Polio programme update
Rigorous review of the 2022–2026 Strategy

- **GPEI Polio Eradication Strategy 2022–2026** set 2023 as the target year to interrupt **Goal 1** - all remaining wild poliovirus type 1 (WPV1), and **Goal 2** - circulating vaccine-derived poliovirus type 2 (cVDPV2) transmission, with the aim to reach eradication by 2026.

- The Strategy committed GPEI to undertake a rigorous independent programme review by the end of 2023 to assess progress towards interruption & eradication Goals.

- This independent assessment will be conducted by the IMB as part of its annual review of the programme, and will be geared specifically to:
  - Evaluate progress towards the interruption and eradication Goals 1 and 2 of the Polio Eradication Strategy 2022-2026
  - Assess whether the strategic plan is a) on track, b) at risk, c) off track or d) missed
  - Identify areas where corrective action plans are required and evaluate the quality, implementation, and impact of corrective action plans

**Note:**

- The Strategy milestones, set in 2021, assumed that there would have to be a fixed three-year period of non-detection after interruption of transmission to certify eradication.

- In June 2022, the GCC recommended that for WPV1 (Goal 1) the fixed three-year period of non-detection be replaced with a flexible period of **not less than two years** that takes into account the quality of surveillance in endemic countries, the risk in sub-population groups poorly or not reached by surveillance, and other data such as molecular analysis of the last chains of transmission.

- The timeline to validate the absence of cVDPV2 (Goal 2) is still under consideration by the GCC. A decision is expected later this year.
# Progress towards interrupting polio transmission by end-2023

## Objective

**Goal 1**
- Interrupt all wild poliovirus by end of 2023
- Global eradication of all wild poliovirus certified by 2026

**Goal 2**
- cVDPV2 interruption by end of 2023
- Absence of cVDPV2 by 2026

## Overview

- Endemic transmission is restricted to Southern KP in Pakistan and the Eastern Region of Afghanistan
- Number of transmission chains is significantly reduced
- Both remaining WPV1 transmission chains have survived the 2022–2023 low season
- Number of AFP cases, transmission chains, and infected districts is reducing
- Increasing concentration of the virus – 84% of cases in the most consequential geographies* (MCG)
- ‘Beyond standard’ responses planned or under implementation in the MCGs

## Current state

- One case and ten ES+ detections in Pakistan in 2023. Historic reservoirs no longer endemic
- Continuing transmission in eastern Afghanistan (5 cases) and a recent ES positive in Kandahar
- Cross-border transmissions detected
- No agreement to conduct house-to-house in the south means Afghanistan faces significant risks
- Successful nOPV2 rollout has seen a reduction in new vaccine-derived emergences
- Reducing trend of cVDPV2 cases and environmental detections
- Enhanced geographic scope of response but timeliness and quality of response remain a challenge
- Effectiveness of intensive response in the MCGs will be key for interruption of transmission

*most consequential geographies: eastern DRC, northern Nigeria, central Somalia, and northern Yemen*
Goal One: Endemic transmission is increasingly restricted, but the virus has survived the low season

- Endemic transmission has been restricted to Southern KP in Pakistan and the Eastern Region of Afghanistan, with the number of transmission chains reduced from 19 to two. ES detection of YB3A exportation from East Region to Pakistan beginning in 2023.
- To date in 2023 there has been one case and ten ES positives in Pakistan; five cases and 29 ES positives in Afghanistan. There have been no WPV1 detections from the eastern Africa importation since August 2022 in Mozambique.
- The principal aim in endemic areas remains reaching persistently missed children in Eastern Afghanistan and Southern KP.
- The historic reservoirs in Pakistan are no longer endemic, but there has been a recent positive environmental sample in the South region of Afghanistan as well as Peshawar and Karachi.
- The ES positive detected in Kandahar where there are a high number of susceptible children given the absence of authorized house-to-house campaigns presents a major risk.
- As the high transmission season progresses and the risk of reestablished transmission increases, rapid and high-quality outbreak response is required.

