Malawi Multi-Sectoral Cholera Control Plan (MMCCP)

2025 - 2030

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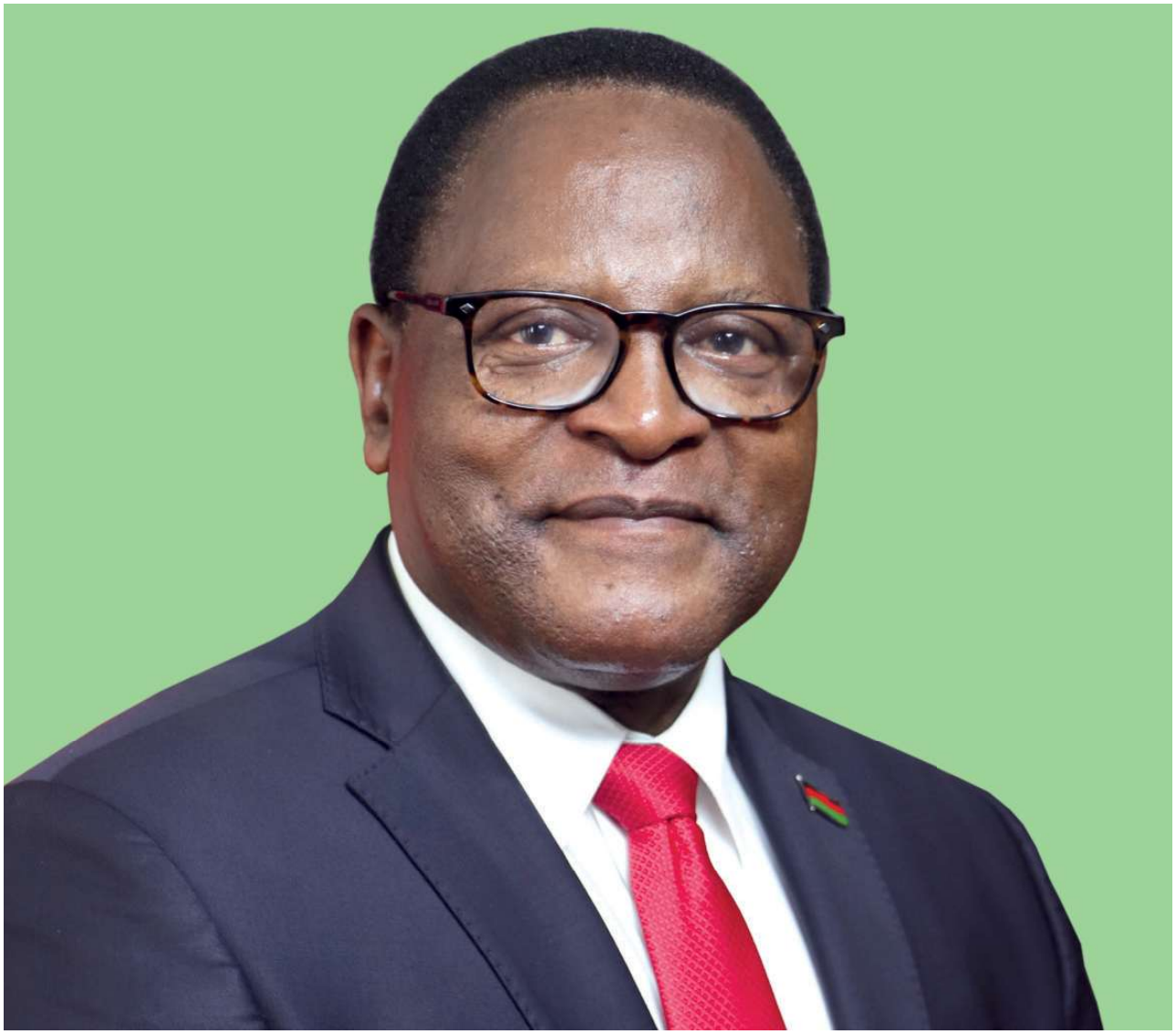
Foreword



The health of the people of Malawi is a top priority for my Government. This commitment reflects the developmental rights enshrined in the national Constitution and enables the economic aspirations that Malawians espoused in the Malawi 2063 Vision of becoming a self-reliant and inclusively wealthy middle-income country, one with a vibrant and sustainable public health system that preserves the well-being for all Malawians.

In pursuit of this health agenda, our ambition is to achieve Universal Health Coverage through deliberate Health in All Policies that move us closer to the attainment of Sustainable Development Goal No. 3, with an approach that considers the health impacts and implications of decisions and synergies across all sectors. This approach recognizes that many of the challenges we face as a nation, such as climate change and health inequities, are complex and linked to social and environmental factors such

as the circumstances in which people are born, grow up, live, work, age, as well as the systems and forces that affect these circumstances.

Within this nexus, Cholera remains a significant global health challenge, with an estimated 2.9 million cases and 95,000 deaths reported annually, globally. Africa accounts for a disproportionately large share of this burden, and Malawi is no exception, with cholera outbreaks posing a recurrent threat to our public health security, particularly in vulnerable hotspots such as peri-urban and lakeshore areas. In recent decades, Malawi has recorded numerous cholera outbreaks, with the most recent episodes in 2022 and 2023, highlighting the urgent need for comprehensive action to stop the threat that these outbreaks pose to lives and livelihoods.

With this in mind, my government has joined global efforts to end the scourge of cholera by 2030 as espoused in the WHO Global Roadmap to End Cholera by 2030. This National Multisectoral Cholera Control Plan (NMCCP) provides a blueprint for achieving this goal. It outlines a comprehensive and coordinated approach to reduce morbidity and mortality due to cholera, with a focus on enhancing Water, Sanitation, and Hygiene (WASH) infrastructure and services in high-risk areas, and strengthening our national capacity for early identification of cholera outbreaks, and timely and effective response. It builds on what already exists in various sectors, but advocates for active and synergized implementation of those policies and programmes.

Key interventions in this Plan include the establishment of efficient cholera prevention and case management systems, delivery of reactive and preemptive oral cholera vaccines to vulnerable populations, the implementation of risk communication strategies to foster community engagement, and the strengthening of surveillance and laboratory support systems. These measures will be implemented concurrently to ensure a robust and sustained response to the threat of cholera.

The successful implementation of this Plan requires committed leadership, adequate funding from the government and our partners, and active participation from all sectors of the economy, not least, from local community leaders and civil society. On its part, in a quest to strengthen public health security, the Government of Malawi has, among other initiatives, established robust public structures and systems to address public health emergencies, including the threat posed by cholera. To this end, I have established a Presidential Taskforce on Public Health Emergencies within my office to coordinate national responses to multisectoral public health emergencies and keep me informed and updated accordingly on public health threats within and outside the boarders of the country to ensure timely preparedness and response.

I therefore urge all stakeholders; namely local communities, development partners, civil society organizations, and other private sector, to collaborate with my government in mobilizing resources and expertise to achieve our shared vision of a cholera-free Malawi.

With the unwavering political will and coordinated action, I am confident that Malawi can eliminate Cholera, safeguarding the health and prosperity of all our citizens.

Lazarus McCarthy Chakwera
President of the Republic of Malawi

Acknowledgments

Cholera has long been one of the major infectious public health challenge in Malawi, with recurrent occurrence of outbreaks threatening lives, livelihoods, and the country's development progress. While emerging outbreaks have been successfully contained each time, the response has tended to be reactive and not long lasting in its scope and impact.

The Malawi Multisectoral Cholera Control Plan (MMCCP) is the first of its kind to address the problem in a comprehensive multisectoral manner. It represents the bold resolve to combat the cholera scourge in the country with a medium term vision and a goal to ultimately eliminate it and safeguard the health and wellbeing of every Malawian. It outlines strategies to end cholera by 2030 through high-level multi-sectoral coordination, strengthened infection and disease prevention through enhancing WASH services, improved and timely case finding and case management; reactive and preventive vaccination; and effective community engagement. The Plan is a testament to the truly multisectoral approach required for the effective control of the cholera scourge.

On behalf of the Presidential Taskforce on Public Health Emergencies, we would like to extend our heartfelt gratitude to all stakeholders who contributed to the development of this Plan. In particular, we acknowledge and commend the unwavering commitment and tireless efforts of his Excellency, the State President, Dr Lazarus McCarthy Chakwera, for His vision and overall srewardship in fighting the cholera scourge in the country, not least, through the establishment of a fully-fledged Presidential Task Force on Public Health Emergencies within his office to guide the multisectoral

fight against cholera and other public health emergencies in the country.

Sincere acknowledgements are also due to:

- All members of the Presidential Taskforce on Public Health Emergencies and its Secretariat, whose policy leadership and guidance facilitated the formulation of the MMCCP.
- The Public Health Institute of Malawi (PHIM), for providing technical expertise and coordination in ensuring the Plan is evidence-based and actionable.
- Key line ministries: notably Ministries of Health, Water and Sanitation, Local Government, Education, labour, security establishments and others, whose multisectoral collaboration has been instrumental in the development of the MMCCP.
- Our invaluable development partners, including the World Health Organization (WHO), United Nations Children's Fund (UNICEF), Global Task Force on Cholera Control (GTFCC) and its Country Support Platform (CSP),Malawi Red Cross Society and the International Federation of Red Cross and Red Crescent Societies (IFRC),the African Medical Research Foundation (AMREF) Health Africa, WaterAid, Africa CDC and many other organizations whose technical and financial support made this Plan a reality.

On its part, the Presidential Taskforce on Public Health Emergencies, commits to ensuring the effective coordination, implementation, and monitoring of the MMCCP. To this end, the taskforce undertakes to:

Facilitate High-Level Leadership: Ensure the MMCCP remains a top priority on the national agenda and receives unwavering political and institutional support.

Strengthen Multisectoral Coordination: Bring together government ministries, development partners, civil society, and private sector stakeholders to work collaboratively in implementing the Plan.

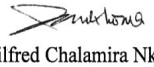
Promote Accountability: Establish mechanisms to monitor progress, address challenges, and ensure transparency in the use of resources and achievement of targets.

Advocate for Sustainable Resources: support mobilization of domestic and external resources to support the full implementation of the Plan.

Foster Innovation and Adaptation: Encourage the use of innovative approaches and evidence-based strategies to enhance the impact of cholera control interventions.

Eliminating cholera in Malawi is not just a health priority, it is a moral and economic imperative. By addressing theWASH-related root causes of cholera and strengthening health systems, Malawi will be able to transform the lives of millions of Malawians and build a nation that is resilient to cholera and other public health threats. The taskforce therefore calls upon all stakeholders: our partners, communities, and leaders at every level, to unite in action, demonstrate unwavering commitment, and make ending cholera by 2030 a shared success story for Malawi. Together, we can achieve a healthier, more prosperous cholera free Malawi.

Hon Khumbize Kandodo Chiponda, M.P
Minister of Health
&
Co-Chairperson, Presidential Taskforce on Public Health Emergencies



Dr Wilfred Chalamira Nkhoma
Co-Chairperson, Presidential Taskforce on Public Health Emergencies

Pledge of Commitment from the Ministry of Water and Sanitation

My Ministry, pledges and commits to Support the Implementation of the Malawi Multi-Sectoral Cholera Control Plan**.** Cholera continues to pose a significant public health and developmental challenge in Malawi, disproportionately affecting vulnerable populations in high-risk areas. Access to safe water, sanitation, and hygiene WASH services is fundamental to preventing and controlling cholera outbreaks.

As Minister responsible for Water, Sanitation and Hygiene (WASH), I firmly believe that achieving a cholera-free Malawi requires a collaborative, coordinated, and sustained effort across all sectors. The Malawi Multi-Sectoral Cholera Control Plan (MMCCP) provides a comprehensive roadmap to control cholera by 2030. At the heart of this Plan lies the need to strengthen WASH systems building blocks with a focus on infrastructure and services in cholera hotspots. This aligns with our Ministry's vision of achieving water and sanitation for all, always, as reflected in the policies, legal, development and strategic frameworks.

As part of our commitment, the Ministry of Water and Sanitation, pledges to:

- Enhance WASH Infrastructure through scaling up investments in water resources management to increase coverage of water access through reticulated water supply systems. Additionally, improving access to sanitation services through construction of sanitation facilities in public places and hygiene promotion programs in high-risk areas, prioritizing peri-urban communities, lakeshore areas and schools.

- Promote Community Engagement by working closely with local communities to raise awareness about hygiene practices, facilitate behaviour change, and empower communities to take ownership of WASH initiatives.

- Strengthen Partnerships and coordination in the sector by collaborating with other government ministries, development partners, the private sector, and civil society organizations to mobilize technical expertise, financial resources, and innovative solutions for improving WASH services.

- Ensure Policy Alignment and Integration by mainstreaming the cholera control priorities into national and district-level WASH strategies, and ensuring alignment with the Malawi Vision 2063 and other relevant development frameworks.

- Monitor and Evaluate Progress by stablishing robust management information system for monitoring and evaluation to track the implementation of WASH interventions under the national cholera control plan, ensuring accountability and continuous improvement.

The Ministry acknowledges that addressing the root causes of cholera requires urgent and sustained investment in resilient WASH systems. We are committed to working with all stakeholders to ensure every Malawian has access to clean water, safe sanitation, and improved hygiene facilities. I therefore request all stakeholders to unite with us in this effort. Let us harness our collective expertise and resources to transform the lives of Malawians and achieve the ambitious but attainable goal of a cholera-free Malawi by 2030. Together, we can make this vision a reality.

Hon Abida Sidik Mia, M.P

Minister of Water and Sanitation-Republic of Malawi

Pledge of Commitment from the Ministry of Health

Cholera remains one of the most pressing public health threats in Malawi, exacerbated by inadequate access to clean water, sanitation, and hygiene services, and the vulnerabilities of densely populated communities. The Malawi Multisectoral Cholera Control Plan (MMCCP) represents a crucial step forward in addressing this challenge and achieving the national target of controlling cholera by 2030.

As Minister of Health, I am deeply committed to ensuring that every Malawian enjoys the right to health and well-being, free from the devastating effects of cholera. I fully endorse the MMCCP as a comprehensive and strategic guide to address the root causes of cholera while strengthening our health systems to respond effectively to outbreaks.

In support of the MMCCP, the Ministry of Health pledges to:

1. **Strengthen Surveillance and Early Detection Systems:** Enhance disease surveillance and early warning systems to promptly detect and respond to cholera outbreaks, with the support of robust laboratory capacities.

2. **Ensure Effective Case Management:** Provide high-quality, timely treatment to all cholera patients by equipping health facilities, training healthcare workers, and ensuring the availability of essential medicines and supplies.

3. **Support Oral Cholera Vaccination Campaigns:** Lead the planning, coordination, and implementation of targeted oral cholera vaccination campaigns to protect populations in high-risk areas, complementing other prevention strategies.

4. **Promote Health Education and Risk Communication:** Collaborate with communities and stakeholders to implement culturally appropriate health promotion campaigns, empowering communities to adopt behaviors that reduce the risk of cholera transmission.

5. **Enhance Multisectoral Collaboration:** Work closely with other government ministries, development partners, civil society organizations, and private sector actors to align efforts, mobilize resources, and ensure the coordinated implementation of the MMCCP.

6. **Advocate for Sustainable Financing:** Champion increased domestic and international investment in cholera prevention and control interventions to ensure the sustainability and success of the Plan.

The Ministry of Health acknowledges that the elimination of cholera is not only a public health imperative but also a social and economic priority. Our collective actions today will safeguard future generations and advance Malawi's journey toward health and prosperity.

I call upon all stakeholders—government ministries, non-governmental organizations, development partners, community leaders, and every Malawian—to join hands in this critical mission. Together, let us demonstrate our resolve, commitment, and determination to eliminate cholera and create a healthier, more resilient Malawi.

Yours sincerely,

Hon. Khumbize Kandodo Chiponda, MP
MINISTER OF HEALTH
REPUBLIC OF MALAWI

Definitions

Strategic goal:	In the context of a National Cholera Plan, the strategic goal is either to control or to eliminate cholera transmission in acountry.
Strategic objectives:	Concrete and measurable outcomes or results that need to be achieved to reach the strategic goal. Strategic objectives will usually be related to cholera pillars.
Strategies:	Course of action for achieving strategic objectives and strategic goals.
Target:	Specific, measurable, time-bound achievement attached to strategies, on the path to achieve a strategic objective.
(MMCCP) operational geographic units:	Geographic unit that corresponds to the lowest administrative level where resources are allocated, and cholera control decisions are made. The corresponding administrative level is country specific.

List of Acronyms and Abbreviations

AAR	After Action Reviews
ADC	Area Development Committees
AEFI	Adverse Events Following Immunization
AIDS	Acquired Immuno-Deficiency Syndrome
AMREF	African Medical and Research Foundation
CATI	Case Area Targeted Interventions
CDAs	Community Development Assistants
CDC	Center for Disease Prevention and Control
CFR	Case Fatality Rate
CHAM	Christian Health Association of Malawi
CHV	Community Health Volunteers
CHW	Community Health Workers
CLTS	Community Led Total Sanitation
COVAX	COVID-19 Vaccine Global Access
COVID	Corona Virus Disease
CPHO	Chief Preventive Health Officer
cRDTs	Combined Rapid Diagnostic Tests
CSOs	Civil Society Organizations
CSP	Country Support Platform
CTC	Cholera Treatment Center
CTU	Cholera Treatment Unit
DC	District Commissioner
DCPC	District Civil Protection Committee
DCT	District Coordinating Committee
DEHO	District Environmental Health Officer
DEM	District Education Manager
DESC	District Environmental Sub Committee
DHIS	District Health Information System
DHMT	District Health Management Team
DHO	District Health Office
DHPO	District Health Promotion Officers

DHS	Director of Health Services
DIOs	District Information Officers
DIPs	District Implementation Plans
DoDMA	Department of Disaster Management Affairs
DPHEMC	District Public Health Emergency Management Committee
DPs	Development Partners
DCSAs	Disease Control and Surveillance Assistants
EBS	Event-Based Surveillance
EHIN	Electronic Health Information Network
EOC	Emergency Operation Centre
EPI	Expanded program on Immunization
GAIA	Global AIDS Interfaith Alliance
GIZ	German Corporation for International Cooperation
GTFCC	Global Task Force on Cholera Control
HAIs	Healthcare Associated Infections
HSAs	Health Surveillance Assistants
HCM	Health Care Management
HCMC	Health Centre Management Committee
HIV	Human Immunodeficiency Virus
HSSP	Health Sector Strategic Plan
HTSS	Health Technical Support Services
IBS	Indicator based Surveillance
ICG	Interagency Coordinating Group
IDPs	Internally Displaced Persons
IDSR	Integrated Disease Surveillance and Response
HIS	Integrated Household Survey
IMS	Incident Management System
IPC	Infection Prevention and Control
KUHeS	Kamuzu University of Health Sciences
LIMS	Logistics Information Management System
LUANAR	Lilongwe University of Agriculture and Natural Resources
M&E	Monitoring and Evaluation
MAITAG	Malawi Immunization Technical Advisory Group

MDAs	Ministries, Department and Agencies
MHEN	Malawi Health Equity Network
MHM	Menstrual Health Management
MHRC	Malawi Human Rights Commission
MMCCP	Malawi Multi-Sectoral Cholera Control Plan
MMR	Maternal Mortality Ratio
MoH	Ministry of Health
MoLGUC	Ministry of Local Government, Unity and Culture
MoWS	Ministry of Water and Sanitation
MRCS	Malawi Red Cross Society
MSF	MedecinsSans Frontieres
NGOs	Non-Governmental Organizations
NITAG	National Immunization Technical Advisory Group
NMRL	National Microbiology Research Laboratory
NSO	National Statistical Office
OCV	Oral Cholera Vaccine
OHSP	One Health Surveillance Platform
OPC	Office of the President and Cabinet
ORPs	Oral Rehydration Points
ORS	Oral Rehydration Solution/Salt
OSL	Operations Support and Logistics
PAMIs	Priority Areas for Multi-sectoral Interventions
PHEMC	Public Health Emergency Management Committee
PHEOC	Public Health Emergency Operation Center
PHERRT	Public Health Emergency Response Team
PHIM	Public Health Institute of Malawi
PI	Priority Index
PoE	Points of Entry
PPE	Personal Protective Equipment
PTF	Presidential Task Force
QMD	Quality Management Directorate
RCCE	Risk Communication and Community Engagement
RDTs	Rapid Diagnosis Tests

SBCC	Social and Behavior Change Communication
SDGs	Sustainable Development Goals
SHN	School Health & Nutrition
SLA	Service Level Agreements
SOPs	Standard Operating Procedures
SSA	Sub-Saharan Africa
STA	Sub-Traditional Authority
SWOT	Strengths, Weakness, Opportunities and Threats
TA	Traditional Authority
TWGs	Technical Working Groups
UN	United Nations
UNICEF	United Nations Children's Fund
USD	United States Dollars
VDC	Village Development Committees
VHC	Village Health Committees
WASH	Water Sanitation and Hygiene
WHO	World Health Organization
WUA	Water Users Association

Executive Summary

The **Malawi Multi-Sectoral Cholera Control Plan (MMCCP)** outlines a comprehensive approach to eliminate cholera in Malawi by 2030. Developed through a collaborative and multi-sectoral process, the plan addresses the persistent threat of cholera, which continues to pose significant public health and socio-economic challenges in the country. The MMCCP aligns with global cholera control strategies and prioritizes coordinated, evidence-based interventions to reduce morbidity and mortality associated with cholera outbreaks.

Cholera Epidemiological Overview and Challenges

Since Malawi's first cholera case in 1973, the country has faced annual outbreaks, with over **149,146** cases and **4,333** deaths recorded between 1998 and 2024. The Case Fatality Rate (CFR) remains at **2.89%,** exceeding the World Health Organization's recommended threshold of 1%. Recent major outbreaks highlight hotspots in Southern Region districts (e.g., Nsanje, Chikwawa) and lakeshore areas, exacerbated by inadequate Water, Sanitation, and Hygiene (WASH) infrastructure and climatic conditions. This is evident with only **67%** of households havingaccess to safe, cleandrinking water, and **35%** to improved sanitation. Climate-related vulnerabilities further worsen the situation with frequent flooding and drought exacerbating cholera risks.

Key Objectives

The MMCCP aims to:

- **Reduce cholera incidence by 90%** and maintain a CFR below 1% by 2030.
- Transition from response-oriented cholera management to sustainable control and elimination strategies.
- Enhance coordination through the Presidential Taskforce on Public Health Emergencies, ensuring all sectors are involved in cholera control efforts.
- Address underlying vulnerabilities, including inadequate WASH infrastructure and the impacts of climate change.

Priority Areas for Multi-Sectoral Interventions (PAMIs)

The plan identifies **118 Traditional Authorities (TAs)** across 20 districts as high-risk areas requiring targeted interventions. These PAMIs account for **86.2% of cholera cases and 81.5% of deaths** from recent outbreaks. The key pillars will focus on delivering interventions in these areas to strengthen WASH services, improve healthcare access, and engage communities.

Pillars of Intervention

The MMCCP focuses on eight key intervention pillars:

1. **Coordination:** Strengthening multi-sectoral collaboration at national, district, and community levels. The plan emphasizes robust governance, resource mobilization, and accountability frameworks.
2. **Surveillance and Laboratory Systems:** Enhancing real-time reporting, data quality, and laboratory capacity for early detection and effective outbreak response.
3. **Case Management:** Improving access to quality treatment through expanded Cholera Treatment Centers (CTCs) and training healthcare workers.
4. **Infection Prevention and Control (IPC):** Ensuring proper hygiene in healthcare facilities and communities.
5. **Oral Cholera Vaccine (OCV):** Integrating preventive and reactive OCV campaigns with other health services.
6. **Risk Communication and Community Engagement (RCCE):** Addressing myths and promoting behavior change to improve community response and preparedness.
7. **Operations Support and Logistics (OSL):** Enhancing supply chain readiness to preposition critical supplies for outbreak management.
8. **WASH:** Investing in sustainable water and sanitation infrastructure, particularly in Priority Areas for Multi-Sectoral Interventions (PAMIs). This will build in climate smart WASH interventions, addressing vulnerabilities linked to extreme weather events and environmental degradation.

Implementation and Monitoring

The MMCCP establishes a detailed implementation plan led by the Presidential Taskforce, supported by the Ministry of Health and Ministry of Water and Sanitation. A robust Monitoring and Evaluation (M&E) framework will track progress using defined indicators and milestones.

Commitment to Action

The Government of Malawi commits to scaling up WASH services and cholera vaccination campaigns, strengthening health systems and multi-sectoral coordination, and mobilizing resources to sustain cholera prevention and control efforts.

With a collaborative and sustained approach, the MMCCP aims to eliminate cholera as a public health threat, contributing to Malawi's broader health and socio-economic development goals.

1 Introduction

1.1 The overview of the cholera situation in Malawi

Cholera continues to be a major global public health issue, predominantly impacting communities with low socioeconomic status and inadequate access to safe water and sanitation services. Malawi reported its first case of cholera in 1973. Since 1998, the country has experienced cholera outbreaks almost every year, with a higher disease burden during the rainy season (November to April) compared to the dry season.

From 1998 to 2024, Malawi recorded 149,146 cholera cases and 4,333 cholera-related deaths, resulting in an overall Case Fatality Rate (CFR) of 2.89%. The Southern Region districts,especially in Nsanje and Chikwawa and districts along the lakeshore are particularly affected by recurrent outbreaks. During the dry season, cholera cases are sometimes reported around Lake Chilwa, affecting the districts of Phalombe, Zomba, and Machinga.

1.2 Programs and approaches implemented to control cholera in the country

Cholera control in Malawi involves a multi-faceted approach led by various governmental and non-governmental entities. Cholera response activities overall leadership is provided by the Presidential Task Force on Public Health Emergencies. Strategic coordination is provided by the National Health Cluster/Sector and the WASH cluster/ Sector which meets regularly to discuss issues on health and WASH. Operational oversight is provided by the Ministry of Health (MoH) through Public Health Institute of Malawi (PHIM, Epidemiology Department), which works in close collaboration with partners within the Public Health Emergency Management Committee (PHEMC) which is the technical arm of the Health Cluster. PHEMC is composed of technical experts on health from different organizations which meetsquarterly when there is no outbreak and weekly during cholera outbreaks. During an outbreak the Committee meets several times per week to review epidemiological updates on the outbreak and direct the response.

At the district level, the District Public Health Emergency Management Committee (DPHEMC) manages the coordination of cholera response. The Committee comprises representatives from the District Health Management Team (DHMT), the District Secretariat, the Ministry of Water and Sanitation), Social Services, the police, and national and international partners. The Committee is chaired by the District Commissioner.

The country has been implementing cholera response activities using the following pillars:

- Coordination
- Points of Entry
- Case Management
- Infection Prevention and Control (IPC)
- Oral Cholera Vaccination (OCV)
- Risk Communication and Community Engagement (RCCE)
- Operations Support, and Logistics (OSL)
- Surveillance and Laboratory
- Point of Entry (PoE) and cross-border surveillance
- Water Sanitation and Hygiene (WASH)

1.3 Transition from a response-oriented strategy to a long-term control strategy

A multifaceted approach involving the combination of case management, water, sanitation and hygiene (WASH), rapid surveillance, social mobilization and oral cholera vaccines (OCV) is key to attaining the MMCCP's targets of controlling cholera and reducing deaths.

The plan has a proposed coordination platform. The implementation of (MMCCP) will be coordinated by the Presidential Task Force on Public Health Emergencies. The task force is under the Office of President and Cabinet so it can coordinate all Ministries and Partners.

The targets and strategies for(MMCCP) have beenformulated through a thorough analysis of the strengths, weaknesses, opportunities, and threats associated with the existing coordination and leadership mechanisms in public health emergencies, as well as the success and challenges gained from past experiences in cholera surveillance and case management. The situation analysis further integrated lessons learned from the 2019–2023 OCV campaigns, along with valuable insights from prior RCCE practices. Additional considerations also included the current status and ongoing projects on WASH. Drawing on this extensive analysis, the MMCCP targets and strategies were developed with the aim to strategically address key areas for improvement and enhance the overall effectiveness of cholera control efforts in the long-term.

***Surveillance and early case detection*:**

This entails developing the technical capacity to detect cholera quickly and to respond immediately, preventing large-scale, uncontrolled outbreaks. Real-time surveillance through strengthening reporting, ensuring timeliness, data quality through deploying electronic systems, strengthening laboratory capacity, and case management of cholera cases are other essential interventions that can save lives and reduce the mortality rates often associated with cholera outbreaks when individuals have access to good quality treatment as and when the symptoms appear.

