Iraq Outbreak Response Assessment Mission - 14 to 23 August, 2015

Context: Iraq reported two wild poliovirus type-1 cases in 2014, after almost 14 years of polio free period. The last case of polio before 2014 outbreak was in February 2000. The 2014 outbreak in Iraq was part of the Middle East Outbreak affecting both Syria and Iraq. Genomic sequencing indicated that the first case (date of onset on 10 February 2014, Shaab district in Baghdad - Rusafa Health Directorate) was detected within few months (almost 3 months) of virus introduction from Syria. The second case (date of onset in April 2014, Al Madaen district in the same Health Directorate) was genetically linked to the first case, indicating local circulation.

In response to the outbreak, Iraq has conducted five National Immunization Days (NIDs), two Sub-National Immunization Days (SNIDs) and five targeted vaccination campaigns (Mop Ups) in 2014 (Annex 1). Three NIDs have, so far, have been conducted in 2015 and there is a plan to conduct 2 NIDs in October and November, 2015 (Annex 2). The early detection of the virus introduction and subsequent response has apparently resulted in containment of the outbreak, as there are no further cases reported since April 2014 and there is no evidence of residual virus circulation.

An outbreak response assessment was conducted from 10th to 18th January 2015, which concluded that the government's commitment was high and the outbreak response was effective in reducing the risk of having more polio cases. However, the program is facing challenges in the surveillance system at different levels making it not possible to conclude that the circulation has stopped. The assessment team recommended general and specific interventions to improve quality of the surveillance system, particularly the active surveillance, and to enhance the quality of Supplementary Immunization Activities (SIAs), Routine Immunization and Communications.

A review mission deployed in Iraq for the period 14 to 23 August 2015 to conduct final outbreak response assessment, 16 months after the date of onset of the most recent polio case . Below is an abridged report of the Review Mission.

Objectives:

The main objectives of the mission were:

1. Review the sensitivity of the surveillance system to judge the level of confidence that there is no residual poliovirus circulation in the country
2. Assess the capacity and preparedness of the program to respond effectively to any polio importation or emergence of Vaccine Derived Polioviruses (VDPVs)
3. Identify areas for improvement and support needed to improve the program performance

Methodology:

The selection of the targeted provinces is based on predefined criteria including the results of risk assessment, accessibility, and proportion of IDPs and hosting mass gatherings. A total of eight health directorates were included for field assessment. They included Baghdad Kerkh, Baghdad Rusafa , Najaf , Karbala and Muthana, and three provinces of Kurdistan Region Government Iraq (Erbil, Dohuk and Sulymaniah), see Annex 3.

The assessment team was composed of a group of national and international reviewers from Global Polio Eradication Initiative (GPEI) partnership (WHO and UNICEF) and Academia. The interviewers were facilitated by the professionals working in the program at the country level from partner agencies and by the government staff running the program at the federal and provincial levels (Annex 4).

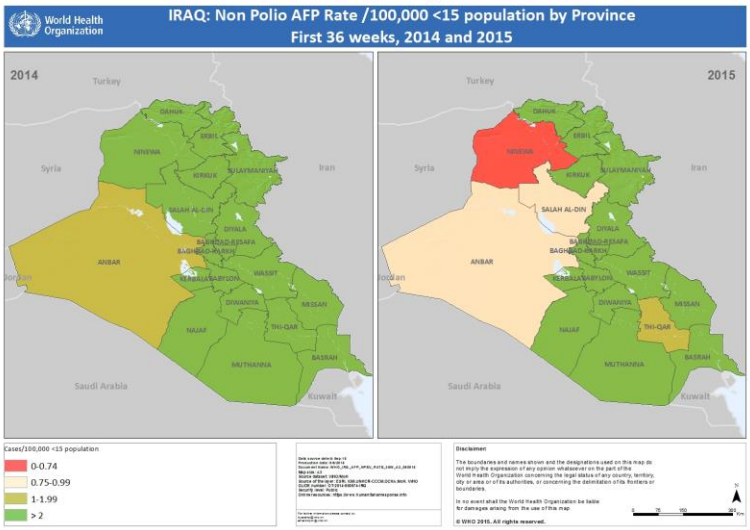
Results:

General:

