Report from the Polio WG Meeting (12-13 September, 2017)

Dr.Yagob Al-Mazrou
Chair, SAGE Polio Working Group
17 October, 2017

World Health Organization

Report from the Polio WG

- Background
- Issues and WG Conclusion
- Proposed Recommendations by SAGE

Background: SAGE Recommendations in April 2017

2017, 92, 301–320 No 22

World Health Organization
Organisation mondiale de la Santé

Weekly epidemiological record
Relevé épidémiologique hebdomadaire

2 JUNE 2017, 92th YEAR / 2 JUIN 2017, 92e ANNÉE
No 22, 2017, 92, 301–320
http://www.who.int/wer

Contents

301 Meeting of the Strategic Advisory Group of Experts on immunization, April 2017 – conclusions and recommendations

Sommaire

301 Réunion du Groupe stratégique consultatif d'experts sur la vaccination, avril 2017 – conclusions et recommandations

Meeting of the Strategic Advisory Group of Experts on immunization, April 2017 – conclusions and recommendations

The Strategic Advisory Group of Experts on immunization (SAGE)[1] met on 25–27 April 2017. This report summarizes the discussions, conclusions and recommendations.[2]

Report from the WHO Department of Immunization, Vaccines and Biologicals

The report focused on acceleration of global and regional implementation of the Global Vaccine Action Plan (GVAP), the positioning of immunization in global health agendas, and the way forward.

The October 2016 midterm review of the GVAP acknowledged the progress made, but noted that it was too slow to achieve the goals of the Decade of Vaccines.[3] In 2015, 86% of infants worldwide (116.1 million) received 3 doses of diphtheria, tetanus and pertussis containing vaccine (DTP). However, to achieve universal coverage, 13.5 million unvaccinated children must be reached annually and an additional 6 million incompletely vaccinated children must complete the schedule. Access and missed opportunities for vaccination remain challenging in low, middle and high income countries.

Led by the WHO African Regional Office (AFRO), the Reaching Every District (RED)

Réunion du Groupe stratégique consultatif d'experts sur la vaccination, avril 2017 – conclusions et recommandations

Le Groupe stratégique consultatif d'experts (SAGE) sur la vaccination[1] s'est réuni du 25 au 27 avril 2017. Le présent rapport résume les discussions, conclusions et recommandations auxquelles il est parvenu.[2]

Rapport du Département Vaccination, vaccins et produits biologiques de l'OMS

Ce rapport porte sur l'accélération de la mise en œuvre à l'échelle mondiale et régionale du Plan d'action mondial pour les vaccins (GVAP), le positionnement de la vaccination dans les programmes mondiaux d'action sanitaire et les prochaines étapes.

L'évaluation à mi-parcours du GVAP, réalisée en octobre 2016, a reconnu les progrès accomplis tout en soulignant que la réalisation des objectifs de la Décennie de la vaccination demeurait trop lente.[3] En 2015, 86% des nourrissons dans le monde (116,1 millions) ont reçu 3 doses du vaccin contre la diphtérie, le tétanos et la coqueluche (DTC). Néanmoins, pour parvenir à une couverture universelle, 13,5 millions d'enfants non vaccinés doivent recevoir leurs doses de vaccin chaque année et les 6 millions d'enfants partiellement vaccinés doivent recevoir les doses manquantes afin de respecter le calendrier vaccinal. L'accès à la vaccination et les occasions manquées restent problématiques dans les pays à revenu faible, intermédiaire et élevé.

La stratégie «Atteindre chaque district», menée par le Bureau régional OMS de l'Afrique

[1] See http://www.who.int/immunization/sage/en/index.html, accessed April 2017.

[2] Presentations and background materials used for the SAGE meeting together with the list of SAGE members and summarized declarations of interests are available at http://www.who.int/immunization/sage/meetings/2017/april/en/index.html, accessed April 2017.

[3] See 2016 midterm review of the Global vaccine action plan. Available at http://www.who.int/immunization/global_vaccine_action_plan/SAGE_GVAP_Assessment_Report_2016_EN.pdf?ua=1, accessed April 2017.

[1] Voir http://www.who.int/immunization/sage/en/index.html, consulté en avril 2017.

[2] Les communications et les documents de travail utilisés pour la réunion du SAGE, ainsi que la liste des membres du SAGE et une synthèse de leurs déclarations d'intérêts sont disponibles à l'adresse http://www.who.int/immunization/sage/meetings/2017/april/en/index.html, consulté en avril 2017.