Case management

The primary support for cholera patients is to ensure timely rehydration and administration of appropriate medications. For that reason, the MMCCP aims to prevent fatality through expanding treatment facilities and oral rehydration points in affected communities. Early case detection is a critical component of the MMCCP. It involves identifying suspects and diagnosing cholera cases as early as possible, including confirmation at peripheral levels.

Effective case management can be achieved by establishing well-equipped and staffed treatment centers within the existing health facilities and community centers. Improving the knowledge and skills among health workers is critical in identification of clinical signs and symptoms, patient assessment for dehydration, appropriate treatment protocols, and how to protect themselves and prevent the spread of infection at the treatment facilities.

While the health sector has usually taken the lead in cholera outbreak preparedness and response to control immediate outbreaks, this unilateral effort failed to address the underlying causes of recurrent outbreaks. Thus, the lack of comprehensive engagement with other

sectors has contributed to the persistence of cholera outbreaks. Recognizing this critical gap and the necessity for a coordinated and multisectoral approach to control cholera, the MMCCP was formulated through collaborative efforts involving various line ministries, non-governmental organizations and donor partners, in addition to the MoH. These included ministries of Water and Sanitation, Education, Labour, Gender, Health, LUANAR, KUHES and partners such as the Red Cross, WHO, UNICEF, AMREF, Water Aid, and MHEN.

Oral Cholera vaccine (OCV)

In recent years, OCV has become another essential and cost-effective tool to prevent and control cholera in emergency and non-emergency settings. WHO recommends that OCV be considered in pre-emptive situations as part of comprehensive cholera control plans and reactive situations depending on the local epidemiology and feasibility of conducting campaigns. Further, OCV should not be used as a stand-alone intervention to replace the other proven public health interventions but instead as a "supplementary" tool in outbreak control and the long-term prevention of cholera. Thus, OCV programmes should be used as a short-term measure to reduce disease burden and mortality in the interim, pending long-term solutions that must include sustainable WASH infrastructure and strengthened health systems able to anticipate epidemics and robust community engagement plans required to stop transmission. These solutions must be built on solid operational support, local and global resourcing, and technical expertise.

WASH interventions

Although the effectiveness of different cholera interventions varies from country to country, WASH interventions are key to reducing the burden of cholera in high-risk areas in the long run. In developed and some developing countries, cholera was effectively eliminated through investing in proper environmental health solutions, including water supply with appropriate treatment and distribution, adequate disposal of human waste, and sanitation infrastructure. Therefore, improving environmental health conditions, especially water and sanitation, is the most significant intervention to prevent cholera or other waterborne disease outbreaks. However, this requires sustained commitment and investment to improve the infrastructure and WASH services.

Climate change actions

Climatic changes and environmental degradation are now considered key drivers to the increased risk of emerging and re-emerging infectious diseases, particularly cholera. Climate change occurrences, including droughts and flooding, impact on human placements, which favour cholera outbreaks by reducing access to clean water. Besides limited access to clean water, drought such as that experienced in Malawi puts the population at risk of cholera spread. Thus, actions to prevent and respond to impacts of environmental degradation will be embraced as an integral part of the cholera prevention and control strategies in the MMCCP.

2 Country Commitment

2.1 Formal statement on the country's decision to commit to the sustained control of cholera

To reduce cholera annual incidence rate by 90% and achieve a case fatality rate of less than 1% in Malawi by 2030.

The government through a multi-sectoral approach commits to contain outbreaks wherever they will occur through early detection and rapid response achieved through interventions such as community engagement, strengthening early warning and surveillance systems, strengthening of laboratory capacities to diagnose and characterize causative organisms, strengthening case management and other health systems, strengthening supply chain readiness, and establishing rapid response teams. Refer to **Annex 2** for the country's commitment letter to control cholera.

The government will also scale up a targeted multi-sectoral approach to prevent cholera recurrence through focusing on PAMIs. These are relatively small areas mostly affected by cholera, which experience cases on an ongoing or seasonal basis and play an important role in the spread of cholera to other regions and areas. These will be targeted by deliberate efforts to improve access to safe water, adequate sanitation, and hygiene (WASH) and through use of pre-emptive/preventive Oral Cholera Vaccines (OCV) and Risk Communication and Community Engagement

A centrally led mechanism for coordination of strategic guidance, technical support, advocacy, resource mobilization, and partnerships at national and local levels. In line with the recommendations of the GTFCC Ending Cholera: Global Roadmap Strategic document, the Malawi Cholera Control will be based on a multi-sectoral approach coordinated from the office of the president and Cabinet.

2.2 The process of developing the MMCCP and the actors involved

On 20th March 2024, the Presidential Task Force on Public Health Emergencies was briefed about the development process of Malawi's Multi-Sectoral Cholera Control Plan(MMCCP), followed by the Senior Management Teams (SMTs) from the Ministry of Health and Ministry of Water and Sanitation (MoWS). Both the PTF and SMTs endorsed the process. Following these endorsements, a multi-sectoral task team was established, chaired by the secretariat for PTF on Public Health Emergencies, to facilitate the whole development process.

The task team comprised technical officers from government Ministries, Departments and Agencies (MDAs), civil society organizations, academia, UN agencies and other relevant stakeholders.The key stakeholdersinclude Ministry of Water and Sanitation, Ministry of Health - Public Health Institute of Malawi (PHIM), Ministry of Local Government, Unity and Culture (MoLGUC), Ministry of Education (MoE). UN agencies were World Health Organization (WHO) andUnited Nations International Children's Emergency Funds (UNICEF).

The local and international partners were Malawi Red Cross Society(MRCS), Center for Disease Control and Prevention (CDC), Kamuzu University of Health Sciences (KUHeS), Lilongwe University of Agriculture and Natural Resources (LUANAR), Water and Environment Sanitation Network (WESNET) WaterAid,and Malawi Health Equity Network.

The task team held regular meetings to develop a budgeted work plan, data collection tools, and resource mobilization plan for the MMCCP development. The development process involved several steps, including:

- Identification of PAMIs
- Formulation& prioritization of activities
- Development of operational plans & associated budget
- Development of a monitoring & evaluation framework including definition of indicators & milestones
- Presentation of the plan to the Technical Working Groups (TWG) and key ministries,
- Review and approval of the plan by the PTF,
- Launch by the minister of Health, and Water and Sanitation
- Dissemination of the plan.

The entire process is planned to take place from February to December 2024.

3 Country Profile

3.1 Country context

3.1.1 Geographical overview of the country

Malawi is a land-locked country in Southern Africa, lies between latitudes 9°S and 17°S and longitudes 32°42'E and 36°36'E. It is bordered by Tanzania to the north and northeast, Mozambique to the east, south, and southwest, and Zambia to the west. The country covers a total area of 118,484 square kilometers, of which 94,084 km² is land and 24,400 km² is water. Malawi has three major water bodies: Lake Malawi, Lake Chilwa, and the Shire River. Lake Malawi, also known as Lake Nyasa, is the third-largest lake in Africa and the ninth largest in the world, stretching about 580 kilometers (360 miles) along the eastern border. These water resources are vital for the country's economy, significantly contributing through fishing, transportation, irrigation, hydroelectric generation, and tourism. Additionally, Malawi is home to Mount Mulanje in the southern part of the country, which is the highest peak at an elevation of 3,002 meters (9,849 feet).

Areas along these water bodies, especially in the Lower Shire Valley, are prone to flooding during the rainy season, increasing the potential spread of waterborne diseases including cholera. Similarly, in the fishing communities near Lake Chilwa, where fishing is a primary livelihood, fishermen traditionally camp for extended periods (more than three months) in floating homes known as Vimbowela (Khonje et al., 2012). These communities often use the lake for drinking water and ablutions, raising the level of fecal contamination. These geographical features and associated vulnerabilities significantly influence the socio-economic activities in Malawi, highlighting the need for sustainable management and development strategies.

The country is divided into three major regions and 28 districts, with 6 districts in the north, 9

Figure1: District borders in Malawi

districts in the central region, and 13 districts in the southern region. The capital city, Lilongwe, is the most populous city in the country, with an estimated population of 989,318 in 2018 (NSO, 2019). Following Lilongwe are Blantyre and Mzuzu cities, with a population of 800,264 and 221,272 respectively. The country operates under the decentralized administrative system, enforced by the Local Government Act 1998. This Act aims to enhance local governance by transferring authority and responsibility from the central government to local councils. Nonetheless, the central government still plays a significant role in national policies and major development initiatives.

3.1.2 Demographic profile

Malawi has an estimated population of 21,479,331 in 2024 (United Nations, 2024). It is one of the most populous countries in Sub-Saharan Africa (SSA) with a population growth rate of 2.7%. Approximately 15.6% of its population Malawians live in urban areas while 84.4 percent reside in rural areas (NSO, 2020), with an estimated population density of 222 people per Km2 and (UN, 2024). A significant proportion of the population is young, with 64.7% being 24 years or younger (NSO, 2020). Furthermore, forty-eight percent (48%) of the population are males and 52% are female. The country remains underdeveloped, with a life expectancy at birth standing at 62.9 years (United Nations, 2024).

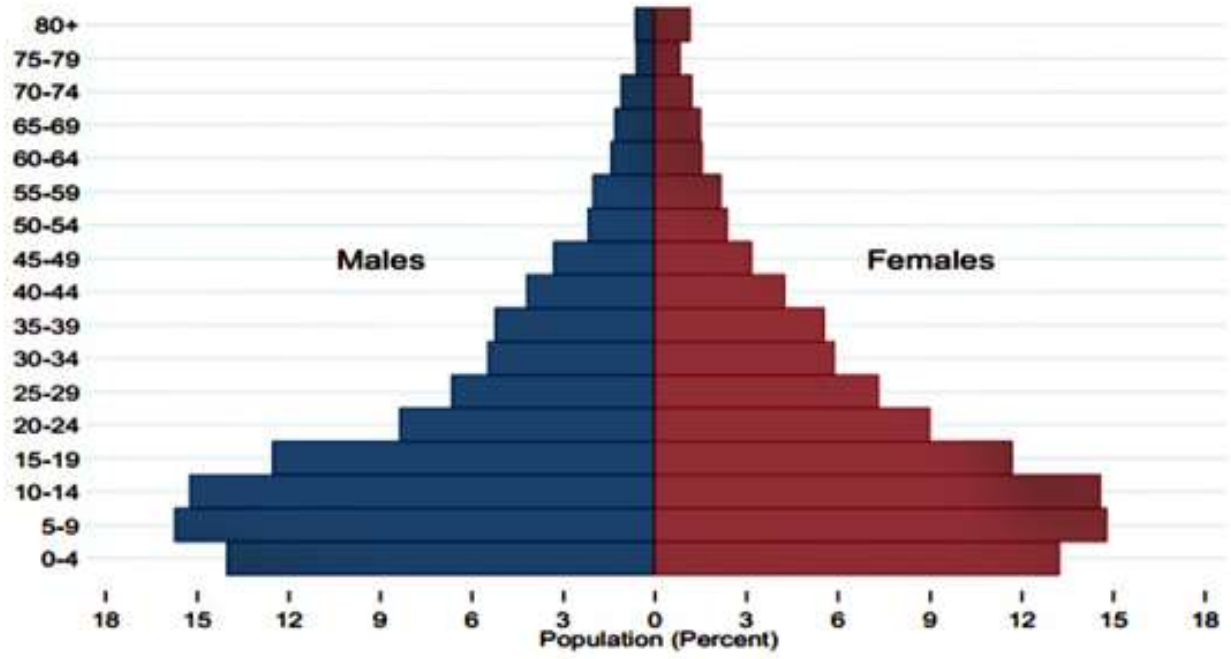


Figure 2: Age and sex pyramid of the population in Malawi, 2024

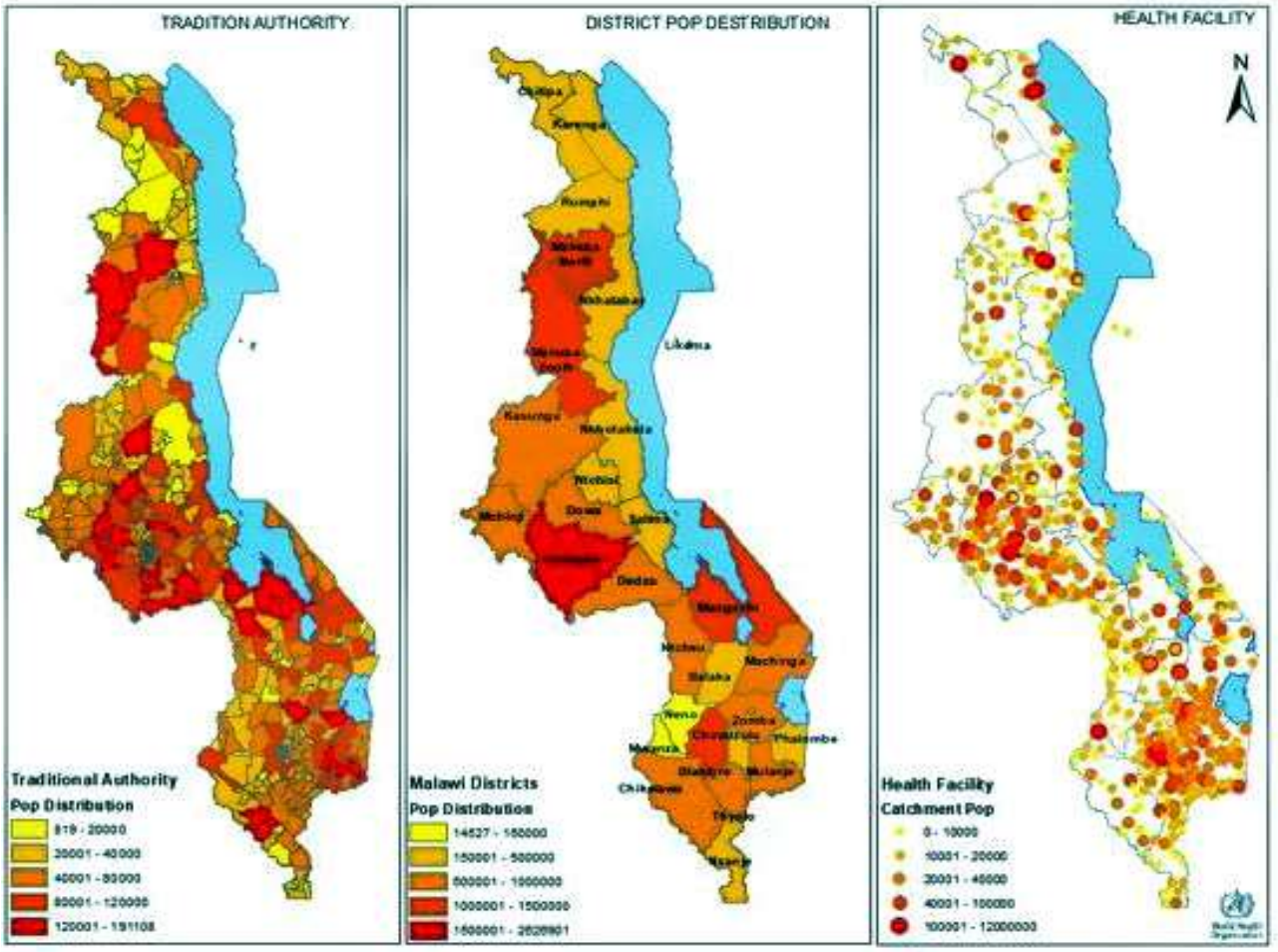


Figure 3: Distribution of population by MMCCP unit, District and Health Facilities in Malawi, 2024

3.1.3 Health profile

3.1.3.1 Mortality

Malawi faces high mortality rates due to widespread poverty, limited healthcare access, and prevalent infectious diseases like malaria, HIV/AIDS, and tuberculosis. Poor sanitation and lack of clean water also contribute to these health challenges, making the population vulnerable to diseases such as cholera. The maternal mortality ratio (MMR) in Malawi has seen significant improvements over the past decade. According to data from the World Bank, the MMR was around 439 per 100,000 live births in 2016 and has been decreasing since then to 381 per 100,000 live births by 2020 (WHO).

3.1.3.2 Infant Mortality

High infant mortality in Malawi is driven by malnutrition, infectious diseases, and inadequate maternal healthcare. The infant mortality rate in Malawi stands at 30 deaths per 1,000 live births (https://data.unicef.org/country/mwi/), https://data.who.int/countries/454). This rate reflects the number of infants dying before reaching one year of age per 1,000 live births in a given year. Neonatal conditions and cholera outbreaks significantly threaten infants, highlighting the need for improved maternal and child health services, vaccination coverage, and access to clean water and sanitation.

3.1.3.3 Nutrition Status

Malnutrition, both chronic (stunting) and acute (wasting), is a major issue in Malawi, worsened by food insecurity, poor dietary diversity, and frequent illness. Cholera outbreaks exacerbate malnutrition by causing severe dehydration and nutrient malabsorption, necessitating efforts to improve nutrition through better agricultural practices, education, and access to diverse foods.

3.1.3.4 Health care

In Malawi, poor infrastructure and limited access to primary and secondary healthcare hinder effective cholera management. Rural areas face challenges like poor road conditions and limited transportation, complicating access to health facilities. Cholera Treatment Centers (CTCs) are crucial but scarce and unevenly distributed. Enhancing infrastructure, increasing healthcare funding, and establishing more CTCs are essential for improving cholera response and ensuring equitable health services across the country.

Public and private clinics in Malawi play a crucial role in cholera case management, working together to curb the spread of this infectious disease. Public clinics, often more accessible to the general population, provide essential frontline services, including early detection, patient education, and treatment, leveraging government resources and international aid. These clinics are pivotal in outbreak responses, offering widespread immunization campaigns and community health initiatives. Private clinics, though fewer, complement public efforts by providing additional medical expertise, advanced diagnostic tools, and quicker services, often catering to those who can afford private care. Together, these healthcare facilities enhance the overall capacity to manage cholera, ensuring timely treatment, reducing mortality rates, and promoting public health awareness across the country.

In Malawi, traditional beliefs and practices often lead to delayed health-seeking behaviour for cholera. Many communities attribute cholera to spiritual causes or witchcraft, preferring traditional healers over medical facilities. This delay exacerbates the disease's spread as people seek medical help only when symptoms worsen. Mistrust of healthcare systems and misinformation about cholera treatment further hinder timely intervention. Addressing these cultural barriers through community education and collaboration with traditional leaders is crucial for improving cholera case management and promoting early health-seeking behaviour.

Cholera management in Malawi focuses on prevention through education on sanitation and hygiene, ensuring clean water sources, and prompt treatment through local health centres and community-based treatment centres during outbreaks. Collaboration among local leaders, health authorities, and international organizations is crucial for effective management and resource distribution.

3.1.3.5 Antibiotic resistance

Antibiotic resistance in Vibrio cholerae strains in Malawi has become a critical issue, complicating the treatment of cholera outbreaks. Several studies, conducted by researchers from academic and health institutions, have assessed the resistance patterns of these strains to commonly used antibiotics. Data provided by the National Microbiology Reference Laboratory shows high levels of resistance to the following antibiotics: Trimethoprim/sulfamethoxazole, Chloramphenicol, and Gentamicin, leading

to limited options when needed. The studies on antibiotic resistance provide valuable insights into the extent and mechanisms of resistance, guiding public health interventions and treatment strategies. Addressing this challenge requires ongoing surveillance and research efforts to effectively combat the spread of resistant strains.

3.1.3.6 Laboratory Capacity

The capacity of laboratories in Malawi to conduct Cholera tests varies across different regions and facilities. In urban centers like Lilongwe and Blantyre, major hospitals and health centers typically have the necessary infrastructure and expertise to perform Cholera tests, including rapid diagnostic tests (RDTs) and microbiological culture tests. Additionally, Cholera Rapid Diagnostic Test Kits (cRDTs) are increasingly utilized in urban and rural settings to provide quick and reliable diagnoses, especially in areas with limited laboratory infrastructure. In more remote regions, the availability and capacity of laboratories may be constrained, prompting reliance on mobile health teams and decentralized testing approaches to promptly diagnose and respond to Cholera outbreaks. Efforts are ongoing to enhance laboratory capacities nationwide, aiming to strengthen Cholera surveillance and response capabilities throughout Malawi. Currently, 25 laboratories are doing Cholera confirmation using culture and 7 district laboratories are yet to be activated and will extend to CHAM and major private hospitals across all regions of Malawi.

3.1.3.7 Epidemiological situation of diarrheal diseases in the country

Diarrhea is one of the priority diseases in the IDSR Technical Guidelines 3rd Edition for Malawi and a leading cause of morbidity among under five children. From January 2018 to September 2023 the country recorded 374,257 cases of diarrhea in under five children. Majority of the cases were recorded in the year 2023with 172,678 cases of diarrhea of which 9.1% reported in Lilongwe and 8.4% reported in Mangochi. (Source: HMIS)

3.1.3.8 Surveillance

Malawi adopted the IDSR strategy to enhance effective disease surveillance. Per Malawi's IDSR strategy, Cholera is an immediately notifiable disease (cases must be reported within 24 hours). The district IDSR coordinator receives reports of suspected Cholera cases from health facilities in their respective health districts, assesses them, and responds accordingly. Once a suspected Cholera case is identified the Director of Health Services (DHS) and District Environmental Health Officer (DEHO) are notified, and DEHO informs the Epidemiology Department at PHIM, under MOH. A multi-sectoral and multidisciplinary DPHERRT, composed of Epidemiology experts, Environmental Health Officers, laboratory officers, WASH experts, nurses, clinicians, and DCSAs who conducts an epidemiological field investigation and ensures that laboratory specimens are obtained, documented, tested, and reported

3.1.3.9 Cholera epidemiological profile in Malawi

The country has experienced three major Cholera outbreaks. The first was recorded in 1998-1999 Cholera season with 25,000 cases and 860 deaths (CFR=3.44%), the second was recorded in 2001-2002 cholera season with 33,546 cases and 968 deaths (CFR=2.9%) and the last major outbreak Cholera outbreak was recorded in 2022-2023 Cholera season with 53,020 cases and 1,586 deaths (CFR=3%). The CFR has been above

1% (WHO recommend <1% threshold) in all the cholera outbreak. Figure 4 illustrates cholera epidemiology trend in Malawi since 1998 to 2024.

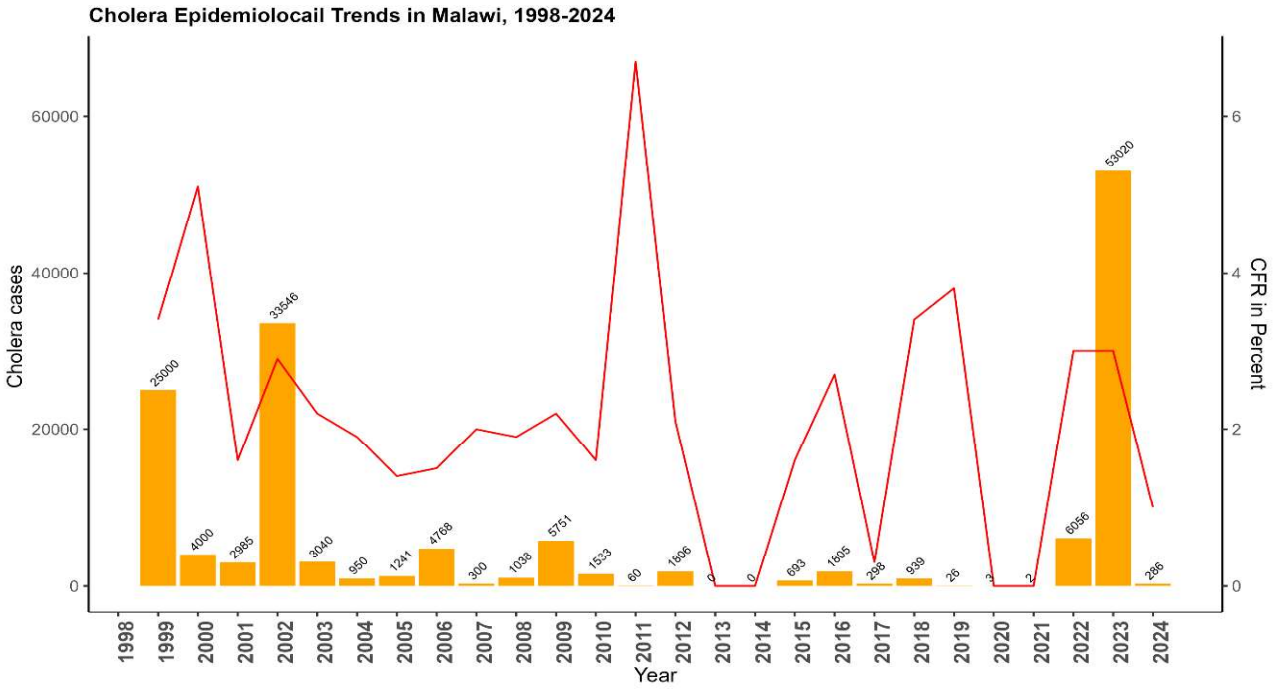


Figure 4: Cholera Epidemiology trends in Malawi, 1998-2024

The country's worst Cholera outbreak was from February 2022 to July 202. Cumulatively, a total of 59,376 cases and 1,772 deaths (CFR=3.0%) were recorded.

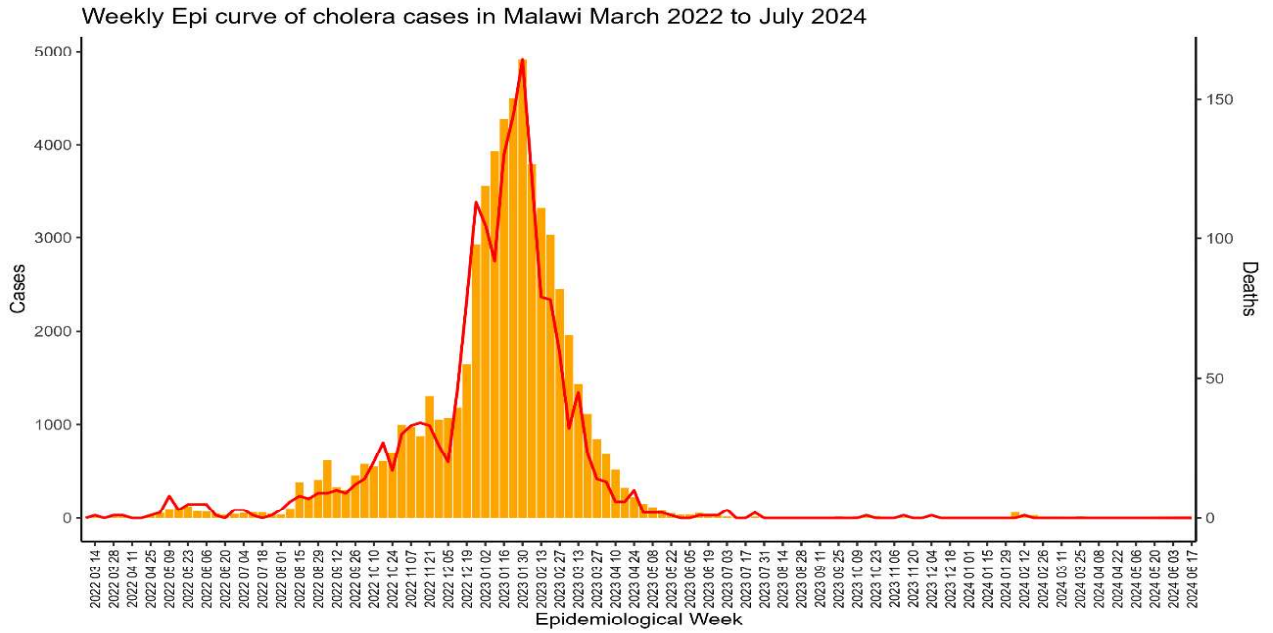


Figure 5:Weekly cholera Epi curve in Malawi; March to July 2024

All 29 health districts were affected and reported Cholera cases from March 2022 to November 2023.

In the 2022 to 2024 outbreak 55% of the cases were male and 45% were female. The age group of 20-29 contributed 26% of the total cases reported followed by the 10-19 age group which contributed 20 % of the cases.

