

Poliovirus Detection Outbreak Response Plan for Australia

November 2024



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Preamble

Australia was verified as polio-free in 2000, along with the Western Pacific Region. The Poliovirus Detection Outbreak Response Plan for Australia (the Plan) has been developed to ensure Australia is prepared for possible outbreaks of infection with wild poliovirus (WPV) or circulating vaccine derived poliovirus (cVDPV).

In a previously polio-free country, the occurrence of a poliovirus detection due to WPV or cVDPV is considered a national public health emergency, requiring a rapid and high-quality response.

This Plan is developed in line with the Australian National Framework for Communicable Disease Control^a, Australia's Emergency Response Plan for Communicable Disease Incidents of National Significance (CDPLAN)^b and the Standard Operating Procedures for responding to a poliovirus event or outbreak^c.

As noted in the CDPLAN, where disease-specific plans exist, such as this one for poliovirus, such plans are the primary plans used in response to specific incidents.

Summary of endorsements:

- Reviewed and endorsed by the National Certification Committee (NCC) on 23 September 2024.
- Reviewed and endorsed by Australia's Polio Expert Panel (PEP) on 26 September 2024.
- Reviewed and endorsed by Communicable Diseases Network Australia (CDNA) on 15 October 2024.
- Reviewed and endorsed by Australian Health Protection Committee (AHPC) on 12 November 2024.
- Submitted to Western Pacific Regional Certification Commission (RCC) on 22 November 2024.



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21 November 2024

^a Please see Australia's [National Framework for Communicable Disease Control](#)

^b Please see CDPLAN (<https://www.health.gov.au/resources/publications/emergency-response-plan-for-communicable-diseases-of-national-significance-cd-plan>)

^c Please see the GPEI's technical guidance for outbreak response, including the Standard Operating Procedures for responding to a poliovirus event or outbreak (<https://polioeradication.org/tools-and-library/resources-for-polio-eradicators/gpei-tools-protocols-and-guidelines/>)

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Introduction

Purpose of this Document

Australia was declared polio-free by the World Health Organization (WHO) in 2000.¹ Any case of wild poliovirus (WPV) or circulating vaccine derived poliovirus (cVDPV) is therefore considered an outbreak, threatens Australia's polio-free status, and must be managed as a public health emergency.

In addition to a confirmed WPV or cVDPV case, the Poliovirus Detection Outbreak Response Plan for Australia (the Plan) provides appropriate response actions in the event of a clinically suspected poliovirus case, or if a high- or very high-risk laboratory poliovirus breach or human exposure occurs, where infection is considered likely but has not been confirmed.

The Plan also provides response actions in the event that WPV or cVDPV is detected through wastewater surveillance in the absence of a clinically suspected or confirmed poliovirus infection.

The Australian Government Department of Health and Aged Care (Health) has prepared this Plan in consultation with key stakeholders. The Plan clarifies the roles and responsibilities of the Australian Government agencies and state and territory health departments, advisory committees, organisations and clinicians involved in disease surveillance and control in the event of a confirmed or probable WPV or cVDPV case, detection of WPV or cVDPV in wastewater, or a high-risk laboratory exposure incident in Australia.

Consistent with the WHO Global Polio Eradication Initiative^d the Plan does not cover viruses with a genetic sequence indicative of having been shed from an immunocompromised person following vaccination with oral polio vaccine (OPV) (immunodeficiency-associated vaccine-derived poliovirus or iVDPV), nor viruses classified as ambiguous vaccine derived poliovirus (aVDPV). With detection of either iVDPV or aVDPV a rapid risk assessment will occur.

Australia's Emergency Response Plan for Communicable Disease Incidents of National Significance (the CDPLAN) notes that where disease-specific plans exist, such as this Plan for poliovirus infection, the disease-specific plans are the primary plans used in response to such incidents.

The Plan is based on a risk management approach for biological emergencies², which recognises that:

- such an event will occur infrequently,
- the evidence base for decision making may be limited and evolving, and
- community concern may be disproportionate to the level of risk.

^d Please see the Global Polio Eradication Initiative (GPEI) website polioeradication.org/

In Australia the likelihood of locally acquired cases resulting from an importation of a WPV or cVDPV is very low due to high immunisation coverage and generally good sanitation. There are, however, populations in Australia with lower immunisation coverage where WPV or cVDPV may transmit amongst unvaccinated individuals. While WPV or cVDPV continue to be diagnosed internationally there remains the potential for local importation events. Should local transmission occur the consequences would be profound, so being prepared for an outbreak event is essential.

Triggers for Activation of the Plan

- A single confirmed or probable case of WPV or cVDPV infection (as defined by the [national notifiable diseases surveillance case definition](#)), or
- A high- or very high-risk laboratory containment breach resulting in human exposure to poliovirus, even if infection has not yet been confirmed, or
- Any unexpected detection of WPV, or cVDPV in routine wastewater surveillance.

There are several possible scenarios for an outbreak of poliovirus infection to occur in Australia that would trigger activation of the Plan. These include:

Scenario 1 – Importation of a WPV case from an endemic country or a country with recently imported poliovirus. This scenario occurred in Australia in 2007³, or

Scenario 2 – Importation of cVDPV from a country with cVDPV, or

Scenario 3 – Human acquisition of a WPV or cVDPV from a laboratory containment incident, or

Scenario 4 – Very high- or high-risk laboratory exposure to WPV or cVDPV from a laboratory containment incident, where poliovirus infection is probable but has not yet been confirmed, or

Scenario 5 – Unexpected detection (outside of an established outbreak) of WPV, or cVDPV in routine wastewater surveillance.

Any case of WPV or cVDPV in Australia will require epidemiological investigation to determine the likely source of infection. The Operational Matrix ([0](#)) guides the activation steps for a confirmed or suspected poliovirus infection, or where a laboratory incident results in a high- or very high-risk breach or human exposure to poliovirus ([0](#)).

WPV or cVDPV may be detected in wastewater in the absence of a clinically confirmed poliovirus case. In this instance, a response is warranted to prevent circulation of poliovirus and disease, including paralysis. The Operational Matrix ([0](#)) guides the activation steps for a wastewater detection of WPV or cVDPV.

High- or very high-risk laboratory poliovirus breach or exposure

The Plan will be activated in response to a high- or very high-risk poliovirus laboratory breach. Facilities should undertake a risk assessment of a poliovirus containment breach (where a contained poliovirus is accidentally released) or exposure (where

humans are exposed to poliovirus) to determine the appropriate notification steps, and whether activation of the Plan is required. The *public health management of facility-related exposure to live polioviruses*⁴ identifies the following factors for consideration in undertaking a risk assessment⁴:

- the exposure type (ingestion would be higher risk than dermal exposure)
- characteristics of the breach (volume, concentration, potential or confirmed exposure of staff, whether occurred outside the facility, or was contained)
- the use of adequate personal protective equipment (PPE) at the time of the breach, gowning and de-gowning and decontamination procedures
- the time elapsed since the breach, if known
- the immunisation history of the exposed person(s) and their contacts
- travel history of the exposed person, including within the local community
- the immunity profile of the local population and any areas identified to have suboptimal vaccination coverage,
- any history of poliovirus transmission in the community
- any high-risk subpopulations, such as unimmunised close contacts or local communities with low vaccination coverage rates and
- environmental risks that would heighten the concern for transmission.

The *public health management of facility-related exposure to live polioviruses*⁴ also provides a risk stratification for poliovirus breach or exposure based on the type of sample, and poliovirus serotype, involved:

- **Very high-risk**
 - Any containment breach or exposure anywhere involving WPV2 or cVDPV2
- **High-risk**
 - Any exposure involving WPV1/cVDPV1 or WPV3/cVDPV3
 - Any exposure involving Sabin-like type 2 (SL2), in a country or surrounding area (within a radius of 100 km) with inadequate immunity against WPV2/cVDPV2 (less than 90% inactivated poliovirus (IPV) coverage), with lower access to basic or safely managed sanitation (less than 95% of the population as per [WHO/UNICEF JMP data](#)).
- **Low-risk**
 - Any exposure involving SL2 in a country and the surrounding area with adequate immunity against WPV2/cVDPV2 (more than 90% IPV coverage) AND higher access to basic or safely managed sanitation (the converse of high- or very high-risk described above)
 - Any exposure involving WPV2/cVDPV2 potentially infectious material.
- **Minimal risk**
 - Any exposure involving SL1 or SL3 material that is considered minimal risk and that is not currently considered within the scope of the guidance but that, following OPV cessation in the future, will need to be addressed in future.
 - Any exposure involving SL2 potentially infectious material.

Scenarios that will not activate this plan

A case of vaccine associated paralytic poliomyelitis (VAPP) in a person who has recently travelled from a country that is still using oral polio vaccine (OPV) will be investigated but is not likely to result in secondary cases and therefore would not lead to activation of this Plan.

Notifications concerning viruses with a genetic sequence indicative of having been shed from iVDPV, or virus classified as aVDPV, will not activate this Plan.

Low or minimal risk laboratory exposures will not activate this Plan. Low-risk laboratory exposures should be managed in accordance with the guidance in the *public health management of facility-related exposure to live polioviruses*.⁴

Governance Process for Activating the Plan

Authority to activate the Plan rests with the Chief Medical Officer (CMO), as Chair of the Australian Health Protection Committee (AHPC), in collaboration with the reporting state or territory health authority.

Clinical and/or laboratory confirmation of poliovirus infection, high- or very high-risk human exposure to poliovirus due to a laboratory containment breach, or a confirmed wastewater detection of cVDPV or WPV, would initiate a joint meeting between:

- the CMO as the chair of AHPC
- the Chief Health Officer (CHO) or their chosen representative from the affected jurisdiction
- the Communicable Diseases Network Australia (CDNA)
- the Public Health Laboratory Network Executive Group (PEG)
- Australia's Polio Expert Panel (PEP)
- representatives from the National Enterovirus Reference Laboratory (NERL)
- the National Authority for Containment (NAC), and
- the National Certification Committee for the Eradication of Poliomyelitis (NCC).

In the rare circumstance that more than one jurisdiction is affected, an emergency videoconference of the AHPC will be called. This videoconference would include the chairs of the CDNA, Public Health Laboratory Network (PHLN), PEP and NCC, representatives from the NERL, the National Poliovirus Containment Coordinator (NPCC), and other relevant experts.

Participating committees will be engaged according to their respective terms of reference.

Emergency response approach

According to the structure of the [CDPLAN](#), the principles below underpin a coordinated national approach to a rare biological emergency in Australia.

- **Prevention** to reduce the likelihood of any emergency and its impact,
- **Preparedness** which includes actions taken before an incident to ensure effective response and recovery, and

- **Response** encompassing coordinated **Standby**, **Action** and **Stand down** phases including:
 - coordination of policy and operational arms at a state or territory and national level, including agreement on roles and responsibilities, and
 - regular communication between key policy and operational stakeholders. These lines of communication should be established and have the ability to deal with interactions with the media.

Roles & Responsibilities for key response activities

Critical Success Factors

The main response actions to a confirmed or probable poliovirus infection, exposure to poliovirus resulting from a laboratory incident, or detection of WPV or cVDPV in wastewater samples, will be containment of potential spread, including through:

- tracing, isolation and testing of the index case, or in the case of a laboratory exposure incident, isolation and testing of exposed personnel,
- risk assessment to inform subsequent steps,
- tracing and management of contacts, including stool sample collections from close contacts,
- targeted immunisation campaigns,
- education on infection control measures,
- preventing ongoing community risk through managing any potential environmental contamination,
- enhanced clinical surveillance measures, including notices to clinicians regarding the potential for acute flaccid paralysis (AFP) diagnoses, and/or active case finding and retrospective review of hospitals records, and
- liaison between the NERL, as Australia's designated Poliovirus Essential Facility (dPEF), and other testing laboratories to ensure appropriate protocols are in place for the management of poliovirus infectious and potentially infectious materials (principally, stool and sputum specimens, and concentrated wastewater samples which have tested positive for poliovirus).

In instances where the Plan is activated solely as a result of wastewater detection of WPV or cVDPV, isolation and testing of the index case will be impossible. All other critical success factors will be implemented as appropriate.

The critical factors affecting success of the response will be:

- timely detection, notification and reporting as part of active surveillance,
- accurate and timely assessment of at-risk populations and environmental risk assessments,
- identification of the source of infection (importation, locally acquired or laboratory acquired),
- detailed epidemiological data and case history to identify potential contacts and at-risk populations (limitations to this exist when the Plan is activated solely in response to wastewater detections of WPV or cVDPV),
- uptake of poliovirus vaccines by at-risk populations, and
- management and maintenance of enhanced active surveillance.

Any diagnosis of poliovirus infection in Australia will be of international significance. It is imperative there is a nationally consistent approach to the release of information

and an effective national response, including international reporting from the National Focal Point (NFP) to the WHO International Health Regulations (IHR) Focal Point.

Emergency Response Teams

The primary public health response to a confirmed or probable poliovirus infection, human exposure to poliovirus from a laboratory containment breach, or wastewater detection of WPV or cVDPV, will be driven at the state or territory level with overarching coordination at a national level by the National Incident Centre (NIC) and the CDNA, with support as required from AHPC.

Response teams will be required at different levels of the public health system, including state or territory and national incident response teams. Each will be required to work closely together.

An epidemiologist or appropriate public health officer from the affected state or territory health department and a representative from the NERL would be included in the response team or available as liaison between teams.

Technical advice may be sought from the PEP, the NCC, and the Australian Technical Advisory Group on Immunisation (ATAGI) as required. The NAC will be consulted on laboratory containment issues. Key stakeholders involved in a response to a poliovirus infection or outbreak are listed under [Appendix A](#).

Notification to the WHO IHR Focal Point

All detections of WPV and cVDPV must be reported to the WHO within 24 hours of confirmation, as per the decision tree algorithm contained in Annex 2 of the WHO *International Health Regulations (2005)*.⁵ Notification by the relevant state or territory health department occurs through the NFP, in the Health Security and Emergency Management Division (HSEMD), at Health, to the WHO IHR Focal Point. In the event a case cannot be laboratory confirmed but is considered probable, reporting to the WHO, though not required, is desirable and would follow the same process.

