

Situational Report No. 155

Outbreak Name: Cholera	Investigation start date: 4 th October, 2017
Date of report: 15 th March, 2018	Prepared by: MOH/ZNPHI/WHO

1. SITUATION UPDATE

- **Lusaka District:** As of 06:00hours today Thursday 15th March, 2018, there were **40 new suspected cases (21 children and 19 adults); there was one cholera death** recorded in the last 24 hours, a facility death from Chawama CTC.
 - There were 65 patients under treatment; 39 patients had been discharged
 - Cumulative cases for Lusaka district now stand at **4,483 with 83 deaths**
 - Based on the most recent statistics, the case fatality rate of the current outbreak is **1.85%** (facility CFR=0.70%) with a weekly incidence rate of **7/100,000population¹ at the close of week 10** (up from 4/100,000 the previous week).

Table 1: Summary of cases reported to CTCs in Lusaka District as of 06hours on 15th March 2018

CTC/CTU	New Admissions	Deaths in 24hrs	Current Admissions	Cum. Cases	Cum. Deaths
Kanyama	5	0	0	1305	32
Chipata	3	0	0	1306	29
Matero	3	0	1	538	12
Chawama	7	1	17	609	5
Bauleni	0	0	0	68	0
Chelstone	0	0	0	88	4
Heroes	22	0	47	569	1
TOTAL	40	1	65*	4483	83

*24 children and 41 adults

- **Cholera cases reported from outside Lusaka District:**
 - In the last 24 hours, there were **three (3) new cases** reported: 2 from Kafue, and 1 from Shibuyunji. **No cholera deaths were recorded.**
 - There were 8 patients under treatment; four (4) patient had been discharged
 - The cumulative number of cases from other districts now stands at 393. There have been 14 deaths recorded over the course of the outbreak.
- **Country wide:** the cumulative number of cases recorded is **4,876 with 97 deaths**

¹ 175 new cases and 1 death reported from 4th-10th March 2018, compared to 109 new cases and 0 deaths the previous week

	Sub-district (total new cases)	Cases by Area of Residence (# of cases)
1	Chipata (8)	Ngombe (4), Garden (1), Chazanga (1),Kabanana (1), Chaisa (1)
2	Matero (9)	George (8), Zingalume (1)
3	Kanyama (8)	Old Kanyama (3), John Laing (3), Garden House (2)
4	Chawama (6)	Kuku (1), Misisi (3), Kamwala South (1), Old Chawama (1)
5	Chelstone (9)	Mtendere (3), Chaina (3), Kalikiliki (1), Kamanga (2)

Table 2: Distribution of cases reporting in the last 24hrs by area of residence

Figure 1: Epidemic curve of cholera cases recorded in Lusaka district by week of onset as at close of Week 10 2018

