In November 2022, the Indonesian government reported a polio outbreak in Aceh province, linked to circulating vaccine-derived poliovirus type two (cVDPV2). In response, the Ministry of Health and international partners bolstered surveillance and routine immunization, and successfully administered 12,416,088* type two novel oral polio vaccine (nOPV2) through two rounds of supplementary immunization activities (SIAs) across Aceh, North Sumatra, and West Java. As per the latest assessment, these provinces are not recommended to conduct another SIA and instead focus on strengthening surveillance systems.

**Outbreak confirmation**

Location of reported cVDPV2 cases in Aceh and West Java, Indonesia

4 cases of acute flaccid paralysis (AFP) with cVDPV2

11 cases of healthy children with cVDPV2

**Outbreak response**

Successfully reached*

- **6.3 million** children in the 1st round
- **6.1 million** in the 2nd round

*As of 23 June 2023

**nOPV2 COVERAGE**

Indonesia achieved to increase non-polio AFP rates of above **3 people per 100,000**

**2.23** ↔ **6.65**

2022

2023

This indicates that Indonesia is improved in active surveillance that led to better detection of polio cases

**Based on national target**
To ensure the outbreak response is effective, a team of international experts recently conducted an outbreak response assessment (OBRA).

Based on the assessment, it is recommended that these high-risk polio provinces improve their outbreak response plan, enhance laboratory diagnostics and early detection capabilities, strengthen routine immunization plan, strengthening surveillance quality, and optimize vaccine management.

WHO, UNICEF and partners are assisting Indonesia in strengthening routine immunization to prevent future outbreaks by improving Polio Immunization Coverage and strengthening local government commitment.

Enhancing AFP surveillance quality and polio immunization is crucial to stop transmission of cVDPV and to provide adequate protection against polio for children.

Ensuring the implementation of OBRA’s recommendation in these provinces

Properly managing waste of nOPV2 doses and addressing transportation budget constraints in certain districts, particularly in North Sumatra

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relevant resources

http://polioeradication.org/  
https://www.who.int/indonesia/emergencies/polio-outbreak

Contact information

Ibu Vitri, a local coordinator at Puskesmas Limo, Depok, West Java, conducted SIA and routine immunization. Credit: Wildan Machamad Ridho /WHO Indonesia

PHO West Java and Aceh have conducted waste disposal for the nOPV2 vaccine to ensure a safe environment, with PHO North Sumatra set to complete its waste disposal process by mid-September.

48,964 open vials destroyed in Aceh
178,191 open vials destroyed in West Java
Circulating Vaccine-Derived Poliovirus Type 2 Outbreak in Indonesia

Situation Report No 1 – 7 September 2023

Outbreak response:
- Coordination and planning
- Surveillance
- Immunization response
- Logistic

Summary

Outbreak confirmation:
- Total number of AFP cases with cVDPV2: 4
- Total number of healthy children with cVDPV2: 11 (4 in Aceh and 7 in West Java)
- Outbreak grade: 2

Infected Provinces and Districts:
- Aceh Province: 1 case with paralysis each in Pidie, North Aceh and Bireun districts
- West Java province: 1 case with paralysis in Purwakarta district

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 case (by date of onset):
- Source: AFP case
- Location: Maniis Subdistrict, Purwakarta District, West Java Province
- Onset of paralysis: 16 February 2023
- Sex: Female
- Age: 4 years old
- Vaccination status: 0 dose

Outbreak Response:
- Aceh Province: All children 0 to below 13 years
- North Sumatra and West Java Province: All children below 5 years
- Target: 6.5 million children
- Vaccine type: nOPV2

Crash Programme
- West Sumatra and Riau: All children below 5 years (0-59 months: bOPV and 4-59 months: IPV)

