Poliomyelitis: Paralytic and Non-paralytic Infection

Signs and Symptoms	Up to 95% of poliovirus infections are asymptomatic or unapparent. Some cases have nonspecific mild illnesses including fever, headache, sore throat, or gastrointestinal symptoms. In rare cases, poliovirus infects the spinal cord or brain stem resulting in aseptic meningitis or acute flaccid paralysis (rapid onset of loss of muscle tone and reflexes in one or more limbs).
Incubation	For nonparalytic polio: 3 to 6 days. To onset of paralysis in paralytic polios: usually 7 to 21 days, range 3-35 days.
Case classification	**Poliomyelitis, paralytic** **Probable**: Acute onset of a flaccid paralysis of one or more limbs with decreased or absent tendon reflexes in the affected limbs, without other apparent cause, and without sensory or cognitive loss. **Confirmed:** Meets the probable criteria AND in which the patient: • has a neurologic deficit 60 days after onset of initial symptoms, or • has died, or • has unknown follow-up status. **Poliovirus infection, non-paralytic** **Confirmed**: Poliovirus isolated from an appropriate clinical specimen.
Differential diagnosis	Other enteroviruses: West Nile, Japanese encephalitis, Cytomegalovirus, Epstein-Barr, and adenovirus. Other illnesses: synovitis, neuritis, limb injury, Guillain-Barré syndrome (GBS), transverse myelitis, stroke (including spinal stroke), tumor, acute cord compression, conversion disorder.
Treatment	Supportive, as there is no specific treatment for poliomyelitis. Clinicians should expedite neurology and infectious disease consultations to discuss treatment and management considerations.
Exposure	Person-to-person fecal-oral transmission
Laboratory	The provider should order viral respiratory and viral stool cultures locally. CDC requires consultation to test. Submit specimens to PHL for forwarding to CDC for testing and typing enterovirus, rhinovirus, and poliovirus. Collect as soon as possible: • Two stool specimens collected 24 hours apart (minimum 1 gram in sterile container) • CSF (minimum 0.15 mL, spun and processed, in cryovial) • Serum collected at same time as CSF if possible (0.5 mL minimum, spun and processed) • Nasopharyngeal or oropharyngeal swab (synthetic swab with synthetic shaft, in VTM) • If fatal, fresh-frozen tissue or fixed tissue (formalin 3 days then in 100% ethanol, **room temp**.) **Except for fixed tissue, freeze** all specimens, ship according to PHL requirements: https://doh.wa.gov/public-health-provider-resources/public-health-laboratories/lab-test-menu.
Public Health investigation	• Assess the likelihood of polio and AFM: confirm compatible clinical symptoms, verify vaccination and travel history, assess exposure risk (e.g., contact with a recent oral polio vaccine recipient), obtainhistory of recent respiratory or GI illness, and review test findings (i.e., CSF and MRI results). • If laboratory testing is indicated, facilitate timely collection/transport of appropriate specimens. • If poliovirus is confirmed, DOH and CDC will assist with an extensive contactinvestigation. See Appendix A. • Virus is usually present in nasopharyngeal secretions for 1 to 2 weeks and can be shed in stools for several weeks after infection, even with minor symptoms or no illness. • For a suspected polio case, identify contacts and monitor for symptoms. Collection of stool and serum samples from household members and other contacts associated with possible transmission settings may be required. For a confirmed polio case, in addition vaccination should be offered to susceptible contacts with an emphasis on persons who have an ongoing risk of exposure.

Poliomyelitis: Paralytic and Non-paralytic Infection

1. DISEASE REPORTING

A. Purpose of Reporting and Surveillance

1. To detect importation of wild poliovirus into the United States
2. To detect the presence of vaccine-derived poliovirus
3. To prevent transmission of poliovirus and to distinguish between wild-type polio and vaccine-associated paralytic polio, if a case of poliomyelitis occurs

B. Legal Reporting Requirements

1. **Health care providers and Health care facilities**: immediately notifiable to **local health jurisdiction**
2. **Laboratories:** Poliovirus, acute, by IgM positivity or PCR positivity immediately notifiable to **local health jurisdiction**; submission required – isolate or if no isolate available, specimen associated with positive result, within 2 business days.

   Paralytic polio is designated "immediately notifiable, extremely urgent", requiring state and local health authorities to notify CDC within 4 hours of their notification.

