World Health Organization

WHO Guidance for implementation of the IHR Temporary Recommendations under the IHR (2005) to reduce the international spread of polio
November 2015

Purpose of this document

On 5 May 2014, the Director-General of the World Health Organization (WHO) declared the international spread of wild poliovirus (WPV) a Public Health Emergency of International Concern (PHEIC). The declaration followed advice given by an Emergency Committee under the International Health Regulations (IHR) and issued Temporary Recommendations to limit the international spread of wild poliovirus (WPV).

Since May 2014, the Emergency Committee has re-evaluated the evolving epidemiology every three months, and offered further strengthened recommendations and an ongoing assessment that the situation remained a PHEIC.

At its most recent meeting in November 2015, reflecting the growing public health importance of circulating vaccine-derived polioviruses (cVDPVs), the Emergency Committee recommended the extension of the Temporary Recommendations to countries affected by cVDPVs (previously the Temporary Recommendations applied to countries affected by WPV only). The Director-General subsequently accepted this recommendation.

This document aims to provide guidance to countries affected by cVDPVs and/or WPVs in implementing the Temporary Recommendations. The full report from the Emergency Committee is available here.

Risk Categories

Wild Poliovirus

- States currently exporting wild poliovirus
- States infected with wild poliovirus but not currently exporting;
- States no longer infected by wild poliovirus, but which remain vulnerable to international spread.

Circulating Vaccine Derived Poliovirus

- States currently exporting cVDPV;
- States infected with cVDPV but not currently exporting;
- States no longer infected by cVDPV, but which remain vulnerable to the emergence and circulation of VDPV.

Temporary Recommendations under the IHR

States currently exporting wild poliovirus or cVDPV

(Currently Pakistan (last wild poliovirus exportation: 27 August 2015) and Afghanistan (last wild poliovirus exportation: 6 June 2015).)

- Officially declare, if not already done, at the level of head of state or government, that the interruption of poliovirus transmission is a national public health emergency; where such declaration has already been made, this emergency status should be maintained.
- Ensure that all residents and long-term visitors (i.e. > four weeks) of all ages, receive a dose of oral poliovirus vaccine (OPV) or inactivated poliovirus vaccine (IPV) between four weeks and 12 months prior to international travel.
- Ensure that those undertaking urgent travel (i.e. within four weeks), who have not received a dose of OPV or IPV in the previous four weeks to 12 months, receive a dose of polio vaccine at least by the time of departure as this will still provide benefit, particularly for frequent travellers.
- Ensure that such travellers are provided with an International Certificate of Vaccination or Prophylaxis in the form specified in Annex 6 of the IHR to record their polio vaccination and serve as proof of vaccination.
- Restrict at the point of departure the international travel of any resident lacking documentation of appropriate polio vaccination. These recommendations apply to international travellers from all points of departure, irrespective of the means of conveyance (e.g. road, air, sea).
- Recognising that the movement of people across the border between Pakistan and Afghanistan continues to facilitate exportation of wild poliovirus, both countries should further intensify cross-border efforts by significantly improving coordination at the national, regional and local levels to substantially increase vaccination coverage of travellers crossing the border and of high risk cross-border populations. Both countries have maintained permanent vaccination teams at the main border crossings for many years. Improved coordination of cross-border efforts should include closer supervision and monitoring of the quality of vaccination at border transit points, as well as tracking of the proportion of travellers that are identified as unvaccinated after they have crossed the border.
- Maintain these measures until the following criteria have been met: (i) at least six months have passed without new exportations and (ii) there is documentation of full application of high quality eradication activities in all infected and high risk areas; in the absence of such documentation these measures should be maintained until the state meets the above criteria of a 'state no longer exporting'.
- Provide to the Director-General a monthly report on the implementation of the Temporary Recommendations on international travel, including the number of residents whose travel was restricted and the number of travellers who were vaccinated and provided appropriate documentation at the point of departure.

States infected with wild poliovirus or cVDPV but not currently exporting

(Currently (any cVDPV detected within preceding six months) Nigeria, Guinea, Madagascar, Ukraine, and Lao People's Democratic Republic.)

