

**World Health Organization**

**TECHNICAL ADVISORY GROUP ON POLIO  
ERADICATION FOR THE HORN OF AFRICA  
COUNTRIES**

**10<sup>th</sup> Meeting Report**

**5 February to 7 February 2014  
Nairobi, Kenya**

## **Executive Summary**

The 10<sup>th</sup> meeting of the Technical Advisory Group on Polio Eradication for the Horn of Africa Countries (HOA TAG) was held from 5 to 7 February 2014 in Nairobi, Kenya. The purpose of the meeting was:

to review the situation, and the progress in achieving the objectives of Phase II of the outbreak response plan (Nov 2013 to Apr 2014)

to provide recommendations for achieving those objectives, as well as for maintaining polio free status following interruption of transmission

to review and provide recommendations on sensitivity of surveillance

and finally, to review and provide recommendations on risk mitigation strategies, and additional interventions, for prevention of introduction of wild polio virus into non-infected countries.

The meeting took place in the context of a continuing outbreak of WPV1 which started in the Banadir region and then spread to other areas in South Central Zone of Somalia, as well as to neighbouring areas of Kenya (North East) and Ethiopia (Somali Region).

The TAG noted the achievements attained *by the countries*, and appreciated their efforts in following up and reporting on the status of implementation of previous TAG recommendations. TAG also expressed satisfaction, and *complimented partners*, on joint HOA presentations, on the appointment of an overall coordinator for the HOA outbreak with focal persons from all partners, and on progress on the use of social data within the communication strategy.

*But the TAG expressed deep concern that the HOA outbreak is not yet over*, and has spread out of its initial epicentre. The TAG noted that the initial response to the outbreak was satisfactory but expressed serious concerns on SIA quality and surveillance sensitivity in some of the infected countries. No major breakthrough has been made in reaching half a million children in inaccessible areas of South Central Somalia. These are serious risks to stopping transmission in the Horn of Africa.

The TAG reviewed the achievements of Phase I (May to Oct 2013) and Phase II (Nov 2013 to Apr 2014) of outbreak response against their set objectives and concluded that only 2 of 4 objectives of Phase I have been met. For Phase II, the TAG concluded that 3 out of 4 objectives are at risk.

***Most importantly, the TAG concluded that there is high risk of continuation of the outbreak and its further spread within and beyond HOA countries.***

The TAG made the following key recommendations:

- a) To rapidly interrupt transmission, ***infected countries should focus on high risk/infected areas for conducting high quality SIAs with no more than 4 weeks gap between SIAs.*** Such focusing will help in concentration of resources to infected areas.
- b) Countries should ***develop and implement specific flexible plans for vaccination, communication and surveillance in mobile populations, with focus on the pastoralist/nomadic communities.*** UNICEF and WHO ROs should facilitate exchange of good practices, strategies and planning guidelines. The country teams are encouraged to use available sources of information (e.g., RMMS, IOM, UNHCR, etc.) to ***identify, map and access these communities*** and vaccinate.
- c) Countries should ***prioritize improvement of SIA quality in the infected and highest risk regions/zones*** (including areas with high numbers of incoming refugees); use IM data for improving coverage in sub-sequent rounds; and, document reasons for missed children while taking appropriate actions to reduce their numbers.
- d) The TAG strongly recommends to both countries and other partners that ***all vacancies of existing and surge staff should be filled on a priority basis.***
- e) ***Kenya*** should share the report on action taken following the notification of a positive environmental sample in Nairobi County. The ***national plan for environmental surveillance should be completed and implemented***, and results shared at the next TAG meeting
- f) ***In Somalia, further efforts should be made to access the children in the inaccessible (non-SIA) districts of SCZ*** through local NGOs and continuous negotiations with different parties or programmes functional in the area.
- g) ***Somalia should continue with the strategy of conducting four vaccination rounds at short interval using bOPV in the newly accessible districts/populations***, making all preparations in advance.
- h) ***In the accessible areas of Somalia, the programme needs to focus on SIA quality:*** micro-plans should thoroughly be reviewed and updated regularly in consultation with the operational staff, better training implemented, improved supervision ensured, with IM continued and expanded to other areas while taking necessary action for poor performance.
- i) ***Across the Horn of Africa, the programme needs to maximize the use of communication “know-how” strategies and platforms for Somali populations*** in the HoA countries, including ***specific interventions to target pastoralist, nomadic and migrant groups.***

- j) ***Governments and partners must hold their staff accountable*** for responsibilities, particularly for polio eradication activities in high risk areas.

The next meeting of the HOA TAG is proposed to take place in mid- August 2014 in Nairobi, Kenya.

## **I. Preamble**

The 10<sup>th</sup> meeting of the Technical Advisory Group on Polio Eradication for the Horn of Africa Countries (HOA TAG) was held from 5 to 7 February 2014 in Nairobi, Kenya under the chairmanship of Dr Jean-Marc Olivé. In 2013 the HOA TAG had met in April-May (its 9<sup>th</sup> Meeting) and had had two teleconference calls (virtual TAG meetings) in October and December.

Globally, the number of WPV1 cases went down in endemic countries from 194 in 2012 to 159 in 2013, with Nigeria and Afghanistan showing major decreases (>50% reduction). And no case of WPV3 was detected in 2013. But, 2013 saw setbacks in the form of outbreaks in three HOA countries (Somalia, Kenya and Ethiopia), in Syria and in Cameroon.

Since the last TAG meeting in April 2013, there have been major developments in the Horn of Africa. HOA is having an outbreak of WPV1 with first case notified on 9<sup>th</sup> May from Banadir region of Somalia (date of onset 18<sup>th</sup> April). Most of the cases at the start of the outbreak occurred in the Banadir region and then spread to other areas in the South Central Zone of Somalia and to neighbouring areas of Kenya (North East Kenya) and Ethiopia (Somali Region). As of 4<sup>th</sup> of February 2014 the total number of WPV cases in the HOA are 213, with 190 cases from Somalia, 14 from Kenya and 9 from Ethiopia. This outbreak is still continuing with the last case from Somalia detected in Dec, and from Ethiopia in Nov 2013. In Kenya, no polio virus has been detected since mid-July 2013 but an environmental sample collected from Nairobi in October 2013 was found positive for WPV1.

This ongoing polio outbreak has occurred in a complex context that influenced its occurrence and magnitude, as well as the response strategies. Inaccessibility, mainly due to security concerns in south and central Somalia and in border areas of north-eastern Kenya, makes it difficult for vaccinators to reach all children during campaigns, resulting in suboptimal population immunity. Significant population movements resulted in the virus spread to large pools of unvaccinated children in some areas. Subnational acute flaccid paralysis surveillance gaps exist in all the countries in the epidemiological block.

**Phase I:** The response to the outbreak was swift and had four objectives for the first six months (Phase I, from May to Oct 2013):

- a) to interrupt WPV transmission in the outbreak zone within four months
- b) to protect populations at high risk from the WPV outbreak
- c) to maximize opportunities for immunisation in the inaccessible areas of south-central Somalia, and
- d) to protect populations in other areas that may be at risk due to population movements.

Innovative strategies such as expanded age group vaccination, short interval administration of additional OPV doses and the use of bivalent OPV (bOPV) were used in responding to the outbreak.

In Phase I, both Kenya and Somalia showed aggressive responses in the outbreak zone. Banadir region of Somalia conducted 8 SIAs through November, of which 6 SIAs covered higher age groups (3 SIAs covering children less than 10 years and another 3 covering the entire population). The North Eastern province of Kenya, conducted 5 SIAs through November, 2 of which covered the entire population.

Areas immediately around the infected zone were at highest risk of WPV spread. This included South Central zone of Somalia; Turkana, Nairobi, and high risk areas of Rift valley and Coast province in Kenya; Somali region of Ethiopia and refugee areas/IDP camps in Yemen. All these areas implemented intense SIAs to raise population immunity: Somalia conducted 7 SIAs in South Central Zone of which 5 targeted population of higher age groups (3 covering children less than 10 years and another 2 covering the entire population); Kenya, Ethiopia and Yemen each conducted 3-4 campaigns in these areas.

