POLIO GLOBAL ERADICATION INITIATIVE

STANDARD OPERATING PROCEDURES

RESPONDING TO A POLIOVIRUS EVENT OR OUTBREAK

PART 1: General SOPs

V2.1 20 April 2016
V2.2 15 August 2016
V2.3 01 May 2017
V2.4 01 November 2017

EFFECTIVE 01 NOVEMBER 2017 UNTIL 30 APRIL 2018

World Health Organization

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Revisions

Document version (date)	Description of substantive revisions
Version 2.0 (April 2016)	• Post-switch era: global trivalent oral polio vaccine withdrawal and new response strategies for type 2 events and outbreaks. • Introduce the fact that poliovirus "events" require initiation of risk assessment and response; and for some an immunization response (such as supplementary immunization activity (SIA)). • Type 2 events are managed operationally similar to outbreaks, but with greater discretion while field investigation and VDPV classification are underway. Global Polio Eradication Initiative performance standards apply to type 2 events. • Introduce revised definitions and classification of vaccine-derived polioviruses: ambiguous, circulating, immunodeficiency-associated. • Revised timeline to reflect that 'Day 0' is the date of laboratory result notification (and not outbreak confirmation). • Introduce steps to request monovalent oral polio type 2 vaccine from global stockpile.
Version 2.1 (April 2016)	• Minor technical edits and updates • No substantive content changes
Version 2.2 (August 2016)	• Technical editing done including amendments on IHR notification, outbreak assessment and closure, and inactivated poliovirus vaccine options.
Version 2.3 (May 2017)	• Revised type 2 response recommendations to align with updated technical advice for responding to events and outbreaks • Minor updates to OBRA and declaring end of outbreak figures and process • Updates and links to Sabin 2 investigation tools
Version 2.4 (November 2017)	• Update to emphasize quality of SIA implementation • Introduce requirement for response preparedness dashboard and/or checklist and timeline before commencing outbreak or event response SIAs

Abbreviations

AFP	acute flaccid paralysis
aVDPV	ambiguous vaccine-derived poliovirus
C4D	Communication for Development
cVDPV1/2/3	circulating vaccine-derived poliovirus type 1/type 2/type 3
DTP3	diphtheria-tetanus-pertussis
EC	Emergency Committee
EOMG	Eradication and Outbreak Management Group
EOC	Emergency Operations Centre
GPEI	Global Polio Eradication Initiative
GPLN	Global Polio Laboratory Network
IHR	International Health Regulations
IPV	inactivated poliovirus vaccine
iVDPV	immunodeficiency-associated vaccine-derived poliovirus
LQAS	lot quality assurance sampling
NCCPE	National Certification Committee for Polio Eradication
OPV	oral polio vaccine
OBRA	outbreak response assessment
OPRTT	Outbreak Preparedness and Response Task Team
bOPV	bivalent OPV (contains Sabin types 1 and 3)
tOPV	trivalent OPV (contains Sabin types 1, 2 and 3)
mOPV2	monovalent OPV (contains Sabin type 2)
RCCPE	Regional Certification Commission for Polio Eradication
SIA	supplementary immunization activity
SOP	standard operating procedure
STOP	Stop Transmission of Polio
UNICEF	United Nations Children's Fund
VDPV	vaccine-derived poliovirus
WHA	World Health Assembly
WHO	World Health Organization
WPV	wild poliovirus

Preface to Version 2.4

The Standard operating procedures (SOPs) for responding to a poliovirus event and outbreak – Parts 1 and 2 were released in April 2016 to coincide with the globally synchronized switch from trivalent oral polio vaccine (tOPV) to bivalent oral polio vaccine (bOPV). The recommendations in this version 2.1 focused on response in the first 12 months following the switch (e.g. Phase 1, 1 May 2016 to 30 April 2017). However, due to severe global shortage in the inactivated polio vaccine (IPV) supply, version 2.2 was published in August 2016 to change the recommended use of IPV in outbreak response campaigns from full-dose intramuscular injections to fractional doses delivered intradermally. In May 2017, version 2.3 reflect updated guidance on response planning, particularly for type 2 events and outbreaks, from the Polio Working Group of the WHO Strategic Advisory Group of Experts on Immunization (SAGE, February 2017). There were minor clarifications in other sections of the SOPs at this time.

The current minor update (version 2.4) reflects the greater emphasis on the importance of the quality and reach of supplementary immunization activities (SIAs) as recommended by SAGE and technical advisors within the Global Polio Eradication Initiative (GPEI). The key objectives, strategic principles, and general operational components of poliovirus response remain largely unchanged.

Quality, scope & speed considerations

For Part 1, section 2.7. High quality SIAs for event and outbreak response	
Current	*Revision*
All polio outbreaks and any type 2 polio event that are assessed to meet the criteria for high risk of transmission will require implementation of vaccine campaigns within 14 days to stop any further transmission of the virus.	Initiating the first SIA within 14 days of notification is recommended where high vaccination coverage can be achieved. A detailed risk assessment by country and GPEI experts must be completed in order to set start date to ensure quality implementation. Use of a preparedness dashboard is now required to be presented to relevant GPEI guidance or expert advisory body to track country readiness to launch SIA (e.g. mOPV2 advisory group and/or outbreak preparedness and response task team (OPRTT)). Response options include initial response SIA in limited geographic scope within 14 days, followed by SIA1 for larger population when intensified planning can maximize quality.
Rationale: reflects the increased emphasis on quality, particularly in the context of the complex settings where poliovirus outbreaks may occur and, for type 2 poliovirus, that risks of poor coverage or missed populations continue to increase as population mucosal immunity decreases in the post-switch context.	

Executive summary

Responding to a poliovirus event and outbreak, *Part 1: General (SOPs)*[1] describes the general principles and steps to facilitate timely and effective responses to poliovirus events and outbreaks, and incorporate lessons learned from recent previous outbreak response efforts. This document summarizes roles and responsibilities of national governments and Global Polio Eradication Initiative (GPEI) partners.

The main objectives of the SOPs are to: (i) establish standards and timelines for response activities; and (ii) guide national governments and GPEI partners in key support functions.

This new version of the SOPs presents overall response requirements for dealing with type 1, 2 and 3 poliovirus following monovalent type 2 oral polio vaccine (mOPV2) cessation. Version 2.4 will be valid until release of revised version 3.0 (anticipated May 2018).

Poliovirus events and outbreaks. Emergence of poliovirus may be defined as an 'event' or an 'outbreak' based on a range of criteria in order to guide an appropriate response. The GPEI SOPs recommend that supplemental immunization activities be implemented within 14 days of identification of a poliovirus that requires an immunization response. For the purpose of response performance monitoring, notification of the laboratory result is defined as 'Day 0' so that progress of the event or outbreak response can be monitored against the standards set in these SOPs. Outbreak confirmation is the responsibility of the World Health Organization (WHO) regional office(s) in consultation and/or agreement with the National Authority of the countries and WHO headquarters.

Obligation to notify poliovirus events. All instances of wild poliovirus isolation in a previously polio-free country, type 2 vaccine-derived poliovirus (VDPV2) anywhere in the world, and all Sabin-like 2 (SL2) viruses – must be reported immediately by the national authority (country) to WHO, regardless of type of isolate (WPV or VDPV), or its source (clinical case, environmental sample, other).

Responding to a polio event. The country team, WHO and GPEI partners conduct a risk assessment for every event based on findings from epidemiologic and laboratory investigations as well as strength of evidence. A polio event may be reclassified as an outbreak at any point in the investigation.

The scope of the response to a detected event depends on the poliovirus type, classification, and in some circumstances, the local situation. The initial general steps include case and contact investigation, community case finding, assessment of population immunity and enhanced surveillance. In addition, specific steps are defined according to the isolate identified and its source. All poliovirus type 2 events are managed according to the SOP Part 2 v2.4 guidance, and undergo an initial risk assessment while awaiting results of field investigations and final classification.

1 SOPs: standard operating procedures

Responding to a polio outbreak. The recommended general steps to respond to all poliovirus outbreaks are the same as for an event, but complemented with additional activities or standards, such as grading by the Eradication and Outbreak Management Group (EOMG), deployment of rapid response team by the Outbreak Preparedness and Response Task Team (OPRTT), independent monitoring of supplementary immunization activity and immunization coverage assessment with clustered lot quality assurance sampling (LQAS) survey. Specific steps for the immunization response are defined according to the isolate identified.

Selection of the most appropriate vaccine is made with WHO technical guidance. It is based on the type of poliovirus transmission, underlying population immunity and other factors, such as vaccination campaigns in the recent past, type of polio vaccine used in the routine immunization programme, availability of specific type of vaccine, and time since global withdrawal of OPV2.

Risk assessment aims to characterize current virus transmission and possible further spread. It assesses the critical factors that will influence the type and scale of response and makes recommendations for appropriate actions. The EOMG bases its outbreak grading on two criteria: (i) potential for transmission within the country and beyond national borders; and (ii) strength of the country's capacity to respond and contain the outbreak. On the basis of this assessment, the EOMG assigns a grade to the outbreak (grades 1, 2 or 3) to recommend the outbreak response activities needed to manage the risk. The higher the grade, the more GPEI support will be needed for the response.

Strategic response framework for polio outbreak. Five strategic pillars are needed to effectively interrupt transmission in an outbreak setting: (i) a fully engaged national government, (ii) a rapid risk assessment and identification of transmission risk zones, (iii) a robust immunization response, (iv) effective communication and social mobilization, and (v) enhanced surveillance.

Outbreak assessment and closure. Outbreak assessments are conducted every three months by an external team of experts (Outbreak Response Assessment (OBRA) team) to assess the quality of implementation of eradication activities and evidence of interruption of poliovirus transmission. Based on the assessment findings and when at least six months have passed without detecting poliovirus from any source, the OBRA team may conclude that the outbreak has ended; otherwise the periodic assessments will continue until the end of the outbreak. The report of this assessment should be submitted to the country team, OPRTT chair, WHO regional office and WHO headquarters polio director. The WHO regional office may confirm the end of the outbreak based on the assessment report and share the report with EOMG/ GPEI and others (such as National Certification Committee for Polio Eradication (NCCPE), Regional Certification Commission for Polio Eradication (RCCPE), IHR-EC) as required.

GPEI support. Countries have ultimate ownership of the response, and maintain leadership throughout the process. GPEI partners support the countries in six key functions: (i) outbreak response and assessment, (ii) coordination and advocacy, (iii) technical and human resources, (iv) information management, (v) communication, social mobilization and behaviour change, and (vi) finances and logistics.

The GPEI performance standards describe the expected outputs from all partners, in each of the six key functions. Defined deliverables and timelines are provided as well.

Conclusions. As of 2017, three countries are still fighting the endemic wild poliovirus, while these and other countries are experiencing new outbreaks or events due to the emergence of vaccine-derived polioviruses in areas with persistently low population immunity. The Polio Eradication and Endgame Strategic Plan 2013–2018 calls for any poliovirus outbreak in a polio-free country to be stopped within 120 days of detection. A common understanding of intensified eradication strategies and a joint effort of national governments and GPEI partners will ensure timely and effective response. The SOPs Part 1 was endorsed by the World Health Assembly in 2015. Implementation of high quality eradication strategies is the responsibility of the national government while GPEI partners are to provide necessary guidance and support to develop effective response strategies and select appropriate vaccine options.

1 Introduction

Wild poliovirus (WPV) and vaccine-derived polioviruses[1] (VDPVs) can both cause clinical illness, including acute flaccid paralysis (AFP), and lead to outbreaks *(1)*. There are three types of WPV, but only type 1 (WPV1) continues to circulate. The last type 2 WPV (WPV2) was isolated in 1999 and declared eradicated in September 2015. The last type 3 poliovirus (WPV3) was isolated in 2012 *(2)*. There are three endemic countries – Afghanistan, Pakistan and Nigeria – where WPV1 continues to cause paralysis in children. These countries are continuing on the path to eradication, strongly supported by the Global Polio Eradication Initiative (GPEI) partners.

The VDPVs capable of causing paralysis also continue to emerge and circulate. In May 2014 and in November 2015 in conjunction with the World Health Assembly (WHA), the World Health Organization (WHO) Director General declared the ongoing spread of polioviruses – WPV and circulating vaccine-derived polioviruses (cVDPV) – to be a 'public health emergency of international concern'. In response, the Emergency Committee (EC) for polio, convened under the International Health Regulations (IHR), included cVDPVs in their remit for monitoring action and progress. In under-immunized populations, cVDPVs represent a particular risk and in recent years, most cVDPV cases and outbreaks have arisen from oral polio vaccine (OPV) containing the type 2 component (OPV2).

The May 2014 WHA endorsed a strategy to reduce the risk associated with attenuated poliovirus (Sabin strains) used in OPV. In line with the *Polio Eradication and Endgame Strategic Plan 2013–2018 (3),* all countries ceased using OPV2, in their routine immunization programmes from 17 April to 1 May 2016. This marked the largest globally coordinated vaccine introduction in history, with all OPV-using countries switching from using trivalent OPV (tOPV, containing Sabin 1, 2, and 3) to a bivalent form (bOPV; containing Sabin 1 and Sabin 3). All existing stocks of tOPV have been removed from circulation, to further reduce the likelihood of cVDPV type 2 virus emergence.

The GPEI seeks to ensure that future generations of children would be free from the risk of paralysis due to poliomyelitis. The GPEI is a public–private partnership, led by national governments and spearheaded by key partners *(4)*. GPEI partners support countries for polio eradication activities and outbreak response. Critically important to successful eradication is ensuring rapid and effective response to polioviruses from any source if it gets reintroduced or emerges in the remaining endemic and non-endemic countries. Countries and GPEI partners must aim to stop the transmission of poliovirus within 120 days of confirmation of any new outbreak.

1 Strains of poliovirus mutated from the live attenuated oral polio vaccine.

1.1 Scope

This document is intended to facilitate timely and effective response to interrupt poliovirus transmission in non-endemic countries, and incorporates lessons learned from previous outbreak response efforts. It summarizes the roles and responsibilities of countries and GPEI partners as well as the required response standards for a polio outbreak or event. It updates and establishes standard operating procedures (SOPs) for the post switch era *(3)* in alignment with the more detailed protocol for type 2 poliovirus events and outbreaks after global tOPV withdrawal on 1 May 2016.

1.2 Objectives

The objectives of this document are to:

- establish standards and timeline for response to any polio events and/or outbreaks; and
- guide national governments and GPEI partners in key support functions to fulfil the response to any polio outbreak or event.

(*Note:* this document is a revision of the SOP first made available in February 2015.)

1.3 Target audience

The proposed audience for this document are national government and GPEI partners who will coordinate the national response to poliovirus events and outbreaks.

1.4 Companion documents

For additional information users of this document are requested to consult the following:

- *Reporting and classification of vaccine-derived polioviruses guidance (5).* This guidance describes additional laboratory analyses and field epidemiological investigations prior to confirming classification of a VDPV sample.
- *Outbreak response: a package of guidelines and materials (6).*

These materials can be found on the GPEI website. The SOPs do not provide specific tools for outbreak response, planning of supplemental immunization activities (SIAs) or methods for enhanced surveillance.

2 Poliovirus events and outbreaks

2.1 Definitions

Table 1 classifies all polio isolates according to whether their appearance is currently deemed to represent an 'event' or an 'outbreak', for the purpose of describing the extent of person-to-person transmission and determining the appropriate response (also see Figure A1–1a and A1–1b in Annex 1).

