POLIO GLOBAL ERADICATION INITIATIVE

THE READINESS TOOL



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A RISK ASSESSMENT FRAMEWORK TO GUIDE OPV-USING COUNTRIES ON THEIR READINESS TO TRANSITION TO IPV-ONLY IN THEIR ROUTINE IMMUNIZATION SCHEDULES

Background

In March 2025, the Strategic Advisory Group of Experts on Immunization (SAGE) of the WHO endorsed the methodology of the 'Readiness Tool'.[1] The 'Readiness Tool' is a risk assessment framework to guide OPV-using countries deciding whether to transition to IPV only routine immunization (RI) schedules in advance of global bOPV cessation. The outcome of the risk assessment is to classify each OPV-using country as having 'high', 'medium', or 'low' readiness to transition becoming IPV-only in their RI schedules. The framework was developed by Imperial College London in collaboration with the WHO HQ Polio Research team.

Overview of the "Readiness Tool"

In short, the current IPV RI schedule and reported WUENIC national coverage are reviewed and a risk assessment is conducted based on several variables of whether a 'safe' IPV-only transition is likely. The expectation of a 'safe' transition is that while importation of poliovirus and transmission may occur, a low number of poliomyelitis cases may arise, but outbreak response should be rapid and IPV immunity will prevent large numbers of poliomyelitis cases. The risk assessment captures variables associated with poliovirus importation risk; cVDPV1 and cVDPV3 emergence risk; poliovirus transmission efficiency; fragility of a country; time since the introduction of a second IPV dose into the RI schedule; the country's observed poliovirus epidemiology since the trivalent to bivalent OPV Switch in 2016; and if a given country would become an 'IPV-only island' if it transitioned (i.e. if all of its neighbours would be bOPV-using countries). This risk assessment is updated every 6-10 months. The most recent update was in August 2026 (version 3).

Importantly, a final stage of review is needed following this risk assessment before a country transition to an IPV-only schedule. This includes evaluation of a country's national poliovirus outbreak preparedness and response capacity through clinical acute flaccid paralysis (AFP) and environmental surveillance quality/scope as well as ensuring that the country adheres to a SAGE-recommended IPV schedule of at least three IPV doses. For instance, some countries may be classified as having 'high readiness' but may need to incorporate an extra IPV dose into their schedule if it currently only contains two IPV doses. Furthermore, there may be other factors regions and countries would also like to consider.

Detailed methodology

The variables considered in the framework are detailed below.

WHO SAGE pre-requisites

In the pre-eradication era, SAGE recommends that countries have at least two IPV doses alongside bOPV in the national RI schedule and that countries with WUENIC DTP3 coverage >90% could be considered for transitioning to IPV-only schedules (**Figure 1**). The risk-scoring is binary on whether these conditions are met or not. Note that SAGE recommends that countries transitioning to IPV-only schedules introduce a third IPV dose in their RI schedule.