In Somalia, in addition to chronic conflict and insecurity, mass immunisation activities for polio have been banned in regions controlled by non-state entities since 2009. This resulted in the accumulation of a pool of nearly one million unprotected children under five years of age. Permanent vaccination teams at transit points and cross border areas have been established in these non-SIA areas. Negotiations to initiate immunisation in inaccessible areas have also been conducted. In partially accessible districts, stocks of vaccines and financial resources have been prepositioned in order to vaccinate children that might be coming from inaccessible villages or to immediately start SIAs in case they become accessible.

To protect populations in other areas deemed to be at risk due to population movements - including other parts of Somalia, as well as Kenya, Ethiopia, Yemen and other countries in the Horn of Africa - Phase I saw preventive campaigns in all of these areas to raise population immunity. Somalia conducted 7 SIAs covering Somaliland and Puntland, Kenya and Ethiopia conducted 2-3 campaigns, and other countries in the HoA also conducted preventive campaigns.

**Phase II:** In view of the changing epidemiology (i.e. spread to and continued transmission in non-SIA areas of South Central Somalia), the Objectives of Phase II (Nov 2013 to Apr 2014) of the Outbreak Response were set:

- a) to interrupt WPV transmission in non-SIA areas of the South Central Zone of Somalia by April 2014
- b) to interrupt transmission in the Somali region of Ethiopia by the end of 2013, and to sustain protective immunity throughout the epidemiologic block (Banadir, the remainder of the South Central Zone of Somalia and the NE Province of Kenya)

- c) to sustain high population immunity in areas at high risk of transmission, and
- d) to continue routine vulnerability reduction activities and outbreak response preparations.

In first three months of Phase II (Nov 13 to Jan 14), infected and other high risk areas of Somalia, Kenya and Ethiopia had two to three vaccination opportunities which included expanded age campaigns in Somali region of Ethiopia. The rest of the areas of Horn of Africa had 1-2 opportunities with preventive campaigns.

The current epidemiology shows that transmission in the epicentre of the outbreak has dropped, with no case reported in NE Kenya and the Banadir region of Somalia after July. Despite preventive SIAs and permanent vaccination points, transmission did spread to other parts of the South Central Zone of Somalia and is also continuing in non-SIA areas. New cases have been reported in the Somali region of Ethiopia. The countries in the HoA therefore remain at substantial risk. In addition there is risk of international spread.

## **II: Conclusions and Recommendations**

### **General Conclusions**

The Technical Advisory Group noted the achievements attained by the countries and appreciated their efforts in following up and reporting on the status of implementation of the recommendations made during the 9th HOA TAG meeting in April 2013. However, it noted that some of these achievements/efforts were not documented well.

The TAG expressed satisfaction and complimented partners on joint HOA presentations, appointment of an overall coordinator for HOA outbreak with focal persons from all partners, and progress on use of social data for communication. TAG also expressed satisfaction on the risk assessments done by regions and countries. Finally, the TAG recognised and appreciated fund raising efforts for outbreak response in some of the HOA countries, and encouraged both Regional Offices and Country Offices to take a leadership role in local fundraising during 2014.

However ..... ***the TAG expressed deep concern that the HOA outbreak is not over, and has spread out of its initial epicenter.*** The TAG noted that the initial response to the outbreak had been satisfactory but expressed serious concerns on SIA quality and surveillance sensitivity in some of the infected areas.

The TAG noted significant delays in processing of stool specimens at the Kenya and Ethiopia laboratories, as well as incidence of UVT (unintended virus transfer). The challenges highlighted for the KEMRI lab include increase in workload, limited laboratory space, late implementation of surge capacities attributable to suboptimal administrative procedures, data management issues and insufficient day to day supervision capacity. For the Ethiopia lab, the

TAG noted with concern the challenge of delayed processing of samples due to lack of reagents resulting from custom clearance problems.

**Phase I:** *The TAG reviewed the achievements of Phase I of outbreak response against set objectives and concluded that only 2 of 4 objectives have been met:*

***Achievement against set objectives in Phase I of outbreak response are as below:***

Objective	Remark	Status
1. To interrupt WPV transmission in Banadir and Dadaab within 4 months	<ul style="list-style-type: none"> <li>No cases detected after mid July 2013</li> </ul>	Met
2. To protect populations at high risk of WPV outbreak	<ul style="list-style-type: none"> <li>Spread to accessible areas of south central zone of Somalia but seems to have been controlled with last case in mid Aug 2013</li> <li>Spread to Somali region of Ethiopia, transmission continuing</li> </ul>	Partially met
3. To maximize opportunities for immunization in inaccessible areas of south central Somalia	<ul style="list-style-type: none"> <li>Spread to non SIA areas, transmission continuing</li> </ul>	Not met
4. To protect populations in other areas that may be at risk due to population movement	<ul style="list-style-type: none"> <li>Immunity built with multiple preventive campaigns, no transmission detected</li> </ul>	Met

**Phase II:** *The TAG also reviewed the progress in Phase II of outbreak response and concluded that 3 out of 4 objectives are at risk or not met:*

***Achievement against set objectives in Phase II of outbreak response are as below:***

Objective	Remark	Status
1. Interrupt transmission in non SIA areas of south central zone, Somalia by April 2014	<ul style="list-style-type: none"> <li>Transmission still being detected with last case onset in late Nov'13</li> </ul>	At Risk
2. Interrupt transmission in Somali region of Ethiopia by end 2013 (as per 4 months from notification target) and sustain high population immunity throughout the epidemiologic block (Banadir, rest of SCZ Somalia, and NE province of Kenya)	<ul style="list-style-type: none"> <li>Findings from recently conducted Outbreak response assessment in Ethiopia shows that there is urgent need of improving quality of SIAs in Somalia region. If not addressed, this poses serious risk to interruption of transmission.</li> </ul>	At Risk
3. Sustain high population immunity in areas at high risk of transmission.	<ul style="list-style-type: none"> <li>No transmission detected in the high risk areas of Ethiopia</li> <li>Transmission detected in Puntland of Somalia and Environmental Sample of Nairobi</li> </ul>	Not met
4. Continuation of routine vulnerability reduction activities and preparation for outbreak response	<ul style="list-style-type: none"> <li>No transmission detected</li> </ul>	On track

**In global terms, the TAG concluded that there is serious risk of continuation of the outbreak and its further spread within and beyond the Horn of Africa.**



## **Recommendations**

### **Cross Cutting Recommendations:**

1. In view of global gaps on funding and vaccine, necessitating priority to endemic countries and outbreak areas, TAG recommends that within HOA, ***infected and highest risk areas should be prioritized for SIAs***. Preventive campaigns should be conducted as per the resources available. ***TAG also encourages both Regional Offices and Country Offices to take a leadership role in local fundraising during 2014.***
2. To rapidly interrupt transmission, ***infected countries should focus on high risk/infected areas for conducting high quality SIAs with no more than 4 weeks gap between SIAs***. The focusing will help in concentration of the resources to infected areas.
3. TAG ***reiterates its earlier recommendation of doing 3 monthly assessments of outbreak response***. The next assessment for Somalia and Kenya is past due and a combined assessment should be conducted at the earliest possible opportunity. The 6 month assessment should be conducted when due for whole epidemiological block, i.e. all three infected countries in a combined review.
4. Governments and partners should ensure that ***necessary funds for conducting quality outbreak response activities reach the implementation level in a timely way.***
5. Countries should ***expand use of Independent Monitoring*** as per the guideline, with focus on ***using the data for intervention.***
6. All ***microplans should be done at the lowest operational level***, regularly updated and implemented in the field.
7. Countries should ***develop and implement specific flexible plans for vaccination, communication and surveillance in mobile populations with focus on the pastoralist/nomadic communities***. UNICEF/ WHO ROs should facilitate exchange of good practices, strategies and planning guidelines. The country teams are encouraged to use available sources of information (like RMMS, IOM, UNHCR, etc) to ***identify, map and reach*** these communities for vaccination.
8. In view of ongoing crises and dynamic population movements, TAG recommends that ***all refugees and IDPs be tracked and vaccinated with documentation of doses administered and “zero doses”***. ***Surveillance indicators should also be monitored.*** Vaccination posts should be established at crossing points.
9. The TAG strongly recommends ***cross-border coordination among countries for immunisation, communication and surveillance***. Country implementation of the

previous TAG recommendation on sharing of information on activities, particularly cross notification of polio HOT cases and synchronisation of SIAs with the neighbouring countries, should be continued and further strengthened.

