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.

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Jordan Country Report

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

Reviewer	Title and Affiliation	Area of review (Provinces)	Duration
Dr. Nasr El-Sayed	Ex. Assistant of Minister of Health and member of Polio Independent Monitoring Board (IMB)	Ajloun, Zarka and camps of displaced Syrians (Al-zarka and Zaatri)	13 – 17 September 2015
Dr. Mohamed Abou-soliman	Under-secretary, MoHP	Karak and Maan	
Dr. Hala Abou Elnaga	Medical Epidemiologist, ESU - Lebanon	Irbid, Jarash and Madaba	
Dr. Yehia abd - el ghaffar	Assistant professor, Public health, Alexandria University	Tafila and Aqaba	
Dr. Abraham	WHO medical officer	Balka	
Dr. Noha Farag	CDC/Atlanta Medical Officer	Central level and Amman province	
Dr. Nasr Eltantawy	Lead, WHO consultant	Central level and Amman province	

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

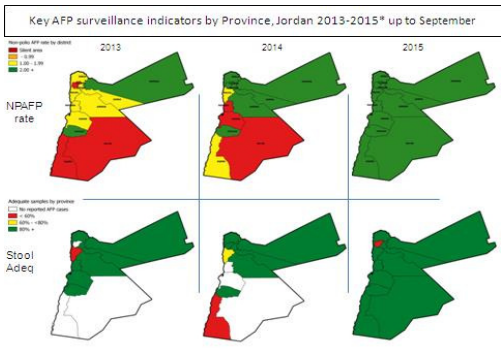


Fig. 2

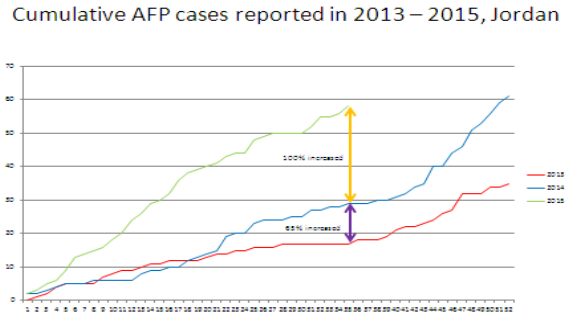


Fig. 3

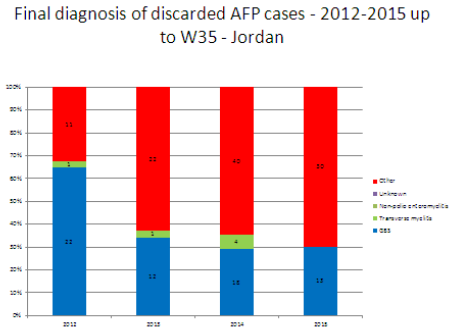
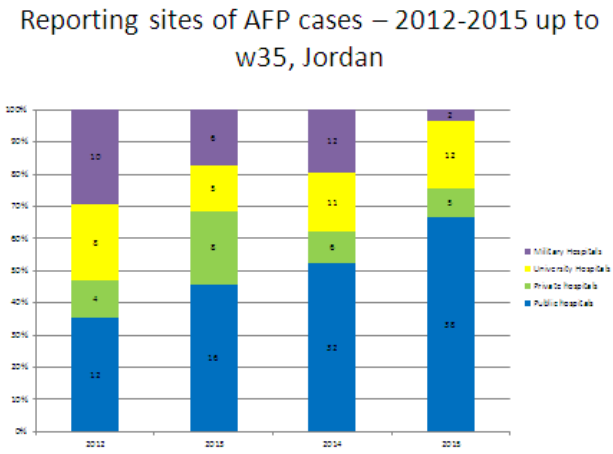


Fig. 4



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 SNIDs 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

		Dates	Target	Reached	Admin Coverage (%)	IM Coverage (%)
Phase I		21–28 Nov. 2013	922,905	1,111,221	120	94
		21- 24 Dec. 2013	895,021	953,239	107	NA
	NIDs	2–6 March 2014	949,162	1,032,693	109	88
Phase II		08–11 June2014	184,698	199,480	134	90
	SNIDs	10–13 Aug.2014	197,403	248,970	126	94
		26- 30 Oct. 2014	1,001,836	1,160,243	118	91
	NID	30 Nov. /4 Dec. 2014	1,001,836	1,223,872	122	94

Fig. 2

tOPV-SNIDs Administrative coverage and PCES Results for April SNID in Camps, 2015

