

# Global eradication of poliomyelitis

Report of the sixth meeting of the  
Global Technical Consultative Group  
for Poliomyelitis Eradication  
Geneva, 7-10 May 2001



**DEPARTMENT OF VACCINES  
AND BIOLOGICALS**



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# List of abbreviations

AFP	acute flaccid paralysis
AFRO	WHO Regional Office for Africa
AMRO	WHO Regional Office for the Americas
CDC	Centers for Disease Control and Prevention (USA)
EMRO	WHO Regional Office for the Eastern Mediterranean
EPI	Expanded Programme on Immunization
EURO	WHO Regional Office for Europe
GAVI	Global Alliance for Vaccines and Immunization
IPV	inactivated polio vaccine
ITD	intratypic differentiation
MOH	ministry of health
NID	national immunization day
OPV	oral polio vaccine
SAGE	Scientific Advisory Group of Experts
SEARO	WHO Regional Office for South-East Asia
SIAs	supplementary immunization activities
SNID	subnational immunization day
TCG	Technical Consultative Group
UNICEF	United Nations Children's Fund
VDPV	vaccine-derived poliovirus
WHO	World Health Organization
WPRO	WHO Regional Office for the Western Pacific



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# Executive summary

The number of children paralysed by polio each year has declined by 99% since the eradication initiative's launch in 1988, decreasing from an estimated 350 000 cases at that time to less than 3500 reported cases in 2000. Polio cases are now at the lowest in history, having halved between 1999 and 2000, even with a substantial increase in surveillance sensitivity. Only 20 countries were polio-endemic at the beginning of 2001, down from 30 at the end of 1999. Even within remaining endemic countries, ongoing polio transmission was limited to smaller geographic areas.

This substantial progress is the result of continued efforts by polio-endemic countries working in partnership with an international coalition of organizations, spearheaded by the World Health Organization (WHO), Rotary International, the US Centers for Disease Control and Prevention (CDC), and the United Nations Children's Fund (UNICEF). The Technical Consultative Group (TCG) commends the broad array of public-private sector partners that continue to closely collaborate to achieve eradication of wild poliovirus, including nongovernmental/humanitarian organizations, civil society advocates, special ambassadors, the UN system, donor governments, and over 10 million community volunteers.

All available data indicate that the polio eradication strategies, when appropriately implemented, will eradicate polio. It is becoming increasingly evident that it is also feasible to successfully implement these strategies in the most difficult circumstances in countries around the world.

Despite these achievements, interruption of polio transmission globally will require substantial and additional efforts, particularly in conflict-affected countries. The inability to access children in areas affected by conflict, particularly in Angola, remains a threat to global poliomyelitis eradication and consequent certification, which cannot be achieved until there is confidence that transmission of wild poliovirus in these areas has ceased.

All endemic countries, all countries at high risk of re-establishing transmission, and all partners must augment their efforts to improve the quality of immunization activities and surveillance. It is crucial to assure continued high-level commitment to achieve eradication as soon as possible, with certification by 2005.

The outbreak of polio caused by vaccine-derived poliovirus (VDPV) on the island of Hispaniola is the consequence of failure to maintain high immunization coverage in an area of poor sanitation, thereby allowing VDPVs to circulate among unvaccinated children and cause disease. The implication for the global eradication initiative is that high coverage in every area is absolutely critical both to prevent circulation of wild poliovirus and the emergence of VDPVs. The polio eradication goal must be

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achieved rapidly and immunization stopped as soon as it is safe to do so. The protracted use of oral polio vaccine (OPV) in routine programmes that have low coverage risks the emergence of more Hispaniola-like conditions following certification.

Last year, the TCG focused its recommendations on improving the quality of supplementary immunization activities and acute flaccid paralysis (AFP) surveillance. While further improvements in quality are needed, a major focus this year must be on further improving the timeliness of critical surveillance data and the rapidity of response to it.

There remains a substantial funding gap of approximately US\$ 400 million through 2005, of which US\$ 225m is needed before the end of 2002. Successful eradication is in jeopardy unless these resources can be found promptly. As we are now approaching eradication, it is also critical to determine the resource requirements for activities that will take place beyond certification. These activities include continued surveillance with adequate laboratory capacity, laboratory containment of wild poliovirus stocks, obtaining the necessary information to assure polio vaccination can be stopped safely, and stockpiles of vaccine for the extremely unlikely event of an outbreak after the cessation of immunization. While significant costs are associated with reaching the eradication goal, the cost of not achieving the goal will be even greater, because the benefits of stopping immunization will never accrue, and a significant disease burden from paralytic poliomyelitis will continue.

Discussions throughout the course of the sixth TCG demonstrated again the increasing importance of a strong communications and information capacity within the polio eradication partnership, particularly to ensure international understanding of, and consensus on, the polio “end-game”.

The TCG discussed and elaborated recommendations on the following key aspects of the Global Polio Eradication Initiative:

### **Resource needs**

- Given the substantial progress since 1999 in establishing the capacity to eradicate poliovirus virtually everywhere in the world, the highest priority of the initiative at all levels must be to rapidly close the currently estimated funding gap of US\$ 400 million for activities from 2001 to 2005.
- Because costs will be incurred in the post-eradication and post-certification eras, WHO should ensure that estimates of the funding needs through 2010 are developed by the seventh TCG.

### **Effective use of surveillance and laboratory data**

- All endemic and recently endemic countries should analyse surveillance data down to the district level at least monthly. This analysis should include AFP surveillance and laboratory indicators.
- The TCG endorses the principles outlined in the draft guidelines on “response to a suspected outbreak of poliomyelitis” and requests the secretariat to finalize and disseminate these guidelines by end of June 2001.



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- By the end of 2001, all countries should achieve the quality of AFP surveillance needed for switching from clinical to virological case classification criteria. Expert Groups for case classification must be established in all countries by end-2001 (by September 2001 if the country is already using the virological classification scheme).

### **Conflict-affected areas and other geographic priorities**

- Recognizing the particular importance of conflict-affected areas such as Afghanistan, Angola, the Democratic Republic of the Congo, and Somalia, WHO should establish a cross-regional working group to ensure the lessons learned and strategic approaches in each of these areas are shared. In addition, the lessons and future challenges in the conflict-affected areas should be a major focus of the seventh TCG in 2002.
- Given that Angola, Ethiopia and Nigeria have only recently established surveillance capacity, and the strategic importance of these countries to the entire global initiative, WHO should provide an interim report to the TCG on the performance in these countries through the WHO Regional Office for Africa (AFRO) Task Force on Immunizations (TFI) in December 2001.
- The interruption of polio transmission in Egypt must be a leading strategic priority for the programme in 2001. High-level support from WHO, UNICEF and partner agencies should be provided to the Ministry of Health (MOH) as soon as possible to ensure the appropriate intensification of activities in the coming six months.

### **Stopping polio immunization safely**

- The TCG has reviewed and endorsed the WHO/CDC programme of work to develop the information necessary to decide on the appropriate strategy to stop immunization against polio.

### **Communications and information**

- The TCG, having extensively reviewed the new information and challenges to the initiative that emerged in 2000 (e.g. the Hispaniola (Haiti and Dominican Republic) outbreak and global containment), reaffirms that the core messages of the eradication programme are sound, particularly that the ultimate goal remains the cessation of immunization against this disease.



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# 1. Introduction

From 7 to 10 May 2001, the sixth meeting of the Technical Consultative Group (TCG) on the Global Eradication of Poliomyelitis was convened at the World Health Organization (WHO) in Geneva. The TCG reviewed the current status of the Global Polio Eradication Initiative and made recommendations on the further acceleration of activities to strengthen surveillance and interrupt poliovirus transmission as rapidly as possible. The TCG also reviewed the programme of work to ensure the ultimate benefits of the eradication initiative are achieved.

The meeting was opened by Dr Gro Harlem Brundtland, Director-General (DG), WHO. In welcoming participants, Dr Brundtland emphasized the commitment of WHO and partners to polio eradication, and to overcoming the key challenges to interruption of poliovirus transmission: (1) securing the necessary financial resources to close the US\$ 400 million funding gap; (2) ensuring access to all children, including those in conflict-affected areas; and (3) maintaining political commitment.

Dr Yasuhiro Suzuki, Executive Director, Health Technology and Pharmaceuticals cluster of WHO, asked that the TCG provide technical guidance on several specific policy issues related to stopping poliovirus transmission, improving surveillance, and stopping polio immunization once polio eradication was achieved. Dr Suzuki also emphasized the importance of ensuring that the achievements of polio eradication contribute to the aims of the Global Alliance for Vaccines and Immunization (GAVI).

Dr W. Orenstein of the Centers for Disease Control and Prevention of the United States of America (CDC) served as chairperson of the meeting, with Dr P. Figueroa of the Ministry of Health, Jamaica, as rapporteur. This report summarizes the technical deliberations and recommendations of the sixth meeting of the TCG.

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## 2. Status of the Global Polio Eradication Initiative

Rapid progress towards eradication of poliomyelitis continued during 2000. Only 20 countries were polio-endemic at the beginning of 2001, down from 30 at the end of 1999 (Figure 1). Even within remaining endemic countries, ongoing polio transmission was limited to smaller geographic areas. Polio cases declined by 99% since the initiative's launch in 1988, decreasing from an estimated 350 000 cases at that time to less than 3500 reported cases in 2000. Polio cases are now at the lowest point in history, having halved between 1999 and 2000, even with a substantial increase in surveillance sensitivity.

