

**Report on the
2nd Meeting of the Technical Advisory Group (TAG)
on Poliomyelitis Eradication in
the Republic of Yemen**

**Sana'a, Republic of Yemen
21 & 22 June 2006**

Executive Summary

Of the 21 previously polio-free countries which were reinfected during the period 2003-2005, the people of the Republic of Yemen suffered a particularly devastating epidemic, with a total of 479 laboratory confirmed cases of paralytic polio in children during a period of 12 months, the most recent case having onset on 2 February 2006 in Ibb governorate.

In response to this epidemic, the Government of Yemen supported by polio partners launched and implemented an extraordinary response, conducting 8 full rounds of national immunization days (NIDs) and 2 subnational immunization days (SNIDs). The NIDs generally reached over 95% of target children using mostly mOPV1. During the same period, reported routine immunization coverage increased substantially during 2005 as the government and partners provided financial and logistic support for a substantial scale-up of outreach activities.

The TAG identified 3 main epidemiological risks to the progress that has been made towards interrupting wild poliovirus transmission in the Republic of Yemen and ranked them as follows:

- *Undetected, ongoing transmission of poliovirus:* Insufficient AFP surveillance performance in the highest risk areas, a slower than anticipated improvement in routine coverage in the first six months of 2006, and a 5% decline in coverage during the April & May mop-ups compared with the December NID, are behind this risk.
- *New importation from Somalia:* constitutes the 2nd highest risk, but appears to be declining as the epidemic is now coming under control in that country. In addition, in Yemen itself routine and/or campaign coverage and AFP surveillance are all generally strong in the major port areas receiving Somali migrants.
- *New importation arising from Nigeria:* Although this risk is currently low, it must be carefully monitored in the light of approaching the season of population movements from areas where the virus is circulating.

Taking the above risks into account, the TAG made the following recommendations:

Surveillance for Acute Flaccid Paralysis:

1. To rapidly achieve an AFP rate of > 2 per 100,000 children under 15 in each governorate as outlined in the new WHA Resolution 59.1. The TAG feels that this is the highest priority at this stage of the programme in Yemen and should be achieved by September 2006.
2. Particular attention must be given to enhancing active searches for AFP cases, beginning with the highest risk governorates where virus was last detected and/or governorates reporting AFP rate < 2 per 100,000 children under 15. All districts with large populations should have active surveillance sites, and the completeness of planned visits, particularly, to priority reporting sites must be monitored to facilitate the targeting of corrective measures.
3. Recognizing the need to rapidly improve surveillance to protect the polio-free status of Yemen, national surveillance capacity for EPI/Polio should be strengthened with the designation of a senior responsible officer and additional qualified staff. This will be fundamental to ensuring that efforts for rapid polio eradication in Yemen are based on a sound foundation of data.

4. Governorate level AFP performance should also be strengthened with additional designated staff, and performance reported on a monthly basis to H.E. the Minister of Health to facilitate advocacy as needed with priority governorates. The National Poliomyelitis Eradication Committee should also be kept informed.

Routine Immunization:

5. Because high routine immunization coverage is demonstrated to be the only way to prevent the spread and epidemic potential following importations, the Government of Yemen must continue to give very high priority to the strengthening of fixed and outreach routine immunization services.
6. The TAG strongly urges that the Ministry of Public Health and Population gives high priority to ensuring that all existing health facilities are staffed, trained and equipped to perform routine immunization services, with quarterly reporting of Governorate level performance to H. E. the Minister of Public Health and Population.
7. Recognizing that routine coverage achieved only 61% in the 1st quarter of 2006, in part due to the delayed release of designated Government funds for outreach, the TAG kindly requests H.E. the Minister of Public Health and Population to facilitate the necessary measures to ensure the timely release of these funds.

Supplemental Immunization Activities:

8. The TAG highlights the importance of monitoring the national, regional and global epidemiologic situation to guide decisions on future polio campaigns in Yemen. Recognizing the constraints on global polio eradication financing and vaccine availability, for the time being the following guidance is provided for SIAs in Yemen:
 - If wild poliovirus is again detected in Yemen, 3 rounds of supplementary immunization should be initiated immediately, as per ACPE recommendations (plan within 72 hours, first round within 4 weeks), at least 2 of which should be nationwide.
 - If no wild poliovirus is detected in Yemen, but the risk of importation increases due to either spread from Nigeria to the Sudan or an escalation of the epidemic in Somalia, an initial 1 round of nationwide supplementary immunization should be conducted with mOPV1 (ideally as early as possible after either of these triggers occurs). Further rounds would depend on the evolving epidemiologic situation.
 - If no further wild poliovirus is detected in Yemen despite improvements in surveillance, and the risk of importations remains low or declines further, emphasis should be given to further strengthening the routine immunization services with trivalent OPV, supplementing this with targeted campaigns in very low performing areas, rather than large scale NIDs or SNIDs.
 - The Ministry of Public Health and Population should develop a media management plan to ensure each of these contingencies can be rapidly and effectively communicated to health workers and the general public population to sustain confidence in the programme and ensure high coverage if further campaigns are required.

