

5.8 Polio

NOTIFIABLE

RECOMMENDATIONS

Assess all migrants for previous polio vaccination.

- Be aware that acute cases of polio can present from countries where polio is endemic.
- Consider post-polio syndrome in patients who may have been infected in childhood.

Vaccinate

- All children according to the routine childhood immunisation schedule 6 in 1* at 2, 4 and 6 months with booster dose at 4-5 years old
- All others according to the "late entrants catch-up schedule" for children and adults as follows:
 - 12 months to <4 years, three doses of 6 in 1* at two month intervals with booster dose at 4-5 years old
 - 4 to <10 years, three doses of 6 in 1* at two month intervals with booster dose at least 6 months and preferably 3 years after primary course
 - 10 to <18 years, three doses of Tdap/IPV^ at one month intervals with booster dose 5 years
 - 18 years and older, one dose of Tdap/IPV^, followed by two doses of Td/IPV# at one month intervals

*6 in 1: DTaP/IPV/Hib/HepB

^Tdap/IPV: Tetanus, reduced dose diphtheria vaccine, reduced dose pertussis vaccine/ IPV

#Td/IPV: Tetanus, reduced dose diphtheria vaccine/IPV

Poliomyelitis is an acute illness which may result from invasion of the gastrointestinal tract by one of three types of polio virus (1, 2 and 3). The virus has a high affinity for nervous tissue.⁽¹⁾

Transmission is through contact with the faeces or pharyngeal secretions of an infected person. The incubation period ranges from 3-21 days, but may be longer. Cases are most infectious from about 10 days before to 7 days after the onset of symptoms. However, carriers and some immunocompromised persons may shed virus in the faeces for longer than 6 weeks.⁽¹⁾

Most infections are clinically inapparent. Clinical disease may range in severity from a non-paralytic fever to aseptic meningitis or paralysis. Symptoms include headache, gastro-intestinal disturbance, malaise and stiffness of the neck and back, with or without paralysis. The proportion of inapparent to paralytic infections may be as high as 1,000:1 in children and 75:1 in adults. A case-fatality rate of more than 50% can occur in young adults with paralytic polio.⁽¹⁾

Post-polio syndrome is a neurological condition that can occur in people who have had polio previously. After a period of years with minimal symptoms, people can develop symptoms such as: new muscle weakness, muscle/joint pain, muscle atrophy, general reduction in stamina, breathing, sleeping or swallowing difficulty, cold intolerance.⁽²⁾ Post-polio may be difficult to diagnose as there is no single diagnostic test and patients may also not know that they have had polio previously.^(2,3)

An active world-wide surveillance system for acute flaccid paralysis has been in operation since 1998. In any case of acute flaccid paralysis, it is essential to obtain two faecal samples 24-48 hours apart for viral culture, as soon as possible after the onset of paralysis.

Epidemiology

Worldwide, polio cases have decreased by over 99% since 1988, from an estimated 350,000 cases then, to 223 reported cases in 2012. The reduction is the result of the global effort to eradicate the disease. However in 2013 the number of reported cases globally had increased again to 416.⁽⁴⁾

Since 2008, however, more than 20 countries (in Europe, Africa and South Asia) have experienced outbreaks of polio imported from endemic countries—some of them multiple times. Up to November 2013, cases of wild polio have been reported from Afghanistan, Cameroon, Ethiopia, Kenya, Nigeria, Pakistan, Somalia, and Syria. This shows the ongoing threat of wild polio virus and the need to maintain high immunisation levels and to report cases of acute flaccid paralysis (AFP).

Rationale for assessment of vaccination status

The rationale for assessment of new entrants is:

- The risk of serious consequences of the disease.⁽¹⁾
- Polio is preventable by vaccination.⁽¹⁾
- Polio has been targeted for global elimination.⁽¹⁾

Assessment

The following indications for polio assessment and vaccination are based on Immunisation Guidelines for Ireland 2013.⁽¹⁾

A history of polio vaccination should be requested of all migrants.

Without documented evidence of polio vaccination migrants should be offered polio vaccination as outlined below.

Vaccination

- All children at 12 months of age should be offered polio containing vaccine according to the childhood immunisation schedule at 2, 4 and 6 months with a booster dose at 4-5 years of age.
- All others according to the “late entrants catch-up schedule” for children and adults as follows;
 - 12 months to <4 years, 3 doses of 6 in 1* at two month intervals with booster dose at 4-5 years old
 - 4 to <10 years, 3 doses of 6 in 1* at two month intervals with booster dose at least 6 months and preferably 3 years after primary course
 - 10 to <18 years, 3 doses of Tdap/IPV^ at one month intervals with booster dose 5 years after primary course
 - 18 years and older, one dose of Tdap/IPV^, followed by two doses of Td/IPV# at one month intervals.

*6 in 1: DTaP/IPV/Hib/HepB

^Tdap/IPV: Tetanus, reduced dose diphtheria vaccine, reduced dose pertussis vaccine/ IPV

#Td/IPV: Tetanus, reduced dose diphtheria vaccine/IPV

Enteroviral surveillance

- Routine enterovirus/poliovirus surveillance for asymptomatic refugees is not recommended.
- The role of environmental and enterovirus surveillance among these population groups is currently under discussion at the EU/EEA-level with a view to agreeing on common standards and indicators.⁽²⁾

References

- (1) National Immunisation Advisory Committee. Immunisation Guidelines for Ireland 2013. Available from: <http://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/immunisationguidelines.html>
- (2) Public Health England. Migrant Health Guide. [Internet]. UK: Public Health England. 2013 May 30th. Available from: <http://webarchive.nationalarchives.gov.uk/20140714084352/http://www.hpa.org.uk/migranthealthguide>
- (3) British Polio Fellowship. Post-polio syndrome [Internet]. UK: British polio Fellowship; [undated] [cited 2014 January 1st]. Available from: <http://www.britishpolio.org.uk/polio-and-post-polio-syndrome/post-polio-syndrome/>
- (4) World Health Organization. WHO Fact Sheet on Poliomyelitis no 114 [Internet]. 2014 October. Available from: <http://www.who.int/mediacentre/factsheets/fs114/en/>