1. Introduction

The fourth meeting of the regional technical advisory group on poliomyelitis eradication was held in Cairo, Egypt on 10 and 11 May 2006 under chairmanship of Dr. David Salisbury. The meeting was opened by Dr. Hussein A. Gezairy, WHO Regional Director for the Eastern Mediterranean Region who welcomed the TAG members and expressed gratitude of WHO for their valuable guidance to the program. He also welcomed representatives of UNICEF, Rotary International, CDC and colleagues from WHO headquarters, AFRO and EMR region.

Dr. Gezairy referred to the developments in the region, particularly the declaration of polio-free Egypt and the evident reduction in wild poliovirus transmission in Pakistan and Afghanistan. However, he expressed significant concerns about the evidence of continued extensive transmission of poliovirus in northern Nigeria and the risk of re-introduction of the virus into EMR. He emphasized the need to rapidly interrupt poliovirus transmission in Somalia and to maintain high levels of surveillance and population immunity among young children.

The program and list of participants are attached in Annex I and II.

2. Follow-up of the recommendations of the third RTAG meeting

The regional technical advisory group noted, with appreciation, that the recommendations made in its last meeting have been implemented by both WHO/EMRO and member states, particularly with respect to implementation of high quality surveillance and supplementary immunization activities (SIA) as well as the close coordination with neighboring countries in Africa. The TAG has noted the achievements in Egypt which was declared polio-free and the clear evidence of reduction in wild poliovirus transmission in the two remaining endemic countries, namely Pakistan and Afghanistan. It acknowledged the extremely hard work made by all those involved in polio eradication program activities at all levels especially at the most peripheral levels.

3. Progress in Egypt:

The TAG noted with great satisfaction the end of the circulation of wild poliovirus in Egypt and recommends the following:
- Maintaining certification standard surveillance including environmental monitoring and avoiding development of immunity gap among any
population groups through continued emphasis on sustaining high levels of routine immunization.
- The national authorities should put into effect the national plan for preparedness and response to importation.
- The national TAG for Egypt should explore the value of using monovalent OPV1 for the birth-dose in the national immunization schedule during their next meeting.

4. Progress in the remaining endemic countries:

4.1 Afghanistan
The TAG highlighted Afghanistan as a priority country with remaining localized endemic transmission in the southern region, particularly in Kandahar province. This situation is directly related to the high insecurity and inadequate accessibility leading to sub-optimal quality of SIA activities.

The TAG was briefed about ongoing efforts by the national authorities, WHO and UNICEF to achieve periods of tranquility in areas with ongoing conflict in southern Afghanistan to enable vaccination of all children.

The TAG recommended the following:
- Every effort should be done to ensure access and vaccination to all targeted children. The TAG therefore reinforces the work being done to achieve periods of tranquility. Emphasis should be put on densely populated accessible areas to ensure the highest coverage, in all provinces of the southern region where recent transmission occurred.
- Campaigns should be implemented every 6-8 weeks using the appropriate vaccine guided by the epidemiologic development in the country.
- In view of the fact that the epidemiology of the poliovirus circulation in Afghanistan is closely linked to Pakistan, there should be continued close coordination between the two programs and give particular attention to the moving population between the two countries and the border area representing the common pool of transmission.

4.2 Pakistan:
The TAG acknowledged that Pakistan had made significant progress towards eradication of poliomyelitis with clear evidence of decreasing virus diversity and intensity of transmission and recommends the following:
- Maintain the strong political commitment at all levels, federal, provincial and district.
- The TAG endorses the continuation of SIAs with the additional focus on the virus reservoir areas through mop-up activities using the appropriate vaccine.
- The program should ensure high levels of immunity in all children and avoid any immunity gaps that may develop in certain areas or among specific population groups due to accessibility problems.
- To sustain the very high level of surveillance sensitivity and efficiency.
- In view of the fact that the epidemiology of the poliovirus circulation in Pakistan is closely linked to Afghanistan, there should be continued close coordination between the two programs and give particular attention to the moving population between the two countries and the border area representing the common pool of transmission.

5. Situation in Re-infected Countries

5.1 Sudan
The TAG noted with satisfaction that the epidemic of 2004-2005 has come to an end and that surveillance and routine immunization are improving. However, the political development in Sudan and the peace process in Darfur are expected to result in significant population movement from Chad and southern states which are areas of traditionally weak surveillance and immunization coverage. Additionally, it is noted that the season of usual annual population movement from west and central Africa eastwards towards Saudi Arabia is approaching and hence the potential of reintroduction of the poliovirus from endemic areas in Africa and Sudan.

The TAG therefore recommends that:
- Surveillance efforts should strengthened, particularly in Upper Nile region of southern Sudan where previous transmission was missed.
- The national plan for preparedness and response to importation should be updated and activated
- Two rounds of NIDs to be conducted in the fall of 2006 with special attention given to high risk areas.

