Review of Phase III Middle East Polio Outbreak Response

Beirut, Lebanon
22 - 23 October 2015

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ACRONYMS

AFP	Acute Flaccid Paralysis
bOPV	Bivalent Oral Polio Vaccine
C4D	Communication for Development
EMRO	WHO Regional Office for the Eastern Mediterranean
EPI	Expanded Programme of Immunization
HRAs	High Risk Areas
IDPs	Internally Displaced Populations
IOM	International Organization for Migration
KAP	Knowledge, Attitude and Practice Survey
ME	Middle East
MENARO	Middle East and North Africa Regional Office (UNICEF)
MoH	Ministry of Health
NIDs	National Immunization Days
OPV	Oral Polio Vaccine
PCM	Post-campaign Monitoring
POL	Polio
RI	Routine Immunization
SIAs	Supplementary Immunization Activities
SMS	Short Message Service
SNIDs	Sub-national Immunization Days
tOPV	trivalent Oral Polio Vaccine
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WHO	World Health Organization
NGO	Non-governmental Organization
WHA	World Health Assembly
WPV	Wild Poliovirus
DoHs	Directorate of Health
VDPV	Vaccine Derived Polio Virus
MMUs	Mobile Medical Units
IPV	Intra-muscular Polio Vaccine (SALK Polio vaccine)

EXECUTIVE SUMMARY

The Middle East Outbreak of polio began with the reporting of type 1 wild poliovirus (WPV) cases from Syria in October 2013. This followed earlier isolation of wild polioviruses from sewage specimens in Egypt, Israel and Palestine. Genetic analysis of the outbreak virus strain indicated that it was likely imported from Pakistan. Following the identification of the first WPV cluster of cases, a coordinated effort was made to control the outbreak, the most significant feature of which was the extraordinary commitment demonstrated by the governments of affected countries and their implementing partners. Consequently, about 70 vaccination campaigns were implemented in three phases of the outbreak response in spite of the very complex and volatile security situation in the sub-region. Millions of children were vaccinated and thousands were saved from permanent disability due to poliomyelitis.

A meeting was convened on 22–23 October 2015 in Beirut, Lebanon to review Phase III of the response with the primary aim of ascertaining whether the polio outbreak in the Middle East is over, based on available evidence, and to determine the nature and scope of the strategic priorities for the next phase of the response. The meeting was very crucial given that more than 18 months had elapsed since the last wild poliovirus was isolated in the Middle East. Prior to the meeting, multi-country desk reviews and field assessments of polio Outbreak Response activities were conducted by WHO and UNICEF regional offices, with support from the headquarter offices of both organizations.

Participants at the Phase III Review Meeting included delegates from seven EMR countries involved in the response; namely Syria, Iraq, Jordan, Lebanon, Egypt, Palestine and Iran. Delegates consisted of leaders of the various national polio programs and representatives of partner agencies, including Rotary International, UNICEF and WHO representatives from field, regional and headquarters offices. The meeting was co-chaired by Dr Nima Saeed Abid, Team Leader, Cross Cutting Functions, WHO Polio Eradication, EMRO and Mr. Jalaa' Abdel Wahab, Deputy Team Leader, Polio, UNICEF HQ. The agenda for the meeting is attached as Annex 1 and the list of participants as Annex 2. Below is the summary of conclusions and recommendations of the meeting. The detailed report follows this summary.

Key lessons learned from the response were:

- The unprecedented multicountry coordinated response helped to achieve the goal of interruption of virus transmission in a shorter time frame
- National government leadership and coordination among all key partners was a cornerstone to success
- Synchronized regional communication campaign paid off well
- The phase-approach, strong monitoring and evaluation component in the response ensured evidence based plans and paved the way for all the achievements
- The high risk approach was instrumental in ensuring access to each and every child
- Access mapping was instrumental in covering the unreached communities.
- Nothing could have been possible without the dedication and hard work of the front line workers

The Review of Phase III recognized a few **best practices shared by country teams**, notably a) mapping high risk populations; b) sub-national analysis of missed children to guide interventions; c) engagement of private sector physicians through different means, including social media; d) mobilizing community influencers' support for tailored activities suiting local

context, and e) Use of mobile technology and GPS to monitor the SIAs and collect timely data for immediate action.

Key conclusions of the meeting based on available evidence were:

- Phase III plans were successfully implemented and most of the targets fully or partially achieved despite a rapidly evolving and complex security situation in the region.
- There is evidence of improvement in immunization status and surveillance quality in the affected countries.
- Based on field assessments, surveillance data and the time lapse since the last reported case (>18 months), there is reason to infer that wild poliovirus transmission associated with the 2013 importation has been interrupted.
- However, there are outstanding risks and gaps warranting immediate risk reduction plans. Key risks and gaps include pockets of children missed persistently due to security issues (adjacent governorates of Syria and Iraq, in particular) and operational issues (e.g. Baghdad). The risk of emergence of VDPV is also high in the region particularly in conflict affected countries due to deteriorating routine immunization coverage.
- Additionally, there is continued endemic transmission in Pakistan and Afghanistan, which implies the remaining risk of new WPV importations given the frequency of population movements between these countries and those affected by the outbreak in the region.

Recommendations and way forward for Risk Reduction Phase:

- Overarching policy should aim at maintaining vigilance and commitment of governments and partners, and ensuring that sub-national gaps are addressed.
- Geographical prioritization of the affected countries based on perceived vulnerability should remain as in the past. These include Zone 1: most vulnerable countries, i.e., Syria and Iraq, and Zone 2: at-risk countries, i.e., all other countries in the Middle East.
- Strategic priorities should include the following:
  a. <u>All countries:</u>
     - Coordination among the different implementing partners to keep the program in right direction.
     - Communications and advocacy to keep polio at the top of the national public health agenda and continued engagement of the top political and technical leadership.
     - Achieving high population immunity uniformly at sub-national levels through strengthening of routine immunization services.
     - Ensuring sensitive AFP surveillance systems meeting global certification standards.
     - Continued focus on high-risk areas for all components of the polio program, including surveillance, immunization activities and advocacy and communication.
     - Adequate levels of preparedness for any possible new poliovirus importation and field testing of the readiness plan, including ensuring an adequate vaccine supply and logistical support.
  b. <u>Syria and Iraq:</u> In addition to the above mentioned activities, SIAs in Syria and Iraq *should be conducted with focus on low performing areas and/or epidemiologically high risk areas. Special strategies for reaching children in inaccessible areas should be a core component of country plans.*

- Updated plans for each country will be shared with WHO by 15 November 2015 based on the broad guidelines provided to them for the above-mentioned strategic priorities.

- Immediate priorities for the regional level leadership are:
  a. Jointly by WHO and UNICEF: i. advocacy with high level government officials to maintain vigilance and canvas for budget allocations; and ii. facilitate inter-country coordination on cross border issues
  b. WHO and UNICEF Regional Offices: i. work closely with countries to encourage them to license or grant temporary import waivers for WHO prequalified OPV vaccines to increase the supply flexibility; and ii. document the best practices for emulation in other programs
  c. WHO: i. continue the surge support in 2016; and ii. Institute environmental surveillance in Iraq and Syria.