TABLE 1: Definitions of poliovirus events and outbreaks

Typology	Definition
Event **(as yet, no evidence of transmission)**	***Human***
	Detection of • **VDPV** in: – single AFP case or asymptomatic person (e.g. contact), or – one or more persons,[a] with no evidence of further community-level circulation (**iVDPV** or an **aVDPV** isolates) OR • **Sabin like 2** isolate from individual sample(s) OR • **WPV2** infected individual **with** documented type 2 virus exposure in a laboratory or vaccine production facility
	Environmental
	Detection of • **WPV** single environmental sample **without** follow-up evidence of virus excretion,[b] OR • **VDPV without** evidence of further transmission, such as – single environmental sample without evidence of prolonged circulation, or – an aVDPV OR • **Sabin like 2** isolate from environmental sample(s)

Typology	Definition
Outbreak	***Human***
(evidence of transmission)	Detection of • any **WPV** infected individual(s)[a] (in addition for type 2: "without documented exposure to a type 2 virus in a laboratory or vaccine production facility") OR • any **cVDPV** infected individual(s)[a]
	Environmental
	Detection of • two or more separate[c] environmental samples positive for **WPV with** genetic sequencing information indicating sustained local transmission OR • a single environmental sample positive for **WPV with** follow-up evidence of virus excretion[b] (in addition for type 2: "no documented exposure in a laboratory or vaccine production facility") OR • any **cVDPV** positive environmental sample(s)

a Infected person can be an AFP case or an asymptomatic/healthy person.

b Evidence of virus excretion is defined by identification during follow-up investigation of WPV or VDPV infected individual(s).

c "separate" means that: samples were collected at more than one distinct environmental surveillance collection site (no overlapping of catchment areas), OR samples were collected from one site, but collection was more than two months apart.

aVDPV: ambiguous vaccine-derived poliovirus; cVDPV: circulating vaccine-derived poliovirus; iVDPV: immunodeficiency-associated vaccine-derived poliovirus.

2.2 Vaccine-derived polioviruses

The VDPVs *(7,8)* are identified based on their degree of genetic divergence from the parent OPV viral strain. Strains that are >1% divergent (or >= 10 nucleotide changes, for types 1 and 3) or >0.6% divergent (>= 6 nucleotide changes, for type 2) from the corresponding oral vaccine strain are labelled as VDPVs *(5)*. VDPVs are classified into three categories:

(i) **Immunodeficiency-related vaccine-derived polioviruses (iVDPVs)** are VDPVs arising in the gut of persons with a primary immunodeficiency. Unlike immunocompetent persons, who excrete the vaccine virus for a limited period of time, some immunodeficient persons are unable to clear intestinal replication of the vaccine virus after receiving OPV. In this regard, iVDPVs pose a threat to polio eradication, as individuals who excrete the vaccine virus for prolonged periods could serve as sources of poliovirus reintroduction after polio eradication.

(ii) **Circulating vaccine-derived polioviruses (cVDPVs)** occur when there is evidence of person-to-person transmission in the community.

(iii) **Ambiguous vaccine-derived polioviruses (aVDPV)** are a classification of exclusion when the investigation does not support classification as cVDPVs or iVDPVs. Isolates may be from persons with no known immunodeficiency or from an environmental sample, without evidence of circulation.

The GPEI's *Reporting and classification of vaccine-derived polioviruses guidance (5)* provides definitions and describes laboratory and field epidemiological investigation processes needed to classify a VDPV isolate.

2.3 Laboratory results and initiation of response

When one or more laboratories of the Global Polio Laboratory Network (GPLN) isolate a poliovirus from a biological (human) or environmental sample (through culture, intratypic differentiation and genetic sequencing), the GPLN promptly notifies the health ministry of the affected country. The notification allows authorities to initiate case and community investigations to assess the affected child/adult and his/her family and community contacts (or circumstances of the environmental sample), and explore whether there is any evidence of person-to-person transmission.

The GPLN also informs the WHO at the country and regional and global levels about the poliovirus isolation including genetic information of the virus in detail.

The WHO provides information to GPEI partners as soon as it is received. Investigations also provide the information necessary to classify the isolate as outlined in the previous section. Investigation and classification can take days or weeks. The laboratory result notification is not shared beyond the GPEI until the WHO regional office, in collaboration with laboratory and National authority, confirms it as an event or an outbreak.

2.4 Defining 'Day 0' for event and outbreak monitoring

The GPEI SOPs recommend that supplemental immunization activities be implemented within 14 days of identification of a poliovirus that requires an immunization response for each type of isolate (as detailed in Tables 4 and 5 on pages 13 and 18).

For the purpose of performance monitoring, **notification of the laboratory result received by WHO HQ is defined as 'Day 0'** so that progress of the event or outbreak response can be monitored against the standards set in these SOPs. This is true for as-yet unclassified VDPV type 2 events that are assessed as "high risk" for onward transmission, and for cVDPV2 outbreaks. High risk is based on qualitative assessment of the following risks: virologic, contextual, and international spread. For VDPV type 1 and 3 events pending classification, rapid investigation is expected, but will not at this time be measured against the SOP standards unless they are confirmed to be, or become, a type 1 or type 3 outbreak.

2.5 Outbreak confirmation

The confirmation of an **outbreak** is the responsibility of the WHO regional office (Table 2).

TABLE 2: OPERATIONAL REQUIREMENTS FOR CONFIRMING AN OUTBREAK

Terminology	Definition
Outbreak confirmation (Day 0 for performance monitoring)[a]	**WHO regional office confirms** an outbreak in consultation with the national authority as well as GPLN laboratory experts and WHO headquarters, after taking into account the following criteria: • laboratory result (genetic sequencing) AND • final case investigation (to rule out iVDPV) AND • event investigation (especially for type 2 to rule out laboratory or vaccine production facility contamination).

a For type 2 polioviruses, Day 0 for performance monitoring will be based on laboratory results (genetic sequencing).

2.6 Outbreak transmission risk zones

Factors such as past epidemiologic history, location and population characteristics may determine three general "transmission risk zones" which reflect the risk for poliovirus type 1 and 3 transmission (see Table 3). For poliovirus type 2 risk scenarios, please see SOP Part 2, version 2.3..

TABLE 3: DEFINITION OF "TRANSMISSION RISK ZONES" BASED ON POPULATION RISK FOR POLIOVIRUS TRANSMISSION

Zone	Country/area and population characteristics	Risk for further transmission
1	Clear history of sustained WPV or reported cVDPV since 2005; **OR** affected community with other risks for low immunity[a] or high mobility links to susceptible communities	High
2	Consistently low DTP3[b] coverage <80% in the previous three years; **OR** history of imported WPV or any cVDPV or aVDPV in the previous three years; **OR** with DTP3 coverage <90% and adjacent to affected area	High–Medium
3	DTP3 coverage consistently >80%; affected community with few risk factors for sustained transmission	Low

a For example: high birth rate, high population size and density, low routine immunization coverage, failure to reach unvaccinated children in pre-switch SIAs, and other conditions associated with high levels of fecal–oral transmission

b diphtheria-tetanus-pertussis

2.7 High quality SIAs for event and outbreak response

All polio outbreaks and any type 2 polio event that are assessed to meet the criteria for high risk of transmission will require implementation of **high quality vaccination campaigns (SIAs). Initiating the first SIA within 14 days of notification is recommended where high coverage can be achieved** to stop any further circulation of the virus. Please refer to section below for further detail on the considerations of quality versus speed of response, and to SOP Part 2: Protocol for poliovirus type 2.

Rapid supplementary immunization activity (SIA) campaign for event and outbreak response is the first SIA **within 14 days** of laboratory result notification (Day 0).

Short interval additional dose is the interval between SIA rounds and can be as short as one week.

Large-scale SIAs are defined as at least 500 000 children for the first SIA round and approximately 2 million for subsequent rounds. Where 2 million children do not exist within a reasonable radius, all children, or children of 10 million total populations could be targeted. It is possible to consider increasing the scope further: in densely populated areas, **or** if there is evidence of extensive circulation, **or** if there is potential for extensive circulation (e.g. outbreak population well-connected to a major urban area). However, in all situations, the target population should not be increased beyond the capacity of the programme to attain high coverage.

Targeted age group for SIAs are all children below five years of age. An **expanded age group** considers children below 10 years of age, below 15 years of age, or the whole population depending on the local context. Expanded age group vaccination is recommended if there is evidence of virus circulation among older age groups.

High Quality SIAs: In responding to a poliovirus event or outbreak with vaccination response, there is a tension between achieving timely response (i.e., within 14 days), in preferred geographic scope and ability to achieve the desired coverage (>90%) and no persistently missed children. There is increasing recognition that assurance of quality campaigns is essential to achieve rapid interruption of transmission, and the timeline for implementation may be adjusted slightly to help achieve quality.

Consistent with the performance targets of the SOPs, a high quality campaign of appropriate scope should be mounted within 14 days of notification of a poliovirus ***where it is possible to achieve high coverage***. However, this is not always operationally feasible. The challenges inherent to settings where poliovirus is now detected may mean that it is better to set a slightly later start date for vaccination response in order to achieve the high quality necessary to avoid early emergence of young VDPVs (e.g. situations with security or access compromise, operational difficulties, hard to reach subpopulations and/or vaccine hesitancy amongst target population). However, even more critical is to ensure that the second and any subsequent rounds of vaccination response reach every child.

Decisions to delay the start of vaccination response are to be made by the country based on the most complete risk assessment possible in a timely manner. The country decision is to be made ***in consultation with WHO RO and HQ, supported by GPEI technical experts***. In the case of type 2 events and outbreaks, the mOPV2 advisory group will assist the WHO Director General to determine the appropriate release of mOPV2, based on the country risk assessment and proposed response plan and the expert recommendations of the Advisory Group.

- Reaching every child is of particular importance when using mOPV2 due to the rapidly declining type 2 mucosal immunity everywhere since the withdrawal of tOPV.
- Geographic scope for vaccination response is assessed based on a detailed risk assessment, on a case by case basis, and informed by discussion with technical experts (e.g., epidemiologists, virologists, and country experts) to ensure it fully covers high risk zone around the case(s).
- When feasible, timely vaccination is optimal and the first campaign should be implemented within 14 days of virus notification. However, quality assurance must be maintained, particularly in settings with anticipated operational challenges. Quality is not to be unduly sacrificed in order to implement within 14 days.
- To balance these competing priorities in achieving the SOP performance standards whilst maintaining high quality, alternate solutions might include:
  - Implementation of small rapid response campaign within 14 days in reduced geographic scope (e.g. immediate zone around case, for example the village or district the child lived in at time of symptom onset). An appropriately scaled "SIA1" then follows within another two weeks, using the extra time to intensify planning and technical support to the outbreak area.
  - Delay of implementation beyond 14 days but within less than 30 days, using the extra time to intensify planning and technical support.

- A preparedness dashboard and/or a checklist and timeline are recommended to track country readiness to launch SIA and to support quality implementation, and should be provided for feedback along with the risk assessment. Detailed pre-campaign readiness and intra-campaign quality monitoring are both expected for all mOPV2 responses.
- All sources of post-campaign information should be reviewed and triangulated to assess campaign quality, including but not limited to LQAS, independent monitoring, administrative coverage, convenience surveys, spot checks, non-polio AFP (NPAFP) immunity profiles, overall consistency of data sources, ongoing and new population movements, and the reported observations and experience of campaign personnel, supervisors, monitors and observers in the field.
- mOPV2 vaccine management is an integral part of ensuring a high quality type 2 response campaign. Guidelines are available.*

* Technical Guidance mOPV2 vaccine management, monitoring, removal and validation. http://polioeradication.org/wp-content/uploads/2016/11/Technical-guidance-mOPV2-management-monitoring-removal-and-validation_Oct2016_EN.pdf

3 Obligation to notify positive poliovirus isolates

All instances of poliovirus isolation in a previously polio-free country – and other notifiable polioviruses, such as VDPV2 or Sabin 2 virus, isolated anywhere (endemic or polio-free country) – must be reported immediately by the country to WHO, regardless of the type of isolate (WPV, VDPV, Sabin 2), or the source (case, environmental sample, other).

Notification should occur at the first indication of a positive sample. For example, an unclassified VDPV should be notified immediately to WHO by the country prior to final classification. This applies to both environmental and clinical isolates. Countries should not rely on the laboratory notification to inform WHO but institute their own formal rapid notification procedure.

Background. In 2012, the WHA adopted a landmark resolution declaring that the completion of polio eradication is a programmatic emergency for global public health, as outlined in the Emergency Response Framework. The resolution called for an intensification of efforts to eradicate polio.

Notification. Countries should **notify WHO about any detection of WPV or VDPV poliovirus** immediately on the grounds that it could be an "event that may constitute a public health emergency" in accordance with IHR *(9).* This holds true regardless of source or precise classification of source of the poliovirus. WPV isolated from an AFP case or case contact meets the criterion for "notification in all circumstances" under IHR Annex 2 (2005) *(10).* Identification of a WPV or VDPV from any source (environmental or human) meets the conditions for notification to WHO under the following criteria from IHR Annex 2 (2005) *(11)*:

i. Serious public health impact

ii. Unusual or unexpected event

iii. Significant risk of international spread of disease

iv. Significant risk of international trade or travel restrictions.

In addition, the isolation of Sabin 2 is notifiable under IHR, as there should be no further Sabin 2 containing vaccine except in the context of an outbreak response with mOPV2.

Steps to notify

- Laboratory notifies or shares the results with the national programme, WHO country polio focal point and regional and global polio laboratory coordinators within 24 hours of receiving the result.

- WHO regional and global polio laboratory coordinators review and confirm the results with the reporting laboratory and share with WHO regional and global polio programme focal points within 24 hours of receiving the laboratory results.
- WHO global polio focal point or programme coordinator informs all concerned GPEI partnership members.
- National authority notifies the IHR focal point when and if the notifiable situation meets the criteria as mentioned in the IHR 2005 in Annex 2.

4 Responding to a polio event

The country will investigate and monitor any polio event with support from GPEI partners where requested to determine potential source, risk, and scope of potential spread is occurring. Timely, clear and effective communication between all partners and levels is crucial to ensure appropriate response to events.

Table 4 describe the minimum response requirements to the different possible polio events.

> All poliovirus **type 2** events assessed to be at high risk or with evidence of transmission will be managed as outbreaks for the purpose of implementing and monitoring the operational response, while for example, waiting for results of field investigations and final classification in the case of a VDPV2.

This implies that for type 2 events, the "no-regrets" financing policy applies and the GPEI performance standards set out in these SOPs will apply, including detailed investigation, active surveillance and conducting of vaccination campaigns when advised by the EOMG recommendations or standards. For the event response there will be more flexibility in determining the SIA options including the number of SIA rounds or the scope of SIAs.

4.1 Investigation and assessment – general steps for all events

The recommended initial general steps to respond to a polio event are:

- **Case and contact investigation**:
  - Conduct a detailed clinical, epidemiological and social investigation of the case and contacts urgently.
  - Investigate clinical history including signs or symptoms of primary immunodeficiency, health facilities visited, as well as travel history, social environment and the community context of the case.
  - Conduct contact sampling of case(s) (stool sampling): Collect one stool sample from at least five direct contacts (i.e. siblings, household contacts, playmates) as well as from at least 20 persons of the same age group living in the community (i.e. in another part of the village or in a nearby village). Visit and document all other health-care providers in the area, including traditional healers and private practitioners as part of active case search.
  - Collect additional environmental samples and also community stool samples in case the new VDPV is from an environmental source.

- **Community case finding**: The community searches for unreported cases, which includes active case searching and retrospective case searching in health facilities. A positive environmental sample should also trigger active case finding in the suspected community and/or catchment area of the environmental surveillance site. The cases found should be sampled.
- **Assessment of population immunity**: This will be done from the AFP database and routine immunization coverage, as well as a quick community survey of the OPV/inactivated poliovirus vaccine (IPV) status, as part of the case investigation.
- **Enhanced surveillance**: The surveillance system is put on high alert to detect any signs of poliovirus transmission in the affected country and any potentially impacted neighbouring countries (AFP surveillance supplemented by environmental surveillance)
  - To maximize quality and sensitivity of the AFP surveillance system, ensure strict attention to completeness and timeliness of all AFP reporting. Consider routinely doing contact sampling for AFP cases (three contacts for every AFP case) from the geographical area for a period of time.
  - For the immediate investigation period, increase the frequency of environmental surveillance, if available. For the longer-term analyses, investigate with the GPEI partnership about establishing or expanding local environmental sampling sites.

