Polio Outbreak Response Review

Lebanon

31August- 04 September 2015

WHO/UNICEF organized a review for the Middle East Polio outbreak response during the period 31st August – 4th September, 2015. Seven international officials participated in this review;

- Dr. Faten Kamel, WHO Consultant (team leader)
- Dr. Tarek Abdelrahman Elsayed, Medical Officer, WHO/EMRO
- Dr. Nasr Tantawy, WHO Consultant
- Dr. Ahmed Ramadan, WHO Consultant
- Dr. Usama Salama, WHO Consultant
- Dr. Seifeddine Saleh, WHO Consultant
- Ms. Marwa Kamel, UNICEF Consultant

Background

Lebanon reported the last 2 indigenous cases in 1994. Two importations occurred in 1995 and 2003 with no further spread. In response to the Middle East polio outbreak and considering the ongoing humanitarian crisis and the vast population movement there, a comprehensive multi-country outbreak response was initiated in November 2013. Lebanon is one of the eight countries included in the Response (Syria, Lebanon, Jordan, Iraq, Turkey, WB&G, Egypt and Iran).

Objectives of the review were to assess

- Implementation of Phase II recommendations and Phase III plans
- AFP surveillance sensitivity and quality
- Adequacy of immunization activities (Routine and SIAs)
- Communication and Social Mobilization activities
- Partners' coordination for the Outbreak Response
- To make specific recommendations on how to maintain Lebanon polio free

Methodology

- The mission started with Desk Review and full briefing by MoPH officials.
- Field Visits (Beirut, Mount Lebanon, Baalbek, Zahla, Tripoli, Akkar) were made.
- Meetings with EPI team, ESU, WHO, UNICEF, UNHCR and NCC were conducted.
- All components of Outbreak Response activities were reviewed including response to recommendations of last review; current situation and implementation of PHASE III activities which include;
  - Supplementary Immunization activities
  - Routine Immunization
  - AFP Surveillance
  - Communication
  - Coordination among all partners
- Findings were shared and recommendations were formulated.

Findings and Recommendations

i. GOVERNMENT COMMITMENT AND PARTNERS' COORDINATION

- The Government continues to lead the response with partners' support from WHO, UNICEF, UNHCR, NGOs and the Private Sector.
- Funding: Partners provided funds for SIAs. Government is providing support for surveillance with WHO support for active surveillance covering the costs of hiring 8 surveillance officers and related transport.
- Sharing of information between partners including between WHO and UNICEF has improved. Reporting from the private sector especially on RI is still an issue.

II. SUPPLEMENTARY IMMUNIZATION ACTIVITIES (SIAs)

Lebanon implemented 11 campaigns as a response to polio reappearance in the Middle East in which more than 4 million OPV doses were administered. The target for NIDs was close to 600,000 under-5 children including both Lebanese and non-Lebanese. Mop-up activities

were implemented in Phase II and Phase III targeting High Risk areas with most vulnerable populations.

Month	Type	Number reached	IM
November 2013	NID	580,770	
December 2013	NID	589,054	90
March 2014	NID	492,706	
April 2014	NID	549,768	78
July 2014	Mop-up	120,142	
August 2014	Mop-up	115,424	
September 2014	Mop-up	126,780	
October 2014	NID	516,967	73
November 2014	NID	556,814	83
March 2015	Mop-up	384,888	71
April 2014	Mop-up	421,691	78

SIAs Findings

- The high-risk approach was followed in planning and implementation of Phase III SIAs
  - Mapping and targeting high risk areas was done in March & April 2015: Identification of High risk areas was done using vulnerability maps and adding areas with poor vaccination coverage. Vulnerability is decided using a composite index of concentration of vulnerable Lebanese population (living on less than USD 4/day) and registered refugees. The most vulnerable quintile amounts to 225 localities including 86% of registered refugees and >66% of vulnerable Lebanese population. The target for the mop-up was 180,000 children, but the reach was much higher as all public schools received a decree from MOE to comply with the campaign, some newly displaced Syrians were not accounted for during planning and some Qaza Physicians decided to vaccinate some new areas that they considered vulnerable. Each vaccinated child received a signed card as proof of vaccination with a blank space over the date of the next vaccination to remind the parents of the next campaign. These cards were the basis of verification of vaccination by independent monitors