[3] Voir l'évaluation à mi-parcours 2016 du Plan d'action mondial pour les vaccins. Disponible à l'adresse http://www.who.int/immunization/global_vaccine_action_plan/SAGE_GVAP_Assessment_Report_2016_EN.pdf?ua=1, consulté en avril 2017.

301

WORLD HEALTH ORGANIZATION Geneva
ORGANISATION MONDIALE DE LA SANTÉ Genève

Annual subscription / Abonnement annuel
Sw. fr. / Fr. s. 346.–
06.2017
ISSN 0049-8114
Printed in Switzerland

- Regional and national immunization technical advisory groups should recommend 2 fractional IPV doses in national routine immunization schedules, where feasible and available IPV supply should be prioritized for use in routine immunization
- WHO review its tier classification of countries with respect to prioritization of IPV to take into account the size of the population with no IPV protection and the recent VDPV2 events.
- After global OPV withdrawal, countries should include at least 2 doses of IPV, the first at or after 14 and the second dose ≥4 months after the first dose, administered either as full or fractional doses, at least for 10 years after the OPV withdrawal*

* Countries with PEFs should continue to use IPV as long as mandated by the Global Action Plan

World Health Organization

Background: Polio WG Discussions

Following up on the SAGE recommendations, the WG met on 12-13 September 2017 to:

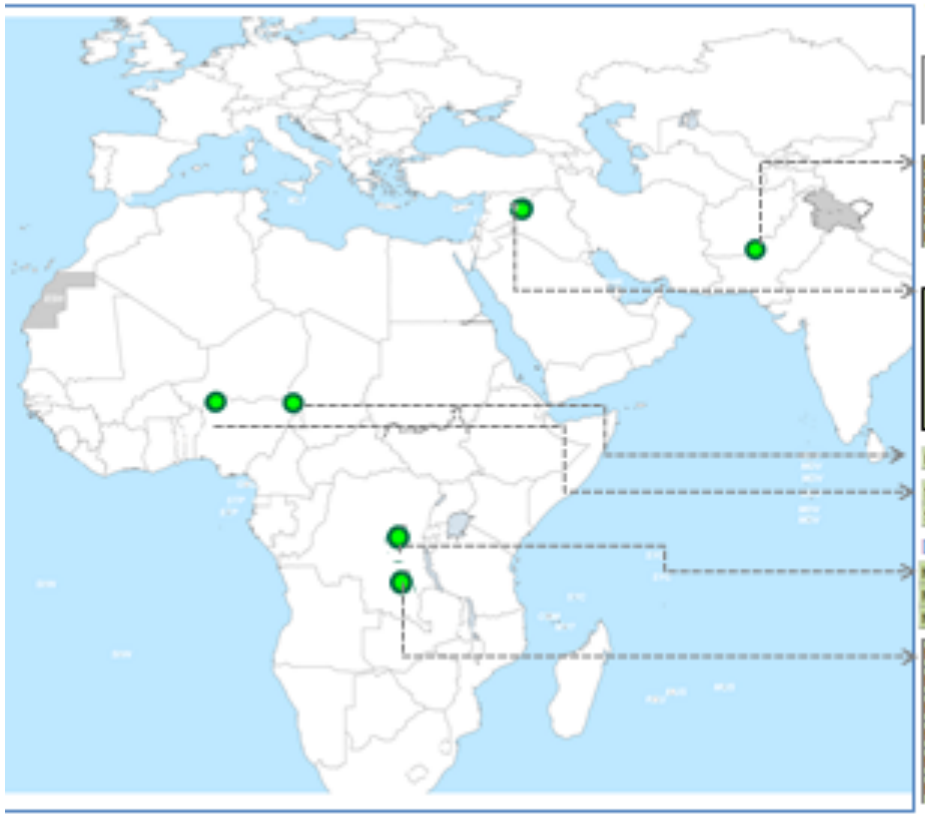
- Review the Global Polio Eradication Initiative (GPEI) progress and update, including VDPV epidemiology and IPV supply situation
- Develop a recommendation on IPV catch-up
- Start discussion on “readiness criteria” for eventual bOPV withdrawal

Report from the Polio WG

- Background
- Issues and WG Conclusion
  - Type 2 VDPV epidemiology and type 1,3 risk assessment
  - Introduction of IPV in the routine immunization
  - Readiness criteria for full OPV withdrawal
  - Resource requirements
- Proposed Recommendations by SAGE

