Joint WHO/UNICEF Middle East Polio Outbreak Response Review

Jordan Country Report

13–17 September 2015
EXECUTIVE SUMMARY

WHO/UNICEF conducted a review meeting in Beirut during September 2014 to assess the outbreak response activities in the Middle East countries involved in the Multi-country strategic plan to respond to the outbreak of polio in Syria and Iraq and assess the risk of possible spread inside Syria and Iraq, or transmission to countries in high risk zones including Jordan.

An independent review mission in Jordan was conducted during 13–17 September 2015 with the following objectives:

1. To assess
   a. Implementation of Phase II recommendations and Phase III plans
   b. AFP surveillance sensitivity and quality
   c. Adequacy of immunization activities (Routine and SIAs)
   d. Communication and Social Mobilization activities
   e. Partners’ coordination for the Outbreak Response

2. To make specific recommendations on how to maintain Polio Free Status

Methodology:

The review was launched with a desk review through a briefing by MOH officials followed by field visits during which 6 teams of experts visited 12 provinces and 2 camps (Zaatari and Azrak).

During each visit, activities and documents were reviewed at provincial directorate, hospitals and primary health care centers (PHCs). The evaluation included meetings with EPI/surveillance team, Royal Medical Services (RMS), WHO, UNICEF, UNHCR and IOM.

Reviewers focused on status of implementation of all components of outbreak response including response to recommendations of the last review, the current situation and implementation of PHASE III activities along the following areas:

1. Supplementary Immunization activities
2. Routine Immunization
3. AFP surveillance
4. Communication
5. Coordination among all partners
6. Share findings and provide recommendations
Findings:

**AFP surveillance:**

**A. Strengths:**
1. Structure of AFP surveillance system:
   i. Wide surveillance network
   ii. 65 active surveillance and 513 zero reporting sites
2. National guidelines updated
3. Sensitive AFP surveillance system operated by experienced staff (NPAFP rate > 2/100,000) with stool adequacy > 80%.
4. Considerable role of RMS in AFP surveillance
5. Mapping of high risk areas with regular updates
6. Commitment from clinicians for reporting of AFP cases
7. WHO supports central level with short-term CDC STOPper
8. WHO supports public health surveillance through real time electronic data reporting (covering 270 HCFs) with plans for future expansion.

**B. Weaknesses/challenges:**
1. **Sensitivity issues**
   a. Annualized NPAFP rate among Syrians during 2015 is 1.5/100,000 population <15 years of age, of 57 AFP cases during 2015, only 3 were among Syrians. (limited financial resources of Syrians could impact the presentation of AFP cases to hospitals)
   b. Incidents of case exclusion
   c. Reporting based on differential diagnosis/admitting diagnosis only, not on presenting complaints
2. **Quality issues:**
   a. Sub-optimal quality of active surveillance visits
   b. Inconsistent/irregular monitoring of timeliness and completeness of active surveillance and zero reporting
   c. Inconsistencies between line lists at central and provincial levels
   d. Supervision needs strengthening and documentation. Supervisory visits are irregular and there is no documentation of findings during supervisory visits.
   e. Surveillance forms not standardized
   f. Sub-optimal performance of focal points in active surveillance sites
g. Shortage of specialized human resources at central and directorate levels and multi-tasked staff at central, provincial and facility levels

3. Inadequate surveillance capacities
   a. Logistics issues (transportation, computers and communication equipment)
   b. Human resources: 4 surveillance officers (SOs), 1 coordinator, and 1 lab technician in sub-regional polio laboratory were hired through WHO contracts to support the outbreak response – contracts expired 3 months ago and have not been renewed

4. Lack of training at all levels
5. Late notification of AFP cases
6. Centralized data management and analysis

Recommendations:
1. Build surveillance capacities:
   a. Maintain current capacity: WHO to renew contracts for surveillance officers (3 SOs, 1 coordinator, 1 senior SO and one lab technician in polio sub-regional lab).
   b. Provide logistics, particularly transportation (in some directorates)

2. Continue and expand use of Syrian community informants for reporting of AFP cases particularly in HRAs and use of community health committees and Reach Every Community (REC) mobile teams for case detection and reporting (UNICEF & UNHCR support)

3. Engage Syrian physicians and NGOs providing healthcare to Syrians to ensure that they report AFP cases

4. Design and conduct well-structured essential training courses for Surveillance Officers and focal persons (WHO support needed)