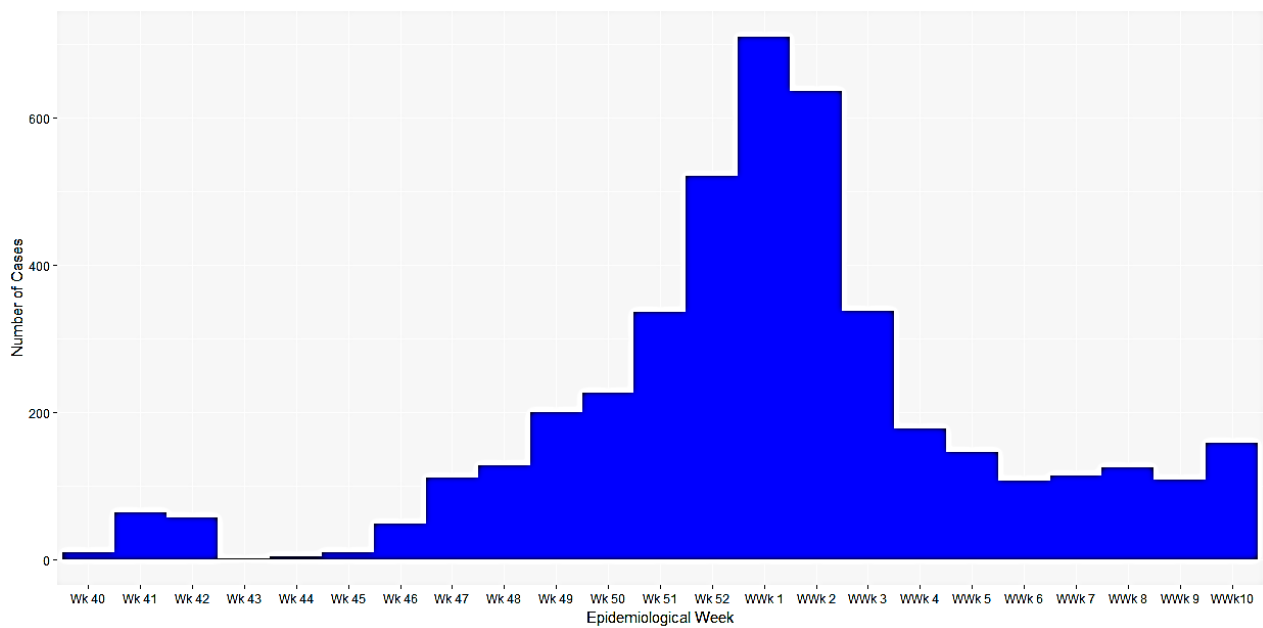
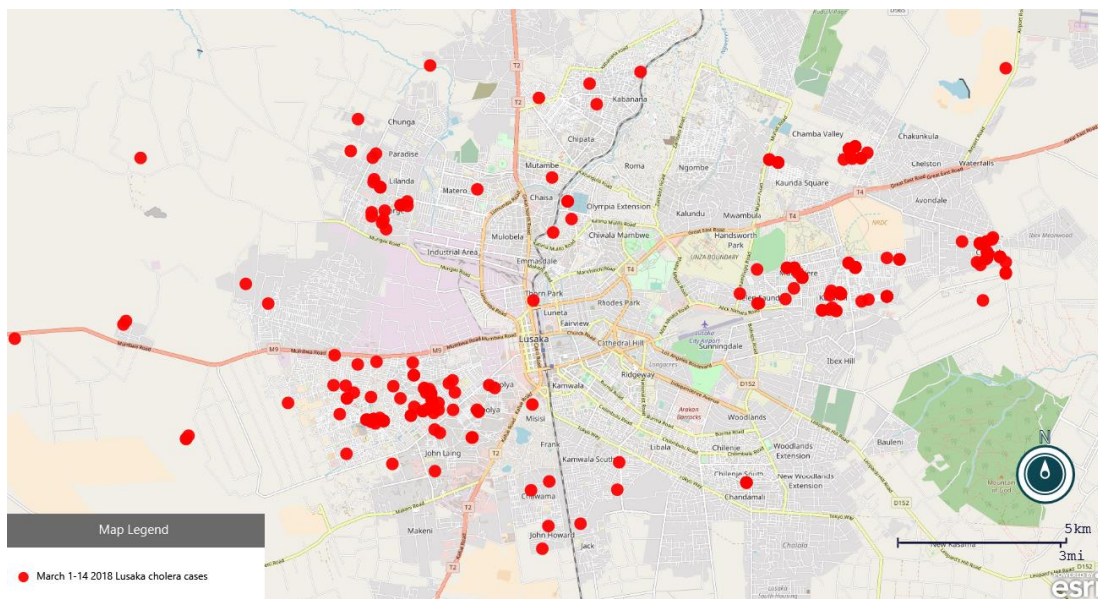


Figure 2: Distribution of cholera cases reported in Lusaka district from 1-14 March 2018



2. BACKGROUND

The outbreak was declared on 6th October, 2017 after two laboratory confirmed cases were recorded from Chipata from suspected cases who reported to the clinic with acute watery diarrhoea on 4th October, 2017. Kanyama reported the first suspected case of cholera on 8th October, 2017. The patient was a 3 month old baby who was brought in dead after a bout of diarrhoea. The rapid diagnostic test (RDT) was positive from a rectal swab specimen.

3. RESPONSE CO-ORDINATION

3.1 Political Will and Leadership

- The Honourable Minister of Health, Dr Chitalu Chilufya MP, hosts a bi-weekly meeting to coordinate water, sanitation and resources being channelled to the response.
- Senior members of staff representing the different stakeholders including the line ministries, co-operating partners, Lusaka Water and Sewerage Company (LWSC), Lusaka City Council (LCC), Disaster Management and Mitigation Unit (DMMU), Defence Forces, as well as WASH and health promotion teams attend.
- The Government of Zambia continues to draw resources from its treasury to support the response, including provision of clean and safe water, waste management, health promotion and clinical management.
- The Honourable Minister of Health, through the provisions of the laws of Zambia, invoked the Public Health Act, (Laws, Volume 17, Cap. 295), the Public Health (Infected Areas) (Cholera) Regulations, 2017 and issued **Statutory Instrument No. 79 of 2017** to facilitate the implementation of an enhanced approach to mitigate the current cholera outbreak.
- The Honourable Minister of Local Government, through the provisions of the laws of Zambia, issued **Statutory Instrument No. 10 of 2018**. The Local Government Act (Cap. 288), the Local Government (Street Vending and Nuisances) (Amendment) Regulations 2018 has been effected to ensure the outbreak is mitigated and prevented from re-occurring.
- The Ministry of Fisheries and Livestock has issued a Gazette notice on the **extension of the fishing ban for the 2017/18 season in cholera affected areas to 30th April 2018**. Fishing camps in unaffected areas will be inspected; those with inadequate sanitary facilities shall remain closed.