4.2 Risk assessment

The country, WHO and GEPI partners conduct a risk assessment for every event based on the findings of the epidemiologic and laboratory investigations, and the strength of evidence. The risk assessment aims to characterize virus transmission and the implications for its further spread. This is especially important following the discovery of a type 2 isolate (please refer to *Responding to a poliovirus event and outbreak. Standard operating procedures. Part 2: Protocol for poliovirus type 2*).

The ultimate decision of whether to designate a poliovirus isolate as an event or outbreak, for the purposes of the response described in this SOP, rests with the WHO in dialogue with the affected country.

A polio event may be escalated to an outbreak at any point in the investigation (following definitions in Table 1), as deemed necessary by the WHO in consultation with the country and other GPEI partners.

4.3 Specific steps

The scope of the response to a detected event will depend on the poliovirus type and classification, and in some circumstances the local situation. In the post-switch era, the detection of type 2 events now also warrant a more aggressive investigation in addition to notification.

Specific steps are defined according to the isolate identified; this is in addition to the general steps also outlined in Table 4.

- For all type 2 events, the type 2 response protocol in Part 2 of this SOP describes the full details about investigation and steps to risk assessment to determine if a vaccination

response is required. Risk assessment will qualitatively assess the following risk categories: virologic, contextual, and potential for international spread.

- For all Sabin 2 virus isolations, there must be a detailed investigation. A guidance document and template form for investigation has been made available on the GPEI website.1,2
- For **VDPV1 or VDPV3 pending classification**, the approach will follow the same initial response steps. However, SIA activities are not required unless the isolate is classified as a cVDPV that will invoke a full outbreak response.
- The investigation into an **environmental WPV isolate in a non-endemic country** must consider possible importation (e.g. incoming travel) or release from a laboratory facility. For type 1 and 3, the necessary response, including the implementation of SIAs, will be determined on a case-by-case basis, with careful consideration of the country (e.g. proximity to endemic regions), population immunity characteristics and outcome of investigation.

Rapid response to types 1 and 3 outbreaks (WPV or cVDPV1 or 3) will be undertaken with bivalent OPV (Sabin vaccine types 1 and 3) and requests will follow the usual procedures for campaign support through the WHO and United Nations Children's Fund (UNICEF) country offices.

TABLE 4: Minimum response requirements to polio events

Isolate	Source	General response	Immunization response	Timeframe[b]
WPV				
WPV 1 or 3	Environment	• Case finding: community search for cases • Assessment of population immunity • Enhanced surveillance • Event response assessment	• **SIAs** plan and their implementation based on local situation, as advised by WHO and GPEI partners	-

1 A guide for investigation of Sabin Like 2 (SL2) poliovirus in a human or in the environment http://polioeradication.org/wp-content/uploads/2017/03/SL2-investigation-guide_WHO-HQ09032017.pdf

2 A tool for investigation of Sabin Like 2 (SL2) poliovirus isolation in human or in the environment http://polioeradication.org/wp-content/uploads/2017/03/SL2-investigation-tool_WHO-HQ09032017.pdf

Isolate	Source	General response	Immunization response	Timeframe[b]
WPV 2	Environment (with no evidence of individual excreting virus)	• Case finding: community search for cases • Assessment of population immunity • Enhanced surveillance • Event response assessment • Refer to Part 2 of this SOP (poliovirus type 2 protocol)	• Refer to Part 2 of this SOP (poliovirus type 2 protocol). • SIAs plan and implementation depends on the local situation. • NO SIAs unless high risk. IF high risk, plan for **2 high quality rounds of SIAs** – Target age: 0–5 years – Targeting approx. 1–2 million children in high risk area – Vaccine of choice: mOPV2 – Vaccine request to WHO Director General for mOPV2	In High Risk Scenario: First SIA within 14 days followed by successive high coverage campaigns
Sabin like 2				
Sabin like 2	• Environment or • Human	• Refer to Part 2 of this SOP (specific poliovirus type 2 protocol)	• Refer to Part 2 of this SOP (poliovirus type 2 protocol). • **SIAs are not required**	-
VDPV				
VDPV1 or 3 (waiting classification)[a]	• Human • Environment	• Case and contact investigation (clinical and epidemiological) • Case finding: community search for unreported cases • Assessment of population immunity • Enhanced surveillance	• **SIAs are not required**	-
aVDPV1 or 3	• Human OR • Environment	• Case and contact investigation (clinical and epidemiological) • Strengthened environmental surveillance	• **SIA are not required**	-
iVDPV1 or 3	Human	• Case and contact investigation (clinical and epidemiological)	• **SIA are not required**	-

Isolate	Source	General response	Immunization response	Timeframe[b]
VDPV2 (awaiting classification, "new" VDPV: probable transmission)	• Human OR • Environment	• Case and contact investigation (clinical and epidemiological) • Case finding: community search for unreported cases • Assessment of population immunity • Enhanced surveillance • Refer to Part 2 of this SOP (poliovirus type 2 protocol)	• Refer to Part 2 of this SOP (poliovirus type 2 protocol). NO SIAs unless high risk. IF high risk: **plan for 2 high quality rounds of SIAs** – Implement SIAs with mOPV2 – Targeting approx. 1–2 million children in high risk area – Other rounds: implementation depends on local situation – Vaccine of choice: mOPV2 – Vaccine request to WHO Director General for mOPV2	In High Risk Scenario: First SIA within 14 days where high coverage can be achieved
aVDPV2	• Human OR • Environment	• Case and contact investigation (clinical and epidemiological) • Strengthened environmental surveillance • Refer to Part 2 of this SOP (poliovirus type 2 protocol)	• Refer to Part 2 of this SOP (poliovirus type 2 protocol). NO SIAs unless high risk. If high risk, **consider 2 high quality rounds of SIAs** – Implement SIAs with mOPV2 – Targeting approx. 1–2 million children in high risk area – Other rounds: implementation depends on local situation – Vaccine of choice: mOPV2 • Vaccine request to WHO Director General for mOPV2	In High Risk Scenario: First SIA within 14 days where high coverage can be achieved

Isolate	Source	General response	Immunization response	Timeframe[b]
iVDPV2	Human	• Case and contact investigation (clinical and epidemiological) • Refer to Part 2 of this SOP (poliovirus type 2 protocol)	• Refer to Part 2 of this SOP (poliovirus type 2 protocol). **SIAs are not required** – Intravenous immunoglobulin for case (+ monoclonal antibodies or anti-virals if available) PLUS – IPV for household members and close community contacts	-

a If a VDPV is classified as a *circulating* strain, reflecting evidence of ongoing transmission, an outbreak will be declared.

b Timeframe: (i) from laboratory result notification for poliovirus type 2 events; and (ii) for poliovirus type 1 and 3 events, rapid response is expected, but immunization response will not be measured at this time against the SOPs unless they are confirmed to be, or become, a type 1 or type 3 outbreak.

c Timeframe: (i) from laboratory result notification for type 2 events; and (ii) for VDPV type 1 and 3 events pending classification, aVDPV 1 or 3 , iVDPV 1 or 3, rapid response is expected, but will not be measured at this time against the SOPs unless they are confirmed to be, or become, a type 1 or type 3 outbreak.

4.4 Release of mOPV2 from the global stockpile

In line with the World Health Assembly resolution, new procedures have been put in place for countries to request monovalent type 2 oral polio vaccine (mOPV2) from the global vaccine stockpile. The country will prepare and submit a vaccine request[3] within 48 hours of laboratory result notification of a type 2 poliovirus likely to require a vaccination response (e.g. high risk or documented transmission such as cVDPV2).

Only the WHO Director General has the authority to approve release of the mOPV2 vaccine upon the recommendation of the Advisory Group on mOPV2 provision composed of the GPEI's Eradication and Outbreak Management Group (EOMG) and selected additional laboratory and technical experts.

4.5 Event response assessment

The concept of outbreak response assessment can be applied to events, particularly those for which an immunization response and surveillance strengthening are implemented. The event response assessment can be scaled appropriately or focused to meet the needs of the local context and circumstances. The purpose of the event assessment will be to review the quality of the response, the need for further surveillance, and to recommend further SIAs, particularly in the case of type 2, and plans to deploy further mOPV2 for which a full justification must be provided.

3 Vaccine request form for mOPV2 is available on the GPEI website at: http://www.polioeradication.org/Portals/0/Document/Resources/PolioEradicators/SOP_AnnexB_mOPV.doc.

5 Responding to a polio outbreak

5.1 Minimum response requirements for all polio outbreaks

The scope of the response to a detected outbreak will be determined by: the type and classification of the poliovirus, underlying population immunity, local situation and findings of the initial epidemiologic investigation. The key to a successful response lies in adapting strategies as the situation evolves over the course of the investigation.

Table 5 describes the minimum response requirements for all polio outbreaks.

The recommended **general steps to respond to all polio outbreaks** (Table 5) are the same as for an **event** (see paragraph 4.1) but complemented with additional activities or standards levels as listed:

- An addition for enhanced AFP surveillance, where the minimum standards in AFP surveillance is increased to "three non-polio AFP cases per 100 000 children under 15 years of age in every first subnational division (province or state), for the duration of the outbreak and for at least 12 months after the last case" (where there is small population at the first subnational division level, there should be special consideration should be given to determine the expected number of AFP cases, as rates per 100 000 children may fluctuate).
- Addition of activities, such as:
  - Outbreak grading (by EOMG)
  - Deployment, where applicable (by OPRTT) of a rapid response team (Team A) and a surge team (Team B)
  - Independent monitoring (IM) of SIAs
  - Immunization coverage assessment with clustered lot quality assurance sampling (LQAS)
  - Independent outbreak response assessments (OBRA).

Specific steps for the immunization response are defined according to the isolate identified, in addition to the general steps.

TABLE 5: Minimum response requirements to all polio outbreaks

Isolate	Response	Timeframe (from laboratory result notification)
General steps		
All isolates	Case and contact investigation	24 hours to initiate
	Community case-finding	24 hours to initiate
	Assessment of population immunity	24 hours to initiate
	Enhanced surveillance[a]	72 hours to initiate
	Outbreak risk assessment and subsequent grading (by EOMG)	72 hours to complete
	Initiate and deploy, where applicable (by OPRTT[b]): • rapid response team (Team A) and • surge team (Team B)	 • 72 hours to initiate for Team A • Within 3 weeks for Team B
	Independent monitoring of SIAs *(12)*[c]	• Independent monitoring in conjunction with all SIAs to be implemented **within 1 month** • Detailed results of independent monitoring to be shared to GPEI partners within 14 days of end date of each campaign
	Assessing immunization coverage with clustered-LQAS[d] *(13)*	LQAS to be started as soon as possible in conjunction with SIAs
	Outbreak response assessments (OBRA) *(14)*	1. **First 3-month assessment:** to be implemented 3 months after the detection of the first case of a polio outbreak 2. **Follow-up quarterly assessments:** 3 months after the first quarterly assessment, to be repeated every 3 months as long as outbreak continues 3. **End-of-outbreak assessment:** At least 6 months passed without detection of poliovirus from human or non-human source.
Specific steps		
WPV		
WPV1 or 3 • Human OR • Environment	**Plan + implement ≥3 round(s) of SIAs, as advised by WHO and GPEI partners** • Target age: 0–5 years + an expanded age group in ≥1 SIAs • Population size: SIA1: minimum 500 000 children. SIA 2 and SIA 3: approximately 2 million children • Vaccine of choice: bOPV	First round within 14 days First three rounds to be short interval SIAs (2–3 weeks apart)

Isolate	Response	Timeframe (from laboratory result notification)
WPV2 • Human	Refer to Part 2 of this SOP (poliovirus type 2 protocol) **If high risk, plan for 2 high quality rounds of SIAs**, as advised by WHO and GPEI partners • Target age: 0–5 years • Population size: SIA1 & 2: approx. 1-2 million children • Vaccine of choice: mOPV2 Vaccine request made to WHO Director General for mOPV2	Refer to Part 2 of this SOP (poliovirus type 2 protocol)
WPV2 • Environment	Refer to Part 2 of this SOP (poliovirus type 2 protocol) Depends on local situation. **If high risk, plan for 2 high quality rounds of SIAs**, as advised by WHO and GPEI partners • Target age: 0–5 years • Population size: SIA1 & 2: approx. 1-2 million children • Vaccine of choice: mOPV2 Vaccine request made to WHO Director General for mOPV2	Refer to Part 2 of this SOP (poliovirus type 2 protocol)
cVDPV		
cVDPV1 or 3 • Human OR • Environment	**Plan + implement ≥3 round(s) of SIAs**, as advised by WHO and GPEI partners • Target age: 0–5 years + an expanded age group in ≥1 SIAs • Population size: SIA1: minimum 500 000 children. SIA 2 and SIA 3: approximately 2 million children • Vaccine of choice: bOPV	First round within 14 days First three rounds to be short interval SIAs (2–3 weeks apart)

Isolate	Response	Timeframe (from laboratory result notification)
cVDPV 2 • Human OR • Environment	Refer to Part 2 of this SOP (poliovirus type 2 protocol) **Plan for 2 high quality rounds of SIAs**, as advised by WHO and GPEI partners • Target age: 0–5 years • Population size: SIA1 & 2: approx. 1-2 million children • Vaccine of choice: mOPV2 Vaccine request to WHO Director General for mOPV2	Refer to Part 2 of this SOP (poliovirus type 2 protocol)

a Independent monitoring does not replace, nor equal supervision

b OPRTT = Outbreak Preparedness and Response Task Team

c including AFP surveillance to be enhanced to an annualized rate of greater than **three non-polio AFP cases per 100 000 children** aged under 15 years in every first subnational division (province or state), for the duration of the outbreak and for at least 12 months after the last case. Also, for the immediate assessment period, increase frequency of environmental surveillance if available.

d lot quality assurance sampling

Selection of the most appropriate vaccine is made with the WHO technical support *(15)*. It is based on the type of poliovirus, the underlying population immunity and projected timeframe (Table 6).

Due to a constrained IPV supply situation and the fact that IPV does not induce mucosal immunity in OPV-unprimed individuals, the Strategy Committee of the GPEI following the Strategic Advisory Group of Experts (SAGE) on Immunization Working Group recommendation advised on 27 April 2017 that mOPV2 is the vaccine of choice for outbreak response to type 2 poliovirus outbreaks and achieving high quality is key. **IPV should be prioritized to routine immunization in countries at risk for VDPV2 emergence and spread, and should not be relied on outbreak response to type 2 poliovirus outbreaks.**[4]

4 http://www.who.int/immunization/sage/meetings/2017/april/SAGE_April_2017_Meeting_Web_summary.pdf?ua=1

TABLE 6: Summary of typical vaccination strategies recommended for event or outbreak response, by type of poliovirus

Type of outbreak	Post-switch (May 2016 onwards)	
Type 1 or 3 poliovirus (WPV)	bOPV	 bOPV
Type 1 or 3 poliovirus (cVDPV)	bOPV	 bOPV
Type 2 poliovirus	mOPV2 (released by WHO Director General)	 mOPV

Note: In all cases, WHO must be consulted regarding the choice of vaccine.

IPV (fractional or full dose) is not recommended for response to cVDPV2. Continue to vaccinate close contacts of iVDPV cases.

5.2 Upon confirmation of an outbreak

The steps listed below are to be followed upon confirmation of an outbreak.

