POLIO GLOBAL ERADICATION INITIATIVE

# Sixth annual meeting with National Authorities for Containment and the Global Certification Commission–Containment Working Group

12–13 October 2022 | WHO Headquarters, Geneva, Switzerland (and online)

EVERY LAST CHILD

# Contents



# List of abbreviations

| | |
|---|---|
| CAG | Containment Advisory Group |
| CMG | Containment Management Group |
| CWG | Containment Working Group |
| CC | certificate of containment |
| CCS | Containment Certification Scheme |
| CP | certificate of participation |
| cVDPV | circulating vaccine-derived poliovirus |
| GAPIV | WHO Global Action Plan for Poliovirus Containment, fourth edition, 2022 |
| GCC | Global Certification Commission |
| GMP | good manufacturing practices |
| GPEI | Global Polio Eradication Initiative |
| ICC | interim certificate of containment |
| IPV | inactivated polio vaccine |
| M&E | monitoring and evaluation |
| NAC | National Authority for Containment |
| NCC | National Certification Committee |
| NPCC | national poliovirus containment coordinator |
| OPV | oral polio vaccine |
| mOPV | monovalent oral polio vaccine |
| nOPV2 | novel oral polio vaccine type 2 |
| tOPV | oral polio vaccine |
| PEF | poliovirus-essential facility |
| PIM | potentially infectious materials (poliovirus) |
| POSE | poliovirus outbreak simulation exercise |
| PV | poliovirus |
| RCC | Regional Certification Commission |
| WHA | World Health Assembly |
| WHO | World Health Organization |
| WPV | wild poliovirus |

# 1. Introduction

Containment of eradicated polioviruses is an essential component of the Global Polio Eradication Initiative (GPEI) and is critical for maintaining polio-free status in the post-certification era after 2026. Every year, as part of its ongoing work with national and international oversight bodies to prepare for global poliovirus containment certification, WHO facilitates a meeting between National Authorities for Containment (NACs) and the Containment Working Group (CWG) of the Global Certification Commission (GCC) to share experiences and information and support progress towards global poliovirus containment goals. The sixth such meeting was held at WHO headquarters in Geneva, Switzerland, on 12–13 October 2022. It was chaired by Dr Arlene King of the GCC-CWG and was attended by representatives of 21 NACs from the 24 countries hosting designated poliovirus-essential facilities (PEFs).

The meeting had four key objectives:
1. update countries on progress in implementing poliovirus containment certification since 2021;
2. update countries on *WHO Global action plan for poliovirus containment, fourth edition, 2022 (GAPIV)*;
3. discuss progress and the way forward for implementing containment; and
4. give NACs an opportunity to share best practices and discuss obstacles and opportunities for containment.

# 2. Polio eradication and vaccine needs

## 2.1. GPEI strategy update and current outbreaks

*Aidan O'Leary, WHO*

The GPEI *Polio eradication strategy (2022–2026)* is designed to stop both wild poliovirus (WPV) and circulating vaccine-derived poliovirus (cVDPV) transmission by the end of 2023, with certification of eradication of poliovirus by no later than the end of 2026.

During 2022, WPV1 remained endemic in Afghanistan and Pakistan. Both countries had seen a significant reduction in WPV1 circulation over the past year, and the remaining pockets of detections were limited to just two genetic clusters in only a handful of districts. An unexpected outbreak of WPV1 in south-east Africa (Malawi and Mozambique) prompted a rapid multi-country vaccination response whose quality was initially problematic due to lack of experience, but which has significantly improved since.

The extent of cVDPV outbreaks also reduced in 2022. Three new emergences of cVDPV2 in high-income countries (Israel, UK and USA) were particularly concerning leading to enhanced surveillance and targeted immunization campaigns using the immediately available inactivated polio vaccine (IPV). They remain under genetic and epidemiological investigation.

Elsewhere, since a WHO recommendation for Emergency Use Listing in November 2020, the novel oral polio vaccine (nOPV2) became the vaccine of choice for outbreak response. In 2022, nearly half a billion doses of nOPV2 were administered in more than 23 countries. More than 90% of outbreaks were restricted to four sub-national areas (outside WPV1-endemic countries): northern Nigeria, eastern Democratic Republic of Congo, northern Yemen, and south-central Somalia. Immunization rates in these areas are low because access is hampered by hesitancy, conflict, natural disasters or humanitarian crises.

The eradication programme will target its efforts at these limited geographies to eradicate polio from its last remaining strongholds. GPEI is confident that it can meet the goal of interrupting transmission by 2023. But there can be no certification of eradication without containment. Mr O'Leary urged all NACs to accelerate progress towards containment goals and align their efforts with eradication timelines.

**Action points**

- All stakeholders to strengthen containment efforts to accelerate progress and align with timelines for the certification of eradication.

### 2.2. Vaccine supply security

*Vachagan Harutyunyan, WHO*

Security of polio vaccine supply refers to the timely, sustained, uninterrupted supply of affordable polio vaccines of assured quality. Dr Harutyunyan gave an overview of polio vaccine types, the vaccine market, and various mechanisms for ensuring the availability of necessary live and inactivated vaccines for the polio eradication programme. He positioned vaccine supply in relation to poliovirus containment and research and development of new technologies for the eradication programme, with the goal of having a discussion on synergies and collaboration between these three critical areas of the *Polio Eradication Strategy 2022–2026*.

The polio vaccine supply market is currently considered healthy, with many manufacturers supplying WHO-prequalified OPVs and IPVs to national immunization programmes and GPEI. But this is expected to change: as eradication approaches, many suppliers are expected to exit the market due to declining profitability and stringent polio vaccine production requirements. The vaccines distributed through the global OPV stockpile are strictly regulated and cannot be freely sold on the open market: GPEI is the sole purchaser. At the same time, several new polio vaccine production technologies are expected in the coming years; these require a healthy pool of manufacturers interested in investing in their rollout.

Dr Harutyunyan emphasized the importance of close collaboration between polio containment and vaccine supply teams. This should include groups responsible for developing new vaccine technologies to ensure GPEI can: procure quality vaccines at competitive prices, maintain an uninterrupted supply of vaccines (through the global OPV stockpile) to respond to poliovirus outbreaks, and roll out new polio vaccines. Participants acknowledged the importance of collaboration at all levels, including in-country cooperation between NACs and manufacturers.

**Action points**

- Participants supported the idea of close collaboration between containment, vaccine supply and research and development, and agreed to explore specific areas of cooperation and activities at all levels.