The isolation of WPV or cVDPV from other human or non-human sources, for example, from clinical samples in a person without paralysis, or from wastewater samples, must be notified to the WHO, through the NFP, in accordance with the criteria in the decision tree algorithm in Annex 2 of the WHO *International Health Regulations (2005)*, as any detection of WPV or cVDPV would be considered unexpected and have a potentially serious public health impact.

Any exposure or breach involving poliovirus type 2 (PV2) should be regarded as an event that may constitute a public health emergency of international concern and notified to the WHO through the NFP. Spills or exposures of poliovirus type 1 (PV1) or type 3 (PV3) should also be notified according to Annex 2 of the IHR, if the event meets at least two of the following criteria⁵,

- 1) The event's public health impact is serious.
- 2) The event is unusual or unexpected.
- 3) The risk of international spread is significant.
- 4) The risk of international travel or trade restrictions is significant.

Determination that the criteria for WHO IHR Focal Point notification has been met will occur following consideration of the event against the criteria, and a risk assessment, by Health. The decision to notify the WHO IHR Focal Point rests with the CMO.

Contact details of the NFP are:

National Incident Centre

Health Security and Emergency Management Division

Telephone: (+61) 2 6289 3030 (24 hours)

Email: health.ops@health.gov.au

Other countries' national focal points and international disease control agencies will also be informed of confirmed cases by the Australian Government, where relevant.

Once the NFP notifies the WHO IHR Focal Point, the CDNA and AHPC must be informed.

Epidemiological Investigation of Poliovirus Infection

The epidemiological investigation aims to establish where the poliovirus infection was acquired and where it may have spread. This is particularly important and time sensitive for those without a history of travel or laboratory exposure, indicating the potential for a locally acquired infection. The short incubation period (usually 7-14 days but may range from 2-35 days), and ability for asymptomatic patients to shed poliovirus, may mean that many individuals have been exposed to poliovirus before a case of AFP is detected.

The epidemiological investigation team should review the patient's records and ensure that the following has been collected for the index case:

- stool samples, collected and sent to the NERL for laboratory testing as per [Appendix B](#) to determine whether the virus is WPV or cVDPV. Patient and clinical information must accompany the stool samples referred to the NERL,
- age of patient, date of onset of paralysis,
- residence or history of travel to a polio-endemic country^e, or a country with active transmission following a cVDPV or WPV importation, or one with a current or recent cVDPV detection^f, or a country that uses OPV,
- immunisation status, including dates and the vaccine used (OPV or IPV),
- contact with persons recently immunised with OPV or persons who have recently travelled to a polio-endemic country, or a country with active transmission following an importation or one with a current or recent cVDPV detection, or a country that uses OPV,

^e <https://polioeradication.org/where-we-work/polio-endemic-countries/>

^f <https://polioeradication.org/where-we-work/polio-outbreak-countries/>

- potential for further spread noting that health care workers and people who have contact with children or are involved in food preparation have a greater chance of spreading infection to a larger number of people,
- potential for exposure to laboratory strains of poliovirus,
- identification of contacts,
- immune status of patient and contacts (refer to [0](#) of this document for categories of contacts and relevant actions for each), and
- Indigenous status of the case.

In addition, the epidemiological investigation and collection of stool specimens may involve the local community, including health care facilities, childcare facilities, schools and other community groups.

The epidemiological assessment may be constrained when the Plan has been activated due to a wastewater detection of WPV or cVDPV, or due to a high- or very high-risk laboratory poliovirus exposure incident where infection is not yet confirmed.

Table 1 Operational Matrix for the investigation and response to a suspected poliovirus infection

Note that actions may take place concurrently. The national surveillance case definition refers to probable or confirmed cases. A “probable case” requires both clinical evidence and for the case to not be discarded as non-polio AFP after review by PEP. Suspected cases refer to cases with a high clinical suspicion of poliovirus infection. Some actions must take place when a case of poliovirus infection is first suspected, prior to being considered a probable or confirmed case.

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
PREPAREDNESS PHASE						
Identification of case of AFP or clinically suspected poliovirus infection	Paediatricians Neurologists Other clinicians	Clinical presentation of AFP.	Presentation at health care facility.	Knowledge of poliovirus amongst clinicians. Inclusion of poliovirus infection in the differential diagnosis of AFP.	-	46, 52
Reporting to NERL, local public health unit and, for paediatric AFP cases, the Australian Paediatric Surveillance Unit (APSU)/Paediatric Active Enhanced Disease Surveillance Unit (PAEDS)	Paediatricians Neurologists Other clinicians	Phone call to NERL and local public health units (return of APSU report card and AFP questionnaire; ascertainment of case by PAEDS).	As soon as AFP is considered in the differential diagnosis (where poliovirus infection is not excluded).	Notification of paediatric case via APSU/PAEDS. Immediate notification to NERL. Collection of adequate stool specimen for diagnostic testing at the NERL.	Immediately	47-51 Appendix B
Isolation of AFP case as per hospital protocols	Paediatricians Neurologists Other clinicians	Isolation of case as per hospital protocols. Refer to the Australian Guidelines for the Prevention and Control of Infection in Healthcare for the correct infection control procedures.	As soon as AFP is considered in the differential diagnosis (where poliovirus infection is not excluded).	Knowledge of poliovirus amongst clinicians.	Immediately	31
STANDBY PHASE						

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
Notification of a suspected case (a case with high clinical suspicion of poliovirus infection), to the relevant jurisdictional authorities and the NFP	Via a local public health unit OR NERL	Notification of a suspected case (a case with a high clinical suspicion of poliovirus infection) and the expected time to confirm the diagnosis. Initiation of case investigation protocol.	Should occur as soon as possible after clinician's referral. Ideally within 24 hours.	Agreed referral protocols.	Within 24 hours of clinician's referral	49 Appendix C
Epidemiological investigation and risk assessment for local spread	State or territory health authority in collaboration with NERL, Health, and the CDNA	Detailed case investigation including determining the likely source of possible infection. Contact tracing including review of immunisation status and environmental risks.	Immediately after notification of a suspected poliovirus infection.	As above AND Availability of credible exposure history.	Within 24 hours of notification of a suspected poliovirus infection	15, 30
Laboratory testing to identify poliovirus type to aid in confirmation of diagnosis	NERL	Poliovirus typing by virus culture, Reverse Transcription Polymerase Chain Reaction (RT-PCR) and genetic sequencing.	Either direct on stool specimen or after virus culture, which will require days.	Timely referral of adequate specimens for testing by the NERL.	Within 24 hours of the clinician suspecting poliovirus infection	47
Activation of jurisdictional responsibilities under this response plan	State or territory health authority	Begin actions described in this response plan, including all steps from here down.	As soon as poliovirus infection is confirmed by the NERL.	Timely reporting of poliovirus typing results by the NERL.	Within 24 hours of notification of a suspected poliovirus infection	-
Refer AFP case to PEP for review	NERL/APSU/ PAEDS OR Health through the CDNA	Arrange special teleconference of the PEP including the chair of the NCC to discuss case. Joint teleconference with the CDNA to follow if poliovirus infection is considered. The PEP Chair to attend the CDNA teleconference to provide update.	When adequate clinical and laboratory data can be provided.	Availability of stool specimens. Collection of 2 stool specimens within 14 days of onset of symptoms and at least 24 hours apart. Availability of clinical findings.	Within 48 hours of case reported by clinician or jurisdictional health authority	49-51
Notification of positive test results to the NFP	NERL in its role as the dPEF in Australia and being part of the	NERL reports test results to the PEP, the affected jurisdiction, and Health via the NAC and NFP. Note as part of their	As soon as a positive test result is confirmed.	Availability of samples.	Immediately upon result	48

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
	Global Polio Laboratory Network (GPLN)	role in the GPLN the NERL also reports positive test results to the GPLN. The GPLN informs the local, regional and global WHO polio offices.				
Official notification to the WHO under the IHRs	NFP	The NFP makes the IHR notification to the WHO IHR Focal Point. The AHPC and CDNA are notified about the IHR notification.	Within 24 hours of the case being classified by the PEP as a confirmed or probable case of poliovirus infection.	Laboratory notification. Timely review of the case by the PEP.	Within 24 hours of the PEP advice	14-15
Progress formal recommendation for Plan activation	Australian Government, and relevant state or territory health authority	Emergency videoconference including the CMO as the chair of the AHPC, the CHO or their chosen representative, of the affected jurisdiction, the CDNA, PEP, NERL, NPCC and NCC. If more than one jurisdiction is affected, an emergency AHPC videoconference will be called and include the chairs of the CDNA, PEP and NCC, representatives of NERL and the NPCC. If a First Nations community or individual is involved, NATSIHP representatives should be included.	When the case becomes a probable or confirmed case of WPV or cVDPV. OR In response to management of public concerns.	Timely access to clinical and laboratory data for the PEP review.	Within 12 hours of positive test result notification received by the NFP	11-14
ACTION PHASE						
Poliovirus Outbreak Response Plan officially activated	CMO	Initiate collection and analysis of enhanced surveillance and next steps.	When the case becomes a probable or confirmed case of WPV or cVDPV.	Availability of key decision makers.	Within 48 hours of confirmation from the NERL and PEP	11
Containment	State or territory health service	Isolate additional suspected cases, including close contacts of confirmed polio cases.	As soon as polio is confirmed.	Uptake of vaccine. Detailed investigation of potential contacts including	For isolation of suspected cases – immediately upon	30-42

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
		<p>Targeted immunisation campaign.</p> <p>Increased surveillance, including enhanced clinical and/or targeted environmental surveillance.</p> <p>Management of contacts and collection of stool specimens for testing at the NERL.</p> <p>Environmental and sanitation measures as appropriate.</p> <p>Decontaminate if necessary (e.g. aircraft bathroom).</p>		<p>collection of stool specimens from close contacts.</p> <p>Thorough risk assessment for environmental contamination.</p> <p>Consistent and comprehensive application of response plan across affected area/jurisdiction.</p> <p>Timely communication of plan and provision of resources to affected areas.</p> <p>Cooperation from patient, their family and other contacts.</p>	<p>suspicion of poliovirus infection.</p> <p>Re-assess need to isolate after laboratory results are provided.</p> <p>Within 24 hours of confirmation from the NERL and the PEP</p>	
Patient support and family services	State or territory and Australian Government. Carer organisations	Examination of the availability, efficiency, effectiveness, and acceptability of support services by family/carers/hospitals etc.	As soon as diagnosis is suspected or confirmed.	Individual access to support services. Availability of culturally appropriate services.	Within 48 hours of confirmation from the NERL and the PEP	-
Risk communication	CMO in collaboration with jurisdictional CHO, AHPC/CDNA and other relevant agencies depending on the facts of the case	<p>Detailed communication strategy developed in collaboration with the Health media unit.</p> <p>Notification to the WHO Focal Point under the IHR (as mentioned above).</p> <p>Reporting of laboratory results to WHO by NERL (as mentioned above).</p>	<p>Management of media interactions at any stage of the investigation.</p> <p>Notify the WHO Focal Point when diagnosis confirmed.</p>	<p>Timing and nature of media releases depends on the scenario encountered and whether there is an ongoing risk to the Australian community.</p> <p>Timing of international notification dependent on confidentiality being maintained by those involved in diagnosis and case investigation.</p>	Within 24 hours of the activation of the pPlan	42

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
STAND DOWN						
Closure of a response and deactivation of the Plan	CMO in collaboration with jurisdictional CHO, the AHPC/CDNA and other relevant agencies depending on the facts of the case	<p>Collection and analysis of enhanced surveillance providing evidence of the interruption of polio transmission.</p> <p>Videoconference including the CMO as the chair of AHPC, the CHO or their chosen representative, of the affected jurisdiction, the CDNA, PEP, NERL, NPCC and NCC.</p> <p>If more than one jurisdiction is affected, an AHPC videoconference will be called and include the chairs of the CDNA, PEP and NCC, representatives of NERL and the NPCC.</p>	Throughout the investigation.	Ongoing collection of enhanced surveillance. Adequate clinical and laboratory data provided. Ongoing collection and analysis of environmental samples.	Six months after the symptom onset of the last identified case in the outbreak	43
Debriefing and review of the polio response plan	Teams at local, jurisdictional and national levels including a representative from NERL, PEP, NAC and NCC	<p>Identify strengths and weaknesses of response plans, including coordination.</p> <p>Economic evaluation.</p> <p>Applied research arising out of the investigation as appropriate.</p>	As required.	Agency/partner participation. Review findings incorporated where relevant into polio response plan and communicated to relevant stakeholders including the Western Pacific Regional Certification Commission (RCC).	4 weeks following the closure of the outbreak by the CMO	44

Table 2 Operational Matrix for the investigation and response to a high- or very high-risk laboratory poliovirus exposure in Australia

Note that actions may take place concurrently. Some actions must take place before an exposed person is considered a probable or confirmed case, but they have had a high- or very high-risk exposure to poliovirus which is considered likely to result in poliovirus infection. If a poliovirus case is confirmed, the guidance in 0 should be followed.

