20-21 February | 2018

15th Meeting of the SAGE Polio Working Group

Conclusions and recommendations

Note for the Record

World Health Organization

Background

The 15th face-to-face meeting of the SAGE Polio Working Group (WG) was held on 20-21 February, 2018 at the World Health Organization HQ in Geneva, Switzerland.

Agenda and the List of Participants are attached as Annexes 1 and 2.

Dr. Ilesh Jani and Dr. Peter Figueroa co-chaired the meeting.

This note presents a summary of the discussions and recommendations.

Context and topics

1. To harmonize recommendations between SAGE and GAP III on post-eradication polio immunization schedule
2. To review and provide recommendation on VDPV outbreak response protocol
3. To review and provide recommendation/endorsement on proposed Polio Post-Certification Strategy
4. To hear from GCC on revised requirements for certification of poliovirus eradication and clarify, in this context, how vaccine derived polioviruses will be treated

Minutes of the meeting and SAGE WG recommendations

Programme update

The WG reviewed the global epidemiology of WPV (wild poliovirus) and circulating vaccine derived poliovirus type 2 (cVDPV2).

In 2017, 22 WPV1 cases were reported worldwide (14 in Afghanistan, 8 in Pakistan), compared to 37 in 2016 (13 in Afghanistan, 20 in Pakistan, 4 in Nigeria). As of 28 February 2018, 3 WPV1 cases were reported from Afghanistan, an increase from 1 case for the same time period in the previous year. Regarding cVDPV, 95 cases of cVDPV2 were reported in 2017 (74 in Syria, 21 in DRC). Nigeria has not reported any WPV or cVDPV cases since September and August 2016, respectively.

WPV1 continues to be consistently detected through environmental surveillance (ES) in Afghanistan and Pakistan indicating ongoing transmission. Specifically in Pakistan, despite the decrease in number of WPV1 cases from 2016 to 2017, the rate of WPV1 detection through ES increased from 12% to 16% during this period, with genetic divergence demonstrated between isolates indicating multiple chains of transmission. It should be noted that during this period sensitivity of ES in Pakistan has improved with an increase of 23% in number of sites (43 to 53) and 21% in number of samples taken (543 to 659).

VDPV2 outbreaks were detected in 5 countries since the switch (Nigeria, Pakistan, DRC, Syria and Somalia). It was clarified that all VDPV2 events/outbreaks except for an outbreak in the Maniema province of DRC were caused by VDPV2 viruses that originated prior to the switch from trivalent OPV (tOPV) to bivalent OPV (bOPV) in May 2016. The Maniema outbreak appears to be related to an unauthorized use of tOPV after the switch because in

Maniema the nucleotide difference of the cVDPVs from Sabin PV2 was between 7-9 nucleotide changes suggesting <1 year of circulation when detected.

The GPEI provided in-depth review of the progress towards poliovirus detection and interruption in the endemic countries Afghanistan/Pakistan which are considered as one epidemiological block, and outbreak countries Syria, DRC, Nigeria and Lake Chad, and Somalia. The WG was updated regarding ongoing challenges to achieving interruption in transmission, specifically:

- Lack of access due to violence particularly in Pakistan (where healthcare workers and security forces protecting them are deliberately targeted) and conflict in Afghanistan (where insecurity has resulted in chronic inaccessibility of children, including an estimated 23, 000 children in Kunar and Nangarhar provinces. Conflict has also resulted in high-risk mobile populations in Afghanistan (including 2 million returning Afghan refugees from Pakistan in 2018), and continues to affect Borno state in Nigeria (where an estimated 160,000 children remain unreached) and Syria.
- Changing political climate, particularly the upcoming elections in Pakistan could disrupt programmatic activities
- Lack of political commitment, including the ban imposed by the Government in Niger on immunization activities in Lake Chad Basin islands; and the declining political and financial commitment evident in Nigeria
- Low universal healthcare and routine immunization (RI) coverage, including pockets in northern Nigeria where reported RI coverage is as low as 3%
- Significant surveillance gaps, particularly in conflict affected areas in Nigeria and neighbouring Lake Chad Basin countries

