POLIO GLOBAL ERADICATION INITIATIVE

Standard operating procedures

Global guidance for responding to a poliovirus event or outbreak

Version 5.0

Pre-publication version current as of March 2026

Updated by the
Outbreak Response SOP Task Team

EVERY LAST CHILD

POLIO GLOBAL ERADICATION INITIATIVE

Standard operating procedures

Global guidance for responding to a poliovirus event or outbreak

Version 5.0

Pre-publication version current as of March 2026

Updated by the
Outbreak Response SOP Task Team

EVERY LAST CHILD

Cover image generated using ChatGPT (GPT-5.3), 2026

CONTENTS

ACKNOWLEDGEMENTS

This document reflects contributions from epidemiologists, technical experts, laboratory scientists, public health and gender experts, and programme managers from the national, regional and global levels in a process led by the partners of the Global Polio Eradication Initiative (GPEI): the World Health Organization (WHO), Rotary International, the US Centers for Disease Control and Prevention (CDC), the United Nations Children's Fund (UNICEF), the Gates Foundation and Gavi, the Vaccine Alliance. Critical aspects of the standard operating procedures (SOPs) were derived from broad consultations with expert advisory groups, including the Strategic Advisory Group of Experts (SAGE) on immunization, and endorsed by relevant GPEI technical and management groups.

ACRONYMS

ACSM	Advocacy, communication and social mobilization
AFP	Acute flaccid paralysis
aVDPV	Ambiguous vaccine-derived poliovirus
bOPV	Bivalent oral polio vaccine
cVDPV	Circulating vaccine-derived poliovirus
cVDPV1	Circulating vaccine-derived poliovirus type 1
cVDPV2	Circulating vaccine-derived poliovirus type 2
cVDPV3	Circulating vaccine-derived poliovirus type 3
EOC	Emergency Operations Centre
EPI	Essential Programme on Immunization
ERF	Emergency Response Framework
ES	Environmental surveillance
fIPV	Fractional dose of the inactivated polio vaccine
GIS	Geographic information system
GPEI	Global Polio Eradication Initiative
GPLN	Global Polio Laboratory Network
HR	Human resources
IBRA	In-between-rounds activities
IDP	Internally displace population
IHR	International Health Regulations
IM	Independent monitoring
IMST	Incident Management Support Team
IPC	Interpersonal communication
IPV	Inactivated polio vaccine
iVDPV	Immunodeficiency-associated vaccine-derived poliovirus
LQAS	Lot quality assurance sampling
mOPV1	Monovalent oral polio vaccine type 1
mOPV2	Monovalent oral polio vaccine type 2
NEAP	National emergency action plan
NID	National Immunization Day
nOPV2	Novel oral polio vaccine type 2
NPAFP	Non-polio acute flaccid paralysis
NPEC	National Polio Expert Committee
NPORP	National polio outbreak response plan
nRG	nOPV2 Release Group
OBRA	Outbreak response assessment
OPV	Oral polio vaccine
OPV2	Type 2-containing oral polio vaccine
ORPG	Outbreak Response and Preparedness Group
PHEIC	Public Health Emergency of International Concern
PID	Primary immunodeficiency disorder
PIRI	Periodic intensification of routine immunization
POC	Polio Oversight Committee
POSE	Polio outbreak simulation exercise
PRSEAH	Preventing and responding to sexual exploitation, abuse and harassment
QIP	Quality improvement plan
RED	Reach every district
RES	Reaching every settlement
RIC	Reaching inaccessible children
RORG	Regional Outbreak Response Group
Sabin2	Sabin type 2 vaccine virus
SAGE	Strategic Advisory Group of Experts on Immunization
SBC	Social and behavioural change
SIA	Supplementary immunization activity
SIA1	First supplementary immunization activity
SIA2	Second supplementary immunization activity
SIA3	Third supplementary immunization activity
SitRep	Situation report
SL	Sabin-like vaccine virus
SL-1	Sabin-like type 1 vaccine virus
SL-2	Sabin-like type 2 vaccine virus
SL-3	Sabin-like type 3 vaccine virus
SNID	Subnational Immunization Day
SOPs	Standard operating procedures
TAG	Technical Advisory Group
tOPV	Trivalent oral polio vaccine
UN	United Nations
UNDSS	United Nations Department of Safety and Security
UNICEF	United Nations Children’s Fund
VDPV	Vaccine-derived poliovirus
VP1	Viral protein 1
VPD	Vaccine-preventable disease
WHO	World Health Organization
WPV	Wild poliovirus
WPV1	Wild poliovirus type 1
WPV2	Wild poliovirus type 2
WPV3	Wild poliovirus type 3

GLOSSARY

Active outbreak: detection of poliovirus (wild poliovirus [WPV] or circulating vaccine-derived poliovirus [cVDPV]) within the previous 12 months.

Breakthrough transmission: any wild poliovirus type 1 (WPV1) or cVDPV type-specific detection with a date of paralysis onset (in cases of acute flaccid paralysis [AFP] at any age or in an AFP contact) or sample collection date (for community contacts or environmental samples) more than 21 days after the first day of a supplementary immunization activity (SIA). Breakthrough transmission indicates a failure of a specific SIA to stop transmission.

Chronic outbreak: polio outbreak with transmission occurring for more than 365 days of Day 0; subcategory of *persistent outbreaks*.

Concomitant administration: administration of both the novel oral polio vaccine type 2 (nOPV2) and bivalent oral polio vaccine (bOPV). Referred to as "co-administration," this approach is recommended in areas with co-circulation of poliovirus type 2 with types 1 and/or 3. See also: *sequential administration*.

Consequential geography: a subset of countries experiencing a *chronic outbreak* and at least one of the following: the generation of three or more new type-specific emergences of cVDPV (i.e. the emergence was first detected in-country); ten or more exportations to other countries as defined by nearest neighbour data; or a high paralytic burden (≥100) of paralytic cases detected during the outbreak.

Day 0: the date that WHO headquarters or a regional office receives notification of a laboratory-confirmed WPV or VDPV by genetic sequencing.

Failure to respond: failure to launch an *initial outbreak vaccination response*, or a delayed response.

Failure of response: *initial outbreak vaccination response* did not achieve sufficient quality and failed to stop transmission.

Failure of scope: *initial outbreak vaccination response* used an inadequate scope for the geographical area or targeted age group and failed to stop transmission.

Inactive outbreak: no detection of poliovirus (WPV, cVDPV) within the previous 12 months.

Initial outbreak vaccination response: a series of vaccination activities used to address an initial detection of poliovirus; includes an optional *Round 0*, a series of *major vaccination response campaigns* and, if necessary, a *mop-up campaign*.

Major vaccination response campaigns: large-scale vaccination campaigns that are also referred to as SIAs. In a *new outbreak*, three large-scale SIAs are generally recommended.

Mop-up campaign: additional vaccination activities that target districts where monitoring suggests children were missed for immunization. A limited mop-up campaign should be implemented within three weeks after the end of last major SIA to achieve maximum benefit and to boost population immunity within the shortest possible time.

National emergency action plan (NEAP): an outbreak-specific plan that provides a strategic blueprint for a country's polio outbreak response effort. The NEAP defines goals, structures and targeted strategies for stopping transmission of a *persistent outbreak*. NEAPs are co-developed by national governments and the GPEI and usually receive endorsement by leadership within the government. A NEAP is required for all countries classified with a chronic polio outbreak; it replaces the *national polio outbreak response plan*.

National polio outbreak response plan (NPORP): a tactical plan developed and updated by a government that coordinates the national response to a confirmed polio outbreak. The NPORP details management procedures and actions needed to stop transmission, focusing on immediate *major vaccination response campaigns* to improve population immunity and surveillance enhancements to quickly detect transmission.

New outbreak: polio outbreak with transmission for 180 days or less from Day 0.

Outbreak grading: a classification of the severity and risk of infectious disease events, ranging from small local issues (low or Grade 1) to major international crises (very high or Grade 3). Outbreak grading activates or triggers WHO emergency procedures and activities for the management of response efforts, including resource allocation. All polio outbreaks and some high-risk events are graded by WHO.

Persistent outbreak: polio outbreak with transmission continuing for more than 180 days of Day 0.

Polio event: Detection of cVDPV or a vaccine-derived poliovirus (VDPV) without evidence of local transmission in a country previously type-specific free for 12 months or more. Under certain conditions, WPV detection may also be classified as an event.[†]

Polio outbreak: Detection of WPV or cVDPV with evidence of local transmission in a country previously type-specific free for 12 months or more.[†]

Polio-outbreak country: country with a WPV1 or cVDPV type-specific outbreak with active transmission in the previous 12 months. A polio-outbreak country can have up to four polio outbreaks at one time: WPV1, circulating vaccine-derived poliovirus type 1 (cVDPV1), circulating vaccine-derived poliovirus type 2 (cVDV2) and circulating vaccine-derived poliovirus type 3 (cVDPV3).

Round 0: a geographically limited vaccination campaign in the immediate subdistrict area of virus isolation; also referred to as rapid response round. Round 0 must be implemented within 14 days of Day 0 to quickly interrupt further transmission. Round 0 is not equivalent to a *major vaccination response campaign*.

Quality improvement plan (QIP): a tool for identifying key impediments to implementing high-quality SIAs. A QIP should be developed within seven to 10 days after the first SIA, using lessons learned.

Rapid response team: a multi-disciplinary team of experts from GPEI agencies, including regional offices, who are deployed as soon as an outbreak is notified and that remains in-country for a limited period of time.

Sequential administration: administration of nOPV2 and bOPV in separate SIAs. Sequential administration is another vaccination approach recommended for co-circulation of type 2 with types 1 and/or 3. See also: *concomitant administration*.

Surge support: interagency roster used for longer-term deployment of experts to support a response. The expected period of deployment for surge support is from *Round 0* and/or the *initial outbreak vaccination response* until the end of the outbreak. A one-week overlap with the rapid response team ensures a smooth handover.

[†] Refer to Table 4 for detailed classification based on source of the sample.

EXECUTIVE SUMMARY

Since its first publication in 2015, *Standard operating procedures: Global guidance for responding to a poliovirus event or outbreak* has provided guidance to countries on how to respond in a timely, effective manner to a high-risk event or outbreak of poliovirus. With the release of a new and revised fifth version, the Global Polio Eradication Initiative (GPEI) has updated this essential tool to reflect the latest developments within broader epidemiological, virologic and operational contexts.

These standard operating procedures (SOPs) outline priority actions that must urgently be taken by national governments in collaboration with the GPEI for any high-risk polio event or outbreak. In the context of an outbreak, the SOPs set a goal of stopping poliovirus transmission within 120 days (or four months).

Snapshot of priority actions and standards for a poliovirus outbreak

	Initiate an investigation.	*within 24 hours*
	Conduct a risk assessment and grade the outbreak.	*within 72 hours*
	Begin developing (or update) a national polio outbreak response plan (NPORP).	*within 72 hours*
	Declare an outbreak (or high-risk event) as a national public health emergency.	*within 7 days*
	Plan and submit a finalized vaccination response plan.	*within 14 days*
	Launch the initial outbreak vaccination response.	*within 28 days*
	Complete three large-scale vaccination campaigns.	*within 84 days*

Country ownership, GPEI support: Ultimate ownership and accountability for a robust, comprehensive response rests with national authorities, whose strong leadership must be maintained throughout the response effort. Poliovirus high-risk events and outbreaks bring national governments and the GPEI into active collaboration and coordination. Depending on the scope and scale of the outbreak and the country's capacity to respond, the GPEI will provide support that can include technical assistance, response coordination, advocacy or financial and logistical support. In cases of weak country capacity or a high risk of international spread, the GPEI may also quickly deploy a technical liaison and arrange for the longer-term deployment of a multidisciplinary team of regional and global experts whose specialized skillsets can strengthen the response. Outbreak response efforts at the global level are led by the GPEI Outbreak Response and Preparedness Group (ORPG), in close coordination with the relevant regional offices and regional outbreak response mechanisms.

The SOPs provide guidance on topics that include:

- When is a vaccination response warranted for a poliovirus detection?
- Which vaccines should be used and how can they be requested?
- Which vaccines should be administered in outbreaks with the co-circulation of multiple types?
- What is required to complete a successful initial vaccination response to a poliovirus outbreak?
- How does a gender-responsive approach to vaccination campaigns create a stronger response?
- How does surveillance need to be enhanced to support detection and inform response plans?
- How does social and behavioural change improve response quality and reach?
- Why do some outbreaks persist? How can underlying issues and failures be resolved?
- What tools help to assess whether the outbreak is on the path to interruption?
- What criteria must be met to declare the closure of a poliovirus outbreak?
- How can population immunity continue to be strengthened to prevent a future risk of outbreaks?

Version 5.0: new and revised guidance

This fifth version of the SOP, published in 2026, includes new and revised guidance that will be critical for all polio-outbreak countries to consult, regardless of what point they are at in their response efforts.

Revised standard of practice

The recommended number of major large-scale vaccination campaigns has been revised to three (3) supplementary immunization activities (SIAs) – an increase over past SOPs that recommended two SIAs for new outbreaks. In highly specific cases, two SIAs may still be permissible. Countries are encouraged to consult with the GPEI.

Latest vaccine guidance

Guidance is provided on when the inactivated polio vaccine (IPV) can be used in conjunction with the oral polio vaccine (OPV). For countries with outbreaks of more than one type, guidance is also provided on concomitant administration of the bivalent oral polio vaccine (bOPV) and the novel oral polio vaccine type 2 (nOPV2).

Persistent outbreaks

A classification system is introduced to distinguish new outbreaks (within 180 days of confirmation) and persistent outbreaks (more than 180 days of uninterrupted transmission). Persistent outbreaks are further categorized into: (1) chronic outbreaks with transmission that continues for more than a year; and (2) consequential geographies that meet criteria for extraordinarily high risk of international spread, new emergences or high paralytic burden.

Failures in response efforts

To more effectively respond to outbreaks, new guidance is provided to support countries in identifying the underlying failures that contribute to a persistent outbreak. These include: a failure of response, a failure of scope and a failure to respond. More than one type of failure may be contributing to persistent transmission. Added guidance is also provided on conducting in-depth reviews to uncover drivers or root causes.

Prioritization scheme

In recognition of seismic shifts in global health and development that have constrained resources for public health emergencies, a prioritization scheme is now provided. Its purpose is to guide countries on activities that can be modified – from lowest to highest risk of impacting response quality – to ensure that resources are directed to activities where high performance can make the biggest impact, with mitigating activities to manage risk.

Expanded guidance for all countries

In recognition of recent detections in countries that exclusively use IPV in routine immunization programmes, the SOPs now include guidance for IPV-only countries. Recommendations cover which detections warrant investigation, when OPV may be recommended, and how countries should investigate detections of type 1 or type 3 in settings where bOPV has not been administered in the preceding four months.

Standard operating procedures: Global guidance for responding to a poliovirus event or outbreak, referred to as the outbreak response SOPs, is a "living document." The SOPs undergo review every six months with revised versions published whenever an update is required. To ensure response efforts incorporate the latest innovations and best practices or approaches, a range of materials on topics covered by the SOPs are included as resources for each section. An SOP companion document, available on the GPEI website, details analytical findings that informed changes in outbreak response strategies.

CONTEXT

About the Global Polio Eradication Initiative

In 1988, the World Health Assembly passed a resolution to eradicate polio (WHA41.28). The same year, the Global Polio Eradication Initiative (GPEI) launched with a mission to achieve this milestone.

The GPEI is a public-private partnership led by national governments with six partners: the World Health Organization (WHO), Rotary International, the US Centers for Disease Control and Prevention (CDC), the United Nations Children's Fund (UNICEF), the Gates Foundation and Gavi, the Vaccine Alliance. This broad coalition unites health workers, governments, donors and global leaders behind the vision of a polio-free world. Through this effort to protect children everywhere, the global incidence of polio has decreased by 99.9%, and two of three wild polioviruses (types 2 and 3) were declared eradicated in 2015 and 2019, respectively. Only one wild poliovirus type remains: wild poliovirus type 1 (WPV1).

The GPEI Strategy

The GPEI Strategy defines a pathway to achieve two goals: Goal One to interrupt all poliovirus transmission in the final endemic countries; and Goal Two to stop transmission of vaccine-derived polioviruses (VDPVs) and prevent outbreaks in non-endemic countries. In pursuit of these goals, strategic and tactical approaches across the programme are continually analyzed, evaluated and adapted by the GPEI to respond to evolving epidemiological, virologic, operational, political, social and financial developments.

The GPEI Action Plan

The GPEI also uses a tool – the GPEI Action Plan – to support annual planning and implementation. As an operational companion to the GPEI Strategy, the Action Plan defines priority actions needed in geographies that are most critical to the polio eradication effort. Country-level plans, which have been a cornerstone to the success of the polio eradication effort, underpin the Action Plan and are regularly updated as the GPEI continues to respond to challenges at a local level.

About the standard operating procedures (SOPs)

Background: In May 2014, the WHO Director-General declared poliovirus a public health emergency of international concern (PHEIC) – a declaration that reflected the risk posed by the virus. In 2015, the GPEI published the first version of *Standard operating procedures: Global guidance for responding to a poliovirus event or outbreak* (hereafter referred to as the *outbreak response SOPs* or simply "SOPs"). One year later, in response to the eradication of wild poliovirus type 2 (WPV2), the type 2 oral poliovirus vaccine (OPV2) was withdrawn from routine immunization programmes. As global population immunity to type 2 declined in children born after April 2016, the world began to see an increase in outbreaks of circulating vaccine-derived poliovirus type 2 (cVDPV2).

Purpose: The purpose of the SOPs is to provide guidance to countries to respond in a timely and effective manner to a poliovirus event or outbreak with the specific objective of interrupting poliovirus transmission within 120 days (four months) of confirmation.

Audience: The audiences for these SOPs are national governments and public health decision-makers who coordinate responses to poliovirus events and outbreaks so they may take quick and decisive actions. The SOPs will also be useful for their country-level, regional and global partners.

Scope: The SOPs establish response standards and timelines for responding to: WPV1 importation in a non-endemic country; outbreaks of cVDPV2 and circulating vaccine-derived poliovirus types 1 and 3 (cVDPV1, cVDPV3) detected in any context; and VDPV events.

The SOPs do not cover: response to WPV1 due to local transmission in an endemic country context; field-level operational guidance or tools to plan high-quality supplemental immunization activities (SIAs); or detailed methods for enhanced surveillance. These topics are addressed in existing resources, and references have been included in the relevant sections.

Box 1. Collaboration is key

Outbreaks are highly context specific. While this global guidance is applicable to most outbreak settings, some extenuating circumstances are not sufficiently addressed by these SOPs. For such issues, countries and GPEI technical experts will collaborate to review further guidance on a case-by-case basis to reach agreement on next steps.

Not every outbreak context is addressed by the SOPs, and countries are encouraged to collaborate with GPEI partners to better understand their own extenuating circumstances (Box 1).

About this version

The guidance contained within the outbreak response SOPs represent the optimal approaches to interrupt transmission and confirm with high confidence that an outbreak has ended. The development of the SOPs relies on scientific evidence and consensus among technical and operational experts, including regional and national staff at WHO and UNICEF, the Strategic Advisory Group of Experts on Immunization (SAGE), and GPEI technical and management groups. Each version of the SOPs incorporates updated vaccine recommendations, new research and analytical findings, new tools, best practices and lessons learned.

A living document

The availability of SOPs that reflect up-to-date knowledge and practices is critical to respond effectively to poliovirus events and outbreaks.

With Version 5.0, the GPEI shifted its approach to ensure that the SOPs become a living document. The GPEI will review the SOPs every six months to determine whether an update is required. A version control table will reflect when reviews are conducted and when updates are made (Table 1).

Table 1. SOP versions, past and present

Version	Published date
Version 1.0	February 2015
Version 2.1–2.4 *Part 1: General SOPs* *Part 2: Protocol for poliovirus type 2*	April 2016 – November 2017
Version 3.0	January 2019
Version 3.1	March 2020
Version 4.0	March 2022
Version 5.0 (current)	March 2026

What's new in Version 5.0

This version (Version 5.0) builds upon the March 2022 version and its 2025 addendum. It contains critical updates to polio outbreak response procedures and practices.

- Polio outbreak definition: The definition of a polio outbreak is now specific to the poliovirus type rather than based on the emergence group. This streamlined definition is intended to reduce ambiguity when reporting the number of outbreaks within a country.
- Standard practice for outbreak response:
    - The recommended number of major vaccination response campaigns is now three SIAs. Two SIAs are permissible only under highly specific conditions.
    - The definition of breakthrough transmission has been updated to assess breakthrough on a per SIA basis rather than per overall response (i.e. three SIAs). This ensures alignment with the principle that each virus must be addressed with two SIAs in a timely manner.
    - The previous binary indicator system (i.e. met or not met) has been replaced by a 'traffic light' scheme (optimal, caution, failed to meet, critically failed to meet) for a nuanced assessment.
- Outbreak categorization: A new classification of outbreaks distinguishes between new outbreaks (≤180 days since notification to WHO) and persistent outbreaks (>180 days). Persistent outbreaks are further categorized into chronic outbreaks and consequential geographies.

- Failures contributing to persistent outbreaks: The concepts of *failure of response*, *failure of scope* and *failure to respond* are introduced to aid in the identification and application of more effective, tailored strategies to stop persistent outbreaks.
- Vaccination type and administration guidance:
    - The inactivated polio vaccine (IPV) as a full or fractional dose is recommended for use in conjunction with OPV for initial outbreak vaccination responses in OPV-using countries under specific circumstances so as not to produce delays in initiating SIAs.
    - New guidance is provided on concomitant versus sequential administration of the bivalent oral polio vaccine (bOPV) and the novel oral polio vaccine (nOPV2).
- IPV-only countries: The SOPs now include guidance for countries that use only IPV in their routine immunization programmes. This guidance includes:
    - considerations for using OPV in outbreak response; and
    - recommendations for conducting type 1 or type 3 investigations in settings where bOPV has not been administered within the preceding four months. The guidance adopts flexible language regarding which detections may warrant investigation.
- Prioritization of outbreak response activities: A prioritization scheme has been introduced to ensure that outbreak response activities are guided by the availability of internal resources and potential for external support.

How to use the SOPs

As a comprehensive resource, the SOPs cover topics that range from the initial detection of poliovirus to closing a polio outbreak that may have persisted for years. The SOPs are divided into five main sections (Fig. 1, next page).

The main body of the SOPs focus on contextual and strategic considerations to enable decision-makers to respond most effectively to the epidemiology of the outbreak in their country's context. It comprises four sections:

1. Response fundamentals: definitions and cross-cutting topics relevant to all poliovirus detections, including outbreaks;
2. New outbreaks: after Day 0: science-based and data-driven guidance, recommendations and best practices to stop poliovirus transmission within 120 days;
3. Persistent outbreaks: beyond Day 180: step-by-step guidance for countries facing challenges that have extended an outbreak beyond six months and in some cases for more than a year; and
4. Closing an outbreak: guidance for countries on the process to close an outbreak;

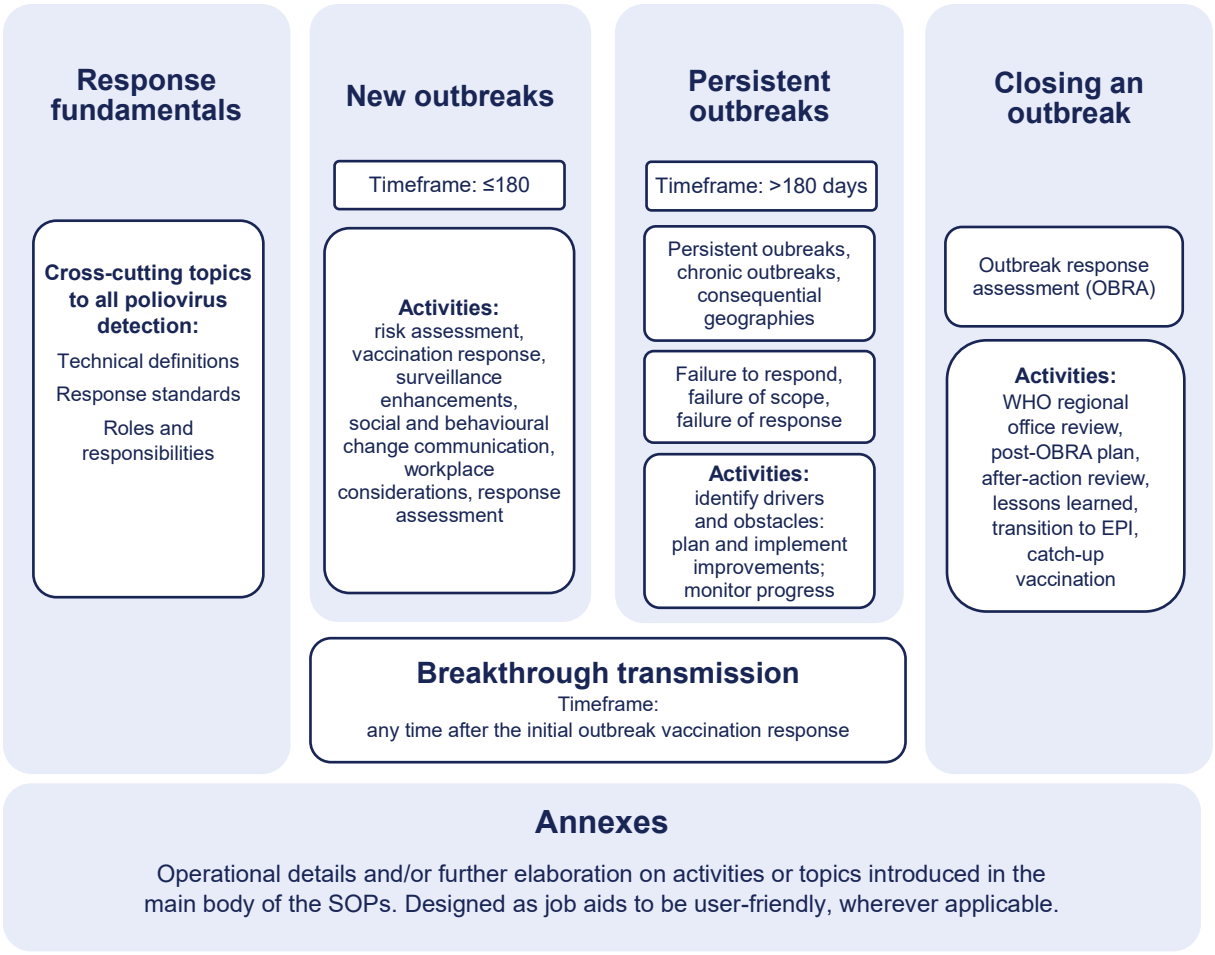
For operational components of response efforts, countries should also consult:

5. Annexes: timelines, checklists, frameworks and other action-oriented tools.

References to existing helpful resources are included at the end of chapters. An SOP companion document, available on the GPEI website, details the analytical findings that informed changes in outbreak response strategies.

While Table 2 helps readers navigate to the sections most relevant to their country's outbreak, all countries will benefit from reading the SOPs in its entirety. Countries with ongoing polio outbreaks are recommended to review Response fundamentals and New outbreaks to become familiar with modifications to definitions, response standards, timelines and conditions for GPEI support. Similarly, while breakthroughs can occur with any polio outbreak, potential underlying issues that contribute to breakthroughs are described in detail in Persistent outbreaks, which countries with new outbreaks are also recommended to review.

Fig. 1. Overview of the outbreak response SOPs (2026)



EPI = Essential Programme on Immunization; OBRA = outbreak response assessment; SOPs = standard operating procedures; WHO = World Health Organization.

Source: WHO

.

Table 2. Relevant sections based on a country's current polio status

Current polio status	Section(s) to read
Poliovirus detected, yet to be classified as an event or outbreak	*Response fundamentals*
Newly classified outbreak or high-risk event	*Response fundamentals* *New outbreaks: after Day 0*
Ongoing outbreak (≤180 days)	*Response fundamentals* (refresher) *New outbreaks: after Day 0*
Ongoing outbreak (>180 days) *Persistent outbreak*	*Response fundamentals* (refresher) *Persistent outbreaks: beyond Day 180*

1. RESPONSE FUNDAMENTALS

This section addresses cross-cutting topics for responding to a poliovirus detection. It includes definitions of technical terms, classifications of polio events and outbreaks, overall response standards and the roles and responsibilities of national governments and GPEI partners toward stopping a polio outbreak.

Technical definitions

Poliovirus isolates

Poliovirus isolates fall into three categories: wild polioviruses (WPVs), vaccine viruses and vaccine-derived polioviruses (VDPVs) (Table 3a). Three types of VDPV isolates provide an additional level of classification based on emergence and evidence of transmission (Table 3b).

Table 3a. Categories of poliovirus isolates and their definitions

Category	Definition
1. Wild polioviruses (WPVs)	The natural virus that causes paralysis, particularly in young children. The eradication of wild poliovirus types 2 and type 3 (WPV2, WPV3) has been certified but type 2 and type 3 poliovirus materials may be found in laboratories, research facilities and vaccine manufacturers where their use, handling and storage must conform to strict biosafety and biosecurity standards. Wild poliovirus type 1 (WPV1) transmission continues in human populations in the final two endemic countries of Afghanistan and Pakistan.
2. Vaccine viruses include:	Sabin viruses are the live, attenuated poliovirus in oral polio vaccines (OPVs) used in routine immunization programmes, as well as preventative and outbreak response across the globe.
	Novel oral polio vaccine virus type 2 (nOPV2) is an attenuated virus that has been authorized for use in response to circulating vaccine-derived poliovirus type 2 (cVDPV2) outbreaks since 2020. It was first used in March 2021 and gained WHO pre-qualification status in December 2023.
	Sabin-like (SL) viruses and nOPV2-like viruses are vaccine viruses that have begun to diverge from their respective OPV strain but to a lesser degree than a vaccine-derived poliovirus (VDPV, see below). SL and nOPV2-like viruses are commonly detected in the population and the environment following OPV use. However, type 2 Sabin-like virus (SL-2) and nOPV2-like virus should not be detected more than four (4) months after use. Likewise, types 1 and 3 Sabin and Sabin-like viruses (SL-1, SL-3) should not be detected in countries that use only the inactivated poliovirus vaccine (IPV) in routine immunization programmes.*
3. Vaccine-derived polioviruses (VDPV), also referred to as variant viruses	VDPVs are vaccine virus strains that are >1% divergent (≥10 nucleotide differences) for types 1 and 3 and >0.6% divergent (≥6 nucleotide differences) for type 2 from the corresponding reference Sabin strain in the VP1 gene region.[1]

* While SL-1 and SL-3 should not be detected in countries that use only IPV in routine immunization, detections may occur due to population movement from areas that use bOPV in routine immunization programmes.

cVDPV2 = circulating vaccine-derived poliovirus type 2; IPV = inactivated polio vaccine; nOPV2 = novel oral polio vaccine type 2; OPV = oral polio vaccine; SL = Sabin-like vaccine virus; SL-1 = type 1 Sabin-like vaccine virus; SL-2 = type 2 Sabin-like vaccine virus; SL-3 = type 3 Sabin-like vaccine virus; VDPV = vaccine-derived poliovirus; VP1 = viral protein 1 (capsid protein); WPV = wild poliovirus; WPV1 = wild poliovirus type 1; WPV2 = wild poliovirus type 2; WPV3 = wild poliovirus type 3; WHO = World Health Organization.

[1] GPEI guidelines: Classification and reporting of vaccine-derived polioviruses (VDPV), published in 2016 (https://polioeradication.org/wp-content/uploads/2016/09/Reporting-and-Classification-of-VDPVs_Aug2016_EN.pdf).

Table 3b. Categories of vaccine-derived poliovirus isolates and their definitions

Category	Definition
Circulating VDPVs (cVDPVs)	VDPV demonstrating person-to-person transmission based on evidence from human and/or environmental detections of genetically linked viruses.* cVDPV2-n refers specifically to a cVDPV that originated from nOPV2.
Immunodeficiency-associated VDPV (iVDPV)	VDPV isolated from individuals with evidence of a primary immunodeficiency disorder (PID). Individuals with PID may have prolonged intestinal replication of the vaccine viruses due to their inability to mount an adequate immune response to clear the virus, leading to the development of iVDPV.
Ambiguous VDPV (aVDPV)	VDPV for which the VP1 sequence is not genetically linked to another VDPV sequence, and there is no evidence of PID. A VDPV sequence will be classified as ambiguous based on laboratory results, epidemiological investigations and in communication with field teams and technical experts and laboratory staff at WHO headquarters and the WHO regional office.

* 'Genetically linked' is a genetic relationship between or among poliovirus sequences that suggests a common origin or emergence.

aVDPV = ambiguous vaccine-derived poliovirus; cVDPV = circulating vaccine-derived poliovirus; iVDPV = immunodeficiency-associated poliovirus; nOPV2 = novel oral polio vaccine type 2; PID = primary immunodeficiency disorder; VDPV = vaccine-derived poliovirus; VP1 = viral protein 1 (capsid protein); WHO = World Health Organization.

Polio events and outbreaks

The classification of WPV, cVDPV or VDPV as a polio event or outbreak is distinguished by the evidence of local transmission, also referred to as community circulation (Box 2).

- Evidence of local transmission (or an outbreak) is when poliovirus has been detected among unrelated human samples or in several locations indicating spread beyond a single source. Examples include detection in a case of acute flaccid paralysis (AFP) and their community contacts, two environmental surveillance (ES) sites with different catchment areas, or an AFP case and an ES site in a different catchment area.
- No evidence of local transmission (or an event) is when poliovirus is detected from one source with no evidence of transmission beyond the single source. Examples include VDPV detection in an AFP case and their close contacts or from the same ES site within a two-month period. For WPV or cVDPV, a single detection in a human sample (AFP case, contact, healthy child) without travel history or facility-associated exposure may be indicative of local transmission and classified as an outbreak.

Box 2. Local transmission or community circulation?

The phrases *local transmission* and *community circulation* are often used interchangeably. The phrase *local transmission* is used for consistency in the SOPs and denotes person-to-person transmission of poliovirus.

The classification of polio outbreaks and events used to support reporting requirements under International Health Regulations (IHR) (2005) is provided in Table 4.[2]

A country can experience up to four (4) polio outbreaks at one time: WPV1 and circulating vaccine-derived polioviruses of types 1, 2 and 3 (cVDPV1, cVDPV2, cVDPV3). A country that has a type-specific WPV or cVDPV outbreak with active transmission in the previous 12 months is considered a "polio-outbreak country."

[2] World Health Organization. International Health Regulations (2005) as amended in 2014, 2022 and 2024, explanatory note by the Secretariat of the World Health Organization. Geneva: World Health Organization; 2025 (https://apps.who.int/gb/bd/pdf_files/IHR_2014-2022-2024-en.pdf).

Table 4. Definitions of polio outbreaks and events

Outbreak or event	Type	Description
Polio outbreak	1. Detection of WPV or cVDPV *with evidence of local transmission* in a country previously type-specific free for ≥12 months[3]	a. Detection of one isolate of WPV or cVDPV in a human sample (AFP case, contact, healthy child) without travel history to an infected area[§] or facility-associated exposure.
		b. Detection of two linked WPV or cVDPV from separate environmental samples (collected from two different sites with no overlapping catchment areas OR from the same site but at least two months apart).
		c. Detection of WPV or cVDPV in a human sample (AFP case, contact, healthy child) genetically linked to an independent isolate in the country (e.g. two human samples without close contact).
Polio events	2. Importation event is the detection of WPV or cVDPV in a country polio type-specific free for ≥12 months *with no evidence of local transmission*	a. Detection of WPV or cVDPV from a human sample (AFP case, contact, healthy child) with travel history to an infected area.
		b. Single environmental detection of WPV or cVDPV.
		c. Multiple environmental detections of WPV or cVDPV from one site within a two-month period and no evidence of multiple excreters (genetic sequences are identical or nearly identical[4]).
	3. New VDPV detection *with no evidence of local transmission*	a. Detection of a new VDPV from a single human sample (AFP case, contact, healthy child) and is not genetically linked to another VDPV.
		b. Detection of one or more VDPVs from a single environmental site within a two-month period and no evidence of multiple excreters (i.e. genetic sequences are identical or nearly identical) and is not genetically linked to another VDPV.
Other polio events	4. Facility-associated WPV or VDPV event	a. Detection of WPV or VDPV (any type) in a person with suspected or documented type-specific virus exposure in a laboratory or vaccine production facility, or in the environment samples collected in the vicinity of such a facility.
	5. Vaccine event	a. Detection of a type 2 vaccine virus in an area where type-2 containing polio vaccine has not been used in the four months prior to detection.
		b. Detection of type 1 or type 3 vaccine virus in an area where OPV has not been used for routine immunization (i.e. countries with only IPV in their routine immunization schedules) or SIAs in the four months prior to detection.[5]

[§] Travel history to an infected area within 35 days before onset of paralysis.
AFP = acute flaccid paralysis; cVDPV = circulating vaccine-derived poliovirus; IPV = inactivated polio vaccine; SIA = supplementary immunization activity; VDPV = vaccine-derived poliovirus; WPV = wild poliovirus.

In Table 4 above, Events 2b and 2c are considered high-risk events. Event 3a may be a high-risk event if the VDPV detected is type 2. Events 2a and 3b may be high-risk events if additional risk factors are present.

[3] Under certain conditions when the outbreak's initial emergence or lineage has not been detected for almost 12 months, the GPEI may consider a newly imported virus of another emergence or lineage as a new outbreak.
[4] Isolates show no genetic variation or only minor variation consistent with excretion by a single human being.
[5] Detection of type 1 or type 3 in a country that uses only IPV in routine immunization and has not recently used OPV is context-specific and should be informed by the expert opinion of surveillance and laboratory colleagues.

Polio response standards

An overview of the response standards and their corresponding timelines are provided to ensure countries are aware of expected activities that must be completed as part of outbreak response efforts.