- The **national government**, supported by GPEI partners, will declare the outbreak as a *national public health emergency*. The national government will notify it to WHO as a '*public health emergency of international concern*' in accordance with IHR, wherever relevant.
- The **national government** will establish an emergency operation centre (EOC) to lead the development of a comprehensive response plan including surveillance strengthening, communication and social mobilization, and ensures the implementation of quality SIA strategies.
- The **OPRTT** will submit to EOMG adequate information to grade the outbreak within 72 hours of laboratory result notification
- The **GPEI EOMG** will meet within 72 hours of laboratory result notification to grade the outbreak.
- **WHO and GPEI partners** will offer technical support for all activities, as appropriate to the grade of outbreak and the requirements of the health system support in the affected country.

5.3 Risk assessment and grading of an outbreak

While laboratory and epidemiologic investigative steps correspond in general to standardized processes for following-up any poliovirus detection, a risk assessment would aim to characterize the virus transmission and the implications for further spread. The risk assessment assesses the critical factors that will influence the type and scale of the response and make recommendations for appropriate actions.

For type 2 poliovirus, the risk assessment focuses specifically on addressing these three core questions (refer to Part 2 of this SOP specific type 2 poliovirus protocols):

i. What is the nature of the virus (e.g. WPV, Sabin, or VDPV)?

ii. Is there evidence of circulation?

iii. What is the risk of further spread?

The EOMG performs a **risk assessment** based on the combination of **two sets of criteria**:

i. Potential for transmission within the country and beyond national borders.
Assessment of the risk of transmission takes into account the following aspects:

a. Risk of international spread (especially for type 2 poliovirus post-switch) including multi-country/cross-border risk, through travel links and transmission routes.

b. Type and classification of poliovirus (e.g. type 1, 2, or 3; WPV or VDPV classification).

c. Population immunity in the affected area (from the AFP database and routine immunization coverage, as well as a quick community survey of OPV/IPV status).

d. Existence of vulnerable populations (refugees, internally displaced persons, significant nomadic groups, access-compromised population groups, and others).

e. Risk of intentional spread (especially for type 2 poliovirus post switch) or breach in containment (from laboratory, research and vaccine production facilities).

ii. Strength of the country's capacity to respond and contain the outbreak.
Assessment of the national response capacity includes the following elements:

a. Country health infrastructure level.

b. Capacity to mobilize human resources.

c. Security situation, including the presence of armed conflict or significant areas of insecurity or inaccessibility.

This risk assessment ultimately determines the risk of further transmission and directly influences the required type and scale of response (from **grade 1 to 3**).

As a result of the risk assessment, the **EOMG** assigns a grade to the outbreak **within 72 hours of confirmation of the outbreak** to:

- inform partners of the extent, complexity and likely duration of support required;
- prompt all GPEI partners at all levels to be ready to repurpose and mobilize appropriate resources in order to provide support, including the human resources required to constitute rapid response (Team A) and surge response (Team B) teams, if necessary; and
- trigger outbreak response activities and policies in the concerned country.

Table 7 outlines the three grades and their definitions according to the two sets of criteria.

TABLE 7: Polio outbreak grades and definitions

Grading	Criteria	Definition
Grade 1	Potential for transmission and international spread	Low-to-medium risk of transmission including international spread due to good population immunity and no major vulnerable population cluster
	Strength of country capacity	Strong to moderate country response capacity due to robust health infrastructure and no security threat or access challenges
Grade 2	Potential for transmission and international spread	Low-to-high risk of transmission including international spread
	Strength of country capacity	Strong-to-weak country response capacity
Grade 3	Potential for transmission and international spread	Medium-to-high risk of transmission including international spread due to significant gaps in population immunity, history of multi-country/cross-border propagation and major vulnerable population clusters
	Strength of country capacity	Moderate-to-weak country response capacity due to serious deficiencies in local in-country health infrastructure, high security threats and access challenges, or a complex humanitarian emergency

The **risk profile matrix** in Table 8 provides a visual tool to illustrate the decision-making process underlying the classification of an outbreak according to grade 1, 2 or 3. It highlights the fact that the level of the response needed (the grade) to a polio outbreak with a low risk of transmission can vary between grades 1 and 3, depending on the country's response capacity. The grading system is used to describe the actions necessary to manage the risk identified. Moreover the polio grading system is flexible enough to allow adaptation to every polio outbreak context as well as changes in global strategy, which will be of paramount importance after global tOPV withdrawal.

TABLE 8: Risk profile matrix for grading a polio outbreak

	Country response capacity		
Risk transmission and international spread	**Strong**	**Moderate**	**Weak**
Low	Grade 1	Grade 1	Grade 2
Medium	Grade 1	Grade 2	Grade 3
High	Grade 2	Grade 3	Grade 3

The grade will be **updated at least once every three months or whenever a significant change in the outbreak evolution** requires a re-evaluation of the assigned grade. Flexibility is embedded in the grading, so that shifts between response activity categories in Table 9 can be tailored on a nearly real-time basis to reflect the national situation and meet local needs.

The grade will serve as the basis for prioritizing or ranking the level of outbreak response activities (Table 9) from the "green light" grade 1 to the "orange light" grade 2, and finally to the "red light" grade 3. The higher the grade, the more GPEI support will be needed for the response.

TABLE 9: Outbreak response scale-up supports according to grade

	Grading		
Type of support	**Grade 1**	**Grade 2**	**Grade 3**
Response leadership[a]	National coordinator	GPEI nominated coordinator	GPEI nominated coordinator
Technical liaison[a]	Polio **expert mission** from the GPEI partners to support the development of the outbreak response plan	Deployment of a rapid response team: **Team A**[a] (multidisciplinary outbreak response team).	Deployment of a rapid response team: **Team A**[a] (multidisciplinary outbreak response team).
Surge[a]	**Stop Transmission of Polio (STOP)** *(16)* programme support if needed	• Deployment of surge response team: **Team B**[a] (multidisciplinary consultant team for minimum 6-month deployment) • **STOP** support	• Deployment of surge response team: **Team B**[a] (multidisciplinary consultant team for minimum 6-month deployment) • **STOP** support
Financial	Standard financing for outbreak response immunization activities (an advance of up to US$ 500 000)[b]	"No-regrets" financing policy (an advance of up to US$ 500 000)	• "No-regrets" financing policy (an advance of up to US$ 500 000) • Financial support for security measures, if required
Security and access	NA[c]	NA[c]	• Country Assessment and Support Team of WHO Headquarters, coordination with other United Nations and humanitarian agencies on the ground • Deployment of field security officer(s) where necessary

a Terms of Reference for teams A and B can be found in Annex 4. Composition of supports, particularly the size and number of experts deployed in the rapid response team (Team A) and the surge response team (Team B) will be scaled-up to meet the needs of the country.

b Standard financing is subject to re-payment conditions, as determined on a case-by-case basis.

c Not applicable.

5.4 Release of mOPV2 from the global stockpile

See section 4.4, as the same principles and processes for mOPV2 release applies to both type 2 events and outbreaks.

6 Strategic response framework for polio outbreak

A strategic response framework is needed to guide the international response to a polio outbreak. This framework provides the basis for coordination and collaboration among close partners in addressing the outbreak to ensure that national response activities are supported to the fullest extent possible.

The following **five strategic pillars** are needed for interrupting transmission in an outbreak setting and have to be implemented in a coordinated manner.

i. **A fully engaged national government:** The key to a successful outbreak response is a high level of government engagement. National governments should make sure that their actions meet the IHR provisions and ensure rapid notification to WHO of any suspect AFP cases or any specimens found positive for poliovirus.

   - The government's response should engage the senior leadership of GPEI partners and request guidance and outbreak response assistance as required.
   - The highest level of government should declare a public health emergency.
   - An EOC type-mechanism should be formed to guide and oversee the outbreak response.
   - The national government should appoint a senior focal person to lead the outbreak response and the EOC.
   - All key departments or ministries should be engaged to ensure a multi-sectorial response.

ii. **Rapid risk assessment and identification of transmission risk zones**: Affected countries must work closely with GPEI partners to conduct a rapid risk assessment to identify the outbreak-affected and high-risk zones with defined areas of ongoing circulation and areas of high risk. This should take into account sub-national areas of vulnerability given geographic contiguity and/or other criteria (e.g. underserved populations).

iii. **Robust immunization response:** Upon confirmation of a type 1 or 3 poliovirus outbreak, countries should plan a coordinated immunization response, including the rapid launch of the first SIAs covering all children younger than five years of age in affected and adjacent geographic area – or a minimum of 500 000 children in large population countries. Subsequent SIAs need to be at a larger scale to target a minimum of two million children younger than five years of age, if the risk of further spread of poliovirus justifies this strategy choice. Type 2 poliovirus outbreaks are now recommended to have two high quality SIAs, each targeting approximately 1–2 million children under 5 years of age (Refer to SOP part 2 for further details). Strategies will change with time elapsed after global tOPV cessation. Oral polio vaccine will be preferred in outbreak response because it boosts intestinal mucosal immunity. Key components of the response include:

   - Where high coverage can be achieved (>90% and no persistently missed children) first SIA to be launched within 14 days from confirmation of the poliovirus outbreak.

- Selection of the most appropriate vaccine should be based on the type of poliovirus and underlying population immunity (see Table 6). Selection should be made in consultation with WHO technical support.
- A minimum of three SIAs should be planned and implemented – the first three rounds should be at short intervals. (For the number of SIAs for type 2 post-switch, please refer to type 2 protocol in part 2 of this SOP.)
- Expanded age group should be included in at least one SIA. The specific upper limit of the expanded age-group will be advised by WHO and GPEI partners in consultation with WHO and UNICEF regional and country offices based on epidemiology, susceptibility profile of the population and underlying population immunity (consider the time since last virus isolation/last SIA).
- The WHO Director General should perform oversight and release the post-switch global stock of mOPV2. Stocks of mOPV2 released in such responses must be tightly managed, monitored, retrieved and disposed at the end of the activity.
- Vaccine supplies should be secured through the UNICEF Supply Division or other mechanisms (for self-procuring countries) immediately upon declaration of the outbreak.
- Special attention should be given to populations at highest risk, and implementation of strategies should target vaccination efforts specifically to these groups.
- Independent monitoring should be implemented to assess whether at least 95% of children interviewed have been vaccinated.
- The Country Assessment and Support Team should be involved to provide additional support if there are concerns about the security and access to immunize children in the affected regions.

iv. **Effective communication and social mobilization:** To maximize effectiveness, the government should prioritize communication and social mobilization to ensure that populations at greatest risk are vaccinated and that chronically missed children are reached. GPEI partners will assist the government in achieving these goals. Strategies for building polio vaccine demand and mitigating the risk of population fatigue during repeated campaigns include:

- Rapid analysis of the knowledge, attitudes and community practices around vaccination, and barriers to reaching every member of the target population.
- Design of strategic messages and key strategies based on social profiling of polio-confirmed and zero-dose non-polio AFP cases or contact cases, as well as any other available social research.
- Mass communication messages informing the population of the outbreak, the risks and implications of contracting polio, and the need to take multiple doses of the polio vaccine for individual protection and to stop the outbreak.
- Engagement with existing humanitarian or development organizations, United Nations country team and/or government community social networks to ensure the coordinated and coherent dissemination of messages.
- Systematic reporting of identified social indicators, especially for missed children, refusals and absences, as part of the overall national outbreak reporting mechanism.
- Adjustment of communication interventions based on outcomes of monitoring data to scale and refine Communication for Development (C4D) intervention targeting.

v. **Enhanced surveillance:** AFP surveillance should be enhanced to an annualized rate greater than *three non-polio AFP cases per 100 000 children younger than 15 years of age in every first subnational division (province or state), for the duration of the outbreak and for at least six to 12 months after the last case.* Countries should:

- immediately notify all subnational surveillance units of the outbreak's detection;
- activate AFP case-finding strategies at the subnational levels and conduct a retrospective record review;
- provide sensitization training on AFP surveillance to all health-care workers;
- develop an outbreak monitoring system for weekly surveillance reporting from all subnational-level reporting units;
- expand contact sampling for all AFP cases in all "infected" and "immediate" transmission risk zones until the end of the outbreak;
- ensure that AFP active case search is integrated into SIA activities;
- ensure that laboratory services are strengthened to handle the additional workload and are able to maintain rapid result turnaround throughout the outbreak; and
- consider whether environmental surveillance can be launched, and in areas where it already exists, increase the frequency of sampling.

7 Outbreak assessment and end of outbreak

Assessments are conducted approximately every three months by an external team of experts – the Outbreak Response Assessment (OBRA) team or other independent monitoring team – to assess the quality of implementation of eradication activities, the evidence of interruption of poliovirus transmission and quality and sensitivity of surveillance. The OBRA team leader submits the report to the country team, OPRTT chair, WHO regional office, and polio director. The WHO regional office will confirm the end of the outbreak based on the assessment report and recommendations. For any type 2 poliovirus outbreak with immunization response using mOPV2, the OBRA team will also make recommendation on what to do with any remaining vaccine in country after all immunization rounds are completed.[5]

The decision that the outbreak has ended is described below and in Figure 1.

7.1 OBRA after six months

Poliovirus outbreaks may be closed after six months if:

- at least six months have passed after the onset date of the most recent poliovirus, without the detection of poliovirus from any source (AFP case, person or environment, inside or outside the country)

  AND

- there is documented evidence that 'high quality eradication activities' were conducted in all infected and high-risk areas; this evidence includes,
  - *high-quality immunization activities* implemented as per the national outbreak response plan where the immunization coverage was high, as measured through independent monitoring and LQAS, and
  - *sensitive AFP surveillance*, defined as a non-polio AFP rate of ≥3/100 000 children under 15 years of age in every first administrative level/first subnational division (province or equivalent). In situations where there is small population at the first subnational division level, special consideration to the denominator to be given for expected AFP rate.

In the absence of 'high quality eradication activities', the outbreak cannot be closed. The OBRA team should provide pertinent technical recommendations to the country for improved implementation of eradication activities.

The outbreak response assessment should continue until the outbreak is closed by fulfilling the criteria mentioned above any time between six and 12 months or after 12 months have passed

5 Technical Guidance mOPV2 vaccine management, monitoring, removal and validation. http://polioeradication.org/wp-content/uploads/2016/11/Technical-guidance-mOPV2-management-monitoring-removal-and-validation_Oct2016_EN.pdf

without the detection of polioviruses as per criteria used by the IHR-EC for classifying "States no longer infected (detection of no new wild poliovirus or cVDPV)" mentioned below in point 7.2.

