

POLIO | GLOBAL ERADICATION INITIATIVE

How would a comprehensive surveillance look like
(with ball park costing?)

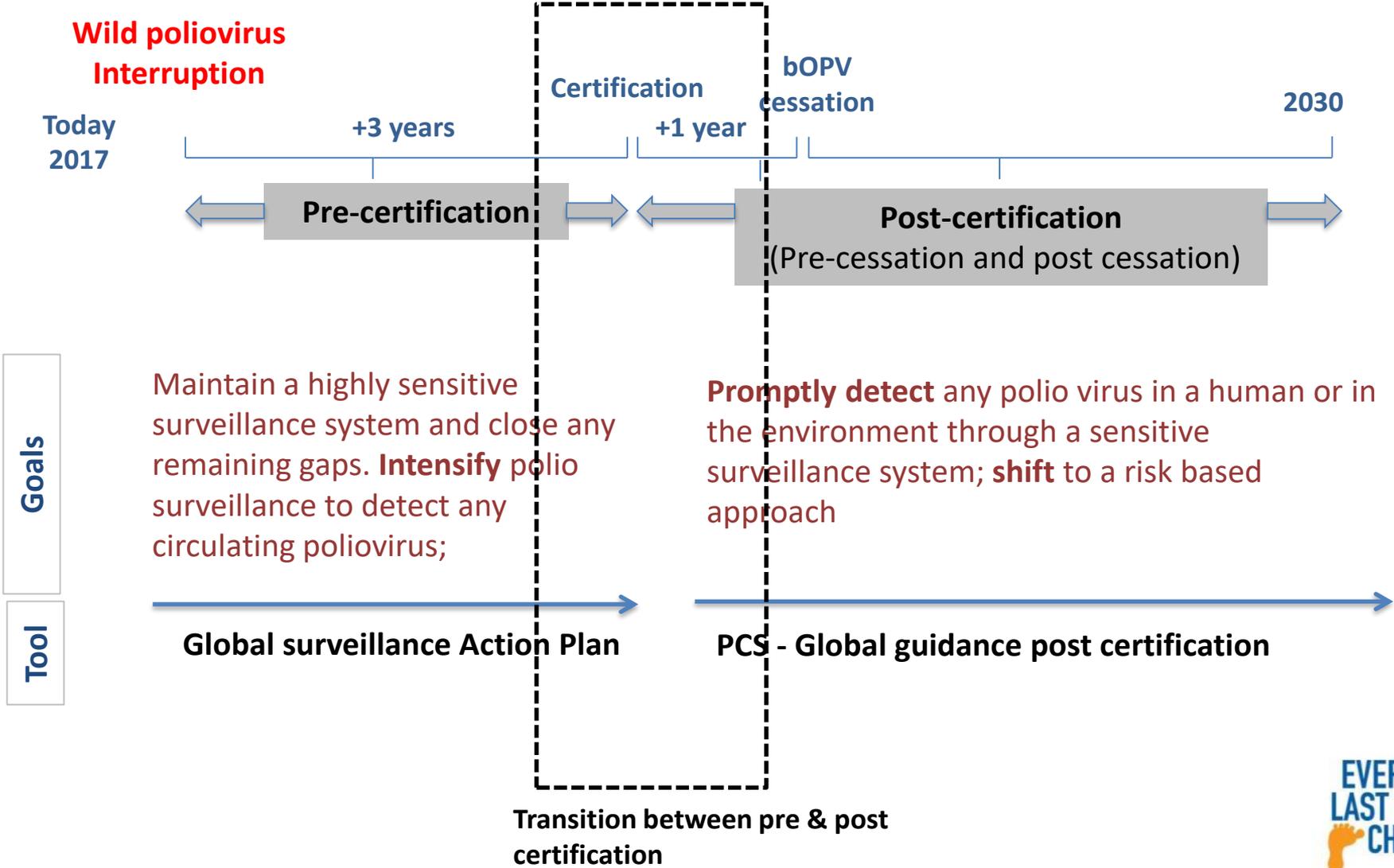
2-3 Nov 2017, London, UK

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Polio surveillance and the (bumpy) road to transition

Overall timeline for polio surveillance



What are the primary risks pre-post certification?



