Vaccine-Derived Poliovirus Response in Indonesia

Situation report no. 20
1–22 March 2024
(Central Java, East Java, and Central Papua)

Confirmation of cVDPV2 and VDPV1 cases 2022 - 2024

7 cases of acute flaccid paralysis (AFP) with cVDPV2

- Aceh province: 1 case with paralysis each in Pidie, Aceh Utara, and Bireuen
- West Java province: 1 case with paralysis in Purwakarta
- Central Java: 1 case with paralysis in Klaten
- East Java: 1 case with paralysis each in Pamekasan and Sampang

1 case with paralysis with VDPV1 in Mimika, Central Papua

Outbreak in Central Java and East Java

Outbreak confirmation:
- Total number of AFP cases with cVDPV2: 3
- Total number of healthy children with cVDPV2: 9

Infected provinces and districts:
- Central Java: 1 case with paralysis in Klaten
- East Java: 1 case with paralysis each in Pamekasan and Sampang

Index case:
- Source: AFP case in Klaten, Central Java. Patient had a travel history to Sampang, East Java
- Location: Tanjungsari village, Manisrenggo
- Onset of paralysis: 20 November 2023
- Sex: Female
- Age: 6 years old
- Vaccination status: 2 doses of OPV

Outbreak grade: 2

Most recent case (by date of onset):
- Source: AFP case in Sampang, East Java
- Location: Madupat village, Camplong
- Onset of paralysis: 6 December 2023
- Sex: Male
- Age: 3 years old
- Vaccination status: 4 doses of OPV

Environmental surveillance:
VDPV2 positive from Saksak river, Bangkalan, East Java

Outbreak Response:
- East Java and Central Java: All children 0-7 years
- Sleman, Yogyakarta: All children 0-7 years
Response in Central Java, East Java, and Sleman District, Yogyakarta Province

Coordination and planning
The Ministry of Health (MOH) is actively coordinating partners and efforts to strengthen the polio outbreak response and protect vulnerable populations. This includes providing IPV vaccination for Hajj pilgrims. For outbreak response, the MOH and WHO are collaborating on data analysis to identify gaps and ensure accuracy. To boost local capacity, MOH introduced outbreak response immunization (ORI) guidelines, conducting training for district health offices (DHO) with support from WHO, UNDP, DTO, and the AEFI national committee.

Supplementary Immunization Activity (SIA) nOPV2 vaccination
**Target: 8.4 million**
All children 0–7 years old
Vaccine type: nOPV2

- East Java: 106.7% (1st round), 105.8% (2nd round)
- Central Java: 102.2% (1st round), 99.9% (2nd round)
- Sleman, DIY: 77.2% (1st round), 74.4% (2nd round)

*Data as of 13 March 2024, based on targeted children from Data and Information Center (Pusdatin), MOH.

Surveillance
WHO with district and provincial offices conducted AFP strengthening efforts, including hospital record reviews, awareness-raising, and active involvement from key health staff. In addition, WHO and partners assisted East Java PHO to disseminate VPD outbreak and AFP surveillance information to a wider audience, such as DHO, puskesmas and hospitals. This approach was replicated and attended by to 724 participants on AFP surveillance, community involvement, reporting, and awareness of VPD symptoms.

Logistics & vaccine management
UNICEF and MOH conducted desk reviews for nOPV2 vaccines and logistics in East Java, Central Java, and Sleman following the 2nd round SIA evaluation. In addition, WHO and PHO discussed waste management with the DHO leadership and monitored vaccine supplies.