Circulating-VDPV2 After OPV2 Withdrawal

Post switch* cVDPV2 outbreaks



Total of 6 post-switch cVDPV type2 outbreaks in 4 countries

Province	District	Surv. type	Date (collection /onset)	NT change
Pakistan (1)				
[redacted]	[redacted]	AFP	[redacted]	[redacted]
[redacted]	[redacted]	ENV	[redacted]	[redacted]
[redacted]	[redacted]	ENV	[redacted]	[redacted]
[redacted]	[redacted]	ENV	[redacted]	[redacted]
[redacted]	[redacted]	ENV	[redacted]	[redacted]
Syria (1)				
59 positives from AFP – onsets from 5 March to 10 July (57 in Deir_Al_Zour, 1 in Raqua, 1 in Homs governorates) 51 positives from contact sampling (29 in Mayadeen, 1 in Talabyad and 1 in Bokamal)				
Nigeria (2)				
BORNO	MONGUNO	Contact	26-Aug-2016	37
SOKOTO	BODINGA	Contact	24-Nov-2016	17
SOKOTO	BODINGA	AFP	28-Oct-2016	12
DRC (2)				
MANIEMA	KINDU	Contact	02-May-2017	9
MANIEMA	KUNDA	AFP	18-Apr-2017	7
MANIEMA	KINDU	AFP	26-Mar-2017	7
HAUT LOMAMI	MUKANDA	AFP	05 Jun 2017	19
HAUT LOMAMI	BUTUMBA	AFP	07 Apr 2017	15
HAUT LOMAMI	BUTUMBA	AFP	05 Mar 2017	16
HAUT LOMAMI	MUKANDA	AFP	15 Jun 2017	14
HAUT LOMAMI	MALEMBA-NKULU	AFP	20 Feb 2017	15
HAUT LOMAMI	MUKANDA	AFP	20 Jun 2017	18

cVDPV2 outbreak (total 6 outbreaks)

Post-switch SIA containing mOPV2 vaccine was conducted or is planned.