## 3. Containment communications

### 3.1. Communications and advocacy

*Joseph Swan, WHO*

The new *Strategy for global poliovirus containment* and *Global poliovirus containment action plan 2022–2024* call for a more comprehensive and systematic approach to communications and advocacy. Mr Swan informed NACs that the communications plan needs to be revisited based on the action plan's recommendations and latest developments and that the GPEI must explore how to better resource this work going forward. Mr. Swan gave an overview of activities completed over the past year.

**NAC information sharing platform.** In 2019, at the request of NACs, WHO established a closed, online information-sharing platform for NACs to exchange knowledge and share experiences. The platform is accessible by invitation only and currently has 43 members. As originally intended, the WHO service provider provides minimal administrative support and basic moderation of discussion. Due to NACs' low use of the platform, WHO held a survey in late 2021 to assess whether the tool was still useful and desired by NACs. All survey respondents said they wanted the platform to remain available but there were mixed viewpoints on the level of support that should be provided by WHO. Mr. Swan presented two options for maintaining the platform, with or without WHO support, and meeting participants agreed that the tool should continue with the current arrangement. Mr. Swan highlighted the need for NACs to be more actively engaged with the platform to enable fruitful discussion and ensure benefits.

**News stories.** WHO communications on containment focus on profiling achievements or significant advances through news stories published on the GPEI website. Participants noted two examples of articles published in 2022: one on the launch of GAPIV; and one on the first interim certificate of containment (ICC), which was awarded to a Canadian facility in September 2022.

**Advocacy.** In July 2022, the WHO Director-General sent letters to Ministers of Health of four type-2 poliovirus-retaining Member States that had yet to designate a NAC. Through the 2018 World Health Assembly Resolution 71.16 (WHA 71.16), Member States made several time-bound commitments, including achieving this particular step by the end of 2018. Two Member States have since responded to WHO; WHO is following up with the other two. Mr Swan noted that WHO will send further letters to Member States with outstanding containment commitments.

**Action points**

- WHO to keep the NAC information-sharing platform and provide minimal administrative support through its external service provider.
- NACs to increase active use of platform and to contact WHO's service provider for support if needed.
- NACs can provide input for, or request support on, external communications through the WHO Secretariat.

# 4. Containment certification

## 4.1. WHO Global action plan for poliovirus containment, fourth edition, 2022 (GAPIV)

*Harpal Singh, WHO*

GAPIV describes the safe handling requirements for PEFs that intend to retain WPV/VDPV and Sabin/OPV infectious materials as well as WPV potentially infectious materials (PIM) after eradication. In late 2018, following a recommendation from the poliovirus Containment Advisory Group (CAG), GAPIII was updated to reflect the dynamic nature of polio eradication and improved understanding of risk characterization of polioviruses and vaccine technologies, and to ensure the revised document aligns with other relevant standards. The revision process was largely stakeholder-driven, involving rounds of stakeholder inputs and public consultation with close oversight from CAG. On 1 July 2022, following CAG's endorsement the day before, GAPIV was published and came into immediate effect.

Some of the major changes to the structure and contents made in GAPIV are:[1]

- merging of GAPIII annexes 2 and 3[2], which were also converted from tables to prose to eliminate redundancy and improve clarity;
- reorganization of biorisk management system elements reducing these from 16 to 14;
- renaming of primary, secondary and tertiary safeguards as facility, immunization coverage and environmental safeguards;
- inclusion of new guidance on emerging issues, especially around the safe handling of novel poliovirus strains; and
- a shift away from prescriptive requirements lacking evidence towards a risk-based approach, for example around the requirements for exit showers and dedicated effluent decontamination systems.

[1] A summary of all changes made during the 2021–2022 revision process is included in GAPIV, available at: https://polioeradication.org/wp-content/uploads/2022/07/WHO-Global-Action-Plan-for-Poliovirus-Containment-GAPIV.pdf.
[2] Annex 2: Biorisk management standard for poliovirus-essential facilities holding wild poliovirus materials; Annex 3: Biorisk management standard for poliovirus-essential facilities holding only OPV/Sabin poliovirus materials (no WPV).

Facilities must ensure all relevant national or subnational legal requirements are identified and fulfilled within the biorisk management system. In cases where the requirement in GAPIV differs from national or subnational legal requirements, facilities must meet the more rigorous requirement.[3]

Participants noted that the shift to a risk-based approach is in line with WHO's *Laboratory biosafety manual (fourth edition)*, considered to be the global standard for biosafety. As described in GAPIV, NACs may choose to consider environmental surveillance as part of the parameters used for environmental control safeguards. The role of routine environmental surveillance and its impacts on confidence of no detection of polioviruses in areas surrounding the PEFs will be reviewed by CAG at its next meeting, as well as the general lack of evidence for immunization coverage and environmental control safeguards.

Participants asked for guidance on implementing risk assessments to ensure comparability across a range of PEFs. WHO is planning to develop risk assessment webinar trainings to support NACs to implement and evaluate risk assessments. Several issues associated with the retention of PIM, polioviruses have been identified by CAG and include containment requirements for handling PIM, WPV/VDPV. This issue is planned for deliberation by CAG at its next meeting in December 2022.

The approach to novel PV strains in GAPIV is also subject to change. A limited set of novel strains (for specific uses) have been given a temporary waiver from GAPIV requirements.[4] GCC recommended WHO maintain a register of facilities retaining novel PV strains that includes the same information as that given in the certificate of participation (CP) (see section *4.3 Putting GCC recommendations into practice*). These facilities should also be included in national inventories of facilities retaining PVs. Further recommendations on novel PV strains are expected to emerge from the CAG meeting in December 2022.

There is a need to increase awareness of the roles and responsibilities of different stakeholders in meeting monitoring requirements for storing, distributing, using and destroying mOPV2 as described in the *Technical guidance for mOPV2 vaccine management, monitoring, removal and validation*. The scope of NACs is limited to PEF certification and they do not typically form part of the outbreak response teams or containment task forces that are responsible for vaccine supply distribution or reverse logistics and vial disposal. Stronger coordination with NACs in this area, potentially including containment education and training for logisticians, may be beneficial. Participants were reminded that any use of a PV2 vaccine in countries should be reported to their relevant Regional Certification Commission (RCC) and trigger an update of their national inventory.

## Transitioning to GAPIV

To give stakeholders time to move from GAPIII to GAPIV, there will be a three-year transition period. In this time PEFs can be audited against either standard and the resulting containment certificates will remain valid (see Fig. 1). During the transition period, NACs should decide whether to audit against GAPIII or GAPIV and to make this clear when submitting their audit plans for ICCs. Regardless of when they are awarded, all ICC GAPIII certificates will expire on 1 July 2025.

