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Polio and Routine Immunization Strengthening in the DRC

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Context

The Democratic Republic of Congo (DRC) is conducting an outbreak response to the circulating vaccine-derived poliovirus type 2 (cVDPV2) cases detected in 2017.

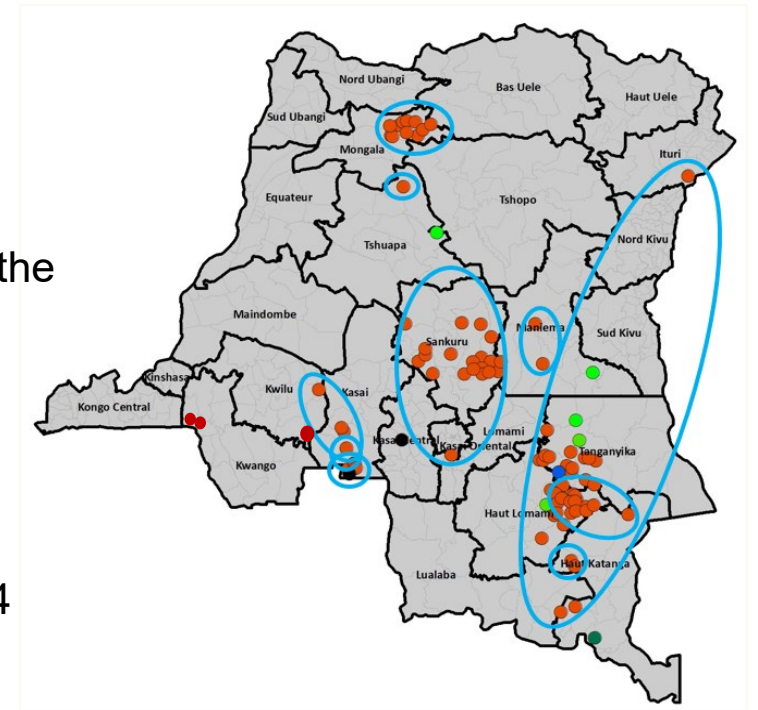
In February 2018, the government of the DRC declared the cVDPV2 outbreak a public health emergency of international concern.

The outbreak is not yet under control, with 10 separate outbreaks of cVDPV2 in 34 health zones distributed in 11 provinces in central and eastern part of the country.

There are also many geographic, cultural, and religious barriers to vaccination. The money and logistics must be on time and get to the workers.

Many children are not vaccinated through routine immunization or campaigns.

The Global Polio Eradication Initiative (GPEI) continues to coordinate teams in the region and undertakes regular reviews of the country to strengthen response. The national government remains fully committed to ending the outbreak. Provincial and local engagement is the weakest link.



Objectives of BMGF Funded PATH Project

1. Rapidly improve the quality of the cVDPV2 outbreak response in DRC (2018), as well as strengthen Polio surveillance.
2. Provide technical support and advocacy to strengthen routine immunization in 2 provinces (adaptation of the successful approach used in Nigeria).

Key activities implemented to date

- Providing logistical and financial support to the polio EOC in Kinshasa and polio-affected provinces.
- Providing technical support in Tanganyika and Haut Lomami to achieve Mashako Plan/MOH Routine Immunization strengthening vision (e.g. via mobile phones).
- Conducting routine immunization assessments and strengthening cold chain.
- MOU signed between BMGF and the Governors of Tanganyika and Haut-Lomami.
- Haut-Lomami Edit (provincial law) promulgated in December 2018 for immunization sustainable financing.
- Innovations introduced in the two provinces:
 - VTS (vaccine tracking system) during SIAs supervision to improve door to door vaccination quality.
 - Update health zone maps using satellite maps and GIS data with population estimates (ongoing) to have real population denominator.