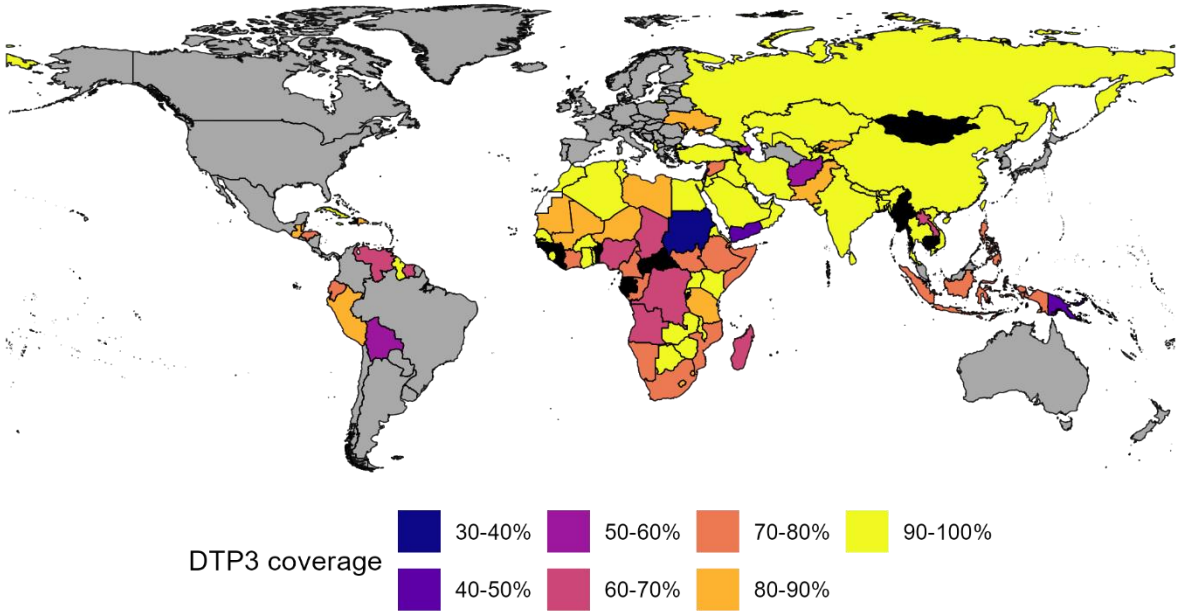


Figure 1. WUENIC DTP3 coverage of OPV-using countries in 2025 with at least two IPV doses in their RI schedules. Grey shading indicates countries that are already IPV-only using countries and black shading indicates countries that are ineligible to consider transitioning as they only have one IPV dose in their RI schedule at the time of the risk assessment.

Score representing importation risk of WPV1 and cVDPV1&3

Previous modelling has shown that the number of permanent migrants from WPV1 endemic countries (Pakistan and Afghanistan) living in each country are associated with WPV1 importation.[2] This variable takes the number of permanent migrants[3] (**Figure 2)** and scores high risk if the number is >20,000, medium risk if the number is between 2000 and 20,000, and low risk if it is lower than 2000. Similar models are designed reflecting cVDPV1 and 3 importation risk.

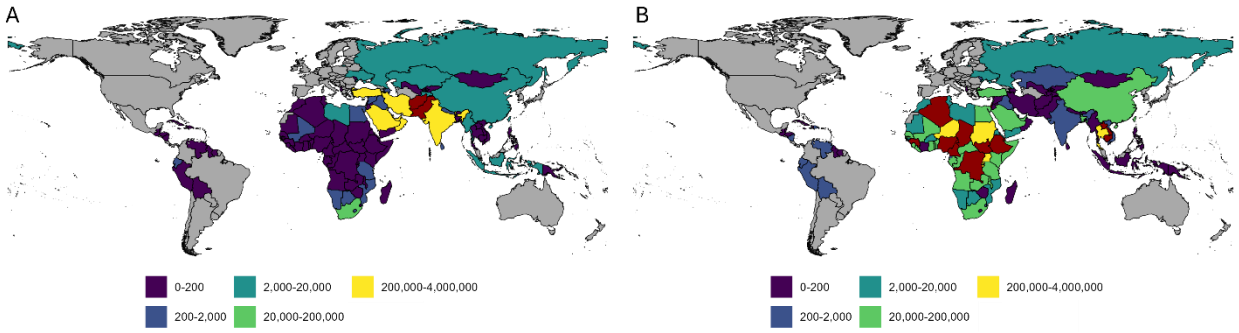


Figure 2. Permanent migration patterns from WPV1 endemic countries (A) and cVDPV1/3 outbreak countries (B). WPV1 endemic countries include Pakistan and Afghanistan (red); cVDPV1/3 outbreak countries include Algeria, Laos, Chad, Djibouti, DRC, Ethiopia, South Sudan, Nigeria, Cameroon, Guinea and Israel (red) at the time of the last risk assessment update, August 2026.

Poliovirus Transmission Intensity

Previous modelling has also found under 5 child mortality to be a proxy variable for poliovirus transmission intensity; countries with lower sanitation levels and higher faecal-oral transmission will transmit poliovirus more efficiently [2](**Figure 3**).

