

Situational Report No. 159

Outbreak Name: Cholera	Investigation start date: 4 th October, 2017
Date of report: 19 th March, 2018	Prepared by: MOH/ZNPFI/WHO

1. WEEK 11 SUMMARY (11th-17th MARCH 2018)

• Lusaka District:

- The district recorded a total of 256 new cases and 7 deaths from 11th-17th March 2018, compared to 175 new cases and 2 deaths the previous week. Of the 7 deaths recorded, 4 were community deaths.
- The cumulative number of cases as of Saturday 17th March, 2018 was 4,543 with 84 deaths
- The weekly incidence rate was **11/100,000population** (up from 7/100,000 the previous week), whereas the **case fatality rate for week 11 was 2.73% (facility CFR=1.19%)**. The increase incidence is attributed to the heavy rains and flooding during the week under review. Refer to Figure 1.

Table 1: Summary of cases reported at CTCs in Lusaka District from 11th to 17th March 2018

CTC/CTU	Total Admissions	Total Deaths	Cumulative Cases	Cumulative Deaths
Kanyama	32	0	1313	32
Chipata	45	2	1314	29
Matero	16	2	542	12
Chawama	29	1	617	5
Bauleni	0	0	68	0
Chelstone	1	1	88	4
Heroes	133	1	601	2
TOTAL	256	7	4543	84

Table 2: Distribution of cases reported in week 11 by area of residence

	Sub-district (total new cases)	Cases by Area of Residence (# of cases)
1	Chipata (58)	Chaisa (13), Chipata (11), Garden (10), Ngombe (11), Mazyopa (4), Kabanana (3), Chazanga (1), Zani muone (1), Marapodi (1), Olympia (1)
2	Matero (59)	George (45), Zingalume (3), Lilanda (2), Six miles (4), Nine miles (1), Matero (2), Chunga (1), Buseko (1)
3	Kanyama (47)	Old Kanyama (17), John Laing (11), Garden House (8), Chibolya (2), Lusaka West (1), Kanyama West (1), Makeni (2), Makeni Villa (4), New Kanyama (1)
4	Chawama (20)	Old Chawama (5), Kuku (4), Misisi (4), Kamwala South (2), John Howard (1), Jack (1), Kuomboka (1), Lilayi (1), Chimwemwe (1)
5	Chelstone (72)	Mtendere (40), Chainda (12), Kalingalinga (2), Chelstone (3), Chelstone extension (4), Avondale (1), Kamanga (6), Kalikiliki (4)

Cholera cases reported from outside Lusaka District:

- There were **thirty-five (35) new cases** reported during the week under review: 11 from Kafue, 5 from Chikankata, 5 from Shibuyunji, 5 from Chongwe, 3 from Petauke, 3 from Kabwe, 1 from Chilanga, 1 from Chisamba, and 1 from Kapiri Mposhi,.
- **No cholera deaths were recorded during the week.**
- The cumulative number of cases from other districts as of Saturday 17th March, 2018 was 400. There have been 14 deaths recorded over the course of the outbreak.

2. SITUATION UPDATE

- **Lusaka District:** As of 06:00hours today Monday 19th March, 2018, there were **25 new suspected cases (11 children and 14 adults); there were no cholera deaths** recorded in the last 24 hours
 - There were 51 patients under treatment; 21 patients had been discharged
 - Cumulative cases for Lusaka district now stand at **4,587 with 84 deaths**
 - Based on the most recent statistics, the case fatality rate of the current outbreak is **1.83% (facility CFR=0.71%)**

Table 3: Summary of cases reported to CTCs in Lusaka District as of 06hours on 19th March 2018

CTC/CTU	New Admissions	Deaths in 24hrs	Current Admissions	Cum. Cases	Cum. Deaths
Kanyama	3	0	2	1322	32
Chipata	1	0	0	1315	29
Matero	2	0	2	545	12
Chawama	4	0	17	625	5
Bauleni	0	0	0	68	0
Chelstone	0	0	0	88	4
Heroes	15	0	30	624	2
TOTAL	25	0	51*	4587	84