- Officially declare, if not already done, at the level of head of state or government, that the interruption of poliovirus transmission is a national public health emergency; where such declaration has already been made, this emergency status should be maintained.
- Encourage residents and long-term visitors to receive a dose of OPV or IPV four weeks to 12 months prior to international travel; those undertaking urgent travel (i.e. within four weeks) should be encouraged to receive a dose at least by the time of departure.
- Ensure that travellers who receive such vaccination have access to an appropriate document to record their polio vaccination status.
- Intensify regional cooperation and cross-border coordination to enhance surveillance for prompt detection of poliovirus and substantially increase vaccination coverage among refugees, travellers and cross-border populations.
- Maintain these measures until the following criteria have been met: (i) at least six months have passed without the detection of wild poliovirus transmission or circulation of cVDPV in the country from any source, and (ii) there is documentation of full application of high quality eradication activities in all infected and high risk areas; in the absence of such documentation these measures should be maintained until the state meets the criteria of a 'state no longer infected'.
- At the end of 12 months without evidence of transmission, provide a report to the Director-General on measures taken to implement the Temporary Recommendations.

States no longer infected by wild poliovirus, but which remain vulnerable to international spread, and states that are vulnerable to the emergence and circulation of VDPV

(Currently Somalia, Ethiopia, Syria, Iraq, Israel, Equatorial Guinea, Cameroon and South Sudan)

- Urgently strengthen routine immunization to boost population immunity.
- Enhance surveillance quality to reduce the risk of undetected wild poliovirus and cVDPV transmission, particularly among high risk mobile and vulnerable populations.
- Intensify efforts to ensure vaccination of mobile and cross-border populations, Internally Displaced Persons, refugees and other vulnerable groups.
- Enhance regional cooperation and cross border coordination to ensure prompt detection of wild poliovirus and cVDPV, and vaccination of high risk population groups.
- Maintain these measures with documentation of full application of high quality surveillance and vaccination activities.
- At the end of 12 months without evidence of reintroduction of wild poliovirus or new emergence or circulation of cVDPV, provide a report to the Director General on measures taken to implement the Temporary Recommendations.

Guidance for countries

The following actions may be considered to support implementation of the Temporary Recommendations:

- Put in the necessary mechanisms to ensure the implementation of the recommendations and to respond to frequently asked questions by relevant stakeholders, such as medical professionals and their professional bodies.
- Ensuring sufficient supply of polio vaccine.
- Establishing vaccination posts at key border crossings, international airports and seaports.
- Communicating recommendations widely to general public, medical professionals, caregivers, travel associations, airlines, etc.
- Ensuring sufficient supplies of the International Certificate of Vaccination or Prophylaxis.
- Putting in place mechanisms to monitor implementation of the recommendations, and publicly report on implementation.
- Communicating with sub-national health authorities including health officials at international points of entry and exit to ensure these recommendations are received, understood and implemented.

Vaccines

- Any poliovirus type 1 containing vaccine can be used (e.g. tOPV, bOPV or IPV).
- WHO pre-qualified polio vaccines should be considered acceptable for the purposes of vaccinating travellers from polio-infected countries
- Nationally-licenced polio vaccines not yet submitted for WHO pre-qualification may also be considered acceptable for this purpose.

Special considerations

- All travellers, regardless of age, should receive vaccine.
- Pregnant women should be vaccinated as there is no evidence that OPV or IPV are unsafe for pregnant women and their unborn children.
- Patients with severely depressed immune function can be safely vaccinated with inactivated polio vaccine (IPV). OPV should not be given to patients whose immune system is severely depressed because of known underlying diseases such as certain primary immunodeficiencies, or to patients on medications which severely depress the body's immune system.

Administrative issues and timelines

- Wild poliovirus exporting countries in particular will need to reinforce the capacity to vaccinate travellers prior to departure, issue certificates, communicate to the public, and, potentially, screen at border points in order to assess the polio vaccination status of departing travellers and to manage any health measures applied to them as appropriate, in accordance with the Temporary Recommendations and the IHR.
- These recommendations were effective immediately, from 5 May 2014. It is expected that countries immediately began taking action towards full implementation. Action should be prioritized beginning with the highest risk areas and progressing rapidly to full implementation.
- Temporary recommendations are valid for three months and may be extended or modified by the Director General. The Director-General has requested the Emergency Committee to reassess the situation in three months.

States receiving travellers from polio-infected States

- There are no Temporary Recommendations for polio-free States.

- However, any polio-free State which becomes infected with wild poliovirus should immediately implement the advice for 'States infected with wild poliovirus but not currently exporting'.