GPEI is fully aligned with the June 2023 TAG analysis and recommendations on Goal One
Afghanistan: quality improving, but pockets of persistently missed children remain; major risk in the South

Overview
- Increase in WPV1 cases and detections through low transmission season compared to 2021 and 2022
- Programme recently achieving high-quality SIAs (90% LOQAS), but the threshold will have to be increased and improvements need to be sustained to reach interruption
- ES+ detection in Kandahar in the South region is a public health emergency with an important risk of a large outbreak
- Absence of authorization for house-to-house campaigns in the South means Afghanistan faces important risks
- Health sector exempt from decree on female workers

Progress
- Recent improvements in campaign quality
- Numbers of missed children are decreasing, and population immunity is improving

Risks
- Setbacks in Afghanistan pose risks to programme in Pakistan
- Potential pockets of susceptibility in children 5-10 years old due to history of inaccessibility (East Region)
- Conduct of timely, high-quality outbreak response is required to prevent re-establishment of transmission (South Region)
- Large susceptible population due to limitations of site-to-site campaigns; ongoing challenges in securing house to house campaigns as planned (South Region)

Program response/key activities (from June 2023 TAG recommendations)
1. Improve AFP and ES surveillance through optimized networks, improved record keeping and monitoring and evaluating surveillance quality
2. Interrupt endemic transmission in East Region via full access, house-to-house, and further increased campaign quality
3. Implement high-quality SIAs
4. Use social mapping and listening to ensure all communities are effectively engaged in SIAs
5. Trial and systematically evaluate use of different pluses to optimize campaign quality
6. Continue intense programme monitoring

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Missed Children East Region

- 2021: 5.1%
- 2022: 3.8%
- 2023: 1.9%

- Children Vaccinated (number)
- Children Missed (%)

- May 2021: 2.7%
- Jun 2021: 3.4%
- Jul 2021: 2.8%
- Aug 2021: 2.3%
- Sep 2021: 1.8%
- Oct 2021: 1.3%
- Nov 2021: 0.8%
- Dec 2021: 0.3%
- Jan 2022: 0.4%
- Feb 2022: 0.9%
- Mar 2022: 1.4%
- Apr 2022: 1.9%
- May 2022: 2.4%
- Jun 2022: 2.9%
- Jul 2022: 3.4%
- Aug 2022: 3.9%
- Sep 2022: 4.4%
- Oct 2022: 4.9%
- Nov 2022: 5.4%
- Dec 2022: 5.9%
- Jan 2023: 6.4%
- Feb 2023: 6.9%
- Mar 2023: 7.4%
- Apr 2023: 7.9%
Pakistan: Decrease in detections but remaining unreached children remain a challenge

Overview
• Decrease in WPV1 cases and detections through low transmission season
• The most direct path to interrupting endemic transmission remains multiple high quality ('3+2' enhanced H2H) campaigns
• These will be complemented by additional alternate approaches (site to site, plusles, SBC) to access to the remaining unreached children
• Strong national Environmental Surveillance system, including 9 regular sites, 68 ad hoc sites, and 5 temporary sites in Southern KP

Southern KP
• Progress
  • Southern KP action plan operational and showing positive impact
  • Approximately 160,000 more children are being vaccinated compared with last year
• Risks
  • The programme continues to miss a large number of children, likely more than indicated by administrative data
  • Extremely challenging context, including economic crisis, elections, and insecurity

Program response/key activities (from June 2023 TAG recommendations)
1. Implement Southern KP Action Plan
2. Vigorously pursue core strategy
3. Implement SIAs as scheduled in Southern KP
4. Priority focus on 69 UCs and “Reaching the Unreached” plan
5. Restart mass immunization in Upper South Waziristan
6. Resume robust monitoring from July SIA, especially in 69 UCs
7. Understand and address clustered refusals and boycotts
8. Evaluate plusles and integrated services
9. Continue developing social listening to inform boycott resolution; develop and test boycott prevention interventions
10. Bolster South KP Hub and programme management

Southern KP: Reported Vaccinated
Africa WPV1 Importation: no detections since August 2022

- Since the detection of WPV1 in AFRO in February 2022, an effective coordinated response across Malawi, Mozambique, Tanzania, Zambia and Zimbabwe has been implemented
- 21 rounds of campaigns have been conducted across this block, and the response has seen SIA quality improve with each round across Malawi, Mozambique, Tanzania, and Zambia
- AFRO has had ten months without detected transmission (last case: Mozambique, 10 August 2022)
- Outbreak Response Assessments (OBRA) for each country have provided guidance for the responses, strengthen surveillance plans, and ongoing monitoring and advocacy
- Outbreaks in Malawi and Mozambique will be reviewed by the Africa Regional Certification Commission in July. A further round of OBRA is planned for Q3 2023 when it is hoped these outbreaks can be declared closed