   Non-paralytic polio is designated "immediately notifiable and urgent" requiring state and local health authorities to notify CDC within 24 hours of their notification.

C. Local Health Jurisdiction Investigation Responsibilities

1. Begin case investigation and notify Office of Communicable Epidemiology (CDE) immediately.
2. Facilitate the transport of specimens to Washington State Public Health Laboratories (PHL) at the direction of CDE and CDC for patients with suspected or confirmed polio.
3. Implement appropriate infection control measures.
4. Report all *confirmed* or *probable* cases (see Section 3) to CDE.
5. Enter into the Washington Disease Reporting System (WDRS) as "Acute Flaccid Myelitis (AFM)/Poliomyelitis"

2. THE DISEASE AND ITS EPIDEMIOLOGY

Background

The name poliomyelitis or polio (from polios, "gray"; myelos, "marrow" or "spinal cord") describes lesions in gray matter, especially in the anterior horns of the spinal cord.

Polio is one type of acute flaccid myelitis, which is characterized by rapid onset of flaccid weakness in one or more limbs and distinct abnormalities of the spinal cord gray matter on magnetic resonance imaging (MRI). Wild poliovirus was eliminated from the western hemisphere in 1991 but wild type and vaccine strain viruses still circulate in many countries, and countries once polio-free have had cases of polio imported through international travel (see: https://wwwnc.cdc.gov/travel/notices/alert/global-polio and

https://polioeradication.org/polio-today/polio-now/this-week/). There has not been a case of wild polio acquired in the United States since 1979 and the last imported case of wild polio was in 1993.

In 2022 New York State reported a case of paralytic polio in an unvaccinated person due to a strain derived from vaccine strain type 2. Subsequent wastewater testing found type 2 strains in multiple counties in New York. See: Public Health Response to a Case of Paralytic Poliomyelitis in an Unvaccinated Person and Detection of Poliovirus in Wastewater — New York, June–August 2022 | MMWR (cdc.gov) and Wastewater Testing and Detection of Poliovirus Type 2 Genetically Linked to Virus Isolated from a Paralytic Polio Case — New York, March 9–October 11, 2022 | MMWR (cdc.gov)

Although poliovirus is no longer endemic in the United States, it's important that healthcare professionals rule out poliovirus infection in cases of unexplained acute flaccid paralysis (AFP) that are clinically compatible with polio, particularly those with anterior myelitis, to ensure that any importation of poliovirus is quickly identified and investigated. For details, see Appendix A.

Paralytic poliomyelitis cases are more likely to be identified through disease surveillance than non-paralytic cases because of the existing surveillance program for acute flaccid myelitis (see AFM guideline). Non-paralytic cases are not likely to be detected outside of the context of an outbreak or known community transmission, because testing for poliovirus is not a routine practice, and non-paralytic poliomyelitis symptoms are non-specific. Paralysis is an uncommon event during poliovirus illness (<1% of infections); therefore, a single paralytic poliomyelitis case suggests there could be additional infected persons in the community.

For up-to-date information on current outbreak countries (defined as countries that have stopped indigenous wild poliovirus but are experiencing re-infection either through importation of wild or vaccine-derived poliovirus [VDPV] from another country, or the emergence and circulation of VDPV) see: https://polioeradication.org/where-we-work/polio-outbreak-countries/

A. Etiologic Agent

Acute paralytic disease may be caused by naturally occurring (wild) polioviruses, and rarely by oral poliovirus (OPV) vaccine viruses. Polioviruses are members of the family Picornaviridae, genus Enterovirus, in the species enterovirus C, and include 3 serotypes all of which can cause paralysis.

OPV-associated cases of vaccine-associated paralytic poliomyelitis (VAPP) may occur in those recently vaccinated or their close contacts, or may be associated with circulating vaccine-derived polioviruses (cVDPVs) that have pathogenic characteristics that are equal to naturally occurring polioviruses as a result of sustained person-to-person transmission in populations with inadequate immunity. People with specific immunodeficiencies are at increased risk both of vaccine-associated paralytic polio and of persistent infection from vaccine virus. Globally more cases of paralytic disease are now caused by vaccine-related viruses (vaccine-associated or circulating vaccine-derived viruses) than by wild polioviruses. In 2000, an all-IPV vaccine schedule was implemented for this country.