4. ACTIONS TO DATE

4.1 Oral Cholera Vaccine Campaign

- The Government of the Republic of Zambia with the support of World Health Organisation facilitated and provided resources to procure the Oral Cholera Vaccine (OCV)
- **Round one** of the OCV campaign, which run from 10th to 20th January 2018, recorded 1,317,925 people vaccinated, with a coverage 109%. The coverage included 1,407 vaccinated inmates at Lusaka Central Prison.
- **Round two** of the OCV campaign commenced in Chawama and Kanyama on **Monday 5th February 2018** and closed on **Wednesday 14th February 2018**.
 - The heavy downpour in most cases resulted in reduced numbers of people accessing the vaccination centres. This necessitated a re-strategising of efforts, including door to door vaccinations.
- The OCV Round 2 schedule for other areas will be communicated in due course; Chipata and Matero are currently scheduled to receive the vaccine next.
- The Ministry of Education has approved the delayed opening of schools in the hotspots in order to ensure that target populations receive the vaccine

Table 3: Comparison of Round 1 and Round 2 immunisation coverage in Chawama & Kanyama

Sub-district	Target Population*	Round 1 total vaccinated (% coverage)	Round 2 total vaccinated (% coverage)
Chawama	238,807	235,227 (99.0%)	301,928 (126.4%)
Kanyama	242,302	331,841 (137.0%)	409,776 (169.1%)
Total	481,109	567,068 (118.0%)	711,704 (147.9%)

*Target populations have been recalculated based on head count instead of CSO estimations

4.2 Surveillance and Case management:

- **Surveillance:** Sporadic cases continue to be recorded. Interventions including contact tracing, chlorine distribution and water sampling are being mounted in all areas.
- **Case definition:** Zambia is currently using the WHO standard case definition of suspected and confirmed cholera **regardless of age**. With the reduced incidence, the index of suspicious and sensitivity in investigating diarrhoeal cases has been increased. The use of SD Bioline has been employed to determine probable cases.
 - **Suspected:** Any Patient presenting with acute watery or rice watery diarrhoea with or

without vomiting and signs of dehydration should be suspected as a case of cholera during an outbreak

- **Probable:** A suspected case in which the SD Bioline RDT is positive and/or is epi-linked to a confirmed (culture positive) case
- **Confirmed:** A suspected case in which *Vibrio cholerae O1* or *O139* has been isolated in stool.

* **Children under 2 years can also be affected during an outbreak**

** Acute watery diarrhoea: passage of watery or liquid stools ≥ 3 times in the last 24 hours

- **Case management:** In order to manage the growing number of cases while maximizing the available resources (i.e. supplies, equipment and human resource), 5 of the initial Cholera Treatment Centers in Kanyama, Chipata, Matero, Bauleni and Chelstone sub-districts have been converted to Cholera Treatment Units. Chawama CTC was converted to a main Cholera Treatment Centre to cover the southern population of Lusaka district and serves as a referral centre. It has a 41 bed capacity and room for expansion, and a functional referral system. The main Cholera Treatment Hospital was set up at the Heroes Stadium for the northern part, with a 500 bed capacity and room for expansion.
- **Mentorship of frontline workers:** 2-3 hour mentorship visits are being conducted as well as bedside mentorship. CDC in collaboration with the ZNPHI produced jobs aids detailing the case definition and treatment plans. Flow charts for assessment, transfer criteria and discharge criteria were made available.
- **Management of Alcohol Delirium Tremens and all other Mental Disorders:** A number of patients have been noted to present with alcohol delirium tremens and other mental disorders. A specialized team from Chainama Hills College Hospital has been assigned to the case management team. As of 10th March 2018, cumulatively, 635 patients had been seen. Medical, psychosocial, nutritional treatments and laboratory services have been offered successfully.