Vials distributed for 2nd round SIA:
- 88 960 in East Java
- 71 240 in Central Java
- 1 670 in Sleman
- 161 870 in total

Key issues
- **Data discrepancies**: a gap between the 1st and 2nd round SIA on several districts and sub-districts, indicating potential data error.
- **Unvaccinated children**: the RCA results revealed the need for targeted outreach, especially for those that were unvaccinated due to illness or recent birth.
- **Limited reporting**: vaccine supply and logistics reports are incomplete

Next steps
- Conduct thorough desk reviews of polio SIA coverage data, comparing round 1 and round 2 to identify and correct any errors.
- Complete the nOPV2 vaccine and logistics desk review for Sleman and schedule desk reviews for East Java, Central Java, and Klaten once the MOH officially concludes the 2nd polio SIA.
Response for VDPV1 case in Central Papua

National coordination
MOH and partners conducted a national coordination meeting highlighting recommendations for responding to the VDPV1 case finding. For VDPV1, as this is only an event, strengthened surveillance and immunization actions are required.

Polio immunization strengthening
WHO assisted Nabire DHO in capacity building on catch-up immunization strategies. Moreover, Karang Senang Puskesmas conducted a community engagement initiative to increase public trust and confidence.

Surveillance strengthening
Hospital engagement: WHO facilitated hospital record reviews and AFP awareness campaigns with Nabire DHO at Nabire RSUD. This resulted in the DHO’s commitment to increase active surveillance efforts.

AFP surveillance capacity building: WHO supported Nabire DHO in building AFP surveillance capacity across 16 Puskesmas. This focused on strengthening both active and passive surveillance methods.

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(Left) Raising awareness activity on AFP surveillance, (right) Puskesmas and the community provide walking therapy tool for child with polio. Credit: Nabire DHO
Situation Update

- The non-polio acute flaccid paralysis (NPAFP) rate, an indication for polio occurrence; should be above 3/100,000 population under 15 years of age during an outbreak. This NPAFP rate indicates high surveillance sensitivity and reduces risk of missing polio transmission reflecting. In 2023, Indonesia achieved a NPAFP rate of 6.34/100,000.
- In 2024, MOH set targets for finding and reporting AFP cases, which are mandatory for targeted provinces. The following table shows progress made for targeted provinces experiencing outbreaks and event response.

<table>
<thead>
<tr>
<th>Province</th>
<th>Target for AFP Case Finding 2024</th>
<th>Q1 Target for AFP Case Finding (2024)</th>
<th>AFP Case Reported</th>
<th>Annual NPAFP rate per 100,000 population under 15 years old (target ≥ 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Java</td>
<td>488</td>
<td>122</td>
<td>94</td>
<td>4.35</td>
</tr>
<tr>
<td>DIY</td>
<td>54</td>
<td>14</td>
<td>8</td>
<td>3.35</td>
</tr>
<tr>
<td>East Java</td>
<td>530</td>
<td>133</td>
<td>129</td>
<td>3.39</td>
</tr>
<tr>
<td>Central Papua</td>
<td>22</td>
<td>6</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Indonesia</td>
<td>4,448</td>
<td>1,122</td>
<td>681</td>
<td>2.81</td>
</tr>
</tbody>
</table>

- On 12 February 2024, MOH reported a VDPV1 case in Central Papua involving a 9-year-old boy, with the onset of paralysis on 20 December 2023. As a response, WHO and MOH conducted a field investigation and led coordination with the Mimika DHO and Central Papua PHO.

Figure 11. Final classification of AFP cases in Indonesia over the last 12 months, data as of 14 March 2024.
### Outbreak Response