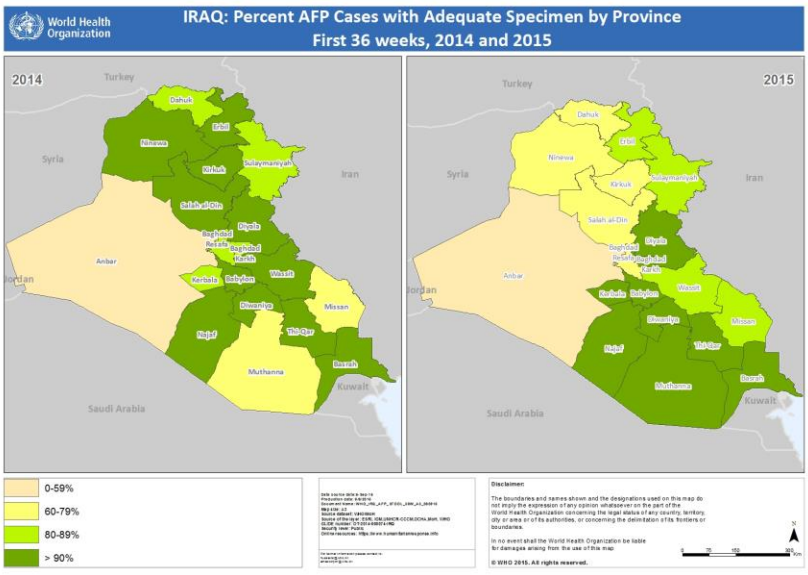
1. The Ministry of Health leadership is cognizant of disrupted primary health care services and is open to transparent and constructive feedback and technical advice.
2. Coordination is strong between the government and the key partners. Presence of Chairman National Certification Committee on Polio Eradication during assessment was noticed with appreciation, as well.
3. About one-fourth of population live in areas controlled by Anti-State Group (ASG) besides frequent terrorist activities in major cities, Baghdad in particular.
4. There has been a shift in approach to capacity building activities and supervision resulting in non-conduction of sub-national surveillance activities despite funds allocation from WHO as per recommendation of the January 2015 mission . Some of the key findings mentioned below could have been averted.

Surveillance:

1. There are well-trained and experienced surveillance coordinators at the federal and provincial levels
2. Analysis of the performance indicators are being done regularly but not the risk analysis at district level
3. The program has achieved the certification standards performance indicators in all but the conflict affected provinces or under the control of the Anti-Government Elements (ISIS). The non- polio AFP rate is less than 2 per 100000 population under 15 years of age in Nienwa, Anbar and Salahadin



4. The key indicator of stool adequacy (target 80%), could not be achieved in in three conflict affected provinces (Ninewa, Salahadin and Anbar) as well as Dahuk and Kirkuk provinces



5. There are no specific strategies or plans developed to enhance the surveillance sensitivity in conflict affected areas, IDPs, mass gatherings or high risk districts/ provinces

6. The proportion of the AFP cases reported by the private sector is only 7% of the total reported AFP cases (Table 1)

Table (1) Proportion of AFP cases reported by the Private sector, Iraq 2015

provinces	Private Sector	Total No.	%
Thiqar	3	10	30%
Muthanna	4	11	36%
Kerkuk	5	12	41.60%
Erbil	2	13	15%
Diwania	0	12	0
Basrah	0	14	0
Diala	0	14	0
Dahauk	0	15	0
Missan	1	17	5.8
Najaf	0	17	0
Babil	5	23	21%
Sulymania	0	20	0
B. Kerkh	0	26	0
B.Resafa	0	49	0
Anbar	0	4	0
Ninawa	0	3	0
Salahuddin	0	4	0
Wassit	0	9	0
Kerbala	0	10	0
Total	20	280	7%

7. Major Filed observations:
    a. Basic perception and concepts of active surveillance emphasized in last report and reportedly shared in national level meetings are not followed. This is basis of below major findings:
        i. There were missed AFP cases discovered in the tertiary centers: 7 from the Medical City in Baghdad; 16 from Baghdad Karkh health directorate and 3 from Najaf.
        ii. There was a misconception about the process of active surveillance. A good initiative had been taken by appointing focal points in referral hospitals but this was wrongly considered as replacement for the active surveillance where experienced professionals , preferably the AFP coordinator at the provincial level, visits the high priority surveillance sites to check for AFP cases , meet the health care providers , review the medical records and make sure that correct procedures are being followed for samples collection and dispatch to the laboratory
        iii. The active surveillance sites were restricted to the hospitals and do not include busy primary health care centers or private clinics

iv. There was no documentation of the active surveillance visits
v. Low awareness of the new graduates on AFP case definition
vi. The diagnoses of the consultations were not recorded in the registers of many visited health facilities which makes screening for AFP cases difficult or not possible

It is worth mentioning that all senior pediatricians including academia were not only aware of AFP but also stated that none of them had seen poliomyelitis cases in the past one year.

b. In Baghdad Al Karkh Health Governorate, there was inconsistency in the data between the case investigation forms and the patient registers of the three randomly selected AFP cases with more recent date of onsets in the AFP case investigation forms compared to the patients' hospital record for these cases.

