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Report on the

THIRD MEETING OF THE TECHNICAL ADVISORY GROUP ON POLIOMYELITIS ERADICATION IN EGYPT

Cairo, Egypt, 3–4 February 2003

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CONTENTS

EXECUTIVE SUMMARY

In November 2002, the Global Technical Consultative Group (TCG) on Poliomyelitis Eradication stated that Egypt, along with India and Nigeria, constituted a 'grave concern' for the cessation of wild poliovirus transmission globally by the end of 2003. The third meeting of the Technical Advisory Group (TAG) considered the concerns of the Global TCG, particularly recognizing that the World Health Assembly has requested a substantive discussion in May 2003 on the status of eradication in each of the remaining endemic countries.

Since the Minister of Health and Population of Egypt assumed direct oversight of polio activities, and the Ministry began aggressively implementing the recommendations of the first and second TAG meetings, there has been substantial improvement in the quality of supplementary immunization activities (SIAs) and surveillance. Of particular importance has been the enhanced engagement of Governors and political authorities, the deployment of fulltime designated polio officers and the establishment of polio cells at all levels. This has facilitated earlier planning of SIAs, use of an exclusive house-to-house approach, and an increase in the number of vaccination teams and supervisors. These changes have resulted in a 12.5% increase in the number of children immunized, from 8.6 million in December 2001 to 9.8 million in December 2002. The TAG was very impressed with the doubling of AFP surveillance sensitivity over the same period (AFP rate of 2.3 versus 1.1 per 100 000 population under 15 years).

These programmatic improvements have resulted in a decline in the intensity of poliovirus transmission in Egypt. Of the 15 governorates with environmental sampling, 11 were positive for wild poliovirus in 2002, as compared to 8 of 8 governorates in 2001. More significantly, the proportion of samples that were positive for wild poliovirus declined from 57% to 14% in the same period. Genetic sequencing found only 3 major clusters of poliovirus type 1 in 2002 versus 4 clusters in 2001. Finally, it has now been 26 months since type 3 poliovirus was isolated (December 2000).

While the TAG is impressed with the progress that has been made since March 2002, it continues to share the concerns of the Global TCG, primarily because of the fragility of the progress to date, the wide geographic extent of virus transmission (including Lower Egypt) and the fact that the most recent cases had onset after the last round of NIDs. However, the TAG believes it is possible to stop transmission in 2003 in Egypt, if the very aggressive programme of work that has commenced under the Minister is continued and the substantial momentum that has been established is maintained. Particularly important will be ensuring that high-level commitment to transparency is implemented at all levels of the programme.

1. Recognizing the tremendous progress that has been made as a result of the direct oversight of the polio programme by the Minister of Health and Population, the TAG would like to encourage this high-level attention through 2003. The Minister's capacity to engage governors, the private sector and other government ministries has been of particular importance.

2. Until the locally filled OPV has been submitted to standard international testing for 'pre-qualification', the use of ready-made vaccine for all supplementary immunization should continue and be introduced for routine services.

3. The national plan of action for 2 full rounds of strictly household-to-household NIDs in early 2003 is endorsed, with the caveat that consideration be given to adding a third round to this series should it be warranted by the available surveillance data in early April. The TAG is available for early consultation on this issue. Planning should continue for two full rounds of NIDs in late 2003.

4. Further improvements in SIA quality will be essential to reach every child and stop transmission. Particular attention should be given the ensuring the 'household-to-household' approach is actually implemented in megacity apartment blocks and other high-risk areas. Supervision of these areas must be enhanced to ensure that poor-performing areas are systematically identified and repeated. This will require deploying additional personnel.

5. The reasons for the discordance in poliovirus isolation results between VACSERA and the global specialized laboratories must continue to be investigated and should be resolved as rapidly as possible. The retesting of samples from highly suspect AFP cases should continue until such time as this issue is resolved.

6. The Expert Group for the Classification of AFP cases should be reconstituted to ensure that it's membership is independent of the Ministry of Health and Population, which should serve as secretariat.

7. Recognizing the excellent collaboration between the Ministry of Health and Population and partner agencies, and the increased financing demands of a strictly house-to-house approach for supplementary immunization activities, enhanced international support should be sought through the Interagency Coordinating Committee (ICC).