WG decisions/recommendations

- The WG acknowledged the ongoing efforts of the GPEI and the progress achieved in WPV eradication. However, concerns were raised regarding challenges to interrupting transmission in 2018, particularly lack of access, supervision and monitoring and surveillance activities in conflict affected areas. In this regard the WG urged the GPEI to work closely with local actors with specific expertise in implementing innovative programmatic operations in conflict areas, including community based organizations, networks with female workers and female leaders, and local NGOs in order to attempt reaching inaccessible children in conflict areas
- The WG expressed concern over continuing WPV transmission in Pakistan and Afghanistan through the active corridors of transmission, as manifested through the continued detection of genetically divergent WPV1 detected in environmental samples in Pakistan and detection of orphan viruses in east Afghanistan. The WG recommended that the GPEI intensify vaccination activities to reach populations with low immunity to rapidly raise population immunity as a priority, and sustain this high level of population immunity which is the only way to interrupt the circulation of WPV in its last endemic zones
- The WG emphasized the importance of achieving high quality AFP surveillance in high-risk areas, including implementing innovative targeted strategies such as testing stool in healthy children leaving conflict areas (as was undertaken in Nigeria for approximately 300 children). The WG urged the GPEI to prioritize expanding environmental surveillance in high risk areas particularly in AFRO and EMRO, and

highlighted the importance of maintaining high quality AFP and environmental surveillance activities into the post-eradication era.

- The WG reaffirmed that the GPEI continue to monitor dynamic geopolitical situations and where possible ensure programmatic accountability
- The WG acknowledged the significant progress made in controlling the cVDPV2 outbreak in Syria and noted the ongoing discussions to determine whether additional subnational or national mOPV2 campaigns will be implemented in future. The WG noted that despite ongoing complexities significant improvement had been made particularly related to timeliness of specimen collection and transportation.
- The WG discussed the evident decrease in WPV1 cases in Pakistan despite consistent detection in environmental surveillance and the possibility of use of IPV to target high risk populations was raised.
- The WG highlighted the importance of reaching remaining pockets of under-immunized children particularly in mobile populations. Particular reference was made to a serosurvey undertaken in Pakistan which demonstrated improved poliovirus type 1 immunity in Killa Abdullah district (92%); despite the high overall immunity one possible explanation of WPV1 circulation is that pockets of immunity gaps (susceptibility) in the mobile population exist which help maintain WPV1 transmission.
- The WG suggested that the GPEI undertake and share in-depth analysis of AFP cases in endemic and outbreak countries, specifically the number of doses of vaccine received and of zero dose children.

Update on Poliovirus Containment

The WG was updated on progress in activities related to poliovirus containment. Currently 28 countries worldwide plan to host 91 Polio-Essential Facilities (PEFs); these countries account for 54% of the global birth cohort. The containment oversight structure and functions of key groups, containment reference documents and the process of certification of eradication and containment certification were presented. It was highlighted that:

- The Technical Report Series (TRS) 926 will be aligned with GAP III and endorsed by the Expert Committee on Biologic Standardization (ECBS) in October 2018
- GAP III was endorsed by the WHA in 2015, and that GAP III Containment Certification Scheme (CCS) supersedes Annex 4 of GAP III, which was endorsed by SAGE in 2016
- All PEFs will be certified through their National Authority for Containment (NAC) in consultation with the Global Commission for Certification (GCC) (through the process of obtaining Certificate of Participation (CP), Intermediate Certificate of Containment (ICC), and Certificate of Containment (CC)

Immunization Requirements for Countries with PEFs

At the request of the Containment Advisory Group (CAG), the WG reviewed the secondary safeguards in countries hosting PEFs, in order to align GAP III and SAGE recommendations on IPV schedule, vaccine coverage and geographical scope of vaccine coverage targets. The importance of reaching a consensus on this topic was emphasized as it was highlighted that countries hosting PEFs may be reluctant to submit their CP application due to uncertainty

regarding obligations included by statutory requirements as outlined in GAP III for population immunity.

The SAGE WG reviewed the proposal to harmonize the post-certification IPV schedule recommendation for all previously OPV- only using countries (including for countries hosting a PEF). The harmonized schedule includes a minimum of two doses of IPV (full dose or fractional dose) with the first dose administered at age 4 months and the second dose at least 4 months later [1]. The schedule should be implemented as soon as is feasible and no later than when all OPV is withdrawn which is anticipated ~2022. It was emphasized that IPV in RI is a risk mitigation strategy to prevent paralytic polio, and not expected to induce intestinal immunity. The WG recognized the trade-offs in the proposed schedule whereby immunity will be induced at 9 or 10 months (e.g. with only two-doses of IPV administered at 4 and 8 or 9 months of age with measles vaccine) rather than at 7 months (with previously recommended GAPIII three-dose schedule at 2, 4 and 6 months of age). And also the slight decrease in seroconversion with fractional-dose IPV (94%, 98%, 93% to PV1, 2, 3 respectively), compared to full dose (100% for all PV types) [2].