5. Ensure timely reporting of AFP cases through:
   a. Raising awareness of clinicians (sensitization sessions, promotional materials) as important functions of active surveillance visits or high level technical meetings to promote timely notifications of AFP cases
   b. Detailed investigation of reasons for delays in reporting and take corrective actions following the high-risk approach in planning and implementation
2. Encourage data analysis at the sub-national level; could be incorporated in trainings
3. Conduct internal surveillance reviews

1. **Supplementary Immunization Activities:**

   a. **Strengths**

   1. Following high-risk approach in planning and implementation
   2. Bottom up approach in identification of HRAs
   3. Innovative and supportive strategies:

   3. Communication with registered displaced Syrians through SMSs by UNHCR to encourage vaccination of Syrian children during SIAs. Polio Control Room (PCR) at central level with consistent participation from all partners. This allows for ongoing communication and coordination of response activities among partners. A similar structure exists in HRAs along the Northern borders (in Mafraq) **Independent Monitoring (conducted by RMS) following almost each campaign:**

      a. Segregation of analysis of campaign data (Jordanians/non-Jordanians)
      b. High coverage among Jordanians and non-Jordanians

   4. Adopting strategies to reach high risk populations:
   a) Vaccination at border crossing check points
   b) Vaccination at UNHCR registration centers
   c) Involvement of community leaders to raise awareness and prepare communities before campaigns

   5. Coping with increasing population target figures and securing enough vaccines & logistics and cold chain equipment

   b. **Weaknesses/challenges:**

   1. Sub-optimal quality of micro-plans
   2. Reaching unregistered Syrians is still a challenge requiring governmental innovative strategies
   3. Difficulties in target identification and mapping of geographical catchment areas for planning, implementation and monitoring purposes
4. Need to strengthen supervision during campaign implementation, particularly in the presence of intra-campaign monitoring as part of a comprehensive independent monitoring exercise.

5. Absence or delayed reporting of post-campaign monitoring (PCM) results of some rounds jeopardizing proper utilization of data for future planning.

6. Delay in transfer of funds for training and field operations during campaigns, affecting staff motivation

c. Recommendations:
   1. Improve quality and reach every child during SIAs through:
      a. Continuous update of risk assessment and mapping
      b. Improved and standardized microplanning with special focus on high risk areas (technical support needed)
      c. Promote and improve involvement of community leaders to reach every child in high risk areas (invite for meetings, events rather than telephone communication)
      d. Continue and expand close coordination with all stakeholders
   2. Continue independent monitoring including pre, intra, and post campaign evaluations with timely sharing of data

2. Routine immunization:
   2.1. Strengths:
   1. Well established system supported by national strategies for enhancement of routine immunization
      a. Wide network of vaccination outlets all over the country, with experienced staff
      b. Vaccination of children is free of charge for all nationalities
      c. Leading role of MOH in providing vaccines to displaced Syrians inside and outside camps supported by UNHCR, UNICEF and IOM
   2. Monitoring vaccination status and defaulter tracking
   3. Well established cold chain system and vaccine stock management
   4. Supportive role of partners
   5. Using Reach Every Community (REC) approach to vaccinate children in high risk areas through mobile teams and community mobilizers
2.2. Weaknesses/challenges:

1. Problems in target identification (continuous movement of displaced Syrians)
2. Records are variable and need standardization (does not allow program monitoring)
3. Challenges/barriers to ensuring high coverage among high risk groups
4. Unregistered Syrians, mobile in community
5. Other nationalities (Iraqi, Pakistani, Somali, and others)
6. Limited supervision
7. Strategy of tracking of defaulters varies among different PHCs.
8. Guidelines of vaccination of older children are not consistently followed. Sometimes PHCs have to contact central level for guidance on a case-by-case basis.

C. Recommendations:

9. Standard registers and statistical formats should be developed and distributed for reporting of all program activities
10. Develop structured national training for staff at all levels
11. Establish supervisory system with suitable tools
12. Continue to work with partners to identify strategies to locate and immunize Syrian children
13. EPI coverage surveys are advised for estimating coverage and monitoring trends
14. Innovate methods, in coordination with partners, to raise awareness among high risk groups about availability of free and safe vaccines to improve routine coverage
15. Two more refrigerator cars are needed to help in vaccine distribution (currently, there are only two cars at central level)

3. Communication:

(Findings through field visits and desk review of PCM):

1. Availability of communication strategies and plans at the central level, with leading roles of UNICEF, IOM and UNHCR.
2. Extensive outreach network through NGO partners and community leaders
3. Acceptable Mass media plan with wide reach (more than 60% in PCM).
4. Good general public awareness of the campaign and interest in immunization (more than 90% in PCM)
5. Availability of communication resources, manuals and visibility materials.
6. Availability of communication focal point at the central and directorate level, EPI staff are aware of communication efforts and implementation
7. PCM data reflect good communication efforts and reduction of social reasons behind missed children over the outbreak response period.