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
PREPAREDNESS PHASE						
Laboratory personnel comply with biosafety protocols and are alert for poliovirus spills and exposures	Laboratory staff at NERL or other laboratory handling poliovirus	Laboratory staff minimise risk of spills or exposure by complying with biosafety protocols. Laboratory staff are alert to events which result in high- or very high-risk personnel exposure to poliovirus, where infection is considered probable but is not yet confirmed.	Ongoing	Awareness and identification of high- or very high-risk laboratory exposure by laboratory staff.	-	-
STANDBY PHASE						
Management and isolation of laboratory personnel exposed to poliovirus	NERL or other laboratory at which incident occurred	Management and isolation of affected personnel as per NERL protocols.	As soon as laboratory incident occurs.	Immediate isolation of affected laboratory personnel.	Immediately	9-10, 35-36
Immediate response to laboratory containment breach	NERL or other laboratory at which incident occurred	Decontaminating exposed personnel, laboratory equipment and immediate area. AND Collection of baseline bloods, throat and stool samples of affected laboratory personnel.	As soon as laboratory incident is identified.	Appropriate decontamination of personnel, laboratory equipment and immediate area. AND Collection of baseline clinical samples.	Immediately	36
Notification of a high- or very high-risk laboratory exposure	Via a local public health unit OR	Notification of a high- or very high-risk laboratory exposure to poliovirus.	Notification of a high- or very high-risk laboratory exposure should occur	Agreed referral protocols.	Within 24 hours of	14-15

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
to the relevant jurisdictional authorities and the NFP	NERL or other affected laboratory management directly	Initiation of investigation protocol. Note as part of their role in the GPLN the NERL also reports any subsequent positive test results to the GPLN. The GPLN informs the local, regional and global WHO polio offices.	within 24 hours of the exposure occurring.		laboratory exposure	
Risk assessment for potential for local spread	State or territory health authority in collaboration with the NERL, Health, and the CDNA	Contact tracing including review of immunisation status and environmental risks.	Immediately after laboratory exposure is notified.	As above AND Collection of relevant information to undertake risk assessment.	Within 24 hours of notification of high- or very high-risk laboratory exposure incident	30
Activation of jurisdictional responsibilities under this response plan	State or territory health authority	Begin actions described in this response plan, including all relevant steps from here down.	As soon as high- or very high-risk poliovirus exposure is notified.	Timely reporting of exposure, results of spill testing (if necessary) or poliovirus type, by the NERL.	Within 24 hours of notification of high- or very high-risk exposure	-
Refer exposure incident to the PEP for review	NERL OR Health through the CDNA	Arrange special teleconference of the PEP including the chair of the NCC to discuss exposure. Joint teleconference with the CDNA to follow if exposure is confirmed to be high- or very high-risk and poliovirus infection is considered likely. The PEP Chair to attend the CDNA teleconference to provide update.	When adequate clinical, laboratory, and other data can be provided.	Availability of information about exposure incident.	Within 48 hours of exposure reported by laboratory or jurisdictional health authority	-

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
Notification of poliovirus type to the NFP	NERL in its role as Australia's dPEF	NERL reports exposure type to the PEP and NFP, if this information was not available at the time of exposure.	As soon as poliovirus type is confirmed.	Availability of samples.	Immediately upon result	-
Official notification to the WHO under the IHRs	NFP	The NFP makes the IHR notification to the WHO IHR Focal Point. The AHPC and CDNA are notified about the IHR notification.	Within 24 hours of the PEP classifying the exposure as high- or very high-risk.	Laboratory notification.	Within 24 hours of the PEP advice	14-15
Progress formal recommendation for Plan activation	Australian Government, and relevant state or territory health authority	Emergency videoconference including the CMO as the chair of the AHPC, the CHO or their chosen representative, of the affected jurisdiction, the CDNA, PEP, NERL, NPCC and NCC.	When the exposure is confirmed as high- or very high-risk. OR In response to management of public concerns.	Timely access to clinical and laboratory data for the PEP review.	Within 12 hours of positive test result notification received by the NFP	11-15
ACTION PHASE						
Poliovirus Outbreak Response Plan officially activated	CMO	Initiate collection and analysis of enhanced surveillance and next steps.	When the exposure is confirmed as high- or very high-risk.	Availability of key decision makers.	Within 48 hours of notification from the NERL and PEP	11
Containment	State or territory health service	Isolate exposed/potentially exposed persons as necessary. Confirm immunisation status for all workers in affected laboratory, offer IPV booster to those who have not received a booster in the last 10 years. Active surveillance of exposed and potentially exposed workers and/or targeted environmental surveillance. Management of exposed/potentially exposed persons and collection of	As soon as exposure determined to be high- or very high-risk by the PEP.	Pre-existing vaccination status of exposed/potentially exposed workers, and uptake of booster vaccines. Detailed investigation of potentially exposed persons including collection of stool specimens from exposed/potentially exposed persons. Thorough risk assessment for environmental contamination. Consistent and comprehensive application of response plan across affected area/jurisdiction.	For isolation of suspected cases – immediately upon suspicion of poliovirus infection. Re-assess need to isolate after laboratory results are provided.	30-42

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
		stool specimens for testing at the NERL. Environmental and sanitation measures as appropriate. Decontaminate if necessary (e.g. bathrooms).		Timely communication of plan and provision of resources to affected areas. Cooperation from affected laboratory personnel.	Within 24 hours of confirmation from the NERL and the PEP	
Risk communication	CMO in collaboration with jurisdictional CHO, AHPC/CDNA and other relevant agencies depending on the facts of the case	Detailed communication strategy developed in collaboration with the Health media unit. Notification to the WHO Focal Point under the IHR (as mentioned above). Reporting of laboratory results to the WHO by NERL (as mentioned above).	Management of media interactions at any stage of the investigation. Notify the WHO Focal Point when exposure/spill confirmed.	Timing and nature of media releases depends on the scenario encountered and whether there is a risk to the Australian community. Timing of international notification dependent on confidentiality being maintained by those involved.	Within 24 hours of the activation of the Plan	42
STAND DOWN						
Closure of a response and deactivation of the plan	CMO in collaboration with jurisdictional CHO, AHPC/CDNA and other relevant agencies depending on the facts of the case	Collection and analysis of active surveillance providing evidence that no exposed/potentially exposed worker is infected with, or excreting, poliovirus. Videoconference including the CMO as the chair of the AHPC, the CHO, or their chosen representative, of the affected jurisdiction, the CDNA, PEP, NERL, NPCC and NCC.	Throughout the investigation.	Co-operation of lab personnel with active surveillance. Adequate clinical and laboratory data provided. Ongoing collection and analysis of environmental samples.	After two incubation periods without a case since the exposure/spill	43
Debriefing and review of the polio response plan	Teams at local, jurisdictional and national levels including a representative from the NERL, PEP, NAC and NCC	Identify strengths and weaknesses of response plans, including coordination. Economic evaluation. Applied research arising out the investigation as appropriate.	As required.	Agency/partner participation. Review findings incorporated where relevant into polio response plan and communicated to relevant stakeholders including the Western Pacific Regional Certification Commission (RCC).	4 weeks following the closure of the incident by the CMO	44

Table 3 Operational Matrix for the investigation and response to a wastewater detection of WPV or cVDPV in Australia

Note that actions may take place concurrently.

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
PREPAREDNESS PHASE						
Operational jurisdictional wastewater testing program	State or territory wastewater testing facility OR Local public health unit undertaking testing, with routine confirmatory testing undertaken by the NERL	Wastewater samples tested for poliovirus at state or territory wastewater facilities, or local public health laboratories, as part of routine surveillance programs.	Routine wastewater surveillance at frequency determined by the jurisdiction.	Regular testing with methods appropriate to detect poliovirus in wastewater. Established pathways for reporting, escalating, and confirmatory testing of poliovirus detections.	Frequency of sampling and testing determined by jurisdiction	-
STANDBY PHASE						
Detection of poliovirus in wastewater samples	State or territory wastewater testing facility OR Local public health unit undertaking testing	Detection of poliovirus in wastewater samples tested at state or territory wastewater facilities, or local public health laboratories.	As soon as poliovirus is detected in wastewater samples tested at a state or territory laboratory.	Detection of poliovirus in wastewater samples.	-	41-42
Reporting to NERL, local public health unit, and Health	State or territory wastewater testing facility	Advising NERL, local public health units, and Health (polio@health.gov.au) of detection of poliovirus in wastewater samples.	As soon as poliovirus is detected in wastewater samples tested at a state or territory laboratory.	Notification to NERL. Notification to local public health unit. Notification to Health.	Immediately	42

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
Confirmatory testing confirms WPV or cVDPV	NERL	Jurisdictions to transport wastewater samples to NERL for confirmatory testing and poliovirus characterisation	As soon as poliovirus is detected in wastewater samples tested at a state or territory laboratory.	Transport of wastewater samples to be received by NERLg within 48 hours of collection.	Samples to be received by NERL within 48 hours of collection	42
Notification of a detection of WPV or cVDPV in wastewater samples to the relevant jurisdictional authorities and NFP	Via NERL OR Local public health unit	NERL reports confirmed WPV or cVDPV detection to the PEP, the affected jurisdiction, and Health via the NAC and NFP.	As soon as possible after WPV or cVDPV is detected in wastewater.	Timely notification to relevant jurisdictional authorities, the PEP, and the NFP.	Within 24 hours of testing confirming WPV or VDPV in samples	-
Activation of jurisdictional responsibilities under this response plan	State or territory health authority	Begin actions described in this response plan, including all steps from here down.	As soon as WPV or cVDPV is confirmed in wastewater samples by the NERL.	Timely reporting of poliovirus typing results by the NERL.	Within 24 hours of notification of wastewater detection	-
Official notification to the WHO under the IHRs	NFP	NFP makes the IHR notification to the WHO IHR Focal Point. The AHPC and CDNA are notified about the IHR notification.	Within 24 hours of the detection of WPV or cVDPV in wastewater samples.	Laboratory notification. Notification of wastewater detection to the NFP and WHO.	Within in 24 hours of NERL's confirmation of WPV or cVDPV	14-15
Progress formal recommendation for Plan activation	Australian Government, and relevant state or territory health authority	Emergency videoconference including the CMO as the chair of the AHPC, the CHO, or their chosen representative, of the affected jurisdiction, the CDNA, PEP, NERL, NAC and NCC. If more than one jurisdiction is affected, an emergency AHPC videoconference will be called and include the chairs of the CDNA, PEP and NCC,	When the WPV or cVDPV is confirmed by the NERL. OR In response to management of public concerns.	Timely access to laboratory data for the PEP review.	Within 12 hours of positive test result notification received by the NFP	11-15

⁹ [Referral pathway for poliovirus confirmatory testing](#)

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
		representatives of NERL and the NPCC. If detection involves First Nations individuals or communities, NATSIHP representatives should be included.				
ACTION PHASE						
Poliovirus Infection Outbreak Response Plan for Australia officially activated	CMO	Initiate collection and analysis of active surveillance and next steps.	When the NERL confirms WPV or cVDPV in wastewater samples.	Availability of key decision makers.	Within 48 hours of confirmation from the NERL	11
Containment	State or territory health service	Targeted immunisation campaign (refer to Table 5). Increased surveillance. Education and communication with clinicians Environmental measures as appropriate. Typing enterovirus isolations in cases of aseptic meningitis.	As soon as poliovirus is confirmed.	Uptake of vaccine. Communication with clinicians. Consistent and comprehensive application of response plan across affected area/jurisdiction. Timely communication of plan and provision of resources to affected areas.	Within 24 hours of confirmation from the NERL and the PEP	30-42
Risk communication	CMO in collaboration with jurisdictional CHO, AHPC/CDNA and other relevant agencies depending on the facts of the detection	Detailed communication strategy developed in collaboration with the Health media unit. Notification to the WHO Focal Point under the IHR. Reporting of laboratory results to the WHO by NERL.	Management of media interactions at any stage of the investigation. Notify the WHO Focal Point when NERL confirms WPV or cVDPV.	Timing and nature of media releases depends on the scenario encountered and whether there is an ongoing risk to the Australian community.	Within 24 hours of the activation of the Plan	42
STAND DOWN						
Closure of a response and deactivation of the Plan	CMO in collaboration with jurisdictional CHO, AHPC/CDNA and	Collection and analysis of active and enhanced surveillance providing evidence of the interruption of poliovirus transmission.	Throughout the investigation.	Ongoing enhanced AFP surveillance and active case finding. Ongoing collection and analysis of wastewater samples.	Six months after the last detection of WPV or	43

Action	By whom	What & how	When to act	Critical success factors	Timeframe to complete	Page Ref.
	other relevant agencies depending on the facts of the detection.	<p>Videoconference including the CMO as the chair of the AHPC, the CHO, or their chosen representative, of the affected jurisdiction, the CDNA PEP, NERL, NAC and NCC.</p> <p>If more than one jurisdiction is affected, an AHPC videoconference will be called and include the chairs of the CDNA, PEP and NCC, representatives of NERL and the NPCC.</p>			cVDPV in wastewater	
Debriefing and review of the polio response plan	Teams at local, jurisdictional and national levels including a representative from NERL, PEP and NCC	<p>Identify strengths and weaknesses of response plans, including coordination.</p> <p>Economic evaluation.</p> <p>Applied research arising out of the investigation as appropriate.</p>	As required.	<p>Agency/partner participation.</p> <p>Review findings incorporated where relevant into polio response plan and communicated to relevant stakeholders including the Western Pacific Regional Certification Commission (RCC).</p>	4 weeks following the closure of the outbreak by the CMO	44

Activation of Laboratory Surge Plan

Based on the experience of the 2007 poliovirus importation, the number of specimens to be tested from contacts of the index case can quickly increase. Nucleic acid-based tests (e.g., RT-PCR) are more amenable to high throughput testing than virus culture. After the 2007 poliovirus importation, the NERL implemented pan-enterovirus RT-PCR testing of all specimens from AFP cases in parallel to the WHO recommended culture-based procedure.^h

In the event of another poliovirus importation, the NERL would be in the position to provide public health authorities with rapid RT-PCR test results. In consultation with key stakeholders, the public health response will be based on the NERL's RT-PCR testing of patient specimens with the timing of confirmatory poliovirus culture dependent on the number of cases involved.

Risk Assessment

As a certified polio-free region Australia has a responsibility to:

- Maintain the WHO certification-standard surveillance for AFP,
- ensure access to a WHO-accredited poliovirus reference laboratory, and
- ensure containment of polioviruses.

A risk assessment should be conducted by the relevant state or territory health authority and ideally completed within 24 hours of the notification of a suspected case (a case with a high clinical suspicion of poliovirus infection), the identification of a laboratory spill incident, or environmental detection of WPV or cVDPV to identify the following:

- the immunity profile of the population,
- any areas of suboptimal immunisation coverage,
- any subpopulations at high risk, and
- environmental risks that would heighten concern for transmission.

