

AN UPDATE ON PUBLIC HEALTH SECURITY IN ZAMBIA

Perspective

By: B Gianetti¹, KE Musakanya¹, C Groeneveld¹, R Hamoonga¹, ML Mazaba¹

Information Systems Unit Zambia National Public Health Institute

Citation Style For This Article: Gianetti B, Musakanya KE, Groeneveld C, et.al. An update on public health security in Zambia. Health Press Zambia Bull. 2019; 3(3); Pp 7-9.

Zambia is a landlocked country and borders eight nations: Zimbabwe, Botswana, Namibia, Angola, Democratic Republic of the Congo (DRC), Tanzania, Mozambique, and Malawi. In 2018 outbreaks of Ebola virus disease, cholera, measles, poliomyelitis (cVDPV2), monkeypox, and yellow fever were reported in the DRC. Moreover, Zimbabwe reported major outbreaks of cholera and typhoid [1]. Due to Zambia's expansive and porous borders with countries experiencing multiple ongoing outbreaks, public health security is an issue of utmost national importance.

The government of Zambia drafted a five year National Health Strategic Plan (NHSP) in 2017 to provide a framework for building robust health systems across the country. Embedded in the plan are policies that promote security during outbreaks and public health events of importance. At the helm of Zambia's emergency and outbreak response is the Zambia National Public Health Institute (ZNPHI). ZNPHI was established with a

legal mandate in 2015 and serves as a focal point for coordinating public health research, surveillance, workforce capacity strengthening, laboratory systems, information sharing, and emergency preparedness and response activities. This article provides a brief overview of reported outbreaks and outbreak response measures undergone in Zambia in 2018.

Cholera:

In October 2017, ZNPHI was challenged with organizing a response to a large-scale cholera outbreak. By the outbreak's end in June 2018, 5,582 suspected cholera cases were reported from Cholera Treatment Centres (CTCs) in Lusaka District, 668 of which were laboratory confirmed. In response to the outbreak ZNPHI activated the Public Health Emergency Operations Center (PHEOC) and utilized an Incident Management System (IMS) to help coordinate a multisectoral response. The response included the establishment of seven CTCs in Lusaka District and the development

of standard operating procedures for case management. Surveillance was increased and contact tracing and active case finding were performed. Clean supplies of water were provided to affected communities, water supplies were chlorinated, and household water treatment materials were distributed. Additionally, WASH campaigns were held at local schools and community health promotion campaigns were conducted. The government oversaw the emptying of septic tanks, the inspection and emptying of pit latrines, the disinfection of toilets, and the pickup and removal of solid waste. Dedicated call centres were established to receive citizen complaints about sewer blockages and failed trash pickups. The Zambia Defense Forces cleaned up the Central Business District, and legal ordinances were passed banning food street vendors, extending the ban on fishing, and increasing food quality monitoring. Moreover, the Zambian government oversaw oral cholera vaccine (OCV) campaigns in four affected subdistricts.

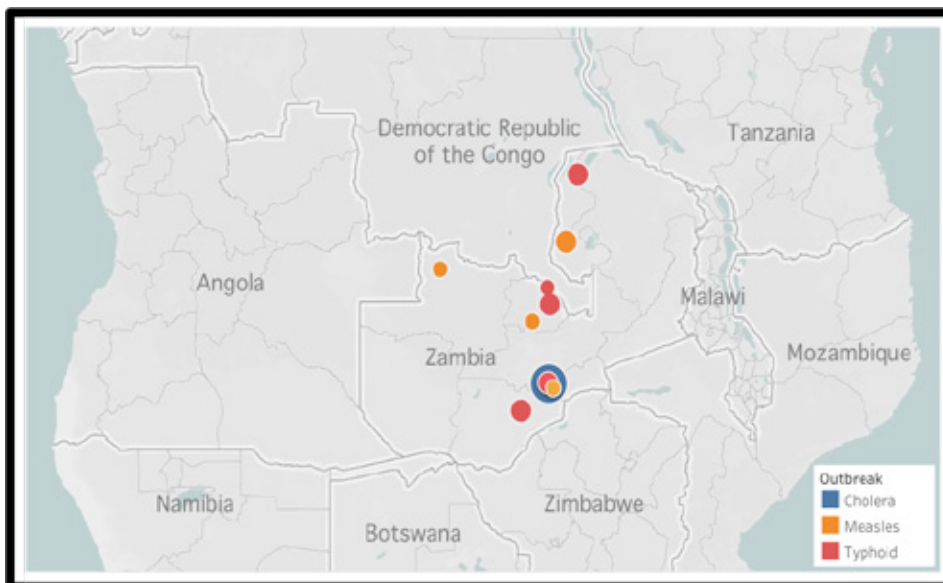


Figure 1: Map of outbreaks in Zambia (2018)

