PHIM PUBLIC HEALTH INSTITUTE of MALAWI

MALAWI

CHOLERA weekly epidemiological report

Published on 7 February 2023

Epidemiological Week 05, 2023 (30 January to 5 February 2023)

Outbreak Summary

Epidemiological Week 05, 2023 (30 January to 5 February 2023)

New cases	New deaths	Case Fatality Rate	Number of Districts that reported cases
4815	167	3.5%	25 (Blantyre, Lilongwe, Balaka, Mangochi, Nkhotakota, Karonga, Kasungu, Zomba, Ntcheu, Salima, Phalombe, Mchinji, Mulanje, Nsanje, Chikwawa, Chiradzulu, Dedza, Mwanza, Dowa, Likoma, Neno, Machinga, Thyolo, Mzimba North, and Ntchisi,)

Cumulative Data Epidemiological Week 8, 2022 to Week 5, 2023

Number of Cases	Number of Deaths	Case Fatality Rate	Number of Districts affected
39 171	1277	3.3%	29 (Nsanje, Machinga, Chikwawa, Blantyre, Neno, Mulanje, Lilongwe, Balaka, Mangochi, Chiradzulu, Nkhotakota, Rumphi, Mzimba North Nkhata bay, Kasungu, Mwanza, Zomba, Mzimba South, Karonga, Chitipa, Ntcheu, Ntchisi, Dowa, Salima, Likoma, Phalombe, Thyolo, Mchinji and Dedza)
Districts still within 14 days of last reported cases			28 (Blantyre, Chikwawa, Nkhotakota, Rumphi, Karonga, Kasungu Balaka, Mangochi, Lilongwe, Machinga, Mulanje, Salima, Ntcheu, Phalombe, Zomba, Chitipa, Nsanje, Chiradzulu, Dowa, Mwanza, Mchinji, Likoma, Thyolo, Chitipa,, Mzimba North, Neno and Dedza).

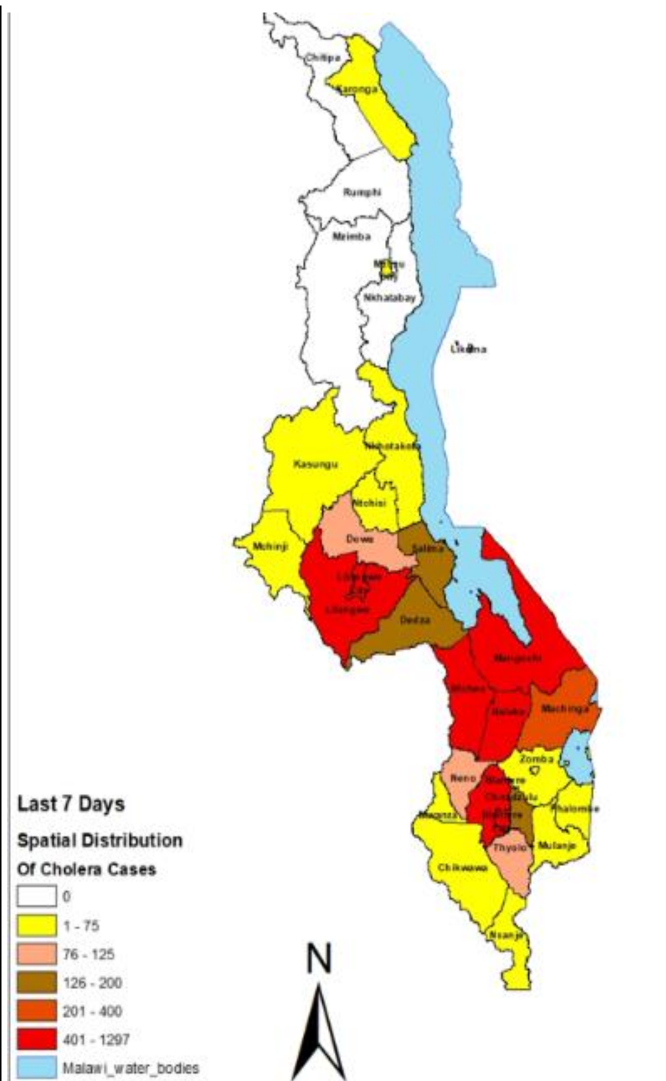


Figure 1. Distribution of cholera cases and deaths in Malawi, epi-week 5, 2023

Malawi declared a cholera outbreak on 3 March 2022, after a case reported to Machinga District Hospital was confirmed culture positive for *Vibrio cholerae*. This was the first Cholera case to be reported in Malawi in the 2021/2022 Cholera season.

Epidemiological Week 05 update

1. In the reporting week, 25 districts reported 4815 cases with 167deaths (CFR 3.5%). (Figure 2) The majority of cases and deaths were reported from Lilongwe district.

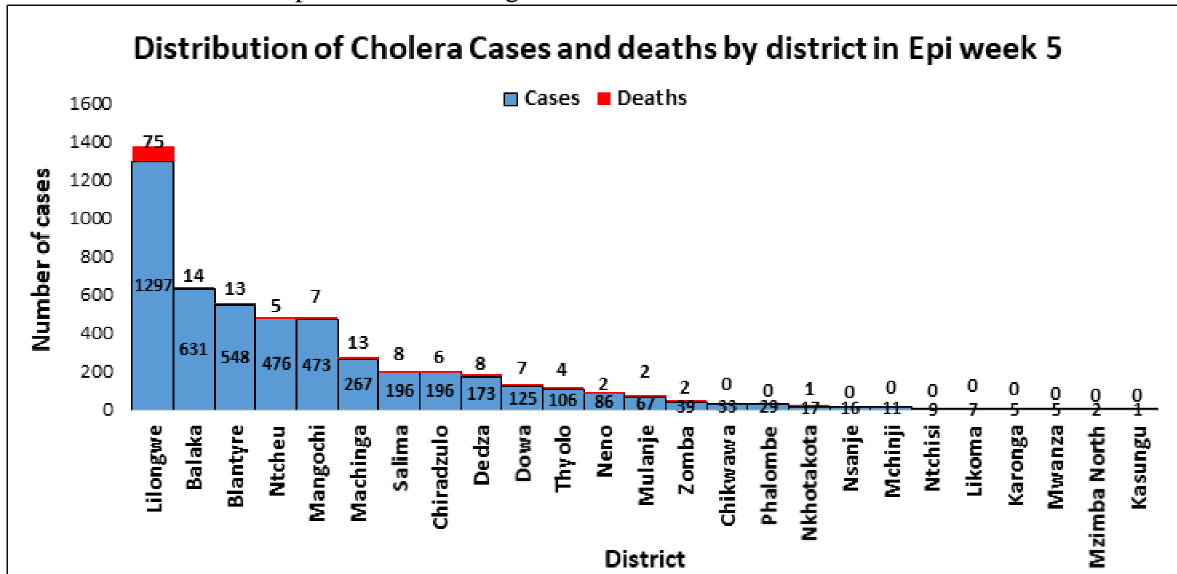
2. 

Figure 2. Geographical distribution of cholera cases and deaths in epidemiological Week 05

3. Of the 4,815 reported cases in epi-Week 5, data on sex and age were available for 3264 cases, of which 1,240 cases representing 38 % (n=3,264) were females and 2,024 cases representing 62% (n=3,264) were males. The most affected age group for epi Week 05 was 15-24 years, followed by 5-14 years, then 25-34years. (Figure 3).