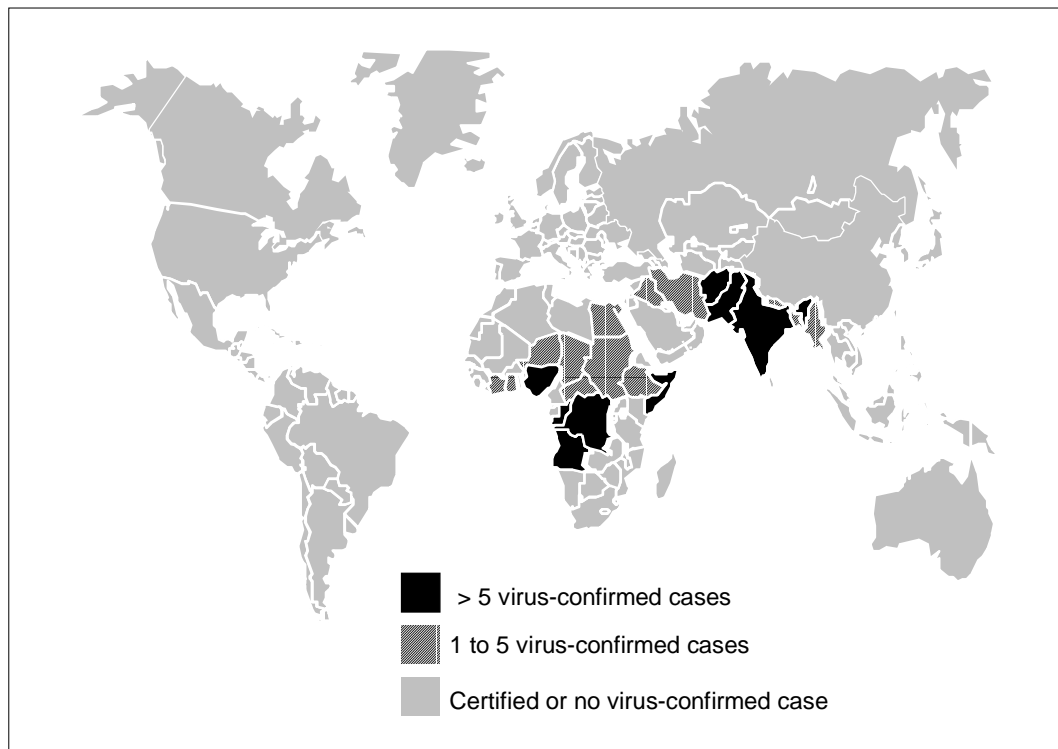
This substantial progress is the result of continued extensive efforts by polio-endemic countries working in partnership with an international coalition of organizations, spearheaded by WHO, Rotary International, CDC, and UNICEF. The TCG commends the broad array of public-private sector partners that continue to closely collaborate to achieve polio eradication, including nongovernmental and humanitarian organizations, civil society advocates, special ambassadors, the UN system, donor governments, and over 10 million community volunteers.

Selected achievements of the Global Polio Eradication Initiative since the 5th meeting of the TCG in 2000 include:

- A record 550 million children – almost one-tenth of the world's population – received OPV in accelerated activities in 82 countries. Every polio-endemic country increased the number of national immunization day (NID) rounds and began house-to-house vaccine delivery to reach every child.
- The 37 countries and areas of the WHO Western Pacific Region (WPR) were certified polio-free in October 2000. WPR is the second WHO Region to be certified polio-free, after the Region of the Americas in 1994.
- NIDs were synchronized among 17 countries in west and central Africa, vaccinating 76 million children in the largest public health initiative in the Region's history. President Obasanjo (Nigeria), President Konare (Mali), and President Tandja (Niger) played key roles.
- The Global Polio Laboratory Network was strengthened to enable genetic sequencing of all wild polioviruses.
- Country management and administrative reviews were conducted in all large country programmes and key endemic regions. Polio Management Support Units, or their equivalents, were established in AFRO, the WHO Regional Office for South-East Asia (SEARO), and the Regional Office for the Eastern Mediterranean (EMRO), as well as in WHO HQ, to improve efficiency of personnel recruitment, supplies procurement, and financial transactions.

- Staffing increased more than five-fold, with almost 1500 polio-funded immunization staff now in place.
- The UN Secretary-General addressed the Global Polio Partners' Summit in New York, a gathering of over 350 individuals. The Global Polio Eradication Initiative Strategic Plan 2001–2005 was launched, and partners pledged their commitment to secure a polio-free world in 2005.
- Countries in two of the three polio-free regions of the world, the Western Pacific and Europe, and selected countries in regions with continuing wild poliovirus circulation, began creating national inventories of laboratories containing wild poliovirus. Pilot projects are under way to develop inventories in the Americas.

**Figure 1: Countries with wild poliovirus confirmed cases, 2000, by number of cases**



Despite these achievements, interruption of polio transmission globally will require extensive and targeted efforts, particularly in conflict-affected countries. All endemic countries and partner agencies must augment their efforts to improve the quality of immunization activities and surveillance. All polio-free countries, particularly those at high risk of re-establishing transmission, must protect their investment by remaining vigilant against importations.

The delays between confirming wild poliovirus circulation and preparing and conducting an appropriate vaccination response must be reduced. The lessons learned through outbreaks such as that in Cape Verde in 2000 must result in improvements in this area. The importance of maintaining high routine immunization coverage and

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certification-standard AFP surveillance in polio-free areas was highlighted by this outbreak. Poliovirus was imported to Cape Verde from Angola, resulting in 56 cases of paralysis between August and December 2000. All ages were affected; 17 deaths occurred. Cape Verde had been polio-free for over a decade.

An outbreak of VDPV on the island of Hispaniola (Haiti and Dominican Republic) in 2000 to 2001, has important implications for how to prepare for the cessation of immunization against polio, following global certification of eradication. The most compelling lessons from the Hispaniola outbreak were the need to maintain good surveillance and high immunization coverage after wild poliovirus circulation has been interrupted. The outbreak further demonstrated the need to achieve global eradication as rapidly as possible so as to minimize the opportunity for further such events. This outbreak has helped to accelerate and focus the research agenda for developing the most efficient and safe strategy for eventually stopping the use of oral polio vaccine following global certification of polio eradication.

Detailed reports were provided on the progress in the three WHO regions that remain polio-endemic, and five of the most important countries for the eradication initiative - Angola, the Democratic Republic of the Congo, India, Nigeria and Pakistan - where intense transmission of wild poliovirus is ongoing.

### **Recommendations:**

- Given the rapid progress since 1999 in establishing the capacity to eradicate poliovirus virtually everywhere in the world, the highest priority of the initiative at all levels must be to urgently close the funding gap currently estimated to be US\$ 400 million for activities from 2001 to 2005.
- Recognizing the particular importance of conflict-affected areas such as Afghanistan, Angola, the Democratic Republic of the Congo, Somalia and the Sudan, WHO and UNICEF should establish a cross-regional working group to ensure the lessons learned and strategic approaches in each of these areas are shared. In addition, progress in the conflict-affected areas should be a major focus of the seventh TCG in 2002.
- Given that Nigeria has only recently re-established its surveillance capacity and in view of the strategic importance of this country to the entire global initiative, WHO should provide an interim report to the TCG on the surveillance performance in Nigeria through the AFRO TFI in December 2001. Progress in surveillance should be similarly monitored in the other critical AFRO countries, Angola and Ethiopia, and reported to the TCG.
- The interruption of polio transmission in Egypt must be a leading strategic priority for the programme in 2001. High-level support from WHO, UNICEF and partner agencies should be provided to the MOH as soon as possible to ensure the appropriate intensification of activities in the coming six months.
- Recognizing the substantial investments in the Pakistan eradication programme at the national and subnational levels in 2000, increased attention should now be given to ensuring high quality supplementary immunization activities at the district level through heightened supervision and international support.

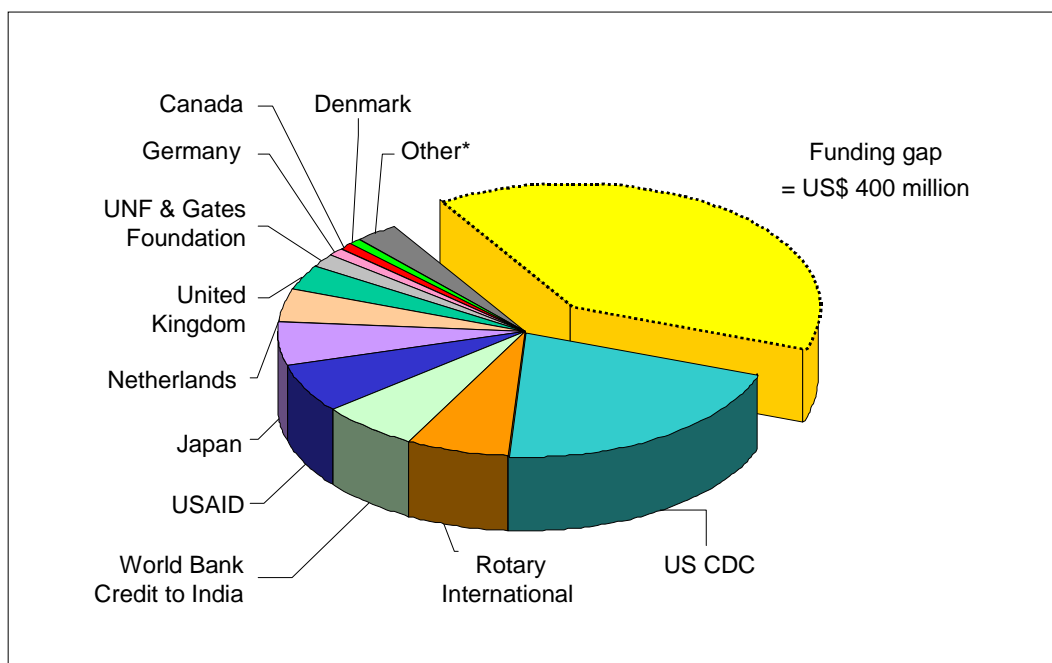
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- Effective social mobilization will be essential to further improving the quality of eradication activities, particularly supplementary immunization, in the remaining endemic areas. The TCG endorses the social mobilization guidelines developed for this purpose and urges WHO and UNICEF to ensure their wide dissemination and use at the country level to improve the quality of activities.
  - It is absolutely essential that all stool specimens are analysed in a WHO-accredited laboratory from mid-2001. Given the critical role of laboratories at this time in the eradication initiative, WHO should give serious consideration to removing from the Network any laboratories that have not achieved full accreditation status by September 2001.
  - Given the critical need for ongoing political support at this point in the eradication initiative, the decision-making process should be carefully mapped in key geographic areas and form the basis of a comprehensive and sustained advocacy plan of work.