5.2 Yemen
The TAG noted the efforts made by national authorities, WHO and UNICEF and other polio partners to quickly bring the epidemic under control in a relatively short period. It has also noted the few sporadic cases that followed, the last of which had its date of onset on February 2nd, 2006.

Several lessons were learned from this epidemic, especially the need to avoid the development of an immunity gap among young children and keep the surveillance always on the alert to ensure early detection of any importation. Additionally, the TAG was informed of ongoing efforts of national authorities supported by Gulf Countries and WHO to strengthen routine immunization.

The TAG Recommends:
To maintain political commitment and avoid complacency
- The upcoming Yemen TAG closely examines the quality of the AFP
  surveillance at the sub-national level and measures taken to strength
  routine immunizations.
- Update and activate national plan for preparedness and response to wild
  poliovirus importation

5.3 Somalia:
The TAG noted that several preventive SIAs were implemented since early 2005
including the use of monovalent OPV1. It was also noted that when the virus was
introduced in Somalia it had its severest impact where the security situation has
affected accessibility, particularly Banadir and Lower Shabelle, while spread
outside these areas remained largely sporadic and limited. The TAG also noted
that the vaccination status of non-polio AFP cases still shows large gaps in the
immunity.

- The Somali program to continue SIAs every 4-6 weeks until transmission
  is interrupted and continue the efforts made to increase the quality of the
  campaigns to ensure rapid control of the epidemic.
- The TAG endorses continuation of the use of mOPV1 vaccine until
  interruption of transmission. Thereafter, at least two rounds should be
  implemented using tOPV.
- The program should continue efforts to ensure accessibility to reach all
  targeted children in the country.

Horn of Africa Coordination:
The TAG highlighted the vulnerability of countries in the Horn of Africa and
expressed special concerns on the situation in Somali region of Ethiopia and
Djibouti with its relative sub-optimal program performance. The TAG also
recognized the existing level of coordination achieved in countries of the Horn of
Africa and recommends
- Strengthening these efforts, with special emphasis on coordination in the
  Somali community in the four countries (Somalia, Djibouti, Ethiopia and
  Kenya). This should be achieved through joint planning and synchronized
  activities.

6. Global Risk of Poliovirus Importation:

Global Risk:
The TAG noted the extraordinary efforts made in Sudan, Yemen and Somalia to
address the importation arising because of the failure to control the situation in
northern Nigeria. Unless similar efforts are made in Nigeria, this serious threat
will continue to exist to countries of the region and the world.

In order to protect the achievement of the program
- The member states of this region should be alerted of the ongoing intense transmission in some northern states of Nigeria.
- The TAG urges that the regional office regularly monitor the situation in Nigeria, including the impact of the planned May-June immunization plus days on transmission and keep member states of EMR informed of the potential of re-infection from this major reservoir.
- The TAG calls on the Regional Director to work with countries of the region to encourage them to initiate direct contact with Nigeria regarding the need to rapidly bring the situation in the affected parts of Nigeria under control through implementation of the most appropriate strategies defined by the ACPE.

With the upcoming season of Umra and Haj (pilgrimage) and the high influx of pilgrims from Muslim countries around the world, there is a danger of the importation of the poliovirus into Saudi Arabia and from there globally, the RD may consider asking Saudi Arabia to exert special efforts through direct communication with Nigerian officials to impress upon them the urgent need to rapidly bring the situation under control.

**Preparedness and Response to Importation:**
The TAG reviewed the experiences among the countries which suffered from importation with respect to the timeliness of the detection, adequacy and impact of the response. The TAG reviewed and endorsed the revised regional “Guidelines for Preparedness and Response to Wild Poliovirus Importation and Format for National Plans”. It urged the countries of the region to:

- Adhere to the standards spelled in the guidelines
- Countries should regularly review their national plan for preparedness and response to importation. They are also expected to test these plans.
- Countries where importation result in secondary cases should immediately be prepared to conduct at least 6-8 months of response activities to control the situation.
- Planned surveillance reviews should also be used as opportunities to review the application and operational aspect of these national plans for preparedness and response to importation.

**Definition of Imported Cases**
The RTAG discussed the issue of importation and classification of cases and stressed that when a case is known to have been infected in one country and then moves to another country, the case should be listed in the country where infection took place. When in doubt, genomic sequencing data would help in identifying the most probable source of infection.

Consequently, the two cases that were exposed to the virus and became ill in Yemen and then crossed the border for treatment in Oman should be included in the line list of Yemen.
Similarly the Sudanese case that traveled to Saudi Arabia where it had paralysis starting in SAA shortly after arrival from Sudan (within incubation period) and the wild poliovirus was related to the virus circulating in Sudan, should be added to Sudan’s line list.