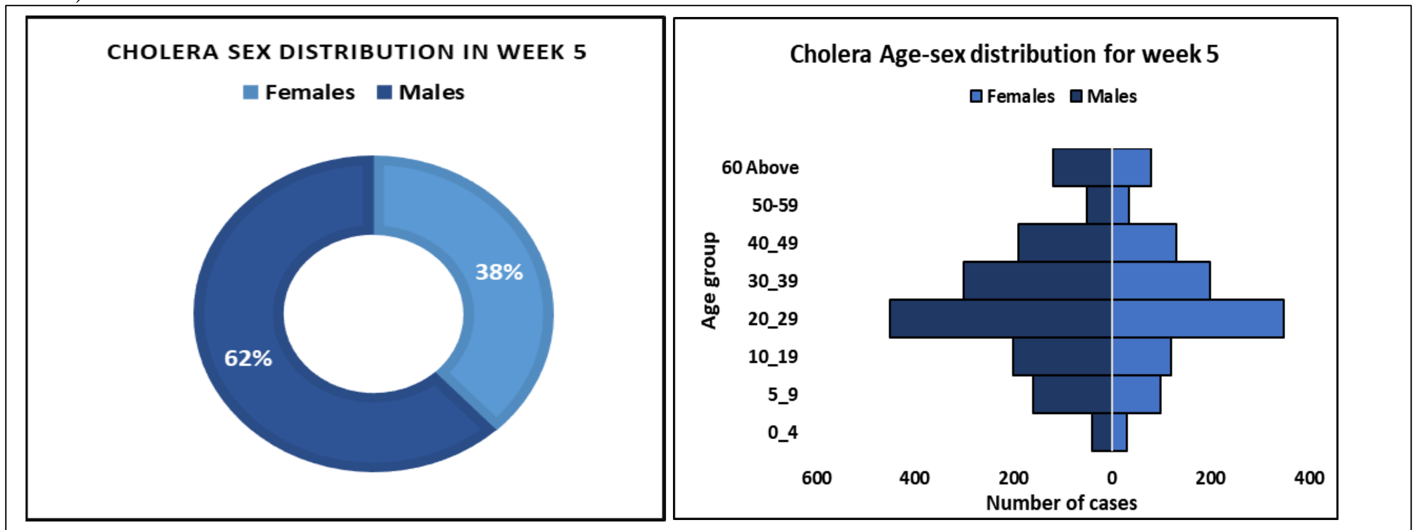


Figure 3. Age sex distribution of cholera cases in epidemiological Week 05

4. 167 deaths were reported in epi-Week 5. However, sex and age data were only available for 76 deaths. 32 deaths representing 42.1% (n=76) were females and 43 representing 56.6% (n=76) were males. The most deaths occurred in the age group 60 above.

5. There was an increase of 10.5% in the number of cases in Epi week 5, 2023 (4818 cases) compared to Epi week 4, 2023 (4361cases). (Figure 14).

6. There was a 39.2% increase in the number of deaths in Epi week 05 (167 deaths) compared to Epi week 04 (120 deaths). (Figure 17)

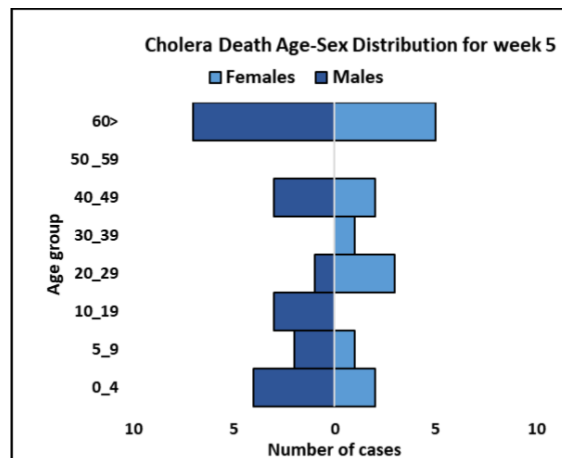


Figure 4 Sex-age distribution of cholera deaths in week 5

7. The National CFR for week 5 was 3.5 % (Figure 5)

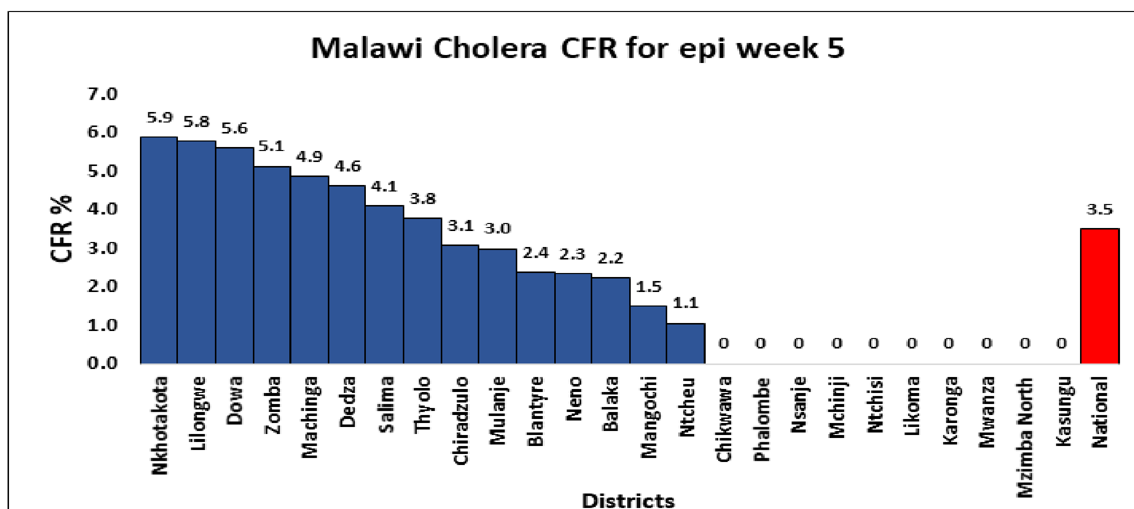


Figure 5 Case fatality rate by district for epidemiological Week 05

8. During the reporting period Culture, RDT, Epidemiological Linkage were used to screen and diagnose the cholera cases.
9. The contributing factors in Epi Week 05 were poor food hygiene, Unsafe water source, Contact with Cholera case.
10. One of the contributing factors for the increase in deaths in Lilongwe, Blantyre, Balaka, Machinga, was late presentation to health facility.
11. The incidence rate (IR) of most districts has dropped in epi-Week 5 compared with epi-Week 4. However, the weekly IR for Ntcheu, Lilongwe, Balaka, Machinga have increased (Figure 6).