Response standards for poliovirus events and outbreaks

Notification of a new poliovirus or the spread of poliovirus to a new geographic area or population requires national authorities and GPEI partners to collaborate on the following actions and procedures:

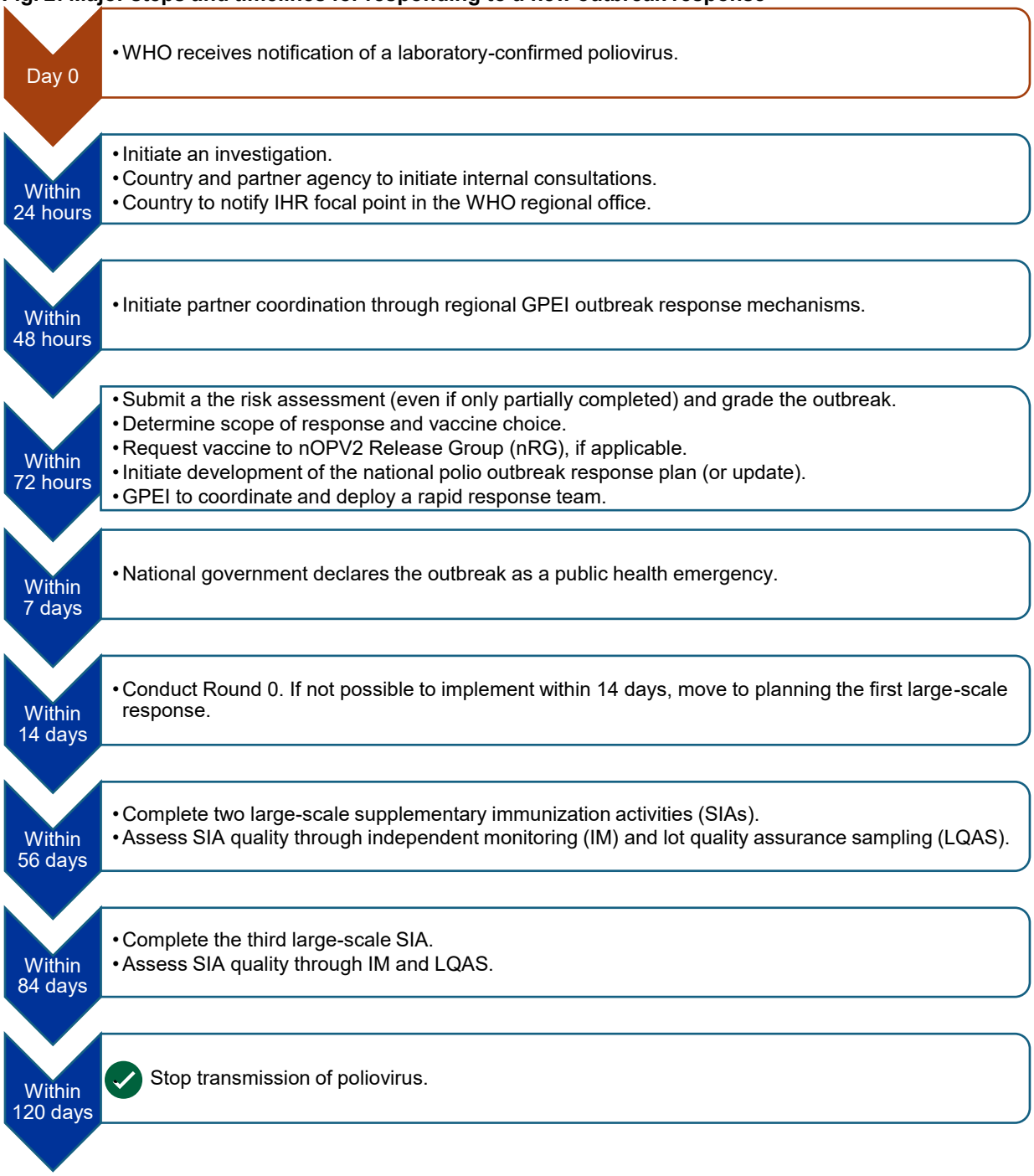
1. immediately declare the outbreak or high-risk event as an emergency. This action, taken by the national or subnational government, serves as a trigger for all subsequent procedures and ensures a fully committed "all of government" approach. In parallel, any IHR 2005 reportable poliovirus must be immediately reported to the country IHR focal point (see Detection, notification and investigation);
2. conduct a detailed investigation and risk assessment (see Detection, notification and investigation and Submitting a risk assessment and Grading an outbreak);
3. plan, accurately scope and implement a vaccination response based on the risk assessment (see How to initiate a vaccination response). All outbreaks and high-risk events require a timely vaccination response, with the first SIA launched within 28 days of laboratory notification. (A Round 0 may be implemented as the first vaccination response if commencement can begin within 14 days of laboratory notification). Robust coordination, careful planning, comprehensive budgeting, and gender-responsive community engagement and monitoring enable a successful vaccination response;
4. enhance surveillance to increase sensitivity to detect continued transmission or spread and to bolster confidence that any ongoing transmission will be rapidly detected (see Detection, notification and investigation and How to enhance surveillance during an outbreak);
5. social and behavioural change communication should be tailored to the event or outbreak context to reflect local gender norms and support surveillance enhancement, vaccination response activities and routine immunization (see How to plan for social and behavioural change); and
6. an optimally implemented outbreak response – that includes investigation, initial vaccination response and surveillance enhancements, all supported by gender-responsive social mobilization and communication activities – should be able to interrupt poliovirus transmission within 120 days of notification. If there is evidence of transmission beyond 180 days, re-assessment and improvements will be warranted to identify a more aggressive path to interrupting virus transmission (see Persistent outbreaks: beyond Day 180).

The standard procedures are outlined throughout this document. Annex A offers a high-level summary to promote broad understanding of the global guidance for responding to a poliovirus outbreak.

Standard timelines for outbreak response

Fig. 2 presents targeted timelines for major steps in an outbreak response. See Annex B. Timelines and responsibilities for detailed activities that must be completed in the first 30 days and over the duration of the outbreak.

Fig. 2: Major steps and timelines for responding to a new outbreak response



GPEI = Global Polio Eradication Initiative; IHR = International Health Regulations; IM = independent monitoring; LQAS = lot quality assurance sampling; nOPV2 = novel oral poliovirus vaccine type 2; nRG = nOPV2 Release Group; SIA = supplementary immunization activity; WHO = World Health Organization.

Source: WHO.

Table 5 outlines standard indicators for polio outbreak response. Each indicator has an optimal target for completion (green), a caution period (yellow) as early notice of the need to accelerate activities or implement improvements before countries fail to meet (orange) or critically fail to meet targets (red). For response efforts that critically failed to meet targets, aggressive action is necessary across all three levels (national, regional, global) to get the response on track. Indicators should be monitored at all levels to permit quick implementation of corrective action if challenges arise.

Table 5. Outbreak response standard indicators

Indicator	Definition	Optimal	Caution	Failed to meet	Critically failed to meet
Time to complete (or partially complete) risk assessment	Time from Day 0 to risk assessment received by ORPG	≤3 days	>3 days and ≤7 days	>7 days	Not applicable; tiering only goes to "Failed to meet."
Time to declare outbreak a national public health emergency (PHE)	Time from Day 0 to declaration of PHE	≤7 days	>7 days and ≤14 days	>14 days and ≤28 days	>28 days
Initial response time *Standard of practice is 3 SIAs but may be 2 SIAs per risk assessment (RA)*	Time from Day 0 to completion of SIA3 *(or SIA2 per RA)*	3 SIAs ≤84 days from Day 0 *(2 SIAs ≤56 days per RA)*	3 SIAs completed >84 and ≤180 days from Day 0 *(2 SIAs >56 days per RA)*	<3 SIAs completed within 180 days of Day 0 *(<2 SIAs completed within 180 days of Day 0 per RA)* **FAILURE TO RESPOND**	No SIAs completed >365 days of Day 0 with ongoing virus detections **CONTINUED FAILURE TO RESPOND**
Breakthrough transmission response time	Time from Day 0 of breakthrough transmission detection to start of second breakthrough SIA	2 SIAs ≤56 days from Day 0 of breakthrough transmission	2 SIAs completed >56 and ≤180 days from Day 0 of breakthrough transmission	<2 SIAs completed within 180 days of Day 0 of breakthrough transmission **FAILURE TO RESPOND**	No SIAs completed >365 days of Day 0 of breakthrough transmission **CONTINUED FAILURE TO RESPOND**
Effective spacing of SIAs	Time from start of SIA1 to start of SIA2, and start of SIA2 to start of SIA3	>1 week and ≤4 weeks	>4 weeks and ≤8 weeks	>8 weeks and ≤26 weeks	>26 weeks
Time to interrupt transmission	Time from Day 0 to the last virus detection of the outbreak	≤120 days from Day 0	>120 days ≤180 days from Day 0	>180 days and ≤365 days from Day 0 **PERSISTENT OUTBREAK**	>365 days from Day 0 **PERSISTENT OUTBREAK (CHRONIC OUTBREAK)**
Effective outbreak vaccination response	Time from completion of the initial outbreak vaccination response to last virus detection *The initial outbreak vaccination response is composed of an optional Round 0, major vaccination response campaigns (SIAs) and mop-up campaign used to respond to a new polio outbreak.*	No virus detections for >365 days after completion of initial outbreak vaccination response	No virus detections for >365 days after completion of initial outbreak vaccination response and breakthrough SIAs	Virus detection >21 and ≤365 days after initial outbreak vaccination response *and two breakthrough SIAs* **FAILURE OF RESPONSE**	Virus detection >21 and ≤365 days after initial outbreak vaccination response *and four breakthrough SIAs* **CONTINUED FAILURE OF RESPONSE**

Day 0 = date of laboratory confirmation; ORPG = Outbreak Response and Preparedness Group; PHE = public health emergency; RA = risk assessment; Round 0 = rapid response round; SIA = supplementary immunization activity; SIA1 = first supplementary immunization activity; SIA2 = second supplementary immunization activity; SIA3 = third supplementary immunization activity.

Roles and responsibilities

Outbreak response must always be implemented in an operational framework that supports accountability.

The actions and deliverables expected of countries and GPEI partners by specific timelines (within hours, days and weeks of laboratory confirmation) for the first 30 days after Day 0 and throughout the life of the outbreak are detailed in Annex B. Timelines and responsibilities. The standards are not exhaustive and may be modified as required to fit the specific context of the country and the outbreak.

National governments

Ultimate ownership and accountability for a robust and comprehensive response to a poliovirus outbreak rests with the national authorities of a polio outbreak country, whose strong leadership must be maintained throughout. National governments must assume responsibility for a polio outbreak and immediately plan and implement vaccination activities to rapidly improve and monitor population immunity, especially among un- and under-vaccinated communities that are most vulnerable to infection and disease. Because polio outbreaks emerge wherever routine immunization is weakened, governments should also prioritize immunization strengthening activities through their Essential Programme on Immunization (EPI). As an essential component of responding to a high-risk polio event or outbreak, surveillance systems must be enhanced to quickly detect polioviruses and inform vaccination response activities. Governments are also encouraged to carry out periodic polio outbreak simulation exercises (POSEs) to bolster their preparedness and to enable a rapid response effort (Annex C).

Governments are recommended to establish a national emergency operations centre (EOC) within 24 hours of notification of a laboratory-confirmed poliovirus. The EOC serves as the centralized coordinating body leading polio outbreak response efforts and provides a direct line of communication between EOC leaders, government decision-makers and GPEI partners. Members of the EOC should include staff from relevant sectors and offices of the government to ensure effective collaboration. The national EOC is also charged with implementing the existing national polio outbreak response plan (NPORP) or quickly developing one; a template is available from the GPEI Outbreak Response and Preparedness Group (ORPG). Annex C provides more information on essential functions for national emergency management of a polio outbreak.

Global Polio Eradication Initiative

The GPEI undertakes a range of activities to support country-led response, in alignment with its mandate, technical expertise and available resources. The scope and scale of support depend on the nature of the outbreak, existing country capacity and resource availability within the GPEI. While GPEI partners are committed to assisting national authorities to ensure a timely and effective response, such support will be prioritized and tailored based on current operational and financial constraints.

GPEI partners can support national authorities on key functions for an outbreak response including:

- outbreak preparedness
- risk assessment and event/outbreak response planning
- advocacy and coordination
- polio vaccine provision and transport
- finance and logistics, including coordinated resource mobilization and external support from donors
- assessment of the quality of outbreak response activities; and
- technical and human resources, including:
  - information management
  - communication, social mobilization and behavioural change
  - vaccine and cold chain management
  - vaccination activities
  - surveillance enhancements
  - gender analysis
  - security and access.

The ORPG leads coordination at the global level in close coordination with regional offices and outbreak response mechanisms that exist in the WHO African Region (the Rapid Outbreak Response Group [RORG]) and the Eastern Mediterranean Region (the Incident Management Support Team [IMST]).

Surge support

On behalf of GPEI partners, the ORPG coordinates surge support – or the rapid deployment of highly skilled women and men who are selected for teams – to reinforce national response teams in carrying out essential response functions and to ensure a smooth transition from short-term surge support to longer-term staffing solutions. Surge support can take many forms: from personnel that fill key technical and operational roles based on outbreak grade and country context, to experts in innovative strategies (such as GIS mapping) whose specialized skillsets can help to improve the quality of the response.

Two kinds of surge support are coordinated through the ORPG:

- a rapid response team involves the deployment (within 72 hours of laboratory confirmation) of staff and qualified consultants from GPEI agencies, including regional offices. The period of deployment is through Round 0 or the first SIA, as needed; and
- a surge support team is an interagency roster for longer-term deployment that should be in place within 21 days of laboratory confirmation. The expected period of deployment is from the initial vaccination response until the end of the outbreak, with a one-week overlap with the rapid response team for a thorough handover.

WHO and UNICEF should implement emergency SOPs for deployment and grant travel without travel authorization restrictions. Recruitment practices must promote gender equity; efforts should be made at all levels to have equal representation of women and men in technical and operational roles.

Areas of collaboration and coordination

Political advocacy

Political advocacy is vital for responding to polio outbreaks. The GPEI and its partners, including national governments, collaborate to adapt a range of advocacy strategies to fit the local socio-political context.

- Securing high-level political commitment: The GPEI engages with national governments to ensure polio eradication remains a top national priority amid competing health emergencies or political challenges. National ownership is critical for allocating resources, facilitating timely and high-quality vaccination campaigns and overcoming obstacles along the way. Advocacy efforts include: engagement of the Polio Oversight Board to support regional directors and the GPEI Strategy Committee; ORPG chair engagement for multi-country and multi-level advocacy; Regional Certification Committee support for advocacy; and interministerial advocacy in consequential geographies.
- Negotiating access in insecure areas: In conflict-affected areas, advocacy often involves negotiating “days of tranquillity” among all parties to secure safe access for vaccination teams or reinstate effective campaign modalities, such as house-to-house vaccinations.
- Engaging women and men community and religious leaders: Working with traditional political and religious leaders according to local social and gender norms is a core advocacy tool to build community trust, increase vaccine acceptance and dispel misinformation. These local figures are essential partners who encourage parents to vaccinate their children and help reduce refusal rates.
- Cross-border coordination: Poliovirus often moves across national and international borders due to population movement. Advocacy is key to ensuring strong coordination and synchronized vaccination campaigns between neighbouring countries.
- Data-driven accountability: Advocacy supports the accountability of all partners, including national and subnational decision-makers, for campaign quality and vaccination coverage.

Response coordination

After laboratory notification of a new outbreak or high-risk event, national governments and GPEI agency partners must rapidly establish coordination mechanisms to facilitate an investigation, conduct a rapid risk assessment and determine subsequent actions for the response.

Within 48 to 72 hours of laboratory notification of a new outbreak or high-risk event, the WHO regional office will conduct a coordination call with GPEI partners across the country, regional and global levels to review country needs, monitor the immediate provision of pre-financing (if applicable), and plan required resources and initial supportive interventions. Regular updates will be provided by the ORPG to the GPEI Strategy Committee on the progress of response activities and related financial updates.

For grade 2 and 3 outbreaks (and high-risk events), WHO and UNICEF regional offices will nominate an outbreak coordinator for deployment to the country level within 14 days of laboratory notification of a new outbreak, in consultation with the ORPG (see Grading an outbreak). The coordinator will be deployed as support for in-country authorities, supplementary to existing senior GPEI staff, to ensure comprehensive and timely coordination and management at both the national and subnational levels.

Budgets and financing

Upon confirmation of an outbreak, national authorities are required to develop two budgets in collaboration with WHO, UNICEF and other partners:

1. a response surge budget based on the technical assistance needs; and
2. a separate SIA budget.

Together, the budgets should provide a carefully considered and comprehensive estimate of costs for all SIA activities (e.g. coordination, vaccination, communication and social mobilization) and enabling functions (e.g. laboratory operations, surveillance, training and transport). Outbreak budget templates are available from the ORPG.

The goal of outbreak response financing is to ensure that cash flow challenges do not interfere with the rollout of response activities. The exact amount is subject to the availability of funds within GPEI resources and will be determined by the ORPG upon provision of adequate justification by the country and the relevant regional offices. Countries may be eligible for pre-financing that can help to kick-start critical activities of the response effort while SIA budgets are under development. The release of funds by GPEI partners may pre-date outbreak grading by WHO, based on the risk assessment and discussions across the national, regional and global levels. Funds are typically released by WHO and UNICEF; another GPEI partner may on occasion provide funding in close coordination with the ORPG. The pre-financed funds must be included and accounted for in the outbreak response budget prepared by the country.

The GPEI recognizes that the humanitarian sector faces increasing demands with multiple crises competing for limited resources. The partnership remains committed to financing activities that prevent and respond to polio outbreaks while ensuring the continuity of essential functions. Prioritization will guide resource allocation to maximize impact, and all decisions will be taken in collaboration across the GPEI partnership. Guidance specific to each implementing agency on financial processes will be made available as needed. Countries should consult Annex D for a general scheme to support effective prioritization.

Vaccine cost

Type 2 vaccines (nOPV2 and the type 2 monovalent oral polio vaccine, or mOPV2) are part of the global stockpile which are already financed and are delivered without cost to the country. Type one monovalent oral polio vaccine (mOPV1) is currently unavailable in the stockpile but may be made available upon request with a 9- to 12-month lead time at no cost to the country. Should bOPV or IPV be required, upon approval by the ORPG, UNICEF Supply Division must submit a request to the UNICEF Programme Group to secure funding to cover the freight cost before delivery can be arranged.

2. NEW OUTBREAKS: AFTER DAY 0

With the goal of interrupting poliovirus transmission within 120 days of confirmation, time is of the essence to launch a response that stops transmission and prevents further crippling paralysis. Many activities must occur in parallel: high-quality vaccination responses, improved polio vaccination coverage through routine immunization and enhanced poliovirus surveillance sensitivity, alongside gender-responsive social and behavioural change communication to foster community acceptance and generate vaccine demand. Before these activities can start, however, it is critical to learn more about the reported poliovirus isolate.

What actions must immediately be taken in a new outbreak

Procedures

- → Immediately report any notifiable poliovirus per International Health Regulations (2005) to the IHR focal point in the respective WHO regional office.
- → Initiate an investigation within 24 hours of receipt of any laboratory-confirmed poliovirus.
- → Describe the polio case (or environmental isolate), including the local context and social profile.
- → Determine the geographic extent of poliovirus transmission.

The isolation of poliovirus through testing by a WHO-accredited laboratory triggers a series of activities, including notification to WHO, mandatory notification by national authorities and a detailed investigation of the virus source.

Detection

All human and environmental samples are sent to a WHO-accredited polio testing laboratory within the Global Polio Laboratory Network (GPLN) to confirm the presence of poliovirus. The virus is identified through culture, intra-typic differentiation and genetic sequencing. Genetic sequencing results are compared with existing sequences to identify genetic linkages and to classify the virus.[6]

Regardless of testing method, the date of notification from the testing laboratory to WHO headquarters or regional office is the starting point for all response activities, referred to as "Day 0" (Box 3).[7]

To ensure continued detection of poliovirus transmission, countries must maintain and often improve their surveillance sensitivity throughout the response (See How to enhance surveillance during an outbreak).

Box 3. What does 'Day 0' mean?

Day 0 indicates the precise date that WHO receives notification of laboratory-confirmed poliovirus (WPV or VDPV) and genetic sequencing results. All SOP activities track their timing based on Day 0, unless otherwise specified, and response activities and their progress will be monitored against Day 0.

For high-risk events and outbreaks requiring a vaccination response, Day 0 will remain unchanged even as the date for "Day 0 of an event" may later be referred to as "Day 0 of an outbreak" (or "outbreak notification date").

For polio events that do not warrant a vaccination response, genetic sequencing for new isolates may retrospectively confirm local transmission. In these cases, the GPEI may adjust Day 0 from "an event" to "an outbreak" using the date the new sequencing result confirmed local transmission.

[6] Global Polio Eradication Initiative. GPEI Classification and reporting of vaccine-derived polioviruses (VDPV), August 2016 (https://polioeradication.org/wp-content/uploads/2016/09/Reporting-and-Classification-of-VDPVs_Aug2016_EN.pdf).
[7] Viruses detected using methods that are not accepted or recommended by the GPLN should be reported as described in Guidance Paper #9 (GP9_Reporting-virus-of-programmatic-interest-detected-using-not-recommended-or-not-accepted-methods.30.05.2023.Final_.pdf).

Notification

In addition to testing laboratories notifying WHO of positive results for poliovirus, countries are required to notify IHR per IHR (2005).[8] Detection of the following polioviruses in human or non-human sources, including environmental (wastewater) samples, is notifiable:

- WPV;
- VDPV (type 1, 2, or 3); and
- Sabin / Sabin-like (SL) type 2 vaccine viruses from areas where Sabin OPV2 has not been used in the previous four months.

All notifiable polioviruses must be immediately reported without delay (i.e. within 24 hours). To report polioviruses, the national IHR focal point notifies the WHO IHR contact point at their WHO regional office within 24 hours of final laboratory confirmation and national programme announcement, in compliance with IHR provisions. Notification beyond 24 hours would constitute non-compliance with IHR provisions..

In addition to sharing laboratory confirmation of poliovirus with the national health authorities, the GPLN will inform WHO at the country, regional and headquarters levels. WHO headquarters will then inform GPEI partners as reports are received and validated. Additional details, including any genetic linkage to other polioviruses, will be shared by the GPLN and WHO headquarters as soon as available. Notification to WHO may lead to publication of a Disease Outbreak News (DON) report on the WHO website, as appropriate, based on virus type, risk assessment and outbreak status.

Investigation

An investigation must be quickly launched to determine if the detection represents an event or outbreak. Concerning epidemiological situations and alerts should be investigated immediately without waiting for the results of the laboratory investigation or final virus classification.

All IHR notifiable polioviruses and select non-notifiable polioviruses require investigations (Table 6).

Table 6. IHR notifiable polioviruses and poliovirus detections that must be investigated

Poliovirus detections that must be notified under IHR (2005) as amended in 2014, 2022 and 2024	Poliovirus detections that must be investigated
✓ WPV	✓ WPV
✓ VDPV (type 1, 2 or 3)	✓ VDPV (type 1, 2 or 3)
✓ Sabin2 / SL-2 viruses* from areas where Sabin OPV2 has not been used in the previous four months.	✓ Sabin2, SL-2 vaccine virus in an area where mOPV2 has not been used in the four months prior to detection.
	✓ Novel, and novel-like type 2 vaccine virus in an area where nOPV2 has not been used in the four months prior to detection.
	✓ Type 1 or type 3 vaccine virus in an area where bOPV** has not been used in routine immunization or SIAs in the four months prior to detection.***

* This includes Sabin and Sabin-like viruses and does not include novel and novel-like type 2 vaccine virus.
** Or mOPV1, if it is made available for use.
** Detection is context-specific and should be informed by expert opinions of surveillance and laboratory colleagues. Examples that may warrant an investigation include ≥7 nucleotide differences from Sabin (if sequencing was performed) and detection from a high-risk population or in areas with poor sanitation or <80% vaccination coverage of two doses of IPV (IPV2).

[8] World Health Organization. International Health Regulations (2005) as amended in 2014, 2022 and 2024, explanatory note by the Secretariat of the World Health Organization. Geneva: World Health Organization; 2025 (https://apps.who.int/gb/bd/pdf_files/IHR_2014-2022-2024-en.pdf).

bOPV = bivalent oral polio vaccine; OPV = oral polio vaccine; OPV2 = type 2-containing oral polio vaccine; Sabin2 = Sabin type 2; SIA = supplementary immunization activity; SL-2 = Sabin-like type 2; VDPV = vaccine-derived poliovirus; WPV = wild poliovirus.

The investigation consists of two parts: an analysis of the case or environmental isolate and a determination of the geographic extent of transmission (Table 7). Both parts of the investigation should review and triangulate all available national and subnational data. Results from the investigation and laboratory results should be used to describe the characteristics of the virus, to determine whether there is evidence of local transmission and to inform classification of the detection as an event or outbreak.

Table 7. Investigation of poliovirus isolates from humans and environmental surveillance

Part	Investigation components	Objectives
Part A Analyze the case or environmental isolate and the local context	1. Detailed case investigation of a poliovirus isolate from an AFP case, AFP contact or healthy child. 2. Investigation of the site of an isolate from environmental surveillance. 3. Description of the community context for any detected isolate, regardless of source: • population immunity; • recent SIA performance; • population characteristics, movement and migration routes; and • community social mapping and determinants.	• Gather information to confirm the event/outbreak and associated risks. • Identify possible source of infection/causes of the event or outbreak. • Determine the number and characteristics of cases and the local context for environmental isolates. • Formulate control measures (immunization and surveillance) to interrupt transmission and prevent spread.
Part B Determine the geographic extent of transmission	1. Investigation of the quality of surveillance and evidence of virus transmission: • in-depth polio surveillance review across the country; • analysis and mapping of high-risk or hard-to-reach populations; and • ad hoc case search (as per GPEI AFP surveillance guidance).	• Determine the geographic extent of transmission and assess the risk of further transmission. • Further refine and sharpen control measures to interrupt transmission and prevent geographic spread.

AFP = acute flaccid paralysis; GPEI = Global Polio Eradication Initiative; SIA = supplementary immunization activity.

The most effective approach takes the form of a joint epidemiological and social investigation of the isolate source and affected community with national support. Team composition should reflect local gender norms to increase access to primary caregivers (who are most often women) and to ensure the investigation can identify potential gender-related barriers to immunization.

Further details are provided in Annex E. Investigation of a poliovirus detection.

How to assess and grade a new outbreak

Procedures

→ Perform a risk assessment if poliovirus is isolated from an uninfected area.
→ Prepare to present initial investigation findings to regional and global polio outbreak response groups within 72 hours of receipt of sequencing result or outbreak confirmation.
→ Continue to update the risk assessment as new information becomes available.

Countries are required to complete a risk assessment when poliovirus is detected in a previously uninfected area.[9] The risk assessment reviews virological and contextual characteristics of a poliovirus event or outbreak, evaluates the risk for further local or international spread, and helps to inform decision-making on whether a vaccination response will be required.

Based on the assessment, poliovirus outbreaks (and some high-risk events) are subsequently graded by the relevant WHO regional office to indicate risk and to prioritize actions to manage the event or outbreak.

Submitting a risk assessment

The risk assessment, even if only partially completed, should be presented by countries to regional polio response teams and the ORPG within 72 hours of receipt of laboratory confirmation of poliovirus (i.e. Day 0). The finalized risk assessment should be submitted no later than Day 5.

The risk assessment summarizes information from the initial field investigation and according to three critical risk elements: virological risk, contextual risk and risk of international transmission (Table 8). This information is summarized in a template.[10] It is used to inform decision-making on the type and scale of response. As a procedure, it also enables the GPEI to recommend appropriate actions.

Table 8: Risk elements to assess the potential for further poliovirus transmission

Risk element	Example of risk factors (not exhaustive)
Virologic risk	• High degree of genetic deviation from parent OPV; number and nature of nucleotide changes; linkage to other virus(es); and expert interpretation by virologists.
Contextual risk	• Recent poliovirus detection or other sentinel events; sensitivity of AFP surveillance system; population density; immunization coverage and population immunity; geographic access; conflict; inaccessible or hard-to-reach populations; and population movement. • Previously experienced chronic polio outbreak or classified as consequential geography (see Persistent outbreaks: beyond Day 180).
Risk of international transmission	• Border area with high population mobility, nomadic or refugee populations, cross-border conflict, and international travel routes.

AFP = acute flaccid paralysis; OPV = oral polio vaccine.

Risk elements are elaborated below. To help prepare a robust risk assessment, a summary is provided in Annex F with additional details.

[9] Defined as an administrative division of a country with no poliovirus-type transmission in the previous 12 months. The area may be national when the population is <2 million, first subnational unit for moderately populous countries (i.e. ≥2 million people), or second subnational unit for countries with population >10 million.
[10] The Risk Assessment for Poliovirus Transmission Template (2022) is available on the GPEI website: https://polioeradication.org/wp-content/uploads/2024/05/Risk-Assessment-Template-final-October-2022.pptx.

Virologic risk

Virologic risk is considered high for any WPV or cVDPV (Fig. 3). A single, new VDPV detection may also signal high risk of further transmission depending upon the following factors:

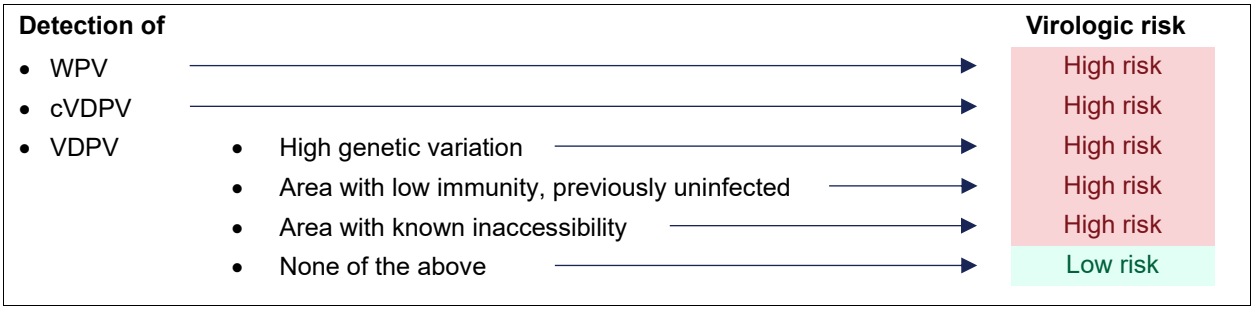
- viruses with more genetic divergence from Sabin-like viruses or from its nearest relative and orphan viruses (Box 4);
- VDPV isolation that occurs in a previously uninfected area with low immunity (especially for type 2 detections); or
- isolation of a new VDPV in areas with known inaccessibility for vaccination and suboptimal surveillance.

Box 4. What are orphan viruses

Orphan viruses have ≤98.5% VP1 identity from the closest match in the sequence database. These viruses generally indicate undetected transmission and suggest gaps in polio surveillance sensitivity.

Conversely, a new VDPV with few nucleotide changes detected in an area with recent type-specific OPV campaigns presents a lower virologic risk of transmission.

Fig. 3. Virologic risk as part of the polio outbreak risk assessment



cVDPV = circulating vaccine-derived poliovirus; VDPV = vaccine-derived poliovirus; WPV = wild poliovirus.
Source: WHO.

As a rule, all type 2 poliovirus detections (cVDPV2, VDPV2 or WPV2) require special consideration.[11] Following the global withdrawal of OPV2 from routine immunization programmes in April 2016, type 2 mucosal immunity is low in many countries. Consequently, all type 2 poliovirus detections require consultation with regional polio response teams and the nOPV2 Release Group (nRG) to review the risk assessment and assess the need for a potential nOPV2 vaccination response.[12]

Detection of OPV2-like virus in an area where no OPV2 has been used in the previous four months requires an investigation (see Investigation, Table 6). This detection may indicate ongoing and/or unauthorized use of OPV2, as vaccinated children typically only shed OPV-like virus for approximately three months. A risk assessment and investigation should also begin for type 2 isolates (PV2) pending genetic sequencing if collected from an area that did not use OPV2 in the previous four months, especially if other epidemiological risk factors exist. Countries should immediately share findings with the regional polio response teams and the ORPG.

Contextual risk

Country context is essential to ensure the risk assessment is an effective tool. Depending on circumstances, the risk assessment may include analysis of the urgency and complexity of the event and the reputational risk it may generate.

[11] Although WPV2 has been globally eradicated, the risk remains from a potential containment breach.
[12] nOPV2 is the vaccine of choice for responding to outbreaks but under extenuating circumstances (e.g. limited nOPV2 supply), mOPV2 may be considered if available through the global stockpile.

Contextual risk elements should address:

- estimated population immunity to relevant poliovirus type(s), and/or time since the last in-country use of type 2-containing OPV;
- detailed quantitative and qualitative analysis and mapping of population movement (e.g. trade, migration, displacement and travel and migration routes, including roads, lakes and rivers);
- quantification of high-risk or hard-to-reach populations (e.g. geographic or cultural inaccessibility, mobile and cross-border populations, areas of insecurity, gender-specific barriers, vaccine refusals and sentinel events);
- GIS mapping with emphasis on high-risk populations, urban areas, border areas and areas with access challenges (Box 5);
- detailed assessment of all surveillance indicators at the subnational level; and
- a summary of historical experience with polio outbreaks in the specific geography, including previous outbreaks classified as a chronic outbreak or consequential geography.

Box 5. How to address access constraints?

Inaccessibility is one of the most challenging barriers to interrupting poliovirus transmission. Access constraints arise from insecurity, control by non-state armed groups, political restrictions, natural disasters or natural physical barriers (mountains, flooding, desert, islands).

Addressing these constraints requires tailored planning, careful negotiations and appropriate operational strategies. See Annex G. Outbreak operations in access-compromised areas.

Entities such as the International Organization for Migration, United Nations High Commissioner for Refugees, the United Nations Office for the Coordination of Humanitarian Affairs and the WHO and UNICEF Emergencies Programmes provide critical information on population migration and insecurity.

Risk of international spread

The risk of international spread is a critical consideration, especially if the area of concern borders another country or has demographic links to locations across international borders (e.g. international travel routes and sizable cross-border population movement). The risk is of greater concern if those locations have low population immunity to the detected poliovirus type. Cross-border coordination should be quickly pursued in such instances to develop and implement joint and complementary response plans with synchronization of activities, if feasible. See Annex H. Cross-border outbreak coordination.

Sentinel events to be included in the risk assessment

Communities or administrative areas with sentinel events should be included in the risk assessment.

A sentinel event is information or an occurrence that suggests increased risk for polio:

- appearance of vaccine-preventable diseases (VPDs), such as measles and diphtheria, that suggests generally low routine immunization performance;
- appearance of a disease with faecal-oral transmission like polio;
- rapid displacement or ongoing movement of un- or under-immunized communities;
- a cluster of polio-compatible cases;[13]
- type 2 detection in a human or environmental source pending sequencing from an area without recent OPV2 use; and
- finding vials of type 2-containing OPV in the community.

[13] A cluster is defined as two compatible cases in either a single district or two neighbouring districts within four weeks.

Updating a risk assessment

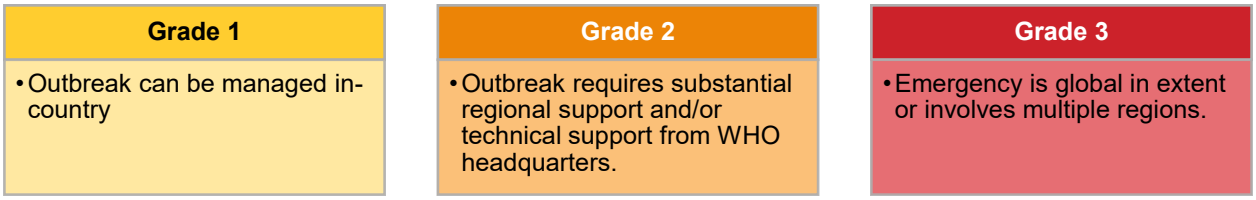
The risk assessment is an important tool for response efforts, and national authorities must continue to update the risk assessment as more information becomes available, such as results from laboratory investigations and detailed social analysis on affected communities. The updated risk assessment should be maintained by national authorities and the in-country polio eradication team.

Grading an outbreak

All polio outbreaks and some high-risk events are graded by relevant WHO offices as per the Emergency Response Framework (ERF).[14] Grading is a procedure that triggers outbreak response policies in WHO and the affected country (or countries) (Fig. 4). The purpose of grading is to:

- inform all partners of the nature of the event or outbreak, the response that will be required and the need for the mobilization of internal and external resources;
- activate GPEI response mechanisms; and
- prompt local government and GPEI partners at all levels to mobilize resources for support, including immediate human resources.

Fig. 4. Outbreak grades and their implications



Source: WHO.

The criteria used to grade outbreaks include: (1) the potential for local or international transmission (based on the risk assessment); and (2) the capacity of the country to respond to and contain the outbreak. Table 9 presents a general risk matrix for grading an event or outbreak. Country capacity is a subjective assessment based on health infrastructure and current security or access challenges.

Table 9: General risk matrix for grading an event or outbreak

Risk of local or international transmission	Country capacity to respond		
	Strong	Moderate	Weak
Low	Grade 1	Grade 1	Grade 2
Medium	Grade 1	Grade 2	Grade 3
High	Grade 2	Grade 3	Grade 3

An outbreak should be graded within the 72 hours of Day 0. The outbreak grade is valid through the initial outbreak response (three to six months) and should be reviewed as new information becomes available or if the initial outbreak response efforts fail to interrupt transmission.

National leadership and GPEI support

For all poliovirus outbreaks, national ministries of health are expected to lead outbreak response efforts. Depending on the outbreak grade, the GPEI may also provide supplemental support (Table 10).

Each outbreak is unique, and the needs will evolve over time. Those responsible for outbreak coordination must reassess support needs on a continuing basis.

[14] Emergency Response Framework: internal WHO procedures. Geneva: World Health Organization; 2024 (https://www.who.int/publications/i/item/9789240058064).

Table 10: Global Polio Eradication Initiative support for polio outbreaks according to outbreak grade

Type of support	Grade 1*	Grade 2	Grade 3
Response leadership	• National coordinator.	• GPEI-nominated coordinator.	• GPEI-nominated coordinator and high-level advocacy, as needed.
Rapid response team (technical liaison)	• Polio expert mission from GPEI partners to support NPORP development.	• Deployment of a multidisciplinary rapid response team.	• Deployment of a multidisciplinary rapid response team.
Surge	• National surge support; international consultants, if needed.	• Deployment of surge support team: multidisciplinary consultant team for minimum six-month deployment.† • International consultants.	• Deployment of surge support team: multidisciplinary consultant team for minimum six-month deployment.† • International consultants.
Financial	• Standard financing for outbreak immunization activities.‡	• Pre-financing funding policy applicable only to new outbreak countries with the exact amount to be determined by the ORPG based on available funding and prior to the completion of the response budget.	• Pre-financing funding policy applicable only to new outbreak countries with the exact amount to be determined by the ORPG based on available funding and prior to the completion of the response budget – to support response preparedness and security measures, if required.
Security and access	• Coordination with United Nations (UN) and humanitarian agencies in the field.	• Coordination with UN and humanitarian agencies in the field.	• Deployment of field security officer(s), where necessary. • Coordination with UN and humanitarian agencies in the field.

* Grade 1 outbreaks are managed within countries; therefore, GPEI support is minimal (shaded in grey).
† Composition of team and number of experts deployed for rapid response and surge support teams will be scaled up to meet the needs of the country.
‡ Standard financing is subject to re-payment conditions, as determined on a case-by-case basis.

GPEI = Global Polio Eradication Initiative; NPORP = national polio outbreak response plan; ORPG = Outbreak Response and Preparedness Group; UN = United Nations.

Resources

- Risk assessment for poliovirus transmission template (automatic download)
- Multi-country risk assessment template (automatic download)

How to initiate a vaccination response

Procedures

→ Plan an effective and timely vaccination response with an appropriate number of SIAs, an adequate scope and high-quality campaigns.
→ Choose the most appropriate type-specific poliovirus vaccine. For concurrent transmission of more than one type, follow recommendations for concomitant or sequential use of polio vaccines.
→ Develop and validate community-level microplans in accordance with local gender norms to optimize vaccination of the target population.
→ Identify breakthrough transmission and respond accordingly.
→ Adhere to vaccine management and reporting requirements for nOPV2, if applicable.

The primary aim of the vaccination response is to rapidly increase population immunity and achieve >90% vaccination coverage for girls and boys within the target population. The timing, scope and quality of the response are all critical factors for interrupting virus transmission, preventing new emergence and mitigating future outbreaks from importation. Throughout the response, countries should update their existing national polio outbreak response plans to capture any modifications to strategies and procedures.

When a vaccination response is warranted

The risk assessment helps to inform decision-making as to whether a vaccination response is warranted. Table 11 presents situations when a vaccination response is required, recommended or not recommended.