INTRODUCTION

A multi-country outbreak response was implemented in three phases, since reporting of the wild poliovirus type 1 (WPV1) from Syria in October 2013 and subsequent spread in Syria and Iraq culminating in 38 cases (36 in Syria and 2 in Iraq) in 2013 and 2014. Genomic sequencing of the poliovirus revealed that the origin of the virus is Pakistan. A review meeting was convened on 22–23 October 2015 in Beirut for review of Phase III and the way forward. It is important to mention that the review meeting was preceded by multi-country desk reviews and field assessments of polio outbreak response by WHO, UNICEF Regional and HQ offices supported by external experts recruited by WHO. The goal of Phase III was (i) to maintain high population immunity through efficient routine immunization activities and SIAs so as to prevent new virus outbreaks (ii) To maintain highly sensitive AFP surveillance systems for early detection and effective response to any poliovirus circulation

Participants of the Phase III Review Meeting included delegates from seven countries comprising WHO, UNICEF and MoH representatives, WHO and UNICEF regional and HQ office staff, Representatives from Rotary International, and Head of Lebanon certification committee. The seven EMR countries were Syria, Iraq, Jordan, Lebanon, Egypt, Palestine and Iran. Agenda and list of participants are attached in Annex 1 and 2 respectively.

The review meeting was co-chaired by Dr Ni'ma Abid, Team Leader Cross Cutting Functions, WHO Polio Eradication, WHO/EMRO and Mr. Jalaa' Abdel Wahab, Deputy Team Leader, Polio, UNICEF/HQ. The inaugural session included welcome messages on behalf of WHO and UNICEF Regional Offices and on behalf of MoH Lebanon being the host country. The Ministry of Health in Lebanon, represented in the meeting by Dr. Randa Hamadeh, welcomed the attendees on behalf of H.E. the Minister of Public Health in Lebanon and thanked them for their work with a remark note on the cooperation with WHO and UNICEF. The technical sessions started with Objectives of the meeting and Status of Polio Eradication in the region presented by Dr N. Abid, outbreak overview and response activities were presented by Dr F. Kamel, WHO consultant and Status of implementation of phase III review recommendations by Dr F. Ather from UNICEF. The inaugural session was followed by presentations from the countries describing progress, challenges and future plans. The countries shared their best practices. Countries' presentations were followed by discussion with special focus on Syria and Iraq given the fact that these were the two countries affected by the outbreak. Following the presentation of Lebanon, Jordan and Iraq, members of the field outbreak response assessment teams shared their key observations. A presentation on the magnitude of missed children globally and strategies for reaching them were shared with the participants by Mr J. Abdelwahab from UNICEF.

The focus of day two was on communication, strategies for strengthening Basic Immunization Services and reaching High Risk Population, strengthening AFP Surveillance system and highlights on risk analysis and the new outbreak response SOPs. The status of global supply of vaccines and logistics was presented by UNICEF supply division. Conclusion and recommendations of the review were presented by Dr F. Kamel before the work group session to guide the development of a roadmap for the risk reduction phase. Group Work was based on the conclusion and recommendation of the meeting to guide the strategic focus and the plans in 2016 in areas of SIAs, RI, AFP surveillance and Communication.

1. SUMMARY OF TECHNICAL PRESENTATIONS

1.1 Objectives of the current meeting:

Dr Ni'ma Abid, WHO/EMRO

The Objectives of the meeting were summarized as follows:

1. Assess implementation of phase II review recommendations;
2. Review the achievements and remaining challenges of the Phase III plans;
3. Compile and discuss results of the individual country reviews;
4. Determine if the outbreak can be considered to be over; and
5. Formulate strategies and develop country plans for the next phase of the response to keep the Middle East polio-free.

1.2 Global and Regional update

Dr Ni'ma Abid, WHO/EMRO

The progress towards global polio eradication is tremendous; it is the first time ever in the history of the polio eradication initiative, since its inception in 1988, that the continent of Africa reported no wild polio virus in more than a 12 months period. Moreover, the Global Polio Certification Commission in its meeting in Bali, Indonesia in September 2015 declared that wild polio type 2 has been eradicated, and the date of onset of the most recent case of WPV3 in the globe was in November 2012.

The outbreaks of polio in the Middle East (ME) and Horn of Africa (HoA) in 2013–14 have been successfully controlled, and large multi-country epidemics have been prevented as a result. It is now more than 18 months since the date of onset of the most recent case from the Middle East (April 2014 in Iraq) and more than 12 months since the most recent case from the Horn of Africa (August 2014 in Somalia). The ongoing circulation of wild polio virus is restricted to a few districts in only two remaining polio endemic countries, namely Pakistan and Afghanistan. A total of 51 polio cases type 1 have been reported till 19 October 2015 (38 from Pakistan and 13 from Afghanistan).

In Pakistan and Afghanistan, lack of safe access to children in conflict-affected areas and inconsistent improvement in the quality and coverage of supplementary immunization activities (SIAs) have hampered polio eradication efforts. However, the governments and their partners have developed robust emergency action plans for 2015, the implementation of which is achieving results with more than 80% reduction in polio case load in Pakistan. The key priority for the regional and global polio eradication in the next 6-9 months is to stop polio transmission in Pakistan and Afghanistan

1.3 Outbreak overview and current status of Phase III of Polio outbreak response

Dr Faten Kamel, Consultant

The presenter explained the three phases of the strategic plan as a response to the outbreak since October 2013. Phase I extended from October 2013 to April 2014, Phase II from May 2014 to January 2015 and Phase III from February 2015 to October 2015. The main objective of phase I was to stop the virus circulation and prevent the spread to ME countries. Therefore, the strategy was to implement massive and synchronized vaccination campaigns in the 7 target countries. By the end of phase I, the size of polio outbreak had been reduced to the minimum in Syria (35 cases in 2013 and one case in 2014). Unfortunately, the poliovirus was able to reach and paralyze 2 children from Iraq. The main objective of phase II was to identify the high risk areas and implement focused and high quality SIAs in order to reach difficult areas. The response was extended to 8 countries including Iran in phase II. All countries were able to map and vaccinate HRAs with different SIAs quality. The impact of the first two phases significantly reflected the success of immunization activities; no more polio cases were detected and all environmental samples collected from neighboring countries showed negative WPV since April 2014. Phase III objectives were focused on no complacency and consolidation of the gains by: 1) maintaining high population immunity through routine immunization and SIAs to guard against poliovirus spread, 2) maintaining sensitive AFP surveillance systems to ensure that there is no missed virus in circulation. By the end of phase III, countries were supposed to present their achievements, any remaining challenges and support needed from WHO/UNICEF.

1.4 Status of implementation of phase III review recommendations

Dr Fazal Ather, UNICEF/MENARO

The presentation highlighted six areas for recommendations:

1. SIAs
2. AFP surveillance
3. Communication and social mobilization
4. Routine Immunization
5. Coordination and
6. Hard to reach population.

All countries conducted the planned SIAs; 9 NIDs and 8 SNIDs focused mainly on children in HRAs and high Risk groups. Strengthening the role of communities and local partners in order to reach all children was seen as best practice in many countries. Countries have developed accessibility maps that lead to increase in access to children in hard to reach areas. All countries implemented full spectrum of campaign monitoring with varying degrees of quality.