Using the WHO grading system (see the WHO's [Emergency Response Framework](#)), all outbreaks of poliovirus in Australia would be considered Grade 1⁶. As Australia has high poliovirus immunisation coverage, robust health care systems and structures, and low to no security threats or challenges to accessing populations, there is minimal risk of continuation and/or international spread of poliovirus.

Containment strategies

The containment of a potential outbreak of poliovirus will include the following:

- isolation of infected or exposed individuals,
- tracing and management of potential contacts,
- cleaning, disinfection and infection control (including environmental factors),
- immunisation,

^h [WHO_IVB_04.10.pdf](#)

- education, and
- increased surveillance, including wastewater surveillance.

Isolation of infected individuals

Individuals identified as being infected with poliovirus are to be isolated to minimise the potential for spread. Contact precautions are to be implemented and, if the patient is hospitalised, the patient should have a single *ensuite* room. A stool specimen is to be collected weekly for testing at the NERL. Isolation should continue until two stool samples taken seven days apart are shown to be negative for poliovirus. Sewage waste should be collected, quarantined, and incinerated to avoid environmental release until this time. Poliovirus infection is usually cleared within six weeks by an immunocompetent person but may become chronic in individuals with a primary immunodeficiency who were immunised with OPV and may result in an iVDPV.

Patients who continue to shed WPV or cVDPV should be kept in isolation for a minimum of 2 weeks after diagnosis to ensure full immunological response in the vaccinated close contacts. If after this time, the patient is well, but has not stopped shedding, then a comprehensive risk assessment must be completed before discharge from hospital and before considering home based isolation. This risk assessment should be undertaken by an infectious disease physician and public health authorities in consultation with the PEP.

Families and carers of a patient with a poliovirus infection should be reminded to observe good sanitation and hand washing. All healthcare workers, carers and family need to be adequately immunised against poliovirus (see 'Tracing and management of potential contacts' below). Where a patient with a poliovirus infection requires hospitalisation, health care workers are to refer to the *Australian Guidelines for the Prevention and Control of Infection in Healthcare*⁷ for the correct infection control procedures.

Additional screening of immunocompromised patients following release from isolation

Stool samples are to be taken monthly from infected immunocompromised individuals. The time period for testing is to be decided on a case-by-case basis in consultation with the treating physician, the state or territory health department and the PEP. Persons identified with a chronic poliovirus infection should be counselled regarding good hygiene practices and consideration given to whether a sanitary assessment of their living conditions or occupation adjustments (for example, healthcare worker or food handler) is necessary. Family members, close contacts and household contacts of a person shedding iVDPV should be counselled on the need to maintain adequate poliovirus vaccination and good hygiene practices.

Tracing and management of potential contacts

To contain the spread of poliovirus, which produces a large number of asymptomatic infections, contact tracing undertaken by the relevant jurisdiction(s) is essential to

identify potentially infected individuals. Categories of people who may have had contact with the index case and therefore may have been exposed to poliovirus include:

- Household contacts (people who lived with the index case or visitors who stayed overnight). These people are at the greatest risk of becoming infectious as they may have had contact with the index case prior to the appearance of symptoms.
- Childcare contacts, including carers and other children in the childcare facility are also considered at high risk of contracting poliovirus as they may have had contact with the index case before the onset of symptoms. Childcare workers may also have handled infected stools through assisting with toileting and changing soiled nappies.
- Toilet contacts (people who shared a toilet with the index case during the infectious period, before the toilet was cleaned, e.g., those sharing a toilet at the workplace, on an aeroplane, or in a shopping centre).
- Healthcare workers (people who cared for the index case during the infectious period).
- Laboratory workers involved with testing the patient's specimens. This includes wastewater facility workers involved in handling and testing wastewater in which poliovirus has been detected. Laboratory and wastewater facility workers need to ensure appropriate procedures are followed during testing of samples potentially infectious for poliovirus.
- Community contacts, including consumers if the index case prepared food for others to eat.

Previous vaccination or exposure to poliovirus does not necessarily prevent infection and most people who are infected with poliovirus do not develop any symptoms. As such, the precautions in [0](#) are advised to prevent further transmission from potentially infected contacts.

Table 4 Management of potentially infected contacts

Type of contacts	Risk categorisation level	Management action
Household contacts (people who lived with the index case or visitors who stayed overnight). This includes group homes and dormitories, and other shared living arrangements. Sexual contacts.	Higher risk	<ul style="list-style-type: none"> Quarantine household contacts at home, consistent with jurisdictional and national legislation and outbreak incident response team advice, Quarantine is recommended for a period of 7 days, and stool samples should be taken > 3 days after the contact's first exposure to the infectious index case. Contacts can be released from quarantine when two stool samples taken 24 to 48 hours apart are shown to be negative for poliovirus, In the event of continued negative stool samples, screening should continue for 60 days, with two samples collected weekly, with Mondays and Thursdays suggested as sampling days, Offer education on symptoms of poliovirus infection and advise contact to inform local Public Health Unit (PHU) if any symptoms occur, Offer education on hygiene, and Recommend vaccination with IPV, this should include offering a booster to those already vaccinated.
Childcare contacts. Where the index case is an infant, childcare workers who have assisted with toileting or changed soiled nappies are considered higher risk contacts. A risk assessment should be undertaken to determine which children within the childcare centre should also be considered higher risk contacts, and which may be considered lower risk contacts.	Higher risk	<ul style="list-style-type: none"> Quarantine contacts at home, consistent with jurisdictional and national legislation and outbreak incident response team advice, Quarantine is recommended for a period of 7 days, and stool samples should be taken > 3 days after the contact's first exposure to the infectious index case. Contacts can be released from quarantine when two stool samples taken 24 to 48 hours apart are shown to be negative for poliovirus, In the event of continued negative stool samples, screening should continue for 60 days, with two samples collected weekly, with Mondays and Thursdays suggested as sampling days, Offer education on symptoms of poliovirus infection and advise contact to inform local PHU if any symptoms occur, Offer education on hygiene, and Recommend vaccination with IPV, this should include offering a booster to those already vaccinated.

Type of contacts	Risk categorisation level	Management action
Toilet contacts (people who shared a toilet with the index case during the infectious period, before the toilet was cleaned), for example at a school, workplace, shopping centre, or airport.	Lower risk	<ul style="list-style-type: none"> • Offer education on symptoms of poliovirus infection and advise contacts to inform local PHU if any symptoms occur, • Offer education on hygiene, and • Recommend vaccination with IPV. Assume Australian-born contacts have been vaccinated and offer a booster. Ask overseas-born contacts to provide evidence of vaccinations and offer a full course of IPV (three doses with each a minimum of one month apart) if not fully vaccinated, or if vaccination cannot be demonstrated.
Healthcare workers who cared for the index case during the infectious period with appropriate PPE.	Lower risk	<ul style="list-style-type: none"> • Offer education on symptoms of poliovirus infection and advise contacts to inform local PHU if any symptoms occur, • Offer a booster vaccine with IPV for anyone who has not had a booster within the previous 10 years as outlined in the Australian Immunisation Handbook, • Investigate use of appropriate PPE when caring for index case. If a breach of PPE has occurred, healthcare workers should be treated as higher risk household contacts. This includes droplet precautions as poliovirus is transmissible through respiratory secretions for 7 days after onset, • For healthcare workers who have no recorded immunisation history, or are not completely vaccinated, take two stool samples, 24 to 48 hours apart, with the first being taken > 3 days after the contact's first exposure to the index patient and offer a full course of vaccination with IPV (three doses with each a minimum of one month apart), and • A decision about whether a healthcare worker should return to work should be made by local experts in infection prevention and control, work health safety, and infectious diseases; considering the likely risk of infection and role.
Laboratory workers involved with testing the patient's specimens, and wastewater facility workers involved in handling and testing wastewater in which poliovirus has been detected.	Lower risk	<ul style="list-style-type: none"> • Offer education on symptoms of poliovirus infection and advise contacts to inform local PHU if any symptoms occur, • Offer a booster vaccine with IPV for anyone who has not had a booster within the previous 10 years as outlined in the Australian Immunisation Handbook, and • For laboratory workers who have no recorded immunisation history, or are not completely vaccinated, take two stool samples, 24 to 48 hours apart, with the first being taken > 3 days after the contact's first exposure to the specimen or

Type of contacts	Risk categorisation level	Management action
Community contacts (including consumers if the index case is involved in food preparation for public consumption)	Lower risk	<p data-bbox="1263 256 2074 316">infectious wastewater sample, and offer a full course of vaccination with IPV (three doses with each a minimum of one month apart).</p> <ul data-bbox="1216 373 2114 624" style="list-style-type: none"> <li data-bbox="1216 373 2114 432">• Offer education on symptoms of poliovirus infection and advise the contacts to inform local PHU of any of these occur, <li data-bbox="1216 437 1608 464">• Offer education on hygiene, and <li data-bbox="1216 469 2114 624">• Recommend vaccination with IPV. Assume Australian-born contacts have been vaccinated and offer a booster. Ask overseas-born contacts to provide evidence of vaccinations and offer a full course of IPV (three doses with each a minimum of one month apart) if not fully vaccinated, or if vaccination cannot be demonstrated.

Summary information pertaining to the household transmission of polioviruses and non-polio enteroviruses can be found in *Fields Virology 6th Edition*⁸ which states that:

“Household secondary attack rates in susceptible members may be greatest for the agents of acute haemorrhagic conjunctivitis (enterovirus type 70 and coxsackievirus A24 variant) and for poliovirus, and of lesser magnitude for the other coxsackieviruses and echoviruses. In some studies, secondary attack rates may be 90% or greater, although they are typically lower. New York Virus Watch⁹ data indicate that enterovirus infections were more frequent among children 2 to 9 years of age and the greater spread of polioviruses and coxsackieviruses may derive from longer periods of virus excretion.”

Tracing of toilet contacts (such as those sharing a section of an aeroplane, workplace or childcare centre with the infected patient) is important to reduce the risk of onward transmission of infection. For containment, the tracing of contacts needs to be more rapid than the spread of the virus. One of the most important reasons for tracing of contacts is to educate them on hygiene and recommend IPV vaccination.

Contact tracing may not prevent a contact becoming infected with poliovirus, particularly if they are not adequately immunised, but stool sampling of household and incompletely vaccinated healthcare worker contacts (as outlined in [0](#) above) and increased surveillance for clinical symptoms such as AFP will identify spread of the virus and allow prevention of further transmission.

Management, including vaccination of contacts such as healthcare workers, food handlers and childcare workers, who have the potential to spread infection to a large number of people, are to be prioritised.¹⁰ The Department of Home Affairs will be involved in identification of contacts in an immigration, diplomatic or refugee setting, from countries that have the potential to spread the disease. The Department of Defence may become involved in identification of contacts should a defence member or dependant be exposed to poliovirus in the course of their duty.

Quarantine and screening of laboratory personnel exposed to poliovirus in a high- or very high-risk laboratory spill incident

In the event of human exposure to poliovirus resulting from a high- or very high-risk laboratory incident, affected personnel should be isolated immediately until the risk of poliovirus infection has been ruled out. For very high-risk poliovirus exposures, hospital isolation with a separate toilet should be considered. Sewage waste should be collected and incinerated to avoid environmental release.

Alternatively, exposed laboratory personnel may undertake home isolation with separate sanitation facilities from other household members. Exposed laboratory personnel must be strictly quarantined from household contacts and should be

counselled in appropriate cleaning and disinfection methods (see Cleaning and disinfection). Sewage waste should be captured and incinerated through use of a portable toilet.

The Global Polio Laboratory Network (GPLN) *Diagnostic procedures following an accidental exposure to poliovirus* Guidance Paperⁱ provides a sampling schedule following a probable accidental exposure to poliovirus, as would result from a laboratory spill incident. For individuals who have been exposed to poliovirus through a high- or very high-risk laboratory exposure incident, affected personnel should be quarantined for 7 days. Throat swabs and stool samples should be collected and tested daily for a minimum of 7 days. If a positive stool sample is returned within the first 7 days, the individual should be managed in accordance with the protocol for managing a poliovirus case. A baseline blood sample should be collected on the day of exposure, and again at 15-21 days post-exposure.

Cleaning and disinfection

Proper cleaning and disinfection of areas contacted by an infected individual, or a spilled laboratory specimen, is required to prevent onward transmission. Following the imported case in Australia in 2007, cleaning and disinfection of the aeroplane and airport toilets, as well as the patient's home, was performed. No evidence of transmission of poliovirus infection on aeroplanes has been reported.

Survival of poliovirus is favoured by lower temperatures and high moisture content. Once shed, poliovirus can survive outside the human body for weeks at room temperature.¹¹ Laboratory studies have shown that poliovirus survival in the environment is enhanced at high relative humidity.¹² Typical relative humidity for an aircraft is below 10% suggesting the virus may not survive for long periods in this environment.¹³ Interpolating data from various studies, Dowdle and Birmingham estimated poliovirus infectivity to decrease by '90% every 20 days in winter and 1.5 days in summer, in sewage every 26 days at 23°C, in fresh water every 5.5 days at ambient temperatures, and in seawater every 2.5 days under the same conditions'.¹⁴ Poliovirus survived on cotton fabric with minimal loss for 24-48 hours at ambient temperature and 35% relative humidity, with rapid loss after 48 hours. Poliovirus survived longer on woollen fabrics, with recovery after 20 weeks at the same humidity.¹⁵

Active disinfection procedures should involve the use of cleaning practices to remove soiling that may harbour and protect viral particles. Common disinfectants such as 70% ethanol, isopropanol, lysol and quaternary ammonium compounds are not effective against poliovirus.⁸ The virus is also resistant to lipid solvents (such as EcoTru® and Dettol®). It is stable in many detergents at room temperature, although temperatures above 60°C for prolonged periods will reduce the infective capability of poliovirus.

