Report from the Seventeenth Meeting

Global Commission for the Certification of the Eradication of Poliomyelitis

Geneva, Switzerland
26 – 27 February 2018

World Health Organization

Global Commission for the Certification of the Eradication of Poliomyelitis

Left to Right: Dr Supamit Chunsuttiwat, Chair, South-East Asia Regional Commission Certification for Polio Eradication (SEA-RCCPE); Dr Nobuhiko Okabe, Chair, Western Pacific RCC; Dr Arlene King, Chair, American RCC for the Polio Endgame and Chair, GCC-Containment Working Group (GCC-CWG), Professor David Salisbury, Chair, GCC and Chair, European RCC; Professor Rose Leke, Chair, African RCC and Professor Yagoub Al-Mazrou, Chair, Eastern Mediterranean RCC.

Table of Contents

Foreword

The Global Commission for the Certification of Poliomyelitis Eradication (GCCPE/GCC) met in February 2018. It noted that although no WPV paralytic cases had been reported in Pakistan since November 2017 and fewer cases were being reported from Afghanistan for comparable periods in earlier years, considerable numbers of positive environmental samples were being reported from both countries implying that there was still significant ongoing transmission. This circulation of WPVs has implications for the commencement and conclusion of the process of certification of interruption of transmission.

The GCC has previously asked for development of a risk assessment tool that can be used by National Certification Committees and Regional Certification Commissions allowing the GCC to compare risks and their mitigation between countries and across Regions. The GCC noted the progress being made with this tool and hopes that it will be introduced shortly in all Regions.

The GCC considered the possibility that there may still be cVDPV outbreaks in the approach to certification and agreed conditions for the process of certification in such circumstances. The GCC also reviewed the surveillance standards that it will require countries to fulfil according to the systems in place (AFP, environmental and enterovirus surveillance or combinations of these). The GCC's Terms of Reference were reviewed since it had been many years since this was last done. The GCC has previously recommended that countries should undertake outbreak simulation exercises and proposed that the GCC should undertake a certification exercise. This could be done using the example of certification of WPV3 eradication. Finally, the GCC asked for a time line for its activities to be presented regularly and updated as circumstances on the interruption of transmission and containment change.

The GCC will meet next in approximately six months.

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Chair, GCC

Abbreviations

Containment

CAG	Containment Advisory Group
CC	Certificate of Containment
CP	Certificate of Participation
ICC	Interim Certificate of Containment
CCS	Containment Certification Scheme to support GAPIII
CWG	Containment Working Group
GAPIII	Global Action Plan for Poliovirus Containment
NAC	National Authority for Containment
PEF	Poliovirus-Essential Facility

Certification

GCC	Global Commission for the Certification of the Eradication of Poliomyelitis
NCC	National Certification Committee
RCC	Regional Commission for the Certification of the Eradication of Poliomyelitis

Viruses and vaccines

IPV	Inactivated poliomyelitis vaccine
OPV	Oral poliomyelitis vaccine
bOPV	Bivalent oral poliomyelitis vaccine containing Sabin type 1 and type 3
mOPV2	Monovalent oral poliomyelitis vaccine Sabin type 2
nOPV	New oral poliomyelitis vaccine
PV	Poliovirus (PV1 is PV type 1, PV2 is PV type 2, and PV3 is PV type 3)
VDPV	Vaccine-derived poliovirus
aVDPV	Ambiguous vaccine-derived poliovirus
cVDPV	Circulating vaccine-derived poliovirus
iVDPV	Immunodeficiency-associated vaccine-derived poliovirus
WPV	Wild poliovirus
WPV1	Wild poliovirus type 1
WPV2	Wild poliovirus type 2
WPV3	Wild poliovirus type 3

Others

AFP	Acute Flaccid Paralysis
CDC	Centers for Disease Control (United States of America)
ES	Environmental surveillance
GPEI	Global Polio Eradication Initiative
IDP	Internally Displaced Persons
IMB	Independent Monitoring Board
PEESP	Polio Eradication and Endgame Strategic Plan 2013-2018
SAGE	Strategic Advisory Group of Experts on immunization
TAG	Technical Advisory Group
ToR	Terms of Reference
WHO	World Health Organization

Introduction

The 17th meeting of the Global Commission for the Certification of Poliomyelitis Eradication (GCC) took place in Geneva, Switzerland, on 26 – 27 February 2018, with the Chair of each of the six Regional Certification Commissions (RCC) in attendance:

Professor David Salisbury, Chair of the GCC and Chair European RCC,
Professor Yagoub Al-Mazrou, Chair Eastern Mediterranean RCC,
Dr Supamit Chunsuttiwat, Chair South-East Asian RCC,
Dr Arlene King, Chair American RCC,
Professor Rose Leke, Chair African RCC, and
Dr Nobuhiko Okabe, Chair Western Pacific RCC.

The agenda and list of participants are included in annexes 1 and 2.

