



Ministry of Health

Situational Report No.17			
Outbreak Name	Cholera	Prepared by	MOH/ZNPFI/WHO/NORTHERN PHO/MPULUNGU DHO
Date of report	27 May 2019	Investigation start date	3 rd April 2019

SITUATION UPDATE / HIGHLIGHTS

- **On 27 May, 2019**
 - 1. Kapembwa HP Catchment area**
 - 0 new case in the last 24 hours
 - 0 case currently under admission at Kapembwa CTU
 - 1 case discharged
 - Cumulative total 32 cases of which 30 are suspected and 2 laboratory confirmed *Vibrio Cholerae 01 Ogawa*
 - 2 community deaths (12/05/2019 and 18/05/2019)
 - 2. Mpulungu HC catchment**
 - 2 new cases in the last 24 hours(both from Chilila Island)
 - 5 cases discharged today
 - 5 cases currently under admission
 - Cumulative total 201 cases of which 156 are suspected and 45 laboratory confirmed *Vibrio Cholerae O1 Ogawa*
 - 1 facility death (18/05/2019)
 - 3. Kabyolwe HP catchment**
 - 0 new cases in the last 24 hours
 - 0 reporting for last 14 days
 - 0 cases currently under admission
 - Cumulative total 19 cases of which 16 are suspected and 3 laboratory confirmed *Vibrio cholerae O1 Ogawa*
 - 1 facility death (4th May 2019)
 - 4. Isoko RHC catchment**
 - 0 new case in last 24 hours
 - 0 case currently under admission
 - Cumulative total 28 of which 24 are suspected and 4 laboratory confirmed *Vibrio cholera O1 Ogawa*
 - 2 deaths (1 community –7/05/2019 and 1 facility—6/05/2019)

5. Chisanza HP Catchment area

- 0 new case in last 24 hours
- 1 case currently under admission
- Cumulative total 5 all of which are suspected; 3 samples are currently undergoing analysis at Mpulungu District Hospital
- 0 deaths

Table 1: Cholera cases and Deaths by Area, Mpulungu District (as of 27/05/19)

District Affected	Area affected	Date of Onset of index case.	Population (2019 CSO).	New case reported on 27/05/19	Cumulative number of cases	Cumulative suspected cases	Cumulative confirmed cases	Attack rate(per 100,000)	Cumulative deaths	CFR (%)
Mpulungu	Kapembwa	3/04/19	2,900	0	32	29	02	1103.4	2	6.3
Mpulungu	Mpulungu	6/04/19	38,136	2	201	156	45	521.8	1	0.5
Mpulungu	Kabyolwe	2/05/19	2,600	0	19	16	03	730.8	1	5.3
Mpulungu	Isoko	6/05/19	12,059	0	28	24	5	232.2	2	7.1
Mpulungu	Chisanza	24/05/19	8,130	1	5	5	0	61.5	0	0
Mpulungu	Total		63,825	3	285	230	55	446.5	6	2.1

BACKGROUND

On 3rd April 2019, a 3 year 6 months old girl was brought to Kapembwa Health Post, presenting with acute watery diarrhea and vomiting with some dehydration. The condition of the patient gradually deteriorated due to continued diarrhea and vomiting. Upon realizing this, the health staff (Community Health Assistant) referred the patient to Mpulungu Health center where the Clinical Officer on duty suspected it to be a case of cholera. He admitted the patient to the isolation ward and then alerted the District Health Office. She tested positive using the Rapid Diagnostic Test (RDT) for *Vibrio cholerae*. Additionally, stool sample submitted for culture to Kasama General Hospital laboratory tested positive to *Vibrio cholerae*O1 Ogawa.

Kapembwa Health post is located along the shores of Lake Tanganyika approximately 90km away from the District Hospital. It is a newly constructed facility that can only be accessed by marine transport and serves a population of about 2,900 (CSO, 2019). It is a fishing camp though some people have decided to settle there.