B. Description of Illness

After poliovirus is ingested, virus replicates in the pharynx and gastrointestinal tract, then invades local lymphoid tissue and enters the bloodstream where it induces type-specific immunity. Rarely, poliovirus infects the spinal cord or brain stem resulting in aseptic meningitis (1-5%) or acute, asymmetric, ascending flaccid paralysis (<1%). Among adults, women are at greater risk of infection. Both the incidence and severity of poliomyelitis may be increased in pregnant women. Paralysis occurs more commonly in adults: 1 in 75 adults vs. 1 in 1000 children (with boys at higher risk).

Most illnesses are mild and nonspecific with fever, headache, sore throat, or gastrointestinal symptoms (e.g., vomiting, abdominal pain). In 4% to 8% of infections, symptoms disappear within a period of 2-3 days without any neurological symptoms. This presentation is known as abortive poliomyelitis; it cannot be distinguished from other viral infections, and is usually detected only during outbreaks or epidemics.

In paralytic polio, neurological symptoms typically develop and progress within a few days, achieve a plateau for weeks, and then resolve partially or fully. Legs are more often affected than arms. Bulbar paralysis affecting the cranial nerves may accompany extremity involvement or can occur as the sole paralysis.

Muscle function returns to some degree in most cases of paralytic polio. Permanent weakness occurs in about two thirds of patients with paralytic poliomyelitis. Complete recovery is less likely when acute paralysis is severe and when mechanical ventilation is required. Paralysis that is still present 60 days after onset will usually be permanent.

Table 1. Distribution and timeline of polio infection clinical presentations*

Clinical/Subclinical Form	Children	All patients	Days after exposure → 0 5 10 15 20 Minor illness Major illness
Unapparent/Asymptomatic	Up to 72%	Up to 95%	
Abortive poliomyelitis	24%	5-8%	
Non-paralytic polio (Aseptic meningitis)	1-5%	1-2%	
Paralytic polio	<1%	<1%	

*Modified from Paul JR. History of Poliomyelitis. New Haven, CT: Yale University Press; 1971

Other complications of poliomyelitis include respiratory compromise, myocarditis, gastrointestinal hemorrhage, paralytic ileus, bladder paralysis and urinary retention. The case fatality ratio for paralytic polio is 2-5% among children and 15-30% among adults.

In 20-85% of persons who had childhood paralytic poliomyelitis, a new onset of muscle weakness, pain, atrophy, and fatigue can occur after 15-40 years as post-polio syndrome. The affected muscles are usually the same as those affected during the original illness. Post-polio syndrome is not an infectious process (not contagious), and is not notifiable.

Differential diagnoses includes other viruses, such as other enteroviruses (West Nile virus, Japanese encephalitis virus, Cytomegalovirus, Epstein-Barr virus, and adenovirus) infections, synovitis, neuritis, limb injury, Guillain-Barré syndrome, transverse myelitis, stroke (including spinal stroke), tumor, acute cord compression, or conversion disorder.

C. Polio in Washington

The last endemic transmission of wild polio virus infection in the United States was in 1979; the last case of wild virus infection identified in Washington was 1977. Vaccine-associated paralytic polio occur sporadically, including in a Washington resident who contracted the virus in 1993 from a relative recently vaccinated with oral polio vaccine.

D. Reservoir

Humans are the only known reservoir of poliovirus, which is transmitted most frequently by persons with asymptomatic infections.

E. Modes of Transmission

Mainly fecal-oral, including by contaminated water. Respiratory droplet transmission is also possible. Infants shedding virus in the feces after having received OPV have been the source of exposure for susceptible care givers.

F. Incubation Period

Nonparalytic polio: 3-6 days (range 3 to 36 days). Paralytic poliomyelitis: 7-21 days for onset of paralysis.

G. Period of Communicability

Most infectious from 7-10 days before and after onset of symptoms when virus is present in the throat and excreted in high concentration in feces. After onset of illness, poliovirus might be present in the throat for 1-2 weeks and in stool from 3-6 weeks. Persons with asymptomatic infections are also communicable.

H. Treatment

Treatment is supportive and especially following acute paralytic illness can include respiratory support and physical therapy or use of splints.