#### 1. Planning and coordination

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NATIONAL</strong></td>
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</tr>
<tr>
<td>March 2024</td>
<td>Jakarta</td>
<td>MOH, through Directorate of Surveillance and Health Quarantine, and the Central Hajj Institution initiated the administration of one dose of the IPV vaccine for haj pilgrims from East Java and Central Java. The Directorate of Surveillance and Health Quarantine is finalizing the official directive letter. Until then, the puskesmas will provide IPV vaccines from routine immunization stocks for this effort.</td>
</tr>
<tr>
<td>7 March 2024</td>
<td>Jakarta</td>
<td>MOH conducted a desk review of polio supplementary immunization activities (SIA) coverage data for first and second round. With WHO’s support, the key focus was on identifying any potential data errors. WHO also demonstrated data validation by presenting results of rapid convenience assessment (RCA).</td>
</tr>
<tr>
<td>18–22 March 2024</td>
<td>Yogyakarta</td>
<td>MOH introduced outbreak response immunization (ORI) guidelines through on-the-job session to empower DHOs and puskesmas to respond promptly to vaccine-preventable diseases (VPD) outbreaks. The first training series was conducted for 19 provinces across Sumatra, Java, Bali, and Nusa Tenggara Island, with 299 DHOs attending virtually (see figure 2). The second training session is scheduled for April - May 2024 for the remaining provinces. The training was facilitated by the MOH, WHO, UNDP, Digital Transformation Office (DTO), and the AEFI national committee. WHO also supported the development of the handbook materials.</td>
</tr>
<tr>
<td><strong>EAST JAVA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 March 2024</td>
<td>East Java</td>
<td>East Java PHO, with the WHO’s staff support, conducted a preparatory meeting of outbreak response assessment (OBRA) documentation, which was attended by 578 participants. Complete OBRA documentation is important as evidence to showcase Indonesia’s thorough polio outbreak response. In doing so, all documents related to the response from all levels will be submitted into a single repository.</td>
</tr>
<tr>
<td><strong>CENTRAL JAVA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 March 2024</td>
<td>Central Java</td>
<td>WHO and the PHO discussed follow-up activities after SIA campaign. This includes analyzing areas with low coverage and OBRA preparation. Since poliovirus primarily affects children under five, so that the analysis must focus on this age group. The MOH’s extension of SIA round 2 until 18 March 2024 provides an opportunity for sweeping unvaccinated children. Simultaneously, PHO and DHO in Central Java need to prioritize gathering all OBRA’s documentation.</td>
</tr>
</tbody>
</table>
### 2. Surveillance

#### EAST JAVA

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 March 2024</td>
<td>Probolinggo</td>
<td>WHO assisted DHO in conducting hospital record review (HRR) and raising AFP surveillance implementations at M. Saleh General Hospital. This activity was attended by hospital management, laboratory officers, medical record staff, inpatient and outpatient staff, and clinicians. The DHO emphasized the importance of AFP surveillance officers and clinicians in finding, recording, reporting VPDs, and as well as support from hospital leadership for these roles.</td>
</tr>
<tr>
<td>19 March 2024</td>
<td>East Java</td>
<td>East Java PHO, with the assistance of WHO, disseminated the result of VPD outbreak and AFP surveillance, attended by 578 participants from all DHO and puskesmas. As a follow-up, the DHO, puskesmas and hospitals must bolster its active and passive surveillance.</td>
</tr>
<tr>
<td>20 March 2024</td>
<td>East Java</td>
<td>With WHO’s assistance, PHO conducted a desk review of AFP indicators across 38 DHOs. This review focused on AFP rate, NPAFP rate, adequate specimen, case investigation for 24 hours, document completeness (HRR, FP1 form, &amp; 60 days follow-up action plan), AEFI reports, priority hospital list, and active surveillance list.</td>
</tr>
<tr>
<td>21 March 2024</td>
<td>East Java</td>
<td>PHO conducted workshop about AFP surveillance to clinicians, surveillance officers, health professional organizations, and Indonesian Neurological Association (Perhimpunan Dokter Saraf Indonesia/PERDOSSI, with 801 participants. The commitment to find and report VPD cases must be increased.</td>
</tr>
</tbody>
</table>

#### CENTRAL JAVA

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 March 2024</td>
<td>Klaten</td>
<td>The WHO, together with the Klaten DHO and Manisrenggo Puskesmas visited the home of a child with a polio case in Klaten to assess the child’s condition. Health workers observed that the muscles in the right leg are still weak with minimal improvement and show signs of atrophy of about 1-2 cm. The puskesmas has provided free</td>
</tr>
</tbody>
</table>
physiotherapy twice a week, but there are challenges regarding compliance, as the parents prefer traditional treatment. The WHO provided physical exercise while demonstrating the child’s recovery in Papua and explained the importance of physiotherapy.