  - Effective partnership with community entities:
    - High coverage in Informal Settlements (MoPH through BEYOND/UNICEF): In Lebanon, there are no camps for Syrian refugees. Displaced Syrian population lives in different host communities, in Informal tented Settlements (IS) and Collective Shelters (CS). Not all of them are registered with UNHCR (about 1.4 refugee registered from all ages and additional estimate of about half a million). UNHCR supported health facilities are providing vaccination through fixed sites but the Vaccination of IS, is carried out tent to tent by a local NGO, Beyond, which is supported by UNICEF. Lebanon has a total of 2512 ISs with 34,059 tents and 201,379 total population living in them. The *Shaweeshs* (the local leaders of each IS) were sensitized and thus extremely helpful in organizing campaigns which led to excellent coverage. Total under-5 children covered by NGO Beyond is 64,254 in ISs and 57,870 in CSs. The main concern and challenge was to reach Syrian population in host communities who was spread all over the

country. There are, as well, financial and acceptance barriers that could impact the access and use of health facilities/services by them.

- Vaccination in schools preceded by communication activities, lectures and interactive dialogue and Symbolic prizes on polio. Decrees were sent from MOE to schools.
- Innovative social mobilization activities (use of worship places, schools, hospitals and municipalities)
- Using UNHCR data base; SMSs to registered Syrian Refugees and information dissemination through UNHCR refugee outreach volunteers.
- Increasing involvement of private physicians in campaign activities & fighting rumors against OPV (role of pediatric society): there is evidence for better partnership with the private sector. Some issues previously noted included low participation of the private sector despite free supply of vaccines by MOPH and sometimes advising against repeated vaccination. Different strategies were used to reach the private physicians (direct contact, joint WHO-UNICEF-MOPH meetings and regular information sharing with Lebanese Pediatric Societies (LPS), through polio certification committee, Ministry of Education and school physicians, mass and social media and daily follow-up by MOPH during SIAs). These initiatives paid off where the proportion of children vaccinated at the private sector has markedly increased from 2% in April 2014 to 24% in October 2014. Similarly the proportion of children who missed vaccination because the private physician advice was significantly reduced from 39% in April to 2% in October. Private physicians as a source of information on the campaign increased from 2% in April to 11% in October.

- Adopting additional strategies to reach high risk population:
  - Vaccination at the 4 cross-border check points, at the airport and at UNHCR registration centers (Beirut/Mt Lebanon-Tripoli-Zahle and Tyre): number vaccinated at the border reached 80,000 in 2014 and 28,698 in 2015. 180,000 at registration centers in 2014 and 72,431 to date in 2015. 53,000 from all ages coming from infected countries were vaccinated on arrival to the airport.
  - Increase house to house vaccination

- Coping with increasing target figures and securing enough vaccines & logistics and cold chain equipment: In light of unpredictability of electrical supply, UNICEF provided over 850 vaccine fridges of alternative power (280 solar distributed and being installed in PHCC, SDCs, CAZA Physician's offices, 580 sibir fridges for dispensaries as well as constructing 3 cold rooms in the central warehouse of MOPH)

SIAs Remaining Issues

- Sub-optimal quality of micro-plans There are no detailed workplans with different components/maps or clear supervisory plans or uniform policy for some campaign operations (use of finger markers or reporting from private sector)
- Need to strengthen supervision during campaign implementation

- Absence or delayed reporting of PCM data jeopardizing proper utilization of its findings. By the time of the review, independent monitoring: results were not released though monitoring was carried out through the Faculty of Health Sciences at La Sagesse University and the sample included 2,775 children under 5 years of age, regardless of their nationality, residing in the targeted Lebanese communities and 525 Syrian children hosted in the ISs. Preliminary data shows that awareness about the campaign was higher among Syrians in ISs compared to community sample (92% compared to 78%). Same for coverage, the overall April 2015 polio vaccination coverage was 78% (n=2,164), among the community residents and 92% (n=483) among the Syrians hosted in ISs.
- Reaching the unregistered Syrians is still an issue needing governmental innovative strategies.