The aim of the meeting was to review progress and plan and promote greater certainty in the process of global certification of polio eradication. Specific objectives were:

- Review progress toward WPV eradication, and the status of implementation of recommendations from July the 2017 meeting.
- Review progress of the work undertaken in developing a global risk assessment tool that will be used to assist the work of the GCC in the period leading to certification, and to implement a more risk based approach to certification.
- Consider the criteria for certification of WPV eradication in the context of the ongoing risk of polio due to VDPV that may occur post certification and beyond OPV cessation.
- Consider standards that should apply to certification with respect to AFP, environmental, enteroviral and other supplementary surveillance systems, including in conflict and access compromised areas.
- Review updated Terms of Reference for the GCC that include oversight of containment, and a communication strategy for certification and containment.

Session1: Progress towards Eradication

Presentations were given by the Director of Polio Eradication, WHO Headquarters and each of the RCC chairs. Key points and themes that emerged from the presentations and ensuing discussion can be summarized as follows:

- WPV epidemiology: The year 2017 saw the lowest number of WPV cases ever recorded, with only two countries reporting detection of WPV1, namely Afghanistan and Pakistan. Only 22 cases were reported, 14 from Afghanistan and eight from Pakistan. However, many more environmental specimens tested positive for WPV1, and many of these were found in areas not reporting cases.
- New cVDPV2 outbreaks have occurred in three countries in 2017, namely Syria, the Democratic Republic of Congo and Somalia.
- Surveillance gaps were identified in all regions. In regions that have been polio free for a long time, maintaining AFP surveillance has been very difficult, including in some highly economically developed countries where AFP has either been discontinued or does not meet certification standards. In some regions, principally the African and Eastern Mediterranean Regions, conflict and insecurity has had a detrimental impact on surveillance, and notably there are still totally inaccessible areas of Borno in Nigeria unreached by the surveillance system.
- Risk based approach. All regions reported progress in implementing recommendations from the 16th GCC meeting in July 2017 regarding moving toward a more risk based approach. In the South-East Asian Region, four key questions are required to be answered at both regional (RCC) and national (NCC) levels:
    - Are polio immunization coverage and immunity levels high enough to prevent imported wild poliovirus to circulate and emergence of VDPV?
    - Is polio surveillance sensitive enough to rapidly and reliably detect imported wild poliovirus and VDPV should it emerge?
    - Are polioviruses in laboratories adequately handled and contained under GAPIII requirements to prevent reintroduction into populations and the environment?
    - Are levels of preparedness for timely and reliable detection of and response to poliovirus occurrence adequate and up to date?
- Feedback on this approach from NCC in the Region was positive.
- Outbreak preparedness. All regions require NCC's to report on national outbreak preparedness plans, including testing of the plans. Some regions have undertaken simulation exercises, while other regions cited review of 'real-life' examples of cVDPV outbreaks as effectively testing national plans.
- Containment. Progress on the inventory, destruction and transfer of PV2 to designated polio virus essential facilities (PEF's) continues across all regions. However, progress in the containment certification scheme for PEF's remains slow, and the proposed number of PEFs is still too high, with limited success so far in reducing these.
- Strengthening the work of RCCs and NCCs. The European Region is moving toward electronic submission of annual update reports. Several regions use RCC meetings to advocate for strengthening the polio program, notably in Africa. The American Region continues to reinvigorate certification, including RCC members conducting country visits and developing consistency in country annual reporting. The Western Pacific Region ensured its own recommendations were consistent with and supported GCC recommendations.

Developing a 'Road Map' toward Global Certification

The GCC secretariat presented a high-level draft 'road map' toward certification, that could be used as a 'living document' to map out key milestones and decisions required to lead to global certification of polio eradication. The purpose of the document is to develop a common understanding of the likely certification timetable to ensure smooth and timely preparation, but also to consider alternative timetables based on the various scenarios possible for interruption of transmission.

There was consensus that the road map would be a useful tool to monitor progress and facilitate coordination. The main target audience of the road map would be the GCC and members of the RCCs and their secretariats.

Various scenarios were discussed, including:

- The African Region could be certified as polio free as soon as November 2019, when the documents from Nigeria are due to be considered by the RCC. The decision when to certify has not yet been taken, and will depend on the situation in the Lake Chad sub-region, especially Borno state in Nigeria and other high-risk areas in central Africa and the Horn of Africa.
- If WPV1 transmission is interrupted during the current low season, the Eastern Mediterranean Region could certify WPV eradication in late 2021. However, given that polio is now only being detected in two countries with overall strong AFP and environmental surveillance (Afghanistan and Pakistan), the timetable could be shortened so that the time between last virus detected and regional and global certification could be less than three years if confidence in surveillance is maintained.
- There may be value in certifying the eradication of WPV3 ahead of WPV1, given the period since the last detection of WPV3. However, this would not necessarily be linked to OPV3 cessation.

Conclusions on Progress toward Eradication

1.1. The GCC concluded there has been real progress toward eradication, with lowest annual number of WPV cases (22 cases) ever reported occurring in 2017. However, the large number of cVDPV2 cases globally and the identification of widespread WPV environmental positives in infected countries in the Eastern Mediterranean Region are significant concerns.