### 3. Resource mobilization, management and administration

Significant progress has been made in identifying more precisely the resource needs for the final phase of the eradication effort, and considerable contributions have already been made or pledged. However, there remains a substantial funding gap, currently estimated at US\$ 400 million through 2005, of which US\$ 225 million is needed for activities that must take place before the end of 2002.

This gap includes funding for vaccines, which must be assured on a long-term basis. Funding is also needed for national and international staff, laboratory capacity, operational costs associated with supplementary immunization campaigns and AFP surveillance, research on how best to stop polio vaccination, and laboratory containment.

**Figure 2: Contributions to polio eradication pledged and projected by major donors, 2001-2005**



\* Other: Australia; Austria; Aventis Pasteur; Belgium; Italy; Ireland, Norway; Portugal; Saudi Red Crescent; UNICEF; WHO.

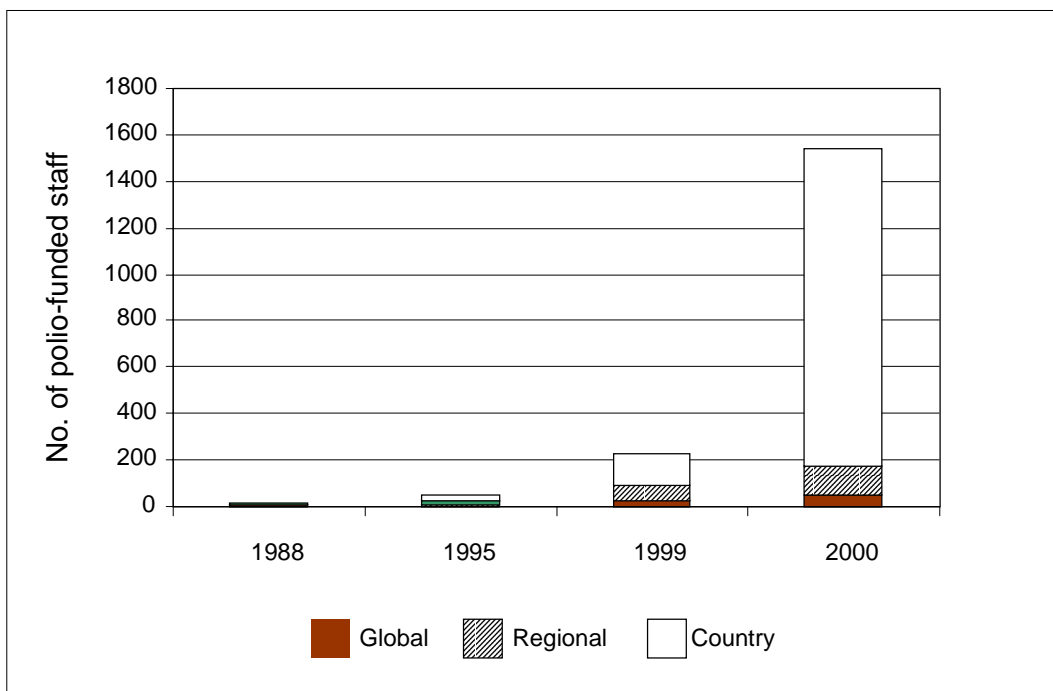


Successful eradication is in jeopardy unless these resources can be found promptly. While significant costs are associated with reaching the eradication goal, the cost of not achieving the goal will be even greater, because the benefits of stopping immunization will never accrue, and the significant disease burden from paralytic poliomyelitis will continue.

The major focus of prior recommendations has been on obtaining the resources required for finishing polio eradication and certification. This remains the top priority. However, as the world is now approaching eradication, it is critical to determine the resource needs for the activities that will be needed beyond certification. These activities include continuing surveillance with adequate laboratory capacity, achieving containment requirements, obtaining the necessary information to assure polio vaccination can be stopped safely, implementing strategies derived from that research, and establishing stockpiles of vaccine for the extremely unlikely event of an outbreak after immunization has been stopped. Other sections of this report cover these issues in more detail.

The TCG commends the World Health Organization, UNICEF, Rotary International, the Centers for Disease Control and Prevention, and all other partner agencies, for the extraordinary progress that has been made to rapidly deploy the human, financial and physical resources needed to accelerate eradication activities worldwide. The TCG was particularly impressed with the speed and efficiency with which WHO established the administrative capacity needed at global, regional and country level. Indeed WHO's recent management of the polio eradication initiative should serve as a model for the strengthening of other major international programmes.

**Figure 3: Growth in polio-funded staff 1988–2000**



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The TCG also commends UNICEF for the much improved management of the global supply of OPV, its efforts to ensure the continuing availability of polio vaccines as long as they are needed, and the effective use of its field structure to support the initiative.

### **Recommendations:**

- The highest priority of the initiative at all levels must be to urgently close the currently estimated funding gap of US\$ 400 million for activities from 2001 through 2005.
- The TCG strongly reaffirms the importance of the ongoing work of WHO, UNICEF and national governments to review and, if necessary revise, the total financial resources required and the funding gap for eradication activities during the period 2002–2005, with publication and wide dissemination of these results by September 2001. It is of the utmost importance to ensure that this annual update continues to reflect any new costs due to acceleration of activities, the rising cost of OPV and the implementation of the programme of work on stopping polio immunization following certification.
- Because costs will be incurred in the post-eradication and post-certification eras, by the seventh TCG WHO should ensure estimates are developed of the funding needs through 2010.
- Recognizing the urgency of the funding gap, WHO and partner agencies should also give consideration to an extraordinary appeal in the autumn of 2001 for support to close the funding gap through at least end-2002.
- WHO and partner agencies should develop cost estimates for the various scenarios that could emerge should transmission continue beyond 2002 in any geographic area.
- WHO and UNICEF should continue their dialogue with polio vaccine manufacturers to ensure that vaccine needs are fully met through certification and to at least 2010. UNICEF should develop a plan for forward funding of vaccine procurement.
- WHO should continue its systematic review of the administrative and management capacity needed to support polio eradication activities in each of the highest priority countries. The approach to strengthen this capacity at global and regional levels must continue to be extended as rapidly as possible to key country offices such as Nigeria.

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## 4. Supplementary immunization activities

Supplementary immunization is a cornerstone of the polio eradication strategy, with high-quality mopping-up being critically important to eliminate the last chains of virus transmission.

The TCG was particularly impressed with the quality of large-scale mop-up campaigns conducted in India following a series of intensified national and subnational immunization days (NIDs/SNIDs) during 2000-2001. These activities have markedly reduced circulation of virus and appear to have terminated transmission in large population groups. Key lessons learned in India are summarized in Table 1.

**Table 1: Improving the quality of house-to-house immunization – lessons learned in India**



The TCG was pleased to see that its recommendations for monitoring the quality of supplementary immunization were implemented and beneficial to eradication activities in the Democratic Republic of the Congo. Monitoring activities in that country included rapid assessments by supervisors of the number of households visited in targeted areas, the proportion of children immunized, the proportion of “0-dose children” receiving OPV for the first time, the availability of detailed maps and micro-plans, and the number of sites with vaccine vial monitors that had changed colour.

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The experience of the Democratic Republic of the Congo suggests that the monitoring activities endorsed by the TCG in 2000 can be successfully implemented under the most difficult of circumstances. In preparing activities to monitor and evaluate the quality of supplementary immunization activities (SIAs), countries should refer to chapter 7 of the report of the fifth TCG meeting, May 2000.

**Recommendations:**

- The experience of India in ensuring that high quality surveillance data was used to target mop-ups and of the Democratic Republic of the Congo in effectively applying NIDs monitoring tools, should be widely disseminated and used to encourage similar activities in the remaining endemic areas.
- The TCG recommends that WHO, in coordination with UNICEF, finalize and disseminate the “Checklists and reference guides for communication for polio eradication” to help improve this important aspect of SIAs.

## 5. Effective use of surveillance and laboratory data

The TCG was impressed with the progress being made to improve surveillance quality in all regions as evidenced in the marked improvements of standard performance indicators.