Key activities to be implemented

- Integration of the polio EOC into the national EOC in the Diseases Control General Direction.
- Use of Mobile EOC for polio and other outbreaks.
- Direct payment (motivation) for provincial SIAs actors during future polio campaigns.
- Use of teacher and pupils as community relays in Tanganyika province in community-based surveillance of AFP cases
- mOPV2 vials tracking with some design among five proposed by PATH HQ to reduce vials loss;
- nOPV2 development in clinical trial by PATH HQ
- Tracking of AFP stool samples (GPS tracking and temperature monitoring)

Yearly polio surveillance indicators

Indicator	2016	2017	2018	2019
Total cases of AFP notified	1,820	2,148	2,752	3,293
Number of health zones having notified (%)	506 (98%)	503 (96%)	499 (96%)	501 (96%)
Annualized non-polio AFP rate	3.6	3.9	5.2	6.7
% AFP cases with adequate stool samples	89%	86%	77%	70%
% of provinces with both indicators	61%	69%	42%	11%
Rate of non-polio enterovirus	11.8	11.7	10.5	17.3

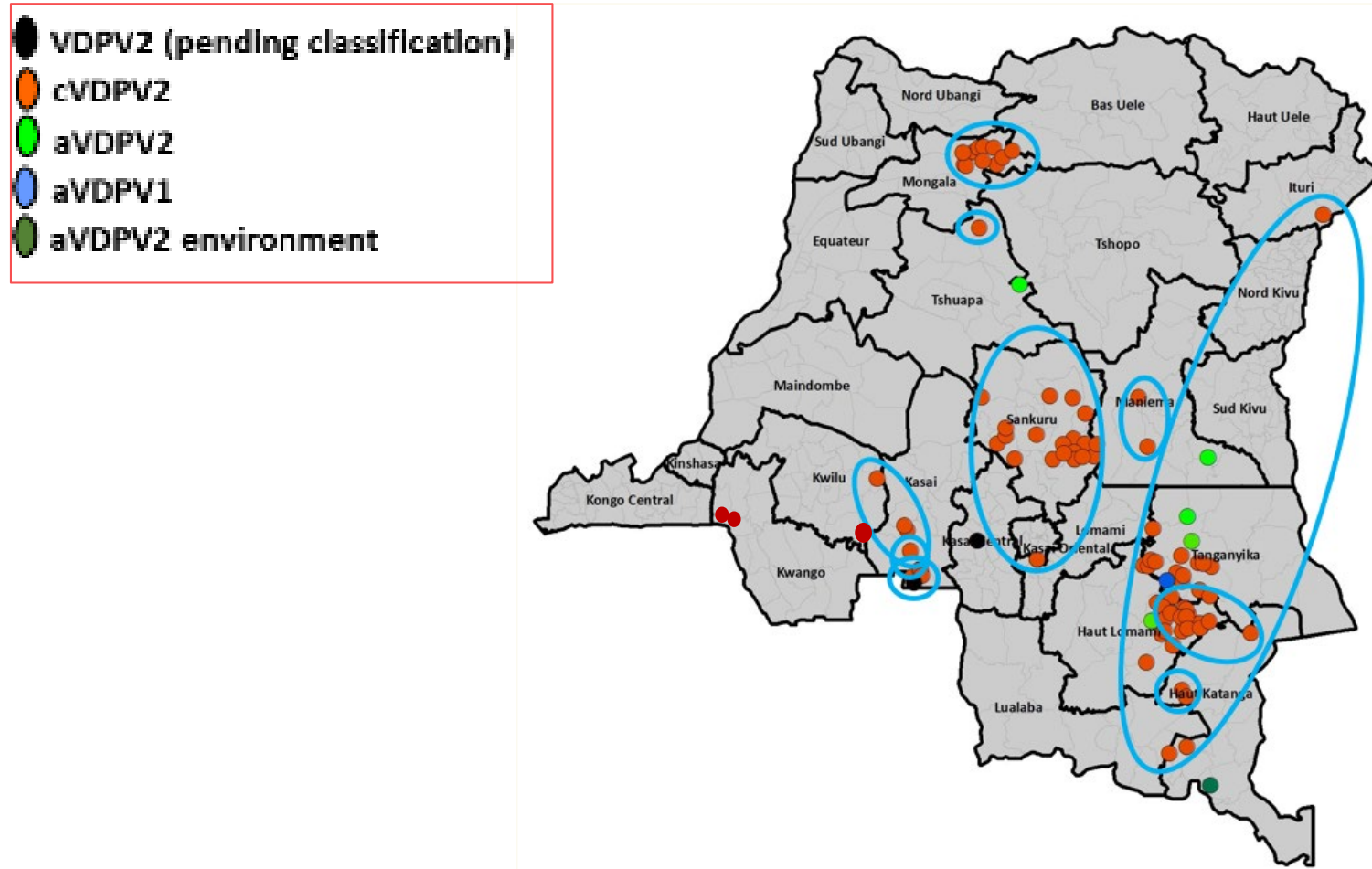
Of concern, adequate AFP cases and percent of provinces with two indicators indicating adequate surveillance have decreased steadily.