1.2. There is also concern about significant gaps in surveillance and population immunity in polio free regions that pose risks to global certification.

1.3. The GCC endorsed the draft road map that sets out the key milestones, decisions, and possible timetables for global certification.

1.4. The GCC resolved to meet twice a year, the first with an emphasis on containment, and the second on certification. However, its next meeting will be in the third quarter of 2018, and cover both certification and containment.

1.5. The GCC also decided to consider further the value of certifying the eradication WPV3, and/or undertaking a simulation exercise around the certification of WPV3 eradication.

Recommendations on Progress toward Eradication

1.1. The secretariat should maintain the certification road map, and share it regularly with RCCs so that there is a common understanding among the seven certification commissions (GCC and six RCCs) about the path forward to global certification and to facilitate coordination and preparation. The road map should include contingency plans for delays or other changes in the current certification timetable.

1.2. The secretariat should begin exploring the feasibility of certifying eradication of WPV3, including as a simulation exercise or 'pilot run' of WPV certification.

Session2: Risk Based Approach to Certification

Currently, each of the six WHO Regional Offices conducts a risk assessment on an annual basis. The purpose of these risk assessments varies by region, but generally focuses on the risk of importation and circulation of polioviruses and/or the emergence of vaccine-derived polioviruses. All the regional risk assessments utilize similar albeit not identical indicators and methods. While these regional risk assessments are useful, their diversity of indicators and purpose do not satisfy the needs for global certification.

In July 2017, the GCC recommended that a global risk assessment be developed and tailored to assess risks for global certification. Consequently, the Inter-Regional Risk Assessment Working Group (IRRAWG), a semi-formal working group consisting of regional polio focal points, and facilitated by CDC on behalf of the GPEI, developed a draft certification specific risk assessment model using a single set of globally defined indicators to assess certification risks in countries using existing data sources; there would be no additional data requested from regions or countries.

Indicators measuring population immunity, surveillance quality, preparedness, containment, and other factors such as insecurity, hygiene and sanitation, and health system status were proposed to be included in the scoring of risk, weighted according to their contribution to risk. The greatest weight was attached to the population immunity category, as it was found to correlate with the greatest risk of sustained poliovirus transmission. The model proposed to indicate risk in four segments, with all countries ranked according to score. The contribution to the score of each of surveillance, immunity, preparedness and containment would be reported separately to demonstrate the type of risk in each country.

The draft polio risk assessment was presented to the GCC. It was proposed that the global RA will be performed annually and utilized by the GCC to identify risk areas and assess mitigation activities identified in future NCC reports, and will quantify certification risks for each country in the six WHO Regions. This will allow direct comparison between countries and across Regions by using a single methodology. The GCC will be able through RCC chairs to ask countries to address concerns and report back through future NCC reports so that the GCC can assess the adequacy of risk mitigation actions.

A second risk assessment being developed by the GPEI Containment Management Group (CMG) was also presented. This risk-ranking of poliovirus-essential facilities (PEFs) differentiates them according to the risk they pose to poliovirus eradication to inform where the polio program should focus its energy and resources to most effectively reduce the current risk posed by PV2 retention, and facilitate achieving containment targets by the time of global WPV eradication certification and subsequent OPV withdrawal. A modified version of this PEF risk-ranking has been incorporated as one of the containment indicators in the global certification risk assessment.

Work being done in the South East Asian Region to update and improve NCC reporting was also presented. The RCC had welcomed the new format of progress reports and presentations and had requested this more analytical and interactive approach to discussing country situations on maintaining polio-free status be developed further. The NCC reports and presentation now are tailored to answer the four key questions (mentioned earlier in this report):

- Are polio immuization coverage and immunity levels high enough to prevent imported wild poliovirus to circulate and emergence of VDPV?
- Is polio surveillance sensitive enough to rapidly and reliably detect imported wild poliovirus and VDPV should it emerge?
- Are polioviruses in laboratories adequately handled and contained under GAPIII requirements to prevent reintroduction into population and environment?
- Are levels of preparedness for timely and reliable detection of and response to poliovirus occurrence adequate and up to date?

Conclusions on Risk Based Approach to Global Certification

2.1. The GCC concluded that the draft global risk assessment for certification was a useful tool to ensure a cross regional comparison of risks to certification of eradication, and endorsed the focus on four areas, namely population immunity, surveillance, containment and preparedness.

2.2. The GCC risk assessment will be conducted annually by the IRRAWG and shared with GCC, RCCs and NCCs. The results are meant to be shared at all levels and NCCs will report back annually on risk mitigations undertaken to address certification related risks flagged in the GCC RA.

2.3. The global certification risk assessment is not meant to replace regional risk assessments. The purpose of the global certification risk assessment and regional risk assessment are different and will be done in parallel.

2.4. The GCC concluded that the PEF risk-ranking scheme is a useful tool for highlighting the residual risk related to the retention of polioviruses in facilities.