**Table 2: Reported AFP cases, AFP quality indicators, confirmed polio and polio-compatible cases, by WHO region, 1999 and 2000**

WHO region	AFP reported		Non-polio AFP rate		Percent AFP with adequate specimens		Confirmed polio (wild virus confirmed)		Polio Compatible
	1999	2000	1999	2000	1999	2000	1999	2000	2000
African	5 011	5 943	0.80	1.50	31%	52%	2 861 (246)	1 772 (164)	583
Americas	1 861	2 057	1.10	1.20	80%	80%	0 (0)	12 (0)	21
Eastern Mediterranean	3 079	3 252	1.10	1.41	67%	69%	914 (479)	498 (285)	55
European	1 703	1 680	1.17	1.15	74%	80%	0 (0)	0 (0)	2
South-East Asia	11 916	10 765	1.58	1.70	71%	80%	3 365 (1 161)	594 (272)	355
Western Pacific	6 354	6 893	1.40	1.49	86%	90%	1* (1*)	0 (0)	26
<b>Grand Total</b>	<b>29 924</b>	<b>30 500</b>	<b>1.26</b>	<b>1.58</b>	<b>67%</b>	<b>75%</b>	<b>7 141 (1 887)</b>	<b>2 876 (721)</b>	<b>1 040</b>

\* imported case

However, the TCG was concerned by the large number of cases still pending final classification from 2000, though it recognized that this was in large part due to the increase in workload arising from the rapid expansion of surveillance activities.

The successful interruption of polio transmission will require even more rapid collection, analysis, dissemination and use of surveillance data. India, for example, has demonstrated that it is possible to identify and differentiate wild poliovirus within a median interval of 45 days.

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The quality of support provided by the 147 laboratories collaborating in the global polio laboratory network continues to improve. In 2000, only 8 of 147 laboratories failed WHO accreditation, and 12 of 147 laboratories were provisionally accredited, with full WHO accreditation for all other laboratories.

While a considerable amount of surveillance data is collected (Table 2), there is insufficient routine, regular analysis of this information for guiding programme decisions. For example, some countries are collecting data on polio-compatible cases, but do not routinely analyse those cases to determine if they cluster in time and place, which might suggest ongoing undetected wild poliovirus transmission.

Last year, the TCG focused its recommendations on improving the quality of supplementary immunization activities and AFP surveillance. A major focus of this year's deliberations was further improving the timeliness and use of critical surveillance data.

Many factors are contributing to delays in final classification of cases and the required immunization response. These include: delays in notification, investigation, collection, transport and processing of stool specimens, and communication of laboratory results. While many delays in 2000 were unavoidable due to the rapid expansion of surveillance activities, in the final phase of the initiative it will be unacceptable for final classification of AFP cases to continue to take 120 days or longer.

### **Recommendations:**

- All endemic and recently endemic countries should analyse surveillance data down to the district level at least monthly. This analysis should include AFP surveillance and laboratory indicators.
- The interval between onset of paralysis and receipt of final intratypic differentiation (ITD) results should be reduced to  $\leq 60$  days (target  $>80\%$ ). Reasons for delays in ITD results must be analysed in detail to identify and correct problems. Specifically, the time needed for each step in the process should be scrutinized to identify bottlenecks (e.g. time from onset to notification, notification to investigation, investigation to specimen collection, collection to receipt in the laboratory, and laboratory to reporting of results).
- The interval between ITD and sequencing of wild polioviruses should be reduced to  $\leq 28$  days (target  $>80\%$ ).
- Countries and regions must track the number and proportion of cases pending final classification after 90 days following onset of paralysis. Reasons for delays in classification should be identified and corrected. Particular scrutiny should be applied to ensuring timely laboratory results, follow-up (if appropriate) and Expert Group review.
- AFP cases with a high index of suspicion (i.e. fever at onset, age  $< 5$  years, asymmetrical paralysis, unvaccinated, minority group) should be prioritized for investigation. Specimens should be immediately transported to a network laboratory for priority processing, and should be tracked through to final results and classification. It is the responsibility of the investigating surveillance medical officer to ensure 'hot cases' receive appropriate attention through final classification.

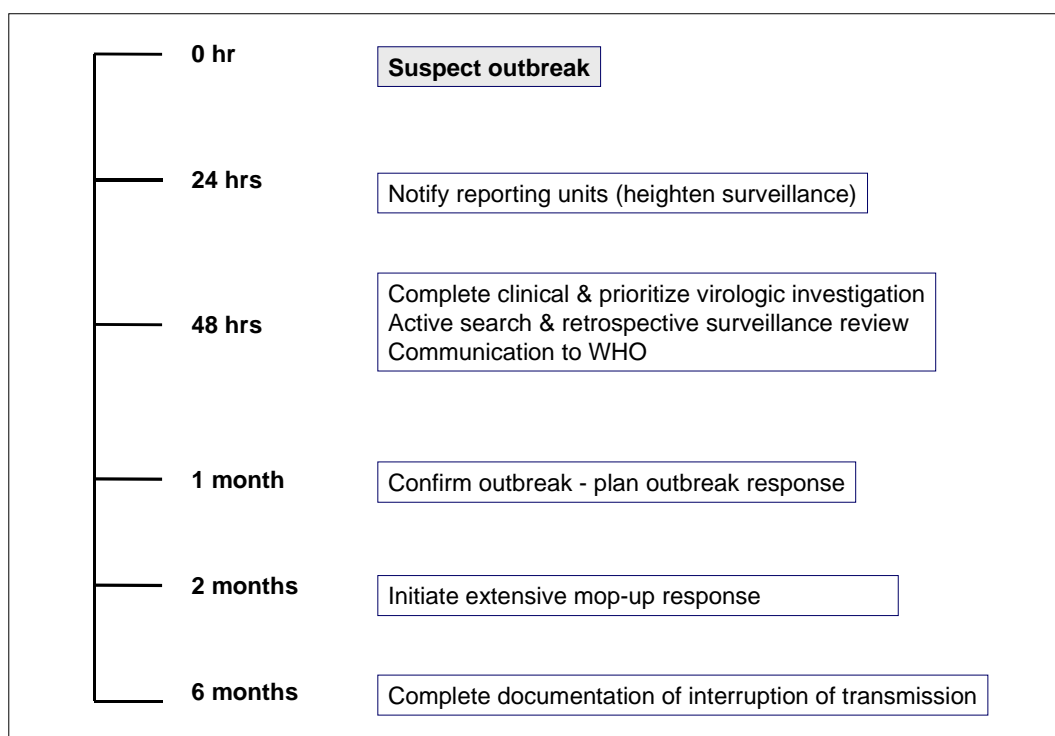
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## 6. Detecting and responding to outbreaks

An increasing number of countries appear to have terminated transmission of wild poliovirus, yet remain at risk for re-introduction and re-establishment of indigenous transmission. Given the fact that AFP surveillance, even when ideal, detects only a small proportion of poliovirus infections, it is critical to rapidly detect and respond to suspected polio cases to minimize spread of the virus. To assist countries in detecting and responding to outbreaks, guidelines have been prepared by the WHO Secretariat and are summarized below (Figure 4).

The proposed guidelines define suspected polio outbreaks for rapid investigation, as (i) a cluster of polio compatible cases (two or more compatible cases, as classified by an Expert Group, with onset in the same or adjacent districts within a two month period) or (ii) a cluster of AFP cases (multiple AFP cases without final classification, but which are clinically strongly suggestive of polio, with onset in the same or adjacent districts within a two month period).

**Figure 4: Proposed timeline for reacting to a suspected polio outbreak**



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The purpose of these definitions is to facilitate the early identification of high-risk situations, their rapid investigation and the timely confirmation of polio outbreaks. The guidelines also describe the appropriate immunization and surveillance response to a confirmed polio outbreak (particularly in a non-endemic or recently-endemic country).

### **Recommendations:**

- The TCG endorses the principles outlined in the draft WHO guidelines on “response to a suspected outbreak of poliomyelitis” and requests the Secretariat to finalize and disseminate them by the end of June 2001.
- Within 48 hours of detection of a suspected polio outbreak, a full clinical, epidemiological and virological investigation should have been initiated, with a detailed review of surveillance quality in the area. Based on the investigation, a decision should be made on the need for, and scope of, an immunization response.
- Any suspected polio outbreak should be communicated to WHO within 48 hours.
- Within one month, a suspected polio outbreak (including a cluster of AFP cases) should have been confirmed as due to wild poliovirus or discarded.
- In polio-free areas, any confirmed polio outbreak should have had an extensive mop-up operation initiated within two months of onset of the index case.
- Exhaustive documentation of the interruption of transmission should be complete within six months.



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## 7. Polio-compatible cases and virological case classification

In 1996, the TCG issued recommendations on the criteria for switching from the clinical case classification system to a virological system. These criteria required countries to have reached a non-polio AFP rate of at least 1 case per 100 000 population aged < 15 years, collection of adequate stool specimens from at least 60% of AFP cases and processing of all specimens at a WHO-accredited laboratory.

Countries using the virological case classification criteria must have an Expert Group for case classification to review all AFP cases for whom final diagnosis is not clear-cut (i.e. cases with no or inadequate specimens and either residual paralysis on 60-day follow-up or no follow-up due to death or loss).