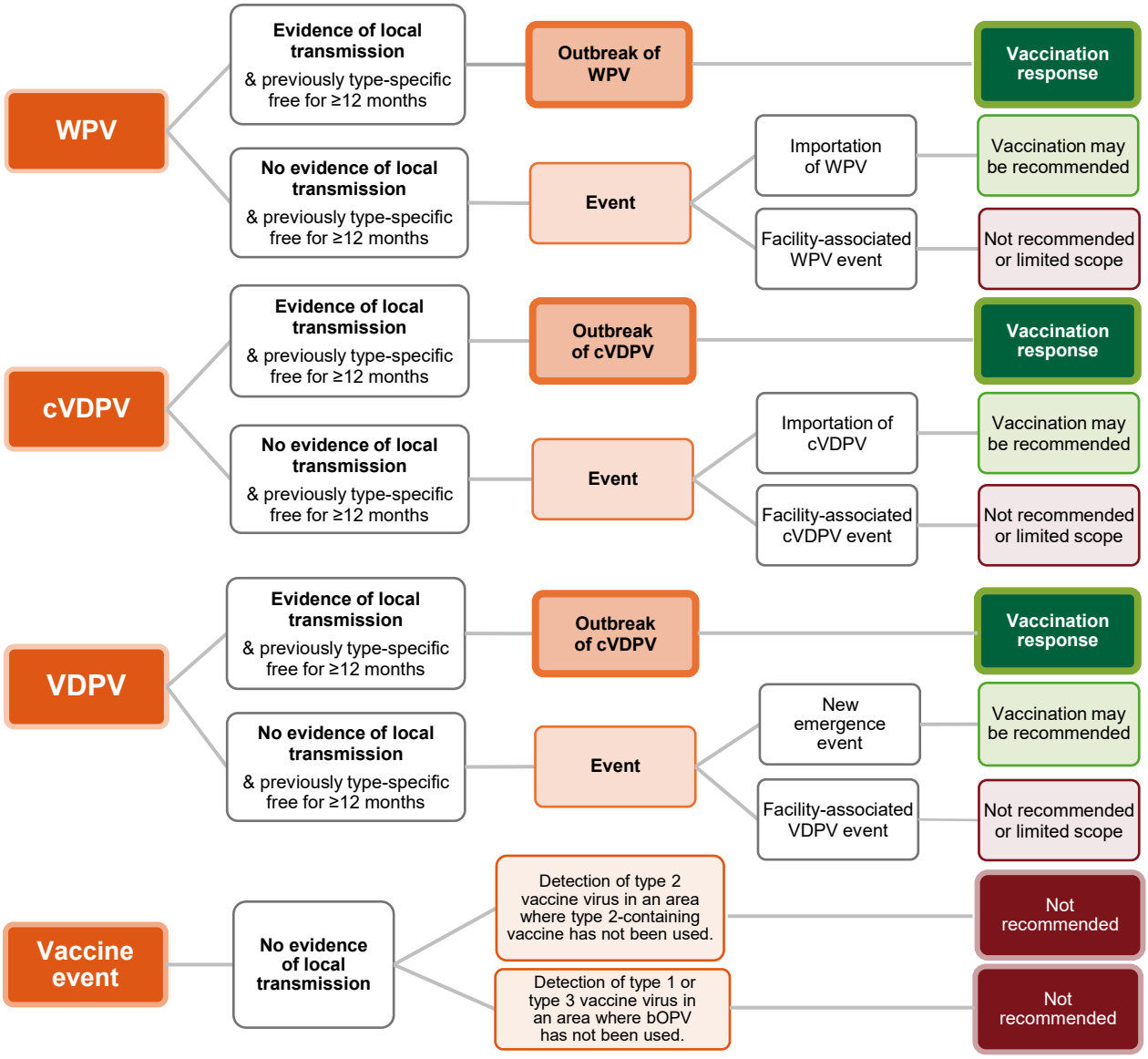
Table 11. Situations that may warrant a vaccination response

Vaccination response	Situation
Required	Outbreak: detection with evidence of local transmission.
Recommended	• Event with high likelihood to evolve into an outbreak. • Event in an area that historically experienced difficult-to-stop poliovirus transmission. • Event in an area with major surveillance gaps.
Not recommended or of limited scope (with continued monitoring)	• Isolated ES detection with low likelihood to evolve into an outbreak. • Facility-associated events. • iVDPV detection with no evidence of local transmission. • aVDPV with none of the above criteria.

aVDPV = ambiguous vaccine-derived poliovirus; cVDPV = circulating vaccine-derived poliovirus; ES = environmental surveillance; iVDPV = immunodeficiency-associated vaccine-derived poliovirus.

The decision to initiate a vaccination response must consider factors that elevate the risk of transmission and the potential for spread (Fig. 5, next page). Such factors include: the type of poliovirus detected; history of OPV use; evidence of local transmission; a history of travel leading to an importation of virus; or a facility-associated event through individual exposure to polioviruses or through the release of polioviruses into the surrounding area.

Fig. 5. Polio events and outbreaks that warrant a vaccination response



bOPV = bivalent oral polio vaccine; cVDPV = circulating vaccine-derived poliovirus; OPV = oral polio vaccine; VDPV = vaccine-derived poliovirus; WPV = wild poliovirus.

Source: WHO.

Required

Evidence of local transmission that is indicative of an outbreak will always require a vaccination response. This includes WPV or cVDPV breakthrough transmission in the outbreak zone or WPV or cVDPV detected in a new subnational area beyond the outbreak zone.

Recommended

Detections classified as an importation event[15] or emergence event[16] may warrant a vaccination response. The evaluation should consider whether:

- there is a high likelihood that the event will evolve into an outbreak due to the low population immunity in the area where poliovirus was detected (Box 6);
    - Type 2 events: In countries that use OPV in routine immunization, the primary factor to consider for population immunity is the time since the last use of OPV2 vaccines in the area.
        - ✓ If it is more than two years since last OPV2 use, vaccination response is recommended.
    - Type 1 and 3 events: the primary factors to consider are: (1) bOPV routine immunization coverage and (2) the time since the last bOPV SIA.
        - ✓ If there is a large immunity gap, then a vaccination response is recommended;
- the geographic area of the event has historically experienced polio outbreaks that were difficult to stop, in which case a vaccination response is recommended; or
- the quality of polio surveillance suggests serious gaps such that the detection likely represents a "tip of the iceberg," in which case a vaccination response is also recommended.

Box 6. What is low population immunity when responding to a poliovirus?

Key to interrupting faecal-oral transmission is intestinal mucosal immunity in the community. Estimated population OPV-derived immunity <80% should be considered low and warrants discussion on the need for a vaccination response.

An assessment of risk factors and a recommendation of vaccination response will be done on a case-by-case basis in consultation with the ORPG and regional offices.

Not recommended, or of limited in scope

Vaccination responses should be small in scale or limited in scope for select conditions:

- facility-associated event: a limited vaccination response may be warranted for exposed individuals and their at-risk contacts (e.g. household or food consumer contacts, toilet contacts);[17] or
- iVDPV detection: all household members and close community contacts.[18]

All other events are not recommended to have a vaccination response unless extenuating circumstances indicate that the event may proceed to an outbreak.

[15] High-risk importation events for which a response is recommended: a single environmental detection of WPV or cVDPV in a country polio type-specific free for ≥12 months with no evidence of local transmission, or multiple environmental detections of genetically identical (or near identical) WPV or cVDPV from one site within a two-month period in a country polio type-specific free for ≥12 months with no evidence of local transmission and no evidence of multiple excreters (see Table 4, 2b and 2c). Detection of WPV or cVDPV from a human sample (AFP case, contact, healthy child) with travel history to an infected area may also be high risk if additional factors are present (see Table 4, 2a).

[16] High-risk emergence events for which a response is recommended: detection of a new VDPV2 from a single human sample (AFP case, contact, healthy child) that is not genetically linked to another VDPV (see Table 4: 3a for type 2 only). Detection of one or more VDPV(s) from a single environmental site within a two-month period that is not genetically linked to another VDPV, with no evidence of multiple excreters, may be high risk if additional factors are present (see Table 4, 3b).

[17] Public health management of facility-related exposure to live polioviruses: Guidance in managing exposed persons for countries hosting facilities that maintain live polioviruses. Geneva: World Health Organization; 2020. (https://polioeradication.org/wp-content/uploads/2021/05/Public-Health-Management-of-Facility-related-Exposure-to-Live-Polioviruses-EN-20210520.pdf).

[18] Global Polio Eradication Initiative. Guidelines for Implementing Poliovirus Surveillance among Patients with Primary Immunodeficiency Disorders, revised. Geneva: World Health Organization; 2022 (https://polioeradication.org/wp-content/uploads/2022/06/Guidelines-for-Implementing-PID-Suveillance_EN.pdf).

If an isolated detection indicates a low risk of local transmission and a vaccination response is not pursued, such events should nevertheless be continuously monitored in case the epidemiology evolves and a decision must be taken to conduct a vaccination response. This may occur, for example, if confirmation of local transmission reclassifies a poliovirus event as an outbreak.

iVDPV case management and public health response

The management of iVDPV cases and the scope of the public health response will depend on several factors including the type of virus isolated, sequencing data and the presence of risk factors for local transmission. Because iVDPV excretors shed the virus over extended periods, sensitive and ongoing surveillance around individuals with primary immunodeficiencies must be maintained. Historically, local iVDPV transmission was only considered as a possibility; however, there is now clear evidence of its occurrence. If evidence indicates local iVDPV transmission, the virus must be re-classified as a cVDPV and outbreak response mobilized. For detailed guidance on case management and investigation, refer to *Guidelines for Implementing Poliovirus Surveillance among Patients with Primary Immunodeficiency Disorders (PIDs)*.[19]

Which vaccine(s) should be used

The choice of vaccine(s) depends on several factors including the detected poliovirus type(s) and polio vaccines used in routine immunization (see Annex I. Current polio vaccine options). The most appropriate vaccine or combination of vaccines is described below and is determined with technical support from WHO and GPEI partners. Table 12 summarizes recommended vaccine(s).

Table 12. Vaccines recommended in response to a new polio outbreak

	Type of outbreak	Countries using OPV in routine immunization	Countries using only IPV in routine immunization
Single type	WPV1 or cVDPV1	bOPV[a] (+IPV)[b]	IPV if the country has: • high level of sanitation and hygiene; and • transmission is confined to a well-defined population or geography. Type-specific OPV(s): country does not meet above criteria for IPV use
	cVDPV2	nOPV2 (+IPV)[b]	
	cVDPV3	bOPV (+IPV)[b]	
Multiple types	WPV1/cVDPV1 and cVDPV2	bOPV + nOPV2[c] (+IPV)[b]	
	WPV1/cVDPV1 and cVDPV3	bOPV (+IPV)[b]	
	cVDPV2 and cVDPV3	bOPV + nOPV2[c] (+IPV)[b]	

[a] mOPV1 may be considered in special circumstances as an alternative to bOPV, in consultation with WHO and UNICEF.
[b] Timeliness of response is essential. If the addition of IPV will delay the first SIA, consider adding to later SIAs.
[c] mOPV2 may be permitted only if nOPV2 supply is inadequate; tOPV is currently unavailable within the programme.

bOPV = bivalent oral polio vaccine; cVDPV1 = circulating vaccine-derived poliovirus type 1; cVDPV2 = circulating vaccine-derived poliovirus type 2; cVDPV3 = circulating vaccine-derived poliovirus type 3; IPV = inactivated polio vaccine; mOPV1: monovalent oral polio vaccine type 1; nOPV2 = novel oral polio vaccine type 2; OPV = oral polio vaccine; tOPV = trivalent oral polio vaccine; WPV1 = wild poliovirus type 1.

[19] Global Polio Eradication Initiative. Guidelines for Implementing Poliovirus Surveillance among Patients with Primary Immunodeficiency Disorders, revised. Geneva: World Health Organization; 2022 (https://polioeradication.org/wp-content/uploads/2022/06/Guidelines-for-Implementing-PID-Suveillance_EN.pdf).

Outbreaks of a single poliovirus type

When only one poliovirus type is detected, vaccine choice is simplified as it is guided exclusively by which polio vaccines are used within the country's routine immunization programme.

For countries using OPV in routine immunization (OPV-using)

Vaccination response should always use an OPV that matches the detected poliovirus type, with special consideration for type 1 outbreaks. For most outbreaks of type 1, bOPV will be the vaccine of choice. However, if feasible and vaccine availability permits, mOPV1 may be considered in consultation with WHO and UNICEF over bOPV due to its superior immunogenicity for type 1.

Co-administration with IPV

IPV may be co-administered with OPV as a full dose delivered intramuscularly with a needle and syringe or a fractional dose (fIPV) delivered either intramuscularly with a needle and syringe or intradermally with a needle and syringe or with a needle-free jet injector.[20,21] A key enabler in stopping an outbreak is the timing of the first SIA, and thoughtful deliberations must be made to balance the imperative to ensure all targeted children are vaccinated quickly with the logistical and financial resources required to include (f)IPV.

- Immunologically, IPV elicits excellent humoral protection against paralysis and provides a strong boost to intestinal mucosal immunity in children previously vaccinated with OPV.[22] Under certain conditions, such as chronic malnutrition and co-circulating enteroviruses, IPV may mitigate potential reduction in OPV immunogenicity by providing a stronger boost to intestinal mucosal immunity than an additional OPV dose.
- However, the challenge of administering an injectable vaccine in the target population and the cost for (f)IPV are potential hinderances to achieving high-quality SIAs if including (f)IPV.
- Therefore, if adding (f)IPV would delay or compromise the quality of the first SIA, it should only be considered for subsequent SIA(s).[23]

IPV is not recommended as a standalone vaccine for vaccination response in an OPV-using country except as an additional SIA in areas where repeated OPV campaigns have not successfully interrupted virus transmission. IPV will be a more effective booster than an additional OPV dose in these situations. Targeting an expanded age group (e.g. <15 years old) may also be considered.

The decision to include IPV in SIAs must be made in collaboration with the ORPG and regional outbreak response teams and in consideration of the need to prioritize response activities (See Annex D).

For countries using IPV only in routine immunization (IPV-only)

IPV may be used in the vaccination response if there is a high level of sanitation and hygiene in the country and if the outbreak is defined within a limited geographic scope. If transmission persists or increases in spread, a shift to using OPV will be warranted.[24] (See also Persistent outbreaks: beyond Day 180).

[20] Meeting of the Strategic Advisory Group of Experts on Immunization, March 2024: conclusions and recommendations. Wkly Epidemiol Rec 2024;99(22) 285-306 (https://www.who.int/publications/i/item/WER-9922-285-306).
[21] Global Polio Eradication Initiative. Aide Memoire: Use of fractional-dose inactivated polio vaccine (fIPV) in supplementary immunization activities (SIAs). Available at: https://polioeradication.org/wp-content/uploads/2017/11/polio-fipv-in-sias-aide-memoire-01092017-en.pdf.
[22] Meeting of the Strategic Advisory Group of Experts on Immunization, March 2023: conclusions and recommendations. Wkly Epidemiol Rec 2023;98(22) 239-256 (https://www.who.int/publications/i/item/who-wer9822-239-256).
[23] Meeting of the Strategic Advisory Group of Experts on Immunization, September 2024: conclusions and recommendations. Wkly Epidemiol Rec 2024;99(49) 719-740 (https://www.who.int/publications/i/item/who-wer9949-719-740).
[24] Meeting of the Strategic Advisory Group of Experts on Immunization, October 2022: conclusions and recommendations. Wkly Epidemiol Rec 2022;98(1)1-18 (https://www.who.int/publications/i/item/who-wer9801-1-18).

Outbreaks of more than one poliovirus type

Concurrent transmission of different poliovirus types ("co-circulation") requires the use of two OPVs (nOPV2 and bOPV) in an OPV-using country with one exception: for the co-circulation of types 1 and 3, only bOPV is used. In addition to OPV, IPV may be administered (see Table 12 above and Major response campaigns: IPV in SIAs below).

How to request vaccines

Countries should submit a vaccine request within 72 hours from Day 0.

bOPV and IPV requests

Requests for bOPV and IPV should use the same vaccine request form as nOPV2, submitted to the OPV secretariat.[25] Once the request is approved, standard procurement procedures through UNICEF will be followed. The use of bOPV and IPV in outbreak response does not require approval by the WHO Director-General.

mOPV1 requests

Requests for mOPV1 require additional consultation with WHO and UNICEF. As it is currently unavailable in the global stockpile, mOPV1 requires a lead time of 9-12 months before it is available for use.

mOPV2 requests

While mOPV2 is available within the global stockpile, it will be made available only under extenuating circumstances, such as in cases of limited nOPV2 supply. Procedures for requesting mOPV2 from the global stockpile will be shared with countries as necessary.

nOPV2 requests

Requests for nOPV2 require WHO Director-General authorization. In coordination with regional polio response teams, nOPV2 requests should be submitted to the nOPV2 Release Group (nRG) through the OPV secretariat.[26] The nOPV2 vaccine request form needs to be completed and signed by ministry of health officials and shared with both the OPV secretariat and UNICEF Supply Division.[25] The nRG will advise the WHO Director-General with their recommendation through the Director of the WHO Polio Department.

How to implement a successful initial outbreak vaccination response

To interrupt transmission, the initial outbreak vaccination response should:

- be as timely and rapid as possible;
- implement an appropriate number of SIAs;
- cover a large enough geographical scope;
- cover all susceptible populations; and
- reach >90% of the target population in each SIA.

Achieving high-quality SIAs is critical to success. Preparation of macro-level plans and budgets based on the target population, local conditions and operational costs allows stakeholders to discuss strategies and secure resources. Such top-down planning must be accompanied with effective bottom-up microplanning (i.e. developing and validating plans at the community level in accordance with local gender norms). Training and supportive supervision help to ensure that microplans are of high quality. See Microplanning

[25] Global Polio Eradication Initiative. Novel Monovalent Oral Polio Vaccine Type 2 Request Form for the response to type 2 vaccine derived poliovirus (VDPV) and type 2 wild poliovirus (WPV2), version 2, January 2024. Available online: nOPV2-vaccine-request-form-20240304.docx.

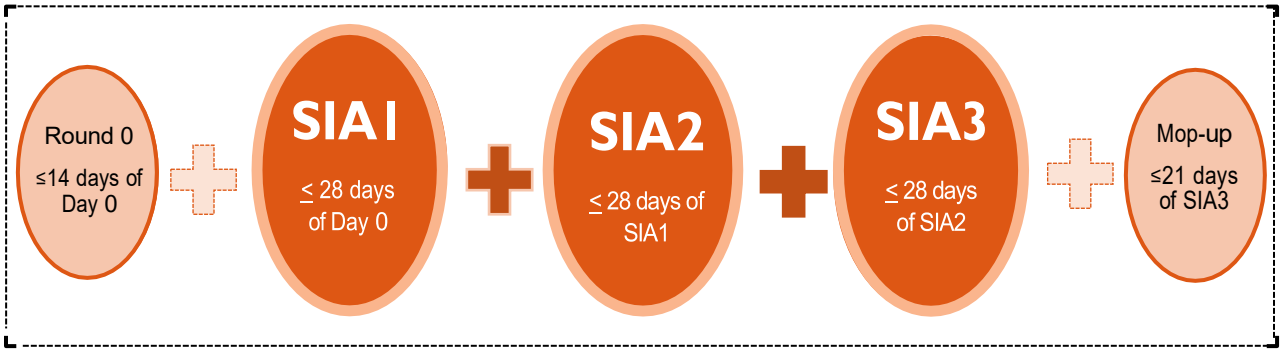
[26] Executive Board, 146 (2020). Resolution and decisions, annexes: 146th session, Geneva, 3-8 February 2020. Agenda item 16.1, EB146(11) Polio eradication. Geneva: World Health Organization, 2020 (https://apps.who.int/gb/ebwha/pdf_files/EB146-REC1/B146_REC1-en.pdf).

Guidelines[27] and Best Practices in Microplanning for Polio Eradication[28] for further guidance. The GPEI Gender Strategy also provides instruction on developing gender-responsive and inclusive microplans.[29]

How to plan the appropriate number of campaigns

The initial outbreak vaccination response is composed of the major response campaigns (commonly three SIAs) that may be preceded by Round 0 and followed by a mop-up campaign. In general, three SIAs will be recommended (Fig. 6a); however, there may be specific occasions when two SIAs are recommended (Fig. 6b).

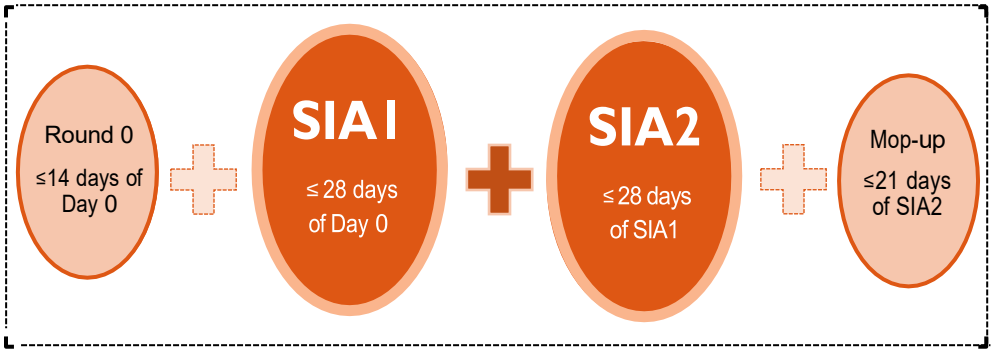
Fig. 6a. Example of an initial outbreak vaccination response with three major response campaigns (SIAs)



Day 0 = date of laboratory confirmation; Round 0 = rapid response round; SIA1 = supplementary immunization activity round 1; SIA2 = supplementary immunization activity round 2; SIA3 = supplementary immunization activity round 3.

Source: WHO.

Fig. 6b. Example of an initial outbreak vaccination response with two major response campaigns (SIAs)



Day 0 = date of laboratory confirmation; Round 0 = rapid response round; SIA1 = supplementary immunization activity round 1; SIA2 = supplementary immunization activity round 2.

Source: WHO.

[27] Global Polio Eradication Initiative. Microplanning for Polio Supplementary Immunization Activity, published 2014 (https://polioeradication.org/wp-content/uploads/2024/05/Micro-planning-Guidelines_Aug2014_EN.docx).

[28] Global Polio Eradication Initiative. Best practices in microplanning for polio eradication. Geneva: World Health Organization; 2018 (https://polioeradication.org/wp-content/uploads/2018/12/Best-practices-in-mircoplanning-for-polio-eradication.pdf).

[29] Global Polio Eradication Initiative. Gender Equality Strategy 2019–2023. Geneva: World Health Organization; 2019 (https://www.who.int/publications/i/item/WHO-POLIO-19.01).

Round 0 (optional)

Round 0 may be implemented within 14 days of Day 0 as a first vaccination campaign to quickly interrupt further transmission (Box 7). The aim of Round 0 is to target the immediate subdistrict area of virus isolation while the full geographic area of expected transmission is covered later by the first major SIA campaign (SIA1). Round 0 is not required and is not equivalent to a major response campaign (i.e. SIA).

Box 7. Round 0 or rapid response campaign?

The phrases *Round 0* and *rapid response campaign* are often used interchangeably. The phrase *Round 0* is used for consistency in the SOPs.

Factors to consider in determining whether to launch a Round 0 include:

- the type of virus (e.g. WPV or VDPV; type 1, 2 or 3);
- risk factors of neighbouring districts, such as surveillance sensitivity and sanitation conditions;
- estimated population immunity, including pockets of zero-dose children and age of case(s);
- operational capacity to implement a Round 0 within 14 days at the given scope;
- quantity of vaccines available and readiness of logistics/cold chain; and
- availability of budget and timeliness of funding.

Round 0 should not delay the initiation of SIA1 within 28 days of Day 0; therefore, if a Round 0 cannot begin within 14 days, or if there are significant delays from sample collection until the confirmation of the virus, countries are recommended to proceed directly to planning and conducting the first SIA. This decision should be made in consultation with regional polio response teams.

Major response campaigns (SIAs)

The number of SIAs will be guided by findings from the risk assessment and in consultation with the ORPG and regional teams. In general, three high-quality SIAs (>90% of targeted population vaccinated) should be completed; however, two SIAs may be recommended for very specific situations.

Two SIAs may be recommended instead of three SIAs if:

- background intestinal mucosal immunity to the specific polio type in the area is high considering
    - Type 2 population immunity will primarily depend on the duration since the last OPV2 SIA and the number and quality of OPV2 SIAs in the preceding one to three years;
    - Types 1 and 3 population immunity will depend on both the duration since the last bOPV SIA and routine immunization coverage; and
- historical experience in the specific geography with successfully stopping polio outbreak responses with two SIAs within four to six months. An assessment of the current epidemiology and background immunity from previous responses will be considered. Countries that experienced breakthrough transmission in previous outbreaks or had persistent outbreaks (see Persistent outbreaks: beyond Day 180) should conduct three SIAs.

SIAs should be conducted via house-to-house vaccination as this modality results in higher immunization coverage in most settings. Each SIA is recommended to last up to four days; however, it may be extended based on extenuating circumstances such as a challenging local context or high numbers of missed children in hard-to-reach areas that will require additional vaccination teams and supervisors.

IPV in SIAs

For countries that include OPV in their routine immunization programmes, specific guidance on IPV use will be provided during the risk assessment by the ORPG.

For countries that do not use OPV in their routine immunization programmes, an IPV catch-up campaign should be considered in addition to IPV SIAs. Based on the risk assessment, further vaccination activities may be identified, including the need to increase the number of IPV doses and expand the targeted age group. When multiple IPV campaigns are planned in the same area, IPV doses should be separated by four weeks. For expanded age groups that include adults, one IPV dose provides a life-time booster.

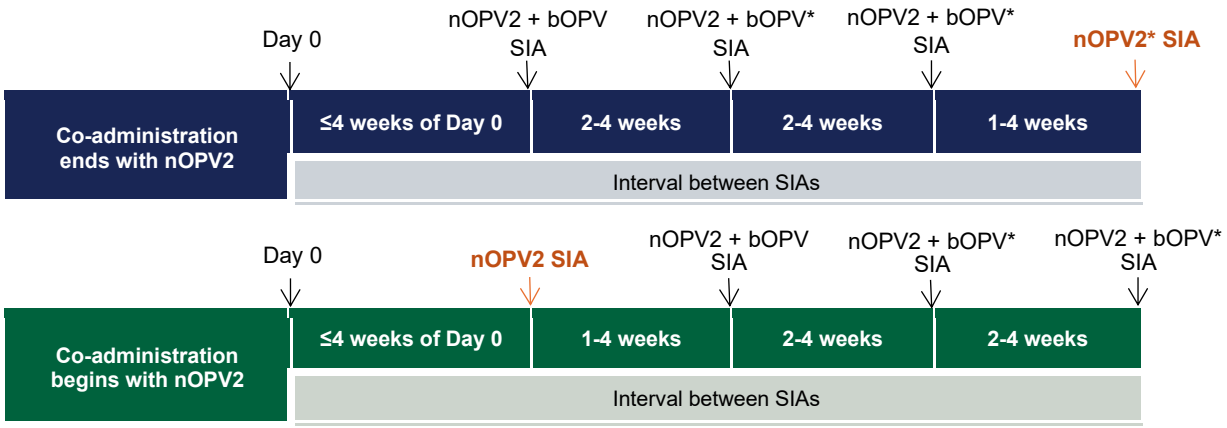
Concurrent outbreaks

SAGE reviewed data on concomitant administration ("co-administration") of nOPV2 and bOPV that indicated type 2 immunity interference when nOPV2 and bOPV were co-administered.[30,31] The data indicated type 1 and 3 immune responses were not affected by co-administration of nOPV2 and bOPV.[32] As a result, SAGE recommended co-administration of nOPV2 and bOPV in areas with co-circulation of poliovirus types 1 and 2 and types 2 and 3.

Co-administration of nOPV2 and bOPV

If planned well, co-administration of nOPV2 and bOPV can reduce costs for total SIAs and enable a timely response to both poliovirus types. However, operational challenges must be addressed for successful implementation. Furthermore, countries should consider additional nOPV2 SIAs before or after the nOPV2–bOPV co-administered SIAs to address the reduced type 2 immune response (Fig. 7). Additional guidance is available upon request to the WHO country or regional office.

Fig. 7. Example of co-administration of nOPV2 and bOPV based on initial vaccine use



*Consider adding fractional or full IPV dose to the SIA to boost humoral and intestinal immunity.

bOPV = bivalent oral poliovirus vaccine; IPV = inactivated polio vaccine; nOPV2 = novel oral polio vaccine type 2; SIA = supplementary immunization activity.

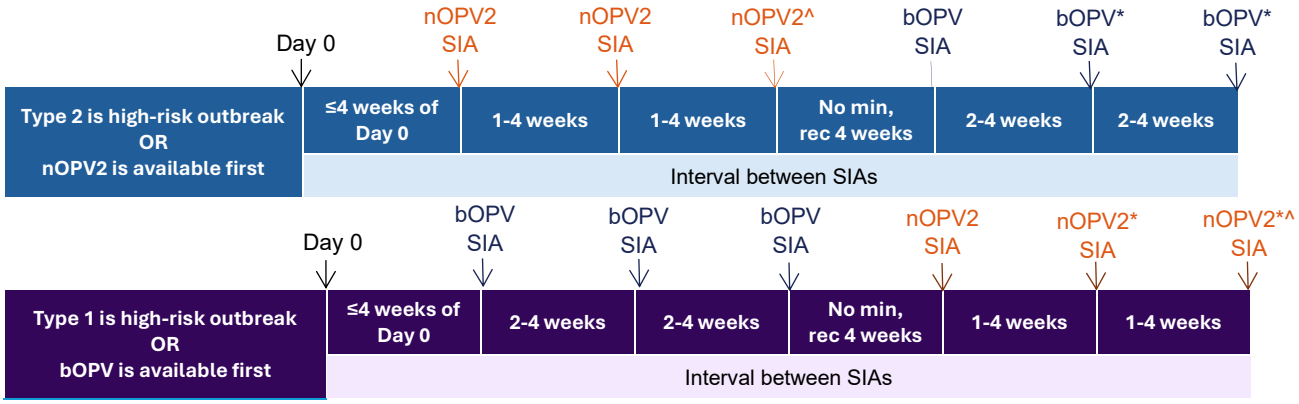
Source: WHO.

[30] Meeting of the Strategic Advisory Group of Experts on Immunization, September 2023: conclusions and recommendations. Wkly Epidemiol Rec 2023;98(47) 599-620 (https://www.who.int/publications/i/item/WER-9847-599-620).
[31] Meeting of the Strategic Advisory Group of Experts on Immunization, September 2024: conclusions and recommendations. Wkly Epidemiol Rec 2024;99(49) 719-740 (https://www.who.int/publications/i/item/who-wer9949-719-740). Type 2 immune response after two and three doses was 65% and 78%, respectively, in those who received both vaccines, compared with 86% and 92% in those receiving only nOPV2.
[32] Wilkinson, AL, et al. Immunogenicity of novel oral poliovirus vaccine type 2 administered concomitantly with bivalent oral poliovirus vaccine: an open-label, non-inferiority, randomised, controlled trial. Lancet Infect Dis 2023;23(9)1062-1071.

Sequential administration of nOPV2 and bOPV

Sequential administration of nOPV2 and bOPV is another approach to co-circulation of type 2 with types 1 and/or 3 (Fig. 8). Deciding which vaccine to use depends on which vaccine is available and which outbreak represents the higher risk due to the intensity of transmission and population immunity. Countries should thus consult with their WHO regional office. No minimal interval is recommended between nOPV2 and bOPV SIAs, but a four-week interval was shown to mitigate potential interference of bOPV on nOPV2 immunogenicity.[33] Intervals of at least one week between nOPV2 SIAs and two weeks between bOPV SIAs must be planned.

Fig. 8. Example of sequential administration of nOPV2-bOPV based on initial vaccine use



* Consider adding (f)IPV to the SIA to boost immunity.
^ If more than four weeks between nOPV2 SIAs, add another nOPV2 SIA and/or (f)IPV to boost type 2 immunity.

bOPV = bivalent oral poliovirus vaccine; (f)IPV = full or fractional inactivated polio vaccine; nOPV2 = novel oral polio vaccine type 2; rec = recommended; SIA = supplementary immunization activity.

Source: WHO.

How to choose between co-administration and sequential administration of nOPV2 and bOPV

To respond to co-circulation, co-administration can enable a timelier response with more opportunities to budget efficiently. In the following circumstances, however, sequential administration is preferred:

- if one OPV is available and the other is delayed, consider beginning the SIA with the available OPV and add the other OPV sequentially or concomitantly when it becomes available;
- if the target population has not received any OPV2 in the previous 6–12 months, consider sequential administration to avoid any immune interference with type 2 and add IPV to a subsequent SIA;
- if vaccine supply is limited and only two nOPV2 SIAs can be conducted. Sequential administration is expected to have less interference and maximize the immunogenicity of the two nOPV2 SIAs. Alternatively, adding (f)IPV can help close the interference gap;
- if budgets are sufficient to account for at least three SIAs of each OPV, or six SIAs in total, as compared with three to four concomitant SIAs; and
- if operations are prepared to implement SIAs in short succession (one- to two-week intervals between SIAs) to enable both a rapid response and to avoid an increased risk of emergence that is associated with longer inter-campaign intervals (i.e. more than four weeks).

[33] See Meeting of the Strategic Advisory Group of Experts on Immunization, September 2023: conclusions and recommendations. Wkly Epidemiol Rec 2023;98(47) 599-620 (https://www.who.int/publications/i/item/WER-9847-599-620). Meeting of the Strategic Advisory Group of Experts on Immunization, September 2024: conclusions and recommendations. Wkly Epidemiol Rec 2024;99(49) 719-740 (https://www.who.int/publications/i/item/who-wer9949-719-740).

Mop-up campaign

When monitoring suggests children in certain health districts or areas have been missed, a mop-up campaign is required after the last SIA. The mop-up should be implemented within three weeks of the end of the last SIA to achieve maximum benefit and to boost population immunity in the shortest possible time. Information to guide the selection of districts for mop-up can include intra-campaign monitoring, independent monitoring (IM), lot-quality assurance sampling (LQAS), post-campaign surveys, eyewitness accounts and spot checks, data on new population movements and data on breakthrough transmission.

How to time and space SIAs

The first major large-scale SIA campaign (SIA1) should be launched within 28 days of Day 0. Subsequent SIAs (SIA2, SIA3) should be within 28 days (four weeks) of a preceding SIA to maximize impact and minimize emergence risk. The spacing can be shortened to one week for nOPV2[34] and two weeks for bOPV in certain situations, such as areas with co-circulation or hard-to-reach areas and conflict settings. The shorter duration achieves adequate immunity with no increase in safety issues and it has an operational advantage for areas with shorter windows of access to vaccinate (e.g. mobile children). However, intervals for nOPV2 should not exceed four weeks. This is particularly important in areas with little to no type 2 immunity to mitigate the risk of seeding new emergences. If this is unavoidable, at least one more nOPV2 SIA should be conducted within one to four weeks of SIA3 (alongside IPV, if possible).[35]

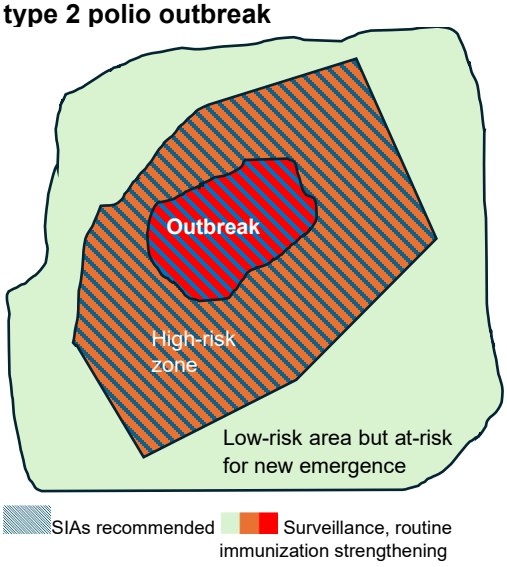
How to determine the geographic scope

The geographic scope will be guided by the findings from the risk assessment and in consultation with the ORPG and regional teams. Appropriate geographic scoping for an SIA that includes OPV must be wide enough to stop transmission. Based on considerations related to poliovirus type (case-to-infection ratio), existing surveillance sensitivity and timelines for surveillance strengthening, the initial vaccination response must include areas with detected transmission (or the outbreak zone) and also areas to which the virus can spread from the outbreak zone or a high-risk zone. Surveillance and routine immunization strengthening must be conducted in all areas, including outside the vaccination response zone. For type 2 outbreaks, including the high-risk zone provides a margin of safety to ensure interruption while mitigating the risk of emergence by using a not-too-wide geographic scope (Fig. 9).

SIAs may be national campaigns, also referred to as national immunization days (NIDs), in small countries or confined geographies such as islands. Subnational NIDs (SNIDs) may be necessary for larger countries, though an accurate risk assessment will be critical to ensure correct scoping.

The scope of the vaccination response may include multiple countries if a strong connection among populations across international borders creates a linkage that is referred to as an epidemiological block, or epi-block. In these cases, the exact scope will be informed by a multi-country risk assessment based on practical realities of population size, likely movement, historical transmission patterns and background population immunity. The ultimate determination on scope should be made by epidemiological considerations about population movement and not political or administrative boundaries.

Fig. 9. Sample geographic scope for a type 2 polio outbreak



Source: WHO.

[34] Meeting of the Strategic Advisory Group of Experts on Immunization, March 2023: conclusions and recommendations. Wkly Epidemiol Rec 2023;98(22) 239-256 (https://www.who.int/publications/i/item/who-wer9822-239-256).
[35] Meeting of the Strategic Advisory Group of Experts on Immunization, September 2023: conclusions and recommendations. Wkly Epidemiol Rec 2023;98(47) 599-620 (https://www.who.int/publications/i/item/WER-9847-599-620).

How to identify the target age group

The poliovirus type of the outbreak will guide the targeted age group (Fig. 10).

Fig. 10. Recommended target age group by poliovirus type

Types 1 and 3	Type 2
Recommended age group: Children <5 years old	**Recommended age group:** Depends on time since tOPV–bOPV switch (April 2016) and the date of the last OPV2 campaign in relation to the date of the confirmation of the outbreak. • **Last OPV2 campaign ≤5 years:** children <5 years old • **Last OPV2 campaign >5 years:** consider all children born since the last OPV2 campaign. • **No OPV2 campaign since tOPV–bOPV switch:** Consider all children born since the tOPV switch.

Special consideration: Children ≥5 years old and adults if evidence of contribution to virus transmission or in areas with low historical polio vaccination coverage.

bOPV = bivalent oral polio vaccine; OPV2 = type 2-containing oral polio vaccine; tOPV = trivalent oral polio vaccine.

Source: WHO.

As a rule, the targeted age group should include (at a minimum) all infants and children under five years of age. An expanded age group may be considered in certain instances.[36] Studies show that adolescents and adults who are otherwise protected from paralysis can nevertheless become infected and shed poliovirus.[37] Risk assessments should consider susceptibility and risk of transmission in all ages, as detection of polio in older age groups or in areas of historically low vaccination coverage suggest significantly low immunity.

When identifying a target age group, countries should: (1) consider their capacity to conduct SIAs and reach high vaccination coverage in all targeted age groups; (2) ensure very high vaccination coverage is achieved in children under five; and (3) weigh the financial implications and benefits of vaccinating older age groups.

How to monitor and improve SIA quality

Stopping an outbreak requires vaccinating >90% of the targeted population. High-quality campaigns are critical to reach this threshold. SIA monitoring and evaluation ensures that preparedness is robust, that support is given where needed and that outbreak response stops transmission.

SIA quality assurance includes both quantitative and qualitative methods, with some suggested approaches and indicators included in Table 13. National EOCs are encouraged to develop tailored tools and indicators to monitor SIA performance. See Box 8 for details on how mobile data collection can help.

Box 8. Data collection using mobile devices

Electronic data capture through mobile devices and real-time secure data upload supports timely, comprehensive data collection and reporting for all response activities. Use of these methods requires effective training, data cleaning and analysis, and continual quality checks. An effort should be made to build upon the existing national electronic data systems, where feasible. National governments should consider sustaining the electronic data system after the polio outbreak response for use across broader health and immunization programmes.

[36] Meeting of the Strategic Advisory Group of Experts on Immunization, October 2022: conclusions and recommendations. Wkly Epidemiol Rec 2022;98(1)1-18 (https://www.who.int/publications/i/item/who-wer9801-1-18).
[37] Mach O, Verma H, Khandait DW, Sutter RW, O'Connor PM, Pallansch MA, et al. Prevalence of asymptomatic poliovirus infection in older children and adults in northern India: analysis of contact and enhanced community surveillance, 2009. J Infect Dis 2014;210 (Suppl 1) S252-8.

Table 13: Key activities and indicators to assess quality before, during and after campaigns

Vaccination response
Planning and preparation
• Preparedness dashboard indicators >90%. • Evidence of training for all personnel (women and men equally). • Accurate bottom-up microplans with detailed mapping, complemented by innovations such as GIS imagery and cross-validation, where feasible.
Implementation
• Intra-campaign independent monitoring >90% coverage for girls and boys. • Spot checks and surveys per WHO guidance and standards. • >90% coverage (e.g. at markets, transit hubs). • Use of strategies to ensure that borders are covered (e.g. “handshake” hand-off between teams).
Post-campaign follow-up
• Post-campaign independent monitoring >90% coverage for boys and girls; and >80% LQAS lots passed at 90% threshold. • Administrative coverage >90% for girls and boys. • No evidence of persistently missed boys and girls or missed geographic areas. • Robust and timely reporting, with innovations (mobile data collection and/or GPS coordinates) to support the collection and analysis of sex-disaggregated coverage data, where feasible.

GIS = geographic information system; GPS = global positioning system; LQAS = lot-quality assurance sampling; WHO = World Health Organization.