*Switch date: 01 May 2016

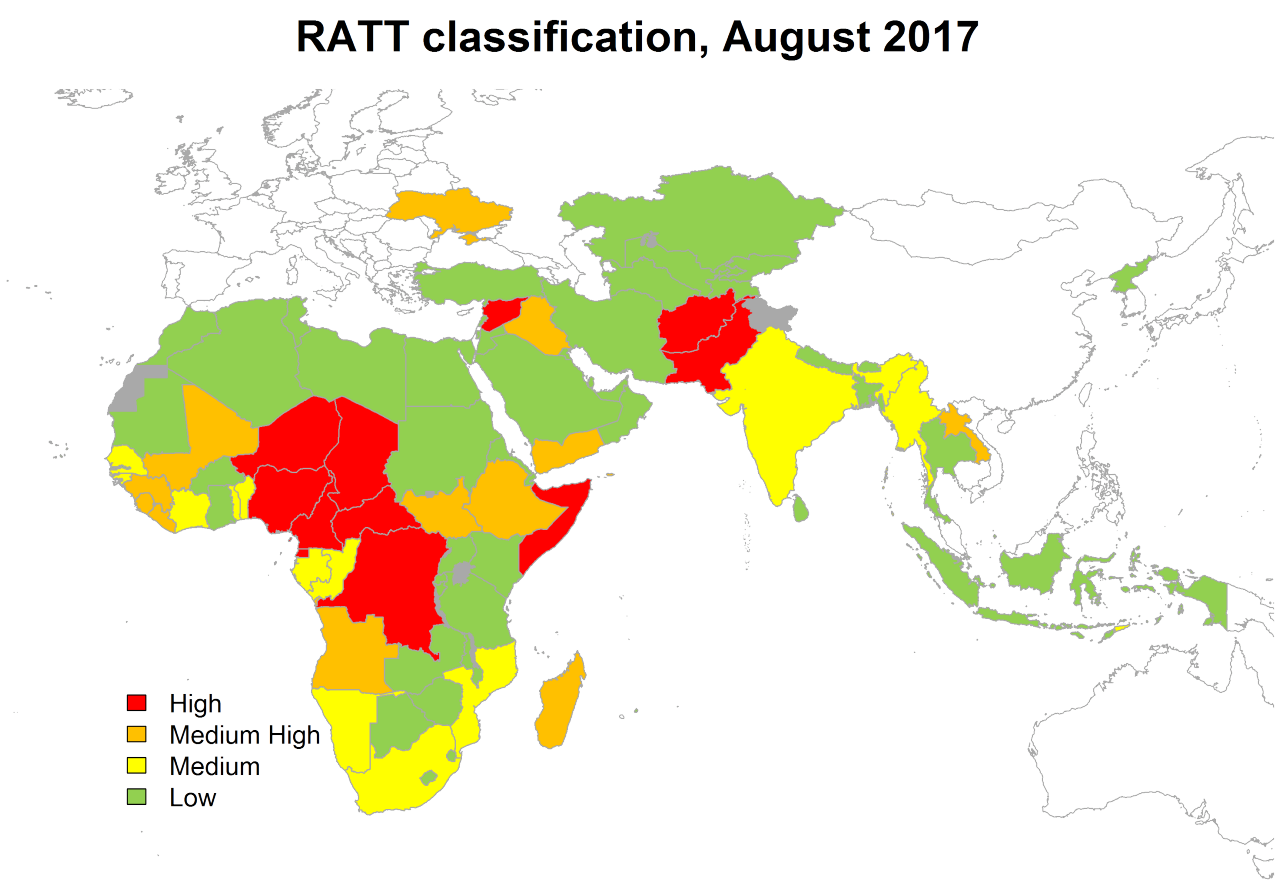
Data in WHO HQ as of 5 Sep. 2017

- Since the tOPV-bOPV switch in April 2016, the Sabin viruses in most OPV-using countries have disappeared
- 6 post-switch cVDPV2 outbreaks occurred in four countries (i.e. Pakistan, Syria, Nigeria, and DRC) with most cases in hard-to-reach population
- So far no international spread of cVDPV2 viruses has been documented.

X At least one cVDPV2 reported per given month

World Health Organization

Risk Assessment for bOPV Cessation



- GPEI Risk Assessment Task Team (RATT) assess the risk toward WPV1 and developed a SIA options before the OPV cessation
- While the risk of cVDPV 1,3 emergence may be lower than cVDPV2, some countries/areas may benefit from maintenance/additional SIAs before global OPV withdrawal