<table>
<thead>
<tr>
<th>Malawi</th>
<th>Mozambique</th>
<th>Tanzania</th>
<th>Zambia</th>
<th>Zimbabwe</th>
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<tr>
<td>17M doses administered</td>
<td>44M doses administered</td>
<td>45M doses administered</td>
<td>17M doses administered</td>
<td>7M doses administered</td>
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<tr>
<td>2.9M, 3.5M, and 3.6M</td>
<td>3.5M, 7.5M, and 8.6M</td>
<td>12.4M, 15M and 17.8M</td>
<td>4M, 5M and 17.8M children</td>
<td>2M, 2M and 2M children</td>
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<td>children vaccinated</td>
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<td>Rounds 2-4</td>
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<td>Rounds 1-3</td>
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<tr>
<td>4 bOPV rounds completed,</td>
<td>6 bOPV rounds completed,</td>
<td>4 bOPV rounds completed</td>
<td>3 bOPV rounds completed,</td>
<td>3 bOPV rounds completed,</td>
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<td>1 planned (Aug 2023)</td>
<td>1 planned (Aug 2023)</td>
<td>Percent of LQAS lots</td>
<td>1 planned (Sept 2023)</td>
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<td>Percent of LQAS lots</td>
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<td>passed increased from 17%</td>
<td>passed increased from 64%</td>
<td>passed increased from</td>
<td>passed increased from</td>
<td>passed increased from</td>
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<tr>
<td>in round 1 to 72% in round 4</td>
<td>in round 2 to 92% in round 4</td>
<td>32% in round 1 to 83% in</td>
<td>57% in round 1 to 67% in</td>
<td>51% in round 3</td>
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<td>round 4</td>
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Goal Two: Positive trends on virus burden, but the effectiveness of the response in the most consequential geographies will determine when interruption will be reached.

- cVDPV2 cases and circulating emergences are declining, and cases are increasingly geographically concentrated.
- The majority of outbreaks are stopped after two quality campaigns, and the trend of fewer but bigger campaigns continues into 2023.
- Timeliness and campaign quality remain important challenges, as does implementation capacity, especially where there is co-circulation of cVDPV1 & 2, as seen in DR Congo.
- The most consequential geographies of eastern DR Congo, northern Nigeria, central Somalia and North Yemen have been identified as the drivers of continued cVDPV2 transmission. Inaccessibility, security risks, political instability, logistics and other challenges hamper the response and tailored solutions to the situation district by district are required.
- Improved nOPV2 supply since Q2 2023 has enabled a more comprehensive response but the situation remains fragile due to reliance on a single supplier.

Note: Year-to-date figures are used to account for the significant lag between onset and notification.
Positive trends on virus burden

- The number of cases is declining, with year-to-date comparisons, used to account for the significant lag between onset and notification, showing that 2023 case numbers are slightly over 50% of the case numbers from the same time period last year.
- Increasing geographic concentration of cases, with:
  - Number of provinces and districts reducing year on year
  - cVDPV2 cases in DRC, Nigeria, Yemen, and Somalia have accounted for over 84% of global cases since January 2022.
- There are also decreasing numbers of new and circulating emergences.
Recent trends towards fewer bigger campaigns, but timeliness and quality remain key

- There has been a trend toward fewer but bigger campaigns starting in 2021
- OPV supply disruption contributed to reduction in campaign activity in the first quarter of the year
- A big increase planned for the rest of the year with 234Mds of nOPV2 approved for campaigns through to Sept, with further approvals for Q4 pending
- Vaccine supply has enabled the campaign response needs to get bigger, but they will also have to get faster and better in the last mile
- Timeliness of response is a challenge at each stage from onset to notification; for national and GPEI decision making; and campaign planning and implementation
- Over the past 18 months 39% of campaigns met the target of implementing the first campaign within 28 days outbreak confirmation
An effective campaign response does stop the majority of outbreaks

- The ‘2+1’ campaign strategy has stopped outbreaks (no breakthrough transmission) in 20/28 countries
- This strategy has not worked in the most consequential geographies and countries that suffer from repeated importations from these geographies
- In these countries a more intensified tailored approach is required
Four Most Consequential Geographies driving continued cVDPV2 transmission

- In 2022, a GPEI analysis of transmission patterns determined that four sub-national geographies are driving the continued spread of cVDPV2.
- These most consequential geographies feature some of the highest proportions of zero-dose children (children who are either un- or under-vaccinated). They are also affected by broader complex humanitarian emergencies, including ongoing security and access concerns.
- To bring an end to transmission from these “most consequential geographies” requires an intense vaccine response designed to resolve the specific reasons campaigns persistently miss vaccinating children in these areas, as well as integration to address broader community needs in marginalized populations and increase vaccine acceptance.
- As the epidemiology evolves, targeting will also need to evolve for example narrowing down from Northern Nigeria to Northwestern Nigeria.