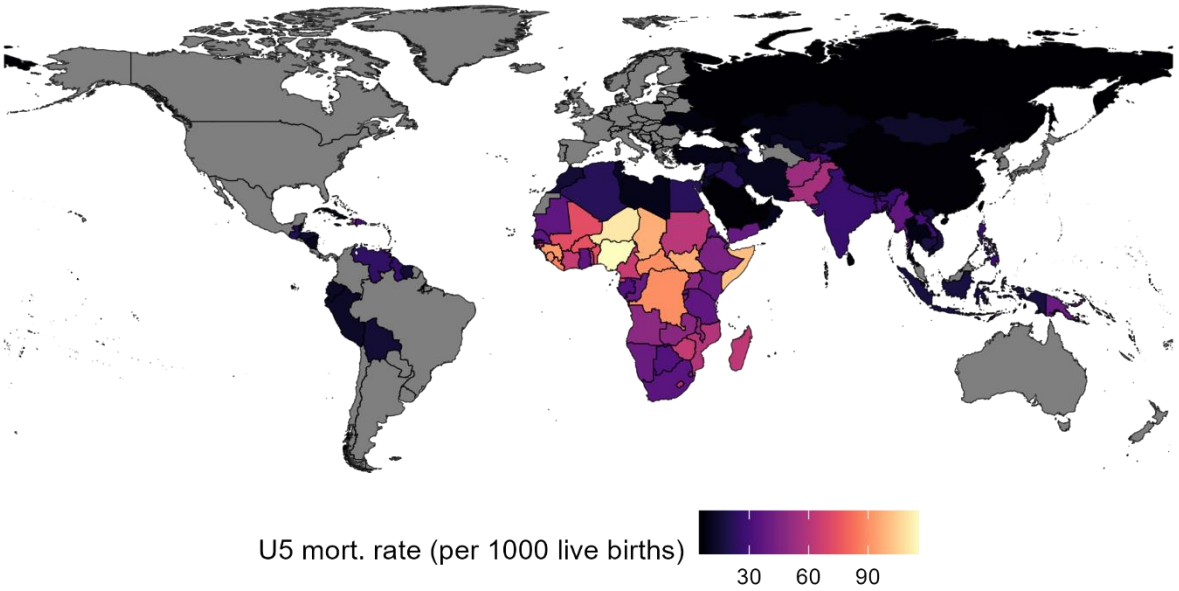


Figure 3. UN national under 5 child mortality rate in 2025.

These data may also serve as a proxy for a functioning health system and ability to respond to an outbreak. We score countries at high risk if the UN under 5 child mortality rate is higher than 60 deaths per 1,000 live births, medium risk if it is between 20 and 60 and low risk if it is less than 20.

Emergence risk of cVDPV1 / cVDPV3

A risk model of cVPDV1,3 emergence using variables on population immunity, under 5 population size, under 5 child mortality, and distance to OPV use was developed. This model was fitted to over a decade of data (2010 - 2021) on locations of VDPV emergence and was used to project risk forward in time. We score countries at high, medium, low, and very low risk of emergence.

