



# Polio: Statement of the Twenty-first IHR Emergency Committee

## Regarding the International Spread of Poliovirus

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The twenty-first meeting of the Emergency Committee under the International Health Regulations (2005) (IHR) regarding the international spread of poliovirus was convened by the Director-General on 14 May 2019 at WHO headquarters with members, advisers and invited Member States attending via teleconference, supported by the WHO secretariat.

The Emergency Committee reviewed the data on wild poliovirus (WPV1) and circulating vaccine derived polioviruses (cVDPV). The Secretariat presented a report of progress for affected IHR States Parties subject to Temporary Recommendations. The following IHR States Parties provided an update on the current situation and the implementation of the WHO Temporary Recommendations since the Committee last met on 19 February 2019: Afghanistan, DR Congo, Indonesia, Nigeria, Pakistan and Somalia.

The committee commended all countries that presented on the quality of information provided, and the transparency with which countries discussed their challenges.

## Wild poliovirus

The Committee is gravely concerned by the significant further increase in WPV1 cases globally in 2019, particularly in Pakistan where 15 cases have already been reported. In Pakistan transmission continues to be widespread, as indicated by the number of positive environmental isolates in many areas of the country, and the proportion of samples that detect WPV1 is rising. The recent cluster of cases in Lahore also indicates that vulnerabilities still exist outside the high-risk corridors. Notably, the increased rate of infection during what is usually the low season may herald even higher rates of infection in the coming high season unless urgent remedial steps are taken. The committee was very concerned about attacks on vaccinators and on the police protecting them. The increasing refusal by individuals and communities to accept vaccination also needs to be

actively addressed. While the committee understood that the recent elections and political transition may have adversely affected delivery of the polio program, it is now essential that the new government renews its efforts, noting that the eradication program in the country is no longer on-track.

Highlighting these concerns, the committee noted the recent detection of WPV1 in sewage in Iran in an area close to the international border with Pakistan. Based on genetic sequencing, the virus is most closely linked to viruses found recently in Karachi, Pakistan. While there is no evidence currently that transmission has occurred in Iran and routine immunization coverage is high there, this finding together with the resumption of WPV1 international spread between Pakistan and Afghanistan suggests that rising transmission in Pakistan correlates with increasing risk of WPV1 exportation beyond the single epidemiological block formed by the two countries. The Iran event is the first such exportation detected since 2014 and signals that the hard fought gains of recent years can easily be reversed.

In Afghanistan, the critical issue of access is seriously hampering progress towards global eradication and needs to be resolved. Inaccessible and missed children particularly in the Southern Region mean there is a large cohort of susceptible children in this part of Afghanistan. Environmental surveillance has found an increased proportion of positive samples in 2019. The security situation and access will need to significantly improve for eradication efforts to progress.

The Committee noted the continued high degree of cooperation and coordination between Afghanistan and Pakistan, particularly in reaching high risk mobile populations that frequently cross the international border and welcomed the all age vaccination now being taken at key border points between the two countries. In Nigeria, there has been no WPV1 detected for over two and a half years, and it is possible that the African Region may be certified WPV free in early 2020. However, this will require careful assessment of the risk of missed transmission in inaccessible areas of Borno, and in other countries in the region where confidence in surveillance is lacking. The Committee commended the strong efforts to reach inaccessible and trapped children in Borno, Nigeria, even in the face of increased insecurity, and noted that the inaccessible target population was now down to around 60 000 children, scattered across Borno State in smaller pockets. The committee noted the delays between case investigation and final laboratory results in Nigeria and suggested an analysis be undertaken to understand the reasons for this.