- **Northern Yemen:** High intensity transmission and exportation from inaccessible areas.
- **Northern Nigeria:** Largest exporter (27% of all detections).
- **Eastern DRC:** Most emergences within 3 provinces.
- **South Central Somalia:** Longest duration of circulation (1642 days).
Eastern DR Congo: campaign response needs to better adapt to the evolving security and humanitarian crises

<table>
<thead>
<tr>
<th>Overview</th>
<th>Programmatic Response and Activities</th>
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<tbody>
<tr>
<td>• Country was classified for an IASC grade 3 humanitarian emergency response due to the worsening situation in eastern DRC on 20 June 2023</td>
<td>• nOPV2 and bOPV campaigns completed in January, March, and June 2023</td>
</tr>
<tr>
<td>• Insecurity and armed conflict in eastern DRC has led to large numbers of internally displaced people</td>
<td>• Recently approved activities in the consequential geographies of Maniema, Tanganyika, and Haut Lomami</td>
</tr>
<tr>
<td>• Presidential, parliamentary and provincial elections are scheduled for 20 December 2023</td>
<td>• Further bOPV campaign planned for August</td>
</tr>
<tr>
<td>• Quality of campaigns seriously hampered by this complex environment in addition to weak logistics and inaccessibility</td>
<td>• In 2022: 3 nOPV2 activities completed; 22M total doses administered; between 7M and 7.5M children vaccinated each round</td>
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<tr>
<td>• Limited implementation capacity further weakened by the cVDPV1 co-circulation and the need to do nOPV and bOPV campaigns at least four weeks apart</td>
<td>• In 2023 (through June 30): 3 nOPV2 and 1 bOPV activities completed; 30M total doses administered; between 0.6M and 17M children vaccinated each round</td>
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Northern Nigeria: improving quality, but pockets of persistently missed children remain

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<thead>
<tr>
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</table>
| • Case numbers have seen significant declines over the past 18 months and the quality of campaigns has improved  
• Continued detections from ES in Zamfara and Sokoto indicate pockets of persistent transmission  
• Access issues remain a key risk with inaccessibility expanding in the Northwest | • Two sub-national campaign conducted this year  
• Recently approved campaigns in the consequential geographies of Sokoto, Zamfara and Kebbi  
• RI intensification combined with in between round activities, including integration with CMAM  
• fIPV/nOPV2/Polio plus activities were conducted in NW Nigeria in May 2023, and an additional NID with nOPV2 is planned  
• Supplemental activities continue: DOPV scale up, VTS tracking of teams in insecure areas, female supervisors in areas with FFM, and deployment of community informants in inaccessible areas  
• Operational challenges are being addressed head on through strong local partnerships  
• In 2022: 12 nOPV2 activities completed; 228M total doses administered; up to 36M children vaccinated each round (range of 0.2M to 36M)  
• In 2023 (through June 30): 4 nOPV2 activities completed; 60M total doses administered; up to 36M children vaccinated each round (range of 0.1M to 36M) |

>3.9M children in 31,000 settlements are not reachable  
• Insurgency, banditry, and kidnapping attacks in both Zamfara and Sokoto states means specialized strategies are required to reach these children |
Central Somalia: increased access is helping the campaign response

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<tbody>
<tr>
<td>• Country was classified for an IASC grade 3 humanitarian emergency response due to the drought and famine on 11 August 2022</td>
<td></td>
</tr>
<tr>
<td>• Transmission has been low level and concentrated in south-central areas under control of Al-Shabab</td>
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<tr>
<td>• For the first time, there are no fully inaccessible districts</td>
<td></td>
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<tr>
<td>• There are around 90K expected children remaining inaccessible (reduced to 90k in March 2023 from 364K in Jan 2022)</td>
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**Accessibility status, 2022-2023**

- Trends are moving in the right direction for numbers of under 5 children reached in inaccessible districts
- There are ongoing challenges related to, infrastructure, and weak health systems that further affect quality

- Recently concluded SNID in SC Somalia with nOPV2
- Focus on consequential geography of south central now that access has improved.
- Operations in Somaliland resuming after the government there lifted its opposition to campaigns.
- Establishment of the Somalia Support Unit
- Systems strengthening activities being implemented
- In 2022: 5 mOPV2 and 1 tOPV activities completed; 14M total doses administered; between 1.9M to 4.3M children vaccinated each round
- In 2023 (through June 30): 2 nOPV2 and 1 tOPV activities completed; 9M total doses administered; between 2.6M and 3.5M children vaccinated each round
North Yemen: withdrawal of authorization for vaccination campaigns by the authorities in Sanaa

