



ASEAN BIODIASPORA VIRTUAL CENTER

DISEASE ALERT

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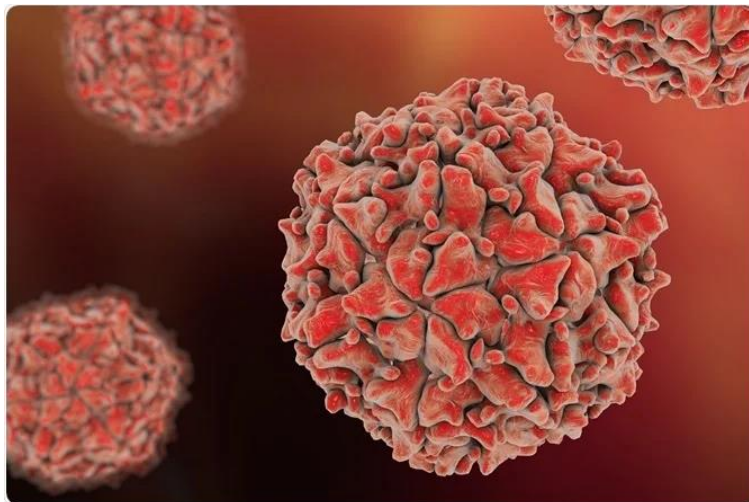
ASSOCIATION
OF SOUTHEAST
ASIAN NATIONS

October 23, 2024 | Issue No. 16

First alert: 23 October 2024 | Vaccine-derived Poliomyelitis in Viet Nam

SUB-LOCATIONS AFFECTED

Gjak Lak Province (Xa Cu M'Gar)



Source: <https://www.news-medical.net/life-sciences/Polio-Virion-Infection.aspx>

Event Description

On October 19, 2024, the Dak Lak Provincial Center for Disease Control (CDC) reported a case of acute flaccid paralysis (AFP) associated with vaccine-derived poliovirus type-3 (VDPV3), involving a 10-month-old male, residing in Ea Kiet commune, Cu M'gar district, Dak Lak province.

On September 29 the patient developed a high fever at home, lasting for two consecutive days. Following the fever, the patient experienced weakness in the lower limbs and was unable to stand. On October 3, the family took the patient to Central Highlands General Hospital, where he was diagnosed with quadriplegia and transverse myelitis, with Guillain-Barré syndrome not ruled out. After consultations, the patient was referred to Children's Hospital 2 in Ho Chi Minh City for further treatment. However, due to financial constraints, the family opted to bring the patient home for monitoring.

On October 18, the patient tested positive for Poliovirus Sabin-Like 3 discordant. Currently, the patient still has weakness in both lower limbs and is undergoing isolation and treatment at Cu M'gar District Medical Center.

Epidemiological Information

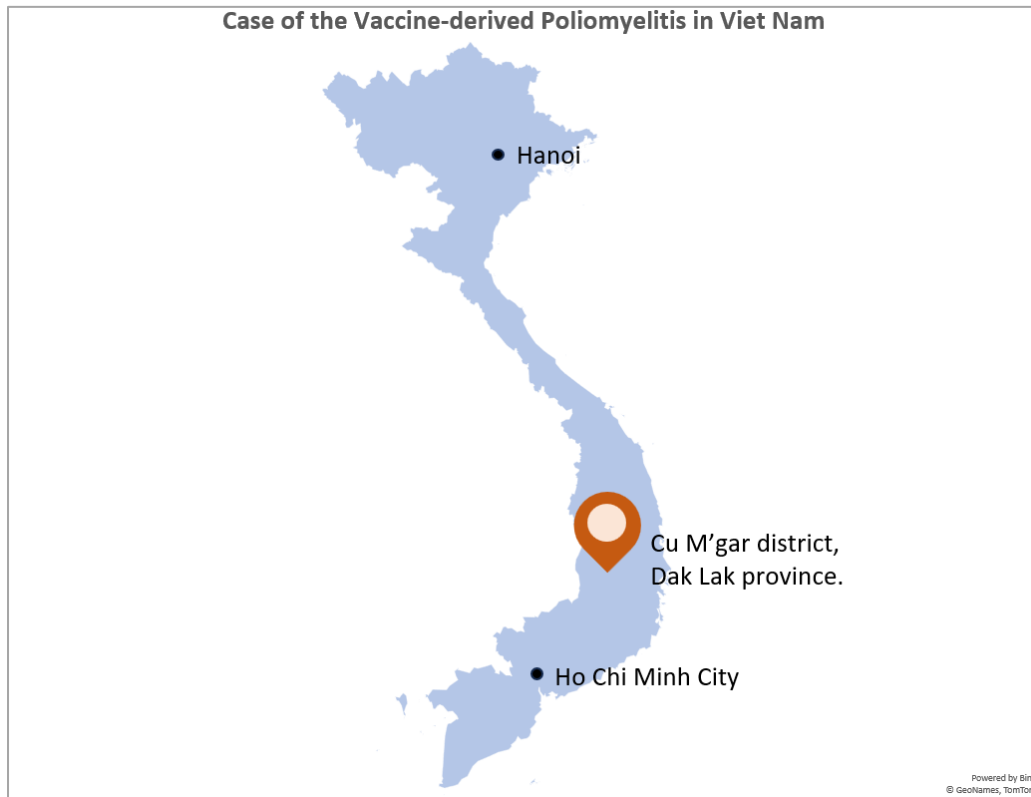


Figure 1. Location of the reported case of vaccine-derived poliomyelitis in Viet Nam

- According to the polio-immunization WHO website, Viet Nam vaccination coverage in 2023 was 60%, far below the 95% threshold recommended to prevent outbreaks.
- It is notable that a significant decline in polio-vaccination coverage has been observed since the beginning of the SARS-CoV-2 pandemic: 90% (2019), to 80% (2020), 81% (2021), and 70% in 2022.
- In 2023, the WHO Regional Committee for the Western Pacific upgraded Viet Nam from a low-risk to a high-risk group of further spread for wild polio, and/or vaccine-derived polio cases given the country's vaccination status.