Three days later, on 6th April 2019, a 12 year old male, from a different area within the township of Mpulungu, presented to Mpulungu Health center with acute watery diarrhea and vomiting. He also tested positive with the RDT for *Vibrio cholerae*. A stool sample was submitted to Mbala General Hospital laboratory for culture but tested negative to *Vibrio cholerae*. Thereafter, the district started

receiving a lot of cases from both Kapembwa and several areas within the Mpulungu Township. However, all the stool samples from Mpulungu Township that were submitted to Mbala General Hospital for culture tested negative to *Vibrio cholerae*. Despite this, the district continued to record increased cases of acute watery diarrhea and vomiting from different areas and thus decided to continue reporting as a possible cholera outbreak.

Between 2nd and 5th May 2019, Kabyolwe Health Post, another facility located about 120km on the shores of Lake Tanganyika, reported 10 cases of acute watery diarrhea and vomiting. One of the cases had history of travel to Nsumbu in Nsama district with his parents. He developed the symptoms a day after returning from Nsumbu. Kabyolwe is another fishing camp and has a population of about 2,600(CSO, 2019).

On 6th May 2019, another facility, Isoko RHC, located 29km from the District Hospital reported two cases of acute watery diarrhea and vomiting. One of the cases, a 47 year old female died at the facility while the health staff were trying to resuscitate her. The following day, the facility staff received a report of a 78 year old male who died in the community from acute watery diarrhea and vomiting. Isoko RHC has a catchment population of 12,059 (CSO, 2019). This area has got only one borehole and thus the majority of the people draw water for domestic use from a stream that runs along the length of the catchment area. This is the same stream where agricultural economic activities on a small scale are done especially sugar cane.

The continued increase in the number of diarrheal cases and deaths, despite negative laboratory results, prompted the District Health Office to request for epidemiological and laboratory support from the Ministry of Health (MOH) and the Zambia National Public Health Institute (ZNPPI) through the Provincial Health Office (PHO).

On 23 May 2019, Mpulungu reported 5 new suspected cases, Kampembwa 1, Isoko 0 and Kabyolwe 0 suspected cases. No reported cases from other areas in the district. Mpulungu Township is considered the most affected area with the cholera outbreak in the district with cumulative confirmed cases 40, suspected 141 and 1 death (case fatality Rate= 0.5%).

Outbreak is declining for the last one week with around 5 reported case(s)/ day. However, the aim is to reach to zero cases before the start of the next month.

On 26 May 2019, a total of 5 suspected cholera cases were reported from Chisanza RHC and 3 stool samples submitted to Mpulungu District Hospital for culture. The health facility is located approximately 60km away from the District Hospital along the lake shore. It serves a population of 8,130(CSO, 2019).