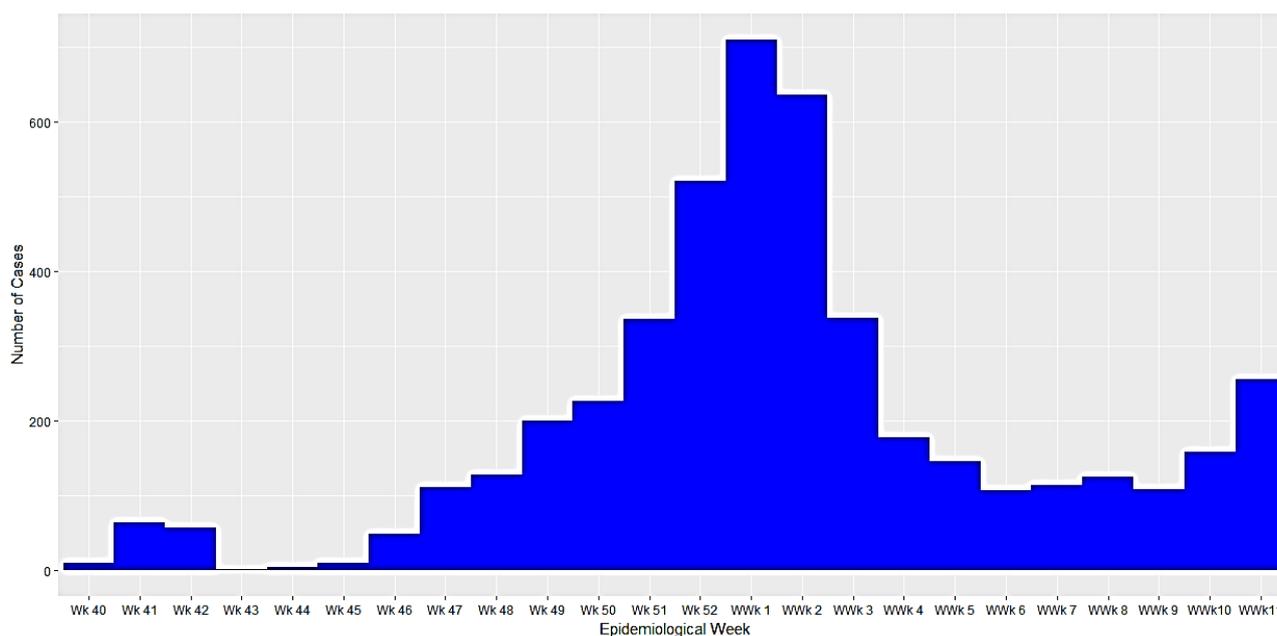
*17 children and 34 adults

- **Cholera cases reported from outside Lusaka District:**
 - In the last 24 hours, there were **eight (8) new cases** reported: 6 from Kafue, 1 from Chongwe, and 1 from Shibuyunji. **No cholera deaths were recorded.**
 - There were 15 patients under treatment - 2 in Petauke, 1 in Chisamba, 2 in Chongwe, 8 in Kafue and 2 in Shibuyunji; 3 patient had been discharged
 - The cumulative number of cases from other districts now stands at 415. There have been 14 deaths recorded over the course of the outbreak.
- **Country wide:** the cumulative number of cases recorded is **5,002 with 98 deaths**

Table 4: Distribution of cases reporting in the last 24hrs by area of residence

	Sub-district (total new cases)	Cases by Area of Residence (# of cases)
1	Chipata (1)	Garden (1)
2	Matero (6)	George (3), Zingalume (1), Matero (2)
3	Kanyama (5)	Garden House (2), John Laing (2), Old Kanyama (1)
4	Chawama (3)	Chawama (1), John Howard (1), Misisi (1)
5	Chelstone (10)	Chainda (6), Kamanga (2), Chelstone (1), Kalikiliki (1)

Figure 1: Epidemic curve of cholera cases recorded in Lusaka district by week of onset as at close of Week 11 2018



3. BACKGROUND

The outbreak was declared on 6th October, 2017 after two laboratory confirmed cases presenting with acute watery diarrhoea were recorded at Chipata Level 1 Hospital 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.



4. RESPONSE CO-ORDINATION

4.1 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.

5. ACTIONS TO DATE

5.1 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 coverage 109%; in addition, 1,407 inmates at Lusaka Central Prison were vaccinated.



Table 5: Summary of immunisation coverage as at close of Round one of the campaign

Sub-district	Target Population*	Total vaccinated	Coverage
Chawama	238,807	231,950	97%
Kanyama	242,302	343,760	142%
Matero	356,462	293,808	82%
Chipata	368,344	448,351	122%
Prisons	-	1,407	-
Total	1,205,915	1,319,276	109%

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

- **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 centers. 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.