Best practices for campaign monitoring are available,[38] and the GPEI Resource Hub offers SIA-related resources.[39] A key component of SIA monitoring will be leveraging the findings from preparedness, implementation and post-campaign assessments to increase the quality and reach of the next SIA. With each SIA, improvements should be made to ensure a decline in missed children.

Collecting sex-disaggregated data for missed and zero-dose children is essential to identify gender-related barriers to immunization. Campaign monitoring tools, including LQAS and IM, should collect sex- and age-disaggregated data to support programme teams in the design of gender-responsive strategies. To ensure monitoring accurately assesses SIA quality, the composition of monitoring teams should reflect local gender norms to permit access and to confirm vaccination. Annex L provides checklists on gender mainstreaming to ensure no girl or boy is missed during SIAs due to household or social dynamics.

Planning and preparation

The SIA preparedness checklist, available upon request to the ORPG, includes a comprehensive list of activities that need to be completed and entered into a preparedness dashboard before a health facility is deemed ready to proceed with the SIA. Each activity is assigned a timeline and score; higher scores indicate strong preparedness while lower scores signal implementation challenges that may need external support.

The checklist is administered at specific intervals: two weeks, one week and three days before the SIA. Assessments conducted two weeks and one week before the SIA are focused on ongoing activities and implementation: microplanning, trainings, vaccines, high-risk operational plans, communication and social mobilization, coordination meetings and funding or resource availability. The assessment conducted three days before an SIA provides an indication for a “GO” or “NO GO” decision.

[38] Global Polio Eradication Initiative. Best practice for monitoring the quality of polio eradication campaign performance. Geneva: World Health Organization; 2018 (https://polioeradication.org/wp-content/uploads/2018/12/Best-practice-for-monitoring-the-quality-of-polio-eradication-campaign-performance.pdf).

[39] See the GPEI Resource Hub for supplementary immunization activities (SIAs): https://polioeradication.org/resource-hub/?rh_tools=supplementary-immunization-activities-sia.

Implementation

Dashboards, also available upon request to the ORPG, monitor a range of indicators related to SIA implementation quality: daily vaccination coverage, vaccine utilization and stockouts, missed children and refusals. The dashboards facilitate real-time monitoring of personnel in the field and provide policymakers with critical information to guide corrective action during the SIA. Dashboard data should be disaggregated by sex to quickly identify and correct gender-related barriers during the campaign.

Post-campaign follow-up

A comprehensive post-SIA review process, led by the national EOC, can identify challenges or gaps that impacted SIA quality. Administrative data, LQAS results and IM data are reviewed to identify geographic areas with a high number of missed children and low vaccination coverage.

The post-SIA review should identify:

- *where* girls and boys are being missed;
- *who* these boys and girls are;
- *why* they are being missed; and
- *how* they can be reached.

To more easily identify effective strategies, gaps should be analyzed and classified as demand-side issues (e.g. refusals, vaccine hesitancy) or operational or supply-side challenges (e.g. teams not visiting households, insufficient time spent, weak supervision, vaccine stockout). Campaign monitoring tools should be modified to collect sex- and age-disaggregated data to determine which issues are best addressed by gender-responsive social mobilization, demand-creation efforts and/or operational solutions to ensure that no child is left behind.

Once gaps are thoroughly assessed, the national EOC is responsible for making recommendations, developing a quality improvement plan (QIP) to overcome challenges and ensuring all partners implement the recommendations, including regional and global collaborators if indicated.

What to include in a quality improvement plan (QIP)

Developed 7–10 days after the first SIA, a QIP uses lessons learned and campaign evaluation results, in conjunction with national and subnational monitoring feedback, to identify key issues and impediments to high-quality SIAs.

QIPs should address all areas related to SIA planning and implementation: leadership and coordination, microplanning, vaccine management, surveillance enhancements, gender, social and behavioural change communication and funding. The QIP should outline problems, identify constraints and propose recommendations to resolve issues (e.g. update and validate microplans, strengthen training and supportive supervision plans, improve vaccine logistics plans). To be effective, the QIP should also promote accountability by delegating the agencies and individuals responsible for improvements, with timelines for completion and an update on the final status.

The QIP is intended to be a collaborative process between country teams and GPEI partners to ensure full commitment to implementation. QIP implementation should be monitored biweekly until the start of the third SIA. If key components of the QIP remain incomplete, a decision should be made whether to delay the start of the SIA to avoid poor outcomes.

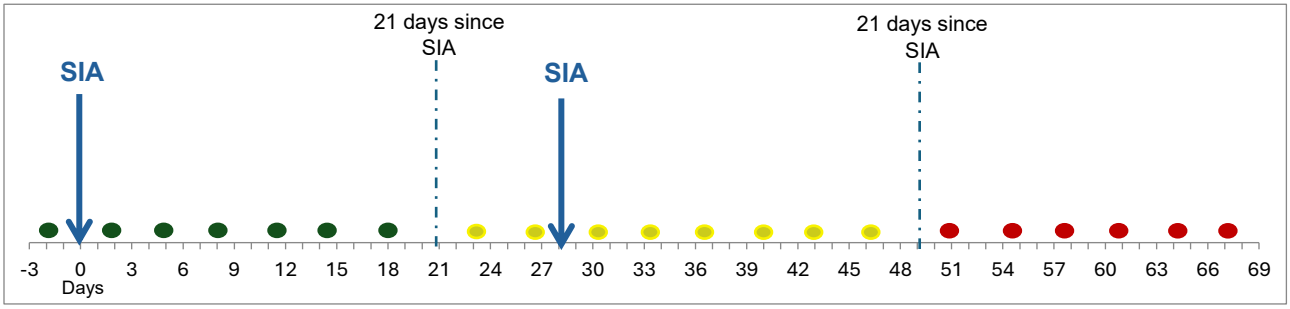
How to respond to breakthrough transmission

The detection of poliovirus in a human or the environment after an SIA provides an early indication that the response has failed to interrupt transmission. In the context of an active outbreak, any WPV1 or cVDPV detection with the date of paralysis onset for AFP cases or contacts (of any age) or a collection date for community contacts or environmental samples more than 21 days after the first day of the SIA constitutes

breakthrough transmission. Regardless of whether it occurs after the initial outbreak vaccination response or after any subsequent SIA, breakthrough transmission is anchored to a specific SIA rather than the full vaccination response.[40] All breakthrough transmission must be responded to (or "covered") with two SIAs implemented in a timely manner.[41]

To clarify this definition and illustrate the number of SIAs needed to cover breakthrough transmission, Fig. 11 depicts three possible scenarios.

Fig. 11. Examples of breakthrough transmission



- Detections shown in **green dots** are **not** breakthrough transmission. These detections have been covered by two SIAs.
- Detections shown in **yellow dots** are breakthrough transmission. They "breakthrough" the first SIA. They are covered by the second SIA but also require an additional SIA so they are covered by a total of two SIAs.
- Detections shown in **red dots** are breakthrough transmission. They "breakthrough" both SIAs and require two additional SIAs to be covered.

SIA = supplementary immunization activity.
Source: WHO.

The classification of breakthrough transmission is independent of the specific virus or type that has triggered an outbreak. For example, an emergence of a new VDPV can be breakthrough transmission if it meets the above criteria. In this case, a new VDPV indicates high population immunity wasn't achieved nor sustained enough to prevent an emergence. Therefore, the SIAs were unlikely to have interrupted transmission of the original outbreak virus.

For areas with a high risk of continued transmission due to inaccessibility or evidence of poor-quality SIAs or surveillance gaps, a shorter threshold of 14 days may be used instead of 21 days to assess breakthrough transmission.

For any breakthrough transmission, the country should carry out a thorough field investigation and risk assessment to understand why the initial outbreak vaccination response failed. Focus should be on the quality of the SIAs and the sensitivity and quality of polio surveillance, as well as other relevant local factors. The outcome of the investigation should inform the QIP to address SIA quality issues.

[40] The definition of breakthrough transmission has changed in this version of the SOPs from *per response* (i.e. after two SIAs) to *per SIA*.
[41] Eradication of poliomyelitis. In: Fifty-ninth World Health Assembly, 26 May 2006. Geneva: World Health Organization; 2006 (https://apps.who.int/gb/ebwha/pdf_files/WHA59/WHA59_1-en.pdf).

What standards apply to vaccine management and reporting

Vaccine management should be prioritized at all levels and stages of the response. All vaccines received, distributed and administered must be recorded through stock management tools and/or vaccine utilization records. For each SIA, all vials and doses used, partially used or unused must be fully recorded with notes on partial use, contamination or vaccine vial monitor changes. All vials must be fully accounted for and recorded. All lost and missing vials must also be reported. All use of nOPV2 in-country will be guided by the nOPV2 technical guidance document.[42]

Countries must report on the status of vaccines used, disposed, retrieved and stored after each Round 0 and SIA through **Form A** (in nOPV2 technical guidance, Annex 1).

A reverse logistics and vial disposal plan must also be integrated within the response plan. It should:

1. confirm that unused vaccines will be returned to central or regional storage in reverse cold chain;
2. outline which health facilities and district vaccine stores will be left with a one-month supply of bOPV after the end of type 1 and type 3 SIAs;
3. stipulate that all type 2-containing OPV will be immediately withdrawn and kept at the central level after the end of type 2 SIAs; and
4. for type 2-containing OPV only, outline how all unusable vials will be returned to safe disposal sites (all used, partially used, expired and damaged vials, including vials with vaccine vial monitors that reached the discard point).

For OPV2 tracking, the ORPG will work with the WHO Global OPV Stockpile focal point and UNICEF Supply Division to track the decisions of the WHO Director-General and the distribution of vaccines to each country. The national EOC will report back to the OPV secretariat on OPV2 stocks in the country two weeks after the end of each SIA.

When and how to pursue integrated campaigns

Integrated campaigns, defined as the simultaneous co-delivery of multiple vaccines and/or other health interventions, presents both opportunities and potential limitations within poliovirus outbreak response. On the one hand, integrated campaigns can improve vaccine reach and enhance service efficiency, particularly in areas with a history of refusals. On the other hand, polio outbreak response must be pursued with both speed and quality through defined SIA intervals that can complicate the delivery of other vaccines.

The GPEI provides guidance on campaign integration and enabling factors.[43] If countries anticipate that the timing and quality of the initial outbreak vaccination response can be maintained while delivering other vaccines or health interventions, national and regional stakeholders from the relevant programmes (polio and integrated antigens/interventions) should collaborate quickly to assess if all enabling factors are met.

Countries considering integrated campaigns should seek GPEI endorsement by:

- clearly documenting their integration plans in the risk assessment and initiating discussions on budget line items;
- ensuring that preparedness for integrated campaigns can be addressed in the response plan; and
- submitting the risk assessment and integrated response plans to the ORPG and relevant regional offices for review and endorsement (see Submitting a risk assessment).

[42] Global Polio Eradication Initiative. Novel Oral Polio Vaccine Type 2 (nOPV2) Management, Monitoring, Removal and Disposal (in 50 dose vials with VVM type2): Technical Guidance, published 2024 (https://polioeradication.org/wp-content/uploads/2024/05/nOPV2-vaccine-handling.pdf).

[43] GPEI Briefing note: Considerations for Integrating Multi-Antigens & Other Health Interventions to Support Polio Eradication (https://polioeradication.org/wp-content/uploads/2025/06/GPEI-MultiAntigenGuide-20250610.pdf).

The ORPG reviews the state of planning and preparedness before issuing a final decision on whether GPEI resources will be made available to support country integration plans. In the event that the initial outbreak vaccination response is deemed unsuitable for integrated campaigns, polio vaccines administered as part of planned or preventive campaigns or responses to persistent outbreaks may provide another opportunity.

Integrated campaigns do not have to be polio-driven. Opportunities to include polio vaccinations in planned VPD campaigns, such as measles and rubella campaigns, should be pursued to further strengthen population immunity for polio at a fraction of the cost of a polio campaign. While OPV can be easily added to campaigns, those campaigns that already include injectable vaccines represent a valuable opportunity for IPV as co-delivery will resolve logistical challenges related to IPV administration.

How to strengthen routine immunization in the context of a polio outbreak

Routine immunization is a critical backbone to the polio eradication effort. Countries with high coverage of polio vaccines in routine childhood immunization, delivered by national Essential Programmes on Immunization (EPIs), have higher population immunity that lowers the risk for an outbreak from a poliovirus importation or emergence. Countries and subnational areas with suboptimal immunization coverage, however, will intrinsically be at higher risk for outbreaks as low population immunity contributes to the risk of new emergences of VDPVs and transmission of cVDPVs or WPV1.

In the context of a polio outbreak, improvements to routine immunization must be evaluated as part of response planning and EPI must be actively engaged – particularly as the EPI workforce is often enlisted to implement polio SIAs and other outbreak response activities.

- Led by the national EPI team, a thorough analysis of the reasons for low immunization coverage in the outbreak areas should be conducted, with data disaggregated by age and sex to support social profiles on zero-dose and under-vaccinated children in all high-risk communities.
- Based on the findings, the national EOC that leads on the polio outbreak response should integrate EPI insights into planning for the initial vaccination response.
- Additionally, the national polio outbreak response plan should include initiatives that can leverage time-limited support from the polio outbreak to improve routine immunization coverage through their mutual benefits. For example, select short- and medium-term immunization systems strengthening actions may be feasibly taken in line with the operational components of the “reaching every district” (RED) approach.[44] Other possible areas of focus may include:
    - strengthened programme management;
    - improved microplanning with a focus on mapping zero-dose communities;
    - social mobilization that connects high-risk communities with immunization services;
    - gender analyses to better identify reasons for vaccine hesitancy or refusals;
    - supportive supervision and improved performance monitoring; and
    - more robust use of surveillance as data for action.
- GPEI and EPI partners should also identify possible opportunities for joint resource mobilization to support response efforts and EPI coverage improvement and to build on the political attention from the polio outbreak to ensure accountability for routine immunization service delivery.

Efforts to strengthen immunization systems during an outbreak response must be undertaken with care and deliberate planning. On the one hand, polio vaccination responses must be prioritized in the allocation of frontline health workers and operational resources and must be implemented without delay. On the other

[44] Reaching Every District (RED), 2017 revision. Brazzaville: World Health Organization; 2017 (https://www.afro.who.int/sites/default/files/2018-02/Feb%202018_Reaching%20Every%20District%20(RED)%20English%20F%20web%20v3.pdf).

hand, efforts must also be made to protect the continuity of routine immunization services during polio SIA campaign planning and implementation. This includes maintaining minimum staffing levels at fixed facilities, ensuring continued provision of routine antigens (including bOPV and IPV), and tracking any temporary service disruptions for rapid corrective action. Supervisory teams should thus verify both SIA performance and continuity of routine immunization services during polio outbreak response.

Resources

- Microplanning for Polio Supplementary Immunization Activity
- GPEI Resource Hub – Supplementary Immunization Activities
- Field Manual: Assessing Vaccination Coverage Levels Using Clustered Lot Quality Assurance Sampling
- Best Practice for Monitoring the Quality of Polio Eradication Campaign Performance
- Microplanning for immunization service delivery using the Reaching Every District (RED) strategy.
- Briefing Note: Considerations for Integrating Multi-Antigens & Other Health Interventions to Support Polio Eradication
- Catch-Up Institutionalization Assessment Tool
- Missed Opportunities for Vaccination (series)
    - Planning Guide to Reduce Missed Opportunities for Vaccination
    - Methodology for the Assessment of Missed Opportunities for Vaccination
    - Intervention Guidebook for Implementing and Monitoring Activities to Reduce Missed Opportunities for Vaccination

How to enhance surveillance during an outbreak

Procedures

→ Immediately notify all national and subnational offices about the polio outbreak or event.
→ Enhance the sensitivity of polio surveillance systems to detect any further poliovirus transmission within and beyond the outbreak zone.
→ Include surveillance enhancement activities in the national polio outbreak response plan.
→ Implement strategies for detecting poliovirus in special populations or inaccessible areas.

Interrupting poliovirus transmission and closing outbreaks requires a robust, sensitive surveillance system that can detect virus transmission in a timely manner. Surveillance activities support the initial steps of Detection, notification and investigation. Vigorous efforts to further enhance the surveillance system are also required to promptly detect ongoing transmission or new virus within and beyond the outbreak zone.

AFP surveillance remains the primary means for detecting poliovirus in most countries, which may be supplemented with environmental surveillance (ES), where feasible. A few countries detect poliovirus through surveillance approaches that are not poliovirus-specific, such as enterovirus surveillance or acute flaccid myelitis (AFM) surveillance. Regardless of the method, the goal is to achieve a level of surveillance sensitivity that is tailored to each country's context and risk. Countries should refer to the Global Polio Surveillance Action Plan 2025–2026 to determine the appropriate level of surveillance sensitivity: *highly sensitive* or *very sensitive* surveillance.[45]

To help countries improve the sensitivity of their surveillance, *Strengthening Polio Surveillance during a Poliovirus Outbreak* summarizes the activities to improve AFP surveillance and ES.[46] The guidelines include recommendations for key challenges, such as inaccessible areas and special populations (Box 9).

The national polio outbreak response plan must include surveillance enhancements which start when a response is initiated and continue after interruption to strengthen and maintain sensitivity for at least twelve (12) months to confirm the last detection of poliovirus.

Box 9. Topics in surveillance in outbreak settings

1. Checklist of surveillance strengthening activities.
2. Place polio surveillance system on high alert.
3. Enhance AFP surveillance:
   - active surveillance, review of reporting network;
   - training, sensitization on AFP case detection and notification;
   - supervision and validation of AFP cases; and
   - logistics and prioritization of sample testing.
4. Enhance environmental surveillance:
   - review ES network, sampling frequency and performance; and
   - expand network within and beyond outbreak zone, where necessary and feasible.
5. Laboratory surveillance coordination:
   - Establish close coordination, prioritize testing, contingency planning for shipping and testing samples.
6. Other strategies:
   - AFP contact sampling, ad hoc AFP case search, community-based searches.
7. Special populations, insecure or inaccessible areas.
8. Monitor surveillance enhancements
9. Possible signs of diminished surveillance sensitivity in need of corrective actions:
   - orphan viruses, cluster of compatible cases, ES detection with no AFP case.

As available in *Strengthening Polio Surveillance during a Poliovirus Outbreak*.[46]

[45] See Part 1 and Annex A in: Global Polio Eradication Initiative. Global Polio Surveillance Action Plan 2025–2026. Geneva: World Health Organization; 2025 (https://iris.who.int/bitstream/handle/10665/382037/9789240111844-eng.pdf).
[46] Global Polio Eradication Initiative. Strengthening Polio Surveillance during a Poliovirus Outbreak, revised February 2026. Available on the GPEI website: https://polioeradication.org/wp-content/uploads/2026/02/Strengthening-Polio-Surveillance-during-a-Poliovirus-Outbreak-20260226.pdf.

How to strengthen and optimize AFP surveillance

To strengthen and optimize the sensitivity of AFP surveillance, countries must review the performance of routine and active AFP surveillance, starting with an assessment of passive and active surveillance. If they are not performing these as globally recommended, they should adjust their approach to ensure that their surveillance meets the global standards.

For countries where the AFP surveillance system has been largely inactive or reliant on passive surveillance, *Global guidance for conducting acute flaccid paralysis surveillance in the context of poliovirus eradication* provides details on how to initiate active surveillance and optimize the AFP network.[48] Briefing personnel, reviewing the reporting network, ensuring the collection of sex- and age-disaggregated data, and establishing supportive supervision are essential to ensure all AFP cases are detected and fully investigated (Box 10).

Box 10. Importance of gender in AFP surveillance

For surveillance, it essential to understand if the system can detect and is responsive to both female and male AFP cases. Sex- and age-disaggregated data of AFP cases will help provide non-discriminatory support for AFP case notification and investigation, as well as further medical support where needed. Findings and interventions should be incorporated into the microplans and other response activities.

Refer to Annex F in the Global Polio Surveillance Action Plan on safeguarding gender to detect and investigate AFP in children.[47]

What is the role of environmental surveillance

As a supplement to AFP surveillance and never a substitute, ES provides valuable information on the geographic extent and duration of transmission, as well as the excretion of vaccine virus following SIAs. Countries should refer to *Field guidance for the implementation of environmental surveillance for poliovirus* to implement ES in accordance with the global standards.[49] *Strengthening Polio Surveillance during a Poliovirus Outbreak* includes activities to enhance ES, such as expanding the network with ad hoc sites.[50] Any adjustments to ES should be done in close collaboration with polio surveillance officers, laboratorians and, where needed, the environmental health departments within the country.

How to monitor surveillance enhancements

Regular monitoring of process and performance indicators at the field level will enable early identification of bottlenecks and impediments, so countries can implement effective solutions and bolster confidence that surveillance performance is sensitive enough to detect ongoing virus transmission.

Countries should monitor reporting from all subnational units (with an emphasis on high-risk populations) and track surveillance indicators.

- In outbreak-affected and high-risk areas,[51] the non-polio AFP (NPAFP) target is increased to a minimum of three cases per 100 000 children <15 years of age per year. This threshold must be maintained for at least 12 months after the last poliovirus detection.

[47] Global Polio Eradication Initiative. Global Polio Surveillance Action Plan 2025–2026. Geneva: World Health Organization; 2025 (https://iris.who.int/server/api/core/bitstreams/a7455caa-cabe-40f9-bacf-1b323efeac1b/content).
[48] Global guidance for conducting acute flaccid paralysis (AFP) surveillance in the context of poliovirus eradication (pre-publication version). Geneva: World Health Organization; 2026 (https://polioeradication.org/wp-content/uploads/2026/01/Global-AFP-guidance-pre-publiation-2026.pdf).
[49] Global Polio Eradication Initiative. Field guidance for the implementation of environmental surveillance for poliovirus. Geneva: World Health Organization; 2023 (https://polioeradication.org/wp-content/uploads/2023/06/Field-Guidance-for-the-Implementation-of-ES-20230007-ENG.pdf).
[50] Global Polio Eradication Initiative. Strengthening Polio Surveillance during a Poliovirus Outbreak, revised February 2026. Available on the GPEI website: https://polioeradication.org/wp-content/uploads/2026/02/Strengthening-Polio-Surveillance-during-a-Poliovirus-Outbreak-20260226.pdf.
[51] Area defined as the lowest administrative level that permits meaningful interpretation.

- At the national level, a minimum of two cases per 100 000 children <15 years of age per year is the recommended NPAFP target.
- The target for stool adequacy remains at ≥80% for at least 12 months after the last poliovirus detection.

Table 14 summarizes high-level actions to monitor surveillance enhancements implemented during an outbreak response. More information on enhancing surveillance during an outbreak is provided in Annex J. Next steps to address identified bottlenecks and impediments to polio surveillance sensitivity are available and included in the list of surveillance resources located at the end of this chapter.

Table 14: Key activities and indicators for enhanced surveillance

Surveillance
Planning and preparation
• Rapid review and triangulation of available surveillance data (AFP, ES, reporting sites, routine weekly reporting). • Review ES sampling frequency (sampling once or twice a month). • Review prioritization levels of the active surveillance sites. • Supervision schedules made available for AFP and ES, including validation of AFP cases. • Additional strategies, if appropriate, discussed and planned.
Implementation
• Regular monitoring of AFP and ES performance and process indicators (including timeliness) at subnational levels. • Monitoring of laboratory surveillance and timeliness of testing. • Regular data harmonization with the laboratory. • Document impact of targeted strategies for hard to reach, inaccessible and high-risk population.
Monitoring
• AFP surveillance indicators maintained for at least 12 months after last poliovirus detection: ○ NPAFP rate: ≥3/100 000 children <15 years old per year in all outbreak-affected and high-risk areas. ○ Stool adequacy: ≥80% of AFP cases in all areas. ○ Timeliness of detection for WPV/VDPV: ≥80% of AFP cases with results available per guidelines. ○ Adequacy of active surveillance: ≥80% of high-priority sites visited per guidelines. • ES enterovirus detection rate: ≥50% of samples are enterovirus positive per ES site. • No orphan viruses detected. • Specific analysis for all high-risk populations (AFP rate, NPAFP rate, stool adequacy).

AFP = acute flaccid paralysis; ES = environmental surveillance; NPAFP = non-polio acute flaccid paralysis; VDPV = vaccine-derived poliovirus; WPV = wild poliovirus.

Resources

- Global Polio Surveillance Action Plan 2025-2026
- Strengthening Polio Surveillance during Poliovirus Outbreaks
- Guidelines for Implementing Polio Surveillance in Hard-to-Reach Areas and Populations
- Global guidance for conducting acute flaccid paralysis (AFP) surveillance in the context of poliovirus eradication, 2nd edition (pre-publication)
- AFP surveillance training guide (submit a request for permissions)
- Field guidance for the implementation of environmental surveillance for poliovirus

How to plan for social and behavioural change

Procedures

→ Launch SBC interventions at least 10 days before SIAs to increase acceptance and minimize refusal.
→ Use assessment tools and gender analysis to identify special populations and under-vaccinated children.
→ Implement innovative approaches to raise awareness before the initial vaccination response begins and achieve high vaccine acceptance.
→ Integrate SBC activities into microplanning to map special populations, identify barriers to access (including gender-related barriers) and tailor interventions to reach every child.
→ Conduct surveys, using a gender lens, to understand why some children are not vaccinated; adapt communication strategies to improve campaign effectiveness.

Social and behavioural change (SBC) communication is a systematic and evidence-informed approach that aims to produce measurable, positive shifts in individual behaviours and social norms through activities that include community engagement, advocacy, social mobilization, risk communication and misinformation management. In the context of poliovirus outbreaks, SBC communication strategies focus on building (or rebuilding) women and men caregivers' awareness, trust and knowledge about polio and OPV to increase community acceptance of the polio vaccine and generate demand for polio immunization.

SBC strategies are systematic in that every communication is leveraged as an opportunity: from a frontline worker's knock at the door to targeted campaigns countering rumours on social media. Broadly, SBC interventions are developed through close engagement with a local community. By mobilizing women and men leaders and influencers, the community's participation becomes central to campaign planning. Advocacy with traditional political or religious leaders amplifies collective will that helps to solidify individual commitment to take personal action in response to a polio outbreak. Collaborating with local civil society organizations and broader health personnel can further facilitate the coordinated delivery of polio vaccines alongside other immunizations.

SBC strategies also enhance the effectiveness of other outbreak response activities by:

- raising awareness about polio disease, vaccines and upcoming campaign dates;
- elevating the perceived risk of polio for children, families, and communities;
- building community trust in vaccine safety and efficacy;
- identifying and addressing barriers to immunization, including gender-related barriers;
- mobilizing communities, particularly in high-risk and underserved areas; and
- strengthening surveillance for the detection of AFP cases in polio-affected communities.

Annex K provides a framework on the role of SBC in outbreak response.

What are the first steps for SBC planning

Outbreak response communication is initiated immediately upon laboratory confirmation of poliovirus and integrated into all response planning, implementation and monitoring.

SBC interventions must precede a vaccination response by at least 10 days. Therefore, planning starts immediately, beginning with a comprehensive analysis of social, cultural, gender and environmental barriers to vaccine acceptance and demand.

- Initial assessment: Effective SBC interventions must be grounded in timely, accurate and context-specific data. A comprehensive review should be conducted of all social and behavioural data (e.g.

missed children, refusals and absences). Where such data are unavailable or outdated, a rapid social assessment should be performed. All data must be disaggregated by sex, age, geographic location and other relevant variables to ensure a comprehensive analysis. Findings from the initial assessment should guide the design and implementation of SBC activities and inform the identification of priority audiences, their segmentation and behavioural objectives.

- Gender analysis: A gender analysis combines both quantitative (sex- and age-disaggregated data on missed and zero-dose children) and qualitative data to generate insights into the perceptions, social norms and beliefs that may influence vaccination uptake. This analysis aims to identify differences in women and men caregivers' awareness and education, as well as their communication preferences. It also clarifies decision-making patterns within households and communities, showing who makes decisions and who influences whether girls or boys receive polio vaccination or other health services. The outcomes of the gender analysis help guide gender-specific interventions. For example, polio teams can navigate interactions with mothers and fathers separately to determine, among other aspects, preferences for women or men vaccinators which can significantly impact vaccination outcomes in certain areas. Another example is communication materials at the appropriate reading level displayed in spaces where women and men can easily engage with them. See Annex L. Checklist for gender mainstreaming for further details.
- Advocacy, communication and social mobilization (ACSM) committee: A national ACSM committee should be created (or reinvigorated) to help plan, coordinate, lend support to and promote the implementation of gender-responsive SBC interventions, including advocacy, social mobilization, digital engagement, risk communication, external and crisis communication, capacity-building and supportive supervision plans and activities.

How to integrate SBC activities throughout the vaccination response

Vaccination response planning must align with the communication needs and preferences of the affected population. Locally tailored, culturally appropriate and gender-sensitive messaging helps to ensure that women and men caregivers understand the rationale for vaccination and the importance of accepting vaccinations throughout the outbreak response.

SBC interventions are implemented in three phases: before, during and after or between SIAs.

Before SIAs

Effective pre-campaign monitoring ensures readiness, identifies gaps and develops timely corrections before vaccines reach communities. Based on an analysis of social and epidemiological data, SBC planning should prioritize innovative approaches to identified challenges (Annex K). Several SBC activities need to be implemented as part of campaign preparedness. These include:

- ensuring ACSM microplanning activities at the lowest level;
- recording previous non-compliance and mapping refusals;
- conducting advocacy and community meetings (i.e. ACSM committee meetings);
- training social mobilizers and vaccinators to build their interpersonal communication skills;
- documenting household visits to ensure at least 90% of families are aware of the upcoming SIA;
- engaging in social listening to proactively manage rumours or misinformation; and
- creating media plans with messaging tailored to specific communication channels that include radio and digital media broadcasting.

During SIAs

Door-to-door social mobilization activities begin at least three days before the start of SIAs. In this phase, SBC activities focus on issues that arise during vaccination, including vaccine refusals, crisis management and social listening for the concerns of mothers and fathers (and women and men caregivers). All concerns

should be responded to online, offline and in the field. Also critical during SIA implementation are any SBC interventions that have been planned with local women and men community leaders and influencers, as well as broader communications plans, media broadcasts and digital community engagement.

After each SIA and between SIAs

SBC activities after each SIA should focus on understanding the reasons for missed girls and boys by conducting special investigations within communities with low vaccination, resolving refusal households, addressing social and gender-related barriers, amplifying trust about polio immunization, improving polio's risk perception, promoting routine immunization and sustaining community engagement until the next SIA.

As part of the post-campaign review process, findings on the *where*, *who*, *why* and *how* of missed boys and girls should be used to adapt communication strategies to improve effectiveness and inclusivity.

How to monitor and supervise SBC communication

Monitoring and supervision should be carried out before, during and after SIAs to ensure interventions are conducted as planned (Table 15). Refer to Annex K for further guidance. *Rapid Social Data Collection Tools for Polio Outbreak Response* provides low-cost tools in English, French and Arabic at poliokit.org.[52]

Table 15: Key activities and indicators to assess SBC before, during and after implementation

Social and Behavioural Change Communication
Planning and Preparation
• Evidence of engagement with the local community, women's groups, women and men community and religious leaders. • Engagement of national government with active support for outbreak response. • Evidence of SBC data collection tools that disaggregate social data by age and sex. • In-depth social investigation of case(s) and/or community to identify un-/under-vaccinated children. • Evidence of in-depth social profiling to tailor messaging to audience groups, including special populations (urban, mobile/migrant, refugees/IDPs, cross-border and conflict-affected populations) • Innovative approaches to engage special populations, including a gender component.
Implementation
• Evidence of increased sensitization of women and men community members to AFP and vaccination. • Evidence of women involved in advocacy, communication and social mobilization activities. • Evidence of men who encourage childhood vaccination and take action to ensure that it happens. • Active support from community, including women's groups and religious leaders, during campaigns. • Targeted strategies used to optimize response activities in special populations. • No block vaccination refusals.
Post-campaign follow-up
• Evidence that campaign awareness was ≥90% of all households (IM and/or LQAS). • Evidence of <2% of refusal cases of total recorded missed children, by sex and age. • Special populations >90% coverage. • Analysis of disaggregated data for high-risk populations, missed girls and boys and refusals.

IDP = internally displaced population; IM = independent monitoring; LQAS = lot quality assurance sampling; SBC = social and behavioural change.

[52] Rapid Social Data Collection Tools: Rapid Polling and Rapid Qualification Research for Polio Outbreak Response, version 2, New York: UNICEF; 2020 (https://poliokit.org/sites/default/files/2022-10/Rapid%20Social%20Data%20Collection%20Tools%20for%20Polio%20Outbreak%20Response%20%28English%29.pdf).

Resources

Social & Behavioural Change Communication

- Polio Toolkit
- Advocacy Toolkit
- SBC Planning and Monitoring Tools for Polio Outbreak Response (in English and French)
- Digital Community Engagement (DCE) Strategy 2025‑2026
- Behavioural and social drivers of vaccination: Tools and practical guidance for achieving high uptake
- Polio Communication Global Guide
- Polio Special Investigation Tool: Missing Children
- SBC Programming in Hard-to-Reach Settings
- nOPV2 Introduction Communications Toolkit
- Template: Behavioural Strategy to Prepare and Respond to cVDPV and Introduction of nOPV2

Gender Mainstreaming

- UNICEF Gender and Immunization Global Gender Analysis Tool
- European Institute for Gender Equality Gender Analysis
- JHPIEGO Gender Analysis Framework
- JHPIEGO Gender Analysis Toolkit for Health Systems

How to address workforce considerations

Human resources for polio outbreak response differ by country. Beyond recruiting and training, the following elements should also be considered.

Timely and secure payment: The GPEI places a strong emphasis on worker protection and programme integrity. As such, it is essential to guarantee that all frontline workers involved in SIAs, surveillance and social mobilization efforts receive timely, secure and auditable payments. Countries are encouraged to implement fit-for-context disbursement channels and digital or direct-to-person methods, wherever feasible (Box 11).

Box 11. How to choose a payment platform?

When selecting a financial payment disbursement service, countries should properly vet all providers. For example, digital payment services should meet key operational criteria. They should be able to:

- segregate user roles for approval, disbursement and reconciliation;
- provide unique budget lines and reports to validate payments against microplans, attendance and monitoring for post-campaign reconciliation; and
- connect team leads with help desk support and grievance redress for any errors or disruptions in payment processing.

The platform should apply Know Your Customer (KYC) standards to protect frontline workers from potential fraud or theft. The select platform should also demonstrate how their disbursement method effectively removes barriers to access for women frontline workers – so they can directly receive and manage their pay and not rely on male family members.

Gender balance in the workforce: Health workers are indispensable to polio outbreak response. Attention should be given to guarantee a greater gender balance in recruitment, hiring, deployment and training for capacity-building and skills development. Countries should aim to integrate gender modules into all polio outbreak trainings (vaccinators, supervisors, social mobilizers and surveillance staff) to strengthen awareness and accountability for gender-responsive programming based on evidence.

The frontline workforce operates best when teams reflect the preferences of communities, as this increases acceptance and boosts engagement that ultimately makes it possible to reach boy and girls equally. In some contexts, this deference to community preferences may mean avoiding the deployment of women-only teams to align with local norms. See Annex L for further information on gender mainstreaming in the workforce.

Above all, equal opportunities should be provided to women for working, training, developing expertise and growing their careers in the polio eradication programme.

No tolerance for misconduct: The GPEI has a zero-tolerance policy for sexual misconduct.[53] Polio outbreak responses must include measures to prevent and respond to sexual exploitation, abuse and harassment (PRSEAH) by ensuring all staff know mechanisms for reporting misconduct. For tools to support PRSEAH, see Annex M. Preventing and responding to sexual exploitation, abuse and harassment.

Resources

- Gender and Immunization Demand: Final Report and Recommendations (automatic download)
- McGill Introduction to Gender Equality and Global Health
- University of California Irvine Diversity and Inclusion for HR Professionals
- Cynara Gender Training Platform

[53] Global Polio Eradication Initiative. Polio Oversight Board statement on zero tolerance for sexual misconduct. Available at: https://polioeradication.org/wp-content/uploads/2018/04/polio-oversight-board-statement-on-sexual-misconduct-20180426.pdf.

Is the outbreak on the path to interruption?

Procedures

→ Support and implement recommendations from outbreak response assessments.

In addition to regularly monitoring response performance (Tables 13–15), an independent outbreak response assessment (OBRA) conducted during an outbreak is essential to determine that a country is on the path to interrupting poliovirus transmission.

Outbreak response assessments

The purpose of an OBRA is to assess whether surveillance efforts and the vaccination response are robust enough to detect and interrupt poliovirus transmission. OBRAs should be carried out in a timely manner to assess progress, identify gaps and provide recommendations for corrective actions. Participating members should include independent experts in immunization, vaccine management, surveillance, gender and SBC communication who are not directly engaged with the response effort. Refer to the *Poliovirus Outbreak Response Assessment Aide Memoire* for sample tools and further details.[54]

The ORPG, WHO and UNICEF regional offices will lead coordination. The first OBRA should be conducted six (6) months after outbreak notification and after at least two SIAs. The focus, scope and terms of reference of the OBRA will be adjusted in consideration of the interval of time since the last poliovirus isolate and the local context. Extended outbreaks may warrant intermediate OBRAs.

The ORPG will deploy individual or joint partner agency missions, as needed and as feasible. Depending on circumstances, one of two methodologies will be used:

1. a field mission in which a team (5–8 external evaluators) is deployed to the country for 1–2 weeks; or
2. a desk review at the regional level or virtual OBRAs for situations where in-person assessment is not feasible, for example in cases of insecurity or if a high volume of outbreak countries stretches capacity.

To ease data collection, electronic tools such as the OBRA open data kit survey should be used wherever feasible. The tool can be downloaded to the evaluator's mobile device and used to collect survey data. The survey tool is paired with a PowerBI OBRA dashboard where results of field surveys are summarized through graphs and maps as live data. The dashboard can help the OBRA team monitor field activities in close to real-time.

The OBRA team lead will present findings and recommendations to national authorities before leaving the country or at the end of the virtual external desk review. The team will later submit a report to the country team, ORPG chair, regional polio response teams and the Director of the WHO Polio Programme.

The WHO regional office will confirm if the country is on the path to interruption and if closure of the outbreak is warranted based on the OBRA report. If not, the ORPG and regional office will make recommendations for next steps. The country must update their national polio outbreak response plan (NPORP) based on OBRA recommendations. This may include strengthening internal and external support for the response, conducting external desk reviews or implementing an emergency action plan to strengthen surveillance and improve vaccination quality. Special situations, such as multi-country outbreaks and co-circulation, will be dealt with on case-by-case basis.

If the recommendations suggest closing an outbreak, a final assessment should be considered after at least 12 months from the last poliovirus isolation to consider closure of the outbreak (see Closing an outbreak).

[54] Global Polio Eradication Initiative. Aide Memoire: Poliovirus Outbreak Response Assessment (OBRA), version 5. Available at: https://polioeradication.org/wp-content/uploads/2024/05/Polio-Outbreak-Response-Assessment-Aide-Memoire-version-5-20251111.pdf.

3. PERSISTENT OUTBREAKS: BEYOND DAY 180

While the topic of persistent outbreaks may be a new chapter in the outbreak response SOPs, they are not a new concept for the polio eradication programme. Since 2016, 54% of outbreaks were not stopped within 180 days. This chapter addresses five key questions to guide countries toward overcoming impediments and stopping any outbreak that persists.