EPIDEMIOLOGY & SURVEILLANCE

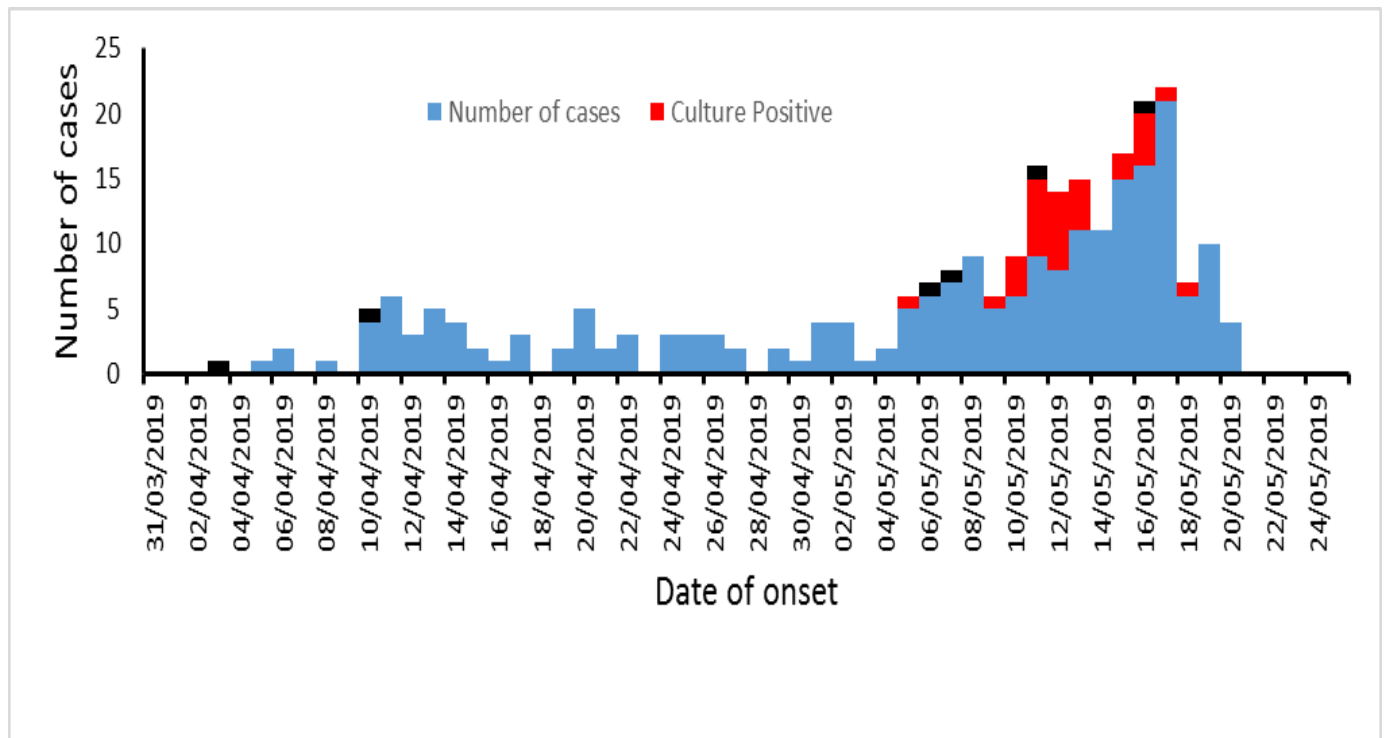


Figure 1: Distribution of cases by date of onset for Mputungu District, Zambia, 26 May 2019. (N= 244)
 Note: Line list is still being updated; to be completed today. Once updated the epi-curve will also be updated