Countries have shown improvement in surveillance sensitivity. Collection of samples from contacts of all AFP cases was done in Syria, while other countries collect mainly from contacts of hot and those with inadequate AFP cases. Surveillance networks were expanded to include new IDPs and refugees. Internal AFP reviews have not been done in all countries while external outbreak response reviews were conducted in most of the countries. All countries assessed the feasibility of implementation of environmental surveillance sampling.

All Countries developed special plans for high risk areas with low RI performance. Intensive attention was given to maintain outreach activities among mobile and hard to reach communities. Special plans to provide RI for refugees and IDPs have been developed. At least one IPV dose is introduced in most of the countries.

Subnational communication plans have been reviewed and the implementation has been monitored systemically. Countries improved their plans to include all partners and local communities to jointly work on EPI and outbreak response communication and social mobilization issues.

2. COUNTRY REPORTS: 2015 ACHIEVEMENTS AND PLANS FOR 2016

2.1 Syria

Dr Lamiaa Abou Ajaj and Dr Razan Al Tarabishi, Ministry of Health, Syria

Syria implemented the recommendations formulated in the January 2015 review meeting with varying degrees of quality. Activities in the Phase III plan were fully implemented. Four NIDs and one SNID were conducted in Phase III (January - October 2015). The average number of vaccinated children in each NID was 2.9 million and SNID was 0.3 million. The type of vaccine used in most of rounds was tOPV except for February NID and January SNID. After each campaign, post-campaign monitoring (PCM) was done using independent monitors, re-call and finger marking coverages showed more than 90% except February SNID (FM showed 79% coverage). The program faced serious challenges to reach most of children under five in the northern governorates during the SIAs. The major ones were lack of security, confusion of parents due to implementation of campaign by other groups, some health facilities were out of service and many teams were stopped in the field. Open window strategy has been used and the team was able to implement campaigns in Deir Ezzor in March and May 2015.

The AFP surveillance has been strengthened at the national level. The key surveillance indicators in 2015 have reached the certification benchmarks: non-polio AFP rate is 3 per 100,000 children less than 15 years of age (target ≥ 2) and stool adequacy is 90% (target ≥ 80%). The reverse cold chain was properly maintained and the Lab isolated 7% NPEV and 6% SL from all collected specimens. However, there were sub-national level gaps in Idlib, Aleppo, Al-Hassakeh, Deir Ezzor and Al-Reqqa due to security constrains.

Routine immunization remains the weakest link in the chain of the polio eradication strategies. Due to the conflict, 25% of health centers are out of service (400/1622), especially in high risk areas which caused the coverage of OPV3 to decline from more than 90% before the conflict to 67%. During Phase III, the program implemented the 6-month plan to revitalize RI: 85% of the required mobile teams were involved (146/172) in strengthening supervision and maintaining the cold chain. A coverage survey has been done during phase II and the final result is under process. Hit and run strategy has been adopted in high risk areas.

The program continued efforts to maintain a good level of coordination among partners and local authorities. The mechanism of coordination was through the National Coordination Committee. The national communication strategy is being implemented. Several media channels were involved in information dissemination before and during the campaign and for production of immunization songs.

2.2 Iraq

Dr Muataz Abbas and Dr Yusra Khalaf, Ministry of Health, Iraq

The Program reported implementation of all recommendations, but most of these were partial, except better training of teams in high risk areas of Baghdad. Two NIDs were conducted in September and October. About 25% of the population lives in areas having conflicts of varying nature. Analysis of non-polio AFP cases aged 6 to 59 months showed improvement in 2014 compared with 2013 but upwards of 10% of these children had below 4 doses of OPV reflecting sub-national immunity gaps. The government of Iraq provided more than 8 million US$ for SIAs, reinforcing its commitment to polio eradication.

Surveillance was enhanced through regular feedback to DoHs and advocacy meetings and training in September and October. Key surveillance indicators are meeting the international standards at national levels. Three governorates were missing the target of non-polio AFP rate and one of them, Anbar, was missing the target of percent AFP cases with adequate specimen, as well.

Routine immunization data showed that OPV3 rates remained below 80%., 77% in 2014 compared with 79% in each of the two preceding years. This has been largely due to emphasis on reporting accurate data in 2014, vaccine stock outs and security setbacks in five DoHs. The program shared strategic and operational priorities for the next six months keeping in view global context and recommendations of the recent assessment. Two NIDs and one SNID were proposed with immediate focus on training on micro-planning/mapping in high risk governorates; modifying tools/forms for follow up of missed children; intensifying supervision/monitoring and reviewing independent monitoring methodology. For routine immunization, focus would be on ensuring vaccine management; capacity building of vaccinators and supervisors, and RED approach; enhanced supervision using technology like Android Apps for geo-tracking of vaccinators; DQS and using polio assets to improve RI coverage. For further improving AFP surveillance, training of AFP Focal Points and seminars for physicians would be convened in addition to financial support to active surveillance and adjusting database to collect information about high risk populations. Communications and social mobilization plans would be developed for each phase of SIA with diversification of medium channels, including social media. A bi-monthly meeting of the National Steering Committee would be convened to ensure coordination and follow up of plans.

Outbreak review Iraq

Dr Ni'ma Abid, WHO/EMRO and the Team Leader of the review mission

The team conducted field assessment in 8 provinces as well as reviewed available documents. The mission concluded that there is no evidence of residual wild polio virus circulation in Iraq; however the country remains vulnerable to WPV importation or emergence of VDPVs due to the following reasons:; 1) routine immunization coverage is low (69%)and variable (from < 20% to 100%); 2) sub-optimal quality of immunization services provided to the IDPs in the visited camp in Kerkh health directorate of Baghdad; 3) significant proportion (25%) of population lives in conflict affected or inaccessible areas; and 4) there are surveillance gaps at sub-national levels and clear evidence of missing AFP cases from key tertiary centers in Baghdad.

The mission made specific recommendations to improve the quality of polio campaigns and routine immunizations with the main focus on reaching the IDPs and high risk groups and enhancing the sensitivity of the surveillance system to early detect and effectively respond to any introduction of WPV or emergence of VDPVs.

2.3 Lebanon

Dr Randa Hamadeh, and Mrs Hala Abou Naja, Ministry of Public Health, Lebanon

This summary briefly addresses the response Lebanon has achieved against the polio outbreak concerning especially the implementation of phase III plans. As recommended before by the review mission during January 2015, Lebanon has implemented two mop-up campaigns using bOPV during March and April 2015 contributing to a total of 5.5 million OPV doses administered since 2013. Those campaigns achieved coverage higher than 100% due to an unexpected increase of targeted children as a result of a continuously moving population and identification of additional vulnerable areas by district physicians. After conducting the PCM, results showed that more than 88% of the children surveyed received the polio vaccine during the campaign especially at the HRAs. More than 98% of those also received a vaccination card during the campaign. SIAs challenges in Lebanon include reaching the unregistered Syrians, keeping the communication level to a satisfying level, and the issue of short notice leaving a very tight window to the communication team to reach every corner of the target population. Accordingly, the issues of delay in PCM data make it hard to take action based on this data. The way forward concerning the SIAs is to continue the focused campaigns where the need exists especially in the HRAs, and to develop well-established micro-plans at the cadaster level.