ⁱhttps://polioeradication.org/wp-content/uploads/2020/08/GP8_Diagnostic-procedures-following-accidental-exposure-to-poliovirus.pdf

Effective disinfectants are those which contain free chlorine, such as sodium hypochlorite or bleach, glutaraldehyde solutions, formaldehyde solutions and iodophores.⁸ Contact time is also important in inactivating the virus. Laundry should be soaked in chlorine bleach (diluted according to the manufacturer's instructions) for at least 15 minutes.

The WHO *Guide to Hygiene and Sanitation in Aviation*¹⁶ provides indicators and guidance notes for post-event disinfection procedures to assist airport and aircraft operators in the prevention of the spread of disease.

Faecal matter management

A risk assessment for the shedding of WPV and cVDPV from potentially infected individuals is to be undertaken, and isolation of infected individuals considered as per the guidelines under *Management of infected individuals and potentially infected contacts* (0). While epidemiological investigations are being completed, the ramifications of potentially shedding WPV or cVDPV into the local sewerage network should be reviewed. A reticulated sewerage system in a major urban setting may be deemed safe from a public health perspective, but an older network in a regional or remote area may present additional risks.

The condition of septic tanks may also be considered a potential public health threat if a WPV or cVDPV infection was subsequently identified in a contact that had used such a system.

Where the potential risk of poliovirus transmission by environmental sources is determined to be high, preventative strategies such as the installation of a sewage trap should be investigated. As a further assessment of poliovirus being shed within the sewerage network, grab samples can be taken from a septic tank or at strategic points of a reticulated system and tested by the NERL.

Alternatively, consideration should be given to use of a closed-system toilet, such as a camping toilet, for individuals with poliovirus infection, or who have been exposed to poliovirus in a laboratory exposure incident, particularly if household quarantine does not allow for an ensuite. Waste should be incinerated to prevent onward poliovirus transmission risk. This is particularly important if household quarantine does not allow the affected individual to use separate sanitation facilities.

Full PPE should be worn by anyone handling waste and should include closed shoes, heavy-duty rubber gloves, impermeable gowns, impermeable aprons, facial protection (masks and goggles or face shields) and ideally a head cover.⁴ Where the suspected case is handling their own waste, this may be done by following appropriate hygiene precautions to prevent contamination and virus transmission.

Immunisation

Globally, there have been recent environmental detections and human cases of vaccine-derived polioviruses, particularly of cVDPV type 2. Australia is at low risk of a sustained poliovirus outbreak due to high levels of vaccine coverage and good sanitation. Coverage for dose 3 and 4 of IPV-containing vaccines is between 90-96%

in children (older than 6 months) for most regions across Australia, and historically has been high (>90%) over many decades suggesting high population-based levels of immunity.

Risks of human-to-human transmission of poliovirus (wild type or oral vaccine derived) should be further reduced by the following pre-emptive vaccination strategies:

- Identification of areas and populations at greatest risk of a poliovirus incursion (e.g., dense population centres with large migrant populations and/or areas with low vaccine coverage) using detailed evaluation of vaccine coverage data.
- Provision of comprehensive catch up and/or on time administration of IPV-containing vaccines in low coverage areas and populations, using locally tailored strategies.
- Improved communication strategies and/or system-based approaches to promote primary and booster doses of IPV prior to travel to regions with reported circulation of poliovirus, as recommended in the Australian Immunisation Handbook. Many travellers would also benefit from a tetanus booster prior to travel, particularly if >5-10 years have elapsed since a prior dose of tetanus-containing vaccine. As such, use of the combination vaccine dTpa-IPV (e.g., Boostrix-IPV) in people aged >10 years can be recommended. An alternative vaccine would be the IPV vaccine (IPOL), where a tetanus-containing dose is not required.

In the event of a clinical case of poliomyelitis, human poliovirus sample detection, or an environmental (e.g., wastewater) poliovirus detection, the following additional vaccination measures should be considered for use as important adjuncts to other public health containment efforts:

- Rapidly characterise the extent of the virus incursion and any resultant transmission in Australia to inform the optimum vaccination program response.
- An outbreak or significant environmental detection confined to a well-defined subpopulation or geographic area should be initially managed with an IPV-containing vaccine campaign, as endorsed by the WHO and ATAGI.¹⁷
 - Catch-up IPV campaigns in affected areas should target close contacts of known cases and under-vaccinated individuals.
 - IPV booster campaigns for people whose last dose of polio vaccine was 10 or more years ago should be considered for close contacts and people living in affected areas. IPV (e.g., IPOL) and dTpa-IPV (e.g., Boostrix-IPV) are the recommended vaccines for people >10 years. Childhood IPV-containing vaccines, such as DTPa-HepB-IPV-Hib (e.g., Infanrix-hexa) and DTP-IPV (e.g., Infanrix-IPV) are recommended for children aged 10 years or younger. Booster campaigns may be constrained by the available stock of IPV-containing vaccines suitable for people aged >10 years. Childhood IPV-containing vaccines can be used by people >10 years but are associated with higher rates of injection site reactions, as the DTPa components of the childhood vaccines contain higher antigen content compared to the reduced antigen content in adult dTpa vaccines.

- An outbreak or environmental detection spread across a wide geographic area could potentially be managed with a suitable oral polio vaccine-based campaign. However, the choice of OPV (e.g., monovalent novel oral polio vaccine type 2 [nOPV2], bivalent oral polio vaccine [bOPV] [containing Sabin 1 and 3 viruses], or other OPV formulations) would need to be made based on the type of circulating poliovirus detected and on vaccine availability.¹⁷
- Oral polio vaccines are unsuitable for stockpiling, as their use is very unlikely in the Australian context. In addition, a special process exists for the procurement of the nOPV2. In the event of an outbreak with cVDPV2, an application would need to be made to the WHO via the Western Pacific Regional Office.
- There is no published evidence on the role of polio immunisation as post-exposure prophylaxis against paralytic disease. Theoretically, as IPV induces IgG immunity in some people after a single dose, IPV provided early during the incubation period may protect the individual.

The Australian Government, through travel advice on the Department of Foreign Affairs and Trade (DFAT) Smartraveller website (smartraveller.gov.au), encourages all Australians to consult their doctor or a travel clinic and ensure they get immunised before they travel. Applicants for Australian visas from countries that have the potential to spread the disease internationally may be required to present a valid certificate of vaccination with their visa application. The information provided on both the [Home Affairs](#) and [DFAT](#) websites is routinely reviewed and updated to align with WHO and Health guidelines and advice.

Table 5 Matrix of potential vaccination responses following detection of poliovirus in Australia

Refer to the polio chapter of the [Australian Immunisation Handbook](#) for vaccine details.

Poliovirus type detected	Response options				Recommended vaccines					
	Vaccinate close contacts	Booster doses for contacts	Catch-up vaccination for affected regions	Booster doses for risk population in affected regions	DTPa-HepB-IPV-Hib (e.g. Infanrix hexa)	DTP-IPV (e.g. Infanrix IPV)	dTpa-IPV (e.g. Boostrix-IPV)^	IPV (e.g. IPOL)	Bivalent OPV* (bOPV)	Novel monovalent OPV2* (nOPV2)
Recommended age					People aged 10 years or younger#		People aged >10 years#		People aged >6 weeks	
Clinical case or human sample detection										
cVDPV2									C	
WPV1	R	C	R	C	R	R	R	R	C	
cVDPV1 or 3									C	
Environmental detection only										
cVDPV2									C	
WPV1			R	C	R	R	R	R	C	
cVDPV1 or 3									C	

R - recommended, **C** – consider

cVDPV – circulating vaccine-derived poliovirus, WPV – wild-type poliovirus, bOPV – bivalent oral polio vaccine, nOPV2 – novel oral polio vaccine (monovalent), IPV – inactivated polio vaccine, DTPa – diphtheria, tetanus, acellular pertussis (child formulation), dTpa – diphtheria, tetanus, acellular pertussis (adult formulation)

^Many travellers to regions with sporadic polio cases will also benefit from a tetanus booster if their last tetanus-containing vaccine was >5-10 years ago. The combination vaccine dTpa-IPV (e.g., Boostrix-IPV) will provide protection against both polio and tetanus.

*The inactivated polio vaccine is the only polio vaccine currently available in Australia. An initial IPV-only campaign is endorsed by the WHO where vaccine coverage is high, sanitation is good, and incursion is limited to a well-defined area or population. Oral polio vaccines (OPVs) can be used to control outbreaks across a large geographic area (an unlikely scenario in Australia).¹ The WHO regulates the release of nOPV2 worldwide.¹⁷

#At the time of publication, large catch-up and/or booster campaigns may be limited by the current stock of IPV-containing vaccines suitable for people >10 years. Childhood IPV-containing vaccines can be used by people >10 years but are associated with higher rates of injection site reactions, as the DTPa components of the childhood vaccines contain higher antigen content compared to the reduced antigen content in adult dTpa vaccines.

Education and increased surveillance

As part of the [containment strategy](#), education will be essential as poliovirus infection is a very rare occurrence in Australia. Medical practitioners should be educated about common presentations of poliovirus infection and the importance of considering poliovirus as a differential diagnosis in clinically compatible presentations. Healthcare workers need to be educated on appropriate contact precautions, testing and immunisation. Cleaning staff need to be educated on appropriate cleaning agents and contact times, and appropriate PPE. Potential contacts need to be educated on testing, hygiene and immunisation and provided with information of the symptoms of poliomyelitis infection.

Where poliovirus is determined to be circulating in a discreet community, education and liaison with community leaders should be utilised to communicate risk, encourage community members to seek medical attention where necessary, and encourage immunisation catch-ups for under-immunised populations. Where poliovirus detections involve First Nations communities, Aboriginal Community Controlled Health Services should be engaged to disseminate information to communities and encourage polio vaccination uptake.

So that any further transmission is detected, clinicians and testing laboratories need to ensure that all cases of AFP have appropriate stool sampling and are referred to the NERL for testing. Australia's status as 'free from poliovirus infection' can only be demonstrated by maintaining the WHO performance indicators for AFP surveillance, including appropriate stool sampling.

Wastewater surveillance

Individuals shed poliovirus for several weeks after infection and, as noted in the section on [Cleaning and disinfection](#), it is estimated that poliovirus can survive in sewage for weeks under suitable conditions (i.e. poliovirus infectivity decreases by approximately 90% every 26 days at 23°C).¹³ Using a number of assumptions, the WHO estimates the theoretical maximum sample sensitivity of wastewater surveillance at detection of one individual infected with poliovirus among 15,000 uninfected individuals. In practice this means that repeated detection of the virus in a sampling site almost guarantees that the virus is circulating in the population.¹⁸ Since Australia was certified polio-free in 2000 and ceased use of OPV in 2005, any poliovirus detected by routine environmental monitoring is of concern and requires further investigation.

Wastewater surveillance has played an important role in the certification of previously endemic countries, such as Egypt (the last isolation of indigenous WPV was from an environmental sample) and India as polio-free. Many established polio-free countries have also used this system to supplement their existing surveillance systems. Non-polio enteroviruses are routinely reported as indicator organisms for the validation of the collection, transport and processing of the samples.

The NERL performs testing for poliovirus on wastewater collected from Melbourne's Eastern and Western treatment plants, and wastewater from three sites in Perth which

is transported to the NERL for testing. More recently, some individual jurisdictions have commenced wastewater surveillance for poliovirus in their jurisdictions. Any detection of poliovirus in wastewater, including Sabin strains, must be sent for confirmatory testing at Australia's dPEF, the NERL, in accordance with the process outlined in the PHLN [Referral pathway for poliovirus confirmatory testing](#).

Enterovirus surveillance

The clinical manifestation of poliovirus infection ranges from febrile illness to meningitis and paralysis. As part of extended surveillance for poliovirus, the NERL established the Enterovirus Reference Laboratory Network of Australia (ERLNA) in 2009, consisting of public diagnostic virology laboratories. The member laboratories either type enteroviruses detected in clinical specimens or refer them to the NERL for identification. This serves the dual purpose of confirming or excluding the presence of poliovirus as well as surveying the epidemiology of non-polio enterovirus infection in Australia. WPV or cVDPV detected by this form of surveillance would require follow-up by the state or territory health authority according to [0](#). As part of an investigation of a confirmed WPV or cVDPV importation, the ERLNA may provide recent enterovirus typing results, particularly from meningitis cases, and follow-up on any un-typed results from the jurisdiction involved.

Even though Australia ceased use of OPV from November 2005, Sabin poliovirus strains can be detected in clinical specimens from persons who either travelled to or from a country routinely using OPV or were in contact with someone who had done so, as well as in wastewater samples.

Communication Strategy

One of the most important elements of a public health response will be the communication strategy to ensure that, whilst protecting the patients' privacy and confidentiality, relevant and accurate information is provided to the media and the community in a timely manner. The release of inaccurate or premature information may have serious repercussions for the affected individual, their family, carers, and their community. The media may also be important in education of the public on the importance of sanitation, hand washing and immunisation in the containment phase.

It is important that the media are presented with up to date and factual information in order to minimise speculation and public concern. It is important for key stakeholders to have agreed on a consistent approach, national notification and communication strategy. The CDNA will formulate the key messages and Health will coordinate the media response. Health's website will have current information and media releases.

For media enquiries, please contact:

Health's Media Unit

Phone: (02) 6289 7400

Email: news@health.gov.au

Stand down of the Plan and Closure of the outbreak response

Enhanced poliovirus surveillance will continue for six months after the symptom onset of the last identified case, the last poliovirus detection in individuals that have tested positive for poliovirus in the absence of clinical symptoms, or the last wastewater detection of WPV or cVDPV. An outbreak will officially be closed by the CMO, in consultation with the affected jurisdiction, if no further cases are identified during this period and evidence shows the transmission of poliovirus infection has been interrupted in Australia. Upon the closure of an outbreak this plan will be deactivated.

Evaluation of an outbreak response

Following the official closure of an outbreak response, an assessment of the response will be undertaken by Health with assistance from the relevant state or territory health authority, a representative from the NERL, CDNA, PEP, NAC and NCC. This will occur approximately four weeks after the plan has been deactivated.

The assessment may include but not be limited to:

- identifying strengths and weaknesses of the response, including an evaluation of the coordination and communication strategies,
- providing an economic evaluation, and
- identifying, where appropriate, future areas for applied research.