9. Given that type 1 is currently the only wild poliovirus serotype circulating in the region, any SIA that is conducted should use mOPV1 subject to availability of supplies.

Recognizing the rapidly evolving epidemiologic situation internationally, the TAG would be pleased to review these SIA recommendations by e-mail or teleconference in late August or early September and advise the Government of Yemen accordingly.

Introduction:

The TAG on poliomyelitis eradication in Yemen held its 2nd meeting in Sana'a, Republic of Yemen on 21 & 22 June 2006. It was attended by TAG members, Ministry of Health Officials and representatives of polio partners. List of participants and programme are attached as Annex (1) & (2).

Dr Yagoub Al Mazrou, Chairman of the TAG opened the meeting. He welcomed H.E. the Minister of Public Health & Population of Republic of Yemen, members of the TAG and other participants. He pointed out to the critical importance of completing the necessary efforts to ensure complete freedom of Yemen from the wild poliovirus that was introduced last year and emphasized on the necessity to give special attention to routine immunization.

Dr Hashim Elmousaad, WHO Representative, delivered a message from Dr Hussein A. Gezairy, WHO Regional Director for the Eastern Mediterranean. In his message, the Regional Director praised the efforts and commitment of the Government of Yemen towards polio eradication, which were behind their success in rapidly containing the epidemic of poliomyelitis. He reiterated the need to avoid relaxation in the efforts until evidence of complete freedom from the invading virus. He also, emphasized on the need to address the reasons behind the epidemic, which is essentially the immunity gap in the population because of weak routine immunization. The Regional Director referred to the important lessons learned from the epidemic and the need to always remember them in order to maintain success and guard against any future set backs.

Dr Gezairy acknowledged the support extended to the polio eradication programme by the polio partners and UN agencies working in Yemen.

In his address to the meeting, H. E. Dr Abdul Karim Al Rasa'a, Minister of Public Health and Population, welcomed members of the TAG and thanked them for their continued support. He highlighted what was done by the Ministry of Public Health and Population following the importation of the virus in early 2005 namely; the conduct of several NIDs, strengthening surveillance and efforts to improve routine immunization.

His Excellency acknowledged with thanks and appreciation, the support of the polio partners and friendly countries, UN agencies and National Societies. He then wished the meeting success and appreciated TAG guidance with respect to 3 issues:

- the number of SIAs required this year and future years
- the type of vaccine to be used and
- recommendations to address any future possible importations

Status of implementation of the Recommendations of 1st TAG meeting:

The TAG was in general impressed with the degree to which the recommendations of its first meeting were implemented, particularly in the areas of routine immunization, polio supplemental immunization activities and social mobilization. The TAG was concerned, however, by the disproportionate deficiencies in implementing its recommendations on surveillance. Of particular concern is the deficiency in implementing active surveillance, engagement of the private sector, tracking of surveillance performance and systematic targeting of activities to rectify residual gaps in surveillance sensitivity.

Epidemiologic Situation and Surveillance Performance:

The TAG reviewed the epidemiology of polio in Yemen. A total of 479 cases of confirmed polio occurred between 25 February 2005 and 2 February 2006 with all but one governorate suffering cases. The most recent case had onset in the governorate of Ibb, but was genetically related to the cases previously detected in Marib, raising the probability of relatively widespread transmission as recently as February 2006.

Although no cases of polio have been detected subsequently, the TAG noted that this may be due to deficiencies or gaps in surveillance sensitivity. The TAG was particularly alarmed that the AFP rates remained below 2 per 100,000 under 15 years of age for a number of governorates including the particularly high risk areas of Ibb and Marib. The TAG was also concerned that the surveillance strategies were not being properly implemented in all areas. There appears to be particular deficiencies in the areas of active surveillance, engagement of the private sector, monitoring and feedback.