Regarding the RI, tOPV is still used till the date of the switch in April 2016 and will be enough till then. bOPV is used during campaigns, and IPV is used within the national calendar since 6 years. RI is provided in Lebanon through 219 PHCs and more than 500 dispensaries. DQS has been established and results put into action, and sensitization is increased especially through the CHM. Engagement of the private sector is well increased as well. By the same trend, a cluster-based survey is in the pipeline as well as a sero-prevalence survey.. In addition, , cold chain has been well reinforced (solar system for cold chain), and EVM training is on-going since October, 3, 2015. Polio assets are well used and still being used in the focus immunization sessions frequently done for Lebanese and in the ITS. Concerning the refugees, vaccination at the border is still on-going and special plans were made for accessing their areas in campaigns and for RI.

Regarding communication, much of the work has been done especially with UNICEF (C4D) including many spots and IEC material.

AFP indicators have been markedly improved. The non-polio AFP rate has almost doubled from 2.2 in 2013 to reach 4.8 (annualized) in 2015. All provinces in 2015 have reached and exceeded the target NPAFP rate (2/100,000). Similar improvement has been seen in adequacy rate, where for the past 5 years, this is the first time that the national adequacy rate has exceeded the threshold (86% in October 2015). Two provinces in 2015 though still are below 80% (Mount Lebanon and Nabatieh), where more work is still needed on national level in general and more specifically in Mount Lebanon and Nabatieh after assessing the reasons behind inadequate cases in the corresponding provinces.

Moreover, as part of adopting the high risk approach, segregate analysis has been conducted on national level and provincial levels as well. The NPAFP rate for Syrians refugees has reached the expected threshold (2/100,000).

As for the differential diagnosis of AFP cases in 2015, the majority of cases' diagnosis are GBS with a rate of 1.3/100,000 <15 yrs.

All these improvements have been a result of a number of factors. HR surge capacity has been on top of these factors where 8 surveillance officers have been recruited to conduct active visits in the 8 corresponding provinces. Accordingly, the number of active sites has increased tremendously from 52 sites in 2013 to 114 sites in 2015. In addition to that, visits have not been restricted to hospitals only, where the surveillance officers are visiting also medical centers and dispensaries that provide medical services to Syrian refugees. Moreover, another factor for improvement of indicators is the establishment of community surveillance, where community reporters have been trained on AFP case definition (around 260 reporters have been trained). 15 suspected AFP cases have been reported by these community reporters, where only 3 cases turned out to be true AFP cases after thorough verification and investigation conducted by the surveillance officers. It is worth mentioning that these community reporters are located in areas of close geographic proximity to the Syrian borders and of high levels of insecurity. Moreover, the most prominent factor in this improvement is the excellent collaboration between the epidemiological surveillance program and the different UN bodies and NGOs that deal with the Syrian refugees.

As for future activities, they are numerous however the summarized points are as follows:

- Enhance reporting from private physicians, through involving syndicate of private physicians and introducing innovative ideas such as E-learning modules and mobile applications.
- Expand the network of community reporters to other regions
- Include auxiliary departments inside hospital in AFP reporting (Outpatient clinics, diagnostic imaging testing departments, physiotherapy clinics, emergency rooms)….(in process)
- Conduct simulation exercise including EPI/ESU and partners to test national preparedness and response plans
- Follow up on the provision of implementing environmental surveillance in Lebanon (communication with WHO-EMRO is in process)

Outbreak review Lebanon

Dr Faten Kamel, Consultant and the Team Leader of the review mission

Lebanon was one of the eight countries included in the Middle East outbreak Response (Syria, Lebanon, Jordan, Iraq, Turkey, West Bank and Gaza, Egypt and Iran) and a comprehensive plan was developed to ensure protection from the polio outbreak. Periodic reviews were conducted in all countries. The last field review in Lebanon took place in October 2015. The main objective of the review mission was to assess the implementation of Phase III recommendations and to make specific recommendations on how to maintain polio free status in Lebanon. The mission started with a Desk Review: Briefing by MoPH officials followed by field visits (Beirut, Mount Lebanon, Baalbek, Zahla, Tripoli, Akkar).

AFP surveillance sensitivity markedly improved (Non Polio AFP rate was 2 in 2013 and has reached 4 in 2015). Stool adequacy rate has improved at national level (45 % in 2013 to 88% in 2015). There was expansion of the surveillance network that included community

reporters and more hospitals from HRAs. There is still a gap in reporting AFP cases from OPDs, 50% of cases detected during active visits and refresher training is needed for some focal persons.

Lebanon implemented 5 NIDs and 5 SNIDs in specific HRAs. Reviewers have found major achievement: mapping high risk areas, perfect communication activity plan and engagement of the private sector. On the other hand, the reviewers recommended development/update of the detailed micro-plans of some areas and implementation of the PCM immediately after the campaign and sharing the results in time for corrective action. Provision of RI by MMUs in Bekaa and North is managed by an NGO (Beyond) and UNICEF. This includes free vaccination services, immunization units at UNHCR Registration centers and Border entry points giving polio and measles regardless of age and vaccination status and vaccination cards issued to facilitate tracking. The team recommended continuing efforts to engage the private sector to collect regular RI data to adjust RI coverage. Total targets need to be addressed because of population movement and the integration of unregistered Syrians within the Lebanese community.

The reviewers concluded that Lebanon implemented most of the recommendations made by previous reviews and are on track with implementing Phase III plans. The team recommended continuing mop up campaigns in high risk areas as well as supporting the surveillance HR plan in 2016.

2.4 Jordan

Dr Mohammad Ratib Sorour, Ministry of Health, Jordan

Jordan fully implemented phase III plans; SNID was implemented in HRAs reaching 397,206 children of the HRAs with a coverage by IM =91% both Syrian refugees camps (Zaatari and Azrak) were involved in the SNID with high coverage by IM.

AFP surveillance indicators were improved (non- polio AFP rate 3/100000 in 2015), AFP review was conducted September 2015.

Jordan RI schedule gives 5 doses of OPV (3M,4M,9M,18M,and 6 Y) plus 3 doses of IPV (2M,3M,4M)also Jordan introduced Rota Virus Vaccine in March 2015 of 3 doses with Penta vaccine.

Regarding inaccessibility in Jordan there are no inaccessible areas, but to increase coverage in HRAs, MOH initiate community leaders' activity:

- HRAs were identified at sub district level
- A detailed list of HRAs was prepared. All HRAs were accurately mapped.
- Area specific approach was used to reach eligible children in each area according to the specific characteristic of the area/group
- The activity was done in close coordination between MoH and all partners (WHO, UNICEF, UNHCR, IOM, UNRWA, and RMS)

Criteria of HRAs:

- Border areas with Syria and Iraq;
- Geographically hard to reach areas;
- Mobile communities;
- Communities with high numbers of refugees;

- Locations where Polio coverage is suspected to be < 90% for routine immunization or as reported in previous campaign

Regarding routine EPI services, Jordan managed to maintain more than 90% coverage for different antigens among Jordanian target population ;for Syrian refugees in camps ,to ensure more than 90% coverage of eligible children 7 fixed EPI teams were added (total now is 10 teams) , supported one cold room and ten solar fridges to reach and vaccinate Syrian refugees in the host community - other high risk groups reach every community plan (REC) has been drafted utilizing the mapped high risk areas during SNIDs and through involvement community and religious leaders using the outreach – mobile teams, tablets will be used for real time reporting.