X At least one cVDPV2 reported per given month

World Health Organization

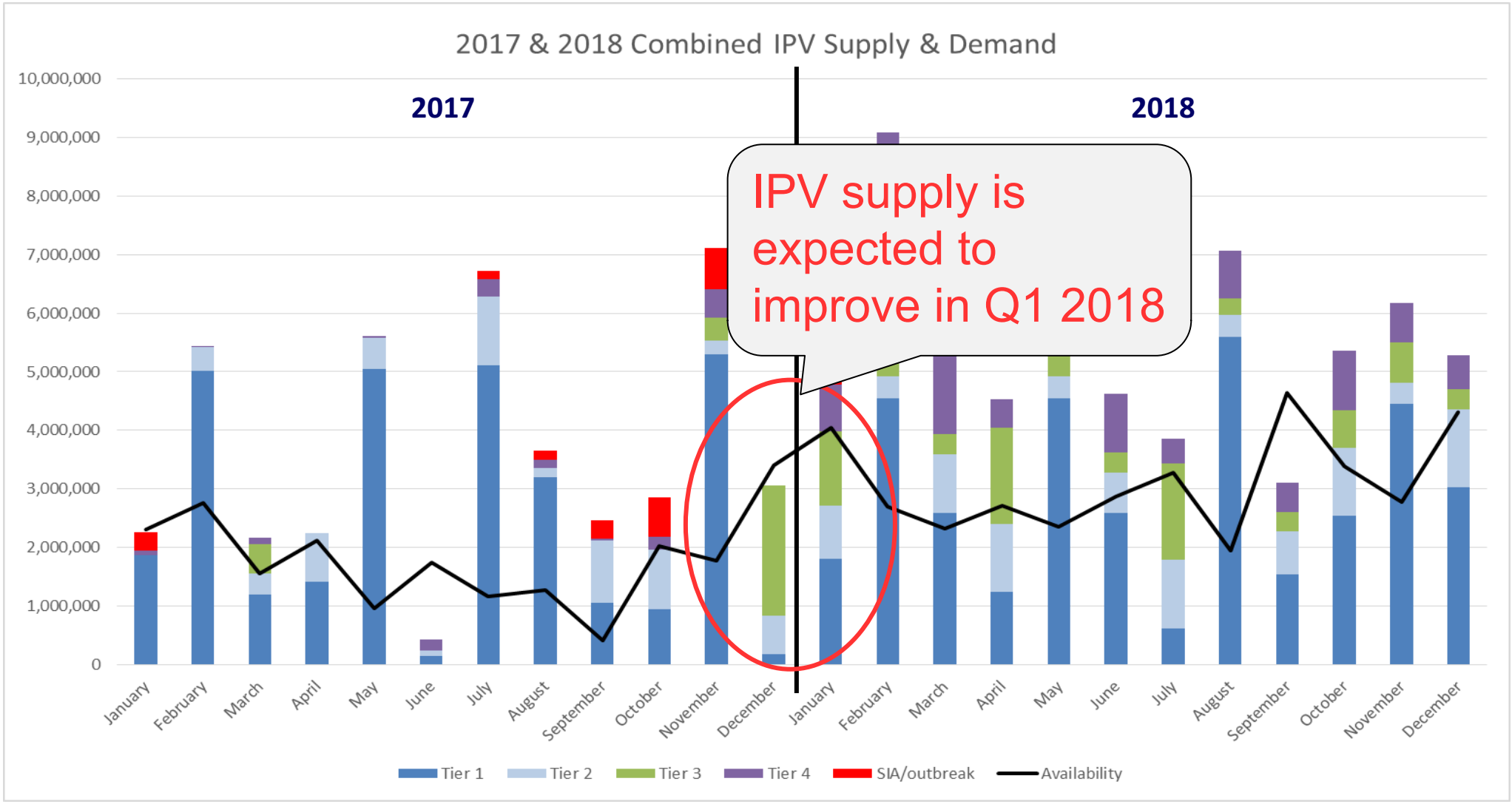
cVDPV2 Epidemiology: WG Conclusion

- In the context of declining population immunity against type 2, the WG highlighted its previous recommendation that countries with co-circulation of WPV and cVDPV2 should administer at least 2 doses of mOPV2 before the next bOPV round.
- The WG acknowledged progress towards controlling the cVDPV2 outbreak in Syria but noted serious access and security issues which must be overcome.
- The WG reaffirmed its previous (October 2016) recommendation that countries should maintain high population immunity against types 1 and 3, especially in high risk countries and sub-national high risk populations, until bOPV cessation.

Report from the Polio WG

- Background
- Issues and WG Conclusion
  - Type 2 VDPV epidemiology and type 1,3 risk assessment
  - Introduction of IPV in the routine immunization
  - Readiness criteria for full OPV withdrawal
  - Resource requirements
- Proposed Recommendations by SAGE

IPV supply and demand for 2017 & 2018



World Health Organization

Grading of Risk in Tier 3 and 4 Countries

	Susceptibility	Transmission	Exposure	iVDPV	Total score from 12 (weighting susceptibility x3)
Iran	2	0	2	2	10
Egypt	2	0	2	1	9
Sudan	2	1	1	0	8
Côte d'					
Burkina					
Burund					
Senega					
Eritrea					
Nepal					
Sierra L					
Guinea					
Tajikist					
Turkme					

	Susceptibility score	Transmission score	Exposure score	iVDPV score	Total score from 12 (weighting susceptibility x3)
Tanzania	2	1	2	0	9
Viet Nam	2	0	1	0	7
Ghana	1	1	2	0	6
Rwanda	1	1	2	0	6
Togo	1	1	2	0	6
Zambia	1	1	1	0	5
Malawi	1	1	1	0	5
Zimbabwe	1	1	0	0	4
Uzbekistan	1	1	0	0	4
DPR Korea	1	0	0	0	3

- Following the last SAGE recommendation, WHO worked with Imperial College to grade the risk in Tier 3 and 4 countries based on risks for susceptibility, transmission, exposure and iVDPV prevalence)
- A few countries are identified as high risk (e.g. Iran, Egypt, Sudan in Tier 3 and Tanzania and Vietnam in Tier 4), which will be prioritized in IPV supply

World Health Organization

Fractional Dose IPV Implementation

- **Routine Immunization (2 fIPV at 6 and 14 weeks)**
  - **SEARO**
    - Rolled out nationally in **India** and **Sri Lanka** (19% of global cohort)
    - **Bangladesh** Q4 2017, **Nepal** for Q1 2018 (3% of global cohort)
  - **PAHO**
    - PAHO TAG recommended 14 countries to implement a 2 fractional dose sequential schedule (represent 6% of global cohort)
    - **Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras Nicaragua** are conducting trainings for fIPV use
    - Discussions underway with other regions (AFRO, EMRO)
- **SIAs in small geographical areas**
  - India, Pakistan in response to VDPV2 detections