The WG reviewed the coverage requirements and proposed to require the same vaccination coverage for PEFs storing or manipulating Sabin/OPV and/or wild poliovirus. The WG further suggested that countries hosting PEFs need to achieve and document high population immunity against polioviruses in the commuting area of a PEF (area to include districts within a 100km commuting distance, and >90% vaccination coverage in this area), and recognized this may require cross-border collaboration. The WG proposed that countries hosting PEFs develop an outbreak plan specifying response to a containment breach, including the opportunity to conduct regular simulation exercises. The WG recognized that these recommendations will result in substantial changes in the secondary safeguards contained in GAP-III [3], and that countries hosting PEFs may require an appropriate transition period for implementation.

Risk Ranking of PEFs

On request from the Containment Working Group the SAGE WG reviewed the current approach to ranking PEFs for the risk to poliovirus eradication, with poliovirus 2 retention as the basis for risk. Key factors incorporated in ranking the risk of PEFs included: 1) Virus type - WPV or VPDV had greater risk than Sabin or OPV; 2) Virus content and volume level - high content and volume poliovirus materials had greater risk than low content and low volume; 3) Population immunity using WUNEIC POL3 coverage at national level - lower population immunity had greater risk 4) Force of infection (R0) - lower access to sanitation facilities as estimated through WASH surveys had greater risk; and, under discussion 5) Containment safeguards in place.

Each PEF will be assigned a risk rank score [high Rank 1 (≥15), med>Rank 2 (>5to<15), low Rank 3 (≤5)] with a higher rank score indicating higher risk to poliovirus eradication. The applicability of this risk ranking scheme will be to assist the programme in informing discussions of relative risk of one PEF compared to other PEFs. In addition, the risk rank will be incorporated into containment targets to be met by the time of certification of WPV

eradication. Lastly where necessary, the risk rank will be used to target country-specific advocacy efforts aimed at reducing the number of PEFs.

In addition, the SAGE WG was updated on development of a whole-cell pertussis Hexavalent vaccine containing IPV currently licensed for use in India. The available stock of this vaccine in the near future will be low for larger programmatic implementation and will likely be used predominantly in the private sector.

WG decision/recommendations

- The WG endorsed the proposal to harmonize the GAPIII and post-certification IPV schedules for countries hosting PEFs, and recommended the same schedule, coverage targets and geographical scope for vaccination target for PEFs storing or manipulating Sabin/OPV or WPV
- The WG recommended a routine schedule of 2 IPV doses (full or fractional dose) with the 1st dose administered at 4 months and the 2nd dose at an interval of at least 4 months after the 1st dose, and recommended achieving and maintaining high population immunity with at least ≥90% IPV2 coverage in infants in the area surrounding the PEF defined as within a 100km commutable distance from the PEF
- The WG recommended that beyond the immediate zone of 100km, the GVAP childhood vaccination target should be achieved and maintained (≥90% national coverage and ≥80% in every district or equivalent administrative unit with all vaccines in national programs, unless otherwise recommended)
- The WG endorsed the proposed change of the geographic scope of vaccination coverage target in the PEF area from nationwide to subnational level, or multi-national level for facilities near international borders
    - Recommended that vaccination coverage target be achieved in all districts within a minimum radius of 100km from the PEF, with acknowledgement this may require cross-border collaboration (particularly in Europe)
- The WG strongly urged that countries hosting PEFs have in place an outbreak plan specifying response to a containment breach and strongly urged simulation exercises be undertaken regularly (periodicity – annually) in the PEF hosting countries and their immediate neighbours
- The WG endorsed the risk ranking proposal proposed by the CWG to assign a risk score to each PEF, categorizing relative risk to polio eradication
- The WG understands that the decisions on implementation timeframes and alignment of these secondary safeguards in countries hosting PEFs with the application processes for CP, ICC, CC, will be decided by the containment oversight groups (i.e., GCC and CAG)
- The WG will review the status of hexavalent vaccine in 2018 which will be brought to SAGE WG discussions in September 2018, with affordable Hexavalent vaccine use anticipated in 2022-2025.