10. The TAG recommends better documentation of various efforts, especially on migratory/nomadic populations and cross border coordination.
11. For assessing immunity gaps, ***‘unknown’ status of OPV doses in NP-AFP cases should be seen alongside with ‘zero dose’.***
12. In addition to *NPEV*, ***countries should monitor and report Sabin virus isolation in stool samples***, as a proxy indicator for reverse cold chain and lab functioning.
13. The newly appointed HOA Coordinator office should ***publish the HOA bulletin on a monthly basis***. The bulletin should also have ***information on population movements and its implications for the outbreak response***.
14. The TAG strongly recommends that ***all vacancies of existing and surge staff should be filled on priority basis***.
15. ***Zero dose AFP cases*** reported from all ***Permanent Transit Vaccination Posts should be monitored*** (for trends across area and time), identifying the reasons and taking corrective measures.
16. All countries should sharpen strategies to ***address specific communication issues, based on research, including those that contribute to children being missed during SIAs***. Efforts should be intensified in and tailored to the high-risk areas.
17. ***Communication indicators, elucidating reasons for missed children***, specifically refusals and reasons for children being absent during SIAs, ***should be collected and systematically analysed*** through the Independent Monitoring process and other tools.
18. Maximize the use of communication “know-how” strategies and platforms for Somali populations in the Horn of Africa, including ***specific interventions to target pastoralist, nomadic and migrant groups***.
19. Monitor vaccine utilization at district level, by enhancing district capacity in data management, identification of inconsistencies and adoption of corrective measures. ***Countries should report on the vaccine used, against coverage and wastage, as part of routine SIA reporting***.
20. In view of the need for sustaining population immunity for preventing outbreaks, it is recommended that ***countries should optimize the use of the polio infrastructure and its activities, for strengthening RI and continue to report their efforts***.

21. Government and partners should hold their staff *accountable* particularly for polio eradication activities in high risk areas.
22. *The HOA Coordination office (with Regional Offices) should track the progress regularly*, with quarterly detailed reviews, and also document status on TAG recommendations.

**Laboratory:**

1. The WHO country office and the Ethiopian Government should monitor the progress on customs clearance issues, (for consumables, reagents and equipment procured by WHO) and make the necessary follow-ups.
2. Successful expansion of Environmental Surveillance in Kenya (and other HOA countries if need be) must rely on additional laboratory space and capacities (human resources, equipment, training). Countries working together with WHO need to finalize national plans regarding environmental surveillance where needed.
3. Country programmes need to review communication and logistics processes and tighten relationships with the Inter-country laboratories in order to streamline specimens referral and results sharing, and avoid back logs.

**Country Specific Recommendations:**

**1. Kenya should:**

- Share the report on action taken following the confirmation of a positive WPV type 1 in an environmental sample in Nairobi County. The national plan for environmental surveillance should be completed and implemented and results shared at the next TAG meeting.
- (as possibility of importation remains high) ... Maintain efforts to continue high political support and to strengthen the program, until transmission is interrupted in the HOA.
- TAG takes note of actions identified by the country to address declining surveillance indicators. Regular progress reports should be provided on these activities.
- Intensify social mobilisation and community engagement in the high-risk districts. Understanding of knowledge, attitude, and practices around polio immunisation is imperative.

## **2. Ethiopia** should:

- Prioritize improvement of SIA quality in the infected and highest risk regions/zones (including areas with high numbers of incoming refugees), and use IM data for improving coverage in subsequent rounds; it should also document reasons for missed children and take appropriate actions to reduce their numbers.
- Report on the status of implementation of the 3-month outbreak assessment recommendations, as set out in the implementation plan.
- Strengthen AFP surveillance activities as a priority, for the MoH and all partners in Somali Region and other high risk areas.
- Monitor implementation of the recently developed routine immunization improvement plan and provide updates to the TAG.
- Operationalize the communication strategy of engaging cattle market brokers as messengers to communicate with clan elders. Measurable outcomes should be presented during the next TAG meeting.

## **3. South Sudan** should:

- Use every opportunity to deliver immunization services to populations from inaccessible areas.
- Identify means to maintain national capacity strengthening and immunization program management by seeking opportunities to increase training, both within South Sudan and for displaced staff.
- (during the emergency phase) ... Review the polio emergency response framework to include surveillance, maintaining population immunity, and strengthening routine immunisation systems, such that partners may assist in its implementation.
- Address the alarming issue of staffing, where the ongoing conflict has resulted in approximately 70% of the international workforce and 40% of national staff not having returned to their duty stations.
- Adapt communication plans to accommodate the changing emergency situation and movement of IDPs and refugees, including possible cross-border vaccination interventions at 37 sites.

## **4. Uganda** should:

- Conduct the evaluation of the risk of WPV importation, and progress in routine immunization coverage, as planned to be undertaken in June 2014.

- Complete efforts on social mobilization / C4D that are in progress, and be supported in this by partners.

**5. Eritrea** should:

- Continue integrated SOS health activities in 16 hard to reach districts.
- Hold cross-border meetings with Sudan.
- Identify an advocacy strategy to support resource mobilisation, which supports the strong national ownership, and identify resources to support planned and proposed activities.

**6. Tanzania** should:

- (in view of identified surveillance gaps, and transmission of polio in HOA) ... Take steps to strengthen surveillance and develop an emergency response plan, and report on these to the next TAG.
- Provide more details on migrant populations in the country, and plans for mitigating the risk of WPV importations.

**7. Somalia** should:

- Continue the innovative measures already introduced for accessible and inaccessible areas during Phase I.
- Carry out further efforts to access the children in the inaccessible (non-SIA) districts of SCZ through local NGOs, and further negotiations with different parties or programmes functional in the area.
- Continue with the strategy for the newly accessible districts/populations, conducting four vaccination rounds at short interval using bOPV, and making all preparations in advance.
- in the accessible areas ... Focus on SIA quality: micro-plans should thoroughly be reviewed and updated regularly in consultation with the operational staff, better training, improved supervision, continued IM with expansion to other areas, and necessary action taken in cases of poor performance.
- Conduct detailed analysis of Zero Dose AFP cases to identify the areas, reasons and trends for the increase in proportions. Quarterly analysis will help understanding trends and taking corrective measures.
- Finalize and implement preparations for community-based surveillance in SCZ .

- Track surveillance indicators at sub-national level for the identification of gaps and to take timely corrective measures.
- Expand on IM in all accessible districts through building partnerships with local bodies.
- Rapidly recalibrate and operationalize the communication strategy based on the findings of Harvard polling, including special emphasis on pastoralist, nomadic, and migrant populations.

#### **8. Yemen should:**

- Focus on high risk Governorates (Al Hudeidah, Al Jawf, Saada) to further improve SIA quality, and enhance AFP surveillance sensitivity. Starting from the Feb NID round, special plans should be made for these Governorates.
- Continue the work on identifying migrants and displaced as well as investigating and documenting their immunity status, and use the information for revising the micro-plans.
- Take innovative measures to gain access to security compromised areas by building partnerships. Look into the possibility of conducting SIADs to improve the population immunity in a short time in these areas.
- Provide a quarterly update on the implementation and impact of the social mobilization plan developed by the country team.
- Document refusals recorded, and proportion vaccinated, by campaign.