1. INTRODUCTION

The Technical Advisory Group (TAG) on Polio Eradication for Egypt held its third meeting at WHO/EMRO in Cairo, Egypt on 3 and 4 February 2003. The TAG was charged with reviewing progress toward the implementation of previous recommendations, evaluating the impact of these actions on wild poliovirus transmission and advising the Ministry of Health and Population on the strategic and operational priorities for polio eradication in 2003. The programme is attached as Annex 1 and the list of participants is attached as Annex 2.

The meeting was chaired by Dr Ciro De Quadros, who invited Dr Mohamed A. Jama, Deputy Regional Director, to address the meeting on behalf of the Regional Director. Dr Jama welcomed the participants and wished them success in their deliberation. He then delivered a message from Dr Hussein A. Gezairy, WHO Regional Director for the Eastern Mediterranean. In his message Dr Gezairy welcomed the participants and thanked His Excellency Dr Mohammed A. Tag-El-Din, Minister of Health and Population, for sparing his valuable time to inaugurate the meeting. He expressed appreciation for the commitment and dedication of the Government of Egypt towards the eradication of poliomyelitis. He mentioned that the implementation of the recommendations of the previous TAG meetings had led to the improvement in AFP surveillance. He congratulated the Ministry of Health and Population for conduction of three house-to-house NIDs rounds, noting that this would not have been possible without widening of the scope of intersectoral involvement, participation of different governmental and nongovernmental sectors and the implementation of a comprehensive communication and social mobilization plan. He urged all partners to consolidate these achievements to sustain high quality activities to reach the eminent goal of interruption of wild poliovirus transmission leading to a polio-free Egypt. He concluded by thanking the TAG members, representatives of the Ministry of Health and Population, UNICEF, Rotary International, the Centers for Disease Control and Prevention (CDC) and the United States Agency for International Development (USAID) and WHO headquarters for their continued support and collaboration.

His Excellency Dr Mohammed A. Tag-El-Din, Minister of Health and Population, Egypt, in his inaugural address welcomed TAG members and other participating partners and WHO staff. He emphasized the need to sustain high quality NIDs and AFP surveillance. After reviewing achievements, he assured the meeting of the full support of the Government of Egypt for the polio eradication programme and reaffirmed his commitment towards implementation of the recommendations of the TAG.

2. REPORT ON THE RECOMMENDATIONS OF PREVIOUS TAG MEETINGS

A detailed point-by-point review of the recommendations from the first and second meetings of the TAG was provided by the Government of Egypt. The TAG was very impressed with the thoroughness and seriousness with which previous recommendations had been addressed. The TAG noted no substantial gaps in the actions taken on previous recommendations, nor did the Government of Egypt identify recommendations which had proven to be 'unimplementable'. Data relevant to specific recommendations are included in the subsequent sections of this report.

The TAG noted that as much as possible, subsequent reports should quantify the progress made in improving surveillance and SIA processes, as well as outcomes since 2001 (e.g. the number of AFP bulletins developed/distributed, the number of active reporting sites visited, the number of SIA vaccinators and supervisors).

3. EPIDEMIOLOGY OF POLIO CASES AND WILD POLIOVIRUSES

The AFP surveillance system has detected 9, 4, 5 and 7 cases of poliomyelitis due to wild poliovirus each year between 1999 and 2002. The 7 wild poliovirus cases detected in 2002 were from the provinces of Sharkia (2), Giza (2), Alexandria (1), Assiut (1) and Menoufia (1). The most recent two cases had onset after the December 2002 NIDs, on 21 and 26 December 2002 (the most recent NIDs finished 16 December 2002). Six of the seven cases were detected in Lower Egypt and greater Cairo, in contrast to 2001 when all 5 cases were detected in Upper Egypt. All but one case was aged less than 5 years and all had received at least two doses of OPV during SIAs.

4. IMPLEMENTATION AND QUALITY OF SUPPLEMENTARY IMMUNIZATION ACTIVITIES

Five rounds of supplementary immunization with OPV were conducted in 2002, two of which were subnational (March and April in Upper Egypt) and three of which were nationwide (September, October and December). From all accounts, these NIDs were of substantially higher quality than those of previous years, due to a number of important changes in implementation strategy. For example, an exclusive house-to-house approach was promoted and a total of 40 000 vaccinator teams were mobilized for the NIDs, compared with a maximum of 26 000 in previous years. For the first time, these teams included a large number of volunteers, including those from the local communities. There was a full supervisory structure covering the team, district, governorate and national levels and totalling 10 000 people using standardized instructions and forms. This supervision was supplemented by 74 national and 30 international monitors. In contrast to previous years, preparations began 3 months in advance, with a particular emphasis on community level microplanning, house marking and use of volunteers. Importantly, enumeration was finally discontinued in favour of a 'geographic' focus.