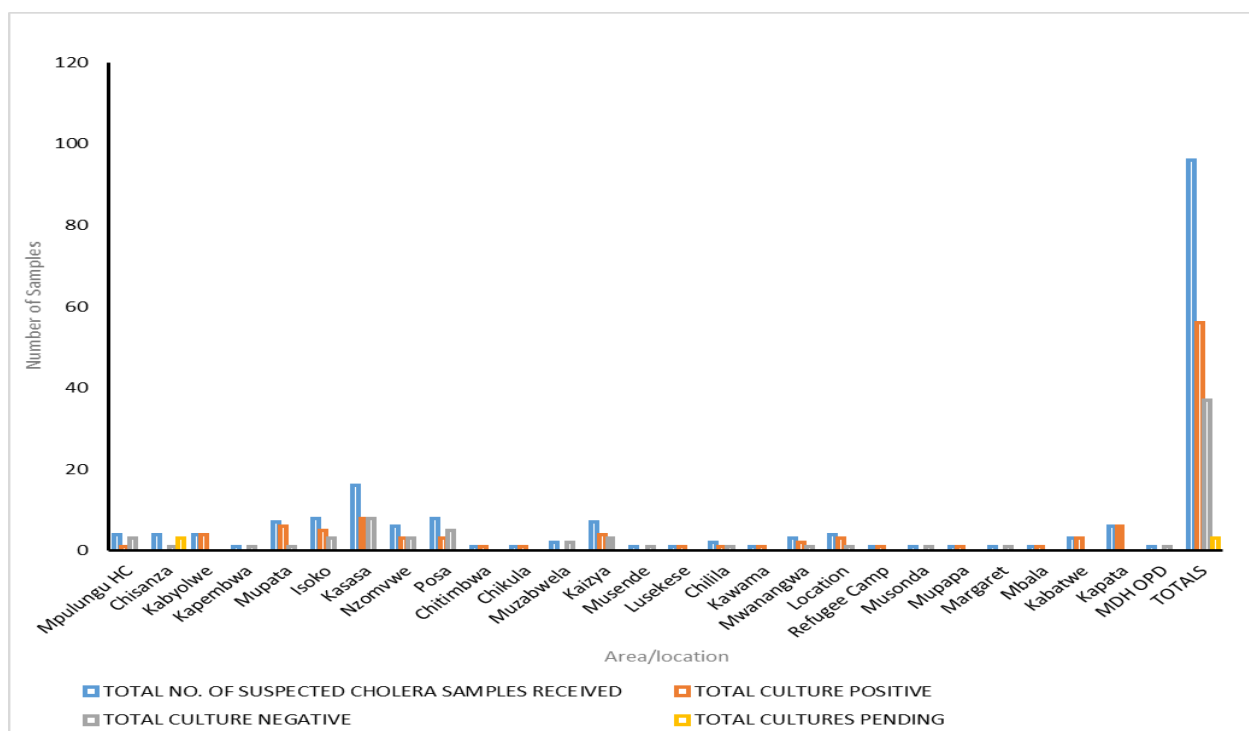


Figure 2: Graph of number of samples tested culture positive to Vibrio cholerae O1 Ogawa, Mputungu district, May 2019(n=96)