The TAG identified 3 main epidemiological risks to the progress that has been made towards interrupting wild poliovirus transmission in the Republic of Yemen and ranked them as follows:

- *Undetected, ongoing transmission of poliovirus:* Insufficient AFP surveillance performance in the highest risk areas, a slower than anticipated improvement in routine coverage in the first six months of 2006, and a 5% decline in coverage during the April & May mop-ups compared with the December NID, are behind this risk.
- *New importation from Somalia:* constitutes the 2nd highest risk, but appears to be declining as the epidemic is now coming under control in that country. In addition, in Yemen itself routine and/or campaign coverage and AFP surveillance are all generally strong in the major port areas receiving Somali migrants.
- *New importation arising from Nigeria:* Although this risk is currently low, it must be carefully monitored in the light of approaching the season of population movements from areas where the virus is circulating.

Recommendations:

1. To rapidly achieve an AFP rate of > 2 per 100,000 children under 15 in each governorate as outlined in the new WHA Resolution 59.1. The TAG feels that this is the highest priority at this stage of the programme in Yemen and should be achieved by September 2006.

2. Particular attention must be given to enhancing active searches for AFP cases, beginning with the highest risk governorates where virus was last detected and/or governorates reporting AFP rate < 2 per 100,000 children under 15 years of age. All districts with large populations should have active surveillance sites, and the completeness of planned visits, particularly, to priority reporting sites must be monitored to facilitate the targeting of corrective measures.
3. To expand/enhance zero reporting and monitor its timeliness and completeness.
4. Recognizing the need to rapidly improve surveillance to protect the polio-free status of Yemen, national surveillance capacity for EPI/Polio should be strengthened with the designation of a senior responsible officer and additional qualified staff. This will be fundamental to ensuring that efforts for rapid polio eradication in Yemen are based on a sound foundation of data.
5. Given the importance of the private sector in identifying and rapidly reporting AFP cases, there should be a systematic effort to raise awareness through appropriate professional bodies with an offer to provide training as requested.
6. Governorate level AFP performance should also be strengthened with additional designated staff, and performance reported on a monthly basis to H.E. the Minister of Public Health and Population to facilitate advocacy as needed with priority governorates. The National Poliomyelitis Eradication Committee should also be kept informed.
7. Detailed subnational analyses should be done on an ongoing basis (e.g. identifying silent areas which have not reported AFP cases, clusters of AFP cases and/or high risk areas with low coverage/suboptimal indicators) with appropriate mapping, feedback and action each month.
8. At its next meeting the TAG requests a detailed report on the quality of implementation of the processes necessary to improve surveillance sensitivity, including the monitoring of completeness of active surveillance and the monthly feedback to Governorates.

Routine Immunization:

The TAG was impressed with the reported increase in routine immunization coverage during 2005, which reached a reported 87% for 3 doses of the pentavalent vaccine. The TAG noted that 28% of that coverage was the result of a new emphasis on outreach activities as part of the 'Reaching Every District' (RED) strategy, which received strong political, technical and financial support from both the Ministry of Public Health and Population and its partners in immunization.

The fragility of this progress is already apparent by mid-2006, however, as the TAG learned that 2006 coverage was only 61% at end-April of this year. While the reasons for this decline in performance are multi-factorial, the TAG noted that a delay in the release of designated Government funds for outreach contributed substantially. The TAG was also concerned that because of a number of factors the outreach activities were not optimally spaced throughout the calendar year (e.g. every quarter).

This low rate of routine immunization is reaffirmed by the high percentage of zero dose children detected during the monitoring of SIAs.

Recommendations:

1. Because high routine immunization coverage is demonstrated to be the only way to prevent the spread and epidemic potential following importations, the Government of Yemen must continue to give very high priority to the strengthening of fixed and outreach routine immunization services.
2. The TAG strongly urges that the Ministry of Public Health & Population gives high priority to ensuring that all existing health facilities are staffed, trained and equipped to perform routine immunization services, with quarterly reporting of Governorate level performance to H.E. the Minister of Public Health and Population.
3. Recognizing that routine coverage achieved only 61% in the 1st quarter of 2006, in part due to the delayed release of designated Government funds for outreach, the TAG kindly requests H.E. the Minister of Public Health and Population to facilitate the necessary measures to ensure the timely release of these funds.

Supplemental Immunization Activities:

The TAG was very impressed with the number and quality of supplementary immunization activities that were conducted between April 2005 and May 2006, for a total of 8 NIDs and 2 SNIDs. The TAG was very impressed with the strong political support being given to the launching and implementation of these campaigns.