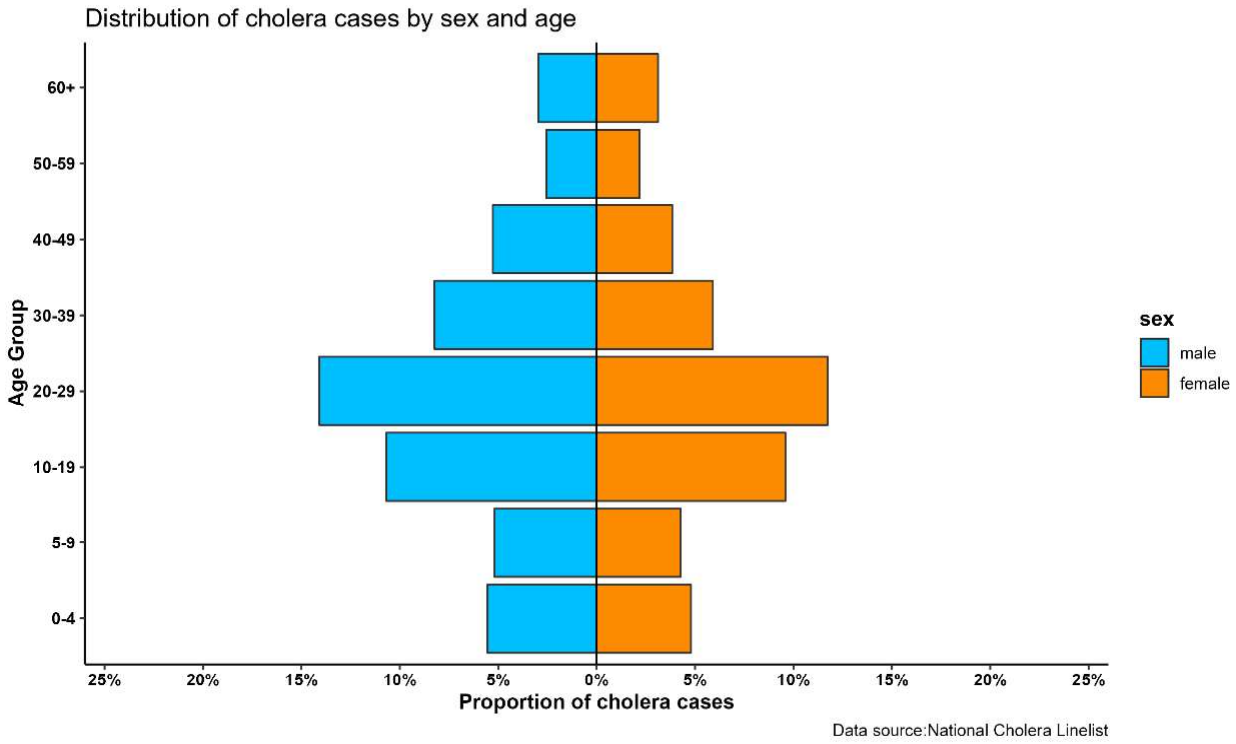


Figure 6: Distribution of cholera cases by sex and age

3.1.3.10 Factors with the potential to exacerbate vulnerability to cholera.

Inadequate coverage of access to safe drinking water and sanitation are the major risk factors for Cholera in Malawi. Climate conditions also favour Cholera outbreaks with heavy rains leading to floods or droughts. The recent prolonged Cholera outbreak in Malawi has been fueled by natural disasters, cyclone Freddy, Gombe and Tropical storm Ana. There is considerable free movement of people in all directions between Malawi, Mozambique, Zambia and Tanzania. Furthermore, it is usual for citizens of these countries to seek health care across borders as a potential risk of Cholera.

The principal risk factors of Cholera in Malawi are inadequate access to safe drinking water and sanitation facilities despite improvements brought by several initiatives over the past years. Although 67 per cent of Malawi's households have access to drinking water, distribution among districts, and between urban and rural areas, is uneven. Improved drinking water sources are more common in urban areas at 87 % compared to 63 %in rural areas. In rural areas, 37 %of households spend

30 minutes or more to fetch drinking water in comparison to 13 per cent in urban areas. Further analyses within districts also revealed the distribution of water services in some areas is poor and uneven. Only 77%of safe water points nationwide are functional. The rest are non-functional and dilapidated due to water catchment degradation, neglect, lack of spare parts and inadequate community-based water management structures (UNICEF; water sanitation and hygiene Report, 2020).

The Integrated Household Survey (IHS) by the National Statistical Office (NSO) showed a slippage by about 50%, from 70% improved sanitation coverage in 2016 to 35% in 2020 (NSO, 2020). About 8.9% of households practice open defecation in Malawi. There are sharp disparities in sanitation and hygiene coverage between urban and rural areas as well as by sex of household head. In urban areas, access to improved sanitation sources is at 65.5% while it is at 29.3% in rural areas. About 10.2% of rural households do not have any type of safely managed fecal disposal facility compared to only 1.9% of urban households, and traditional latrine with roofs is the dominant sanitation facility in rural areas. Assessment by sex of the household head reveals that the proportion of male-headed households having improved toilet sanitation facilities is higher at 37.2 percent than female-headed households at 30.8% (NSO, 2020). Regarding hygiene, only 28% of households in the country have a handWASH ing facility with water and soap available for appropriate handWASH ing (NSO, 2021).

In addition, infrastructure breakdown, damage, or latrine collapses due to heavy rains are quite common. Fishing communities are particularly at risk, with temporary fishing camps set up on the lake shore with poor sanitation, and hygiene and often no access to safe water sources. In addition to these risk factors, the movement of fishermen and vendors along the lakeshore areas and inland, coupled with the low-risk perception in those communities provided an opportunity for further spread of the disease. The recent prolonged cholera outbreak in Malawi has been fuelled by natural disasters, cyclone Freddy, Gombe and Tropical storm Ana.

3.2 Cholera case and outbreak definitions

A cholera outbreak is declared once one culture-confirmed cholera case is reported from a specific geographic unit. The following terms are defined depending on confirmed or suspected cholera outbreaks.

Suspected Cholera case: In areas where a Cholera outbreak has not been declared: Any patient aged two years and older presenting with acute watery diarrhoea and severe dehydration or dying from acute watery diarrhoea. In areas where a Cholera outbreak is declared: any person presenting with or dying from acute watery diarrhoea.

Confirmed Cholera case: A suspected case with Vibrio Cholerae O1 or O139 confirmed by culture Polymerase Chain Reaction (PCR) and, in countries where Cholera is not present or has been eliminated, the Vibrio Cholerae O1 or O139 strain is demonstrated to be toxigenic

A Cholera outbreak is defined by the occurrence of at least one confirmed case of Cholera and evidence of local transmission. In an area with sustained (year-round) transmission, a Cholera outbreak is defined as an unexpected increase (in Magnitude or timing) of suspected cases over 4 consecutive weeks of which some are laboratory-confirmed.

3.3 Major outbreaks in recent years

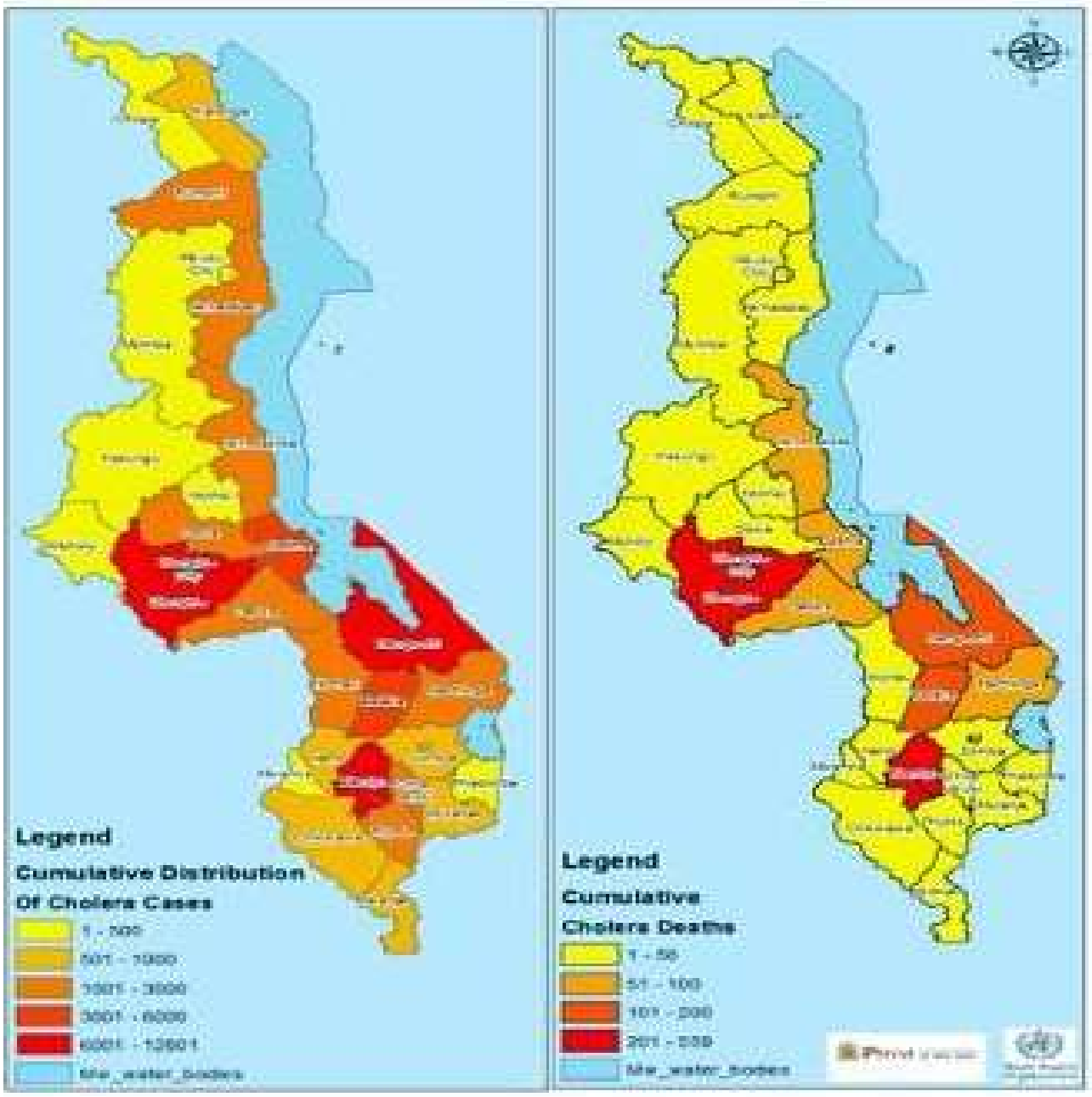


Figure 7: Distribution of Cholera cases by district, from 2022 to 2023

Malawi's first Cholera outbreak occurred in 1973, triggering a significant epidemic. Subsequent outbreaks of varying sizes have since occurred, with the highest reported cases during the 1998/99 and 2001/2002 rainy seasons, reaching 25,000 and 33,546, respectively. Since 1998, Cholera outbreaks have become nearly an annual event in Malawi, from November 1st to October 31st of the following year, often characterized by peak periods.

In 2022, following floods in the southern region, the Ministry of Health confirmed a Cholera outbreak on March 3, 2022.

The outbreak was initially limited to the Southern Region and mainly the flood-affected areas, but it spread to all regions and districts in the country by August 2022. The country was responding to multiple emergencies, including COVID-19, wild polio virus, and natural disasters (Cyclone Freddy, Cyclone Gombe, and Tropical Storm Ana).

As of August 5, 2023, the country had reported 58,979 cases and 1,768 deaths (CFR 3.0%) from all 29 districts, making it the largest Cholera epidemic ever reported in Malawi. Among the 1,768 deaths recorded, 94.7% were facility deaths and 5.3% occurred in the community. The incidence rate of cholera had decreased since May 2023. Northern and Central region districts were relatively less affected. Lilongwe was the most affected district (12,787 cases), followed by Blantyre (8,933 cases) and Mangochi (8,512 cases). Overall, infections were higher among males (54.6%) than females (45.4%) for the total number of reported cases for whom sex and age were aggregated. Cumulatively, the most affected age groups were between 20-29 years (25.8%) and 10-19 years (20.0%), respectively

3.4 Vaccination profile

Malawi introduced the Oral Cholera Vaccine (OCV) in 2015, primarily using it in reactive campaigns targeting high-risk districts. The Ministry of Health, in collaboration with international partners, has conducted several OCV campaigns to prevent or control outbreaks. These campaigns have been successful, although they faced challenges such as managing population migration, vaccine hesitancy due to cultural and religious beliefs, data accuracy, and resource constraints for demand creation and social mobilization.

3.4.1 Registration of OCV vaccine

In Malawi, the Cholera vaccine is registered and approved for use by Medicines and Pharmacy Regulatory Authority approved brands: Shanchol TM, Euvichol, and Euvichol Plus. The registration of the Oral Cholera Vaccine (OCV) in Malawi is aligned with the global recommendations by the World Health Organization (WHO), ensuring its availability for both preventive and reactive use in the country.

3.4.2 Coordination of the Cholera Vaccination

The coordination of choleravaccination in Malawi is primarily managed by the Ministry of Health (MoH-EPI). The MoH collaborates with various stakeholders, including international organizations like WHO, UNICEF, Red Cross, and Global Vaccine Alliance Initiative (GAVI) as well as non-governmental organizations (NGOs) and local health authorities. The Malawi Immunization Technical Advisory Group (MITAG) provides technical guidance and recommendations to the MoH on immunization strategies, including the use of OCV as follows;

i) **Endemic Regions/PAMIs:** As part of a preventive control strategy to build immunity in populations at higher risk of cholera.

ii) **Outbreaks:** As part of a reactive control strategy to contain and control the spread of cholera during outbreaks.

iii) **Humanitarian Emergencies:** As part of a pre-emptive control strategy to protect populations in areas affected by

crises, where the risk of cholera is high due to disrupted water and sanitation infrastructure.

iv) **Integration of OCV Campaigns with Other Health Interventions:** The implementation of OCV campaigns in Malawi is often integrated with other health interventions to maximize the impact and efficiency of public health efforts. This integration includes:

- **WASH Initiatives:** OCV campaigns are complemented by Water, Sanitation, and Hygiene WASH programs. During vaccination campaigns, efforts are made to improve access to clean water, build sanitation facilities, and promote hygiene practices.
- **Routine Immunization services:** OCV campaigns are sometimes integrated with other routine immunization activities, allowing for a comprehensive approach to disease prevention and enhancing the reach of vaccination efforts.
- **Health Education and Awareness:** Community health education initiatives are conducted alongside OCV campaigns to inform and educate the public about cholera prevention, the benefits of vaccination, and general health practices.
- **Nutrition and Maternal Health Programs:** In some areas, OCV campaigns are coordinated with nutrition and maternal health programs to provide a holistic approach to improving overall community health, particularly in vulnerable populations.

3.4.3 Vaccination activities in NCP geographical units

In the recent outbreak (2022 - 2023), reactive OCV vaccination campaigns were carried out in areas within districts as shown in **Annex 2.** During these campaigns, Districts and health facilities were reporting units because PAMIs were yet not identified. In the course the following activities were conducted:

- Development of micro-plan for OCV deployment in an emergency
- Conducted Cold chain inventory assessment to identify gaps in cold chain capacity at all levels for vaccine storage
- Developed a request to GTFCC for reactive OCV when there is a need
- Provided supplies and vaccines at all relevant levels
- Trained vaccinators and supervisors on OCV use and administration
- Conducted community engagement and awareness in the areas where OCV campaigns were implemented
- Conducted actual OCV vaccination to the population aged one year and above
- Conducted data recording, collection, reporting
- Conducted monitoring of adverse events following immunization
- Conducted post-coverage survey for OCV campaigns

Annex 1 provides asummary of Pre-emptive (P) OCV, Reactive (R) OCV, campaigns conducted in Malawi since March 2015 – 2023.

3.4.4 Process for submitting an emergency reactive OCV request.

The process of submitting an emergency reactive Oral Cholera Vaccine (OCV) request to the International Coordinating Group (ICG) is initiated by the Incident Management Team guided by Presidential task force on Public Health Emergencies. The process will be initiated within 4 weeks of reporting of a culture-confirmed cholera outbreak in any given area with a historical precedence spread to other areas and also the risk of spread in the affected area. The request comprises the following documents: completed ICG request form, vaccination plan, a map of areas to be vaccinated and adjacent areas and budget.

The request will also include confirmation that OCV campaign has not been conducted in the previous 3 years in the same area as well as agreement by Pharmacy and Medicines Regulatory Authority

3.4.5 Timeline for preventive OCV campaign

Based on the fact that once a person gets 2 doses of OCV (preventive) the period of protection is 3 years and Malawi conducted its last OCV preventive OCV campaign in 2021, it is recommended that the next OCV campaign should be conducted in 2024, 2027 and 2030.

3.5 Water Sanitation and Hygiene Profile

Delivery of WASH services in Malawi is multi-sectoral in nature, with several government ministries, departments and agencies involved such as Water and Sanitation, Health, Education, Environmental Affairs, Information, Finance, Justice, Homeland District and City Councils. Water boards, NGOs, and the community also play a critical role. The Ministry of Water and Sanitation provides overall coordination and leadership of WASH services in Malawi.

At the central level, the WASH Cluster works closely with technical offices in affected districts (PAMIs) to support coordination of actors, provide updates on the outbreak to inform preparedness and response, mobilize support in terms of implementation of activities as well as supplies. At this level, the WASH Cluster engages Development Partners such as UN Agencies, NGOs and government agencies for support to prepare, respond and implement post response activities. Based on updates received from the WASH Cluster and MOH on stock levels in affected districts, as well as projected needs to probable future cholera outbreaks, existing stocks are boosted by procuring and positioning more items. The planning figures for essential WASH supplies can be based on actual information or projected figures in the National Contingency Plan. Through the WASH Cluster, gaps in emergency WASH supplies and services are shared with members for appropriate support.

During past cholera outbreaks, essential supplies such as buckets, soap, chlorine, and aqua tabs were distributed to households to ensure safe water storage and treatment, and to promote personal hygiene. In addition, rapid water quality test kits were provided to Health Surveillance Assistants to monitor and ensure the safety of drinking water sources, by detecting contamination and taking immediate corrective actions therebypreventing the spread of cholera. Prefabricated latrines were installed in cholera control units to provide immediate

and safe sanitation facilities. Portable hand-washing stations were set up in public places, such as markets and schools, to encourage regular hand washing with soap, reducing the risk of cholera spread through contaminated hands. Further, door-to-door campaigns were conducted to educate households on good hygiene practices.

3.5.1 Organization of WASH Services in Malawi

At the district level, the rural water supply and water resources management is done by the government through the District Water Development Office. The provision of piped water supply in cities, peri-urban areas and market centres (trading centres) is the responsibility of Water Boards.

Promotion of sanitation and hygiene at the household and community levels is being done by various extension workers led by community health workers in the Ministry of Health. The District Council also provides sanitation facilities in public places such as markets, bus depots, etc., and institutions such as schools, health facilities, prisons, and Ports of Entry (POEs). District and City/ Municipal Councils also conduct inspections, licensing and enforcing sanitation and hygiene in food and business premises. The management of solid waste is also the responsibility of District and City/ municipal councils.

The multi-sectoral nature of WASH services calls for strong coordination at all levels. At the community level, WASH is coordinated by Water Point Committees, Village Health Committees (VHCs), Village Development Committees (VDCs), and Area Development Committees (ADCs). At the district level, the District Coordination Committee (DCT) coordinates WASH services and reports to the District Executive Committee and Full Council. DCTs operate in all Districts while Urban Coordinating Teams (UCTs) operate in City Councils. There is also a WASH cluster at the district level regarding preparing for and responding to disasters and emergencies.

At the national level, there is a national WASH Technical Working Group (TWG)- replacing the National Sanitation and Hygiene Coordination Unit. The TWG has subcommittees which are the Water Supply TWG and the Sanitation and Hygiene TWG. During outbreaks and disasters, the WASH is coordinated by the WASH Cluster.

Cholera Interventions Implemented in Malawi Geographical Areas

The WASH cholera vulnerabilities are common for all the districts in all the three regions of the country. However, some critical factors are unique to districts and regions. This has been determining the type of WASH interventions being implemented.

Interventions in The Northern Region Districts

The PAMI districts in the Northern Region of Malawi are Karonga, Likoma, Mzimba, Rumphi, and Nkhata Bay.The WASH Cholera interventions being implemented to address risk factors are drilling and rehabilitation of boreholes, expansion of piped water supply, water treatment with chlorine, construction of sanitation facilities in Cholera Treatment Units (CTUs), markets, schools and health facilities and promotion of sanitation in fishing camps and community level through door-to-door sensitization, Community Led Total Sanitation and Case Area Targeted Interventions (CATI). For border district of Karonga and Rumphi, there have been cross-border activities to discuss joint interventions with their counterparts (Zambia for Rumphi, and

Tanzania for Karonga), including strengthening WASH in POEs and surrounding areas.

Interventions in the Central Region Districts

The PAMIS districts in the Central Region of Malawi include Lilongwe, Dedza, Salima, Ntcheu, and Nkhotakota. These districts are not spared from floods, especially Nkhotakota Dedza and Salima. There is poor sanitation and hygiene in fishing camps in Nkhotakota and Salima districts. Lilongwe City is always hard hit due to informal settlements where there is rampant use of unsafe water sources and poor sanitation and hygiene.

General activities have included drilling and rehabilitation of boreholes, expansion of piped water supply, water treatment with chlorine, construction of sanitation facilities in Cholera Treatment Units (CTUs), markets, schools, and health facilities, promotion of sanitation in fishing camps and sanitation promotion and community level through door-to-door sensitization, Community Led Total Sanitation (CLTS) and Case Area Targeted Interventions (CATI) and cleanup campaigns.

In Lilongwe City, there have been projects to expand safe water supply to unplanned settlements, expansion of the sewerage network, rehabilitation of sewerage treatment plants, and construction of sanitation and hygiene facilities in schools, markets, and inspection and enforcement activities. In Nkhotakota and Salima, interventions have also included the promotion of sanitation and hygiene in fishing camps where durability is affected by sandy soils.

Interventions in the Southern Region Districts

Most of the PAMIS are in the Southern Region of Malawi in the districts of Mangochi, Balaka, Machinga, Zomba, Phalombe, Mulanje, Blantyre, Chikwawa, Neno, and Nsanje. These districts are prone to frequent disasters, especially flooding and landslides, with Chikwawa and Nsanje being hit almost yearly. The other challenge in the Southern Region is fishing activities in Lake Chilwa, which is surrounded by Machinga, Zomba, and Phalombe Districts. Fishermen stay right in the Lake, on floating homes called Zimboweras, without sanitation facilities and safe water supply. On average, there are over 60,000 fishermen in the Lake at any time.

In addition, border districts such as Mangochi, Machinga, Mulanje, Chikwawa, and Nsanje are affected by cross-border cholera transmission and high-water salinity. There are also challenges of irrigation farming in the dry season across the Shire River, where farmers stay without access to safe water and poor sanitation fueling cholera for weeks when away from their homes.

In view of these risk factors, the activities that are happening are the construction and rehabilitation of boreholes, expansion of piped water supply, water treatment with chlorine, construction of sanitation facilities in Cholera Treatment Units, markets, schools, and health facilities, promotion of sanitation in fishing camps and sanitation promotion and community level interventions through door-to-door sensitization, CLTS, CATI, and clean-up campaigns.

The special WASH interventions include distribution of chlorine to farmers in Nsanje and Chikwawa, construction of sanitation facilities in public places and institutions to respond to floods, CLTS, distribution of water filters and chlorine to fishermen in Lake Chilwa, sanitation and hygiene promotion in POEs.

Table 1: WASH Indicators by region in Malawi 2024

	Household Level		
Region	**% of the population using unimproved water facilities**	**% of the population using unimproved sanitation facilities**	**% of the population without hand WASH ing facilities**
Northern	52	90	72
Central	32	85	66
Southern	50	86	77
National	42	86	72

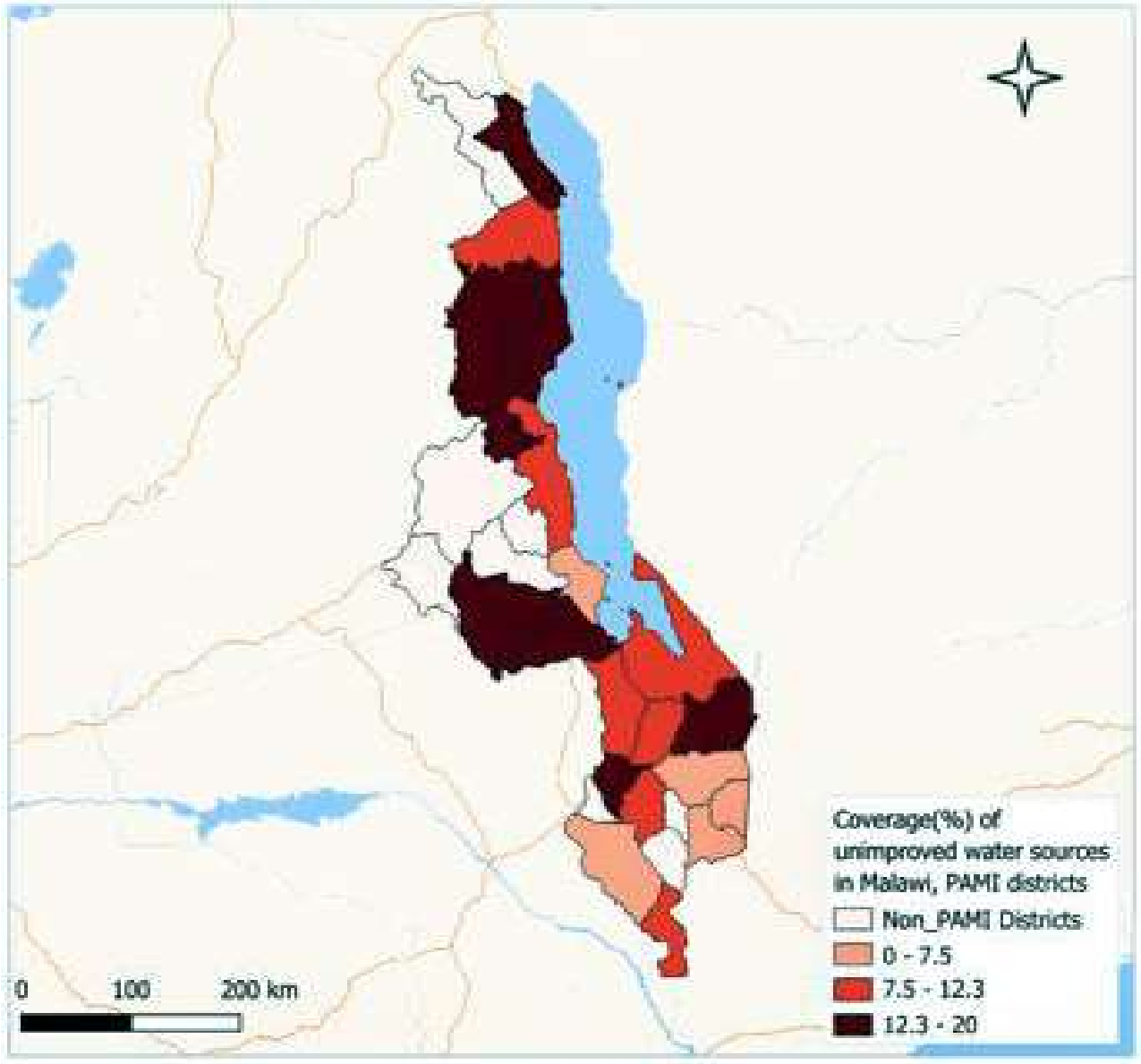


Figure 8: Percentage of population using water facility, by MMCCP operational geographic unit, Malawi, 2024

4 Priority Areas For Multi-Sectoral Interventions (PAMIS)

The process of coming up with the PAMIS started in November 2023. The PAMIs were identified using the following information on cholera outbreaks from 2018 to 2023: calculated cholera priority values for all geographical units across the country using GTFCC Excel-based tool; selection of priority areas with priority index score of at least 6.

This process led to the identification of 80 TAs which had experienced 86% of cases and 58% of deaths from 2018.Further to this, validation was conducted which led to the identification of an additional 39 TAs based on following vulnerability factors: physical exposure to floods and storm surge, WASH indicators, areas with high population density or overcrowded settings, extreme climate and weather conditions and history of cross-border infections. A total of 118 TAs have been identified as PAMIs in 20 districts in Malawi.