Communication challenges:

1. Communication planning is not integrated within the overall governorate SIA plans
2. PCM data is not received by the directorate level and does not inform the directorate level planning
3. Supervisory check list does not address communication adequately
4. No timely distribution of Communication materials

Recommendations:

1. Effective utilization of PCM data to develop local level plans
2. Communication planning should be included in the overall planning at the directorate level and should also be included in the monitoring check list
3. Effective distribution of IEC materials
4. Strengthen the defaulter tracing programme across Jordan, not only in the HRAs.
5. Coverage survey results should be utilized to develop local level communication plans, this should also be complimented with effective training of communication focal points on developing evidence-based local communication plans

4. Coordination/partnership:
International partners launched a coordinated response under the leadership of MOH to address the recommendations of Phase II and III outbreak response. The roles of the partners are as follows:

1. MOH: Leading and implementing
2. WHO: Technical, human resources and operational support
3. UNICEF: Vaccine supply, cold chain management, and communication
4. UNHCR: Facilitating access to refugees and providing services.
5. IOM supporting emergency vaccination and social mobilization.

However, the Phase III response plan highlighted the need for including Non-governmental Organizations (NGOs) in the response. The recommendations included the involvement of NGOs in planning and monitoring of SIAs as well as implementation and monitoring of AFP surveillance. These recommendations have not been addressed to date. NGOs do not currently play a noticeable role in AFP surveillance or SIA planning and implementation.
Background:

Indigenous transmission of wild polio virus (WPV) in Jordan was interrupted in 1988, with the last case of WPV reported in Jordan during an outbreak in 1992. However, concerns about the risk of wild polio virus importation from neighboring countries have been heightened by recent events. There are approximately 629,000 registered displaced Syrians who moved inside Jordan, only 100,000 live inside camps. In addition, there are 50,000 Iraqis; 15,000 arrivals in 2015 alone. Other non-Jordanian residents in Jordan include populations from Pakistan, Yemen, Somalia, and Sudan. Vaccinations are provided free of charge for ALL children in Jordan regardless of nationality or legal status.

The “WHO/UNICEF Strategic Plan for Polio Outbreak Response in the Middle East” outlines the specific actions that will be implemented across Syria, Iraq, Jordan, Lebanon, Turkey, Egypt, Iran, and Palestine from May to December 2014 to fully interrupt wild poliovirus transmission and prevent further international spread. Three phases of the strategic plan were put in place, where phase I has been rapid, coordinated and focused on reaching the maximum number of children across the 7 countries with Oral Polio Vaccine (OPV). In addition, AFP surveillance has been intensified, national communication plans were developed and updated and efforts are underway to strengthen routine immunization.

Having successfully implemented PHASE I activities, and based on new risk assessment and recognizing the gaps and weaknesses identified in the Polio Outbreak Response Review, the Phase II Strategic plan focused on:

- **Quality:** Improving the quality and intensity of key activities including SIAs, AFP Surveillance and Routine Immunization services, with emphasis on monitoring during and after campaigns

- **Reach:** Systematic mapping of hard to reach populations wherever they may be and specific targeting of these populations in subsequent SIAs, Routine Immunization and surveillance services

Nevertheless, significant risks still remain that this outbreak may spread further within Syria and/or Iraq, and expand to neighboring countries including Jordan.
Two outbreak response reviews were recently conducted in Lebanon and Jordan to inform whether recommendations of PHASE II have been met, and PHASE III activities are being implemented. Two major questions remain to be answered during the upcoming review in Beirut during 22–24 October 2015: 1) Does the potential for circulation among these countries persist? and 2) Are further activities needed or can we stop interventions following PHASE III implementation?

**Review mission participants:**

The mission was composed of independent international experts, supported by WHO and national medical officers during field visits.