<table>
<thead>
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<tbody>
<tr>
<td>Yemen is listed as a grade 3 health emergency</td>
<td>An integrated polio-child health response was planned but is currently paused after not being permitted by authorities</td>
</tr>
<tr>
<td>Prevention of polio outbreaks and transmission is one of the</td>
<td>Advocacy efforts, through multiple channels, to convince authorities in North Yemen to resume the vaccination response</td>
</tr>
<tr>
<td>five of objectives of the emergency health plan</td>
<td>An SBC/comms group was developed a plan to address anti-vaccine narrative</td>
</tr>
<tr>
<td>However, there is ongoing anti-vaccine sentiment from authorities</td>
<td>The Ministry of Health in South Yemen conducting activities to encounter anti-vaccine propaganda</td>
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<tr>
<td>in North Yemen</td>
<td>Latest campaign conducted in South Yemen in March 2023</td>
</tr>
<tr>
<td>No campaign activities have occurred in the North since the</td>
<td>In 2022: 3 tOPV activities completed; 8M total doses administered; between 1.9M to 3.9M children vaccinated each round</td>
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<tr>
<td>outbreak began</td>
<td>In 2023 (through June 30): 1 tOPV activity completed; 1.3M total doses administered; 1.3M children vaccinated</td>
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Surveillance: continued challenges with timeliness of detection

- The Global Polio Surveillance Action Plan 2022-2024 aims to shorten the time between detection and response, with ≥80% of polioviruses confirmed and sequenced within 35 days of onset of the case (or sample collection for ES) – currently no countries with a cVDPV2 outbreak are able to make this target.

- Logistics challenges for sample transportation are still the biggest contributor to delays. Understanding and solving the context-specific reasons why countries are failing to meet the target is key.

- In addition to logistics activities are underway to improve surveillance timeliness in terms of expanding sequencing capacities in key laboratories, fast tracking new direct detection methodology, and building surge capacity.

- There remain surveillance gaps at sub-national level and environmental site sensitivity has not improved post-pandemic, creating a risk of missed transmission.
Financing: increasing demands from outbreak response

- The five-year budget for the 2022-2026 Strategy was costed at USD 4.8bn.
- Current funding pledges stand at USD 3.3bn, leaving a current funding gap of USD 1.5bn.
- GPEI’s funding projections estimate that USD 1bn could be raised in additional contributions by 2026.
- The average annual budget for the Strategy is USD 960m, and the programme is spending at a rate of a little under USD 900m per year.
- The WPV1 importation and the cVDPV1 outbreaks in Africa put considerable stress on the outbreak budget which was costed to cover cVDPV2 response and was already over stretched by the scale of the demand.
- The 2022 outbreak budget was increased from USD 156m to USD 360m to cover the additional campaign demands. The campaign budgets achieved an implementation rate of 90%.
- A similar pattern has been seen in 2023 with the USD 238m outbreak budget increased to USD 366m by June of this year with further demand expected.
- Preventative campaigns and vaccine stockpile budgets have been deprioritized to cover these costs, in addition to underspends elsewhere in the programme being re-invested in outbreak response.
- To date the WPV1/cVDPV1 response has taken up 37% of the outbreak budget.
Conclusions

Goal One

- Continued low-level transmission in Southern KP and intensified transmission in Nangarhar remain significant risks, especially in the southern shared Pakistan-Afghanistan corridors with important immunity gaps.
- As the high-transmission season progresses, the risk of outbreaks is rising both within the country and across the border; the programme must respond rapidly and effectively to outbreaks as they occur.
- The recent detection in Kandahar in particular underlines a major risk of re-established transmission and an explosive outbreak if not effectively addressed.
- Both programmes have the capacity to stop remaining endemic transmission.
- The programme in Pakistan has shown it has the leadership support, tools, knowledge, and resources to stop outbreaks efficiently.

**Key risks:**
- Continued transmission in the endemic zones
- Exportation of the virus outside the endemic zones, with the potential to reinfect and re-establish transmission within the historical reservoirs
- High number of susceptible children due to use of site to site rather than house to house response in the South

**Across the endemics, there is a need to:**
- Double down on reaching 300,000+ persistently missed children with regular and integrated SIAs in East Afghanistan and South KP
- Ensure aggressive high-quality response to rapidly stop any outbreak
- Enhance the current data-driven approach
- Better integrate SBC activities

Goal Two

- Countries responding to cVDPV outbreaks face multiple challenges in implementing effective outbreak responses.
- cVDPV2 burden may be declining and is increasingly geographically concentrated.
- The majority of outbreaks are stopped after two quality campaigns, but timeliness and campaign quality remain important challenges.
- Recent years have seen the implementation of large-scale campaigns with large target populations, but better and faster responses are still needed.
- Surveillance performance and sensitivity are mostly restored to pre-pandemic levels; focus now on targeted subnational strengthening and improved timeliness of detection.
- Successful nOPV2 rollout has enabled a more comprehensive response but the supply situation remains fragile; nOPV2 appears as safe and effective as mOPV2, but more genetically stable.
- The most consequential geographies of eastern DR Congo, northern Nigeria, central Somalia and North Yemen drive continued transmission; there are additional outbreaks not being responded to (e.g., Yemen, Eritrea), and these pose a risk to the programme.
- Growing susceptibility to type 1 and type 2 poses a major risk.
Reflections of the Independent Monitoring Board

• The 22nd Meeting of the IMB convened in July 2023 to assess progress towards interruption of polio transmission by the end of 2023.

