Ensuring the quality of polio outbreak response activities: A rationale and guide for 3 month, quarterly and 6 month independent assessments

Introduction

While polio exists anywhere, countries with low population immunity remain at risk of a polio outbreak. Outbreaks are costly and time consuming to control and consume significant human and financial resources that would be better utilized in stopping polio in the last remaining endemic areas. Any new polio outbreak directly threatens the World Health Assembly (WHA) endorsed objective of stopping all polio transmission globally by 2014.

Experience has shown that the most effective ways to control importation-related polio outbreaks are:

- **Strong surveillance to promptly detect and monitor poliovirus transmission.**
- **Large - scale polio supplementary immunization campaigns using oral polio vaccine (OPV) implemented as soon as possible after notification of the first case**
- **Continued large scale and targeted supplementary immunization campaigns using oral polio vaccine (OPV) until the outbreak is stopped**

Recognizing the significance of efficient outbreak control for achieving global polio eradication, the 59th World Health Assembly (WHA) urged all polio-free Member States to respond rapidly and effectively to polio outbreaks. Resolution WHA59.1 contains detailed guidance on how affected polio-free countries should control outbreaks, including the timely conduct of large-scale SIAs, with a minimum of two SIA rounds following the last reported wild poliovirus case.

Further to the guidance provided by the WHA and to ensure that polio outbreaks are stopped as quickly and effectively as possible WHO recommends:

- that, starting 3 months after notification of the first case, assessments of the quality and adequacy of outbreak response activities, against the WHA-established standards, be conducted by an external review team, to be repeated every 3 months (quarterly) as long as the outbreak continues;

- that, once a 6-month period has passed without finding new cases, a rapid surveillance assessment be conducted to determine the quality and sensitivity of surveillance and how reliably it can be assumed that transmission was actually been interrupted, as well as to recommend key steps to be taken to ensure that surveillance continues to be sensitive enough to reliably rule out transmission.

This rationale and guide describes the importance of these assessments and how the ‘Three Month’, 'Quarterly' and the 'Six Month' assessments should be conducted.

A. Independent 'Three Month' Assessment

Quarterly assessments should start three months after the detection of the index case of a polio outbreak and are critical to ensure polio outbreaks are stopped in the shortest possible time.

They should be independent, time bound and technically focused on improving all aspects of outbreak response including SIA planning and implementation, routine immunization, surveillance and communications.

Assessments should include both a desk review of relevant data, planning documents and materials as well as a field review component.

While determining as accurately as possible overall population immunity and the risk of continuing transmission of polio virus, primarily quarterly assessments should determine whether all necessary steps are being taken by governments and supporting partners to stop polio transmission within six months, as global guidelines recommend, or as quickly as possible if this deadline has been missed. The risk of missing transmission due to gaps in surveillance should be critically assessed and highlighted.

1 Quarterly assessment objectives

The objectives of a 3 month quarterly assessment are to:

- Assess whether the quality and adequacy of polio outbreak response activities are sufficient to interrupt polio transmission within six months of detection of the first case, as per WHA-established standards, or as quickly as possible if this deadline has been missed
- To provide additional technical recommendations to assist the country meet this goal

2 Assessment team and suggested schedule

An inter-agency team of external experts, with at least one communication expert, should be assembled to visit the affected areas, preferably during the time when a response SIA is being conducted. The team will conduct desk and field assessments, ideally monitoring an SIA and/or assessing response activities in the infected area(s), and provide feedback to the Government authorities and national partner teams assisting the Government with the response.

At least one week to ten days should be given for completion of the review. Sufficient time should be included for initial briefings with government and local partners. Field travel to different sites and the desk review component of the assessment. Initial findings should be compiled by the team while still in country and should be delivered to the MoH, WHO and UNICEF management teams. Final report should be made available within two weeks of completing the assessment.