Key highlights
- To ensure the outbreak response is effective, a team of international independent experts from Global Polio Eradication Initiative (GPEI) partners conducted an outbreak response assessment (OBRA) in Aceh, North Sumatera, and West Java provinces. The activity started with a briefing meeting on 10 July, followed by field assessments on 11 to 19 July, and a debriefing session on 20 July 2023. The full report can be accessed [here](#).
- On 16 August, WHO assisted MoH, along with UNICEF, CDC, and UNDP to initiate the follow-up action plan on OBRA findings and recommendations. In this context, the participants actively discussed the range of activities that MOH, PHO, DHO and Puskesmas, and partners need to undertake.
- On 7 September, MOH circulated letter for three provinces which were Aceh, North Sumatera and West Java to follow up OBRA recommendations and preparedness for upcoming assessment.
Outbreak response

Coordination and planning

- On August 22, PHO West Java conducted a coordination and implementation meeting on the action plan against the recommendations by OBRA. This meeting was coincided with the midterm evaluation meeting for the routine Immunization and stunting programs. The event was attended by approximately 60 participants, including MOH, CDC representatives, and nutrition managers at the district level. The WHO Indonesia led the discussion on the initial action plan, with a specific focus on strengthening and improving the quality of AFP surveillance. Among the key points discussed, it was noted that five districts namely Tasikmalaya, Subang, Bogor district, Bekasi city and Sukabumi had not yet achieved the non-polio AFP (NPAFP) rate target, and expect to achieve it by the end of September. In response, active measures are needed to enhance AFP surveillance case detection in health centers and hospitals, particularly on conducting active surveillance.

- On 24 to 25 August, to evaluate the response to polio outbreak and discuss the lessons learnt, WHO Indonesia field team participated and delivered update about Polio Risk Assessment of Indonesia by 2022 and shared about previous OBRA findings and suggestions on Polio Outbreak responses in Indonesia. in meeting with the International Federation of Red Cross and Red Crescent Societies (IFRC), and Indonesia Red Cross/Palang Merah Indonesia (PMI) in Bandung city, West Java. The activity aimed to strengthen collaboration in achieving polio eradication. PMI delivered lessons learned regarding polio preparedness on volunteer mobilization and health promotion within eight districts in Aceh, North Kalimantan, East Nusa Tenggara, North Maluku, and West Papua. WHO Indonesia encouraged PMI to mobilize volunteer assistance in regions having potential risk for a polio outbreak. Acknowledging the limited resources, the MoH have established a partnership with PMI/IFRC. As part of this collaboration, a list of provinces with potential susceptibility to a polio outbreak will be compiled. The list will guide the execution of specific actions, which include mobilizing communities to participate in immunization services, administering vaccinations through volunteer healthcare personnel, conducting Rapid Community Assessments (RCA), and disseminating information about cases of AFP. This coordinated effort aims to proactively prevent and manage potential polio outbreaks.

- Further provincial and districts meetings in Aceh and Sumatra are expected to discuss and plan for the implementation of OBRA recommendations.

Surveillance

- On 14 to 16 August, MOH conducted a national expert committee meeting to discuss means to improve VPD surveillance. The National Certification Committee for Polio Eradication (NCCPE) concluded that active AFP case findings in hospital settings must be revitalized to improve AFP surveillance. They also emphasized the importance of having commitments from the national and subnational governments to ensure funding is allocated for AFP surveillance activities.
• On 18 August, MoH, the National Expert Committee of VPD and WHO supported PHO North Sumatera in conducting coordination meetings with VPD expert committees of North Sumatera, the Indonesian Pediatric Society of North Sumatera, and other professional member (IDI, PPNI, IBI), the Association of Private Clinics, Private and public hospitals, DHO, and puskesmas to strengthen the support of clinician for VPD surveillance, especially AFP surveillance. WHO updated the global situation of VPD surveillance, MoH refreshed the CRS and VPD surveillance program and updated the situation in Indonesia, while national expert committees strengthening the case finding of AFP and other VPD surveillance.

