

JOINT EXTERNAL EVALUATION
OF IHR CORE CAPACITIES
of the
REPUBLIC OF MALAWI

Mission report:
11–15 February 2019



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CONTENTS

Acknowledgements	v
Abbreviations	vi
Executive summary	1
Scores and priority actions	3

PREVENT ----- **10**

National legislation, policy and financing	10
IHR coordination, communication and advocacy	13
Antimicrobial resistance	15
Zoonotic diseases	18
Food safety	20
Biosafety and biosecurity	22
Immunization	25

DETECT ----- **27**

National laboratory system	27
Surveillance	30
Reporting	33
Human Resources	35

RESPOND ----- **38**

Emergency preparedness	38
Emergency response operations	40
Linking public health and security authorities	42
Medical countermeasures and personnel deployment	44
Risk communication	46

IHR-RELATED HAZARDS AND POINTS OF ENTRY ----- **49**

Points of entry	49
Chemical events	52
Radiation emergencies	55

Appendix 1: JEE background ----- **57**

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ABBREVIATIONS

AEA	Atomic Energy Act
AERA	Atomic Energy Regulatory Authority
AMR	Antimicrobial resistance
CDC	Centers for Disease Control and Prevention
DHHS	Department of Health and Human Services
DHIS2	District Health Information System 2
DODMA	Department of Disaster Management Affairs
EBS	Event-based surveillance
EIS	Event Information Site for IHR national focal points
EOC	Emergency operations centre
EQA	External Quality Assurance
EPI	Expanded Programme of Immunization
FAO	Food and Agriculture Organization of the United Nations
FETP	Field epidemiology training programme
GLASS	Global Antimicrobial Surveillance System
HAI	Health care-associated infections
HIS	Health Information System
HIV	Human immunodeficiency virus
HRMIS	Human Resource Management Information System
HSSP	Health Sector Strategic Plan
IAEA	International Atomic Energy Agency
IBS	Indicator-based surveillance
IDSR	Integrated Disease Surveillance and Response
IHR	International Health Regulations (2005)
IPC	Infection prevention and control
JEE	Joint external evaluation

MCM	Medical Council Malawi
MOAIWD	Ministry of Agriculture, Irrigation and Water Development
MOH	Ministry of Health and Population
MOU	Memorandum of Understanding
NFP	National IHR Focal Point
NGO	Non-governmental organization
OIE	World Organisation for Animal Health
PHEIC	Public health emergency of international concern
PoE	Points of entry
PHIM	Public Health Institute of Malawi
PMPB	Pharmacy, Medicines and Poisons Board
PVS	Performance of Veterinary Services
SOP	Standard operating procedure
STI	Sexually transmitted infections
TOR	Terms of reference
TB	Tuberculosis
TWG	Technical Working Group
WAHIS	World Animal Health Information System
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

EXECUTIVE SUMMARY

The primary purpose of this joint evaluation was to assess Malawi's capacities and capabilities relevant to the 19 technical areas of the Joint External Evaluation (JEE) tool to provide baseline data and recommendations in support of efforts to improve national public health security and comply with the International Health Regulations (2005) (IHR). A multisectoral team of experts from the World Health Organization (WHO), Food and Agriculture Organization of the United Nations (FAO), World Organisation for Animal Health (OIE), Nigeria, US Department of Health and Human Services (specifically, the Centers for Disease Control and Prevention and the Office of the Assistant Secretary for Preparedness and Response) and the Ministry of Health of Zimbabwe participated in the week-long assessment, which took place from 11-15 February 2019 in Mponela, Dowa, Republic of Malawi.

Prior to this mission, the Government of Malawi completed a self-assessment using the JEE tool. The results were presented to the External Assessment Team which, jointly with experts from Malawi, assessed the results to determine current strengths, areas for improvement and priority actions.

The JEE identified more than 85 priority actions covering the IHR Technical Areas, many of which can be moved forward quickly since work to achieve them is already underway.

The dedication and passion of the national staff demonstrated during discussions on technical areas and the field visit were among the highlights of the JEE. There was also a recognition of the gaps and challenges that will require some attention and support at various ministerial levels; Malawi should be commended for what it has been able to accomplish and for its commitment to work on the identified gaps to strengthen IHR core capacities.

Main Findings

Malawi can be pleased with its achievements in a number of areas. The country has established the Public Health Institute of Malawi (PHIM) to provide leadership and coordination in public health activities, a veterinarian school has been set up, there is a strong immunization programme and in recent outbreaks, the country was able to respond quickly and appropriately despite limited resources.

While IHR implementation is not specifically addressed in all relevant legislation, revisions and new legal developments should empower and support national authorities and functions necessary to meet certain IHR obligations. Steps have been taken to incorporate One Health into certain regulations, for example in revising the Public Health Act. A number of public health laws either already exist or are in draft form but there remain gaps in legislation in the areas of biosafety and biosecurity, appropriate use of antimicrobials and links between public health and security.

Malawi also has a large network of committed international and local partners with whom to work on enhancing its IHR commitments. Mechanisms have been developed to foster intersectoral collaboration in key areas, such as the One Health platform. Other mechanisms include the formalization of an institution to serve as a national IHR focal point (NFP), an operational OIE delegate and a World Animal Health Information System (WAHIS) national focal point. Spokespersons and groups are designated during public health emergencies. However, there are still gaps in coordination among programmes and ministries.

Also, many existing mechanisms are informal. While there is evidence of policies, frameworks and other formal agreements such as enrolment of laboratories in WHO's Strengthening Laboratory Management Toward Accreditation (SLMTA) programme, there are a number of informal processes and agreements with respect to carrying out IHR implementation that should be formalized in policy and standard operating procedures (SOPs).