SIAs Recommendations

- Mop-ups in High Risk areas/populations should continue as long as the threat of polio continues
- Quality and reach of SIAs should be ensured through:
  - Continuous Update of risk assessment and mapping
  - Improved and standardized microplanning with specific focus on high risk planning. (Technical support)
  - Continue and expand close coordination with all stakeholders
  - Innovation strategies to reach unregistered refugees in the community
  - Ensuring Independent Monitoring which could be biased to high risk areas/population, with proper and timely utilization of monitoring data to improve quality of sub-sequent campaigns

III. AFP SURVEILLANCE

The AFP surveillance system is implemented in Lebanon since 1998. The main issues detected in previous reviews included suboptimal/borderline indicators, missing some facilities serving Syrians by the active surveillance network, issues with implementation of active surveillance, quality of visits, profile of staff conducting the visits, transport, monitoring and supervision, suboptimal information sharing and feedback and pediatricians focusing on diagnosis rather than syndromic approach.

As indicated below, great improvement was noted during the current review. Lebanon achieved the target for most indicators for the first time in the last few years.

AFP Surveillance Findings

Structure/Personnel/Policy

- There is a well-established AFP surveillance system with wide network and clear structure within the epidemiologic surveillance programme at central (Separate from EPI), Mohafezat (being developed for Mt. Lebanon) and Caza levels.
- Dedicated focal point for AFP (since one year) and appointed 8 AFP nurses (in batches Sept 2014, Nov 2014) one for each Mohafaza representing a positive improvement to support the surveillance officers.

- Central staff met and Nurses are well versed, trained and committed (Clear TOR), supporting Active Survvveeeillance, detailed case and area investigation, filing and data entry)
- Surveillance responsibilities are provided by central team for Beirut.
- Contact focal points identified in hospitals (however with variable qualification and knowledge, some in need of refresher training)
- The documentation of the activities was variable regarding plans but complete forms
- Adequate logistics at different levels, computers and transport
- New AFP Guidelines developed, printed and distributed to surveillance staff (not yet to FP and Hospitals). Guidelines are comprehensive and consisting with global and regional policies
- AFP SOPs under revision to include new definitions, concepts and new Outbreak Response SOPs.
- Hot case concept clear and contact sampling is done (hot cases, cases with inadequate stools and 6 border Cazas)
- New NEG is to be established, we could not meet the potential members (urgently needed one case pending more than 90 days)

Communication/Coordination/Feedback and Supervision

- There is continuous communication between different levels (phone, e-mails, adhoc visits).
- Bulletin produced monthly and published on web-site.
- Limited Supervisory visits (do not include checklist and not documented)
- Adhoc meetings involving Mohafezat and caza staff with no minutes
- Feedback on samples results is send to treating physicians, through hospitals focal points and Mohafezat/caza staff
- Cross notification is done between Mohafezats and with Syria
- Need for direct communication with Jordan Laboratory and to ensure timely results

AFP case investigation, documentation and follow up

- There is significant delays in reporting of cases by private physicians and even in hospitals.
- Private physicians do not report cases from their clinics/ confusion about what to report (syndromic approach/GBS?)
- Nearly half the cases were detected by Active Surveillance indicating reluctance of hospitals and physicians to report spontaneously
- GBS rate is 1.1/100,000 under 15 (indication of good AFP cases)