Figure 3. VPD surveillance coordination meeting in PHO North Sumatera. Credit: WHO/Candora Tambunan

• On 21 August, WHO collaborated with the DHO Bogor district to facilitate active surveillance visits in Government Hospital (RSUD) Leuwiliang for VPD specifically focusing on the identification of AFP cases. This effort was carried out in conjunction with the CDC manager and their team. Notably, this endeavor involved enhancing case identification within a network of four prominent government hospitals and numerous private hospitals, aligning with the recommendations outlined by OBRA. For improved surveillance an innovative approach was recommended, involving the integration of active and rapid screening procedures through an electronic comprehensive initial assessment application. The primary objective of this approach is to achieve early and highly sensitive detection of cases. Under this system, patients who present with suspected cases of VPD/AFP are promptly identified and directly notified to the hospital’s surveillance officer. This streamlined process aims to expedite case detection and reporting, ultimately contributing to more efficient surveillance efforts.

Figure 4. Screening and review register in patients on pediatric wards for AFP cases found. Credit: WHO/Wildan Muhammad Ridho
From 21 to 23 August, PHO North Sumatra convened a comprehensive performance assessment meeting focused on VPD surveillance within the region. This meeting involved the participation of district health office surveillance officers. The objective of this gathering was to address the challenge of low adequacy rates in AFP stool specimens across North Sumatra. During the meeting, representatives from the MOH and the Health Development Policy Agency (Badan Kebijakan Pembangunan Kesehatan) collaborated to revise and enhance the strategy pertaining to the VPD surveillance program and the collection of specimens for VPD cases. The PHO of North Sumatra meticulously evaluated the performance of VPD surveillance indicators on a district level, encompassing metrics such as the non-AFP rate and the adequacy of collected specimens. To bolster the efficacy of the surveillance system, WHO provided support to the PHO of North Sumatra. This assistance was directed at improving the action plan for active surveillance on a district level, as well as devising strategies to elevate the adequacy of AFP stool specimens. The collaborative efforts undertaken during this meeting aimed to enhance the overall surveillance performance and response capabilities within the region.

Figure 5. Surveillance coordination meeting in PHO North Sumatera. Credit: PHO North Sumatera
A sensitive AFP surveillance is essential to ensure timely and reliably detect any circulating polio virus in the community. Global target NP AFP rate is 2/100,000 and national target is 3/100,000. In 2022, 47% provinces achieved non-polio AFP rates of above 3/100,000 and 74% provinces achieved non-polio AFP rates of above 2/100,000. In 2023 (as of 24 August 2023), 56% provinces achieved non-polio AFP rates of above 3/100,000 and 79% of provinces have achieved non-polio AFP rates of above 2/100,000. This indicates that Indonesia is improved in active surveillance that led to better detection of polio cases.

In 2022, the non-polio AFP (NP-AFP) rate in Aceh was 5.77 per 100,000 population under 15 years of age with specimen adequacy of 55%. As of 24 August 2023, Aceh reported 93 AFP cases from 23 districts with an annualized NP-AFP rate of 6.65 per 100,000 population under 15 years of age and specimen adequacy of 67.7%. The NP-AFP rate in West Java was 2.62 per 100,000 population under 15 years of age and the specimen adequacy was 78.9% in 2022 with one silent district1 (Kota Cimahi). In 2023, West Java reported 545 AFP cases in 27 districts, with an annualized NP-AFP rate of 5.09 per 100,000 population under 15 years and specimen adequacy of 83.7%. The NP-AFP rate in North Sumatra was 2.23 per 100,000 population under 15 years of age and the specimen adequacy was 60.6% in 2022 with 11 silent districts. In 2023, North Sumatra reported 242 AFP cases in 33 districts, with an annualized NP-AFP rate of 6.65 per 100,000 population under 15 years and specimen adequacy of 63%.

Despite improvements in case detection, a major concern is the low rate of timely collection of specimens from AFP cases. Just 29.4% of provinces out of 38 provinces achieved stool adequacy of greater than 80% during 2022; in 2023 (as of 20 July 2023) only 21% provinces have achieved 80% stool adequacy. This compromises the capacity for timely detection of circulating polioviruses.