		Dates	Target	Reached	Admin Coverage (%)	IM Coverage (%)
Phase III	SNIDs	08–11 April 2015	208,812	397,206	190	91
	Camps	Zata'ari	15,931	18,492	116.8%	99.1%
		Azraq	3,631	2,380	152.56%	85.7%

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

Comparison June, August, October, November 2014 and April 2015 High Risk Areas (HRAs) PCES – Jordan

	June 2014		August 2014		October 2014		November 2014		April 2015	
	Jordanian	Syrian	Jordanian	Syrian	Jordanian	Syrian	Jordanian	Syrian	Jordanian	Syrian
Vaccinated for Polio during Campaign	88.6 [1690]	91.4 [476]	91.9 [1488]	98.6 [423]	95.6 [431]	95.2 [160]	93.5 [316]	98.3 [234]	90.4 [2082]	94.0 [598]
Finger Mark	68.1 [1260]	63.1 [327]	71.7 [1129]	85.1 [360]	71.6 [308]	83.8 [140]	85.9 [326]	92.1 [229]	72.2 [1614]	82.4 [510]

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.
3. Mobile communities.
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. PCRs 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.

Figure 1.

District	EPI centers	Live births
Amman	40	58,997
East Amman	31	14,749
Madaba	18	4,800
Zarka	36	28,410
Balka	29	9,608
South Shouna	8	1,354
Deir Alla	12	1,696
Irbid	49	20,852
Kura	13	3,317
Ramtha	11	3,791
N.Agwar	9	3,114
Banekenana	18	2,776
Ajloon	24	4,374
Jarash	18	5,725
Mafrak	30	6,765
N. Badia	15	2,125
Karak	38	6,317
South Agwar	3	1,186
Tafiela	16	2,738
Ma'an	19	3,627
Aqaba	11	3,911
Total	448	190,232

Distribution of EPI vaccination centers, Jordan 2014

District	EPI centers	Live births
Amman	40	58,997
East Amman	31	14,749
Madaba	18	4,800
Zarka	36	28,410
Balka	29	9,608
South Shouna	8	1,354
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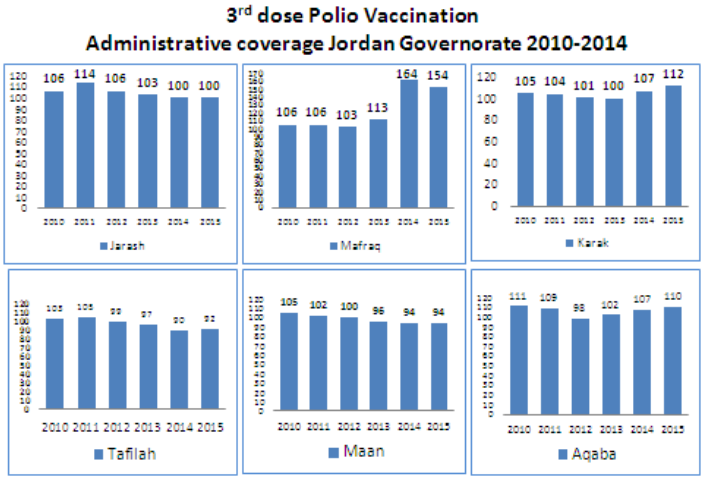
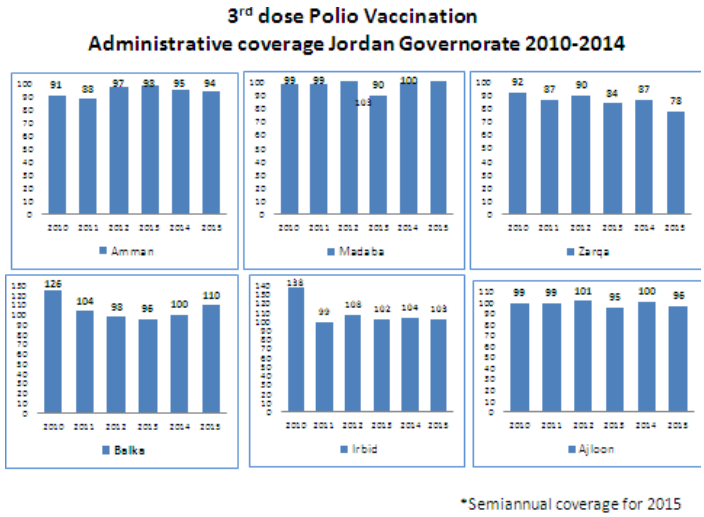
Ramtha	11	3,791
N.Agwar	9	3,114
Banekenana	18	2,776
Ajloon	24	4,374
Jarash	18	5,725
Mafrak	30	6,765
N. Badia	15	2,125
Karak	38	6,317
South Agwar	3	1,186
Tafiela	16	2,738
Ma'an	19	3,627
Aqaba	11	3,911
Total	448	190,232

Distribution of EPI vaccination centers, Jordan 2014

Fig. 2





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.