8. There is a need for improved coordination between EWARN and AFP surveillance systems in MOH despite the fact that AFP diagnosis is on the list of EWARN notifiable diseases and WHO is sharing regular updates.

Immunizations:

1. There is strong government commitment reflected by funding the EPI and contributing significant domestic resources to the SIAs (vaccines, hard ware, staff salaries – transportation for the next two SIAs). However, they expressed strong need for Partnership's continued support in operations (incentive of workers, training) and communications.
2. Experienced human resources are available at the federal level and in most of the provinces.
3. A plan to address the IDPs has been developed and shared with the provinces but not comprehensively implemented
4. Administrative coverage of routine immunization is available by district but the latest third party routine immunization coverage was conducted in 2011 as part of the MICs survey. The data available at the federal EPI unit shows low and declining administrative OPV3 coverage (78% in 2014 and 69% in 2015). The administrative coverage in 2015 is low particularly in conflict affected provinces (Nienwa 47%, Anbar 9% and Salahadin no data for 2015 and 34% for 2014) which is understandable , but also low in Baghdad Resfa which reported the two polio cases in 2014 (the overall coverage is 58% and it is 42 in Madaen district which reported one of the two cases in 2014 and 60% in Shaab district which reported the other case)
5. Major field observations:
    a. The SIAs micro-plan shared at the visited PHCCs was limited to a spread sheet showing areas of assignments of the vaccination teams during polio campaigns. There was no comprehensive integrated (Operation, communication and security) data driven micro-plans.

b. There was no evidence of supervision or monitoring of the pre-campaign phase. In Baghdad Al Resafa the PHCCs were informed officially about the 22nd February campaign on 9th February, moreover, the staff at the health center consider 10 days lead time is sufficient for adequate preparations
c. The results of the independent monitoring data were shared with EPI MOH but not with the provinces and health centers to guide the planning process of the subsequent campaigns.
d. All the reviewed provinces reported delay in releasing the vaccination team incentives.
e. One of the provinces (Al Najaf) reported shortage of fund allocated for communication activities
f. Immunization services provided to the IDPs in Al Kazanzania camp in Alkarkh were of low quality: no permanent register is available; no vaccination activities from end February to end March 2015 and only measles and OPV antigens were given during the period March to July; and the polio campaign was conducted in the fixed site and not tent to tent. A cluster of 13 children revealed zero routine immunization coverage.

Readiness Plan for Response to New Infection / Outbreak:

There was a draft readiness plan in EPI/MOH. This needs to be endorsed by the MOH nonetheless.

Conclusion:

Though there is no evidence of polio virus circulation and the outbreak has apparently been successfully stopped, but it is difficult to conclude with high confidence that the system is able to detect low intensity residual circulation or early detection of importation or emergence of circulating vaccine derived polioviruses due to observed loopholes in the surveillance system and inaccessibility to almost 20% of the population.

Recommendations:

There is a need for urgent interventions to enhance the sensitivity of the surveillance system and to improve the quality of polio campaigns planned for October and November 2015, with main emphasis on reaching IDPs and other high risk groups.

1. Develop an action plan with inbuilt monitoring framework to implement the recommendations of the January assessment mission which are still valid …… End August

2. Ensure the highest possible quality of the polio campaigns in Oct. and Nov. through:
    a. Developing comprehensive integrated data driven microplans with special focus on IDPs and other high risk population groups/areas
    b. Establishing a control room to closely monitor the preparatory phase of the campaigns

c. Conducting high quality training
d. Ensuring strong supervision
e. Tracking and vaccinating all children missed during the initial teams visit