Zero Reporting/Active Surveillance

There is clear distinction between zero reporting and active surveillance

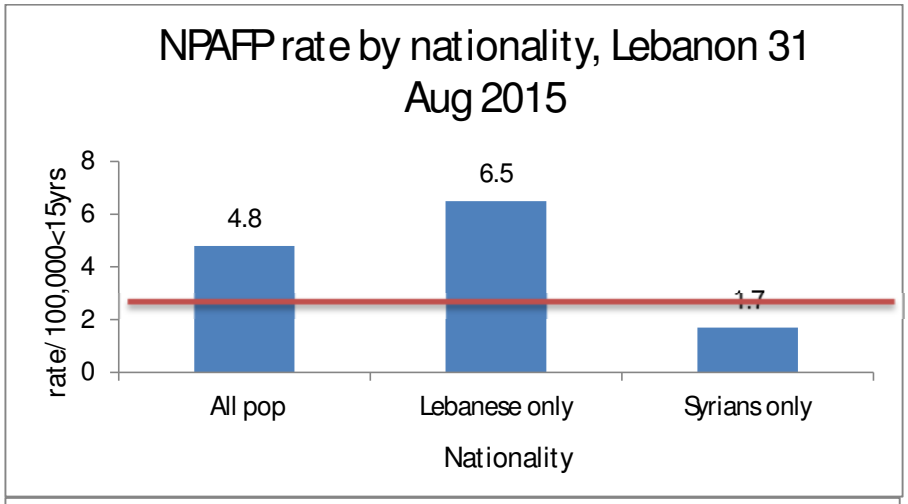
- Zero reporting:
  - Very wide network of Zero reporting including hospitals, public and private HF, PHCC, dispensaries as well as some MMUs in some Qazas. Reports are computerized and monitoring is done.
  - Responsibility of focal points
  - In some areas done from medical records without checking with physicians and wards. In few by phone not documented
  - Efficient System for monitoring at central level

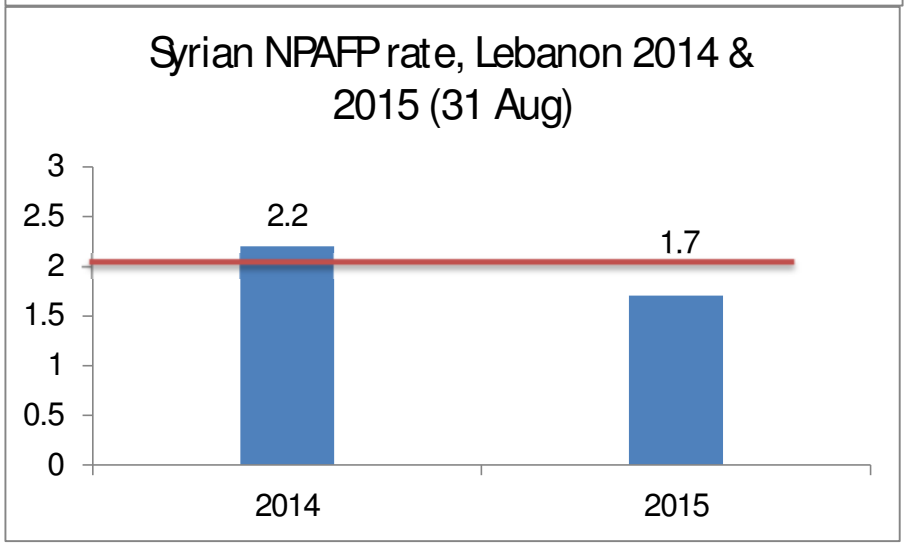
- Active surveillance:
  - AS network expanded from 52 hospitals (both public and private) in 2013 to 90 in 2014 and currently reached 112 in 2015, with nominated Focal Points, List of reporting sites continuously updated, prioritization done
  - Supported by the 8 AFP nurses and Casa surveillance officers
  - Resumption of AS in Beirut (in five hospitals)
  - Most hospitals that treat Syrian refugees are included among active sites
  - No major logistic issues were observed
  - Quality of visits: have improved with indication of register reviews. There is still room for improvement by visiting and checking all relevant departments. the quality differs between Governorates
  - There is no supervision on Active visits and is highly needed.
  - Monitoring completeness of Active visits is now done in addition to Zero reporting, dispensaries and UNHCR facilities, but still AS monitoring and supervision is weak at the local level.
  - Introduction of community surveillance: Community surveillance is in process using key informants from communities (detected 3 cases in 2015)
  - High commitment from physicians for reporting of AFP cases. Orientation sessions were implemented. Still more is needed with physician awareness and distribution of print material.