Note: Some countries already have polio vaccination requirements for entry (e.g. the Kingdom of Saudi Arabia, India), and others may decide to put additional measures in place to prevent the spread of poliovirus.

Additional health measures

- Polio-free countries are encouraged to enhance surveillance for polioviruses to rapidly detect any importation.

Travellers from polio-free States to polio-infected States

- While there are no Temporary Recommendations under the IHR affecting short term travellers from polio-free countries to polio-infected countries, WHO recommends that all persons travelling to polio-infected areas be fully vaccinated against polio prior to travel, as recommended in WHO's International Travel and Health, available at http://www.who.int/ith/en/. In summary:
  - All travellers from polio-free countries should ensure that they have completed the age-appropriate polio vaccine series, according to their respective national immunization schedule. Adult travellers to polio-infected areas who have previously received three or more doses of OPV or IPV should also be given another one-time booster dose of polio vaccine. Travellers to polio-infected areas who have not received any polio vaccine previously should complete a primary schedule of polio vaccination before departure.
- Long-term visitors to polio-exporting and other polio-infected countries are subject to the same WHO Temporary Recommendations as local residents of that country. Individuals from polio-free countries who are planning to travel and stay in a polio-infected country for more than four weeks should consider receiving a dose of polio vaccine before departing their home country as proof of such vaccination, as above, may be required when they seek to leave the polio-infected country to return home.

Key messages

In May 2014, recognizing the increasing risk international spread of wild poliovirus posed to the goal of a polio-free world (as more and more countries were becoming re-infected), WHO declared polio eradication to be a 'Public Health Emergency of International Concern', under the guidance of an Emergency Committee of the International Health Regulations (IHR). This declaration was further supported by evidence indicating that failure to eradicate polio could lead to global resurgence of the disease, resulting in 200,000 new cases every single year, within 10 years.

Under the PHEIC, countries affected by wild poliovirus transmission have taken extraordinary measures. Under the auspices of the respective heads of state, national polio emergencies were declared, eradication efforts intensified through an all-of-government approach, and systematic vaccination of international travellers implemented.

As a result, wild poliovirus transmission has now been curbed to its lowest levels in history. In 2015, fewer cases have been reported from fewer areas of fewer countries than ever before. In September 2015, Nigeria – which was the global epicentre of polio

transmission as recently as 2012 – was officially removed from the list of polio-endemic countries, not having reported a case since July 2014. Nowhere on the African continent has any wild polio case been reported in more than 12 months. Today, only two countries remain endemic – Pakistan and Afghanistan. The world stands on the brink of an unprecedented public health success – the worldwide eradication of a human disease for only the second time in history (after smallpox in 1980).

However, in the end stages of polio eradication, with most of the world polio-free, the risks posed remaining vaccination coverage gaps anywhere is becoming more evident.

On extremely rare occasions, in areas of chronic vaccination coverage gaps, circulating vaccine-derived polioviruses (cVDPVs) can emerge to cause outbreaks of polio cases. This is not a side effect of the oral polio vaccine, but rather an effect of low vaccination coverage in a community, which is enabling such strains to emerge.

More countries are affected by cVDPV outbreaks (Ukraine, Guinea, Lao, Nigeria, Madagascar) than wild polioviruses (Pakistan and Afghanistan); 3 WHO Regions are affected by cVDPV outbreaks.

Recognizing the progress achieved in bringing the world to the brink of eradicating wild polioviruses, and the growing importance of risks associated with cVDPVs, WHO – with ongoing advice of the IHR Emergency Committee - is extending its PHEIC to countries also affected by cVDPVs (previously the PHEIC was restricted to wild poliovirus affected countries).

It means countries affected by cVDPVs should undertake the same measures as wild poliovirus affected countries: declare a national public health emergency, implement national emergency plans under the auspices of the head of state to ensure an all-of-government approach, and ensure the vaccination of international travellers.

This move reflects the growing international concern at the risk cVDPVs also pose to populations anywhere, in particular in a world increasingly free of poliovirus.

The move is also particularly critical, in advance of the start of the phased withdrawal of OPVs, beginning with the switch from trivalent OPV to bivalent OPV in April 2016. The withdrawal of OPV is a critical part of the Polio Endgame Plan, to secure a lasting world free of all polioviruses (wild- or vaccine-derived).