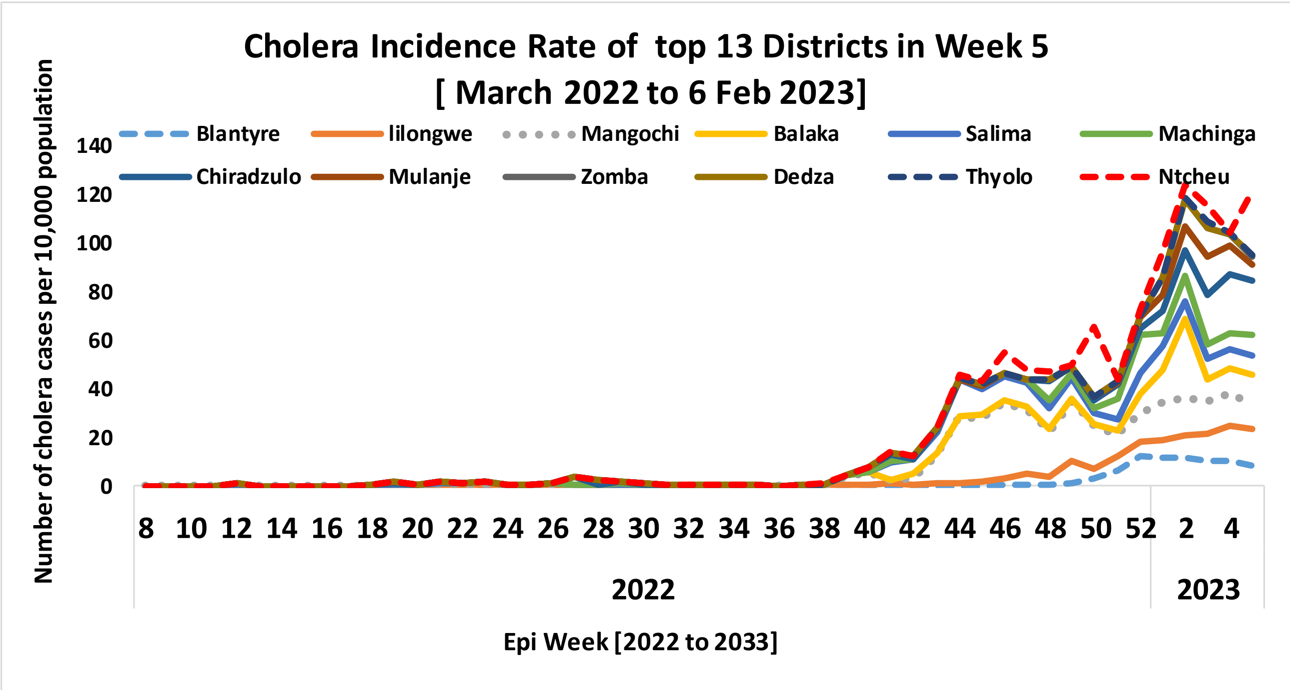


Figure 6. Weekly incident rate by district

Cumulative Epidemiological Summary

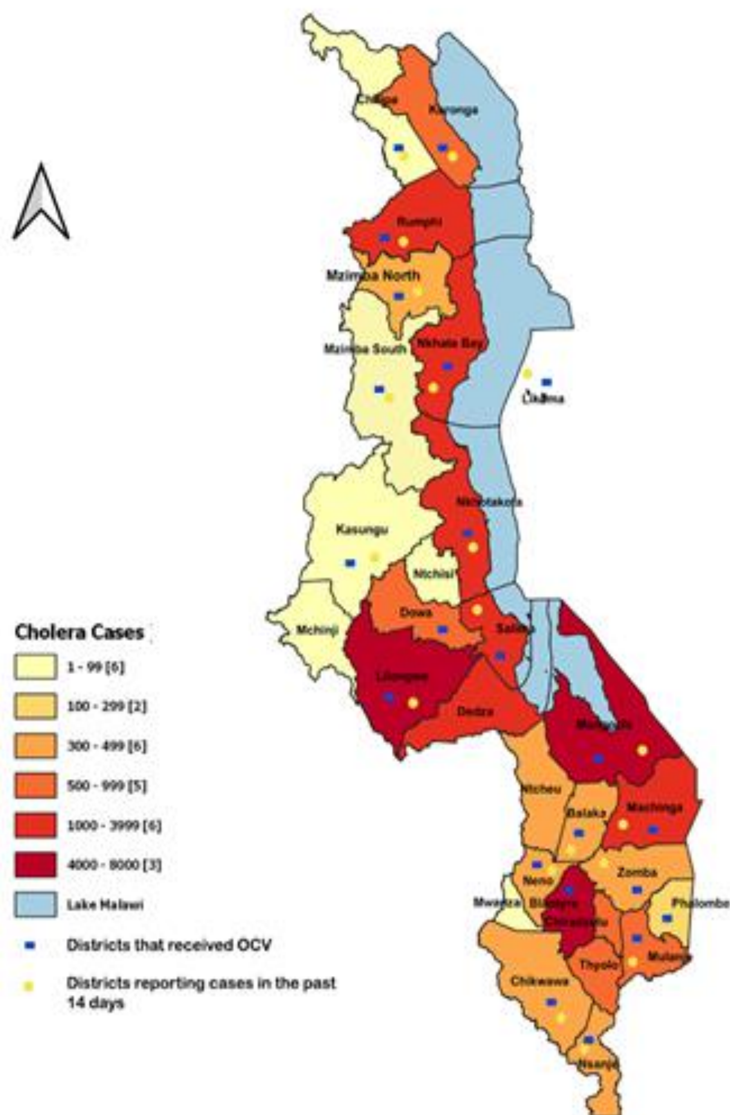
Overview of Cholera Cases

Cases by geographical location

- As of 5 February 2023, a cumulative total of 39177 cholera cases (Table 1) including 1277 deaths (CFR 3.3%) have been reported in Malawi (Figures 7 and Table 1). Of the 357 cases reported in Nsanje district, 93 (26.1%) represent a cross-border spread from Mozambique, out of 235 cases reported in Likoma district, 84 (36.8%) represent a cross-border spread from Mozambique, out of the 57 cases reported in Mwanza, 15 (26.3%) represent a cross border spread from Mozambique, out of 608 cases reported in Mulanje district, 15 (2.5%) represent a cross-border spread from Mozambique, out of 366 cases reported in Chikwawa 2 (0.5%) represent a cross-border spread from Mozambique, out of 502 cases reported in Zomba 1 (0.2%) represent a cross-border spread from Mozambique and out of the 7,168 cases reported in Mangochi, 1 (0.01%) represents a cross border spread from Mozambique.

Table 1. Distribution of cholera cases by district

District	Cumulative cases	Deaths
Mangochi	7165	117
Lilongwe	6172	365
Blantyre	5717	185
Salima	2824	75
Balaka	2667	75
Machinga	1667	62
Nkhatabay	1514	44
Nkhotakota	1315	54
Dedza	1290	54
Rumphi	1047	17
Dowa	992	29
Karonga	938	25
Chiradzulo	891	34
Ntcheu	850	16
Thyolo	717	19
Mulanje	608	27
Zomba	502	21
Mzimba North	472	2
Neno	453	9
Chikwawa	366	8
Nsanje	357	15
Likoma	235	2
Phalombe	134	10
Chitipa	92	3
Mchinji	62	2
Mwanza	57	5
Ntchisi	31	0
Kasungu	29	1
Mzimba South	7	1



Cholera cases overtime

- Generally, the outbreak is increasing overtime. There was an increase of 58.0% in the number of cases in Jan 2023 (16, 716 cases) compared to Dec 2023 (7017 cases). (Figures 8,9 and 10).