Reach Every Community or REC approach is adopted, Jordan National EPI Programs is implementing strategies and actions to reach all children, especially Syrian refugees and those in socially disadvantaged and marginalized communities in all High Risk Areas which were identified during 2013-15 Polio NIDs/SNIDs in Jordan.

- 23 Outreach/Mobile teams in all 12 governorates covering the identified HRAs according to the monthly plan based on the governorates micro plan.
- In addition, 7 vaccination teams in Za'atari camp are using the REC approach
- Prior to each visit, IOM through CLs and CHCs are mobilizing and informing the HRAs communities on the next sessions or encouraging them to visit the nearby health facilities.
- To increase the community awareness on RI for children and TT for CBAs, flyers and posters have been provided to each community and health facility.
- National EPI with the support of WHO and UNICEF developed awareness materials: 4 Flip charts (RI, MR, Polio and EPI guideline), 3 Posters: (RI, TT and defaulter) and 2 Monitoring Charts: Children RI and TT for CBAs.

Further, the national refresher training workshops on EPI at the governorate level have started. As of today 31 out of 60 training workshops have been completed and the remaining will be done within the next two months. To improve AFP surveillance quality, 3 surveillance officers, one senior surveillance officer (SSO), one lab technician and one senior coordinator (to coordinate with military health facilities) were recruited. Training workshops were conducted for clinicians, nurses, infection control officers, sanitarians, EPI managers and health staff of NGOs offering health services to Syrian refugees. As a result, the NPAFP rate exceeded 2/100000 children less than 15 years old and all other surveillance indicators met the global standards. However there are still 3 low density population governorates which didn't report AFP cases during 2014.

The program maintained a high level of coordination among all partners through the regular weekly polio control room committee (PCRC), involving MOH, WHO, UNHCR, UNICEF, IOM, UNRWA, Royal Medical Services and other partner agencies, to regularly review status of response activities, Planning and take necessary action when needed.

Community mobilization: Advocacy meetings with heads of health directorates, NGOs and CBOs. In addition to that community and religious leaders and health workers embarked on sensitization in suburban/rural areas. Radio and TV ads during NIDs and SMS messaging targeting Syrian refugees as well as provision of required IEC materials, e.g., flyers, banners

stickers. As a result coverage rates have increased; number of missed children was significantly reduced, social reasons for missed children decreased throughout the campaigns June-November.

To build community ownership (especially in high risk areas), a new innovative approach of involving community leaders in pre and intra-campaign monitoring has been conducted. The approach included engaging of 240 HRAs community leaders (CLs) in the preparation and implementation of the polio campaign, to ensure every child is vaccinated. CLs were contacted regularly by special polio control room officers and actions were taken immediately to address any encountered problem. This approach proved to be very effective and will be replicated in the subsequent rounds

Outbreak Response review, Jordan
Dr Nasr Tantawy, Team Leader of the review mission

In view of the current polio outbreak response activities in high risk countries, review missions have been deployed to assess the level of implementations of phase II recommendations and compliance with phase III plan. The mission was conducted from 7-13 September, 2015 to fulfil certain assessment objectives and followed a standard review process encompassing all outbreak response components.

The major findings indicate that AFP surveillance system is in place and adequately functioning. However, some remaining issues were identified regarding the inadequate quality of active surveillance; shortage of surveillance staff and enabling factors. Supplementary immunization activities show bottom up process of identifying high risk areas with suitable targeting strategies. Low quality microplanning was identified as a major issue that needs improvement. Routine immunization system is well established and vaccine is given for free without any restriction for Jordanians and non-Jordanians. Use of some innovative interventions to improve routine are implemented particularly the use of Reach Every Community approach (REC). Implementation of vaccine coverage survey is planned to validate the administrative coverage data.

Communication interventions have enabled the community to get timely information about Routine and supplementary immunization. Polio control room has been very instrumental in enhancing communication as well as coordination between government and all partners. A set of recommendations were addressed to Ministry of Health and partners.

In conclusion Jordan may respond to all recommendations and bridge the gaps that have been identified during the review to maintain Jordan polio free.

2.5 Palestine
Dr Randa Abu Rabe, WHO Jerusalem Office

Palestine implemented successfully all phase III recommendations. Refreshing training is ongoing of health workers to enhance AFP detection as non-polio AFP rate is 1.5 in 2015. Environmental samples are collected regularly and didn't isolate any WPV or VDPV since March 2014. Routine immunization coverage is very high by reported coverage as well as best estimate (98% for both). In case of war there are special vaccination activities for IDPs. There are mobile teams visiting the community behind the wall and in remote areas. IPV is part of RI and 2 doses are given in the first year. The program is ready for the switch by April 2016. Communication is at high level between MOH and partners; WHO, UNICEF and UNWRA.

The main challenges are the delay in sending the stool specimens to Lab in Israel and receiving the Lab results due to security restrictions. Clearance of the procurement of vaccines takes long time that might lead into zero stock out in some instances.

2.6 Iran

Dr. Sussan Mahmoudi, Ministry of Health and Medical Education, Iran

Every year about one million children get vaccinated against polio in January and February in tropical areas and in April and May in non- tropical areas. Target groups are all parts of provinces close to Afghanistan and Pakistan (House-to- House) and High- risk zones and groups in rest of the country. bOPV is used in all SIAs. In 2014, in response to Middle East polio outbreak.2 additional rounds were conducted in western border provinces. In 2015, 4 rounds were conducted and also 4 rounds are planned for 2016.Also vaccination of travelers coming and going to polio endemic/infected countries in ongoing.

Non polio AFP rate is 4.1 at country level and is more than 2 in all provinces (except Isfahan). Percent of AFP cases with adequate specimens in 2015 was 96% at country level and more than 80% in all provinces.

C4D campaign addressing HCWs, physicians and parents for polio eradication In 2015. OPV3 coverage in 2015 was 99% at country level and more than 95 % in all provinces. One dose of IPV has been introduced in national immunization program in September 2015.

To ensure sufficient expected coverage of routine immunization, active immunization is conducted among Hard-to-Reach and remote areas by mobile teams. Also in 2015, Health centers providing active health care services have been established in marginal areas of megacities. Country received Vaccine Introduction Grant for Non-GAVI eligible countries from WHO in 2015. Almost all the dedicated budget will be allocated to get standard logistic and cold chain equipment.

Based on national guideline for polio eradication and AFP Surveillance System, MOH is developing web-based training materials on outbreak and AFP case detection and reporting with free access for all physicians and health workers at public and private sector .The project is funded by WHO and is at final stages. Also a special website for polio eradication and IPV introduction has been developed.