4.1 PAMIs identification methods

The process for identifying Priority Areas for Multi-Sectoral Interventions (PAMI) for cholera control in Malawi involves two steps: first, data entry and analysis using the GTFCC tool at the Traditional Authority level over five and a half years; and second, a stakeholder validation workshop, held in Mponela, Dowa, from September 5-8, 2023, to review and validate the PAMI list, ensuring targeted and effective cholera control interventions.

4.2 Documentation of PAMIs identification

Malawi conducted an analysis to identify the Priority Areas for Multi Sectoral Interventions (PAMIs) where conditions for cholera transmission and persistence were high. The analysis selected the Traditional Authority level as an operational geographic unit for identification of PAMIs which included the Sub-Traditional Authority (STA) and a subdivision of a district. The identification process used data collected over the last five and half years from January 2018 to September 2023, corresponding to 295 weeks.

The analysis used data on the Number of cholera cases (suspected, probable, and confirmed) per week, the Number of cholera deaths (suspected, probable and confirmed) per week and Number of weeks with at least one reported cholera cases (suspected, probable and confirmed) by operational geographic unit per week to determine the TA's Priority Index (PI). The PI was calculated as a sum of cholera above-mentioned epidemiological indicators also known as Incidence, Fatality, and Persistence respectively. Epidemiologic indicators were scored in four categories based on the 50th (median) and the 80th percentiles of their respective distributions.

A score ranging from zero to three points was attributed to each TA for each epidemiologic indicator. The Priority Index (PI), as such, ranged from 0 to 9, where a score of 0 indicates that a TA scored 0 across all indicators, while a score of 9 indicated that a TA scored 3 across all indicators. All TAs with a priority index score between 6 and 9 were included in the priority areas for multi-sectoral interventions.

In addition to the priority index to determine the PAMI eligibility, the analysis also took into account the vulnerability factors as indicated in the table below. Any TA which scored a PI of 5 and a yes on any of the vulnerability factors was also regarded as a PAMI.

Table 2: Vulnerability Factors Considered for PAMIs Identification

Vulnerability Factor	Description
Density	Areas with overcrowded setting and/or high population Mass gatherings
Cyclone	Physical exposure to storm surge
Flood	Physical exposure to floods
Climate Change	Areas at high risk of extreme climate and weather conditions
Cross-border	Located adjacent to cross-border cholera affected areas or identified PAMIs
WASH	Areas with more than30% of the population with access to unimproved water facility type Areas with more than 50% of the population with access to unimproved sanitation facility type Areas with more than 50% of the population with no hand WASH ing facility on premises

4.3 Outcomes of PAMIs identification

The identification process found that 118 out of 421 TA's were classified as PAMIs from 20 out of 29 districts in the country. This analysis indicated that these priority areas constitute about 28% of all TAs and cover 47.1% of the national population. Additionally, the results show that the designated PAMIs account for 86.2% of cholera cases and 81.5% of cholera-related deaths.

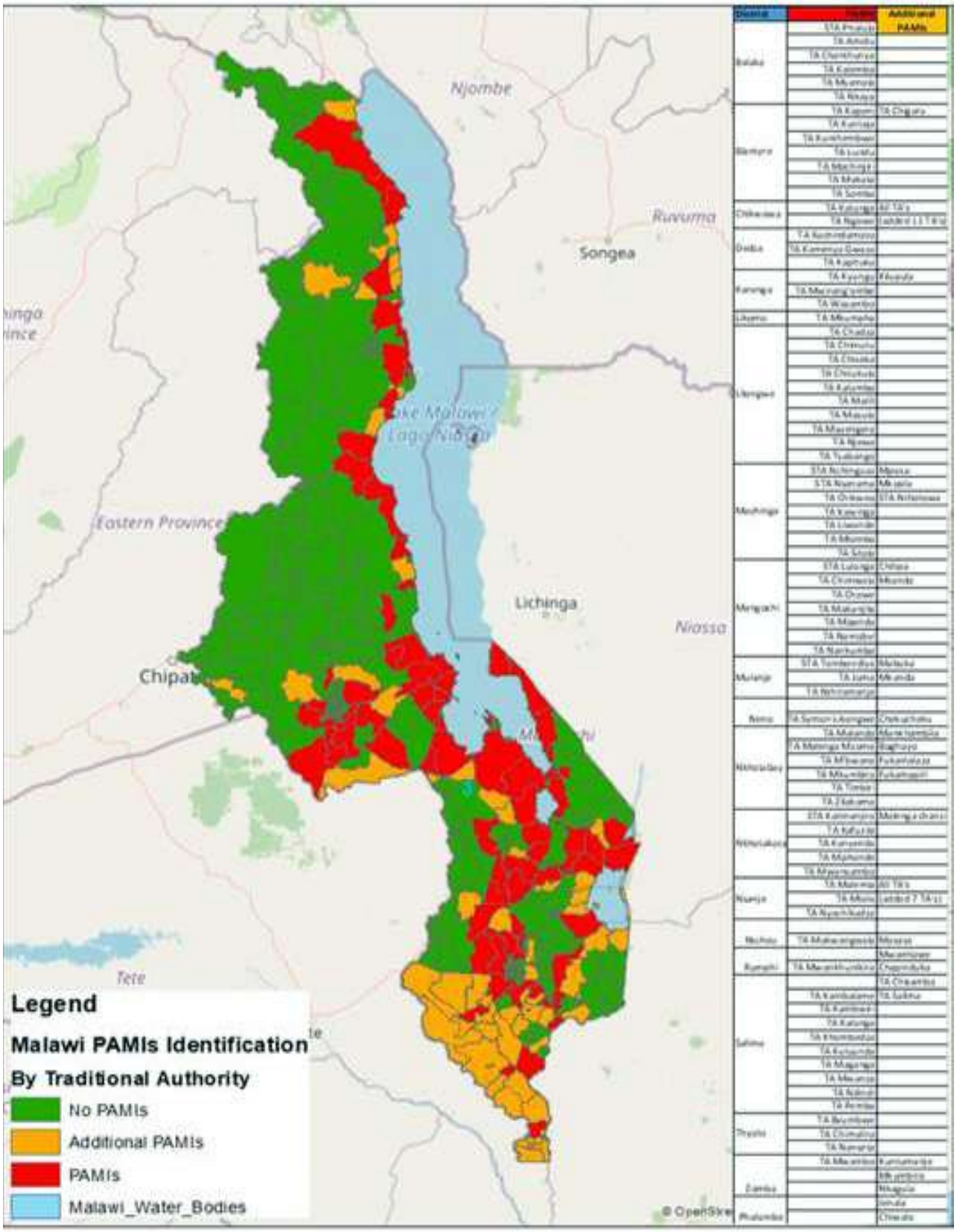


Figure 9: Map of PAMIs in Malawi by MMCCP operational geographic unit and GTFCC priority index, 2024

5 Situation Analysis

5.1 Cholera pillar capacity and Gaps assessment

5.1.1 Coordination

Malawi has a multidisciplinary cholera coordination task force at the national level and committees at district levels. These structures are in place to enhance coordination between relevant sectors such as WASH, Education and Communication, with representatives from relevant ministries, local authorities, international agencies, NGOs, and others. The structures also facilitate participation of all relevant partners through their clusters or pillars. The membership of these structures are multi sectoral and multidisciplinary, for instance, the National coordination task force (PTF) includes representation from faith groups, local leaders, Civil Society Organizations (CSOs), Malawi Human Rights Commission (MHRC), besides the relevant line ministries.

At continental level, the Africa CDC has developed a framework for cross-border surveillance and information sharing in the Africa region (in which Malawi is actively involved) aimed at strengthening border surveillance systems in and between countries and ensuring linkages with national surveillance systems. Similarly, the country is actively engaged in the SADC Council of Ministers, which emphasizes coordinated efforts among member states in combating cholera.

Malawi cooperates with its neighboring countries and international organizations to manage and mitigate public health threats that cross national boundaries. Disease outbreaks such as COVID-19, Cholera have shown the necessity to strengthen collaborations with neighboring countries. Memoranda of Understanding (MoUs) are established with neighboring countries to enhance disease surveillance and manage public health events. During the 2022-2023 cholera outbreak, cross-border transmission between Malawi and Mozambique was a significant issue, prompting the development of a joint cholera plan. Periodic cross-border collaboration meetings and district-to-district discussions are held, but challenges persist in information sharing due to a lack of established protocols on information sharing.

There are no established cross-border technical working groups with neighboring countries. A strategic risk assessment has been conducted with Zambia targeting the Mchinji-Mwami border where public health hazards including cholera have been identified and border specific response plans developed. Assessment of IHR core capacities have been jointly conducted with the United Republic of Tanzania focusing on Songwe-Kasumulu Border and a joint action plan to address the identified gaps has been developed. Continued engagement with neighboring countries to implement action plans is limited due to financial constraints.

Malawi ensures coordination at community level where most cholera cases originate. The country has three major coordination structures at Traditional Authority, health center, and Village levels, namely Area Development Committee (ADC), Health Centre Management Committee (HCMC) and Village Development Committee (VDC) respectively. These structures reinforce and bridge the health sector and the community's enabling

participation of communities in outbreak response.

During the previous outbreaks, the country always relied on preparedness and response plans which included specific activities with indicators and targets by pillars. However, these plans have always lacked well defined and proper frameworks on Monitoring and Evaluation. This has contributed to limited coordinated monitoring and evaluation of the national cholera preparedness and response plans. The current MMCCP includes an M&E framework aligned to the Health Sector Strategic Plan (HSSP III), which is the overarching guidance of all health interventions in Malawi aiming at integrating the efforts.

Currently the government of Malawi does not have a specific budget line ring fenced for cholera activities in its fiscal budget. With the harmonized health sector approach adopted through the operationalization of the HSSP III, the country heavily relies on donors and partners. For instance, during the 2022/23 cholera outbreak, the response plan was significantly supported by donations. The absence of the national cholera resource mobilization plan also jeopardizes sourcing of financial support to implement and monitor cholera interventions.

Table 3: SWOT analysis for Coordination Pillar

Strengths	Weaknesses
• Availability of PTF that provides high level leadership of Public Health Emergencies including cholera • Availability of national EOC and PHEOC. • Availability of coordination structures such as PHEMC, PHERRT, Type A EOCs (during an emergency the districts do activate the EOCs) • Multi-sectoral (one health) collaborations • Availability of the following plans: o National Cholera preparedness and response plan o National Multi-Hazard Contingency Plan-Overarch all emergencies, Championed by DODMA o Malawi Multi-Hazard Emergency Response plan-concentrated on Public Health sector o Malawi Emergency Preparedness and Response roadmap (2023 - 2025) o Cholera contingency plan o Cholera manual for health workers	• Inadequate capacity (in numbers, PHEM knowledge and skills) in some pillars (Case management and OSL) • Delayed multi-sectoral collaboration • Weak system on cross border coordination mechanism • Some of the health facility rapid response teams are not active • Absence of functional PHEOC • Irregular coordination meetings at district level • Lack of SOPs on DODMA role for activating multi-sectoral coordination for national public health emergency • PHEOC handbook not disseminated • Outdated Public Health Act. • Lack of district multi-hazard plans • Inadequate funds for cholera preparedness and control activities including prepositioning of resources

o Disaster management act o Health Sector Strategic Plan (HSSP III) o District Implementation Plans (DIPs) • Existing coordinating structures • Political will to mobilize resources • Incident Management System for responding to public health emergencies • Availability of community structures like HCM, WUA, ADC • Availability of influential leaders: traditional, religious and political leaders	• Limited allocation of resources for cholera in the national budget at both national and district level • Lack of integrated dashboard to display epidemiological, logistical and intervention data • Poor coordination between pillars at district level • Lack of capacity to enable good coordination of the structures • Inadequate coordination between government and some partners on funding allocation • Unmatched priorities between the government and partners
Opportunities	**Threats**
• Availability of partners supporting cholera response • Willingness of staff to work in during cholera outbreak. • High level ministerial engagement • Availability of surveillance platforms • Availability of modern technologies for communications • Global Health Security project towards strengthening One health Multisectoral collaboration planned for launch in 2024 • Availability of partners to support development and dissemination of SOPs and guidelines • Availability of global taskforce as well national task force on cholera control • Availability of committed partners to foster coordination between pillars especially at national level • Existing continental cross border collaboration frameworks (i.e., Africa CDC council of ministers) • Readily available support from the community	• Existences of multiple emergencies and occurrence of natural disasters • Ongoing risk of cholera in the Africa and other continents with potential of continued transmission • Changes in disease burden • Emerging of new diseases • Economic instability • Climate change • Limited capacity to sustain coordination due to limited resources • Donor specificity/priorities: which infringes cholera implementation

The situation analysis has identified a strong cholera coordination system, with the national task force and sub national committees ensuring multi-sectoral collaboration across various sectors. However, cross border collaboration, while active with established MoUs between Malawi and neighboring nations, faces challenges due to limited established protocols for information sharing and lack of functional TWGs. Despite having community-led coordination structures that effectively link the health services with local population, gaps exist in monitoring and evaluation, as previous cholera plans (preparedness and response) lacked robust frameworks. The SWOT analysis has also revealed significant financial constraints which impact the ability to implement and sustain coordinated efforts, as there is no budget line specific for cholera, hence heavy reliance on donor support.

Strengths include political will, strong leadership, and the existence of critical emergency response plans. However, weaknesses like outdated legal frameworks, inadequate funding, and delayed multi-sectoral collaboration threaten the sustainability of these efforts. Opportunities exist in enhancing partnerships and leveraging new technologies, but threats like economic instability and climate change present ongoing challenges.

5.1.2 Surveillance and Laboratory Pillar

Cholera is one of the notifiable diseases in Malawi. Therefore, its surveillance is done in the context of the IntegratedDisease Surveillance and Response System (IDSR). Health facilities and Points of entry are the basic surveillance units and the entry point of patients into the formal health care system. Reporting of cholera cases is streamed from health center to district level, and the district level reports to the National Level. All suspected and confirmed cholera are reported to the Public Health Institute of Malawi (PHIM).

The IDSR strategy uses Indicator-based Surveillance (IBS) and Event Based Surveillance (EBS) at facility and community level. At community level, volunteers and key informants detect signals and events of public health importance. Community engagement and participation, and a reliable response network are key features of an effective community EBS.

In the absence of the Cholera outbreak, the system uses passive surveillance where reporting is done using routine structures. During an active Cholera outbreak, the system uses both passive and active surveillance. Active surveillance involves use of community case search. In areas where confirmed cholera cases have not been recently reported, if one or more clinically suspect cases of cholera return a positive RDT result, immediately Cholera alert is launched and stool specimens are sent to the culture laboratory for confirmation by culture, and initiate response measures.

A minimum of 5 samples are collected and tested every week from each Cholera Treatment Unit (CTU) to confirm if *vibrio cholerae* is still circulating and for sensitivity analysis. For large or nationwide outbreaks, a representative number of CTUs (sentinel sites) are selected. A minimum of 5 samples are collected and tested every 2 weeks from each CTU. All districts and regions in Malawi have been provided with cRDT kits. Districts have expanded to health centers to be testing the suspects of Cholera. Health centers have expanded to some catchment areas to conduct the tests.

Cholera data is captured using both paper based and electronic systems. For paper

based the data is captured using Cholera line-list registers and case-based surveillance forms. For the electronic system the Nation adapted the use of DHIS-2 One Health Surveillance Platform (DHIS2- OHSP) which is a web system. All Cholera data captured from the health facility level is stored at the National level. The DHIS2-OHSP is the mother database for IDSR data at the National level. Cholera data is analyzed based on the time on which the case occurred, person, and the place where the case has occurred. Disease measures such as Attack Rate, Cumulative Incidence Rate are used. The analyzed data is presented using tables, Epidemic Curves, Population pyramid chats, Bar charts and pie charts.

The Cholera surveillance performance will be monitored by conducting periodic risk assessment using the Assessment of Cholera Surveillance Interim Guidance GTFCC 2024. In addition to this routine supervision and IDSR review meeting will be utilized to review the Cholera surveillance. During an active Cholera outbreak, daily reports are produced from all the 29 health districts in Malawi and a National Situation report is produced on a daily basis. Weekly Situation reports are produced using the aggregate figures of daily reports. The National Cholera focal person shared the National report with all UN agencies. Once a Cholera suspect is reported from any geographic units, the District Public Health Emergency Rapid Response Team with support from National level conducts outbreak investigation to confirm the outbreak.

Malawi also implements Cholera cross border surveillance. At national level, the framework for cross-border Integrated Disease Surveillance and Response exists as a mechanism for fostering collaboration and partnerships, sharing of surveillance data and epidemiological information, harmonization of outbreak investigation and response interventions under one health approach in the cross-border zones. Cross-border surveillance zones and surveillance committees were set up along national borders, covering populations between two or more countries. Six cross-border zones were established between Malawi and its neighboring countries (Zambia, Mozambique and Tanzania). However, the existence of porous borders and uncharted routes in the border areas increase cholera transmission from neighboring countries making it hard to effectively respond and contain the outbreak.

Table 4: SWOT Analysis for Surveillance and Lab

Strengths	Weaknesses
• Adaption of Integrated Disease Surveillance and Response (IDSR) Technical Guidelines 3rd Edition and Event-Based Surveillance (EBS) • Timely outbreak investigations (Active cholera case search) due to the presence of rapid response teams at the national, district and facility level	• Inadequate emergency funds to support surveillance activities at district and national level • Inadequate Cholera/ outbreak data and information sharing with neighboring countries • Untrained cross border surveillance committees • Weak cross-border surveillance and information sharing

• Timely transmission of cholera data from reporting sites through One Health Surveillance Platform (OHSP) and WhatsApp platforms • Regular surveillance meetings at national and district level • Cholera data audit and validation exercise • Cholera Deep Dive Analysis conducted • Availability of IDSR coordinators at the national and district levels, IDSR focal points in all Government and CHAM facilities, data clerks, Health Surveillance Assistants (HSAs) and Community Health Volunteers (CHV) in all communities • Established cross border surveillance committees in the cross-border surveillance zones • Availability of functional culture laboratories in the country • Availability of personnel to use the cRDTs • Dissemination of Standard Operating Procedures for Cholera sample collection and testing from the national to the sub-national levels in the course of the response. • Training in sample collection and referral management by Africa CDC and NMRL • Established WhatsApp platform for daily reporting of RDT results by laboratories from the districts to the national level • Ability to screen cases at points of entries	• Incomplete line list data from districts • Inadequate human resources for surveillance (i.e. data entry clerks) • Inadequate cholera data validation and cleaning at district level • Non-inclusion of some private health institutions in IDSR system • Suboptimal reporting by private health service providers in surveillance • Limited capacity for cholera testing at district level due to lack of Cholera RDT for screening at community level • Inadequate training to DCSAs • Incomplete reporting of Healthcare Worker infections for fear of stigma • Inadequate preparedness at the early phase of the pandemic • The national sample referral strategy is currently in draft form • Limited sharing of cholera testing data by Laboratory team with the surveillance team • Delayed adoption of Cholera testing strategy • Irregular laboratory mentorship and supervision of laboratories at the sub-national levels • Sub-optimal coordination between Surveillance and laboratory teams • Inadequate capacity of the laboratory staff to run clinical chemistry tests especially at CTUs. • Lack of a dedicated sample referral system could affect movement of samples from CTUs to hospital laboratories with capacity to perform biochemistry and haematology tests. • Lack of testing guidelines to provide biochemistry and haematology tests as part of cholera response planning

Opportunities	Threats
• Availability of some trained health workers on IDSR • Availability of mobile phone network providers that can be utilized for electronic IDSR data reporting • Availability of partners to support implementation of activities • Existence of a digital health strategy with several digital systems and tools already developed e.g., One Health Surveillance Platform (OHSP), Health Management Information System (HMIS), etc. • Availability of cross border surveillance committees which can implement cross border surveillance in the border areas • Availability of Rapid Diagnostic Test kits (RDTs) provided by partners	• Non-compliance on use of reporting tools by private institutions • Porous borders and use of unchatered Points of Entry (PoEs) • Staff turnover of cross border surveillance committee members • Limited internet hindering the effective use of digital surveillance tools • Hostile communities and religious/cultural beliefs hindering surveillance activities implementation • Inadequate knowledge on Cholera by community members • Limited Government funding for Cholera kits and supplies • Few partners supporting Cholera diagnostics (kits and supplies) • The unprecedented scale of the outbreak • Limited stock of supply of biochemistry and haematology tests in the country and long lead times for delivery of the reagents.

The Surveillance and Lab SWOT analysis highlights strengths such as the adoption of IDSR guidelines, timely outbreak investigations, established cross border surveillance committees, functional laboratories, supported by trained personnel and established communication platforms. However, weaknesses include inadequate emergency funds, incomplete data reporting, limited involvement of private health facilities, and poor cross-border surveillance. Opportunities arise from partnerships, trained health workers, and digital tools, while threats include non-compliance by private institutions, limited internet access, and cultural barriers. Key gaps include limited geographic coverage of IDSR training including the cross-border surveillance committees, underutilization of digital systems, inadequate community sensitization on detection and early reporting of suspected cholera cases, and inadequate human capacity for sample collection and testing.

In conclusion, while Malawi's Cholera surveillance and laboratory response demonstrate significant strengths, addressing the highlighted weaknesses, threats, and gaps is crucial to improving the efficiency and effectiveness of the system.

5.1.3 Case Management Pillar (CM pillar)

On case management, the primary support for cholera patients is to get proper and timely treatment. The NCP aims to prevent fatality through expanding treatment facilities and oral rehydration points in affected communities. Early case detection is a critical component in cholera case management. It involves identifying and diagnosing cholera cases as early as possible using Rapid Diagnostic Tests (RDTs)and confirmation at the District Hospital Laboratory, Central Hospital Laboratory or National Reference Laboratory.

At national level, the case management pillar is composed of key departments in the Ministry of Health which includes curative and medical rehabilitation services, nursing and quality management. It also comprises implementing partners such as WHO, Malawi Red Cross, UNICEF and MSF. The Technical Working Group (TWG) on Cholera case management at national level and oral rehydration point (ORP) TWG, where WHO and MOH are co-chairs.

At the district level, the case management pillar is composed of members from clinical, nursing departments, IPC officers and other supporting departments, implementing partners and other relevant stakeholders.

At the primary health care facility, the case management team comprises clinician(s), nurse(s), HSA's, pharmacy personnel, IPC officers, support staff and implementing partners. The primary health care team also works hand in hand with the community leaders and volunteers to support in planning and implementation of ORPs at a community level. ORP team at the community level is composed of community volunteers and HSA's. Community leaders authorize the implementation of ORP in their communities including sensitization of community members on ORPs and selection of sites for ORP set-up. Supportive supervision of ORPs is conducted by the primary health care case management team, district and national case management pillar.

Cholera case management is divided into community and facility-based care. Suspected cholera cases are triaged and managed at the community level in Oral Rehydration Points (ORP's) while cases with severe dehydration, under-five children and pregnant women are referred to Cholera Treatment Units based at the health centers and district hospitals.

5.1.3.1 Oral Rehydration Points

The ORP is a WHO approved first line intervention in acute watery diarrhea/Cholera outbreaks and was set-up to curb the high CFR which was attributed to delays in accessing care. The late presentations led to patients presenting with severe forms of dehydration.

Prompt and timely rehydration of cholera patients is the mainstay treatment in Cholera outbreaks, and it starts at ORPs. Community volunteers assess dehydration status for suspected cases and administer ORS under the supervision of Disease Control Surveillants (DCSs). Adult Patients without dehydration or with some dehydrations are treated in these units and get discharged home. Cases with severe dehydration, under-five children and pregnant women are referred to Cholera Treatment Units based at the health centers and district hospitals.

5.1.3.2 Cholera Treatment Units

The units are categorized as Facility-based case management Points which consists ofCholera Treatment Facilities (CTFs), which

can either be CTUs or the Cholera Treatment Centers (CTCs). These are set-up in health centers as well as district hospitals. Using a predefined tool, nurses and clinicians screen patients for Cholera symptoms and triage them to determine dehydration status and severity of the illness. CTCs/CTUs serve as in-patient cholera facilities, which manage patients with no dehydration, some dehydration and severe dehydration. Patients with severe dehydration require intravenous fluids, antibiotics, and close monitoring. The CTC/CTUs also manage patients with complications and comorbidities. Supportive laboratory tests are done, in addition to cholera confirmatory testing depending on the clinical assessment.

5.1.3.3 Coverage

Currently, the activities are done in priority areas of Multisectoral Interventions (PAMI's) which were established in twenty-one districts out of twenty-nine, with a total of 199 CTU/CTCs and 184 ORPs. Refer to the table 5 below.

Table 5: Number of CTU's/CTC's, ORP and Cholera beds per PAMI.

District PAMI	No. of CTUs/CTCs	No. of ORPs
Lilongwe (N=10)	12	25
Blantyre (N=7)	28	13
Mangochi (N=9)	23	24
Machinga (N=10)	No data	10
Balaka (N=6)	12	28
Nkhotakota (N=6)	19	4
Chikwawa (N=11)	18	9
Nsanje (N=9)	12	14
Salima (N=8)	13	10
Ntcheu (N=2)	5	5
Karonga (N=4)	10	0
Thyolo (N=3)	5	0
Mangochi (N=8)	No data	24
Phalombe (N=2)	2	5
Nsanje (N=11)	12	No data
Dedza (N=3)	7	7
Likoma (N=1)	No data	No data
Zomba (N=4)	16	0
Rumphi (N=3)	No data	No data
Nkhatabay (N=10)	No data	No data
Neno (N=2)	5	6

5.1.3.4 Capacities

Data on capacities collected from PAMI health facilities included availability of tents, availability and use of cholera case management guidelines and number of trained community health care workers(clinicians, nurses and DCSs). A national cholera manual for health care workers has been developed with adaptation of the WHO/GTFCC guidelines. There is disparity in the available infrastructure and human resource compared to the population sizes.

During the worst and longest outbreak, 2022/23 cholera season, implementation of case management activities was done by the government with support from partners. These partners included World Health Organization (WHO), UNICEF, Red cross, Global AIDS Interfaith Alliance (GAIA), MSF, German Agency for International Cooperation (GIZ), SEED and CDC, just to mention a few.

Table 6: SWOT Analysis for Case Management

Strengths	Weaknesses
• Clinical mentorship provided by national and international medical teams. This includes training of health care workers and supervision of cholera treatment facilities. • Introduction of oral rehydration points (ORPs) at community level. • Conducting case management reviews, death and clinical audits. • Deployment of surge staff • Availability of community volunteers (VHC,MRCS volunteers)	• Inadequately trained/skilled personnel to treat cholera cases, including those with comorbidities such as pregnancy and malnutrition • Limited health supportive services leading to delays, misdiagnosis and poor outcomes, i.e. inadequate capacity of laboratories in health facilities to measure electrolytes • Inadequate standardized clinical tools e.g. admission forms, monitoring forms. • Inadequate coordination with private and CHAM facilities in cholera case management and referral pathways. • Insufficient in-patient monitoring equipment in the treatment facilities.

Opportunities	Threats
• SLAs (service level agreement) with CHAM and IHAM. • Functional emergency care systems. • Use of temporary structures for managing cholera cases such as the ORPs and CTUs/ CTCs. • Availability of functional IDSR system. • Political will • Availability of partners.	• Myths and misconceptions among community members • Long distance to health facilities • Poor health-seeking behaviour • Occurrence of other disasters and emergencies, such as floods during cholera outbreaks • High staff turnover

Table 5 above, highlights an analysis of some of the strengths, weaknesses, opportunities and threats associated with cholera case management in Malawi. The strengths and opportunities relate to capacity building of healthcare workers, introduction of community case management through oral rehydration points (ORPs), capacity in auditing of cases and deaths, existing SLA (service level agreement) with CHAM. Integration of Cholera into other diseases of public health concern, the presence of political will and availability of partners are also opportunities in Cholera case management.

However, challenges with the healthcare system, topography and community behaviors affect management of cases in Malawi. Healthcare system challenges include lack of skilled personnel to treat cholera cases with comorbidities, inadequate guiding documents, inadequate coordination with private and CHAM facilities; limited supportive services; and lack of real time data for critical clinical decision making. The system is also faced with geographical barriers which include poor access to health facilities especially for hard-to-reach communities, inadequate cross border coordination. Behavioral challenges include misinformation among community members; community and healthcare workers' stigma, poor health seeking behaviors. Natural disasters such as floods and other emergencies, also result in challenges in responding to cholera outbreaks.

5.1.4 Infection Prevention and Control Pillar (IPC)

IPC is a critical component in ensuring the safety of patients, care takers and healthcare workers particularly in the context of managing cholera outbreaks. Cholera can spread rapidly in healthcare settings if strict IPC protocols are not followed. During cholera outbreaks, healthcare facilities must be vigilant to prevent the transmission of this highly contagious disease, which can exacerbate the burden of Healthcare-Associated Infections (HAIs).