The extremely high priority being afforded to polio eradication activities in Egypt is best evidenced by the launch of the first round of NIDs in September 2003 by the First Lady. In addition, the SIAs have been personally overseen by the Minister of Health and Population, with substantial engagement of Governors. Other important changes with respect to previous years include the a significant increase in social mobilization activities and introduction of ready-made OPV. There was a substantial investment in the cold chain (i.e. replacement of 20% the existing equipment and purchase of 16 000 new vaccine carriers).

The total number of children aged less than 5 years who were immunized increased from 9.33 million in the first round to 9.54 million in the second and 9.82 million in the third. This represents an increase of between 700 000 and 1.2 million children as compared with December 2001 (i.e. a 7.5% to 12.5% increase given a total of 8.62 million immunized at that time). Much of this increase was in the densely populated governorates such as Cairo. If monitors found a missed geographic area or coverage of less than 95%, the area was repeated. Surveys of approximately 30 000 children found coverage to be greater than 95% on average the sampled areas. Most SIA process indicators also showed improved quality. For example, 90% of the houses were properly marked.

'Source of information' data reaffirm the value of investing in mass media strategies as 78% of respondents had learned of the campaigns through television. Of note, 29% had reported hearing of the campaign through mobile microphones while only 10% reported hearing from religious institutions. Only 5%–8% reported no previous knowledge of the campaigns.

While there is quantifiable evidence of better SIA quality, there remain areas for improvement. Foremost among the concerns of the TAG was the ongoing unresolved issues as to the potency and stability of the OPV which is locally filled. The TAG felt it was unfortunate that VACSERA had not completed the process of pre-qualification of its OPV that it had begun in 2001–2002.

The TAG was also concerned that immunization activities were not implemented on a strictly house-to-house basis in all areas (i.e. 91% house-to-house activities nationwide). An even more important point is that this implementation error was mainly occurring in the large apartment blocks of urban areas and megacities. Extremely concerning were reports that teams were marking apartment buildings rather than individual apartments and calling families for immunization rather than visiting each household. In addition, only 60%–72% of teams were using microplan maps when checked by supervisory teams. Although the teams felt confident that they knew their areas, the full and systematic use of maps can markedly reduce the risk of inadvertently missing geographic areas. Furthermore, of the children who were missed, 30% of parents reported that it was because teams had not visited.

The TAG reinforced the value of the key programme changes that have been implemented, particularly the introduction of an exclusive house-to-house approach, the widespread use of volunteers, the full supervisory structure (1 per 4 teams), and the extensive monitoring. The TAG also voiced the importance of sustaining these improvements and correcting the deficiencies noted above if transmission is to be interrupted in 2003. Given the

substantial number of nationwide house-to-house immunization rounds planned for 2003, it was not anticipated that extensive mop-up activities would be undertaken in the coming year.

Environmental sampling continued to detect extensive wild poliovirus transmission in 2002. However, compared with 2001 there has been a decline in both the number of governorates where such sampling was positive (8 of 8 sampled provinces in 2001 versus 11 of 15 in 2002) and the percentage of samples that were positive for wild poliovirus (57% of 134 samples in 2001 versus 14% of 162 samples in 2002).

Four wild polioviruses from AFP cases with onset in 2002 have been sequenced to date. That these viruses represent three separate lineages confirms that as recently as late 2002 there has been substantial poliovirus transmission in the child population in both Upper and Lower Egypt.

Recommendations for supplementary immunization activities

1. The national plan of action for 2 full rounds of household-to-household NIDs in early 2003 is endorsed, with the caveat that consideration be given to adding a third round to this series should it be warranted by the available surveillance data in early April. The TAG is available for early consultation on this issue. Planning should continue for two full rounds of NIDs in late 2003.

2. To improve the quality of the upcoming NIDs, all available surveillance and SIA monitoring data must be fully scrutinized by mid-March to ensure the accurate identification of high-risk areas. These areas must then receive further attention to ensure exclusive house-to-house immunization, complete use of mapping, increased numbers of teams and the strongest possible supervision.

3. The first level supervision should be improved and if necessary augmented to ensure the capacity to properly monitor the house-to-house approach in mega cities. The best supervisors should be targeted to these areas. To gauge the quality of supervision, the number of areas that are repeated due to insufficient coverage should be monitored.