- The regional office should therefore revise the records with respect to the above mentioned case recorded currently under Saudi Arabia.
- Polio-free countries which receive confirmed cases of wild poliovirus from other countries during the period of communicability should timely implement appropriate immunization and surveillance response.

7. **Surveillance:**

The TAG acknowledges the achievements illustrated by the surveillance performance indicators in the region. However it expressed concern regarding the remaining gaps in some high risk areas especially in Sudan, Somalia and Djibouti and the borderline surveillance standards in some of the polio-free countries such as Morocco and Lebanon.

The TAG stressed the need to sustain surveillance sensitivity; however this should not compromise the quality.

- Cases included in AFP rate calculations should be those cases whose clinical manifestations represent a proxy to poliomyelitis. GBS rate represents a good indicator for the quality of the AFP surveillance.
- To increase the sensitivity of the surveillance system and assess the extent of any possible transmission, supplemental surveillance activities are introduced such as collection of stool specimens from contacts of select AFP cases. In this regard, the TAG reviewed the regional guidelines for contact sampling and endorsed them.
- The TAG recommends the monitoring and assessment of the impact of the new guidelines on laboratory workload and the impact it has on the identification of the wild poliovirus.

**Laboratory support to surveillance:**

The TAG acknowledges the contribution made by the laboratory network and the high quality performance as indicated by the timely reporting of the result to them to guide the program to take necessary action. It has noted that the transport time of specimen from collection to reaching the laboratory is still longer than the target in few countries.

- It recommends that this would be further investigated and corrective measures taken to address the reasons for this gap.
- The TAG also recommends that the program continues to extend the necessary support to the regional laboratory network to adequately cope with the work load.

8. Supplementary Immunization Activities:

The immunity profile of AFP cases in member states was reviewed. The TAG recommended that:
- Countries should regularly monitor routine immunization coverage and immunity profile as reflected from immunization status of AFP cases in order to early identify any immunity gap nationally or among specific groups. Any identified gaps should be addressed through ensuring strong routine immunization and conducting appropriate SIAs.

The plan of SIA activities in the region were presented and reviewed by the TAG. 
- The TAG members agreed that external support for preventive campaigns would be justified in Sudan as it is the first possible re-entry route into the region from west and central Africa particularly with the current unrest situation in Western Darfur.
- The TAG recommends that the international spread of virus be closely monitored with onset of the high season of travel and population movement so that it could trigger rapid implementation of precautionary measures (i.e. heightened surveillance and possible preventive campaigns) especially in Yemen and Somalia.

9. Coordination:
- Where cross country or cross region activities are to be undertaken these should be coordinated to achieve the best possible effect. Ideally the involvement of the relevant regional directors of WHO and UNICEF would be instrumental in supporting such coordination.

10. OPV Cessation:

The TAG noted the substantial and comprehensive program of work that is ongoing to prepare for eventual OPV cessation.

During 2004 and 2005 there were important development in this area including the inclusion of polio in the IHR (2005), the development and licensing of stockpile vaccine (i.e. OPV1 and OPV3), the publication of a supplement to the WHO position paper on IPV, and development of the third edition of the global action plan for containment for polioviruses. The TAG recommends:
- EMRO support key member states (especially middle income countries) to implement the new protocols for evaluating the prevalence of prolonged or chronic poliovirus excretion among persons with primary immunodeficiency disorders.
EMRO should incorporate information from the new supplement to the WHO IPV position paper and GAP III into its advice to member states on long-term post-eradication planning.

EMRO should consider using the RC and annual EPI managers meeting to keep member states abreast of developments in the area of preparations for eventual OPV cessation.

11. Poliovirus Laboratory Containment:

The TAG noted that continue progress towards completion of phase I of Laboratory containment among countries of the region and looks forward to the timely completion of this phase. Additionally, data presented reassures the TAG that very few countries would be holding polio viruses in the future.

- The TAG recommends alignment of the regional containment plan with GAP III.

12. Certification:

The TAG was briefed on the status of implementation of certification activities among the member states. They confirmed that there is no global frame of work to be used for submitting regional reports to the GCC. The global commission is expected to give some guidance in this regard.

The TAG recommends that:
- The RCC members should be well-briefed on technical issues and positions that emanate from polio eradication regional and global technical bodies.
- The RCC, being a non-technical body, should refer such issues to the relevant technical bodies of the program.

13. Coordination between PEI and EPI activities.

The TAG appreciated the comprehensive overview illustrating the contributions of polio eradication program to EPI and other health activities in the region.

- The TAG strongly recommends that this valuable information should be documented in a publication for large scale distribution to raise awareness globally about the role of PEI in other health activities in the region.