Table 7: SWOT analysis for IPC

Strength	Weakness
• Coordinated IPC meetings involving key stakeholders from national and district level. • Established IPC structures, including IPC focal persons and committees • The availability of IPC policies, guidelines including the National IPC Policy and Operational Plan • Monitoring and evaluation tools, such as the online IPC daily checklist (kobo collect) • Screening patients at the entrance of facilities • Supportive supervision and mentorship at CTUs	• Lack of clear budget allocation to fund IPC activities. • Inadequate number of Cholera Treatment Units and poor infrastructure design that does not comply to IPC standards • Dedicated and trained IPC personnel not allocated to CTU/CTC • No specific IPC Standard Operating Procedures (SOPs) for CTUs. • Limited mobile network coverage in certain CTUs affecting reporting and effective communication. • Delayed implementation of IPC activities • Inadequate operational management of WASH infrastructure at health facilities • Inadequate IPC supplies to implement IPC interventions including PPE's, hand washing soap, environmental cleaning items.
Opportunity	**Threat**
• The availability of some IPC supplies for cholera response including masks, and chlorine. • Availability of Cholera training manuals including the Standardized Training Package for IPC Preparedness in Cholera Outbreaks • Availability of IPC cholera assessment tools and daily checklist • The availability of coordination structures at both national, zonal and facility level. • Availability of IPC partners in some PAMIs	• Frequent turnover of healthcare workers leads to the loss of IPC-trained staff and focal persons • Over-reliance on partner support threatens the sustainability of IPC activities. • Poor coordination of partners presents a threat to effective IPC program implementation.

The data collected from facilities within PAMI's highlights critical gaps in IPC measures across healthcare facilities. A key issue is the shortage of trained IPC focal persons, with only Likoma district having a trained person in place, while Karonga, Phalombe, and Rumphi lack such personnel. Furthermore, none of the PAMIs have over 50% of healthcare workers trained in IPC, which includes both technical and support staff. The lack of sufficient training, particularly for frontline workers, compromises the quality of care.

Inadequate and poor adherence to IPC guidelines in some facilities interferes with the implementation of IPC standards. Some. Addressing these gaps is essential for improving patient and healthcare worker safety in these facilities.

Despite these challenges, there are clear opportunities to strengthen IPC implementation across the PAMI facilities. Expanding IPC training programs to ensure that every facility has at least one trained IPC focal person to manage CTU/CTC and developing tailored training programs that address the specific needs of both technical and support staff.

5.1.5 Oral Cholera Vaccine (OCV pillar)

Malawi introduced OCV in 2015 as a response to the cholera outbreak that occurred in 2014 among internally displaced people (IDP) camps in Nsanje district. Sincethen, there have been a couple of OCV campaigns implemented in response to cholera outbreaks in different districts.

Malawi has never conducted a nationwide preventive campaign other than reactive campaigns targeting hotspots and vulnerable populations in high-risk districts; approximately more than six OCV campaigns have been conducted with support from implementing partners as indicated in Annex 1. Until now, OCV has been used either to prevent an outbreak or control an outbreak and not necessarily as part of routine vaccination services. WHO through the Interagency Coordinating Group (ICG) made sure thatMalawi obtained OCV doses for its reactive campaigns.

In Malawi, OCV has been coordinated by the Ministry of Health in collaboration with World Health Organization, Malawi Red Cross Society, UNICEF, Medicins San Frontiers (MSF) among others. OCV campaigns have been complemented with other critical interventions like WASH and Health promotion activities targeting diarrhea diseases inclusive of Cholera. The Ministry of Health used the opportunity of its existing cold chain and supply logistic system to facilitate the delivery of the vaccines to the last mile. With guidance from the ICG, the recent 2022-2023 OCV campaign used a single dose rather than two doses as required for a strengthened immunity. This entails the risk of waning immunity (one dose guarantees at least protection up to 6 months while 2 doses can guarantee maximum protection up to 3 years) even for those that received a single dose in the just ended campaigns and of course herd immunity is also not guaranteed.

Due to previous country experience and well-established systems for carrying out these campaigns, it would take two weeks to start and execute a campaign from the time doses arrive in the country following ICG approval. Critical funding came from ICG through WHO country office. Significant capacity building has been done to enhance human resources for the delivery of the OCV including demand creation and social mobilization. The required minimum coverage for OCV vaccination is >70% according to ICG. The journey to achieving high coverages has been slow due to different challenges however other districts have reached higher coverages than expected. The most recent coverage for OCV is demonstrated in the figure below.

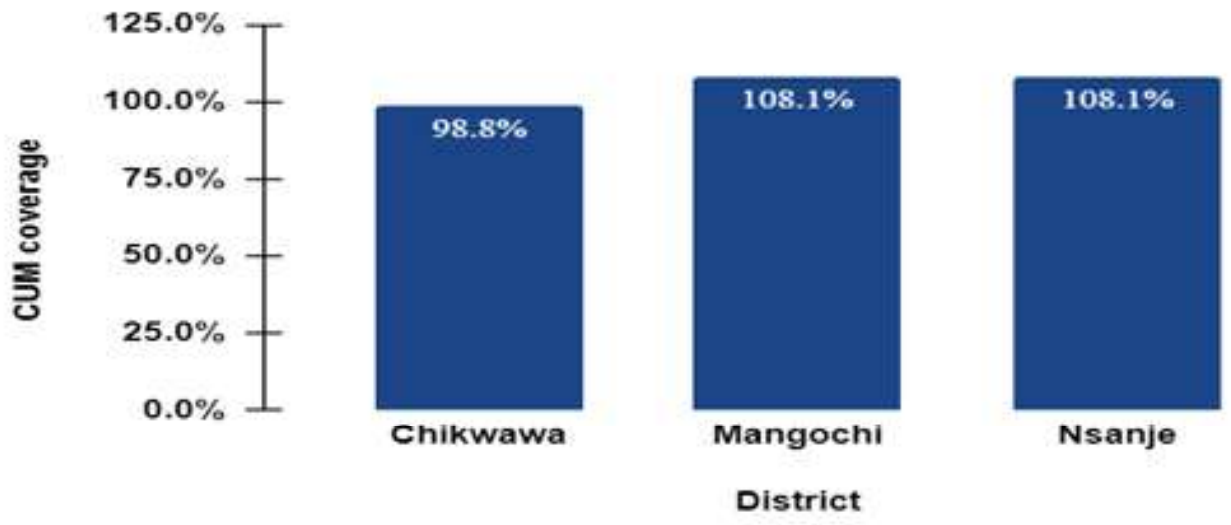


Figure 10: OCV Coverage for Chikwawa, Nsanje and Mangochi, August 2023

5.1.5.1 Vaccine Management

Cold Chain and Supply Management

- EPI received support from GAVI through the Cold Chain Equipment Optimization (CCEOP) platform.
- The government of Japan, WFP, and KfW have a robust and up-to-date cold chain equipment to support the storage and delivery of vaccines at all levels.
- Malawi uses Solar Direct Driven Fridges where there is no alternative source of power.
- OCV fits within the existing cold chain management systems (+2 to +8 degrees Celsius) available in health facilities.
- Cold chain and supply management for vaccines are handled by cold chain technicians who are well-capacitated to do repair and maintenance of cold chain, collect, and distribute vaccines.
- EPI as a programme is managed by the EPI coordinator at the district level.
- National EPI supports vaccinators at all levels with transport systems including push bikes for vaccine logistics and mobility during campaigns.
- Using other programme resources and in the spirit of integration, motorcycles and motor vehicles are made available to support vaccine delivery and distribution at different cold chain and supply levels.
- For vaccine logistic management, the programme uses the Open Logistics Information System (Open LIMS), which enhances inventory management and promotes the monitoring of the supply and distribution of vaccines to the last mile.

Regulatory approval and Vaccine safety

- The Pharmacy Medicines and Regulatory Authority (PMRA) is the sole authority to allow the use and importation of OCV.
- MITAG regularly convenes to guide in case of special conditions to optimize the use of OCV.

- EPI has a robust vaccine safety platform that deals with adverse events following immunization (AEFI). The system is well built and capacitated from identification, reporting and investigating the AEFI.
- The Pharmacy Medicines Regulatory Authority carries out the causality assessments and feedback is given to the concerned facilities. This approach helps to increase vaccine confidence and reduce vaccine hesitancy.

Challenges and Barriers

Data Management:

- Challenges with obtaining accurate data for at-risk populations during OCV campaigns.
- Data management systems issues ranging from real-time data, general data storage, and reporting.
- Need for digitizing data collection tools (ODK, Rapid Pro, etc.) to cater for real-time monitoring of the campaigns and reporting coverages at the end of the campaign.
- Use of Open LMIS to help with data needs during vaccination campaigns.

Population Mobility:

- Management of mobile populations in targeted catchment areas, including fishermen, border populations with neighboring countries, seasonal farmers or laborers in some estates, and vendors.
- Partially addressed by using mobile vaccination services.

Vaccine Hesitancy and Demand Creation:

- Vaccine hesitancy due to cultural and religious beliefs.
- Resource constraints to support demand creation and social mobilization activities leading to low turnout for vaccines.
- Worse challenges in urban settings compared to rural areas.
- Resolved through enhancing collaboration with stakeholders and local leaders to mobilize resources for demand creation.

Supply Chain and Logistics:

- Inadequate stocks of vaccines due to global low stockpile (Threat rather than a weakness).
- Delayed mobile payments to health workers affected supervision and movements.
- Poor pre-campaign preparedness, mainly on logistics and supply delivery from supplies, limited availability during the campaign period.

5.1.5.2 Lessons learnt from previous OCV campaigns

1. Multi sectoral and multi-disciplinary collaboration in the OCV campaigns; existing collaboration with stakeholders and willingness of stakeholders to get involved in the OCV campaigns increased coverage of people reached with OCV.
2. Door to Door OCV administration strategy; increased vaccine acceptance and uptake.

3. Provision of incentives to the vaccination teams (Transport funds and allowances) and good interpersonal communication skills among health care workers and community volunteers increased vaccine acceptance and uptake.

4. Trained and experienced vaccination teams; experience from past OCV campaigns and availability of training resources facilitated in reducing vaccine hesitancy.

5. Good and timely involvement of influential leaders as champions in OCV campaign; willingness of influential leader to be involved in the OCV campaigns.

6. Timely OCV data sharing; availability of Phones using Rapid Pro and trained staff on Rapid Pro increased access to data and coverages and planning for mobilizing people to take OCV.

Figure 11: Community Health Worker Administering OCV in Nsanje

Table 8: SWOT Analysis for The OCV pillar

Strengths	Weaknesses
• Immunization human resource already available to coordinate the introduction of new vaccines and coordinate the implementation of routine vaccines. • Availability of active decision-making structures MITAG, EPI TWG. • Resilient Health system with the ability to respond simultaneously to multiple health emergencies such as polio outbreaks, COVID-19 pandemic and cholera Outbreak. • Availability of district human resources in place e.g. supervisors, HSAs, Volunteers • Utilization of multiple deployment strategies such as fixed sites, outreach teams, village to village (door to door), school to school and house to house approaches to bridge access and equity gaps. • Efficient cold chain management for field teams which ensured that none of the vaccines reached beyond VVM stage 2. • Timely OCV Data Sharing; increased access to data and coverages availability of phones using Rapid Pro trained staff on Rapid Pro. • Good commitment from staff to conduct the campaign despite having other competing priorities– some districts had to put COVID-19 vaccination on packing load to pave the way for the OCV campaign for two weeks. • Integration of OCV vaccination with routine immunization. • Some health facilities managed to mobilize parents to authorize vaccination of their children while at school • There was good team supervision.	• Limited coordination among DHO and DEM staff regarding OCV administration in schools. • Delay in administering reactive OCV to the targeted areas as some of the targeted populations were missed due to a prolonged outbreak (2022/2023). • Delayed mobile payments to health workers affected supervision' (specially MoH) movements • Poor pre-campaign preparedness mainly on logistics and supply delivery from supplies which limited the availability of the supplies during the campaign period. • Limited funding for social mobilization and demand creation activities in all districts especially with regards to the use of public address systems and deployment of mobilisers. • Delayed communication to districts for the OCV campaign schedule puts pressure on districts to catch up with the activity schedule in their districts with the set dates for the campaign. • Late communication to districts also affected the district in mobilizing extra resources for the areas which WHO did not provide. • Lack of utilization of expert clients to help mobilize the communities. • There was some vaccine hesitancy in some communities. • Outstanding/ Pending payments for WHO-funded activities affected the morale and confidence of staff to participate in WHO-supported activities. • There was limited knowledge and supplies for AEFI management in facilities. • Little or no reports on AEFI.

Opportunities	Threats
• Availability of non-governmental organizations and Civil Society Organizations with a willingness to co-support OCV vaccination in some districts. • Willingness of Traditional Leaders and Village Heads to support vaccine deployment efforts. • Well-established Community Health System with the trust of community members to deliver appropriate health interventions to the community level. • Availability of already existing routine immunization system boosted the vaccination in most districts • Increase in demand for the vaccines due to fear of Cholera	• Vaccine hesitancy • Funding gaps • Long processes for cholera vaccine procurement • Inadequate stocks of vaccines due to global low stockpile Threat than a weakness

OCV Strategic Recommendations and Conclusions

The OCV Pillar will prioritize:

- Timely requests of OCV doses for pre-emptive and reactive campaigns.
- Support districts to conduct OCV microplanning.
- Conduct case-area targeted OCV reactive campaigns.
- Conduct coverage surveys immediately after the campaign.
- Enhance collaboration with stakeholders and local leaders to mobilize resources for demand creation.
- Utilize community health workers to conduct headcounts for accurate data.
- Digitize data collection tools (ODK, Rapid Pro) for real-time monitoring and reporting.
- Implement mobile vaccination services to manage mobile populations.
- Strengthen community engagement and education to address vaccine hesitancy.
- Secure buffer stocks and streamline procurement processes to mitigate supply chain disruptions.

Conclusion

Oral Cholera Vaccine (OCV) implementation in Malawi requires multi-sectoral collaboration, up-to-date cholera incidence data, and timely requisition of OCV for preventive and reactive campaigns. The challenges, lessons learned, and SWOT analysis demonstrate the need for strategic adjustments based on past experiences to enhance future OCV campaigns. Integration of OCV campaigns with WASH and other services, multi-sectoral collaboration for resource mobilization, timely community engagement, and utilization of multiple deployment strategies such as fixed

sites, outreach teams, village-to-village, school-to-school, and house-to-house approaches are essential to bridge access and equity gaps.

5.1.6 Water, Sanitation and Hygiene (WASH pillar)

Despite implementing several interventions, challenges that hinder the effective control of cholera outbreaks in Malawi still need to be addressed. Many communities lack sufficient WASH facilities, making it difficult to practice safe hygiene and sanitation, thereby increasing the risk of cholera. Infrastructure damage due to natural disasters or lack of maintenance leaves many people needing access to safe drinking water and sanitation facilities. Inadequate treatment of water from contaminated sources results in the consumption of unsafe water, contributing to the spread of cholera. Many water sources, such as boreholes and wells, are non-functional due to lack of maintenance or repairs, forcing communities to rely on unsafe water sources. An unreliable water supply disrupts the availability of safe water for drinking and hygiene purposes, exacerbating the cholera risk. Practices such as open defecation, use of unimproved toilets, and inadequate treatment of faecal sludge and wastewater create environmental contamination that facilitates the spread of cholera. Poor solid waste management leads to environmental pollution and contamination of water sources, contributing to cholera outbreaks. Roles and responsibilities of various government ministries, departments, and agencies involved in water and sanitation service provision are conflicting, which results in ineffective management and coordination, hampering efforts to control cholera.

Significant gaps in access to safe water, sanitation, and hygiene in Malawi have critical implications for cholera control. Only 17.76% of the population has access to safely managed drinking water services, leaving a significant portion vulnerable to waterborne diseases like cholera. Rural areas have lower coverage of safely managed services (10.17%) than urban areas (52.37%). Only 3.05% of the population has access to basic sanitation services, and 46.19% have safely managed sanitation services. Open defecation is still practiced by 2.61% of the population, with a higher prevalence in rural areas (2.93%). Urban areas have better sanitation coverage, with 41.16% having safely managed services. A significant proportion of the population (61.37%) has limited access to hand washing facilities, and 23.32% have no hand washing facilities at all. Rural areas have lower coverage of basic hygiene services (12.55%) than urban areas (27.91%). The current levels of access to WASH services present a high risk of cholera transmission in Malawi, particularly in rural areas. The urban-rural disparities in WASH coverage highlight the need for targeted interventions in rural areas to control cholera.

5.1.6.1 Coordination

The WASH Cluster coordinates with other clusters and pillars in the PAMIs to ensure the provision of safe water, sanitation services, and hygiene practices. However, gaps in predictable and sustainable financing, emergency WASH supplies, inadequate community programs for safe water storage and chlorination, and limited access to safe drinking water in vulnerable areas remain significant challenges.

5.1.6.2 Policies and guidelines

Implementing WASH in Malawi as a key component in cholera prevention is guided by several policies and legal frameworks at global, regional and country levels. The Malawi 2063, along with its first 10-year implementation plan (MIP-1), also underscores the importance of sustainable development, which includes enhancing water and sanitation services to improve health outcomes. However, WASH

standards and guidelines for primary and secondary schools, though completed, still require effective dissemination.

Despite having good coverage on policies and legislation,there are notable gaps: many documents are outdated, such as the Public Health Act and the Occupational Safety, Health, and Welfare Act. There is an urgent need to fast-track the review of these documents.

5.1.6.3 WASH service level data collection and monitoring tools.

There are standardized data collection and monitoring tools for community, school, and health care center WASH components. However, we have markets and religious institutions where data is collected on an ad-hoc basis using unstandardized tools. Despite the availability of standardized tools for some of the components, generally, data collection and monitoring are not done regularly due to, among other things, inadequate funding. WASH data collection and monitoring tools are not harmonized, and there is no National WASH Management Information System.

5.1.6.4 WASH governance at different administrative levels

WASH governance involves making the right decisions for the sector and implementing them efficiently. It requires balancing power relations and improving the processes for which decisions are made. WASH services in Malawi aim to ensure that communities have equitable access to WASH for socio- economic development of the country.

WASH services are provided by different governments, such as Water and Sanitation, Health, Education, Environmental Affairs, and others, together with local councils, Non-Governmental Organizations (NGOs), Water Boards, Development Partners (DP), and communities themselves.

Governance structures ensure that communities get equitable and effective WASH services. These governance structures are supposed to operate at all levels. At the community level, there are Village Health Committees (VHCs), Water Users Associations (WUAs), area mechanics (AM), Waterpoint Committees (WPCs), Village Development Committees (VDCs), and Area Development Committees. District Civil Protection Committees also ensure WASH issues are incorporated in Disaster Risk Management. WASH governance ensures that the human right to WASH is respected.

At the District level, the District Coordinating Committee (DCT), a DEC subcommittee, coordinates WASH. The DCT, therefore, reports to the DEC and Full Council. WASH is also coordinated by the District Environmental Sub Committee (DESC) and District Civil Protection Committee (DCPC). WASH should be incorporated in all environmental and disaster risk management activities.

At the national level, the national WASH Technical Working provides overall coordination and Governance. There are also the Water Supply TWG and Sanitation and Hygiene TWG. There are also Urban District Coordination Teams (DCT) like those in district councils.

The primary governance challenges currently include weak community participation and leadership, low coverage of active VHCs and Water Point Committees, weak coordination of DCTs, and non-availability of inequitable distribution of WASH NGOs. Financing of WASH is also low. While the coverage of WASH is already low, the availability of inclusive WASH facilities could be better. There is a need to enhance community participation, activate most of the required governance

structures, and mobilize resources for WASH service delivery. There is a need to increase the number of WASH providers.

5.1.6.5 Water quality monitoring systems and laboratory capacity for surveillance

In Malawi, comprehensive water quality monitoring services are mainly provided by the National and two regional laboratories in the northern and southern region. However, these laboratories are overstretched in comparison to the demand for water quality test services and the situation is exacerbated by capacity gaps in terms of staff and equipment. Further, water quality services are decentralized to district level there by affecting coverage. In the context of limited access to comprehensive water quality testing services, the country has been making use of rapid water quality test which are also hard to access due to limited resources. As such water quality monitoring is mostly done on ad hoc basis with support from development partners.

5.1.6.6 Guidelines and protocols for operation and maintenance of WASH services

The country has technical manuals and guidelines for sustainable operation and maintenance for WASH facilities including boreholes, latrines, hand washing facilities and piped water systems. However, implementation is hampered by resource constraints and lack of prioritization for operation and maintenance activities.

5.1.6.7 Emergency WASH coordination, strategies.

The country has the WASH cluster which is activated to coordinate WASH services in emergencies. The cluster is vibrant, but its efforts are mostly constrained by coordination and collaboration challenges especially at district level and inadequate WASH supplies. Major strategies employed during emergencies include prepositioning of WASH supplies in the disaster-prone localities and institutions, supply

and distribution of essential WASH supplies, water quality monitoring and surveillance as well as sanitary surveys and inspections. Implementation of these is, however, affected by resource limitations.

5.1.6.8 WASH interventions being implemented in geographical areas where OCV was recently implemented

OCV has been implemented in all PAMIs geographical areas since 2022 when the country experienced the worst cholera outbreaks in history. The WASH program in Malawi recognizes that OCV is not a panacea for cholera and requires it to be complemented with WASH interventions. Therefore, WASH interventions have been ongoing in all the geographical regions despite implementation of the OCV.

5.1.6.9 Solid waste management services status in the PAMIs

Malawi, like many other developing countries, faces challenges in the management of waste from generation, collection, transportation, treatment and safe disposal. This is despite having robust documented institutional arrangements for waste management across the entire chain. At implementation level, there is confusion of some mandates, denial of responsibilities, non-compliance and limited enforcement. To address the identified challenges and gaps in service provision, Malawi needs to promote and advocate for sound and environmentally friendly facilities, infrastructures, and systems for waste management in all the PAMIs - through use of appropriate technologies in waste management services.

Table 9: SWOT analysis for WASH pillar

Strengths	Opportunities
• Availability of standards and guidelines for WASH in Schools • WASH is Integrated into the school curriculum • Availability of SHN teachers and WASH clubs in some schools • Availability of Water Monitoring Assistants, HSAs, CDAs, and EHOs for WASH -integrated interventions • Availability of WASH Database in schools, MOH, • A stand-alone Ministry of Water and Sanitation • Available By-laws in urban sanitation with enforcement mechanisms • Available Cholera Training Guides that include issues of WASH • Availability of integrated IPC/WASH guidelines and standards	• Availability of political will towards prioritization of WASH in the development agenda • Donor interest and support in the context of ever-increasing public emergencies • Availability of national and global development blueprints that prioritize WASH i.e. Mw2063 and SDGs • Availability of academic institutions which can support the WASH sector in conducting research and innovations • Availability of civic space for advocacy • Willingness of the private sector to invest in WASH i.e. private domestic waste collectors, private toilet operators

Weaknesses	Threats
• Limited availability of technologies for climate-resilient WASH facilities • Weak, none harmonized Information system • Weak coordination and TWGs • Poor reporting systems for WASH • Low coverage of WASH facilities in Communities and institutions • Outdated bylaws and regulations in WASH • Inadequate dissemination of WASH policies and standards/Lack of sensitization of roles of different Ministries in WASH / Lack of information, dissemination, and sensitization to local structures on WASH • Inadequate WASH sector joint planning and reviews • Limited prioritization of operation and maintenance in WASH • Poor management and Care of facilities in institutions such as schools, health facilities, public places etc. • Weak community participation in WASH in schools and in general • Weak advocacy for increased government investments in WASH • Low-level cadre for WASH leadership at the district level (which results in inadequate representation in high-level decision-making) • Bureaucratic inefficiencies in government systems • Lack of standardized regulations for WASH facilities in urban and rural areas • Limited capacity of SHN Teachers on WASH • Poor quality and Inadequate WASH facilities in schools, healthcare facilities, markets, and other public spaces • Inadequate gender-inclusive WASH facilities in institutions such as MHM, Urinals, disability-friendly facilities • Inadequate community leadership and role modeling in WASH.	• Increased intensity and frequency of climate change-related disasters such as floods, wind, and storms • Donor over dependency and unpredictable donor funding/support • Vandalism of WASH facilities • Use of institutional WASH facilities by the public • High water tables • Predominance of unstable soil formation in lakeshore areas and low-lying areas • Increasing emergence of informal settlements and slums • Prevalence of highly saline groundwater resources in lakeshore and low-lying areas • Geographical terrain prohibiting WASH interventions in some areas e.g. rocky and rugged terrain • Inadequate national budget allocation to the WASH sector, which threatens progress and sustainability.

Strategic Directions:

The SWOT analysis highlighted the complexities of the WASH sector in Malawi, revealing several strengths and opportunities alongside weaknesses and threats. While there are established standards, integrated curricula, and political will; limitations in coordination, predictable and sustainable financing, reporting, and community engagement hinder progress toward achieving access to basic WASH services. External threats, such as climate change, donor dependency, and environmental challenges, further worsen the situation.

Enhance Coordination and Governance:

- **Leverage Multi-Sectoral Coordination:** Utilize existing governance structures such as the national WASH TWG, District Coordination Committees (DCTs), and community-level committees to foster seamless collaboration among stakeholders.
- **Update and Harmonize Policies:** Prioritize the revision of outdated legal frameworks and ensure the dissemination of updated WASH policies and guidelines across all administrative levels.
- **Strengthen Information Systems:** Develop a harmonized National WASH Management Information System to facilitate standardized data collection, monitoring, and reporting, thereby improving decision-making processes.

Increase Access and Coverage:

- **Focus on Rural and Underserved Areas:** Implement targeted WASH interventions in rural districts with low coverage rates, ensuring equitable access to safe water, sanitation, and hygiene facilities.
- **Maintain and Expand Infrastructure:** Ensure the sustainability of WASH infrastructure through regular maintenance, repairs, and expansion projects, particularly in high-risk areas prone to natural disasters.

Strengthen Emergency Preparedness and Response:

- **Preposition Essential Supplies:** Strategically stockpile essential WASH supplies in disaster-prone districts to enable rapid deployment during cholera outbreaks.
- **Enhance Laboratory and Monitoring Capacities:** Invest in expanding laboratory capacities and improving water quality monitoring systems to ensure timely detection and response to water contamination incidents.

Address Resource Constraints:

- **Mobilize Sustainable Funding:** Advocate for increased and sustained funding from government budgets, donor agencies, and private sector partnerships to support WASH services, maintenance, and emergency responses.
- **Optimize Resource Allocation:** Implement efficient resource allocation strategies to maximize the impact of available funds and ensure the sustainability of WASH interventions.

Promote Community Engagement and Leadership:

- **Empower Local Committees:** Activate and support community-level governance structures such as VHCs and WPCs to foster ownership and accountability for WASH facilities.

- **Conduct Continuous Education:** Implement ongoing community education and sensitization campaigns to promote good hygiene practices and reduce open defecation, thereby enhancing community resilience against cholera outbreaks.

Integrate WASH with Other Health Interventions:

- **Complement OCV Campaigns:** Ensure that WASH interventions are effectively integrated with Oral Cholera Vaccine (OCV) campaigns to provide a comprehensive cholera prevention strategy.
- **Support Routine Health Services:** Align WASH initiatives with routine immunization and other health services to enhance overall public health outcomes and resource efficiency.

Conclusion

Malawi's WASH strategies, as outlined in the National Cholera Plan (NCP), present a robust framework supported by established guidelines, multi-sectoral coordination, and strong political commitment. The integration of WASH with cholera control measures, particularly through emergency response mechanisms and community engagement, underscores a comprehensive approach to combating cholera outbreaks.

However, significant challenges remain, including low coverage rates, weak coordination, outdated policies, and resource constraints. These impediments must be addressed to achieve the strategic objectives of increasing access to basic WASH services, strengthening WASH systems, and enhancing preparedness and response to cholera outbreaks by 2030.

By implementing the strategic orientations—focusing on enhancing coordination, increasing access, strengthening emergency preparedness, addressing resource constraints, promoting community engagement, and integrating WASH with other health interventions—Malawi's National Cholera Plan can significantly bolster its WASH services. This will not only contribute to reducing the incidence and impact of cholera outbreaks but also support the broader goal of achieving universal access to safe water, sanitation, and hygiene, thereby fostering sustainable socio-economic development across the country.