3 Subject areas of assessment

- Speed and appropriateness of immediate outbreak response activities as per WHA Resolution, 2006 (WHA59.1)
- Effectiveness of partner coordination during outbreak response

- Quality of SIAs – planning, delivery, monitoring and communications – this assessment should include adequacy of vaccine supply and appropriateness of the type of vaccine used
- AFP surveillance sensitivity and quality
- Routine Immunization performance
- Adequacy of human and financial resources to carry out effective response activities

4 Key data and information to be assessed

Speed and appropriateness of immediate outbreak response

Indicator (since date of index case officially reported)	**Source**
Activation of outbreak response within 72 hrs. of notification ***At least three large scale OPV SIAs*** ***SIA coverage at least 95% as evaluated by PCM data*** ***Initial response SIA conducted within 4 weeks of notification*** ***At least 3 SIAs completed since date of notification***	WHO, MoH, partners, field visit
Number of SIAs, dates, type of vaccines, target age groups, and areas covered during outbreak immunization response activities were appropriate	WHO, MoH and UNICEF data sources
Rapid analysis of AFP and lab data conducted [when, results]	WHO, MoH
Response plan prepared within two weeks of outbreak notification ***Response plan was followed during outbreak response***	WHO, MoH

Effectiveness of partner coordination during outbreak response

Indicator (since date of index case officially reported)	**Source**
Outbreak focal point for MoH and WHO, UNICEF designated in first week of outbreak	**MoH, WHO and UNICEF**
Situation Report (SITREP) being prepared and shared with all stakeholders	**MoH, WHO and UNICEF**
Weekly calls with WHO HQ and Regional Office on outbreak taking place [yes/no] **Weekly calls with UNICEF HQ and Regional Office on outbreak taking place [yes/no]**	**WHO** **UNICEF**
Weekly technical coordination meetings chaired by the Government and attended by all partners and key stakeholders were conducted at national and sub-national level	**MoH, WHO, UNICEF**

Funds for outbreak response disbursed on time	**WHO, MoH and UNICEF**

Quality of SIAs (Planning delivery, monitoring and communication)-

Indicator (since date of index case officially reported) *(Please ask for and check relevant supporting documents for each component while reviewing)*	**Source**
Funding disbursed to field level at least one week prior to each SIA	WHO, UNICEF, MoH
Vaccine arrived in time in country and is adequate for each planned SIA (at least 10 days before start date of each planned SIA) ***Vaccine used was most appropriate for the type of poliovirus detected***	WHO data sources, UNICEF, MoH
Quality of SIA rounds conducted based on reported coverage, assessed post-campaign (independent) monitoring, out-of-house surveys and/or LQAS assessments, as well as any other qualitative information on SIA quality available ***Reasons of missed children,*** particularly children absent (look at the disaggregated data) ***SIA quality in high risk areas and high risk populations***	WHO, UNICEF and MoH data
Efforts to strengthen micro-planning process evident Example: Was adequate attention provided to micro-planning process? Are micro-plans seen in the field, accurate and complete? Are teams witnessed in the field working according to micro-plans?	Observations during SIA field visit
Quality and effectiveness of field supervision and field vaccination activities Example: Are -supervisory checklists available and filled-in regularly by the supervisors? Are supervisors moving in the field and doing supportive supervision?	Observations during SIA or meetings
Special provisions to reach high risk groups, hard to reach areas or low coverage areas evident [Describe and use maps] Example: Have the high risk areas, high risk groups identified and mapped? Are there special plans to cover these areas? Have any additional measures, such as provision of additional resources (teams, supervisors, logistics) been taken to ensure these areas are well covered? Have extra monitoring and supervision efforts been put in high risk area?	WHO, UNICEF and MoH data sources, observations during SIA
Quality and extent of Independent monitoring Example: Are all important areas being monitored by IMs? What is the source and qualification of IMs?	WHO

Cross border activities Example: Has sufficient attention been paid to ensuring good cross border activities? (at international, inter-regional and inter-district borders) Has the effort been made to synchronize the activities across borders Is there provision to vaccinate children crossing the borders through major transit points? Has the communication strategy tailored specifically to address cross border population	MoH, UNICEF and WHO data sources, observations during SIA
SIA Review/Debriefing Meetings co-ordinated effectively Example: Have review/debriefing meetings been held to review the performance of each SIA round and use lessons to improve subsequent rounds? Is there evidence that Coverage and IM data and other quantitative and quality reports are used to improve subsequent rounds? Is there evidence that evening review meetings at health facility and district level take place every day during the campaign to review the findings of day?	MoH, WHO, UNICEF data sources, review meeting reports
Level of commitment of engagement by national authorities Example: Did the President or Prime Minister publically launch an SIA or make a recorded public statement Did other line ministries outside the Ministry of Health mobilize their resources and networks to support outbreak response activities	UNICEF and MoH data
Level of commitment and engagement of local political and health leaders in outbreak response Example: Did any of the reviewers see the District Health Officer in the field during SIA? And/or during the evening meeting? Was a local politician seen in the field? Was any SIA inaugurated by the prov./dist. political head?	Observations during SIA or meetings, Meeting minutes, Photos, Media coverage
Level of commitment and engagement of local community influencers Example: Have local community influencers (traditional, religious, community leaders) been identified and are they engaged in supporting SIA activities	MoH, WHO, UNICEF data
Quality and effectiveness of communication response: Example: Has an evidenced based communication outbreak response plan been developed? When was it last updated? Has the communication outbreak response plan been implemented? Is communication and social data being used to track community knowledge, participation and support for polio outbreak response activities? Is IM and social data being used to guide communication response strategies? What special interventions have been put in place in the districts with the worst awareness or refusals? Are social mobilizers equipped with culturally relevant education tools and products? What are they?	WHO data sources, UNICEF monitoring tools, observations during SIAs or meetings