Table1: Outbreaks in Zambia (2018)

Disease	IDSR outbreak threshold	Location		Epidemiological Week	Number of suspected cases	Number of laboratory confirmed cases	Response
		Province	District				
Cholera	1 confirmed case	Lusaka	Lusaka	41 (2017)	5,582	668	<ul style="list-style-type: none"> Incident Management System Cholera Treatment Centres established Surveillance increased Contact tracing and active case finding Disinfection and waste management Water supply and treatment Oral cholera vaccine campaigns Health promotion activities Legal ordinances
				- 21 (2018)			
Typhoid	5 confirmed cases per 50,000 population	Southern	Monze	2	19	7	<ul style="list-style-type: none"> Investigation launched Samples sent for laboratory testing Tetracycline mobilized for presumptive treatment Inspection of food vendors and environmental sampling Door-to-door sensitization
		Lusaka	Lusaka	16	8	7	
		Copperbelt	Mufulira	21	32	2	
		Copperbelt	Luanshya	22	5	5	
		Northern	Lunte	41	11	6	
Measles	3 confirmed cases per 100,000 population in 1 month	Lusaka	Lusaka	25	4	3	<ul style="list-style-type: none"> Investigation launched Surveillance increased Ring vaccinations surrounding affected area ELISA kits for measles IgM requested
		Luapula	Mansa	29	27	6	
		North-western	Mwinilunga	34-37	5	3	
		Copperbelt	Mpongwe	40	5	3	

Typhoid

Using the Integrated Disease Surveillance and Response (IDSR) systems, the national surveillance body identified five typhoid outbreaks in Zambia in 2018. A typhoid outbreak is defined as five laboratory confirmed cases of typhoid per 50,000 population. In 2018, typhoid outbreaks occurred in Lusaka, Southern, and Copperbelt provinces. The largest outbreak occurred in January 2018 in Monze District of Southern Province and consisted of 19 suspected cases and seven laboratory confirmed cases. In the response to the outbreak, government officials conducted an investigation that included sending patient and environmental food and water samples for laboratory testing. In addition, tetracycline was procured for the presumptive treatment of quarantined suspected cases, and a door-to-door sensitization campaign was conducted in affected communities.

Measles

Four measles outbreaks were reported in Lusaka, Luapula, North-western, and Copperbelt provinces in 2018. A measles outbreak is defined as three confirmed

cases per 100,000 population in a one month period. The largest measles outbreak was recorded in Mansa District of Luapula Province and consisted of 27 suspected cases and six laboratory confirmed cases. In response to the measles outbreaks, government officials launched investigations that included increased surveillance and active case finding. Officials also called for ring vaccination campaigns with the measles containing vaccine (MCV). At the time of the outbreaks there was a shortage of measles IgM ELISA kits necessary for the laboratory confirmation of measles infection and more kits were requested.

Conclusions

Zambia reported ten outbreaks of cholera, typhoid, and measles in 2018. The outbreaks occurred in border areas and in the densely populated Lusaka District, which houses the capital city. Continued national surveillance efforts are required for early detection of outbreaks and increased emergency

preparedness activities must be implemented to prevent the cross-border transmission of epidemic prone diseases. ZNPHI has trained over 400 health providers, government officials, members of the defense forces, and employees at point of entries in Ebola Preparedness and Response in Lusaka Province and the provinces bordering the DRC. The institute is currently conducting additional trainings in Eastern, Central, and Western provinces.

LIST OF REFERENCES

1. World Health Organization. Weekly Bulletin on Outbreaks and Other Emergencies Week 52: 22- 28 December 2018. URL: <https://apps.who.int/iris/bitstream/handle/10665/277423/OEW52-2228122018.pdf>