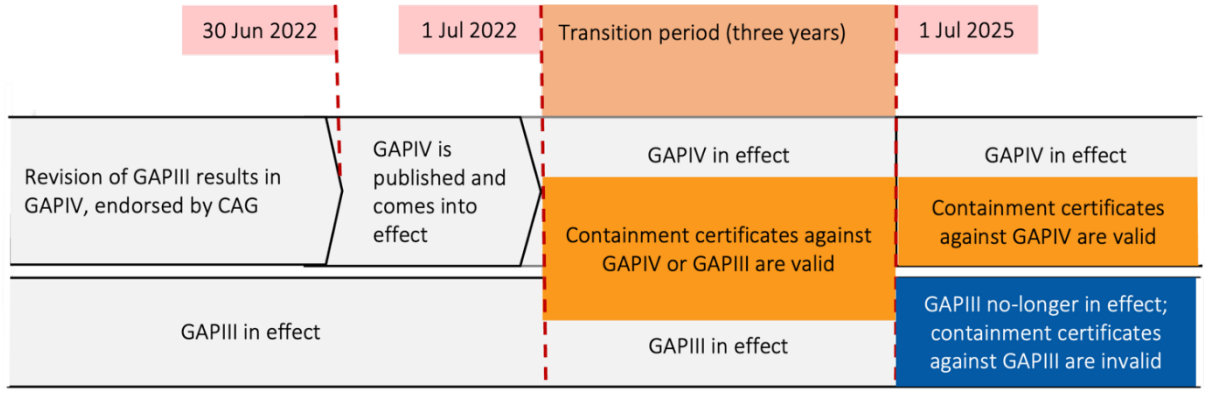
Asked about upcoming GAP trainings, WHO said GAPIV webinars will be offered to all in the close future.

Participants asked WHO to consider if and how NACs can engage more directly with CAG. They noted that several changes have been made to the mechanism previously established to submit issues to CAG, including the need for submissions from designated facilities to be made through the NACs. WHO confirmed the updated submission mechanisms based on CAG recommendations (CAG IV- July 2019) requesting all PEFs to submit through their NAC and reminded participants that submissions can be made at any time using the online submission form.

[3] See section 1.12. Legal requirements of GAPIV, available at: https://polioeradication.org/wp-content/uploads/2022/07/WHO-Global-Action-Plan-for-Poliovirus-Containment-GAPIV.pdf.

[4] For a full list of novel PV strains temporarily exempt from GAPIV standard, see the report of the fifth meeting of CAG, available at https://polioeradication.org/wp-content/uploads/2022/05/CAG5-March-2022-Meeting-Report-Final-EN.pdf.

*Fig. 1. The transition from GAPIII to GAPIV for containment certification.*




**Action points**

- WHO Secretariat to share with CAG NACs' feedback on immunization coverage and environmental surveillance requirements.
- RCCs and NACs to consider how to strengthen national coordination with emergency operations teams.
- WHO and UNICEF to follow up on how to strengthen containment during polio outbreak response.

## 4.2. Polio containment: where are we?

*Liliane Boualam, WHO*

The global strategy and action plan for poliovirus containment are built around three strategic goals that need to be simultaneously achieved, within specific timeframes to the certification of eradication and beyond (see section *5.1 Containment strategy and action plan*).

Roles and responsibilities for delivering on these goals are shared across stakeholders at national, regional and global levels. Key activities and timelines are aligned with eradication milestones and build on Member States' 2018 commitments set out in WHA 71.16.

The current status of the first two containment goals shows some significant gaps and missed milestones (see Table 1). There have however been some significant achievements over the past few years. For example, the overall number of planned PEFs has dropped from 89 to 61 since 2018, with further reductions expected once ICC audits begin. And in October 2022, Canada became the first country in the world to advance to the second stage of containment certification (see *6.5 Canada: the first ICC*).

*Table 1. Current status of activities to achieve containment goals and objectives.*

| | Activity | Deadline | Progress |
|---|---|---|---|
| Goal 1 | Complete PV2 initial inventories | end 2016 | 6 countries pending |
| | Complete WPV1 and WPV3 inventories | end 2022 | 28 countries pending |
| | | | |
| Goal 2 | Establish NACs | end 2018 | 22/25 countries<br>(3 countries declaring PV2 retention have no NAC) |
| | Obtain CPs for all PV2 PEFs | end 2019 | 14/24[a] countries<br>(10 countries with no or incomplete CPs) |
| | All designated PEFs to initiate the ICC process (by declaring their intent) | end 2022 | 10/24[a] countries<br>(14 countries have not responded) |

[a] Brazil has a NAC but is not included in the denominator here because the country is no longer planning to have a PEF.

WHO also reminded NACs of their responsibilities to report any PV2 containment breaches through the International Health Regulations (IHR) National Focal Point and commended the one country that reported a containment breach in 2022. It further reminded NACs that WHO can provide communications and information management support to help countries respond to any PV2 containment breaches.

Achievement of containment milestones needs to be accelerated to match the certification of eradication. A suite of new and revised tools – including the new GAPIV and *Global containment action plan 2022–2026*, revised CCS and PIM guidance, and updated application forms templates – are being developed to help achieve containment goals (see section *5.1 Containment strategy and action plan*). WHO also plans to continue working with countries to reduce the number of PEFs and to increase global monitoring, reporting and accountability in relation to countries' compliance with WHA 71.16 commitments (see section *5.2 Global reporting, monitoring and evaluation*).

Participants asked for clarification on the term 'initial inventory'. It was explained that since being asked to complete PV2 inventories in 2016 (when PV2 was declared eradicated) some countries have had to use a PV2 vaccine (either because they detected WPV2 in environmental samples or had a new emergence or outbreak of cVDPV2), which challenges the validity of any inventory already completed. This then is the reason for the introduction of the term 'initial inventory': it is necessary to routinely review facilities for the acquisition of new PV2 or cVPDV/WPV materials. Countries that detect PV2/cVDPV2/WPV2 or have facilities that receive these materials from affected countries after completing their initial inventory will need to update their inventories. This update does not negate the completion of their initial inventories. Participants noted that VDPVs are subject to the same containment requirements as WPVs so any type of infectious material or PIM needs to be included in national inventories. WHO acknowledged that PV1 is likely to be the most difficult inventory to complete. Participants pointed out that regardless of new emergences or outbreaks, the scale and scope of facilities also change over time and inventories would benefit from a regular review.

### Strengthening oversight capacities

Since 2017, WHO has helped countries build significant capacities through GAP awareness-raising, CCS auditor trainings, polio outbreak simulation exercises (POSEs) and audit-related activities. For example, 30 countries (including all countries with designated PEFs) have benefitted from CCS auditor training for an estimated 300 individuals. These trainings were the most significant financial investment made by GPEI for containment.