Recommendations 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

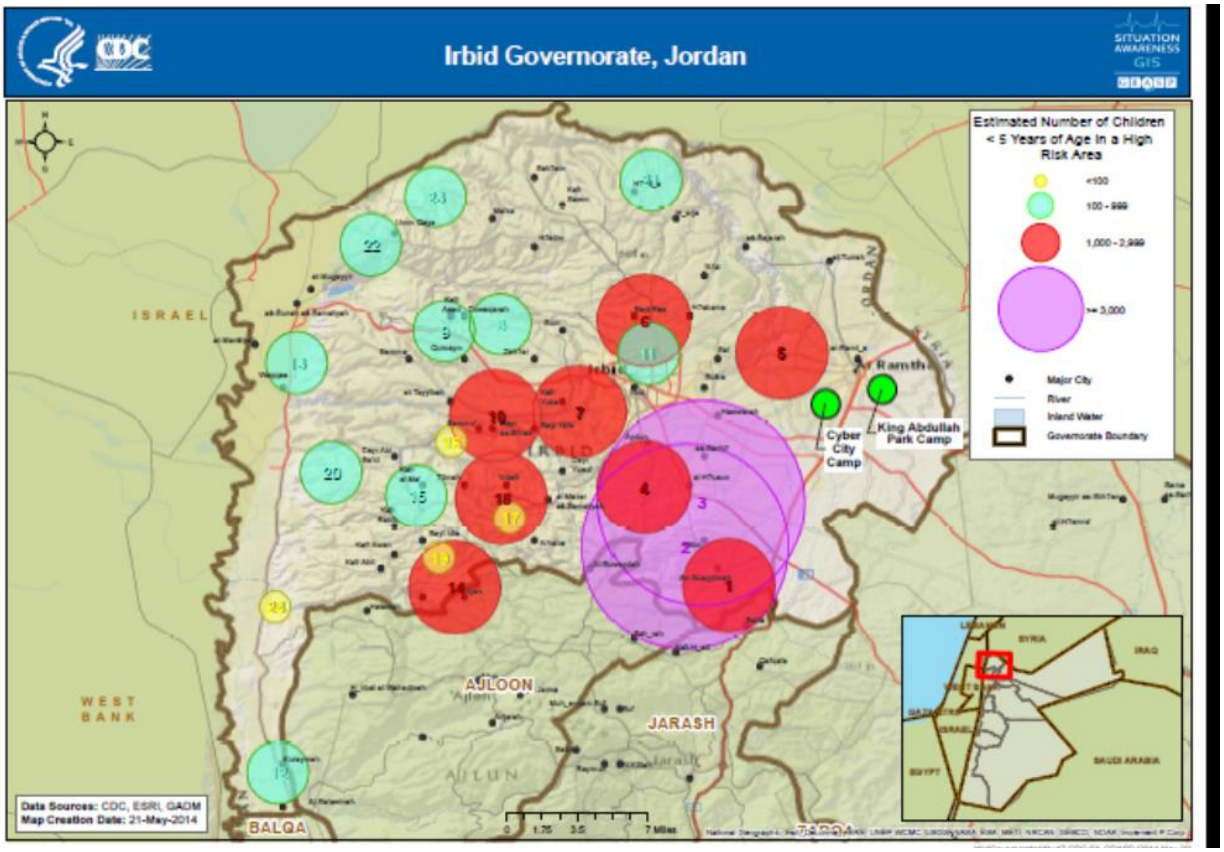
District	% population	expected pop by end of 2015	new births (Surviving infants)	Estimated population less than 15 years	No. infants 1-2 year by 015	Estimated population less than 5 years	Crude Births	women in child bearing age	Areas
Amman	31.0%	2114264	60295	742107	58997	269636	61525	528566	Amman
East Ammar	7.8%	528554	15073	185523	14749	67408	15381	132139	East Amman
Madaba	2.5%	172028	4906	65371	4800	21939	5006	43007	Madaba
Zarka	14.9%	1018140	29035	396057	28410	129845	29628	254535	Zarka
Balka	5.1%	344323	9819	130498	9608	43912	10020	86081	Balka
M. Agwar	0.7%	48539	1384	18396	1354	6190	1412	12135	Aghoar wosta
Deir Alla	0.9%	60783	1733	23037	1696	7752	1769	15196	Dir Ola
Irbid	11.0%	747281	21311	282472	20852	95302	21746	186820	Irbid
Kura	1.7%	118887	3390	44939	3317	15162	3460	29722	Koura
Ramtha	2.0%	135862	3875	51356	3791	17327	3954	33966	Ramtha
N.Agwar	1.6%	111600	3183	42185	3114	14233	3248	27900	N. Aghoar
Banekenana	1.5%	99472	2837	37600	2776	12686	2895	24868	Beni Kenana
Ajloon	2.3%	156737	4470	62852	4374	19989	4561	39184	Ajloun
Jarash	3.0%	205154	5851	83703	5725	26164	5970	51288	Jarash
Mafrak	3.6%	242431	6914	99154	6765	30918	7055	60608	Mafraq
N. Badia	1.1%	76136	2171	31140	2125	9710	2216	19034	N. Badia
Karak	3.3%	226383	6456	83535	6317	28871	6588	56596	Karak
South Agwa	0.6%	42486	1212	15677	1186	5418	1236	10621	S. Ahgoar
Tafiela	1.4%	98122	2798	40328	2738	12514	2855	24530	Tafila
Ma'an	1.9%	129972	3707	50689	3627	16576	3782	32493	Maan
Aqaba	2.1%	140171	3997	54103	3911	17876	4079	35043	Aqaba
Total	**100.0%**	**6817326**	194417	2540722	190231	869427	198384	1704332	**Total**