Planned activities are:

- Holding 4 sub national refreshing courses for provincial health care workers (Budget is covered by WHO)
- National guideline for Immunization (including IPV and tOPV-bOPV switch) has been revised and approved by NITAG and will be published in the next month (Budget is covered by UNICEF)
- Conducting 4 rounds of SIAs in 2016
- National plan for tOPV- bOPV Switch has been developed (23 April 2016 to be National Switch Day)

3. STRATEGIC ISSUES IN COMMUNICATION, SOCIAL MOBILIZATION

Ms Marwa Kamel, UNICEF/MENARO

Communication and social mobilization efforts were vital in sustaining public momentum and creating an enabling environment in the ME for continued polio campaigns. Middle East outbreak response was considered an opportunity for:

- Institutionalizing communication in government Structure, System and Planning process (with various degree across countries)
- Generating evidence for communication; PCM , Coverage survey , campaign evaluation, KAPs (Syria ,Lebanon)
- Evidence based planning at lower level
- Communication tools and recourses developed
- Communication capacity increased : training, communication focal points, HR capacity support for countries
- Communication staff supporting communication for other health programs -**NIDs campaign for support of cholera outbreak Iraq**
- Community participants for polio used for programs –REC approach Jordan
- Community volunteers used for comprehensive family care programs **–FARAH initiatives, Syria**
- POLIO lessons used to inform other Community based programs **– Community PSS programs – Syria**
- Polio Communication evidence informing other programs **(media consumption** analysis , reasons for missed children …

The way forward/Recommendations are:

- Maintain / Strengthen communication evidence to inform RI plans
- Continue Communication capacity building at all levels , regional C4D trainings
- Strengthen role of community in HRAs through maintaining /strengthening mobilizing new community networks
- Mainstream and standardize the IM questionnaire and data so that it could be used to reach the missed children
- Building on successful experiences across the countries (Nancy Ajram Ad was recalled by 40% of population in Lebanon abd Zaal wa Khathra was recalled by 50 % of population in Jordan
- Effective utilization of communication channels
- Communication support to surveillance strengthening
- Documentation

4. STRATEGIC ISSUES FOR STRENGTHENING BASIC IMMUNIZATION SERVICES

Dr Kamal Fahmy, WHO/EMRO

Based on the analysis of the RI coverage in the ME countries throughout the last four years and based on the comparison of the reported coverage Vs WUNEIC estimate a number of strategies have been developed to strengthen the weakened RI coverage specially in countries with difficulties namely Syria and Iraq.

On a short term basis: a Multi antigen campaign, for inaccessible areas can be done targeting children 2-59 M of age, to be repeated three times at an interval of 4-6 weeks including Pentavalent (DTP) and OPV for three doses, MCV for two doses for 6 months and older and one dose of IPV for less than 1 year of age, The campaign should be well prepared including a proper training of HWs. The campaign should be conducted using fixed Health

centres, outreach and mobile teams. On a long term basis, re-establish non-functioning EPI centres, replenish the deficient cold chain, proper training of health workers and defaulter tracing.

Sustained challenges are still facing the EPI program in ME countries as continuous internal displacement of the population, presence of campaign refugees, Shortage of global supply of vaccines, poor logistic supply and poor strategy for social mobilization especially for non-governmental controlled areas.

In country polio staff has an essential role in strengthening RI, through proper use of PEI asset in the country, to build on successful polio campaign to include other antigens and to assist in capacity buildings of HWs

The suggested recommendations focus on Preparing and implementing the multi antigens campaign, assess the cold chain and revitalize the RI in war affected zones, establish an effective mechanism for defaulter tracing and proper advocacy and social mobilization towards the necessity and importance of routine Immunization

5. MISSED CHILDREN

Mr Jalaa' Abdelwahab, UNI*CEF/HQ*

The success of stopping poliovirus transmission and achieving global eradication hinges on our joint responsibility to identify, reach and vaccinate all missed children, especially those who are persistently missed. GPEI has various sources of data on missed children. Based on the non-polio AFP surveillance data, we estimate that globally we have around 6.6 million children (6-59 months) who have never received any OPV doses with half of those coming from WHO African region. In order to address missed children we need to better understand the reasons and underlying factors for missing those children in both accessible and inaccessible areas. In few countries, a significant proportion of the missed children are due to inaccessibility. At the same time, in many countries the challenge remains in implementing quality immunization activities in accessible areas. For example in Jordan, a little over 6% of the targeted children are missed in the last campaign due to refusal and lack of awareness about the campaign.

Harvard polling has helped us understand caregivers perceptions around the vaccinators and vaccine: Another key factor in reaching and vaccinating children is trust of the caregivers in the vaccinator: the person who comes to the doorstep is a critical determining factor in whether or not a parent will open the door and then allow the person at the other end to vaccinate their children repeatedly. The data shows that vaccinators do not enjoy very high levels of trust in any of our priority polio-affected countries. In line with the virus epidemiology we see that trust is lowest where we have the most substantial challenges in reaching children. Trust in the vaccine follows the same formula. Destructive rumors about OPV circulate most in areas where we have the most challenges in reaching all children repeatedly.

Over the years, GPEI has been able to identify successful strategies for reaching missed children in accessible and inaccessible areas. In accessible areas it is critical to extend our focus to beyond the 3-5 days of the immunization campaigns: there are various strategies for the program to optimize reaching children before, during and after the campaigns days. Key strategies have also been identified for reaching and vaccinating children in inaccessible areas. Depending on the context, other alternative approaches include utilizing opportunities to

provide polio vaccination through synergies and alignment with other initiatives under the banner of "polio plus".

SIA quality continues to be sub-optimal in key risk areas. There is a need to prioritize and fully apply the presented strategies in order to achieve global systematic excellence in reaching missed children. Overall, success in addressing missed children is dependent on our ability to ensure strong program accountability and ownership, utilizing all available data and information to guide the development and implementation of locally tailored strategies fully integrating operations and communication.

6. GLOBAL AND REGIONAL VACCINE SUPPLY OVERVIEW

Mr. Andisheh Ghazieh, UNICEF

Overall supply is constrained but sufficient to meet planned activities based on EOMG approved SIAs developed in consultation with the regions through to end 2015 with the usual issues related to licensed products. However Supply availability of tOPV for Q1 2016 could be constrained, if 2015 demand increases due to the production lead time and the planned Switch in April 2016.

As per the IMB report 2015, although there has been some strong work in vaccine management, vaccine continues to be wasted. IMB sources report that they have seen fridges stocked full of vaccine far in excess of requirements; and vaccine that sits unused and so is wasted. Vaccine is precious, and there is considerable scope for countries, supported by partners, to further improve its judicious management. The IMB recommends that in the endemic and priority countries, vaccine wastage be urgently reduced to 15% as an absolute maximum in every subnational area, starting by full implementation of the programme's standard operating procedure for reporting on vaccine utilization and stock balance. Therefore countries need to provide the balance report whenever new vaccine requests are made for supplementary activities.

UNICEF together with GPEI partners and manufacturers are planning for tOPV cessation in April 2016 and demand switching from tOPV to bOPV ("the Switch"). To mitigate the risk for accessing vaccine for the routine, countries are highly encouraged to accept the vaccine based on the WHO pre-qualification (WHA resolution). UNICEF will continue to support WHO's efforts to encourage countries to license or grant temporary import waivers for WHO prequalified OPV vaccines to increase the supply flexibility.