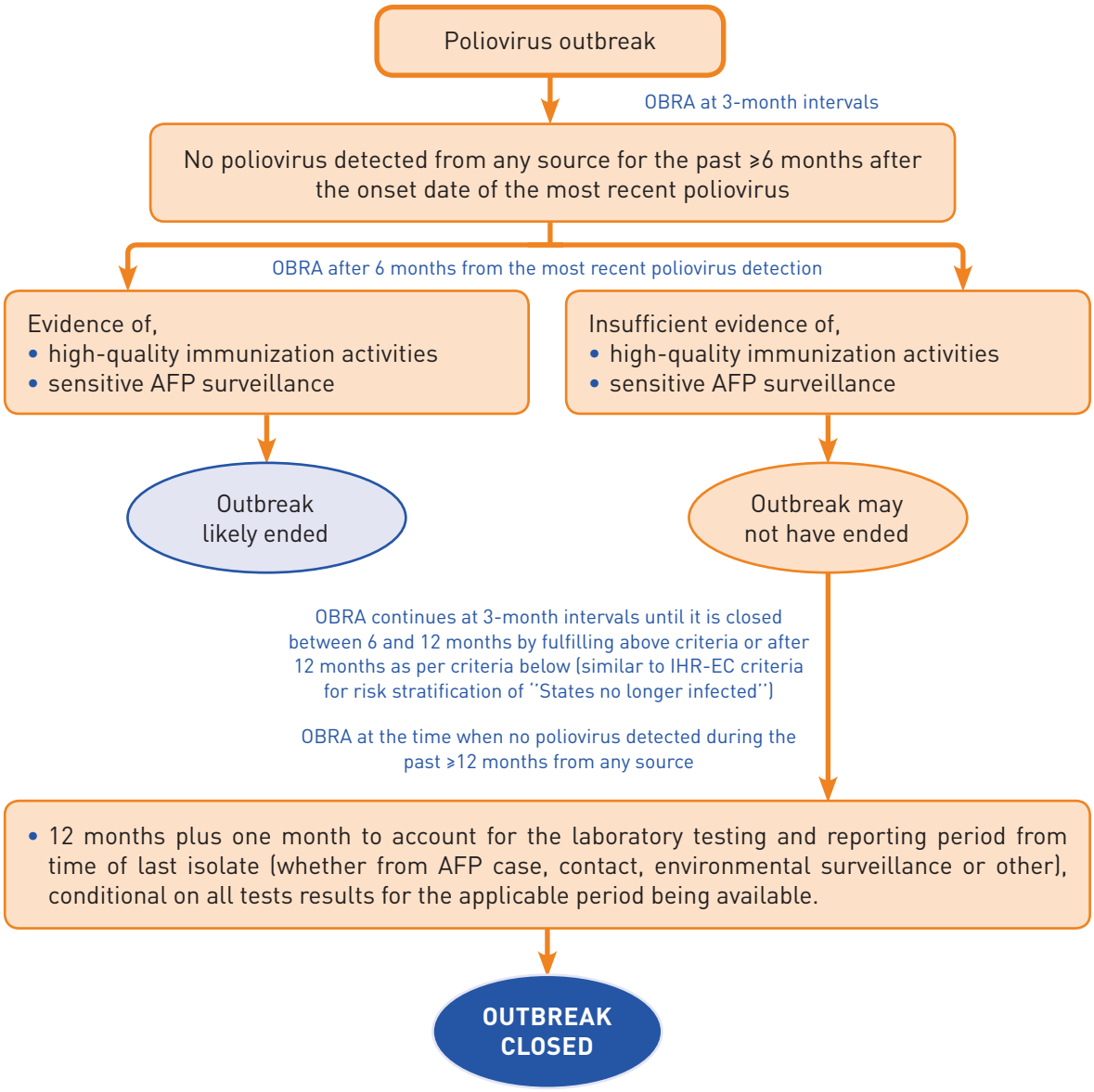
The OBRA team should also consider taking guidance from the SOP: Part 2 Protocol for poliovirus type 2 and IHR-EC statement, if required, while evaluating for end of outbreak.

7.2 OBRA after 12 months

Poliovirus outbreaks can be assessed as having ended after 12 months based on the processes and criteria used by the IHR-EC for categorizing a country's infection status as below:

- 12 months plus one month to account for the laboratory testing and reporting period from time of last isolate (whether from AFP case, contact, environmental surveillance or other), conditional on all tests results for the applicable period being available.

FIGURE 1: Outbreak response assessment decision tree



8 GPEI partnership support

8.1 Six key functions of the GPEI

While countries have ultimate ownership of the response, and have to maintain leadership throughout the process, the GPEI partners support the countries to complete a robust risk assessment and response to poliovirus outbreaks.

To deliver on their commitments described in the *Polio Eradication and Endgame Strategic Plan 2013–2018 (3)*, the GPEI partners support **six key functions** in the outbreak response (Figure 2):

i. Outbreak response and assessment

ii. Coordination and advocacy

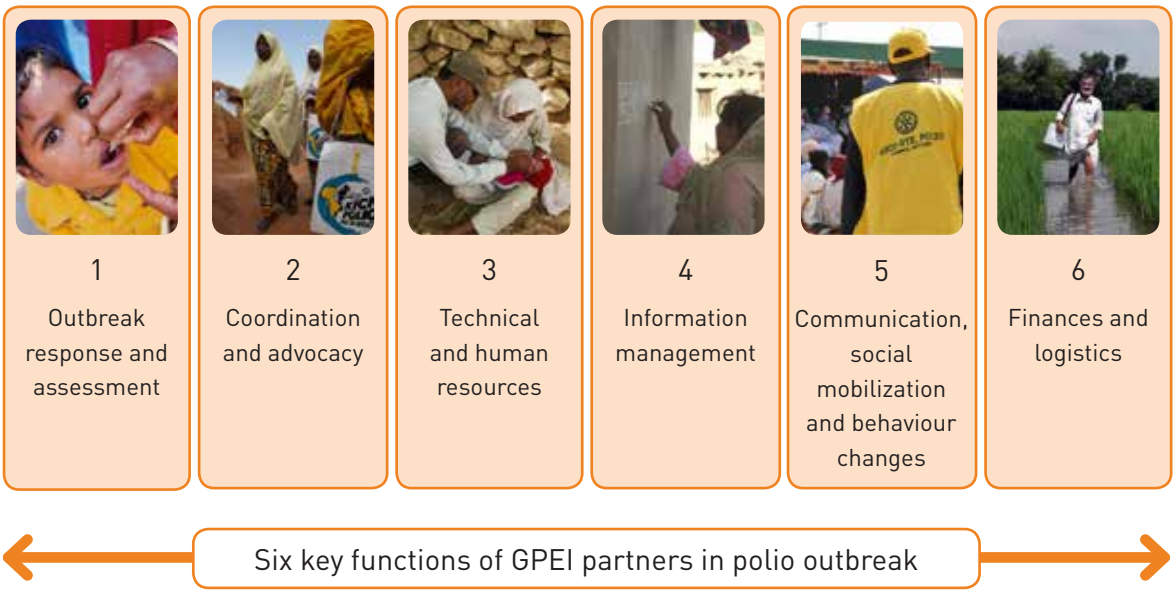
iii. Technical and human resources

iv. Information management

v. Communication, social mobilization and behaviour change

vi. Finances and logistics.

FIGURE 2: Six key functions of the GPEI partners in polio outbreak response



8.2 Essential policies for optimizing GPEI response

The EOMG's outbreak grading will activate the full GPEI surge response and the "no-regrets" policy for financial support, where deemed necessary. These functions will be supported through the OPRTT that will ensure that the six key support functions of GPEI are coordinated between all partners and the different levels of each organization.

Surge policy

The GPEI mobilizes and rapidly deploys experienced professionals to the affected country so that they can join the national response team and perform the six key functions in outbreak response described above. This deployment follows the initial investigation, assessment and grading of an outbreak by the EOMG. Therefore the earliest activation of the surge policy would be 72 hours after laboratory result notification. The activation of the surge policy is accomplished using a partner-wide interregional surge mechanism, which involves qualified staff from partner organizations or the engagement of qualified consultants.

The objective of the surge policy is to strengthen the agencies' ability to immediately staff key positions of the response and to ensure a smooth transition to longer-term staffing.

The surge policy is based on the following **principles**:

- Identification of key roles (including technical, operational, and communications coordination) to be staffed for immediate- and long-term positions, according to outbreak grade.
- Establishment of a rotating interagency list of "on-call" staff who can be deployed to the risk zone within 72 hours (rapid response team called Team A).
- Active management of the interagency "on-call" roster for longer-term deployments using a centralized management platform for ease of visibility/reporting (surge response team called Team B).
- Rapid training of personnel listed on the roster to ensure understanding of the SOPs and the critical standards to be met in all phases of the outbreak.
- Assurance that the deployment processes allow "longer-term" personnel to be in place within three weeks of an outbreak, allowing at least one week of overlap between Team A and Team B to ensure complete and detailed handover.

Recognizing the challenges of meeting surge requirements, the GPEI partners will follow a **two-phase surge process** and maintain **two types of experts' rosters**:

i. *Rapid response phase* (with Team A): The rapid response roster consists of pre-identified, trained and experienced professionals with multiple expertise, deployable within 72 hours for up to one month. Key roles include: technical, operational and communication liaisons. The technical liaison is typically designated as the outbreak coordinator and should receive priority for first deployment in an urgent response (see Annex 4 for the terms of reference).

ii. *Surge response phase* (with Team B): The surge response roster lists trained experts across multiple disciplines, who can be deployed within three weeks of laboratory result notification. The roster ensures the continuous availability of staff/consultants to support national-level and subnational-level response activities (see Annex 4 for the terms of reference).

The **composition of the two teams** can be scaled up or down to meet the needs of the country and grade of response. Key personnel, roles and level of activities may include:

- *outbreak coordinator* where required (GPEI-nominated staff)
- *operations manager*: coordination of operations, budget, activity tracking, human resource and administrative support (national staff)

- *communications officer*: lead key external communications and C4D initiatives, assist development of communications plan (national staff)
- additional experts for polio SIAs and enhanced surveillance (national staff based at district level)
- additional communications and C4D (19) experts (national staff based at district level), to be considered as needed.

"No-regrets" policy

At the onset of emergencies, the GPEI ensures that an appropriate release of staff and funds is made to the country, even if it is later realized that a smaller contribution was required. This approach must be maintained from the initial investigation and confirmation of outbreak until the end of the outbreak. This policy affirms that it is better to over-resource critical functions than to risk failure by under-resourcing.

8.3 GPEI performance standards according to the timeframe and key functions

GPEI partners will undertake a range of activities to support a country-led response. To ensure timely and effective outbreak response, the actions stated below comprise the essential indicators required by the country and GPEI partners. These standards are not exhaustive and may be modified as required to fit the context specific to the country and the outbreak. The OPRTT will provide support to coordinate and monitor the outbreak response.

These performance standards apply to polio outbreaks of all grades. The timeframe for the expected response is counted forward from the date of the laboratory results. Each task is associated with the country and GPEI partners responsible for its completion.

GPEI outbreak response performance standards in Table 10 describe the expected outputs from each level of GPEI partners in each of the six key functions. Concrete deliverables and timelines are provided as well.

TABLE 10: GPEI poliovirus outbreak response performance standards according to six key functions and response timeline

1. Outbreak investigation, response and assessment

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Upon notification of a polio event		
Develop an initial immunization response plan with identified risk zones and send to GPEI's EOMG to guide grading, funding and vaccine approval	Health ministry to lead; WHO and UNICEF country offices to support	WHO/UNICEF regional offices and headquarters to provide technical support
Plan for mOPV2 vaccine request to WHO Director General if cVDPV2, or if high risk VDPV2 or WPV2.	Health ministry with support from WHO and UNICEF	WHO and UNICEF regional offices and headquarters
Within 24 hours of laboratory result notification		
Ensure health ministry and other relevant government officials are fully aware of the status of the outbreak	WHO and UNICEF country offices	WHO regional offices/headquarters to liaise with the laboratory network (GPLN) to ensure that the WHO country office has the necessary information to provide feedback to country stakeholders
Initiate full epidemiological and social investigation of the outbreak, including a field investigation and community survey to understand community perceptions regarding immunization; include a social assessment of the case(s), knowledge, attitude and practice indicators and a rapid community assessment of the main social issues	Health ministry with support from WHO country office and UNICEF	GPEI partners will provide external technical support in field investigation
Ensure notification of the EOMG and relevant staff who will be involved in supporting the outbreak response		WHO headquarters
Surveillance response		
Conduct a rapid analysis of AFP surveillance and laboratory databases	WHO country office to analyse and share the information with headquarters	WHO headquarters to perform additional analysis and share it with all stakeholders
Within 72 hours		
Finalize and share the report on the initial epidemiological and social investigation of the outbreak and the assessment of the case or case cluster's social profile	Health ministry with support from WHO country office and UNICEF	GPEI partners will provide external technical support EOMG must be provided with the report
Ensure outbreak grading by the EOMG		EOMG chairperson
Provide the country office with updated materials and guidelines on outbreak response (the Short Interval Additional Dose strategy, expanded age group, etc.) *(6)*		WHO and UNICEF regional offices and headquarters

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Initiate the development of a 6-month outbreak response plan document that includes details for subnational implementation in high-risk areas on vaccine and other required supplies, social mobilization field activities and the budget needed to cover the activities	First surge outbreak coordinator to plan with support from WHO and UNICEF country team and the health ministry	Regional offices and headquarters to provide technical support
Immunization response		
Begin planning to establish an EOC for the first immunization round at the national and subnational levels to develop microplans with vaccines, logistics, and a social mobilization component	Health ministry with support from WHO and UNICEF; surge staff to provide close guidance in field	WHO and UNICEF regional offices
Prepare for mOPV2 vaccine request to WHO Director General if cVDPV2, or if high risk VDPV2 or WPV2.	Health ministry with support from WHO and UNICEF	WHO and UNICEF regional offices and headquarters
Surveillance response		
Initiate enhanced surveillance activities, including actively looking for AFP cases, retraining health workers and taking samples from contacts of all AFP cases (≥30 contacts according to context); increase the frequency of environmental sampling where appropriate; review genetic sequencing of isolates to map spread of the virus	Health ministry with support from WHO– rapid response team (Team A) staff to provide close guidance in the field	
Within 14 days		
Finalize the 6-month outbreak response plan document and make it available to all partners	Team A and surge response team (Team B), with repurposed country staff	
Complete and present for review a preparedness dashboard for immunization and other outbreak response activities	Health ministry with support from WHO and UNICEF to prepare and present	Relevant GPEI partners including mOPV2 Advisory Group and/or OPRTT to review
Immunization response		
Establish EOC at the national and subnational levels to develop microplans with vaccines, logistics as well as a social mobilization	Health ministry with support from WHO and UNICEF; Team B staff to provide close guidance in field	WHO and UNICEF regional offices
Send for mOPV2 vaccine request to WHO Director General if cVDPV2, or if high risk VDPV2 or WPV2.	Health ministry with support from WHO and UNICEF	WHO and UNICEF regional offices and headquarters
Conduct training of front-line workers (vaccinators, supervisors and social mobilizers) and monitor activities	Teams A and B, with repurposed country staff	WHO and UNICEF regional offices and headquarters to provide technical support

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Implement the first rapid-interval (2–3 weeks apart) SIAs immunization response campaigns, considering an expanded age range (for type 2 post switch, please refer to type 2 protocol)	Health ministry with support from WHO and UNICEF under overall coordination of first surge coordinator	WHO and UNICEF regional offices and headquarters to provide logistics and technical support
Establish campaign monitoring for the SIAs (independent monitoring) ensuring that the results are internationally posted on the WHO global website within 14 days of the end-date of each campaign	WHO country office	WHO headquarters to provide technical support
For mOPV2 response ensure comprehensive management of doses deployed including recording, retrieval and disposal of balance stocks at end of response	Teams A and B with repurposed country staff	
Surveillance response		
Liaise with in-country data managers to identify and resolve data format and completeness issues, if any	Teams A and B with country staff	
Within 14 days to outbreak closure		
Fully implement the comprehensive six-month outbreak response plan	Teams A and B with repurposed country staff to coordinate the implementation with the health ministry	WHO and UNICEF regional offices and headquarters to provide technical, logistics and monitoring support
Immunization response		
Conduct SIAs according to the response plan: • Conduct activities to improve the quality of SIAs including detailed microplanning with special attention to high-risk populations, and tailor social and community mobilization interventions • Conduct vaccinator and supervisor training, using local language modules and including interpersonal communication skills • Establish/strengthen supervision, monitoring and review meetings • Fully implement independent monitoring, including relevant social data on refusals and reasons for missed children and other social barriers • Initiate vaccination and communication strategies to reach missed children	Teams A and B with repurposed country staff to coordinate the implementation with ministry of health	WHO and UNICEF regional offices and headquarters to provide technical, logistics and monitoring support
Surveillance response		
Maintain enhanced surveillance activities, including actively search for AFP cases, retraining health workers and taking stool samples from contacts of all AFP cases cases; and consider commencing environmental surveillance	Teams A and B with repurposed country staff to coordinate the implementation with the health ministry	WHO regional office and headquarters to provide technical, logistics and monitoring support

