Circulating Vaccine-Derived Poliovirus Type 2 Outbreak in Aceh, Indonesia
Situation Report No 6 - 9 February 2023

Outbreak response:
- Coordination and planning
- Surveillance
- Immunization response
- Advocacy, social behaviour change, and risk communication

Summary
Outbreak confirmation:
- Total number of cVDPV2 virus: 7 (3 AFP case and 4 healthy children)
- Outbreak grade: 2

Infected Provinces and Districts:
Aceh Province – 1 case each in Pidie, North Aceh and Bireuen districts

Index case:
- Source: AFP case
- Location: Mane sub-district, Pidie district
- Onset of paralysis: 9 October 2022
- Sex: Male
- Age: 7 years old
- Vaccination status: 0 dose

Most recent virus (by date of onset):
- Source: AFP case
- Location: Jeunieb sub-district, Bireuen district, Aceh Province
- Onset of paralysis: 13 January 2023
- Sex: Male
- Age: 4 years old
- Vaccination status: 0 dose

Outbreak Response:
- Aceh Province: All children 0 to below 13 years
- North Sumatra Province: All children below 5 years
- Target: 2.5 million children
- Vaccine type: nOPV2

Key highlights
- As of 9 February, three confirmed vaccine-derived poliovirus type 2 (VDPV2) cases have been reported, one each in Pidie, North Aceh and Bireuen districts.
- Circulation of VDPV2 (cVDPV2) was confirmed through four positive stool specimens collected from healthy children, living in the same village but not close contacts of the first case. The outbreak was confirmed on 25 November 2022. Investigation showed that the virus identified in Pidie District is not genetically linked with any previous cVDPV2. The second and the third case have a genetic link with the first case.
• The outbreak response will be expanded to North Sumatra, West Sumatra, and Riau provinces. The Ministry of Health conducted a high-level meeting for the Governors to mobilize their support for supplementary immunization activities (SIA), with a special emphasis on strengthening routine immunization (a crash programme) with the administration of an additional dose of the inactivated polio vaccine (IPV) and bivalent oral polio vaccine (bOPV).
• On 19 and 21 January, WHO assisted the North Aceh District Health Office (DHO) and village midwives in a home visit to a new confirmed VDPV type 2 case to observe his physical condition after fourteen days of illness. The team encouraged the parents to bring their child to the hospital for physiotherapy. In addition, on 26-27 January, WHO, MoH, Aceh Provincial Health Office (PHO), North Aceh DHO, and Tanah Jambo Aye primary health care (PHC) centre (Puskesmas) conducted house-to-house screening to identify any additional cases of AFP in the village.
• Detailed epidemiological investigation of the most recent case from Bireuen has been initiated.
• On 25 January, MoH conducted an orientation for health workers in North Sumatra on the use of nOPV2 for polio SIA. More than 1000 participants attended. The purpose was to discuss the microplanning document to ensure adequate logistics and human resources as well as to arrange the schedule of immunization services. In parallel, a similar orientation was conducted in Riau and West Sumatra provinces, joined by more than 140 participants online.
• On 26 January, MoH conducted an evaluation meeting of AFP surveillance performance which invited all 23 districts in Aceh province; a total of participants of 50 joined virtually.

Situation updates
• A seven-year-old male child from Mane village, Mane sub-district, Pidie district, Aceh Province developed AFP with the onset of paralysis on 09 October 2022. The child did not have a travel history and had never received a polio vaccine (IPV or OPV). Laboratory confirmation of VDPV2 was received on 12 November 2022. Genetic sequencing results showed VDPV2 with 25 nucleotide changes. Whole genome sequencing is pending. Quantitative immunoglobulin test shows that the child is immunocompetent.
• The second case was reported from the North Aceh district. A three-year-old male child from Teupin Gadjah village, Tanah Jambo Aye Sub-district, Aceh province developed AFP with the onset of paralysis on 03 January 2023. The child did not have a travel history and had never received a polio vaccine (IPV or OPV) through the routine immunization programme but received the nOPV2 vaccine on 13 December 2022. Laboratory confirmation was received on 26 January 2023. Genetic sequencing results showed VDPV2 with 27 nucleotide changes. Whole genome sequencing is pending. A quantitative immunoglobulin test is also pending.
• The third case was reported from the Bireuen district. A four-year-old boy from Meunasah Keutapang village, Jeunieb sub-district, Aceh province developed AFP with the onset of paralysis on 13 January 2023. The child did not have any travel history and had never received any polio vaccine (IPV or OPV) from the routine immunization programme. The child received the nOPV2 vaccine on 6 December 2022 during the first campaign round. Laboratory confirmation was received on 7 February 2023. Genetic sequencing results showed cVDPV2 with 34 nucleotide changes. Whole genome sequencing is pending. A quantitative immunoglobulin test is also pending.
• In response to the detection of the former case, a field investigation was undertaken:
  o 32 stool samples from healthy children in the surrounding area who are not contacts of the case were collected and tested for poliovirus.
o 4 stool specimens tested positive for VDPV2 with 25-26 nucleotide changes at VP1 region.

