THE CONTAINMENT CORNER - POLIOVIRUS CONTAINMENT NEWS

JUNE 2019

Are we on track?

Welcome to the third edition of The Containment Corner - Poliovirus Containment News! In this issue we look at how countries are tracking in their journey to achieve containment certification, chat with head of the Containment Advisory Group and public health legend David Heymann on poliovirus versus smallpox containment, provide an update on wild poliovirus 3 certification and the World Health Assembly, and see what WHO Africa Regional Office is doing to improve handling of monovalent type 2 oral polio vaccine in the field. First up, be sure to check out our brand new containment animation featuring our polio mascot!
Happy reading.
Containment made more digestible...

We get it. Containment is not the easiest thing to get one's head around. WHO has teamed up with UK-based visual design company Heehaw to produce a short animated video that explains what containment is all about and why it is needed to secure a lasting polio-free world.

Available in English, Arabic, Chinese, French, Spanish and Russian.

Current containment status

Last year, WHO Member States [committed](#) to accelerating poliovirus containment action globally. As part of this commitment, countries and facilities retaining type 2 poliovirus need to engage in the Containment Certification Scheme — their first step being to apply for a Certificate of Participation (CP) in the scheme. Two out of 26 countries hold valid CPs indicating that their facilities have been recognized as suitable candidates to handle and store poliovirus. Three countries have applications in the pipeline.

**Countries have until 31 December 2019 to submit their applications for CPs.**
Currently, **26 countries** plan to retain type 2 poliovirus in **78 designated poliovirus-essential facilities**.

<table>
<thead>
<tr>
<th>WHO Region</th>
<th>Number of countries planning to retain type 2 poliovirus (PV2) materials</th>
<th>Number of designated poliovirus-essential facilities (PEFs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region of the Americas</td>
<td>5</td>
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</tr>
<tr>
<td>African Region</td>
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<tr>
<td>European Region</td>
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<tr>
<td>Eastern Mediterranean Region</td>
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<td>3</td>
</tr>
<tr>
<td>South-East Asia Region</td>
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<td>2</td>
</tr>
<tr>
<td>Western Pacific Region</td>
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<td>16</td>
</tr>
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**Poliovirus vs smallpox containment: An interview with David Heymann**
We caught up with head of the Containment Advisory Group, Professor David Heymann, to discuss some of the similarities and differences between poliovirus and smallpox containment, and work of the CAG. With decades of public health experience, David has worked to manage and curb the spread of SARS, Ebola, Zika virus, HIV, malaria, and measles – and that’s in addition to polio and smallpox eradication efforts! He is currently a professor of Infectious Disease Epidemiology at the London School of Hygiene and Tropical Medicine and head of the Centre on Global Health Security at Chatham House, London.

As part of your extensive experience with infectious diseases you were involved in efforts to eradicate smallpox, a disease which caused the death of more than 300 million people in the 20th century alone. How did you get involved in the effort and what were some of the difficulties faced in reaching eradication?

For the smallpox programme, I was recruited by WHO as a short-term consultant and I spent two years with the programme in the field, in Bihar state, India.

Smallpox eradication was actually very simple to deliver. It was straightforward with two basic strategies: search and contain. The search component involved looking for children or adults showing classical signs of smallpox, by going from house to house, to villages, communities, markets and religious festivals – wherever people congregated. We took with us pictures of what smallpox looked like so people knew what we were looking for and what to be on the lookout for. We explained that our work was to put an end to this disease and relieve pain and suffering, and communities were very receptive.

When a patient was identified, the address was taken and a house visit was made. If diagnosed as smallpox the patient was then isolated and there was a local vaccination activity – a ‘containment activity’ – with residents of 30 households around that patient vaccinated.

Would you say then that eradicating smallpox was/is easier than eradicating polio?

Yes, compared to polio, smallpox was much easier to eradicate. A major reason being the nature of polio with only 1 out of approximately 200 cases being symptomatic. For smallpox,
every infection resulted in the same clinical manifestation of the disease and this made patients easier to find and isolate. It also made following up on [case] contacts easier for monitoring and immediate isolation if they started to show signs of fever.

From a logistics point of view, far less vaccine was needed to stop smallpox transmission as the strategy was not mass immunization but ring vaccination – vaccinating people in households surrounding that of the patient and any other persons who were known to have contact with the patient. The vaccine was heat stable meaning it could be taken anywhere without cold chain. This is not the same for polio vaccine which needs to be kept cold.

Strict laboratory containment of variola virus which causes smallpox is vital to help make sure the disease does not come back. Was this something always known to the programme and was lab containment prioritized at the time of eradication?