2.5. The GCC noted that all regions have made progress toward updating NCC reports to include an assessment of risk.

Recommendations on Risk Based Approach to Global Certification

2.1. The GCC recommends that GPEI continues to refine the RA model in consultation with the Inter Regional RA Working Group, and to conduct the risk assessments annually. The reporting of risk should be conveyed based on population immunity, surveillance, containment and outbreak preparedness. Results of the risk assessment should be communicated to NCCs by Regional Offices as RCC secretariats, and compared to the NCC's own assessment of national risks.

2.2. The regions should continue to conduct their region-specific risk assessments for regional programming.

2.3. The GCC recommends that the CMG finalize the PEF risk-ranking scheme to support global and regional programming and PEF reduction advocacy.

2.4. Regional certification commissions and their secretariats should continue to strengthen NCC's capacity to assess and report on risks.

Session3: Certification of WPV Eradication in the Context of cVDPV

The GCC reviewed the epidemiology of cVDPV, particularly outbreaks current at the time of the meeting in Syria, Somalia, and the Democratic Republic of Congo (DR Congo), summarized in this report as at 27 February 2018.

In Syria, there have been 74 confirmed cases of cVDPV2 over 129 days between March and September 2017; 71 from Deir Ez-Zor governorate, two from Raqqa and one from Homs governorates. The main challenges include difficulties in maintaining or re-establishing immunization services in conflict areas, the risk of spread of virus from the outbreak zone to new areas in and beyond Syria including through IDP's, difficulties in maintaining sensitive surveillance in all populations to ensure timely detection of VDPV2 outside the outbreak zone, the volatile security situation, and maintaining efficient shipment of specimens to the laboratories.

In Somalia, a very highly divergent cVDPV2 has been isolated from environmental sampling sites in Mogadishu, in October, November, January and February. Two SIAs with mOPV2 were completed in Dec 2017 – Feb 2018, with a third round using IPV scheduled in early April. Risks and challenges include operating in the context of a complex humanitarian emergency with multiple other concurrent outbreaks, including acute watery diarrhoea and measles, challenges in provision of robust supportive supervision and oversight, inaccessibility in several target districts, no proper health system and hence no routine immunization, the unclear origin of the virus and consequently uncertainty if the population is correctly targeted, and the large scale, wide ranging cross border population movement.

In DR Congo, 21 cases of cVDPV2 have been reported in 2017, from three provinces, caused by two genetically distinct viruses. The health zones affected by the outbreak have low population immunity, favoring emergence and circulation of VDPV. The outbreak is continuing to evolve, with more recent virus isolations showing further divergence from Sabin2. Risks include insecurity in some areas and pockets of vaccine hesitancy and refusal.

Modelling of type 2 population immunity showed a correlation between historic cVDPV2 cases and estimated type 2 population immunity. It is predicted that there will be no mucosal immunity by 2022 in under 5 year olds (except in current mOPV2 using countries), and that by 2022 humoral immunity against poliomyelitis will be variable and depend on routine immunisation coverage. This means that as mucosal immunity declines, VDPV2 should be easier to detect if circulating (and surveillance is maintained). Furthermore, if current cVDPV2 transmission is interrupted, long-term type-2 poliovirus risk will be localised to countries with long-term iVDPV2 shedders and PEFs.

An analysis of VDPV since 2014 concluded that there is no evidence of circulation for the majority of VDPV and that, by far, type 2 poliovirus is responsible for most of the aVDPV and cVDPV detections. Evidence suggests that so far surveillance has been sensitive enough to detect ongoing circulation once cVDPV is detected, with a documented gap in one country (Nigeria, missed transmission for 15 – 18 months). However, further analysis is needed of the implications for surveillance of detecting viruses which are already highly diverged when first detected. cVDPV2 outbreaks have all occurred in known high-risk areas and have been controlled after aggressive SIA rounds. To date, there is no evidence of cVDPV2 resulting from mOPV2 use, but this needs to be monitored as population mucosal immunity continues to fall.

The GCC secretariat presented a draft position paper outlining the possible pre-conditions that could be made to ensure that WPV certification occurs at a time that is free of outbreaks due to cVDPV.

The GCC also discussed the possibility of allowing for a shorter period than three years without transmission if evidence suggests that the surveillance in the last remaining infected countries is of sufficiently high quality to ensure detection of transmission with no gaps.

Conclusions on Certification of WPV Eradication in the Context of cVDPV

3.1. The GCC concluded that, based on analysis of recent cVDPV outbreaks, emergence of VDPV, use of mOPV2 post switch and experience in Syria, Somalia and DR Congo, and modelling of type 2 immunity, it would be undesirable to certify WPV eradication in the context of on-going cVDPV outbreaks. This is because the credibility of WPV certification would be undermined by concurrent outbreaks of polio due to cVDPV

3.2. The GCC concluded that for types 1 and 3 cVDPV, it would be prudent to wait six months after the last detection of transmission of a given cVDPV outbreak before declaring the eradication of WPV. However, based on the evidence that cVDPV2 has circulated undetected for longer periods, a longer period of 18 months without transmission would be desirable for type 2. The GCC noted that if cVDPV2 was occurring in 2020 - 21, four or five years after OPV2 cessation, this would represent a significant challenge to the polio eradication program.