Polio Vaccine Supply Status

The WG reviewed the IPV supply situation presented by UNICEF Supply Division (SD). The WG was updated on the ongoing critical constraints in global IPV supply with availability for

the period 2014-2018 projected to be only 48% of contracted supply. In addition recent notification was received that 80% of IPV supply from one manufacturer will only be available in the 2nd half of 2018. Clarification was provided that of the reserve stock of 2M IPV doses set aside for outbreak response, only 1.1M doses will be available after factoring in planned SIAs administering IPV in Syria and Somalia. By April 2018, IPV will be available for the remaining 35 countries that are procuring the vaccine through UNICEF and that had been affected by the supply shortage (either they were not able to introduce the vaccine or they had to stop using it because of shortages). The UNICEF IPV tender for 2019-2022 has been concluded, with supply for catch up most likely to be available from 2020 onwards.

The WG reviewed the bOPV projections which based on supply offers received will be sufficient to meet demand through 2022. For 2018, additional awards were required to maintain a minimum buffer stock of +100M doses in April. Currently, no awards have been made for 2022 and additional awards will be made in April 2018 through to 2022 based on SIA plans for 2020 and beyond. The uncertainty of bOPV demand was highlighted which is due to the timing of interruption of WPV1 transmission. It was highlighted that an 18 month lead time will likely be required if there is a change in current plans which do not have pre-cessation campaigns, and therefore timely notification of additional bOPV SIAs prior to cessation will be imperative to secure sufficient supply.

WG decisions/recommendations

- The WG strongly recommended that countries receiving IPV should introduce it in a timely manner without delay
- The WG noted the efforts of UNICEF SD to manage the IPV supply, given the significant constraints
- The WG noted that the presented forecast may not take sufficiently into account IPV demands for outbreak response campaigns and from endemic countries for accelerating eradication
- In line with previous recommendations, the WG strongly endorsed the use of fIPV for catch up vaccinations of cohorts that had not received IPV because of supply shortages
- The WG discussed the role of IPV in outbreak response and agreed that its use should be determined on a case-by-case basis, and where IPV is deemed to be of benefit, fractional-dose IPV should be implemented
- The WG requested an update from PAHO countries. The WG noted the commitment of PAHO to introduce fractional-dose IPV, however due to supply constraints and limited availability of ID syringes in the context of large scale use in Brazil to fight a YF outbreak, intradermal IPV introduction may have to be delayed

Update from Cessation Risk Task Team (CRTT)

The WG reviewed the outcome of the CRTT meeting that was held in Geneva on February 1-2, 2018. As part of this update, epidemiological analysis of VDPV2 events and outbreaks since the switch from tOPV to bOPV was presented and compared with the modelling projections that had been carried out prior to the switch. There were 7 cVDPV2 outbreaks, 27 aVDPV events and 9 iVDPV cases reported in the 2 years following the switch. Although more outbreaks and events occurred in the first year post switch than was forecasted, the

WG noted that the forecast was made in advance of ES expansion and did not encompass post-switch VDPVs, particularly aVDPVs following mOPV2 use.

It was highlighted that all VDPV2 outbreaks have been in high risk areas with known low RI coverage and insufficient quality of pre-cessation tOPV use; furthermore only one outbreak had spread beyond the initial area of response (Haut Lomami to Tanganyika, DRC). The CRTT advised that the GPEI remain vigilant for new emergences particularly in areas of poor surveillance performance, and that although the risk of emergence would decrease, the risk for spread would increase over time due to declining mucosal immunity.

The CRTT proposed consideration for nation-wide mOPV2 SIA in Syria, due to the risk of ongoing cVDPV2 circulation outweighing concerns over mOPV2 exposure. The role of the mOPV Advisory Group to undertake ongoing qualitative assessment for new emergences on a case-by-case basis was supported by the CRTT. Lastly the CRTT presented analysis on the benefit of an IPV strategy for cVDPV outbreak control. The group did not change its position on regarding the role of IPV use in cVDPV2 outbreak response. mOPV2 should be the primary response tool. The scope and number of mOPV2 campaigns should be appropriate for the outbreak, and should not be influenced by IPV use. IPV may prevent paralysis and, among OPV2 recipients, boost mucosal immunity. There was no consensus on whether these benefits could justify IPV use. However, IPV is not effective for outbreak control when used outside of the mOPV2 response region or as a supplement to mOPV2 SIAs that are either low quality or of insufficient scope. The EOMG should not approve requests for IPV unless well-justified by epidemiologic or contextual need.