**Dr. Faten Kamel: Coordinator of ME Outbreak Response strategic plan**

<table>
<thead>
<tr>
<th>Reviewer</th>
<th>Title and Affiliation</th>
<th>Area of review (Provinces)</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Nasr El-Sayed</td>
<td>Ex. Assistant of Minister of Health and member of Polio Independent Monitoring Board (IMB)</td>
<td>Ajloun, Zarka and camps of displaced Syrians (Al-zarka and Zaatri)</td>
<td>13 – 17 September 2015</td>
</tr>
<tr>
<td>Dr. Mohamed Abou-soliman</td>
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<td>Tafila and Aqaba</td>
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<td>Dr. Abraham</td>
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<td>Central level and Amman province</td>
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</table>
Objectives:
To assess the implementation of Phase II recommendations and Phase III plans and make recommendations on how to maintain polio free status. The following components of the response were assessed:
- AFP surveillance sensitivity and quality
- Adequacy of immunization activities (Routine and SIAs)
- Communication and Social Mobilization activities
- Partner’s coordination for the Outbreak Response
- National Certification Committee
- Expert Review Group

Methodology:
The review was launched with a desk review through a briefing by MOH officials followed by field visits during which 6 teams visited 12 provinces and 2 camps (Zaatari and Azrak). During each visit, activities and documents were reviewed at provincial and directorate offices, hospitals and primary health care centers (PHCs). The evaluation included meetings with EPI/surveillance team, Royal Medical Services (RMS), WHO, UNICEF, UNHCR and IOM.

Population figures of Jordan: (Annex 1)

Total population: 6,817,326

Children 1-2 years: 190,231

Children < 15 Years: 2,540,722

I. Meeting the recommendations of PHASE II and current status of the components of the outbreak response activities:

A) AFP surveillance:

The AFP surveillance system has a reasonable structure with well selected active surveillance sites (n=65) and hundreds of zero reporting sites. Surveillance staff are well versed with the program and experienced enough to run the system. Although the system is sensitive in case detection, the NPAFP rate among Syrians was below the required standard (1.5/100,000 children below 15 yrs), in addition more work need to be done to intensify surveillance in high risk areas and among high risk populations which is one of the major objectives in
phase II & III. Although some innovative activities have been implemented, they are still not quite visible or effective. In general, Jordan has reached - in 2015 - the certification standards of AFP surveillance indicators particularly the NPAFP rate and stool adequacy (Fig 1). However, there is a clear need for further enhancement of active surveillance, despite shortages in logistical and other enabling factors. Of prime importance is the implementation of training plans (September 2015) for all concerned staff which is still pending due to shortage of funds and transportation of trainers and trainees.

Internal surveillance reviews were recommended to be implemented at least once a year. Also, training on AFP surveillance was not implemented due to the same reasons mentioned above.

It is important to consider all activities that can improve surveillance in a comprehensive way including training of surveillance staff, sensitization sessions for clinicians and other informants, being biased towards high risk areas, and securing necessary funds and other logistics. Filling vacant posts of surveillance staff and polio laboratory is cornerstone to improving the functioning of the program.

Some of phase III activities have been implemented namely finalization and distribution of the updated AFP surveillance guidelines, issuance of polio bulletin (although it is still irregular and does not reach many reporting sites and surveillance personnel), while others are in process like the creation of IEC materials. Enforcement of supervisory visits seems to be difficult in view of staff shortage at all levels.

Reporting of AFP cases has improved; the number of AFP cases has doubled in 2015 compared to 2014. (Fig.2).

Discarded AFP cases have a high proportion of (other) diagnoses that need to be further classified by most plausible diagnoses. (Fig. 3). AFP cases are reported by public, university, private and military hospitals with increasing reporting over time by public hospitals. (Fig. 4)

Fig. 1
**Fig. 2**

Cumulative AFP cases reported in 2013 – 2015, Jordan

**Fig. 3**

Final diagnosis of discarded AFP cases - 2012-2015 up to W35 - Jordan

**Fig. 4**

Reporting sites of AFP cases – 2012-2015 up to W35, Jordan
Overall conclusion on AFP surveillance: Partial implementation of phase II & III recommendations.