Have social mobilizers received training / guidance on interpersonal communication? Do social mobilizers conduct house-to-house visit and community discussion in a systematic and organized manner? Is there movement plan / activity plan? Assess community knowledge, participation and support for polio outbreak response activities. What is the magnitude of refusals or reluctance for vaccination? Are communication activities focused on the highest risk areas and populations? Is communication on symptoms and definitions of AFP part of regular communication messaging?	

AFP surveillance sensitivity

(Standard tool for Rapid AFP Surveillance Review should be used)

Indicator (in the past 3 years)	**Source**
Non-Polio AFP Rate, Stool adequacy rate by first sub-national level in the last 2 years; (by quarter) [Example: has there been an increase in non-polio AFP rate since the beginning of outbreak]	AFP Database analysis
AFP Case investigation: timeliness, stool collection, 60-day follow up, contact investigations [Describe]	WHO, MoH Database and reports, Field observations
Average period from collection of the stool samples to its arrival at the Lab	AFP database
Bar graph and geographical distribution of reported AFP by laboratory results status (confirmed wild poliovirus, n.-p. enterovirus, negative, lab results pending) by month ***Trend in pending cases (Pending lab and pending classification) since beginning of outbreak*** ***Trend in who reported the AFP cases***	Program and Laboratory database
Were adjustments made or were contact sampling protocols established following confirmation of the outbreak	Program and Laboratory database
Was lab work optimized to ensure rapid reporting on virus isolates associated with outbreak areas ***Was extra HR, logistics and technical support provided to lab to cope up with outbreak demands***	Laboratory database and visit to the laboratory
Active surveillance: a listing and map / geographical distribution of active surveillance sites; are active surveillance sites prioritized; is the completeness of active surveillance visits being monitored;	Field visits, MoH and WHO data

Specific activities in AFP surveillance carried out as a result of the outbreak and its spread [Describe for active surveillance, training sessions, reporting network, improved sample logistics etc.]	Field visits, MoH and WHO data
Regularity and frequency of sensitization sessions with clinicians / health workers	Field visits, MoH and WHO data
Actions taken to strengthen AFP Surveillance ***[Example: expansion of reporting network, higher frequency of active surveillance visits, improved sample logistics]***	Meeting with MoH, WHO, UNICEF
Most recent AFP Surveillance Review [Date, Results]	WHO Data
Environmental surveillance data analysis (if carried out)	WHO data, MoH

Routine Immunization Performance

Indicator (in the past 3 years)	**Source**
Immunization coverage with POL 3 in the past 3 years	WHO/UNICEF Best estimate, MoH statistics, surveys
OPV status of non-polio AFP cases for the last 3 years, at the first or second (large countries) administrative level [% 0 dose, % 1-3 dose, % >3 dose]	AFP Database analysis
Evidence of outbreak response supporting RI improvements Example: Is the outbreak response being used as an opportunity identify any high level barriers to high routine immunization coverage at national and regional and district level? Have there been advocacy activities planned with national or regional authorities or other partners to strengthen routine immunization activities? Do social mobilization activities implemented as part of the outbreak response deliver RI messages to parents and caregivers (number of visits required to complete immunization schedule, vaccine preventable diseases against which the vaccines are available)? Have cold chain and logistics strengthening as part of the outbreak response, been delivered to benefit RI, in between the SIA rounds?	MoH, WHO, UNICEF reported data, observations during field visit?