I. Immunity

Poliovirus has three serotypes: type 1, type 2, and type 3. Type 2 wild poliovirus (WPV2) and type 3 wild poliovirus (WPV3) were declared eradicated in 2015 and 2019, respectively. Type 1 poliovirus now accounts for all polio cases attributable to wild poliovirus. Two vaccines are used against polio: oral polio vaccine (OPV) and inactivated poliovirus vaccine (IPV). OPV has attenuated versions of either one (monovalent), two (bivalent bOPV) or three (trivalent tOPV) types. Rarely, OPV mutates and causes polio disease. The only source of disease from type 2 poliovirus is related to vaccine use, so in 2016 there was a global switch from tOPV to bOPV, eliminating type 2 poliovirus from oral vaccines. Areas using bOPV routinely have added a single dose of IPV to protect against WPV2. IPV protects against paralytic poliomyelitis due to all three types of poliovirus, IPV does not contain live virus so cannot cause disease but also does not prevent intestinal carriage. Since 2000, in the United States, only IPV is recommended.

3. CASE DEFINITIONS

A. Poliomyelitis, paralytic (2010)

Case Classification

1. **Probable:**
   Acute onset of a flaccid paralysis of one or more limbs with decreased or absent tendon reflexes in the affected limbs, without other apparent cause, and without sensory or cognitive loss.

2. **Confirmed:**
   Acute onset of a flaccid paralysis of one or more limbs with decreased or absent tendon reflexes in the affected limbs, without other apparent cause, and without sensory or cognitive loss; AND in which the patient
   - Has neurologic deficit 60 days after onset of initial symptoms; or
   - Has died; or
   - Has unknown follow-up status

   Comment: All suspected cases of paralytic poliomyelitis will be reviewed by a panel of expert consultants before final classification occurs. Confirmed cases receive further classification based on epidemiologic and laboratory criteria.

B. Poliovirus infection, nonparalytic (2010)

Case Classification

1. **Confirmed:**
   Any person without symptoms of paralytic poliomyelitis in whom a poliovirus isolate identified in an appropriate clinical specimen with confirmatory typing and sequencing performed by the CDC Poliovirus Laboratory, as needed.

4. DIAGNOSIS AND LABORATORY SERVICES

A. Laboratory Diagnosis

Poliovirus can be found in the intestine (stool gives highest yield), throat, and occasionally blood, cerebrospinal fluid (CSF), urine or conjunctival fluids. Virus is detected by cell culture, which is most sensitive, or by polymerase chain reaction (PCR). Poliovirus is demonstrable in throat secretions as early as 36 hours and in stools as early as 72 hours after exposure in both symptomatic and inapparent cases.

Real-time reverse transcription PCR is used to differentiate possible wild strains from vaccine-like strains ("intratypic differentiation"), using virus isolated in culture as the starting material. Genomic sequencing is used to confirm the poliovirus genotype and determine its likely geographic origin.

To rule out poliovirus in a suspect acute flaccid myelitis (AFM) case, the provider should order a viral stool culture and viral respiratory culture to be done locally when available.

To increase the probability of isolating poliovirus, collect at least **two stool specimens 24 hours apart from patients** with suspected poliomyelitis. These should be collected as early in the course of disease as possible (ideally within 14 days after onset).

A fourfold rise between acute (immediate collection) and convalescent (three weeks later) serologic specimens suggests poliovirus infection. Serologic testing cannot distinguish between wild-type and vaccine derived virus. Poliovirus infection is generally ruled out if no antibody is detected in either specimen. However, results can be difficult to interpret because there are some limitations to antibody titers, and:

- For any patient, neutralizing antibodies appear early and may be at high levels by the time the patient is hospitalized so a four-fold rise in antibody titer may not be demonstrated.
- Patients who are immunocompromised may have two specimens with no antibody detected and still be infected with poliovirus.

B. Tests Available at Washington State Public Health Laboratories (PHL)

PHL does not perform testing for poliovirus. For all patients presenting with acute flaccid limb weakness who meet the reporting criteria for Acute Flaccid Myelitis (including patients with suspected poliomyelitis), send recommended specimens to PHL as soon as possible for testing at CDC testing (see section 4C). The CDC AFM Patient Summary Form must accompany any specimens submitted for suspected AFM patients, including patients with suspected poliomyelitis: https://www.cdc.gov/acute-flaccid-myelitis/downloads/patient-summary-form.pdf

Note that PHL requires all clinical specimens have two patient identifiers, a name **and** a second identifier (e.g., date of birth) both on the specimen label and on the submission form. Due to laboratory accreditation standards, specimens will be rejected for testing if not properly identified. Also include specimen source and collection date.