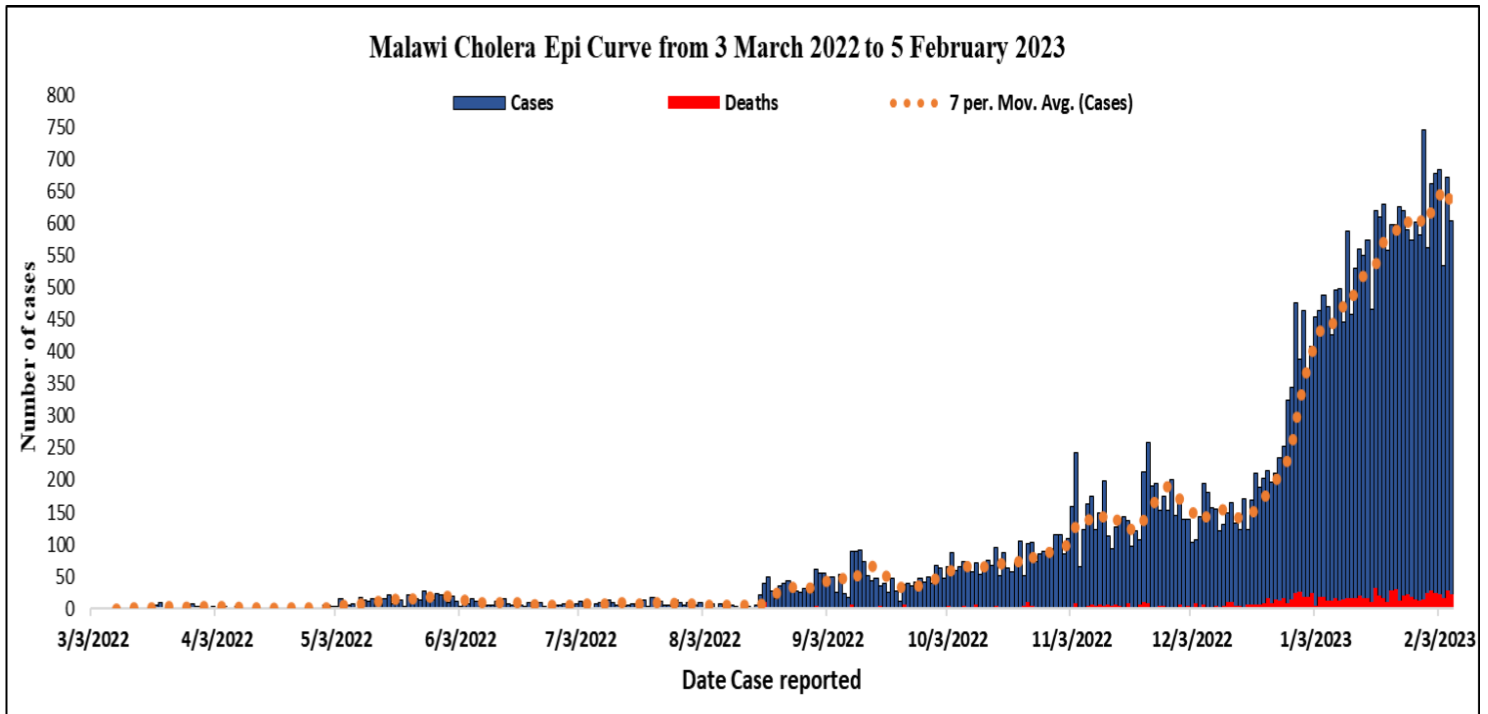


Figure 7. An epi-curve by date of cholera cases for Malawi from 3 March 2022 to 5 February 2023.