**Table 3: Proportion of countries using virological case classification and with an Expert Group for case classification, by WHO region, as of January 2001**

WHO region	% Countries using virological classification		% of Countries with expert group (where appropriate)
African	48%	(23/48)	~20%
Americas	100%	(21/21)	100%
Eastern Mediterranean	83%	(19/23)	100%
European	98%	(49/50)	100%
South-East Asia	90%	(9/10)	100%
Western Pacific	100%	(17/17)	100%

The Expert Group should classify such cases as polio-compatible or discard them as non-polio AFP. Compatible cases may occur even where surveillance quality is high (systems seldom collect adequate specimens from 100% of AFP cases). Because polio-compatible cases can indicate areas of undetected virus transmission, the TCG has repeatedly recommended their close scrutiny, particularly if such cases cluster in time and place.

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Experience in the Americas, Western Pacific and India has shown the critical programmatic value of polio-compatible cases during the final phase of eradication. Despite this, the virological classification scheme and the “polio-compatible case” concept is still not implemented uniformly, with many countries reporting either much fewer or many more compatibles than expected. Consequently, WHO has drafted guidelines to assist countries to properly classify AFP cases and manage polio-compatible cases.

### **Recommendations:**

By the end of 2001, all countries should achieve the quality of AFP surveillance needed for switching from clinical to virological case classification criteria. Once having changed to virological criteria, countries should not revert back to the clinical scheme.

Expert Groups for case classification must be established in all countries by end-2001 (September 2001 if the country is already using the virological scheme).

The TCG endorses the proposed draft guidelines for the application of the virological AFP case classification scheme and the work of Expert Groups. The draft guidelines should be finalized by the end of June 2001 and disseminated to all regions and countries.

The TCG recommends that all countries should:

- Maximize efforts to obtain two adequate stool specimens. The principal aim of countries using the virological criteria must be to obtain adequate specimens from every case.
- Prioritize the investigation and follow-up of cases with inadequate specimens. Detailed initial investigation within 48 hours, reliable 60-day follow-up and accurate documentation of such cases is essential to the classification work of the Expert Group.
- Expert Groups must have documented terms of reference, operating procedures and training to ensure accurate and timely classification of cases. In endemic and high-risk countries the Expert Group should meet monthly. In countries where the necessary expertise to assemble an Expert Group is not available, it may be necessary to provide external technical support.
- Monitor and map polio-compatible cases with field investigation of clusters. Surveillance data must be monitored and mapped to allow early detection of clusters of compatibles and trigger further field investigations (including quality of surveillance and routine/ supplementary immunization).
- Use clusters of polio-compatible cases to target supplementary immunization. Areas with such clusters may need to be included in mop-up activities that are targeting the last areas of wild virus transmission. Clusters of polio-compatible cases may trigger a mop-up activity even if the cluster is not adjacent to a known wild virus reservoir.

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## 8. Sixty-day follow-up examination

The TCG in 2000 reviewed the AFP classification system and stated that 60-day follow-up information was not necessary for AFP cases with adequate stool specimens, regardless of the classification scheme being used. The expectation was that dropping the 60-day follow-up for such cases would significantly reduce the workload of field workers and allow them to concentrate on the highest risk cases.

Evidence from several countries, including India, indicates that the number of polio-compatible cases as well as the workload for the Expert Groups could be reduced significantly (by 30–50%) by conducting a proper 60-day follow-up for AFP cases lacking adequate stool samples (see Table 4). Such follow-up improves the precision of AFP surveillance to reliably exclude non-polio AFP cases and focuses efforts on those AFP cases that are more likely to be polio. Some countries may need to consider innovative ways of encouraging parents to bring their children for 60-day follow-up examination, such as reimbursing parents for transportation and lodging expenses.

**Table 4: Reduction of Expert Group caseload through effective 60-day follow-up for AFP cases lacking adequate stool samples, India, 1998 - 2000**

	1998	1999	2000
Total AFP cases	9466	9587	8102
AFP cases with inadequate stools	4060	2845	1589
Cases without follow-up, of those with inadequate stools	680	456	302
No residual weakness (discarded)	1232	965	560
Percentage reduction in Expert Group caseload	36%	40%	44%

The TCG is concerned about the large number of polio-compatible cases in some countries where follow-up rates continue to be low, and where collection of adequate stool specimens is also low.

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## Recommendations:

- The TCG reaffirms the importance of collecting adequate stool specimens from all AFP cases. This will significantly reduce the need for the 60-day follow-up examination.
- All AFP cases with inadequate specimens should undergo 60-day follow-up examination. To monitor compliance with this recommendation, countries should track the “proportion of AFP cases with inadequate stool specimens that have follow up” as a new indicator of surveillance quality. At least 80% of all such cases should receive follow-up.
- Recognizing the need for some countries to prioritize cases for follow-up examination, countries should give highest priority to “hot cases”, cases with no specimens and cases with specimens collected more than 30 days after onset of paralysis.

**Table 5. Summary of AFP surveillance recommendations**

<p><b>Full implementation of virologic classification by end-2001</b></p> <ul style="list-style-type: none"><li>• All countries should achieve quality of surveillance required to adopt virologic classification and should establish Expert Groups for case classification by end-2001</li></ul> <p><b>Increase timeliness of obtaining and responding to surveillance data</b></p> <ul style="list-style-type: none"><li>• Onset of paralysis to final classification &lt;90 days (target: 80%)</li><li>• Onset of paralysis to ITD results &lt;60 days (target: 80%)</li><li>• ITD to sequencing results &lt;28 days (target: 80%)</li><li>• Prioritize clinical and laboratory investigation of all suspicious AFP cases</li></ul> <p><b>Refine analysis of surveillance data</b></p> <ul style="list-style-type: none"><li>• Monthly analysis of district-level data</li><li>• Monitor pending cases, map and respond to clusters of compatible cases</li><li>• Monitor 60 day follow-up rate among cases with inadequate specimens</li></ul>
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## 9. Use of environmental surveillance data

The detection of AFP cases and laboratory testing of stool specimens is the surveillance standard for global polio eradication. However, years of experience with environmental sampling in several industrialized countries with well-developed sewage systems and qualified laboratories have demonstrated that such surveillance can detect circulation of wild polioviruses. Environmental surveillance has been suggested as a method for helping to detect unrecognized poliovirus circulation in high-risk or reservoir populations.

Recent experience gained from environmental surveillance projects in Egypt, Georgia, India (Mumbai) and Turkey has demonstrated that it is possible to detect wild virus in the absence of AFP cases (Egypt, Mumbai). However, it is recognized that sampling and laboratory testing in developing countries has presented considerable logistical challenges and in some cases compromised AFP surveillance work.

The programme response to a wild poliovirus-positive environmental sample will depend on the virus origin (imported vs. indigenous), effectiveness of the surveillance system, time since detection of last virus-confirmed polio case, immunization policy and coverage.

### **Recommendations:**

- The TCG does not currently recommend the routine use of environmental surveillance in polio-endemic countries. It is more important to utilize available epidemiological and laboratory resources to optimize the quality of AFP surveillance.

Targeted environmental sampling may become more important during the final stages of eradication, and the TCG encourages further evaluation of this technique by the Secretariat. This evaluation should be presented at the next TCG meeting.

- If wild poliovirus is found through environmental sampling (sources may include sewage, water, stool surveys, etc.), the following steps should be taken:
  - a) notification to WHO and all reporting sites in the country within 48 hours, with instruction to enhance AFP surveillance (per instructions for responding to an importation);
  - b) confirmation of the isolate in a WHO-accredited laboratory;
  - c) resampling of the area where the isolate originated;
  - d) determination of virus origin through genomic sequence analysis within 21 days of confirmation of wild virus isolation to help to determine whether imported vs. indigenous.

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- The TCG offers the following guidance on immunization response when wild polioviruses are detected through environmental sampling:
    - a) endemic countries: continue NIDs with a special focus on the area sampled.
    - b) high-risk countries: if the virus proves to be indigenous, large-scale SIAs are needed; if the virus is imported, mopping-up is needed, particularly if routine coverage is low and surveillance performance is inadequate.
    - c) polio-free countries (>3 years): mop-up may be needed with extent dependent on routine coverage and surveillance performance.
  
  - Along with enhanced AFP surveillance, environmental sampling should be continued to determine the impact of the immunization response to a positive result.

# 10. Accessing children in conflict-affected areas

The TCG emphasizes that the inability to access children in conflict-affected areas remains a threat to global poliomyelitis eradication. Certification cannot be achieved until there is confidence that transmission of wild poliovirus in these areas has ceased.

The TCG was impressed with the rapidly increasing quality of polio eradication activities in many conflict affected areas (Table 6). Data presented from Somalia, Afghanistan, the Democratic Republic of the Congo (DRC), Liberia and Sudan (South) was particularly impressive.