In other efforts to support NAC oversight, WHO and UNICEF are working to ensure they procure polio vaccines from manufacturers that comply with containment standards. Experience from countries also points to a range of other good practices that strengthen NACs' capacities for oversight and support them to lead containment at the national level.

- NAC team diversity helps implement containment certification more effectively, especially if the team is designed with designated PEF profiles in mind, for example, including a good manufacturing practices (GMP) inspector in the team if any PEFs are manufacturers.
- Making the national poliovirus containment coordinator (NPCC) and the NAC Chair the same person helps ensure an all-inclusive view of containment and can improve the quality of inventories.
- Developing containment legislation that empowers the NAC is useful but can take a long time to enact.
- NACs are rarely the only national body working on containment; others may include a national certification committee (NCC), and a NPCC or national containment task force (NCTF). Ensuring coordination across these functions, and with emergency operations and PEFs, is critical to ensure comprehensive oversight.

**Action points**

- WHO to provide greater clarity on timelines for inventories for VDPVs type 1 and 3.
- NACs to systematically report any PV2 containment breaches through IHR.
- From November 2022, UNICEF to share the monthly monovalent, novel and trivalent OPV stock balances received from countries with the CWG Chair.

## 4.3. Putting GCC recommendations into practice

*Arlene King, GCC-CWG*

In June 2022, the GCC, which oversees the certification process for polio eradication, held its 22nd meeting and reviewed the status of containment activities. It endorsed the global strategy and action plan and expressed concern that compliance with the timelines for containment as set out in WHA 71.16 is off track. It also acknowledged that VDPV (all serotypes) inventories may need to be updated.

To accelerate progress and get containment back on track, the GCC made three recommendations.

First, the GCC recommended that WHA 71.16 non-compliant countries be reminded of their commitment and strongly urged to act. To that end, WHO is undertaking high-level advocacy (see section *3.1 Communications and advocacy*) and urged all countries to complete their inventories as soon as possible. RCCs will continue to follow up with NCCs to monitor progress in this area.

Second, the GCC recommended that WHO maintains a register of all facilities retaining novel PV strains with the same information as that provided in the CP. All NACs (or NPCCs) were asked to submit this information to WHO as soon as possible. For ease of data collection, this should be done using the CP template (part A), but there is no formal application process and facilities retaining novel PV strains do not need to hold a CP. As noted in section 4.1 of this report, only a limited set of novel PV strains, for a limited set of uses, is temporarily exempt from containment certification. The list is subject to change and will be regularly reviewed and updated depending based on availability of newer data, the course of eradication, bOPV cessation and other factors.

Third, the GCC recommended that NACs begin containment of WPV1 and WPV3, with the aim of getting CPs for all planned PEFs by the end of 2023. Facilities with a CP for PV2 can simply extend their CP by updating their CP template (part A) to say which additional virus is being retained. Facilities with no existing CP should apply for a WPV1 or WPV3 CP using the standard CP template.

These recommendations build on earlier GCC recommendations from July 2021 that extended the validity of existing CPs to December 2022, and asked all countries planning to retain PVs to have started developing their ICC application by that time (by submitting preliminary documentation on their ICC plan—see section 4.4. below).

**Action points**

- WHO to continue high-level advocacy to stimulate action towards containment goals.
- NACs and NPCCs to submit information on novel PV strains using the CP template (part A).
- WHO to collate data on facilities handling any novel PV strains, in a central registry.

## 4.4. ICC review and CCS revision

*Arlene King, GCC-CWG*

As recommended by GCC in July 2021, all applications for containment certification are for ICCs (not CCs) until further notice. Before applying for any ICC, NACs should already have a CP and, before this expires, are expected to formally declare their ICC intentions by submitting comprehensive information on their ICC plan, including the timeframe, audit team composition and experience, and detailed process for auditing.

In theory, NACs should have submitted all ICC plans by the end of 2022, when all issued CPs are due to expire. But in practice, the move from CPs to ICCs has been delayed by COVID-19 and few countries are on track to meet this timeline. The GCC has also only just finished validating and finalizing all the methods and templates needed to process ICC applications – an achievement that was a year in the making and that culminated in the award of the first ICC in October 2022 (see section *6.5 Canada: the first ICC*).

## ICC timelines and processes

Dr King and the GCC Chair had explored options to mitigate the delays. Their suggested recommendation, which was communicated to participants, and which will be presented for validation at the next GCC meeting, was to give all existing CPs an automatic three-month extension, from 1 January to 31 March 2023. The GCC will also revise its expectations for transitioning to ICCs, as detailed below.

**Countries intending to apply for ICCs.** All countries intending to apply for ICCs must send in their complete ICC plans by 31 March 2023, with a full ICC application submitted no later than 31 December 2023. CWG confirmed that the existing templates on the GPEI website are still valid and should be used for all ICC applications. WHO confirmed that all NACs will receive a package of tools and information, including all the templates needed to submit ICC plans and applications.

Depending on when NACs manage to submit the full ICC application, they may also need to apply for a CP extension when they submit their ICC plan, for example if they are submitting after March 2023. The timelines for review will also vary depending on when the plan is submitted (see Table 2).

*Table 2. Timelines for ICC process.*

| Countries submitting ICC in Q4 2022 | | Countries submitting ICC after March 2023 | |
|---|---|---|---|
| Oct–Dec 2022 | • NAC sends a comprehensive ICC plan with timelines and auditor competencies and experiences<br>• CWG reviews plan | Jan–Mar 2023 | • NAC sends a comprehensive ICC plan, with submission timelines and CP extension application<br>• CWG reviews plan |
| 31 Dec 2022 | • Deadline for confirmation of CWG conclusions on plan, including any recommended changes | 31 March 2023 | • Deadline for confirmation of CWG conclusions on plan, including any recommended changes |
| Jan–Feb 2023 | • NAC submits ICC application | Mar–Oct 2023 | • NAC submits ICC application |
| Jan–March 2023 | • CWG reviews ICC application | March–Dec 2023 | • CWG reviews ICC application |

In response to a query, Dr King suggested that after submitting its ICC plan, NACs should proceed with implementing their audits, taking into account the CWG's conclusions on the plan. Asked about nonconformities, the WHO confirmed that the CCS process for these should not change for this specific element and ICC applications are expected to include all relevant documentation on non-conformities, including a corrective action plan that details how the PEF plans to close them.

Participants discussed the role of NCCs in containment, noting that NCC and NAC activities are often kept separate and would benefit from integration. Certification includes containment and a coordinated approach will be essential to achieve certification and manage containment in the long term. National and international containment oversight in the post-certification era will be discussed during the revision process for the GPEI post-certification strategy, which is scheduled to begin in 2023.