- Based on the examination conducted by CDC Atlanta, the MoH has reported that the VDPV2 identified from Pidie district is not genetically linked to any previously sequenced VDPV2 and will be identified as INO-ACE-1. The positive results from the healthy children were examined as well and genetically linked with INO-ACE-1. Therefore, the PV2 virus was classified as cVDPV2.

**Outbreak response**

**Coordination and planning**
- On 26 January, MoH conducted a meeting to discuss the preparation of 2nd round of the polio SIA in Aceh province. During the session, MoH and Aceh PHO delivered a situation update, lessons learned as well as obstacles faced during the 1st round of polio SIA. SIA implementation was reviewed for each district.

**Surveillance**
- On 25 January, WHO and Lhokseumawe DHO conducted active surveillance in MMC Hospital, Lhokseumawe city. One AFP case with no immunization history was identified. Investigation and sample collection were conducted, and parents were encouraged to complete the child’s immunization with nOPV2 during polio SIA.
- On 26 January, WHO and Aceh Besar DHO visited RSUD Aceh Besar (district-level public hospital). Sensitization and review of the medical records were conducted, and two suspected AFP cases were identified. DHO will collaborate with the puskesmas to investigate the case and collect the specimen.
- Also on 26 January, MoH conducted a virtual evaluation meeting of AFP surveillance performance in Aceh. 50 participants from all 23 districts in Aceh province attended.
- Upon the identification of the second cVDPV2 case in North Aceh, PHO, DHO, MoH, and WHO conducted a house-to-house screening to find any additional cases. A total of 214 households were surveyed, and no additional AFP cases were identified. The team also identified 92 children under 5 years old, and among them, 49 and 44 children had not received any OPV and IPV, respectively. In addition, the team identified three suspected measles cases from surveyed households.
- As of 27 January, the NPAFP rate is 4.7 per 100 000 population <15 years of age and the specimen adequacy rate was 55% in 2022. There are four silent districts in Aceh namely Kota Lhokseumawe, Gayo Lues, Aceh Tenggara, and Kota Subulussalam. In 2023, 10 AFP cases have been reported from Aceh, nine of them are pending laboratory results.
Immunization response

- The 2nd round of polio SIA in Aceh province is being conducted in two phases based on polio SIA coverage in 1st round as of 2 January:
  a) Phase 1 (starting 30 January 2023): 13 districts (with coverage ≥90%).
  b) Phase 2 (starting 13 February 2023): 10 districts (with coverage <90%).
- The outbreak response will be extended to the close-by provinces of North Sumatra, Riau, and West Sumatra:
  a) North Sumatra (starting 13 February 2023): polio SIA for all children under 5 years old using nOPV2.
  b) West Sumatra and Riau (starting 20 February 2023): with a special emphasis on strengthening routine immunization with the administration of additional doses of IPV and bOPV.
• On 24 January, the mayors of Pidie and Pidie Jaya districts released a letter to instruct related government stakeholders to support the 2nd round of the polio SIA to achieve coverage of at least 95% in all age group targets, especially those of school age.

• On 27 January, WHO monitored immunization services for Rohingya refugees in the Aceh Besar district. This activity was conducted by Aceh Besar DHO and supported by International Organization for Migration (IOM). 40 out of 46 children Rohingya refugee children received IPV and the measles and rubella (MR) vaccine. Six remaining children were not vaccinated due to illness.

• On 28 January and 1 February, Pidie Jaya and Aceh Besar DHOs, supported by UNICEF, conducted a preparation meeting with all puskesmas in their areas. The meeting was led by the heads of the DHOs and emphasized the importance of microplanning and following the SOP for vaccine management. The communication strategy was also discussed in the preparation meeting.

• On 30 January, while 13 districts in Aceh province started the 2nd round of the polio SIA, some sub-districts in Pidie district were under water due to heavy rain. However, the vaccinators proceeded with vaccination for children aged 0-12 years. During the immunization service, 55 out of 76 children in Dua Paya village, Peukan Baro sub-district were vaccinated.

![Image: WHO monitored immunization services for Rohingya refugees in Aceh Besar district (left) and polio SIA implementation during a flood (middle and right). Credit: WHO/Martina (left), Puskesmas Muara Tiga (middle) and Puskesmas Peukan Baro (right).]

• Daily coverage monitoring and feedback is provided to local government, provincial and district health offices, stakeholders, and implementers.

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Aceh Province</th>
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<tbody>
<tr>
<td><strong>Total (0-12 years)</strong></td>
<td>671,937</td>
<td>549,274</td>
</tr>
<tr>
<td>0-5 months</td>
<td>275,146</td>
<td>194,775</td>
</tr>
<tr>
<td>5-7 years</td>
<td>122,716</td>
<td>64,488</td>
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<tr>
<td>7&lt;12 years</td>
<td>264,075</td>
<td>200,011</td>
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*Note: Daily target to achieve at least 95% within 7 days of coverage.*
As of 26 January, 48 rapid convenience assessments (RCAs) had been conducted in 14 out of 23 districts: 1,821 children aged 0-12 years were assessed; 1,606 (88.2%) of them had been vaccinated. The main reasons for children missing vaccination were children being sick, being unaware of the campaign, and traveling (parents).