#### **9. Sudan**

- Although the current level of AFP surveillance and SIA implementation have shown good quality performance, in consideration of the virus circulation in the HOA, the program should remain vigilant.
- Country team efforts to access the inaccessible children are commendable and need to continue. Similarly, efforts need to continue to achieve days of tranquility for vaccination of the 180,000 missed children since 2011 in South Kordofan and Blue Nile, with the support and advocacy of national and international partners.
- Sudan has conducted cross-border coordination meetings with all neighboring countries except Eritrea. Sudan should continue efforts to hold cross border meetings with Eritrea.

#### **10. Djibouti**

- The excellent Government commitment showed by the Director General should be translated into concrete support to Polio Eradication and Immunisation activities, as well as resource mobilisation.
- As it is at the cross roads of population movements, Djibouti should .... Map out routes, document magnitude, and give special attention to reach and vaccinate all mobile populations.
- Introduce IM to evaluate the SIA coverage, identifying reasons for missing children and take corrective actions.
- Ensure the partners role in building capacities of the EPI program, which is critical to ensure sustainable high quality performance.

### **III. Next meeting of the TAG**

The next meeting of the HOA TAG is proposed to take place in mid-August 2014 in Nairobi, Kenya. Precise dates will be agreed as soon as possible.

## **Annex I: Country Updates**

### **Somalia**

The 9<sup>th</sup> HoA TAG made four country specific recommendations, of which three were implemented. The fourth, on independent monitoring (IM) of SIAs, was reintroduced and progressively expanded from 16 districts originally to 49 districts at the time of this report. Overall, the coverage by finger marking varied from 72% to 82%. Review of IM findings confirmed an increase in the number of children reached during successive SIAs rounds in the majority of districts.

In 2013, 190 polio cases were confirmed from 46 districts of South and Central Zones, and 1 district in North East Zone. Accessibility remains a challenge in controlling the outbreak: 27 of the 110 districts are completely inaccessible for SIAs and 77% of all WPV were notified from districts with accessibility issues. Two cases were reported in Puntland (Bossasso district) in Nov and Dec 2013 respectively.

The Phase I of outbreak response objectives had partial success. Objective 1, to interrupt WPV transmission in outbreak zone within 4 months (area of focus Banadir) was achieved as WPV circulation in Banadir region was interrupted within 14 weeks. Objective 2, to protect populations at immediate high risk of WPV outbreak in SCZ was partially achieved as the transmission spread to rest of south central zone, although no transmission has been detected from accessible areas of SC Somalia after August.

Objective 3, to maximise opportunities for immunisation in inaccessible areas of SCZ was partially achieved, with low profile activities continuing by some local NGOs, but these have been limited to only a few towns. Objective 4, to protect populations in other areas that may be at risk due to population movement in Somaliland and Puntland, was not achieved as two WPV cases were detected in Bossasso district in Puntland.

The response to the outbreak was fast, aggressive and flexible: an initial outbreak response immunization targeting 360,000 <5 children in Banadir and Afgoi district in Lower Shabelle was conducted within 5 days of notification of the index case. This initial response was followed by an intensive 6-month outbreak response plan. Overall, since the beginning of the outbreak, 9 rounds of polio SIAs were conducted in 2013.

Banadir, the epicenter of outbreak was covered with 9 SIAs in 2013 since the outbreak, of which 3 targeted children <10 years (734,413) and 3 SIAs were conducted targeting the entire population (1,800,000). The rest of the accessible districts of South Central Somalia had 8 vaccination opportunities of which 3 targeted children <10 years (1,447,154) and 2 SIAs were conducted targeting all age groups (3,700,000). In the rest of Somalia (Somaliland and Puntland) 7 rounds of SIAs using bOPV (1 round all-age group and 2 rounds < 10 yrs.) were conducted in 2013. Reported coverage during the campaigns ranged between 88% and 100%



in Central Zone and between 56% and 91% in South Zone while it is above 97% for North-East and North-West zone.

To prevent the spread of transmission from infected areas to other areas, 292 permanent vaccination posts have been established around inaccessible areas and at borders to provide OPV to children under 10 years. 75,000 people are vaccinated on average every week in all PTPV (permanent transit point vaccination) sites of which on average 5% are vaccinated for the first time. The highest proportions of zero-doses at PTPV was reached in South zone (10% of all PTPV of South zone).

A multipronged approach has been used to maximize opportunities to vaccinate children in inaccessible areas. This includes a high state of preparedness to cover any newly opened area with 4 SIADs, vaccination of children through NGOs using fixed or mobile strategies, and establishing PTPV (permanent transit point vaccination) sites around inaccessible areas. Approximately 26000 children < 10years were vaccinated in two districts by NGOs. In Mahaday, a newly opened district, 3 SIAs targeting age group <10 and one targeting all age group was conducted within one month. More than 90% of children vaccinated in the first campaign in this area were zero dose.

Throughout 2013, NGOs have been unable to secure authorization to conduct vaccination in inaccessible districts. Insecurity and inaccessibility remain major barriers to the effective implementation of PEI activities. As the result of military operations on the ground, the number of accessible districts in SCZ increased from 34 in early 2012 to 51 between late 2013 and 2014, leading to a decrease in unimmunized children <5 from an estimated 1 million to 500-600,000 by the end of 2013.

The independent quarterly assessment in August 2013 concluded that there was a significant risk that the country would not stop WPV transmission within 6 months due to substantial under/un-immunised populations and therefore, requested that the outbreak response planning be extended through June 2014.

Phase II (Nov 2013 - April 2014) of the outbreak response plan has three objectives.

Objective 1 is to interrupt transmission in non-SIA (inaccessible) areas of South Central Zone, Somalia by April 2014. To achieve this, activities will focus on continuation of efforts to reach children in non-SIA areas through local NGOs and partners. Vaccination at permanent transit points (< 10 yrs.) and at fixed sites in inaccessible districts will continue. The country will continue to monitor changes in access, and conduct at least 4 rounds of SIADs using bOPV once access is granted (first response within 1 week).

Objective 2 is to sustain high immunity throughout the epidemiologic block (Banadir and rest of SCZ Somalia) and will be achieved by conducting 6 high quality SIAs in first half of 2014 in all accessible districts. In newly infected Bari region of Puntland, an additional 3 SIADs will be conducted in quick succession to stop transmission. In view of transmission detected, Puntland will be having SIAs along with the SCZ of Somalia.

Objective 3, to sustain high population immunity in areas at high risk of transmission from outbreak areas, will be achieved through implementation of 3 SIAs in Somaliland in first half of 2014.

As a result of the outbreak, surveillance activities were strengthened throughout the country. Active search for AFP cases through the extensive network of polio officers and village polio volunteers was intensified at reporting sites and within the communities. The national non-polio AFP rate in 2013 was 6.6/100,000 (10 in North-East zone, 5.5 in North-West zone, 5.7 in Central zone and 8.3 in South zone) and stool adequacy 87% (90.7%, 96.9%, 82.2%, 90.1% in NE, NW, C and S zones respectively). At sub-national level, none of the 19 regions had NP-AFP detection rate below 2/100,000. Review of AFP surveillance indicators by accessibility status reveals that, in 2013, NPAFP rate was 6.5 in accessible districts and 5.5, 6.8 and 4.9 in inaccessible, partially accessible and districts accessible with security challenges respectively.

Despite overall improvements in OPV coverage with successive rounds, routine immunization remains low in Somalia. Administrative coverage for OPV3, at the national level was below 60% in 2012, with large sub-national discrepancies (33% in SCZ, 45% in NEZ and 85% in NWZ). Activities to strengthen/reestablish routine EPI in inaccessible and newly accessible areas are ongoing. These activities include: reactivating agreements with local NGOs to provide routine immunization in health facilities and rehabilitating the cold chain infrastructure.