**Countries not intending to apply for ICCs.** Countries with a CP that are not intending to apply for an ICC should complete all their poliovirus work by 31 March 2023. If needs be, they can apply for a second three-month CP extension (to 30 June 2023) using an abbreviated process by submitting the standard Application form for Certificate of Participation (CP)[5] (only sections A-PEF and B-NAC) no later than 28 February 2023 (one month before the first CP extension expiry date).

**Countries failing to declare their intentions by 31 March 2023.** Unless an application for a second extension is made, CPs will expire on 31 March 2023. In those cases, NACs should document and report the decommissioning of the facility (or apply for a new CP if PV work is not completed).

[5] The CP application form is available at: http://polioeradication.org/wp-content/uploads/2018/01/cp-application-form-20180111-en.docx.

### CCS revision

The CCS remains the reference document for certification application; it defines the sequence of activities involved and lists the roles and responsibilities of NACs and CWG in completing them.

The CCS will be updated to align with GAPIV language around risk-assessment and to reflect recent GCC recommendations (for example on qualified auditors) and updated timelines. The CCS revision, which should start in November 2022, will be led by WHO and will include broad consultation with stakeholders. It is scheduled for release by June 2023.

The CCS revision will not impact the ongoing certification process. In response to a query, Dr King confirmed there is no reason to delay applying for ICCs and that moving forward with ICCs will not compromise NACs' ability to follow the revised CCS.

### The audit team

Ensuring that the audit team has the right mix of competencies to effectively assess all components of the ICC audit is critical. In some cases, NACs may be able to establish an audit team using their own expertise. In others they may contract external auditing companies to complement or support their own auditors. Countries also have the option to share auditors. All auditing activities are self-financed.

Requirements for auditors are set out in CCS (Chapter 3). Familiarity with the GAPIV is important and the team should include at least one auditor who has received WHO CCS training. The requirements for "qualified CCS auditors" (CCS p13, section 3.5) have been mitigated by GCC by not implementing the requirements as described in the CCS. No other major changes to auditor requirements are expected to emerge from the CCS revision process.

When submitting the ICC plan, NACs should make a case for the audit team it has developed so that the CWG can confirm that all the competencies required to assess that particular facility are in place. Countries can choose to contract external auditors to support their audit and should submit similar auditor information in their ICC plan.

Participants thanked CWG for its work in advancing ICCs, adding that the path toward containment certification is clearer than it has been for years. Some NACs reported some level of turn-over of CCS-trained auditors and shared their concern about retaining all CCS-trained auditors to perform upcoming audits. One NAC mentioned the possibility of running its own training but may need technical support. WHO confirmed that it will not continue auditors' training as before; but said it would be willing to support NACs within its areas of expertise in GAPIV orientation and risk assessment.

**Action points**

- CWG/WHO to develop a standard review form to ensure all ICC application reviews are comparable and aligned with GAP IV language by November 2022.
- WHO to work with stakeholders to map NACs and NCCs to understand overlaps and interplays and identify paths for national coordination across all partners to reassure GCC and RCC that there is integration and stronger coordination.
- WHO to clarify the short- and long- term support that it intends to provide, both to NACs and to PEFs.
- NACs to contact WHO if there is specific need for technical support.

# 5. Programme orientation

## 5.1. Containment strategy and action plan

*Mark Pallansch, Containment Management Group (CMG)*

The *Strategy for global poliovirus containment* (2022–2026) and *Global poliovirus containment action plan 2022–2024* are built around three strategic goals, which need to be achieved in parallel to eradication and beyond.

1. **Reduce** to a minimum the number of facilities retaining PV materials.
2. **Contain** all eradicated PV materials in PEFs and ensure such materials are stored and handled according to international standards.
3. **Sustain** containment by strengthening and supporting national and international programmes to continue PV containment in the post-certification era.

The new strategy and action plan are directed at all stakeholders for implementing PV containment. They describe the path to achieving each goal and outline key responsibilities and sources of support. Both documents also emphasize the importance of an enabling environment for containment in terms of monitoring and evaluation (M&E), communication and advocacy, gender equality and resource mobilization.

A series of strategic resources, practical tools and technical and policy guidance are being developed to complement the new strategy and action plan and to support the achievement of containment goals. The new GAP standard (GAPIV) has already been published (see section *4.1 GAPIV*), along with guidance for laboratories. Other resources under development include an updated PIM guidance and a new M&E framework (see section *5.2 Global reporting, monitoring and evaluation*), as well as an updated version of the CCS (see section *4.4. ICC review and CCS revision*).

The CMG is also working to update the post-certification strategy, which will become increasingly important as eradication approaches. Participants noted that countries are ultimately expected to take ownership of containment after certification of eradication and that this will be reflected in the post-certification strategy. The CMG encouraged all countries to engage in its development; and to also make the most of the closing window of opportunity for technical support before NACs need to become self-sufficient.

The CMG continues to work in parallel to NACs to facilitate, coordinate and advocate for containment at all levels, including by identifying new issues as they emerge and assuring appropriate input from all stakeholders into the development and refinement of technical guidance and support.

**Action points and unresolved queries**

- CMG to consider the contents and outcomes of this meeting when revising the post-certification strategy, and to ensure all NACs can provide input and feedback.

## 5.2. Global reporting, monitoring and evaluation

*Liliane Boualam, WHO*

The strongest reporting framework available for containment is the 2018 WHA 71.16 resolution that urges all Member States to complete their inventories for PV2 and sets deadlines for countries retaining PVs to establish a NAC and submit their applications for CPs (see section *4.2 Polio containment: where are we?*). Progress against these commitments is monitored by the WHO and reported in the annual GPEI update to the WHO Executive Board every year.

Participants pointed out that WHA 71.16 is more than four years old and was made before COVID-19; it could benefit from a refresh. WHO agreed and asked NACs for feedback on what the content of a new resolution might be; participants were also asked to investigate whether there was any appetite among Member States to co-sponsor such a resolution at the next WHA (to make the process for passing a resolution simpler).

GCC recommendations from its meetings in July 2021 and June 2022 provided some global key performance indicators (KPI) for containment (see section *4.3 Putting GCC recommendations into practice*). Progress

against these is captured in the annual reports that countries submit to RCCs and are also monitored by the WHO Secretariat.

The fast-approaching deadlines for eradication have heightened the interest in progress in containment and increased the need for more diligent M&E, including more global transparent reporting. In response to these trends, the CMG is supporting the development of a *Global M&E Framework* for containment. This is scheduled for completion by the end of 2022, with reporting scheduled to start from January 2023.