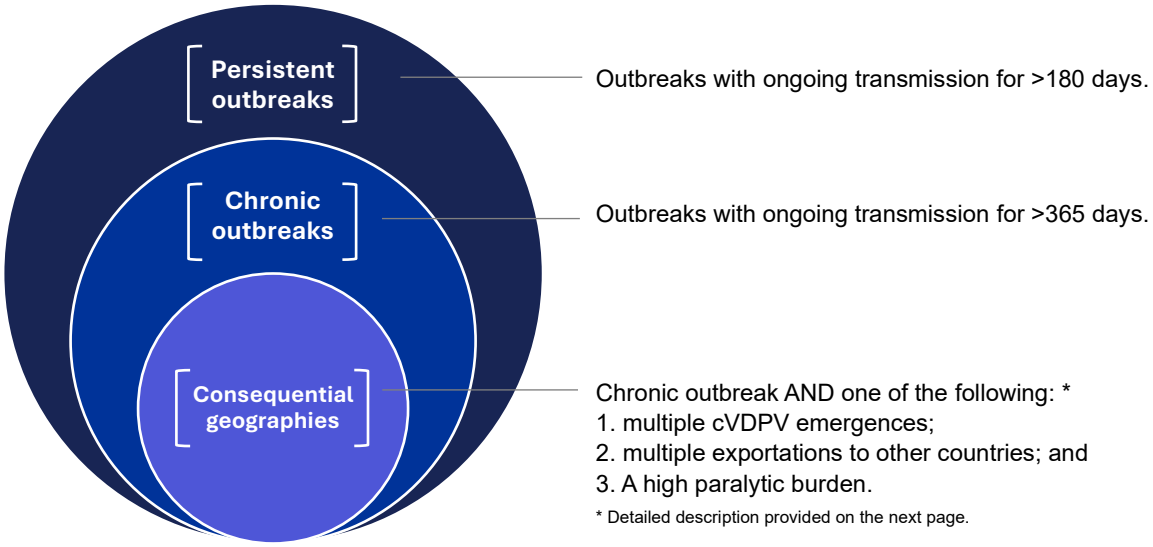
Is the outbreak a persistent outbreak?

Definitions: persistent outbreaks, chronic outbreaks and consequential geographies

For every outbreak, the goal of the response effort is to interrupt poliovirus transmission within 120 days of Day 0 (notification of a laboratory-confirmed WPV or VDPV). Strategies and approaches recommended in the early phase of an outbreak response can successfully interrupt transmission; however, if interruption isn't achieved by the 180-day mark, response efforts need to be re-examined and re-calibrated.

Outbreaks with continued transmission for more than 180 days are defined as persistent outbreaks. Persistent outbreaks are further classified as chronic outbreaks and a special class of chronic outbreaks referred to as consequential geographies (Fig. 12).

Fig. 12. Relationship of persistent outbreaks, chronic outbreaks and consequential geographies



Source: WHO.

Classification of countries into each of these categories will be made in consultation with regional offices; the ORPG will also be involved in classifying outbreaks.

Persistent outbreaks with ongoing transmission >365 days are considered chronic outbreaks. Since 2016, 27% of polio outbreaks took >365 days to close or are still active.[55] Chronic outbreaks pose a significant challenge to polio-outbreak countries and the GPEI as they require added intensive interventions, including high-level advocacy from GPEI leadership. Chronic outbreaks are often due to: (1) a continued inability to interrupt virus transmission, and (2) a continued failure to initiate or complete required SIAs.

[55] Active outbreaks have ongoing poliovirus detection. Inactive outbreaks have not had poliovirus detection for >365 days and have yet to be officially closed.

Consequential geographies represent a subset of countries experiencing a chronic outbreak and at least one of the following:

1. the generation of multiple (≥3) new type-specific cVDPV emergences (i.e. the emergence was first detected within the country);
2. multiple exportations (≥10) to other nearby countries, defined by the nearest neighbour data from genetic sequencing dendrograms; and
3. high paralytic burden (≥100 paralytic cases) detected during the outbreak.

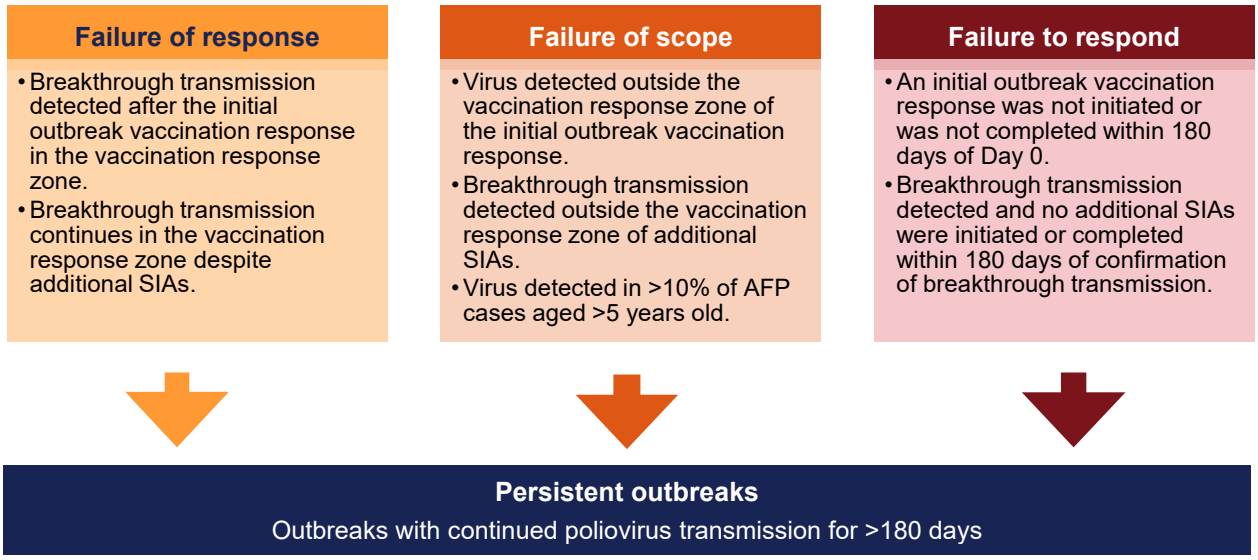
Countries will be classified as consequential geographies until poliovirus is interrupted and the outbreak is officially declared closed. Classification as a consequential geography is at the national level even when a subnational area is driving transmission. Countries that share borders with consequential geographies may also experience frequent and/or persistent outbreaks, creating an epidemiological block (or epi-block). Response efforts for consequential geographies are recommended to pursue cross-border coordination, where feasible, to successfully interrupt transmission and sustain immunity across the entire epi-block.

Why do outbreaks persist?

Failures of the response effort that contribute to persistent outbreaks

Outbreaks persist because too many girls and boys remain unimmunized. While there may be many causes, and while multiple reasons may be present at once, three main underlying issues contribute to the failure of the response effort (Fig. 13). The three kinds of failure are not mutually exclusive. A country may experience one, two or all three in different geographic areas at the subnational level.

Fig. 13. Three underlying issues that contribute to persistent outbreaks



AFP = acute flaccid paralysis; SIA = supplementary immunization activity.

Source: WHO.

Failure of response is defined as the inability of the initial outbreak vaccination response (and additional SIAs) to interrupt poliovirus transmission. Evidence can be seen in the detection of breakthrough transmission after the initial outbreak vaccination response within the vaccination response zone or after additional SIAs to interrupt transmission (referred to as breakthrough SIA).

Response refresher

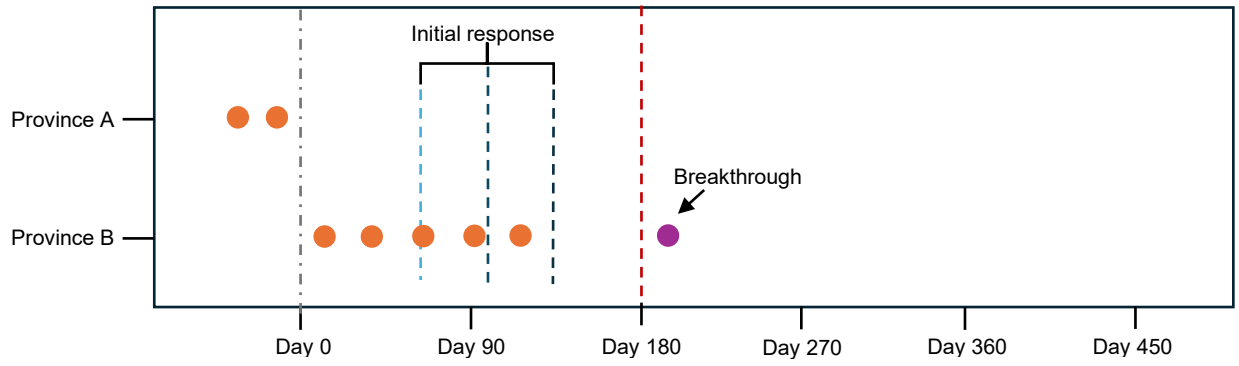
The *initial outbreak vaccination response* is composed of an optional Round 0, major vaccination response campaigns (SIAs) and a mop-up campaign.

An example is provided in Fig. 14a, where Province B detects breakthrough transmission after the initial outbreak vaccination response (i.e. three SIAs). Breakthrough transmission may occur for a variety of reasons, from poor-quality SIAs to poor community engagement.

Response refresher

Breakthrough transmission is defined as any WPV1 or cVDPV type-specific detection with the date of paralysis onset for AFP cases or AFP contact (of any age) or collection date for community contacts or environmental samples more than 21 days after the first day of the SIA.

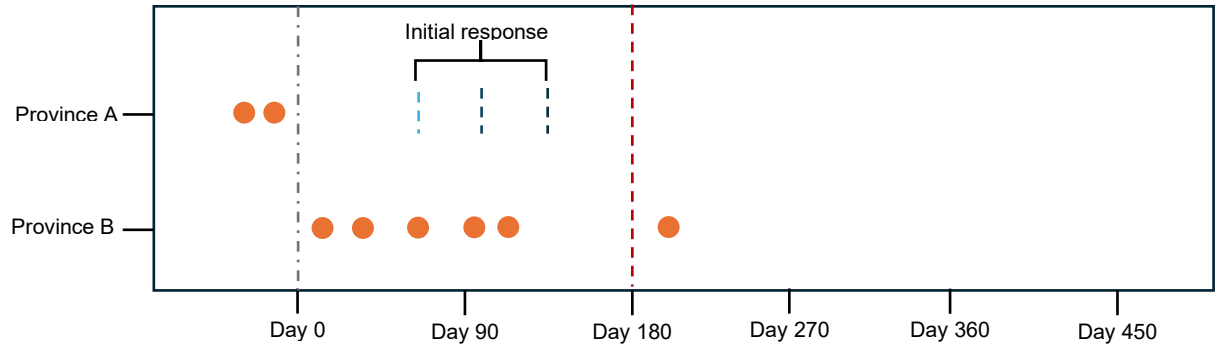
Fig. 14a. Example of failure of response



Source: WHO.

Failure of scope occurs when an initial outbreak vaccination response is conducted with an inadequate scope (geographic or targeted age group) that consequently fails to interrupt transmission. For geographic scope, this is evidenced by poliovirus detected outside the targeted vaccination zone. In Fig. 14b, poliovirus was initially detected and responded to in Province A. Despite continued virus detection in Province B after the outbreak was confirmed, however, no SIAs were conducted in Province B.

Fig. 14b. Example of failure of geographic scope

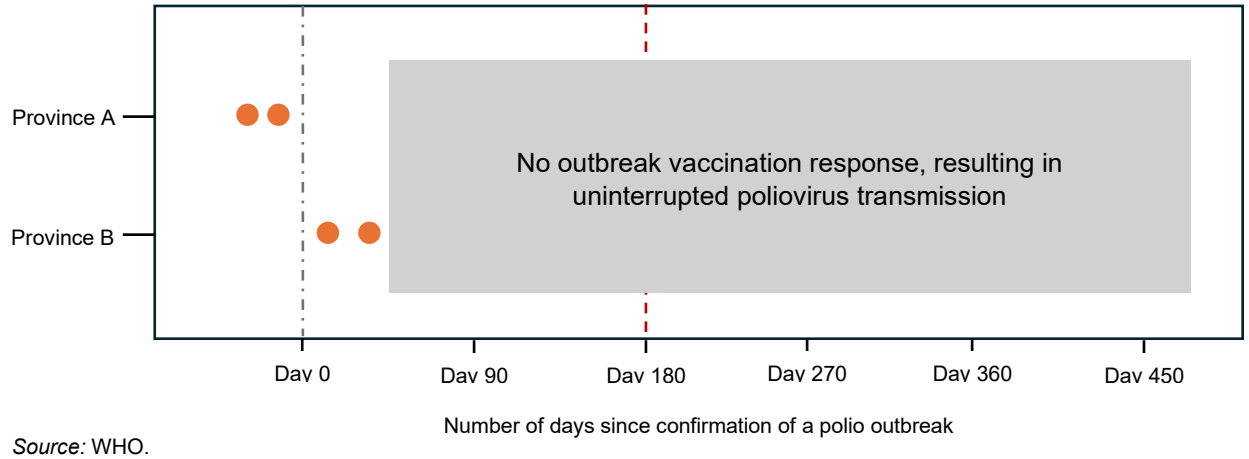


Source: WHO.

In cases of insufficient scoping of the targeted age group, evidence can be seen in the detection of more than the expected number of polio cases (>10%) among children older than five years of age. Common reasons for this failure of scope include: poorly conducted risk assessments; decisions to focus strictly on children under five years old; insufficient historical review of population immunity data (particularly intestinal mucosal immunity); and poor-quality surveillance.

Failure to respond occurs with a delayed launch or the absence of conducting an initial outbreak vaccination response. Fig. 14c shows an example of no initial outbreak vaccination response despite poliovirus detection in two provinces. This is evidenced by: (1) detections of poliovirus without an initial outbreak vaccination response completed within 180 days of Day 0; or (2) breakthrough transmission without SIAs to cover the breakthrough within 180 days of breakthrough transmission confirmation. One of the main reasons for this kind of underlying issue is poor or suboptimal government commitment (national, subnational) to recognize and/or respond to the outbreak.

Fig.14c. Example of failure to respond



Source: WHO.

What underlying issues drive a persistent outbreak?

Identify potential drivers

Procedures

→ Identify the underlying issue(s): failure of response, failure of scope and/or failure to respond.
→ Conduct twice-yearly in-depth reviews (OBRA or other field assessment) of response performance.
→ Use in-depth review findings to update response plans, target key drivers and stop the outbreak.

It is critical to identify with specificity why an outbreak persists despite response efforts. Understanding the issues (i.e. failure of response, failure of scope and/or failure to respond) and drivers behind persistent transmission clears a path toward effective interventions. Often the causes are multifactorial and uncovering a driver may not be straightforward. While some may be obvious, others may be challenging to elucidate without external support. Countries are encouraged to work with regional and global GPEI partners.

How to start from the "big picture"

A high-level view or "big picture thinking" can help to direct investigation efforts in a meaningful manner.

To begin, countries should identify which of the categories of failure are relevant to their context. Recall that a persistent outbreak may be caused by more than one category of failure, especially as the type of failure can vary across different subnational areas. When reviewing response performance, also remember that stopping an outbreak does not require perfection in every activity, but high performance is key in a few areas, most notably reaching every child with polio vaccines and detecting polioviruses in a timely manner.

How to identify specific drivers of persistent transmission

An in-depth review of outbreak response performance will be necessary to make meaningful changes.

Failure of response

An in-depth situation analysis of all available data—campaign quality, surveillance, routine immunization, social and behavioural change communications, political commitment, community engagement—will help to identify potential impediments. Information from past assessments, such as OBRAs, desk reviews and field assessments, should be included in the review. An investigation into the quality of SIAs should also be conducted by reviewing LQAS, IM and administrative data. Online tools are available to support an

evaluation of SBC activities.[56] To pinpoint social and gender-related barriers, data should be disaggregated by age and sex, where possible. Data should be reviewed together and triangulated to identify potential impediments.

While an initial desk review may help to direct further investigations, it is vital for all countries with persistent outbreaks to prioritize a field assessment, especially as all issues identified by the desk review will need to be validated in the field. The field assessment should be planned and conducted as soon as possible after classification as a persistent outbreak. Remember that, in addition to poor performance, investigations should also look for *performance that is too good to be true* based on experience or historical knowledge of the area. The field assessment approach used in OBRAs is recommended due to its demonstrated effectiveness; however, countries in consultation with WHO and UNICEF regional offices can identify another appropriate approach.

Drivers behind persistent transmission will always be highly context-specific and more than one driver may impact response efforts (Table 16).

Table 16. Some potential drivers behind a failure of response

Poor campaign planning and logistics			
Delay in SIA implementation.	Failure to meet SIA preparedness indicators.	Failure to microplan or incomplete microplans.	Unreliable data on target population.
Surveillance challenges			
Delays in timeliness can result in missing areas of transmission during SIA planning.		**Surveillance gaps** (silent districts/provinces, orphan viruses, poor AFP or ES sensitivity) create blind spots that can lead to poorly scoped SIAs.	
Insecurity and inaccessibility			
Areas cannot be reached by vaccination teams and remain unvaccinated.	***Ongoing insecurity leaves vulnerable populations unreached by:***		
	disrupting outreach;	compromising message consistency; and	undermining trust in health services.
Social and behavioural challenges			
Limited use of SBC data:	***Misinformation:***	***Vaccine hesitancy:***	
hampers the development of context-specific communication strategies to address local perceptions, barriers to vaccination.	persistent misconceptions or conspiracy theories about vaccination erode public trust, hinder acceptance of polio vaccination.	deeply rooted cultural beliefs and religious precepts contribute to refusals.	
Community fatigue:	***Lack of urgency:***	***Other demands and concerns:***	
repeated polio SIAs without visible health improvements can lead to diminished interest, disengagement.	caregivers prioritize immediate livelihood concerns, which diminishes demand for polio immunization.	communities have other demands or concerns, especially in areas where health systems are disrupted.	
Supervision and field implementation			
Poor IM and/or LQAS results.	Poor coverage survey results.	Evidence of fake finger-marking.	

AFP = acute flaccid paralysis; ES = environmental surveillance; IM = independent monitoring; LQAS = lot quality assurance sampling; SBC = social and behavioural change; SIA = supplementary immunization activity.

[56] Rapid Social Data Collection Tools: Rapid Polling and Rapid Qualification Research for Polio Outbreak Response, version 2, New York: UNICEF; 2020 (https://poliokit.org/sites/default/files/2022-10/Rapid%20Social%20Data%20Collection%20Tools%20for%20Polio%20Outbreak%20Response%20%28English%29.pdf).

Failure of scope

A failure to accurately scope the geographic extent of transmission produces unfortunate consequences, as the country chases poliovirus transmission rather than getting ahead of it. Likewise, a failure to scope the appropriate age group has repercussions that contribute to persistent transmission.

An in-depth situation analysis should be conducted with concerted focus on understanding why the scope was incorrect and where transmission is currently ongoing. To understand why the initial scope was inaccurate, investigate the quality of the information that was included in the initial (and updated) risk assessment(s), specifically on virologic and contextual risks. For example, a poor understanding of population immunity levels may be attributable to using poor data sources or to systematically missing or excluding high-risk populations. In the case of inaccurate geographic scoping, mistaken assumptions may arise in cases where outbreak zones appear on national borders, where there are highly travelled international corridors, or where some high-risk areas may have been overlooked. A weak understanding of population movement and poor surveillance sensitivity may lead the country to target a limited or erroneous geographic area or miss detections in children older than five years of age. These gaps can lead to populations or areas being left out of initial response plans. Annex H provides additional guidance for cross-border outbreaks.

Disagreements on scope by key decision-makers may also result in a smaller response than needed. After-action review of the initial decision-making process may help to identify the earlier impediments and course correct. As such, reviews must be conducted in an environment that fosters honest discussion and avoids assigning blame on any one person, team or partner.

A modified risk assessment should also be conducted by using more reliable, validated information and by reviewing any cautions and concerns that may have directed the country away from launching a wider initial vaccination response (see Submitting a risk assessment).

In addition to the review of activities described above for *failure of response*, countries should also review:

- surveillance sensitivity within and beyond the outbreak zone, especially the sensitivity of the system to detect AFP cases in those older than five years of age;
- timeliness indicators to identify bottlenecks within and beyond the outbreak zone (refer to *Strengthening Polio Surveillance during a Poliovirus Outbreak* for indicators[57] and Annex 16 in the *Global AFP surveillance guidelines* for troubleshooting suggestions[58]);
- population movement and the capacity of the surveillance network to detect cases in hard-to-reach areas and in high-risk populations (see *Guidelines for hard-to-reach populations*[59]); and
- historical population immunity data from routine immunization and campaigns to identify older birth cohorts who may be un- or under-immunized and possibly contributing to transmission.

Furthermore, countries should consider a full surveillance audit (or review) by an independent group if the initial review suggests poor surveillance performance. If countries have subnational areas with a mix of failure of scope and failure of response, they should consider an OBRA to identify field-level impediments.

[57] Global Polio Eradication Initiative. Strengthening Polio Surveillance during a Poliovirus Outbreak, revised February 2026. Available on the GPEI website: https://polioeradication.org/wp-content/uploads/2026/02/Strengthening-Polio-Surveillance-during-a-Poliovirus-Outbreak-20260226.pdf.

[58] Global guidance for conducting acute flaccid paralysis (AFP) surveillance in the context of poliovirus eradication (pre-publication version). Geneva: World Health Organization; 2026 (https://polioeradication.org/wp-content/uploads/2026/01/Global-AFP-guidance-pre-publiation-2026.pdf).

[59] Global Polio Eradication Initiative. Guidelines for Implementing Polio Surveillance in Hard-to-Reach Areas & Populations. Available on the GPEI website: https://polioeradication.org/wp-content/uploads/2020/10/Guidelines-polio-surveillance-H2R-areas.pdf.

Failure to respond

The reasons for extremely delayed, incomplete or no initial outbreak vaccination response are often due to a lack of political will or commitment, competing public health priorities or large areas of inaccessibility or insecurity. Indeed, these causes may be interrelated as limited political ownership has, in some contexts, weakened public trust and diminished community engagement. Investigating these issues will require interviewing key informants among in-country partners, including the GPEI coordinator, ministry of health staff, religious leaders and local women and men influencers to better understand potential drivers.

How to assess low routine immunization coverage

A weak routine immunization programme and continued low vaccination coverage represent impediments to stopping persistent outbreaks that also elevate the risk for future outbreaks. During the early phase of outbreak response efforts, plans and initial steps should have been taken to improve routine immunization coverage. Later, once the outbreak becomes persistent, an assessment of progress in strengthening routine immunization coverage should be conducted and repeated as part of any in-depth outbreak review. The assessment should evaluate subnational coverage, dropout, zero-dose distribution and barriers to access. Operational guidance for conducting an assessment may be drawn from the *Missed Opportunities for Vaccination* series in addition to other immunization performance analyses (see Resources, below).

cVDPV2-affected countries have limited options to maintain type 2 intestinal mucosal immunity through routine immunization schedules as nOPV2 is not licensed for routine use. Countries that experience multiple cVDPV2 outbreaks must assess risk through regional assessments and mitigate their risk through planned regional SIAs.

How to leverage an in-depth review

Findings from all in-depth reviews should be summarized and used to guide data-driven recommendations for revised response plans. The findings should also be used to update the risk assessment based on a better understanding of the risks (virologic, contextual and international spread). See Submitting a risk assessment for details.

In-depth reviews and field assessments should be conducted every six months until the outbreak is closed to ensure that the implementation of interventions is yielding positive results; if they are not, more aggressive and tailored strategies must be prioritized as part of an updated response plan.

Resources

- Missed Opportunities for Vaccination (series)
  - Planning Guide to Reduce Missed Opportunities for Vaccination
  - Methodology for the Assessment of Missed Opportunities for Vaccination
  - Intervention Guidebook for Implementing and Monitoring Activities to Reduce Missed Opportunities for Vaccination
- Aide Memoire: Poliovirus Outbreak Response Assessment (OBRA)
- OBRA Toolkit (English and French versions): Available upon request to the ORPG.

What needs to be done to stop poliovirus transmission?

Developing an aggressive plan and implement improvements

Procedures

→ In countries with persistent outbreaks: update and implement national polio outbreak response plans (NPORPs).
→ In countries with chronic outbreaks and consequential geographies: develop and implement a national emergency action plan (NEAP) that includes SIA and non-SIA interventions.
→ Formalize a national Polio Oversight Committee to oversee plan development and implementation and to recommend corrective action, as needed.

After identifying the drivers of a persistent or chronic outbreak, it becomes clearer what needs to be done. This includes a more resolute approach that aligns with the four pillars of:

1. greater government ownership, oversight and coordination
2. the development and implementation of a more aggressive response plan;
3. targeted and tailored outbreak response activities; and
4. assured global technical and financial support.

As outbreaks continue to persist and as countries are further subclassified from a persistent outbreak to a chronic outbreak, or a consequential geography, more creative (e.g. non-SIA based immunization activities) and intensive interventions (e.g. more SIAs) and greater oversight will be required (e.g. an independent technical advisory group [TAG]).

Pillar #1 – Greater government ownership, coordination and oversight

For all persistent outbreaks, greater ownership, coordination and oversight will be required to ensure that urgent action is taken to stop poliovirus transmission and close the outbreak.

With the classification of a persistent outbreak, national governments must acknowledge that the situation has deteriorated by committing to any or all the following activities:

1. issuing a declaration that the outbreak has been classified as a persistent outbreak;
2. organizing a workshop to update the national polio outbreak response plan (NPORP) in countries with newly classified persistent outbreaks or to develop a national emergency action plan (NEAP) in countries with newly classified chronic outbreaks; and
3. hosting a launch event of the NEAP attended by the ministry of health (for countries with chronic outbreaks or consequential geographies only).

A Polio Oversight Committee headed by the ministry of health should be formalized to provide greater oversight of the response effort. Membership should include UNICEF and WHO representatives; other members for the committee can be selected at the discretion of the country and may include experts in outbreak response and routine immunization.

The responsibilities of the committee will include:

- overseeing revision of the NPORP or development of the NEAP; and
- meeting at least monthly to regularly follow the epidemiology as it evolves and to monitor NPORP or NEAP implementation.

Countries classified as consequential geographies must have their NEAP reviewed by an external TAG. WHO regional offices will be responsible both for coordinating the formation of the TAG, including identifying independent members, and for convening quarterly meetings to review outbreak response performance.

Pillar #2 – A more aggressive response plan

Depending on their outbreak category, countries will need to either revise the NPORP or shift to a NEAP (Table 17). For both document types, an aggressive response plan should be developed that builds on and reflects the recommendations from assessments, including the in-depth review. A timeline of activities should be incorporated with assigned responsibilities. Process and performance indicators can be added for the appropriate governance group to provide oversight and to routinely monitor progress.

Table 17. Operational framework for national response coordination by outbreak classification

Category	New outbreak	Persistent outbreak	Chronic outbreak & consequential geography
Definition	≤ 180 days	181–365 days	> 365 days (+ specific criteria for CG)
Plan	National polio outbreak response plan (NPORP) *Timeline: within 14 days of notification of the outbreak*	Revised and updated national polio outbreak response plan (NPORP) *Timeline: within two (2) months of new classification*	National emergency action plan (NEAP) *Timeline: within two (2) months of new classification*
Governance	• National EOC	• National Polio Oversight Committee	• National Polio Oversight Committee • External TAG (consequential geographies only)
Diagnostics steps	• Review campaign data and epidemiology	• Examine the causes for failure (of response, of scope, to respond) • Identify corrective measures • Update the NPORP with more tailored approaches to country context	• Examine the causes for failure (of response, of scope, to respond) • Identify corrective measures • Update NEAP with SIAs and non-SIAs interventions
Assessment tools	• OBRAs	• OBRAs • Field and desk reviews	• OBRAs • Field and desk reviews
Monitoring frequency	• Weekly SitReps	• Weekly SitReps • Monthly updates to the Polio Oversight Committee	• Weekly SitReps • Monthly updates to the Polio Oversight Committee • Quarterly TAG meeting (consequential geographies only)

CG = consequential geography; NEAP = national emergency action plan; OBRA = outbreak response assessment; NPORP = national polio outbreak response plan; SIA = supplementary immunization activity; SitRep = situation report; TAG = Technical Advisory Group.

Action plans by outbreak category

NPORP: As standard response strategies were ineffective for countries with persistent outbreaks (i.e. with transmission that has extended beyond 180 days but less than one year), the six-month NPORP should be revised to incorporate more tailored and targeted approaches.

NEAP**:** Countries with chronic outbreaks and countries that are classified as consequential geographies will need to take more decisive action to interrupt transmission that has continued for more than one year. An initial step will be to shift from a NPORP to a NEAP.

A NEAP is a one-year detailed plan that describes:

- government ownership and coordination;
- improved vaccination response strategies to reach every girl and boy;
- activities to achieve highly sensitive polio surveillance;
- gender-responsive community engagement and communication strategies;
- activities to strengthen routine immunization;
- vaccine management and cold chain logistics;
- cross-border coordination, if applicable;
- human resources requirements;
- funding sources; and
- programme management for overall coordination and oversight.

Although the NEAP is a one-year plan, it should be updated every six months as in-depth reviews are conducted and as refined corrective actions are pursued. Technical support will be provided by GPEI global and regional partners to develop the NEAP. Past NEAPs and lessons learned from countries with similar challenges will be shared for guidance.

Effective planning focused on corrective action

Country plans must include actions to correct the failures contributing to persistent transmission (Table 18).

Table 18. Corrective actions to underlying failures

Reason	Supporting evidence	Corrective actions
Failure of response		
Poor SIA planning and implementation	• Delayed SIA implementation. • Poor or absent microplans. • Vaccine stock-out in the field. • Lack of sufficient supervision of vaccination teams. • Poor coverage by IM or LQAS. • Poor partner performance.	• Preposition supplies and use mobile payment options. • Conduct microplanning exercises. • Cross-check population data from different sources to better estimate target population. • Increase number of supervisors. • Use independent monitors; ensure use of SOPs. • Expand partnership in certain geographies.
Under-reached populations	• Concentration of zero-dose NPAFP cases (e.g. within special populations, geographically hard-to-reach). • Inaccessible areas.	• Increase advocacy. • Develop a gender-responsive plan for improving access, including engagement with local partners. • Conduct in-between round activities such as transit point vaccination or expanded use of nOPV2. • Maximize intervention when presented with opportunities including OPV, IPV, integration with other pluses and/or catch-up vaccination. • Deploy RED strategies; improve routine immunization. • Ensure security assists vaccination teams (RES/RIC). • Partner with local groups to improve reach in challenging areas.
Insufficient vaccination coverage (field implementation)	• Low campaign coverage surveys. • Evidence of fake finger-marking. • Serological survey.	• Plan additional vaccination opportunities or SIAs. • Include gender-responsive SBC strategies in SIAs. • Use enhanced data tools for house-to-house interventions. • Conduct a population-representative serological survey, if results can be provided in time for decision-making.
Poor political commitment to polio response	• National and/or subnational leaders absent from campaign planning and implementation.	• Re-engage political leaders at all levels on the importance of aggressively responding to the outbreak.

IM = independent monitoring; IPV = inactivated polio vaccine; LQAS = lot quality assurance sampling; nOPV2 = novel oral polio vaccine type 2; NPAFP = non-polio acute flaccid paralysis; RED = reach every district; RES/RIC = reaching every settlement/reaching inaccessible children; OPV = oral polio vaccine; SBC = social and behavioural change; SIA = supplementary immunization activity; SOPs = standard operating procedures.

Table 18 (continued)

Reason	Supporting evidence	Corrective action
Failure of scope		
Surveillance delays	• Notifications of new detections months or years after sample collection.	• Ensure sufficient funding for shipment of samples. • Ensure women and men healthcare workers and surveillance focal points are well sensitized to AFP case definition and reporting requirements.
Surveillance gaps	• Silent districts or provinces (zero reporting of AFP cases). • Orphan viruses. • No or poor performing ES sites. • Low percentage of AFP cases with adequate stool. • Clusters of compatible or potentially compatible cases.	• Enhance active surveillance and supportive supervision in high-priority sites. • Initiate ES or move ES sites to increase performance. • Ensure adequate AFP contact sampling. • Ensure timely follow-up and categorization of all inadequate cases. • Enhance surveillance in areas where clusters were identified, if necessary.
Incomplete risk assessment	• Misinterpretation of population immunity in subnational areas. • Mobile, at-risk populations not captured in the risk assessment.	• Triangulate data from multiple sources to identify immunity gaps. • Map mobile and high-risk populations to target vaccination sites.
Older age transmission	• Increased percentage of cases over five years old. • Reason to expect lower immunity in an older-aged cohort (e.g. born post-switch or during low-vaccination timepoint).	• Implement enhanced contact sampling, such as older aged household members. • Conduct expanded age group vaccination with OPV and consider IPV.
Cross-border populations	• Detection of virus in neighbouring country(ies). • Continued re-introduction of virus after SIAs.	• Collaborate among affected countries to conduct cross-border activities to better understand population movement, strengthen surveillance, improve microplans and strategies to improve reach. • Consider synchronized SIAs if it will not negatively affect SIA quality and timeliness in any country.
Poor political commitment to polio response	• National and/or subnational leaders absent from planning and/or implementation of campaigns.	• Re-engage political leaders at all levels on the importance of aggressively responding to the outbreak.
Failure to respond		
Poor political commitment to polio response	• Government unwilling to implement outbreak response activities in all or some of the geographies at risk.	• Leverage GPEI leadership to advocate for outbreak response activities with the government.
Competing public health priorities	• Government unable to implement outbreak response activities due to other public health emergencies (Ebola, measles, mpox, etc.).	• Identify opportunities to integrate polio response activities into other public health interventions. • Identify breaks in activities for other public health responses to insert polio activities and/or to strengthen overall routine immunization.

AFP = acute flaccid paralysis; ES = environmental surveillance; IPV = inactivated polio vaccine; GPEI = Global Polio Eradication Initiative; OPV = oral polio vaccine; SIA = supplementary immunization activity.

Pillar #3 – Targeted and tailored outbreak response activities

Increasing population immunity

Additional SIAs will be required to increase population immunity. The number and scope will be guided by the updated risk assessment with an emphasis on reaching boy and girls missed in previous SIAs. While traditional methods to improve SIA quality should remain a focus, additional strategies should be explored to reach missed children. This includes vaccination activities that can be implemented in between SIAs (context-specific non-SIA interventions), integration of polio immunization with other health interventions and routine immunization strengthening.

Improvements to SIA quality

All SIAs should be implemented on time and achieve >90% coverage among targeted girls and boys. Achieving timely, high-quality SIAs requires resolving operational inefficiencies and ensuring reliable use of SIA coverage metrics to inform subsequent SIAs (e.g. IM, LQAS, GIS tracking).

Key SIA interventions may include:

- improving microplans to ensure all communities are well covered by vaccination teams. Microplans should be updated based on field data to identify missed boys and girls and high-risk populations. Vaccine supply, logistics and cold chain readiness should also be reviewed;
- increasing community demand for polio vaccines by including “pluses," such vitamin A, soap and other interventions (see Box 12);
- ensuring funds and supplies are in the field before SIAs begin by resolving all logistical and financial challenges; and
- adding IPV to OPV campaigns and adapting IPV co-administration for specific context, such as using jet injectors to administer fIPV for areas with limited access or insecurity.

Countries with chronic outbreaks and consequential geographies should closely monitor SIA quality through GIS technology to ensure that vaccination teams reach the target population, that supervisors monitor their teams, and that independent monitors go where they are assigned for post-campaign monitoring and LQAS.

Countries with exclusive IPV use in routine immunization schedules should consider shifting to an OPV response. Wherever polio transmission is widespread within a general population, OPV is the recommended vaccine. In IPV-only countries, enhanced surveillance will be key. As paralytic cases are unlikely to occur in these countries, AFP surveillance will be of limited use and ES will be needed to closely monitor transmission.

Box 12. What are integrated campaigns?

Countries with persistent outbreaks should consider integrating polio vaccinations with broader health interventions that can include other vaccines, vitamin A, bed nets, deworming tablets or other health interventions. This approach, referred to as “integrated campaigns,” may increase community acceptance and participation in polio campaigns. Integrated campaigns are highly recommended for consequential geographies and complex settings. Guidance is available, including a detailed list of factors which may impact whether a multi-antigen campaign is the right approach.[60]

Countries that decide to pursue integrated campaigns must clearly document their plans in the risk assessment for review and alignment with GPEI global and regional partners; approval is required before funding and vaccine supply are released. Upon approval, countries can begin planning, implementing, monitoring and evaluating activities. During each of these phases, countries should continue to evaluate and adapt integration strategies based on their priorities, resources and epidemiological and political considerations, all of which can change the decision to continue with an integrated campaign(s).

Integration does not have to be polio-driven. Polio vaccination can be added to other health interventions such as measles campaigns and broader health service delivery.

Implementation of non-SIA Interventions

Non-SIA interventions can support the response efforts of all countries with persistent outbreaks. Countries with chronic outbreaks and consequential geographies, and especially countries experiencing cVDPV2 outbreaks, should strongly consider such interventions.

[60] Global Polio Eradication Initiative. Briefing Note: Considerations for Integrating Multi-Antigens & Other Health Interventions to Support Polio Eradication, June 2025. Available at: https://polioeradication.org/wp-content/uploads/2025/06/GPEI-MultiAntigenGuide-20250610.pdf.

Non-SIA Interventions

- In-between-rounds activities (IBRAs) help to reach chronically missed girls and boys in high-risk areas with significant evidence of low population immunity. IBRAs focus vaccination efforts in places such as nomadic settlements, markets, hospitals, international borders and IDP camps. Expanded nOPV2 use may be considered for IBRAs (Box 13). As part of IBRA implementation, gender-responsive community engagement should be developed based on a rapid social assessment to map and track chronically missed boys and girls and address barriers to vaccination. Refer to the *Rapid Social Data Collection Tools for Polio Outbreak Response* for additional information.[61]

- Strategies such as "reaching inaccessible children" (RIC) strengthen collaboration with communities, local humanitarian partners, access negotiators, security personnel and/or the military to reach boys and girls in inaccessible settlements. A core component of RIC, SBC identifies trusted women and men influencers, builds communication channels and develops messages and activities that are contextualized, culturally appropriate and gender sensitive. Civil society organizations and emergency actors involved in emergency efforts should be considered for partnerships to integrate polio immunization with other activities.

- Vaccination at transit points serves as a firewall in inaccessible poliovirus reservoirs by providing a means for immunizing highly mobile populations. As these populations are likely under-vaccinated for other antigens, transit point vaccination presents opportunities to integrate services. Expanded nOPV2 use may also be considered (Box 13). Vaccination posts can be established in transit hubs such as border crossings, railway stations or markets with an expanded target age group.

- Documenting the population movement and migration patterns of highly mobile communities helps to identify locations for transit sites and IBRAs.

- nOPV2 can be included in the NEAP campaign calendar for countries with chronic outbreaks and consequential geographies.

- Gender-responsive community engagement and social mobilization can help to increase population immunity, particularly in areas with refusals, low coverage or misinformation.[63] Subnational teams should review vaccination coverage data, surveillance indicators and IM reports to refine microplans and address persistent challenges.

- Catch-up routine immunization and integrated outreach that includes polio vaccination with other vaccines can also help to improve population immunity.

Box 13. What is "expanded nOPV2 use"?

For countries with chronic cVDPV2 outbreaks and consequential geographies, SAGE supports expanded nOPV2 use as another tool that can be leveraged as part of non-SIA interventions.[62]

Direct guidance will be provided by WHO and UNICEF teams to support contextualized plans for affected geographies. General guidance may be developed after evaluations of piloted implementation of expanded nOPV2 use.

Given the limited data available on the efficacy of different expanded-use strategies, evaluation should be built into these interventions to assess their effectiveness. In parallel, gender-responsive SBC communication should be prioritized to ensure strong demand creation and to improve polio surveillance sensitivity.

[61] Rapid Social Data Collection Tools: Rapid Polling and Rapid Qualification Research for Polio Outbreak Response, version 2, New York: UNICEF; 2020 (https://poliokit.org/sites/default/files/2022-10/Rapid%20Social%20Data%20Collection%20Tools%20for%20Polio%20Outbreak%20Response%20%28English%29.pdf).
[62] Meeting of the Strategic Advisory Group of Experts on Immunization, September 2025: conclusions and recommendations. Wkly Epidemiol Rec 2025;100(49) 605-626 (https://www.who.int/publications/i/item/who-wer10049-605-626).
[63] Behavioural and social drivers of vaccination: tools and practical guidance for achieving high uptake. Geneva: World Health Organization; 2022 (https://www.who.int/publications/i/item/9789240049680).

Improvements to routine immunization coverage

Routine immunization coverage improvements must be prioritized during persistent outbreaks to ensure that, at a minimum, all children are protected from paralytic polio. Findings from the in-depth review on routine immunization performance should be used to identify corrective actions with established timelines and clear lines of accountability.

Ideally, outbreak response campaigns should serve as an entry point to identify zero-dose girls and boys through the household visits of social mobilizers, supervisors and monitors – and through the subsequent analysis of missed opportunities for vaccination. Standardized documentation and referral mechanisms should be used to link these children to immunization services, with plans that identify responsible teams for follow-up and for updated reporting on vaccination status.