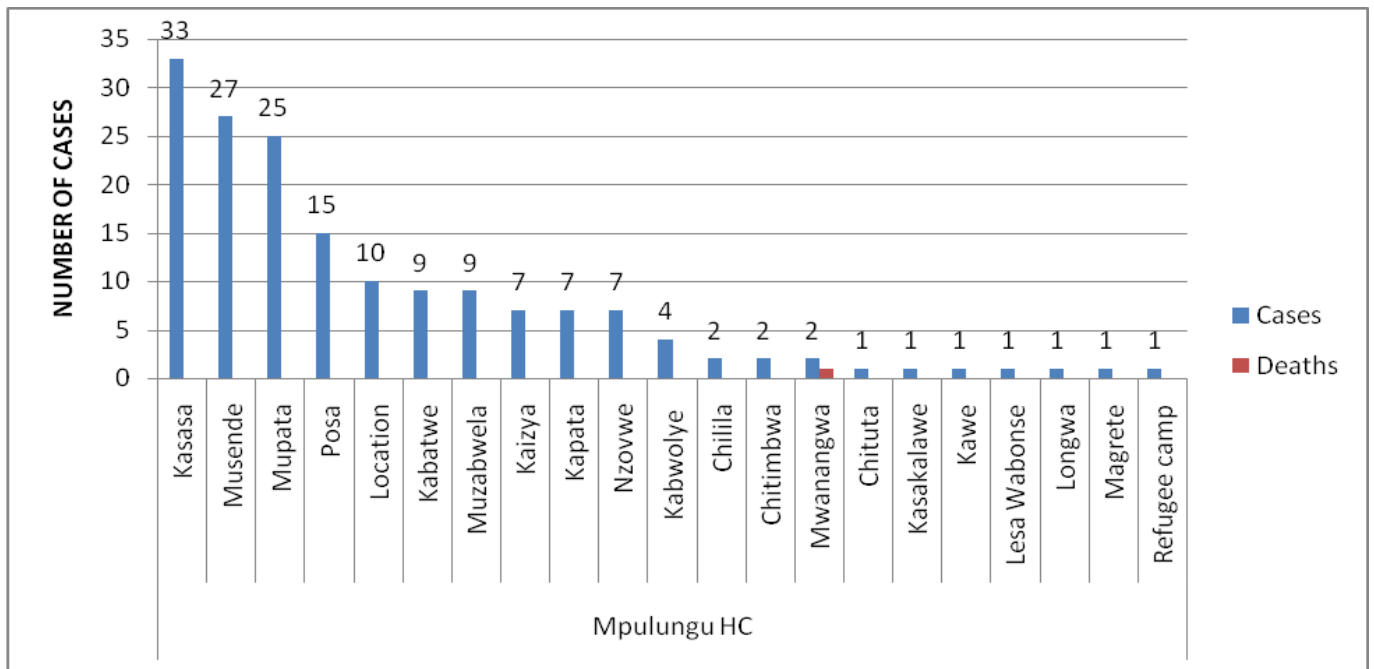


Figure 3: Distribution of cases by location, Mpulungu HC, Mpulungu, 26 May 2019

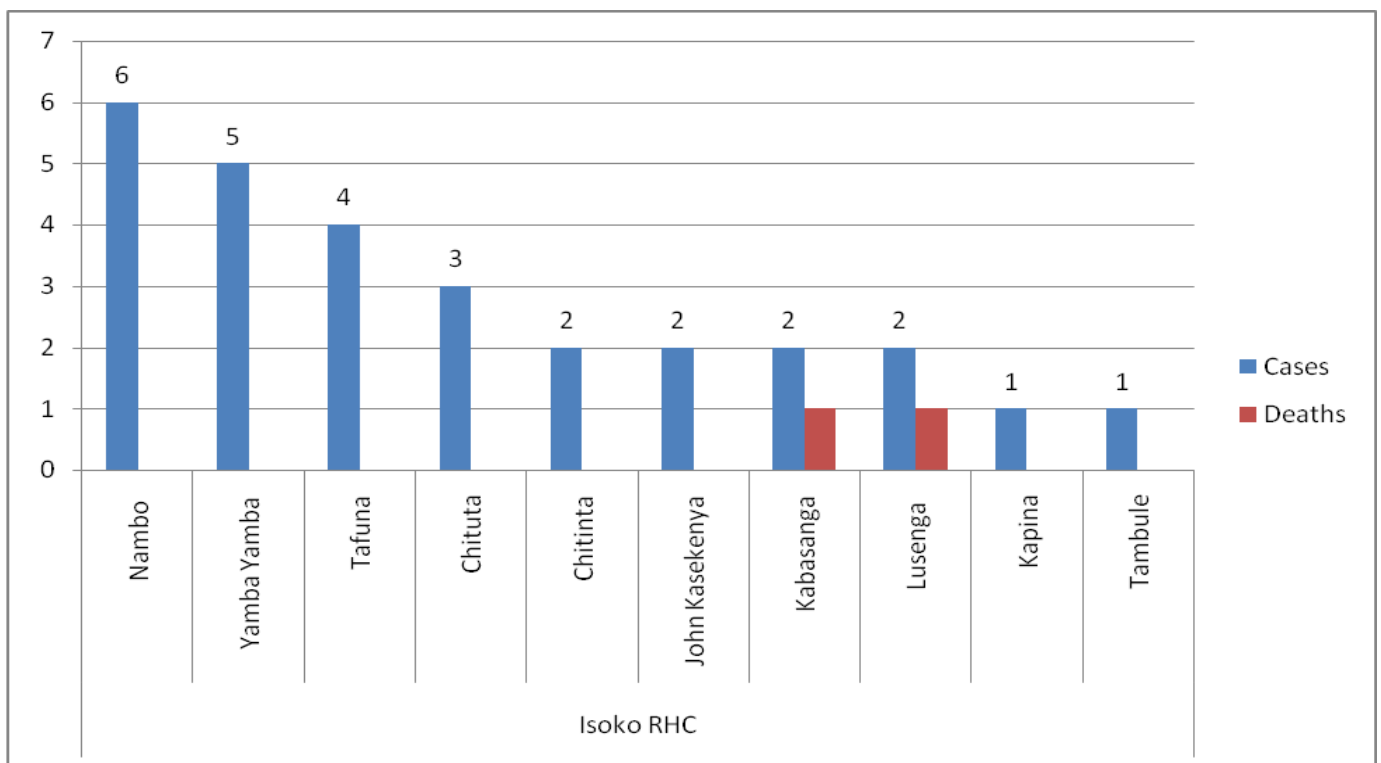


Figure 4: Distribution of cases by location, Isoko HC, Mpulungu, 26 May 2019

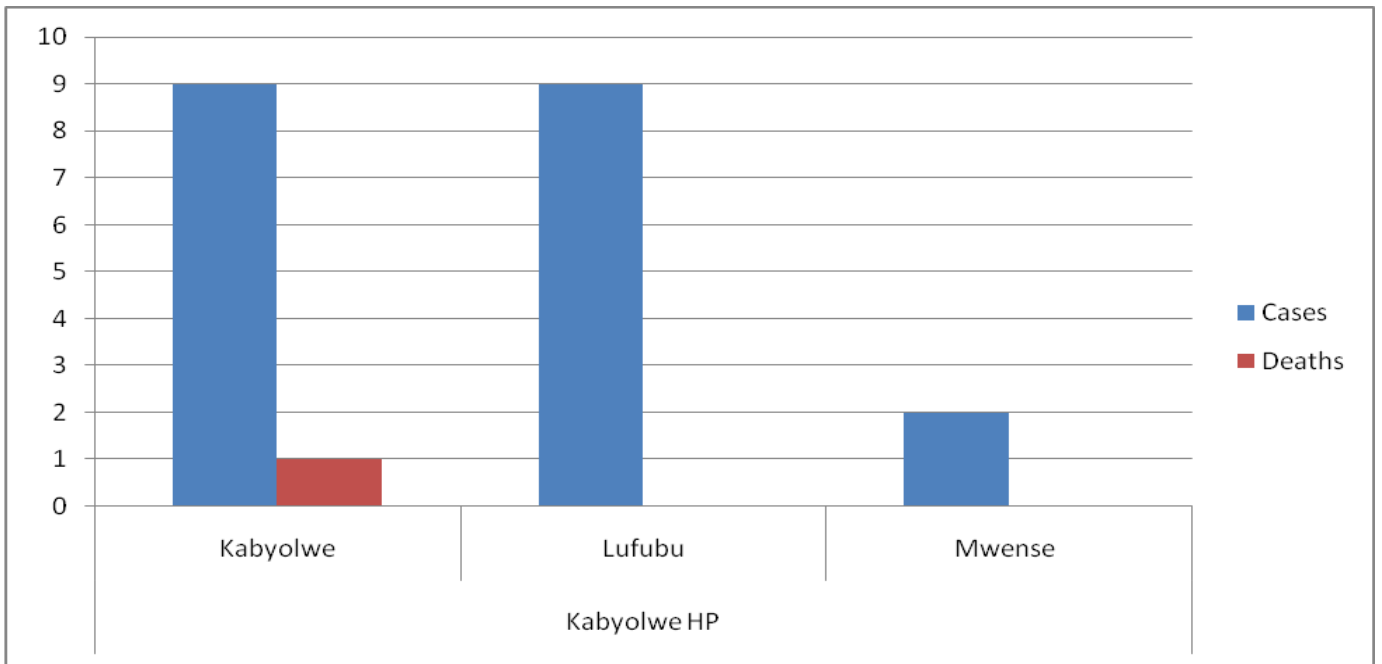


Figure 5: Distribution of cases by location, Kabyolwe HP, Mpulungu, 26 May 2019

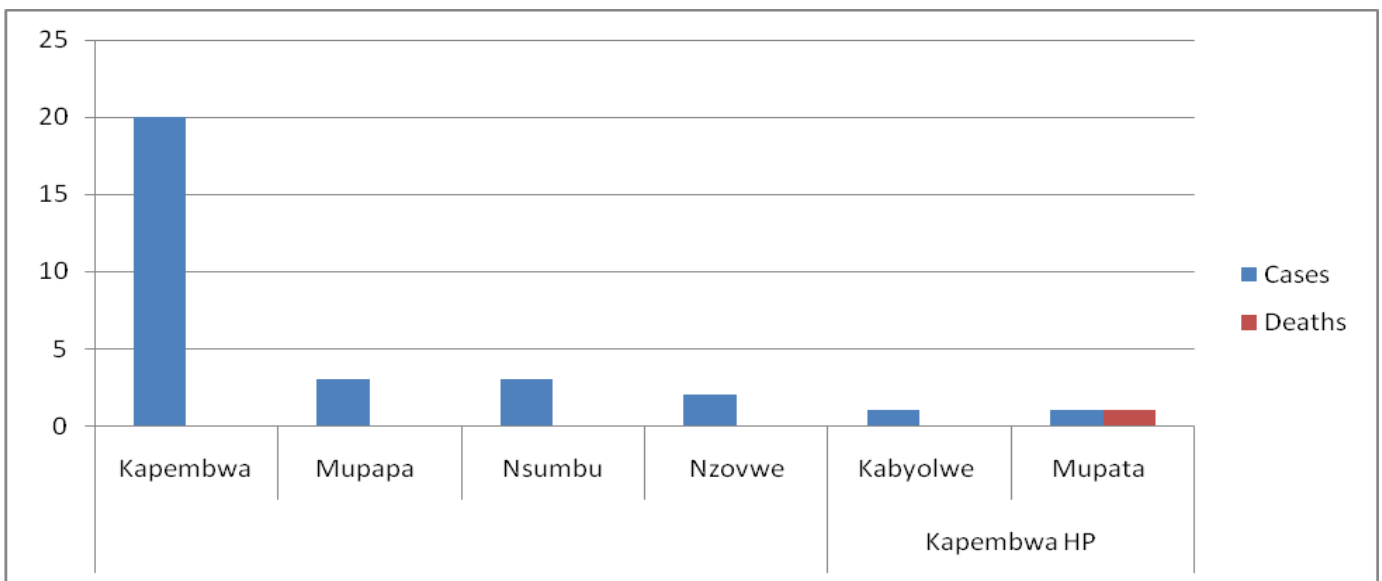


Figure 6: Distribution of cases by location, Kapembwa HP, Mpulungu, 26 May 2019

Key Priority Actions

4.1 COORDINATION

- The Zambia National Public Health Institute (ZNPHI) of the Ministry of Health leads the response to the cholera outbreak through Northern PHO and Mpulungu DHO with support from Disaster Management and Mitigation Unit (DMMU), the Mpulungu District Council, WHO, Zambia Red cross, UNICEF, and other partners.
- ZNPHI is providing technical oversight into coordination using the Incident management System, case management, interpretation of laboratory findings and guide the choice of antibiotics, oral cholera vaccination and outbreak investigations.