Current status of AFP surveillance shows the following:

4.1. Strengths:
   1. Structure of AFP surveillance system:
      a. Wide surveillance network
      b. 65 active surveillance and 513 zero reporting sites
   2. National guidelines updated
   3. Sensitive AFP surveillance system operated by experienced staff (NPAFP rate > 2/100,000) with stool adequacy > 80%.
   4. Considerable role of RMS in AFP surveillance
   5. Mapping of high risk areas with regular updates.
   6. Commitment from clinicians for reporting of AFP cases
   7. WHO supports central level with short-term CDC STOPper

4.2. Weaknesses/challenges:
   1. Sensitivity issues
      a. Annualized NPAFP rate among Syrians during 2015 is 1.5/100,000 population <15 years of age, of 57 AFP cases during 2015, only 3 were among Syrians (limited financial resources of Syrians could impact the presentation of AFP cases to hospitals)
      b. Incidents of case exclusion
      c. Reporting based on differential diagnosis/admitting diagnosis only, not on presenting complaint
   2. Quality issues:
      a. Sub-optimal quality of active surveillance visits
      b. Inconsistent/irregular monitoring of timeliness and completeness of active surveillance and zero reporting
      c. Inconsistencies between line lists at central and provincial levels
      d. Supervision needs strengthening and documentation. Supervisory visits are irregular and there is no documentation of findings during supervisory visits
      e. Surveillance formats are not standardized
f. Sub-optimal performance of focal points in active surveillance sites. Shortage of specialized human resource at central and directorate levels and multi-tasked staff at central, provincial and facility levels

3. Inadequate surveillance capacities
   a. Logistics issues (transportation, computers and communication equipment)
   b. Human resources: 4 SOs, 1 coordinator, and 1 lab technician in sub-regional polio laboratory were hired through WHO contracts to support the outbreak response. Contracts expired 3 months ago and have not been renewed

4. Lack of training at all levels

5. Incidents of Case exclusion

6. Irregular monitoring of timeliness and completeness of active and zero reporting reports.

7. Late notification of AFP cases

8. Centralized data management and analysis

4.3. Recommendations:

1. Build surveillance capacities
   a. Maintain current capacity: WHO to renew contracts for surveillance officers (3 SO, 1 coordinator, 1 SSO and one lab technician in polio sub-regional lab)
   b. Provide logistics, particularly transportation (in some districts)

2. Continue and expand use of Syrian community informants for reporting of AFP cases particularly in high risk areas and use of community health committees and Reach Every Community (REC) mobile teams for case detection and reporting (UNICEF & UNHCR support)

3. Engage Syrian physicians and NGOs providing healthcare to Syrians to ensure that they report AFP cases

4. Design and conduct well-structured essential training courses for Surveillance Officers and focal persons (WHO support needed)

5. Ensure timely reporting of AFP cases through:
   a. Raising awareness of clinicians (sensitization sessions, promotional materials) as important functions of active surveillance visits or high level technical meetings to promote timely notifications of AFP cases.
   b. Detailed investigation of reasons for delays of reporting and take corrective actions following the high-risk approach in planning and implementation
6. Encourage data analysis at the sub-national level; could be incorporated in trainings
7. Conduct internal surveillance reviews
8. Support of sub-regional Polio lab with enough human resources. The laboratory is accredited for one year and it is handling the specimens from Jordan and Syria and most recently also specimens from Lebanon.

B) Supplementary Immunization Activities:

Following the polio outbreak in Syria, Jordan started the first campaign in Zaatri camp along the northern Jordanian borders. In phase I & II, seven SIAs were implemented: 5 NIDs and 2 SNIDs. (Fig. 1). In phase III, one SNID was implemented in April, 2015. (Fig. 2). None of these rounds achieved 95% coverage as measured by Independent Monitoring. However, inside the camps, coverage was almost consistently higher as children are easy to reach and vaccinate.

Fig. 1

![TOPV-SIAs Administrative coverage and PCES Results, 2013-2014](image)

Fig. 2

![TOPV-SNIDs Administrative coverage and PCES Results for April SNID in Camps, 2015](image)
Analysis of campaign coverage data (recall) in high risk areas (June, August, October, November 2014 and April 2015) was more re-assuring among Syrians where coverage exceeded 95% in three out of five rounds, while coverage was 95% and above among Jordanians in two rounds. (Fig. 3). Use of finger markers needs to be encouraged as it facilitates monitoring and documentation of coverage.