In response to previous TAG recommendations, 3-month assessment, and independent consultant reports, the Somalia polio eradication team has intensified communication (C4D) activities and begun to collect and analyze additional data on knowledge, attitude and practice of communities related to polio vaccine, to facilitate programme planning and implementation. Major programmatic achievements include implementation of the Harvard KAP study (in all 3 zones) – the first KAP survey for more than 6 years in Somalia; interviewing almost 100 of the confirmed WPV cases in regard to social and behavioral determinants; analysis of available monitoring data to better track changes in parental awareness/missing children/refusals; and performing Third Party Monitoring on implementation of C4D activities by NGOs. The WPV outbreak and SIA schedule posed many challenges to communication, including vaccinating for the first time children under 10 years and all age groups, vaccination for Hajj and during Ramadan, community fatigue due to frequent polio campaigns, and vaccination of some regions but not neighbouring ones (based on epidemiology) which caused messaging spill-over using local media. In order to mitigate these challenges, the polio team used strategies including high-level advocacy (President, Prime Minister, ministries), religious leader advocacy (mosque announcements, religious leader involvement for Hajj and Ramadan campaigns), school engagement (Ministry of Education, schools, teachers, etc.) especially for <10 and all age group vaccinations, increased media engagement through BBC Media Action, interactive SMS messaging, and integration of polio messaging with other services (nutrition, WASH, EPI). These activities have led to increased parental awareness (overall 90% in South Central Zone for 2013), and low overall refusal rates (<1-5%).

## Kenya

Kenya had a WPV1 outbreak in 2013 with a total of 14 confirmed cases in Garissa County. The first case had onset of paralysis on 30 April and the last on 14 July 2013. Of these, seven cases were from the refugee camps and 7 in the host communities. Age of the cases ranged from 4 months to 22 years. 50% of the cases had never received OPV. An additional WPV1 was isolated from environmental samples collected on 12 October 2013 in Nairobi County during a pilot phase to establish environmental surveillance in Kenya. This virus isolate is closely related to virus that was circulating in Banadir, Somalia. Further environmental samples taken so far have been negative of wild polio virus.

The 9th HOA TAG had three specific recommendations for Kenya, of which two (SIAs in the high risk districts and high level advocacy) were implemented completely. The third was on community based surveillance and is yet to be implemented. However, modules have been developed, a focal person has been appointed and training of DHMTs, CHEWS, CHWs is planned for late February 2014. All the cross cutting recommendations have been implemented.

Following detection of the initial WPV1, the investigation was prompt and response timely within 2 weeks of notification. During Phase I of the outbreak response, 6 rounds of SIAs were conducted in the outbreak zone of Dadaab refugee camps, host and surrounding districts; 5 rounds in the high risk counties and districts of North eastern, Eastern, Coast and Nairobi provinces; and 1 round was conducted in the rest of the country in September. Independent monitoring data showed a significant improvement in percentage of districts achieving over 90% coverage, from 40% in the May SNID to 85% in the September NID. In the outbreak area and surrounding host communities, two of the SIA rounds in Phase I targeted all age groups.

For Phase II of the response, 2 SIAs have been done in the high risk areas of Dadaab and Kakuma refugee camps, Garissa, Wajir and Mandera counties. The second nationwide round of SIAs has been done in January 2014. In all the rounds, independent monitoring was done with an improved coverage in each subsequent round. The last 2 rounds in 2013 achieved 94% (IM) with the percentage of districts achieving less than 90% decreasing from 60% in May to 21% in November.

During the December 2013 SIA in Garrisa County (Dadaab refugee camps and 5 host divisions) a single dose of IPV was provided to 120,514 children aged 6-59 months along with OPV. Coverage of 96% by independent monitoring was achieved. There was cross-border collaboration & coordination with Somalia, Ethiopia, Uganda and South Sudan between July and November 2013 and most of the SIAs were synchronized with Somalia's. The high coverage was associated with a robust ACSM (Advocacy, Communication and Social Mobilization) plan and use of improved district level microplans during the November 2013 and January 2014 rounds.

The 3 month outbreak assessment was conducted in August 2013. All the recommendations of the assessment have been implemented. These included (a) declaration of the polio

outbreak as a public health emergency, (b) environmental surveillance which was introduced in October 2013 in 2 sites in Nairobi and is being expanded to additional sites in Nairobi and Mombasa, (c) use of IPV along with OPV in Dadaab, (d) strengthening social mobilisation, (e) putting emphasis on improved micro planning and training, and (f) implementing specific strategies for hard to reach populations and areas. The use of micro plans commenced in the November NID round while specific strategies for hard-to-reach populations/areas include use of vaccination teams stationed at high volume transit points of bus stops and motor parks. Additional vaccination teams and logistics were used to reach nomadic populations along the Northeastern border of Kenya. Border vaccination points at Nadapal in Turkana were used to vaccinate refugees from South Sudan against measles and polio (1804 children less than 5 years vaccinated as at 28th January 2014).

Routine Immunisation: OPV3 coverage showed a slight improvement in 2013 compared to 2012. Only 1 of the 47 counties had an OPV3 coverage below 50% in 2013 compared to 6 for 2012. Five of the 6 counties which showed improvement in 2013 were in the high risk and outbreak zones.

AFP surveillance indicators have however declined both at national and sub-national levels. AFP detection rate was 3.16/100,000 and stool adequacy at 84% for 4th quarter of 2013 as compared to 4.00/100,000 and stool adequacy of 95% for first Quarter 2012. AFP case detection rate for high risk areas of North Eastern, Eastern, Coast and Nairobi remained above standard in 2013 at 7.5, 2.1, 4.6 and 4.9 though surveillance gaps exist at county and sub-county levels, with about 30% of the districts having Non-Polio AFP rate of <2/100,000 children below 15 years. The decline is attributed to devolution of health services with new and inexperienced surveillance personnel coupled with inadequate funding for surveillance and routine immunisation.

Major remaining challenges include: unclear managerial structures following recent devolution, funding constraints for field operations, continued insecurity in the border districts particularly Northern parts, untrained field surveillance staff, and continued influx of 'refugees' from Somalia and South Sudan, with inadequate population immunity in the border areas. The programme has strengthened its technical support by hiring 4 new surveillance officers. One has been deployed to Dadaab County and the other 3 will start work in March 2014.

During the Phase II component of the outbreak response, key activities will include (a) closing surveillance gaps at sub national level during the first quarter by capacity building for county and sub-county level surveillance personnel, sensitization of clinicians and staff of big hospitals and an increase in supportive supervision and active case search in outbreak and high risk areas; (b) expanding environmental surveillance for polio virus by setting up additional sites and increasing the capacity at the national laboratory (KEMRI) with an additional 3 technical staff to support laboratory work; (c) conducting 2 SIA rounds in 24 high risk counties [40% of the target population under 5 years], planned for March and April 2014 and a nationwide SIA in June 2014; (d) a meeting with Health Ministers and Directors of all the 47 Counties to be held in mid-February 2014 to advocate for support to routine immunization; and (e) deployment of further international consultants and STOP team

members, with 43 staff to be redeployed to poor performing districts. UNICEF will hire additional staff including 4 STOP communication consultants, 1 EPI specialist, 1 special population consultant, 1 media specialist, 1 communication specialist, and 1 emergency C4D.

## **Ethiopia**

While Ethiopia had no country specific recommendations from the 9th HOA TAG, all general and cross cutting recommendations except one were fully implemented. The one not implemented is from the external surveillance recommendation (reverse cold chain monitoring). Ethiopia has also implemented the HOA TAG conference call recommendations.

Ethiopia is the third country in the Horn of Africa that has been infected. It has had a total of 9 imported WPV1 cases, all in one district (zone) of Somali region, Warder. Importation began with a case with onset of AFP on 7 July 2013. The most recent case had onset of illness on 5 November 2013 in Warder Zone.