Adequacy of human resources to carry out effective response activities

Indicator	**Source**
International consultants deployed to support the outbreak response [Describe, including STOP, WHO HQ,& RO, UNICEF, CDC and others- time in the country, ToRs, deployed to which areas]	WHO, UNICEF

Impact of international consultants [Describe outputs produced such as reports, trainings conducted, recommendations given, field technical assistance, active surveillance conducted etc.]	Field observations, meetings with partners
Country needs for external technical assistance were met [Discuss with WHO, UNICEF]	WHO, UNICEF, MoH
Country needs for other resources were met [Discuss with WHO, UNICEF]	WHO, UNICEF, MoH

5 Outputs and recommendations

The assessment team should provide a summary of main findings, conclusions and recommendations during a detailed, in-country debriefing session with the Ministry of Health and polio partners in the country which has been assessed. The debriefing should address the following main questions:

- Has the Ministry of Health and supporting partners followed WHA guidance for effective polio outbreak control?
- Were recommendations of previous technical support missions fully implemented?
- How likely is it that the currently implemented SIA strategy will interrupt transmission and what are the risks for further spread?
- Is AFP surveillance sensitivity currently adequate to detect all transmission?
- Is the communication response plan adequate to ensure the sensitization and mobilization of all targeted populations?
- Does the country have additional unmet financial or resource needs that need to be addressed to further strengthen the implementation of immunization and surveillance activities?

A final joint written technical report including description of findings from "areas of assessment", analysis of data, conclusions and recommendations should be delivered to the MoH and supporting partners within 2 weeks of the assessment

B. Follow Up Quarterly Assessments

Follow up quarterly assessments should be done three months after the first quarterly assessment and should be repeated every 3 months as long as outbreak continues.

The Follow up assessment should review implementation status of recommendations from previous assessments and focus on improving all aspects of outbreak response including, SIA planning and implementation, routine immunization, surveillance and communications.

Assessments should include both a desk review of relevant data, planning documents and materials as well as a field review component.

While determining as accurately as possible overall population immunity and the risk of continuing transmission of polio virus, primarily quarterly assessments should determine whether all necessary steps are being taken by governments and supporting partners to stop polio transmission within six months, as global guidelines recommend, or as quickly as possible if this deadline has been missed. The risk of missing transmission due to gaps in surveillance should be critically assessed and highlighted.

1 Follow up Quarterly assessment objectives

The objectives of a follow up quarterly assessment are:

- To assess whether the quality and adequacy of polio outbreak response activities are sufficient to interrupt polio transmission within six months of detection of the first case, as per WHA-established standards, or as quickly as possible if this deadline has been missed, including status of implementation of previous 3 month assessment recommendations.
- To provide additional technical recommendations to assist the country meet this goal

2 Assessment team and suggested schedule

The assessment team for follow up quarterly assessment should consist of external public health and communication experts from partner agencies, preferably members of previous assessment team.

The team will conduct desk and field assessments, ideally monitoring an SIA and assessing response activities in the infected area(s), and provide feedback to the Government authorities and national partner teams assisting the Government with the response.

At least one week to ten days should be given for completion of the review. Sufficient time should be included for initial briefings with government and local partners. Field travel to different sites and the desk review component of the assessment. Initial findings should be compiled by the team while still in country and should be delivered to the MoH, WHO and UNICEF management teams. Final report should be made available within two weeks of completing assessment.

3 Subject areas of assessment

- Implementation of recommendation from previous assessment
- Speed and appropriateness of outbreak response activities as per WHA Resolution, 2006 (WHA59.1)

- Effectiveness of partner coordination during outbreak response
- Quality of SIAs – planning, delivery, monitoring and communications – this assessment should include adequacy of vaccine supply and appropriateness of the type of vaccine used
- AFP surveillance sensitivity and quality
- Routine Immunization performance
- Adequacy of human and financial resources to carry out effective response activities

4 Key data and information to be assessed

Speed and appropriateness of outbreak response

Indicator (since last outbreak response assessment)	Source
Implementation status of recommendations from previous assessment: Outbreak response plan	WHO, MoH and UNICEF
Number of SIAs, dates, type of vaccines, target age groups, and areas covered during outbreak immunization response activities were appropriate	MoH, WHO & UNICEF data sources
At least two full immunization rounds in the target areas after the most recent WPV detected case confirmation ***SIA coverage at least 95% as evaluated by IM data***	WHO, MoH, partners, field visit
Response plan was followed during outbreak response	WHO, MoH