• The IMB listened to GPEI stakeholders, partners, donors, & governments of key countries. Conclusions, key risks & recommendations for achieving Goals 1 & 2 were outlined.

• The report released this week made recommendations to the POB on what further interventions will be needed towards eradication.

Next steps
• GPEI to develop updated plan and budget towards getting to 0-polio

• Revised strategy, timelines, budget to be presented to Polio Oversight Board: October
DAY 3

Programme and Market Update - Polio [PG SD]
Presentation Overview

- General overview and upcoming strategic activities
- Poliomyelitis vaccines demand and supply updates
  - Bivalent Poliomyelitis Vaccines Types 1 and 3
  - Inactivated Poliomyelitis Vaccine
  - OPV2 containing stockpiles
Securing the right vaccines towards global eradication and beyond to maintain the global gains of the efforts - Delivering on a Promise

Procurement objectives across the poliomyelitis vaccine product portfolio:

- Secure sufficient quality assured vaccine supply to meet demand through polio eradication for routine, outbreaks and campaigns
- Affordability, diversity and risk mitigation, laying the ground to maintain a polio free world
Securing the right vaccines towards global eradication and beyond to maintain the global gains of the efforts - Delivering on a Promise

Now live at Global OPV Stockpile Strategy 2022-2026 (polioeradication.org)
Overall goal: **to establish and maintain a secure, sustainable, and affordable supply of polio vaccines of assured quality**, ensuring the success of global polio eradication efforts and safeguarding the gains achieved in order to prevent the re-emergence or reintroduction of the virus.

Through a **consultative process**, the development of such a framework or roadmap aims to **achieve consensus among stakeholders** on a specific definition of polio vaccine security for the next 20+ years, including a definition of the desired state and targets for measuring vaccine security and alignment on a trajectory, actions and decision points and processes on how to get there.
1. **Strengthen collaboration, coordination and communication among stakeholders**: vaccine manufacturers, public/private research and product development teams, containment specialists, donors, regulators, policy makers and implementing governments - to optimize resources, information sharing and decision making and to ensure a unified understanding and approach to polio vaccine supply security.

2. **Take a long-term approach to the planning** of the development of new polio vaccines, including a mapping of on-going and plans for future activities, timing - including critical milestones - for the introduction of new polio vaccines and the transitions of less relevant products; timely immunization policies and decision making.

3. **Ensure long term forecasting of demand** across all polio vaccines to support vaccine manufacturers in their planning of polio vaccine production and to ensure supplier diversification contributing to healthy polio vaccine market.

4. Ensure polio vaccine security through **the development, complementarity and operationalization of mechanisms for effective polio vaccine supply and vaccine management**, e.g., the Global OPV Stockpile, bOPV stockpile, roadmaps for Gavi supported vaccine supply, etc.

More information to come at upcoming WHO/UNICEF consultation 23 October with Industry/NRAs/NACs
Securing the right vaccines to achieve global eradication provides unique challenges – close collaboration with manufacturers, program and regulators is material.

Procurement objectives of tender for supply 2018-2024 remains relevant:

- Sustain sufficient supply of OPV to meet demand through polio eradication and OPV cessation
- Guide the cessation of the OPV market in a responsible manner while maintaining affordability
Changing Demand to meet Programmatic Needs
Cumulative, 2023 (Millions of doses)

Initial 2023 demand projection accounting for GPEI Preventative SIA calendar, planned outbreak response campaigns and country routine immunization requirements.

Demand reduced to levels below the awarded volumes for 2023 due to:
- Cancellation of 2023 preventative campaigns in non-endemic countries
- Reduced scope of outbreak response campaigns due to budget constraints and changes in epidemiology
- Delayed routine immunization demand materialization
- Revised OPV forecasting for Pakistan in August
Bivalent Poliomyelitis vaccines type 1 and 3 2023

Efforts to align supply and demand to mitigate risks due to excess supply:

- Close collaboration with manufacturers on supply phasing, appreciating manufacturers support and flexibility as Programme requirements evolve.
- While good faith agreements, UNICEF offers awarded volumes to be carried forward between years to reduce risks to manufacturers, as per standard practice.
- Working closely with country partners on acceptance of shorter shelf-life vaccines to avoid wastage.
- Close engagement with modelers and Programme on supply forecasts.
- Working with the Programme on potentially establishing a bOPV stockpile to meet future outbreak needs.