PRIMARY RISKS

Wild poliovirus circulation

VDPV emergence leading to cVDPV outbreaks

Spread from iVDPV cases to communities

Containment breach of WPV or Sabin

Post certification strategy (PCS)

– a risk based approach

Risk Classification Criteria

- Each of the 4 risks should be assessed independently
 - Release of poliovirus from polio-essential facilities (PEF)
 - Undetected transmission of a previously identified cVDPV
 - Emergence of cVDPV1 or 3 (bOPV use in RI)
 - Emergence of cVDPV2 (mOPV2 use for outbreak response)
- Final country classification will be done with RO to address risk more broadly e.g. neighbour's risks
- A single high-risk determination leads to a preliminary classification as a high-risk country
- Countries need to adopt a mix of surveillance strategies that address their risks

Table 1. Summary of Risk Categories and Criteria for Country Risk Classification

Risk Categories	Country Risk Classification			
	High Risk	Medium Risk	Low Risk	Negligible Risk
Poliovirus release from a poliovirus essential facility (PEF)	Vaccine manufacturing PEF located in a low-income country*	Vaccine manufacturing PEF located in a middle income country* AND most recent national IPVfinal ^a coverage <90% OR Laboratory PEF located in a low-income country*	Vaccine manufacturing PEF located in a high or middle income country* AND most recent national IPVfinal ^a coverage ≥90% OR Laboratory PEF located in a high or middle-income country*	Country with no PEFs
Undetected cVDPV^a transmission	Last cVDPV detected in the country was ≤ 5 years before certification	Last cVDPV detected in the country was 6-8 years before certification	Last cVDPV detected in the country was ≥9 years prior to certification	cVDPV was never detected in the country
Emergence of cVDPV1 or 3*: bOPV use in routine immunization	bOPV used in the 5 years prior to certification AND OPV3 coverage (5-year median): <65% in middle income country* OR <80% in low income country*	bOPV used in the 5 years prior to certification AND OPV3 coverage (5-year median): <80% in high income country * OR 65-79% in middle income country* OR 80-89% in low income country*	bOPV used in the 5 years prior to certification AND OPV3 coverage (5-year median): ≥80% in high or middle income country* OR ≥90% in low income country*	No bOPV used in the 5 years prior to certification
Emergence of cVDPV2*: mOPV2 use for outbreak response	Used mOPV2 in the 5 years prior to certification and IPVfinal ^a coverage (5-year median) <80%	Used mOPV2 in the 5 years prior to certification and IPVfinal ^a coverage (5-year median) 80-89%	Used mOPV2 in the 5 years prior to certification and IPVfinal ^a coverage (5-year median) >90%	No mOPV2 used prior to certification

*Country income according to World Bank classification of high-, middle- and low-income countries.

^aIPVfinal = last recommended IPV dose as part of the EPI routine immunization schedule. As of 2017 this is one dose but may include a second dose in the future.

*aVDPV to be treated as cVDPV when conducting the country risk classification.

What are the surveillance strategies & standards? (PCS)