The new framework will define a set of KPI based on the deliverables and timelines set out in the WHA 71.16, GCC recommendations and *Global containment action plan 2022–2024*. WHO will be reporting openly and transparently through: WHO Executive Board reports, WHA polio updates, GPEI website, and GCC and RCC meetings. Countries should expect greater visibility on their containment progress, including through qualitative and quantitative data that show the progress of individual countries and highlight gaps in performance.

**Action points**

- CMG to coordinate the development of the global monitoring framework by end of 2022.
- NACs to provide feedback on potential content and country leadership for co-sponsorship of a new WHA resolution by mid-November 2022.

# 6. Country experiences

## 6.1. United States of America: progress on PV2 inventory

*Lia Haynes Smith, NAC USA*

Starting in 2002, the United States of America has conducted multiple surveys to establish its PV2 inventory. The first in 2002 was sent to more than 100 000 facilities and did not distinguish between PV serotypes. In 2015, a second survey focused on facilities with infectious material (excluding respiratory laboratories) and the most recent survey, in 2018, gave greater emphasis to facilities with PV PIM. The 2018 survey was also designed to capture more specific information on the PV type of materials handled and included a declaration of intent for infectious material or PIM (with a choice to destroy, transfer or retain them).

### Challenges and solutions

Dr Haynes Smith commented that there is no regulation in the United States of America that compels facilities to adopt GAP containment measures, so participation in inventorying is voluntary. She also pointed to three other challenges associated with implementing the latest PV survey.

**No national database of laboratories.** The lack of a national laboratory database meant the NAC had to develop its own survey recipient base. It did this by first identifying the types of facilities that might have PV materials and then categorizing these according to likely possession of PV materials. Focusing on the highest risk facilities (those categorized most likely to possess PV materials), the NAC then leveraged diverse sources – including NIH funding recipients, biosafety networks, professional societies, federal partners and literature reviews – to identify potential recipients of the survey. In response to a query, Dr Haynes Smith confirmed that PV is not a select agent but facilities do need a permit to import infectious material to the country, so the Federal Select Agent Program was a useful partner in identifying potential holders of PV materials.

Around 10 600 surveys were sent out, using a range of distribution methods. One participant asked whether there was now an appetite for developing a national database of laboratories given the level of effort it took to identify survey recipients. Other participants confirmed that the need for a database of laboratories handling infectious agents (not just PV) is increasingly acknowledged within the biosafety management communities, where there are ongoing discussions about how to develop one.

**High level of non-respondents.** When the survey first went out, the response rate was very low, at around 30%. To resolve non-responders, the USA NAC enlisted the support of first biosafety officers and then department heads to send survey reminders or prompt the destruction of unneeded PV materials. This approach to outreach and engagement was very effective, halving the number of non-respondents so that the response rate now stands at more than 60%.

**Identifying new facilities.** In the past year, 16 new facilities were identified with PV materials. One of these had PV2 materials and intends to retain these, so it has become a PEF. It is unlikely that new facilities with WPV2 will be identified but this remains a possibility and the USA NAC has established a follow-up process should this happen. Participants acknowledged that inventorying is a continuous process and that there is always a risk that PV materials have been missed. To ensure facilities feel able to come forward with any newly found PV materials, participants highlighted the need for a clear, non-punitive process for facilities to communicate and follow up with NACs.

The survey results as they now stand provide a comprehensive account of relevant facilities for containment and offer a data set that is well positioned for full eradication. The number of facilities handling PVs is going down: of the 29 identified in the survey only ten remain, with plans for five PEFs moving forward.

## 6.2. Sweden: progress on PV PIM inventory

*Åsa Szekely Björndal and Anna-Maria Jonsson, NAC Sweden*

The PV PIM inventory process in Sweden is ongoing. It uses a survey that covers all serotypes and is designed to collect information on the type of material held and how it is handled and stored.

The survey has been sent to more than 100 facilities that the NAC identified as potentially handling or storing PV PIM, including clinical laboratories, academic institutions and companies. The NAC used many sources to build its recipient base, including biosafety networks and government partners. To manage the biorisk associated with creating a list of facilities with PV PIM, the survey is not available online. Rather, individual facilities were sent the survey and returned data are securely stored at the NAC.

### Ongoing challenges

The survey includes questions about PIM collected in Sweden, even though polio caused by WPVs has not been present in the country for decades, and OPVs have never been used. The NAC is not expecting any samples to be retained from the time when WPVs were present in Sweden. But there may well be samples collected from other countries; these are also easily identified through the survey.

More complicated is how to identify PIM in samples obtained from travelers. Survey participants were asked to identify materials collected from individuals that had travelled to areas with cVDPVs or WPVs are present, or where OPV2 is used in the past three months. Swedish citizens take more than 16 million trips every year, so the number of materials in this category could be high but identifying these materials has proven difficult because the travel history of individuals for the past three months is rarely known or documented when collecting samples.

Participants from other countries agreed that identifying samples from travelers is challenging. Surveys in Denmark and the United States of America do not ask about travelers, partly because they are hard to identify, but also because they are deemed lower risk than some other categories. Participants emphasized the need for a risk-based approach. To that end, Dr Björndal suggested greater clarity in the PIM guidance, particularly around respiratory samples from fully IPV-vaccinated individuals.

Another challenge raised by the Swedish survey was facilities that want to keep PV PIM but have no intention of certifying as a PEF themselves.

**Action points**

- WHO to gather input from NACs and NPCCs on PV PIM to inform the PIM guidance update that is scheduled by CAG.

## 6.3. India: progress in containment certification

*Nivedita Gupta, NAC India*

India's containment activities were originally implemented by a national task force; since 2017, they have been led by the NAC. During 2013–2014, the task force surveyed around 72 000 biomedical laboratories to establish its inventory. The survey covered all serotypes and identified 50 labs with WPVs or WPV PIM.

All unneeded WPVs and WPV PIM samples have since been destroyed or transferred to the country's designated PEFs, which include one facility for WPVs and two facilities for Sabin IPV production. The NAC follows a standard process for certifying manufacturers that want to produce Sabin IPVs. This starts with notification from the Indian regulator (DCGI) that a manufacturer wants to import seed strains; and proceeds with the submission of a CP application, which the NAC supports the manufacturer to develop through initial discussion, site visits and recommendations for improvement.

In addition to monitoring Sabin IPV production, the Indian NAC is also tracking producers of novel polio vaccines – specifically nOPV2 and S19 IPV – even though both these are currently exempt from containment certification. Here the NAC does not look for GAP compliance but still assesses facility readiness and does a site visit to ensure that each manufacturer intending to produce nOPV2 or S19 IPV has: partner commitment for strain/bulk transfer; checks for handling accidental release into the environment; and validated laboratory detection assays. The facility must also agree to submit all nOPV2 sequences to the national repository.