Some countries asked whether they can adopt post certification schedule now (i.e. two fIPV at 4 months and 9 or 12 months)

IPV Introduction: WG Conclusion (1/2)

- The WG endorsed the proposed approach to prioritize IPV allocation for the IPV introduction in tier 3 and 4 countries, based on the presented risk ranking
- Due to the supply constraints, the WG agreed that low-risk bOPV-using countries may currently adopt two fIPV, but not two full doses, with the first dose at or after 14 weeks, and the second dose at least 4 months after the first dose. In such cases, countries should continue bOPV in their routine schedule.

IPV Introduction: WG Conclusion (2/2)

- The WG recommended that countries should provide one full dose or two fIPV doses for children in countries which delayed the introduction of IPV or had stock out due to supply shortage as soon as supply becomes available, with the following guidelines
  - IPV supply for catch-up should be allocated based on risk and readiness
  - The decision on whether to provide catch up via routine or campaign should be made based on the cost and expected increase in coverage.

Report from the Polio WG

- Background
- Issues and WG Conclusion
  - Type 2 VDPV epidemiology and type 1,3 risk assessment
  - Introduction of IPV in the routine immunization
  - Readiness criteria for full OPV withdrawal
  - Resource requirements
- Proposed Recommendations by SAGE

Readiness Criteria for Full OPV withdrawal: Background

- Previously, SAGE defined the trigger point and readiness criteria for OPV2 withdrawal (October 2014), including:

  Trigger points: absence of persistent cVDPV2

  Readiness criteria

  - Introduction of at least one dose of IPV vaccine in all countries;
  - Licensure of bOPV for routine immunization;
  - Establishment of a global stockpile of mOPV2 vaccine and protocols for its use;
  - Appropriate containment and handling of poliovirus type 2 infectious and potentially infectious materials;
  - Verification of eradication of wild poliovirus type 2 globally

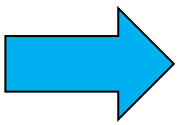
- While some of these criteria were met, others were not met (e.g. IPV introduction in all countries, absence of persistent cVDPV2).

Proposed Trigger and Readiness Criteria

Trigger: Wild poliovirus serotypes 1 and 3 eradication certified by GCC

Readiness criteria

- Adequate population immunity, especially in high-risk communities
- No poliovirus type 2 outside of containment
- No persistent cVDPV1 or 3 circulation (circulation beyond the six months after the first notification)
- Availability of sufficient IPV supply for all countries to adopt two IPV dose schedule (either IM or ID)



WG agreed on the principle of trigger plus readiness criteria and it will continue discussion on the details further in future meetings