3.3. The GCC noted that these considerations do not constitute criteria for the certification of eradication of WPV certification, nor for certification of eradication of cVDPV, and the differences between WPV and cVDPV require careful and ongoing explanation.

3.4. Since criteria for certification were originally published after the first GCC meeting in 1995 and updated in 2004 to include containment, the Endgame Strategy has been implemented. This has resulted in WPV2 already been declared eradicated by the GCC in 2015. This has in turn resulted in the need to update the certification criteria.

Recommendations on Certification of WPV Eradication in the Context of cVDPV

3.1. GCC recommends that the announcement of the eradication of WPV should take into consideration the epidemiology of cVDPVs at that time, and whether the following conditions are met:

- No detection of a persistent cVDPV2 outbreak from any population source in the previous 18 months; and
- No detection of a cVDPV 1 or 3 outbreak from any population source in the previous six months.

3.2. The GCC recommends the following criteria be applied for certification of WPV eradication:

1. No WPV transmission detected from any population source [1] for the previous three years, and
2. Adequate global poliovirus surveillance [2], and
3. Safe and secure containment [3] of WPV retained in facilities, such as laboratories and vaccine manufacturing facilities

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[1] Population sources are humans (both AFP cases and healthy individuals) and environmental sources composing of human waste-water, and do not include other sources such as laboratories and vaccine manufacturing facilities; conversely non-population sources include known WPV stocks in facilities. Detection of WPV from a human or the environment resulting from a containment breach will not be considered from a population source, unless there is sustained transmission in the surrounding population.

[2] Adequate global surveillance is defined as:
- AFP surveillance that meets the minimum standard of non-polio AFP rate in the under 15 population of ≥ 1 per 100,000 with a stool adequacy of ≥ 80% (collected within 14 days of onset and arriving in good condition), and
- clear evidence of a sufficiently well-functioning surveillance system in all high-risk areas and special populations-of-concern to detect transmission, as determined by additional surveillance indicators.

OR

- in countries with strong healthcare systems, with evidence of high population immunity for all poliovirus serotypes; presence of a national surveillance system capable of detecting poliovirus including through the use notifiable disease surveillance, or supplemental surveillance systems such as environmental and enterovirus surveillance, shall be deemed adequate.

[3] All facilities retaining WPVs should have a Containment Certificate, or an Interim Containment Certificate, with a clear end-point for obtaining a CC agreed with the GCC. In addition, at the time of global WPV certification, the GCC will consider the status of biorisk management of potentially infectious materials and readiness to respond to containment breaches.

Session 4: GCC Updated Role

4.1 Containment

The GCC was given an update on poliovirus containment from the Chair of the GCC Containment Working Group.

Based on information from national surveys on the completion of Phase I of GAPIII (Preparation of PV2 containment) and data submitted by the WHO regional containment focal points, there has been little change in the number of facilities identified for the retention of polioviruses with none of these facilities being GAPIII-certified yet. Status of containment activities in progress include:

- Identification of poliovirus materials through completion of surveys/inventories is still in progress.
- Destruction of unneeded poliovirus materials is ongoing.
- Some transfer of poliovirus materials to identified PEFs has occurred, but no National Authority for Containment (NAC) has yet entered any facility identified for the retention of polioviruses into the Containment Certification Scheme (CCS).

There are issues regarding completion of GAP III Phase I (Preparation for PV2 containment):

- lack of clarity about the definition of Phase I of GAPIII and when/if to declare its completion;
- urgent need for a clear validation and verification process related to inventories and surveys to declare the completion of Phase I of GAPIII;
- the need for an implementation plan in all Regions for the guidance for non-poliovirus facilities to minimize risk of sample collections potentially infectious for polioviruses, which is close to finalization.

Proposed activities for completion of phase 1 (PV2), and later for PV1 and PV3 can be summarized as follows:

- verification and validation of national surveys of facilities and poliovirus type 2 inventory, destruction of unneeded poliovirus type 2 materials, and the appropriate transfer of needed PV2 materials to designated poliovirus essential facilities;
- informing governments, institutions and facilities about the need for PV containment, and associated timelines;
- designation of PEFs, if applicable; and
- designation of a NAC, if applicable, which means the NAC has been identified by the government in a letter annexed to the national inventory/survey.

Additional issues were also discussed:

- There needs to be consideration of greater harmonization of RCC's ToR with respect to inclusion of containment activities.
- Consideration should be given to an NCC/RCC role with respect to the validation of removal of mOPV2 when it has been used to stop cVDPV2 outbreaks.
- Phase II refers to the poliovirus type 2 containment period, and commences as soon as the criteria for global readiness of OPV2 withdrawal are met, and continues until certification of global WPV eradication. Readiness criteria for GAPIII Phase II are incomplete, unclear or obsolete, and require reconsideration, to provide greater clarity with respect to activities related to containment, and associated communication.
- There is a need for a longer-term strategy to stop the use of infectious poliovirus materials through the development and introduction of new technologies using non-infectious poliovirus materials (for example, for testing and for vaccine production).