The CRTT supported a similar approach for bOPV cessation to the strategy implemented for the switch from tOPV to bOPV, with critical aspects being global synchronization, high population immunity prior to bOPV withdrawal, and intensification of surveillance to rapidly detect and respond to emerging VDPVs. The suggestion was made for SIAs to maintain high population immunity to types 1 and 3 (rather than intensification of SIAs prior to withdrawal).

The WG noted the conclusions from the CRTT meeting.

Update on cVDPV2 outbreaks and Outbreak Response Protocol Standard Operating Procedures (SOPs)

The WG was updated on the incidence of VDPV2 events and outbreaks as well as detection of Sabin-Like 2 post switch. The types of mOPV2 response were presented including the use of mOPV2 as a preventive measure (Lake Chad) versus response to an event (Mozambique) versus for outbreak response (DRC, Syria).

In the majority of outbreaks, mOPV2 was received in-country within the recommended 7 days (the exception being Syria where complex logistical challenges were faced due to active conflict). In ~50% of outbreaks, the 1st SIA was implemented within the recommended timeframe of 14 days from outbreak confirmation (the exceptions being DRC, Syria, and Somalia). The WG noted that mop-up activities were carried out in DRC, with no subsequent breakthrough VDPV event to date. The use of IPV in outbreak response has been limited

with implementation in Quetta, Borno, Sokoto, Syria; (and approval for use in Somalia). The WG noted that so far there was no evidence to support the emergence of new cVPDV2 outbreaks following mOPV2 use although aVDPV2 have been detected in ES after mOPV2 SIA.

Guidance was requested from the WG on future revisions to the Outbreak Response Protocol Standard Operating Procedures (SoPs); the revisions will be incorporated in the next version of the SoPs.

WG decisions/recommendations

- The WG suggested outlining the definition for high SIA quality/coverage in the protocol or annexes
- The WG recommended implementation of a high quality timely outbreak response within 14 days of notification. The geographic scope may be of smaller scale encompassing the epicenter of the outbreak zone; this immediate response will be in addition to, and followed by the timely implementation of high quality SIAs as recommended in the current outbreak response protocol (round 1 within 28 days; round 2 within 6 weeks; mop-up in poorly performing areas within 3 months after date of notification)
- The WG recommended the inclusion of the concept of ***"sentinel event"*** as part of the broader risk assessment for any event or outbreak:
    - A "sentinel event" may be any event in an outbreak or contiguous area, suggesting the presence of lower population immunity or increased polio risk for related or unrelated reasons. Examples include: 1. Appearance of vaccine-preventable disease cases or outbreak (e.g. measles, diphtheria, VDPV of any vaccine type) which suggests low routine immunization performance 2. Ongoing or rapid movement of under immunized populations 3. Detection of Sabin-like (SL) virus in the absence of related OPV use (eg. SL 2 in absence of mOPV2 use).
    - The WG strongly recommended that every sentinel event should be investigated and assessed, and included in the risk assessment of any emergent event or outbreak, with consideration for implementation of a timely high quality polio immunization response (strengthening of routine immunization or campaign, where relevant and appropriate)
- The WG supported the information gathering exercise undertaken in AFRO to assess country feasibility for implementation of fractional-dose IPV and anticipated the sharing of this information

New OPV (nOPV2) update

The WG was updated on development of novel live OPV vaccine (nOPV) which would retain its mucosal immunogenicity but would not be able to revert to neurovirulent form. Two nOPV2 candidate strains are in Phase I human clinical study, and nOPV1 and nOPV3 candidate strains are in pre-clinical development. Preliminary results from the Phase I nOPV2 study were discussed including serology, viral shedding, assessment of phenotypic stability and genetic stability. The next steps and the clinical development timeline were outlined.

The WG reviewed the data and welcomed the progress in nOPV development.

Surveillance in security compromised areas

The importance of innovations, approaches and strategies to strengthen surveillance in security compromised areas was emphasized. It was highlighted that recent outbreaks occurred in security compromised areas of Nigeria, DRC, Syria, Somalia and Laos. The challenges in conducting surveillance in security compromised areas were presented including accuracy of data source, unknown population numerators and denominators.

The WG noted and welcomed the efforts made by the GPEI to maintain poliovirus surveillance in the security compromised areas.