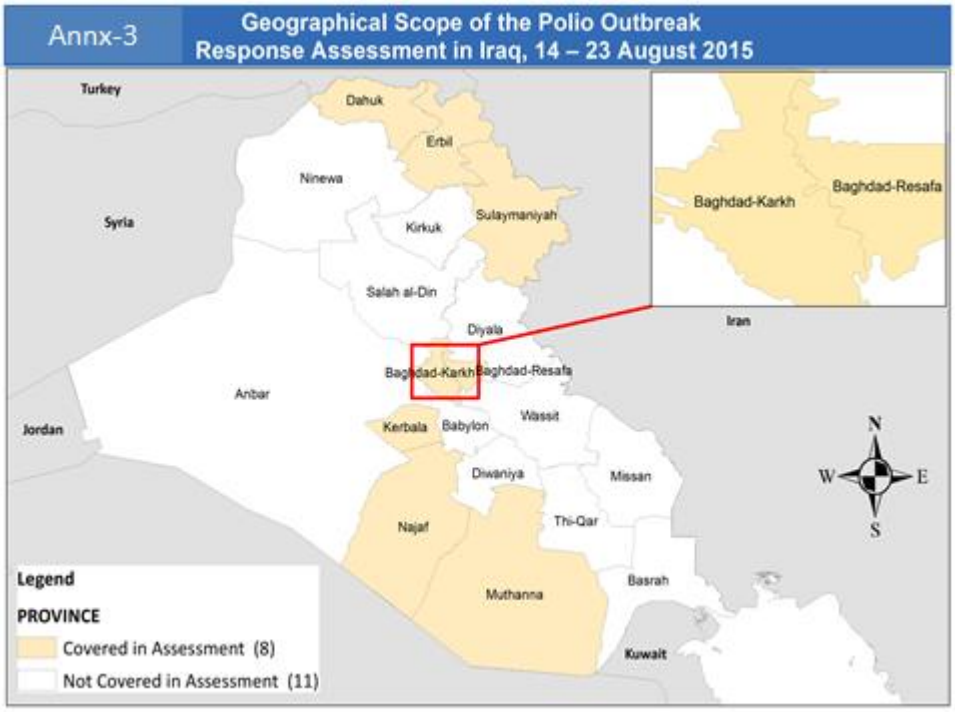
3. Develop surveillance improvement plan for the Medical City, Baghdad Karkh and Baghdad Rusafa with main focus on improving the active surveillance…… end Sep.
4. Conduct twice a year risk analysis at district level to identify the highest risk districts and major risks and develop risk mitigation plans… end of Dec
5. Develop a plan to enhance surveillance sensitivity in the provinces hosting mass gatherings including the possibility of establishment environmental surveillance ……..Nov.2015
6. Improve the coordination between EWARN and AFP surveillance in IDPs and conflict affected areas……ongoing
7. Provide supportive supervision from the federal level to improve routine immunization coverage particularly in Baghdad Rusafa …. Ongoing
8. Ensure comprehensive implementation of the IDP immunization plan. The IDPs should be considered in the denominator of the host districts …..ongoing
9. Readiness plan for any new outbreak / importation may be endorsed by the MOH leadership – End October.
10. Consider the possibility of conducting routine immunization coverage survey by third party …third quarter of 2016

Annex1 : Target, date and administrative coverage of SIAs , Iraq, March – June , 2014

Year	Target	Date	Vaccinated	%
2014 (NIDs)	5.600.701	2-6/3/2014	5.372.156	96
2014/Baghdad/ Bob Alsham	20308	23-29/3/2014	19709	92
2014 (NIDs)	5.600.701	6-10/4/2014	5.840.387	104
2014 (NIDs)	5.618.485	13-17/5/2014	5.995.729	106.7
2014 Baghdad/ Madeen	68178	27-29/5/2014	89736	131.6
2014 Dewanya/ Hamza	37758	1-3/6/2014	37.317	98.8
2014/ Sub.N	1.513.508	15-19/6/2014	1507804	99.6
2014 Baghdad/ Tarmia	25865	24-28/6/2014	27940	108

Annex 2 : Target, date and administrative coverage of SIAs , Iraq, Aug. 2014 – May , 2015

Year	Target	Date	Vaccinated	%
2014 Sub.N	3.977.820	10-14/8/2014	3.727.911	93.7
2014 (NIDs)	5.653.964	14-18/9/2014	5.540.625	98
2014 (NIDs)	5.653.964	19-23/10/2014	5.435.788	95.8
2014 Baghdad	187.760	30/11-4/12/2014	189.724	101
2015 (NIDs)	5.616.768	22-26/2/2015	5.407.232	96
2015 (NIDs)	5.103.070	12-16/4/2015	5.041.099	99
2015 (NIDs)	5.413.945	24-28/5/2015	5.372.822	99



Annex- 4. Name and designation of the reviewers by province			
Province	Reviewer	Designation	Facilitator
MoH and Baghdad Rusafa	Ni'ma Saeed Abid	Team leader Cross Cutting Functions/ POL/ Amman	Obaid and Wassan/ WHO country office and
Baghdad Karkh	Nabil Ibrahim	Epidemiologist –freelance	Omer Mekki-WHO country office
Najaf	Faris Al Lami	Professor Community Medicine, Baghdad Medial College	
Karbala	Dr. Abdul Kareem	Dean Deputy for Scientific Affairs Kufa medical College	
Muthana	Basim Hussein Bahir	Assistant Prof. Baghdad Health and Medical Technology college	
Erbil	Rudi Tangermann	Medical Officer / HQ	Firas Mustafa/ WHO country office
Dohuk	Fazal Athar	Medical Officer/ UNICEF	Craig / UNICEF country office
Sulymaniha	Zaid Mouaid Yassen	Head of Department of Family and Community Medicine, Mosul Medical College	Najwa Jarour/ WHO Country Office