- Late demand shifts seen in Q3 2023 as Programme requirements are reduced.
- Demand for remainder of 2023 remains uncertain due to budgeting constraints limiting immunization activities.
- bOPV remains the cornerstone of the GPEI eradication efforts through to cessation, currently expected by 2027.
To achieve eradication, GPEI’s preliminary demand forecast through to cessation projects annual requirements of 600-740Mds.

To meet the eradication goals, an uninterrupted supply of bOPV to meet preventive SIA needs, routine and a buffer stock to mitigate potential further outbreak demand continues to be required.

Demand assumptions:
- Funding is available to implement the GPEI SIA Calendar
- India, China, and other governments sourcing domestically or bilaterally continue to be able to do so
- 85 countries continue to source their OPV routine needs through UNICEF
Bivalent Poliomyelitis vaccines type 1 and 3

Demand forecast 2024 onwards:
➢ Placeholder calendar for 2024 and beyond approved in principle subject to funding availability to implement
➢ GPEI is undertaking an updated risk assessment, to develop an updated placeholder calendar through to cessation
➢ UNICEF annual forecasting exercise ongoing
➢ UNICEF working with partners on an assessment of the global bOPV demand as part of efforts to secure a sustainable supply of bOPV to meet global needs through to cessation

Supply:
➢ Preliminary awards made for 2024 based on mid-year demand assumptions to ensure supply for the endemics and routine immunization
➢ Potential requirements for further awards for 2024 will be assessed in Q4 as demand projections are firmed up
➢ Strong dependency on a single source of bulk, critical to diversify on this parameter to secure supplies moving forward with market exits from European manufacturers
UNICEF continues to engage with all parties, working closely
• with the GPEI to understand the evolving programmatic needs including funding; ensure the Program has a good understanding of the opportunities, constraints, risks and risk mitigations on the supply side;
• with countries on needs, timelines, funding and supply acceptability; and
• with suppliers to ensure uninterrupted timely availability of affordable, quality assured vaccines of the required type.

Finetuning the programmatic strategies and having the appropriate vaccine supply available in the coming years will be critical – a high level of flexibility, transparency and collaboration will continue to be required from suppliers as we work closely to find solutions for supply.

UNICEF will revisit its procurement strategy in Q4 based on Programme demand projections, with a view to securing supply through to cessation.
IPV supply and demand update
35% reduction in the Weighted Average Price for IPV over the period

Lower prices could have been achieved but this would have been at the risk of NOT having multiple suppliers for each presentation

Second supplier for the 10 dose presentation to improve supply security

Offered supply is 3 times higher than the demand through UNICEF

IPV standalone market is now considered healthy but with overcapacity which could be a challenge moving forward

With this change in the IPV market and to support WHO containment requirement, UNICEF is considering making compliance to GAPIII/IV a mandatory requirement in the next tender

This situation is being closely monitored with the introduction of the wP Hexavalent vaccine which could result in a doubling of the demand for IPV
IPV availability – Now sufficient for all countries to introduce the second dose of IPV and complete catch-up immunisation
2023 – Likely to end year with significant supply available with manufacturers
Big Catch up – Finalising demand with countries – any increase in demand will be communicated to manufacturers once clarified and funding confirmed

5 manufacturers supplying to UNICEF in 2023
• Sanofi (France)/Sanofi (India)
  - Same bulk source
  - Supply the 5 and 10 dose
• Bilthoven (Netherlands)
  - Supply the 1 and 5 dose
• AI Vaccines (Denmark)
  - 5 dose adjuvanted - cannot be used for fIPV
• LG Chem (Korea)
  - 5 dose Sabin IPV

2023 – Likely to end year with significant supply available with manufacturers
Big Catch up – Finalising demand with countries – any increase in demand will be communicated to manufacturers once clarified and funding confirmed
For 194 WHO Member States

**SAGE IPV1 Recommendation 2013**
- 126 MS no IPV
- 68 MS using 1 or more doses of IPV

**April 2019**
- All MS use at least 1 dose of IPV

**SAGE IPV2 Recommendation 2020**
- 99 MS use 1 dose (only) of IPV
- 95 use 2 or more doses of IPV
- 63 Gavi supported*

- 63 supported
- 36 MICS/PAHO/SP
- 34 introduced
- 21 introduced

*Gavi support excludes the 10 Gavi IPV eligible countries that have already adopted a 2-dose schedule with fractional IPV (Bangladesh, Cuba, India, Nepal, Sri Lanka) or introduced a second dose without Gavi support (Guyana, Honduras, Syria) or switched to an aP-Hexavalent product (Armenia and Georgia)

Data as of 18 Aug 2023. Source WHO IPV programme tracking
OVERVIEW OF IPV USE IN IMMUNIZATION SCHEDULES

- Countries on 2 or more doses of IPV (150 countries or 77%)
- Countries on 1 dose only of IPV (44 countries or 23%)
- Not available
- Not applicable

Disclaimer:
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not be full agreement.

