Polio-paralyzed children, 1988-2011

Type 2 polio eradicated

India stops all polio
Bivalent OPV (1&3)
Polio, type 3 cases

* onset of most recent case was 10 Nov 2012
Last type 2 wild poliovirus: 1999
circulating Vaccine-Derived Poliovirus Outbreaks (cVDPVs), 2000-2011

14 countries have had a type 2 cVDPV
World Health Assembly:

2008   synchronize OPV cessation

2012   begin with OPV 2 cessation
The other key to the endgame: 'affordable' IPV

**Study Summary**

<table>
<thead>
<tr>
<th>PV type 2</th>
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<tbody>
<tr>
<td>1/5th dose seroconversion</td>
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<tr>
<td>1/5th dose seroconversion + priming</td>
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</tbody>
</table>
SAGE recommended that all countries should introduce at least 1 dose of IPV in their routine immunization programme to mitigate the risks associated with the withdrawal of OPV2. SAGE accepted the detailed scientific advice and evidence presented by the Immunization Strategic Advisory Group (SAGE) and the WHO.”
SAGE Rationale for > 1 IPV dose:

- prevent polio if exposed to a VDPV2 or WPV2
- improve response to mOPV2 in an outbreak
- reduce transmission of a reintroduced type 2
- boost immunity to WPV1 & 3
The Polio Endgame
Goal: complete the eradication & containment of all wild, vaccine-related and Sabin polioviruses.
Endgame Plan, 2013-8

- Polio detection & interruption
- EPI strengthening, IPV intro. & OPV withdrawal
- Containment & Certification
- Legacy Planning
**Major Objectives**

<table>
<thead>
<tr>
<th><strong>2013</strong></th>
<th><strong>2014</strong></th>
<th><strong>2015</strong></th>
<th><strong>2016</strong></th>
<th><strong>2017</strong></th>
<th><strong>2018</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Virus detection &amp; interruption</strong></td>
<td>Wild virus interruption</td>
<td>Outbreak response (esp. cVDPVs)</td>
<td></td>
<td></td>
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<tr>
<td><strong>RI strengthening &amp; OPV withdrawal</strong></td>
<td>Strengthen RI &amp; prep. OPV2 withdrawal</td>
<td>Introduce IPV</td>
<td>Prepare bOPV withdrawal</td>
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<tr>
<td><strong>Containment &amp; certification</strong></td>
<td>Finalize long-term containment plans</td>
<td>Complete containment &amp; certification globally</td>
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<tr>
<td><strong>Legacy Planning</strong></td>
<td>Consultation</td>
<td></td>
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The Challenge: finishing wild virus eradication

- no type 3 virus globally
- 45% decline in endemic virus
- EGY, ISR, oPT +ve sewage
- Horn of Africa re-infected
The Challenge: IPV into 125 'OPV-only' countries

- **IPV ONLY**: 47 countries
- **IPV/OPV**: 18 countries
- **OPV ONLY**: 127 countries
Timelines are very tight...
...the target for global readiness to withdraw OPV2 is *early 2016*
'Tiered' IPV introduction based on risk

<table>
<thead>
<tr>
<th>Tier</th>
<th>Countries</th>
<th># countries</th>
<th>% OPV cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1</td>
<td>Endemic OR cVDPV2 since 2000</td>
<td>14</td>
<td>61%</td>
</tr>
<tr>
<td>Tier 2</td>
<td>cVDPV1/3 OR large/medium size &amp; DTP3 &lt;80%, 2009-11</td>
<td>19</td>
<td>11%</td>
</tr>
<tr>
<td>Tier 3</td>
<td>Large/medium, next to Tier 1 OR WPV import since 2011</td>
<td>14</td>
<td>11%</td>
</tr>
<tr>
<td>Tier 4</td>
<td>All other OPV only using countries</td>
<td>77</td>
<td>17%</td>
</tr>
</tbody>
</table>
• robust mOPV1, bOPV & tOPV supply

• bOPV licensed for routine immunization

• low-cost IPV for low-income settings
'Affordable' IPV Target

Current Price: 2.25 - 2.50

Volume purchase: 0.99 - 1.25

Gap: 0.5 - 0.6

Post-endgame Target: 0.5 - 0.6
Summary
OPV/IPV Producers & the Endgame:

- continue supply of high quality OPV products
- engage in global planning for OPV2 withdrawal
- explore affordable options for the 'post-endgame'
The Polio Endgame still has substantial uncertainty & risk – very close collaboration is more essential than ever.
Thank you