

Situational Report No. 160

Outbreak Name: Cholera	Investigation start date: 4 th October, 2017
Date of report: 25 th March, 2018	Prepared by: MOH/ZNPHI/WHO

1. WEEK 12 SUMMARY (18th-24th MARCH 2018)

• Lusaka District:

- The district recorded a total of 210 new cases and 4 deaths from 18th-24th March 2018, compared to 256 cases and 7 deaths the previous week. Of the 4 deaths recorded, 3 were community deaths.
- The cumulative number of cases as of Saturday 24th March, 2018 was 4,749¹ with 88 deaths
- The weekly incidence rate was **9/100,000population** (down from 11/100,000 the previous week), whereas the **case fatality rate for week 12 was 1.91% (facility CFR=0.48%)**

Table 1: Summary of cases reported at CTCs in Lusaka District from 18th to 24th March 2018

CTC/CTU	Total Admissions	Total Deaths	Cumulative Cases	Cumulative Deaths
Kanyama	55	0	1364	32
Chipata	9	0	1323	29
Matero	18	2	560	14
Chawama	24	1	641	6
Bauleni	0	0	68	0
Chelstone	0	0	88	4
Heroes	104	1	705	3
TOTAL	210	4	4749	88

	Sub-district (total new cases)	Cases by Area of Residence (# of cases)
1	Chipata (16)	Chaisa (8), Chipata (2), Garden (1), Ngombe (2), Chazanga (2), Kalundu (1)
2	Matero (41)	George (27), Matero (8), Zingalume (1), Lilanda (4), Chazanga (1)
3	Kanyama (64)	Old Kanyama (28), John Laing (8), Garden House (14), Chibolya (3), Lusaka West (1), Kanyama West (1), Makeni (2), Makeni Villa (2), New Kanyama (1), Garden Park (1), Twin Park (1), Kanyama site and service (1), Chinika (1)
4	Chawama (22)	New Chawama (1), Kuku (4), Misisi (5), Kamwala South (1), John Howard (5), Jack (2), Chawama (3), Kamwala (1)
5	Chelstone (63)	Mtendere (19), Kalikiliki (18), Chainda (10), Kalingalinga (5), Kamanga (4), St Agnes (3), Chelstone (1), Chelstone Obama (1), Meanwood (2)

Table 2: Distribution of cases reported in week 12 by area of residence

¹ Four cases from Kanyama sub-district were reclassified as non-cases and excluded from the line list.

- **Cholera cases reported from outside Lusaka District:**
 - There were **twenty-one (21) new cases** reported from other districts: 10 from Kafue, 5 from Shibuyunji, 2 from Chongwe, 2 from Petauke, 1 from Chikankata, and 1 from Chisamba.
 - **No cholera deaths were recorded during the week.**
 - The cumulative number of cases from other districts as of Saturday 24th March, 2018 was **421**. There have been 14 deaths recorded over the course of the outbreak.

2. SITUATION UPDATE

- **Lusaka District:** As of 06:00hours today Sunday 25th March, 2018, there were **19 new suspected cases (7 children and 12 adults); there was one cholera death** recorded in the last 24 hours, a male paediatric patient admitted to Heroes CTC
 - There were 47 patients under treatment; 21 patients had been discharged
 - Cumulative cases for Lusaka district now stand at **4,768 with 89 deaths**
 - Based on the most recent statistics, the case fatality rate of the current outbreak is **1.87%** (**facility CFR=0.72%**)

Table 3: Summary of cases reported to CTCs in Lusaka District as of 06hours on 25th March 2018

CTC/CTU	New Admissions	Deaths in 24hrs	Current Admissions	Cum. Cases	Cum. Deaths
Kanyama	5	0	1	1369	32
Chipata	3	0	0	1326	29
Matero	1	0	1	561	14
Chawama	0	0	0	641	6
Bauleni	0	0	0	68	0
Chelstone	0	0	0	88	4
Heroes	10	1	45	715	4
TOTAL	19	1	47*	4768	89

*18 children and 29 adults

- **Cholera cases reported from outside Lusaka District:**
 - In the last 24 hours, there were **two (2) new cases** reported: 1 from Kafue (Zambia Compound), and 1 from Chongwe (Sewerage compound). **No cholera deaths were recorded.**
 - There were 3 patients under treatment - 1 in Chisamba, 1 in Chongwe, and 1 in Kafue
 - The cumulative number of cases from other districts now stands at 422². There have been 14 deaths recorded over the course of the outbreak.