Conclusions on Containment

4.1.1 The GCC concluded that one of the criteria for certification of eradication of the poliomyelitis should be the safe and secure containment of all WPV. The implementation of the GAPIII is an essential component of safe and secure containment in PEFs certified according to the CCS. However, there are factors outside but related to GAPIII and the CCS that must also be considered, particularly the biorisk management of potentially infectious material, and readiness to respond to containment breaches.

4.1.2 The GCC resolved that rather than declaring the completion of Phase I, it will declare the completion of the proposed activities for preparation of containment of poliovirus type 2 (as listed above) when appropriate.

4.1.3 The GCC noted that not all PEFs are proposing to retain WPV; most in fact will retain other polioviruses.

Recommendations on Containment

4.1.1. Certification of WPV eradication should only occur when all WPV materials, in facilities designated for retaining them, are safely and securely contained*

* All facilities retaining WPVs should have a Containment Certificate, or a time-limited Interim Containment Certificate, with a clear end point for obtaining a CC agreed with the GCC. In addition, at the time of global WPV certification, the GCC will consider the status of biorisk management of potentially infectious materials and readiness plan to respond to containment breaches.

4.1.2. The GCC reiterates its recommendation that facilities awarded a CP should begin the CC application process and only if necessary, obtain an Interim CC for the shortest possible duration.

4.1.3. As the role of the GCC CWG commences once PEFs are entered into the CCS, the GCC recommends RCCs and NCCs assume a validation role for the preparatory activities related to the containment of PV2, and later PV1 and PV3.

4.1.4. GCC recommends the development and execution of an implementation plan for the *Guidance for non-poliovirus facilities to minimize risk of sample collections potentially infectious for polioviruses* as soon as possible following its release.

4.2 Communication

The objectives of a global eradication certification communication strategy are:

- to inform stakeholders and secure their support in the process of regional and global certification,
- to underscore the appropriateness of certification processes among target audiences, and
- to communicate remaining gaps in knowledge and policy decisions to attain an independently verified world free of all poliovirus transmission.

Elements of the proposed certification communication strategy include:

1) Developing key messages and reactive Q&A:
    - including the difference between certification of WPV eradication and VPDV verification;
    - progress on containment;
    - certifying the eradication of viruses, not just paralytic polio cases;
    - surveillance indicators and other indicators; and
    - why independent verification is necessary.
2) Spokesperson identification and media training
3) Development of key fact sheets
4) Placement of key messages in existing communications channels (e.g. website, annual report)
5) Editorials in key scientific publications
6) Publication support

Conclusions on Communication Strategy

4.2.1 The GCC endorsed the proposed communication strategy

Recommendations on Communication

4.2. The GCC recommends the GPEI implements the proposed certification communication strategy, including releasing a statement after each meeting, and using the meeting report as a way of communicating to stakeholders in a more user-friendly format.

4.3 Updated Terms of Reference

The GCC ToR needs to be updated to include its expanded role to oversee global PV containment and to reflect the current situation of implementation of the Endgame Strategy, particularly because WPV2 has already been declared eradicated.

Proposed New Terms of Reference 2018-2022

A. To redefine the parameters and processes by which polio eradication will be certified, in particular considering a global risk assessment, surveillance quality, inaccessible populations, the epidemiology of VDPV, and containment of WPV.
B. To receive and review the following information sources for certification of eradication of WPV1 and WPV3:
    i. reports from Regional Commissions for Certification of Polio Eradication, including updates on any event or outbreak since each Region's certification that may have affected a Region's polio free status, in view of the time since certification in some Regions;
    ii. additional letters of verification from Member States on the last known WPV1 and WPV3 detection in their country;
    iii. a global summary of poliovirus laboratory data;
    iv. a report on the status of safe and secure poliovirus containment from the GCC Containment Working Group.
C. To issue a final report to the Director-General of WHO certifying that global polio eradication has been achieved.

Conclusions on Updated Terms of Reference

4.3.1 The GCC endorsed the revised ToR.

4.3.2 The GCC concluded that the proposed new ToR will need to be approved by the WHO Director-General, following an appropriate level of consultation with RCCs, the GPEI and polio partners. After global certification, these terms of reference will automatically expire. The WHO Director-General will then determine a mechanism to oversee compliance with containment requirements and verify the absence of VDPVs, the latter following OPV cessation.

Recommendations on Updated Terms of Reference

4.3. The proposed revised ToR will be circulated to key stakeholders for consultation, following which the WHO Director-General is requested to approve the revised terms of reference.

Session 5: Surveillance Indicators and Certification

5.1 AFP Surveillance

Trends in AFP surveillance were reviewed, with attention particularly given to known areas of weakness, particularly in Central and West Africa, and the Horn of Africa and Yemen. It was noted that orphan viruses, where the virus is not closely related to any other detected and thus implying missed transmission, were detected in Pakistan and Afghanistan, and based on the genetic analysis, it appeared all orphan viruses had circulated without detection for less than three years.