Readiness Criteria for Full OPV withdrawal: WG Conclusion

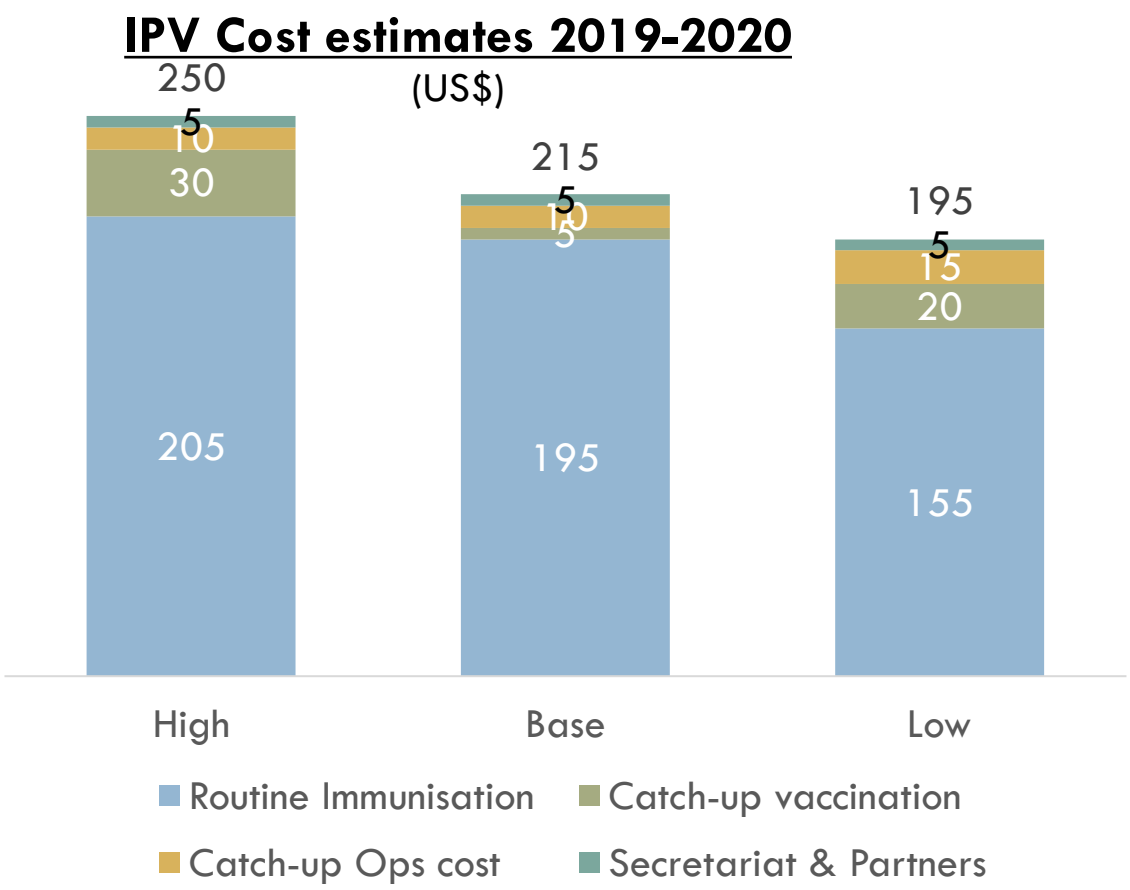
- The WG endorsed the concept of developing trigger and readiness criteria for bOPV withdrawal. It proposes to continue the discussion over the next 12-18 months.

- For the next WG meeting, it requested the secretariat to
  - Revise the trigger and readiness criteria, based on the WG discussions and inputs from stakeholders
  - Summarize the risk assessment and surveillance quality in different countries

Report from the Polio WG

- Background
- Issues and WG Conclusion
  - Type 2 VDPV epidemiology and type 1,3 risk assessment
  - Introduction of IPV in the routine immunization
  - Readiness criteria for full OPV withdrawal
  - Resource requirements
- Proposed Recommendations by SAGE

Long-term Funding Policy for IPV



- Overall IPV cost is estimated to be US$ 195 – 250 million for 2019-20 with approximately US$ 90 million available
- GPEI is working on fundraising to cover the funding gap
- After 2020, the Gavi Board will discuss continued support for IPV post-eradication as part of the Vaccine Investment Strategy (VIS) discussion in 2018

WG emphasized the importance of securing adequate financial resources at national and international levels to sustain essential functions

World Health Organization

Report from the Polio WG

- Background
- Issues and WG Conclusion
- Proposed Recommendations by SAGE

Proposed SAGE Recommendations: (1/3)

Epidemiology of VDPV2 and risk assessment of type 1,3

- Given the waning mucosal immunity against type 2, countries with co-circulation of WPV and cVDPV2 should administer at least 2 doses of mOPV2 before the next bOPV round (Highlighting SAGE recommendation in April 2017)
- Countries should maintain high population immunity against types 1 and 3, especially in high risk countries and sub-national high risk populations, until bOPV cessation

IPV introduction

- When additional IPV supply becomes available to Tier 3 and 4 countries, IPV allocation should be prioritized, based on the risk grading

Proposed SAGE Recommendations: (2/3)

IPV introduction

- Low-risk bOPV-using countries may adopt a two fIPV schedule with the first dose at or after 14 weeks, and the second dose at least 4 months after the first dose, before the global OPV cessation. In such cases, countries should continue bOPV in their routine schedule

- Countries should provide one full dose or two fIPV doses for children in countries which delayed the introduction of IPV or had stock out due to supply shortage as soon as supply becomes available

Proposed SAGE Recommendations: (3/3)

Readiness criteria for full OPV withdrawal:

- Polio WG should further discuss a trigger and readiness criteria for bOPV withdrawal and present an updated draft in the next SAGE meeting in April 2018

Thank you very much!

World Health Organization