General statistical department 2011

15 Þ%12.7 = 5 Þ%2.91 =

Annex 2

Model of identification of high risk areas



Proposed Procedures	Reason to identify as High Risk Group*	Total Children in High Risk Areas < 5 year	High Risk Area	Health Center	Health Center Number on the Map	Lewa'
MT/RA	4	1978	Alna3eemah	Alna3eemah HC	1	Qasabat IRBID
		3257	Alhussen	Alhussen HC	2	
		3054	Alsareeh	Alsareeh HC	3	
		2955	Idoon	Idoon HC	4	
		1375	Almughayeer	Almughayeer HC	5	
		2865	Bait Rass	Bait Rass HC	6	
		1788	Kafer Youba	Kafer Youba HC	7	
		750	Dogarah	Dogra HC	8	
		670	Kafer Assad	Kafer Assad HC	9	
		1040	Alttayba	Alttayba HC	10	
		635	Altatweer	Altatweer HC	11	
MT/RA	3	380	Nomads,gypsies tents			
MT	2	130	ALSLEKHAT	KURIAMAH	12	NORTH

MT	3	130	ALTAAMREH	ALMANSHEYIAH	13	AGWAR
MT	2	31	ALRAHWEH	JUDETAH	14	KURAH
RA	5	1978	JUDETAH	JUDETAH		
MT	2	21	ERKHEEM	JUNIN ALSAFA	15	
MT	2	3	ESKAEEN	DEER ABI SAYED	16	
RA	4	172	DEER ABI SAYED	DEER ABI SAYED		
MT	2	2	ALSUWAN	TEBNEH	17	
RA	4	1147	SAMOOI	SAMOOI	18	
RA	4	37	KUFER AWAAN	KUFER AWAAN	19	
MT	3	11	OYOON ALHAMAM			
MT	3	12	ALARAQEEB			
MT	3	10	WEST HANEN			
MT	3	6	HANEN TRIANGLE			
MT	3	6	AWAL SAMOUI			
MT	3	1	HANEN ALSAFA			
MT	3	12	ERKHEEM			
RA	6	604	HANEN	HANEN	20	
MT/RA	2	11	UM ALNAMEL			
MT/RA	1	394	AQRABA	AQRABA	21	BANI KANANAH
MT/RA	1+3	155	ALBERZ			
MT	3	77	ALAFADLEH			
MT	1	78	ALYARMOOK			
MT	1	77	ALESHEH			
MT	1+2+3	78	HARTHA GROUPS			
MT	1	410	ALMONGEIAH ALTEHTA	ALMONGEIAH ALTEHTA	22	
MT	1	255	ALMOGEIAH ALFOQA	ALMONGEIAH ALFOQA	23	
MT	1+2+3	25	TABAKET UM FAHEL		24	
		26620				

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.

PROVICIAL REPORTS

Attached in separate folder