Fig. 3

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</tr>
</thead>
<tbody>
<tr>
<td>Vaccinated for Polio during Campaign</td>
<td>88.6 [1830]</td>
<td>91.4 [1486]</td>
<td>98.6 [422]</td>
<td>95.2 [160]</td>
<td>93.5 [116]</td>
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<tr>
<td>Finger Mark</td>
<td>88.1 [1260]</td>
<td>89.1 [1327]</td>
<td>85.1 [850]</td>
<td>83.8 [140]</td>
<td>85.9 [128]</td>
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</tbody>
</table>

Microplanning of SIAs addresses two important issues. One, it is biased towards High Risk Areas. These areas were identified geographically and categorized by reason of selection by health care workers from provinces and sub-provinces (Annex 2). This selection was supported by the new strategy of involvement of community leaders to focus their activities in high risk areas to raise awareness and monitor implementation. Second is the mixed vaccination strategy where fixed posts were used extensively and mobile teams were assigned to vaccinate children in high risk areas.

Improving the reach to each and every child particularly in high risk areas is one of the main objectives of SIAs as recommended by outbreak response review. Health officials in Jordan have identified the criteria of high risk areas as follows:

1. Border areas with Syria and Iraq.
2. Geographically hard to reach areas.
4. Communities with large numbers of refugees.
5. Areas where polio coverage was suspected to be less than 90% in routine immunization or reported to be so in previous campaigns.

These areas are listed and mapped by province and sub-province. Each EPI manager has these lists to use during microplanning, implementation and monitoring.

Concept of community leaders was introduced in October 2014, where they help in raising awareness, monitoring of implementation and reporting on reasons for missing children.

The overall impression on SIAs, is that there is good coverage enhanced by natural community demand whether Jordanians or Syrians, in addition, vaccine is provided free of charge. There are innovative interventions like involvement of community leaders. In general, response to phases II and III is partial and needs further improvement.

Current status of SIAs shows the following:

a. **Strengths:**

   1. Following the high-risk approach in planning and implementation
   2. Bottom up approach in identification of high risk areas
   3. Innovative and supportive strategies:
      a. Communication with registered displaced Syrians through SMSs by UNHCR to encourage vaccination of Syrian children during SIAs
      b. PCRPs at central level with consistent participation form all partners. This ensures ongoing communication and coordination of response activities among partners. A similar structure exists in high risk areas along the Northern borders (in Mafraq)
   4. Independent Monitoring by RMS following almost each campaign.
      a. Segregation of analysis of campaign data (Jordanians/non-Jordanians)
      b. High coverage among Jordanians and non-Jordanians
   5. Adopting strategies to reach high risk populations:
      a. Vaccination at border crossing check points
      b. Vaccination at UNHCR registration centers
      c. Involvement of community leaders to raise awareness and prepare communities before campaigns
   6. Coping with increasing population target figures and securing enough vaccines & logistics and cold chain equipment
b. Weaknesses/challenges:

1. Sub-optimal quality of micro-plans
2. Reaching unregistered Syrians is still a challenge needing governmental innovative strategies
3. Difficulties in target identification and mapping of geographical catchment areas for planning, implementation and monitoring purposes
4. Need to strengthen supervision during campaign implementation, particularly in the presence of intra-campaign monitoring as part of a comprehensive independent monitoring exercise.
5. Absence or delayed reporting of PCM results of some rounds jeopardizing proper utilization of data for future planning.
6. Delay in transfer of funds for training and field operations during campaigns, affecting staff motivation

c. Recommendations:

1. Improve quality and reach every child during SIAs through:
   a. Continuous update of risk assessment and mapping
   b. Improved and standardized microplanning with special focus on high risk areas (technical support needed)
   c. Promote and improve involvement of community leaders to reach every child in high risk areas (invite for meetings, events rather than telephone communication)
   d. Continue and expand close coordination with all stakeholders
2. Continue independent monitoring including pre, intra, and post campaign evaluation with timely sharing of data

C) Routine Immunization:

Routine immunization services are provided in Jordan through 448 EPI centers distributed in the 12 provinces (21 districts) (Fig. 1).

Administrative coverage with 3rd dose of polio vaccine has been high in all provinces since 2010 (Fig. 2).