IPV supply faces significant challenges and constraints. Suppliers are experiencing technical issues scaling up bulk production therefore supply reduced by 60 million doses in 2014/2015 and a further 25 million doses in 2016. It should be noted that IPV supply for 2015 is insufficient to meet demand for routine introduction in all countries as well as demand for use in SIAs and for potential outbreak response post Switch. Therefore IPV supply is being prioritized for the endemic and high risk countries (tier 1 and 2) to enable them to introduce into their routine program by the end of 2015. Lower risk countries have been informed about delays in supply availability, leading to postponed introduction.

7. STRENGTHENING AFP SURVEILLANCE SYSTEM AND OUTBREAK PREPAREDNESS AND RESPONSE

Dr Magdi Sharaf, WHO/EMRO

Presentation defined the sensitive AFP surveillance as the ability of the system to detect WPV/VDPV transmission in a geographic area at the earliest. Sensitivity pertained to several elements. The most important element is the surveillance network; wider network enables the program to pick up AFP cases from every community, any tribes and mobile population and can reach remote areas.

The presentation highlighted that the basic surveillance indicators; the non-polio AFP rate and the stool adequacy rate are necessary to assess any weakness within the system. The global standard of the Non-Polio AFP rate is 2 per 100,000 populations below 15 years of age and 3 during the outbreaks. Among EMR countries, all Middle East countries have achieved the global target in 2015. Morocco showed a non-polio AFP rate below 1 due to lack of cooperation with private sector. Lebanon was similar to that before the outbreak and after conducting series of orientation sessions and meeting with senior pediatricians was able to increase the rate from below 2 in early 2013 to above 5 in 2015. It is important to share experience between countries to strengthen the system and that is the outcome of the lesson learned from Middle East outbreak. Presentation showed an area of weakness in the surveillance where national figure is satisfactory while sub-national is not. An example from Yemen showed the non-polio AFP rate is 4.6 at national level while one-third of the districts are silent. The target population below 15 years of those districts exceeds 2 million. Seasonality of the AFP reporting is another area of improvement, this was clearly shown in Lebanon in 2014 when the surveillance officer conducted an active search and 22% of cases added to the line list in December 2014. The surveillance network in hospital sometimes missing the outpatient clinics, analysis of the AFP diagnosis has shown that some countries have never reported traumatic neuritis or hypokalemic hypotonia. Laboratory is a crucial component in the AFP surveillance system delay in Lab result will not allow the system to respond immediately if there is a polio virus transmission. The presentation showed that 50% of AFP cases in Yemen have not yet been classified due to inability to send their specimens to Lab in time.

Supplementary surveillance activities have been presented as an extra-tool to strengthen the system. Collecting stool samples from contacts of an AFP or from healthy children and collecting samples from sewages are the supplementary activities. The presentation showed that the sample collected from sewage in Afghanistan isolated the virus before children getting infected by paralytic polio. The example clarified the importance of the environmental sample as an early warning tool in the system. Similar to that, another example showed the importance of collecting samples from AFP contacts. In Somalia Polio outbreak 2013, 25% of the polio cases confirmed by isolation of wild virus from contacts while samples from index cases were negative. Collection of specimens from healthy children increases the sensitivity of the system especially in low population and silent areas.

Risk Assessment tool:

Presentation demonstrated the history of the development of risk assessment (RA) tool. RA has been developed in EMR and other WHO regions but using different methodologies. After the polio outbreak in Tajikistan in 2010 where there was no polio virus for more than 10 years, the Independent Monitor Board IMB requested to standardize the RA and use its results for action. In 2011, a Global Risk Analysis Group was developed from the six WHO Regional Offices, HQ WHO and CDC Atlanta. The group has developed a national standardized risk assessment model including; (1) Risk factors 3 Categories (Surveillance, Immunization, Additional/Environmental/Health System indicators), (2) Scoring/Weighing 30% Surveillance, 50% Immunity, 20% Environment, (3) Core and Optional indicators. Later EMR has

developed another tool at sub-national level. EMRO updated the IFA system, added module for the risk assessment and trained all data entry staff in August 2014. The surveillance officers were also trained on how to use the program.

Outbreak Response SOPs:

Few slides presented the new Standard Operation Procedure SOP that has been developed according to Polio Eradication and Endgame Strategic Plan 2013-2018 aims to stop any new polio outbreak within 120 days of confirmation of the index case. The new standards are (1) grading" a polio outbreak to right size the response and required resources; (2) expanding the SOP to include responses to circulating vaccine-derived polioviruses (cVDPVs). To ensure the effective implementation of the outbreak strategies and a timely outbreak response to interrupt transmission within 120 days, GPEI partners set up time table for activities. SIAs implementation is one of the most important activities and it should be started within 14 days from outbreak confirmation. The number of rounds will be 5, 3 of them should be implemented in short period of time (2-3 weeks), large scale area with expanded age group. The new SOPs set 2 important policies; surge and no-regret policies. There will be 2-phases surge; Rapid Response Team – "Team A" Within 72 hours of the outbreak notification and Surge Team – "Team B" Within three weeks from outbreak notification. At the onset of all emergencies, the GPEI ensures that predictable levels of staff and funds are made available to the country, even if it is later realized that less was required.

CONCLUSIONS, RECOMMENDATIONS AND WAY FORWARD

Conclusions:

Country presentations, field and desk outbreak assessments and group discussions revealed that Phase III of the outbreak response plan was successfully implemented. All countries showed evidence of improved polio vaccination status, surveillance quality, and consistency. More than 18 months have elapsed since the last polio case was reported in the Middle East (Iraq) in April 2014. Key surveillance indicators confirm the sensitivity of surveillance systems in ME countries. Five WHO accredited labs tested more than 10,000 stool specimens for wild poliovirus from AFP cases and 700 stool specimens from contacts and declared all specimens were polio free. Additionally, wild poliovirus has not been isolated from monthly environmental stool samples collected from Egypt, Gaza and West Bank since March 2014. The aforementioned indicators and facts imply the cessation of poliovirus transmission in the Middle East. However, the risk of poliovirus importation remains, due to inaccessibility of certain areas for immunization activities and the continued presence of the poliovirus in Afghanistan and Pakistan with uncontrolled population movement from both countries to other countries in the region. The risk of emergence of VDPV is also high in the region particularly in conflict affected countries due to deteriorating routine immunization coverage

Recommendations and way forward:

The work group agreed on describing the coming, post-outbreak period as a Risk Reduction Phase. The most important priority is to maintain the momentum as governments and partners work to address all existing gaps in immunity and surveillance in order to mitigate the risk of poliovirus importation. Preparedness and contingency plans should be put in place. They should be realistic and simulation exercises should be conducted to ensure the achievement of polio-free status is maintained and new virus outbreaks are prevented in the

region. All countries are expected to follow the new standard operating procedures in when preparing these plans.

Recommendations specific to particular areas and strategies are outlined below.

1. **Routine Immunization (RI)**

- Develop and update of routine immunization strengthening plans, ensuring innovative approaches and building on polio experience and infrastructure.
- Ensure accountability and monitoring of plans implementation.
- Sustain efforts to reach and vaccinate refugees, IDPs and other high-risk groups and areas with low routine immunization coverage through:
  - Maximizing opportunities for vaccination (border crossings, registration centers, camps, UNHCR supported facilities. etc.)
  - Coordination with NGOs and UN partners Clear protocols to immunize defaulters of different ages
- Consider catch-up activities for RI in inaccessible areas through outreach and campaign delivery strategies.
- Improve registration and reporting system to enhance data quality.
- Develop proper mechanism for defaulter tracing and reaching missed children.