18 March 2024  Central Java

WHO and Klaten DHO organized a seminar on AFP surveillance strengthening efforts, aiming to AFP surveillance officer at puskesmas, DHOs, and hospitals. This seminar was attended by 724 participants. The discussion focused on community involvement strategy to find and report AFP cases, including raising awareness on VPD symptoms and case reporting.

3. Supplementary immunization activity (SIA) | nOPV2 SIA Coverage

From 19 February 2024, the second round of polio SIA is rolling out in East Java, Central Java, DI Yogyakarta, and Sleman district. In addition, MOH continued to conduct sweeping activities until 18 March 2024. Simultaneously, the targeted provinces are finalizing the data for desk review.

<table>
<thead>
<tr>
<th>Province</th>
<th>Targeted children 0-7 years (national estimate)</th>
<th>Targeted children 0-7 years (local estimate)</th>
<th>Vaccinated (1st Round)</th>
<th>Vaccinated (2nd Round)</th>
<th>% (1st Round based on national estimate)</th>
<th>% (2nd Round based on national estimate)</th>
<th>% (1st Round based on local estimate)</th>
<th>% (2nd Round based on local estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Java</td>
<td>4 437 679</td>
<td>4 638 518</td>
<td>4 735 572</td>
<td>4 696 688</td>
<td>106.7%</td>
<td>105.8%</td>
<td>102.1%</td>
<td>101.3%</td>
</tr>
<tr>
<td>Central Java</td>
<td>3 903 678</td>
<td>3 824 620</td>
<td>3 991 363</td>
<td>3 899 509</td>
<td>102.2%</td>
<td>99.9%</td>
<td>104.4%</td>
<td>102.0%</td>
</tr>
<tr>
<td>Sleman, Yogyakarta</td>
<td>149 821</td>
<td>112 728</td>
<td>115 659</td>
<td>111 407</td>
<td>77.2%</td>
<td>74.4%</td>
<td>102.6%</td>
<td>98.8%</td>
</tr>
<tr>
<td>Total</td>
<td>8 491 178</td>
<td>8 575 866</td>
<td>8 842 594</td>
<td>8 707 604</td>
<td>104.1%</td>
<td>102.5%</td>
<td>103.1%</td>
<td>101.5%</td>
</tr>
</tbody>
</table>

Data as of 13 March 2024
**Rapid convenience assessments (RCA)**

To identify missed children and validate reported coverage, MOH, WHO, UNICEF, PHOs and DHOs conducted RCAs after the campaign as follows:

<table>
<thead>
<tr>
<th>Province</th>
<th>No. district conducted</th>
<th>No. RCA</th>
<th>No. puskesmas</th>
<th>No. houses visited</th>
<th>Targeted children 0-7 years</th>
<th>1st Round Vaccinated</th>
<th>%</th>
<th>2nd Round Vaccinated</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Java</td>
<td>8</td>
<td>26</td>
<td>20</td>
<td>523</td>
<td>633</td>
<td>628</td>
<td>99.2</td>
<td>614</td>
<td>97</td>
</tr>
<tr>
<td>Central Java</td>
<td>4</td>
<td>13</td>
<td>7</td>
<td>280</td>
<td>351</td>
<td>341</td>
<td>97.2</td>
<td>322</td>
<td>91.7</td>
</tr>
<tr>
<td>Sleman, Yogyakarta</td>
<td>1</td>
<td>13</td>
<td>13</td>
<td>266</td>
<td>337</td>
<td>337</td>
<td>100</td>
<td>336</td>
<td>99.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
<td><strong>52</strong></td>
<td><strong>40</strong></td>
<td><strong>1,069</strong></td>
<td><strong>1,321</strong></td>
<td><strong>1,306</strong></td>
<td><strong>98.9</strong></td>
<td><strong>1,272</strong></td>
<td><strong>96.3</strong></td>
</tr>
</tbody>
</table>

Data as of 22 March 2024

WHO and UNICEF conducted RCA in several districts, involving the leadership from DHO, village authorities, puskesmas, immunization workers, and cadres. As a follow-up of these monitoring visits and RCA in East Java, Central Java, and Sleman, RCA provided insightful findings, as well as solution for provincial and district health offices to act.