Polio Post-Certification Strategy Document Review (PCS)

The WG reviewed the PCS and acknowledged its objective as a high level working document which aims to sensitize and guide member states and key stakeholders on the polio-essential functions required to sustain a polio-free world after global certification of WPV eradication and subsequent dissolution of GPEI. It was emphasized that as a high level document the PCS will not provide specific or detailed country level guidance.
The aim of the PCS is to serve as a roadmap to ensure that the oversight, infrastructure and funding is in place to 1) contain polioviruses, 2) protect populations from polio, and 3) retain capacity to detect and respond to any poliovirus event, in the post certification era.

The importance of engaging future stakeholders to develop the governance, implementation and resource mobilization plans, in order to take ownership of the PCS and carry it forward from the time of certification of WPV eradication was emphasized. Engaging key stakeholders occurred in 2017, during two rounds of extensive consultations which were undertaken, incorporating input from polio partners groups, major donors, GCC; SAGE, disease modelling groups, GAVI, smallpox focal point, and global groups including IHR, GVAP, non-polio donors, core NGO focal points and member states and other immunization stakeholders. Thereafter the PCS was endorsed by the Polio Oversight Board in January 2018.

The assumptions for the timeline of the PCS were presented, as were the specific goals, activities and expectations relating to each goal of the PCS. It was highlighted that the implementation elements (including governance, management and financial costs) are not included in the PCS as these will be developed, owned and updated by the stakeholders who will take over the responsibility for implementation of the essential functions post certification.

Further consultation with SAGE is planned for April 2018. After incorporating feedback from all stakeholders it is proposed that the PCS be submitted to the World Health Assembly (WHA) in May 2018.

WG decisions/recommendations

- The WG agreed in principle on the content and approach of the PCS document as a high level working document which aims to alert member states and other key stakeholders to the essential functions required to sustain a polio free world after certification of eradication
- The WG suggested that the PCS include a foreword, with a statement from high level stakeholders (signed by heads of agencies); emphasizing that the PCS remains a dynamic document; with a timeframe given for specific comments to be submitted within 2 weeks
- The WG agreed to have the document shared with SAGE in April 2018 for endorsement with a view to bring the PCS to the WHA in May 2018

Poliovirus certification

The role and responsibilities charged to the Global Commission for the Certification (GCC) of Polio Eradication by the DG of WHO were presented. Since its establishment the GCC has defined global polio eradication as the eradication of all WPV and specified that cases caused by vaccine viruses do not invalidate the achievement of the eradication of WPV. However the GCC recognized the full benefits of polio eradication would only be realized in the absence of VDPVs and therefore GCC will be discussing at its next meeting a proposal to update the criteria for certification of Wild Poliovirus Eradication which will also include pre-conditions related to VDPVs. Specifically, these preconditions are proposed to include absence of persistent polio disease due to cVDPV defined as:

- Detection of cVDPV2 from any population source in the previous 18 months; or
- Detection of cVDPV1 or 3 from any population source in the previous six months

In addition to pre-conditions relating to VDPVs, requirements for poliovirus containment will have to be met and linkage to the PCS will need to be maintained. The GCC meeting in February 2018 will further discuss and endorse this approach.

The WG was briefed that, at the request of GCC, there will be a discussion on how to maintain full understanding of groups other than GCC on certification.

Overview of scientific data and programmatic experience with intradermal fractional IPV (fIPV)

At a request of SAGE WG, this additional agenda item was added in order to potentially strengthen the recommendation on use of fIPV in routine immunizations, catch-up campaigns and outbreak response.

Data comparing humoral and intestinal immunogenicity of full and fractional IPV were presented with a conclusion that two doses of fIPV are superior to one full IPV dose; and that no safety signals were detected in relation to fIPV use. Different intradermal (ID) administration methods were presented with the conclusion that successful ID injection can be achieved with BCG needle as syringe as well as with needle-free injectors or needle adaptors; the latter two methods being preferred by the vaccinators.

Routine immunization and/or campaign experience from Pakistan, India and Sri Lanka with fIPV was generally positive.

Past SAGE recommendations were presented and the WG noted that SAGE has recommended fIPV on several occasions.

WG decisions/recommendations

- The WG emphasized that in principle, and given the continuing IPV supply constraints, the WG does not endorse use of IPV for outbreak response. However in specific instances, such as co-circulation of VDPV2 and WPV1 or in area with past mOPV2 use, IPV may be beneficial for outbreak response through boosting response (humoral and mucosal immunity) in individuals who are OPV vaccinated. In these cases, the WG strongly recommends to only use fractional-dose IPV. In this context high quality training of health workers for standard ID injection (using BCG needle and syringe [NS]) will be a priority; ID injection delivery using needle-free device or needle adaptors, when the device is WHO prequalified and available will be preferred

- The WG recommended that those countries that were willing to use fIPV in RI should be encouraged to do so given the global shortage of IPV.