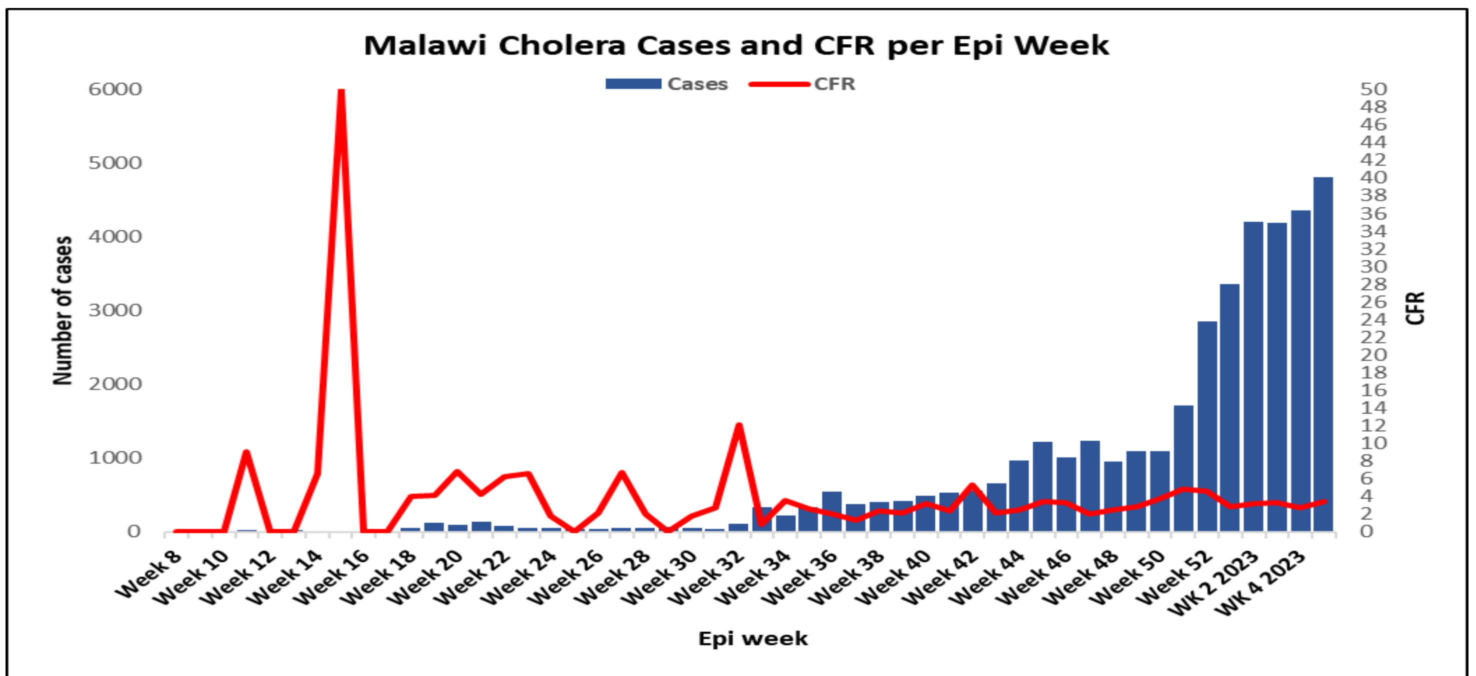


Figure 8. Cholera cases by epi-week for Malawi

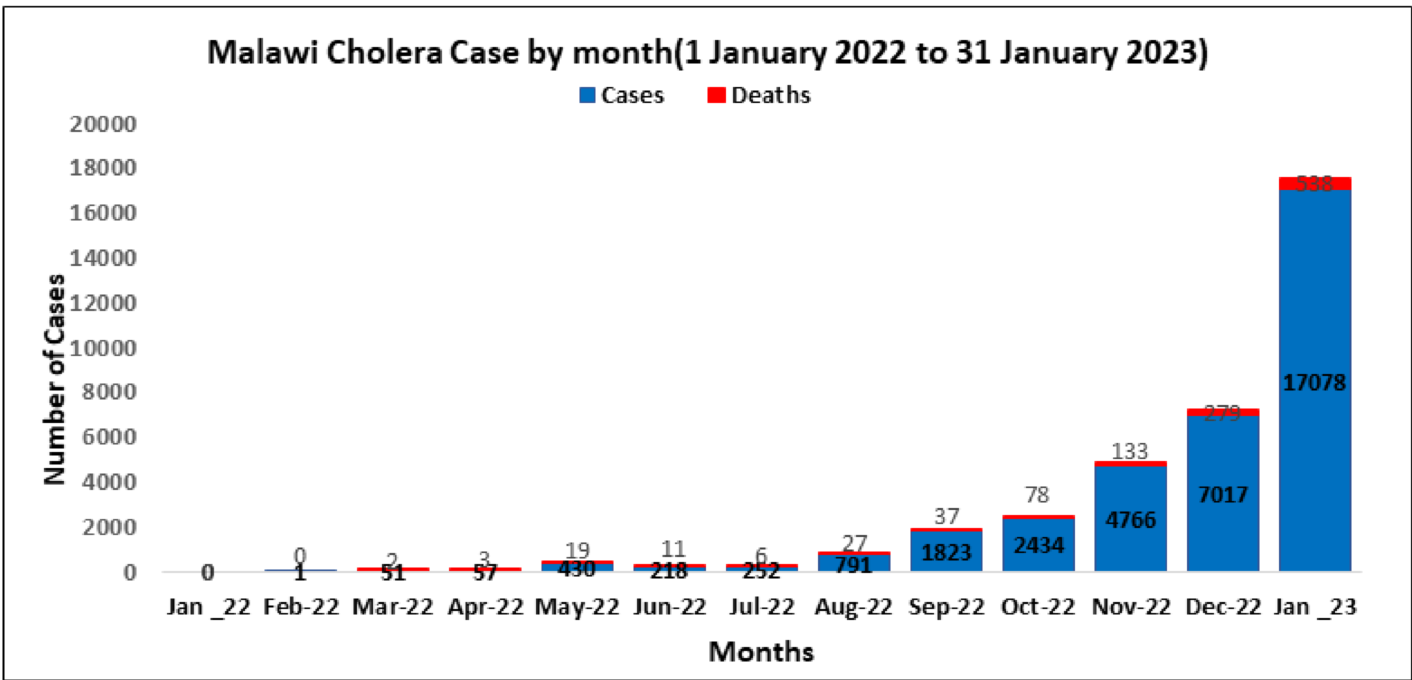


Figure 9. Distribution of cholera cases by month overtime

Cholera cases by person

- Since the beginning of the outbreak, the age group 21 to 30 years is the most affected (27.5%) followed by the 11 to 20 years age group (24.7%) **(**Figure 11).
- Of all the cases, 14886 are females representing 43.0% (n=34599) and 19,733 are males representing 57.0% (n=34599) of the cases (Figure 11).

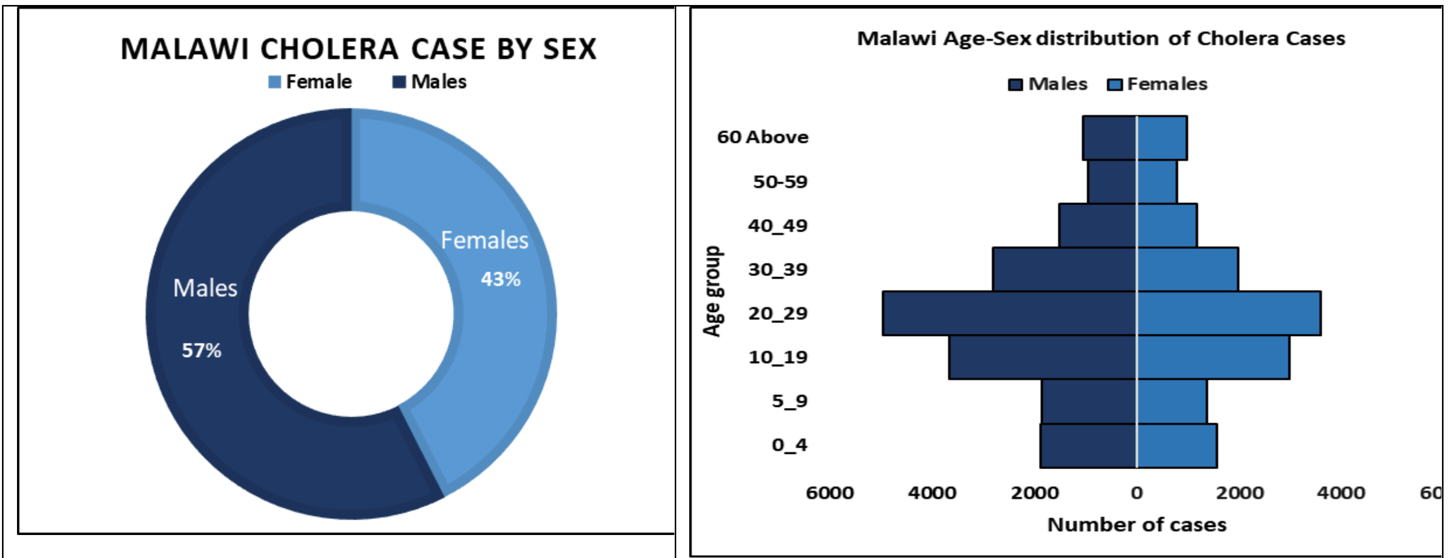


Figure 11. Age-sex distribution of cholera cases as of Epi-Week 05

Overview of Deaths and Admissions

Distribution of deaths by geographical location

- As of epi Week 05, 1277 deaths (CFR 3.5%) have been registered in Malawi and the most deaths have been reported in Lilongwe district (365). 242 deaths, representing (19%) have occurred in the community. (Figure 12)

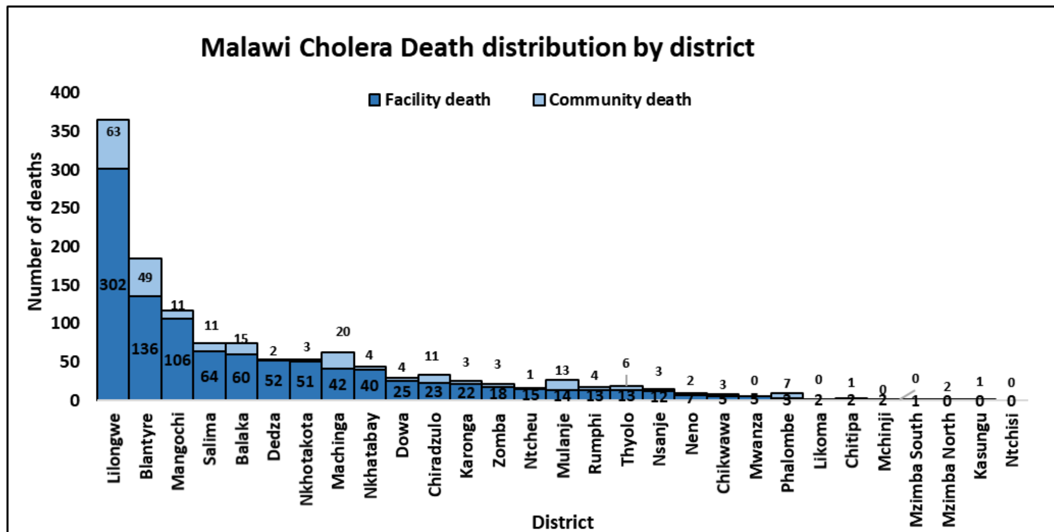


Figure 10. Geographical distribution of cholera deaths by district as of 5 February2023.

- The case fatality rate is highest in Mzimba South (1 death out of 7 cases). (Figure 13).

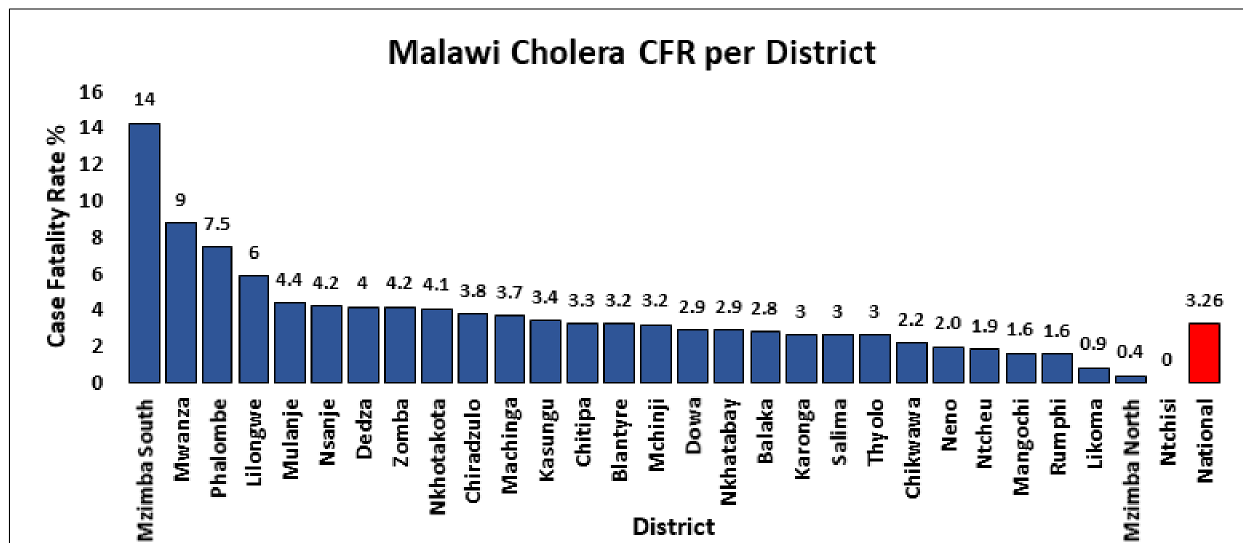


Figure 11. Cholera case fatality rate by district

Distribution of deaths overtime

In week 5, trend of the number of cholera deaths has increase compared to week 5 (Figure 14)