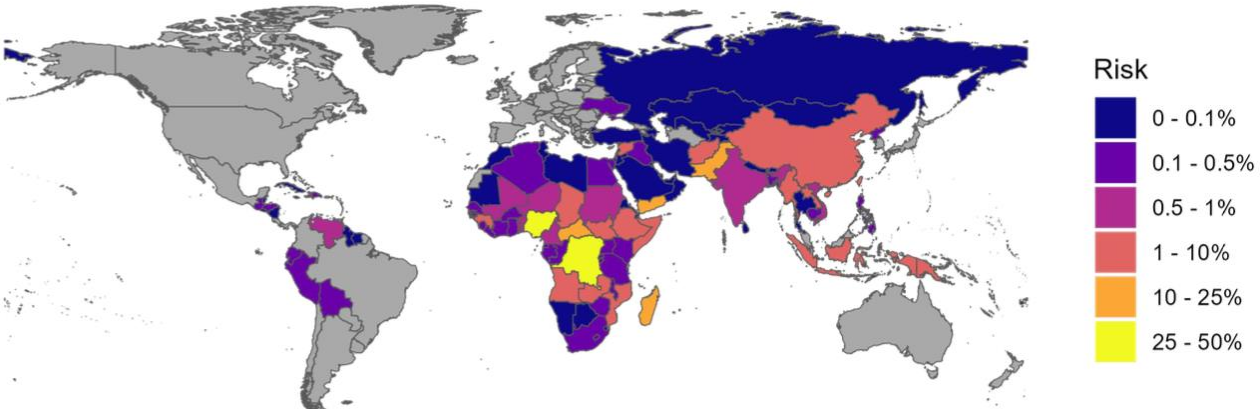


Figure 4. Estimated cVDPV1/3 emergence risk in OPV-using countries

cVDPV2 transmission since the Switch in 2016

We score countries as high risk if they have reported ≥4 cVDPV2 poliomyelitis cases since the switch, medium risk if they have detected transmission but <4 cases, and low risk if there have been no detections. (**Figure 5**)

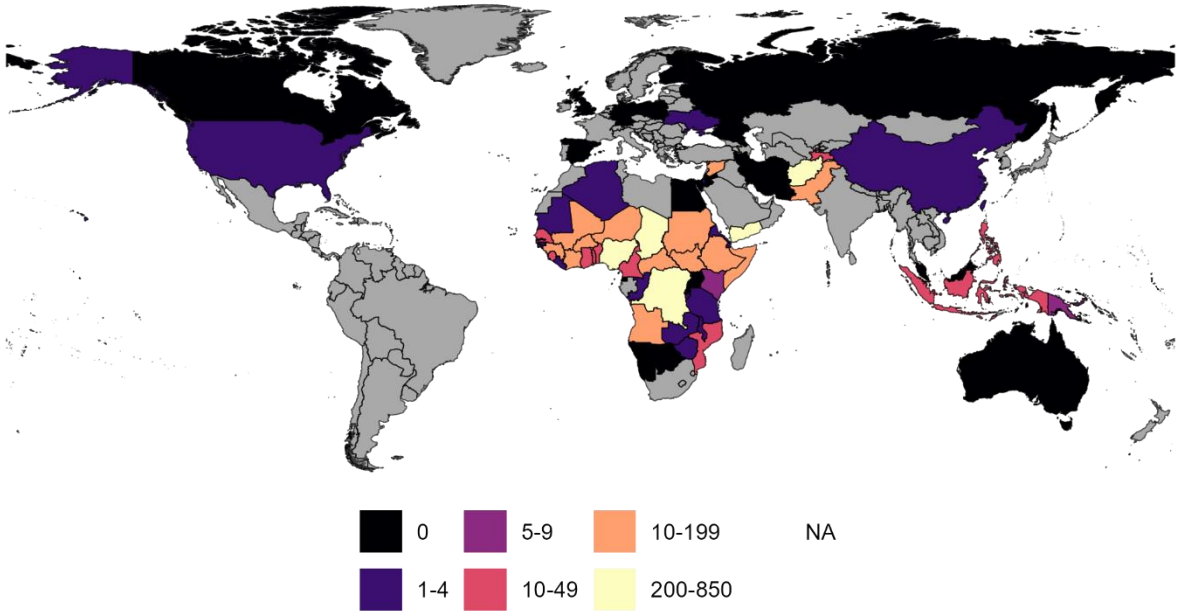


Figure 5. Number of serotype-2 circulating vaccine-derived poliomyelitis (cVDPV2) cases reported since 2016. Grey shading indicates countries where no cVDPV2 detections have been reported whilst countries coloured with '0' reported cases indicate those with silent circulation reported.