Effectiveness of partner coordination during outbreak response

Indicator (since last outbreak response assessment)	Source
Implementation status of recommendations from previous assessment: Partner coordination	WHO, MoH and UNICEF
Outbreak focal point for MoH and WHO, UNICEF designated	MoH, WHO and UNICEF
Situation Report (SITREP) being prepared and shared with all stakeholders	MoH, WHO and UNICEF
Weekly calls with WHO HQ and Regional Office on outbreak taking place [yes/no] ***Weekly calls with UNICEF HQ and Regional Office on outbreak taking place*** [yes/no]	WHO UNICEF
Weekly technical coordination meetings chaired by the Government and attended by all partners and key stakeholders were conducted at national and sub-national level	MoH, WHO, UNICEF
Funds for outbreak response disbursed on time	WHO, UNICEF, MoH

Quality of SIAs (Planning delivery, monitoring and communication)-

Indicator (since last outbreak response assessment) *(Please ask for and check relevant supporting documents for each component while reviewing)*	**Source**
Implementation status of recommendations from previous assessment: SIA quality including communications	WHO, MoH and UNICEF
Funding disbursed to field level at least one week prior to each SIA	WHO, UNICEF, MoH
Vaccine arrived in time in country and is adequate for each planned SIA (at least 10 days before start date of each planned SIA) ***Vaccine used was most appropriate for the type of poliovirus detected***	WHO data sources, UNICEF, MoH
Quality of SIA rounds conducted based on reported coverage, assessed post-campaign (independent) monitoring, out-of-house surveys and/or LQAS assessments, as well as any other qualitative information on SIA quality available ***Reasons of missed children,*** particularly children absent (look at the disaggregated data) ***SIA quality in high risk areas and high risk populations***	WHO, UNICEF and MoH data
Efforts to strengthen micro-planning process evident Example: Was adequate attention provided to micro-planning process? Are micro-plans seen in the field, accurate and complete? Are teams witnessed in the field working according to micro-plans?	Observations during SIA field visit
Quality and effectiveness of field supervision and field vaccination activities Example: Are -supervisory checklists available and filled-in regularly by the supervisors? Are supervisors moving in the field and doing supportive supervision?	Observations during SIA or meetings
Special provisions to reach high risk groups, hard to reach areas or low coverage areas evident [Describe and use maps] Example: Have the high risk areas, high risk groups been identified and mapped? Are there special plans to cover these areas? Have any additional measures, such as provision of additional resources (teams, supervisors, logistics) been taken to ensure these areas are well covered? Have extra monitoring and supervision efforts been put in high risk area?	WHO, MoH and UNICEF data sources, observations during SIA
Quality and extent of Independent monitoring Example: Are all important areas being monitored by IMs? What is the source and qualification of IMs?	WHO

Cross border activities Example: Has sufficient attention been paid to ensuring good cross border activities? (at international, inter-regional and inter-district borders) Has the effort been made to synchronize the activities across borders Is there provision to vaccinate children crossing the borders through major transit points? Has the communication strategy tailored specifically to address cross border population	MoH, UNICEF and WHO data sources, observations during SIA
SIA Review/Debriefing Meetings co-ordinated effectively Example: Have review/debriefing meetings been held to review the performance of each SIA round and use lessons to improve subsequent rounds? Is there evidence that Coverage and IM data and other quantitative and quality reports are used to improve subsequent rounds? Is there evidence that evening review meetings at health facility and district level take place every day during the campaign to review the findings of day?	MoH, WHO, UNICEF data sources, review meeting reports
Level of commitment of engagement by national authorities Example: Did the President or Prime Minister publically launch an SIA or make a recorded public statement Did other line ministries outside the Ministry of Health mobilize their resources and networks to support outbreak response activities	UNICEF and MoH data
Level of commitment and engagement of local political and health leaders in outbreak response Example: Did any of the reviewers see the District Health Officer in the field during SIA? And/or during the evening meeting? Was a local politician seen in the field? Was any SIA inaugurated by the prov./dist. political head?	Observations during SIA or meetings, Meeting minutes, Photos, Media coverage
Level of commitment and engagement of local community influencers Example: Have local community influencers (traditional, religious, community leaders) been identified and are they engaged in supporting SIA activities	MoH, WHO, UNICEF data
Quality and effectiveness of communication response: Example: Has an evidenced based communication outbreak response plan been developed? When was it last updated? Has the communication outbreak response plan been implemented? Is communication and social data being used to track community knowledge, participation and support for polio outbreak response activities? Is IM and social data being used to guide communication response strategies? What special interventions have been put in place in the districts with the worst awareness or refusals? Are social mobilizers equipped with culturally relevant education tools and	WHO data sources, UNICEF monitoring tools, observations during SIAs or meetings