Following the news of WPV confirmation in neighboring Somalia in April 2013, Ethiopia responded swiftly in early June, with an emergency response vaccinating 184,611 children under 15 years in Dollo Refugee Camp and host community. This was followed by two rounds covering a wider area (Somali Region, Harar, Dire Dawa and high risk zones in Oromia and Southern Nations, Nationalities, and Peoples' Region SNNPR), vaccinating 2.7 million in each round in June and July. A third round in August covered Somali Region only. Two nationwide rounds were then conducted, vaccinating 12.8 million children. Independent monitoring showed a coverage of 89% to 95% during the SIAs. Coverage in Somali region was higher than 91% in all the 5 rounds conducted. Additional mop-up campaigns were done in the outbreak district twice with a total of 20,000 children under 15 vaccinated.

To improve the quality of SIAs and to reach all children, Ethiopia established 28 permanent vaccination points on the borders with Somalia. It is estimated that up to 27,000 children have been vaccinated at these points. These permanent vaccination points cover all children up to 15 years of age. In addition, short interval additional doses (SIAD) of OPV were given twice in the outbreak zone of Nogob. To strengthen surveillance, routine EPI, and coordination of activities in high risk areas along the borders, three cross-border meetings with neighboring countries (Somalia, Puntland, Djibouti and Kenya) were held.

AFP surveillance at national level has achieved the minimum standard indicators (non-polio AFP rate of 2.7 and stool adequacy of 87%); however, 3 of the regions (Somali, Harar, Benishangul) do not meet the standard because of low stool adequacy (64%, 71% and 50% respectively). Although there has been improvement in AFP case detection, in the second half of 2013 in Somali Region (from 1.2 to 3.4/100000), gaps remain at zonal level. In 2013, the national laboratory faced logistic problems which resulted in a backlog of stool samples remaining untested.

To support outbreak response SIAs and surveillance, the human resource surge provided by FMOH, RHB and partners included deployment of 6 surveillance staff to support zones; 4 international STOP Team and 2 international consultants to Somali region; 22 EPI technical assistants in high-risk zones; support from CDC; 37 SIA facilitators recruited; 4 regional and 9 zonal communication officers, and 47 Woreda polio messenger advocates (female) from the community. The FMOH command post deployed over 100 staff (FMoH, partners, etc.) during the NID to support and monitor activities.

In 2014 Ethiopia will continue the phase 2 outbreak response plan and conduct 4 more SIAs in the outbreak and high risk zones.

The first polio outbreak external assessment, completed in January 2014 observed that the response to the polio outbreak in Ethiopia was fast, aggressive and met most of the milestones recommended by WHA, and noted the strong national and subnational commitment. However, the key milestone of achieving at least 95% coverage (measured by IM) in all SIAs was not met. Routine immunization coverage in many areas, including the infected region, remains sub-optimal. Detection and investigation remain sub-optimal at subnational level and significant cross border population movements, including refugees, pose continued risk for WPV importation.

The assessment team recommended that to halt the current outbreak within 6 months, government and partners should ensure that there is timely provision of adequate resources (financial, logistical, human) down to the grass roots level and also that there is implementation of appropriate actions to address remaining operational barriers to higher population immunity (improved SIA and RI coverage) and increased AFP surveillance sensitivity.

## **South Sudan**

The 8th and 9th HOA TAG made six recommendations specific to South Sudan, of which four were fully implemented and one was partially implemented. The specific high level advocacy visit from the regional program management to advocate more engagement of the government is yet to be conducted. However, during the signing of the Country Cooperative Agreement the WHO AFRO Regional Director advocated for support for EPI. The one recommendation not implemented related to EPI: limited availability of funds hampered routine EPI activities in the country including those in high risk and difficult to access areas.

South Sudan reported its last indigenous WPV case in 2002 and has experienced repeated WPV importations and outbreaks in 2004, 2005, 2008 and 2009. No cVDPV has been detected in South Sudan. The risk analysis done in the third quarter of 2013 showed about 30% the counties were considered at high risk. This proportion increased to more than 50% by the end of the fourth quarter due to conflict in the North Eastern states of Unity, Upper Nile and Jonglei.

During Phase I of the HOA outbreak response, following the isolation of WPV in Somalia and Kenya, a round of SIAs was conducted in August 2013 covering Upper Nile, Jonglei, Eastern Equatoria and Central Equatoria. Independent monitoring showed overall coverage of 90%. During this round a refined process for independent monitoring was piloted by the Core Group in Central Equatoria. The results from the pilot showed a 7% reduction in coverage compared to regular procedures used. The new process has been since used for all subsequent SIAs IM.

In September 2013, wild polio virus was isolated from stool specimens of 3 AFP cases in Northern Bahr El Ghazal and Central Equatoria. The Ministry of Health declared a national public health emergency and conducted (in 48 hours) a round of SIAs covering 544,865 children under five in the area of the AFP cases. This was followed by a wider round covering the 5 states of Eastern, Central and Western Equatoria and North and Western Bahr El Ghazal. A total of 3,257,314 children were vaccinated. Although it was confirmed a few days before the SIAs that the isolates were a result of laboratory contamination, the SIAs were implemented. Two additional nationwide rounds were implemented in November and December 2013 with IM data showing 6 out of 10 states achieved more than 90% coverage.

Surveillance performance has remained good in South Sudan. The national AFP detection rate is 4.33 and stool adequacy is 94%. However, surveillance gaps still remain at sub-national level, mainly Pibor county of Jonglei, due to continuous intertribal conflicts which hinders active surveillance.

Routine immunization was severely affected during 2013, decreasing from nearly 72% in 2012 to around 56% in 2013. Also the number of counties which achieved coverage less than 50% doubled from 25% to 50% of counties in South Sudan. High risk states were among those with less than 50% OPV3 coverage.

The joint planning between the State Ministries of Health, WHO, UNICEF and the State Mobilization Coordinator resulted in development of evidence-informed plans for all states. Integrated communication activities covered advocacy, mass and community media, social mobilization and community engagement, IEC materials and the training of more than 1400 social mobilizers for SIAs. This resulted in 86% of persons interviewed reporting awareness of SIAs before the round. In addition, 11 cross border meetings were conducted, including Gambella of Ethiopia, Turkana of Kenya as well as Eastern, Central, and Western Equatoria and Western Bahr Ghazal.

However, late in the year the ground situation significantly changed due to civil conflict. Insecurity compounded with inaccessibility has displaced 743,000 people to date and only 40% of people have been reached with some aid. For SIAs and RI, three states are demarcated as non-secure areas (Jonglei, Upper Nile and Unity) while the remaining states have been identified as relatively secure areas. In the insecure areas nearly all the infrastructure was demolished. Appropriate interventions are planned for the IDP camps and include integrated vaccination campaigns covering measles, OPV, Vitamin A and de-worming supported by social mobilization activities; fixed RI site vaccination posts will be set up in

each IDP camp with vaccination targeting more than 90,000 children in the age group between 0-15 years for polio and 6m-15years for measles.

In 2014, four rounds of SIAs are planned, two SNIDs in May and June covering high risk states and two nationwide rounds to be conducted in November and December 2014. Special attention will be paid to monitoring activities in IDP camps, including collaboration with NGOs running clinics/hospitals there and in security compromised areas, and by establishing community networks in IDP camps.

The major challenges that are facing the program in Phase 2 of the outbreak response is the current conflict and insecurity status in more than 40% of the country. This has led to departure of both national and international staff from areas of conflict (about 70% of the international workforce and 40% of the national staff have not returned to their duty posts).

## **Sudan**

The 9th HOA TAG did not make any specific recommendations for Sudan. However, all cross-cutting recommendations were implemented. The last case of wild polio virus in Sudan was in June 2009.