Fragility and geographic situation

Countries that are undergoing humanitarian crises will likely have certain cohorts of children with missed immunisation (i.e. coverage gaps) and will possibly experience challenges conducting outbreak response if poliovirus is detected after transitioning to IPV only. We use data from the Inter-Agency Standing Committee, Humanitarian Action Operations indicating if countries have a Humanitarian response plan in 2025 and 2026.[4] If the country is listed to have a humanitarian response plan or flash appeal it is listed as high-risk and otherwise as low risk.

The last factor taken into consideration is geographic situation in terms of avoiding creation of "IPV-only Islands" surrounded by OPV using countries which would represent risk of cVDPV importation. Regional approach is encouraged rather than unilateral decisions by individual countries.

Readiness Tool Outcomes: Definition of IPV-only 'Readiness'

At the end of the assessment, countries are categorised as having high, medium or low 'readiness' to safely transition to an IPV-only schedule.

- Countries are categorised as having 'high' readiness if none of the described measures of risk are high (i.e., importation of WPV1/cVDPV1/cVDPV3, under 5 child mortality rate, cVDPV1/3 emergence risk, cVDPV2 since the Switch, time since IPV2 introduction, and

fragility), DTP3 WUENIC coverage is greater than 90%, the country would not become an IPV-only island, and at least two doses of IPV are in the national schedule – noting the requirement of including a third dose of IPV if the country moves to an IPV-only schedule).

- Countries are categorised as having 'low' readiness if they have had cVDPV1, cVDPV3 or WPV1 transmission in the last three years, at least one of the described measures of risk are high, DTP3 WUENIC coverage is <78%, expert review considers the country as 'low' or that national RI schedule only includes 1 IPV dose.
- All other countries have 'medium' readiness.

Please see **Table 1** for the per country outcome based on this assessment as of August 2026 (note biannual updates will be ongoing).

Guiding principles for countries carrying out iVDPV surveillance and shifting to IPV-only routine immunization schedule

Countries deciding to shift to IPV-only RI need to consider certain steps and factors before stopping iVDPV surveillance.
The decision should be taken jointly with regional and HQ teams (iVDPV WG/SG) based on the risk assessment and consideration of required minimum activities as per Global Certification Commission (GCC) recommendation.[5, 6]

Specifically, countries should: (1) consider testing all known PID patients of interest within the first year after switching to IPV-only schedule, (2) consider continuing with iVDPV surveillance for 2-3 years after switching to IPV-only schedule, and (3) after this period, consider a less intense modality, and integration with other networks to achieve minimum surveillance requirements. This includes, reducing sentinel sites, with surveillance focused on major immunology and/or bone marrow transplantation (BMT) centres, particularly national referral centres, maintaining regular coordination with national immunology/PID networks to support case identification through mapping of referral centres, and continued clinician awareness, and integrating iVDPV surveillance with existing systems, including enterovirus surveillance networks, routine PID clinical follow-up, BMT programmes, and other relevant laboratory or clinical surveillance platforms.

Conclusion

As of August 2026, eleven countries are scored to have 'high' readiness to transition to IPV-only. The risk assessment will be dynamic over time and updates will be published every six months. Before a country at 'high' readiness considers transitioning to an IPV-only schedule, as detailed above, an outbreak detection and response preparedness assessment should be done and at least 3 doses of IPV should be part of the RI schedule. The scoring will be updated every 6 – 10 months.

Table 1. Country outcomes of the "Readiness Tool" (most recent version: 3, August 2026)