- Held an IMS briefing at 07:30 hrs and 18:00 hrs to review progress and strategize for next day
- Had a videoconference with the national EOC on OCV and other interventions towards the cholera response
- Participated in the stakeholders meeting at the DC's office.

4.2 SURVEILLANCE

- Heightened active surveillance in the whole district. All facilities reporting cases of diarrhea at 07:00hrs and 17:00hrs every day
- Passenger screening and intensified port health services continue at the harbor, bus station and check point along Mpulungu-Mbala road

4.3 LABORATORY

- As at 18:00 hrs on 27th May 2019, the following have been done:
 - Cumulative total samples received 97 of which 56 are culture positive to *Vibrio cholerae* O1 Ogawa and 37 are culture negative
 - 3 samples pending analysis
- A cumulative total of 210 water samples collected to date for bacteriological analysis out of which 210 have been completely analyzed and 128 show fecal contamination (61%).
- Chlorine monitoring exercise has continued with a cumulative total of 209 households sampled and 22.5% show residual chlorine below 0.2mg/l; 58.4% above 0.5mg/l, 17.7% within normal range of 0.2-0.5mg/l and 1.4% showed no residual chlorine in the domestic water.

5.4 CASE MANAGEMENT

- The five treatment sites set up for case management remain operational
- Strengthened health education to patient relatives (ongoing)
- Re-enforce case management in all the CTUs to ensure that they adhere to the standard treatment guidelines.

4.5 LOGISTICS

- Currently we have 12 vehicles (2 District, 4 National, 2 Province, 1 WHO, 1 Social Welfare and 2 from the DC's office) for contact tracing, Social mobilization, outreach services-chlorine distribution, disinfection, water sampling, surveillance, sample transportation and OCV campaign
- We have three boats (marine transport) for the lake shore