4. Recognizing the special challenge of megacities, and that the majority of unreached children appear to be in these areas, the number of target children per team per day should be decreased to ensure sufficient workforce to cover high rises and slums properly.

5. Given unresolved concerns as to the potency and stability of locally filled vaccine, ready-made vaccine should continue to be used for all supplementary immunization activities (SIAs) and extended to include routine services. This recommendation can be reviewed once systematic national and international testing of locally filled vaccine has been implemented.

5. AFP SURVEILLANCE QUALITY AND LABORATORY PERFORMANCE

Since the recommendations of the first TAG in March 2002, there has been a substantial increase in the sensitivity of the surveillance system to detect acutely paralysed children. The number of non-polio AFP cases doubled between 2001 and 2002 from a non-polio AFP rate of 1.1 to 2.3 per 100 000 children under 15 years nationwide (581 cases). Despite this doubling of cases investigated, there was only a slight decline in key indicators, all of which remained satisfactory (e.g. the percentage of cases with samples submitted within 3 days was 91% in 2002 versus 96% in 2001).

During 2002 there was a significant increase in the percentage of AFP cases reported from the private sector (26% versus 16% in 2001) and health units (11% vs. 6%), supporting the contention that the timeliness of case detection is improving. At least 1 AFP case was reported from all but one governorate and 181 of 247 districts. Encouragingly, 84% of cases were detected in the governorate of onset. These improvements in surveillance sensitivity followed an increase in the number of reporting sites (to 13 000), with active weekly visits to 200 sites. An AFP feedback bulletin to the governorate level was introduced.

That the sensitivity of AFP surveillance is improving is further evident in the increasing concurrence of this data with that from the environmental sampling. For example, of the three major genetic clusters of virus found in 2002, all were detected through both the AFP surveillance system and environmental sampling. By contrast, only 1 of 4 major clusters was detected through AFP surveillance in 2001.

Overall, the laboratory indicators remain strong, despite the doubling of the laboratory workload between 2001 and 2002. The NPEV rate was 18% (114 of 581 AFP cases) and 90% of results reported within 28 days (up from 75% in 2001). The TAG noted, however, inconsistencies in the laboratory indicators from the confirmed wild poliovirus cases, particularly for the timeliness of reporting.

The TAG was concerned that 1 of the 7 wild poliovirus positive cases was only found positive when the original samples were retested at the request of the programme. In addition, of the 16 environmental samples tested at both KTL/Finland and VACSERA and for which data were available from both sites, 8 had discordant results (50%!), 5 of which were only found to be positive at the Finnish site (this represents 31% of the total). Finally, the TAG noted the low number of Sabin viruses isolated (23 viruses from 581 AFP cases) as compared with the very high NPEV isolation rate and high reported coverage of both routine and supplementary immunization activities.

While the TAG acknowledges that there has been substantial improvement in the quality of AFP surveillance in 2002, a number of areas for improvement were noted. The majority of these concerns were also highlighted in the report of the recent surveillance review, the recommendations of which were fully endorsed by the TAG. The TAG was particularly concerned about: (a) the functioning of the Expert Group for the Classification of AFP cases, as *none* of the 574 'non-polio' AFP cases from 2001 were classified as 'polio compatible'; and (b) the discordant results between VACSERA and the global specialized laboratories.

The TAG took special note of the fact that much of the progress in AFP surveillance has only been possible because of the substantial steps taken to eliminate the pervasive 'culture of fear' which had especially concerned the TAG during its first meeting. However, progress in this regard is still fragile and requires continuing vigilance and close monitoring to ensure that those people who are properly implementing TAG recommendations are not subject to punitive action, but rather are rewarded and encouraged.

Recommendations on AFP surveillance and laboratory performance

1. The Expert Group for the Classification of AFP cases should be reconstituted to ensure that its membership is independent of the Ministry of Health and Population, which should serve as secretariat. The scrutiny of cases referred to the Expert Group should be enhanced with detailed analysis and use of any data generated in terms of 'polio compatible' cases.

2. Surveillance and SIA monitoring data should be analysed together to ensure the accurate identification of high-risk areas for targeted attention. This will require a marked increase in the completeness of data analysis and the speed with which laboratory data (especially from environmental surveillance) is fed back into the programme.

3. The reasons for the discordance in poliovirus isolation results between VACSERA and the global specialized laboratories must continue to be investigated and should be resolved as rapidly as possible. The retesting of samples from highly suspect AFP cases should continue until such time as this issue is resolved.