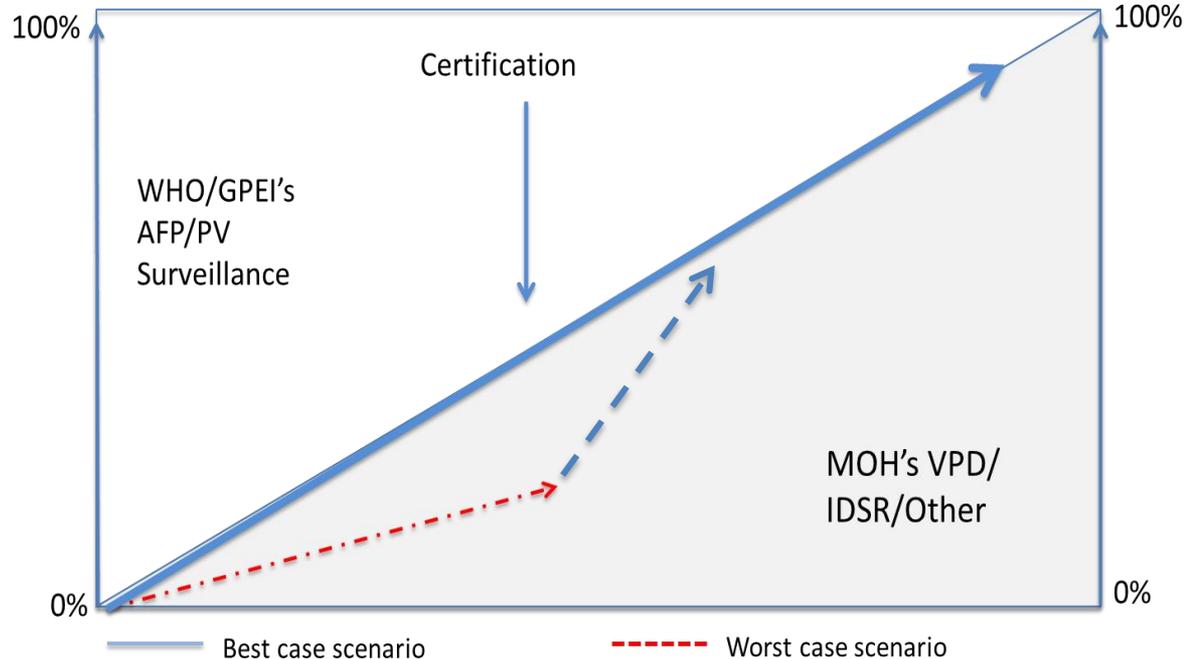
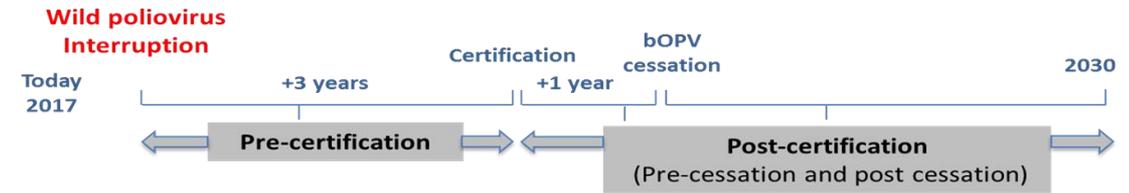
	Pre certification	Post certification
Primary risks	Wild poliovirus	cVDPV, iVDPV, containment breach
Strategies	<ul style="list-style-type: none"> AFP surveillance supplemented by ES <ul style="list-style-type: none"> Vertical active case-based surveillance; multiple facility & community reporting Additional supplementary surveillance to address high risk areas and pop GPLN PID surveillance (to initiate) 	<ul style="list-style-type: none"> Initial reliance on AFP surveillance but increasing reliance on ES; supplement with EBS <ul style="list-style-type: none"> Integrate w/ VPD surveillance; initial mix of active & passive AFP surveillance shifting to focus on sentinel sites & CBS; PID surveillance GPLN Community surveillance around PEFs
Surveillance Standards	<ul style="list-style-type: none"> Indicators as per GCC requirements (primarily based on NPAFP + stool adequacy rates); standards based on certified vs non-certified status lab indicators Process indicators 	<ul style="list-style-type: none"> A risk-based approach with standards designated by the risk of PV detection by category (e.g. WPV, cVDPV, iVDPV) Criteria for VDPV validation is pending AFP surveillance (NPAFP + stool adequacy rates) and ES standard will vary by time and risk.

How to transition - Overall plan

Short Term: Ensuring a high quality AFP/PV surveillance to reach global certification

Medium Term: Support smooth transition of surveillance functions from pre-certification to post certification phase through a guided and responsible way

Long Term: Road to the post certification integrated surveillance system owned and implemented by MOH



Some levels of integration already exist

- Some levels of integration are already in place in some countries, however;
 - It varies greatly within countries and regions
 - It relies mostly on the polio surveillance infrastructure
 - It is not standardised
- Countries that have been polio free for many years are more likely to have a more integrated Polio & VPD surveillance system e.g. Southern African countries
- Countries that are at high risks for polio outbreak or still endemic must be looked at carefully so that integration **does not jeopardise the polio eradication effort**

