Acute Flaccid Paralysis Surveillance System Evaluation, Ebonyi State Nigeria, 2017

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Objective

We evaluated the Ebonyi state AFP surveillance system to assess its usefulness, performance and key system attributes.

Introduction

Nigeria is one of the three countries in the world with ongoing wild poliovirus (WPV) transmission, alongside Afghanistan and Pakistan. Nigeria also experiences outbreaks of circulating vaccine-derived poliovirus type 2 (cVDPV2).[1] Following the detection of WPV1 in northern Nigeria in 2016, after more than two years without WPV transmission, the country continues to implement an emergency response to the detected WPV1 and cVDPV2 strains.[1-3] This resurgence of polio cases underscores the risk posee by low-level undetected transmission and the need to strengthen subnational surveillance.[1] High quality acute flaccid paralysis (AFP) surveillance is essential to rapidly detect and respond to on-going polio transmission. [4]

Methods

Ebonyi state is located in south-eastern Nigeria. The state has 13 local government areas (LGAs). Each LGA has a disease surveillance and notification officer (DSNO) who coordinates surveillance activities at that level with the state epidemiologist supervising them.

We interviewed key system players and also administered a semi-structured questionnaire on all 13 LGA DSNOs to assess their opinion on some key system attributes. We analysed the state AFP surveillance data from 2011-2015 to assess performance on key surveillance indicators. We also reviewed relevant documents and reports.

Results

Funding and logistics for AFP surveillance system operation in the state comes mainly from World Health Organization. Private health facilities are not adequately captured by the system. There was 100% interview acceptance and completion rates and all interviewed stakeholders agreed that AFP case definition is easy to apply, the surveillance forms easy to fill but some said there are too many forms to be filled. The system was transited seamlessly from paper to electronic/ mobile phone-based reporting in 2014. There was 100% LGA-to-state reporting rate within review period though timeliness of reports progressively declined from 92% in 2012 to 65% in 2015 while completeness undulated around the 90% target. Of the 784 AFP cases reported in the state within review period, 756 (96.4%) were investigated within 48 hours, 32 confirmed as circulating vaccine derived polio virus while none was confirmed as WPV. All 13 LGAs met the 80% target for annualized non-polio AFP rate and percentage stool adequacy from 2011-2015.

Conclusions

The AFP surveillance system in Ebonyi state is useful, sensitive, flexible, and acceptable to stakeholders but not that simple. There was timely investigation of reported cases but timeliness of LGA-to-state report was poor. Data quality was average and system representativeness was sub-optimal. Heavy reliance on partner funding threatens sustainability of the system. The state government should take full ownership of the system, pay more attention to data quality and engage more with private healthcare facilities to improve coverage.

Proportion of LGAs that met the 80% Target for Timeliness of Reports, 2011-2015

Year	Number of LGAs that met the 80% benchmark n (%)	Total no of LGAs 'N'
2011	13 (100.0)	13
2012	6 (46.2)	13
2013	12 (92.3)	13
2014	6 (46.2)	13
2014	4 (30.8)	13

Proportion of LGAs that met the 90% Target for Completeness of Reports, 2011-2015

Year	Number of LGAs that met the 90% benchmark n (%)	Total number of LGAs 'N'
2011	10 (77.0)	13
2012	6 (46.2)	13
2013	13 (100.0)	13
2014	9 (69.2)	13
2015	8 (61.2)	13

Keywords

Poliomyelitis; Wild Polio Virus; Surveillance System; Evaluation; Nigeria

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