² One case from Kafue reclassified as a non-cholera case

	Sub-district (total new cases)	Cases by Area of Residence (# of cases)
1	Chipata (8)	Ngombe (5), Kabanana (1), Garden (1), Mandevu (1)
2	Matero (1)	Matero (1)
3	Kanyama (5)	Old Kanyama (1), Chibolya(1), Garden House (1), Chibolya (1), New Kanyama (1)
4	Chawama (0)	0
5	Chelstone (5)	Mtendere (3), Chelstone (2)

- **Country wide:** the cumulative number of cases recorded is **5,190 with 103 deaths**

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

Figure 2: Epidemic curve of cholera cases recorded in Lusaka district by week of onset as at close of Week 12 2018

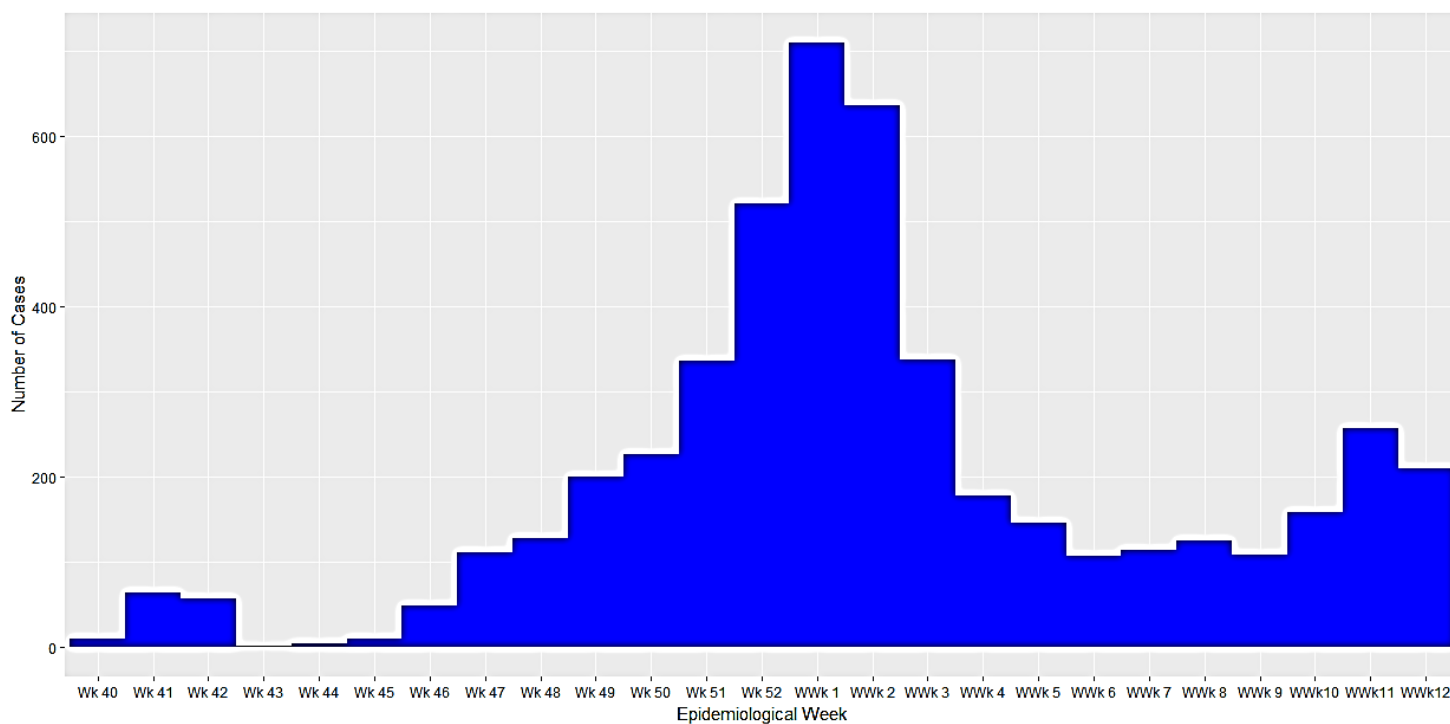
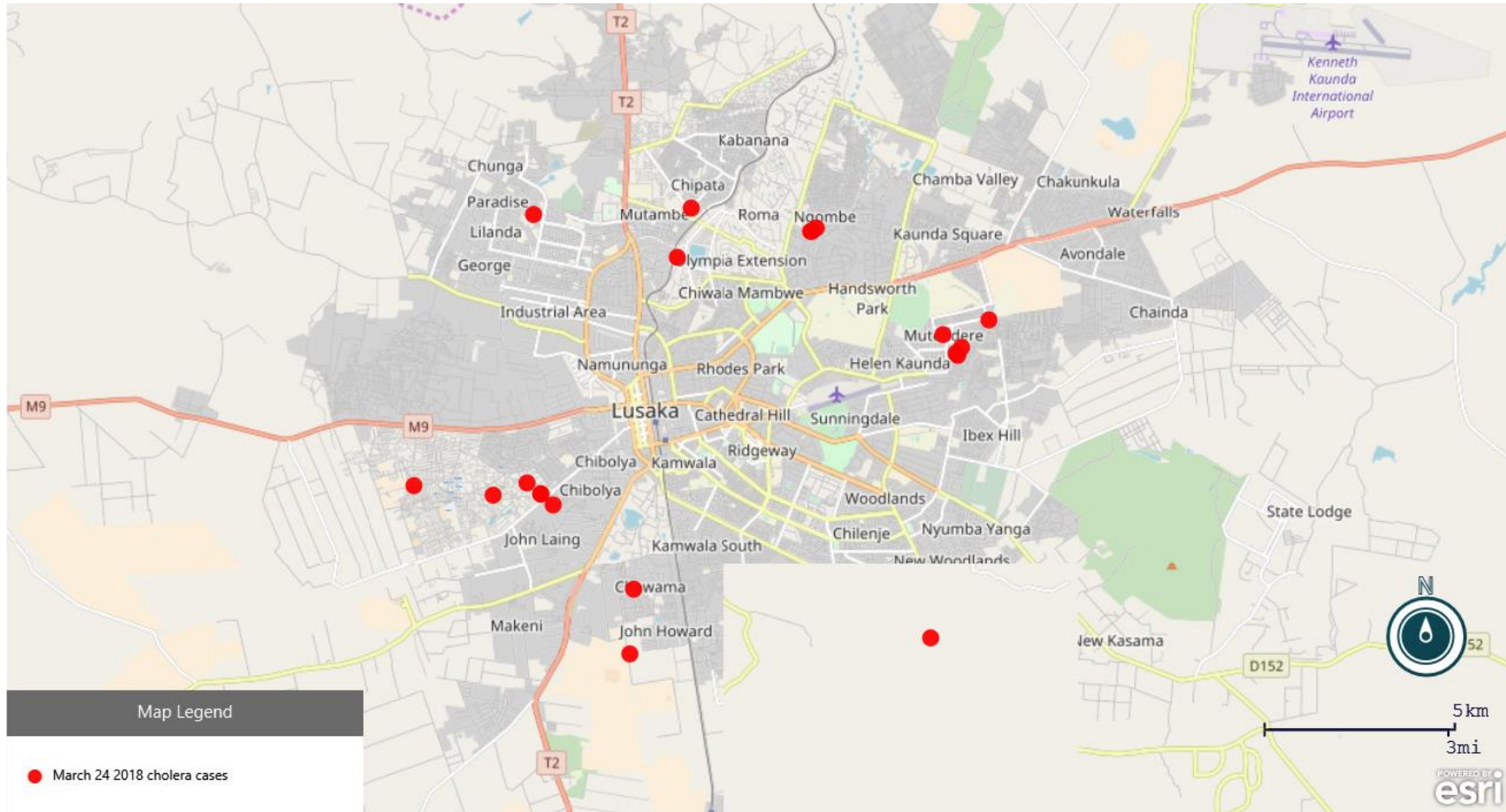