**EAST JAVA**

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Findings</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-9 March 2024</td>
<td>Jombang, Magetan, Pamekasan, Jombang, Madiun, dan Malang</td>
<td>Up to two children have not received completed dose of nOPV2 due to illness and newborn.</td>
<td>Identify all unvaccinated children at all Puskesmas in the district, and schedule to vaccinate them in one day to optimize the nOPV2 index used.</td>
</tr>
<tr>
<td>13 &amp; 15 March 2024</td>
<td>Pasuruan, Kota Surabaya, dan Mojokerto</td>
<td>The RCA coverage of children under 59 months is &gt;95%.</td>
<td>Puskesmas was requested to validate the data and ensure all vaccination children are being reported.</td>
</tr>
</tbody>
</table>

**CENTRAL JAVA**

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Findings</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-13 March 2024</td>
<td>Sleman, Sukoharjo, Rembang, Klaten, Surakarta</td>
<td>• 22 households surveyed; it was found that 100% of children were immunized. The most trusted information source was from health workers. No cases of sudden paralysis in children were reported in the last year. • Incorrect recording of date and placement of nOPV2 immunization.</td>
<td>Immunization officer and midwives should correct directly reporting way on KIA book.</td>
</tr>
<tr>
<td>13 March 2024</td>
<td>Magelang</td>
<td>19 children are fully immunized, and 1 child is not incomplete due to the sick condition.</td>
<td>The child will be given a second dose after his condition gets better.</td>
</tr>
<tr>
<td>14 March 2024</td>
<td>Kendal</td>
<td>RCA coverage did not reach the target 95%, the result was only 83%, 11 children who were incomplete 2nd doses.</td>
<td>Puskesmas implemented sweeping and they already immunized around 400 children.</td>
</tr>
</tbody>
</table>
4. Logistics and vaccine management

- On 5-15 March 2024, UNICEF supported MOH in conducting the desk review for nOPV2 vaccines and logistics in East Java, Central Java, and Sleman following the evaluation meeting on 2nd round of Polio SIA. The desk reviews on nOPV2 vaccines and logistics report were compared against the coverage for each round. The meeting was attended by pharmacy and immunization managers from province and district level. UNICEF prepared a template to track the vaccine distribution, and utilization of nOPV2 vaccines and droppers during the first and the second round of Polio SIA.

- On 15 March 2024, WHO and the East Java PHO discussed waste management with leadership of DHOs and monitored vaccine supplies. The finding indicates seven puskesmas required to report damaged vaccines and return 50 vials that are still in good condition. The discussion emphasized storing remaining vaccine vials in the freezer and promptly returned to the DHO when not in use. All waste management activities required to be documented as accountability documents when reviewed by the GPEI Team through OBRA.

- To reinforce these procedures, WHO and UNICEF facilitated a virtual meeting on 18 March 2024 on vaccine management to Central Java attended by environmental health officers from 35 districts in Central Java.

Key Issues

- Data gaps: Significant discrepancies between 1st and 2nd round data in several districts/sub-districts raise concerns about data accuracy.

- Unvaccinated children: RCA identifies unvaccinated children, primarily due to illness and newborn status, highlighting a need for targeted follow-up.

- Incomplete reporting: Incomplete vaccine and logistics reports compromise vaccine management.

Next Steps

- Conduct a desk review on polio SIA coverage to match data coverage round 1 and round 2. Conduct sweeping activities was extended to 18 March 2024.