... Click here to continue reading

Left to right:
1. David on the smallpox trail. Photo: WHO
2. Cover of WHO's World Health May 1980 magazine, celebrating the end of smallpox. Photo: WHO
Preparing for wild poliovirus type 3 eradication: urgent action required

WPV3 has not been seen anywhere globally since November 2012 and in February this year, the Global Commission for the Certification of the Eradication of Poliomyelitis (GCC) proposed to declare eradication of the strain in late 2019/early 2020. Just like for the declaration of WPV2 eradication in 2015, containment prerequisites will need to be met.

Resolution WHA71.16 (Poliomyelitis – Containment of Polioviruses) urges all WHO Member States to initiate steps for the containment of wild type 1 and 3 materials so that, by the time of global certification of eradication (of all three serotypes), all facilities retaining poliovirus meet containment requirements. National Authorities for Containment are encouraged to work with their national stakeholders to ensure: initiation of surveys of laboratories with WPV3 materials, destruction of unneeded WPV3 materials, and development of inventories of laboratories retaining WPV3 materials. These should be completed as a matter of urgency.

Containment discussions at World Health Assembly

The 72nd World Health Assembly, held 20-28 May, saw the launch of the new GPEI Polio Endgame Strategy 2019-2023. WHA also provided an opportunity for WHO to meet with Member States and discuss broad containment issues including progress and delays in the implementation of GAPIII, availability/shortage of staff to carry out national containment coordination functions, and advocacy to reduce the number of designated poliovirus-essential facilities (PEFs).
‘Every single vaccine vial matters’ was the message ringing in participants’ ears following meetings between polio eradication counterparts across the Democratic Republic of Congo, late last year. Led by the World Health Organization Africa Regional Office (WHO AFRO), health workers, epidemiologists, and experts in poliovirus containment, immunization and waste management came together to evaluate and get oriented on monovalent oral polio vaccine type 2 (mOPV2) safe usage and handling.

“We’re dealing with a special kind of vaccine here – one that comes with significant containment implications,” said Dr Jacob Barnor, WHO AFRO Technical Officer for Poliovirus Containment. “The focus of these meetings was how we improve handling and accountability controls for mOPV2 – the only tool we have to effectively combat vaccine-derived poliovirus type 2 outbreaks – so that we don’t see more of these outbreaks,” he added.

The only oral polio vaccine now containing the OPV2 component is mOPV2, reserved for special use in responding to VDPV2 outbreaks... [Click here to continue reading]

Left to right:
1. Orientation session on mOPV2 safe handling in Likasi, Haut Katanga province. Photo: WHO DR Congo 2018
2. Vaccinators counting empty, open and broken vials under supervision in Bwamanda, Sud-Ubangi province. Photo: WHO DR Congo 2018
Key upcoming dates

- **15-16 July 2019**
  Containment Advisory Group meeting - Geneva

- **15 October 2019**
  WHO-UNICEF consultation with oral polio vaccine and inactivated polio vaccine manufacturers and National Authorities for Containment - Geneva

- **16 October 2019**
  National Authorities for Containment, GCC-Containment Working Group and WHO HQ and Regional Office poliovirus containment consultation - Geneva

- **17-18 October 2019**
  Global Certification Commission meeting - Geneva

- **31 December 2019**
  Deadline for National Authorities for Containment to submit applications for Certificate of Participation in the GAPIII Containment Certification Scheme.

Rolling timeline for review of containment certification applications
The Global Commission for the Certification of Eradication of Poliomyelitis - Containment Working Group (GCC-CWG) has developed a rolling timeline for the review of containment certification applications. National Authorities for Containment are asked to observe the below schedule when submitting applications to the GCC-CWG for Certificate of Participation (CP), Interim Certificate of Containment (ICC) and Certificate of Containment (CC) in the GAPIII Containment Certification Scheme.

<table>
<thead>
<tr>
<th>Wave</th>
<th>Period of acceptance for completed CP applications for review*</th>
<th>GCC will review completed CP applications by:</th>
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<tbody>
<tr>
<td>Wave 1</td>
<td>1 December – 28 February</td>
<td>28 March</td>
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<tr>
<td>Wave 2</td>
<td>1 March – 31 May</td>
<td>28 June</td>
</tr>
<tr>
<td>Wave 3</td>
<td>1 June – 30 August</td>
<td>31 September</td>
</tr>
<tr>
<td>Wave 4</td>
<td>1 September – 30 November</td>
<td>17 December</td>
</tr>
</tbody>
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1 January – 31 March 2019: CET (UTC+1h); 31 March – 27 October: CEST (UTC+2h); 27 October – 17 Dec 2019: CET (UTC+1h)

*Applications should be submitted to containment_certification@workspace.who.int. Specified cut-off dates will be observed. Early submission is strongly encouraged.

Quick links

More on poliovirus containment

Global Action Plan III for the Containment of Polioviruses (GAPIII) and GAPIII Containment Certification Scheme (GAPIII-CCS)

Could you be harbouring poliovirus?Potentially Infectious Material (PIM) guidance
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