Key indicators including adequate specimen collection rates, timeliness of reporting, investigation, and shipment of specimens to laboratories, and completeness of case investigation exhibit significant variability at the sub-national level. Addressing these variations necessitates targeted and distinct efforts. Within the context of the cVDPV2 outbreak provinces, the Hospital Record Reviews (HRR) brought to light instances where certain cases of Acute Flaccid Paralysis (AFP) accessing the health system were ‘missed’ from being reported.

To foster the enhancement of the AFP surveillance system’s sensitivity, it is imperative to allocate attention towards the prioritization of surveillance sites and the implementation of active surveillance visits.

Additionally, the implementation of periodic performance evaluations based on the identified key indicators is crucial. These evaluations serve to uncover potential issues and enable the undertaking of appropriate corrective measures. The scope of these reviews should encompass the national, provincial, and sub-provincial levels to ensure

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1 A ‘silent’ district is a district, area, or other administrative entity that has not reported a single AFP case for a period ranging from 6 to 12 months or longer.
a comprehensive assessment of the surveillance system's efficacy.

Immunization response

- On 19 August, WHO Indonesia participate in celebrating the World Humanitarian Day (WHD), a collaborative event was organized involving the United Nations (UN), the Coordinating Ministry for Human Development and Culture, the National Disaster Management Agency (BNPB), and the Ministry of Social Affairs, supported by various government stakeholders, non-governmental organizations (NGOs), interfaith groups. Under the theme #NoMatterWhat, WHO Indonesia hosted a session on the significance of routine immunization, encompassing discussions about the importance of immunization, adherence to vaccination schedules, and strategies for catch-up vaccinations within the community. This initiative employed a hybrid approach, incorporating both physical activities held at Martha Christina Tiahahu Park and virtual engagement through WHO Indonesia’s Instagram platform.

- On 17-19 August, MoH conducted the Coordination, Monitoring, and Evaluation of Supervisory areas (Bina Wilayah) in Banda Aceh. This meeting aims of the six pillars of health transformation are carried out jointly across sectors and across related programs to increase the achievements of priority health programs in Aceh Province, such as TB prevention and control, immunization management, reduction of stunting, reduction of MMR and IMR, early detection/screening of priority diseases, integration of primary services, referral health services, improving health human resources, digital recording and reporting, and health financing. One of the main priorities in Aceh Province is the immunization program. This meeting was attended by the Head of the 23 City District Health Offices, Zainal Abidin Regional Hospital and Aceh Tamiang Regional Hospital, Aceh Health Polytechnic, WHO, UNICEF and UNDP.

- On 25 and 29 August, PHO Aceh, DHO Banda Aceh, Puskesmas Banda Raya, WHO, and UNICEF conducted BIAS socialization at SD Negeri 71 Banda Aceh and SD Negeri 67 Percontohan Banda Aceh. DHO Banda Aceh provided a presentation regarding routine immunization and new vaccines, including the importance of HPV and Rotavirus vaccination, to 25 parents and 17 female students from 5th grade. At SD Negeri 71, after socialization, Puskesmas staff provided HPV vaccination for 3 female students and one male student for MR immunization. In contrast, at SD Negeri 67 Percontohan, six female students received the HPV vaccine, and three male students accepted the MR vaccine. In August 2023, DHO Banda Aceh actively campaigned for BIAS in schools in Banda Aceh to increase the number of children’s routine immunization.

- On 11 August, PHO Aceh, WHO and UNICEF conducted the workshop for the new vaccines (RV, IPV2, and HPV) introduction for 23 DHOs and all Puskesmas in Aceh. More than 300 participants joined this workshop. In this workshop, dr. Iman Murahman, Sp.KKLP. MKM, head of CDC PHO Aceh, presented the new vaccine policy in Indonesia. Following the presentation on the safety of new vaccines and multiple injections by dr. T. M Thaib, head of KOMDA KIPI Aceh. At the end of the workshop, Dr. dr. Raihan, Sp. A (K) from IDAI Aceh presented Vaccine-preventable diseases (VPD) focus on Polio, Diarrhea, and Cervical Cancer.