**Table 6. Polio eradication in conflict-affected areas**

Area	Country	Population < 5 years	Estimated population < 5 in difficult-to-access areas	First NIDS	2000 NP AFP Rate	2000 % Adequate specimens
Asia	Afghanistan	4.4m	1.5m	1997	1.1	50% (90%)
Horn of Africa	Somalia	2.1m	2.1m	1998	2.2	50% (100%)
	Sudan (South)	1.3m	1.3m	1998	1.4	49% (94%)
Central Africa	DRC	11m	5.3m	1999	2.3	35% (66%)
	Angola	2.4m	0.66m	1996	1.6	54% (85%)
	Congo	0.6m	0.02m	1996	0.7	24% (68%)
West Africa	Sierra Leone	1.2m	0.5m	1999	1.4	41% (58%)
	Liberia	0.5m		1999	2.5	68% (77%)
	Guinea	1.2m		1997	3.1	83% (88%)

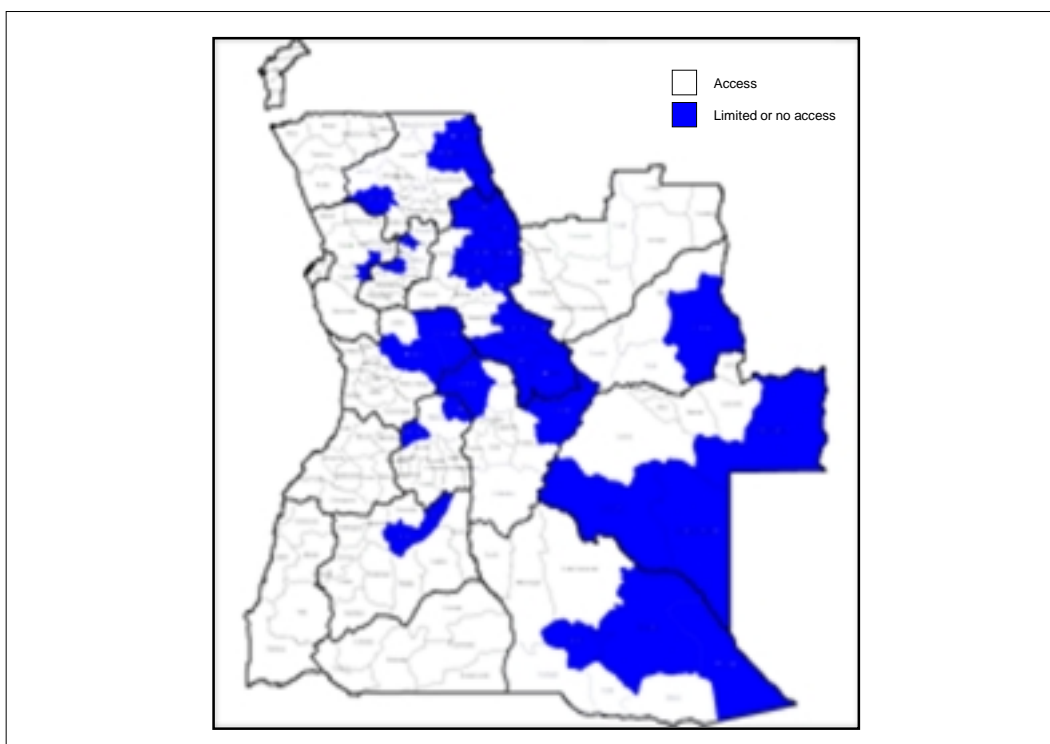
Angola poses a unique challenge to the eradication initiative as the unreached population in that country may be sufficient to sustain polio transmission. WHO, UNICEF and partner agencies will need to engage their highest levels, in addition to their technical staff, to negotiate sufficient access to both immunize the currently unreached children and conduct the necessary surveillance. The first priority in this country, however, must be to improve the quality of activities in currently accessible areas.

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## Recommendations:

- Recognizing the particular importance of conflict-affected areas such as Afghanistan, Angola, the Democratic Republic of the Congo, Somalia and the Sudan, WHO and UNICEF should establish a cross-regional working group to ensure the lessons learned and strategic approaches in each of these areas are shared. In addition, the lessons and future challenges in conflict-affected areas should be a major focus of the seventh TCG in 2002.
- Neighbouring countries affected by conflict, such as Ethiopia and Somalia, or Sierra Leone and Liberia, should put special emphasis on cross-border coordination of polio eradication activities.
- WHO and UNICEF should work with the appropriate agencies and authorities to define the nature and magnitude of the access problem in Angola and other countries of concern, and identify potential mechanisms to obtain access for immunization and surveillance activities.

**Figure 5: Areas of limited or no access during 2000 NIDs in Angola (approximately 20% of population aged < 5 years)**





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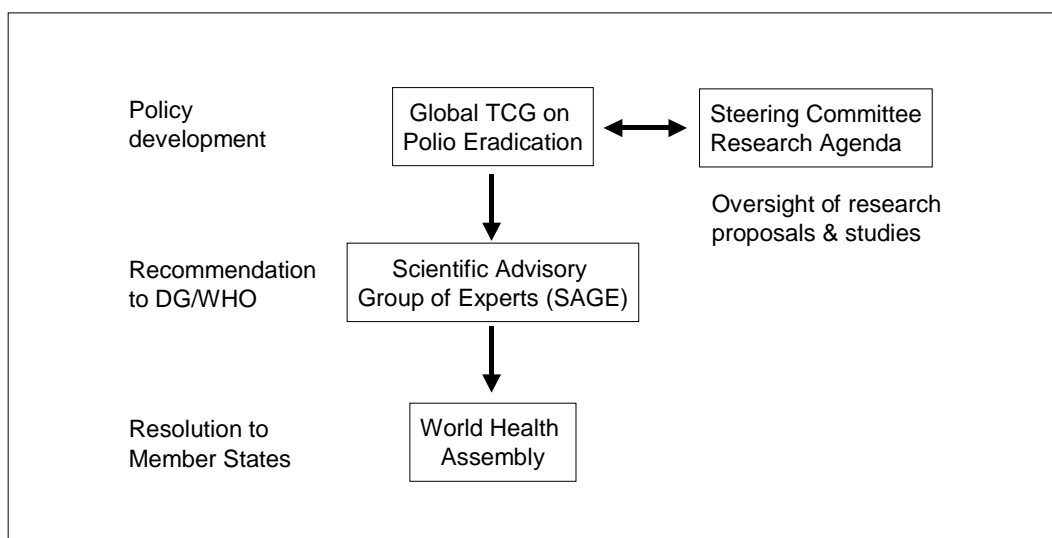
# 11. The role of the Global TCG in the polio “end-game”

The ultimate goals of the polio eradication effort are to terminate transmission of wild polioviruses and subsequently discontinue immunization against polio. However, before stopping the use of OPV there must be certainty that: 1) wild poliovirus transmission has been interrupted, 2) wild virus stocks in laboratories are appropriately contained, 3) vaccine-derived polioviruses do not continue to circulate and cause disease, and 4) a global stockpile of vaccine is available if needed, with a clear strategy for its use.

Until all of these conditions are satisfied, OPV will have to be used. Since it will take time to collect all of the data required, and to establish international consensus on OPV cessation, it is appropriate to plan for the use of OPV through at least 2010. Adequate resources must be secured to enable vaccination and surveillance to continue into the post-certification period.

These issues constitute the polio “end-game” and represent a substantial programme of work. This work will include the generation of new scientific data and feasibility analyses of implementing various options (e.g. financial costs, cost-benefit analyses, stakeholder analyses). The TCG understands that its mandate includes the oversight of this work and the development of policy related to all aspects of the polio end-game. The potential policy options would further be considered by the Scientific Advisory Group of Experts (SAGE) prior to eventual presentation to the World Health Assembly. The TCG welcomes the WHO initiative to establish a Steering Committee to guide, monitor and evaluate the research agenda for stopping polio immunization, under the direction of the TCG. The first meeting of the Steering Committee on the Research Agenda for Stopping Polio Immunization was held during the second day of the sixth meeting of the TCG.

**Figure 6: Decision-making process for stopping immunization**



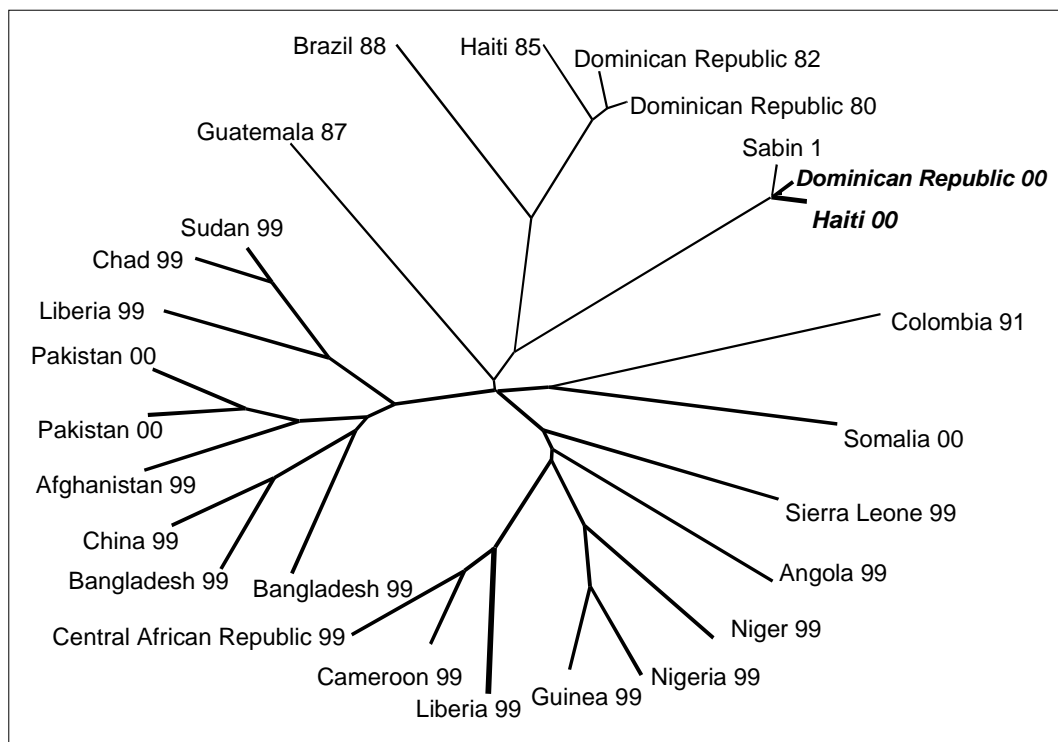
**Recommendations:**

- The TCG (and the Steering Committee on the Research Agenda for Stopping Polio Immunization) should be adequately informed of relevant data on stopping polio immunizations from all sources. It is also important that the deliberations and information generated for the TCG on these issues is available to partner agencies and other interested parties.
- WHO should assure that the scientific community has the opportunity to review the polio end-game programme of work, access the results of new research and feasibility studies, and comment on the findings and process.
- The Secretariat should ensure that adequate resources are available to carry out the polio end-game programme of work, fully and rapidly.
- WHO should establish a mechanism to ensure that all relevant expertise is brought to the development of the polio end-game policies, particularly in the areas of science, economics, programme implementation and policy development.