In 2019 :

- 53 cases of cVDPV2
- 3 cases of aVDPV2

aVDPV: ambiguous vaccine-derived polio virus
cVDPV: circulating vaccine-derived polio virus

cVDPV2 outbreaks (2017–2019)



- Most cases are seen in unvaccinated or zero-dose children with unknown vaccination status, but partially vaccinated children are also vulnerable.
- The cVDPV2 transmission risk profile has not changed.

Analysis of immunization refusal population, reasons, and conversion rates in Haut Lomami

79% conversion rate

Reasons for refusal	Strategies used during the campaign for conversion of refusals
<ul style="list-style-type: none"> • Religious reasons (e.g., Kikolwa sect and epiphany (flight of the children) before the arrival of vaccinators) • Repetitiveness of campaign/ population wonders why vaccination campaigns are repeated • History of curative care or distribution of certain drugs or inputs/ reason for service provision evoked by the community • Why are vaccines free and not curative medicines/ reasons for providing services referred to by the community • Many campaigns, paid healing, vaccines cause anemia/ reasons for service provision evoked by the community 	<ul style="list-style-type: none"> • Recruitment of their leader as a mobilizer • Negotiation/persuasion of parents and community • Persuasion and application of the Nicodemus strategy, which means that the followers of the religious sect accept that their children can be vaccinated only at night • Usage of police force to vaccinate infants

Successes

- Coordination by the political and administrative authorities at all levels.
- Improvements in LQAS results and independent monitoring in the majority of health zones.
- Bringing together the provincial coordinating committee of the polio campaign at the epicenter of cVDPV2 to resolve operational problems.
- Significant improvements in the quality of mOPV2 vial management
- Strong management supervision for campaign implementation.

Challenges

- Decrease in surveillance indicators.
- Herd immunity among children 12-23 months remains low.
- Coverage of the three poliovirus serotypes is 41% in Haut Lomami and 57% in Tanganyika.
- Persistence of non-immunized children during polio campaigns.
- Non-systematic use of micro plans by vaccination teams.
- 69 empty mOPV2 vials were dropped during motorbike transport (Central Kasai province) due to the use of a non-resistant bag.

Key lessons learned

- Surveillance overall is still weak and needs to be improved.
- Government ownership of immunization activities is critical for sustained improvements.
- Strengthening the herd immunity of the target population through high quality routine vaccination is essential.
- The use of satellite mapping data by health zone defines population of all settlements and contributes to better micro plans, logistics and revisit plans.
- The involvement of the provincial health inspectorate (IPS) in the recruitment of coordinators of the mOPV2 vials independent monitors of the health zones has led to an improvement in the quality of monitoring at the level of health zones and in health areas.
- The presence of independent monitors has made it possible to verify the actual use and performance of vaccination teams.
- The use of strong and resistant material for the transport of empty vials is critical.

Prospective strategies to improve polio SIA quality

Where there are cases of refusal of oral polio vaccine that are difficult to overcome, we propose the following possible solutions:

- Address more holistic community needs and frustrations
- Continue to negotiate with leaders of religious sects in order to use them as social mobilization agents during vaccination campaigns.
- Encourage a polio vaccination campaign integrated with vitamin A supplementation, mebendazole deworming, the distribution of insecticide-treated mosquito nets, and food to families. This integration of interventions can motivate parents to bring their children to vaccination. This will require strong coordination between agencies.

Innovative approaches, such as satellite mapping, should also be used to increase vaccination coverage.

Images of mOPV2 destruction in Sankuru province

Images 1 and 2: Destruction of mOPV2 vials by boiling.

Images 3 and 4: Destruction of mOPV2 vials by burial.

Images 5 and 6: Destruction of mOPV2 vials by encapsulation.



Thank you

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