References

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3. Organization WH. WHO Global Action Plan to minimize poliovirus facility-associated risk after type-specific eradication of wild polioviruses and sequential cessation of oral polio vaccine use. WHO Publication **2015**. DOI: http://polioeradication.org/wp-content/uploads/2016/12/GAPIII_2014.pdf

ANNEX 1: AGENDA

World Health Organization

15th Meeting of the SAGE Polio Working Group (WG)

M505, WHO, Geneva

February 20-21, 2018

AGENDA

Expected outcomes of the meeting:

1. To review and provide recommendation/endorsement on proposed Polio Post-Certification Strategy
2. To review and provide recommendation on VDPV outbreak response protocol
3. To initiate development of recommendations on criteria for certification of poliovirus eradication and clarify, in this context, how vaccine derived polioviruses will be treated
4. To harmonize recommendations between SAGE and GAP III on post-eradication polio immunization schedule

Day 1 (February 20)

09:00 - 09:15	Welcome and opening remarks	I. Jani & P. Figueroa WG co-Chairs
09:15 - 10:20	Programme update • Progress toward interruption of WPV and cVDPV2 • Progress with the other objectives of the Polio Eradication and Endgame strategic plan	M. Zaffran, WHO
10:20 - 10:40	**Coffee break**	
10:40 - 11:50	Update on poliovirus containment &	J. Fournier-Caruana, WHO
	harmonization of vaccination requirements	R. Sutter, WHO
	Poliovirus-essential facility (PEF) risk-ranking	J. Partridge, BMGF
11:50 - 12:00	IPV/OPV supply situation (Q&As on hand out)	I .Lewis, UNICEF
12:00 - 13:00	**Lunch**	

13:00 – 13:20	Update from Cessation Risk Task Team (CRTT)	J. Modlin
13:20 – 13:45	Update on cVDPV2 outbreaks & revisions of VDPV outbreak protocol	R. Lewis, WHO
13:45 – 14:45	Discussion	All
14:45 – 15:00	Update on new OPV development (brief update)	J. Modlin, BMGF
15:00 - 15:30	**Coffee Break**	
15:30 – 16:00	Addressing the challenges of surveillance in security-compromised areas	A. Anand, CDC
16:00 - 17:00	Discussion	All
19:00 -	Working dinner (Restaurant: Cafe du Soleil, Topic: Switch from bOPV to mOPV1: pros and cons)	

Day 2 (February 21)

9:00 – 9:30	Post-Certification Strategy	M. Zaffran, WHO
9:30 - 10:20	Poliovirus Certification – what we mean by it	D. Salisbury, Chair GCC
10:20 - 10:40	**Coffee break**	
10:40 -12:30	Discussion	
12:30 - 13:30	**Lunch break**	
13:00 - 16:00	Closed session: Finalizing WG recommendations (Continued; **Coffee break at 2pm)**	WG members WHO/UNICEF secretariat

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Background materials that will be shared with WG members at least 2 weeks prior to the meeting:

- Latest draft of the Post-Certification Strategy
- Revised protocol on response to VDPVs

ANNEX 2: List of Participants

List of Participants
15th Meeting of the SAGE Polio Working Group
20-21 February 2018
WHO-HQ, Salle M505

Polio SAGE Working Group Members	
Dr Yagob Al-Mazrou Secretary General Saudi Health Council Riyadh 12628 Saudi Arabia	tel: + 966-11-4579333 fax: + 966-11-4579361 yalmazrou@chs.gov.sa
Prof J. Peter Figueroa, **(CO-CHAIR)** Professor, Public Health, Epidemiology & AIDS Department of Community Health & Psychiatry University of the West Indies Mona Kingston 7 Jamaica	tel: +1 876-512-3542 fax: +1 876 977 6346 peter.figueroa10@gmail.com
Dr Jean-Marc Olivé Chair of the Technical Advisory Group (TAG) Horn of Africa, Lake Chad Region, Pakistan & Afghanistan	Tel: +33 648897389 jmjolive@gmail.com
Dr Nick Grassly Imperial College London St Mary's Campus, Norfolk Place London W2 1PG United Kingdom	tel: +44 20 7594 3264 n.grassly@imperial.ac.uk
Dr Jacob John Thekkekara Advisor, Christian Medical College Hospital 439 Civil Supplies Godown Lane Kamalakshipuram TN 632 002 Vellore India	tel: +44 20 7594 3264 fax: +91 416 223 2035 tjacobjohn@yahoo.co.in
Dr Guillaume Chabot-Couture Sr. Research Manager, IDM, Seattle, USA	gcouture@intven.com