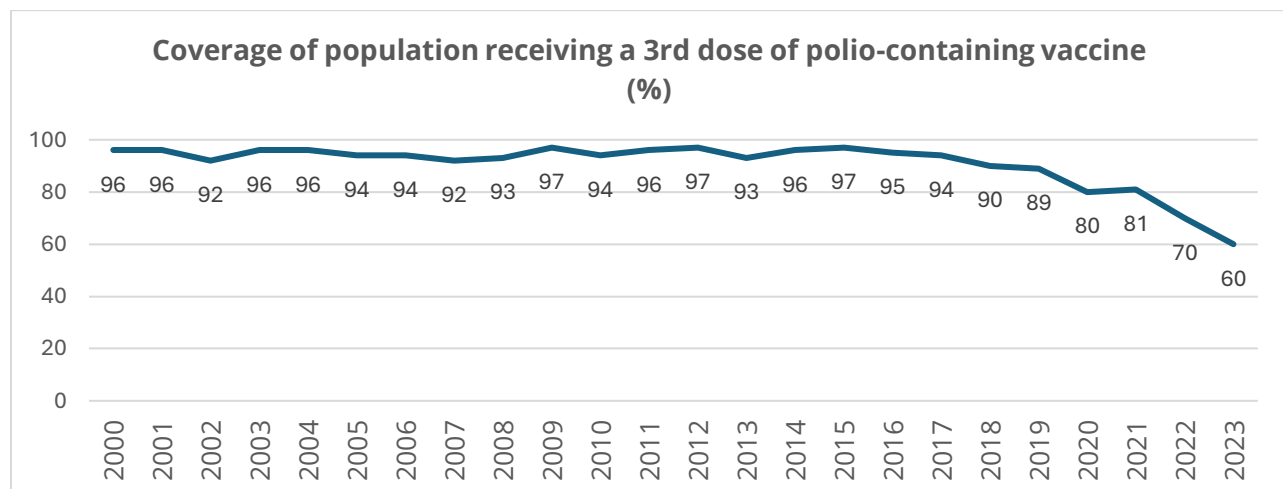


Figure 2. Coverage of population receiving a 3rd dose of polio-containing vaccine in Viet Nam

Source: WHO (<https://immunizationdata.who.int/global/wiise-detail-page/poliomyelitis-vaccination-coverage?CODE=VNM&ANTIGEN=POL3&YEAR=>)

Response Measures

- Following the positive test, the Dak Lak CDC initiated environmental disinfection protocols at the Central Highlands General Hospital and the patient's home and six surrounding households with 0.5% Chloramin-B to disinfect the environment and prevent further spread.
- In collaboration with the Central Highlands Institute of Hygiene and Epidemiology and local health authorities, the CDC surveyed the affected area and implemented measures to strengthen polio prevention, including reviewing the vaccination status of children under five, organizing catch-up, mop-up and supplementary immunization activities, and launching a communication campaign to encourage timely vaccination and early recognition of symptoms.

Disease Information

- **Pathogen:**
Polioviruses are small single-stranded RNA viruses that belong to the *Enterovirus* subgroup of the family *Picornaviridae*.
- **Host:**
Humans are the primary hosts for poliovirus. Children below the age of five are particularly susceptible due to their developing immune systems.
- **Transmission:**
The virus is transmitted by person-to-person spread mainly through the faecal-oral route or, less frequently, by a common vehicle (e.g. contaminated water or food) and multiplies in the intestine.
- **Symptoms:**
Up to 90% of those infected experience no or mild symptoms and the disease usually goes unrecognized. In others, initial symptoms include fever, fatigue, headache, vomiting, stiffness in the neck, and pain in the limbs.
- **Fatality Rate:**
Approximately 5-10% of paralyzed cases result in death, mainly due to respiratory complications where muscles necessary for breathing become paralyzed

Sources:

1. **World Health Organization (WHO).** (2024, October 23). *Poliomyelitis vaccination coverage*. Retrieved from <https://immunizationdata.who.int/global/wiise-detail-page/poliomyelitis-vaccination-coverage?CODE=VNM&ANTIGEN=POL3&YEAR=>
2. **World Health Organization (WHO).** (2024, October 23). *Poliomyelitis (polio)*. Retrieved from https://www.who.int/health-topics/poliomyelitis#tab=tab_1
3. **VN Online** (2024, October 23) Retrieved from <https://vtv.vn/suc-khoe/dak-lak-ghi-nhan-truong-hop-tre-mac-benh-liet-mem-cap-2024101917142206.htm>