WHO and its partners will continue to support all Member States in their ongoing efforts to fully implement national emergency action plans and to implement the recommendations as outlined under the PHEIC.

We are closer to ending polio than ever before, with a record low 56 wild polio cases in two countries in one WHO region thus far in 2015.

Though it is rare, addressing cVDPV is a major priority for the GPEI, with 20 cases occurring worldwide in 2015 (as of 28 November) in six countries in four WHO regions.

cVDPVs occur in areas of chronic poor vaccination coverage; they are not a side effect of the vaccine, but rather an effect of low vaccination coverage.

- The same strategies that are eliminating wild poliovirus also stop cVDPV – all countries must maintain strong disease surveillance and ensure all children are vaccinated, particularly in hard-to-reach and underserved areas.
- The withdrawal of oral polio vaccines starting with the switch from trivalent to bivalent oral polio vaccine in April 2016 will prevent the emergence of new strains of cVDPVs.

So long as wild and vaccine-derived polio exist anywhere, we must use all available tactics to safeguard progress, protect vulnerable children, and stay on track to eradicate the disease once and for all.

Q&As

Why has the WHO Director General (DG) made these recommendations for travellers?

- The Director-General of the World Health Organization (WHO) made the recommendations following her consideration of the advice and views of the International Health Regulations (IHR) Emergency Committee which was convened on 28-29 April 2014, and since then has re-evaluated the evolving epidemiology every 3 months.

Why were the Temporary Recommendations extended to countries affected by cVDPVs in November 2015?

- With strong progress towards the eradication of WPV in the end stages of the programme, more countries are affected by cVDPVs than by WPV outbreaks. In the Polio Endgame, the importance of cVDPVs is increasingly become evident.
- In 2015, cVDPVs emerged in three WHO Regions, underlining significant gaps in population immunity at a critical point in the Polio Endgame. In the past at least five past episodes of international spread of cVDPV have been recorded, all due to cVDPV type 2.
- The risk of cVDPVs on the polio endgame, the risk of international spread, the serious gaps in routine immunization coverage and the urgency of stopping type 2 cVDPVs in advance of the withdrawal of the oral polio vaccine type 2 in April 2016 were evaluated by the committee in support of this decision.
- The long-term goal of eliminating the risk of cVDPVs will be achieved through the phased removal of OPVs, beginning with the switch from trivalent OPV to bivalent OPV in April 2016. However, in the interim, cVDPVs are also able to spread internationally, and must therefore be subject to the same control measures as WPVs.

Why is there an increased focus on cVDPVs this year?

- During 2015, the number of cases of cVDPVs has greatly reduced (20 in 2015 compared to 56 in 2014). Yet the fact that any cases continue to be found underlines the fact that populations continue to be under immunized, leading to the rare conditions through which cVDPVs can emerge.
- In 2015, with numbers of all types of poliovirus at a historic low, more countries have been affected by cVDPVs than by WPV outbreaks. Circulating VDPVs are taking greater precedence now because the number of WPV cases to date in is lower than it has ever been, shifting the focus onto cVDPVs. The definition of cVDPV cases has also been expanded this year to a more sensitive set of criteria. This may also lead to an increased focus on cVDPV cases.

- The goal of the Global Polio Eradication Initiative is to ensure that no child is ever again paralysed by any form of polio, whether caused by WPVs or cVDPVs. The same strategies are needed to stop any kind of outbreak, namely, maintaining strong disease surveillance and ensuring all children are vaccinated, particularly in hard-to-reach and underserved areas.

Should refugees in particular be immunized?

- Poliovirus can spread easily with any population movement. Poliovirus does not distinguish why a person or a population is travelling. It is simply very effective at spreading itself with population movements. That is why the recommendations are in place, to vaccinate travellers from polio-infected areas, to minimise the risk of further international spread of the virus.

Should adults be immunized, and why this particular schedule (i.e. four weeks to 12 months prior to travel)?

- Polio vaccination recommendations for travellers from polio-infected countries should apply to all residents and visitors, who spend more than four weeks in the country, of all ages. This is based on several lines of evidence that demonstrate older individuals play an important role in international spread of poliovirus, including observational and challenge studies and documented cases of adult travellers excreting wild poliovirus.
- Resident travellers from polio-infected countries should have received one documented additional dose of OPV or IPV a minimum of four weeks and a maximum of 12 months before each international travel. This is based on evidence from a number of studies demonstrating that immunologically-naive populations usually attain a maximum immune response within four weeks, and on studies demonstrating that intestinal immunity can wane within 12 months. (Travellers embarking on urgent travel that cannot be postponed should receive one dose of OPV or IPV before departure if they have not received a documented dose of polio vaccine within 12 months.)