Table 6: 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 recalculated based on head count instead of CSO estimations

5.2 Surveillance and Case management:

- **Surveillance:** Sporadic cases continue to be recorded. Contact tracing is being conducted 24 hours a day with security provided for the teams. Interventions including hygiene education, chlorine distribution, sanitation and water sampling are being mounted in all areas.

Figure 3: Contact tracing during night time (Bauleni) and through floods (Kamwala South)



- **Case definition:** Zambia is adapted 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.

5.3 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 01 Ogawa*; 8 for *Salmonella*; and 7 for *Shigella*.
 - From 1st - 14th March 2018, the University Teaching Hospital received 256 samples, of these 87 were culture positive and 95 results were pending.
 - 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%)

5.4 Environment and WASH:

- **LWSC preparedness and response activities:**
 - A shut down of the high lift pumps at Iolanda Water Treatment Plant was ordered to avert total failure of the pumps. Works on the pumps were carried out from 16-17th March 2018. Day time production was suspended, with interruption in supply to approximately 40% of areas including Kabulonga, Kalingalinga, Helen Kaunda, Chudleigh and Chainama. Additional leaks discovered on the blinding plates are being repaired today, Monday 19th March 2018; the interruption in supply is expected to be rectified once works are completed.

Figure 4: Old failing screens replaced at the Iolanda Plant



- **Delivery of water by Bowser (18th March deliveries):** There were 38 bowsers in service. Deliveries increased to **3,411,000L** (from 3,089,000L the previous day).
 - i. Chipata, Chaisa, Chunga, Ngombe, Garden, Bauleni, Kalingalinga and Mtendere:** 13 bowsers were in service; 1,772,000L of safe water were supplied
 - ii. Chawama:** 3 bowsers were in service; 183,000L of safe water were supplied
 - iii. Kanyama:** 22 bowsers were in service; 1,456,000L of safe water were supplied
- **Levy Mwanawasa Hospital:** An additional 93,000L was delivered to the hospital as back up for the reserves.

5.5 Health Promotion and Communications

- There are currently 380 community based volunteers (CBVs) assigned to field activities, with support from UNICEF, Oxfam, the Zambia Red Cross and CHAZ
 - Door-to-door health education campaigns as well as church, market and school sensitisation are ongoing.
 - Household chlorine and IEC material distribution is ongoing



Ministry of Health

- The DMMU call centre numbers are 909 (toll free); 0963 930 779; 0976 904 261/73; 0956 513 193/79. A total of 915 successful (average 131 call/day) were recorded.
- The Ministry of Health has been allocated free air on public and private and radio stations for interviews and discussions pertaining to cholera matters. Technocrats and policy makers feature on these programs to give updates on the outbreak and decisions and or interventions implemented.
- The MoH continues to disseminate health messages and other information through Press briefs (hosted by one or more of the Ministers in the response or the Permanent Secretary to MOH), Public Health Address Systems with the support of Zambia National Information Service (ZANIS), Brochures and Posters
- Community feedback indicates that:
 - Most markets require improved garbage dump sites
 - Garbage accumulation in Lusaka remains a concern
 - Erratic water supply from some water points
 - Inadequate toilets at public places such as markets and bars

Figure 5: Garbage accumulation in Mtendere



6. GAPS AND CHALLENGES

➤ General:

- Flooding in most areas is limiting access and hampering interventions
- 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 against burying of shallow wells; process has been further slowed by logistical constraints
 - ii. Continued street vending despite the ban
 - iii. Taverns trading in unsanitary conditions
- LWSC:
 - i. Electricity outages affecting water supply
 - ii. Heavy rainfall has resulted in flooding and overflow of septic tanks and pit latrines, posing further risk of spread of the outbreak
 - iii. Costly nature of water delivery by bowser
 - iv. Erratic water supply



7. 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

8. CONCLUSION

Week 11 saw an increase in the incidence following the heavy rains and resulting floods. There has, however, been a drop in the number of cases in the recent days. 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.

The increase in the number of calls from the public to the call centre indicates their concern and interest in the outbreak being controlled timely. Local leadership and community engagement with ownership is critical in the response. The response team with the support of Government and various partners is dedicated to mitigating the outbreak timely with few cases and deaths occurring. The unprecedented leadership at political, policy and technical management levels has played a role in ensuring the outbreak does not spread nationwide.

Annex 1: Incidence rate of cholera cases recorded in Lusaka district as of Week 11, 2018