Surveillance Indicators

- The population figures were adjusted to include Syrian population, based on registered refugee's figures, this makes indicators more realistic and avoid overestimation.The number of under 15 population used in surveillance is 2,147,231 including Lebanese (1,354,321) and Syrian (792,910)
- There is increase in number of cases reported (68 up to end August compared to 50 for 2014)
- Sensitivity markedly improved (2.16 in 2013 -> 2.65 in 2014 -> 4.34 annualized 2015). All province have non-polio AFP rate >2
- Non-polio AFP rates are calculated by nationality. Still rate is below 2 among Syrians (at the time of the review). However, no identification of cross-border cases that ESU is not aware of. UNHCR and other NGOs dealing with Syrian refugees have been communicated and trained on AFP case definition. Medical centers that treat Syrian refugees have been contacted and trained
- Improvement of stool adequacy at national level (45.45 % -> 70% -> 88.33 %) and all governorates except Nabatya.
- 11 out of the 68 cases had inadequate specimens (delays in reporting by hospitals and lack of cooperation by parents).
- Delays in case detection and notification (% cases notified within 7 days of onset is low in South, Nabatiye and Bekaa.
- Timely investigation of cases once reported

- Problems in sending the samples to the Laboratory: problems were encountered in sending the samples to VACSERA Cairo. Now samples were shifted to Jordan. The Laboratory isolated NPEV (8%)and SL (2%)..
- Data management and data analysis is done at national level. Basic mapping and analysis needed at governorate and lower level





			AFP classification				Surveillance indicators							Immunity profile		
PROVINCE	Year	Annualized Est. Population < 15 yrs	AFP	Pending	Pending > 90 days	Discarded	% Adeq.	NPAFPRate	% notified within 7 days	%INVEST2DP	% in lab within 3 days	% NPEV	% Sabin like	% > 6 m - <60m with 3 or more OPV doses	count of 6 m -<60 m with < 3 OPV doses	Count of 6 - <60 m with zero OPV doses
BEIRUT	2013	94,981	3	0	0	3	66.7	3.2	66.7	66.7	0.0	0.0	0.0	100.0	0	0
	2014	105,758	2	0	0	2	0.0	1.9	0.0	100.0	0.0	0.0	0.0		0	0
	2015	72,358	2	0	0	2	100.0	2.8	100.0	100.0	0.0	0.0	0.0		0	0
BEKAA	2013	257,207	6	0	0	6	33.3	2.3	0.0	100.0	0.0	0.0	0.0	50.0	2	0
	2014	380,616	10	0	0	10	50.0	2.6	20.0	100.0	20.0	0.0	10.0	71.4	2	0
	2015	310,782	9	2	0	7	100.0	2.9	66.7	100.0	0.0	0.0	0.0	20.0	1	0
MONT LIBAN	2013	470,658	12	0	0	12	33.3	2.6	16.7	100.0	0.0	0.0	8.3	100.0	0	0
	2014	554,800	17	0	0	17	70.6	3.1	70.6	94.1	11.8	0.0	0.0	60.0	2	0
	2015	411,750	17	3	1	14	82.4	4.1	88.2	94.1	0.0	0.0	0.0	90.9	0	0
NABATIYE	2013	94,090	1	0	0	1	100.0	1.1	100.0	100.0	0.0	0.0	0.0		0	0
	2014	113,544	4	0	0	4	100.0	3.5	75.0	100.0	0.0	0.0	0.0		0	0
	2015	80,336	10	2	0	8	70.0	12.5	70.0	100.0	30.0	0.0	0.0	100.0	0	0
NORTH	2013	390,591	5	0	0	5	80.0	1.3	80.0	100.0	0.0	0.0	20.0	100.0	0	0
	2014	482,216	12	0	0	12	75.0	2.5	50.0	100.0	0.0	0.0	0.0	33.3	1	0
	2015	333,836	14	2	0	12	100.0	4.2	92.9	100.0	0.0	7.1	0.0	80.0	1	0
SOUTH	2013	221,494	6	0	0	6	33.3	2.7	16.7	100.0	0.0	0.0	0.0	100.0	0	0
	2014	251,550	5	0	0	5	100.0	2.0	80.0	100.0	0.0	20.0	0.0	100.0	0	0
	2015	172,452	8	2	0	6	87.5	4.6	75.0	100.0	0.0	12.5	0.0	100.0	0	0
LEBANON	2013	1,529,022	33	0	0	33	45.45	2.16	30.3	96.97	0	0	6.06	90	2	0
	2014	1,888,484	50	0	0	50	70	2.65	54	98	8	2	2	63.64	5	0
	2015	1,381,517	60	11	1	49	88.33	4.34	81.67	98.33	5	3.33	0	77.78	2	0