This high coverage does not address coverage in high risk areas or coverage at sub-district level.
### Distribution of EPI vaccination centers, Jordan 2014

<table>
<thead>
<tr>
<th>District</th>
<th>EPI centers</th>
<th>Live births</th>
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<tbody>
<tr>
<td>Amman</td>
<td>60</td>
<td>58,997</td>
</tr>
<tr>
<td>East Amman</td>
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<td>Madaba</td>
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<td>Balqa</td>
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<td>South Shouma</td>
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<td>Deir Allia</td>
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<td>Irbid</td>
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<td>Karak</td>
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<td>Ma'an</td>
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<td>3,627</td>
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<td>Aqaba</td>
<td>12</td>
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<td><strong>Total</strong></td>
<td><strong>440</strong></td>
<td><strong>190,232</strong></td>
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**Figure 1.**
Status of implementation of phase II recommendations:

During the briefing, MoH stated that they have developed a 6-month plan for strengthening of routine immunization and High risk areas have been updated using SNIDs data. The government has developed special strategies to cover the gaps in high risk areas, particularly focusing on training of EPI staff and outreach activities for defaulters.

MoH is planning to strengthen supervision and develop RI IEC materials. Although the MoH has managed to adopt an innovative way to reach and immunize children in high risk areas through Reaching Every Community approach (REC), supervision and immunization materials are still deficient and not standardized. Plans for tracing of defaulters and outreach activities do not meet the phase II recommendations.

Systematic problems persist including undefined population targets for routine immunization at the sub-governorate level (PHCs), non-standardized registration system and recall of defaulters as well as non-standardized statistical reporting forms. Variability of quality of implementation is the rule. Jordan has been using IPV since 2005, however, the licensure of bOPV is still facing problems in national regulatory authorities as is the case in other countries in the region.

In phase III recommendations, the two most important issues are the utilization of REC approach to vaccinate children for routine immunization in HRAs, and planning for the vaccine coverage survey as the first evidence-based reliable coverage for all antigens in primary series. This exercise will identify the low coverage areas particularly the under-
served, so that vaccination can reach them to meet the goal of Global Vaccine Action Plan (2011 – 2020), to ensure equitable access of all children to immunization services.

Overall assessment of routine immunization is as follows:

a. **Strengths:**
   1. Well established system supported by national strategies for enhancement of routine immunization
      a. Wide network of vaccination outlets all over the country, with experienced staff
      b. Vaccination of all children is free of charge for all nationalities
      c. Leading role of MOH in providing vaccines to displaced Syrians inside and outside camps supported by UNHCR, UNICEF and IOM
   2. Monitoring vaccination status and defaulter tracking.
   3. Well established cold chain system and vaccine stock management.
   4. Supportive role of partners.
   5. Using REC approach to vaccinate children in high risk areas through mobile teams and community mobilizers

b. **Weaknesses/challenges:**
   1. Problems in target identification (continuous movement of displaced Syrians)
   2. Records are variable and need standardization (does not allow program monitoring.
   3. Challenges/barriers to ensuring high coverage among high risk groups.
   4. Unregistered Syrians, mobile in community.
   5. Other nationalities (Iraqi, Pakistani, Somali, and others)
   6. Limited supervision
   7. Strategies of defaulter tracking and catch up are variable, guidelines of vaccinating older unvaccinated children are not consistently followed and. In some occasions, PHCs have to contact Central or Directorate level for guidance on a case-by-case basis.

c. **Recommendations:**
   i. Standard registers and statistical formats should be developed and distributed for reporting of all program activities
   ii. Develop structured national training for staff at all levels
   iii. Establish supervisory system with suitable tools
iv. Continue to work with partners to identify strategies for locating and immunizing Syrian children

v. EPI coverage surveys are advised for estimating coverage and monitoring trends

vi. Innovate methods, in coordination with partners, to raise awareness among high risk groups about availability of free and safe vaccines to improve routine coverage

vii. Two more refrigerator cars are needed to help in vaccine distribution (currently, there are two cars at central level)

D) Communication:

(Findings through field visits and desk review of PCM):

1. Availability of communication strategies and plans at the central level, with leading roles of UNICEF, IOM and UNHCR.
2. Extensive outreach network through NGO partners and Community leaders
3. Acceptable mass media plan with wide reach (more than 60% in PCM).
4. Good general public awareness of the campaign and interest in immunization (more than 90% in PCM)
5. Availability of communication resources, manuals and visibility materials.
6. Availability of communication focal point at the central and directorate level, EPI staff is aware of communication efforts and implementation.
7. PCM data reflect good communication efforts and reduction of social reasons behind missed children over the outbreak response period.

Communication challenges:

1. Communication planning is not integrated within the overall governorate SIA plans
2. PCM data is not received by the directorate level and does not inform the directorate level planning
3. Supervisory checklist does not address communication adequately
4. No timely distribution of Communication materials

Recommendations:

1. Effective utilization of PCM data to develop local level plans
2. Communication planning should be included in the overall planning at the directorate level and should also be included in the monitoring checklist
3. Effective distribution of IEC materials
4. Strengthen the defaulter tracing programme across Jordan, not only in the HRAs.