Where feasible, high-risk populations should be prioritized for enhanced immunization services, supported through initiatives that may include: periodic intensifications of routine immunization (PIRIs), IPV catch-up sessions, intensified outreach by culturally appropriate and gender-balanced teams, and integrated delivery with maternal and child health, nutrition or other community health services. Countries should systematically review opportunities to integrate polio vaccination into routine and supplementary immunization services, learning from both success stories and cautionary experiences.[64]

As activities to strengthen population immunity will transition to the national EPI with success in interrupting polio transmission, clear operational guidance will be needed on how immunization system strengthening should be integrated into the outbreak "endgame" phase to prevent a resurgence or re-emergence of poliovirus. National and subnational authorities should define responsibilities for maintaining population immunity once a polio outbreak has been stopped with a plan to embed routine immunization improvement objectives into future outbreak response monitoring and evaluation frameworks. At a minimum, all OPV-using countries should ensure a second dose of IPV is introduced into routine immunization schedules and that high coverage is achieved to mitigate future risks.

Improving SBC communication

SBC communication is vital to response efforts as it can overcome barriers to immunization that are often found in countries with persistent or chronic outbreaks.

SBC interventions aim to achieve ≥90% outbreak awareness within the affected community and to keep refusals below 2% of total recorded missed children. In areas where refusals exceed this target, SBC efforts must intensify rumour management, increase gender-responsive community engagement and social mobilization, and improve tailored messaging to rebuild community trust.

In areas with persistent or chronic outbreaks, deeper and more systemic barriers may be present that prevent polio vaccines from reaching the target population. A root cause analysis should be conducted to identify any barriers that may include social norms or constraints (including gender norms), service quality or logistical challenges. Reasons for missed children must be thoroughly investigated, with the analysis used to adapt SBC strategies. In these cases, the focus should be to design multi-pronged interventions that identify the most effective communication channels to reach women and men caregivers, disseminate messaging that will improve community perceptions of polio vaccines, and directly address the social and gender-related barriers that lead to missed children during campaigns. See Annex K for additional information.

[64] Recent initiatives include: Madagascar's integrated multi-antigen campaigns with polio; Yemen's emergency outreach for various vaccines under the Health Emergency Expansion Resource (HEER) plan; Somalia's integrated measles and polio vaccine campaigns; Afghanistan's application of fIPV in campaigns; and Papua New Guinea's integration of routine immunization with COVID-19 and human papillomavirus (HPV) vaccines.

Special populations will also be critical to consider for targeted interventions (Box 14). In countries with persistent outbreaks, vulnerable communities often live in conflict-affected areas or along borders.

Communities in conflict areas have a heightened risk to infectious disease and limited access to health services. In these areas, SBC should be integrated in microplanning to map out target communities, identify barriers to access and outline tailored interventions.[65] Planning must be conducted at the settlement level to ensure that interventions are locally grounded, context-specific and truly responsive to the needs of each community.

Box 14. Interventions for special populations

- Local recruitment of community mobilizers
- Mobile messaging
- Outreach at gathering points
- Printed materials on food packaging
- Trusted women and men influencers
- Rumour-tracking system
- Cross-border coordination, mapping and harmonized messaging.

For cross-border outbreaks, joint microplanning between districts, provinces, states or countries is important to identify border villages, transit hubs and mobile population routes. Joint microplanning should be followed by regular cross-border coordination and synchronization meetings before and during SIAs to align on messaging, campaign timing and operational strategies. SBC interventions should address vaccine hesitancy through culturally sensitive messaging and through the mobilization of trusted women and men influencers who speak local languages or dialects and understand community dynamics. Communication materials must be harmonized across borders with real-time feedback mechanisms and rumour-tracking systems to adapt strategies and ensure that no girl or boy is missed due to misinformation, mobility, or jurisdictional gaps. Refer to Annex H for additional information on cross-border outbreak coordination.

Broadly, polio outbreak response benefits from building partnerships with other programmes such as routine immunization, malaria prevention, neglected tropical diseases, nutrition, birth registration and education initiatives. Leveraging the presence and trust of these programmes can enhance the effectiveness of polio SIAs and improve access within hard-to-reach populations. Collaboration can help strengthen community relationships and contribute to integrated platforms for delivering consistent health messages and services.

Improving polio surveillance sensitivity

The capacity to promptly detect poliovirus transmission remains paramount to responding to a persistent or chronic outbreak. Possible surveillance performance issues and recommended actions, excerpted from the *Global AFP surveillance guidelines*, are listed in Table 19.[66] Guidance on improvements to polio surveillance sensitivity are also readily available. See Annex J on surveillance in outbreak settings and the list of resources at the end of this chapter for further information.

If it is evident that the surveillance system is missing insecure or access-compromised areas or high-risk special populations, community-based surveillance may be an alternative to consider. Depending on the needs, countries will have to decide if community-based surveillance should be established for the purpose of AFP surveillance only (resource-intensive and focused), or if it will be integrated with an already existing VPD or outbreak-prone disease surveillance network (less resource-intensive and less focused). In cases where orphan viruses are detected or where cross-border transmission is documented, enhancements to surveillance should be made across the broader epi-block.

[65] Global Polio Eradication Initiative. Role of Social and Behaviour Change in Polio Outbreak Response: SBC programming in hard-to-reach settings. New York: UNICEF; 2025 (https://www.poliokit.org/sites/default/files/2025-11/3-%20SBC%20Programming%20in%20hard%20to%20reach%20areass_SBC%20Polio%20Outbreak_EN.pdf).
[66] Global guidance for conducting acute flaccid paralysis (AFP) surveillance in the context of poliovirus eradication (pre-publication version). Geneva: World Health Organization; 2026 (https://polioeradication.org/wp-content/uploads/2026/01/Global-AFP-guidance-pre-publiation-2026.pdf).

Table 19. Performance issues for responding to AFP surveillance data

Issue	Description	What to do
Underperforming areas	Areas with low performance in key indicators such as NPAFP rates or stool adequacy (or that show a sudden increase in reported AFP cases); areas where performance intermittently falls below expectations, such as repeated drops in timeliness.	• Investigate through visits, telephone, e-mail to identify reasons for the performance issue. • Address any problems immediately (e.g. re-training, lack of resources).
Silent areas	While the definition of "silent" varies by country, it generally refers to any area (province or district) that should have but did not report at least one AFP case in the under-15 population over a specified period of time. The time period may vary from six (6) to 12 months or more, depending on the population size and expected AFP case reporting for an outbreak.	• Issue an alert or communicate the potential gap to the district team. • Review surveillance performance and process indicators (including active surveillance); conduct sensitization activities. • Conduct full surveillance review, if required. • Conduct an ad hoc AFP case search in health facilities.
Data "too good to be true"	Indicators that show unusually and unexpectedly high performance, e.g. close to 100% of AFP cases have two (2) stools collected ≤14 days after onset of paralysis. Possible reasons include that cases detected more than 14 days after onset are not being reported, or that the reporting date is being changed to ≤14 days after onset.	• Check for manual errors or issues with data manipulation or migration. • Confirm data with the data manager and surveillance officer, if needed, who collected and entered the data. • Review case investigation forms (CIFs); proceed to field validation of cases/questionable forms, if needed.
"Hot case"	AFP case that clinically looks like polio and meets all three cardinal signs of poliomyelitis: rapid progression of paralysis; asymmetrical paralysis; and fever at onset. Additional criteria as defined by the country or region may include: younger than five years of age; fewer than three doses of polio vaccine or unknown vaccination status; and contact with areas/groups with recent virus transmission.	• The identification of a hot case must trigger the fast-tracking of specimen transport and processing by the laboratory. • Prioritize field investigation. • Check for a possible clustering of (other) hot cases. In the event of a cluster, follow instructions for clustering (see below).
"Potentially polio-compatible" cases	AFP cases that have inadequate stools specimens and either: (a) have a 60-day follow-up finding as: residual paralysis, "lost to follow-up" or "died before follow-up" or (b) have not received any 60-day follow-up visit and have not been classified or have been "discarded" by the NPEC. The existence of such cases may flag an "over-discarding" of cases by the NPEC, which rejected these cases as "non-polio" when they may have been classified as "polio-compatible."	A clustering in time and space of cases with inadequate specimens or residual paralysis that were discarded should be investigated promptly. • Check for possible clustering of (other) "potentially compatible" cases using the AFP line list. In the event of a cluster, follow instructions below. • Consider having the NPEC members re-oriented.

AFP = acute flaccid paralysis; CIF = case investigation form; NPAFP = non-polio acute flaccid paralysis; NPEC = national polio expert committee.

Table 19 (continued)

Issue	Description	What to do
Cluster of cases	The detection of at least two times the number of expected AFP cases occurring in a district (or province in small countries) within a month. Clusters may include polio-compatible or potentially compatible cases, hot cases or zero-dose cases. Possible reasons for clusters: • more than one polio case has occurred due to a new importation or emergence of poliovirus; or • an increase in the number of NPAFP cases reported in area due to increased sensitization or AFP case search.	Cluster investigations include: • detailed case investigation; • a search for more AFP cases, including active case searches in community and health facilities; • fast-tracking of specimen from these cases and their contacts.in the lab. • reviews to ensure all high-risk groups are covered by surveillance and that their health-seeking behaviour is taken into consideration; • surveillance performance assessment for possible gaps; • risk assessment for virus emergence, importation and possible spread; and • general awareness-raising in meetings and interpersonal communication.

AFP = acute flaccid paralysis; NPAFP = non-polio acute flaccid paralysis.

Pillar #4 – Assured global technical and financial support

Responding to persistent and chronic outbreaks through the development and implementation of country plans, especially the NEAP, can be resource-intensive. See Annex D. Prioritization of outbreak response activities in a resource-constrained environment to identify possible measures to balance resource needs.

The GPEI is committed to providing technical and financial support, which may include:

- a GPEI-nominated coordinator and additional international staff to support SIAs, surveillance and communications as per country needs, with personnel funding covered for at least 12 months; and
- in rare cases, the pre-positioning of vaccine to provide the country team with flexibility to rapidly respond to an evolving epidemiology. This may benefit countries classified as consequential geographies which also have logistical challenges for vaccine transport.

The GPEI and other relevant global initiatives will support countries by availing the required vaccine at an operational cost that enables an aggressive vaccination response and by providing technical support and guidance for implementing activities.

Resources

- Polio Toolkit
- Advocacy Toolkit
- Best practices in active surveillance for polio eradication
- Digital Community Engagement Strategy 2025–2026
- Polio Communication Global Guide
- Polio Special investigation Tool: Missing Children
- SBC Planning and Monitoring Tools for Polio Outbreak Response (in English and French)
- SBC Programming in Hard-to-Reach Settings
- Global Polio Surveillance Action Plan 2025-2026
- Outputs from polio surveillance SME work groups: risks and risk mitigation strategies (abridged)
- Field guidance for implementation of environmental surveillance for poliovirus
- Global AFP surveillance guidelines (pre-publication version, 2026)
- Quick reference: strengthening surveillance during poliovirus outbreaks

Is the outbreak on the path to interruption?

Monitoring progress and taking action

Procedures

→ Set up an external Technical Advisory Group (TAG) to monitor performance and provide guidance in countries with consequential geographies.
→ Update the NPORP or NEAP every six-months based on performance (and in-depth) review.

Countries and regional- and global-level partners must assess performance indicators monthly to ensure response activities are optimally implemented. Intermediate indicators for measuring outbreak response performance are listed in Table 20. Each indicator has an optimal target followed by a caution period before reaching failure. In addition, standard indicators for surveillance, SBC, routine immunization and gender should be actively monitored.

The national EOC will monitor the implementation of the updated NPORP or NEAP and provide monthly updates to the Polio Oversight Committee to closely monitor implementation and quickly recommend corrective actions. The national EOC will also provide quarterly updates to the external TAG for countries classified as consequential geographies. While corrective actions should be taken immediately, the response plan should be updated every six months to include any previous changes to strategies as well as recommendations from the semi-annual in-depth reviews.

Table 20. Process and performance indicators for measuring progress for persistent outbreaks

Indicator	Definition	Optimal	Caution	Failed to meet	Critically failed to meet
Update of the NPORP Development of the NEAP	Time from classification as a persistent outbreak (Day 180) to the publication of revised NPORP. Time from classification as a chronic outbreak (Day 365) to the publication of the NEAP.	≤60 days	>60-180 days	>180 days	Not applicable; tiering only to failed to meet
Percent of plan activities implemented	Percent of plan activities that are implemented during the plan period.	>90%	75-90%	50-74%	<50%
Percent of plan activities implemented on time	Percent of activities implemented by target date outlined in the plan.	>90%	75-90%	50-74%	<50%
Percent change in number of infected administrative level 1 geographies (e.g. district, province, state, region)	Percent change in the number of infected administrative level 1 geographies, comparing current 6 months to previous 6 months with a 90-day lag for surveillance.	≥50% decline	0% to <50% decline	0% to 25% increase	>25% increase
Percent change in number of polio cases	Percent change in number of polio cases comparing current 6 months to previous 6 months with a 90-day lag for surveillance	≥50% decline	0% to <50% decline	0% to 25% increase	>25% increase

NEAP = national emergency action plan; NPORP = national polio outbreak response plan.

4. CLOSING AN OUTBREAK

Is the outbreak over?

Procedures

→ Use the final OBRA to capture lessons learned and inform future health emergency preparedness.
→ Conduct an after-action review and document past challenges or obstacles and best practices to mitigate future polio outbreak responses and other health emergencies.

A poliovirus outbreak can be considered over, and the response can be terminated, when no poliovirus has been detected for at least 12 months with evidence that the required level of surveillance sensitivity has been achieved. Surveillance must be adequate in the outbreak zone and high-risk areas with convincing evidence that sufficient measures are in place to halt the poliovirus transmission in conflict-affected areas and in displaced or hard-to-reach populations.[68] (See also Fig 15, next page).

Box 15. Polio and IHR review

As polio is designated a Public Health Emergency of International Concern (PHEIC), the Polio IHR Emergency Committee, convened by the WHO Director-General, conducts quarterly reviews and provides its assessment on whether the polio situation continues to constitute a PHEIC. The criteria used to assess states as 'no longer infected' is available in the Statement of the Forty-third Meeting of the Polio IHR Emergency Committee.[67]

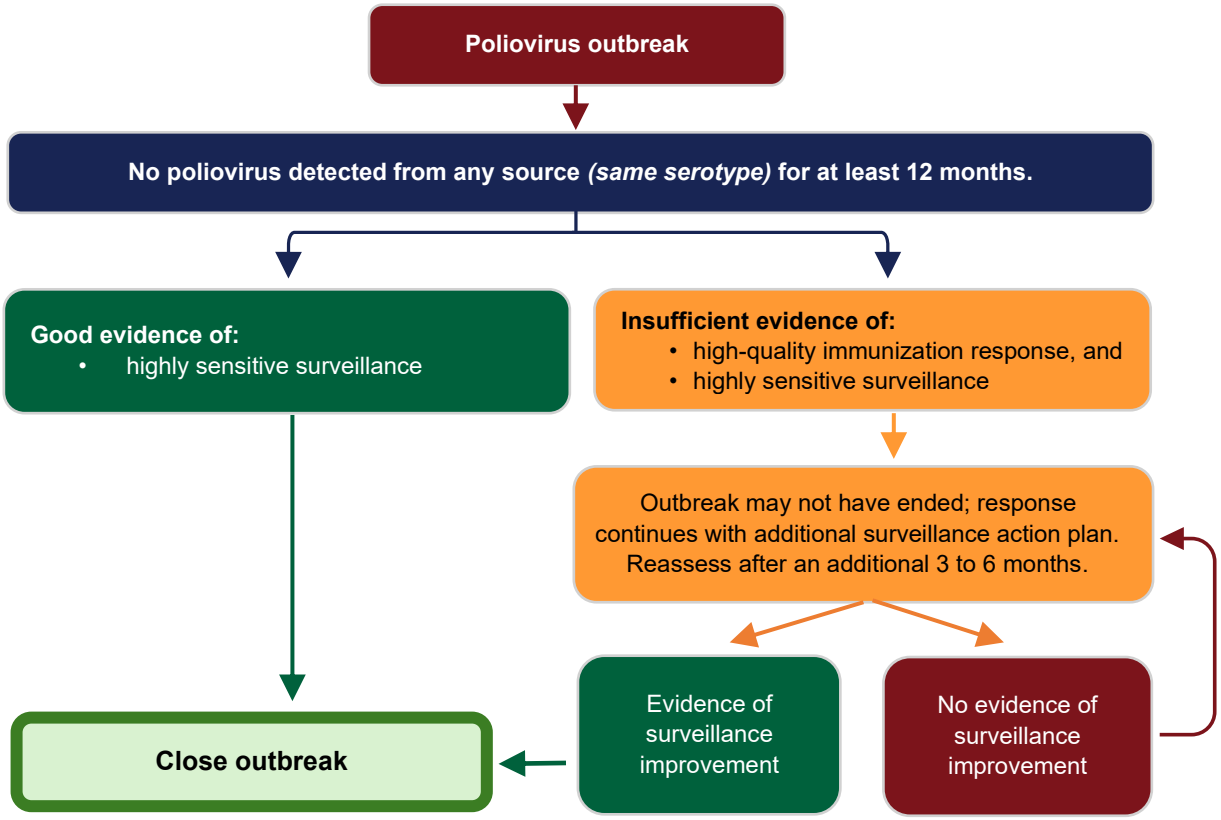
When an OBRA finds that outbreak response has been sufficient to interrupt transmission, the WHO regional office will consider the evidence, share the findings with national and regional certification commissions, and may declare the outbreak officially closed.

Post-OBRA plan: If the regional office recommends closing an outbreak, the country should develop a post-OBRA plan within one month that focuses on sustaining the mechanisms established during the outbreak response, most notably for enhanced surveillance sensitivity and routine immunization coverage improvement. A final SBC assessment should also be conducted to evaluate community acceptance and commitment to vaccination. This assessment may include small-scale surveys, focus group discussions or secondary data analysis. Documentation of SBC outcomes, lessons learned and best practices is essential for institutional learning, future preparedness and further routine immunization improvements.

After-action review: A formal after-action review is typically conducted after an emergency response. This structured review of the polio outbreak response is a valuable activity, identifying what went well, what did not go well, and the reasons behind the outcomes. Conducting an after-action review and documenting the lessons learned and any best practices acquired through the response is useful in improving emergency preparedness planning and can inform a response to future events and outbreaks. Several relevant documents on best practices have already been published.[69]

[67] Statement of the Forty-third Meeting of the Polio IHR Emergency Committee, November 2025. Geneva: World Health Organization; 2025 (https://www.who.int/news/item/11-11-2025-statement-of-the-forty-third-meeting-of-the-polio-ihr-emergency-committee). Polio IHR Emergency Committee statements are available at: https://www.who.int/groups/poliovirus-ihr-emergency-committee.
[68] Refer to the Global Polio Surveillance Action Plan 2025–2026 for more information on achieving highly sensitive surveillance. Global Polio Eradication Initiative (GPEI). Global Polio Surveillance Action Plan 2025–2026. Geneva: World Health Organization; 2025 (https://iris.who.int/bitstream/handle/10665/382037/9789240111844-eng.pdf).
[69] Global Polio Eradication Initiative, Capturing and sharing lessons learned [website] (https://polioeradication.org/who-we-are/transition-planning/lessons-learned-from-polio-eradication/).

Fig. 15: Outbreak response assessment decision tree for closure



Source: WHO.

Transition to EPI: After the closure of the outbreak, activities to continue strengthening population immunity should transition to the national EPI. Access to all data generated during the response should be shared with EPI to support the intensification of immunization activities in high-risk areas. OPV-using countries should aim to improve bOPV and IPV coverage as a failure to maintain sufficient population immunity may lead to a new outbreak. Post-outbreak monitoring should be conducted and include periodic review of subnational coverage, dropout rates and zero-dose trends to ensure that immunity gains achieved during the response are maintained. Countries that have not introduced a second dose of IPV should expedite the introduction process.

Gavi support: Gavi, the Vaccine Alliance, supports catch-up vaccination under its standard co-financing terms. Starting in early 2026, countries will be engaged to plan their vaccine needs as part of Gavi 6.0 (2026–2030) and can factor catch-up and expanded age ranges in the planning process.[70] Under Gavi's 6.0 strategy, the Alliance has committed to support countries to further strengthen health systems to routinely deliver immunization beyond early childhood, ensuring equitable protection for older boys and girls. Countries are encouraged to include eligible catch-up and integrated outreach vaccination strengthening activities, including support for technical assistance, into their upcoming funding applications.

[70] Gavi, the Vaccine Alliance. Phase VI Strategy (2026–2030). Geneva: Gavi; 2024 (https://www.gavi.org/our-work/strategy/phase-6-2026-2030).

Resources

- OBRA Toolkit (English and French versions): Available upon request to the ORPG.
- Aide Memoire: Poliovirus Outbreak Response Assessment (OBRA)
- Guidance for after-action review (AAR)
- WHO After-Action Reviews (AAR) video
- ECDC Technical report: Best practice recommendations for conducting after-action reviews to enhance public health preparedness

ANNEXES

Annex A. Summary of the standard procedures

Table A1 provides a high-level overview of the procedures outlined in this fifth version of *Standard operating procedures: Global guidance for responding to a poliovirus event or outbreak*.

Table A1. Standard procedures for polio outbreak response

Detection, notification and investigation		
1.	❒	Immediately report any notifiable poliovirus per International Health Regulations (2005) to the IHR focal point in the respective World Health Organization (WHO) regional office.
2.	❒	Initiate an investigation within 24 hours of receipt of any laboratory-confirmed poliovirus.
3.	❒	Describe the polio case (or environmental isolate), including the local context and social profile.
4.	❒	Determine the geographic extent of poliovirus transmission.
Risk assessment		
5.	❒	Perform a risk assessment if poliovirus is isolated from an uninfected area.
6.	❒	Prepare to present initial investigation findings to regional and global polio outbreak response groups within 72 hours of receipt of sequencing result or outbreak confirmation.
7.	❒	Continue to update the risk assessment as new information becomes available.
Vaccination response		
8.	❒	Plan an effective and timely vaccination response with an appropriate number of supplementary immunization activities (SIAs), an adequate scope and high-quality campaigns.
9.	❒	Choose the most appropriate type-specific poliovirus vaccine. For concurrent transmission of more than one type, follow recommendations for concomitant or sequential use of polio vaccines.
10.	❒	Develop and validate community-level microplans in accordance with local gender norms to optimize vaccination of the target population.
11.	❒	Identify breakthrough transmission and respond accordingly.
12.	❒	Adhere to vaccine management and reporting requirements for the novel oral polio vaccine type 2 (nOPV2), if applicable.
Surveillance enhancements		
13.	❒	Immediately notify all national and subnational offices about the polio outbreak or event.
14.	❒	Enhance the sensitivity of polio surveillance systems to detect any further poliovirus transmission within and beyond the outbreak zone.
15.	❒	Include surveillance enhancement activities in the national polio outbreak response plan (NPORP).
16.	❒	Implement strategies for detecting poliovirus in special populations or inaccessible areas.

Social and behavioural change (SBC)

17. ❒ Launch SBC interventions at least 10 days before SIAs to increase acceptance and minimize refusal.
18. ❒ Use assessment tools and gender analysis to identify special populations and under-vaccinated children.
19. ❒ Implement innovative approaches to raise awareness before the initial vaccination response begins and achieve high vaccine acceptance.
20. ❒ Integrate SBC activities into microplanning to map special populations, identify barriers to access (including gender-related barriers) and tailor interventions to reach every child.
21. ❒ Conduct surveys, using a gender lens, to understand why some children are not vaccinated; adapt communication strategies to improve campaign effectiveness.

Response assessment

22. ❒ Support and implement recommendations from outbreak response assessments (OBRAs).

Persistent and chronic outbreaks and consequential geographies

23. ❒ Identify the underlying issue(s): failure of response, failure of scope and/or failure to respond.
24. ❒ Conduct twice-yearly in-depth reviews (OBRA or other field assessment) of response performance.
25. ❒ Use in-depth review findings to update response plans, target key drivers and stop the outbreak.
26. ❒ In countries with persistent outbreaks: update and implement the NPORP.
27. ❒ In countries with chronic outbreaks and consequential geographies: develop and implement a national emergency action plan (NEAP) that includes SIA and non-SIA interventions.
28. ❒ Formalize a national Polio Oversight Committee to oversee plan development and implementation and to recommend corrective action, as needed.
29. ❒ Set up an external Technical Advisory Group (TAG) to monitor performance and provide guidance in countries with consequential geographies.
30. ❒ Update the NPORP or NEAP every six-months based on performance (and in-depth) review

Outbreak closure

31. ❒ Use the final OBRA to capture lessons learned and inform future health emergency preparedness.
32. ❒ Conduct an after-action review and document past challenges or obstacles and best practices to mitigate future polio outbreak responses and other health emergencies.

Annex B. Timelines and responsibilities

A timeline of required actions in the first month following Day 0 is outlined in Table B1. A detailed timeline of activities through closure of the polio outbreak is provided in Table B2, with national, regional and global responsibilities. A timeline of activities and related responsibilities for persistent and chronic outbreaks can be found in Table B3. Note: Other timelines, available through the WHO regional office, may apply for specific regional standards on finance and vaccine management.

Table B1: Timeline for actions in the first month following poliovirus detection

Actions	# of days after sequencing results																
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15-30	30+
Notification																	
❒ GPLN informs health authorities of the affected country, WHO country office, regional office and headquarters of virus details.	■																
❒ Country informs health authorities and WHO headquarters informs GPEI partners.		■	■														
❒ National IHR focal point notifies IHR contact point at WHO regional office.		■															
❒ National government declares the outbreak as national public health emergency.				■	■	■	■	■									
Investigation																	
❒ Country team initiates epidemiological and social investigation.		■	■	■													
Coordination																	
❒ Establish a national EOC or another central coordinating body to lead response efforts.		■															
❒ Establish event/outbreak response mechanisms at regional offices and headquarters coordinated by the ORPG and regional office (IMST/RORG).			■	■													
❒ GPEI activates rapid response team and deploys as soon as available.		■	■	■	■	■	■	■	■	■	■	■	■	■	■		
❒ GPEI activates surge support and deploys as soon as available.															■	■	■
Risk assessment and response plan																	
❒ Country team presents the risk assessment and response proposal to GPEI partners at the regional level, ORPG and the nOPV2 Release Group (nRG), if applicable.				■	■	■											
❒ nRG and GPEI partners meet and provide recommendations to country team.				■	■												
❒ Country team to finalize and submit NPORP and budgets.					■	■	■	■	■	■	■	■	■	■	■		
❒ Country team submits request for OPV2 (if applicable) to WHO regional office, ORPG.						■	■										
❒ Outbreak to be graded by WHO Health Emergencies (WHE), per the ERF.		■	■	■													

EOC = Emergency Operations Centre; ERF = Emergency Response Framework; GPEI = Global Polio Eradication Initiative; GPLN = Global Polio Laboratory Network; IHR = International Health Regulations; IMST = Incident Management Support Team; nOPV2 = novel oral polio vaccine type 2; NPORP = national polio outbreak response plan; nRG = nOPV2 Release Group; OPV2 = type 2-containing oral polio vaccine; ORPG = Outbreak Response and Preparedness Group; RORG = Regional Outbreak Response Group; WHE = WHO Health Emergencies programme; WHO = World Health Organization.

Table B1 (continued)

Actions	# of days after sequencing results																
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15-30	30+
Vaccine management for nOPV2; bOPV procured through UNICEF																	
❒ WHO Director-General authorizes release of nOPV2 from stockpile (if applicable).						■	■										
❒ nOPV2 vaccine vials shipped to country (if applicable).							■	■	■	■							
❒ nOPV2 vaccine sent to field (if applicable).										■	■	■	■				
Response activities																	
❒ Pre-financing released to regional/country office (if required) to fund initial response.				■	■												
❒ Develop and implement a national advocacy and communication plan.					■	■	■	■	■	■	■	■	■	■	■	■	■
❒ Initiate surveillance enhancement activities.					■	■	■	■	■	■	■	■	■	■	■	■	■
❒ Implement Round 0 (if applicable).												■	■	■	■		
❒ Outbreak response budget endorsed and funds release to the country.									■	■	■	■					
❒ Implement SIA1, SIA2, SIA3 and mop-up campaign.																	■

bOPV = bivalent oral polio vaccine; nOPV2 = novel oral polio vaccine type 2; SIA1 = first supplementary immunization activity; SIA2 = second supplementary immunization activity; SIA3 = third supplementary immunization activity; UNICEF = United Nations Children's Fund; WHO = World Health Organization.

Table B2: Timeline and responsibility for outbreak response activities from Day 0 to closure of outbreak

Timeline	Function	Activities	Responsibility	
			National	Regional and global
Notification of virus from laboratory – Day 0	Coordination	Establish an outbreak management team with representation from all relevant agencies.	National government/health authorities, with support from WHO/UNICEF country offices	Regional offices to coordinate with countries and ORPG
	Resources	• Review national polio outbreak preparedness and response plan, if available. • Read reports or documents of previous outbreak response activities.	National government/health authorities with support from WHO/UNICEF country offices	
		Identify trained or experienced polio outbreak response persons in country/region.	National government/health authorities, with support from WHO/UNICEF country offices	WHO and UNICEF regional offices/headquarters to rapidly provide required documents

NCC = National Certification Committee; ORPG = Outbreak Response and Preparedness Group; UNICEF = United Nations Children's Fund; WHO = World Health Organization.

Table B2 (continued)

Timeline	Function	Activities	Responsibility	
			National	Regional and global
Within 24 hours of notification	Communication	Inform national authorities and other relevant partners of polio outbreak.	National government/health authorities	
		Inform GPEI partners of polio outbreak.		WHO headquarters to inform GPEI partners
		Alert UNICEF supply division if type 2 poliovirus detected.		WHO, UNICEF headquarters
	Coordination and advocacy	Brief Minister of Health, Head of Government/State and other relevant officials on the specific steps required for an urgent response to stop transmission: 1. Establish a national EOC if an existing emergency coordination structure is not already in place, led by a senior government official as the designated outbreak focal point and supported by staff for administration, strategic communication, operations, logistics, supply management and finance. 2. Implement the required response operations to stop poliovirus transmission as per the outbreak response SOPs, virus type and classification. 3. Ensure systematic monitoring mechanism at all levels (national, regional and district) on progress of planning, implementation and follow-up actions throughout response activities. 4. Report timely and regularly on the progress of outbreak response activities to the head of government/state and GPEI partners.	National health authorities, with support from WHO and UNICEF country offices	With support from GPEI partners to ensure the national health authorities have the necessary information to communicate effectively with country stakeholders
	Coordination	• Establish coordination mechanism among national, regional and global partners. • Initiate event/outbreak response mechanisms at regional office and headquarters levels. • Share any available information with country team (e.g. draft risk assessment, surveillance assessments, historical coverage, security assessments, high-risk groups).	National health authorities, with support from WHO and UNICEF country offices	GPEI partners
		Region, in collaboration with ORPG, to establish weekly conference calls between WHO, UNICEF and GPEI partners.	WHO and UNICEF to participate	Regional polio response teams to initiate and chair calls
	HR surge support	Assess on-the-ground HR capacity of the national health system, WHO, UNICEF and other in-country partners to implement response operations.	National health authorities, WHO and UNICEF country offices	

EOC = Emergency Operations Centre; GPEI = Global Polio Eradication Initiative; HR = human resources; ORPG = Outbreak Response and Preparedness Group; SOPs = standard outbreak response procedures; UNICEF = United Nations Children's Fund; WHO = World Health Organization.

Table B2 (continued)

Timeline	Function	Activities	Responsibility	
			National	Regional and global
Within 24 hours of notification (continued)	HR surge support (continued)	Request expedited procedures for visas at the port of entry for any international outbreak responders.	National health authorities	WHO, UNICEF regional offices/headquarters to rapidly provide required documents
		Activate surge support processes; deploy as soon as available (72-hour target for rapid response team; 21-day target for surge support).	WHO and UNICEF country offices to make in-country arrangements	ORPG and regional polio response teams to coordinate
	IHR notification	Submit IHR notifications to WHO regional point of contact.	National IHR focal point	WHO headquarters to support
	Investigation	Initiate joint epidemiological and social investigation (including gender analysis).	National government/health authorities, with support from WHO and UNICEF country offices	With support from WHO and UNICEF regional office and headquarters
	Public information and media	Identify a media focal person and spokesperson for the outbreak.	National health authorities, WHO and UNICEF country offices to agree and nominate	
		Work with partners and government counterparts to: 1. conduct a media landscape analysis; and 2. conduct a press briefing/media release. Initiate media monitoring.	National health authorities with support from WHO and UNICEF country offices	With support from regional polio response teams/regional offices and headquarters
	Resources	Ensure country team has technical guidance documents to support investigation and response (e.g. outbreak SOPs, investigation template, risk assessment template, budget templates).		WHO and UNICEF regional offices and headquarters
	Risk assessment	Initiate risk assessment using template, including proposal for immunization response strategy.	National health authorities with support from WHO and UNICEF country offices	With support from WHO/UNICEF regional office and headquarters
	Complex emergency settings (if applicable)	Inform the United Nations Resident Coordinator and the Humanitarian Country Team.	WHO country office	
		Coordinate with the United Nations Department of Safety and Security (UNDSS) on field missions.	WHO and UNICEF representatives	
		Assess the security and access around the virus isolate and surrounding areas. Request security advisor to conduct a field level assessment.	UNDSS, in collaboration with national authorities	WHO regional office and headquarters security advisors support as required

IHR = International Health Regulations; ORPG = Outbreak Response and Preparedness Group; SOPs = standard operating procedures; UNDSS = United Nations Department of Safety and Security; UNICEF = United Nations Children's Fund; WHO = World Health Organization.

Table B2 (continued)

Timeline	Function	Activities	Responsibility	
			National	Regional and global
Within 72 hours (3 days) of notification	Advocacy and communication	Initiate development of a national advocacy and communication plan with a gender lens focusing on community engagement, social mobilization and general information dissemination strategies across the outbreak response period. Include: • pre-campaign awareness sessions targeting high-risk and hard-to-reach populations; • proactive communication ensuring women and men community members and health workers are sensitized to the dangers of the disease and benefits of the vaccine; • engagement of key women and men influencers and stakeholders (including political, religious, community leaders, celebrities) to gain access to hard-to-reach communities; and • development of a special crisis communication plan to address rumours in case of resistance to vaccination and rapid respond actions to adverse events following vaccination.	National health authorities with support from WHO, UNICEF country offices	Regional polio response teams to support
		Provide a briefing to the highest government authorities (e.g. cabinet memo or presidential brief) and other key strategic partners needed for a successful response in the outbreak zone: relevant ministries, parliamentarians, political/ religious/civic leaders, health and NGO partners.	National health authorities, with support from WHO, UNICEF country offices	
	Coordination	Conduct a 3-level call among country, regional and global partners for situational awareness and information sharing, if necessary.	National health authorities, with support from WHO, UNICEF country offices	Regional offices to coordinate with countries and ORPG
	Coordination - routine immunization	Include a unit on routine immunization coverage improvement in the EOC, led by the national EPI and supported by the immunization partners.	National health authorities / National EPI supported by WHO, UNICEF country offices (EPI teams)	
	Finance	Release pre-financing to regional/country office to fund initial response activities, if applicable and subject to funds availability.		ORPG, WHO and UNICEF headquarters to coordinate and release
	Logistics planning	Complete a logistics plan including vaccine forecasts, cold storage, warehousing, distribution, utilization monitoring, vaccine accountability, and disposal (see vaccine management guidance).	National health authorities with support from WHO, UNICEF country offices	UNICEF headquarters to support
	Outbreak grading	Prepare and participate in WHO 3-level call for grading by WHE, WHO Polio headquarters, regional office and country office, as per ERF.	WHO and UNICEF country offices with national health authorities	WHO regional office (Polio, WHE) to coordinate; WHE headquarters to grade outbreak in consultation with WHO headquarters, regional office

EPI = Essential Programme on Immunization; ERF = Emergency Response Framework; NGO = nongovernmental organization; ORPG = Outbreak Response and Preparedness Group; UNICEF = United Nations Children's Fund; WHE = WHO Health Emergencies programme; WHO = World Health Organization.

Table B2 (continued)

Timeline	Function	Activities	Responsibility	
			National	Regional and global

Within 72 hours (3 days) of notification (continued)	Outbreak response plan and communication	• Initiate development or revision of the national polio outbreak response plan with a gender lens and in collaboration with subnational teams:
		  ○ background and risk for further transmission;
		  ○ proposed SIA strategy and vaccine choice (scope, timing, etc.);
		  ○ surveillance enhancement activities;
		  ○ advocacy, communication and social mobilization activities;
		  ○ routine immunization strengthening;
		  ○ human resources assessment;
		  ○ monitoring, evaluation, OBRAs; and
		  ○ budget.
		• Communicate preliminary plan to all provinces and districts involved in response activities.
		• ORPG to facilitate review and recommendations from GPEI partners.
			National health authorities with support from WHO and UNICEF country offices	National health authorities, with support from WHO and UNICEF country offices

	Public information & media by WHO	A summary may be reported through the event information site for national IHR focal points or publicly via WHO Disease Outbreak News (DON).	National IHR focal point	WHO regional office and headquarters to support
	Public information & media	Conduct a follow-up media briefing on plans and proposals for responding to the outbreak.	National health authorities, with support from WHO, UNICEF country offices	Regional polio response teams and UNICEF regional office and headquarters to support
	Risk assessment and response planning	1. Finalize risk assessment and response proposal with all available information, including from neighbouring countries. 2. Present risk assessment and proposal to ORPG (types 1 or 3 poliovirus) or nRG (type 2 poliovirus) for feedback and recommendations (at a maximum within five days).	National health authorities with support from WHO and UNICEF country offices	Regional polio response teams, WHO/UNICEF regional offices and headquarters with ORPG support
	Social and behavioural change (SBC) communication	• Share the SBC polio toolkit and list of long-term agreements that the country office can immediately use to accelerate response activities. • Complete social profiling of the case and context (including gender analysis), using special country investigation tools to guide the design of gender-responsive SBC interventions.	National health authorities and UNICEF country office	Regional polio response teams and UNICEF regional office and headquarters to support
	Vaccine request	Submit nOPV2 request for authorization of vaccine released by WHO Director-General; Sabin OPV2 requests shared with countries as necessary.	National health authorities with support from WHO, UNICEF country offices	OPV secretariat and nRG to review and send to UNICEF Supply Division
	Vaccine shipment	Initiate shipment of response vaccine as per response proposal.	UNICEF country office	UNICEF Supply Division

IHR = International Health Regulations; nOPV2 = novel oral polio vaccine type 2; nRG = nOPV2 Release Group; OBRA = outbreak response assessment; OPV = oral polio vaccine; OPV2 = type 2-containing oral polio vaccine; ORPG = Outbreak Response and Preparedness Group; SBC = social and behavioural change; SIA = supplementary immunization activity; UNICEF = United Nations Children's Fund; WHO = World Health Organization.

Table B2 (continued)

Timeline	Function	Activities	Responsibility	
			National	Regional and global
Within 7 days of notification	Advocacy and communication	Develop an external advocacy plan to secure high-level political commitment from the affected country and complement in-country advocacy efforts.	National health authorities, with support from WHO and UNICEF country offices	ORPG, WHO/UNICEF regional offices and headquarters
		WHO and UNICEF regional directors to write to the Minister of Health, highlighting the emergency and the full support of the country representatives and organizations for guidance and support.	WHO, UNICEF country offices to facilitate	WHO/UNICEF regional directors, in coordination with the GPEI Strategy Committee
	Communication - declaration	Declare polio outbreak/high-risk event as a national public health emergency.	National government/health authorities	With necessary support from GPEI partners
	Communication	Initiate the development of a joint WHO/UNICEF situation report (SitRep) to update GPEI partners weekly on the progress of investigation, planning and response activities (template available for guidance).	WHO, UNICEF country offices	Regional polio response teams and UNICEF regional office and headquarters to support
		Inform broader donor community of poliovirus notification and status of polio response activities, including immunization and surveillance.	WHO, UNICEF country offices with in-country donors and media	
		Finalize media protocol kit with key messages, produce media briefs and other communication products relevant to the outbreak for local and regional/global use.	National health authorities with UNICEF country office	UNICEF regional office and headquarters to support
		Initiate weekly media briefing on the response plan and status of immunization and surveillance activities.	National health authorities with UNICEF country office	
	Coordination - partners	Initiate partner coordination with other United Nations and humanitarian agencies on the ground.	WHO country office	Regional polio response team
	HR surge support	Determine human resource surge requirements with ORPG based on grading and country needs.	National health authorities, with support from WHO and UNICEF country offices	ORPG to facilitate GPEI partner support
	Round 0	Assess feasibility of successfully completing Round 0 within 14 days of Day 0. If feasible: • develop a preparedness dashboard to assess readiness for Round 0 and track activities; and • initiate plans for a geographically-limited campaign that details strategy, coordination structure, vaccine, logistics, HR, supervision, social mobilization, communication and training needs, etc.	National health authorities. WHO and UNICEF country offices to support	

GPEI = Global Polio Eradication Initiative; HR = human resources; ORPG = Outbreak Response and Preparedness Group; SitRep = situation report; UNICEF = United Nations Children's Fund; WHO = World Health Organization.