Sudan has maintained OPV3 coverage above 90 % for the last three years with 93% of districts achieving OPV3 coverage greater than 80%. A vaccine management and EPI review conducted in December 2013 recommended focus on states of low coverage (Darfur, Blue Nile, South.Kordofan and Red Sea). The plan is to strengthen supportive supervision, cold chain and capacity building.

AFP surveillance performance indicators remained above certification level for the last 5 years with the non-polio AFP rate 2 per 100,000, stool adequacy greater than 90% and non-polio entero-virus isolation rate was higher than the target of 10%. A risk assessment was done at state (sub-national) level and the results used to address surveillance and immunity gaps. To maintain sensitivity of the AFP Surveillance system, during 2014, Sudan plans to fill the remaining vacant posts in West Darfur, North Darfur, Gedarif and Kassala states, train nomadic focal persons, create new reporting sites along the borders with Chad and Ethiopia and intensify supervision in the high risk districts identified in the Risk Analysis.

**Outbreak Response:** Following the polio outbreak in the HOA, Sudan updated the national and state preparedness plans for poliovirus importation. The high risk population (Southern Sudanese and refugees/IDPs) living in Khartoum were mapped and SIA conducted for this population in October 2013 with 94,648 children vaccinated (97%). In addition, nationwide SIAs were conducted in November and December 2013. Independent monitoring was used to identify reasons for missed children and refusals and this information was used to improve campaign quality in subsequent rounds. In the conflict affected areas in South Kordofan and Blue Nile states, 180,000 children under five have not been vaccinated since June 2011. WHO and UNICEF met with SPLM/N in Addis Ababa and a polio immunization plan for November 2013 was developed and campaign preparations completed by UN and



Government of Sudan; however, the campaign was cancelled in the last moment due to additional conditions imposed by SPLM/N.

In the Phase 2 of the outbreak response, Sudan plans to implement 2 rounds of SIAs (1 SNID and 1 NID in April and May), and an additional two rounds in November and December 2014.

## **Yemen**

The 9th HOA TAG made 5 country specific recommendations. These were all implemented.

Yemen has been polio-free since the WPV1 outbreak of 2005-2006, which resulted in 480 cases. An outbreak of cVDPV3 occurred in 2012 with 3 cases, outbreak extended to 2013 with 1 case that had onset on 12 July 2013. Yemen remains at high risk for WPV importation and sustained transmission due to civil unrest, areas of insecurity, low routine immunization coverage, internally displaced persons and refugees. In addition, the very low coverage of routine and SIAs in Al Jowf due to the security issue is of great concern.

Routine immunization coverage for OPV3 increased to 88% in 2013. Yemen has sub-national immunity gaps in around 25% of its districts.

During the Phase I outbreak response period, Yemen implemented four rounds of SIAs: two subnational rounds covering high risk governorates in June and October 2013, and two nationwide round targeting 4.43 million children in July and December 2013. In one governorate (Al Jowf) for the June and October SIAs campaigns, only 6 of the 12 districts were covered. This increased to 10 in December 2013.

To improve quality of the SIAs, people from high risk population groups (refugees, IDPs and marginalized people) are enlisted and special teams are assigned to cover them during the SIAs. Microplans for both SIAs and routine EPI now include strategies to reach nomadic people, mostly in Hadramout and Al Mahara. Permanent vaccination points have been established at reception points of UNHCR and IOM. During 2013, there were approximately 65,000 new arrivals making the total refugee population in Yemen around 250,000. The majority are from Somalia and a few from Ethiopia. The programme now tracks refusals and the proportion has declined with each subsequent round (from 1.8% in June to 0.6% in December 2013)

AFP surveillance performance indicators for 2011, 2012 and 2013 have remained above certification level at both the national and sub-national levels. The 2013 non-polio AFP rate is 5.1/100,000 and stool adequacy is 91%. All 22 Governorates have non-polio detection rates above 2/100,000. An AFP surveillance review was done in May 2013 and all recommendations have been implemented. In high risk areas with refugees and IDPs, active search sites have been established and surveillance and immunisation indicators are closely monitored.

For Phase II Outbreak Response, Yemen plans to conduct two rounds of NIDs in February and April 2014 and two rounds of SNIDs in July and August 2014. bOPV will be used starting from the April round.

## **Uganda**

During the 9th HOA TAG meeting, two specific recommendations to Uganda were made: (1) improving logistics management, and (2) regular monitoring of recommendations of the external surveillance review conducted in August 2012. Both were fully implemented. Independent consultants identified by UNICEF and WHO supported the country to address gaps in logistics management at all levels through EVMA capacity building workshops. A plan was developed to implement recommendations made by the consultants and since July 2013 no district has reported any vaccine stock out.

Out of the 12 cross cutting recommendations, eight were fully implemented (risk assessment weekly updates and activities conducted to mitigate the risks and monitor the impact of the interventions, systematically regularly document immunisation and surveillance activities conducted in refugee camps and among IDPs, re-emphasize the importance of cross-border coordination and collaboration requests, document all activities, implement established guidelines on stool collection from contacts, and follow established guidelines for independent monitoring and ensure timely analysis and reporting of SIAs results), three partially implemented (replacement of ageing fleet of motorcycles, implementation of all recommendations following the external review due to limited resources, and documenting the impact of communication) and one was not applicable for Uganda.

Since the 9th TAG meeting, there has been a significant improvement in routine immunisation coverage at both national and sub national level. In 2013 (annualised) the OPV3 routine immunisation coverage reached 98% compared to 82% in 2012 and the proportion of districts achieving a coverage of 80% and above reached 72% in 2013 compared to 49% in 2012. Several activities were implemented to achieve this success, namely improving the relationship between National Medical Stores and the EPI Programme (UNEPI) to address stock outs at sub national level, leadership and management challenges addressed, improvement in reporting system by use of DHIS2, national launch of PCV10, scaling up of RED approach through partner support and GAVI ISS funds and intensified efforts of communication, advocacy and social mobilisation by politicians, stakeholders and NGOs. Other interventions implemented during the period included Family Health Days, capacity building and support in refugee affected areas. The biggest concern remaining to be addressed is to ensure that the achievements gained in 2013 are sustained through shared responsibility of the vaccination program.

Following the confirmation of the WPV1 outbreak in HOA, Uganda intensified activities to close the population immunity gap. Two rounds of SIAs were conducted in 37 high risk districts in September and October 2013. Independent monitoring coverage was 92% and

94% respectively and the proportion of districts achieving a coverage of 95% and above was 51% and 65%. In the border areas there has been an influx of refugees from South Sudan, Somalia and Eastern DRC. Polio immunisation is done for all refugee affected districts. Specific focus is also given to refugees and internally displaced people in informal settlements in Kampala city. This is done in collaboration with Inter-Aid, Rotary clubs and Red Cross and through outreach.

The national AFP detection rate in 2013 was 2.77 compared to 2.82 in 2012 with 65% and 56% of the districts achieving a rate of >2/100,000 in 2013 and 2012 respectively. The stool adequacy rate at the national level remained above 80% with over 60% of the districts achieving a rate of >79%. However, significant surveillance gaps still remain at the sub-national level.

During Phase I of the outbreak response the programme was supported by international STOP team members and short-term technical support with consultants who worked on strengthening AFP surveillance, social mobilisation and communications. In addition 35 national STOP team members were trained and deployed to silent districts to strengthen surveillance activities.

For Phase II of the outbreak response, there will be capacity building at the health facility level using the new modules of IDSR, strengthening supportive supervision, and ensuring continuous availability of funds for operations. For the remainder of 2014, two rounds of nationwide SIAs will be implemented, along with implementation of the two year coverage improvement plan. Uganda will continue to receive technical support through the STOP Team programme and national STOP programme.

## **Djibouti**

The 9th HOA TAG made no country-specific recommendations for Djibouti. However, the country was affected by cross-cutting recommendations, and these were implemented.