The assessment will involve consultations with key stakeholders involved in the response, and a review of the response plan through the NCC, PEP, NAC and CDNA. Results from these activities will be used to strengthen and improve this outbreak response plan and provide 'lessons learned' from the response.

Surveillance of AFP and Poliovirus in Australia

Australian Poliovirus Surveillance Program

The Australian Government is responsible for the Australian Poliovirus Surveillance Program and funds several activities associated with the surveillance and monitoring of poliovirus in Australia. The Australian Poliovirus Surveillance Program aims to detect imported poliovirus infections, mitigate the risk of localised transmission should importation occur, and provide ongoing evidence that Australia is maintaining its polio-free status in accordance with WHO recommended standards. The objective of this program is to conduct clinical surveillance for AFP in children less than 15 years of age, and in anyone in which poliovirus infection is suspected (*a case with a high clinical suspicion of poliovirus infection*), in accordance with the WHO standards for a polio-free country. Clinical surveillance is supplemented by virological surveillance including enterovirus typing and sentinel environmental surveillance activities. The clinical and virological surveillance activities monitor Australia's polio-free status and provide ongoing evidence that the country is free of circulating WPV and cVDPV in support of the global eradication effort.

The maintenance of a surveillance system that is sensitive enough to detect a poliovirus infection in Australia is essential, particularly as clinicians will rarely have experience in diagnosis of poliovirus infections. In the context of good sanitation and high immunisation rates, AFP is unlikely to be caused by poliovirus infection, however, active surveillance is vital to detect possible cases.

To ensure the detection of poliovirus infection, further clinical, epidemiological and laboratory investigation is required in the following situations:

1) All AFP cases in children less than 15 years of age

The WHO has set a performance indicator for AFP surveillance in children. In a polio-free country, such as Australia, at least one case of non-polio AFP should be detected annually per 100,000 population aged less than 15 years. If insufficient cases of AFP are reported, the surveillance system is deemed not sensitive enough to detect a potential poliovirus infection. The differential diagnosis of an AFP case upon initial presentation may include poliovirus infection, Guillain-Barré syndrome and transverse myelitis. If reporting of AFP is delayed to exclude other causes, or if a case of AFP is not reported and no follow up laboratory investigation occurs, it is possible that a case of AFP due to poliovirus infection could be missed. Failure to report AFP, a lack of stool specimens or insufficient information in clinical questionnaires can result in Australia not reaching the expected annual number of non-polio AFP cases, or not having an adequate proportion of cases with stools referred for virological investigation.

It is important to report all cases of AFP in children, even those that are later found to exclude poliovirus infection based on clinical and laboratory investigation. AFP

surveillance was initiated in March 1995 as part of Australia's commitment to the Global Polio Eradication Initiative (GPEI). Active surveillance for AFP is conducted through APSU¹⁹ via participating paediatricians and the PAEDS network through selected tertiary paediatric hospitals across Australia in collaboration with the WHO accredited NERL located at the Victorian Infectious Diseases Reference Laboratory (VIDRL).²⁰ The active surveillance system coordinated by VIDRL also regularly provides data to the WHO regional office to assess the surveillance system against the performance indicators for AFP reporting.

2) All suspected cases of paralytic poliovirus infection regardless of age

It is imperative that any case with a clinical suspicion of poliovirus infection in a person of any age be fully investigated.

3) All suspected cases of non-paralytic poliovirus infection regardless of age

It is estimated that 90% of poliovirus infections are asymptomatic. This includes close contacts of confirmed poliovirus cases, immunocompromised individuals from whom a poliovirus was isolated and laboratory derived infections.

Clinical reporting of AFP

AFP surveillance in Australia follows the WHO criteria targeting children less than 15 years of age. The scheme requires clinicians to report and submit stool samples from any case of AFP in one or more limbs or acute onset of bulbar paralysis, even where poliovirus infection is considered a highly unlikely clinical diagnosis. The case definition for poliovirus infection, which includes a definition for AFP as part of the clinical evidence, is provided on Health's website (<http://www.health.gov.au/casedefinitions>). The procedure and Laboratory Request Form for referring stool specimens to the NERL are available at [Appendix B](#).

The procedures to be followed by clinicians in all cases of AFP in children, and in suspected poliovirus infection in a person of any age, are outlined below. A flow chart is also available at [Appendix C](#).

If poliovirus infection is suspected (when *there is a high clinical suspicion of poliovirus infection*) or if poliovirus is isolated, the case should be immediately notified to the state or territory health authority and steps taken to confirm the diagnosis. Key contact details for state and territory health authorities are included in [Appendix D](#).

The adequate collection of stool specimens is the responsibility of clinicians and is essential for confirmation of poliovirus infection. Collection of adequate patient history by clinicians allows for a more accurate assessment of the risks to contacts. It is essential to collect as much information as possible about the patient's history and risks of exposure to WPV or OPV, including cVDPV. Including:

- age of patient, date of onset of paralysis,
- residence or travel to a polio-endemic country or a country that has recently reported poliovirus outbreaks or cVDPV or uses OPV,
- immunisation status, including dates and the vaccine used (OPV or IPV),

- contact with persons recently immunised with OPV or persons who have recently travelled to a polio-endemic country, or a country that has recently reported an outbreak of polio cases or cVDPV, or a country that uses OPV,
- potential for exposure to laboratory strains of poliovirus,
- immune status of patient and contacts, and
- Indigenous status.

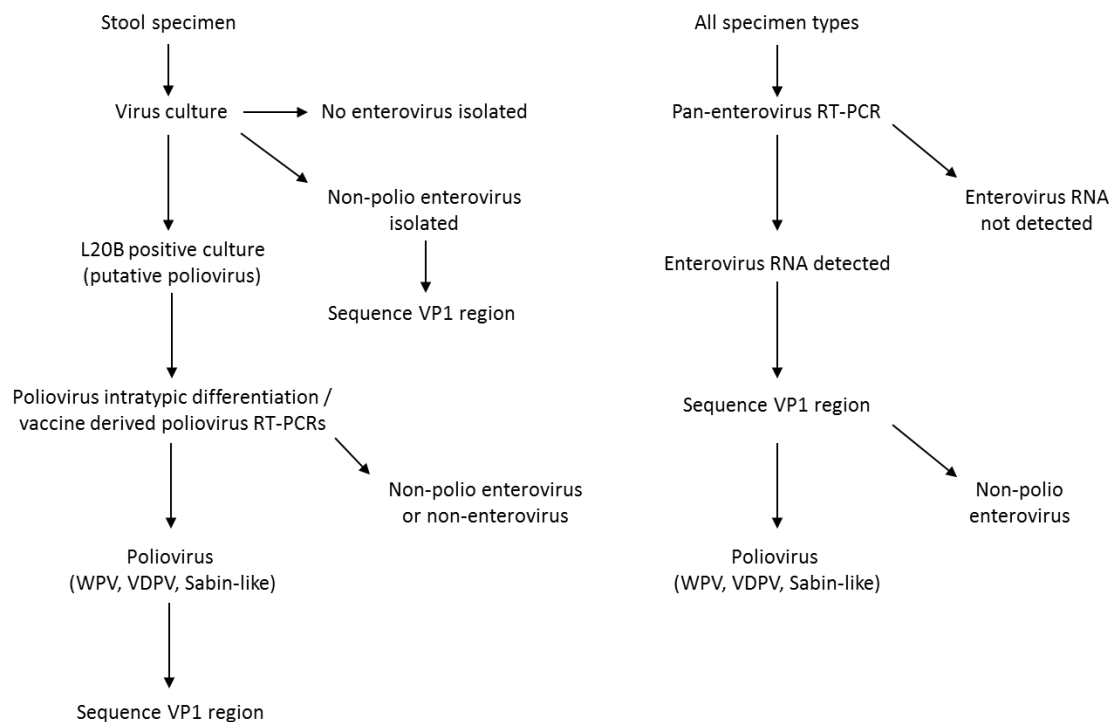
Such information is critical when attempting to trace potential sources of infection and potential onwards transmission.

Laboratory confirmation of poliovirus infection in Australia

Confirmation or exclusion of poliovirus infection is not possible without laboratory testing of stool specimens. It is important that stool specimens are collected from every case of AFP in children and cases with a clinical suspicion of poliovirus infection in persons of any age. Stool specimens from close contacts of confirmed poliovirus infection cases should also be tested for poliovirus. The isolation of a poliovirus from a specimen of an asymptomatic person would be regarded as a poliovirus infection that did not cause paralysis. Definitive diagnosis will establish the need for follow up actions to contain and prevent spread of a WPV or cVDPV. As poliovirus can spread very quickly, rapid detection of cases is critical. Under the WHO guidelines, stool specimens must be tested in a WHO accredited laboratory, which in Australia is the NERL at VIDRL.

The WHO recommends that all stool specimens from AFP cases be tested by virus culture using the RD-A and L20B continuous mammalian cell lines. The NERL also routinely screens stool specimens from AFP cases with a pan-enterovirus RT-PCR and identifies the enterovirus type by sequencing a fragment of the viral protein 1 (VP1) genomic region (refer to [0](#)). While virus culture has the advantage of increasing the virus titre present in an extract of the original clinical specimen, the procedure can be laborious requiring at least one passage to a fresh monolayer of cells. The reporting of a negative result can take up to 14 days, which is not timely in the context of an outbreak investigation. The index case from the 2007 polio importation was held in isolation for 34 days and the household contacts under home quarantine for 16 days before the assigned criteria were met to issue negative virus culture results of stool specimens.

Figure 1 Flow diagram for enterovirus identification and poliovirus characterisation



Serological testing is usually unhelpful and is not routinely recommended.

The cerebrospinal fluid in acute poliovirus infection usually contains an increased number of leukocytes, from 10 to 200 cells/mm³ (primarily lymphocytes), and a mildly elevated protein from 40 to 50 mg/100 ml. This finding is non-specific and may result from a variety of infectious and non-infectious conditions and is therefore not useful for differentiating poliovirus infection from other causes of aseptic meningitis. Poliovirus is rarely isolated from cerebrospinal fluid.

National notification of poliovirus infection

All Australian states and territories have public health legislation that requires medical practitioners and/or pathology laboratories to notify the occurrence of certain communicable diseases to their respective health authorities. The National Health Security Act 2007²¹ (NHS Act) provides a legislative basis for, and authorises the exchange of, health information, including personal information, between Australian states and territories and the Australian Government. The NHS Act also provides the establishment of a National Notifiable Diseases List which specifies the diseases in which personal information can be provided. De-identified data on these diseases are reported to the National Notifiable Diseases Surveillance System (NNDSS). The National Health Security Agreement (www.health.gov.au/nhs) supports the NHS Act and establishes the operational arrangements to formalise and enhance existing surveillance and reporting systems.

Nationally, cases are collated by the NNDSS under the auspices of the CDNA.

The NNDSS surveillance case definition for poliovirus infection available at www.health.gov.au/casedefinitions (WPV, cVDPV, and VAPP), includes a definition for AFP as part of the clinical evidence. Except in the case of non-paralytic infection, a

confirmed case of poliovirus infection requires both clinical evidence AND laboratory definitive evidence (from testing conducted by the NERL). A poliovirus infection that did not cause paralysis, such as in a close contact of a confirmed polio case, is verified by laboratory testing at the NERL.

The procedures for notification of a suspected case of poliovirus infection (a case with a high clinical suspicion of poliovirus infection) are outlined in [0](#) and [Appendix C](#). In the event of a confirmed case being identified, the CDNA, which involves communicable disease experts from each jurisdiction, would coordinate a national response with support from the CMO and the NIC, where required.

Clinical confirmation of poliovirus infection in Australia

Clinical confirmation of poliovirus infections is undertaken by the PEP. The NERL sends a questionnaire to all clinicians reporting AFP, irrespective of the age of the patient, to collect adequate clinical data to enable the PEP to classify cases. It is essential that clinicians fill out these questionnaires and return them to VIDRL in a timely manner, even if poliovirus infection is not suspected.

The PEP comprises paediatricians, epidemiologists, neurologists and virologists who have expertise in AFP surveillance and reporting. All clinical and laboratory details of each case of AFP reported are reviewed by the PEP every two months, or as required. The decisions made by the PEP are reported to the WHO after each meeting and are included in the WHO global AFP surveillance data. The PEP also reports to the CDNA and, as such, a state or territory epidemiologist may be called upon to help procure additional data to aid classification. AFP cases involving children less than 15 years of age are classified by the PEP according to the following categories ([0](#)) using a decision-making tree outlined at [0](#).