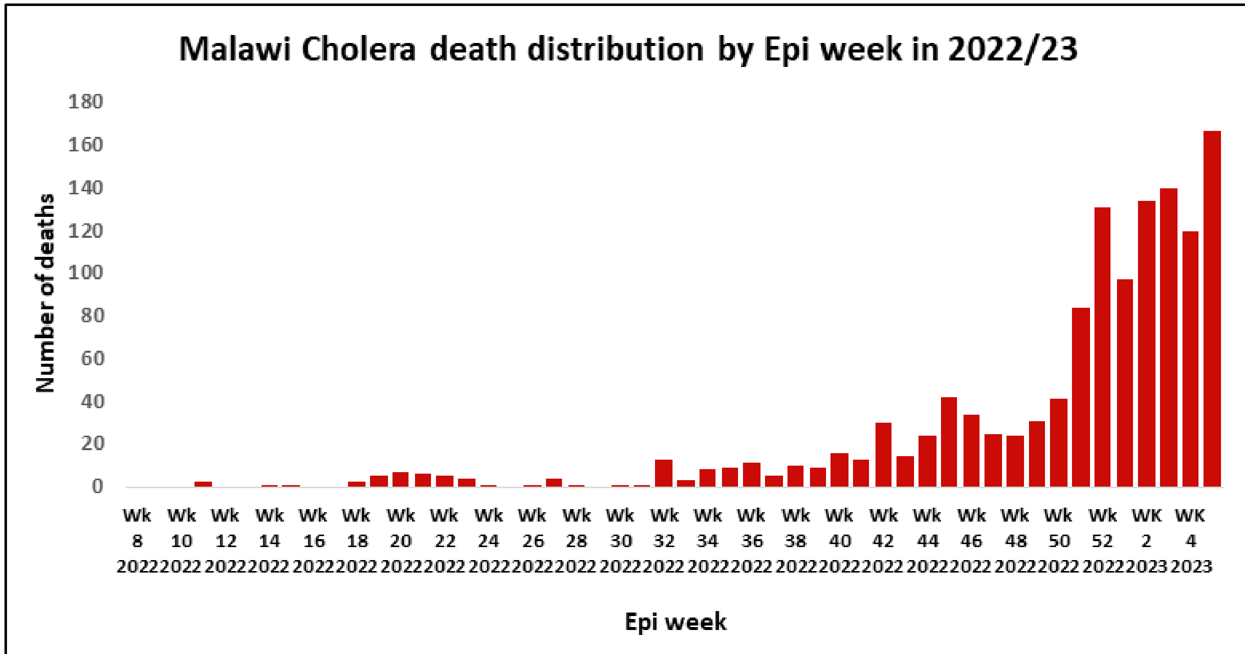
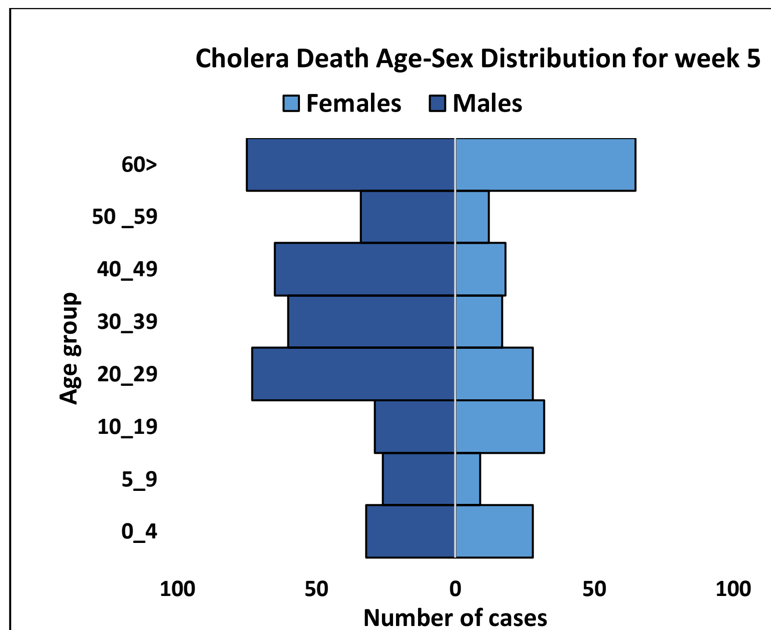


Figure 12. The distribution of deaths overtime

Distribution of cholera deaths by person

- Age groups 60 years above have recorded the most cholera deaths as of 5 February 2023. Most deaths have occurred among males. (Figure 15)



Admissions

- As of epi-Week 05, the most cases have been admitted to Bwaila CTC in Lilongwe followed by Koche, and Mangochi District Hospital CTC (2069). (Figure 16)

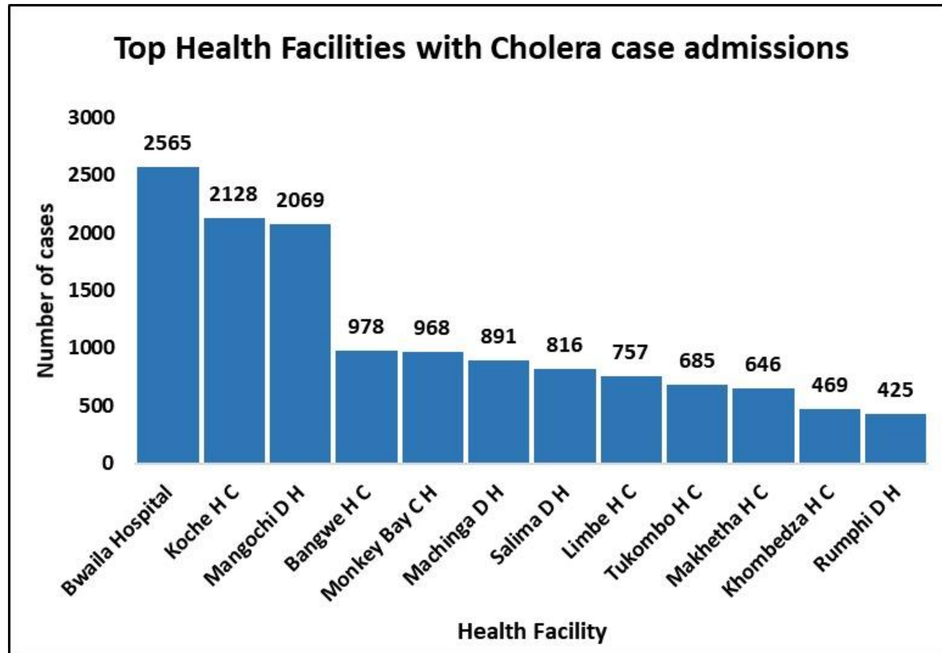


Figure 13. Proportion of Cholera case admissions by health facility

Cholera Transmission Risk Factors

- The top 3 reported risk factors contributing to the occurrence of new cholera cases are unsafe water source/open defecation/low latrine usage, poor food hygiene and contact with cholera cases (Figure 17)