C. Specimen Collection

Office of Communicable Disease Epidemiology will assist with the determination of which specimens should be collected. More detailed instructions regarding collection and shipping of specimens to be sent to CDC can be found at https://www.cdc.gov/polio/php/laboratories/

As soon as possible in the course of illness, preferably on the day of onset of limb weakness, clinicians should collect specimens from patients suspected of having AFM due to poliovirus or another enterovirus including:

1. Two stool specimens collected as soon after onset of limb weakness and separated by 24 hours, minimum 1gram, 10-20 grams preferred, freeze
2. Cerebrospinal fluid (CSF), minimum 1mL; if feasible collected at the same time, or within 24 hours of serum, freeze
3. Acute serum, minimum 0.4mL; if feasible collected at the same time, or within 24 hours of CSF, freeze. A similar convalescent specimen should be collected 3 weeks after the acute specimen.
4. Nasopharyngeal **and** oropharyngeal swab, stored in minimum 0.5 ml, 1mL preferred. Store separately in viral transport media, freeze.

Except for fixed tissue, **freeze** specimens and ship according to PHL requirements: https://doh.wa.gov/public-health-provider-resources/public-health-laboratories/lab-test-menu

5. ROUTINE CASE INVESTIGATION

Rapid investigation of suspected poliomyelitis cases is critical for identifying possible wild poliovirus transmission, implementing control measures, and maintaining the eradication of wild poliovirus in the United States.

A. Evaluate the Diagnosis

Evaluate the clinical information:

- Review the clinical presentation, physical exam findings (particularly flaccid weakness).
- Obtain history of any recent viral respiratory and/or gastrointestinal illness.
- Determine whether clinical criteria including CSF findings and/or MRI test results are suggestive of AFM (see AFM guideline).
- If pursuit of laboratory testing is indicated, facilitate timely collection of appropriate specimens and expedite transport of those specimens to PHL.

B. Assess Risk of Infection

Verify immunization history. Ask about the following potential exposures:

- Contact with person with similar symptoms or known cases
- Travel to or contact with a traveler arriving from a polio endemic area (with either endemic wild-type polio or with a cVDPV outbreak) or area where OPV is used
- Contact in previous 30 days with any person who received OPV in the last 60 days
    - Include date of contact, nature of contact, date contact received OPV, lot number of vaccine, age of contact, and relationship to patient. Please note that OPV is no longer used in the U.S. but is used in other countries.

C. Identify Potentially Exposed Persons

If poliovirus is confirmed, CDE and the Centers for Disease Control and Prevention will assist with an extensive contact investigation. See Appendix B for Contact Identification.

D. Environmental Evaluation

If poliovirus infection is confirmed, an environmental evaluation might be indicated depending on the circumstances. This could include wastewater sampling or other methods for determining presence of poliovirus in the community.

6. CONTROLLING FURTHER SPREAD

A. Infection Control Recommendations / Case Management

If a person has confirmed polio, DOH in consultation with CDC will assist in making other infection control recommendations for the management of the case.

- Isolation for infected person for 10 days from the onset of illness. Enteric precautions shall be followed for six weeks.
- Standard precautions for hospitalized case-patients, with contact precautions indicated for hospitalized infants and young children.

B. Contact Management

If polio is suspected or confirmed, DOH in consultation with CDC will assist LHJs with identification and management of contacts. Contacts of a suspected polio case must be identified and monitored for symptoms. Collection of stool and serum samples from household members and other contacts associated with possible transmission settings may be required. Vaccination with IPV should be offered to susceptible contacts of a confirmed polio case with an emphasis on persons who have an ongoing risk of exposure.

Note: If polio is confirmed and no source has been identified, a retrospective survey of hospitals that serve the community at risk should be conducted to review the illnesses of patients with diagnoses that might be consistent with poliovirus infection.

For additional information see Appendix B for Contact Identification and Appendix C for Contact Management Recommendations.