### Containment certification challenges

Progress in containment certification has been slower than hoped, largely due to three factors.

- **COVID-19** created huge disruptions in India and significant delays to containment activities. None of India's PEFs have initiated their ICC application (although all intend to do so soon).
- **Lack of national polio expertise** means there is a shortage of trained auditors – including no in-country lead auditor – available to do certification audits. Dr Gupta emphasized the need for capacity building to enable the transition from GAPIII to GAPIV.
- **Lack of public information on nOPVs** meant that the NAC could not easily assess the data needed to confidently assess containment risks and to ensure evidence-based decisions. This challenge has been overcome by collaborating with WHO to access information that was not available in the public domain; but it nevertheless created delays in the NAC processes for nOPV2 facilities.

## 6.4. Republic of Korea: containment update

*Min Woo Park, NAC Republic of Korea*

In the Republic of Korea, the NAC exists as a committee within the Korea Disease Control and Prevention Agency (KDCA). In line with KDCA rules and regulations for committees, the NAC comprises diverse members who serve a limited term of two years at a time. The first NAC was established in October 2018; it was reconstituted two years later and now a third NAC is getting ready to take over in October 2022. In response to a query about knowledge transfer from one NAC to the next, Dr Park explained NAC members could serve multiple terms and most members were simply re-elected to retain institutional memory.

Together, the NAC members are responsible for coordinating with PEFs and national partners in biosafety and food and drug safety to establish PEF biosafety standards and requirements, review and evaluate PEF safety systems and procedures against these, and report on containment status and progress (including through annual polio reports to the RCC).

### Key achievements

Since 2018, the Republic of Korea's NAC has done several activities to support containment certification.

- **CP application** involved a lot of preliminary work with the country's PEF to review GAPIII requirements, identify gaps, conduct a site visit and ensure readiness for certification.
- **Auditor training** was achieved with the support of WHO, which provided GAPIII CCS training for 16 individuals in January 2019.
- **CP extensions** were applied for and approved in 2021 and 2022 (the second extension also expanded the PEF's scope to include a new polio vaccine quality control laboratory that had been built on site).
- **Two national surveys** to identify facilities holding PVs were conducted in 2021, identifying 36 institutions in possession of PVs.
- **Participation in a POSE** run by WHO's Regional Office for the Western Pacific gave the NAC and PEF an opportunity to assess national capabilities to respond to polio outbreaks and containment breaches; and enabled knowledge exchange with other countries in the region.

Looking ahead, the NAC continues to work on preparing for an ICC and plans to initiate the process by the end of 2022. It will then proceed with auditing based on the new GAPIV, with achievement of an ICC expected in 2023. Dr Park emphasized the need to cooperate with other agencies responsible for overseeing biosafety and to achieve stronger alignment of terminology and standards across biosafety and GMP.

Work is also ongoing to reinforce the NAC's oversight role by strengthening national legislation in biosafety. The Infectious Disease Control and Prevention Act already requires any entity intending to handle a high-risk pathogen to report or get a permit before acquiring it. The NAC is working to amend this law to include WPV as a high-risk pathogen. The revised law, which is expected to come into force in 2023, will enable the NAC to fulfill its national oversight role for poliovirus more effectively.

## 6.5. Canada: the first ICC

*Andréanne Bonhomme, NAC Canada*

The Canadian NAC is established under the Public Health Agency of Canada – Centre for Biosecurity and is responsible for auditing and inspecting polio laboratories, completing national PV inventories and promoting the destruction or transfer of all unneeded materials, and reporting containment status and progress each year.

From 2009 to 2022, the number of facilities storing eradicated PVs in Canada was reduced from 23 to 2. A further two have other WPVs or Sabin OPVs but are planning to dispose of these upon eradication.

In October 2022, Canada became the first country to be awarded an ICC – for a vaccine manufacturer PEF. The application took a year to complete, although that is because it was the first one; subsequent applications – by Canada or other countries – are expected to be quicker to complete. It can be divided into three key types of activity.

**Preparation.** Before the ICC application began, the NAC did a lot of work to secure and demonstrate the readiness of the auditors and the PEF. The package of information submitted to the CWG included details of the audit team composition, expertise and competencies. The NAC tried to ensure a good mix of skills. The audit team approved by CWG comprised four national qualified biosafety inspectors that had competencies in microbiology, PV containment, GAP, biosafety, risk assessment, emergency preparedness and response, and engineering principles, among other things. Between them, they had more than 59 years of audit experience.

Preliminary information for CWG also included a detailed audit plan. This was informed by a pre-ICC audit assessment of the facility that was done against GAPIII in 2019 and that was used to make recommendations to improve biorisk management and facilitate a more targeted ICC audit in 2021. The pre-assessment was useful in raising the PEF's awareness of containment requirements. Dr Bonhomme emphasized the importance of helping PEFs to understand the GAP standard and called on WHO to provide support in this.

**Audit.** The audit was conducted in November 2021 using a hybrid approach to minimize time on site, because COVID-19 protocols were still in force.

**Documentation.** Documenting the results of the audit, including writing the report and developing the corrective action plan and completing all the WHO templates needed for the application, was a labor-intensive process that took some time to complete.

### Challenges, solutions and next steps

The ICC audit was done against GAPIII because GAPIV was still under development. To support long-term planning by the PEF, even though the audit only listed non-conformities with GAPIII, the audit team considered GAPIV changes and advised the PEF of any potential changes that might impact it in the future.

The audit team also took advantage of other regulatory activities and procedures to maximize efficiencies and enable a more comprehensive view of how well the facility is structured. For example, auditors looked at relevant non-polio infrastructure including a new Containment Level 3 facility that was being commissioned and targeted HVAC commissioning tests. As designated national inspectors, the auditors also issued an inspection report detailing non-compliances observed under Canada's Human Pathogens and Toxins Act.

Canada is now getting ready for its second ICC application, this time for a public health laboratory PEF. It has already submitted the comprehensive preliminary information required and completed the ICC audit (in April 2022). A major lesson learnt has been that different facilities require different competencies to audit and that countries may need to adapt their audit team depending on the type of facility being audited.

The NAC continues to monitor PEFs and to promote general awareness, identification and safe handling of PV PIM through newsletters, presentations and the NAC website. It is also getting ready to participate in a national POSE involving more than 35 participants from the NAC, PEF and federal and regional partners in biosafety and emergency preparedness and response.