Table B2 (continued)

Timeline	Function	Activities	Responsibility	
			National	Regional and global
Within 7 days of notification (continued)	SIAs	If not feasible to conduct Round 0 within 14 days of Day 0, plan for SIAs. • Initiate planning of SIA1 for the outbreak response zone: national operations macro-plan detailing strategy, coordination structure, vaccine, logistics, human resources, supervision, social mobilization, communication and training needs, etc. • Develop microplans, tools and training for development of microplans with strategies, coordination structure, vaccine, logistics, human resources, supervision, social mobilization, communication and training needs, etc.	National health authorities. WHO, UNICEF country offices to support.	
	Surveillance enhancement	Initiate surveillance enhancement activities: • notify and sensitize women and men healthcare workers at national and subnational surveillance units about reporting requirements; • implement supplemental AFP case-finding activities; • review and update priority levels of reporting sites in the active surveillance network; • engage the polio national laboratory to ensure capacity is strengthened; • review ES network and assess whether ad hoc sites are feasible and appropriate; and • use sex-disaggregated analyses to address gender-specific barriers.	National health authorities with WHO country office	GPEI partners to support
	Complex emergency settings (if applicable)	Initiate development of an access plan that includes: • mapping women and men community leaders, key players, stakeholders and identify influencers; • planning for permanent/transit vaccination point strategies surrounding inaccessible areas; and • planning for opportunistic vaccination strategies to reach inaccessible populations.	National health authorities with support from UNDSS	Regional polio response teams, WHO regional office
Within 14 days of notification	Communication	Ensure joint WHO/UNICEF SitRep is generated and circulated among partners.	WHO and UNICEF country offices	Regional polio response teams to provide support
	Coordination – in-country partners	Establish a weekly meeting with key in-country stakeholders to coordinate and monitor implementation of the national polio outbreak response plan.	National health authorities with support from WHO, UNICEF country offices	
	Outbreak response plan and budget	Finalize national polio outbreak response plan and six-month budget; country team to finalize within one week.	National health authorities with support from WHO, UNICEF country offices	ORPG to coordinate GPEI partners' review and feedback
		Initiate national polio outbreak response plan activity monitoring to track implementation (e.g. tracker, dashboard).	National health authorities with support from WHO, UNICEF country offices	

AFP = acute flaccid paralysis; ES = environmental surveillance; GPEI = Global Polio Eradication Initiative; ORPG = Outbreak Response and Preparedness Group; SIA = supplementary immunization activity; SIA1 = first supplementary immunization activity; SitRep = situation report; UNDSS = United Nations Department of Safety and Security; UNICEF = United Nations Children's Fund; WHO = World Health Organization.

Table B2 (continued)

Timeline	Function	Activities	Responsibility	
			National	Regional and global
Within 14 days of notification (continued)	Outbreak response operations plan	• Finalize the national operations macro-plan for the SIAs • Continue to develop microplan tools and trainings for the SIA microplans.	National health authorities with support from WHO, UNICEF country offices	Regional polio response teams
	Round 0 campaign	If determined to be feasible, finalize and implement Round 0 campaign.	National health authorities, with support from WHO, UNICEF country offices	
	SBC and communication	Implement a gender-responsive advocacy and communication plan to engage all relevant stakeholders at the national and subnational levels in outbreak response activities.	National health authorities, with support from WHO, UNICEF country offices	Regional polio response teams and ORPG to facilitate support from partners
	Vaccine management	For an nOPV2 response, ensure comprehensive management of all vials. Detailed monitoring and reporting of vials deployed, retrieved, remaining and unaccounted for at the end of each immunization activity is required.	National health authorities, with support from WHO, UNICEF country offices	Regional polio response teams and UNICEF regional office and headquarters to support
	Complex emergency settings (if applicable)	Initiate process to fill vacant positions in infected and high-risk areas.	National health authorities, with support from WHO, UNICEF country offices	WHO/UNICEF regional office to provide support
		Deploy a field security officer.	National health authorities	WHO regional office and headquarters to provide technical support
		Implement access plan. Examples of strategies include: • engage women and men community leaders, identify influencers; • negotiate access through key players, influencers, stakeholders; • implement a permanent/transit vaccination point strategies surrounding inaccessible areas; and • implement opportunistic vaccination strategies to reach populations in inaccessible areas.	National health authorities, with support from WHO, UNICEF country offices	Regional polio response teams and WHO regional office
Day 14 of notification to completion of initial outbreak vaccination response (95-110 days)	Advocacy	Track the implementation of internal and external advocacy plans, taking note of successful interventions and communicating further needs to RORG/IMST and ORPG.	National health authorities with support from WHO. UNICEF country offices	Regional polio response teams and ORPG to facilitate support from GPEI partners
	Communication	Establish monitoring of communication interventions.	National health authorities with WHO. UNICEF country office	Regional polio response teams and UNICEF regional office/headquarters to provide support

GPEI = Global Polio Eradication Initiative; IMST = Incident Management Support Team; nOPV2 = novel oral polio vaccine type 2; ORPG = Outbreak Response and Preparedness Group; RORG = Regional Outbreak Response Group; SBC = social and behavioural change; SIA = supplementary immunization activity; UNICEF = United Nations Children's Fund; WHO = World Health Organization.

Table B2 (continued)

Timeline	Function	Activities	Responsibility	
			National	Regional and global
Day 14 of notification to completion of initial outbreak vaccination response (95-110 days) (continued)	Coordination - partners	• Conduct regular donor meetings and advocacy activities. • Discuss in-depth and align with other health partners on additional interventions alongside OPV, such as providing vitamin A and deworming tablets, where feasible, particularly for type 1 and 3 outbreaks. (Integration for type 2 outbreaks should only be considered exceptionally.)	National health authorities with support from WHO, UNICEF country offices	
	Finances	ORPG to provide endorsement of national polio outbreak response plan and budget (within 20 days) and initiate mechanisms to release funds. Within 28 days funds should be available in-country.	WHO, UNICEF country teams to prepare and submit budget	Regional polio response teams and ORPG to facilitate reviews and approval processes
	Information management	Liaise with in-country data managers to identify and resolve data format and completeness issues.	National health authorities with support from WHO, UNICEF country offices	RORG/IMST/WHO regional office
		Ensure surveillance, SIA and monitoring data are completed, disaggregated by age and sex and sent to WHO and UNICEF regional offices and headquarters, according to agreed-upon timelines (within 14 days for all SIAs and weekly for AFP data).	National health authorities with support from WHO, UNICEF country offices	
	Outbreak response plan	Review and adapt the national polio outbreak response plan with a gender lens, including SIAs, surveillance, SBC and communication activities, and routine immunization strengthening for subsequent phases. Track progress made and/or support needed to close any remaining gaps.	National health authorities with support from WHO, UNICEF country offices	Regional polio response teams to support and ORPG to review and provide recommendation
	Risk assessment	Update the initial risk assessment as new information becomes available, such as breakthrough transmission or newly affected areas and age groups.	National health authorities with support from WHO, UNICEF country offices	Regional polio teams, WHO/ UNICEF regional offices and headquarters, ORPG support
	Routine immunization	Implement plans to improve routine immunization coverage (e.g. strengthen programme management, microplanning, community mobilization and performance monitoring, identification of zero-dose children, “reaching every district” [RED] approach).	National health authorities, with support from WHO, UNICEF country offices and in-country polio surge resources	
	SIAs - microplan development	Develop tools and training for the development of microplans, detailing strategies, coordination structure, vaccine, logistics, human resources, supervision, social mobilization, communication and training needs etc.	National health authorities with support from WHO, UNICEF country offices	Regional polio response teams to provide any regional/global guidance documents
	SIAs - preparedness	• Develop SIA preparedness monitoring dashboards to be used to assess SIA readiness at national and subnational levels. • Conduct readiness assessments two weeks, one week and three days prior to SIA implementation to inform targeted technical support for SIA quality assurance.	National health authorities with support from WHO, UNICEF country offices	

AFP = acute flaccid paralysis; IMST = Incident Management Support Team; OPV = oral polio vaccine; ORPG = Outbreak Response and Preparedness Group; RORG = Regional Outbreak Response Group; SBC = social and behavioural change; SIA = supplementary immunization activity; UNICEF = United Nations Children’s Fund; WHO = World Health Organization.

Table B2 (continued)

Timeline	Function	Activities	Responsibility	
			National	Regional and global
Day 14 of notification to completion of initial outbreak vaccination response (95-110 days) (continued)	SIAs – monitoring	Establish SIA monitoring for: • supervision; • independent monitoring (intra- and post-campaign); • daily review meetings (team performance, daily reporting); • lot quality assurance sampling (LQAS); and • other data to support SIA reviews, including vaccine refusals, issues related to mistrust, etc.	National health authorities with support from WHO, UNICEF country offices	Regional polio response teams and WHO/UNICEF regional offices and headquarters to provide support
	SIAs - training	Conduct trainings of frontline workers (vaccinators, supervisors and social mobilizers) on technical skills, communication and interpersonal skills for SIA1, SIA2 and SIA3 in targeted areas.	National health authorities with support from WHO, UNICEF country offices	
	SIAs - campaigns	Implement initial outbreak vaccination response (SIA1, SIA2, SIA3, mop-up campaign) per national polio outbreak response plan.	National health authorities with support from WHO, UNICEF country offices	Regional polio response teams, ORPG to facilitate support from GPEI partners
	SIAs – post-campaign monitoring	Conduct activities to improve SIA quality with each subsequent round: • revise microplans for subsequent SIAs, mop-up campaign; • triangulate data on low-performing areas, refusals/missed children and observed social barriers, surveillance; • conduct activities to improve SIA quality, including detailed microplanning with GIS mapping, where appropriate and feasible; • strengthen supervision, monitoring and regular review meetings; • initiate special strategies for missed, high-risk, mobile populations; • conduct training for vaccinators, social mobilizers, supervisors on interpersonal skills; and • strengthen gender responsive SBC communication and outreach.	National health authorities, with support from WHO, UNICEF country offices	Regional polio response teams, ORPG and WHO/UNICEF regional offices and headquarters to provide support
	Vaccine management	Assess cold chain capacity and vaccine management capabilities and take urgent steps to fill gaps prior to SIA1.	National health authorities with support from WHO, UNICEF country offices	UNICEF regional office and headquarters to provide support
	Vaccine accountability and reporting	Complete vaccine utilization and accountability reports after each SIA, including Round 0.	National health authorities, with support from WHO and UNICEF country offices	Regional polio response teams and UNICEF regional office/ headquarters to provide support
	Vaccine disposal	Disposal of used and partially used vaccine vials for type 2 immunization response. Unopened vials should be securely stored in central stores with access-controlled facilities until the outbreak is considered closed.	National health authorities, with support from WHO and UNICEF country offices	Regional polio response teams and UNICEF regional office/ headquarters to provide support

GIS = geographic information system; GPEI = Global Polio Eradication Initiative; LQAS = lot-quality assurance sampling; ORPG = Outbreak Response and Preparedness Group; SBC = social and behavioural change; SIA = supplementary immunization activity; SIA1 = first supplementary immunization activity; SIA2 = second supplementary immunization activity; SIA3 = third supplementary immunization activity; UNICEF = United Nations Children's Fund; WHO = World Health Organization.

Table B2 (continued)

Timeline	Function	Activities	Responsibility	
			National	Regional and global
Until the close of the outbreak ***For outbreaks that have continued detection >180 days of notification, see Table B3.***	Monitoring - data analysis	Analyse and triangulate all data, including age- and sex-disaggregated data, to assess population immunity, sensitivity of surveillance and progress towards interrupting transmission.	National health authorities, with support from WHO, UNICEF country offices	Regional polio response teams and ORPG to facilitate support from GPEI partners
	Monitoring - response standards	Monthly review of standard indicators to ensure progress is made, with flags for any required corrective actions.	National health authorities, with support from WHO, UNICEF country offices	Regional polio response teams and ORPG to review and provide recommendations
	Outbreak grading review - 3 months	A review of the grading is conducted every three months; if the grade changes, the response will be adapted accordingly.		WHO regional office (Polio and WHE) to coordinate, WHE to grade in consultation with WHO polio headquarters and regional office
	OBRAs and desk reviews	Conduct an independent OBRA six (6) months after outbreak notification and after at least two SIAs have been implemented. In contexts where in-person assessment is not possible, virtual OBRAs and desk reviews may be considered.	National health authorities to facilitate, with support from WHO, UNICEF country offices	ORPG, in coordination with IMST/RORG
	OBRA for closure	Following 12 months of no detection of a serotype-specific outbreak, an OBRA for closure should be planned. In situations when in-person assessment is not possible, virtual OBRAs and desk reviews may be considered.	National health authorities to facilitate, with support from WHO, UNICEF country offices	ORPG, in coordination with IMST/RORG
	Outbreak response - lessons learned	Document the response and share lessons learned.	National health authorities, with support from WHO, UNICEF country offices	Regional polio response teams and ORPG to provide input
	Routine immunization	• Continue to strengthen programme management, microplanning, community mobilization and performance monitoring. • Use the established momentum to introduce a second IPV dose in routine immunization, if not yet introduced. • Ensure the transition of resources, assessments, documents and findings from the response team to the EPI programme for continued immunization strengthening efforts.	National health authorities, with support from WHO, UNICEF country offices and polio surge resources in country	
	Surveillance enhancement	Continue surveillance enhancement activities: • notify and sensitize women and men healthcare workers at national and subnational surveillance units about notification requirements; • review and reclassify reporting sites in the AFP active surveillance network; and • monitor the ES network and close ad hoc ES site, if appropriate.	National health authorities, with support from WHO, UNICEF country offices	Regional polio response teams, ORPG and Surveillance Group (SG)

AFP = acute flaccid paralysis; EPI = Essential Programme on Immunization; ES = environmental surveillance; IMST = Incident Management Support Group; IPV = inactivated polio vaccine; OBRA = outbreak response assessment; ORPG = Outbreak Response and Preparedness Group; RORG = Regional Outbreak Response Group; SG = Surveillance Group; UNICEF = United Nations Children's Fund; WHE = WHO Health Emergencies programme; WHO = World Health Organization.

Table B3: Timeline and responsibility for outbreak response activities from Day 180 of notification for countries with persistent outbreaks

Timeline	Function	Activities	Responsibility	
			National	Regional and global
Day 181 to Day 365 of notification ***For outbreaks that appear to have interrupted transmission, refer to "Until the close of the outbreak" in Annex Table A2.***	Communication - declaration	• Reclassify outbreak from "new" to "persistent." • National government to declare outbreak has been classified as a persistent outbreak.		
	Coordination	Stand up a formal Polio Oversight Committee (POC) led by ministry of health; include UNICEF and WHO representatives.	National government/health authorities, with support from WHO, UNICEF country offices	Regional offices to coordinate with countries and ORPG
	Review	Conduct an in-depth review (OBRA or other in-depth field assessment) of response performance. Identify underlying reason(s) for a persistent outbreak: failure of response, failure of scope and/or failure to respond.		
	Risk assessment & outbreak response plan	• Update risk assessment with all available information. • Present risk assessment and proposal to ORPG. • Organize a workshop to update the NPORP.	National health authorities with support from WHO, UNICEF country offices	Regional polio response teams / WHO/UNICEF regional offices and headquarters with ORPG support
	Outbreak response implementation and monitoring	• Implement the revised NPORP with tailored strategies to interrupt virus transmission. • Analyze and triangulate data; monthly review of response standard indicators. • Provide a monthly update to the POC to guide immediate corrective action.	National government/health authorities, with support from WHO, UNICEF country offices	Regional offices to coordinate with countries and ORPG
	Resources	Ensure global and technical financial support for implementation of the response plans.	National government/health authorities, with support from WHO, UNICEF country offices	Regional offices to coordinate with countries and ORPG
More than 365 days after notification ***For outbreaks that appear to have interrupted transmission, refer to "Until the close of the outbreak" in Table B2.***	Communication	Further classify the persistent outbreak as "chronic" outbreak or "consequential geography" if criteria are met.	National government/health authorities, with support from WHO, UNICEF country offices	Regional offices to coordinate with countries and ORPG
	Coordination	*Required for consequential geographies*: Set up an external TAG in addition to POC.	National government/health authorities, with support from WHO, UNICEF country offices	Regional offices to coordinate with countries and ORPG
	Outbreak response review	Conduct an in-depth review (OBRA or other field assessment) to identify why tailored strategies have not interrupted transmission. Conduct in-depth review every six (6) months.	National government/health authorities, with support from WHO, UNICEF country offices	Regional offices to coordinate with countries and ORPG
	Outbreak response risk assessment & plan	• Update the risk assessment with all available information. • Present the risk assessment to the ORPG every six (6) months after completion of the in-depth reviews. • Develop a NEAP. Review and update every six months.	National health authorities with support from WHO, UNICEF country offices	Regional polio response teams / WHO/ UNICEF regional offices and headquarters with ORPG support
	Outbreak response implementation and monitoring	• Implement the NEAP. • Analyze and triangulate all data; review indicators monthly to assess progress, flag for corrective action. • Provide monthly update to POC and quarterly to TAG.	National government/health authorities, with support from WHO, UNICEF country offices	Regional offices to coordinate with countries and ORPG
	Resources	Global and technical financial support plan implementation.		

NEAP = national emergency action plan; NPORP = national polio outbreak response plan; OBRA = outbreak response assessment; ORPG = Outbreak Response and Preparedness Group; POC = Polio Oversight Committee; TAG = Technical Advisory Group; UNICEF = United Nations Children's Fund; WHO = World Health Organization.

Annex C. National emergency management

National emergency management is tasked with coordinating health emergency preparedness, response and recovery and mitigating future health emergency risks that include poliovirus events and outbreaks.

Preparedness

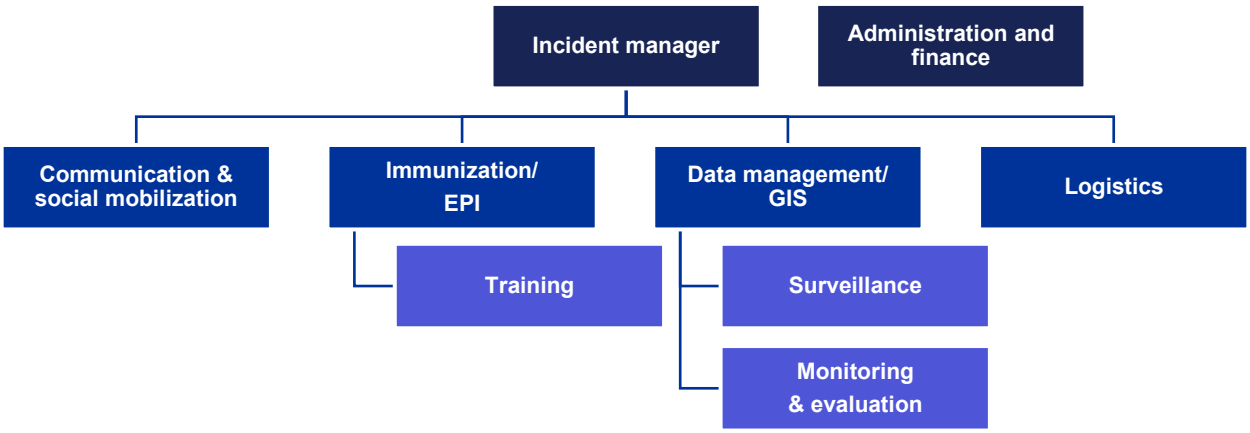
Health emergency preparedness increases national capacity to rapidly respond to a poliovirus detection. Two tools can help to better equip countries:

- National governments are recommended to develop a national polio outbreak response plan (NPORP). National governments are also encouraged to periodically test and revise the NPORP. A template is available upon request to the ORPG.
- Simulation exercises in emergency management help to test and evaluate emergency response systems and identify areas for improvement before such an emergency occurs. Polio outbreak simulation exercises (POSEs) have been used in country and multi-country settings to assess the adequacy of the NPORP.[71] POSEs illuminate how national mechanisms, structures, functions or procedures can be obstacles to quickly initiating and performing response activities. National and subnational public health authorities in areas at high risk for polio (e.g. a neighbour of an outbreak-affect area) are encouraged to conduct a POSE using the NPORP or a similar guiding document to test all elements of the plan: from coordination and communication to activities for immunization and surveillance. The NPORP should be revised based on POSE findings.

Response

Emergency Operations Centres (EOCs) generally fall under national emergency management. While EOC structures can vary by country, the sample provided in Fig. C1 highlights key functions for polio outbreaks. General information on establishing an EOC is available from the World Health Organization (WHO).[72]

Fig. C1. Sample national EOC structure for a polio outbreak response



EOC = Emergency Operations Centre; EPI = Essential Programme on Immunization; GIS = geographic information system.

Source: WHO.

[71] The WHO Regional Office for Europe provides guidance for conducting a POSE to help Member States prepare for responding to a poliovirus risk. See Polio Outbreak Simulation Exercise: How to test national preparedness plans using the POSE model. Copenhagen: WHO Regional Office for Europe; 2015 (https://iris.who.int/server/api/core/bitstreams/702993ff-9d91-4591-a0c4-c9de16c1cc06/content).

[72] World Health Organization. Framework for a Public Health Emergency Operations Centre. Geneva: WHO; 2015 (https://www.who.int/publications/i/item/framework-for-a-public-health-emergency-operations-centre)

Annex D. Prioritization of outbreak response activities in a resource-constrained environment

The Global Polio Eradication Initiative (GPEI) has recently faced constrained resources that limit support for all proposed and planned activities in polio-outbreak countries. As outlined in the GPEI Action Plan, the programme has responded by strategically leveraging resources to maintain processes through a phased or sequential approach to regionally defined epidemiological blocks.[73] This approach means that resources to support outbreak responses across the globe are diminished.

Operating within this fiscal environment requires difficult prioritizations, which are made more challenging as each country context and each outbreak will be unique. However, general considerations for prioritizing limited resources are outlined in Fig. D1. Modifications to the prioritization scheme should be based on the specific outbreak serotype and situation, such as the co-circulation of multiple poliovirus types. All outbreak response efforts should include active collaboration with routine immunization programmes to increase coverage of the inactivated polio vaccine (IPV) and bivalent oral polio vaccine (bOPV) and to explore opportunities for adding polio vaccines and sharing costs with other immunization and health system strengthening initiatives, such as periodic intensifications of routine immunization (PIRIs) and other planned vaccination campaigns.

Activities to potentially de-prioritize

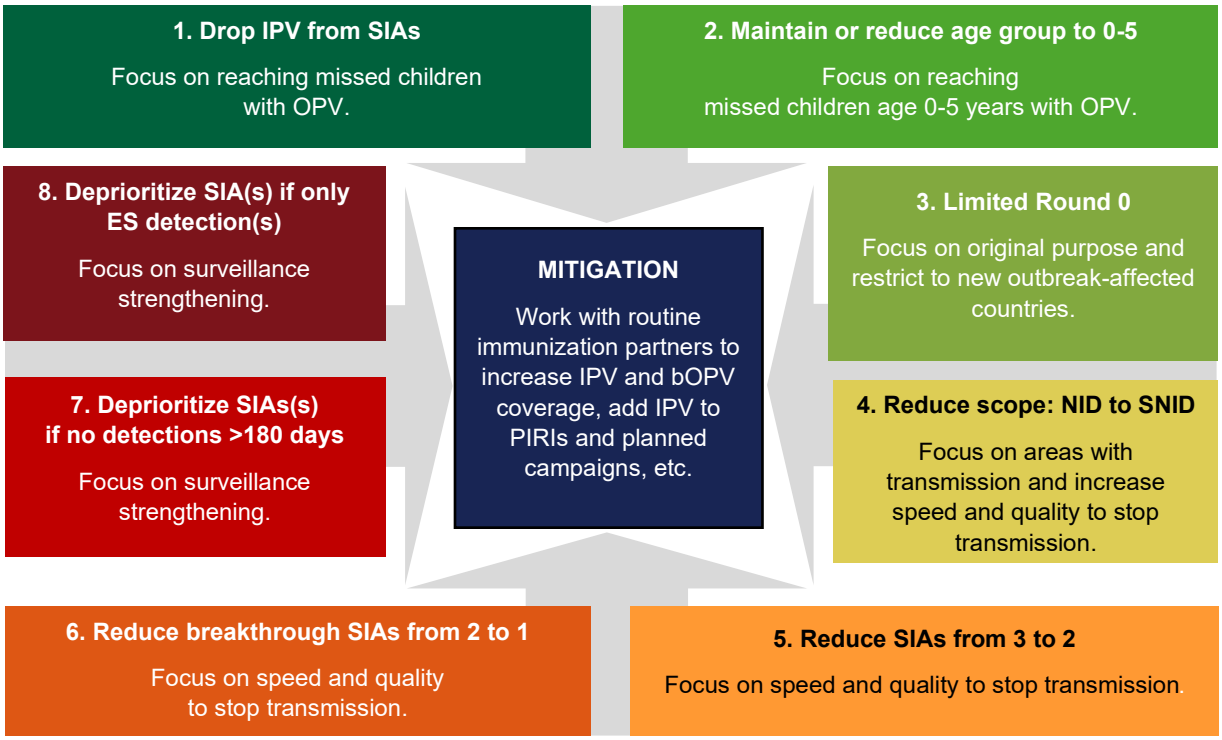
1. IPV campaigns: When added to existing supplementary immunization activity (SIAs) with the oral polio vaccine (OPV), IPV increases overall campaign budget needs due to both vaccine cost (e.g. the lowest price for a 5-dose vial is $1.25 per dose) and logistical and implementation costs. Adding IPV to an existing OPV SIA may also negatively affect coverage. Countries should instead prioritize OPV-only, house-to-house SIAs to achieve high coverage.[74] An alternative approach to increase IPV coverage is to integrate it with other planned nationwide vaccination activities, such as measles SIAs and neglected tropical disease interventions.
2. Expanded age group campaigns: Unless there is clear evidence of transmission in older age groups and a sizeable immunity gap in older aged children, SIAs should focus on children under 5 years of age. This allows the programme to conduct house-to-house SIAs without incorporating schools and other sites where older children congregate. It also saves in vaccine and implementation costs while focusing efforts on the age group that often drives transmission.
3. Limited Round 0: Round 0 has deviated from its original purpose to rapidly vaccinate children located within a small radius of poliovirus detection and often mirrors large-scale SIAs. Efficiencies can be found by limiting the Round 0 to its original purpose, conducting only one Round 0 in a new polio-outbreak country, or skipping Round 0 if one cannot be conducted within 14 days of Day 0 or if there were significant delays from sample collection until the confirmation of the virus.
4. Reduce scope of campaigns from a national to subnational immunization day (NID to SNID), or large SNID to a smaller SNID: Especially for large countries, vaccination campaigns should be focused only on geographies with active transmission or at high risk for spread. This provides savings in vaccine and implementation costs while still delivering a timely, high-quality campaign. There is a risk, however, that due to a surveillance delay or gap, the smaller scale response could result in a "failure of scope" with virus transmission outside the targeted vaccination area.
5. Reduce the number of SIAs from three to two: Some outbreaks have successfully stopped transmission with two SIAs. If only two SIAs will be conducted due to constrained resources, countries should focus on timely, high-quality SIAs with a maximum of four-week intervals. The risk remains for "failure of response" due to campaign delays or poor-quality SIAs.

[73] For the latest GPEI Action Plan, see the GPEI website (https://polioeradication.org/gpei-action-plan).
[74] Estivariz CF, Kovacs SD, Mach O. Review of use of inactivated poliovirus vaccine in campaigns to control type 2 circulating vaccine derived poliovirus (cVDPV) outbreaks. Vaccine 2023;41(Suppl 1) A113-A121. doi: 10.1016/j.vaccine.2022.03.027.

Highest risk

6. Reduce breakthrough SIAs from two to one: Some countries have stopped breakthrough transmission with a single SIA after detection. If only one breakthrough SIA is conducted, countries should focus on a timely, high-quality SIA launched within a maximum of 28 days from the detection of breakthrough transmission. The risk remains for a "failure of response" due to campaign delays or a poor-quality SIA.
7. Deprioritize SIA(s) if no detections for >180 days: Virus transmission in a few high-risk events and outbreaks may stop without a vaccination response as the number of susceptible children declines and transmission cannot be sustained. If there is no detection for more than 180 days, countries may deprioritize SIAs and focus on improving surveillance quality to ensure there is no missed transmission. The risk remains for "failure to respond" due to surveillance delays and gaps.
8. Deprioritize SIA(s) if only environmental detection(s): Some high-risk events detected with only environmental surveillance (ES) may not lead to local transmission or transmission may stop without a vaccination response due to high IPV coverage or few susceptible children. Countries must focus on improving surveillance quality to ensure there is no missed transmission. The risk remains for a "failure to respond" due to surveillance lags or gaps.

Fig. D1: Prioritization of outbreak response activities in resource constrained environment



bOPV = bivalent oral polio vaccine; ES = environmental surveillance; IPV = inactivated polio vaccine; NID = National Immunization Day; OPV = oral polio vaccine; PIRI = periodic intensification of routine immunization; SIA = supplementary immunization activity; SNID = Subnational Immunization Day.

Source: WHO.

Annex E. Investigation of a poliovirus detection

Part 1: Investigating the case or environmental isolate and local transmission

Note: Team composition for an investigation should reflect local gender norms so that direct communication with the primary caregiver (most often a woman) can be conducted.

Investigation of an isolate from an AFP case or contact An example of a detailed epidemiologic case investigation form is available for download.[75]	
1. Conduct a detailed clinical and neurological history and examination.	❒ Detailed history of fever, progression of weakness, treatment, injections and vaccination (including all polio routine and SIA doses, date of last vaccination, and reasons for any missed doses). ❒ Any family history, signs or symptoms of primary immunodeficiency. (If indicated, carry out a test for quantitative immunoglobulins).
2. Conduct an epidemiological and social investigation.	❒ Information on travel history, special population or high-risk status, socioeconomic and community context, distance to health facility or other barriers to vaccination, and other relevant information. ❒ Assess the performance of ES sites near the residence of the case. ** Do not collect specimen from close contacts if poliovirus has been confirmed. **
Investigation of the site of an isolate from environmental surveillance	
1. Describe the catchment area of the sampling site.	❒ Information on population demographics and movement (especially high-risk groups). ❒ Information on relevant institutions (e.g. health facilities, schools, poliovirus-essential facility), and bus stations or other transportation centres.
2. Describe the site itself and its performance.	❒ Information on drainage system complemented by GIS imagery, where possible (e.g. elevation profile, links with other sites, density of dwellings). ❒ History of the site, collection schedule, number and frequency of samples collected, timeliness and completeness of collection, and percentage of samples positive for enteroviruses. Record any poliovirus detected, including Sabin virus.
Investigation of the community of any detected isolate, regardless of source	
1. Population immunity: develop an immunity profile of the community, including characteristics of any under-immunised groups, outbreak of any other VPD of interest. Please note some specific investigation for type 2 isolate.	❒ Epidemiologic evidence of any past poliovirus detections (WPV or VDPV) in the affected or surrounding communities. ❒ Coverage data such as type-specific vaccination status of NPAFP cases, routine and SIA vaccination coverage data, and community immunization surveys. ☐ Use indicators from recent SIAs (IM, LQAS, coverage) to define: (i) number and characteristics (including sex) of missed children; (ii) reasons for missing children; and (iii) any interventions that worked to successfully reach missed children. ☐ Estimate OPV-naïve population or protected only by IPV for type 2 poliovirus. ☐ For type 2 isolates, distinguish between immunity to type 2 compared to types 1 and 3 (special attention to birth cohorts born since the switch or since last use of type 2 containing OPV). Collect additional details regarding last known use of tOPV, mOPV2, or nOPV2 and assess the quality of the recall of type 2 containing vaccine (tOPV, mOPV2 or nOPV2 vials). ❒ Characteristics of unvaccinated and partially vaccinated children, high-risk or special populations; seek details of health-seeking behaviour. ❒ Information on communicable disease incidence and transmission patterns, including VPDs with a special focus on diseases with faecal–oral transmission (such as cholera and acute bloody diarrhoea).

AFP = acute flaccid paralysis; ES = environmental surveillance; GIS = geographic information system; IM = independent monitoring; IPV = inactivated polio vaccine; LQAS = lot quality assurance sampling; mOPV2 = monovalent oral polio vaccine type 2; nOPV2 = novel oral polio vaccine type 2; NPAFP = non-polio acute flaccid paralysis; OPV = oral polio vaccine; SIA = supplementary immunization activity; tOPV = trivalent oral polio vaccine; VDPV = vaccine-derived poliovirus; VPD = vaccine-preventable disease; WPV = wild poliovirus.

[75] Detailed epidemiologic case investigation form. Geneva: Global Polio Eradication Initiative; 2011 (document automatically downloaded: https://polioeradication.org/wp-content/uploads/2024/05/Detailed-Case-Investigation-Form_July2011_EN.doc).

2. Review population characteristics, movement and migration routes.	❒ Overview of the affected population, including information on population density, social structure and networks, presence of minority or non-local residents, and community awareness of polio and immunization. ❒ Any security and access constraints. ❒ Any major population movements due to economic, seasonal or nomadic migration, religious pilgrimage, insecurity or natural disaster.
3. Conduct community social mapping.	❒ Information on immunization practice and vaccine acceptance in the community, including gender-specific barriers to immunization (through rapid gender analysis). ❒ Gender norm mapping to guide social and behaviour change communications plans, microplans, and plans for frontline worker and human resources. ❒ Information on media reach, community influencers, and relevant social groups and linguistic communities.

Part 2: Determining the geographic extent of transmission

Investigation of the quality of surveillance and evidence of virus transmission	
Polio surveillance sensitivity: 1. Identify additional polio cases to provide information on the extent of virus transmission. 2. Identify surveillance gaps or blind spots to shed light on the programme's ability to detect the virus.	Proposed activities ❒ Assess the quality and sensitivity of the current surveillance system, with particular focus on any areas neighbouring polio-affected areas. ❒ Understand and map inaccessible areas and high-risk populations to ensure there are no gaps within the surveillance system. ❒ Review recommendations and implementation status from recent programme or surveillance reviews. ❒ Additional investigations can be considered during the initial investigation but are time- and resource-intensive. Each of these require close coordination amongst surveillance and laboratory colleagues to prepare for any surge requirements: ☐ systematic AFP contact sampling; ☐ targeted healthy children stool sampling; ☐ community household search (also known as ad hoc AFP case search); ☐ local health facility search (also known as ad hoc AFP case search); and ☐ community outreach and sensitization.

AFP = acute flaccid paralysis.

Additional information

Type 2 detection

- Investigate immediately using the detailed epidemiologic case investigation form unless within four months of a type 2-containing OPV response in the immediate area.
- An important subset of nOPV2 viruses will undergo full genome sequencing to determine if attenuation sites are maintained through subsequent transmission in communities where the vaccine was used. Any nOPV2 isolates for which the number of mutations in VP1 is >6 nucleotides may trigger an investigation and a risk-assessment to identify next steps.

Wild poliovirus detection

In cases where wild poliovirus type 1 (WPV1) is detected in a non-endemic country, consider importation from recent travel or possible release from a laboratory or other facility,[76] particularly when genetic sequencing is still pending.

[76] See GPEI resources on containment at: https://polioeradication.org/what-we-do-2/containment/containment-guidance-and-tools/.

Annex F. Risk assessment overview

Summary of elements for a systematic risk assessment of a new vaccine-derived poliovirus (VDPV), wild poliovirus (WPV) or vaccine-like type 2 isolates.

Virologic

Risk category	Indicator of high-risk situation	Suggestive of not high-risk situation	Actions
Virus type	cVDPV or WPV automatically defined as high-risk situation		Seek expert virologist assessment
Virologic factors			
Genetic deviation from OPV origin (nucleotide changes)	Substantial	Not substantial	
Relatedness, if any, to past isolations	Related	Not related	
Virologist characterization / interpretation	Yes	No	
Co-circulation with WPV	Yes	No	
Detection of other (unrelated) VDPVs in region	Yes	No	
Human source			
Co-isolation with other poliovirus or enterovirus	Yes	No	
Evidence of primary immunodeficiency	No	Yes	
Environmental source			
Number of distinct viruses in samples	High	Medium/low	
Genetic diversity (number of genetic clusters)	High	Medium/low	

cVDPV = circulating vaccine-derived poliovirus; OPV = oral polio vaccine; VDPV = vaccine-derived poliovirus; WPV = wild poliovirus.

Context

Risk category	Indicator of high-risk situation	Suggestive of not high-risk situation	Actions
Case characteristics			
Member of known high-risk or underserved population (e.g. minority, refugee, mobile, internally displaced, slum, etc.)	Yes	No	Review with technical experts between country, regional and global levels
Zero-dose or under-vaccinated	Yes	No	Review with technical experts between country, regional and global levels
Aged above five (5) years	Yes	No	Review with technical experts between country, regional and global levels
Coverage data			
Routine immunization coverage (IPV, if available; otherwise DTP3 in infected administrative 1 level)	Poor	Good/high	Population immunity for type 2 polioviruses should factor time since switch
Quality of prior SIAs (>5% missed children by IM data or <80% LQAS lots passed)	Poor	Fair/good	
Surveillance quality			
Surveillance quality (sub-standard AFP indicators, infrequent or absent ES, orphan virus, etc.) in infected administrative 1 level	Evident issues	Fair/good	
Other recent poliovirus detection	Yes	No	
Administrative level 1 context			
Large, densely populated area	Yes	No	
Known high-risk populations (e.g. mobile, refugee, trade, pilgrimage, displacement, etc.)	Yes	No	
Insecure and/or inaccessible area affecting surveillance and/or immunization	Yes	No	
Any type of sentinel events suggesting higher risk of rapid spread	Yes	No	
Evidence of containment breach	Yes	No	
Finding type 2-containing OPV vial(s) in a sweep of the vaccine distribution chain	Yes	No	
Environmental conditions associated with high levels of faecal-oral transmission	Poor water and sanitation	Fair/good water and sanitation	

AFP = acute flaccid paralysis; DTP3 = diphtheria-tetanus-pertussis vaccine, third dose; ES = environmental surveillance; IM = independent monitoring; IPV = inactivated polio vaccine; LQAS = lot quality assurance sampling; OPV2 = type 2-containing oral polio vaccine; SIA = supplementary immunization activity.

International spread

Risk category	Indicator of high-risk situation	Suggestive of not high-risk situation	Actions
Linkages with international border			
Contiguous or direct transport link to international border (especially if other area is known high-risk)	Yes	No	
Links between site or person with poliovirus to other countries (e.g. market, transport routes)	Yes	No	
Travel history of poliovirus case or household (e.g. refugee, nomadic, pilgrimage, stateless persons) to the neighbouring (or any other) country	Yes	No	
Prior history of polio transmission patterns and outbreaks between countries	Yes	No	
Population mobility/migration			
Common service points between infected area and neighbouring areas like markets, pilgrim sites, common trading sites, etc.	Yes	No	
Evidence of high levels of migration (from sequencing data, available cell phone data, prior migration patterns, etc.)	Yes	No	
Context of neighbouring areas			
Evidence of surveillance gaps or other high-risk factors in neighbouring areas susceptible to importation from affected area	Yes	No	
Population immunity in neighbouring countries/areas	Low	High	
Conflict	Present	Absent	

Annex G. Outbreak operations in access-compromised areas

This annex outlines standardized guidance for implementing response activities in access-compromised areas that include fully inaccessible, partially accessible, periodically accessible and hard-to-reach areas.