5.1.7 Risk Communication and Community Engagement (RCCE) Pillar

RCCE plays a crucial role in understanding drivers of behavioural practices, building trust between public health programmers and community members and ensuring active participation of communities especially in cholera preparedness, prevention, management and control. The Ministry of Health through the Health Promotion Division under the Community and Promotive Health Directorate coordinates all RCCE interventions at both national and district level. The Division has Health Promotion Officers in all the twenty (20) PAMI district health offices mandated to coordinate implementation of all SBCC activities through Health Promotion Technical Working Groups (HP TWG), Risk Communication and Community Engagement Committee (during Public Health Emergencies) and Health Promotion focal persons at facility level. The government, through District Health Promotion Officers (DHPO), oversees SBCC programming, but coordination between various government ministries and civil society organizations remains a challenge. Limited logistical resources also constrain the reach

and impact of SBCC programs.

All PAMI districts have RCCE committees that operate within the District Rapid Response Team (DRRT) and Facility Rapid Response Team (FRRT). All DRRTs and FRRTs have been trained although some districts may have capacity gaps due to staff movement/turnover. Almost all the 20 districts can implement Case Area Targeted Interventions (CATI). Some RCCE committees are more active than others. District health offices have a public address system and at least one megaphone per facility. Megaphones are mostly allocated to hard-to-reach health facilities for public announcements. Some districts have community radio stations that are used to disseminate various information.

At the local community level, there are several structures and influencers that are used to disseminate information. These include traditional and faith leaders, ADC, VDC, Village Health Committees, Community Health Action Groups, Water Point Committees, youth clubs and othercommunity committees.

Implementation of RCCE activities at district level is integrated with other pillars such as surveillance, WASH, Case management, IPC and Nutrition in Emergencies for effectiveness and efficiency in prevention, controlling and management of outbreaks.

The HPD promotes the use of evidence to guide RCCE activities implementation. Unfortunately, most of the RCCE players implement activities without carrying out situation analysis. The RCCE situation analysis phase should consider evaluating existing programs to identify barriers, perceptions, attitudes, myths and gaps in community engagement for program effectiveness, ownership and sustainability of desired behavior practices.

5.1.7.1 Barriers to the adoption of messages

- **Social cultural beliefs** – people have specific people to lead in family decisions and believe in home remedies and present to the health facility very late.
- **Religious Believes** Some people believe in faith healing. This prevents them from seeking medical care and complicates cholera control. This can also result in people disregarding messages of early health-seeking behavior.
- **Myths and Misconceptions** – Cholera can only happen during the rainy season, So, any outbreak outside the rainy season is considered to be created. It is believed to be spread through the air, or it is spread deliberately for the government to receive funding.
- **Misinformation** – The cholera Vaccine is a disguised for the COVID-19 vaccine so that it can kill people, because many people did not receive the COVID-19 vaccine.
- **Rumours –** The government is finding ways of controlling the population through these vaccines.
- **Information gap** – There is limited access to information which creates a gap for access to information.
- **Stigma** – Households affected with Cholera are associated with poverty and dirty, therefore the family members discriminate against them.

5.1.7.2 Approaches and Channels used to disseminate information

- **Interpersonal Communication** – door to door and Community engagement meetings

with different stakeholders

- **Human Centered Design (HCD)** – Community problem solving approach that prioritiuses the needs, desires and limitations of the communities and their inhabitants. It involves the understanding of the cholera transmission and co-creating solutions with the communities.
- **Public Announcements** – Loud hailing/ community announcements
- **Edutainment** – Road shows, video shows and theatre for development (drama performances, poems, dances etc.)
- **Print media –** posters, flyers, brochures and other print materials
- **Audio visual** – Jingles, television and radio programs
- **Advocacy meetings with key stakeholders**
- **Social media:** use of digital media e.g. Facebook, twitter, tiktok and other online platforms
- **Interactive cinema** – Projecting videos through cinema to engage community members in discussions about issues of interest or concern

The following consideration should be made:

- Availability of communication tools and materials.
- Assess the availability and effectiveness of tools and materials used for community engagement, such as communication materials, participatory planning tools, and community mapping resources, whether they are culturally appropriate and accessible in local languages.

Identify gaps in Risk Communication:

- Evaluate the current risk communication activities and their reach within the community, particularly focusing on vulnerable and marginalized groups.
- Identify gaps in risk communication and areas for improvement.

Understanding Cultural Context and Identifying High-Risk Groups:

- Consider use of the Human Centered Design approach to dig deeper into the community contextual issues. HCD digs to understand the contextual issues through being empathetic, co-creating with the communities, prototyping the solutions and continuous improvement of the solutions.
- Frame reflections within a broader contextual analysis to understand the socioeconomic, cultural, and behavioral drivers influencing cholera-related behaviour.
- Identify how local actors can map high-risk groups within PAMIs, ensuring targeted interventions are culturally sensitive and effective.

Availability Community Feedback mechanism:

- Ensure availability and functioning of community feedback mechanism
- Ensure all partners bring concrete information from their community feedback mechanisms to guide SBC intervention.

Engagement Strategies for Different Community Sectors:

- Assess strategies to engage various community sectors, including religious leaders, women's associations, youth groups, and local influencers. And whether these strategies and activities have promoted active participation and two-way communication between the community and response actors.

Table 10: SWOT analysis for RCCE

Strengths	Weaknesses
• Availability of human resource e.g. HPOs, DIOs and RCCE facility focal personnel in all the PAMI districts • Availability of public address system and megaphones • Availability of policy documents e.g. Districts had cholera RCCE plans, Cholera technical guidelines (Field and training manuals), National Health Communication Strategy 2021 – 2026. • Availability of coordination mechanisms e.g. Health Promotion TWG, Public Communication cluster, National RCCE sub-committee, DRRT & PHEMC, activated IMS during emergencies, Influencers structures (pastors fraternal, Youth network, ADCs). • Implementation of RCCE preparedness activities e.g. Development of cholera RCCE plans, dissemination of electronic health promotion materials, RCCE coordination meetings etc. • Availability of up-to-date data on new cases thereby enabling quick response. • Availability of partners in most districts. • Availability of community structures and influencers like Village Health Committees, CHAGS, traditional and faith leaders, volunteers etc. • Availability of community radio stations in most PAMI districts.	• Inadequate coordination of RCCE partners • Competing priorities for RCCE interventions which affect the implementation of cholera activities. • Inadequate tools and harmonized database to measure and analyze the impact of RCCE interventions • Limited qualitative evidence to guide RCCE programming. • Unwillingness of stakeholders to fund RCCE preparedness activities, thereby limiting implementation • Pre-programmed interventions not willing to use their resources for locally tailored interventions. • Multiple emergencies compromising quality of implementation. • Inadequate comprehensive knowledge and skills in message delivery.

Opportunities	Threats
• Availability of RCCE partners • Commitment of national RCCE team to assist district RCCE in response activities • Availability of RCCE policies, guidelines and communication materials. • Commitment of partners to provide funds during emergency and willingness of some personnel from other sectors to take part in message dissemination. • Decentralization enabled DCs to have an oversight role in the functions of the health sector, including providing leadership and direction in an emergency.	• Multiple emergencies happening either concurrently or in close succession • Partners' changes in priorities • Partner and donor fatigue • Staff turn-over • Fatigue of personnel to implement packaged interventions for several pillars • Inadequate resources to support RCCE activities • Vaccine fatigue.

RCCE Situation Analysis Summary

Coverage

RCCE plays a pivotal role in cholera prevention and control by raising awareness and building the skills of communities, households and individuals in proper sanitation and hygiene promotion to improving positive seeking behavioral practices. The RCCE pillar has robust structure at national, district and community levels which would play a pivotal role in cholera control. For example, all twenty (20) PAMI District Hospitals have Health Promotion Officers (HPOs), and at each health facility, there are Health Promotion focal persons who are in charge of coordinating RCCE activities. At the local community level, there are several structures that are used to disseminate information. These include Village Health Committees, Community Health Action Groups, Water Point Committees and other community committees.

Understanding cholera transmission varies from community to community. Some communities are aware of the dangers associated with cholera but less knowledgeable about transmission and prevention methods; there also appears to be a gap between community knowledge and putting this knowledge into practice. Knowledge about hand washing is generally good; however, barriers to hand washing include availability and affordability of soap (particularly in rural areas and remembering the key hand washing critical times (e.g. forgetting to WASH before cooking but remembering to WASH after defecating) (Chidziwisano et al., 2020). For example, according to recent data, 62% of survey participants (sample size 14,501) indicated they WASH their hands with soap. Reasons for not washing their hands with soap included the lack of soap (51%), lack of water (5%) and the perception that soap should be used for laundry purposes (7%) or that it is not important (5%).

Capacity

All PAMI districts have RCCE committees that operate within the District Rapid Response Team (DRRT), Facility Rapid Response Team (FRRT) and Community Rapid Response

Team (CORRT). All DRRTs and FRRTs have been trained although some districts may have capacity gaps due to staff movement/turnover. Almost all the 20 districts have the capacity to implement Case Area Targeted Interventions (CATI). Some RCCE committees are more active than others. District health offices have a public address system and at least one megaphone per facility. Megaphones are mostly allocated to hard-to-reach health facilities for public announcements. Some districts have community radio stations that are used to disseminate various information.

Attitude

Attitude towards chlorinated water – while some appreciate the benefits of using chlorinated water in preventing waterborne diseases, others have concerns and misconceptions about its taste and smell. This is largely due to lack of skills and knowledge for community health workers, community structures (like Village Development Committees), volunteers and communities on how to mix and utilize chlorinated water. Some communities resist using chlorine preferring to use untreated water.

Communities in some areas prefer to use water from unprotected wells and rivers, rather than from boreholes which are considered to be salty

5.1.8 Operations, Support and Logistics Pillar (OSL)

For Malawi to effectively control cholera outbreaks, the Operations, Supply Chain, and Logistics Pillar must ensure the continuous and uninterrupted availability of cholera commodities in preparation for outbreaks. Additionally, it is essential to have adequately trained human resources to manage supplies and logistics. To achieve this, there must be collaboration between the leadership and coordination pillars to mobilize resources and engage all stakeholders, including international partners.

The healthcare system in Malawi faces significant challenges in ensuring the availability and distribution of essential medical supplies across various PAMI district health facilities. The availability of key cholera supplies averages 78.6%. This situation is worsened by inadequate government funding for drugs at both district and central hospitals, logistical challenges in redistributing commodities (affecting nearly 100% of the PAMI Traditional Authorities), and an insufficient number of supply chain and logistics personnel. On average, only 67.7% of PAMI district health facilities have pharmacy personnel. The remaining 32.3% of facilities, which lack qualified staff, often struggle to manage health commodities effectively.

While the government of Malawi is working to ensure that all PAMI facilities have qualified pharmacy personnel, financial constraints limit the ability to recruit enough staff. Regular coordination meetings organized by the Health Cluster aim to avoid duplication of efforts and address gaps in supply management. Various partners are engaged in the procurement of cholera prevention and treatment supplies.

5.1.8.1 Supply Chain Mechanism during outbreaks (OSL)

For Malawi to effectively control cholera outbreaks, the Operations, Supply Chain, and Logistics pillar must ensure the continuous and uninterrupted availability of cholera commodities in preparation for outbreaks. Additionally, it is essential to have adequately trained human resources to manage supplies and logistics. To achieve this, there must be collaboration between the leadership and

coordination pillars to mobilize resources and engage all stakeholders, including international partners.

The healthcare system in Malawi faces significant challenges in ensuring the availability and distribution of essential medical supplies across various PAMI district health facilities. The availability of cholera supplies falls below 50% of average monthly consumption against requirement. This situation is worsened by inadequate and delayed disbursement of funds for procurement and distribution of medicine and medical supplies at both district and central hospitals, logistical challenges in redistributing commodities (affecting nearly 100% of the PAMI Traditional Authorities), and an insufficient number of supply chain and logistics personnel. On average, only 67.7% of PAMI district health facilities have at least a qualified pharmacy personnel and 32.3% of facilities, which lack qualified staff, often struggle to manage health commodities effectively.

The Government of Malawi is actively working to ensure that all PAMI facilities are staffed with qualified pharmacy personnel. To enhance coordination and efficiency, the Health Cluster regularly organizes meetings to prevent duplication of efforts and address gaps in supply chain management. Additionally, various partners are collaborating to procure essential supplies for cholera prevention and treatment.

5.1.8.2 Supply Chain Mechanism during outbreaks

The Pharmaceuticals services division under Health Technical Support Services (HTSS) directorate in the Ministry of Health ensures constant availability of commodities for management Cholera. This is done through coordinating forecasting, procurement, warehousing and distribution of supplies as well as monitoring the utilization in health facilities through supervisions and electronic logistics management information systems (eLMIS).

The distribution of Cholera supplies is done in two different systems: push and pull. In the push system, these are central level coordinated donations in which HTSS-Pharmaceuticals coordinates donations and uses utilization data from facilities and in consultation with facility personnel to determine items and quantities to be allocated to respective cholera affected facilities without the user facilities placing an order. In the pull System, the affected health facilities place an order to include Central Medical Stores and private suppliers using consumption data

Prior to the onset of the cholera season, cholera supplies are strategically pre-positioned at the Central Medical Stores Trust and partner warehouses located near high-risk cholera hotspots. These supplies are promptly deployed to affected facilities, ensuring timely availability for effective cholera management.

Once the cholera season is over, districts account for the supplies used in prevention and response. Items like tents, mobile toilets, and infection prevention equipment are salvaged, cleaned, and stored for future use by the District Health Office. However, challenges remain as some facilities still lack trained pharmacy personnel to manage cholera commodities. On average, 67.7% of facilities in each district have pharmacy personnel.

Table 11: SWOT analysis for Operations, Supply Chain and Logistics

Strengths	Weaknesses
• Availability of Reviewed and updated Supply chain and logistics SOPs • Government allocation of 13% of total annual budget to health which is closer to Abuja declaration of 15%. • Availability of well-trained Pharmacy Personnel in all District and central Hospitals • Availability of Health Facility Management Committee • Availability of 78% of the key Cholera Commodities in all PAMI Facilities • Availability of vehicles for Prepositioning, • Distribution and redistribution of Cholera Commodities in PAMI Districts during Cholera outbreaks • Availability of National Stockpile Warehouses • Availability of Stock management systems (electronic Health Information Network, EHIN and Open LMIS) for real-Time national and District Stock levels	• Inadequate printed copies of updated SOPs for distribution to facilities • Inadequate Human Resources for stock and logistics management system at District level • Unavailability of Health Centre Management Committee (HCMC) to verify or witness the receipt of Supplies • Short Supply of key Cholera Supplies • Influx of Substandard Commodities • Inadequate Storage Facilities at District and Facility level
Opportunities	**Threats**
• Availability of International Partner Support for Capacity Building • Existing Warehousing, • Distribution and Logistics Companies	• Community preference of certain specific health Staff • Prioritization of specific Programs by partner • Sustainability • Well trained staff turnovers • Pilferage • Climate Changes • ErraticPower Supply

Situation Analysis for Operations, Supply Chain and Logistics (OSL)

The data collected from facilities within PAMI's network highlights critical gaps in operations, supply chain, and logistics across healthcare facilities. Key issues have been identified, particularly the unavailability or short supply of key cholera commodities in all PAMI facilities. Furthermore, there is a notable deficiency in

well-trained and qualified pharmacy personnel, or supply chain and logistics officers. These deficiencies significantly hamper efforts to control cholera outbreaks.

Another challenge faced is the logistics for fuel required to redistribute supplies from one facility to another within the PAMI network. This logistical hurdle exacerbates stock imbalances across PAMI health facilities, as redistribution rarely occurs smoothly. Consequently, these issues pose a substantial risk to the effective management of cholera cases during outbreaks.

Addressing these gaps is crucial for enhancing cholera control efforts within PAMI. Despite the existing challenges, there are identifiable opportunities to improve the uninterrupted availability of cholera commodities across all PAMI facilities. International partners,Community engagement and stakeholders can play a pivotal role in enhancing logistics and supply chain capabilities. Local drug manufacturing companies also present an advantageous opportunity, offering easier procurement channels that could mitigate supply chain disruptions.

Community engagement in Supply Chain and Logistics management is crucial to enhance Control and prevent pilferage of the Commodities.There are approaches put in place to engage communities in Supply Chain and Logistics Management and control.At each Facility level,there is a committee called: The Health Centre Management Committee (HCMC). This Committee comprises of members from the community and the Health Workers whose mandate is to oversee and be involved in supply chain and Logistics activities at the Facility. Some of the roles played by this committee are being involved when receiving commodities at the Facility and countersigning the delivery notes as witnesses,being present when the Pharmacy personnel is conducting monthly Physical Counting and also performing routing spot checks of the commodities in the Pharmacy.However,the Present of the community representation need to be enhanced by regular meetings of the committee and emphasize on the importance of their roles in Supply Chain and Logistics management and control

On the other hand, addressing the deficiency in well-trained and qualified pharmacy personnel, or supply chain and logistics officers, is crucial for the effective management of cholera supplies in healthcare facilities. This gap has far-reaching consequences on the overall performance of the supply chain, the availability of essential medical supplies, and the ability to respond promptly to cholera outbreaks. Several key reasons underscore the importance of resolving this issue.

Collaborative efforts involving the stakeholders are essential for strengthening PAMI's ability to respond effectively to cholera outbreaks. By leveraging partnerships and optimizing supply chain logistics, PAMI can enhance its resilience and responsiveness in managing cholera cases. This strategic approach not only addresses immediate supply shortages but also builds long-term capacity to sustain cholera control efforts.

5.1.9 The Baseline for GTFCC Core Indicators

Table 12: Cholera baseline and target values for the 16 global GTFCC core Indicators, 2024

Coordination	Baseline Year	Baseline Value	TARGET (2030)
CI 1: Proportion of the MMCCP which is financed through domestic	[2024]	[0]	70%
CI 3: Proportion of the MMCCP which is financed through external funding	[2024]	[0]	30%
CI 2: Number of quarterly multi-sectoral meetings held by the MMCCP coordination body	[2024]	[0]	{24}
Surveillance and reporting			
CI 3: Incidence rate of suspected cholera	[2024]	0.18%	0.02%
CI 4: Completeness of reporting	[2024]	75%	100%
CI 5: Proportion of peripheral health facilities (PHF) with access to functional laboratory	[2024]	87.30%	>95%
Health care system strengthening			
CI 6: Number of deaths from cholera	[2024]	[7]	0
CI 7: Case-fatality ratio in treatment centers	[2024]	tbd	<1%
CI 8: Proportion of the population living in PAMIs who have access to ORS within a 30-minute walk from their home.	[2024]	tbd	100%
Use of Oral Cholera Vaccine			
CI 9: OCV administrative coverage in PAMI areas (vaccinated over the preceding 12 months)	[2024]	n/a	>95%
CI 10: Proportion of PAMIs targeted by the vaccination plan (in the reporting year) that have been vaccinated	[2024]	tbd	100%
CI 11: Proportion of emergency versus total OCV doses administered (over the preceding 12 months)	[2024]	n/a	N/A
Water, Sanitation, and Hygiene			
CI 12: Proportion of people with access to basic+ water in PAMIs	[2024]	58%	>80%
CI 13: Proportion of people with access to basic sanitation in PAMIs	[2024]	14%	>80%
CI 14: Proportion of people with access to basic hygiene in PAMIs	[2024]	28%	>80%

Coordination	Baseline Year	Baseline Value	TARGET (2030)
Community engagement			
CI 15: Proportion of trained focal points to support community engagement and cholera prevention and treatment per inhabitants in PAMIs	[2024]	tbd	100%
CI 16: Proportion of the population in PAMIs who have correct knowledge on cholera prevention in communities	[2024]	tbd	>95%

6 Multisectoral Leadership and Coordination Mechanism for the MMCCP

6.1 Steering and Coordinating Task Force

Leadership and coordination mechanisms: The task force responsible for coordinating and steering of the MMCCP is composed of a multi-sectoral membership including the Government Ministries, Departments and Agencies (MDAs), Civil Society Organizations (CSOs), UN family, partners, and academia (see Figure 7).

The MMCCP operational plans will be monitored and evaluated annually throughout their duration. Additionally, monitoring will occur continuously during implementation through data collection, reporting, and feedback for improvement. The M&E framework will serve as the guiding tool to track implementation progress. Coordination meetings for the national coordination structure will be held annually, except during outbreaks, when meetings will occur more frequently at shorter intervals. Similarly, the M&E plans for the MMCCP will be reviewed at every end of the implementation year in order to incorporate changes that may have been triggered by various circumstances during implementation. The country will also be reporting to the GTFCC on indicators of implementation annually by pillar.

6.2 Organizational chart

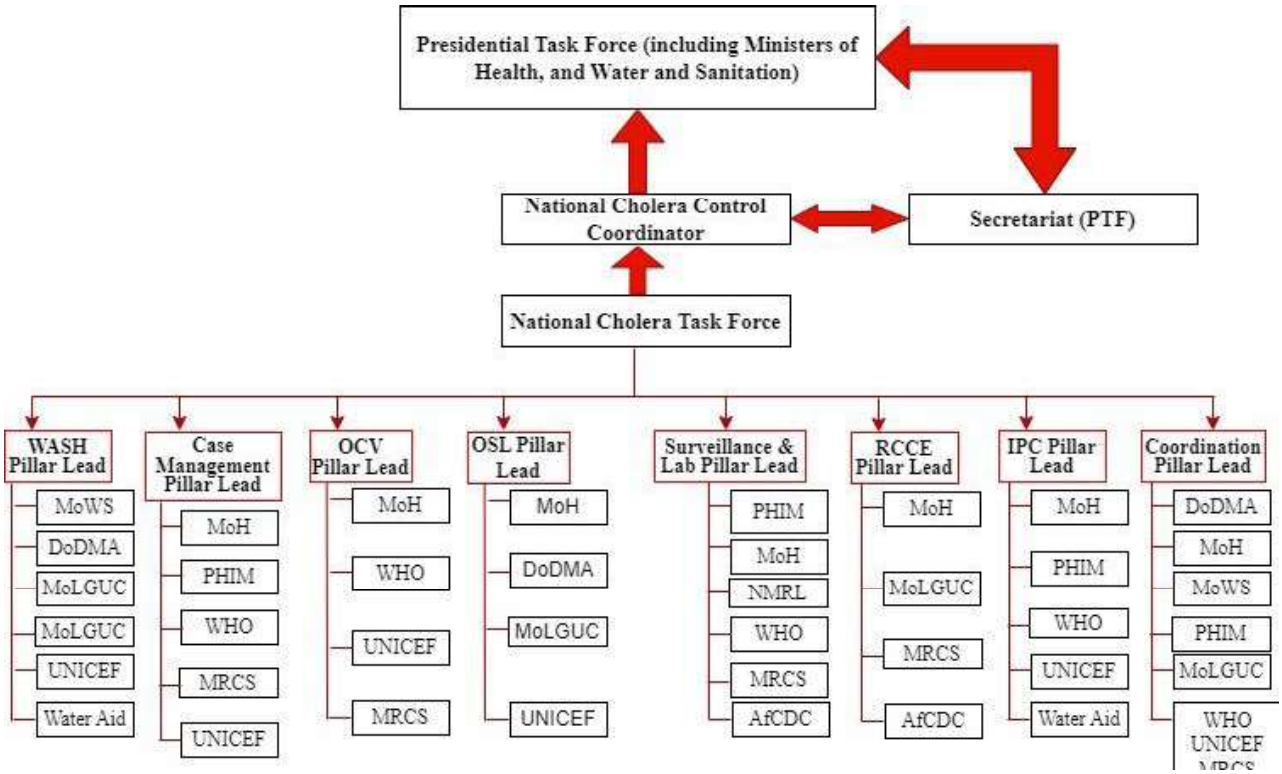


Figure 12: MMCCP Organizational Chart

Long-term vs epidemic coordination mechanisms

The Presidential Task Force on Public Health Emergencies (PTF) provides oversight of multisectoral public health emergencies containment programs, through the national public health emergencies secretariat in the office of the president and cabinet. This structure is in place to enhance coordination with relevant sectors.

7 National, Pillar Goals, and Strategic Objectives

7.1 Goal of the MMCCP

To reduce cholera annual incidence rate by 90% and achieve the case fatality rate of less than 1% in Malawi by 2030.

7.2 Pillar specific strategic objectives

Table 13: Pillar specific strategic objectives

Objectives	
Coordination	
Objective 1	To promote the multisectoral coordination mechanism at National and sub-national levels in all PAMI districts by 2030
Objective 2	To enhance the mobilization of technical, financial and material resources for implementing the cholera control plan activities by 2030
Case management	
Objective 1	To improve the quality of care in Cholera case management in all PAMI's by 2030
Objective 2	To strengthen the level of preparedness to respond to cholera outbreaks in all PAMI's by 2030
Infection Prevention and Control	
OBJECTIVE 1	To reduce healthcare-associated infections in all facilities by 2030
RCCE	
Objective 1	To improve national, district and community RCCE capacity in all PAMIs by 90% by 2030.
Objective 2	To improve adoption of positive Cholera prevention and control behavioral practices in all PAMIs by 85% by 2030.
Objective 2	To increase knowledge about OCV to improve uptake in all PAMIs by 95% by 2030
Surveillance and Lab	
Objective 1	To improve early cholera detection, notification and timely implementation of control measures by 2030.
Objective 2	To maintain, regularly update, analyse and share cholera surveillance and laboratory data at the facility, district and national level
Objective 3	To improve sample referral pathways, expand testing and sequencing capacities, and strengthen biosafety and biosecurity by 2030.
Objective 4	To Strengthen surveillance and laboratory capacities at community, health facility, national level and point of entries by 2030

Objective 5	To improve data quality management in surveillance and laboratory systems by 2030
WASH	
Objective 1	Increase the proportion of population with access to at least basic water services, basic sanitation, and hygiene in all PAMIs by 2030.
Objective 2	Strengthen WASH systems for accelerated attainment of universal access to basic WASH services in the PAMIs
Objective 3	To strengthen WASH preparedness and response to cholera outbreaks in the PAMIs by 2030
OCV	
Objective 1	To achieve high OCV coverage in all PAMIs by use of preventive OCV campaigns
Objective 2	To achieve high OCV coverage in vulnerable and at-risk groups communities through reactive OCV campaigns during outbreaks
OSL	
Objective 1	To improve the availability of essential cholera supplies across all PAMI facilities districts by 2030.
Objective 2	To increase the percentage of PAMI health facilities with well-trained and qualified pharmacy personnel from 67.7% to 100% by 2030

8 Implementation Plans

The total cost for implementing the plan amounts to **USD 99,923,259.57. Annex 7** shows a detailed implementation plan; table below shows the cost per pillar for the duration of the implementation of the plan.

Table 14: Summary Cost per Pillar 2024 to 2030

Pillar	2024	2025	2026	2027	2028	2029	2030	Total
Case Management	-	1,437,945.87	902,416.45	712,884.62	1,460,687.87	701,456.05	1,645,378.73	6,860,769.59
Coordination	-	1,939,744.39	3,798,508.21	1,784,005.98	1,708,691.69	1,224,043.97	1,180,658.78	11,635,653.02
IPC	-	2,292,838.17	265,182.99	274,208.89	239,683.29	200,212.09	83,274.25	3,355,399.69
OCV	-	6,221,195.09	5,272,023.63	4,721,461.23	1,732,277.98	1,746,953.41	1,722,537.98	21,416,449.32
OSL	-	3,635,333.39	642,321.37	568,833.74	437,532.71	394,905.51	248,447.45	5,927,374.17
RCCE	-	4,115,721.91	1,827,969.77	1,260,556.11	1,293,938.40	1,317,482.40	1,293,066.97	11,108,735.57
Surveillance	-	1,749,295.31	1,836,760.08	1,928,598.08	2,025,027.99	2,126,279.39	2,232,593.36	11,898,554.21
WASH	-	4,000,000.00	4,420,324.00	4,300,000.00	4,400,000.00	5,300,000.00	5,300,000.00	27,720,324.00
Total	**-**	**25,392,074.15**	**18,965,506.51**	**15,550,548.66**	**13,297,839.93**	**13,011,332.81**	**13,705,957.52**	**99,923,259.57**

8.1 A description of the methodology used for its preparation

The implementation plan was developed through a multi-sectoral approach, engaging various ministries, civil society organizations (CSOs), departments, partners, and NGOs. The process was spearheaded by the Presidential Task Force on Public Health Emergencies, using a standardized template provided by the Global Task Force on Cholera Control (GTFCC). Stakeholder consultations were a critical component, with the Ministry of Health collaborating closely with the Ministries of Water, Sanitation, and Education and other partners to ensure the plan was comprehensive and aligned with national and international health priorities.