7. MANAGING SPECIAL SITUATIONS

A. Immunization Recommendations

Inactivated polio vaccine (IPV) has three polio types and is recommended for all children in the United States to be given in a four-dose series with doses at 2 months, 4 months, 6–18 months and 4–6 years. The fourth dose should be administered on or after the fourth birthday and at least 6 months after the previous dose. If 4 doses are administered prior to age 4 years, a fifth dose should be administered at age 4 to 6 years. If the third dose was given on or after the fourth birthday, a fourth dose is not required for school entry.

Table 2: Routine Schedule for Childhood Polio Vaccination

Dose	Age	Minimal Interval
IPV 1	2 months	N/A
IPV 2	4 months	4 weeks
IPV 3	6-18 months	4 weeks
IPV 4*	4-6 years	6 months
IPV 5	4–6 years	Only if **4 or more doses** were administered **before** age 4

*A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months after theprevious dose.

IPV is not routinely recommended for U.S. residents ages 18 or older. Adults who havenever been vaccinated against polio should receive three doses of IPV if they are:

- Traveling to polio-endemic or high-risk areas of the world.
- Working in a laboratory and handling specimens that might contain polioviruses.
- Giving health care to a person who could be infected withpoliovirus.

Adults at high risk of coming in contact with poliovirus who have received the 3 dose primary series should receive a booster dose of IPV, or complete a full series.

Although no longer recommended in the United States, OPV is used elsewhere and can cause paralytic disease in unimmunized travelers if exposed, such as by contaminated food or

water. IPV protects against paralytic polio but not intestinal infection. A person vaccinated with inactivated polio vaccine could acquire an intestinal polio infection (wild type or vaccine type) and then transmit the virus to others without becoming ill.

If both OPV and IPV were administered as part of a child's vaccination series, a total of 4 doses should be administered, regardless of the child's current age. If only OPV was administered, and all doses were given prior to age 4 years, 1 dose of IPV should be given at age 4 years or older, and at least 4 weeks after the last dose of OPV.

All OPV recipients should avoid close contact with immunodeficient persons for approximately 4-6 weeks after vaccination. If this is not feasible, rigorous hygiene and hand washing after contact with feces (e.g., after diaper changing) and avoidance of contact with saliva (e.g., sharing food or utensils) can be used but may be less effective. Maximum excretion of vaccine virus occurs within 4 weeks after oral vaccination.

For additional information regarding polio vaccination see the CDC Pink Book: https://www.cdc.gov/vaccines/pubs/pinkbook/polio.html

Table 3: ACIP Polio Immunization Recommendations Catch-Up Schedule

Infants ages 6 months and younger, follow the recommended schedule

If accelerated protection is needed (e.g., travel to polio-endemic area), minimum age and intervals may be followed

Dose	Age	Minimal Interval to the Next Dose
IPV 1	6 weeks	4 weeks
IPV 2	10 weeks	4 weeks
IPV 3	14 weeks	6 months
IPV 4*	4	----------

*A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months after theprevious dose.

For more detailed information, see the CDC Catch-Up Guidance for Children 4 Months through 17 Years of Age: https://www.cdc.gov/vaccines/schedules/downloads/child/job-aids/ipv.pdf

B. Prevention Recommendations

Control of polio is accomplished through immunization. Unimmunized persons at risk of exposure, for example, during travel to areas with known polio cases or areas where OPV is used, should maintain strict prevention measures to avoid potential fecal-oral transmission. These include using good hand washing techniques and safe drinking water during travel to areas with endemic polio and maintaining good hygiene practices if in contact with infants who are receiving oral vaccine.

ACKNOWLEDGEMENTS

This document is a revision of the Washington State Guidelines for Notifiable Condition Reporting and Surveillance published in 2002 which were originally based on the Control of Communicable Diseases Manual (CCDM), 17th

Edition; James Chin, Ed. APHA 2000. We would like to acknowledge the Oregon Department of Human Services for developing the format and select content of this document.

UPDATES

January 2010 Section 1: The investigation form link was updated and 2010 case classification information was added.

January 2011: The Legal Reporting Requirements section has been revised to reflect the 2011 Notifiable Conditions Rule revision.

October 2016: AFM guidance and polio guideline were combined. Global epidemiology data was updated. Information regarding trivalent OPV vaccine switch to bivalent OPV vaccine in low and middle income countries was included.