What happens when a previously polio-free country is infected with wild poliovirus or a cVDPV emerges?

- Any polio-free State which becomes infected with wild poliovirus or where a cVDPV emerges should immediately implement the relevant Temporary Recommendations for 'States infected with wild poliovirus or states infected with cVDPV but not currently exporting'.

For how long will these recommendations be in place?

- Temporary recommendations are valid for three months and may be extended or modified. Given the nature of poliovirus epidemiology, transmission and surveillance, the Director-General has requested the Emergency Committee reassess this situation in three months.

Are there any recommendations for polio-free states?

- No, there are no Temporary Recommendations for polio-free states.

Should polio-free states screen travellers from polio-affected countries for proof of vaccination?

- No. The current Temporary Recommendations do not recommend that polio-free countries screen arriving passengers for their polio vaccination status. However, some individual polio-free countries will require proof of such vaccination for a visa or for entry. It is important to ensure travellers know the requirements of the country to which they are travelling.

Does WHO recommend that travellers from a state exporting polio who may not have been vaccinated, or lack proof of vaccination as provided in these temporary recommendations, NOT be allowed to travel?

- States exporting polio should ensure that all international travellers are vaccinated and provided a certificate of vaccination before departure. If necessary (e.g. urgent travel), vaccination can be given at the time of departure to minimize any impact on travel, while still providing some benefit to the individual and community.

What kind of authority do these temporary recommendations have?

- IHR Temporary Recommendations are an agreed procedure of the IHR, which is an internationally binding agreement by all the WHO Member States, to ensure coordinated international response to a public health emergency of international concern. All Member States expect that polio-infected and exporting States will fully implement them. Internationally coordinated actions under the IHR also reduce the likelihood of individual countries putting in place restrictions on travel and trade that are not warranted.

Do these Temporary Recommendations need to be endorsed by the World Health Assembly?

- No, the World Health Assembly adopted the IHR in 2005, and these came into force in 2007. The WHO Director General sought the advice of the Emergency Committee, convened under the IHR.

Which countries are most at risk of polio re-infection or re-emergence?

- As long as polio circulates anywhere in the world, all countries are at risk.
- However, at particular risk are those areas with close geographic, cultural, socioeconomic and/or other ties with polio-infected countries, and those with evidence of historical spread of poliovirus due to population movements (e.g. West Africa, Central Africa, the Horn of Africa, the Middle East).
- Furthermore, there are some particularly vulnerable countries, with deficits in vaccination coverage (e.g. countries in conflict or affected by complex emergencies, such as South Sudan, and/or countries with significant gaps in their national vaccination programme).

How effective is polio vaccination and how effective is vaccination of travellers in limiting international spread?

- Polio vaccination of travellers reduces the risk of international spread by boosting intestinal mucosal immunity and reducing the risk of transient carriage of the poliovirus by travellers.
- Polio vaccines are among the most effective vaccines and their widespread use has led to a reduction of 99% in polio incidence worldwide since 1988. The disease is on the brink of eradication due to effective vaccination.
- The following measures can help to minimise the risk and consequences of a country becoming re-infected with poliovirus:
    - maintaining high levels of population immunity;

- maintaining very sensitive disease surveillance and rapid outbreak response capacity; and,
- fully implementing relevant polio vaccination recommendations for travellers as outlined in WHO's International Travel and Health. (Note: since the implementation of vaccination requirements for Hajj pilgrims, there has been no evidence of spread of polio to or from Saudi Arabia).

How far can polio really spread?

- Polio usually spreads locally and across porous borders (eg West Africa).
- There is also significant historical evidence of long-distance spread via international air travel or other means (e.g. during the past 10 years there has been spread from Pakistan to the Middle East and Australia, from India to Angola, from Nigeria to Somalia, from Chad to Switzerland, from India to Tajikistan and further to Russia).

These Temporary Recommendations, if fully implemented, will reduce the risk of international spread of polio. However, only complete eradication of polio will eliminate that risk.

Will these recommendations affect the movement of goods and international trade?

- No. The current epidemiological situation does not warrant any restrictions on international trade.