4.3 Laboratory:

- **UTH Bacteriology Laboratory Report (06/03/18):**
 - 1,177 cumulative samples have been processed by the laboratory since 4/10/17; **411** have been culture positive for *Vibrio cholerae O1 Ogawa*; 8 for *Salmonella*; and 7 for *Shigella*.
 - Antibiotic susceptibility testing is ongoing to monitor sensitivity patterns against 5 antibiotics; 243 of the 411 isolates (59.1%) have shown sensitivity.
 - Laboratory microscopy results: 36 of 250 (14%) screened stool samples were found to

have parasites, the most common being *Blastocystis hominis* (25%), *Entamoeba coli* (19.4%) and *Giardia lamblia* cysts (11.1%)

4.4 Environment and WASH:

- **LWSC preparedness and response activities (14th March deliveries):**
 - **Delivery of water by Bowser:** There were 38 bowsers in service. Deliveries decreased to **2,166,000L** (from 2,766,000L the previous day). The decrease over the last three days has been as a result of power failures at the roadside boreholes and major multiple failures on the main water transmission line from Lusaka Water works to Lumumba
 - i. Chipata, Chaisa, Chunga, Ngombe, Garden, Bauleni, Kalingalinga and Mtendere:** 13 bowsers were in service; 987,000L of safe water were supplied
 - ii. Chawama:** 5 bowsers were in service; 131,000L of safe water were supplied
 - iii. Kanyama:** 20 bowsers were in service; 1,048,000L of safe water were supplied
 - **Chainama and Levy Hospitals:** An additional 46,000L was delivered to the hospitals.

Table 4: Summary of tanks installed vs number to which delivery was made by bowser (14/03/18)

Area	Number of tanks installed	Number of tanks filled	Comments
Kanyama	127	112	low levels at Lumumba booster station due to power failure lead to 15 tanks not being filled
John Laing	11	8	low levels at Lumumba booster station due to power failure lead to 3 tanks not being filled
Bauleni	7	7	
Chazanga	12	12	4 tanks were filled late due to delays caused by congestion at Mass media as a result of Lumumba having low levels.
Chipata	20	20	
Chunga	13	13	
Ngombe	15	15	
Chaisa	12	12	2 tanks were filled late due to delays caused by congestion at Mass media as a result of Lumumba having low levels.
Garden	18	15	Access to some tanks remains a challenge
Mtendere	9	9	
Kalingalinga	5	5	
Chawama	23	23	
Mandevu	2	2	
SOS	2	2	
Chibolya	2	2	
4.5 Health Promotion and Communications			
Total	283	262	

- There are currently 380 community based volunteers (CBVs) assigned to field activities, with support from UNICEF, Oxfam, the Zambia Red Cross and CHAZ

- With support from UNICEF:
 - an additional 400 CBVs are being trained
 - advocacy meetings are being held with NHCs and ward councillors
 - advocacy materials are being translated into 7 local languages
 - “Cholera in my village” video is being screened in all at risk compounds, on ZNBC TV and radio
- Door to door outreach as well as church, market and school sensitisation are ongoing.
- The DMMU call centre numbers are 909 (toll free); 0963 930 779; 0976 904 261/73; 0956 513 193/79. Lines are open 24 hours.
- The Ministry of Health has been assigned the following free air slots:
 - Your Doctor: Friday 11:00 hours to 12:00 hours (Live) ZNBC Radio Four
 - Help Me Doctor: Saturday 09:00 hours-55 minutes ZNBC Radio 2
 - Morning Breakfast show Monday & Thursday 06:00-06:30 hours (ZNBC Radio 2)
 - Prime Drive Time: Prime TV 8:00 hours Tuesday and Thursday
 - Diamond TV: Saturday 07.30 hours
- Community feedback indicates that:
 - Most markets have no proper garbage dump sites
 - Garbage accumulation in Lusaka remains a concern
 - Erratic water supply from water points
 - Inadequate toilets at market/bars