October 2018: The AFM case definition was updated to reflect the June 2017 CSTE revision. Specimen collection instructions for AFM were updated to reflect the latest CDC recommendations. Global epidemiology for polio and national and state-wide epidemiology data for AFM was updated.

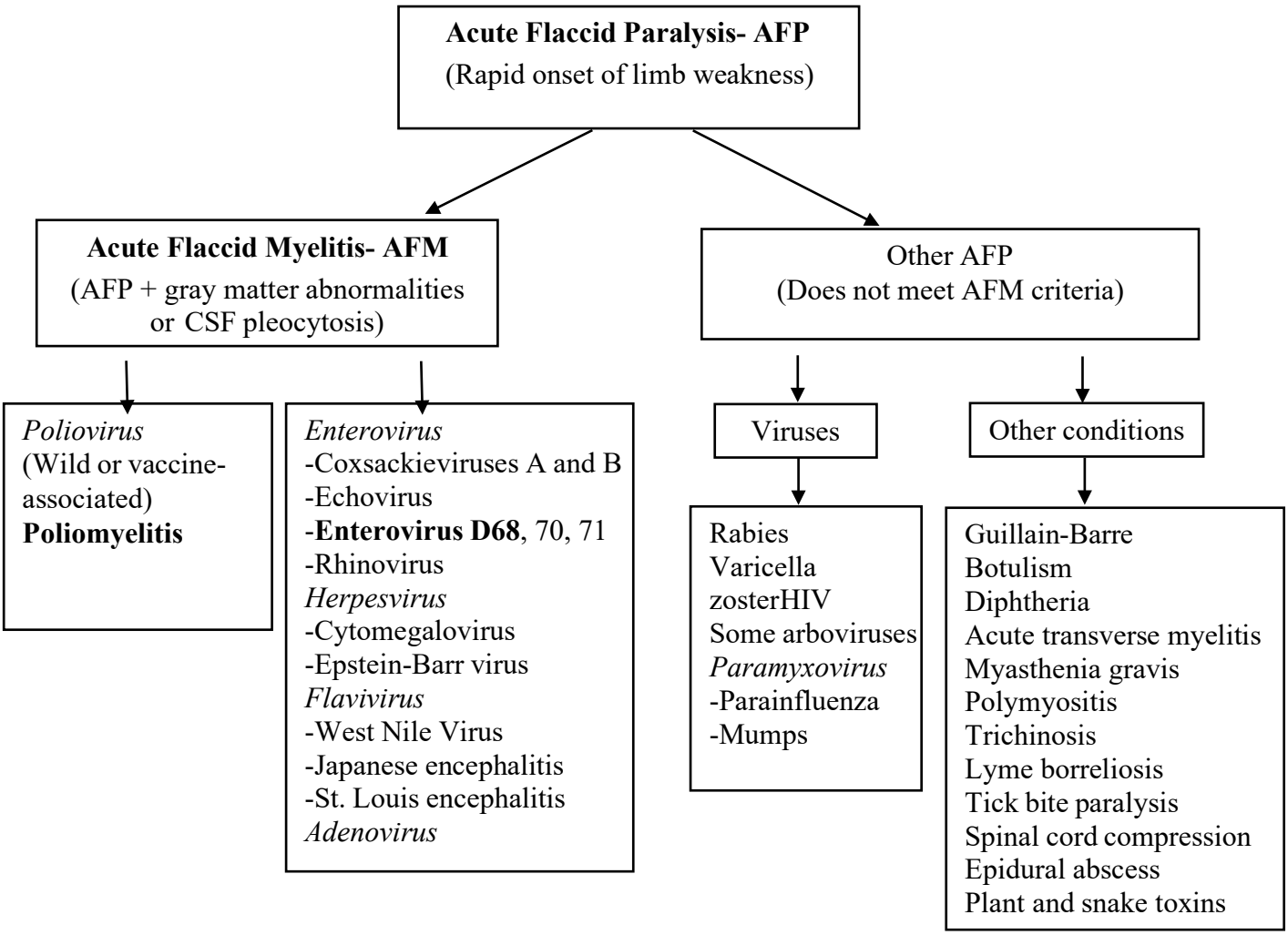
December 2022: For 2023 WAC revision combined provider and facility reporting requirement, updated laboratory submission (Section 1B)

December 2023: For 2024 WAC revision updated laboratory submission.