**Advocacy, social behaviour changes, and risk communication**

**Advocacy**

- MoH conducted an advocacy meeting with the governors of North Sumatra (18 January), West Sumatra (20 January), and Riau (31 January) on the expansion of the polio outbreak response.
• Multi-sectoral coordination in West Aceh (13 January), Pidie Jaya (27 January), and East Aceh (1 February) districts on the preparation of 2nd round of the polio SIA was conducted, supported by UNICEF.

Social Behaviour Change (SBC)
• Prior to the 2nd round of polio SIA in Pidie, “Mobil Pintar” (mobile education car) was mobilized to support awareness-raising, education, and dialogue with the communities. This campaign instrument is estimated to reach more than 700 villages across Pidie.
• UNICEF is collaborating with three radio stations in Pidie to disseminate the audio public service announcement (PSA) expected to reach the radio listeners across Pidie and other districts adjacent to Pidie, such as Bireuen, Pidie Jaya, and Aceh Besar.
• Collaboration with the Pidie Communication and Information Office was initiated to disseminate the information, education, and communication (IEC) materials including mobilization of “Mobil Pintar” from the Office during the 2nd round of the polio SIA.
• Collaboration with Aceh Besar DHO for social mobilization was initiated, including interpersonal communication training, door-to-door distribution of campaign materials, and community dialogues.

Risk Communication
• IEC materials (posters and flyers) with information on the danger of polio and its prevention were created by the UNICEF team and shared through WhatsApp and social media as well as in printed forms in public places.
• A coordination meeting was conducted with all school principals, led by the regent of Pidie district.
UNICEF and WHO supported awareness-raising activities for parents and teachers in schools in Aceh Besar between the 1st and 2nd rounds of polio SIA.

A dissemination and coordination meeting with the principals of all madrasas in Pidie, under the Ministry of Religious Affairs, was held with the support of UNICEF.

Dissemination to 40 school principals in the East Aceh district was held on 1 February.

A media meeting with PHO and UNICEF for updating on polio SIA coverage and information on the 2nd polio SIA round was held on 20 January.

UNICEF developed new IEC materials for dissemination, with a key message stressing the importance of the 2nd dose of the polio vaccine.

UNICEF, WHO, and North Sumatra PHO (Immunization and Health Promotion Division) collaborated to develop IEC material for polio outbreak response in North Sumatra.

UNICEF provided technical support, submitted vaccine request forms (VRF) to the outbreak response & preparedness group (ORPG), updated the National Logistic Plan (NLP), and conducted advocacy, communication, and social mobilization (ACSM).

MoH continues to monitor and evaluate the implementation of the polio outbreak response in Aceh and plans the expansion of the response to close-by provinces of North Sumatra, Riau, and West Sumatra.
MoH is regularly providing feedback on polio vaccination and surveillance updates.

**WHO**
- WHO deployed national and international personnel to support the polio outbreak response in Aceh and in the adjacent high-risk provinces. Technical assistance provided is focusing on vaccine mobilization, assessment, advocacy, surveillance, data quality monitoring, laboratory testing and specimen shipment, and capacity building of health workers.
- WHO officers regularly assess environmental surveillance sites.
- WHO provides management support to the polio outbreak response.

**UNICEF**
- UNICEF has established a field office in the capital of Aceh province. The teams have been reinforced with a surge in support of national officers and consultants for immunization, advocacy, and C4D.
- UNICEF deployed national personnel members to support polio outbreak response in PHO and DHOs in Aceh with a primary focus on immunization, advocacy, and communication.
- UNICEF supported the extended polio outbreak responses in North Sumatra, Riau, and West Sumatra through the deployment of national personnel with a primary focus on providing technical assistance on vaccine management and immunization.

**Rotary**
- Rotary continues to provide T-shirts and other IEC materials to the districts of Aceh Province.

**Key Issues**
- Vaccine hesitancy needs to be addressed through targeted communication and social mobilization efforts.
- Surveillance needs strengthening to reach the enhanced target non-polio AFP and stool adequacy rates by ensuring no AFP cases are missed.
- The outbreak response plan and budget are to be validated by MoH and shared with WHO to be endorsed by the Outbreak Response and Preparedness Group (ORPG) and ensure funds for the response.
- Campaign coverage data management needs to be improved.

**Next Steps**
- Weekly tracking of preparedness for the next mass vaccination response campaign at national, provincial, and district levels – is to be conducted with special attention on the low-performing districts. Information is to be shared regularly with The Global Polio Eradication Initiative (GPEI) partners.
- Implementation of advocacy, communication, and social mobilization interventions as per the SIA planning is to be continued.
- Advocacy meeting with the governor and all mayors in North Sumatra province will be held on 6-8 February, and health workers orientation will be held on 8-10 February.

**Relevant Links**
- [http://polioeradication.org/](http://polioeradication.org/)
- [https://www.who.int/indonesia/emergencies/polio-outbreak](https://www.who.int/indonesia/emergencies/polio-outbreak)

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