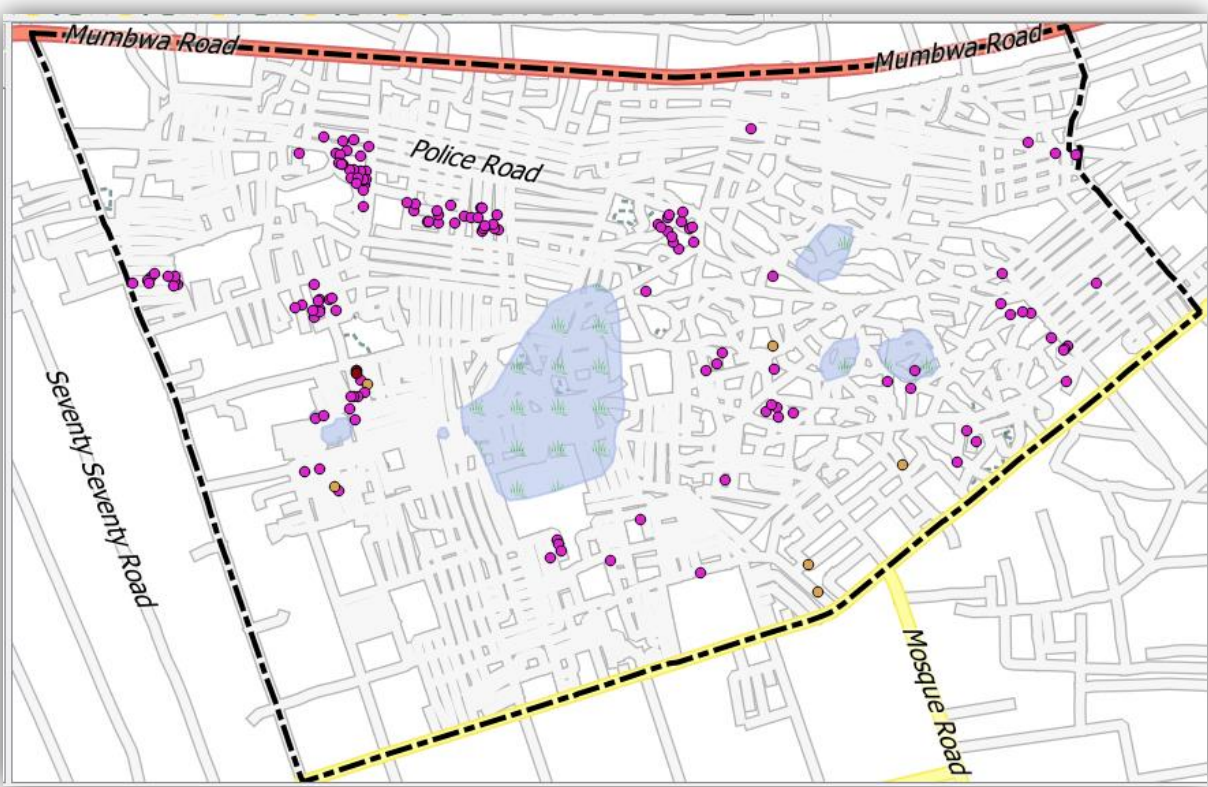
Table 5: Summary of communication and health promotion activities (13/03/18)

ACTIVITY	TARGET	DAILY ACHIEVED	CUMULATIVE*	COMMENT
Volunteers deployed	380	380	-	
Door to door education	428,106	-	1,613,762	Above target
People reached	2,342,402	-	3,899,977	Above target
IEC materials distributed	30,000	-	198,204	Above target
Press briefings	22	0	36	At least 1 per week
Radio and TV discussions	110	-	197	(*5/week)
ZANIS PA system	-	-	618	
DMMU Call Centre	-	53	19,560	38038 cumul. unsuccessful
Schools outreach	1,347	-	1,448	
Markets outreach	122	-	1,165	Re-inspections
Churches outreach	2,073	-	1,147	

5. Gaps and Challenges

- General:
 - Flooding in most areas is limiting access and hampering interventions

Figure 3: Flood prone areas of Kanyama



- High diarrhoea burden during the rainy season may be driving up the numbers as not all cases are cholera.
- Environment and WASH
 - LCC:
 - i. Community resistance and violent demonstration against burying of shallow wells; process further slowed by logistical constraints
 - ii. Continued street vending despite the ban



iii. Taverns trading in unsanitary conditions



- LWSC:
 - i. Erratic water supply
 - ii. Electricity outages affecting water supply
 - iii. Heavy rainfall has resulted in flooding and overflow of septic tanks and pit latrines, posing further risk of spread of the outbreak
 - iv. Costly nature of water delivery by bowser
 - v.

6. Priority actions & Recommendations

- Case management:
 - Training and continuous mentorship of CTC staff
 - Strengthening lab confirmation and epi-linkage of all cases
 - Co-ordinated GPS tracing of cases and ensure safe water availability at patients homes
- LWSC
 - Maintenance of residual chlorine level of 0.5mg/L in all supplied water
- Health Promotion and Communication:
 - Continued engagement and sensitization of communities on hygiene practice and prevention of cholera

7. Conclusion

Current interventions including water supply, burial of shallow wells, waste management, intensified health promotion and behavioural change communication, and enforcement of the ban on street vending must be sustained.



Annex 1: Incidence rate of cholera cases recorded in Lusaka district as of Week 9, 2018