products? What are they? Have social mobilizers received training / guidance on interpersonal communication? Do social mobilizers conduct house-to-house visit and community discussion in a systematic and organized manner? Is there movement plan / activity plan? Assess community knowledge, participation and support for polio outbreak response activities. What is the magnitude of refusals or reluctance for vaccination? Are communication activities focused on the highest risk areas and populations? Is communication on symptoms and definitions of AFP part of regular communication messaging?	

AFP surveillance sensitivity

(Standard tool for Rapid AFP Surveillance Review should be used)

Indicator (in the past 3 years)	**Source**
Implementation status of recommendations from previous assessment: Surveillance sensitivity	WHO, MoH and UNICEF
Non-Polio AFP Rate, Stool adequacy rate by first sub-national level in the last 2 years; (by quarter) [Example: has there been an increase in non-polio AFP rate since the beginning of outbreak]	AFP Database analysis
AFP Case investigation: timeliness, stool collection, 60-day follow up, contact investigations [Describe]	WHO, MoH Database, Field observations
Average period from collection of the stool samples to its arrival at the Lab	AFP database
Bar graph and geographical distribution of reported AFP by laboratory results status (confirmed wild poliovirus, n.-p. enterovirus, negative, lab results pending) by month ***Trend in pending cases (Pending lab and pending classification) since beginning of outbreak*** ***Trend in who reported the AFP cases***	Program and Laboratory database
Were adjustments made or were contact sampling protocols established following confirmation of the outbreak	Program and Laboratory database
Was lab work optimized to ensure rapid reporting on virus isolates associated with outbreak areas ***Was extra HR, logistics and technical support provided to lab to cope up with outbreak demands***	Laboratory database and visit to the laboratory

Active surveillance: a listing and map / geographical distribution of active surveillance sites; are active surveillance sites prioritized; is the completeness of active surveillance visits being monitored;	Field visits, MoH and WHO data
Specific activities in AFP surveillance carried out as a result of the outbreak and its spread [Describe for active surveillance, training sessions, reporting network, improved sample logistics etc.]	Field visits, MoH and WHO data
Regularity and frequency of sensitization sessions with clinicians / health workers	Field visits, MoH and WHO data
Actions taken to strengthen AFP Surveillance ***[Example: expansion of reporting network, higher frequency of active surveillance visits, improved sample logistics]***	Meeting with MoH, WHO, UNICEF
Most recent AFP Surveillance Review [Date, Results]	WHO Data
Environmental surveillance data analysis (if carried out)	WHO data, MoH

Routine Immunization Performance

Indicator (in the past 3 years)	**Source**
Implementation status of recommendations from previous assessment	WHO, MoH and UNICEF
Immunization coverage with POL 3 in the past 3 years	WHO/UNICEF Best estimate, MoH statistics, surveys
OPV status of non-polio AFP cases for the last 3 years, at the first or second (large countries) administrative level [% 0 dose, % 1-3 dose, % >3 dose]	AFP Database analysis
Evidence of outbreak response supporting RI improvements Example: Is the outbreak response being used as an opportunity to identify any high level barriers to high routine immunization coverage at national and regional and district level? Have there been advocacy activities planned with national or regional authorities or other partners to strengthen routine immunization activities? Do social mobilization activities implemented as part of the outbreak response deliver RI messages to parents and caregivers (number of visits required to complete immunization schedule, vaccine preventable diseases against which the vaccines are available)? Have cold chain and logistics strengthening as part of the outbreak response, been delivered to benefit RI, in between the SIA rounds?	MoH, WHO, UNICEF reported data, observations during field visit?