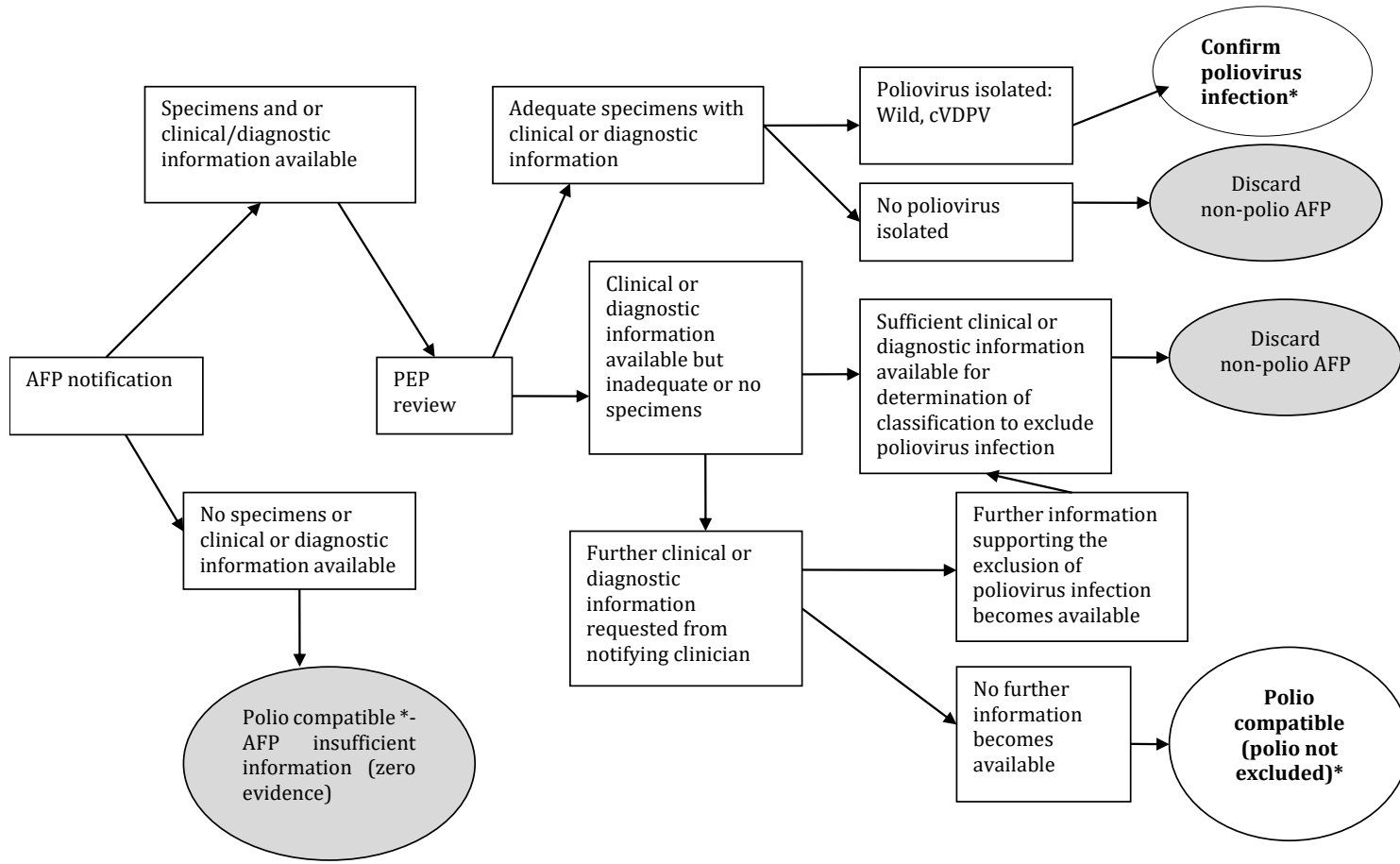
Table 6 PEP AFP case classifications revised February 2019, current April 2023

A. Non-polio AFP
B. AFP more information required
C. Polio compatible (polio not excluded)
D. Polio compatible (zero evidence); AFP notification, insufficient information for further classification
E. Poliomyelitis <ul style="list-style-type: none"> i. WPV ii. VAPP iii. VDPV
F. Non-AFP

As these definitions are based on results of stool specimens it is important that stool specimens be collected from all patients, even when an alternative definitive diagnosis has been confirmed. A decision-making tree used by the PEP when reviewing AFP cases involving children less than 15 years of age is shown in [Figure 2](#). AFP cases are either classified as confirmed poliovirus infection, discarded as non-polio AFP, or if there is not enough information to exclude poliovirus infection, as polio compatible. These data are reported to the WHO and every effort is made to obtain enough

information to enable a final classification of each AFP notification. In addition, the NERL also reports all poliovirus test results to the WHO.

Figure 2 Investigation of AFP notifications in children less than 15 years of age or potential polio cases of any age by the Polio Expert Panel



*Note: Cases of polio compatible AFP notification; insufficient information (zero evidence) involve notification of an AFP case without provision of further patient information by the notifying clinician. The PEP classifies such cases after a final review reveals no evidence of clustering with other AFP notifications. These cases would not activate this response plan. For global surveillance purposes, the WHO count the polio compatible (zero evidence) cases reported by Australia with the non-polio AFP data based on Australia’s high level of polio vaccine coverage and the national polio surveillance mechanisms in place.

Poliovirus and the Global Eradication Program

Poliovirus

Poliomyelitis is a highly infectious disease caused by poliovirus; a small, non-enveloped enterovirus classified in the picornavirus family. Poliovirus infection occurs principally person-to-person via the faecal-oral route. The virus is ingested and replicates initially in the throat and then the gut, mostly without causing symptoms, and then is excreted in faeces. Transmission can occur as long as poliovirus is excreted, in both symptomatic and asymptomatic cases, typically from the nasopharynx for up to a week after infection and from the faeces for 3 to 6 weeks. Cases are most infectious in the days before and after symptom onset.²² Vaccination with OPV can result in poliovirus shedding. Transmission can be enhanced by poor sanitation. In less than 1% of cases, the virus can invade the nervous system, causing AFP, usually involving the legs. In rare cases, patients can die when their breathing muscles become paralysed. Poliovirus infection can occur at any age with individuals who have not been fully immunised at risk of infection and children the most susceptible. As most cases are asymptomatic, poliovirus can spread widely before a case of paralysis is seen.

There are three serotypes of poliovirus (types 1, 2 and 3). Trivalent OPV and IPV are designed to protect against all three serotypes. Trivalent IPV is the vaccine used in Australia. Monovalent OPV vaccines also exist but are not registered for use in Australia. In 2017, the WHO defined a vaccine derived poliovirus (VDPV) as the VP1 region varying from the prototype Sabin poliovirus nucleotide sequence by $\geq 1\%$ for types 1 and 3 and by $\geq 0.66\%$ for type 2. The WHO may update the definition based on further understanding of the evolutionary development of VDPVs. The variation from prototype Sabin poliovirus sequence arises from long-term virus replication that may occur in an individual with an immunodeficiency (iVDPV), or by person-to-person transmission in a location with low vaccine coverage and continued use of OPV (circulating or cVDPV). A number of outbreaks of paralytic polio associated with cVDPV have been reported internationally since 2000.

Global Polio Eradication Initiative

At the 1988 World Health Assembly (WHA), the Ministers of Health of all Member States of the WHO resolved to launch a global goal to eradicate polio.

The globally endorsed *GPEI Polio Eradication Strategy 2022-2026*²³ was developed by the WHO and its partners to formulate what is required to deliver the eradication of all polioviruses. Retention of WPV2 and OPV/Sabin2 materials is no longer permitted except in designated poliovirus essential facilities, and containment of poliovirus types 1 and 3 has commenced in accordance with the WHA resolution *WHA71.16*

Poliomyelitis: containment of polioviruses.

The GPEI is one of the largest public health efforts to date. Further information on the GPEI is available on its [website](#).

Public Health Emergency of International Concern

On the 5 May 2014, the WHO Director General declared the international spread of wild poliovirus a “Public Health Emergency of International Concern” (PHEIC) and issued Temporary Recommendations under the *International Health Regulations IHR (2005)*.²⁴ These recommendations aim to prevent further international spread of poliomyelitis which, if it occurs, could result in the failure to eradicate the disease. The Temporary Recommendations are reviewed approximately every 3 months and are available on the WHO [website](#).

Australian and Regional Situation

The Western Pacific Region (which includes Australia) was certified as free of circulating indigenous poliovirus by the WHO in October 2000.¹ However, since immunocompromised individuals and areas with sub-optimal immunisation levels exist, further limited transmission would be possible within these populations once a poliovirus has been introduced.

The first paralytic poliovirus infection due to a WPV in Australia in more than 30 years occurred in 2007. A case of WPV type 1 was detected in a person from Pakistan who travelled to Australia.²⁵ Appropriate containment and surveillance ensured that there was no local transmission within Australia and the WHO reported that as ‘the case had onset of illness in Pakistan; it was considered a Pakistani case, irrespective of residency status of the individual.’ For this reason, Australia maintained its polio free status and continues to be free of endemic polio.

Australia maintains high polio immunisation rates and generally has good sanitation. The risk of transmission from an imported case is higher in areas with low vaccine coverage, inadequate sanitation, or a higher-than-average prevalence of immunocompromised individuals. Low coverage may be a result of vaccine refusal, which has been documented in some particular groups.²⁶ Some Aboriginal or Torres Strait Islander communities may also be at increased risk due to crowded living conditions,²⁷ although this risk is mitigated by high immunisation coverage and decreased likelihood of exposure to an imported poliovirus.

Australia’s National Immunisation Program (NIP) Schedule provides publicly funded polio immunisation at 2 months (6 weeks), 4 months and 6 months of age with a booster at 4 years.²⁸ In November 2005, Australia switched from OPV to IPV. The use of OPV can lead to VAPP, a rare condition in vaccine recipients and their contacts who have identical clinical presentation to WPV infection. IPV cannot cause VAPP. Unimmunised or under-immunised individuals travelling in countries that still use OPV are at risk of VAPP.²⁹ Monovalent OPVs are available in some countries but are not registered for use in Australia. As a result of Australia switching from OPV to IPV, OPV poliovirus strains including cVDPVs are not expected to be present in Australia, except in rare cases of long-term virus shedding in immunocompromised individuals.

Laboratory Containment

Australia is committed to the global eradication of poliomyelitis. To fulfil our WHA obligations as outlined in resolution WHA 71.16 2018,³⁰ Australia is required to prevent the risk of reintroduction of poliovirus into the population from facilities that still hold poliovirus once eradication of the virus occurs.

The 4th edition of the global action plan, *the WHO Global Action Plan for Poliovirus Containment* (GAPIV) provides details of the global strategy and milestones related to laboratory containment of all polioviruses. Retention of poliovirus type 2 is no longer permitted except in dPEFs, and containment of poliovirus materials of serotypes 1 and 3 has commenced. In December 2015, Health nominated the NERL as Australia's dPEF.

Faecal and respiratory samples collected from confirmed poliovirus cases, as well as concentrated wastewater with confirmed poliovirus wastewater detections, must be handled in accordance with the requirements of GAPIV and the GPEI. These samples should be notified to Health at polio@health.gov.au and a plan developed to destroy or move samples to the dPEF.

All applications for importation of poliovirus or poliovirus infectious materials through the [Department of Agriculture, Fisheries and Forestry Biological Imports Program](#), are assessed by Health giving consideration to the GPEI, which includes that any subsequent importation of a WPV or poliovirus infectious materials must be notified to the Human Biosecurity Officer (humanbiosecurity@health.gov.au) at Health.

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Appendices

[Appendix A: Key Stakeholders Involved in a Suspected or Confirmed Poliovirus Detection](#)

[Appendix B: Referral of stool specimens to the National Enterovirus Reference Laboratory](#)

[Appendix C: Procedure for clinicians to notify a case of AFP or suspected poliomyelitis \(all ages\)](#)

[Appendix D: Key Contacts](#)

[Appendix E: List of Acronyms](#)

Appendix A Key Stakeholders involved in a suspected or confirmed poliovirus detection

The key stakeholders involved in an investigation of a suspected or confirmed poliovirus detection are listed below and some key contact details are included in [Appendix D](#).

- Index case, their family or carers and their primary healthcare or childcare provider
- Contacts of the index case
- Local public health unit and jurisdictional Communicable Diseases Branch
- Diagnostic networks of neurologists, neuropathologists, radiologists, paediatricians
- Hospitals and care facilities in the public and private sectors
- Primary diagnostic laboratories
- Jurisdictional wastewater testing laboratories
- General practitioners
- National Enterovirus Reference Laboratory (NERL) at the Victorian Infectious Disease Reference Laboratory (VIDRL)
- The Australian Paediatric Surveillance Unit (APSU - paediatric cases only)
- The Paediatric Active Enhanced Disease Surveillance Unit (PAEDS)
- The Communicable Diseases Network Australia (CDNA)
- The Public Health Laboratory Network (PHLN)
- The Polio Expert Panel (PEP)
- The Chief Health Officer (CHO)/ Director of Public Health in the affected jurisdiction, and later all CHOs/Directors of Public Health
- The Head of the interim Australian Centre for Disease Control (CDC) and Chief Medical Officer (CMO) for the Australian Government and the broader public health sector
- Jurisdictional health communications teams
- The Australian Health Protection Committee (AHPC)
- WHO IHR Focal Point
- National Committee for the Certification of Polio Eradication (NCC)
- The National Authority for Containment (NAC)
- The Department of Home Affairs
- The Department of Defence
- The WHO Western Pacific Regional Office, Manila
- Counselling and patient support services
- Lawyers, civil organisations regarding confidentiality and liability issues
- The Australian and international media
- The broader Australian and international community

Appendix B Referral of stool specimens to the National Enterovirus Reference Laboratory

- 1) Collect two stool specimens at least 24 hours apart and within 14 days of onset of paralysis, in sterile containers. Each specimen should be approximately five grams. Two specimens are requested due to intermittent virus shedding.
- 2) Store the specimens at 4oC until ready to send. If the shipment cannot be sent for more than 72 hours, freeze the specimens.
- 3) Complete the AFP specimen laboratory request form and include with the shipment.
- 4) Send the specimens to the NERL via the local hospital pathology referral department. Request that the shipment be packaged according to the International Air Transport Association (IATA) Packing Instruction (PI) 650 and classified as UN 3373 biological substance category B.
 - a. The NERL will pay for the shipping costs.
 - b. If the local hospital pathology referral department does not routinely send shipments to VIDRL, contact the laboratory for further information.
 - c. If a member of staff is not qualified for the shipment of biological specimens, contact the NERL for assistance.
- 5) The shipment can be sent by overnight courier, with sufficient ice bricks to keep the specimens chilled while in transit. Dry ice is not needed.

Address the shipment to:

National Enterovirus Reference Laboratory

Victorian Infectious Diseases Reference Laboratory (VIDRL)

The Doherty Institute

792 Elizabeth Street

Melbourne 3000 Victoria

Telephone: (03) 9342 9607 (direct to lab), (03) 9342 9600 (24-hour contact)

Facsimile: (03) 9342 9665

Email: enterovirus@vidrl.org.au

- 6) Notify the NERL of the impending shipment. Contact the laboratory if you have any questions or difficulties with arranging the shipment.

Acute Flaccid Paralysis Specimen Referral

To accompany stool specimens to the National Enterovirus Reference Laboratory (NERL), Victorian Infectious Diseases Reference Laboratory (VIDRL).