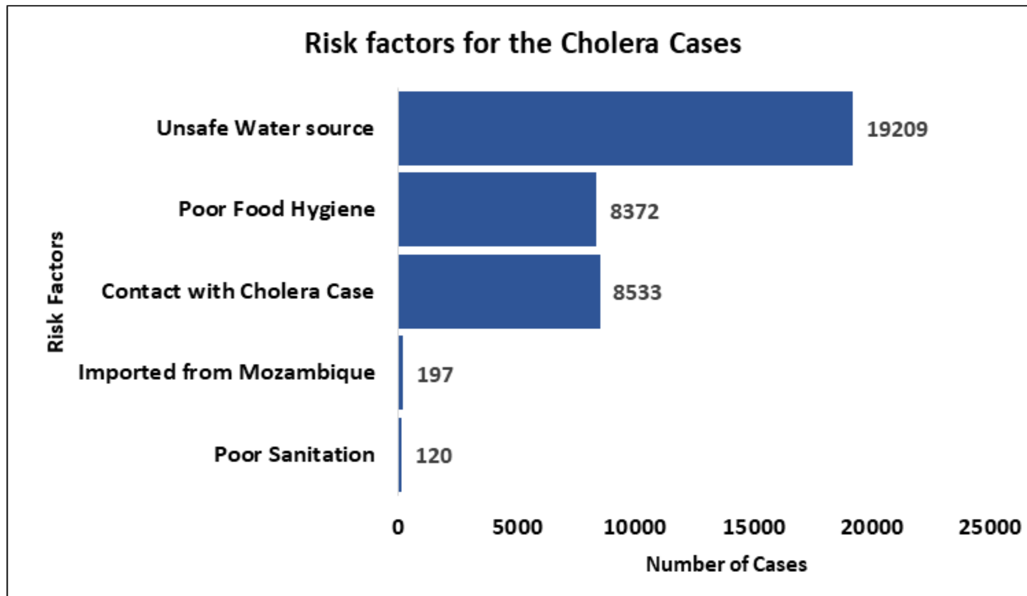


Figure 14 The distribution of risk factors of cholera cases in Malawi

Cholera outbreak response activities by response pillar

Interventions being implemented include coordination of the response at national and district levels in the affected districts, surveillance, mobilization, and distribution of cholera supplies in the outbreak and other priority districts, water sanitation and hygiene(WASH) activities, case management of severe and moderate cases, risk communication and community management, capacity building of health care workers in detection, and the implementation of Oral Cholera Vaccination campaign. Activities conducted and planned next steps are outlined below.

Pillar	Overall Activities	Activities Done in Week 05	Next Steps
Coordination	• Regular response coordination meetings both at District and National levels. • District partners include WHO, MSF, Malawi Red Cross, UNICEF, PSI, UNFPA,Save the Children, Water Aid, CARD, THP, MRCS, WFP, PIH UP, GIZ, World Vision, Illovo, Ripple Africa among others. • Supportive supervision to the affected districts by the National Cholera Task Force members, Rapid Response team visit to affected districts • Cross boarder Meeting with Mozambique Ministry of Health Interim cholera resource needs shared with health cluster • Revised cholera plan with gap analysis submitted to health cluster partners • Intra action review was held with some partner and district representation	• Cholera IMT meeting every Tuesday’s and Friday’s • Surveillance meeting are ongoing on Monday, Wed and Thursday • RCCE meeting every Monday. • Ah hoc meeting on OCV are still ongoing. • Case Management Meeting every Wednesday • Logistics and supplies ad hoc • Conducted integrated supervision. • Update resource mapping 5w s template and share with all partners	• Submission of Cholera Response Plan • Continue with Coordination meetings • Planning to implement pillar integrated Community interventions campaign. • Developing National indicators on cholera response

	• Resources mobilized from World bank, Health services joint fund and other partners • Malawi Environment Health Association held a workshop reviewing cholera response and Environment factors. • Spot visits to affected districts		
Surveillance	• Training of HSAs on Active cases investigation and surveillance, • Deployment of HSAs in the point of entries, and camps. • Strengthening Cross border surveillance (International/District) collaboration and coordination. • Data collection tools harmonization • Surveillance and Fisheries conduct sampling on food contamination targeting fish processing areas and markets in outbreak high burden districts • Develop SOP for random testing • Preliminary report on Fish value chain and risk assessment produced	• Continued daily data collection, collation, analysis and Situation Report production. • Deep dive analysis of data on every Friday. • Print and distribute reporting tools (Cholera line list, Case Based form)	• Support district teams with case follow up, investigations and active case search with appropriate documentation. • Support high burden districts with data management staff • Orient school teachers on cholera case detection to strengthen surveillance in schools. • Support field investigations following case detection • Conduct data audit
Case Management/IPC	• Setting up of CTU's in affected districts • Training in Cholera case management in the affected districts	• Technical support provided on case management and IPC in affected districts. • Conduct regular case management committee	• Conduct mentorship visits in all Cholera Treatment Units • Ensure the availability and use of admission books in all CTU's

	• Conducted cholera death audits. • Conducted ToT on cases management in Nkhotakota, Rumphi, Likoma, Chitipa, Nkhatabay, Mzimba North, Mzimba South and Karonga • On-site training conducted in Northern Districts • Set up of community ORS points • Recruitment of surge staff for high burden districts • Upgraded Bwaila, with support from MSF and Area 25 CTC. • Conducted IPC training in 6 Districts. Lilongwe, Dowa Mangochi Zomba Machinga and Chikwawa • Set up 40 Community ORS points in Lilongwe, Mangochi, Nkhatabay, Nkhotakota and Rumphi • •	meetings with affected districts on every Wednesday at 2:00 pm • Trained newly recruited 40 Nurse and Doctors on IPC and Case Management	• Deploy surge teams (Clinical and Nursing) to support the districts in case management in CTUs in the event of upsurge in cases • Conduct death audits in all districts for each registered death • Plan to recruit 145 IPC personnel.
Laboratory	• Testing using both RDT for screening and culture for confirmation where epidemiological linkage cannot be established to screen and monitor the cholera outbreak	• Screening cases using RDT • Work in progress on processing samples for external referral for genomic sequencing	• Conduct genomic sequencing of circulating *V. cholera* • Conduct culture and sensitivity on sporadic cases reported from districts currently reporting cholera cases

	• Distributed RDT kits in district reporting cholera cases • Quantification of regent to conduct sequencing of *V.cholera* done • Sensitivity analysis on V.cholerae samples to map out resistance patterns		• Mobilize additional Cholera RDTs • Distribute Cary Blair transport media to all districts • Ship samples for genomic sequence
WASH	• Provision of mobile latrines in the camps and Installation of prefabricated latrines • Households in the affected districts are being sensitized on WASH promotion including water treatment and hand hygiene. • House to house chlorination in the cholera affected districts • Water testing to monitor quality • Development and submission of WASH plans • Supply of HTH by GIZ to Nkhotakota, NkhataBay, Rumphi, Karonga and Mzimba • Conducted water quality surveillance in Chikwawa, Nsanje, Blantyre, Mwanza, Neno, Balaka, Machinga, Mangochi, Salima, Nkhotakota, Nkhatabay and Karonga	• Continued distribution of 1% stock solution to community members in all districts by HSAs • Continued Sanitation and hygiene promotion in communities by HSAs and Red-cross volunteers • Continuing installing chlorine dispense in 8 districts. • Repaired Boreholes in Karonga, Rumphi, Nkhatabay and Nkhotakota.	• Advocate for long-term investment on WASH infrastructures in the country and multi-sectoral response on WASH • Engage partners to support WASH activities [1. Treatment and rehabilitation of boreholes, 2. reconstruction of latrines at household level in all flood-affected communities] • Plan to support CTCs with Mobile latrines