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
At one month after of laboratory result notification		
Assess the initial response activities (by the OBRA) against established metrics, and report the results to regional directors and GPEI partners	Lead: GPEI coordinator	Regional offices and headquarters to provide technical support
Review and adapt the outbreak response plan, including communications plans for subsequent phases, and track progress made and/or support needed to close any remaining gaps	Lead: GPEI coordinator	Regional offices and headquarters to provide technical support
At three months and thereafter quarterly (from 6 to 12 months after identification of the last case)		
At three-month intervals, conduct external outbreak assessments (by the OBRA) from 6 to 12 months have passed after the first case	GPEI outbreak coordinator to facilitate this assessment. Who conducts?	Lead: WHO regional office, on coordination and implementation
Reassess the grade of the outbreak, based on outcome of OBRA assessment; if the grade changes, response will be adapted accordingly		EOMG responsible for re-assessment of grade
After 6 months or 12 months of the most recent case, conduct an end-of-outbreak assessment focusing on surveillance and eradication activities to advise EOMG and IHR-EC on outbreak closure	WHO and UNICEF country offices to finalize dates and approval with health ministry	Lead: EOMG GPEI partners to coordinate assessment team through WHO regional offices
Report on any gaps in quality of eradication	Outbreak coordinator to facilitate OBRA team to list all gaps	GPEI partners to coordinate assessment team through WHO regional offices
Ensure ongoing high quality surveillance prior to closure	Outbreak coordinator to facilitate	GPEI partners to support
Document the response process and share the lessons learnt	Outbreak coordinator to facilitate the documentation	Lead: WHO regional office, on coordination and documentation

2. Coordination and advocacy

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
WITHIN 24 HOURS OF LABORATORY RESULT NOTIFICATION		
Advocacy		

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Ensure all relevant government officials are duly notified of the outbreak. WHO and UNICEF country representatives will brief the health minister and other relevant officials on the steps required for an urgent response to stop the outbreak. The minister in turn should brief the office of the head of government or head of state on the following specific tasks: • Declare polio a national public health emergency	WHO and UNICEF country representatives brief health ministry and relevant officials Health ministry to brief head of state government	WHO and UNICEF regional offices and headquarters to monitor and facilitate
• Establish an EOC, led by a very senior government official as the designated outbreak focal point, supported by technical staff from partners, and including staff for strategic communication, logistics and supply management, and finance • Conduct the minimum needed (as per this SOP standards) consecutive, high quality vaccination campaigns (SIAs), and ensure that over 95% of all children are consistently reached; Subsequent number of rounds after the three minimum ones to be determined based on type of poliovirus; • Monitor progress closely and establish a systematic oversight mechanism at all levels (national, regional and district) • Report back on the results of vaccination campaigns to the office of the head of government or head of state		
Coordination		
Establish an EOC in the country with designated outbreak focal point(s) from government and partners, including strategic communication, logistics and supply management, and finance members/staff	Health ministry to coordinate with WHO country office and UNICEF WHO to facilitate coordination with UNICEF	WHO and UNICEF regional offices and headquarters to monitor and facilitate
Establish conference calls with GPEI partners and the regional and country offices (the call should take place daily in the first week, and weekly thereafter)	WHO regional and country offices to participate	Lead: WHO regional offices/headquarters, GPEI partners to participate as desired
Request expedited procedures for visas at the port of entry for initial outbreak responders	Country to facilitate; WHO and UNICEF country offices to assist	WHO and UNICEF regional offices/headquarters to rapidly provide the required documents
WITHIN 72 HOURS		
Advocacy		

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Write to the health minister on behalf of WHO and UNICEF regional directors to highlight the "emergency" and the full support of the country representatives and organizations	WHO/UNICEF regional directors	Lead: WHO/UNICEF regional offices
Develop an "Internal Advocacy Plan" to engage all relevant stakeholders at the national and subnational level (head of government, relevant ministries, sub-national authorities, parliamentarians and other key stakeholders)	WHO and UNICEF country offices	
Upon request of the country team and if external advocacy is needed to further secure high-level political commitment from the affected country, develop an "External Advocacy Plan" to complement in-country advocacy efforts; and coordinate its implementation		GPEI Political Advocacy Focal Points
Develop a media brief and other communication and advocacy products using the situation report		
Coordination		
Support country in IHR-related actions required after IHR official notification (e.g. responses to WHO IHR requests for verification)	WHO and UNICEF to provide support to the health ministry for implementation	WHO headquarters to provide technical support
Communicate the assessment on the risk of international spread through IHR to WHO		WHO headquarters
Convene a meeting of all the key stakeholders at the national level on the initial outbreak response plan with feedback from subnational teams, and communicate it to the provinces and districts involved in outbreak response	Health ministry with support from GPEI outbreak coordinator, WHO and UNICEF country teams	
Initiate communication on the outbreak with the broader donor community as well as a media response	WHO and UNICEF country offices with in-country donors and media	GPEI Polio Advocacy and Communications Team with global donors and media
WITHIN 14 DAYS		
Advocacy		
Establish a mechanism to track the implementation of the "Internal Advocacy Plan" and communicate any further external advocacy needs (through outbreak calls and situation reports);	WHO and UNICEF country offices	Lead: Outbreak Coordinator (through situation reports and outbreak calls)

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Track the implementation of the "External Advocacy Plan", regularly reporting on status and outcome of activities (through outbreak calls and monthly advocacy tracker)		GPEI Political Advocacy Focal Points (through outbreak calls and monthly advocacy tracker)
Coordination		
Establish a weekly meeting with key stakeholders in the country (the outbreak response cell) to coordinate and implement the outbreak response plan	Health ministry with support from WHO and UNICEF country teams	Regional offices and headquarters to provide needed support
Inform governments in risk zone, if any, about the outbreak, the initial response plan and the actions required	Lead: WHO and UNICEF country offices	WHO and UNICEF regional offices and headquarters to support
Align with health clusters among other partners to conduct additional interventions alongside OPV whenever possible	WHO and UNICEF country offices with in-country partners	EOMG with headquarters of relevant international organizations and institutions
Develop microplans, with vaccine logistics as well as social mobilization at national and subnational level	Teams A and B with repurposed country staff	WHO and UNICEF regional offices and headquarters to provide technical support
Develop tools and training manuals for microplanning and monitoring, and ensure that all tools have an integrated strategic communication component	Teams A and B with repurposed country staff	WHO and UNICEF regional offices and headquarters to provide technical support
FROM 14 DAYS TO OUTBREAK CLOSURE		
Conduct weekly meetings with all key stakeholders on the outbreak response plan and coordination	Health ministry with support from WHO and UNICEF, monitored and supported by the GPEI outbreak coordinator	WHO and UNICEF regional offices and headquarters to provide support needed
Hold weekly conference calls with GPEI partners and regional and country offices	Teams A and B with repurposed country staff	Lead: WHO regional offices to set up a weekly call with country and headquarters; WHO headquarters to coordinate partner outbreak call
Conduct regular donor meetings and advocacy activities	Teams A and B with repurposed country staff	WHO and UNICEF headquarters develop funding appeal and share with the regional and country offices
Ensure alignment with other partners and health clusters to conduct additional interventions alongside OPV, such as providing vitamin A and deworming tablets, whenever possible	Teams A and B with repurposed country staff	WHO and UNICEF regional offices and headquarters to provide technical support

3. Technical and human resources

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
WITHIN 24 HOURS OF LABORATORY RESULT NOTIFICATION		
Activate GPEI's rapid response team (Team A), share the contact details with relevant staff throughout the partnership and have the rapid response team leader communicate with GPEI partners, regional and country offices to identify focal points	WHO and UNICEF country offices to send approval for travel of the rapid response team	WHO and UNICEF headquarters to activate Team A in coordination with regional offices
Assess on-the-ground human resource capacity of WHO, UNICEF and other partner in-country staff	WHO and UNICEF country offices to share information with WHO headquarters	
WITHIN 72 HOURS		
Deploy Team A for coordination and development of the outbreak response plan, along with other identified staff as needed (technical, operations, communications and data)	WHO and UNICEF country offices to make in-country arrangements	WHO and UNICEF headquarters in coordination with their regional offices to send travel details for deployment
Ensure all technical and human resources issues are well addressed in the development of a six-month outbreak response plan document	First surge outbreak coordinator to plan with support from WHO and UNICEF country teams and the health ministry	UNICEF regional offices and headquarters to provide technical support
Identify the human resource surge capacity "Team B" (technical, operations and communications staff) from the pre-identified pool for deployment to the country	WHO and UNICEF country offices to send clearly identified needs requests with support from outbreak team leads	WHO headquarters to coordinate with GPEI partners
Evaluate country office administrative capacity and gaps, and find solutions	WHO and UNICEF country offices to provide information on current capacity and perceived needs	WHO and UNICEF regional offices and headquarters to evaluate needs
WITHIN 14 DAYS		
Prepare to deploy (after three weeks of the laboratory result notification) surge response staff (Team B; national and international technical, operational and communications) to support the national, subnational and field sites	Health ministry, WHO and UNICEF country offices to facilitate arrival and plan for deployment under guidance of first surge coordinator	WHO headquarters to coordinate with GPEI partners (including UNICEF, US Centers for Disease Control and Prevention, government) and complete the deployment process

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Support the finalization of the six-month outbreak response plan document in regard to technical and human resources issues and make it available to all partners	Teams A and B with repurposed country staff	
Prepare for smooth transition and handover from Team A to Team B. Team B being deployable within three weeks of the laboratory result notification (Annex 2)	Outbreak coordinator	WHO and UNICEF regional offices and headquarters
FROM 14 DAYS TO OUTBREAK CLOSURE		
Follow up and support the implementation of the comprehensive six-month outbreak response plan	Teams A and B with repurposed country staff to coordinate the implementation with the health ministry	WHO and UNICEF regional offices and headquarters to provide technical, logistics and monitoring support

4. Information management

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
UPON NOTIFICATION OF A POLIO EVENT		
Initiate an assessment of the security and access situation in the outbreak and high-risk zones	Country field security officer	Global field security officers for polio
Complete a full, detailed situational data analysis and make it available to EOMG for outbreak grading	WHO and UNICEF country offices to send analysis to headquarters	WHO and UNICEF regional offices and headquarters to finalize EOMG situational analysis
WITHIN 24 HOURS OF LABORATORY RESULT NOTIFICATION		
Using data from the rapid analysis of AFP surveillance and laboratory data, update maps with WPV cases and SIAs, and share the information with all relevant stakeholders	WHO country offices to analyse and share the information with headquarters	WHO headquarters to perform additional analysis and share it with all stakeholders
WITHIN 72 HOURS		
Compile and produce a situation report using a standard format, as well as a media brief and other communication kits and products	WHO country offices in conjunction with the health ministry and UNICEF to produce the situation report	WHO headquarters to provide support
WITHIN 14 DAYS		

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Establish a system to produce weekly situation reports, a media brief and other communication kits and products	WHO country offices in conjunction with the health ministry and UNICEF to produce the situation report	WHO headquarters to provide support
Liaise with in-country data managers to identify and resolve data format and completeness issues, if any		WHO and UNICEF regional offices and headquarters
FROM 14 DAYS TO OUTBREAK CLOSURE		
Continue producing a weekly situation report using a standard format, with epidemiological and social data, as well as a media brief and other communication kits and products	WHO country offices in conjunction with the health ministry and UNICEF to produce the situation report	WHO headquarters to provide support for media brief, communication and advocacy material
Ensure surveillance, SIA and monitoring data are completed and sent to WHO and UNICEF regional offices and headquarters according to agreed timelines (within 14 days for all SIAs, and at least weekly for AFP data)	WHO country offices to ensure timely data transmission	

5. Communication, social mobilization and behaviour change

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
WITHIN 72 HOURS AFTER OF LABORATORY RESULT NOTIFICATION		
Share the C4D polio toolkit and list of long-term agreements that the country office can immediately use to accelerate the response		UNICEF regional offices and headquarters
Identify the C4D and external communication human resources needs	UNICEF country team	UNICEF regional offices and headquarters to provide technical support
Initiate media monitoring and conduct a media landscape analysis if it does not already exist	UNICEF country team	UNICEF regional offices and headquarters to provide technical support
Identify a media focal person and spokesperson from the government, WHO and UNICEF	UNICEF country team	WHO and UNICEF country offices
Finalize the media protocol and kit with key messages, and produce media briefs and other communications relevant to the outbreak for local use and regional/global outlets	UNICEF country team	WHO headquarters and UNICEF regional offices and headquarters to provide technical support
Work with partners and government counterparts to conduct a press brief/media release, if appropriate	UNICEF country team	WHO and UNICEF headquarters to provide technical support

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Receive and review all media releases/newsfeeds related to the outbreak and share with focal points; target other non-media communication channels that may be effective in certain settings	UNICEF country team	UNICEF regional offices and headquarters to provide support
Ensure the completion of social profiling of the case using special investigation tools to guide the design of C4D interventions	Government and UNICEF country teams	
WITHIN 14 DAYS		
Finalize C4D community engagement and information dissemination strategies	UNICEF country office team with technical support from regional office	UNICEF regional offices and headquarters to provide technical support
Finalize key C4D messages to communicate through various channels, including mass media	UNICEF country team in partnership with the health ministry	UNICEF regional offices and headquarters to provide technical support
Facilitate and lead the reinvigoration of a social mobilization and/or communications plan in areas where polio has not been present for a long time so communities and health workers are sensitized to the dangers of the disease and the benefits of the vaccine	UNICEF country offices and C4D technical liaison	UNICEF regional offices and headquarters to provide support
Develop a media response plan and conduct briefings with political, religious and community leaders and other stakeholders	UNICEF team under guidance of GPEI outbreak coordinator	UNICEF and WHO regional offices and headquarters to provide technical support
Develop a special crisis communication plan to address rumours in case of resistance to vaccination and to respond to adverse event following immunization	UNICEF with the health ministry	UNICEF country and regional offices to provide support
Support national and local partners to conduct mass and/or community strategic communication campaign(s)	UNICEF with the health ministry	UNICEF country offices with support from regional office
Ensure the availability of Information, education and communication materials for use at the community level, based on the key messages identified	UNICEF with the health ministry	UNICEF headquarters to provide support
Begin interpersonal communication training all categories of health and social mobilizers	UNICEF supports the health ministry in coordination with WHO	UNICEF country offices with support from regional office
Ensure microplanning, and that monitoring tools and training manuals include strategic communication activities	Health ministry, supported by WHO and UNICEF; surge staff to provide close guidance in field	WHO and UNICEF country offices with support from regional office(s) and headquarters
Ensure inclusion of a communication budget and communications plan in the six-month outbreak response plan	UNICEF supports the health ministry in coordination with WHO	UNICEF country offices with support from regional office
FROM 14 DAYS TO OUTBREAK CLOSURE		

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Take steps to implement a strategic communication response plan • Launch a public mass communication campaign as appropriate • Disseminate Information, education and communication and interpersonal communication products and tools in the local language, based on identified barriers to immunization • Mobilize other sectors, especially influencers (such as religious leaders), to provide access to hard-to-reach communities • Train vaccinators and mobilizers on communication messages and interpersonal communication skills • Engage the media, and monitor and apply the adverse event following immunization protocol to address rumours immediately • Conduct pre-campaign awareness sessions of high-risk and hard-to-reach areas • Undertake in-depth reviews of potential vaccine refusals or issues of mistrust that must be addressed	UNICEF to support the health ministry in coordination with WHO	Regional offices and headquarters to provide technical and monitoring support
Ensure measurement of the communication interventions with a special monitoring of missed children		

6. Finances and logistics

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
WITHIN 24 HOURS FROM LABORATORY RESULT NOTIFICATION (AIM FOR EARLIER IF POSSIBLE)		
Alert the UNICEF supply division or other vaccine suppliers to the outbreak and imminent need for the rapid delivery of vaccines and associated logistics (finger-markers, etc.)	WHO and UNICEF country offices to communicate initial plans to WHO and UNICEF regional offices and headquarters	WHO regional offices and headquarters to communicate need to UNICEF supply division, in coordination with UNICEF headquarters
For response to type 2 poliovirus, post switch, mOPV2 (and IPV) releases on WHO Director General's approval		WHO headquarters
WITHIN 72 HOURS		
Allocate lump-sum funding to regional and country offices to cover the initial outbreak response activities		WHO and UNICEF headquarters