2. **Supplementary immunization Activities especially prior to the switch**

- Implementation of NIDs in Syria and Iraq.
- SIAs in Egypt.
- Risk reduction in other countries, which may include small-scale SIAs in high-risk areas.

In General:

- Keep the focus on high-risk areas based on experience in previous phases of the outbreak response.
- Implementation of the full spectrum of campaign monitoring activities (pre-, intra-, post-campaign), with timely analysis and sharing of data, using WHO guidelines.
- Continue with access analysis and tracking, identification of chronically inaccessible areas for risk mitigation.

3. **Surveillance:**

- Implement surveillance strengthening plans to improve sensitivity, quality and timeliness.
- Identify and address subnational surveillance gaps.
- Expand and update active surveillance networks to respond to population changes and cover any influx of IDPs or refugees.
- Develop and implement innovative approaches to ensure surveillance in inaccessible areas.
- Perform internal surveillance system reviews at least once a year.
- Institute environmental surveillance in Iraq and Syria as well as other countries (assessment, training and technical guidance to be provided by WHO).
- Continue WHO support in 2016.

4. **HRAs/populations**

- Countries to conduct regular risk assessments (twice a year) to facilitate identification of gaps in key indicators.
- Ongoing mapping of high-risk areas and developing of targeted strategies for reaching children in these areas (innovative approaches, targeted communication strategy component, community involvement, segregated reporting and purposive monitoring).
- Plans should be developed to ensure rapid response to immunity gaps, including components such as mop-ups, surveillance, immunization activities and communication).
- Documenting activities and monitoring progress must be done on a consistent basis.

5. Inaccessible area

- Identify map and track inaccessible areas and quantify inaccessibility up to the village level.
- Full involvement of NGOs and local communities.
- Security access analysis and planning to improve access to besieged areas.
- Pre-positioning of vaccine and taking advantage of peaceful periods.

6. Communication

- Ensure that communication is planned using evidence-based data at all levels, and that strategic planning for behavior change is the focus rather than simply raising awareness only.
- Maintain and strengthen communication strategies to support RI plans. Data from other sources like coverage surveys and KAP surveys should be used to guide planning RI interventions.
- Mainstream and standardize IM protocols to ensure that all forms of resistance to vaccination are uncovered and the resulting information is of use in helping to reach the missed children.
- Strong communication support for surveillance activities.
- Improve communication capacity building at all levels.
- Strengthen role of community in HRAs by creating new and broader community networks.
- Build on successful experiences across countries and document best practices.
- Continue institutionalizing communication structures within government structures, systems and planning processes.

7. Vaccine and logistics

- In view of the tight global supply, countries are requested to provide timely updates to their supply plans, stick to the approved calendar, improve judicious vaccine management, and ensure reporting on vaccine utilization and stock balance. Supply balance reports will be required from countries whenever new vaccine requests are made.
- Work closely with countries to encourage them to license or grant temporary import waivers for WHO prequalified OPV vaccines to increase supply flexibility.

8. Coordination

- Continue coordination mechanisms that were established for the outbreak response

    - Regular meetings
    - Information sharing
    - Joint decision-making
- WHO/UNICEF joint advocacy with high level government officials to maintain vigilance and quality activities, to gain access to chronically inaccessible areas, and advocate for budget allocations.
- WHO/UNICEF to facilitate inter-country coordination on cross border and cross notification activities.

Annex 1

PROGRAM

Thursday, 22 October 2015

08:30 – 09:00	Registration	
09:00 – 09:30	Welcome	MOPH Dr F. Athar, UNICEF Dr N. Abid, WHO
09:30 – 09:45	The status of polio eradication, progress and challenges	Dr N. Abid, WHO
	Introduction of Participants	All
09:45 – 10:00	Objectives of the meeting	Dr N. Abid, WHO

Session 1: Outbreak Status and Review of Phase III implementation

10:00 – 10:50	Outbreak overview and current status of Phase III of Polio outbreak response in the Middle East	Dr F. Kamel
	Status of implementation of Phase II review recommendations	Dr F. Ather, UNICEF
10:50 – 11:20	*Break*	
11:20 – 12:10	**Syria** Country presentation outbreak response activities/plans	Country Team
	Discussion	
12:10 – 13:00	**Iraq** Country presentation outbreak response activities/plans	Country Team
	Summary of Iraq Outbreak Response Assessment	Review team Dr N. Abid, WHO
	Discussion	
13:00 – 13:20	Strategies to cover missed children	Mr J. Abdelwahab, UNICEF
13:20 – 14:20	*Break*	

Thursday, 22 October 2015 (cont'd)

14:20 – 14:50	**Lebanon** Country presentation outbreak response activities/plans	Country Team
	Summary of Lebanon Outbreak Response Assessment	Review team, Dr F. Kamel and Ms. M. Kamel, UNICEF
	Discussion	
14:50 – 15:20	**Jordan** Country presentation outbreak response activities/plans	Country Team
	Summary of Jordan Outbreak Response Assessment Discussion	Review team, Dr N. Tantawy
15:20 – 15:40	**Egypt** Country presentation outbreak response activities/plans	Country Team
	Discussion	
15:40 – 16:00	**Turkey** Country presentation outbreak response activities/plans	Country Team
	Discussion	
16:00 – 16:20	*Break*	
16:20 – 16:40	**Palestine** Country presentation outbreak response activities/plans	Country Team
	Discussion	
16:40 –17:00	**Iran** Country presentation outbreak response activities/plans	Country Team
	Discussion	
17:00 –17:30	Overall discussion	

Friday, 23 October 2015

08:30 – 09:00	Wrap up of Day 1	

Session 2: Remaining challenges/Priorities and proposed actions for the next Phase

09:00 – 09:30	Strategic issues in communication, social mobilization and way forward	Ms. M. Kamel, UNICEF

	Discussion	

Friday, 23 October 2015 (cont'd)

09:30 – 10:00	Strategic issues for strengthening basic immunization services and reaching high risk groups	Dr K. Fahmy, WHO
10:00 – 10:30	*Break*	
10:30 – 11:00	Global supply overview and some regional specific supply data	Mr A. Ghazieh, UNICEF
	Discussion	
11:00 – 11:30	Strengthening surveillance activities	Dr M. Sharaf, WHO
	Discussion	
11:30 – 12:00	Outbreak preparedness and response: (Risk assessment, New SOPs and national plan)	Dr M. Sharaf, WHO
	Discussion	
12:00 – 13:30	*Break/Friday Prayer*	
13:30 – 14:30	Conclusion and recommendation	Dr F. Kamel
14:30 – 14:40	Introduction to the group work for preparation of countries' plans	Dr F. Ather, UNICEF and Dr M. Sharaf, WHO
14:40– 16:30	Group planning session	Country teams
16:30- 16:45	*Break*	
16:45 – 18:00	Discussion of draft country plans	
18:00	Closing remarks	Dr N. Abid, WHO Mr J. Abdelwahab, UNICEF

Annex 2

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