## 12. Cessation of oral polio vaccine use

Genomic sequencing of polioviruses from Egypt and the island of Hispaniola (Haiti and the Dominican Republic) has confirmed that sustained circulation of VDPVs can occur and cause outbreaks of paralytic polio (Figure 7). Current information suggests that this is a rare event. VDPV circulation has only been identified on two occasions, and only in areas where immunization coverage was low. Transmission of VDPV appears to stop when OPV immunization coverage increases. However, currently there are insufficient data to adequately understand the implications of VDPVs for stopping immunization against polio.

**Figure 7: Relationship between Sabin 1-derived isolates from Haiti and the Dominican Republic to type 1 wild polioviruses**

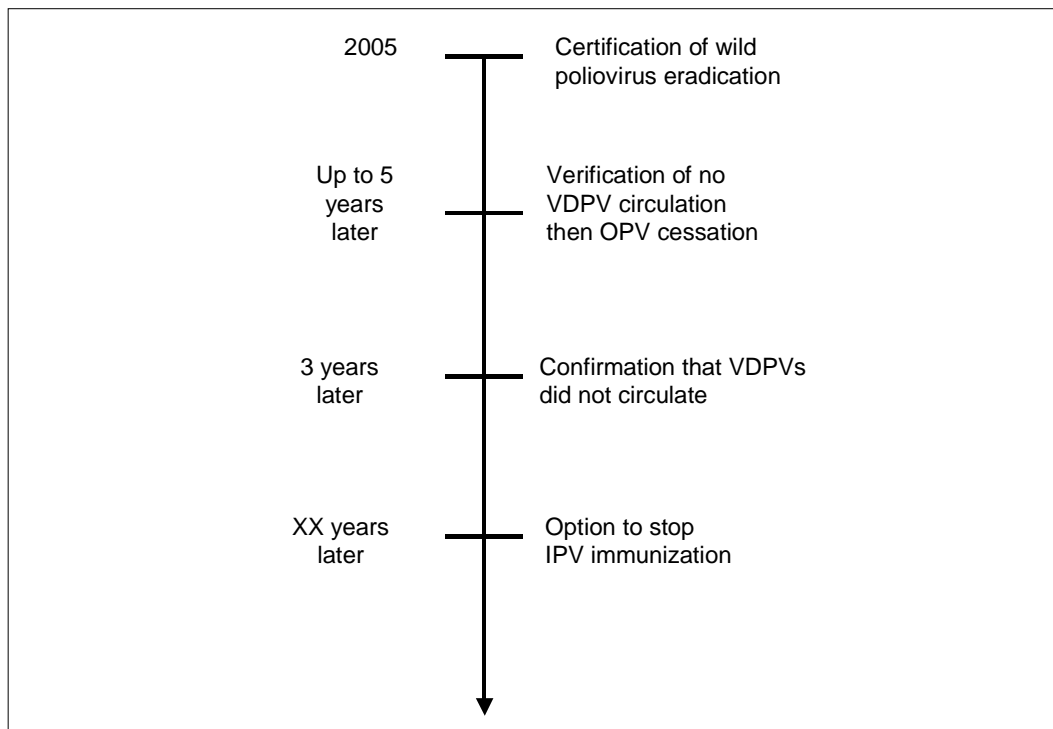


The outbreak of polio caused by VDPV on the island of Hispaniola is the consequence of failure to maintain high immunization coverage in an area of poor sanitation, thereby allowing a VDPV to circulate among unvaccinated children and cause disease. The implication for the global eradication initiative is that high coverage in every area is absolutely critical both to prevent circulation of wild poliovirus and the emergence of VDPVs. In addition, the polio eradication goal must be achieved rapidly and OPV immunization stopped as soon as it is safe to do so. The protracted use of OPV through routine programmes that have low coverage risks the emergence of more Hispaniola-like conditions following certification.

The principle options for stopping OPV immunization are (1) assuring the highest levels of immunity to prevent circulation of VDPVs through coordinated pulse immunization campaigns with OPV, and/or (2) transition to routine immunization with inactivated polio vaccine (IPV) before stopping. These options need to be thoroughly investigated.

Since time will be required to collect all of the research and programme data required to develop the best strategy for safely stopping OPV immunization, it is appropriate to plan for the use of OPV at least through 2010. Adequate resources must be secured to enable vaccination and surveillance to continue into the post-certification period.

**Figure 8: Potential timeline from certification of polio eradication to cessation of immunization against polio**



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## Recommendations:

- The TCG reaffirms its view that the ultimate goal of the polio eradication initiative is to stop polio vaccination, and that the programme of work endorsed by the TCG will allow informed decisions about when and how to cease vaccination. Accordingly, WHO should begin to develop a more detailed timeline for cessation of polio vaccination, based on available information, and starting at time “zero” when no cases have been reported globally for 12 months. This timeline should be updated and, as new information becomes available, communicated to countries, partner organizations and vaccine manufacturers on a regular basis.
- To prevent polio outbreaks due to VDPVs, all countries must maintain high levels of immunity through routine and supplementary immunization.
- The TCG has reviewed and endorsed the WHO/CDC programme of work to develop the information necessary to decide on the appropriate strategy to stop immunization against polio. The programme of work on how to protect populations while stopping OPV will include research on:
  - a) surveillance for sustained circulation of vaccine-derived polioviruses (especially the frequency of VDPV circulation; relative risk factors for generating sustained circulation of VDPVs; and optimal VDPV surveillance strategies).
  - b) whether to recommend IPV after certification (especially efficacy for protecting individuals and the population against wild viruses and VDPVs in developing country settings; global IPV production capacity, cost of IPV for developing country use, and potential for production of Sabin-derived IPV).
  - c) how to safely discontinue the use of OPV if no alternative polio vaccine is offered (especially determination of the impact of pulse OPV on VDPV circulation).
- A progress report on the above programme of work should be provided to the TCG at its next meeting to allow the further development of recommendations on the most appropriate strategy to stop vaccination and to identify any remaining information gaps.
- The Secretariat should ensure that projections for OPV requirements and other programme elements through at least 2010 are available and disseminated to appropriate parties.
- WHO should establish international consensus on the nomenclature for vaccine-derived polioviruses that circulate and cause paralytic disease.

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# 13. Prevention and control of polio outbreaks in the post-immunization era

However unlikely polio outbreaks may seem in the post-immunization era, it is essential to have outbreak response strategies and stockpiles of appropriate vaccines available. The potential risks for reintroduction of polioviruses into the general population during the post-immunization era include long-term poliovirus excretors, recent vaccinees and laboratory sources (e.g. inadvertent or intentional release from stocks).

The strategy for dealing with polio outbreaks in the post-immunization era has two components: prevention and control. Prevention consists of developing and implementing a strategy for stopping OPV immunization (see above) that minimizes the risks of circulating VDPVs, and full implementation of the *WHO global action plan for laboratory containment of wild polioviruses* (WHO/V&B/99.32) to minimize the risks from laboratory sources.

Although the risks for reintroducing polioviruses can be minimized, they will not be zero. To ensure control of any such outbreaks, a plan for responding to reintroductions is essential, including the most appropriate vaccine and a strategy for its stockpiling and delivery.

An immunization response in the post-immunization era may be quite different to a current response. For example, if a single serotype outbreak occurred, the use of the homologous single serotype OPV (mOPV) rather than trivalent OPV (tOPV) would prevent unnecessary seeding of the other serotypes into a susceptible population. Were IPV effective in outbreak control, that could further reduce the risk of inadvertently reintroducing live viruses.

## Recommendations:

- The TCG endorses the WHO/CDC programme of work for developing the necessary information to decide how best to prevent and control polio outbreaks in the post-immunization era. The programme of work should include research on:
  - a) long-term VDPV excretors (the frequency of long-term excretion; the transmissibility of viruses from long-term excretors; and how to curtail long-term excretion).
  - b) monovalent OPV (determine the regulatory issues for licensing such a product and production issues for establishing and maintaining a stockpile).

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- c) the efficacy of IPV in stopping outbreaks.
  - d) the type and size of a vaccine stockpile and the strategy for its release and use.
- Based on the experience gained in the implementation of phase 1 activities of the *WHO global action plan for laboratory containment of wild polioviruses* and through site visits to IPV manufacturers, the global action plan should be updated as appropriate.
  - Once the size and composition of a post-eradication era polio vaccine stockpile has been determined, WHO and UNICEF should develop estimates of the financial resources that will be required to establish and maintain these polio vaccine stockpiles. These estimates should be developed in close consultation with vaccine manufacturers and other appropriate agencies or organizations.