4.6 ENVIRONMENTAL HEALTH & HEALTH PROMOTION

- Water, sanitation and hygiene (WASH) activities include increasing the water supply to hotspots. DMMU is yet to install water tanks despite being distributed to all the hotspots.
- Risk communication, social mobilization, and community engagement activities continue to inform the public on cholera prevention messages as well as the oral cholera vaccination campaign.
- Have conducted contact tracing for 281 out of 285 patients (cumulatively)
- Distributed bottles of liquid chlorine giving a cumulative total of 18,025 out of 19,628 (92% coverage)
- Disinfected a cumulative total of 14,289 out of 16,325 (88% coverage) pit-latrines
- Radio spots on cholera prevention and control are running on the local community radio station
- Using ZANIS PA to reach out to carry out community sensitization
- Using volunteers to conduct door to door community sensitizations (ongoing)
- Working with the Zambia Red cross to promote Hand washing targeting 3500 households in cholera hotspots (Isoko and Mpulungu urban catchment areas).
- As at 18:00hrs on 27th May 2019, 720 households in Musende (Total households covered 2505 in Kasasa, Isoko, Posa and Musende)

4.7 OCV CAMPAIGN

- OCV campaign: Targeting 130, 743 people at risk of cholera in 15 catchment areas in the district. In addition, planning for the sero-assessment survey is on course and will start soon
- Total of 24 vaccination posts as at 25th May 2019 (Day4): 1 under Kasakalawe Zone, 15 under Mpulungu urban Zone 3 Kaizya and 4 Isoko.
- All the 10 remaining facilities have been orientated, therefore, the OCV campaign will start on 28th May 2019 as scheduled.
- A total of 7,387 people have been vaccinated today giving a cumulative of 52276 (40%)
- By day 6 total vaccines issued out from bulk store is 65,717 giving a balance of 71,593

CHALLENGES / GAPS

5.1 WASH

- Inadequate sanitary facilities at Isoko RHC

- About 80% of the population in Mpulungu have no adequate Hand washing facilities with running water (SNV, 2018)
- Although tanks have been distributed, they have not been installed.
- Inadequate posters and lack of leaflets and cholera prevention booklets

5.2 LABORATORY

- Lack of equipment for food analysis
- Lack of Hydrogen sulphide water testing kits
- Inadequate lauryl sulphate broth

5.3 LOGISTICS

- Inadequate funds for the response
- Inadequate PPEs
- Inadequate cholera beds and linen

5.4 CASE MANAGEMENT.

- No food for patients at Isoko, Chisanza and Kapembwa CTUs

5.5 OCV CAMPAIGN

- Inadequate transport for the campaign

RECOMMENDATIONS/ WAYFORWARD

- Mobilize additional funds to help coordinate the response.
- Source for lime
- Continue vaccinating the population
- Mobilize more granular chlorine
- Intensify health promotion and sensitization activities
- Mobilize more vehicles for the OCV campaign

ORAL CHOLERA VACCINE CAMPAIGN IN MPULUNGU

Table 2: OCV Campaign Summary Table

Targeted areas	Vaccination sites	Vaccination status	Target population	Daily Administered Doses	Cumulative administered Doses	Coverage (%)
Chibote HP	0	Pending	3936	0	0	0.00
Chinakila RHC	0	Pending	8273	0	0	0.00
Chitimbwa RHC	0	Pending	7679	0	0	0.00
Chisanza RHC	0	Pending	7732	0	0	0.00
Isoko RHC	5	Ongoing	11468	1536	7420	64.70
Kabyolwe RHC	0	Pending	2473	0	0	0.00
Kaizya HP	3	Ongoing	7286	30	2334	32.04
Kakusu HP	0	Pending	2615	0	0	0.00
Kalongola HP	0	Pending	5421	0	0	0.00
Kapembwa HP	0	Pending	2758	0	0	0.00
Kasakalawe HP	2	Ongoing	10471	63	5056	48.28
Kopeka RHC	0	Pending	7666	0	0	0.00
Iyendwe RHC	0	Pending	5230	0	0	0.00
Mpulungu Urban HC	4	Ongoing	36267	260	31371	86.50
Vyamba RHC	13	Ongoing	11469	2282	6095	53.14
GRAND TOTALS	27		130744	4171	52276	39.98

MPULUNGU CHOLERA OUTBREAK RESPONSE INCIDENT MANAGEMENT SYSTEM