Example of India

Source: TIMB meeting, May 2017

- Gradual scaling down of NPSP polio operations; 30% by 2019 & 50% by 2021; reduce liabilities
- 2017-2022: Phase 1: capacity building; Immunisation, NTDs, IDSP and Malaria
- 2022-2026: Phase 2: continue TA for Immunisation, IDSP & Malaria
- Discussion with donors: GOI, BMGF, Global fund, US CDC, GAVI, Sasakawa, USAID, DFID
- WHO to take additional responsibilities only if needed and demands are matched with adequate resources
- Investigation of AFP cases being transferred to Gov't; 35% in 2009 and 94% in 2016
- Polio laboratory costs (\$3 m/y) by GOI from Jan 2014 onwards
- Government to increase financing from current 10% (\$3/30m) to at least 40-50% (\$8-10/20m) by 2019

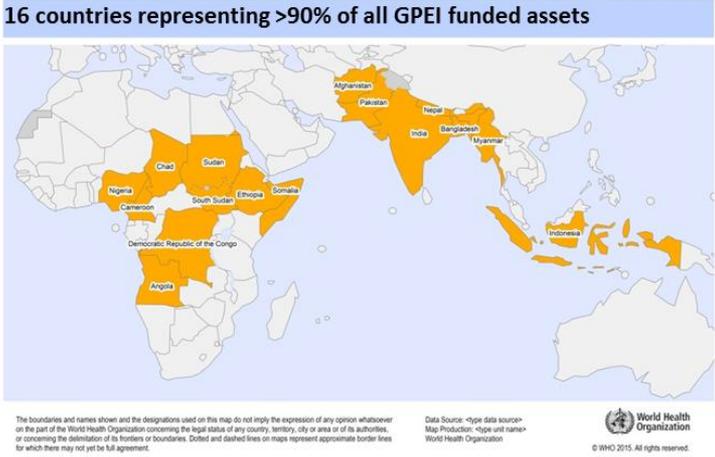
Costing & integration challenges

- The cost of current polio surveillance activities remain unclear,
 - This makes it difficult to forecast the cost for surveillance for pre and post certification
 - The program is currently developing a mechanisms to address this issue (bottom up budget and work plan)
- WHO costing model under development; looking at costs for integrated surveillance
 - It is still unclear if country alone will be able to bear the cost of polio surveillance post certification?
- Some countries have more than one surveillance systems looking at the same disease to monitor different objectives;
 - IDSR allows for outbreak detection, but might be challenging to drive vaccine policy/program decisions (IVB experience)

WHO's guidance to country offices

(work in progress)

- Countries must retain adequate resources for surveillance functions despite the ramp down
- WHO's Polio surveillance structure model (PSM) provides guidance to WHO COs based on
 - A concept of Surveillance & laboratory support unit (per population)
 - 2 steps approach: (1) Global standard & costing , (2) country specific plan
 - Considerations such as pop density, <15 population, geography, risk assessment, conflicts, outbreaks, country capacity,



Polio surveillance structure model (PSM)

A surveillance planning guidance to WHO country offices

2017

Example, Chad & Nigeria

	Chad (High risk-low capacity)	Nigeria (high risk-medium to high capacity)
Population density	11/sq. km	204 sq.km
<15 population	7 m	84 m
Number of provinces	18	37
Number of districts	61	774
Bas number of surveillance units	7	84
Risk scores	5	3
Proposed number of surveillance units	17	90
Proposed personnel	17 surveillance officer, 34 field assistants, 2 support staffs = 53	90 surveillance officer, 180 field assistants, 9 support staffs = 278
Existing personnel	45 Surveillance officer, 0 field assistants, 8 support staffs = 53	194 surveillance officer, 505 field assistants, 130 support staffs = 829

- Global guidance on surveillance standards are available;
 - Country specific surveillance guidelines and Outbreak SOPs (available)
 - IVB surveillance standards (updating now)
 - Global Action Plan for Surveillance, PCS and PSM under development
- Transition must be planned in a guided and responsible manner;
 - so as not to compromise our main goal: Global certification
- To ensure polio surveillance post certification through;
 - Engaging partners (GAVI, IVB, MRI, country programs, etc.) in discussing what requires for integration of VPD surveillance system post certification;
- Surveillance functions and financing to be transitioned;
 - Surveillance functions and financing are transitioned to the integrated surveillance system of the MOH