# 14. Ensuring the broader benefits of the polio eradication investment

The TCG was impressed with the marked increase in communications and collaboration between the polio eradication initiative and those responsible for the broader immunization agenda, particularly GAVI. The TCG appreciates the work of the polio eradication partnership to better document and disseminate the broader benefits of the eradication initiative, particularly on the impact of adding vitamin A to polio supplementary immunization activities (see Table 7).

**Table 7: Estimated childhood mortality impact of integrating vitamin A supplementation into immunization campaigns**

Year	Doses of vitamin A administered	Countries adding vitamin A	Estimated deaths averted
1998	94 million	41	169 000
1999	97 million	50	242 000
<b>Total</b>			<b>411 000</b>

WHO has better delineated the polio-funded infrastructure and its broader potential for national capacity building. The major elements of the infrastructure are illustrated in Table 8.

**Table 8: Global Polio Eradication Initiative infrastructure**

Category	Examples
Human resources	Long-/short-term staff Training
Physical infrastructure	Cold chain equipment Communications equipment
Institutional arrangements	Technical Consultative Groups (TCGs) Interagency Coordinating Committees (ICCs) Surveillance and laboratory network (Labnet)
Strategies	Active surveillance Pulse immunization
Processes	Advocacy and fundraising Social mobilization Strategic planning and microplanning



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Increasing attention is now being given to sustaining and ensuring a broader use of this infrastructure, starting in polio-free areas.

**Recommendations:**

- The TCG encourages the polio eradication partnership to continue working with groups like GAVI to ensure the smooth transition of the polio investment to supporting broader immunization and health goals, particularly the strengthening of surveillance and routine immunization infrastructures.
- The TCG encourages the polio eradication partnership to share with the GAVI Secretariat and partners the many lessons learned in communication and social mobilization for polio eradication, and encourages their utilization in immunization programme implementation at country level.
- The TCG considers the draft checklist for enhancing the impact of polio activities on the Expanded Programme on Immunization (EPI) finalized and endorses its broad dissemination and application. However, the key indicators to monitor progress in optimizing impact of polio activities on EPI should be reviewed and further refined, to ensure that they are meaningful and feasible to measure. Once finalized, the indicators should be used at country and regional level, and a subset of the most critical indicators at the global level.
- As the work of the TCG becomes increasingly focused on the polio end-game and the development of appropriate policy in that area, the TCG strongly suggests that SAGE, the body responsible for the entire WHO immunization programme, increase its direct oversight of this critical area.

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# 15. Communications and information

Discussions throughout the course of the sixth TCG demonstrated again the increasing importance of a strong communications and information capacity within the polio eradication partnership. While the handling of difficult communications challenges to date has been exemplary, the TCG is very cognizant that the initiative faces even greater communications challenges in the years ahead, particularly in establishing international understanding of, and consensus on, the polio end-game.

## **Recommendations:**

- The TCG, having extensively reviewed the new information and challenges to the eradication initiative that emerged in 2000 (e.g. the Hispaniola outbreak and global containment), reaffirms that the core messages of the eradication programme are sound, particularly that the ultimate goal remains the cessation of immunization against this disease.
- The TCG reaffirms its decision of 1998 that immunization with OPV should stop and immunization with IPV may stop when there is sufficient assurance and consensus on how to protect the population during and after the cessation period.
- The TCG is acutely aware of the increasing global scrutiny of the eradication initiative and the need to ensure public confidence in this programme through certification and the cessation of immunization. Consequently, the TCG strongly advises WHO and its partner agencies, at the highest levels, to continue presenting any and all new information forthrightly and ensuring it is seen in perspective of the larger goal of this international effort. This information should be disseminated to all stakeholders and the general public using the most efficient and timely means available.
- The major communication message must be that polio eradication can be achieved and the ultimate benefits realized, but only if the funding gap is rapidly addressed, political will strengthened, and access to all children sustained in this critical phase.

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# Annex 1: Agenda

## Monday, 7 May 2001 – Plenary session

- 08:00 – 09:00 Registration
- 09:00 – 09:30 Opening statements
- 09:30 – 09:40 Introductions and election of officers
- Session 1: Status of global polio eradication and impact of acceleration**
- 09:40 – 10:00 Status of eradication activities and impact of acceleration
- 10:00 – 10:10 Implementation of fifth TCG recommendations
- 10:10 – 10:30 **Discussion**
- 10:30 – 11:00 *Coffee break*
- Session 2: Lessons learned in global priority countries**
- 11:00 – 11:15 India: planning and implementing large scale mop-up campaigns
- 11:15 – 11:30 Democratic Republic of the Congo: enhancing and monitoring the quality of NIDs and social mobilization
- 11:30 – 11:45 Pakistan: translating political commitment into action
- 11:45 – 12:30 **Discussion – supplementary immunization**
- 12:30 – 14:00 *Lunch*
- 14:00 – 14:15 Nigeria: rapid development of polio surveillance
- 14:15 – 14:30 Angola: optimizing quality in accessible areas
- 14:30 – 15:00 **Discussion – AFP surveillance**
- Session 3: Lessons learned in polio-free areas**
- 15:00 – 15:15 Hispaniola: vaccine-derived poliovirus outbreak
- 15:15 – 15:30 Cape Verde: wild poliovirus importation outbreak
- 15:30 – 16:00 *Coffee break*

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- 16:00 – 16:30**    **Discussion – priorities in polio-free areas**
- Session 4:**        **Enabling factors for acceleration of polio eradication**
- 16:30 – 16:45**    **Financial resource requirements and  
resource mobilization**
- 16:45 – 17:00**    **Human resources, management and administration  
arrangements**
- 17:00 – 17:30**    **Discussion – enabling factors**

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**Tuesday, 8 May 2001 – TCG sessions**

**Session 1: Stopping poliovirus transmission**

*TCG Issue 1: Is the current national level analysis and use of surveillance data sufficient for targeting supplementary immunization activities (SIAs) in endemic areas?*

09:00 – 09:45 Epidemiology of wild poliovirus in 2000  
South-East Asia Region data  
Eastern Mediterranean Region data  
African Region data

**09:45 – 10:30 TCG discussion**

10:30 – 11:00 *Coffee break*

*TCG Issue 2: Are the WHO-proposed guidelines appropriate for defining and responding to a suspected polio outbreak?*

11:00 – 11:30 Proposed guidelines for defining and responding to a polio outbreak

**11:30 – 12:30 TCG discussion and decision**

12:30 – 14:00 *Lunch*

**Session 2: Surveillance for wild polioviruses**

*TCG Issue 3: Are the WHO-proposed guidelines on polio-compatible cases appropriate?*

14:00 – 14:15 Proposed guidelines on polio-compatible cases

**14:15 – 14:45 TCG discussion and decision**

*TCG Issue 4: How should supplemental surveillance data be interpreted and used by national programmes in polio-free areas? Polio-endemic areas?*

14:45 – 15:00 Environmental surveillance implementation and results in 2000

**15:00 – 15:30 TCG discussion and decision**

15:30 – 16:00 *Coffee break*

*TCG Issue 5: Should 60-day follow-up exam be reintroduced for all AFP cases?*

16:00 – 16:15 Operational impact of selective use of follow-up exam in 2000

**16:15 – 16:45 TCG discussion and decision**

16:45 – 17:30 Summary Day 1

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## Wednesday, 9 May 2001 – TCG sessions

### **Session 3: Stopping polio immunization – the OPV cessation era**

*TCG Issue 6: Protecting populations while  
stopping OPV: is the WHO/CDC programme  
of work appropriate for defining the best strategy?*

- 09:00 – 09:15 Vaccine-derived poliovirus outbreaks –  
lessons for OPV cessation
- 09:15 – 09:30 WHO/CDC programme of work for the OPV cessation era
- 09:30 – 09:45 Report of the Steering Committee on the  
Research Agenda for Stopping Polio Immunization
- 09:45 – 10:30 TCG discussion**
- 10:30 - 11:00 Coffee break*
- 11:00 – 11:15 Analysis of IPV impact on global population immunity
- 11:15 – 11:30 IPV production capacity, costs and containment
- 11:30 – 12:30 TCG discussion and decision**
- 12:30 – 14:00 Lunch*

### **Session 4: Stopping polio immunization – the post immunization era**

*TCG Issue 7: Polio outbreaks in the  
post-immunization era: is the WHO/CDC  
programme of work appropriate for defining  
the best strategy?*

- 14:00 – 14:15 Potential sources and risk of reintroducing  
poliovirus post-immunization
- 14:15 – 14:30 Potential immunization response strategies for  
the post-immunization era  
(including trivalent OPV, monovalent OPV, IPV)
- 14:30 – 14:45 WHO/CDC programme of work for the post-immunization era
- 14:45 – 15:30 TCG discussion**
- 15:30 - 16:00 Coffee break*
- 16:00 – 16:15 Monovalent OPV production and licensing issues
- 16:15 – 17:30 TCG discussion and decisions**

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## **Thursday, 10 May 2001, Plenary Session**

- 09:00 – 09:15**    **Optimizing the impact of polio eradication on EPI**
- 09:15 – 09:30**    **Integration of GAVI and accelerated disease control objectives**
- 09:30 – 10:00**    **Discussion**
- 10:00 – 10:15**    **Acceleration of polio eradication through 2002:  
strategic priorities**
- 10:15 – 10:30**    **Discussion**
- 10:30 - 11:00*    *Coffee break*
- 11:00 – 11:30**    **Summary of sixth TCG discussions and decisions**
- 11:30 – 12:00**    **Clarifications**
- 12:00 – 12:30**    **Closure of meeting**

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# Annex 2:

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