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Check the availability, and order and initiate the transport of vaccines per the initial estimate and outbreak response plan		UNICEF headquarters
WITHIN 14 DAYS		
Review and release a budget consistent with the six-month outbreak response and communications plan	Rapid response team and surge response team (Teams A and B), with repurposed country staff to coordinate the implementation with the health ministry	WHO and UNICEF regional offices and headquarters
Assess cold-chain capacity and take steps to fill gaps in capacity	Country team to assess and express need	UNICEF headquarters to order to fill gap
Order vaccine and finger-markers for additional campaigns according to the outbreak response plan	Country team to assess and communicate need	UNICEF and WHO headquarters to order
Review additional administrative and logistical support budget	Country team to assess and share budget	WHO headquarters to review budget and release funds
Initiate process to fill vacant positions in infected and high-risk areas	Country team	WHO and UNICEF regional offices to track and support

7. Special circumstances (complex emergency settings)

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
UPON NOTIFICATION OF A POLIO EVENT		
Assess the security and situation in the outbreak and high-risk zones	Country team to gather and provide information to WHO and UNICEF headquarters	WHO and UNICEF headquarters to summarize and incorporate information available at their level
WITHIN 72 HOURS OF LABORATORY RESULT NOTIFICATION		
Have the polio security adviser conduct a field-level assessment	Country team to facilitate	WHO and UNICEF headquarters security adviser to coordinate
Deploy an international outbreak coordinator (if required for a multi-country response) and other staff (technical, operations, communications and data) with work experience in complex humanitarian emergencies	Country teams to provide all required information support	WHO headquarters to identify and deploy such person for initial surge

ACTIVITIES	COUNTRY	REGIONAL/GLOBAL
Initially identify the key stakeholders/influencers group working in the area	Lead country teams to collect this information	WHO and UNICEF headquarters to support
Inform the United Nations Resident Coordinator and the Humanitarian Country Team	WHO representative	
Coordinate with the United Nations Department of Safety and Security on field missions	WHO and UNICEF country teams, with advocacy from their representative level	
Initiate the development of an access plan including the C4D component	WHO country team in coordination with UNICEF and the health ministry	WHO and UNICEF headquarters to provide technical support
Initiate coordination with other United Nations and humanitarian agencies on the ground	WHO representative	WHO headquarters to facilitate from high level
Collect information on public sentiment to vaccination and identify any possible behavioural barriers or anti-vacation groups	WHO and UNICEF country teams	
WITHIN 14 DAYS		
Take steps to initialize and implement the access plan • Negotiate access through key players, influencers and stakeholders • Plan for opportunistic vaccination strategies to reach populations in inaccessible areas	WHO country team with support from UNICEF country team for engagement	WHO and UNICEF headquarters to provide technical support
• Plan and conduct protected campaigns • Engage the community		
Deploy a pre-identified field security officer	Country team to identify the candidate	WHO headquarters to facilitate and provide contract
Plan and implement a permanent vaccination point strategy surrounding inaccessible areas	WHO and UNICEF country teams with the health ministry	WHO headquarters to provide technical support
FROM 14 DAYS TO CLOSURE OF THE OUTBREAK		
Continue to implement the access plan and modify as needed to achieve closure • Access through negotiation with key players, influencers and stakeholders • Continue opportunistic vaccination strategies to reach populations in inaccessible areas • Plan and conduct protected campaigns	Country office to explore options at local level	WHO and UNICEF headquarters to explore and implement at higher level, including advocacy with headquarters of other agencies as necessary

Annexes

Annex 1: SOP at a glance

FIGURE A1–1A: SOP at a glance: from event to outbreak according to poliovirus isolates

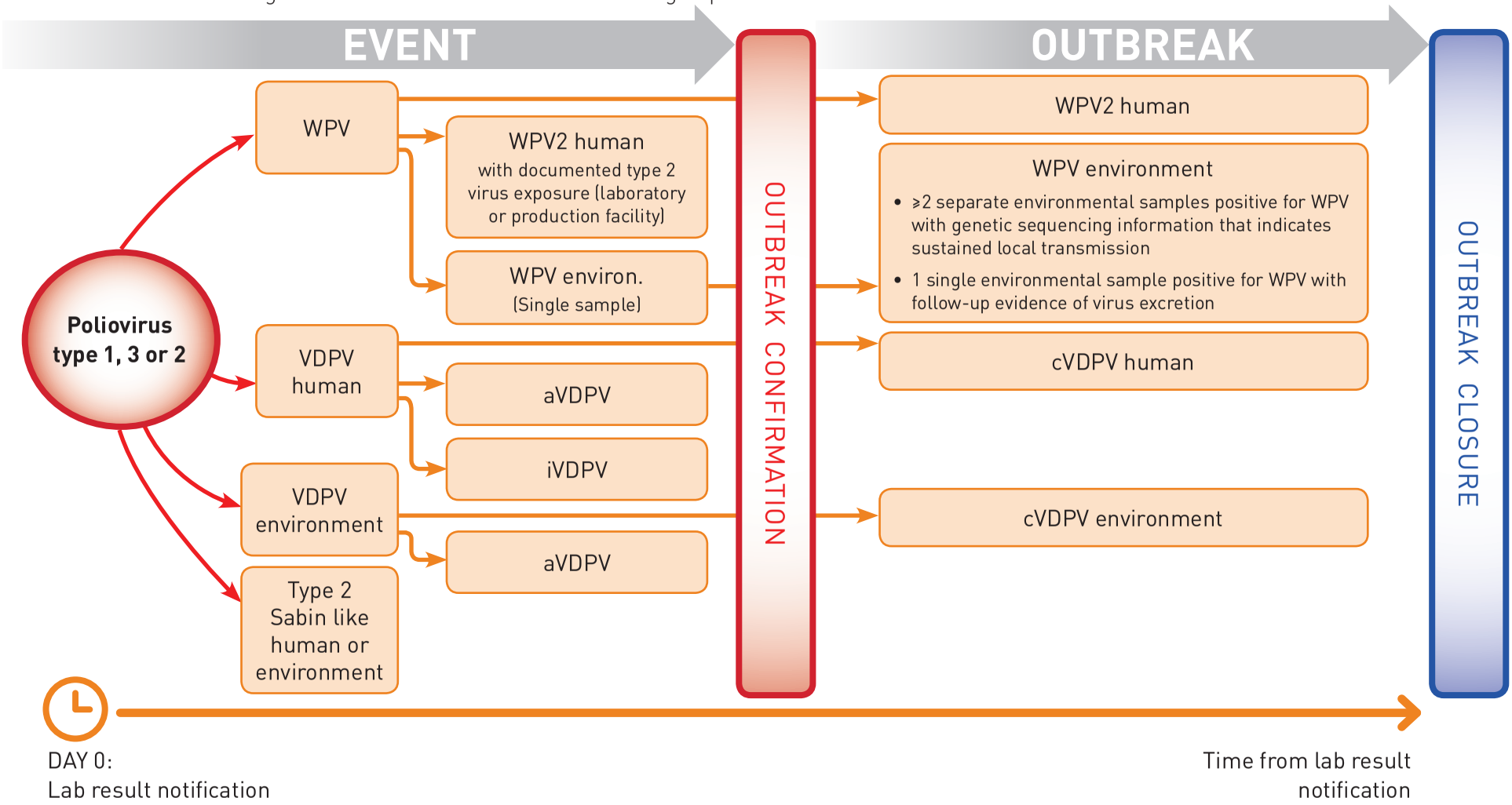
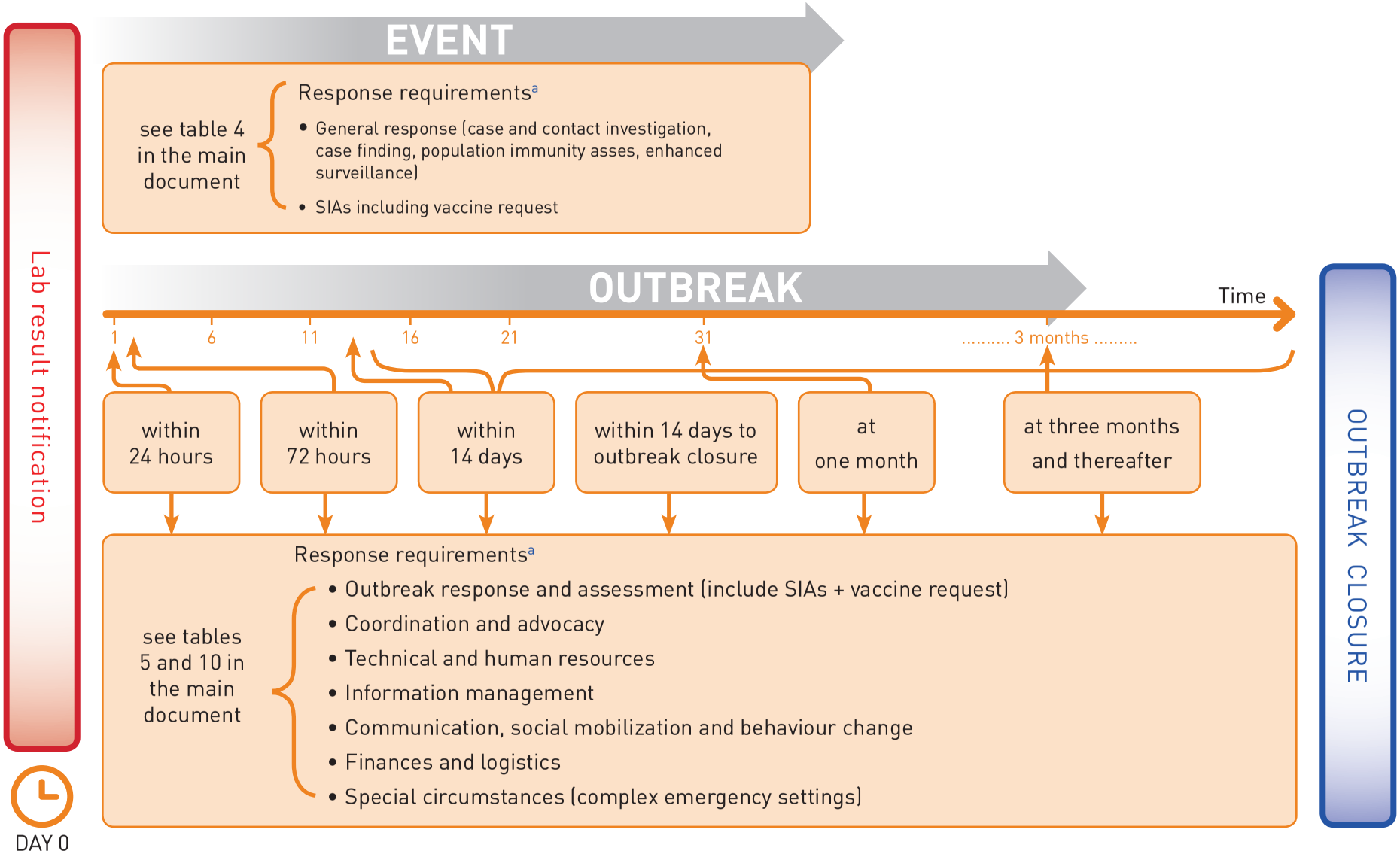


FIGURE A1–1B: SOP at a glance: timeline and response requirements for poliovirus events and outbreaks



a The scope of the response to a detected event or outbreak will depend on the poliovirus type, classification, and, in some circumstances, the local situation. Post switch, detection of even a type 2 event may require a more aggressive response than recommended for the other poliovirus types.

Annex 2: International Health Regulations notification for polio

The main governing documents for this chapter are:

- WHO Guidance for the use of Annex 2 of the International Health Regulations (2005) *(11).*
- Statement on the Seventh IHR Emergency Committee meeting regarding the international spread of poliovirus. WHO statement 26 November 2015 *(9)*.
- IHR case definition, IHR Annex 2 *(10)*.

Notifiable polio conditions and events[6]

Countries must notify WHO about three conditions or events listed below for it to be labelled as an "event that may constitute a public health emergency" in accordance with IHR:

(i) **WPV isolated from an AFP case or a case contact** is one of the four critical disease entities under IHR, which must always be notified to WHO irrespective of the context in which they occur *(10)*.

(ii) **WPV or VDPV isolated from source other than AFP cases (environmental sample or human without paralysis)** must also be notified to WHO as they fulfil at least two of the four criteria for notification from IHR Annex 2 (2005) *(11)*: (a) serious public health impact; and (b) unusual or unexpected event. The final two criteria may also be met: (c) significant risk of international spread of disease; and (d) significant risk of international trade or travel restrictions.

(iii) (proposed[7]) **Sabin-like type 2 virus post switch** must also be notified to WHO if more than four months have passed since the switch from tOPV to bOPV; as they fulfil at least two (i.e. (a) serious public health impact, and (b) unusual or unexpected event) of the four criteria for notification from IHR Annex 2 (2005).

Timing of assessment and official notification *(11)*

Within a country, all public health events that may meet any one of the four IHR criteria have to be **assessed** for potential notification **within 48 hours** of the country becoming aware of it at the national level. This regular and routine assessment of national events should be based upon the public health information available and the application of established epidemiological principles by experienced public health professionals. The same event may be reassessed over time as necessary and as further relevant information about the event becomes available.

6 Notification for type 2 Sabin-like virus 4 months after the switch, i.e. from September 2016 onwards.

7 A proposal to amend the IHR WHO polio case definition based on Global Action Plan III containment criteria, has been done to include type 2 Sabin in addition to WPV and VDPV with the same IHR criteria being met (unexpected and serious impact), with an effective date from 1 August 2016 being 3 months after the last possible date for the switch. The proposal still needs to be validated by the IHR-EC.

If a country assesses an event and finds it notifiable using the IHR decision instrument *(11)*, it is required to **notify** it **within 24 hours** to the WHO. Where an initial assessment of an event is negative but a subsequent assessment meets the notification requirement, then it has to be notified to WHO within 24 hours following this positive re-assessment.

Special note on event identified outside of country territory

Under IHR Article 9.2 "other reports", the country must inform the WHO about any public health risk identified outside their territory that may cause international disease spread (such as by imported or exported human polio cases, infected or contaminated goods (environmental polio)), within the same timeline as an in-country IHR notifiable event (so within 24 hours of receipt of the evidence).

The following table summarizes the various timeframes for IHR official notification and activities for polioviruses.

TABLE A2–1: Timeframe for IHR activities and official notification of polioviruses

Notifiable polio conditions and events	Timeframe	Action	Description	Responsible body
WPV isolated from an AFP case or a case contact	**Within 48 hours** of the country becoming aware of it at the national level	**IHR event assessment**	Within a country all public health events which may meet any one of the four IHR criteria have to be assessed for potential notification	**National authorities** plus in consultation with WHO
WPV or VDPV isolated from source other than AFP cases Sabin-like type 2 virus post switch	**Within 24 hours** of the assessment	**IHR official notification** to WHO	A country assesses an event (inside or outside country territory) and finds it notifiable using the IHR decision instrument	National IHR focal point, to the **WHO Regional office** IHR Contact Point (with copy to WHO country office and headquarters and relevant national authorities)

Processes to notify

- An official notification should be made via the national IHR focal point to the relevant regional WHO contact point within 24 hours of confirmation of the diagnosis of polio.
- In practice the **country polio focal point, usually at the health ministry, should also notify** the WHO country office, or polio advisor at the relevant WHO regional office within 24 hours of receiving the laboratory result of a polio-positive isolate (sequencing results) so that the programmatic action commences rapidly. The country's GPEI partners must be copied on the correspondence.