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IPV1 GLOBAL COVERAGE ESTIMATES 2016-2021

Data source: WHO and UNICEF estimates of immunization coverage: 2022 revision, July 2023
GPEI partners are following up and supporting the remaining 44 countries to introduce IPV second dose as soon as possible, especially the countries at the highest risk due to the type 2 circulation

UNICEF is working closely with outbreak partners in case of increased needs due to expanding outbreaks in countries that have IPV only schedules or have restriction on use of a non licensed OPV

Continued monitoring of country consumption and stock levels to ensure that supply limitation is not a barrier to achieving and surpass pre-COVID coverage levels

During first half of 2024, UNICEF will consult with manufacturers in regarding to either extending the current tender for 12 months or to issue a new tender for 2026 demand and onwards. Depending on the outcome of the consultation, UNICEF could extend the current LTAs for 12 months before the end of 2024 or issue a new tender during the second half of 2024
Type 2 stockpiles
**nOPV2 STOCKPILES STRATEGY TIMELINES and UPDATE**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>Initial use of nOPV2 April 2021</td>
</tr>
<tr>
<td>2022</td>
<td>Wider use of nOPV2 Oct 2021</td>
</tr>
<tr>
<td>2023</td>
<td>Targeted last cVDPV2</td>
</tr>
<tr>
<td>2024</td>
<td>Validated absence of cVDPV2</td>
</tr>
<tr>
<td>2025</td>
<td>nOPV2 PQ &amp; new nOPV2 supplier</td>
</tr>
<tr>
<td>2026</td>
<td>nOPV1 available April 2025</td>
</tr>
<tr>
<td>2027+</td>
<td>nOPV3 available Q3 2026</td>
</tr>
</tbody>
</table>

**OPV type 1 & 3 procurement decisions**
- Novel Vs Sabin: Decision to stockpile which types

**mOPV2 procurement decisions**
- Decision on to store or destroy mOPV2 stockpile – Q4 2023
- Decision on to store or destroy mOPV2 stockpile – Q4 2024
nOPV2 doses delivered

- 1.16 billion doses of nOPV2 have been released to 37 countries by the WHO DG
- Demand in 2023 is expected to be highest since vaccine was introduced – above 500 million doses
nOPV2 supply and demand for 2023

Novel OPV2 – approved under Emergency Use Listing, pending WHO Prequalification

Currently a single source of supply based in Indonesia

Major supply interruptions from Aug 2022 to March 2023 requiring the GPEI to prioritise shipments between countries for outbreak responses

Update on Novel OPV2 tender
- On going tender for nOPV2 bulk and for a WHO prequalified finished product
- Objective of tender is to diversify supplier base to reduce risks while considering overall cost to the Programme
Sabin OPV2 containing stockpiles

- 386 M ds available with 2 suppliers
- Expiry starting 2025
- Working with one supplier to extend contract
- Currently no demand from countries for mOPV2

Given the SAGE recommendation that countries use nOPV2 when available – likely that most of the doses in these stockpiles will expire before use and will have to be destroyed

- Around 97Mds available for delivery
- Currently no demand with last doses sent to Somalia in Jan 23
- 97 M ds to expire this year start from August
- 20 M ds incoming in November
IN SUMMARY

- Bivalent poliomyelitis types 1 and 3: Currently sufficient supply capacity to meet demand including to scale up at short notice to address outbreaks despite market exits; demand continues to evolve based on epidemiology and funding availability, but projected around 6-700Mds annually through to 2027

- IPV: Sufficient supply to meet demand for IPV stand-alone; program support to implement 2nd dose and increase coverage; possible future impact on IPV stand alone of hexavalent vaccine preference

- Global OPV stockpiles: Novel OPV2 under EUL preferred by countries over Sabin OPV2 stockpiles with supply risks due to single sourcing; rightsizing for the future

Upcoming strategies which may impact procurement strategies of polio vaccine portfolio:

- bOPV Cessation Planning activities kicked off
- Polio Post-Certification Strategy update – contain, protect, detect and respond
- Midterm Strategy Review of GPEI 2022-2026 Delivering on a Promise; Independent Monitoring Board Report released this week
- Polio Vaccine Security Roadmap
THANK YOU