A thorough situation analysis and risk assessment were conducted to identify cholera hotspots, transmission patterns, and seasonal risks. This involved the identification of PAMIs which informed the emphasis and prioritization to the implementation plan.

Monitoring and evaluation systems were established, with performance indicators to track the effectiveness of interventions and ensure accountability (Annex 8). The plan underwent validation workshops with technical experts, communities, and partners before being finalized and approved by the Ministry of Health and the National Cholera Task Force, ensuring it was well-adapted to Malawi's specific needs. The logical framework for the plan was developed (Annex 6).

9 Monitoring and Evaluation

9.1 Regular updates

Regular updates will be provided to ensure all stakeholders are informed about the current cholera situation, including the status of outbreaks and response efforts. These updates will include information on case numbers, geographic distribution, and trends in transmission, enabling timely decision-making and resource allocation. Furthermore, stakeholders will receive updates on ongoing prevention and control measures, ensuring that efforts are aligned and effective in addressing cholera outbreaks. Regular communication will also facilitate the sharing of best practices and lessons learned, enhancing the overall cholera response strategy.

9.2 Other monitoring and evaluation methods

9.2.1 Simulation exercise evaluation report.

Simulation exercise evaluation reports will be conducted to assess the effectiveness of preparedness plans and response strategies for cholera outbreaks. These evaluations will focus on gathering participant feedback, analyzing response times, and evaluating resource allocation and coordination effectiveness.

9.2.2 After Action Reviews (AAR).

After Action Reviews (AAR) will be carried out following cholera outbreaks and response activities to analyze the effectiveness of the interventions implemented. Input will be collected from all stakeholders involved to generate actionable recommendations for future response efforts.

9.2.3 Project reports

Project reports will be developed to provide comprehensive overviews of specific cholera prevention and response initiatives. These reports will detail activities undertaken, outputs achieved, outcomes realized, and challenges faced throughout the project implementation.

9.2.4 Outbreak investigation reports

Outbreak investigation reports will be generated to analyze cholera outbreaks, focusing on case demographics, transmission dynamics, and the effectiveness of the response. These reports will inform strategies for managing future outbreaks and enhance public health policies.

9.2.5 Lessons learned

Lessons learned will be documented and shared to promote continuous learning among stakeholders. This will involve highlighting successful interventions, effective community engagement strategies, and collaborative efforts, ultimately contributing to improved cholera response and preparedness efforts.

10 Reporting

10.1 Global reporting on the GTFCC 16 core indicators

Global reporting of the GTFCC (Global Task Force on Cholera Control) 16 core indicators will be implemented to monitor and evaluate the progress of cholera control efforts. This reporting will involve collecting and analyzing data on the 16 core indicators.

10.2 Regular case reporting to WHO

Regular case reporting to the World Health Organization (WHO) will be conducted to ensure accurate and timely communication of cholera cases and outbreaks. This reporting will involve documenting and submitting data on the number of confirmed cases, deaths, and the geographic distribution of outbreaks.

10.3 Annual review of Implementation Plan

An annual review of the Implementation Plan will be conducted to assess progress toward achieving the established objectives and outputs related to cholera prevention and response. This review will involve evaluating the effectiveness of interventions, identifying challenges encountered, and determining whether adjustments are needed in strategies or resource allocation.

11 Annexes

Annex 1: A table of summary of Pre-emptive (P) OCV campaigns conducted in Malawi

District	Pre-emptive (P)	Population targeted	Vaccine Brand used	Dates of the campaign	Coverage
Chikwawa	P	202,000	Shanchol™	Round 1: 02-06 October 2017 Round 2: 23-29 October 2017	Round 1: 209,271 (104%) Round 2: 185.180 (92%)
Dowa	P	40,000	Euvichol™	Round 1: 6-10 Nov 2017 Round 2: 27 Nov - 1 Dec 2017	Round 1: 36,168 (90%) Round 2: 37,703 (94%)
Salima	P	108,339	Euvichol®	Round 1: 20 – 24 Nov 2017 Round 2: 11 – 15 Dec 2017	Round 1: 115,672 (107%) Round 2: 110,511 (102%) incl. 7,601 OCV 1st dose
Nkhata Bay	P	120,000	Euvichol plus	Round 1: 6 – 10 August 2018 Round 2: 27 – 31 August 2018	Round 1: 124,056 (103%) Round 2: 121,631 (101%)
Mangochi	P	206,000	Shanchol	Round 1: 17 – 21 December 2018 Round 2: 7 – 12 January 2019	Round 1: 183,291 (89%) Round 2: 189,633 (92%) incl. 171,572 second dose (84%)
Nsanje	P	252364	Euvichol plus	Round 1: 19-23 October 2020 Round 2: 9-13 November, 2020	Round 1:215,968 (85.6%) Round 2: 167,751 (77.7%)

Phalombe	P	85,615	Euvichol plus	Round 1: 2-6 November 2020 Round 2: 23-27 November, 2020	Round 1: 83,903 (98%) Round 2: 79,622(93%)
Zomba	P	168,000	Euvichol plus	Round 1: 23-27-April 2021 Round 2: 10-15 May, 2021	Round 1: 71% Round 2: 99.7%
Machinga	P	170,000	Euvichol plus	Round 1: 29 Mar-2 Apr 2021 Round 2: 26 Apr-1 May, 2021	Round 1: 158,112 (93%) Round 2: 146,041 (86%)

Annex 2: A table summary of Reactive (R) OCV campaigns conducted in Malawi

District	Population targeted/ adjusted	Vaccine Brand used	Dates of the campaign	Coverage
Nsanje	160,482	Shanchol™	Round1:30 March - 4 April 2015 Round 2: 18 April-24 April, 2015	Round 1: 156,592 (98%) Round 2: 109,247 (70%)
Zomba	90,000	Shanchol®	Round 1: 15-21 November 2016 Round 2: 5-10 December, 2016	Round 1: 98,100 (109%) Round 2: 74,700 (83%)
Districts around Lake Chilwa *(Machinga, Zomba and Phalombe)*	80,000	Shanchol®	Round 1: 15-20 February 2016 Round 2: 8-13 March, 2016	Round 1: 76,800 (96%) Round 2: 66,400 (83%)
Machinga	45,000	Shanchol®	Round 1: 15-21 November 2016 Round 2: 5-10 December, 2016	Round 1: 103.3% Round 2: 68.6%

Chikwawa	40,000	Shanchol™	Round 1: 26-30 June 2017 Round 2: 17-21 July 2017	Round 1: 42,403 (106%) Round 2: 32,836 (82%)
Nsanje	20,000	Shanchol®	Round 1: 3-7 July 2017 Round 2: 24-28 July 2017	Round 1: 25,030 (125%) Round 2: 15,000 (75%)
Karonga *extended to neighboring villages in RUMPHI*	108,000	Euvichol®	Round 1: 19 – 23 Feb 2018 Round 2: 12 – 16 March 2018	Round 1: 110,518 (102%) Round 2: 108,387 (100.3%) incl. 10,369 OCV 1st dose
Rumphi	11,500	Euvichol®	Round 1: 19 – 23 Feb 2018 Round 2: 12 – 16 March 2018	Round 1: 10,023 (87%) Round 2: 10,034 (87%)
Lilongwe	378,333	Euvichol plus	Round 1: 17 – 21 April 2018 Round 2: 28 May – 1 June 2018	Round 1: 348,066 (92%) Round 2: 310,233 (82%)
Salima 2 *(areas different from the previous campaign)*	120,000	Euvichol plus	Round 1: 9 – 13 July 2018 Round 2: 6 – 10 August 2018	Round 1: 151,894 (127%) Round 2: 131,005 (109%)
Nsanje	300,800	Euvichol plus	Round 1: 23 – 27 May 2022 Round 2:	Round 1: 299300 (99.5%) Round 2:
Mulanje	64,218	Euvichol plus	Round 1: 23 – 27 May 2022	Round 1: 61,615 (95.9%)
Machinga	73255	Euvichol plus	Round 1: 23 – 27 May 2022	Round 1: 70,184 (95.8%)

Balaka	53,712	Euvichol plus	Round 1: 23 – 27 May 2022	Round 1: 53.703 (100%)
Chikwawa	306,495	Euvichol plus	Round 1: 23 – 27 May 2022	Round 1: 290,764 (94.9%)
Phalombe	161,200	Euvichol plus	Round 1: 23 – 27 May 2022	Round 1: 134,908 (83.7%)
Blantyre	827,890	Euvichol plus	Round 1: 23 – 27 May 2022	Round 1: 369,305 (44.6)
Mangochi	61,890 185,000	Euvichol plus	Round 1: 23 – 27 May 2022 Round 2: 28 Nov – 2 December 2022	Round 1: 61,877 (100%) Round 2: 170,582 (92.2%)
Neno	147,352 60,000	Euvichol plus	Round 1: 1-5 August 2022 Round 2: 29 Aug-2 Sep 2022	Round 1: 123,776 (84%) Round 2: 40,800 (68%)
Chitipa	127,463	Euvichol plus	Round 1: 28 Nov – 2 December 2022	Round 1: 124,144 (97.4%)
Karonga	268,738	Euvichol plus	Round 1: 28 Nov – 2 December 2022	Round 1: 248,382 (92.4%)
Mzimba North	291,808	Euvichol plus	Round 1: 28 Nov – 2 December 2022	Round 1: 270173 (92.6%)
Mzimba South	136,934	Euvichol plus	Round 1: 28 Nov – 2 December 2022	Round 1: 117,558 (85.9%)
Nkhatabay	207,433	Euvichol plus	Round 1: 28 Nov – 2 December 2022	Round 1: 178,869 (86.2%)
Likoma	14,227	Euvichol plus	Round 1: 28 Nov – 2 December 2022	Round 1: 6216 (43.7%)
Nkhotakota	293,305	Euvichol plus	Round 1: 28 Nov – 2 December 2022	Round 1: 193,918 (66.1%)
Kasungu	243,200	Euvichol plus	Round 1: 28 Nov – 2 December 2022	Round 1: 243,200 (100%)
Lilongwe	560,707	Euvichol plus	Round 1: 28 Nov – 2 December 2022	Round 1: 392,474 (70%)

Salima	260,711	Euvichol plus	Round 1: 28 Nov – 2 December 2022	Round 1: 253,841 (97.4%)
Zomba	222,448	Euvichol plus	Round 1: 28 Nov – 2 December 2022	Round 1: 199,710 (89.8%)
Blantyre	398,500	Euvichol plus	Round 1: 9 – 13 January 2023	Round 1: 323,512 (81%)
Salima	179,328	Euvichol plus	Round 1: 24 – 29 April 2023	Round 1: 162, 147 (90.4%)
Thyolo	179,328	Euvichol plus	Round 1: 24 – 29 April 2023	Round 1: 185,643 (52.9)
Lilongwe	434,885	Euvichol plus	Round 1: 24 – 29 April 2023	Round 1: 330,091 (75.9%)
Dedza	311,543	Euvichol plus	Round 1: 24 – 29 April 2023	Round 1: 252,926 (81.2%)
Mangochi	137,264	Euvichol plus	Round 1: 24 – 29 April 2023	Round 1: 122,807 (89.5%)

Annex 3: A table of summarized PAMI prioritized for OCV, and the 2026 doses required.

District	Administration level 3 (T/A)	projected population 2026	Target	Number of doses for 2 rounds (Target + Wastage)
Balaka	TA Msamala	100804	95764	201104
Balaka	TA Kalembo	96528	91701	192572
Balaka	TA Amidu	57661	54778	115034
Balaka	TA Nkaya	56462	53639	112642
Balaka	STA Phalula	24260	23047	48398
Blantyre	TA Kapeni	126715	120379	252797
Blantyre	TA Lundu	39415	37444	78633
Blantyre	TA Chigaru	63243	60081	126169

Blantyre	TA Kunthembwe	56149	53342	112018
Blantyre	TA Makata	24466	23243	48810
Blantyre	TA Kuntaja	103532	98356	206547
Blantyre	TA Machinjiri	36632	34800	73080
Blantyre	TA Somba	100973	95924	201441
Chikwawa	TA Ngabu	189929	180432	378908
Chikwawa	TA Lundu	74851	71108	149328
Chikwawa	TA Chapananga	106728	101391	212922
Chikwawa	TA Maseya	45503	43228	90779
Chikwawa	TA Katunga	39663	37680	79127
Chikwawa	TA Kasisi	28012	26612	55885
Chikwawa	TA Makhwira	96247	91435	192013
Chikwawa	STA Ndakwela	28524	27098	56906
Chikwawa	TA Mlilima	14385	13666	28698
Chikwawa	STA Masache	26738	25401	53342
Chikwawa	TA Ngowe	12564	11936	25065
Chikwawa	Lengwe National Park	655	622	1306
Chikwawa	Majete Game Reserve – Chikwawa	266	253	531
Chikwawa	Chikwawa Boma	7362	6994	14687
Dedza	TA Kaphuka	203194	193034	405371
Dedza	TA Kachindamoto	158656	150723	316518
Dedza	TA Kamenya Gwaza	44550	42322	88877
Karonga	TA Kyungu	107809	102418	215079
Karonga	TA Wasambo	87756	83368	175073
Karonga	TA Kilupula	94289	89574	188106
Karonga	TA Mwirang'ombe	45021	42770	89816
Likoma	TA Mkumpha	15731	14945	31384

Lilongwe	TA Chadza	173252	164589	345637
Lilongwe	TA Masula	101659	96576	202810
Lilongwe	TA Chiseka	170936	162389	341017
Lilongwe	TA Mazengera	140247	133235	279793
Lilongwe	TA Chimutu	135630	128848	270582
Lilongwe	TA Chitukula	30825	29284	61496
Lilongwe	TA Tsabango	76302	72487	152223
Lilongwe	TA Kalumba	51344	48776	102430
Lilongwe	TA Njewa	60204	57194	120107
Lilongwe	TA Malili	140243	133231	279785
Machinga	TA Liwonde	114836	109095	229099
Machinga	STA Nsanama	49555	47077	98862
Machinga	TA Sitola	32341	30724	64520
Machinga	STA Nchinguza	40932	38886	81660
Machinga	TA Kawinga	118546	112619	236499
Machinga	TA Nkoola	69689	66205	139030
Machinga	TA Mposa	46314	43998	92396
Machinga	TA Mlomba	80104	76099	159807
Machinga	TA Chikweo	107131	101775	213727
Mangochi	TA Mponda	212286	201672	423510
Mangochi	TA Chimwala	119091	113137	237587
Mangochi	TA Chilipa	46032	43731	91835
Mangochi	TA Nankumba	202563	192435	404113
Mangochi	TA Chowe	142308	135192	283904
Mangochi	TA Makanjila	84901	80656	169377
Mangochi	STA Lulanga	54684	51950	109095
Mangochi	TA Namabvi	60629	57598	120956
Mangochi	STA Ntonda	26648	25315	53163

Mulanje	TA Mabuka	131330	124764	262004
Mulanje	TA Nthiramanja	61891	58797	123473
Mulanje	TA Nkanda	155107	147352	309439
Mulanje	TA Juma	133009	126358	265353
Mulanje	STA Tombondiya	29189	27729	58232
Neno	TA Chekucheku	28341	26924	56541
Neno	TA Symon Likongwe	52315	49700	104369
Nkhatabay	TA Fukamapiri	24340	23123	48558
Nkhatabay	TA Zilakoma	21265	20202	42424
Nkhatabay	TA Mankhambira	29007	27557	57869
Nkhatabay	TA Fukamalaza	17035	16183	33985
Nkhatabay	TA Mkumbira	17748	16861	35408
Nkhatabay	TA Timbiri	56167	53358	112053
Nkhatabay	TA M'bwana	28321	26905	56500
Nkhatabay	TA Malenga Mzoma	12822	12181	25581
Nkhatabay	TA Boghoyo	2051	1948	4091
Nkhotakota	TA Kanyenda	140257	133244	279813
Nkhotakota	TA Kafuzila	28967	27519	57789
Nkhotakota	STA Kalimanjira	23665	22482	47213
Nkhotakota	TA Malenga Chanzi	52062	49459	103864
Nkhotakota	TA Mphonde	37617	35736	75045
Nkhotakota	TA Mwansambo	35190	33431	70205
Nsanje	TA Ndamera	39823	37832	79447
Nsanje	TA Chimombo	14585	13856	29097
Nsanje	TA Nyachikadza	9036	8584	18027
Nsanje	TA Mlolo	81716	77630	163024
Nsanje	TA Tengani	48593	46163	96943
Nsanje	TA Malemia	26531	25204	52929

Nsanje	TA Mbenje	63323	60157	126329
Nsanje	TA Ngabu	15823	15032	31567
Nsanje	TA Makoko	12219	11608	24376
Nsanje	Mwabvi Game Reserve	10340	9823	20628
Ntcheu	TA Makwangwala	108127	102721	215714
Ntcheu	TA Masasa	43803	41613	87387
Phalombe	TA Jenala	109028	103577	217512
Phalombe	TA Chiwalo	54288	51574	108305
Rumphi	STA Chapinduka	4506	4281	8990
Rumphi	TA Mwankhunikira	30560	29032	60967
Salima	TA Maganga	87474	83101	174511
Salima	TA Karonga	97601	92721	194714
Salima	TA Pemba	30833	29291	61511
Salima	TA Kambwiri	51982	49383	103704
Salima	TA Ndindi	59580	56601	118862
Salima	TA Kambalame	27866	26473	55593
Salima	TA Khombedza	118911	112965	237227
Salima	TA Mwanza	32195	30585	64229
Salima	TA Kuluunda	24334	23118	48547
Salima	Salima Town	45859	43566	91489
Thyolo	TA Chimaliro	66618	63287	132903
Thyolo	TA Bvumbwe	129134	122677	257622
Thyolo	TA Nanseta	37317	35451	74447
Zomba	TA Kuntumanji	57902	55007	115515
Zomba	TA Mwambo	183052	173899	365188
Zomba	TA Mkumbira	7482	7108	14927
Zomba	STA Nkagula	62080	58976	123849
Total	**118**	**7914723**	**7518987**	**15789872**

Wastage rate for single dose formulation 5% for campaign, Target population = 5% of the projected population, Population adjustment rate =2.69

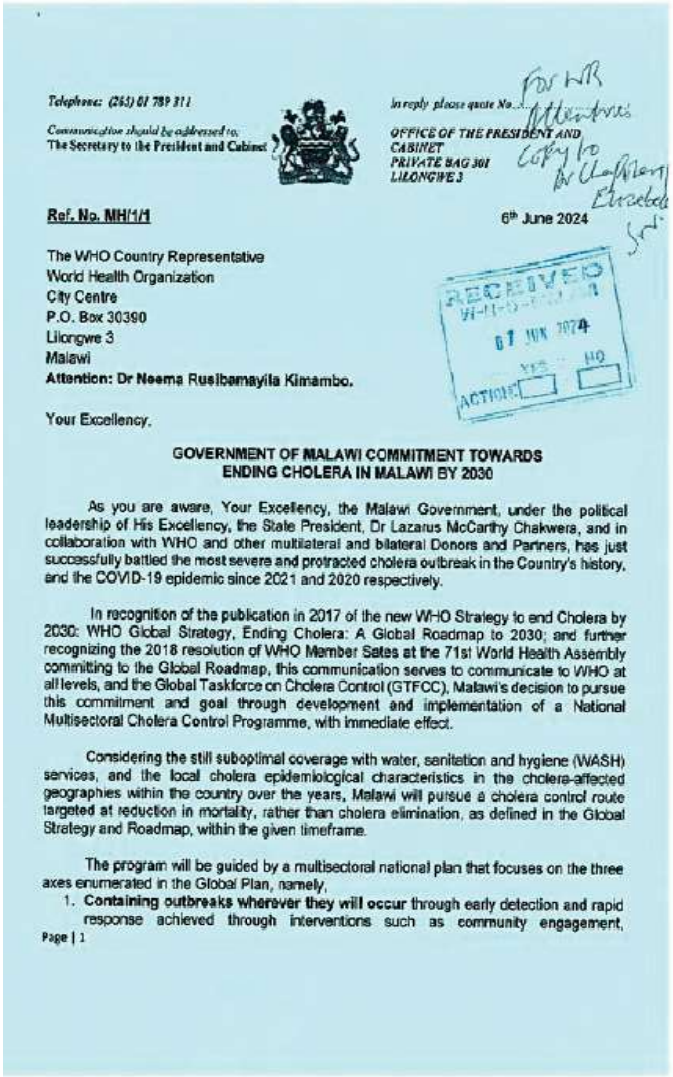
Annex 4: District Reactive OCV indicators in Malawi for 2023

District	Year and Date	Targeted Population (>1)	First dose	Second dose	Total Vaccinated	Fully Vaccinated	Coverage
Salima	April 2023	179328	162147		162147	162147	90.4%
Dedza	April 2023	311543	252926		252926	252926	81.2%
Thyolo	April 2023	352477	185643		185643	185643	52.7%
Mangochi	April 2023	137264	122807		122807	122807	89.5%
Lilongwe	April 2023	434885	330091		330091	330091	75.9%
Total		**1415497**	**1053614**		**1053614**	**1053614**	**74.4%**

Annex 5: Preventive OCV vaccination indicators by district in Malawi 2021

District	Year and Date	Targeted Population (>1)	First dose	Coverage 1st Dose	Second dose	Coverage 2nd dose	Total Vaccinated	Fully Vaccinated
Phalombe	April & May 2021	85615	83903	98%	79622	93%	163525	
Machinga	April & May 2021	170000	158112	93%	146041	86%	304153	
Zomba	April & May 2021	168000	119280	71%	167496	99.7%	286776	
Total		**423615**	**361295**	**87.3%**	**393159**	**92.9%**	**754454**	

Annex 6: Malawi's commitment letter to control cholera



Telephone: (265) 01 789 311

Communication should be addressed to:
The Secretary to the President and Cabinet

In reply please quote No.

OFFICE OF THE PRESIDENT AND
CABINET
PRIVATE BAG 301
LILONGWE 3

Ref. No. MH/1/1

6th June 2024

The WHO Country Representative
World Health Organization
City Centre
P.O. Box 30390
Lilongwe 3
Malawi
Attention: Dr Neema Rusibamayila Kimambo.

Your Excellency,

GOVERNMENT OF MALAWI COMMITMENT TOWARDS ENDING CHOLERA IN MALAWI BY 2030

As you are aware, Your Excellency, the Malawi Government, under the political leadership of His Excellency, the State President, Dr Lazarus McCarthy Chakwera, and in collaboration with WHO and other multilateral and bilateral Donors and Partners, has just successfully battled the most severe and protracted cholera outbreak in the Country's history, and the COVID-19 epidemic since 2021 and 2020 respectively.

In recognition of the publication in 2017 of the new WHO Strategy to end Cholera by 2030: WHO Global Strategy, Ending Cholera: A Global Roadmap to 2030; and further recognizing the 2018 resolution of WHO Member Sates at the 71st World Health Assembly committing to the Global Roadmap, this communication serves to communicate to WHO at all levels, and the Global Taskforce on Cholera Control (GTFCC), Malawi's decision to pursue this commitment and goal through development and implementation of a National Multisectoral Cholera Control Programme, with immediate effect.

Considering the still suboptimal coverage with water, sanitation and hygiene (WASH) services, and the local cholera epidemiological characteristics in the cholera-affected geographies within the country over the years, Malawi will pursue a cholera control route targeted at reduction in mortality, rather than cholera elimination, as defined in the Global Strategy and Roadmap, within the given timeframe.

The program will be guided by a multisectoral national plan that focuses on the three axes enumerated in the Global Plan, namely,

1. **Containing outbreaks wherever they will occur** through early detection and rapid response achieved through interventions such as community engagement,

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strengthening of early warning and surveillance systems, strengthening of laboratory capacities to diagnose and characterize causative organisms, strengthening case management and other health systems, strengthening supply chain readiness, and establishing rapid response teams.

2. **Scaling up a targeted multi-sectoral approach to prevent cholera recurrence through focusing on cholera hotspots,** the relatively small areas most heavily affected by cholera, which experience cases on an ongoing or seasonal basis and play an important role in the spread of cholera to other regions and areas, through deliberate efforts to improve access to safe water, adequate sanitation, and hygiene (WASH), and through use of preemptive (preventive) oral cholera vaccines (OCV). To this end, mapping of cholera Priority Areas for Multisectoral Interventions (PAMIS - hotspots) has already been undertaken jointly with relevant sectors and partners.

3. **A centrally led mechanism for coordination of strategic guidance, technical support, advocacy, resource mobilization, and partnerships at national and local levels:** In line with the recommendations of the aforementioned WHO Global document, the Malawi National Cholera Control Programme will be based on a multisectoral approach coordinated from the Office of the President and Cabinet through a secretariat headed by a Coordinator (Program Manager). This setup already exists and has already been successfully used in coordinating the recent national COVID-19 and vibrio cholera outbreaks response activities in the country with impressive results.

The Presidential Taskforce on coronavirus and cholera control, whose mandate will soon encompass other infectious diseases outbreaks and emergencies, that includes cholera, will have policy guidance responsibility and oversight in implementing the multisectoral national program over time.

The Malawi government looks forward to the human, technical material and financial resources support of WHO at all levels, and the GTFCC, in setting up this programme, in advocacy and in mobilization of local and global partners and resources, including adequate doses of oral cholera vaccines for preemptive vaccination of target populations especially in the identified Priority Areas for Multisectoral Interventions (PAMIS - hotspots), to facilitate effective implementation of the Malawi National Cholera Control Programme in line with the Global Plan, by leveraging their global mandate and capacity to help build upon the country designed and country-led multisectoral cholera control program.

The Malawi government expresses her gratitude for the role WHO played and continues to play in the country's response to health emergencies and outbreaks, and health related disasters, and looks forward to continued support and collaboration in the fight against cholera and other emerging and reemerging health emergencies and outbreaks, and health related disasters.

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Accept, Your Excellency, assurances of our highest considerations

Yours sincerely,

Honourable Khumbize Kandodo Chiponda, MP
MINISTER OF HEALTH & CO-CHAIRPERSON,
PRESIDENTIAL TASKFORCE ON CORONAVIRUS AND CHOLERA, AND OTHER INFECTIOUS DISEASES EMERGENCIES

Dr. Wilfred Chalamira Nkhoma, MPH, PhD, FRSPH (UK)
CO-CHAIRPERSON, PRESIDENTIAL TASKFORCE ON CORONAVIRUS AND CHOLERA, AND OTHER INFECTIOUS DISEASES EMERGENCIES

Copy:

- The Secretary to the President and Cabinet, Private Bag 303, Lilongwe 3
  Attention: Ms Collen Zamba
- The Minister of Foreign Affairs, P.O. 30415, Lilongwe 3
  Attention: Honourable Nancy Tembo, MP
- The Principal Secretary, Office of the Vice President, Private Bag 301, Lilongwe

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Annex 7: Terms of reference contents for an (MMCCP) coordination body

- Objectives.
- Scope and authority, including decision-making powers.
- Membership with affiliation.
- Leadership and governance, including chairperson, vice-chair, executive committee…
- Meetings and communication.
- Decision-making process.
- Reporting and accountability.
- Resource allocation.
- Monitoring and evaluation.
- Annual review of the Implementation Plan.
- Duration of the ToR and review process.
- Communication with stakeholders, media and the public.

Annex 8: National Cholera Plan Logical Framework Analysis

	Project Summary	Indicators	Means of Verification	Risks and Assumptions
Strategic Objective	To reduce cholera annual incidence rate by 90% and achieve a case fatality rate of less than 1% in Malawi by 2030	- **Cholera incidence rate:** Percentage decrease in annual cholera incidence rate - **Case Fatality Rate:** Percentage decrease in cholera case fatality rate	-National Health Sector Surveillance date	**Risks:** Political instability and change of government may delay cholera interventions. Inadequate resource allocation for long term cholera control **Assumptions:** Political and financial commitment to cholera control remains strong. Stakeholders are committed to cholera intervention prioritization
Outcomes	1. Strengthened Multisectoral Coordination for cholera control	- Number of national and district-level coordination meetings held - Proportion of coordination structures with defined Terms of Reference (ToRs)	- Meeting minutes and attendance reports - Published ToRs for coordination structures	**Risks:** Major stakeholders may not attend coordination meetings. Poor communication between national and district levels may result in fragmented response efforts. **Assumptions:** Participation of relevant sectors and stakeholders in coordination meetings. Effective communication levels of government.