## Vaccine derived poliovirus

The multiple cVDPV2 outbreaks on the continent of Africa are as concerning as the WPV1 situation in Asia. The emergence of new strains of cVDPV2 in areas where mOPV2 has been used, the recent spread of cVDPV2 into southern Nigeria, including the densely populated Lagos region, and evidence of missed transmission in Nigeria and Somalia suggests that the situation continues to deteriorate. Insufficient coverage with IPV exacerbates the growing vulnerability on the continent to cVDPV2 transmission. Early detection of any international spread from the five currently infected countries and prioritized use of mOPV2 is essential to mitigate further depletion of the limited mOPV2 supply. Repeatedly, cases have occurred in border districts (in Nigeria, close to Benin, in DR Congo close to Angola, in Somalia, close to Ethiopia, and in Mozambique, close to Malawi).

The cVDPV1 outbreaks in PNG and Indonesia and cVDPV3 in Somalia highlight the gaps in population immunity due to pockets of persistently low routine immunization coverage in many parts of the world. However, these outbreaks seem to pose a lesser risk of international spread,

as bOPV vaccine is already available in the country, and available for traveler vaccination, and global population immunity is far higher than for type 2. It appears likely there has been missed transmission of cVDPV1 in Indonesia although no evidence so far that the virus has spread beyond Papua. Large inaccessible areas of Somalia are a significant constraint on achieving interruption of transmission, exacerbated by large nomadic population movements.

The committee noted that in all infected countries, routine immunization was weak, and coverage remains very poor in many areas of these countries.

Inaccessibility is a major risk to interruption of transmission in Nigeria, Niger, Somalia and Afghanistan, and conflict in these countries and DR Congo makes control of these outbreaks even more challenging.

## Conclusion

The Committee unanimously agreed that the risk of international spread of poliovirus remains a Public Health Emergency of International Concern (PHEIC) and recommended the extension of Temporary Recommendations for a further three months. The Committee considered the following factors in reaching this conclusion:

- **Rising risk of WPV1 international spread:** The progress made in recent years appears to be reversing, with the committee's assessed risk of international spread the highest since 2014 when the PHEIC was declared. This risk assessment is based on the following:
  - the first WPV1 exportation outside of the single epidemiological block of Afghanistan and Pakistan since 2014;
  - rising number of WPV1 cases in Pakistan; ◦ rising proportion of environmental samples that are positive for WPV1 in Afghanistan and Pakistan;
  - widespread detection of WPV1 in Pakistan in environmental samples; ◦ clusters of cases in areas not considered high risk such as Lahore;
  - the fact that all of these observations have been made during the part of the year normally considered as low transmission season;
  - Increasing community and individual resistance to the polio program.
- **Rising risk of cVDPV spread:** The newly emerged strains of cVDPV2 in Nigeria and DR Congo, and the increased number of infected states / provinces in these two countries, together with evidence of missed transmission in Nigeria, Somalia and Indonesia also suggests the risk of international spread of cVDPV, especially type 2, is rising.
- **Falling PV2 immunity:** Global population immunity to type 2 polioviruses (PV2) continues to fall, as the cohort of children born after OPV2 withdrawal grows, exacerbated by poor coverage with IPV particularly in some of the cVDPV infected countries. Protracted outbreaks: The difficulty in rapidly controlling cVDPV outbreaks in Nigeria and DR Congo is another risk.
- **Weak routine immunization:** Many countries have weak immunization systems that can be further impacted by various humanitarian emergencies, and the number of countries in which immunization systems have been weakened or disrupted by conflict and complex emergencies poses a growing risk, leaving populations in these fragile states vulnerable to outbreaks of polio.
- **Surveillance gaps:** The appearance of highly diverged VDPVs in Somalia and Indonesia are examples of inadequate polio surveillance, heightening concerns that transmission could be

missed in various countries. Similar gaps exist in Lake Chad countries and around the Horn of Africa.