Remaining Issues in Surveillance:

- Sensitivity issues:
  - NP AFP rate is below normal standards among high risk group (Syrians)
  - Deficient reporting of AFP cases from OPD
  - Sub-optimal level of awareness and knowledge (some FP and clinicians)
- Quality issues:
  - Quality of active surveillance visits in some places
  - Supervision needs strengthening and documentation
- Timeliness
  - Late detection, late reporting, sample transport
- Centralized data management.

Surveillance Recommendations:

- Continuation of the new structure and AFP nurses
- Continue and expand the use of Syrian community informants for reporting of AFP cases (UNICEF & UNHCR support)
- Design and conduct well structured essential training course for surveillance officers, AFP surveillance nurses and focal persons. This could be conducted for each region (WHO support)
- Efforts should be done to ensure immediate timely notification of any AFP case:
  - *Raising awareness of clinicians (sensitization sessions, printed material, Pediatric association, Medical societies) on his/her role in immediate reporting*
  - *Detailed investigation of reasons of delays with subsequent action*
- Ensure quality of Active surveillance visits (register review, inclusion of relevant departments, supervision of AS)
- Encourage data analysis at sub-national level which could be incorporated in the essential training.
- Conduct internal surveillance reviews
- Feasibility and initiation of environmental surveillance to be discussed with WHO regional Lab coordinator
- Formulation of NEG
- Establish direct communication with the Jordan Lab for follow up
- Samples kept for more than 72 hours should be kept frozen.