- When the **WHO regional office** confirms the notification with the country and the GLPN-affiliated laboratory, it becomes an *official IHR notification* and is reported to WHO headquarters.

Other types of IHR reporting to WHO

In addition to notification, other provisions in the IHR require reporting to WHO. An additional important option for a country assessing events is to **consult** with the WHO in circumstances not requiring notification at the time or where related guidance is needed (Article 8 of IHR 2005). This consultation process can be appropriate when there is insufficient available information to complete the decision instrument assessment, or if a country seeks advice on appropriate public health investigative or response measures, or otherwise wishes to keep the WHO informed.

Annex 3: Handover of rapid response team (Team A) to surge response team (Team B)

Rationale and guiding principles

Effective handover from the outgoing Team A to the incoming Team B is crucial to continuity of outbreak response and the best use of resources. Key components to successful handover include:

- Detailed in-person handover briefings.
- Handover of documents with checklists containing essential information, such as background, response plans, successes and challenges encountered, key reference materials, and a list of key contacts.
- Initial response assessment report, and agreed objectives to be achieved within 30 days and "Next Steps" to get there, priority areas to support, as well as the best practices in the context.

Ensure overlap between the two teams

Allow time to handover properly, e.g. ideally at least three to seven days. If there is no overlap, employ alternate means of communication (e.g. video- or tele-conferences) to ensure successful and effective handover.

If all incoming Team B members arrive at the same time, a complete briefing of the whole team is expected. Conversely, a staggered handover will allow for continuity between the teams when Team A members depart and Team B members arrive at different times. It may be good for one Team A person to remain for an extended period of one or two weeks (e.g. the Team A leader or another of the three key positions: operations, technical, communications).

Overview of the handover process

Every handover should include: key introductions, thorough face-to-face discussions, briefings (including media), and a field visit. A semi-structured handover checklist should be used as a guide (see below).

Team introduction and desk discussion

Introductions should aim to provide a group briefing followed by a one-on-one briefing of Team A to Team B members; and introducing Team B to other partners involved in the outbreak response.

Internal introductions: These include focus one-on-one meetings on the operations action plan, a comprehensive list of partners and what they bring to the outbreak response; the lessons learned and the landmark issues to consider; as well as key office staff to connect incoming team members to necessary administrative supports.

External introductions: These include introducing Team B members, particularly the technical lead, to key outbreak response partners. The list of partners will vary, but generally comprise government officials; key staff members; focal points within the national rapid response team; and key partners or focal points within the partnership from all relevant levels (e.g. country, regional office, headquarters). Key partners include the health ministry, WHO and UNICEF at the minimum.

Teams A and B should attend key meetings together to facilitate building relationships. To enable clear expectations for all, it is necessary to explain the "terms of reference" of Team B early in meetings with partners.

Share all key documents during handover

Share all documents by various means such as on share-point, cloud, USB key to avoid any loss. Documents should cover the following categories:

- List of persons and key contacts, most current outbreak response plan, list of activities (completed, ongoing and planned), the organizational structure (human resources, meetings), challenges, opportunities, recommendations, etc.
- Orientation on practical questions, such as travel authorization, transports, security issues, car rental, hotel reservation in the field, etc.
- An explanation of the hierarchical lines of all partner agencies, including names and contacts for the persons who manage logistics and finance.
- All challenges, constraints, pending issues, bottlenecks, and expectations regarding all fields of activities (human resources, vaccines, vaccination, surveillance, etc.).
- Raw data on SIA and monitoring activities in addition to any shared reports.

General Documents	Yes	No
Government notification of the outbreak		
EOMG grading		
Communication lettre with IRH		
Letter to the Health Minister to highlight the emergency		
Initial epidemiological and social investigation report		
Rapid community assessment report		
Risk analysis report		
Vaccine, other items and log requirements and dates of delivery		
Outbreak response plan		
Outbreak response Budget		
HR surge plan		
Revision of the outbreak response plan if already done, including communications plans for		
subsequent phases		
Ongoing outbreak investigation, lab reports,...		
SIAs: rounds, target population, microplans, vaccination and social mobilization teams, timing, type of		
vaccines, special strategies, etc.		
Vaccinator and supervisor training manuals, using local language modules and tools		
Independent monitoring report of the last round, including relevant social data.		
Independent monitoring training manual and tools		
Special vaccination and communication strategies to reach missed children.		
Detailed micro-plans with special attention to high risk populations		
Plan for opportunistic vaccination strategies to reach population in inaccessible areas		
Permanent vaccination point strategy surrounding the inaccessible areas		
Plan for AFP surveillance		
Surveillance data updated and available, including Active surveillance visit completeness, AFP cases		
with contact sampling, AFP cases found during SIA, ES if available, etc.		
AEFI surveillance document and protocol		
Plan for strenghtening routine immunization		
SITREPs, bulletins, newsletters,...		
Security reports		

Communication	Yes	No
Overall outbreak response communication plan		
IEC and IPC products and tools in local language		
Vaccinators and mobilizers training module on communication messages and skills		
Appropriate content for advocacy and messaging strategies		
Media landscape		
Review on potential vaccine refusals or issues of mistrust or rumours to be addressed		

Contacts	Yes	No
List of contacts persons (e-mail, phones, address) : MOH, UNICEF, WHO, partners, agencies, NGOs, security contacts, journalists, etc.		

Conference calls, Meetings	Yes	No
Conference calls with who, when, objectives,... and minutes		
Outbreak response cell: who, when, where, ... and minutes		
Donor meetings and advocacy activities		
Supervision and review meetings;		

Calendar	Yes	No
- Chronogram of activities, meeting and calls		
- Country Outbreak Dashboard		
- Tracking sheet of progress made and/or support needed to close any remaining gaps		
- Periodic external outbreak response assessments		

Technical documents	Yes	No
List of technical guidelines that should be available in the field as well as templates and tools to develop		

Closure	Yes	No

Although outbreak closure should occur within a matter of months, Teams A and B should already plan for the post-outbreak period from the beginning. As such some activities need to be proposed or identified during the handover; for example, the focus on surveillance activities to maintain polio-free status, documentation of interruption, etc.

Annex 4: Terms of reference for rapid response team (Team A) and surge response team (Team B)

TERMS OF REFERENCE: OUTBREAK TECHNICAL LEAD (National Level)

Introduction:

The Global Polio Eradication Initiative (GPEI) seeks to ensure that future generations of children will be free from the threat of polio paralysis. Achieving this goal depends on interrupting poliovirus transmission in the remaining endemic countries and on ensuring rapid and effective responses to poliovirus outbreaks occurring in polio-free countries. The GPEI recently revised its Standard Operating Procedures (SOPs) for response to new polio outbreaks.

This document describes the terms of reference for the Outbreak Technical Lead in the context of the revised SOPs.

Purpose of the position:

The Outbreak Technical Lead is responsible for the overall management of the operational response to the poliovirus outbreak, working under the supervision of the head of WHO/UNICEF offices and in collaboration with health authorities and other health partners.

The technical lead will be deployed to countries as part of the rapid response team (Team A) or the surge response team (Team B).

Summary of assigned duties:

- Support heads of WHO/UNICEF country offices with strategic and operational oversight of polio outbreak response operations, ensuring that they address the needs of the population and are aligned with plans and strategies of the government/health ministry as well as the polio outbreak response SOPs.
- Lead and guide Team A and Team B on outbreak response strategies and technical oversight of the response activities.
- Foster close coordination with the health ministry, in-country health and other partners, and WHO regional offices and headquarters as well as assist in the organization of regular coordination meetings, teleconferences and updates.
- Work with the health ministry/WHO/UNICEF teams to develop a national outbreak response plan, including a budget, chronogram of activities, and human resources surge plan, periodically adjusting and adapting the plan, as needed.
- Collaborate with the health ministry/WHO/UNICEF teams to establish outbreak response structures that include the four components of outbreak response: (i) outbreak investigation, (ii) outbreak response immunization, (iii) strengthening AFP surveillance, and (iv) strengthening routine immunization.
- Collaborate with the health ministry/WHO/UNICEF teams to produce updates of outbreak response activities (e.g. SitRepS, bulletins, and newsletters) for distribution to relevant partners.
- Collaborate with the health ministry/WHO/UNICEF teams to organize periodic external outbreak response assessments.

- Collaborate with the health ministry/WHO/UNICEF teams to document the closure of the outbreak.
- Collaborate with the health ministry/WHO/UNICEF teams to assess the security situation in the geographic areas included in the response; and as necessary, engage appropriate partners to discuss special strategies and resources for insecure areas.
- Collaborate with the communications team to ensure the preparation of an overall outbreak response communication plan and the appropriate content of advocacy and messaging strategies.
- Collaborate with the Outbreak Operations Manager to ensure that the logistical aspects of the outbreak response, especially financing and human resources, are managed with optimal efficiency.
- Review and clear donor products and provide strategic guidance on resource mobilization and proposal development.
- Undertake other assignments and responsibilities as requested by heads of country offices, regional directors and other partners to support the successful response to the outbreak.

TERMS OF REFERENCE: OUTBREAK OPERATIONS MANAGER (National level)

Introduction

The Global Polio Eradication Initiative (GPEI) seeks to ensure that future generations of children will be free from the threat of polio paralysis. Achieving this goal depends on interrupting poliovirus transmission in the remaining endemic countries and on ensuring rapid and effective responses to poliovirus outbreaks occurring in polio-free countries. The GPEI has recently revised its Standard Operating Procedures (SOPs) for the response to new polio outbreaks.

This document describes the Terms of Reference for the Outbreak Operations Manager in the context of the revised SOPs.

Purpose of the position:

The Outbreak Operations Manager is responsible for: (i) assessing the operational needs and existing infrastructure for polio outbreak response at the country level, (ii) contributing to the development of operational response plans to ensure the availability of flexible operational platforms to support the technical response; and (iii) providing operational inputs to the overall response strategy, including the implementation of the operational work plans, provision of authoritative advice/support to operational units, and collaboration with national/international partners to ensure adequate operational resources.

The Outbreak Operations Manager will be deployed to countries as part of the rapid response team (Team A) or the surge response team (Team B).

Summary of assigned duties:

- Support the operations officers at the WHO/UNICEF country offices with operational oversight of polio outbreak response operations, ensuring that the response is aligned with the plans and strategies of the government/health ministry as well as the polio outbreak response SOPs.

- Liaise with the WHO regional office and headquarters counterparts to report and resolve operational issues that could affect the outbreak response.
- Collaborate with the health ministry/WHO/UNICEF teams to catalogue existing infrastructure and human resources, and assess operational/logistical gaps at the country level to identify what is needed to conduct all aspects of an effective and efficient polio outbreak response.
- Collaborate with the health ministry/WHO/UNICEF teams and the Outbreak Technical Lead to develop operational aspects of the outbreak response plan, including budget (and a mechanism for financial tracking), chronogram of activities, human resources surge plan, and administrative support that feeds into the overall national outbreak response plan. Work with partners and the technical lead to periodically review, adjust and adapt the plan.
- Direct the implementation of the operational outbreak response plan and provide authoritative advice and support to the heads of the different operational units. In particular and as a priority, ensure that needed financial, human (including consultants and other surge team staff and their logistics), and material resources (including vaccines, cold chain equipment, transport, and surveillance tools) are requested, received via expedited procedures, and distributed so that the outbreak response can occur within the timeframe indicated in the SOPs.
- Collaborate with national and international partners to pool operational resources to establish common operational hubs to maximize efficiency and cost-effectiveness.
- Provide frequent and regular reports to the Outbreak Technical Lead on all aspects of operations and contribute updates on operations for situation reports, bulletins and newsletters.
- Oversee logistics related to the periodic external outbreak assessments.
- Work with security partners to assess the security situation in the geographic areas included in the outbreak response; and as necessary, engage appropriate partners to discuss logistical aspects of special strategies and resources for insecure areas.
- Collaborate with the health ministry/WHO/UNICEF teams to fill their vacant positions in the geographic area of the outbreak response.
- Monitor and manage the transparent and effective use of resources, developing detailed lessons learned reports, documenting achievements and obstacles to project implementation, and recommending improvements for future field operations.
- Undertake other assignments and responsibilities as requested by the heads of country offices, regional directors, and other partners to support a successful response to the outbreak.

TERMS OF REFERENCE: OUTBREAK COMMUNICATION OFFICER (C4D and External Communication) (National level)

Introduction:

The Global Polio Eradication Initiative (GPEI) seeks to ensure that future generations of children will be free from the threat of polio virus infection and paralysis. Achieving this goal depends on interrupting poliovirus transmission in the remaining endemic countries and on ensuring rapid and effective responses to poliovirus outbreaks occurring in polio-free countries. The GPEI has recently revised its Standard Operating Procedures (SOPs) for the response to new polio outbreaks.

This document describes the Terms of Reference for the Outbreak Communication Officer in the context of the revised SOPs.

Purpose of the position:

The Outbreak Communication Officer will lead the polio communication support provided to the country during the response to a poliovirus outbreak, working under the supervision of the head of the WHO/UNICEF country offices and in collaboration with the communication teams of those organizations.

The Communication Officer's support to the team at the country office will ensure that the response is aligned with the: (i) plans and strategies of the government/health ministry, and (ii) latest outbreak response SOPs.

The Communication Officer will be deployed to countries as part of the rapid response team (Team A) or the surge response team (Team B).

Summary of assigned duties:

General

- Assess communication needs and existing capacity at the country level.
- Report to WHO/UNICEF headquarters on progress, achievements, and where additional assistance is required.
- Contribute to the development of a communication plan to underpin the technical response, in collaboration with the WHO/UNICEF offices.
- Provide technical input to the overall response strategy, including the implementation of operational work plans and provision of authoritative advice and support to operational units.
- Provide leadership and strengthen the existing communication teams by emphasizing team building and collaboration as a daily routine with national/international partners.

Communication for Development (C4D)

- Ensure conduct of the required social investigation of polio cases as part of the early outbreak response.
- Develop/update/review data on immunization knowledge and attitudes and behaviours of the target audience, especially for high-risk and mobile populations.
- Facilitate and lead the reinvigoration of a social mobilization and/or communication working group or the expansion of an existing one.
- Initiate the development of the social mobilization component of the six-month outbreak response plan document, including details for subnational implementation in high-risk areas and mobile populations, as well as the means for monitoring field activities and budget to cover those activities.
- Finalize C4D community engagement and information dissemination strategies to promote polio and routine immunization.
- Develop and tailor health information products for various target populations/audiences, based on careful assessment of community knowledge, practices and behaviours.
- Ensure that polio microplans (at least in priority areas) include social data and information on social mobilizers and leaders by the time of the first response.

- Provide support for the training of health workers.
- Help implement the strategic communication response plan, including mass communication plans, as appropriate.
- Undertake in-depth reviews of potential refusals of vaccines or issues of mistrust to be addressed.
- Conduct regular analyses of independent data monitoring and other available resources to identify priority areas and devise social mobilization microplans targeting areas that incorporate social mobilization indicators within program monitoring indicators.
- Set up social mobilization teams with delegated authorities at the subnational level, as needed, and oversee the structure until the end of the outbreak with performance monitoring.

External communication

- Conduct a media landscape analysis.
- Support the outbreak response team to prepare an external communications strategy, including engagement with political, religious and community leaders, and other stakeholders.
- Develop polio-related media and external communication packages.
- Identify a media focal person and spokesperson from the government, WHO and UNICEF.
- Work with partners and government counterparts to conduct a press brief/media release, if appropriate, and update donors and partners on work progress.
- Host weekly calls with WHO polio communications counterparts in country offices, regional offices and headquarters.
- Receive and review all media releases/news feeds related to the outbreak and share with focal points. Target other non-media communication channels that could be more effective in certain settings.
- Update talking points and frequently asked questions, as needed (e.g. with changing epidemiology and ahead of vaccination rounds).

Other:

- Undertake other assignments and responsibilities as requested by heads of country offices, regional directors, and other partners to support a successful response to the outbreak.

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