The criteria regarding AFP indicators were set at the first meeting of the GCC in 1995 remain valid for countries that rely on AFP surveillance:

- NPAFP rates should be at least 1/100,000, and stool adequacy 80%.
- Timeliness of reports should be 80% or more.
- Speed of investigation after notification should be at least 80% in 48 hours.
- Follow up: a detailed investigation with 60-day follow up is required for all cases with inadequate specimens.

Conclusion on AFP Surveillance

5.1 The GCC concluded that where AFP surveillance is undertaken, it remains the gold standard for polio surveillance, and based on the indicators, areas of sub-standard surveillance could be identified. However, special additional data is required for high risk areas and populations, to demonstrate that those populations are covered by the surveillance system. In countries that have been polio-free for a long time, and population immunity is high, it is unlikely that AFP can be revitalized or reinstituted, and supplementary systems will need to be used instead.

Recommendation on Surveillance Indicators for Certification

5.1. The GCC recommends that adequate surveillance as a criterion for certification of eradication of WPV be defined as:

Criterion 1:

- AFP surveillance that meets the minimum standard of non-polio AFP rate in the under 15 population of ≥ 1 per 100,000 with a stool adequacy of ≥ 80% (collected within 14 days of onset and arriving in good condition in an accredited laboratory), and
- clear evidence of a sufficiently well-functioning surveillance system in all high-risk areas and special populations-of-concern to detect transmission, as determined by additional surveillance indicators.

OR

Criterion 2:

- in countries with strong healthcare systems, with evidence of high population immunity for all poliovirus serotypes; presence of a national surveillance system capable of detecting poliovirus including through the use of notifiable disease surveillance, or supplemental surveillance systems such as environmental and enterovirus surveillance, shall be deemed sufficient.

5.2 Environmental Surveillance (ES)

Implementation of the expansion plan continues with ES established in 13 out of 23 very high and high priority countries, and in a further seven lesser priority countries (as at 27 February 2018). Globally, there are now 58 countries with ES in 315 cities involving 572 sites. Challenges to progress include insecurity and in some cases, lack of country ownership. The expansion will continue in 2018 – 19 additional countries to be added.

The following ES core indicators for certification were discussed and proposed:

1. ES data are included in routine monthly surveillance reports and annual country reports.
   - Number of active ES sites (country/city/district)
   - Number of sewage specimens planned and collected by month/year and geographical area (city/district/site)
   - Quantitative and qualitative (descriptive) population data for all sites
2. Investigation of any detection of WPV/VDPV or PV2 within 48 hours
3. Specimens arriving at an ES laboratory in good condition
4. Trend of EV detection rate by site
5. Timeliness of laboratory results: % of Intra-typic Differentiation (ITD) results reported within 35 days of collection

There is ongoing GPEI work to fine-tune core indicators, including:

1. Factors influencing sites' performance
2. Catchment population
   - Enumerating people / children who contribute to sewage at the ES site
   - Identifying residential and transient populations (e.g. travellers, refugees, IDPs)
3. Site attributes
   - Type of sewage, time of collection, volume, water 'quality' measurements (pH, temperature, salinity, oxidative reduction potential, turbidity, total dissolved solids)
4. Transport to lab
5. Documentation of any break of cold chain, time delays
6. Quantification of the population covered by the ES network, with a proposed indicator: Population (%) living within 50km of an ES site

Conclusion on Environmental Surveillance

5.2 The GCC concluded that the proposed indicators seemed appropriate, but it was not within its remit to approve them, rather this was the role of the GPEI management structure. Once approved, the GCC could facilitate adoption of the core ES indicators in RCC and NCC reports.

Recommendation on Environmental Surveillance

5.2. The GCC recommends that the proposed ES core indicators be finalized by GPEI in time for inclusion in NCC reports no later than the beginning of 2019.

5.3 Surveillance in Conflict Affected Areas

Challenges for surveillance in security compromised areas can be summarized as follows:
- definitions and sources of data for access;
- access for case investigation and specimen collection;
- access for monitoring and case validation;
- difficulty in establishing new reporting sites;
- collaboration with new partners.

Challenges for monitoring surveillance include:
- limitations on movement impeding monitoring, supervision of surveillance sites and workers e.g. Somalia;
- inability to assess sites for environmental surveillance e.g. Syria;
- inaccurate denominators in conflict areas (due to population movement);
- difficult validation of cases and data may impair data quality and confidence in the indicators;
- process of AFP surveillance especially important in access-compromised areas, but not measured or reported in standard way.

Currently used strategies to address these challenges include:
- community-based surveillance;
- collaboration and coordination with military, NGOs and other organizations;
- collaboration with existing surveillance networks;
- improved mapping;
- technical innovations such as use of phones/tablets to collect AFP case data and GPS locations and special cold chain with energy supply for specimen transport in difficult areas such as Syria.

The GPEI is currently developing guidelines on polio surveillance in hard to reach areas and populations. The focus is on strengthening AFP surveillance but in addition implementing supplemental strategies where AFP surveillance activities are limited or non-existent, especially in inaccessible areas and hard to reach populations. The guidelines will include several supplemental strategies:
- community based surveillance,
- ad hoc active case search,
- contact sampling,
- ad hoc environmental surveillance in access compromised areas,
- ad hoc healthy children stool surveys

Conclusion on Surveillance in Conflict-Affected Areas

5.3 The GCC welcomed the development of these guidelines and requested that the draft be circulated to GCC members, as implementation of these guidelines in the coming year could potentially have a substantial impact on certification.