The TAG was most grateful for the availability of independent monitoring data and praised the Government for promoting this valuable activity. The TAG noted the value of this information in independently reaffirming the high quality of Government sponsored campaigns and highlighting emerging problems affecting performance and achievements, particularly, during recent mop-ups.

In general, campaign quality has been quite high. Aggregate NIDs coverage has generally been higher than 95% as verified by independent monitoring activities. However, the TAG took careful note of the decline in coverage during the most recent mop-up campaigns, from 97.2% in December 2005 NID to 92.7% in the May 2006 mop-up. Out of the 123 monitored districts, in May 2006, the coverage was less than 90 percent in 31 districts. Recognizing that this reflects in part an increasing community fatigue in some high risk areas, this decline reinforces the need to provide additional technical support, supervision and resources to these areas to overcome their particular challenges.

Recommendations:

1. The TAG highlights the importance of monitoring the national, regional and global epidemiologic situation to guide decisions on future polio campaigns in Yemen. Recognizing the constraints on global polio eradication financing and vaccine availability, for the time being the following guidance is provided for SIAs in Yemen:

- If wild poliovirus is again detected in Yemen, 3 rounds of supplementary immunization should be initiated immediately, as per ACPE recommendations (plan within 72 hours, first round within 4 weeks), at least 2 of which should be nationwide.
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 - The Ministry of Public Health and Population should develop a media management plan to ensure each of these contingencies can be rapidly and effectively communicated to health workers and the general public population to sustain confidence in the programme and ensure high coverage if further campaigns are required.
2. Given that type 1 is currently the only wild poliovirus serotype circulating in the region, any SIA that is conducted should use mOPV1 subject to availability of supplies.

Recognizing the rapidly evolving epidemiologic situation internationally, the TAG would be pleased to review these SIA recommendations by e-mail or teleconference in late August or early September and advise the Government of Yemen accordingly

Social Mobilization and Communication:

The TAG noted the tremendous effort and attention that the Ministry of Public Health and Population gives to this fundamentally important element of polio and routine immunization activities. The Ministry presented its 2-pronged approach to strengthen social mobilization and communication activities, focusing on mass media and inter-personal communication, noting particular challenges in improving the latter. The TAG was pleased that the Ministry of Public Health and Population is working to integrate social mobilization for routine and supplementary immunization activities.

While recognizing the work being done in social mobilization and communication, the TAG stated that further strengthening this requires the collection of additional evidence and data to develop and implement a comprehensive communication strategy using standardized communication indicators.

Recommendations:

- i. A comprehensive communication plan for polio and routine immunization should be developed that (a) addresses listener/audience habits, effective and appropriate sources of information (e.g. written vs. oral vs. visual; mass media vs. IPC), the different needs of urban/rural audiences, and the underlying reasons for refusal or non-participation and (b) optimizes the timing, frequency and branding of messages.
- ii. Communication strategies should include sustaining participation, reducing drop-outs, addressing fatigue, and increasing community dialogue, especially with women's groups and professional associations. Particular attention should be given to the needs of illiterate, special populations and/or underserved communities (e.g. through more intensive IPC by locally respected individuals).
- iii. The Ministry should establish a media management plan for future outbreak response and/or SIAs.

Cross-Cutting Recommendations:

The TAG noted that a number of issues were common to all areas of work on polio eradication, including AFP surveillance, polio campaigns, routine immunization and social mobilization and made the following recommendations in this regard:

1. Special attention should be given to inaccessible and/or insecure areas as well as refugee camps/settlements to ensure full implementation of the necessary surveillance and immunization activities, using locally-appropriate solutions. Given the potential importance of such areas to the overall success of this programme, progress in these areas should comprise an integral part of the reporting.
2. Consideration should be given to convening a special Interagency Coordinating Committee (ICC) meeting to present the findings and recommendations of the TAG, particularly given the need for additional, local financing to implement 'preventive' campaigns.
3. Review the composition of both the National Certification Committee and the National Expert Group and facilitate necessary steps to ensure their effective performance.
4. The TAG would appreciate an update on follow up of polio cases in terms of assessment, rehabilitation, etc. to be presented at the next TAG meeting.

Annex (1)

SECOND MEETING OF THE TECHNICAL ADVISORY GROUP ON POLIO ERADICATION IN REPUBLIC OF YEMEN

Sana'a, Yemen 21– 22 June 2006

LIST OF PARTICIPANTS

MEMBERS OF THE TAG

Dr Yagoub Al Mazrou, **Chairman**
Assistant Deputy Minister
for Curative Services
Ministry of Health
Riyadh

Dr Ali Jaafar Suleiman (*)
Advisor Health Affairs
Supervisor Directorate General
Health Affairs
Ministry of Health
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Dr Hamid Jafari (*)
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Ms Ellyn Ogden
Polio Eradication Coordinator
USAID, Office of Health & Nutrition
Washington D.C.