4. Recognizing the unresolved concerns outlined above, the expanded environmental sampling for polioviruses should be continued. However, the data generated must be more rapidly and completely analysed to enhance their utility to the programme as a management tool rather than a research tool.

5. Given the difficulties inherent in managing a very large number of AFP reporting sites, increased attention should be given to consolidating the list of high priority sites for regular weekly active visits, ensuring that such sites are established in every district. At the same time, the increasing engagement and communications with the private sector in AFP surveillance should be reinforced.

6. POLIO ERADICATION PLAN OF ACTION 2003 AND PARTNER COORDINATION

The TAG received a detailed presentation on the major elements of the national Polio Eradication Plan of Action for 2003. The major areas of work outlined in the plan included:

a) Oversight and implementation bodies: enhancing the work of the National Polio Eradication Committee (headed by the Minister), the Expert Group for AFP Classification, the national support team and both governorate and district level polio eradication cell offices.

b) AFP surveillance: further supporting existing procedures, expanding to other sectors (e.g. health insurance offices), implementing actual active surveillance, continuing the AFP reward system, convening district level orientation meetings and governorate level quarterly meetings (4 groups of governorates) and improving the use of environmental surveillance as a management tool.

c) NIDs: implementing 2 sets of NIDs (in March/April and September/October), promoting proper house marking, conducting supervisor orientation and review meetings (at central, governorate and district levels) and standardizing NIDs guidelines (especially microplanning).

d) Social mobilization: continuing the national communications campaign, improving the media strategy, engaging the private sector and targeting high risk areas and populations.

The TAG also heard of the increasing effectiveness and importance of the ICC, particularly given the increased budget requirements for implementing the house-to-house SIA strategy nationwide in 2002 and 2003. It was noted that the ICC deliberations had strengthened the position of local donor representatives when requesting additional support from central level. Both the Government and ICC members stressed that ensuring the optimum impact of the early SIA planning process required funds to be available 2–3 months in advance of the actual activities.

Recommendations on the 2003 plan of action

1. Recognizing the tremendous progress that has been made as a result of the direct oversight of the polio programme by the Minister of Health and Population, the TAG would like to encourage this high-level attention through 2003. The Minister's capacity to engage Governors, the private sector and other government ministries has been of particular importance. Given the potential need for executive decisions at this critical phase in the programme, the direct access to the Minister by those responsible for managing poliomyelitis eradication activities in Egypt should continue to be encouraged.

2. Recognizing that the recent improvements in the quality of polio activities were greatly facilitated by the increase in external financing in 2002, partner agencies should enhance their advocacy efforts to mobilize additional partners and funding on behalf of the Government of Egypt. Particular attention should be given to securing sufficient funds for the NIDs operational costs, currently estimated at approximately US$ 650 000 per round.

3. The scope of work outlined in the Plan of Action for 2003 is endorsed, recognizing the need for some revisions to accommodate the recommendations outlined in this report. The revised Plan of Action should be translated into a work plan and budget by mid-March 2003 and presented to the ICC, to facilitate partner planning and inputs.

Annex 1

PROGRAMME

Monday, 3 February 2003

08:30–09:00	Registration
09:00–09:30	Opening session Address by H.E. Dr Mohamed Awad Afifi Tag-El-Din, Minister of Health and Population, Egypt Message from Dr Hussein A. Gezairy, WHO Regional Director for the Eastern Mediterranean Objectives and meeting agenda/TAG Chairman (Dr De Quadros)
09:30–09:45	Follow up on implementation of Recommendations of Second TAG Meeting/Dr Ibrahim Barakat
09:45–10:30	Discussion
10:30–11:15	Implementation of Fall NIDs: results of independent monitoring/Dr Ibrahim Barakat
11:15–11:30	Surveillance data and progress/Dr Ibrahim Moussa
11:30–12:00	Environmental surveillance results/Dr Humayun Asghar
12:00–13:30	Report of surveillance review team/Dr Faten Kamel
13:30–13:40	Questions to the TAG/Dr Faten Kamel
13:40–15:00	Discussion

Tuesday, 4 February 2003

09:00–09:30	Polio eradication plan for 2003/Dr Nasr El Sayed
09:30–10:30	Discussion and comments of partners
10:30–11:00	Closed meeting of TAG members
11:00–12:00	Recommendations Closing Briefing with H.E. Minister of Health and Polulation

Annex 2

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