Adequacy of human and financial resources to carry out effective response activities

Indicator	Source
Implementation status of recommendations from previous assessment	WHO, MoH and UNICEF
International consultants deployed to support the outbreak response [Describe, including STOP, WHO HQ,& RO, UNICEF, CDC and others- time in the country, ToRs, deployed to which areas]	WHO, UNICEF
Impact of international consultants [Describe outputs produced such as reports, trainings conducted, recommendations given, field technical assistance, active surveillance conducted etc.]	Field observations, meetings with partners
Country needs for external technical assistance were met [Discuss with WHO, UNICEF]	WHO, UNICEF, MoH
Country needs for other resources were met [Discuss with WHO, UNICEF]	WHO, UNICEF, MoH

5 Outputs and recommendations

The assessment team should provide a summary of main findings, conclusions and recommendations during a detailed, in-country debriefing session with the Ministry of Health and polio partners in the country which has been assessed. The debriefing should address the following main questions:

- Has the Ministry of Health and supporting partners followed WHA guidance for effective polio outbreak control?
- Were recommendations of previous outbreak response assessment fully implemented?
- How likely is it that the currently implemented SIA strategy will interrupt transmission and what are the risks for further spread?
- Is AFP surveillance sensitivity currently adequate to detect all transmission?
- Is the communication response plan adequate to ensure the sensitization and mobilization of all targeted populations?
- Does the country have additional unmet financial or resource needs that need to be addressed to further strengthen the implementation of immunization and surveillance activities?

A final joint written technical report including description of findings from "areas of assessment", analysis of data, conclusions and recommendations should be delivered to the MoH and supporting partners within 2 weeks of the assessment

C. End of Outbreak Assessment (Assessment six months after the last detection of WPV)

WHO recommends that an "end of outbreak assessment" should be carried out six months after the last case of polio is detected through any source[1], to assess the probability of whether or not the outbreak has been stopped.

End of outbreak assessments should focus on determining whether or not polio transmission is being missed in any area or population and on strengthening surveillance and programme elements designed to maintain population immunity through both supplementary and routine immunization.

1 End of outbreak assessment objectives

The objectives of the end of outbreak assessment are to:

- Determine as accurately as possible whether or not polio transmission has been stopped
- Determine the level of support the country requires in order to achieve or maintain levels of surveillance sensitivity and population immunity sufficient enough to reliably maintain a polio-free status
- Provide recommendations for strengthening AFP surveillance and to ensure that a comprehensive and adequate outbreak preparedness plan is in place.

2 Assessment team and suggested schedule

Six months after the last case of polio has been detected through any source following an outbreak an inter-agency team of external experts, with at least one communication expert, should be assembled to visit the affected country for a period of approximately one week, preferably during the time when a response SIA is being conducted. The teams will conduct desk and field assessments, ideally monitoring an SIA and/or assessing response activities in the infected area(s), and provide feedback to the Government authorities and national partner teams assisting the Government with the response.

Following an initial briefing through MOH/WHO, the team will gather data for each "Area of Assessment" through meetings with relevant stakeholders, database review and a field trip. The field trip should follow the guidelines of rapid surveillance assessments and thus include at a minimum:

- Meeting with district health authority (preferably in the outbreak zone)

[1] i.e. six months after the case with the most recent onset of paralysis, or six months after the most recent WPV isolation from other sources

- Visiting at least three high priority or medium priority AFP reporting units
- Participating in one AFP case investigation if possible

3 Subject Areas of assessment

By its nature and definition the 6 months end of outbreak assessment is different from the 3 month quarterly assessments in that that there primary objective is to determine as accurately as possible whether or not the polio outbreak response has been stopped. To be able to make this conclusion, much of the information information and data assessed during the 3 month quarterly assessments should also be reviewed by the 6 month assessment team. There should be a specific focus on the quality of AFP surveillance and the risk of undetected transmission of polio as well as population immunity especially in identified highest risk populations of the infected country.

At a minimum a 6 month end of outbreak assessment should review:

- Outbreak response process indicators
- AFP surveillance sensitivity (standard tool for 'Rapid AFP Surveillance Assessment' should be used)
- Quality of SIAs carried out so far and assessment of need for additional SIAs
- Population immunity with special focus on known high risk areas and populations

4 Key data and information to be assessed

Outbreak response process indicators

Indicator (since outbreak notification)	**Source**
Activation of outbreak response within 72 hrs. of notification At least three large scale OPV SIAs SIA coverage at least 95% as evaluated by PCM data Initial response SIA conducted within 4 wks. of notification At least 2 SIAs since date of onset of last WPV	WHO, MoH, partners, field visit
Rapid analysis of AFP and lab data conducted [when, results]	WHO, MoH
Response plan prepared within two weeks of outbreak notification Response plan was followed during outbreak response	WHO, MoH