Definitions and classifications related to access

Access must be routinely assessed by the national Emergency Operations Centre (EOC), with support from the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), humanitarian partners and the United Nations Department for Safety and Security (UNDSS). The definitions and classifications below support coordination and planning.

1. Fully inaccessible areas: no routine immunization activities, vaccination campaigns or surveillance activities for six months or more due to one or more of the following:
    1.1. armed group control with prohibitions on health services;
    1.2. intense fighting or improvised explosive device/mined roads;
    1.3. authority-imposed restrictions; or
    1.4. complete collapse of health infrastructure.
2. Partially inaccessible areas: areas with limited or intermittent access that can include:
    2.1. short access "windows";
    2.2. restricted movement of vaccinators; or
    2.3. areas where fixed-site or transit vaccination is possible, but house-to-house is not feasible.
3. Hard-to-reach but not insecure: areas and populations that may be challenging to access due to geographical barriers (difficult terrain, poor infrastructure) or social barriers (mobile and marginalized populations, gender).
4. Periodically accessible areas: areas occasionally available through access windows achieved by:
    4.1. local negotiation;
    4.2. ceasefires or de-escalation periods; or
    4.3. mass gatherings such as religious or cultural events.

Access mapping and situation analysis

In conflict settings, access and risk mapping should be updated bi-weekly or immediately whenever the situation "on the ground" changes. Table G1 provides a sample checklist to support assessment and analysis.

Table G1. Access and risk mapping checklist

Category	Activity	Status
Settlement boundaries	Verify all settlement-level boundaries are clearly demarcated in microplans.	☐
Key sites	Map the exact locations of: [ ] functional health facilities; and [ ] operational hubs.	☐
	Identify environmental surveillance (ES) catchment areas.	☐
Population demographics	Confirm population estimates for all permanent settlements.	☐
	Confirm population estimates for high-risk mobile populations: [ ] Internally displaced populations (IDPs); [ ] Nomadic groups; and/or [ ] Other (specify):	☐

Table G1 (continued)

Category	Activity	Status
Transit & logistics	Mark all critical transit points, including: [ ] Local markets and food distribution sites [ ] Bus stations [ ] Border crossings	☐
	Identify key logistical features [ ] Checkpoints and access corridors [ ] River crossings	☐
Security	Map all areas currently under the influence of armed actors.	☐

Access negotiations and humanitarian engagement

Access negotiations must adhere to principles of neutrality and impartiality. The following checklist should be completed *before* access negotiations begin for any outbreak response operations, including polio vaccination campaigns, surveillance and routine immunization (Table G2).

Table G2. Preparatory checklist for access negotiations

No.	Activity	Status
1.	Conduct stakeholder and actor mapping.	☐
2.	Identify interlocutors: elders, religious leaders, neutral NGOs, local influencers.	☐
3.	Determine internal “red lines” or non-negotiables.	☐
4.	Prepare unified messages to use across the ministry of health, WHO and UNICEF.	☐
5.	Prepare a clear explanation of the humanitarian purpose.	☐
6.	Ensure UNDSS clearance and risk assessment for UN staff.	☐
7.	Ensure appropriate security and safety clearance is obtained by non-UN staff.	☐
8.	Decide on safe, neutral meeting arrangements and channels.	☐

NGO = nongovernmental organization; UN = United Nations; UNDSS = United Nations Department for Safety and Security; UNICEF = United Nations Children’s Fund; WHO = World Health Organization.

During negotiations, the following topics may be discussed under the guidance of the EOC, depending on the context:

- safe passage for health workers;
- possibilities for including other antigens (only if it would not compromise or delay administration of polio vaccines);
- conditions for access: timing, duration, permitted modalities;
- non-interference with vaccination teams;
- no armed presence at vaccination points;
- permission for community-based surveillance;
- fixed-site vaccination locations and visibility rules; and
- agreement on communication through neutral channels.

Outbreak response in access-compromised area

Vaccination response	Surveillance strategies	Routine immunization	M&E

• **Fully inaccessible areas**
  ○ Perimeter vaccination
  ○ Transit point vaccination
  ○ Short interval additional doses during access windows
  ○ Local vaccinators
  ○ Intensified community engagement
 	
• **Partial accessible areas**
  ○ High-quality microplanning
  ○ Fixed-post vaccination where house-to-house is not feasible
  ○ Local female vaccinators
	• Strengthen the acute flaccid paralysis (AFP) surveillance network
	  ○ Enhance AFP reporting network to include relevant traditional healers, pharmacists, religious leaders, women's group and local health workers
	  ○ Include key health facilities around inaccessible areas
	  ○ Conduct periodic active case search
	
	• Environmental surveillance
	  ○ Sites catering to camps for internally displaced populations, inaccessible areas, major transit corridors
		• Strengthen the national Essential Programme on Immunization (EPI) around inaccessible areas
		• Mobile/outreach routine immunization sessions
		• Integration with essential services
			• Monitoring of access during SIAs
			• Periodically reviewing access negotiation and inaccessibility situation
			• Vaccination monitoring
			• Post-campaign review

Annex H. Cross-border outbreak coordination

Polioviruses move with people not passports. In settings where populations routinely cross borders for trade, work, agriculture (pastoralism), pilgrimage or displacement, no country can successfully stop poliovirus transmission on its own. Effective cross-border coordination is therefore an essential component of outbreak response.

This annex provides guidance for establishing and operationalizing cross-border coordination mechanisms between two or more countries, at both national and subnational levels, including in epidemiological blocks (epi-blocks) where multiple countries share common transmission corridors. The guidance applies to any poliovirus event or outbreak with evidence or risk of cross-border transmission.

Objectives of cross-border coordination

The primary objectives of cross-border coordination are to:

1. detect poliovirus early in high-risk mobile and border populations, such as nomads, internally displaced populations (IDPs) and refugees, through coordinated polio surveillance activities across international borders;
2. align outbreak response activities, including supplementary immunization activities (SIAs) and routine immunization strengthening, across borders so all at-risk children are reached;
3. ensure timely information and data sharing on epidemiology, population movement and response performance;
4. create a platform for joint decision-making and accountability among affected and at-risk countries; and
5. integrate polio within broader health security efforts, including International Health Regulations (IHR) implementation, at points of entry.

Definitions and scope

- Cross-border coordination mechanism: a standing arrangement between two or more countries to jointly plan, implement and monitor polio outbreak response activities in border and mobile populations.
- Border district / governorate / province: administrative unit adjacent to an international border or with major cross-border movement.
- Epidemiological block (epi-block): a group of neighbouring countries linked by epidemiologically significant movement patterns and shared poliovirus transmission risk.
- Cross-border transmission corridor: a geographic area, route or population movement pattern (e.g. refugees, seasonal migrants, pastoralist route, trade road, IDP corridor) through which virus is likely to spread between countries.

Governance and coordination structures

Cross-border coordination requires a clear structure that enables countries to jointly manage outbreak risks that extend beyond national boundaries. Amidst conditions that include extensive population movement, shared transmission corridors, and differing health system capacities, no country can address poliovirus threats in isolation. A streamlined governance arrangement is therefore needed to guide how countries communicate, align decisions, and coordinate operational activities at regional, national and border-district levels. Table H1 outlines the core structures that support effective, timely and accountable cross-border collaboration during outbreak response.

Table H1. Core structures and mechanisms for cross-border coordination and governance

Multi-country level (regional or subregional)	Establish or designate a multi-country coordination platform, such as the Lake Chad Basin block or Horn of Africa block.
	Define and agree on context-specific outbreak response steps, such as joint risk assessments, synchronized SIAs, shared performance indicators, review mechanisms or joint social mapping.
	Nominate national and subnational focal points from each country.
	Agree on meeting frequency.
	Designate a common secretariat support to maintain a database of and follow-up for agreed actions.
National level	Each of the countries must integrate cross-border coordination into its national polio outbreak response plan.
	Establish an intersectoral cross-border taskforce.
Subnational level (bordering districts and provinces)	For each bordering district /governorate/county, establish cross-border coordination committees to facilitate joint cross-border planning and implementation.
	Nominate focal points across bordering districts.
	Map high-risk populations and cross-share list of villages/hamlets across border.
	Agree on regular cross-border meetings.

Joint risk assessment and planning

Participating countries should conduct a joint risk assessment, covering the following aspects:

- recent and historic poliovirus epidemiological data;
- SIA performance and routine immunization coverage in border areas;
- population movement;
- access and insecurity;
- health system; and
- polio surveillance groups.

As part of the joint risk assessment, participating countries should develop a plan, which should align with the national polio outbreak response plan. They should also work to synchronize SIAs, cross-border vaccination points, joint surveillance activities, communication and social mobilization, and partner coordination for resource mobilization and responsibility assignment.

Operational components of cross-border coordination

1. Synchronized vaccination activities: Align SIAs across borders, particularly in high-risk areas. As part of the alignment, it is important to harmonize target group, campaign data and duration and share microplans for border areas to avoid any missed pockets. (If possible, develop joint microplans for cross-border areas). Further, the cross-border coordination teams should conduct a joint SIA readiness assessment ahead of the campaign.
2. Cross-border and transit vaccination points: This action should follow identifying and mapping formal and informal border crossing points and markets used by the cross-border communities.

3. Cross-border surveillance:
    - Align cross-border notification process and timelines.
    - Conduct joint cross-border outbreak investigations and cross-border surveillance review meetings, where possible.
    - Conduct joint supervisory visits to border health facilities, environmental surveillance (ES) sites and border posts.
4. Routine immunization and primary health care in border areas:
    - Integrate routine immunization strengthening into cross-border plans by coordinating outreach activities for border communities, aligning defaulter tracing efforts across borders, and targeting zero-dose and under-immunized children through appropriate linkage between polio SIAs and routine immunization.
    - Promote integration with other essential child health services, where feasible.
5. Social and behaviour change communication:
    - Develop social profiles and mappings of cross-border populations and mobile populations.
    - Develop harmonized key messages for mobile and border communities.
    - Harmonize social listening across the borders – offline and online.
    - Engage cross-border influencers, such as clan elders, religious leaders, etc.
    - Coordinate misinformation management across borders.
    - Generate community trust and demand for immunization in SIAs and in the routine immunization programme.

Information sharing, data management and monitoring

Effective cross-border coordination depends on fast, consistent and secure information sharing between neighbouring countries. Countries should agree on minimal but essential datasets—acute flaccid paralysis (AFP) line lists from border districts, relevant ES results, SIA coverage and border vaccination tallies—shared using common formats, timelines and protected channels, such as secure email groups or regional dashboards. Regular monitoring should track whether priority epi-blocks have functional coordination mechanisms, whether border districts conduct synchronized SIAs, whether border vaccination points operate effectively, whether data exchange occurs routinely, and whether AFP investigations and ES performance in border zones meet required standards.

After each major SIA or with any indication of cross-border transmission, countries should jointly review epidemiological trends, assess transmission routes and evaluate synchronized activities and border vaccination points to determine how well they are functioning and how they can be improved.

Annex I. Current polio vaccine options

The oral polio vaccine (OPV) induces effective humoral and intestinal mucosal immunity and remains the vaccine of choice in OPV-using countries to interrupt transmission rapidly.

Bivalent oral polio vaccine (bOPV)

bOPV is a live-attenuated vaccine containing Sabin poliovirus types 1 and 3. The vaccine induces humoral immunity to protect against paralysis and mucosal immunity to prevent transmission of poliovirus type 1 and 3. bOPV is widely used in routine immunization. It is the vaccine of choice in responding to outbreaks of wild poliovirus type 1 (WPV1) or circulating vaccine-derived poliovirus types 1 and 3 (cVDPV1, cVDPV3).

Inactivated poliovirus vaccine (IPV)

IPV is an inactivated vaccine that contains poliovirus types 1, 2 and 3. The vaccine induces strong humoral immunity, protecting against paralysis to all three poliovirus types. In OPV-vaccinated or poliovirus-exposed individuals, IPV provides a strong boost in mucosal immunity which protects against transmission of the virus within the community. IPV administered to OPV-naïve children has been shown to modestly reduce the duration and frequency of virus excretion.

Novel oral polio vaccine type 2 (nOPV2)

nOPV2 is a modification of the type 2 Sabin monovalent OPV (mOPV2). Clinical studies have demonstrated that nOPV2 provides effective immunogenicity against type 2 poliovirus while being more genetically stable and less likely to revert to a form that can cause paralysis in children who have not been sufficiently immunized. nOPV2 is the vaccine of choice in responding to cVDPV2 outbreaks. The vaccine is available through a global stockpile maintained by the Global Polio Eradication Initiative (GPEI) and can be released only under the authorization of the Director-General of World Health Organization (WHO).

Sabin monovalent oral polio vaccine type 1 (mOPV1)

mOPV1 is a live-attenuated vaccine containing Sabin poliovirus type 1 only. It induces humoral immunity to prevent paralysis and mucosal immunity to prevent transmission of poliovirus type 1. mOPV1 is not part of routine immunization programmes and is not currently available in the global stockpile. mOPV1 is only available upon consultation with WHO and the United Nations Children's Fund (UNICEF) and requires an estimated lead time of 9–12 months before it is planned for use.

Sabin monovalent oral polio vaccine type 2 (mOPV2) and trivalent oral polio vaccine (tOPV)

Since the withdrawal of type 2-containing OPV from routine immunization in 2016 and until the rollout of nOPV2 in 2021, vaccination response to outbreaks of type 2 circulating vaccine-derived poliovirus (cVDPV2) had been implemented only using Sabin-based monovalent OPV type 2 (mOPV2) or trivalent OPV (tOPV). These vaccines, while effective in inducing individual immunity and halting transmission, have a higher risk of reversion to neurovirulence than nOPV2 and hence seeded new outbreaks in the areas with low vaccination coverage. mOPV2 (but not tOPV) is still available in a global stockpile maintained by the GPEI and can be released only under the authorization of the WHO Director-General; however, nOPV2 remains the vaccine of choice in responding to type 2 poliovirus outbreaks.

Annex J. Surveillance in outbreak settings

This annex provides details on:

- key surveillance activities to pursue in outbreak settings (Table J1); and
- additional context-specific surveillance strategies and the instances in which they are recommended (Table J2).

Global Polio Eradication Initiative (GPEI) resources

- Strengthening Polio Surveillance during a Poliovirus Outbreak[77]
- Global guidance for conducting acute flaccid paralysis (AFP) surveillance in the context of poliovirus eradication[78]

Table J1. Surveillance activities for outbreak settings

	Objective	Main activities
Detection, notification, investigation	• Describe the poliomyelitis case (or environmental isolate) and the local context. • Determine the geographic extent of poliovirus transmission.	• Detailed investigation. • In-depth polio surveillance review across the country. • Mapping of high-risk or hard-to-reach populations.
Risk assessment	• Review virologic and epidemiologic characteristics of the newly detected virus, event, or outbreak. • Determine the risk for further local or international spread: high, medium or low.	• Mapping of cross-border population movements. • Community search for additional AFP cases and evidence of transmission (as per GPEI surveillance guidance).
Surveillance following investigation (surveillance enhancement)	• Set the surveillance system on high alert. • Enhance polio surveillance sensitivity to detect any further polio cases within and beyond the outbreak zone. • Improve strategies for detecting poliovirus in special populations and insecure or access-compromised areas. • Include surveillance enhancements in the national polio outbreak response plan.	• Checklist for AFP surveillance and environmental surveillance (ES) activities.[77] • Specific interventions for high-risk and hard-to-reach populations. • Review for orphan viruses, if relevant.
Persistent outbreaks: reassess and improve polio surveillance sensitivity	• Reassess surveillance and implement measures to achieve highly sensitive surveillance in countries or areas continuously affected by poliovirus • Update the national polio outbreak response plan (NPORP) or national emergency action plan (NEAP); monitor performance to guide corrective actions. • Enhance surveillance as a broader (multi-country) epi-block when there is a shared poliovirus transmission zone or when orphan viruses are detected.	• Assessment of surveillance efforts implemented following the initial investigation • Review of implementation of recommendations from field assessments (field and reviews, outbreak response assessment [OBRA], etc). • Updated surveillance enhancement plans. • Regularly monitor performance to guide corrective actions.

AFP = acute flaccid paralysis; ES = environmental surveillance; GPEI = Global Polio Eradication Initiative; NEAP = national emergency action plan; NPORP = national polio outbreak response plan; OBRA = outbreak response assessment.

[77] Global Polio Eradication Initiative. Strengthening Polio Surveillance during a Poliovirus Outbreak, revised February 2026. Available on the GPEI website: https://polioeradication.org/wp-content/uploads/2026/02/Strengthening-Polio-Surveillance-during-a-Poliovirus-Outbreak-20260226.pdf.

[78] Global guidance for conducting acute flaccid paralysis (AFP) surveillance in the context of poliovirus eradication (pre-publication version). Geneva: World Health Organization; 2026 (https://polioeradication.org/wp-content/uploads/2026/01/Global-AFP-guidance-pre-publiation-2026.pdf).

Table J2. Context-specific surveillance strategies to consider (from risk assessment)

Strategies and indications	Reference
Targeted healthy children stool sampling	
Targeted healthy children stool sampling is the collection of specimens from healthy children who have not been in contact with the positive poliovirus case. This surveillance strategy is only conducted in very specific situations where it can help to determine if there is local transmission of poliovirus: • when a VDPV is detected that is not genetically linked to another VDPV; or • when Sabin-like 2 (SL-2) or nOPV2-like viruses are detected more than four (4) months after last mOPV2/nOPV2 campaign or with no recent mOPV2/nOPV2 campaign. For all other use cases, targeted healthy children stool sampling is **not recommended**. Refer to guidance for more details. **IMPORTANT** • In situations **where an outbreak has been confirmed, do not implement targeted healthy children stool sampling** as it would be an inefficient and ineffective use of programme resources. • Any decision to do a targeted healthy children stool sampling should be made in close coordination and collaboration with national surveillance and laboratory colleagues. • Positive test results from targeted healthy children stool sampling cannot be used as laboratory evidence of poliovirus in an AFP case	AFP guideline Annex 15. Targeted healthy children stool sampling[79]
Community household search (ad hoc active case search) **Local health facility search (ad hoc active case search)**	
Ad hoc active case search (ACS) is an extraordinary activity conducted to identify unreported acute flaccid paralysis (AFP) cases. ACS is done through retrospective case search in health facility records and interviews of healthcare providers (facility-based) and community leaders and parents (community-based). Conditions that may warrant ACS include: • Activities where opportunities to look for AFP cases exist, e.g. during supplementary immunization activities (SIAs). • In a polio event or outbreak setting: a) as part of the investigation; and b) as part of enhanced surveillance by activating AFP case finding and record review. • Other indications: a) a disconnect between ES and AFP surveillance findings; and b) clustering of polio-compatible cases in time and space.	AFP guideline Annex 13. Ad hoc active case search[79]

ACS = active case search; AFP = acute flaccid paralysis; ES = environmental surveillance; mOPV2 = monovalent oral polio vaccine type 2; nOPV2 = novel oral polio vaccine type 2; SIA = supplementary immunization activity; VDPV = vaccine-derived poliovirus.

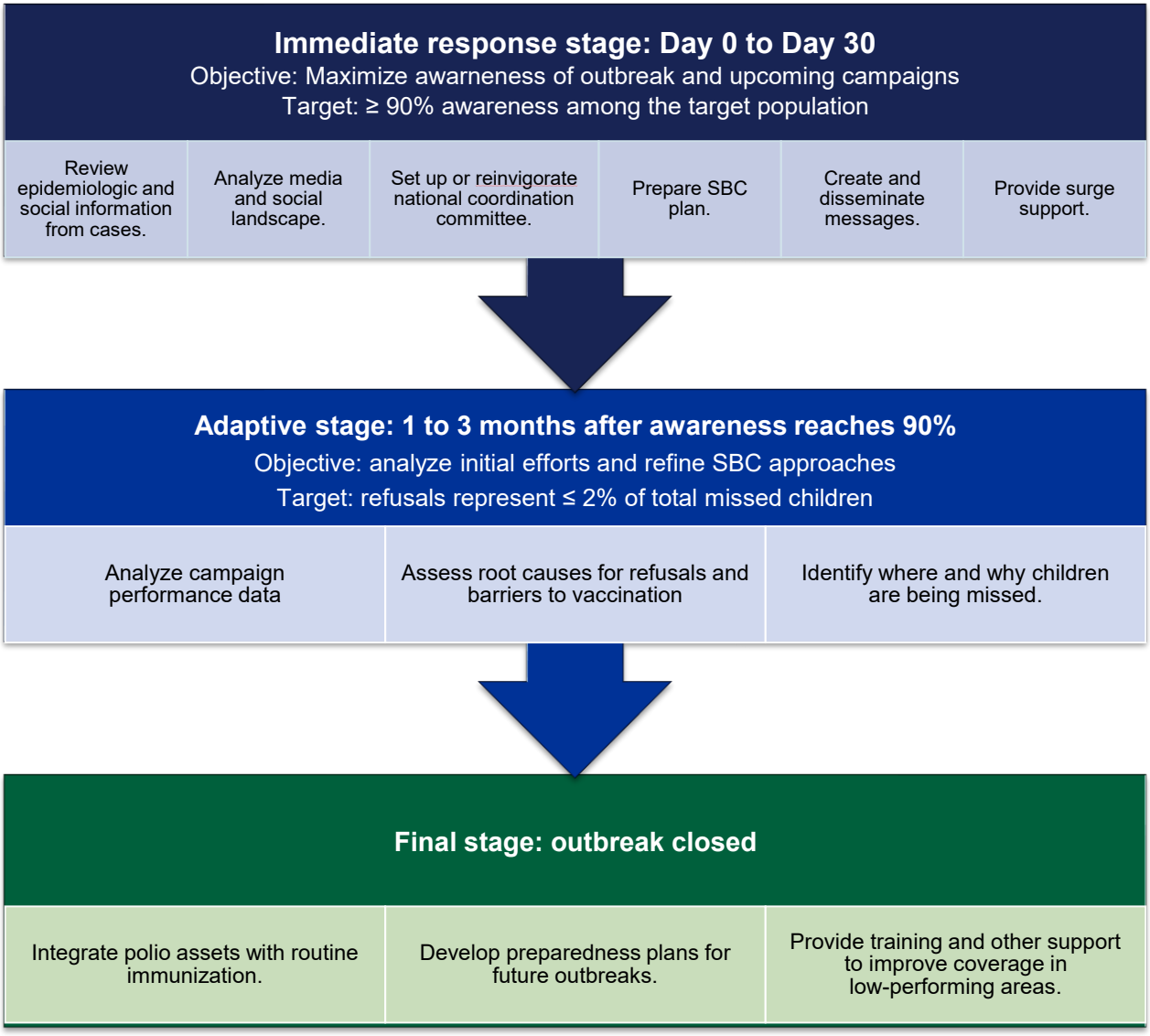
[79] Global guidance for conducting acute flaccid paralysis (AFP) surveillance in the context of poliovirus eradication (pre-publication version). Geneva: World Health Organization; 2026 (https://polioeradication.org/wp-content/uploads/2026/01/Global-AFP-guidance-pre-publiation-2026.pdf).

Annex K. Additional social and behavioural change guidance

Framework to support outbreak response

The framework for social and behavioural change (SBC) defines three stages in outbreak response: (1) an immediate response stage that aims to maximize community awareness; (2) a second adaptive stage that refines the approach to effectively address vaccine hesitancy, refusals and other barriers to immunization; and (3) a final stage that integrates polio resources with routine immunization, enhances preparedness for future outbreaks and supports low-performing areas (Fig. K1).

Fig. K1. Stages to carry out SBC during polio outbreak response



SBC = social and behavioural change.

Source: WHO.

Five innovative approaches

SBC interventions are most effective when they embrace the following approaches:

1. *human-centred design* begins with the perspectives of parents and caregivers to co-create solutions that address real barriers and motivations, ensuring interventions are practical, empathetic and tailored to community needs;
2. *positive deviance* identifies and amplifies successful behaviours and local women and men champions who already promote vaccination, leveraging community-led examples to drive broader acceptance and trust;
3. *collective change* focuses on shifting social norms and collective practices within communities, especially among ethnic or religious groups that influence shared attitudes toward vaccination;
4. *behavioural insights* apply evidence on how women and men make decisions and respond to cues to design and test interventions that nudge positive vaccination behaviours; and
5. *gamification* uses engaging, motivational gender-response techniques – such as challenges, recognition or rewards – to inspire action, boost participation and sustain enthusiasm for immunization.

Together, these approaches enable SBC interventions that move toward community-driven solutions to rebuild trust, address fatigue and accelerate the interruption of transmission.

Implementation strategies

SBC communication draws upon a range of strategies to strengthen trust, counter misinformation and create an enabling environment for polio outbreak response (Table K1).

Table K1. SBC communication strategies

Strategy	Details
Risk communication plan	Provides credible, timely and accurate information to affected communities to ensure broad understanding of the ongoing risk of infection and of clear actions the community can take, including vaccination, to reduce harm, limit spread and stop the outbreak.
Political advocacy	Involves the engagement of women and men political leaders, parliamentarians and key influencers to ensure visibility of the outbreak, prioritize immunization, activate response mechanisms at the highest levels, counter misinformation and secure both domestic and international support and resources.
Media engagement	Ensures effective messages reach affected communities and key stakeholders through trusted, accessible channels. The Ministry of Health and WHO lead on initial media coordination by announcing the outbreak. UNICEF leads SBC efforts, media strategy development, spokesperson training and influencer outreach.
Digital community engagement	Enables rapid gender responsive outreach to large audiences, especially in areas with limited interpersonal communication. It plays a critical role in countering misinformation and disinformation through social listening and monitoring, targeted online campaigns, digital influencer engagement and misinformation management.

SBC = social and behavioural change; UNICEF = United Nations Children's Fund; WHO = World Health Organization.

Table K1 (continued)

Strategy	Details
Stakeholder and influencer engagement	Mobilizes religious, traditional political and community leaders, healthcare providers, parliamentarians, women's and youth groups, digital influencers and other respected figures to promote accurate information and timely immunization. Their endorsement can significantly influence public perception and decision-making at the household and community level and build public consensus around the urgency of the outbreak and the collective responsibility to vaccinate.
Frontline workers (FLWs) (include vaccinators, social mobilizers, and community leaders)	Delivers accurate, credible, gender-responsive and culturally appropriate information to build trust, manage rumours and address vaccine hesitancy effectively. FLWs must be trained in interpersonal communication (IPC) skills and must be equipped to clearly explain the safety and benefits of receiving multiple vaccines, dispel fears of vaccine overload and reinforce the urgency of immunization. Strengthening their capacity through supportive supervision and real-time feedback is essential to ensure a high-quality, community-centred outbreak response.

FLW = frontline workers; IPC = interpersonal communication.

Monitoring for effective implementation

Monitoring serves to ensure communication efforts are effective and responsive to community needs.

Two indicators are critical to assess the effectiveness of SBC strategies in outbreak response:

- achieving at least 90% awareness of the outbreak among target populations; and
- keeping total refusals below 2% of total recorded missed children.

Monitoring in support of these outcomes will assess preparedness, track progress and coverage, analyze community awareness and attitudes, identify bottlenecks (missed households, resistance, misinformation) and guide adjustments for the current or next round of vaccination activities. Monitoring also ensures SBC activities – such as community dialogues, radio broadcasts or digital community engagement campaigns – are implemented as planned and reach their intended audiences. Table K2 summarizes selected SBC activities and associated tools to support monitoring.

Table K2. Selected key activities and tools to support monitoring

Activities	Tool description
Microplanning activities at lowest level	The *ACSM microplanning tool* ensures microplans for advocacy, communication and social mobilization (ACSM) have been developed at the lowest level (health facility, settlement). It helps to monitor what, when, how, where and who is going to implement the interventions.
Recording previous non-compliance (refusal mapping tool)	The *refusal mapping tool* records areas of refusal, sources, reasons and the number of children missing due to refusal. Follow-up on refusal cases should be done before, during and after the SIA. Special teams will be designated to continue this intervention and document the refusals resolved out of the total number recorded.

ACSM = advocacy, communication and social mobilization.

Table K2 (continued)

Activities	Tool description
Advocacy and community meetings with decision-makers and trusted influencers	The *communication plan* should include profiles on participants invited to district and subdistrict meetings, with representation that achieves a gender balance among community leaders, influencers and decision-makers. All meetings should include an agenda with clear objectives for briefing participants on the outbreak, vaccination response and issues. The quality of the discussions should be monitored with solutions for improvement coming from the participants.
Capacity building of social mobilizers and vaccinators	Vaccinators and social mobilizers are trained separately with distinct agendas. The *training module for vaccinators* includes IPC skills and practical sessions; *training agendas for social mobilizers* includes practical sessions on IPC with parents and caregivers, case management of refusal or rumours and data collection forms. Training modules should be prepared in advance.
Household visit	Social mobilizers use the *door-to-door social mobilization data collection tool* to document their activities. The compilation of this data should be monitored daily by local social mobilization supervisors through the *social mobilizer supervision form*. This process helps to monitor household activities, correct any errors and ensure 90% of parents will be informed prior to the start of vaccination.
Functionality of feedback and rumour-tracking mechanisms	The *rumour and misinformation log* is used by social listening teams for the early detection and proactive management of rumours or misinformation. It collects misinformation and rumours in the media and on social media to prevent potential crises and reassure parents by providing accurate information.
Media and digital media broadcasting	*Media plans* monitor the readiness of radio stations, journalists and digital platforms to launch communication on time. Both the quantity (number of broadcasts versus number planned) and the quality of information disseminated should be tracked, with proactive and/or corrective actions in the event incorrect information is broadcast or committed media outlets fail to air agreed content.

IPC = interpersonal communication.

Annex L. Checklist for gender mainstreaming

Gender considerations should be rigorously integrated or mainstreamed into outbreak response (Table L1).

Table L1. Outbreak response activities to support gender mainstreaming

Status | Notes	Tasks
	Gender analysis
[ ]	• Conduct (or review) gender analysis during initial outbreak social investigations.
[ ]	• Identify how gender norms and roles influence disparities in case detection, reporting, and vaccination coverage.
	Human resources
[ ]	• Ensure gender balance among surge staff (international and national), vaccination teams and supervisors.
[ ]	• Track ratio of women to men in outbreak response recruitment.
	Data collection and analysis
[ ]	• Collect and analyze sex-disaggregated data: AFP surveillance, SIA missed and zero-dose children, LQAS.
[ ]	• Ensure data are used and reflected in surveillance and SIA dashboards, QIPs and reports (SitReps, SIA reports, etc.).
	Capacity-building and training
[ ]	• Provide opportunities for women's active participation at all levels.
[ ]	• Disaggregate attendance lists by sex.
	Communication strategies
[ ]	• Use gender-sensitive communication materials and approaches that consider gender roles and norms.
	Safe environment
[ ]	• Promote awareness and compliance with PRSEAH standards at all levels.
[ ]	• Integrate PRSEAH into outbreak response training packages.

AFP = acute flaccid paralysis; LQAS = lot quality assurance sampling; QIP = quality improvement plan; PRSEAH = preventing and responding to sexual exploitation, abuse and harassment; SIA = supplementary immunization activity; SitRep = situation report.

Checklist for gender mainstreaming

The purpose of this checklist is to ensure that gender mainstreaming is an integral part of outbreak response and that it is assessed through the available monitoring systems, including outbreak response assessments (OBRAs). Countries are encouraged to adapt the checklist to their context.

Respond to each question with "Yes," "No" or "Partially," and provide an explanation for selected options.

Gender analysis: Complete before polio outbreak response planning. Use the results to ensure outbreak response activities are gender responsive.

- ☐ Are the social roles of women and men (in each community setting where a polio outbreak response is planned) different in relation to polio vaccination?
- ☐ Who usually makes the final decision on whether children receive polio vaccination (women/men)?
- ☐ Are decisions about polio vaccination different for girls compared to boys or vice versa?
- ☐ Are there locations that are considered culturally appropriate or inappropriate for women or men to access educational or polio vaccination services?
- ☐ Are the levels of education and awareness about polio vaccination different between women and men?
- ☐ Do women and men have different preferred modes of communication about polio vaccination (e.g. social media; information, education and communication (IEC) materials; posters)?
- ☐ Are there community preferences for women or men vaccinators for polio vaccination?
- ☐ Do women frontline health workers face higher security risks at the community level compared to men?
- ☐ Are there socially acceptable ways of recreation for women, men and children that can support engagement in polio vaccination activities?
- ☐ Who is the most respected person in the community, and how do they influence vaccination decisions?

Social and behaviour change (SBC) communication: Use when the national polio outbreak response plan (NPORP) is implemented.

- ☐ Do communication plans include activities for women and men according to the results of gender analysis of local communities and do they address gender-specific barriers to polio vaccination?
- ☐ Are women and men influencers engaged to support outreach to missed and zero-dose children?
- ☐ Are mobilization sessions conducted separately with mothers and fathers?
- ☐ Are women's groups, community-based organizations and civil society organizations engaged at different stages of polio outbreak response planning, implementation, monitoring and evaluation to support vaccination of missed and zero-dose children?
- ☐ Do the content, design and visuals of polio communication materials avoid reinforcing harmful gender norms, roles and stereotypes, and are they adapted to the education and exposure levels of women and men caregivers?
- ☐ Are information, education and communication (IEC) materials displayed in locations accessible to both women and men in the community?
- ☐ Are social media platforms used strategically, given their accessibility to both women and men users?

Health workforce: Use at the planning, implementation and monitoring stages.

- ☐ Are women and men frontline health workers deployed in accordance with community social norms and preferences?
- ☐ Are measures in place to ensure the safety and security of frontline health workers during house-to-house polio campaigns?
- ☐ Are equal opportunities provided to women for meaningful recruitment, employment and career growth at all levels within the polio programme?
- ☐ Is there a designated national or subnational influencer serving as a gender champion to promote the importance of gender mainstreaming within the national emergency action plan (NEAP) or NPORP?
- ☐ Is there a mechanism to ensure that women and men benefit equally from training and other capacity-building activities conducted during polio outbreak response planning and implementation?
- ☐ Are specific gender-related barriers and challenges faced by women at different levels of the polio programme identified and addressed?
- ☐ Is women's meaningful participation ensured in leadership positions and decision-making forums, such as Emergency Operations Centres and regional advisory groups?

Sex- and age-disaggregated data: Use at the planning, implementation and monitoring stages.

- ☐ Is age- and sex-disaggregated data on missed and zero-dose children collected through tally sheets, independent monitoring and lot quality assurance sampling to identify whether boys or girls are missed due to gender barriers, and whether younger children are disproportionately affected?
- ☐ Is data on house-to-house campaign vaccinators, social mobilizers and independent monitors disaggregated to determine the percentage of women participating in these teams?
- ☐ Is data on national and international surge staff disaggregated by sex?
- ☐ Is sex- and age-disaggregated data systematically presented in outbreak response situation reports, briefings, reports and presentations?

Overall:

- ☐ Has an improvement plan for gender mainstreaming been prepared based on the answers above?

Annex M. Preventing and responding to sexual exploitation, abuse and harassment

Aligned with the zero-tolerance policy of the Global Polio Eradication Initiative (GPEI) for sexual misconduct in programme operations,[80] polio outbreak responses must include measures to prevent and mitigate the risk of sexual exploitation, abuse and harassment among the service population and workforce members in close collaboration with the Interagency Standing Committee and United Nations mechanisms.

As a foundational principle, all polio response operations should adopt a victim/survivor-centred approach to preventing and responding to sexual exploitation, abuse and harassment (PRSEAH), in deference to the rights of victims/survivors (Box 16).

Teams should be aware of PRSEAH reporting mechanisms[81], and PRSEAH policies should be fully incorporated into response operations by:

- instituting training on PRSEAH;
- screening personnel and consultants for any past incidents;
- providing accessible, safe and functioning mechanisms for reporting allegations; and
- ensuring accountability.

Table M1 outlines the roles and responsibilities for all involved in polio outbreak response.

Box 16. The rights of victims/survivors

1. If sexual exploitation, abuse, or harassment occurs, the victim/survivor can report it or be referred to the appropriate organizational channels.
2. Reporting allows for an investigation and helps to facilitate assistance and support that reflect the needs and wishes of the victim/survivor.
3. Receiving assistance and support as a victim/survivor is independent of participation in any investigation.
4. Victims/survivors receive assistance upon receipt of an allegation, as per their wishes, in line with the UN Victim Assistance Protocol.

Table M1. Responsibilities according to team roles

Team members, consultants, contractors, vendors
• Do not engage or encourage others to engage in sexual exploitation, abuse and harassment. • Uphold the PRSEAH standards and policies of the polio eradication programme. • Complete mandatory online PRSEAH training before deployment and complete regular refreshers. • Familiarize yourself with the existing referral pathways for service provisions. Any allegations of sexual exploitation, abuse and harassment must be immediately reported through or referred to the appropriate organizational channels. Reporting is everybody's individual accountability. • DO NOT ATTEMPT TO INVESTIGATE ANY ALLEGATION. YOUR DUTY IS TO REPORT. • Survivors/victims should be provided with immediate assistance and/or referrals to assistance upon receipt of an allegation, as per their wishes, in line with the UN Victim Assistance Protocol.

PRSEAH = preventing and responding to sexual exploitation, abuse and harassment; UN = United Nations.

[80] Global Polio Eradication Initiative. Polio Oversight Board statement on zero tolerance for sexual misconduct. Available at: https://polioeradication.org/wp-content/uploads/2018/04/polio-oversight-board-statement-on-sexual-misconduct-20180426.pdf.

[81] Further reporting details are available at UNICEF (https://www.unicef.org/auditandinvestigation/report-wrongdoing) and WHO (https://www.who.int/about/office-of-internal-oversight-services/integrity-hotline).

Table M1 (continued)

Outbreak response coordinators (in addition to above)
• Ensure that all team members are aware of the need to abide by the organization's PRSEAH policies. • Perform background checks on all responders before recruitment/deployment. • Familiarize yourself with existing risk assessments and mitigation plans; update mitigation plans in line with the nature of the specific polio outbreak response operation. • Assess the capacity of implementing partners and contractors in reference to contractual agreements as per individual partner standards and in line with the UN Implementing Partners PRSEAH Common Assessment. • Sensitize populations on sexual exploitation, abuse and harassment, their rights and channels for reporting possible allegations, using existing UN channels and helplines, by including PRSEAH in communications planning, community engagement and social mobilization.

PRSEAH = preventing and responding to sexual exploitation, abuse and harassment; UN = United Nations.

To monitor for PRSEAH awareness among outbreak response teams, Table M2 provides a checklist to be completed by outbreak response coordinators.

Table M2. Checklist for outbreak response coordinators

	Questions	Responses
1.	Do you know about the GPEI's zero-tolerance policy on discrimination, sexual exploitation, abuse and harassment?	[ ] Yes [ ] No
2.	Do you support functional reporting for preventing and responding to sexual exploitation, abuse and harassment (PRSEAH)?	[ ] Yes [ ] No
3.	Do you regularly ensure that all personnel working in outbreak response campaigns and routine immunization (at all levels) complete mandatory PRSEAH training?	[ ] Yes [ ] No
4.	Do you know how to report allegations of sexual misconduct in your specific location and how to communicate it to the population?	[ ] Yes [ ] No
5.	Have you prepared frontline health workers for any eventuality during house-to-house campaigns?	[ ] Yes [ ] No
6.	Do you organize awareness-raising sessions about the current policy, system and support mechanisms for PRSEAH?	[ ] Yes [ ] No
7.	Do you ensure that PRSEAH is coordinated and aligned with community sensitization efforts during vaccination campaigns?	[ ] Yes [ ] No
8.	Are you clear about the referral mechanisms in place and what type of support to provide to victims/survivors in the occurrence of an incident?	[ ] Yes [ ] No

PRSEAH = preventing and responding to sexual exploitation, abuse and harassment.

Additional information on PRSEAH is available at the following links:

- UNICEF Protecting children from sexual exploitation and abuse
- UNICEF Strategy to Prevent and Respond to Sexual Exploitation and Abuse and Sexual Harassment
- WHO online resources on preventing and responding to sexual exploitation, abuse and harassment
- WHO Policy on Preventing and Addressing Sexual Misconduct