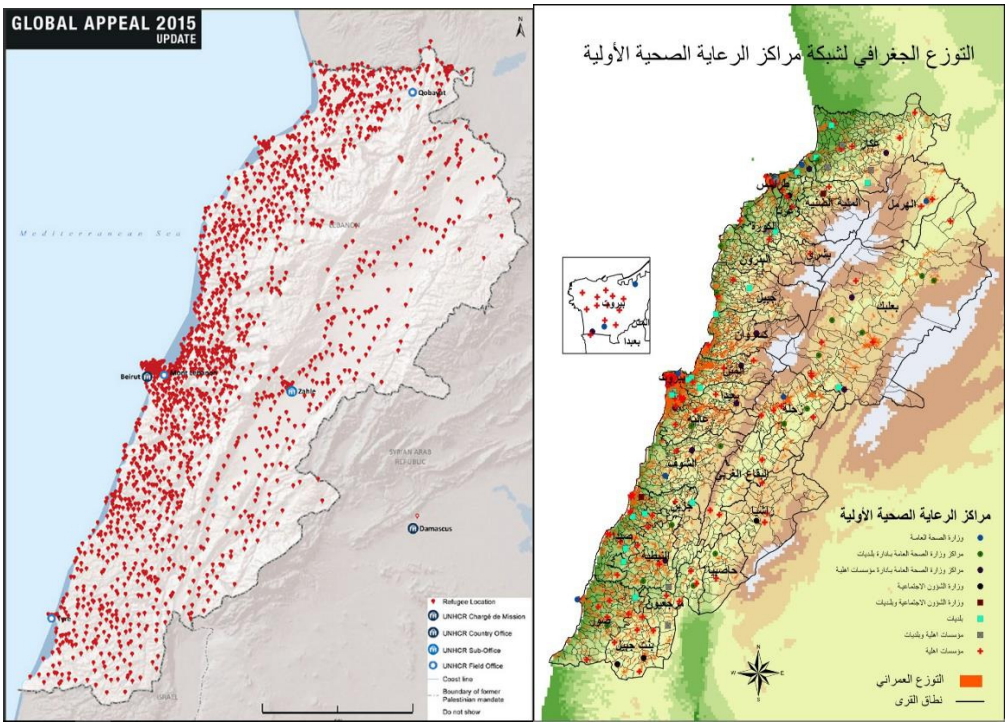
IV. ROUTINE IMMUNIZATION

- There is a well-organized national vaccination programme with strong NGO partnership with MoPH. High level commitment to leadership role and improvement of the system
- Improved accessibility to RI activities & strong NGO partnering with MoPH
  - Increased number of PHCs with thoughtful geographical distribution across the whole country and Utilization of all vaccination outlets
- Well-established cold chain system
- Plan to Build capacity on Effective Vaccine Management (EVM)
- Independent technical EPI committees
- There is a huge private sector market (different vaccination schedules and no reporting). Efforts are done to improve coordination with private sector (MOPH providing free OPV & MMR)
- Monitoring vaccination status and defaulter tracking
  - Efforts done at Qaza level (birth records and surveys)
  - Variable level and strategies at facility levels for defaulter tracing
  - Promising computerized program (under development) to monitor vaccination status of children attending PHCs
  - Efforts to ensure RI of Syrian children
  - Provision of RI in IS by MMUs in Bekaa and North (Beyond/UNICEF)
  - Free vaccination services and Subsidized consultation fees to Syrians (UNHCR facilities and some NGOs)
  - Immunization units at UNHCR Registration centers and Border entry points giving polio and measles regardless of age and vaccination status (and direct to UNHCR supported facilities)
  - Vaccination cards issued to facilitate tracking

Remaining Issues in RI

- Problems in target identification
- No reporting on vaccination from private physicians
- Records standardization and keeping is variable and does not allow program monitoring.
- Out-reach activities and tracking of defaulters follow different methodologies in different settings
- The challenge of Ensuring high coverage among Syrian population (unregistered, outside IS)

- There is big difference between official routine immunization figures and WHO/UNICEF estimates (estimates showing 81% coverage)
- Surveys around some AFP cases pointing to pockets of low coverage.
- Wide variation were found between Lebanese and non-Lebanese regarding polio routine vaccination according to the IM survey results in 2013. Those who received 3 or more doses (verified by card) represented 91.8% among Lebanese children in the sample, 88.7% for Non-Lebanese residing in Lebanon for more than 2 years and 66.8% for non-Lebanese arriving less than 2 years ago.
- Vaccination profile of non-polio AFP cases is confirming presence of under immunized children
- Small EPI central team with huge responsibilities so limited supervision



RI Recommendations:

- Follow up on the electronic application to help identify children for immunization (explore possibility of unique identifier)
- Work with pediatric societies and Syndicate to identify a suitable mechanism to report on vaccinated children (agree on statistics format and channel for reporting)

- Develop standard registers and statistical formats of all program activities, print, distribute and plan for well structured national training for all concerned staff.
- Establish a supervisory system with suitable tools
- Continue work with partners to identify strategies to locate and immunize Syrian children.
- While working on improvement of reporting and until achieved, periodic EPI coverage surveys will be helpful for estimating coverage and monitoring trend

V. COMMUNICATION

Previous reviews showed that Reasons for missing vaccination were mainly related to communication. It also highlighted that The shift from house to house to facility based strategy, the repeated campaigns in a country that has been polio free for long time and where private sector is the primary source of service even for vaccination represents real communication challenges that warranted attention and implementation of a multi-pronged strategy (mass media, sensitization of private sector and schools and with high community mobilization). Involvement of Religious and community leaders, and role of municipalities and district medical officials in mobilization and reaching out to the communities was supposed to be stronger and more organized.

