POLIO GLOBAL ERADICATION INITIATIVE

World Health Organization

STANDARD OPERATING PROCEDURES

RESPONDING TO A POLIOVIRUS EVENT OR OUTBREAK

VERSION 3.1 MARCH 2020

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Acronyms and abbreviations

AFP	acute flaccid paralysis
C4D	Communication for Development
EOC	emergency operations centre
EOMG	Eradication and Outbreak Management Group
ES	environmental surveillance
fIPV	fractional dose inactivated polio vaccine
GIS	geographic information system
GPEI	Global Polio Eradication Initiative
GPLN	Global Polio Laboratory Network
IDSR	Integrated Disease Surveillance and Response
IHR	International Health Regulations (2005)
IM	independent monitoring
IPV	inactivated polio vaccine
LQAS	lot quality assurance sampling
NGO	nongovernmental organization
NPAFP	non-polio acute flaccid paralysis
NPENT	non-polio enterovirus
OBRA	outbreak response assessment
OPRTT	Outbreak Preparedness and Response Task Team
OPV	oral polio-containing vaccine
bOPV	bivalent OPV (contains Sabin types 1 and 3)
tOPV	trivalent OPV (contains Sabin types 1, 2 and 3)
mOPV2	mOPV2 monovalent OPV (contains Sabin type 2)
RED	Reaching Every District
RI	routine immunization
RR	rapid response
SAGE	Strategic Advisory Group of Experts on Immunization
SIA	supplementary immunization activities
SIAD	short interval additional dose
SOPs	standard operating procedures
SR	surge response
STOP	Stop Transmission of Polio
UNDSS	United Nations Department of Safety and Security
UNICEF	United Nations Children's Fund
VDPV	vaccine-derived polio virus
aVDPV	ambiguous vaccine-derived polio virus
cVDPV	circulating vaccine-derived polio virus
iVDPV	immunodeficiency related vaccine-derived polio virus
WHE	WHO Health Emergencies
WHO	World Health Organization
WPV	wild poliovirus
WPV1	type 1 wild poliovirus
WPV2	type 2 wild poliovirus
WPV3	type 3 wild poliovirus

1 Overview

Background

As of July 2018, three countries remain endemic for type 1 wild poliovirus (WPV1): Afghanistan, Nigeria and Pakistan. In 2015, type 2 WPV (WPV2) was declared eradicated, and type 3 WPV (WPV3) was last reported in November 2012. In 2016, type 2 oral polio-containing vaccine was withdrawn from all routine immunization programmes worldwide, replacing trivalent oral polio vaccine (tOPV) containing attenuated poliovirus vaccine serotypes 1, 2 and 3 with bivalent oral polio vaccine (bOPV) containing only types 1 and 3.

While efforts to eradicate WPV1 continue in endemic countries, the world needs to be prepared for the international spread of WPV, and for vaccine-derived poliovirus (VDPV) of serotypes 1, 2 or 3, which can also still emerge in different contexts. Poliovirus events or outbreaks may arise due to a number of possible factors, including low population immunity, importation of virus, or a containment breach from laboratory or vaccine manufacturing facilities.

Purpose

The purpose of these standard operating procedures (SOPs) is to offer policy guidance and to provide performance standards on how to respond to any type of poliovirus outbreak or event in a timely and effective manner, and specifically, to stop an outbreak within 120 days.

This guide is for national governments and public health decision-makers who coordinate responses to poliovirus events and outbreaks, and their global, regional and country-level partners.

Scope

These Global Polio Eradication Initiative (GPEI) SOPs establish response standards and timelines for actions to stop transmission when WPV spreads to a non-endemic country, or when VDPV events and/or outbreaks of any type (VDPV1, VDPV2 or VDPV3) are detected in any context, whether a new emergence or previously undetected circulating vaccine-derived poliovirus (cVDPV).

The SOPs summarize the roles and responsibilities of countries and GPEI partners during a polio outbreak or event. Since WPV2 is now considered an eradicated pathogen, specific measures are outlined for responding to type 2 events and outbreaks, including how to request and account for monovalent oral type 2 polio vaccine (mOPV2) from the global emergency vaccine stockpile.

Guidance in these SOPs relies on scientific evidence and expert consensus, while remaining grounded in operational realities and the context of waning global immunity to type 2 poliovirus. Critical aspects of the SOPs result from broad consultation of expert advisory groups, including the World Health Organization (WHO) Strategic Advisory Group of Experts (SAGE) on immunization, and endorsement by the GPEI Eradication and Outbreak Management Group.

These SOPs do not cover: WPV1 case response due to local transmission in an endemic context, field-level operational guidance or tools for planning high-quality supplemental immunization activities (SIAs), or detailed methods for enhanced surveillance.

What's new in this version

This document updates the most recent version of the Standard Operating Procedures: Responding to a poliovirus event or outbreak", Version 3, published January 2019. Version 3.1 incorporates lessons learned from outbreak response efforts and takes into account the current context of the global program.

Revisions are highlighted throughout the document and summarized below.

1. Revisions to Type 2 Vaccination Response Scope

While the number of cVDPV2 outbreaks due to pre-switch use of tOPV has declined as expected, the number of new emergences sharply increased starting in the second half of 2018, and in 2019 is now far higher than anticipated at the time of cessation. New emergences have been concentrated around areas of recent mOPV2 use in sub-Saharan Africa, but recent outbreaks confirmed in other regions of the world (e.g. Western Pacific and Eastern Mediterranean) demonstrate additional risk elsewhere.

Continuation of outbreaks requires improvements in the timeliness and quality of outbreak response so that any ongoing transmission in mOPV2 response zones is stopped. Additionally, the sharp increase in cVDPV2 outbreaks is possibly as a result of population movement of recently vaccinated children into areas with low population immunity or errant use of mOPV2 outside of response zones. This trend is likely to intensify in the coming year, as more mOPV2 is used in response to new and ongoing outbreaks while mucosal immunity to Type-2 poliovirus continues to decline.

Outbreaks of cVDPV2 will still require use of mOPV2, which remains the only tool capable of stopping the outbreaks in areas with poor sanitation. However, use of mOPV2 will continue to risk the generation of new outbreaks, until an alternative vaccine which does not generate new outbreaks becomes available. In the interim, a revised response strategy for detections of VDPV2 will be needed, balancing the increased risk of cVDPV2 spread and increased risk of mOPV2 use.

Since the number of VDPV1 and VDPV3 outbreaks continues to be minimal and there is less risk associated with bOPV vaccine used in SIA response, the recommendations for these outbreaks should proceed as outlined in version 3.

Details of the revisions are provided within the relevant text of the "Chapter 7 Vaccination Response". However, **for response to VDPV2 only**, the key proposed changes are summarized below:

Version 3	Version 3.1	Comment
Conduct rapid (<14 days) focused response of 200–500k children for SIA Round 0	Conduct rapid (<14 days) focused response of **100–400k** children for R0	Initial response (R0) should be rapid, focused, and small scale; the intent should be to maximize quality in high-risk areas near the detection. If it cannot be conducted quickly (within three weeks), the country team may consider proceeding directly with SIA1 and its appropriate target population as per below. This decision should be made in consultation of GPEI partners.
Response scope for cVDPV2 should be 1–2 million* children for R1	Response scope for newly infected areas with cVDPV2 should be R0 (100 – 400k), R1, R2 **(1-4 million* children) and mop up**	Potentially increase response size for R1 and R2 (ideally when quality can be supported by adequate technical assistance) in order to improve the chance of rapidly stopping