- On 25 and 29 August, PHO Aceh, DHO Banda Aceh, Puskesmas Banda Raya, WHO, and UNICEF conducted School Based Immunization (BIAS) socialization at SD Negeri 71 Banda Aceh and SD Negeri 67 Percontohan Banda Aceh. Mawardy, from DHO Banda Aceh, provided a presentation regarding routine immunization and new vaccines, including the importance of HPV and Rotavirus vaccination, to 25 parents and 17 female students from 5th grade. In the presentation, Mawardy highlighted the three polio cases in Aceh and reminded the parents to complete their children’s routine immunizations, including IPV. At SD Negeri 71, after socialization, Puskesmas staff provided HPV vaccination for 3 female students and one male student for MR immunization. In contrast, at SD Negeri 67 Percontohan, six female students received the HPV vaccine, and three male students accepted the MR vaccine. In August 2023, DHO
Banda Aceh actively campaigned for BIAS in schools in Banda Aceh to increase the number of children's routine immunization.

Figure 9. PHO Aceh, DHO Banda Aceh, Puskesmas Banda Raya, WHO and UNICEF conducted BIAS Socialization in elementary schools in Banda Aceh. Credit: DHO Banda Aceh

Logistics

- PHO West Java and PHO Aceh have conducted waste disposal for nOPV2 vaccine through third parties' service. The number of nOPV2 waste collected from PHO West Java was around 178,191 vials (broken and used vials) as of 8 July and around 48,964 vials (broken and used vials) as of 21 August were collected from PHO Aceh.
- 26 out of the 33 District Health Offices (DHOs) in North Sumatera have already successfully transferred their nOPV2 waste to third-party facilities. The remaining districts are scheduled to complete the transfer of their vaccine waste by September 15, 2023.
On 30 August, UNICEF provided support for PHO North Sumatera in collaboration with WHO and UNDP to conduct an online meeting to assist districts in North Sumatera in finalizing the procedure for nOPV2 waste management, the mechanism for reverse logistics for the remaining unused vial, and the reporting requirement. The action point from this meeting is to finalize the waste disposal activity by 15 September 2023.

Key Challenges
- Enhancement of Acute Flaccid Paralysis (AFP) surveillance and Basic Immunization is imperative to guarantee the absence of any novel viruses and to provide adequate protection against polio for children.
- Actively corresponding on the subsequent steps that will be issued by the Ministry of Health to various entities, including the Provincial Health Office (PHO), District Health Office (DHO), Health Centers (Puskesmas), and collaborating partners.
- Retrieving all novel oral polio vaccine (nOPV2) doses, both used and unused, back to their respective provinces in adherence to established standards. Detailed disposal reports must be furnished to the Ministry of Health, WHO, and UNICEF. To address transport budget constraints in certain districts of North Sumatra, UNICEF is actively exploring options to finance the transportation expenses from the district level to the provincial level.

Next Steps
- Aceh, North Sumatera, and West Java are not recommended to conduct another SIA round. Instead, the focus should be directed towards enhancing the quality of surveillance and diligently executing the plans for...
strengthening surveillance systems. Additionally, there is an urgent need to expedite the completion and full implementation of basic immunization services.

- The Ministry of Health, in collaboration with WHO and UNICEF, has undertaken deliberations to address the follow-up actions recommended by OBRA. With the assistance of WHO and UNICEF, the Ministry of Health has developed comprehensive activity outlines and monitoring instruments for the effective execution of the OBRA recommendations.
- To strengthen the response and preparation for outbreaks, the Ministry of Health, along with experts and partners, is creating Outbreak Response Immunization Guidelines.
- The MOH plans to hold a meeting with the polio expert team wherein it will follow up on OBRA recommendations, especially regarding the quality of AFP surveillance.
- The MOH is intensively conducting a desk review of AFP and VPD surveillance and emphasizing the strengthening of AFP surveillance in accordance with OBRA recommendations.
- Promoting and disseminating the OBRA report to the Ministry of Health and all relevant partners through WHO Indonesia’s website.

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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