Communication Findings

- During the last quarter of 2014 a massive Health communication campaign on polio was planned and implemented, and was a great source of information to the general public about the campaigns dates and messages
- The formation of the Child Health Mobilizers Network is a great asset for promoting the campaign dates and messages
- The involvement of the private sector physicians to promote the polio vaccination campaigns was a great achievement and gave a great push to the polio campaigns
- The collaboration between MOPH, and MOE showcased a very positive example of successful collaboration between ministries to achieving good results

The above points led to reducing resistances, tackling misconceptions, barriers and increased the acceptance to vaccination

The 2015 Mop Up polio campaigns used targeted communication at the local level. Part of the activities planned and implemented included Printing and dissemination of Street banners, Posters, and Flyers, Local activations with partners at different governorates including Fun Recreational activities for kids that included polio vaccinations, Media coverage, Religious leaders' involvement and Mega phones involvement. The new MOPH web site, social media outlets, and bulletin are a great venue for sharing MOPH achievements, successes, and lessons learned

Communication Challenges

- Due to the delayed selection of the sites and venerable/high risk areas to be covered by the Mop Up March and April campaigns, it was difficult to ensure proper systematic communication planning for all geographical areas
- Creative ways have helped make use of existing networks of local partners to promote the polio Mop Up campaigns but could not guarantee needed reach or unification across governorates
- Reaching the unreached and the hard to reach is still a challenge and requires a lot of more work. More work needs to be done to ensure reaching the missed children
- Good awareness raising activities was implemented matching with responding to emergencies and time constraints, and less communication for behavior change programs was planned and implemented

Communication Recommendations

- The decision on vaccination campaign dates needs to ensure allowing time for readiness of the communication plans and interventions on the country level/field office level
- A strong need to have a comprehensive program with pediatricians building on the success of the work done with the syndicates and the pediatricians during 2014
- A comprehensive evidence based strategy and plan for C4D for routine/EPI is highly needed
- Need to plan and implement C4D trainings for field teams, nurses, and outreach staff that do home visits for vaccination to ensure that they posses the right skills to talk to the public and have the right information
- It is highly recommended that communication is observed during the implementation of the EPI/routine /polio campaigns to ensure proper monitoring and evaluation
- MOPH communication team needs to be strengthened and formulated to suit the advanced needs for C4D activities and interventions
- Need for a stronger communication coordination at the central level that could be lead by MOPH communications team, and the UNICEF C4D Team
- More focus needs to be given to IPC and very specific tailored approaches that are evidence based
- Proper and systematic communication monitoring and supervision is an essential component for the success of any future interventions
- Need to develop and disseminate Routine EPI material

Communication recommendations in Surveillance

- Develop job aids (pocket guides, flow charts, etc…) for surveillance teams and health staff to promote notifications of AFP cases
- Ensure that case definition posters are available in all health centers and revise the poster to be more attractive, stand out and have simple messages
- Integrate the availability of surveillance communication materials at hospitals and Health centers are part of the supervision checklists
- Present the surveillance guidelines in events for health teams at the governorate level to announce for their existence and ensure that health providers are also aware of the importance of the guidelines and their contents
- Introduce AFP to the community to increase the acceptance to collection of samples, reduce resistances and approval to the surveillance teams
- Investigate the possibility of using the non traditional tools used to communicate the polio campaigns to the public to also promote the notification of AFP cases

- There is a need to have regular awareness raising plans, trainings, and orientations of surveillance teams, and hospitals teams to AFP Survillance
- Analyze the delays in notifications and accordingly develop plans to address all types of delays

OVERALL CONCLUSIONS

- Lebanon implemented most of the recommendations made by previous reviews and on track with implementing Phase III plans
- There are some remaining gaps and risks, so implementation of the proposed recommendations is crucial to sustain polio free status