- Conduct a desk review on nOPV2 vaccine and logistics in Sleman on 25 March 2024, and final desk review in East Java, Central Java, and Sleman once official notification from the 2nd round Polio SIA is available.
## Response for VDPV1 case in Central Papua

### NATIONAL

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 March 2024</td>
<td>Jakarta</td>
<td>MOH organized a coordination meeting with the Indonesian Technical Advisory Group Immunization (ITAGI), AEFI national committee, and WHO to get recommendations on polio case response. For VDPV1 as it is an event surveillance and immunization strengthening measures are required. SIA with bOPV will only be needed if there is another isolation whether in human or environmental source. However, from the conducted examinations, there is no indication pointing towards this.</td>
</tr>
</tbody>
</table>

### CENTRAL PAPUA

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-7 March 2024</td>
<td>Nabire</td>
<td>WHO assisted Nabire DHO with a hospital record review and awareness on AFP surveillance strategies at RSUD Nabire. The meeting was attended by the hospital director, pediatricians, head of pediatric room, surveillance officer, inpatient and outpatient staff. As a result, the DHO committed to strengthening weekly active surveillance at RSUD Nabire.</td>
</tr>
<tr>
<td>14 March 2024</td>
<td>Nabire</td>
<td>WHO assisted Nabire DHO in disseminating and capacity building on AFP surveillance to 16 puskesmas. The key takeaways were on strengthening routine immunization programme through catch up implementation and enhancing AFP surveillance through active and passive surveillance methods.</td>
</tr>
<tr>
<td>17 March 2024</td>
<td>Mimika</td>
<td>A coordination meeting for the VDPV1 case response was organized by Mimika DHO, with the leadership from provincial government authorities, subdistrict, and provincial development planning agency (Badan Perencanaan Pembangunan Daerah/BAPPEDA) in attendance. The meeting identified several key activities that required support, namely 1) Providing clean water in Gimbi Village, 2) Building healthy housing with basic sanitation for toilets, 3) Adding three posyandu facilities.</td>
</tr>
<tr>
<td>18 March 2024</td>
<td>Mimika</td>
<td>Karang Senang Puskesmas provided support to a family and child with polio case, facilitating access to civil registration, health insurance, and on-going hospital treatment. Consequently, the child’s condition has greatly improved as he is now able to walk independently. Puskesmas’s effort and initiative to the community has strengthened trust and encouraging families to utilize posyandu for immunization services.</td>
</tr>
<tr>
<td>19 March 2024</td>
<td>Mimika</td>
<td>The Central Papua PHO and Mimika DHO conducted a coordination meeting with ten puskesmas within Mimika district. During the meeting, WHO and PHO reviewed routine immunization coverage data and provided refresher information on the catch-up immunization methods and tools.</td>
</tr>
</tbody>
</table>
Surge Support

**MOH**
- Conducted desk reviews on AFP surveillance and polio SIA coverage
- Conducted on-the-job training on outbreak response immunization

**WHO**
- Cascade training for new surveillance officers and clinicians in the districts
- Workshop to strengthen AFP surveillance
- Preparation of priority hospitals list and HRR implementation plans with the PHO
- Advocacy to hospital, DHO, and PHO regarding AFP surveillance
- RCA implementation in puskesmas in Central Java and East Java
- Monitoring of cold chain and waste management at healthcare facilities
- Provided technical expertise for the handbook, flowchart, and ORI training

**UNICEF**
- RCA implementation in puskesmas in Central Java and East Java
- Monitoring of vaccine and logistic supplies
- Monitoring of waste management at healthcare facilities

**ROTARY**
- Community mobilization to organize immunization posts in public places
- Provided additional logistics and supplies, i.e., merchandise, during immunization services

**IFRC**
- Online capacity building on community-based surveillance for volunteers in priority districts

**UNDP**
- Monitoring of vaccines availability and other logistics through SMILE application.

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