Dr M. H. Wahdan
Special Advisor to the Regional
Director for Poliomyelitis Eradication
WHO/EMRO

Dr Bruce Aylward
WHO Coordinator for
Poliomyelitis Eradication Initiative
WHO/HQ

(*) Unable to attend

MEMBERS OF THE TAG (Cont'd)

Dr Nafisa Al-Jaifi
Representative of National
Certification Committee (NCC)
Sana'a

Dr Abdul Wahab Al Haifi
Representative of National
Expert Group (NEG)
Sana'a

MINISTRY OF HEALTH

Dr Majed Al Gonaid
Under Secretary of Primary Health Care
Ministry of Public Health & Population
Sana'a

Dr Ali Al Modhawahi
Director General of Family Health Care
Ministry of Public Health & Population
Sana'a

Dr Abdel Hakim Al Kohlani
Director General of Diseases Surveillance
Ministry of Public Health & Population
Sana'a

Dr Mohamed El Emad
Director for National Immunization Programme
Ministry of Public Health & Population
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OTHER ORGANIZATIONS

ROTARY INTERNATIONAL

Dr Sohaib M. Elbadawi
Sudan National PolioPlus
Committee Chairman
Khartoum

CDC

Dr Brent Burkholder
Centers for Disease Control
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UNICEF

Dr Maria Otelia D. Costales
Senior Health Advisor
Global Polio Eradication
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Dr Rafah Salam Aziz
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Dr Mahendra Sheth
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Dr Solofo Ramaroson
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Ms Dena Assaf
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Dr Ahmed Attieg
Senior Health Advisor
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Dr Mohamed Ibrahim
PHR Plus, USAID
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WHO SECRETARIAT

Dr Hashim Elmoussad	WHO Representative Yemen	WHO/YEM
Dr Faten Kamel	Medical Officer, POL	WHO/EMRO
Dr Hala Safwat	Technical Officer, POL	WHO/EMRO
Dr Liliane Boualam	Technical Officer, POL	WHO/HQ
Dr Ahmed Darwish	Medical Officer	WHO/PAK
Dr Elwaleed Sid Ahmed	Short Term Consultant, CIDA	WHO/YEM
Dr Osama Mere	Short Term Professional, EPI	WHO/YEM
Dr Najeeb Abdul Aziz A. Thabet	Assistant for AFP Coordinator, SSA	WHO/YEM
Ms Wallaa El Moawen	Secretary, POL	WHO/EMRO

Annex (2)

SECOND MEETING OF TECHNICAL ADVISORY GROUP ON POLIO ERADICATION IN REPUBLIC OF YEMEN

Sana'a, 21-22 June 2006

Provisional Programme

Wednesday, 21 June 2006

08:30 – 09:00	Registration	
09:00 – 09:30	Opening Session	
	• Message of Dr Hussein A. Gezairy, Regional Director, WHO/EMRO	
	• Address by H.E. Minister of Public Health and Population	
	• Objectives of the meeting – Dr Yagoub Al Mazrou, Chairman	
09:30 – 10:00	Implementation of the recommendations of 1 st TAG Meeting	Dr Ali Al Mudhwahi / Dr Abdel Hakim Al Kohlani
10:00 – 10:30	Coffee break	
10:30 – 11:30	Review of the Epidemiologic Situation / AFP Surveillance	Dr Abdel Hakim Al Kohlani
	Discussion	
11:30 – 12:30	Review of Immunization Activities	
	• Achievements (routine – SIAs)	Dr Mohammed Al Emad
	• Evaluation by Independent monitors	Dr El Waleed Sid Ahmed
12:30 – 13:00	Social Mobilization	Dr Ali Al Mudhwahi
13:00 – 14:00	Lunch break	
14:00 – 14:30	Future Plans 2006 – 2007	Dr Mohammed Al Emad
14:30 – 15:00	Discussion	
15:00 – 15:15	Coffee break	
15:15 – 17:00	Meeting of TAG Members	

Thursday, 22 June 2006

08:30 – 10:00	Meeting of TAG members
10:00 – 10:30	Coffee break
10:30 – 11:30	Presentation & discussion of recommendations
11:30 – 12:00	Closing