5. Coverage survey results should be utilized to develop local level communication plans, this should also be complimented with effective training of communication focal points on developing evidence-based local communication plans

E) Coordination/partnership:

International partners launched a coordinated response under the leadership of MOH to address the recommendations of Phase II and III outbreak response. The roles of the partners are as follows:

1. MOH: Leading and implementing
2. WHO: Technical, human resources and operational support
3. UNICEF: Vaccine supply, cold chain management, and communication
4. UNHCR: Facilitating access to refugees and providing services.
5. IOM supporting emergency vaccination and social mobilization.

However, the Phase III response plan highlighted the need for including Non-governmental Organizations (NGOs) in the response. The recommendations included the involvement of NGOs in planning and monitoring of SIAs as well as implementation and monitoring of AFP surveillance. These recommendations have not been addressed to date. NGOs do not currently play a noticeable role in AFP surveillance or SIA planning and implementation.

General conclusion:

There are certain issues that should be considered in making a conclusion on what to do next. First is the assessment of the current risk. Second, we should analyze the current situation in terms of status of implementation of phase I,II &III activities. Third is the need to continue emergency interventions and sustainability issues in parallel. These considerations should also be plausible to governments and UN agencies, donors and other partners.

Current risk implies that virus is still circulating in endemic countries in the region and there is continued influx of people coming from countries with complex emergencies to Jordan including Syrians, Iraqis and Somalians, stoppage of polio virus circulation in Syria and Iraq (seemingly) should not be the basis to stop outbreak activities. Although high risk areas are identified in Jordan and are changing over time, no one is sure about how strict is this process going, and the effect of fatigue or negligence of updating these areas should not be ruled out. On other note, although systems are well established in
Jordan, however, many quality issues are absent in surveillance, SIAs and RI, which might create immunity gaps, and predispose to virus importation.

Review recommendations are partially implemented in Jordan indicating that there should be a continuum of activities as long as risk of importation exists. Communication and partnership components are in better shape with good technical and financial support from partners.

Emergency activities of all Outbreak Response are being implemented and should continue until the government takes essential steps towards sustainability (filling the gaps e.g. human resources, other infra-structure issues).

In conclusion, further activities are needed along all outbreak response components (particularly implementation of 2 SNIDs) until we have better clue on improvement of quality of implementation of essential strategies and government can take decisions to guarantee sustainability in parallel to what partners are doing until they phase out.

Recomendations to MoH

1. Build capacity (human resources and logistics) for program sustainability
2. Improve and standardize microplans with specific focus on high risk areas
3. Consider implementation of 2 mop-up campaigns targeting high risk areas
4. Continue work with partners to develop strategies to reach high risk groups
5. Conduct periodic EPI coverage surveys for estimating coverage and monitoring trends
6. Conduct internal surveillance reviews
7. Determine target population in high risk areas using REC approach
8. Ensure supportive supervision

Recommendations to partners

1. Renew contracts for surveillance officers and lab technician (WHO)
2. Continue to support operations for immunization campaigns (WHO)
3. Continue to support training activities (all partners)
4. Assess feasibility of initiation of environmental surveillance (EMRO)

Opportunities

1. Expand Reach Every Community Approach
   a. Increase number of teams
   b. Accurately map high risk areas
   c. Include AFP surveillance
2. Upcoming serosurvey for polio, measles, rubella. High risk areas should be updated to provide a rigorous sampling frame for this serosurvey.

3. WHO supports public health surveillance through real time electronic data reporting (covering 270 HCFs) with plans for future expansion. Including an algorithm for AFP case detection through this system would be a useful addition to the AFP surveillance structure.
Annex 1

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General statistical department 2011
### Annex 2

#### Model of identification of high risk areas

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*Proposed Procedures and reasons to identify as High Risk Group.*

[Image of map showing high risk areas]
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MT: Mobile team;

RA: Raise awareness

*Reason to identify as high risk group: 1= border areas with Syria and Iraq; 2= geographically hard to reach areas; 3= mobile communities; 4= communities with large numbers of refugees; and 5= areas where polio coverage was suspected to be less than 90% in routine immunization or reported to be so in previous campaign.
PROVINCIAL REPORTS
Attached in separate folder