Dr Shelley Deeks Chief, Communicable Diseases, Emergency Preparedness and Response Public Health Ontario Toronto Canada	Shelley.deeks@oahpp.ca Tel: 1 647 260 7417
Dr Walter Orenstein Associate Director Emory Vaccine Center Room 446, Dental School Building Mailstop 1370/004/1AD 1462 Clifton Road, NE Atlanta GA 30322 United States of America	tel: +1 404 712 2466 fax: +1 404 712 2557 worenst@emory.edu
Professor Jeffrey Mphahlele Vice President for Research South African Medical Research Council Pretoria South Africa	jeffrey.mphahlele@mrc.ac.za
Dr Khalequ Zaman Scientist and Epidemiologist International Centre for Diarrhoeal Disease Research, Bangladesh Dhaka Bangladesh	kzaman@icddrb.org
Dr Youngmee Jee – ON THE PHONE Director of the Center for Immunology and Pathology Department of Virology Korea Center for Disease Control Seoul Republic of Korea	jeey62@gmail.com
Dr Ilesh Vinodrai Jani **(CO-CHAIR)** National Institute of Health Mozambique	ilesh.jani@gmail.com

External participants	
Professor David Salisbury GCC Chair Associate Fellow Centre for Global Health Security Chatham House 10 St James Square London, SW1Y 4LE UK	Tel: +44 14 91 837 209 david.salisbury@btinternet.com
John Modlin Deputy Director for Research, Polio Global Development Bill & Melinda Gates Foundation 500 Fifth Avenue, North Seattle, WA 98119 USA	tel: +1 206 726 7196 john.modlin@gatesfoundation.org
Jeff Partridge Senior Program Officer Polio Program Global Development Bill & Melinda Gates Foundation	Tel: +1.206.770.2141 jeff.partridge@gatesfoundation.org
Dr Abhijeet Anand Global Immunization Division Centers for Disease Control and Prevention Atlanta, Georgia United States of America	Tel: +1 404 639 1970 dvi5@cdc.gov
Dr Stephen Sosler Technical Advisor Vaccine Implementation GAVI Alliance Geneva Switzerland	Tel: + 41 22 909 6591 ssosler@gavi.org
Dr Arlene King	arlenesking@yahoo.ca

UNICEF Secretariat	
Mr Ian Lewis Contracts Manager, Polio Unit Vaccine Center, UNICEF Supply Division 10-12 Oceanvej 2150 Copenhagen, Denmark	ilewis@unicef.org

WHO-HQ	
Mr Michel Zaffran Director, POL	Tel: +41 22 791 5409 zaffranm@who.int
Dr Roland Sutter Coordinator Research, Policy & Containment	Tel: +41 22 791 4682 sutterr@who.int
Dr Ondrej Mach Team Lead, Clinical Trials and Research	Tel : +41 22 791 1863 macho@who.int
Dr Jackie Fournier-Caruana Team Lead a.i., POL/RPC	Tel: +41 22 791 2974 fourniercaruanaj@who.int
Dr Rosamund Lewis Team Leader, POL/DAI/CAS	Tel: +41 22 791 4043 lewisr@who.int
Dr Harish Verma Medical Officer, POL/RPC/CTR	Tel: +41 22 791 3567 vermah@who.int
Dr Nicoletta Previsani Technical Officer, POL/RPC/CNT	Tel: +41 22 791 2866 previsanin@who.int

Dr Carolyn Sein Technical Officer, POL/RPC	Tel: +41 22 791 3490 seinc@who.int
Ms Liliane Boualam Technical Officer, POL/RPC/CNT	Tel : +41 22 791 2163 boualaml@who.int
Dr Melanie Marti Technical Officer, FWC/IVB	Tel: +41 22 791 1018 martim@who.int
Mr Alejandro Ramirez Gonzalez Technical Officer, FWC/IVB/EPI	Tel : +41 22 791 3452 ramirezgonzaleza@who.int