Logistics	- Supplies have been distributed to affected for response - Other cholera response Logistics needs currently supported by MoH, UNICEF, WHO, MSF, MRCS,Save the Children,UNFPA,WBand other partners - Quantification for all districts for cholera supplies broken down by kit and item has been conducted.	- Weekly stock status reports on cholera supplies from all districts - Distribution of supplies is ongoing in all the districts - Re-quantification of supplies procession going - Continuity monitoring stock levels both at National and	- Districts to place Emergency Orders to CMST for Cholera supplies based on the district allocation - All affected districts to share cholera updated supplies stock status on weekly basis
Vaccination	- Malawi received 1,947,695 million doses of Oral Cholera Vaccine (OCV) on 7th April 2022 - The Vaccination Campaigns targeted 1,947,695 million people comprising of all adults and children from one year living in flood affected and cholera prone districts. - First round of OCV campaign was conducted in 8 targeted districts from 23rd to 27th May 2022 - Neno OCV Campaign started on 1 to 5 August 2022 (from 6 to 10 August mop-up days) supported by PIH and second round started on 29 August to 2 September (3 to 7 September mop-up days)	Finalize application for addition OCV doses.	Continue with OCV ad hoc meeting

	• 2.9 million doses of OCV arrived in Malawi on 7 November 2022. • OCV Campaign was conducted from 28 November to 2 December in 13 districts Lilongwe, Nsanje, Salima Nkhotakota, Kasungu, Nkhatabay, Likoma, Chitipa, Karonga, Rumphi, Zomba, Mzimba South and North. • OCV coverage in Mangochi was at 92.21%		
Risk Communication	• Use of community and national radios on Cholera messaging • Use of HES band for messaging • Printing of IEC materials (WASH cholera brochure [100,000 copies, Cholera poster 25,000 copies, leaflet for HW 10,000, Waste management poster both type 1 & 210, 000 copies). • Four community radios (Nkhotakota, Nkhata bay, Mzimba and Rumphi) produced jingles, airing radio programs and live panel discussion • Health Promotion Officers engaged Local leaders and Health-Based Leaders • Districts communicated to write letters to Churches, Chiefs and local community structures to	• Pot to pot chlorination is ongoing in all districts. • Conducted TV Program with Luntha TV. • Daily radio and TV program • Conducted KAP survey in the southern regional districts	• Engage District councils to institute by-laws to support the cholera outbreak response. • Continue community engagement activities at district level • Orient and conduct message review with media to integrate cholera messages with other outbreaks the country is responding to. • Submit cholera SMS push proposal • Plan to set up community feedback mechanism

	strengthen cholera prevention measures in the community and during gatherings. • Printing of OCV campaign posters, and leaflets. • KAP survey was done in Blantyre, Salima Nkhatabay • Conducted radio panel discussion with MBC Radio 2. •		

Data sources

The data sources are routine case-based surveillance forms and line lists from the affected districts.

Case definitions

Suspected case:

Any person 2 years or above*, presenting with acute watery diarrhea with or without vomiting; severe dehydration; or death from these.

Confirmed case:

Any person with diarrhea who has *V. cholerae* O1 or O139 isolated from their stool sample through stool culture or PCR. OR

In outbreak areas, a suspected case with epidemiological linkage to a confirmed case.

* Any suspected person aged below 2 years should be confirmed through laboratory and epidemiological linkage (history of contact).

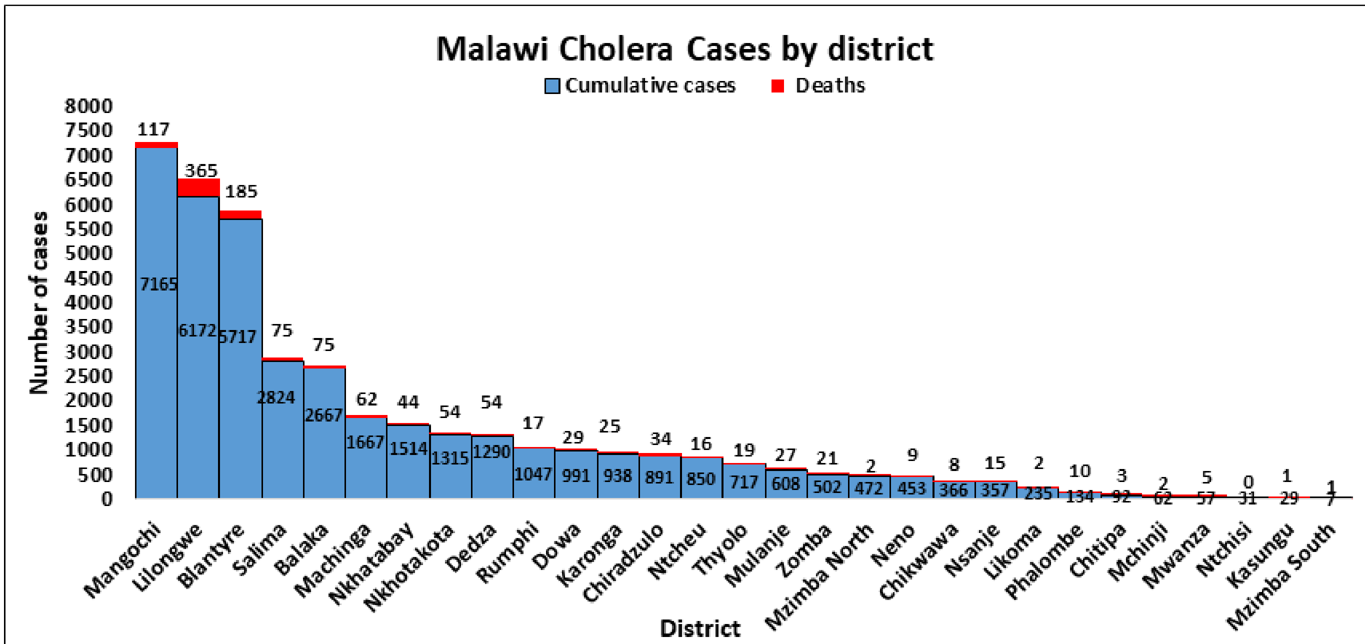
Conclusion:

4815 new Cholera cases have been reported from 25 districts in epidemiological Week 05. Twenty-nine districts in the country have been affected as of epi-Week 05, with 39,171 cumulative cases and 1227 deaths since the onset of the outbreak. There is an urgent need to improve access to safe water sanitation and hygiene. Inter-district and cross-border coordination and collaboration, risk communication, and community engagement are crucial in the prevention and containment of this cholera outbreak. The administration of the oral cholera vaccine will supplement the core cholera prevention and control interventions. Let us join hands in the fight against cholera**.**

This report is produced by the Public Health Institute of Malawi, Ministry of Health. For more information, support and feedback, please contact the following.

NAME	CONTACT
Dr. Matthews Kagoli	mkagoli@gmail.com
Dr. Annie Mwale	chaumaannie@gmail.com
Dr. Dzinkambani Kambalame	dzinkambani@yahoo.com
Mr. Wiseman Chimwaza	chimwazawiseman@gmail.com

Annex



Malawi Cholera CFR from epi week 8 2022 to week 5

Before cases management

Onset

Blantyre started

Lake shore districts started reporting cases

Case fatality rate %

Epi week

TOP 8 DISTRICTS WITH HIGH NUMBER OF CASES