- **Lack of access:** Inaccessibility continues to be a major risk, particularly in several countries currently infected with WPV or cVDPV, i.e. Afghanistan, Nigeria, Niger, Somalia and Papua, Indonesia, which all have sizable populations that have been unreached with polio vaccine for prolonged periods.
- **Population movement:** The risk is amplified by population movement, whether for family, social, economic or cultural reasons, or in the context of populations displaced by insecurity and returning refugees. There is a need for international coordination to address these risks. A regional approach and strong cross-border cooperation is required to respond to these risks, as much international spread of polio occurs over land borders.

## Risk categories

The Committee provided the Director-General with the following advice aimed at reducing the risk of international spread of WPV1 and cVDPVs, based on the risk stratification as follows:

- States infected with WPV1, cVDPV1 or cVDPV3, with potential risk of international spread.
- States infected with cVDPV2, with potential risk of international spread.
- States no longer infected by WPV1 or cVDPV, but which remain vulnerable to re-infection by WPV or cVDPV.

Criteria to assess States as no longer infected by WPV1 or cVDPV:

- **Poliovirus Case:** 12 months after the onset date of the most recent case PLUS one month to account for case detection, investigation, laboratory testing and reporting period OR when all reported AFP cases with onset within 12 months of last case have been tested for polio and excluded for WPV1 or cVDPV, and environmental or other samples collected within 12 months of the last case have also tested negative, whichever is the longer.
- **Environmental or other isolation of WPV1 or cVDPV (no poliovirus case):** 12 months after collection of the most recent positive environmental or other sample (such as from a healthy child) PLUS one month to account for the laboratory testing and reporting period.
- These criteria may be varied for the endemic countries, where more rigorous assessment is needed in reference to surveillance gaps (e.g. Borno).

Once a country meets these criteria as no longer infected, the country will be considered vulnerable for a further 12 months. After this period, the country will no longer be subject to Temporary Recommendations, unless the Committee has concerns based on the final report.

## Temporary recommendations

### States infected with WPV1, cVDPV1 or cVDPV3 with potential risk of international spread

#### WPV1

Afghanistan	(most recent detection 3 April 2019)
Pakistan	(most recent detection 26 April 2019)
Nigeria	(most recent detection 27 Sept 2016)

#### **cVDPV1**

Papua New Guinea	(most recent detection 7 November 2018)
Indonesia	(most recent detection 13 February 2019)

#### **cVDPV3**

Somalia	(most recent detection 7 Sept 2018)
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These countries should:

- 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 and implement all required measures to support polio eradication; where such declaration has already been made, this emergency status should be maintained as long as the response is required.
- Ensure that all residents and long-term visitors (i.e. > four weeks) of all ages, receive a dose of bivalent oral poliovirus vaccine (bOPV) 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 bOPV 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 travelers.
- Ensure that such travelers 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 travelers from all points of departure, irrespective of the means of conveyance (e.g. road, air, sea).
- Further intensify cross-border efforts by significantly improving coordination at the national, regional and local levels to substantially increase vaccination coverage of travelers crossing the border and of high risk cross-border populations. 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 travelers that are identified as unvaccinated after they have crossed the border.
- Further intensify efforts to increase routine immunization coverage, including sharing coverage data, as high routine immunization coverage is an essential element of the polio eradication strategy, particularly as the world moves closer to eradication.
- Maintain these measures until the following criteria have been met: (i) at least six months have passed without new infections 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 assessment criteria for being no longer infected.

- Provide to the Director-General a regular report on the implementation of the Temporary Recommendations on international travel.

## States infected with cVDPV2s, with potential risk of international spread

DR Congo	(most recent detection 8 February 2019)
Mozambique	(most recent detection 17 December 2018)
Niger	(most recent detection 16 March 2019)
Nigeria	(most recent detection 16 April 2019)
Somalia	(most recent detection 15 March 2019)

These countries should:

- 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 and implement all required measures to support polio eradication; where such declaration has already been made, this emergency status should be maintained.
- Noting the existence of a separate mechanism for responding to type 2 poliovirus infections, consider requesting vaccines from the global mOPV2 stockpile based on the recommendations of the Advisory Group on mOPV2.
- Encourage residents and long-term visitors to receive a dose of IPV (if available in country) 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 travelers 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 vaccinate refugees, travelers and cross-border populations, according to the advice of the Advisory Group.
- Further intensify efforts to increase routine immunization coverage, including sharing coverage data, as high routine immunization coverage is an essential element of the polio eradication strategy, particularly as the world moves closer to eradication.
- Maintain these measures until the following criteria have been met: (i) at least six months have passed without the detection of circulation of VDPV2 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 WPV1 or cVDPV, but which remain vulnerable to re-infection by WPV or cVDPV

### WPV1

Cameroon	(last case 9 Jul 2014)
Central African Republic	(last case 8 Dec 2011)
Chad	(last case 14 Jun 2012)

### cVDPV

Syria	(last case 21 Sept 2017)
Kenya	(last env positive specimen 21 March 2018)

These countries should:

- Urgently strengthen routine immunization to boost population immunity.
- Enhance surveillance quality, including considering introducing supplementary methods such as environmental surveillance, to reduce the risk of undetected WPV1 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 WPV1 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 WPV1 or new emergence and circulation of cVDPV, provide a report to the Director-General on measures taken to implement the Temporary Recommendations.

*\*For the Lake Chad countries, this will be linked to when Nigeria is considered no longer infected by WPV1 or cVDPV2.*

## Additional considerations

The committee suggested a thorough analysis of the situation in Pakistan be urgently undertaken, to understand what factors have led to the recent but most serious deterioration in polio eradication seen since 2014. Government, program and community factors need to be all included in such a review. Similarly, in Afghanistan there needs to be an analysis of why anti-government elements have withdrawn cooperation with the polio program. These analyses should be used to tailor programmatic responses to the current situation, as current methods appear to be failing. The committee felt that due to the serious risk of failure of eradication, the GPEI leadership including the Director-General of WHO should engage at the level of head of

State in polio affected countries, to advocate for greater levels of government ownership of eradication. Noting the environmental detection of WPV1 in Iran, the committee recommended that Iran review its surveillance and immunisation coverage in the affected region, and further requested Iran and Pakistan to consider whether further measures are required on their borders to prevent exportation.

Recognizing the limited tools available to prevent cVDPV2 exportation through traveler vaccination with respect to these outbreaks, the committee urged that all countries neighboring cVDPV2 infected countries urgently review surveillance and immunity indicators, particularly in border zones and other high risk population groups. Early detection of importation events is essential in the current situation, and every effort is needed to avoid missed transmission. Countries at highest risk currently are Benin, Ethiopia, Malawi, and Angola. Other countries in the vicinity must also act quickly to enhance surveillance and preparedness level to be ready to mount effective and timely response in case of any evidence of geographic expansion of outbreak transmission. Ongoing efforts are needed also in Lake Chad basin countries and the Central African Republic.

The heightened risk of international spread of polioviruses should be communicated clearly, including engaging infected and high risk countries at the upcoming WHA.

The situation in Iran needs to be closely monitored, and the committee be updated at the next meeting, or alerted sooner if the situation suggests transmission is occurring there.

Based on the current situation regarding WPV1 and cVDPV, and the reports provided by Afghanistan, DR Congo, Indonesia, Nigeria, Pakistan and Somalia, the Director-General accepted the Committee's assessment and on 21 May 2019 determined that the situation relating to poliovirus continues to constitute a PHEIC, with respect to WPV1 and cVDPV. The Director-General endorsed the Committee's recommendations for countries meeting the definition for 'States infected with WPV1, cVDPV1 or cVDPV3 with potential risk for international spread', 'States infected with cVDPV2 with potential risk for international spread' and for 'States no longer infected by WPV1 or cVDPV, but which remain vulnerable to re-infection by WPV or cVDPV' and extended the Temporary Recommendations under the IHR to reduce the risk of the international spread of poliovirus, effective 21 May 2019.

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