Figure 1: Distribution of cholera cases reported in Lusaka district 24 March 2018



3. 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.

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 issued a Gazette notice on the **extension of the fishing ban for the 2017/18 season in cholera affected areas; the ban was lifted today, Sunday 25th March 2018**. The Ministry will map, designate and classify all fish camps; camps found to have inadequate sanitary facilities during the inspections shall not be permitted to operate.

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 a 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 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 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.
- **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:** With the reduction in the number of cases being reported, 5 of the initial Cholera Treatment Centers in Kanyama, Chipata, Matero, Bauleni and Chelstone sub-districts have been converted to Cholera Treatment Units. While the Chawama CTC closed. The main Cholera Treatment Hospital set up at the Heroes Stadium has remained open.
- **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



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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 (26/03/18):**
 - 1,506 cumulative samples have been processed by the laboratory since 4/10/17; **565 (37.5%)** are culture positive for *Vibrio cholerae 01 Ogawa*; 8 for *Salmonella*; and 7 for *Shigella*.
 - Antibiotic susceptibility testing is ongoing to monitor sensitivity patterns against 5 antibiotics; All have shown sensitivity Cotri-moxazole, Chloramphenicol and Tetracycline (Doxycycline).
 - 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:**
 - The system at the Iolanda Water Treatment remains under observation.
 - **Erection of Temporal Tanks and Stands in Mtendere and Kalingalinga to Improve Water Supply:**
 - i. 14 Tanks have so far been erected and are receiving water via bowsers
 - ii. Concrete bases have been distributed and arranged in all the remaining 6 sites
 - iii. Numbering of tanks underway both for new and existing tanks for easy identification. 21 tanks were numbered today.
 - **Delivery of water by Bowser (24th March deliveries):** There were 42 bowsers in service. Deliveries increased to **3,826,000L** (from 3,632,500L the previous day).
 - i. **Chipata, Chaisa, Chunga, Ngombe, Garden, Bauleni, Kalingalinga and Mtendere:** 12 bowsers were in service; 1,645,000L of safe water were supplied
 - ii. **Chawama:** 6 bowsers were in service; 273,000L of safe water were supplied
 - iii. **Kanyama:** 24 bowsers were in service; 1,908,000L of safe water were supplied
 - **Levy Mwanawasa Hospital:** An additional 46,000L was delivered to the hospital as back



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up for the reserves.



Table 7: Summary of tanks installed vs number to which delivery was made by bowser (24/03/18)

Area	Number of tanks installed	Number of tanks filled	Comments
Kanyama	127	123	Replacement of vandalized fittings underway
John Laing	11	11	
Bauleni	7	4	1 tank was vandalised; two could not be accessed
Chazanga	12	7	1 tank requires fittings; 4 tanks were filled late
Chipata	20	18	2 tanks undergoing repair works
Chunga	13	13	
Ngombe	15	12	2 tanks need repairs and 1 needs to be relocated
Chaisa	12	11	1 tank needs replacement of fittings
Garden	18	17	1 tank vandalized
Mtendere	22	20	Access was a challenge; one tank was vandalised
Kalingalinga	5	5	
Chawama	23	22	Fittings on 1 tank need to be replaced
Mandevu	2	2	
SOS	2	2	
Chibolya	2	2	
Maloni	3	3	
Madimba	2	2	
Total	296	274	

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 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

6. GAPS AND CHALLENGES

➤ Environment and WASH

- LCC:
 - i. Community resistance and violent demonstration 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 12 saw an overall decrease of 18% in the number of recorded cases, compared to week 11. There was, however, an increase in the number of cases recorded in Kanyama and



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Chawama subdistricts. 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 will continue to be sustained.

Annex 1: Summary of cases reported country-wide as of 25th March 2018

Province	District	New Cases	Deaths in 24hrs	Discharges in 24hrs	Current Admissions	Cumulative cases	Cumulative Deaths
Lusaka	Lusaka	19	1	21	47	4768	89
	Rufunsa	0	0	0	0	5	0
	Shibuyunji	0	0	0	0	53	5
	Chongwe	1	0	0	1	64	1
	Kafue	1	0	0	1	77	2
	Chirundu	0	0	0	0	1	0
	Chilanga	0	0	0	0	30	0
Central	Kapiri-Mposhi	0	0	0	0	4	1
	Kabwe	0	0	0	0	28	1
	Chibombo	0	0	0	0	16	0
	Mkushi	0	0	0	0	4	0
	Chisamba	0	0	0	1	7	0
	Mumbwa	0	0	0	0	24	1
	Serenje	0	0	0	0	15	0
	Itezhi- Tezhi	0	0	0	0	1	0
Eastern	Lundazi	0	0	0	0	20	1
	Sinda	0	0	0	0	2	0
	Katete	0	0	0	0	3	0
	Petauke	0	0	0	0	10	1
	Chipata	0	0	0	0	1	0
Southern	Mazabuka	0	0	0	0	7	0
	Kalomo	0	0	0	0	4	0
	Livingstone	0	0	0	0	1	0
	Pemba	0	0	0	0	1	0
	Sinazongwe	0	0	0	0	2	0
	Chikankata	0	0	0	0	21	0
	Siavonga	0	0	0	0	2	0
Copperbelt	Ndola	0	0	0	0	7	1
	Kitwe	0	0	0	0	6	0
Western	Kaoma	0	0	0	0	1	0
	Mongu	0	0	0	0	3	0
N/western	Mwinilunga	0	0	0	0	1	0
	Solwezi	0	0	0	0	1	0
	Total	21	1	21	50	5190	103



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Annex 2: Incidence rate of cholera cases recorded in Lusaka district as of Week 12, 2018