Country name	WHO region	Readiness	Country name	WHO region	Readiness	Country name	WHO region	Readiness
Cabo Verde	AFRO	High	Cameroon	AFRO	Low	Morocco	EMRO	Low
Antigua and Barbuda	PAHO	High	Democratic Republic of the Congo	AFRO	Low	Oman	EMRO	Low
Grenada	PAHO	High	Congo	AFRO	Low	Pakistan	EMRO	Low
Guyana	PAHO	High	Comoros	AFRO	Low	Qatar	EMRO	Low
Saint Kitts and Nevis	PAHO	High	Algeria	AFRO	Low	Saudi Arabia	EMRO	Low
Nicaragua	PAHO	High	Eritrea	AFRO	Low	Sudan	EMRO	Low
Trinidad and Tobago	PAHO	High	Ethiopia	AFRO	Low	Somalia	EMRO	Low
St Vincent and the Grenadines	PAHO	High	Gabon	AFRO	Low	Syrian Arab Republic	EMRO	Low
Albania	EURO	High	Ghana	AFRO	Low	Yemen	EMRO	Low
Russian Federation	EURO	High	Guinea	AFRO	Low	Azerbaijan	EURO	Low
Uzbekistan	EURO	High	Gambia	AFRO	Low	Kazakhstan	EURO	Low
Botswana	AFRO	Medium	Guinea-Bissau	AFRO	Low	Turkey	EURO	Low
Namibia	AFRO	Medium	Equatorial Guinea	AFRO	Low	Ecuador	PAHO	Low
Sao Tome	AFRO	Medium	Kenya	AFRO	Low	Guatemala	PAHO	Low
Barbados	PAHO	Medium	Liberia	AFRO	Low	Honduras	PAHO	Low
Bahamas	PAHO	Medium	Lesotho	AFRO	Low	Haiti	PAHO	Low
Belize	PAHO	Medium	Madagascar	AFRO	Low	Venezuela (Bolivarian Republic of)	PAHO	Low
Cuba	PAHO	Medium	Mali	AFRO	Low	Bolivia (Plurinational State of)	PAHO	Low
Dominica	PAHO	Medium	Mozambique	AFRO	Low	Dominican Republic	PAHO	Low
Jamaica	PAHO	Medium	Mauritania	AFRO	Low	Bangladesh	SEARO	Low
Saint Lucia	PAHO	Medium	Malawi	AFRO	Low	Indonesia	SEARO	Low
Peru	PAHO	Medium	Niger	AFRO	Low	India	SEARO	Low
Suriname	PAHO	Medium	Nigeria	AFRO	Low	Maldives	SEARO	Low
Bahrain	EMRO	Medium	Rwanda	AFRO	Low	Myanmar	SEARO	Low
Libya	EMRO	Medium	Senegal	AFRO	Low	Timor-Leste	SEARO	Low
Tunisia	EMRO	Medium	Sierra Leone	AFRO	Low	China	WPRO	Low
Kyrgyzstan	EURO	Medium	South Sudan	AFRO	Low	Cambodia	WPRO	Low
Republic of Moldova	EURO	Medium	Eswatini	AFRO	Low	Lao People's Democratic Republic	WPRO	Low

Country name	WHO region	Readiness	Country name	WHO region	Readiness	Country name	WHO region	Readiness
Tajikistan	EURO	Medium	Chad	AFRO	Low	Mongolia	WPRO	Low
Ukraine	EURO	Medium	Togo	AFRO	Low	Nauru	WPRO	Low
Bhutan	SEARO	Medium	Uganda	AFRO	Low	Philippines	WPRO	Low
Sri Lanka	SEARO	Medium	South Africa	AFRO	Low	Papua New Guinea	WPRO	Low
Nepal	SEARO	Medium	Zambia	AFRO	Low	Solomon Islands	WPRO	Low
Thailand	SEARO	Medium	Zimbabwe	AFRO	Low	Viet Nam	WPRO	Low
Kiribati	WPRO	Medium	Afghanistan	EMRO	Low	Vanuatu	WPRO	Low
Tonga	WPRO	Medium	United Arab Emirates	EMRO	Low			
Angola	AFRO	Low	Djibouti	EMRO	Low			
Burundi	AFRO	Low	Egypt	EMRO	Low			
United Republic of Tanzania	AFRO	Low	Iran (Islamic Republic of)	EMRO	Low			
Benin	AFRO	Low	Iraq	EMRO	Low			
Burkina Faso	AFRO	Low	Jordan	EMRO	Low			
Central African Republic	AFRO	Low	Kuwait	EMRO	Low			
Cote D'Ivoire	AFRO	Low	Lebanon	EMRO	Low			

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