AFP surveillance sensitivity

(Standard tool for Rapid AFP Surveillance Review should be used)

Indicator (in the past 2 years)	**Source**
Non-Polio AFP Rate, Stool adequacy rate by first sub-national level in the last 2 years; (by quarter) [Example: has there been an increase in non-polio AFP rate since the beginning of outbreak]	AFP Database analysis
AFP Case investigation: timeliness, stool collection, 60-day follow up, contact investigations [Describe]	Field observations
Average period from collection of the stool samples to its arrival at the Lab	AFP database
Bar graph and geographical distribution of reported AFP by laboratory results status (confirmed wild poliovirus, n.-p. enter virus, negative, lab results pending) by month Trend in pending cases since beginning of outbreak Trend in who reported the AFP cases	Laboratory database
Were adjustments made or were contact sampling protocols established following confirmation of the outbreak	Laboratory database
Was lab work optimized to ensure rapid reporting on virus isolates associated with outbreak areas	Laboratory database
Active surveillance: a listing and map / geographical distribution of active surveillance sites; are active surveillance sites prioritized; is the completeness of active surveillance visits being monitored;	Field visits, MoH and WHO data
Specific activities in AFP surveillance carried out as a result of the outbreak and its spread [Describe for active surveillance, training sessions, reporting network, improved sample logistics etc.]	Field visits, MoH and WHO data
Regularity and frequency of sensitization sessions with clinicians / health workers	Field visits, MoH and WHO data
Actions taken to strengthen AFP Surveillance [Example: expansion of reporting network, higher frequency of active surveillance visits, improved sample logistics]	Meeting with MoH, WHO, UNICEF
Most recent AFP Surveillance Review [Date, Results]	WHO Data
Environmental surveillance data analysis (if carried out)	WHO data, MoH

Quality of SIAs and assessment of need for additional SIAs

Indicator (since outbreak notification)	Source
Vaccines, finger markers, finances and other supplies on time for SIAs	WHO, UNICEF, MoH
Number of SIAs, dates, target age groups, vaccines used, areas covered during outbreak immunization response activities	WHO data sources
Quality of SIA rounds conducted based on reported coverage, assessed post-campaign (independent) monitoring, out-of-house surveys and/or LQAS assessments, as well as any other qualitative information on SIA quality available	WHO and Mohr data
Level of commitment and engagement of political and health leaders in outbreak response [Example: Did any of the reviewers see the District Health Officer in the field during SIA? And/or during the evening meeting? Was a local politician seen in the field? Was the SIA inaugurated by the prov. /dist. political head?	Observations during SIA or meetings
Quality and effectiveness of field supervision and field vaccination activities [Example: Are -supervisory checklists available and filled-in regularly by the supervisors?]	Observations during SIA or meetings

Population immunity with special focus on known high-risk areas and populations

Indicator (in the past 2 -3 years)	Source
Immunization coverage with POL 3 in the past 3 years	WHO/UNICEF Best estimate, Mohr statistics, surveys
High risk areas, high risk population groups with limited access to immunizations and/or documented low immunization coverage [Describe and use maps]	Meeting with partners
OPV status of non-polio AFP cases for the last 3 years, at the first or second (large countries) administrative level [% 0 dose, % 1-3 dose, % >3 dose]	AFP Database analysis
Results of seroprevalence studies (if any)	WHO/MoH data

5 Outputs and recommendations

The assessment team should provide a summary of main findings, conclusions and recommendations during a detailed, in-country debriefing session with the Ministry of Health and polio partners. The debriefing should address the following main questions:

- Has the Ministry of Health and supporting partners followed WHA guidance for effective polio outbreak control?
- Were recommendations of previous technical support missions fully implemented?
- How likely is it that the country has stopped polio transmission based on analysis of surveillance, SIA and other programme data?
- Is AFP surveillance sensitivity currently adequate to detect all transmission?
- Have caregivers been adequately sensitized and mobilized to positively respond to house-to-house vaccination campaigns or are there significant populations that do not accept polio or other immunization services?
- Does the country have additional unmet financial or resource needs that need to be addressed to further strengthen the implementation of immunization and surveillance activities?

A final joint written technical report including description of findings from "areas of assessment", analysis of data, conclusions and recommendations should be delivered to the MoH and supporting partners within 2 weeks of the assessment – this report should answer definitively whether the outbreak response should be closed, and if not recommend additional activities that are needed to achieve that objective.