	2. Improved cholera case management across health facilities	- Proportion of health workers trained in cholera case management - Number of health facilities with cholera management protocols implemented	- Training attendance sheets - Health facility assessments and reports	**Risks:** High turnover of health workers may result in insufficient training coverage. overburdened healthcare workers lack time and resources to effectively implement case management protocols. **Assumptions:** Enough training resources and facilitators are available. Health workers are motivated and adequately supported to implement the protocols.
	3. Enhanced WASH services and preparedness in cholera-prone areas	- Percentage increase in population with access to clean water and sanitation	- Reports on WASH interventions	**Risks:** Limited budget allocation for WASH interventions may slow down progress. Environmental or climate change factors could undermine WASH infrastructure **Assumptions:** Consistent funding and technical support for WASH interventions. Strong partnership with WASH focused organizations.
	4. Conduct redistribution of cholera supplies during cholera outbreak	- Number of cholera supplies redistribution conducted	- Logistics Report -Distribution Records -Supply Chain Monitoring Data	**Risks:** Supply chain disruptions in the distribution of cholera supplies could hinder timely delivery of supplies to affected areas, affecting the response and worsening the outbreak.

				Assumptions: Sufficient availability of cholera supplies are pre-positioned and available for redistribution when an outbreak occurs.
	5. Conduct engagement meetings with school clubs, market leaders for the promotion of hygiene practices.	- Number of engagement meetings conducted	- Meeting minutes and attendance registers	**Risks:** Low participation from schools and market leaders due to competing priorities or lack of incentives. Limited resources for conducting the meetings. **Assumptions:** School clubs and market leaders remain open to engaging in cholera prevention activities. Sufficient resources will be available to carry out the meetings and support the ongoing activities.
	6. Train surveillance officers (at all levels, including PoEs) in IDSR (IBS and EBS) using One Health Approach	- Number of surveillance officers trained	- Training attendance records and certificates of completion. - Reports from training sessions indicating the number of officers trained. - Documentation from surveillance officer rosters at national, district, and PoE levels.	**Risks:** Difficulties in reaching remote areas or ensuring timely travel for participants, leading to delays in training. Delays in conducting training due to the unavailability of experts or trainers. **Assumptions:** Sufficient budget and resources are available to conduct training across all levels.

Annex 9: MMCCP Implementation Plan

Activities	Target	2025	2026	2027	2028	2029	2030	Responsible	Stakeholders
1. Coordination Pillar									
1.1 Orientation on Terms of Reference (ToRs).	1 National meeting							National Cholera Coordinator	MoH, WHO, UNICEF
1.2 Conduct ToR orientation for district PHEMCs.	20 districts							National Cholera Coordinator	MoH, WHO, UNICEF
1.3 Conduct ToR orientation for ADCs.	20 districts							National Cholera Coordinator	MoH, WHO, UNICEF
1.4 Conduct ToR orientation for health centers	20 districts							National Cholera Coordinator	MoH, WHO, UNICEF
1.5 Conduct ToR orientation for cross-border committees.	6 committees							National Cholera Coordinator	MoH, WHO, UNICEF
1.6 Conduct annual national-level PHEMC meetings.	1 meeting/year							National Cholera Coordinator	MoH, WHO, UNICEF
1.7 Conduct district-level PHEMC meetings.	20 districts							National Cholera Coordinator	MoH, WHO, UNICEF
1.8 Conduct supportive supervision of district PHEMCs.	20 districts							National Cholera Coordinator	MoH, WHO, UNICEF
1.9 Review Standard Operating Procedures (SOPs).	1 national review							National Cholera Coordinator	MoH, WHO, UNICEF

1.10 Conduct national dissemination workshop for guidelines and SOPs.	1 workshop							National Cholera Coordinator	MoH, WHO, UNICEF
1.11 Conduct district dissemination workshops for guidelines and SOPs.	20 districts							National Cholera Coordinator	MoH, WHO, UNICEF
1.12 Conduct stakeholder engagement meetings.	8 meetings							National Cholera Coordinator	MoH, WHO, UNICEF
1.13 Develop a resource mobilization plan.	1 plan								
2. Surveillance									
2.1 Train surveillance officers (all levels, including PoEs) in IDSR using One Health Approach	1,000 officers							National IDSR focal person	MoH, WHO, MRCS, UNICEF, AMREF, GLOBAL FUND, IOM, LIN, World Bank

2.2 Train community volunteers and leaders in EBS, including cholera death reporting	45,000 individuals							National EBS focal person	MoH, WHO, MRCS, UNICEF, AMREF, GLOBAL FUND, IOM, LIN, World Bank
2.3 Train health workers on Epidemic Intelligence from Open Sources (EIOS)	134 health workers							TBD	TBD
2.4 Print and distribute guidelines, reporting tools, training manuals, and job aides	2,718 sets							PHIM-National IDSR Coordinator	WHO
2.5 Conduct quarterly cholera review meetings at zone and district levels	130 meetings							District IDSR Coordinator	WHO, UNICER, Recross
2.6 Conduct active case search of cholera suspects in PAMIs	100% coverage							National IDSR focal person	MoH, WHO, MRCS, UNICEF, AMREF, GLOBAL FUND, IOM, LIN, World Bank
2.7 Conduct cholera contact tracing within 48 hours of detection	100% cases							National IDSR focal person	MoH, WHO, MRCS, UNICEF, AMREF, GLOBAL FUND, IOM, LIN, World Bank

2.8 Conduct training on cholera sample collection, testing, and referral	6,000 health workers							PHIM- National Microbiology	WHO, WORLD BANK, AFRICA CDC
2.9 Procure and distribute lab equipment and supplies for microbiology and genomic sequencing	43 labs							PHIM- National Microbiology	WHO, WORLD BANK, AFRICA CDC
2.10 Establish culture labs in remaining districts	43 districts							PHIM- National Microbiology	WHO, WORLD BANK, AFRICA CDC
2.11 Develop protocols for cross-border information sharing	1 protocol							PHIM-Cross border focal person	ACDC/ECSA-HC
2.12 Conduct quarterly cross-border meetings	20 meetings							PHIM-Cross border focal person	ACDC/ECSA-HC
3. Risk Communication and Community Engagement (RCCE)									
3.1 Develop standardized tools and a harmonized database for RCCE data collection and storage.	Tools developed, pre-tested, validated, and implemented.							Health Promotion Division focal	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat

3.2 Train users in the application of RCCE tools and systems.	60 users trained.							Health Promotion Division focal person	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat
3.3 Develop and launch a website and mobile app for real-time RCCE information dissemination.	Website and app operational.							Health Promotion Division focal	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat
3.4 Train Health Promotion Officers in community feedback mechanisms (CFM).	60 officers trained.							Health Promotion Division focal	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat
3.5 Collect community feedback data using the community feedback mechanisms (CFM)	1,000,000 feedback records.							Health Promotion Division focal	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat

3.6 Conduct Knowledge, Attitudes, and Practices (KAP) surveys and rapid qualitative assessments.	2 KAP surveys, 7 assessments.							Health Promotion Division focal	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat
3.7 Mid-year impact assessments.	2 assessments.							Health Promotion Division focal	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat
3.8 Train district RCCE teams on data collection and management.	1 training session.							Health Promotion Division focal	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat
3.9 Train local leaders and health officials to champion RCCE efforts in their communities.	700 leaders trained.							Health Promotion Division focal	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat

3.10 Establish/reactivate district and community-level RCCE committees.	20 committees operational.							Health Promotion Division focal	MoH-Health Promotion Division, MoI, Department of Civic
3.11 Conduct quarterly RCCE committee meetings.	560 meetings.							Health Promotion Division focal	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat
3.12 Conduct integrated monitoring and field visits with other programs (e.g., WASH , nutrition).	560 visits.							Health Promotion Division focal	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat
3.13 Partner with media outlets for RCCE message dissemination through TV, radio, and print.	10 partnerships formed.							Health Promotion Division	MoH-Health Promotion Division, MoI, Department of Civic Education, UNICEF, WHO, Red Cross, Presidential Taskforce on Cholera and Covid-19 Secretariat

4. Oral Cholera Vaccine (OCV) Pillar									
4.1 Revamp National Task Force (NTF)	1							EPI Program Manager	EPI-MOH, HEU, PHIM, UNICEF, WHO, Red Cross, GAVI, Amref Health Africa, USAID, GLOBAL FUND, GTFCC
4.2 Conduct National Task Force Meetings	12							EPI Program Manager	EPI-MOH, HEU, PHIM, UNICEF, WHO, RED CROSS, GAVI, Amref Health Africa, USAID, GLOBAL FUND, GTFCC
4.3 Conduct District Task Force Meetings	240							DHSS	EPI-MOH, HEU, PHIM, UNICEF, WHO, RED CROSS, GAVI, Amref Health Africa, USAID, GLOBAL FUND, GTFCC
4.4 Develop and review micro plans	2 iterations							EPI Service Delivery Office	EPI-MOH, HEU, PHIM, UNICEF, WHO, RED CROSS, GAVI, Amref Health Africa, USAID, GLOBAL FUND, GTFCC
4.5 Brief DEC members on cholera vaccination	2 briefings							EPI Program Manager	

4.6 Brief local leaders	2 briefings							EPI Program Manager	
4.7 Train trainers (ToTs)	2 sessions							EPI Program Manager	EPI-MOH, HEU, PHIM, UNICEF, WHO, RED CROSS, GAVI, Amref Health Africa, USAID, GLOBAL FUND, GTFCC
4.8 Train volunteers on cholera vaccination	2 sessions							EPI Program Manager	EPI-MOH, HEU, PHIM, UNICEF, WHO, RED CROSS, GAVI, Amref Health Africa, USAID, GLOBAL FUND, GTFCC
4.9 Launch OCV vaccination campaign	2 campaigns							Secretariat	EPI-MOH, HEU, PHIM, UNICEF, WHO, RED CROSS, GAVI, Amref Health Africa, USAID, GLOBAL FUND, GTFCC
4.10 Distribute vaccines to targeted districts	2 distributions							EPI Manager	EPI-MOH, HEU, PHIM, UNICEF, WHO, RED CROSS, GAVI, Amref Health Africa, USAID, GLOBAL FUND, GTFCC

4.11 Supervise district-level campaign readiness	2 assessments							EPI Manager	EPI-MOH, HEU, PHIM, UNICEF, WHO, RED CROSS, GAVI, Amref Health Africa, USAID, GLOBAL FUND, GTFCC
4.12 Conduct mop-up vaccination	As needed							EPI Manager	EPI-MOH, HEU, PHIM, UNICEF, WHO, RED CROSS, GAVI, Amref Health Africa, USAID, GLOBAL FUND, GTFCC
4.13 Supervise trainings and vaccination campaigns	2 rounds							EPI Manager	EPI-MOH, HEU, PHIM, UNICEF, WHO, RED CROSS, GAVI, Amref Health Africa, USAID, GLOBAL FUND, GTFCC
5. IPC Pillar									
5.1 Review and update IPC guidelines, SOPs, and training materials	3 (Guidelines, SOPs, training)							QMD	
5.2 Approve and disseminate IPC guidelines and SOPs	1 set							QMD	
5.3 Conduct 5-day review and finalization workshops for IPC training materials	3 workshops							QMD	

5.4 Train zonal TOTs on IPC for epidemics	100 trainers							QMD	
5.5 Train healthcare workers in IPC	200 HCWs							QMD	
5.6 Orient district-level officers on IPC practices	600 officers							QMD	
5.7 Advocate for establishment of IPC focal posts at all levels	800 facilities							QMD	
5.8 Appoint IPC focal persons at facilities	800 facilities							QMD	
5.9 Develop and integrate HAI indicators into DHIS2	1 framework							QMD	
5.10 Disseminate HAI training materials and SOPs	National dissemination							QMD	
5.11 Conduct HAI training for healthcare workers	800 HCWs							QMD	
5.12 Develop and digitalize IPC and cholera monitoring tools	1 dashboard							QMD	

5.13 Construct infectious disease isolation units	33 units							TBD	
5.14 Conduct a needs assessment for PPE procurement	All health facilities							QMD	
5.15 Install water storage and handWASHing facilities	All health facilities							TBD	
6. OSL Pillar									
6.1 Redistribution of cholera supplies during outbreaks through monthly stock status assessments	7							HTSS-Pharmaceuticals	MOH/Partner
6.2 Conduct trainings on supply chain and logistics for pharmacy personnel and drugstore clerks	273							HTSS-Pharmaceuticals (MOH)	MOH/Partner
6.3 Conduct initial and refresher trainings on OpenLMIS	273							HTSS-Pharmaceuticals (MOH)	MOH/Partner

6.4 Conduct initial and refresher trainings on Electronic Health Information Network (EHIN)	273							HTSS-Pharmaceuticals (MOH)	MOH/Partner
7. Case Management Pillar									
7.1 Update and disseminate national guidelines, SOPs, data collection tools, and training materials.	Guidelines updated and disseminated							Case management officer	
7.2 Train district and facility health care workers on updated guidelines and SOPs.	Health workers in all PAMI facilities							Case management	CMRS/Nursing/Implementing partners
7.3 Conduct regular national, district, and community-level case management coordination meetings.	Quarterly or as needed during outbreaks							Case management	CMRS/Nursing/ Implementing partners
7.4 Stakeholder mapping and integration of case management plans.	National and district levels							Case Management Unit	

7.5 Develop and disseminate referral protocols for cholera cases.	All PAMI facilities							Case management	Clinical, Nursing, Partners
7.6 Procure and deploy ambulances for PAMI facilities.	One ambulance per PAMI facility							Case management/ Research	Research/PHIM/Research institutions
7.7 Train healthcare workers in critical care and emergency case management.	All PAMI facilities							Case management officer	CMRS/Nursing/Implementing partners
7.8 Conduct mentorship and supportive supervision.	Regular follow-up in PAMI facilities							Case management officer	Central hospitals/Nursing/ CMRS
7.9 Preposition and deploy ORP kits for community case management.	All PAMI communities							Case management officer	
7.10 Conduct data collection and quality assessments at ORP sites.	Quarterly assessments							Case management Unit	
7.11 Conduct after-action reviews (AARs) post-outbreaks.	All affected PAMI areas							Case management Unit	

Annex 8: MMCCP M&E Plan

	Indicator	Definition /Calculation	Baseline	Target	Frequency of Data Collection	Data Sources	Responsibility
Coordination Pillar							
Strategic Objective 1: To promote the multisectoral coordination mechanism at national, district, and community levels in all PAMI districts by 2030							
1	Number of PHEMC orientation meetings conducted (National & District levels)	Tracks the number of orientation meetings conducted by the Public Health Emergency Management Committee (PHEMC) at national and district levels.	0	21	Once	Attendance records, meeting reports	PHIM-EPR
2	Proportion of coordination structures with ToRs	Number of coordination structures with ToRs / Total number of coordination structures * 100	0	100%	Once	Reports from MoH, PHIM, DoDMA, District Councils	PHIM
Strategic Objective 2: To enhance mobilization of technical, financial, and material resources for implementing cholera control plan activities by 2030							
3	Number of dissemination workshops for the National Cholera Plan conducted	Total number of workshops conducted to disseminate information about the National Cholera Plan to relevant stakeholders at the national level.	0	1	Once	Workshop minutes/ reports, attendance records	NCP Task Force, PHIM
4	Proportion of the NCP budget funded through domestic funding	Amount of funding received from domestic partners for NCP implementation / Total NCP budget * 100	0	20%	Quarterly	Funding request records, financial reports	NCP Task Force Chairperson

5	Proportion of the NCP budget funded through external funding	Amount of funding received from external partners for NCP implementation / Total NCP budget * 100	0	20%	Quarterly	Funding request records, financial reports	NCP Task Force Chairperson
6	Proportion of the NCP budget funded through government funding	Amount of funding received from government for NCP implementation / Total NCP budget * 100	0	50%	Quarterly	Funding request records, financial reports	NCP Task Force Chairperson
7	Number of stakeholder engagement meetings conducted (National & District levels)	Total number of stakeholder engagement meetings conducted at national and district levels to map out active stakeholders in cholera interventions.	0	21 per year	Bi-Annually	Meeting minutes, reports, attendance records	NCP Task Force Chairperson
Surveillance Pillar							
Strategic Objective 1: Improve early cholera detection, notification, and timely implementation of control measures by 2030							
8	Proportion of outbreaks reported within 1 day of detection	Number of outbreaks reported within 1 day of detection/ Total number of outbreaks detected*100	0	100%	Daily during outbreaks	OHSP, Reports	MoH, District Health Officers
9	Proportion of outbreaks responded to within 7 days	Number of outbreaks responded to within 7 days of detection/ Total number of outbreaks detected*100	0	100%	Daily during outbreaks	OHSP, reports	MoH, District Health Officers

Strategic Objective 2: Maintain, regularly update, analyze, and share cholera surveillance and laboratory data at facility, district, and national levels							
10	Proportion of reports produced and disseminated	Percentage of cholera surveillance reports produced and disseminated at all levels	0	100%	Weekly	IBS, EBS, OHSP	Surveillance Team
Strategic Objective 3: Strengthen sample referral pathways, expand testing and sequencing capacities, and enhance biosafety by 2030							
11	Proportion of samples referred to microbiology reference lab	Number of samples referred to the microbiology reference lab/Total number of samples collected*100	TBD	100%	Monthly	NMRL LMIS	Laboratory Team
12	Proportion of health workers trained on testing and sequencing	Number of laboratory workers trained in cholera testing and sequencing/Total number of laboratory workers targeted for training*100	TBD	100%	Annually	Training reports	Training Coordinators
13	Proportion of health workers trained on biosafety and security	Number of health workers trained on biosafety and security/ Total number of health workers targeted for training*100	0	100%	Annually	Training reports	Training Coordinators
Strategic Objective 4: Strengthen surveillance and laboratory capacities at community, health facility, national level, and points of entry by 2030							
14	Proportion of peripheral health facilities with functional laboratories	Number of peripheral health facilities with functional microbiology labs/ Total number of peripheral health facilities*100	92%	100%	Bi-Annually	PHIM Lab	PHIM Lab & Surveillance Team

Strategic Objective 5: Improve data quality management in surveillance and laboratory systems by 2030							
15	Timeliness and completeness of reporting	Percentage of reports received within 24 hours (timeliness) and reports fully completed (completeness	Timeliness: 100%, Completeness: 80%	100%	Daily	OHSP, Line list	Health workers
16	Reduction in data entry errors	Percentage reduction in data entry errors or discrepancies in submitted reports	90%	40%	Weekly	OHSP, Line list	Health workers
RCCE Pillar							
Strategic Objective 1: To improve national, district, and community RCCE capacity in all PAMIs by 90% by 2030							
17	Proportion of trained focal points to support RCCE interventions	Number of people trained in RCCE / Total number of people supporting RCCE interventions in PAMIs*100	30%	90%	Quarterly	Training Reports, SBCC Database	MoH Health Promotion Division
18	Availability of standardized data collection tools for RCCE	Existence of a standardized set of tools for RCCE data collection in all PAMIs	0	1	As needed	Partners' Databases, RCCE Meeting Updates	MoH Health Promotion Division
19	Availability of a harmonized RCCE data storage system	Existence of a centralized, harmonized RCCE database for data storage	0	1	As needed	HMIS, SBCC Database	MoH

Strategic Objective 2: To improve adoption of positive Cholera prevention and control behavioral practices in all PAMIs by 85% by 3020							
20	Proportion of people reached with key Cholera prevention messages	Number of people reached with key cholera messages / Total population in PAMIs districts*100	TBD	85%	Quarterly	RCCE Reports	TBD 85% Quarterly RCCE Reports
21	Proportion of people practicing recommended Cholera prevention behaviors	Number of self-reporting individuals practicing prevention behaviors / Total at-risk population in PAMIs*100	TBD	85%	Quarterly	Assessment Reports	MOH Health Promotion Division
Strategic Objective 3: To increase knowledge about Oral Cholera Vaccine (OCV) and improve uptake in all PAMIs by 95% by 2030							
22	Proportion of people with knowledge about OCV and Cholera prevention	Number of people reached with OCV messages / Total population in PAMIs districts*100	TBD	95%	Monthly, Quarterly, Annually	SBCC Database, HMIS	MoH Health Promotion Division
Oral Cholera Vaccine (OCV) Pillar							
Strategic Objective 1: To achieve OCV coverage of >80% in all PAMIs through preventive OCV campaigns by 2030							
23	OCV Administrative Coverage in PAMI areas (round 1 and 2)	Total number of doses administered for round 1 and 2 / Total number of persons targeted by the OCV campaigns*100	0	85%	Daily during the campaign	Campaign Reports	Ministry of Health (EPI), Partners
24	Campaign reports and bulletins	Documentation of OCV vaccination activities and coverage per village	0	100%	Daily and at the end of each round	Campaign Reports, Bulletins	MoH (EPI)

Strategic Objective 2: To achieve OCV coverage of >70% in vulnerable and at-risk groups and communities through reactive OCV campaigns during outbreaks							
25	OCV Administrative Coverage in vulnerable and at-risk groups (round 1 and 2)	Total number of doses administered for round 1 and 2 in targeted groups / Total number of persons targeted by the OCV campaigns	0	75%	Daily during the campaign	Campaign Reports	MOH (EPI)
26	Campaign reports and bulletins	Documentation of OCV vaccination activities for vulnerable and at-risk groups	0	100%	Daily and at the end of reach round	Campaign Reports, Bulletins	MOH (EPI)
Infection Prevention and Control (IPC) Pillar							
Strategic Objective 1: To reduce healthcare-associated infections in all facilities by 2030							
27	Healthcare-Acquired Infections (HAI) Incidence Rate	Number of new HAIs / Total admissions * 1,000	0	<1 per 1,000	Monthly, Quarterly	DHIS2, Line Listing Register	IPC Focal Person
28	HAI Incidence Rate Among Healthcare Workers	Number of healthcare worker infections in cholera units / Total healthcare workers * 1,000	0	<1 per 1,000	Weekly, Monthly	Line Listing Register	IPC Focal Person
29	Percentage of Health Facilities with an Active IPC Program	Facilities with designated IPC focal person, functional IPC committee, and IPC/WASH plan / Total facilities * 100	68%	100%	Quarterly	DHIS2, Meeting Minutes, Reports	IPC Focal Person

30	Percentage of Health Facilities with Up-to-Date IPC SOPs	Facilities with updated SOPs (e.g., handWASH ing, waste management, PPE use) / Total facilities * 100	50%	100%	Monthly, Quarterly	DHIS2, Assessment Reports	IPC Focal Person
31	Percentage of Staff Trained in IPC	Number of staff trained in IPC / Total staff * 100	64%	80%	Quarterly	DHIS2, Training Reports	IPC Focal Person
32	Percentage of Hospitals with Healthcare Waste Management Facilities	Facilities with waste segregation and disposal systems / Total facilities * 100	30%	80%	Quarterly	DHIS2, Assessment Reports	IPC Focal Person
33	Percentage of Health Facilities with Hand Hygiene Facilities	Facilities with hand hygiene stations (running water, soap, sanitizer) / Total facilities * 100	43%	100%	Quarterly	DHIS2, Assessment Reports	IPC Focal Person
34	Percentage of Health Facilities with Improved Toilets	Facilities with functional, inclusive toilets for staff and patients / Total facilities * 100	50%	100%	Quarterly	DHIS2, Assessment Reports	IPC Focal Person
IOSL Pillar							
Strategic Objective 1: To improve the availability of essential cholera supplies across all PAMI facilities by 2030							
35	Percentage of key cholera supplies available in PAMI facilities	Measures the proportion of essential cholera supplies in stock and ready for use. Formula: (Number of key cholera supplies in stock) / (Total key cholera supplies required) *100	78.6%	100%	Quarterly	Stock Cards, OpenLMIS, eHIN	HTSS Team - Pharma-ceuticals

36	Percentage of key cholera supplies with at least one month of stock	Measures the proportion of essential cholera supplies available in sufficient quantity to last at least one month. Formula: (Number of supplies with at least one month stock) / (Total supplies required) *100	TBD	100%	Quarterly	Stock Cards, OpenLMIS, eHIN	HTSS Team - Pharmaceuticals
Strategic Objective 2: To increase the percentage of PAMI health facilities with well-trained and qualified pharmacy personnel from 67.7% to 100% by 2030							
37	Percentage of PAMI facilities with trained pharmacy personnel	Measures the proportion of PAMI facilities with pharmacy personnel who have received formal training relevant to managing cholera. Formula: (Number of PAMI facilities with trained pharmacy personnel) / (Total PAMI facilities) *100	67.7%	100%	Annually	HRIS, OpenLMIS, eHIN	HTSS Team - Pharmaceuticals, HR Department
Case Management Pillar							
Strategic Objective 1: To improve the quality of care in Cholera case management in all PAMI's by 2030							
38	Case Fatality Rate (CFR)	Number of deaths / Number of cholera cases * 100	1.42%	<1%	Daily	Admission Register, HMIS	HMIS Officer
39	Percentage of health facilities with case management guidelines and SOPs	Number of PAMI health facilities with SOP/Guidelines / Total number of PAMI facilities * 100	0	100%	Quarterly	Guidelines, Checklist	Supervisors

40	Percentage of trained facility healthcare workers in case management	Number of trained facility health workers / Total number of health workers * 100	10%	100%	Quarterly	Training Reports, Database	Clinical Department
41	Percentage of PAMIs with trained volunteers/ community health workers	Number of PAMIs with trained volunteers/community health workers / Total number of PAMIs * 100	10%	100%	Quarterly	Training Reports, Database	Clinical Department
42	Percentage of cases audited	Number of audited cases / Total number of registered cases * 100	0	50%	Quarterly	Facility Reports, Checklists	Clinical Department
Strategic Objective 2: To strengthen the level of preparedness to respond to cholera outbreaks in all PAMI's by 2030							
43	Percentage of PAMIs with cholera response plans	Number of PAMIs with cholera response plans / Total number of PAMIs * 100	0	100%	Bi-annual, during outbreaks	Response Plans	Supervisors, Hubs
44	Percentage of PAMIs with ORP Kits prepositioned	Number of PAMIs with ORP kits prepositioned / Total number of PAMIs*100	0	50%	Quarterly, during outbreaks	Inventory Reports	HSAs
WASH Pillar							
Strategic Objective 3: Increase the proportion of the population with access to at least basic water services, basic sanitation, and hygiene in all PAMIs by 2030.							
45	Proportion of people with access to basic+ water in PAMIs	Percentage of population with access to basic or safely managed water supply services	72%	100%	Quarterly	DHIS2, MWAMIS, MICS, JMP	Ministry of Health and Ministry of Water and Sanitation

46	Proportion of people with access to basic+ sanitation in PAMIs	Percentage of population with access to basic or safely managed sanitation services	49%	80%	Quarterly	DHIS2, MWAMIS, MICS, JMP	Ministry of Health and Ministry of Water and Sanitation
47	Proportion of people with access to basic hygiene in PAMIs	Percentage of households with handWASH ing facilities (soap and water) available on premises	15%	75%	Quarterly	DHIS2, MWAMIS, MICS, JMP	Ministry of Health and Ministry of Water and Sanitation
Strategic Objective 4: Strengthen WASH systems for accelerated attainment of universal access to basic WASH services in the PAMIs.							
48	Number of district reports on WASH service delivery	Total number of district reports on WASH services, including financing	0	20	Quarterly	District WASH Update Reports, MWAMIS	District Water and Sanitation Offices
49	Number of national and district coordination meetings conducted	Total number of reports from national and district-level WASH TWG coordination meetings	0	504	Quarterly	WASH TWG Dashboard	Ministry of Water and Sanitation
50	M&E system available and updated quarterly	Presence and functionality of M&E system	0	24	Quarterly	MWAMIS, EMIS	Ministry of Water and Sanitation

Strategic Objective 5: To strengthen WASH preparedness and response to cholera outbreaks in the PAMIs by 2030.							
51	Proportion of PAMIs with functional WASH emergency response plans	Percentage of PAMIs with written, up-to-date, and regularly reviewed WASH emergency response plans	0	20%	Quarterly	MWAMIS, EMIS	Ministry of Water and Sanitation
52	Proportion of PAMIs with established WASH rapid response teams	Percentage of PAMIs with designated and trained teams for WASH -related issues during cholera outbreaks	0	20%	Quarterly	MWAMIS, EMIS	Ministry of Water and Sanitation
53	Proportion of WASH -related training sessions conducted in PAMIs	Percentage of planned WASH -related training sessions completed for healthcare workers and community volunteers	0	100%	Quarterly	MWAMIS, EMIS	Ministry of Water and Sanitation