To facilitate the collation of data, the following details are requested.

Contact the NERL if you have any questions.

Telephone: (03) 9342 9607

Email: enterovirus@vidrl.org.au

Laboratory request form:

Patient's Name:	M	F	
Address:			
City:			
Postcode:			
State:			
Date of birth of patient:	Day	Month	Year
If date of birth is unknown, give age in years / months:	Years	Months	
Date of onset of paralysis			
Date first stool specimen collected:			
Date second stool specimen collected:			
Date stool specimen sent:			
Date of most recent polio vaccination:			
Preliminary clinical diagnosis:			
Clinical diagnosis in hospital:			
Name of person to whom laboratory results should be sent:			
Complete Address:			
Telephone number:	Fax number:		

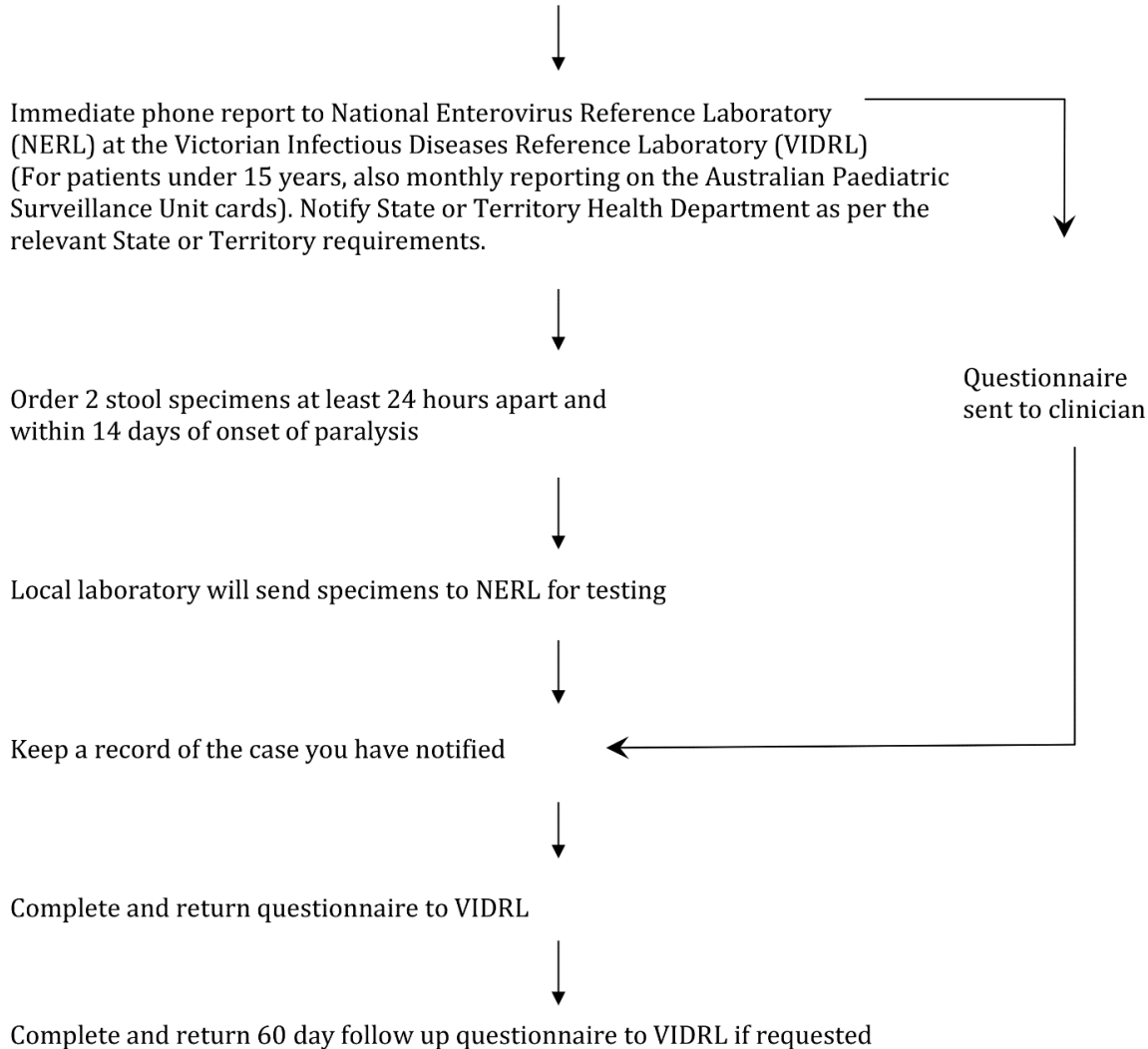
(For use by the National Enterovirus Reference Laboratory)

Date received:	Day	Month	Year
Name of person receiving specimen at NERL:			
Australian AFP case number	AUS		
Was specimen in good condition?*			

* Criteria for "good" condition = adequate mass, no leakage, no desiccation, and temperature indicator or presence of ice indicating reverse cold chain was maintained.

Appendix C Procedure for clinicians to notify a case of AFP or suspected poliomyelitis (all ages)

Identify a case of AFP or suspected poliomyelitis (a case with a high clinical suspicion of poliovirus infection)



VIDRL will notify the State or Territory Health Department if a poliovirus is isolated and clinicians will be contacted as part of the activation of this response plan to assist in the epidemiological investigation of the case.

(1) REPORTING INSTRUCTIONS FOR AFP CASES IN CHILDREN²⁰

Telephone reporting: Report all cases, *immediately by telephone* to the National Enterovirus Reference Laboratory (NERL) at the Victorian Infectious Diseases Reference Laboratory (VIDRL) on **(03) 9342 9607**.²⁰ Notify the State or Territory Health Department as per the relevant state or territory requirements.

APSU reporting: For children under 15 years of age, in addition to the NERL also report cases on the *monthly APSU report card*.¹⁹

Collection of stool specimens from cases of AFP for viral culture: due to intermittent shedding, collect 2 stool specimens at least 24 hours apart and within 14 days of onset of paralysis in a sterile container and send them to your local laboratory who will forward the specimens to the NERL (the WHO accredited National Polio Reference Laboratory) in Melbourne as per [Appendix B](#). Note:

- on the request form, the patient must be identified as having AFP,
- the local laboratory should be informed that the specimens must be forwarded to the NERL for exclusion of poliovirus,
- all costs for transport and analysis will be borne by the NERL. Information regarding specimen transport can be obtained from the NERL on (03) 9342 9607 or at the website www.vidrl.org.au, and
- the NERL will send results to your local laboratory and the Polio Expert Panel (PEP).

Follow-up of clinical information: A clinical questionnaire requesting further details may be sent by the NERL to clinicians reporting a case of AFP or suspected poliomyelitis. A further follow-up questionnaire is sent to clinicians 60 days after the onset of paralysis to determine the outcome of the patient if required.

(2) REPORTING INSTRUCTIONS FOR SUSPECTED CASES OF POLIOMYELITIS IN A PERSON OF ANY AGE

Telephone reporting: Report all cases, irrespective of age, *immediately by telephone* to the State or Territory Health Department ([Appendix D](#)). In addition, telephone the NERL at VIDRL on **(03) 9342 9607**²⁰ to discuss collection of specimens.

Collection of stool specimens from cases of suspected poliomyelitis for viral culture: due to intermittent shedding, collect 2 stool specimens at least 24 hours apart and within 14 days of onset of paralysis in a sterile container and send them to your local laboratory who will forward the specimens to the NERL as per [Appendix B](#). Note:

- on the request form, the patient must be identified as having suspected poliomyelitis,
- the local laboratory should be informed that the specimens must be forwarded to the NERL for exclusion of poliovirus,
- all costs for transport and analysis will be borne by the NERL. Information regarding specimen transport can be obtained from the NERL on (03) 9342 9607 or at the website www.vidrl.org.au, and
- the NERL will send results to your local laboratory and the PEP.

Follow-up of clinical information: A clinical questionnaire requesting further details will be sent by the NERL to clinicians reporting a case of suspected poliomyelitis. A further follow-up questionnaire may be sent to clinicians 60 days after the onset of paralysis to determine the outcome of the patient.

Appendix D Key contacts

Key contacts

The National Enterovirus Reference Laboratory (www.vidrl.org.au)

The NERL should be informed of AFP cases and suspected polio cases (a case with a high clinical suspicion of poliovirus infection) as early as possible:

Victorian Infectious Diseases Reference Laboratory (VIDRL)

The Doherty Institute

792 Elizabeth St

Melbourne 3000 Victoria

Telephone: (03) 9342 9607 (direct to lab)

(03) 9342 9600 (24-hour reporting)

Email: enterovirus@vidrl.org.au

The Australian Paediatric Surveillance Unit (www.apsu.org.au)

Clinicians should contact the APSU with any enquiries regarding the monthly report card:

Australian Paediatric Surveillance Unit

Locked Bag 4001

Westmead NSW 2145

Telephone: (02) 9845 3005 (office hours- for enquiries)

Fax (02) 9845 3082

Email: APSU@chw.edu.au

The Paediatric Active Enhanced Disease Surveillance (www.paeds.edu.au)

Kids Research Institute, The Children's Hospital at Westmead

Cnr Hawkesbury Road and Hainsworth Street

Locked Bag 4001

Westmead NSW 2145

Telephone: (02) 9845 3024

Email: paeds.schn@health.nsw.gov.au

Department of Health and Aged Care

Chief Medical Officer and

WHO IHR National Focal Point

National Incident Centre

Health Security and Emergency Management

Division

Telephone: (+61) 2 6289 3030 (24 hours)

Fax: (+61) 2 6289 3041

Email: health.ops@health.gov.au

For media inquiries, please contact:

Department of Health and Aged Care

Telephone: (02) 6289 7400

Fax: (02) 6289 4044

Email: news@health.gov.au

Key state and territory health authority contacts

All cases of suspected poliomyelitis should be reported immediately to the local health authority.

Key state and territory health authority contacts

Public Health Response Unit
ACT Health
Reply Paid 83006
Weston Creek ACT 2611
Telephone: (02) 5124 9213 (24 hours)
Email: cdc@act.gov.au

Communicable Disease Control Directorate
WA Department of Health
PO Box 8172
Perth Business Centre
Perth WA 6849
Telephone: (08) 9222 2131
a/h Infectious Diseases Emergency: (08) 9328 0553
Email: CDCD.Directorate@Health.wa.gov.au

Communicable Diseases Branch
NSW Ministry of Health
Locked Mail Bag 961
North Sydney NSW 2059
Telephone: (02) 9391 9195
After hours: 0419 230 683
Email: NSWH-CDOncall@health.nsw.gov.au

Communicable Disease Control Branch
SA Department for Health and Wellbeing
GPO Box 6
Rundle Mall
Adelaide SA 5000
Telephone: 1300 232 272 (24 hours)

Communicable Diseases Branch
QLD Health
PO Box 2368
Fortitude Valley BC 4006
Telephone: (07) 3328 9724
Email: CDBoncall@health.qld.gov.au

Communicable Disease Prevention and Control Unit
VIC Department of Health
GPO Box 4057
Melbourne VIC 3000
Notifying Infectious Diseases
Telephone: 1300 651 160
Email: CDIR@health.vic.gov.au

Centre for Disease Control
NT Department of Health
PO Box 40596
Casuarina NT 0811
Telephone: (08) 8999 2400

Communicable Diseases Prevention Unit
TAS Department of Health
GPO Box 125
Hobart TAS 7001
Public Health Hotline: 1800 671 738
Email: cdpuoncall@health.tas.gov.au

For notifiable diseases contact the region directly:

Darwin (08) 89228044
Alice Springs (08) 8951 7540
Katherine (08) 8973 9049
Tennant Creek (08) 8962 4250
Nhulunbuy (08) 8997 0282

Appendix E List of acronyms

Acronyms	Descriptions
AFP	Acute flaccid paralysis
AHPC	Australian Health Protection Committee
APSU	Australian Paediatric Surveillance Unit
ATAGI	Australian Technical Advisory Group on Immunisation
aVDPV	ambiguous vaccine derived poliovirus
CDNA	Communicable Diseases Network Australia
CDPLAN	Australia's Emergency Response Plan for Communicable Disease Incidents of National Significance
CHO	Chief Health Officer
CMO	Chief Medical Officer
cVDPV	circulating vaccine derived poliovirus
DFAT	Department of Foreign Affairs and Trade
dPEF	Designated Poliovirus Essential Facility
ERLNA	Enterovirus Reference Laboratory Network of Australia
GPLN	Global Polio Laboratory Network
Health	Australian Government Department of Health and Aged Care
IATA	International Air Transport Association
IHR	International Health Regulations
IPV	inactivated polio vaccine
iVDPV	immunocompromised vaccine derived poliovirus
mOPV	monovalent oral poliovirus
NAC	National Authority for Containment
NCC	National Committee for the Certification of Polio Eradication
NERL	National Enterovirus Reference Laboratory
NFP	National Focal Point
NIP	National Immunisation Program
NIC	National Incident Centre
NNDSS	National Notifiable Diseases Surveillance System
NERL	National Enterovirus Reference Laboratory
OPV	oral polio vaccine
PAEDS	Paediatric Active Enhanced Disease Surveillance
PC2	physical containment level 2
PEP	Polio Expert Panel
PHEIC	Public Health Emergency of International Concern
PHLN	Public Health Laboratory Network
PI	packing instruction

Acronyms	Descriptions
RCC	World Health Organization Regional Commission for the Certification of Poliomyelitis Eradication in the Western Pacific Region
RT-PCR	reverse transcription polymerase chain reaction
TGA	Therapeutic Goods Administration
Plan	National Poliovirus Infection Outbreak Response Plan for Australia
VAPP	vaccine associated paralytic poliomyelitis
VDPV	vaccine derived poliovirus
VIDRL	Victorian Infectious Diseases Reference Laboratory
WHO	World Health Organization
WPRO	WHO Western Pacific Regions section
WPV	wild poliovirus