Djibouti has been polio-free since the last clinical polio case was reported in 1999. The country however sits at the cross-road of population movements between Somalia, Eritrea, Ethiopia and Yemen and for these reasons is at high risk of WPV importation and spread. Routine immunisation administrative coverage for OPV3 was 89% and 87% in 2011 and 2012 respectively; data is not yet available for 2013.

In Phase I of the outbreak response, following the detection of WPV in Somalia, a risk assessment was conducted with support of the PEI partners. The key activities following the assessment were to improved AFP surveillance sensitivity, particularly in refugee and transit camps, training of health facilities and reporting sites staff, and training of community volunteers for involvement in AFP active case notification. One round of SNIDs was conducted in the two main refugee camps of the country in October 2013, targeting around 6,000 children under-5 years. Two rounds of nationwide SIAs targeting 120,000 children

under 5 years were conducted in June and October 2013. No independent monitoring was done and the administrative coverage was 95%.

In 2013, seven AFP cases were detected, yielding a non-polio AFP detection rate of 2.4/100,000. Stool specimen adequacy at national level was 86% and all AFP cases had more than 4 doses of routine OPV. AFP surveillance in Djibouti remains fragile and still relies heavily on partners for technical and financial support; two WHO consultants provided 6-months of technical support in 2013 and the country has benefited from the continuous presence of STOP team consultants since June 2011.

For Phase II of the outbreak response, Djibouti has conducted one round of nationwide SIA in January 2014, targeting 120,000 under 5 years. Two additional rounds are planned for the remainder of 2014.

## **Eritrea**

The 8th HoA TAG made three country specific recommendations for Eritrea of which two were fully implemented with one partially implemented. The recommendation for cross-border meetings with Sudan (in Kassala State) was not implemented, although the Ministers of Health discussed polio matters at a bilateral meeting in the second quarter of 2013.

The last imported WPV case in Eritrea was in April 2005, from Sudan, for which the response was two rounds of house to house SIAs implemented in the same year, followed by two rounds of SNIDs yearly on the high risk bordering districts.

For the Phase I outbreak response, two rounds of SIAs were conducted in May and June 2013 in the seven high risk districts covering 68,495 children under 5 years. In 16 hard to reach and poor performing districts OPV was included in three rounds of integrated Sustainable Outreach Services (SOS). For Phase II, two nationwide rounds of SIAs were conducted in November 2013 and December 2013, covering for 550,000 children under 5 years using tOPV. The December round was integrated with the second round CHNW (with Vitamin A supplementation and MUAC screening and iodine testing on salt in school health). Coverage from independent monitoring was 96%.

In 2013, surveillance indicators were maintained at certification level at national level. The Non-Polio AFP rate was 2.1/ 100.000 with a stool adequacy of 98%. However gaps still exist at district level. In 2013, 38% of districts had a Non-Polio AFP rate less than 2/100,000 and 5 of these low performing districts are at high risk for polio. The proportion of zero-dose AFP cases (6 – 59 months) was 16% in 2012, compared to 8% in 2010.

The strategies to reach the hard to reach and nomadic populations included involvement of all local government officials, community/religious leaders and community health workers, starting from planning to monitoring of the SIAs. Advocacy meetings with local government officials and community leaders and additional community meetings on mobilisation as well

planning meetings on the Polio SIAs with health workers were conducted at different levels. Radio and TV spots were transmitted with the eight local languages, as well as banners and leaflets distributed. Health workers were trained on interpersonal communication. The community leaders mobilised families for the SIAs at household level, and participated during the SIAs including for monitoring. According to the Independent Monitoring reports, the source of information about immunization from mothers were from community mobilization 52.8%, followed by community meetings at 12.1% and health workers 16%. The reasons given by care takers for the default children were absence from area during SIA and not being aware of the SIA. Innovations on transportation other than vehicles and walking, were begun, with more camels and boats used in less accessible areas. The Supervision and Independent Monitoring assisted on tracing missed children for vaccination. The lack of funding has been addressed by integrating programs as much as possible; for example, Nutrition and IMCI and CHNW supported the SIAs by leveraging resources.

Eritrea's routine immunization is strong, showing progress over years despite the low administrative coverage of 80%. To address the 16 hard to reach districts three rounds of SOS and defaulter tracing during NIDS, SNIDs and CHNWs were conducted. This led to achievement of above 80% in 14 out of 16, while two districts still have below 50% coverage. The 2013 EPI coverage survey report showed 95.7% of children under 1 year of age are routinely immunized with at least 3 doses of OPV & 95.6 % with measles in 2012. This is supported by the WHO-UNICEF best estimate for 2011 of OPV3 99% coverage

Major challenges in Eritrea still remain unreliable population data for planning, population movements across borders with neighbouring countries, high transport costs, and inadequate transportation means (lack of international flights affecting delivery of supply as well as transportation challenges of stool specimens out of the country) and limited external support. Eritrea is using existing resources as much as possible (strong integration), but needs further support to mobilise resources to conduct the planned activities for 2014. To address the data issues DQS, and data harmonisation are conducted regularly, with EPI coverage surveys every three years.

Planned activities for 2014 include conducting two rounds of Polio SNIDs in October and November 2014, four rounds of Sustainable Outreach Services (SOS) in hard-to-reach and low-performing districts, strengthening community based surveillance, implementing the communication EPI strategy and advocacy to reinforce integration in programs and conduct cross-border activities with Sudan and Ethiopia.

## **Tanzania**

The 8th and 9th HoA meetings had two specific recommendations for Tanzania. These were fully implemented. The recommendations focused on improving surveillance in 33 poor performing districts. In addition to standard surveillance activities, a National STOP Team was deployed to the districts. There were three, two week missions during which 41 districts

were visited. In addition, training was given to regional AFP focal persons, and sensitisation of health workers and traditional healers and supportive supervision was conducted.

National routine OPV3 coverage in 2012 was 91%, and 84% of districts achieved levels 80% and above. For 2013, the annualised coverage in September was 86% and no districts were below 60%. No SIAs were implemented in the whole of 2013.

The non-polio AFP rate was 2.5 per 100,000 in 2013 and the stool adequacy was 92.2%. There has been a significant improvement in the NPENT rate from 3.7% in 2012 to 7.8% in 2013. The regions with low detection rates are Dar-es-Salaam (1.9%), Tabora (1.8) and Unguja (1.8). There were no silent districts. Manyara is the only region with low stool adequacy rate of 71%.

Immediately after detection of WPV in Somalia and Kenya, an emergency plan for outbreak response was developed. Key activities included regular high risk analysis by district, intensification of surveillance activities in high priority districts especially high risk areas, identification of areas with unvaccinated and under vaccinated children with OPV using the reaching every community approach. These activities will continue in 2014.

## **Annex II: List of Participants**

### **Technical Advisory Group members**

1. Dr Jean-Marc Olivé, France (Chairman)
2. Dr Yagoub Yousef Al-Mazrou, Saudi Arabia
3. Dr H. El Zein El-Mousaad, USA
4. Mr Carl Tinstman, USA
5. Professor Francis Nkrumah, Ghana (unable to attend)
6. Dr Robert Linkins, CDC, USA (unable to attend)
7. Professor Redda Teklahaimanot, Ethiopia (unable to attend)
8. Dr Rafah Aziz, United Kingdom (Unable to attend)

### **UNICEF and WHO Country Representatives**

9. Dr Marcel Rudasingwa, UNICEF Representative, Kenya
10. Dr Custodia Mandlhate WHO Representative, Kenya

### **Technical Advisors**

11. Brigitte Toure, UNICEF/ESARO
12. Faten Kamel, UNICEF/ESARO
13. Rustam Haydarov, UNICEF/ESARO
14. Alex Gasasira, WHO/AFRO
15. Samuel Okiror, WHO/AFRO
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17. Chris Maher, WHO/HQ, EMRO
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20. Sara Lowther, CDC/USA
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33. Anthony Laku, MOH, South Sudan
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35. Ali Bin Break, MOH/Yemen
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60. Sheeba Afgani, UNICEF/Uganda
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