April 2023: AFM and Poliomyelitis guidelines separated.

June 2024: CDC links updated.

APPENDIX A: MOST COMMON ETIOLOGIES FOR ACUTE FLACCID PARALYSIS AND ACUTE FLACCID MYELITIS



APPENDIX B: POLIOMYELITIS CONTACT IDENTIFICATION

Contact identification should be initiated as soon as poliovirus etiology is highly suspected.

Define Contacts:
Exposure is defined as contact with the stool or oral secretions (e.g. saliva) of an infectious person. Some examples of persons who should be considered contacts:

- Persons having contact (or potential for contact) with stool or fecal matter of the case within 3-5 days before the case's onset of illness, without using infection control precautions
- Persons living in the same household or having close contact with the case (e.g., sharing sleeping arrangements, shared utensils or towels) within 30 days prior to the case's onset
- Children attending the same daycare as the case or frequently playing together

First steps:

- Inquire about case's activities and occupations during the communicable period 10 days prior to and after onset of symptoms.
- Records case occupation(s) and any other high-risk activities with dates, descriptions, and locations:
    - Food handling
    - Provision of childcare in any setting
    - Daycare attendance, employment, or household contact of an attendee or employee
    - Direct patient care
    - Other activities with high risk for fecal-oral or droplet transmission
- Obtain a contact name and number for a person in each high-risk setting that can help identify contacts in the setting

Evaluate contact susceptibility:

- Contacts should be surveyed regarding polio vaccination status, immune status, and recent compatible illness.
- **Contacts with no written record of a complete polio immunization series must be considered susceptible.**
- A complete polio immunization series includes three primary doses and a single booster dose of IPV, when doses are received after 6 weeks of age and at intervals >4 weeks apart
- Other countries' vaccination schedules may include OPV. To assess completeness for a person vaccinated outside the U.S., please see the WHO list of current vaccination schedules available at: https://polioeradication.org/polio-today/polio-prevention/the-vaccines/

There is high risk of transmission in communities with low vaccination coverage. The estimated rate of transmission for wild poliovirus among unvaccinated household contacts is 73%-96%.

APPENDIX C: POLIOMYELITIS CONTACT MANAGEMENT

The suspicion of poliomyelitis or poliovirus infection, particularly in a member of a group that refuses vaccination, should prompt an immediate response. The following active surveillance activities should be initiated in order to assure timely ascertainment of secondary cases and prevention of further transmission:

- Create a list of all identified contacts.
- Obtain name, address, and telephone number of every contact.
- Determine occupation for each contact.
- Note any school or daycare attendance (facility name and location)
- Document each contact's immunization status to identify all susceptible contacts.
- Define the community at risk and possible transmission settings based on epidemiologic data.
- Maintain a line list of all contacts until **at least 36 days** after the exposure of each person that contains the following information (at a minimum):
  - Immunization history
  - Susceptibility status
  - Dates of screening and follow-up interviews
  - Whether recommendations were provided
  - Whether any symptoms developed and description
  - Tests performed and results
  - Disposition of the contact (e.g., hospitalized, follow-up completed)
    - Consult with WA DOH CDE and Immunization Program regarding appropriate strategies forthe effective use of vaccines.
    - If evidence indicates wild-type poliovirus, an outbreak control program with vaccination planning is required.
      - Communities at risk should be assessed for current vaccination status and, at a minimum, one dose of IPV should be provided for any contact without documentation ofa complete polio immunization series.
      - All susceptible contacts 6 weeks of age and older with an incomplete or undocumented vaccination series or booster should be vaccinated on an accelerated schedule (4-week intervals)
      - A booster dose of vaccine is recommended for all adults (>18 years of age) in susceptible members of the community at risk and health-care workers at high risk for exposure who have completed a primary series but have not received an adult booster dose.
- Track the number of susceptible contacts receiving recommended vaccination(s).
- Maintain active community-wide surveillance for 2 incubation periods (i.e., 72 days) beyond the onset of the last case in the area.
- Refer any identified contact that become symptomatic for immediate medical assessment.
- Manage any susceptible contact that becomes symptomatic as a suspect polio case.
- Contacts of a confirmed polio case can be quarantined by order of the local health officer. However, this has not been shown to be effective in preventing transmission once a case has occurred and is not usually recommended.