Recommendation on Surveillance in Conflict-Affected Areas

5.3. The GCC recommends that the work on surveillance in conflict-affected areas continue and be finalized as soon as possible, and that this, together with ongoing work in ES and AFP surveillance strengthening be a focus of the next meeting in late 2018.

Annex 1: List of Participants

GCC Members

Professor David Salisbury, European Region, Chair
Professor Yagoub Al-Mazrou, Eastern Mediterranean Region
Dr Supamit Chunsuttiwat, South-East Asian Region
Dr Arlene King, Region of the Americas
Professor Rose Leke, African Region
Dr Nobuhiko Okabe, Western Pacific Region

Technical Advisers and Observers

Dr Rudolph Tangermann, Adviser, Geneva, Switzerland
Dr Mark A Pallansch, CDC, Atlanta, USA
Dr Deblina Datta, CDC, Atlanta, USA
Dr Sue Gerber, BMGF, Seattle, USA
Dr Jeff Partridge, BMGF, Seattle, USA
Dr Isobel Blake, Imperial College, London, UK

WHO Regional Offices

Dr Pascal Mkanda, African Region
Dr Koffi Isidore Kouadio, African Region
Dr Humayun Asghar, Eastern Mediterranean Region
Dr Obaid-ul Islam Butt, Eastern Mediterranean Region
Dr Shahin Huseynov, European Region
Dr Tigran Avagyan, Western Pacific Region
Dr Roesel Sigrun, South-East Asian Region

WHO Headquarters, Polio Eradication Dept.

Mr Michel Zaffran
Dr Roland Sutter
Dr Graham Tallis
Dr Jamal Ahmed
Ms Claire Chauvin
Dr Ousmane Diop
Dr Zainul Khan
Dr Jacqueline Fournier-Caruana
Dr Nicoletta Previsani
Dr Harpal Singh
Mr Oliver Rosenbauer
Ms Achouak Majdoul

Annex 2: Agenda

Seventeenth meeting of the Global Commission for the Certification of Poliomyelitis Eradication (GCC)

26-27 February, 2018

Venue: Hotel Starling, Geneva - Switzerland

FINAL AGENDA

Monday, 26th February		
08.30	Welcome remarks	M. Zaffran
08.40	Objectives of the meeting	D. Salisbury
Session 1	**Progress toward WPV eradication**	
08.50	Global update	M. Zaffran
09.05	Region of the Americas Update	A. King
09.20	Eastern Mediterranean Regional update	Y.Al-Mazrou
09.35	SE Asia Regional update	S.Chunsuttiwat
09.45	European Regional update	D. Salisbury
09.55	Western Pacific Regional update	N. Okabe
10.05	African Regional update	R. Leke
10.15	Discussion	
10.30	*Coffee break*	
10.50	Update on implementation of GCC recommendations July 2017	G.Tallis
11.10	Draft GCC road map 2018 - 2022	G.Tallis
11.30	Discussion	
12.00	*Lunch*	
Session 2	**Risk based approach**	
13.00	Proposed global certification risk assessment	D.Datta
13.20	Risk ranking of poliovirus essential facilities	J. Partridge
13.30	Risk based approach to NCC reporting - SEAR experience	S.Roesel
13.45	Discussion, conclusion and recommendations	
Session 3	**WPV eradication in the context of VDPV**	
14.15	Syria and Somalia	O. Butt
14.30	DR Congo	P. Mkanda or K. Kouiado
14.45	Review of cVDPV outbreaks	C.Chauvin
15.00	Modelling of type 2 immunity	I. Blake
15.20	*Coffee break*	
15.40	Draft pre-conditions and criteria for WPV certification	R.Sutter
15.50	Discussion, conclusion and recommendations	
17.00	**Finish**	
Tuesday, 27th February		
08.30	Draft recommendations from Day 1	D. Salisbury
Session 4	**GCC updated role**	
09.00	Containment update	GCC CWG Chair (A.King)
9.30	Review CAG and SAGE WG recommendations	J.Fournier
10.00	Discussion, conclusion and recommendations	
10.30	*Coffee break*	
11.00	Communication Strategy	O. Rosenbauer
11.15	Terms of Reference of GCC	D. Salisbury
11.30	Discussion	
12.00	*Lunch*	
Session 5	**Surveillance Indicators for Certification**	
13.00	Global Overview of AFP Surveillance and Key Vulnerabilities	J.Ahmad
13.30	Review of ES expansion plan and proposed core indicators	O. Diop
14.00	Surveillance options in conflict affected areas	S. Gerber
14.30	Discussion	
15.00	*Coffee break*	
15.45	Discussion, conclusion and recommendations	
16.30	Draft recommendations from Day 2	D. Salisbury
17.00	**Closing**	M. Zaffran