## 7. Conclusion

Participants reviewed the meeting objectives and agenda. They agreed that the objectives had been met and expressed their appreciation for the meeting, which they said provided a strong platform for learning more about the ICC process. They particularly valued the opportunity to learn from each other's experiences, both through presentations as well as through informal networking and discussion in between plenary sessions.

WHO was recommended to:

- compile action points identified during the meeting and collect unresolved questions by 23 October;
- provide the latest templates and guidance for ICC applications and CP extensions by 23 October; and
- share a draft meeting report by mid-November 2022.

NACs were recommended to:

- inform WHO of their expected timelines for initiating ICC applications by mid-November 2022; and
- provide their feedback on potential content and potential country leadership for co-sponsoring a new containment resolution during the 2023 WHA by mid-November 2022.

Mr O'Leary concluded the meeting by saying: "to secure eradication milestones, GPEI's top priority until the end of 2023 will be to interrupt transmission and pave the way for certification by 2026. But there can be no certification without containment and the current lack of compliance with the containment commitments of WHA 71.16 remains a concern. Containment processes must be taken seriously and activated if the world is to maintain a polio-free world. That means moving beyond national inventories for all PV2 material to ensure WPV1 and WPV3 readiness for containment, and to begin certifying PEFs".

Dr King thanked all participants for their contributions to the meeting and for their high-quality discussions. She thanked the meeting organizers and acknowledged the work of all partners – including the CWG, CMG, CAG, NACs, PEFs, and regional focal points – in implementing poliovirus containment.

# Annex A. Agenda

**Sixth annual poliovirus containment meeting with National Authorities for Containment and the Global Certification Commission's Containment Working Group**

12–13 October 2022 | WHO Headquarters, Geneva, Switzerland (and online)
Chair: Dr Arlene King, GCC-CWG

12 October 2022

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| **SESSION 1: Introduction** | | |
| 09.00-09:10 | Welcome and opening remarks | A O'Leary, WHO |
| 09:10-09:20 | Meeting objectives and expected outcomes | L Boualam, WHO |
| **SESSION 2: Polio eradication, vaccine needs, and containment certification** | | |
| 09:20-09.40 | GPEI strategy update and current outbreaks | A O'Leary, WHO |
| 09:40-10:00 | Vaccine supply security and containment | V Harutyunyan, WHO |
| **SESSION 3: Poliovirus Containment communications** | | |
| 10.30-10.45 | Containment communications and advocacy | J Swan, WHO |
| **SESSION 4: Containment certification update** | | |
| 11:15-12:00 | Presentation of GAPIV | H Singh, WHO |
| 13:30-14.30 | Global polio containment update | L Boualam, WHO |
| 14:30-15:00 | GCC recommendations and operationalization | A King, GCC-CWG |
| **SESSION 5: Programme orientation** | | |
| 15:30-16.00 | Containment strategy and action plan | M Pallansch, CMG |
| 16:00-16:30 | Global containment monitoring and evaluation | L Boualam, WHO |

13 October 2022

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| **SESSION 6: Global certification** | | |
| 09:40-10:00 | ICC review findings and conclusions; and CCS revision | A King, GCC-CWG |
| **SESSION 7: Country experiences** | | |
| 10:30-11.15 | Progress on inventory of poliovirus type 2 | LH Smith, NAC USA |
| 11:15-12:00 | Progress on inventory of poliovirus PIM | A Björndal, A-M Jonsson, NAC Sweden |
| 13.30-14.00 | National coordination of certification | N Gupta, NAC India |
| 14:00-14:30 | Progress on containment certification | MW Park, NAC Republic of Korea |
| 14.30-15.00 | First ICC application review | A Bonhomme, NAC Canada |
| **SESSION 8: Wrap-up and conclusions** | | |
| 15.30:16.00 | Way forward | L Boualam, WHO |
| 15.30:16.00 | Concluding remarks | A O'Leary, WHO; D Salisbury, GCC; A King, GCC-CWG |

# Annex B. List of participants by institutional representation

| National Authority for Containment (NAC) | |
|---|---|
| Australia | Office of Health Protection and Response Division, Australian Government Department of Health and Aged Care, Canberra, Australian Capital Territory |
| Republic of Belarus | The Republican Commission for the Assessment of Polio Virus Containment, Republican Center for Hygiene, Epidemiology and Public Health, Minsk |
| Belgium | Federal Public Service Public Health, Food Chain Safety and Environment, Brussels |
| Canada | Centre for Biosecurity, Public Health Agency of Canada, Ottawa, Ontario |
| Cuba | National regulatory authority for drug, equipment and medical devices (CECMED), La Habana |
| Denmark | Centre for Biosecurity and Biopreparedness, Statens Serum Institut, Copenhagen |
| France | Le centre opérationnel de régulation et de réponse aux urgences sanitaires et sociales (CORRUSS), General Directorate for Health, Paris |
| Hungary | National Public Health Center (NPHC), Budapest |
| India | Indian Council of Medical Research (ICMR), New Delhi |
| Indonesia | National Institute of Health Research and Development, Jakarta |
| Islamic Republic of Iran | Iran Food and Drug Administration, Tehran |
| Japan | Infectious Diseases Control Division, Health Services Bureau, Ministry of Health, Labour and Welfare, Tokyo |
| Netherlands | Health and Youth Care Inspectorate, Amsterdam |
| Pakistan | National Authority for Containment of Poliovirus, Islamabad |
| Republic of Korea | Division of Biosafety Evaluation and Control, Bureau of Healthcare Safety and Immunization, Korea Disease Control and Prevention Agency, Chungcheongbuk-do |
| Russian Federation | Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing, Department of Epidemiological Surveillance, Moscow |
| Serbia | National Committee for Poliovirus Containment, University of Belgrade, Belgrade |
| Republic of South Africa | National Authority for Containment |
| Sweden | Public Health Agency, Solna |
| United Kingdom of Great Britain and Northern Ireland | UK National Authority for Containment, UK Health Security Agency (UKHSA) |
| United States of America | US National Authority for Containment of Poliovirus, Center for Preparedness and Response, Centers for Disease Control and Prevention, Atlanta, Georgia |

| Global Certification Commission for the Eradication of Poliomyelitis – Containment Working Group (GCC – CWG) |
|---|
| Chair and members |

| Global Certification Commission for the Eradication of Poliomyelitis (GCC) |
|---|
| Co-chairs |

| UNICEF Polio Programme, Geneva |
|---|

| Secretariat |
|---|
| Director, Department of Polio Eradication, WHO |
| Containment unit, Department of Polio Eradication, WHO |
| Detection and Interruption Unit, Department of Polio Eradication, WHO |
| Containment Regional Focal Points, Regional Offices, WHO |

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