Communication and coordination are also often informal (using, for example, the smartphone messaging app WhatsApp) and information exchange between agencies and sectors occurs as a result of individual professional relationships rather than adherence to standard policies or procedures. While this may be an effective functional alternative, it could negatively affect the clarity of roles and responsibilities, an effective response to public health events and continuity when there is staff turnover.

While Malawi can point to success in improving health outcomes, many technical capacities remain under development. For example, there should be a joint agreement between the human and animal health sectors on priority zoonotic diseases, a national public health risk assessment should be undertaken and a public health emergency operations centre (EOC) should be established. Additionally, transportation of animal specimens should be improved, designated Points of Entry (PoE) strengthened to carry out basic IHR functions and capacity enhanced to manage chemical events or emergencies.

A number of existing strategies and plans underpin Malawi's human and animal health sectors such as those on antimicrobial resistance (AMR), the human health workforce development strategy and the national contingency plan to respond to disasters. However, there is no formalized response plan detailing multisectoral roles and responsibilities in the face of foodborne outbreaks or radiation emergencies, although an Atomic Energy Regulatory Authority (AERA) has been set up.

Guidelines, plans and SOPs also require attention. There are no cross-sectoral guidelines or plans for such hazards as chemical, radiation or food safety events, although the radiation sector is actively working on developing a national response plan. There are no established procedures for personnel deployment during public health emergencies. While integrated disease surveillance and response (IDSR) guidelines provide a framework for surveillance, operational scale-up through improved coverage of training and real time data transmission is necessary.

Understaffing is a problem affecting many sectors and while there is some capacity to implement IHR, it is insufficient. Training is required across many technical areas.

Although they are still being strengthened, existing capacities and mechanisms in Malawi provide a strong basis for moving forward and building a robust capacity to respond to public health events and emergencies as obligated under the IHR, with the following next steps.

Next Steps

- Build on the momentum of the JEE process to develop a national action plan for health security that prioritizes activities to address key gaps, with the participation of all relevant ministries.
- Pursue both domestic financing and partner engagement to support the plan technically and financially.

SCORES AND PRIORITY ACTIONS

Technical areas	Indicator no.	Indicator	Score	Priority Actions
PREVENT				
National legislation, policy and financing	P.1.1	The State has assessed, adjusted and aligned its domestic legislation, policies and administrative arrangements in all relevant sectors to enable compliance with the IHR	2	<p>Finalize legislation that enables compliance with the IHR across all relevant sectors and provides necessary resources (mobilize political and financial support for this activity).</p> <p>Develop a national policy framework that clarifies all ministry roles and responsibilities relevant to IHR capacity implementation.</p> <p>Establish mechanisms for coordinated/joint contingency fund management and oversight for public health emergencies that ensures funds are available (for example within 24 hours).</p>
	P.1.2	Financing is available for the implementation of IHR capacities	2	
	P.1.3	A financing mechanism and funds are available for timely response to public health emergencies	1	
IHR coordination, communication and advocacy	P.2.1	A functional mechanism established for the coordination and integration of relevant sectors in the implementation of IHR	1	<p>Develop national IHR terms of reference and SOPs that clearly articulate the roles and responsibilities of the different stakeholders for effective national and subnational multisectoral and multidisciplinary coordination and communication.</p> <p>Institute formal communication mechanisms with WHO and other international agencies for IHR reporting.</p> <p>Plan and conduct joint regular simulation exercises with relevant agencies involved in IHR implementation.</p> <p>Put in place mechanisms to continuously assess the effectiveness of the NFP.</p> <p>Develop an advocacy plan to ensure all key stakeholders are actively involved in and contribute to IHR implementation.</p>
Antimicrobial resistance	P.3.1	Effective multisectoral coordination on AMR	3	<p>Incorporate aspects of pharmaceutical production into the AMR strategy and institutionalize a monitoring and evaluation system to track progress of AMR strategy implementation in both human and animal health.</p> <p>Establish AMR surveillance in the animal sector.</p> <p>Develop and implement an antimicrobial policy to guide the appropriate prescription and use of antimicrobials in both human and animal health.</p> <p>Develop SOPs and tools for effective coordination and communication, including AMR data sharing and reporting for both human and animal health.</p> <p>Finalize, disseminate and implement the IPC policy and guidelines for human health, animal health and food production, as well as mechanisms to offer supportive supervision, monitoring and evaluation.</p>
	P.3.2	Surveillance of AMR	2	
	P.3.3	Infection prevention and control	1	
	P.3.4	Optimize use of antimicrobial medicines in human and animal health and agriculture	1	

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Zoonotic disease	P.4.1	Coordinated surveillance systems in place in the animal health and public health sectors for zoonotic diseases/ pathogens identified as joint priorities	1	<p>Formalize a multisectoral policy for collaboration on zoonotic diseases.</p> <p>The Malawi Ministry of Agriculture, Irrigation and Water Development and Malawi Ministry of Health and Population should jointly develop a priority list of zoonotic diseases.</p> <p>Establish a coordinated surveillance system for zoonotic diseases and conduct joint simulation exercises.</p>
	P.4.2	Mechanisms for responding to infectious and potential zoonotic diseases established and functional	1	<p>Request an OIE performance of veterinary services (PVS) gap analysis for the quantitative evaluation of Malawi's needs and priorities.</p>
Food safety	P.5.1	Surveillance systems in place for the detection and monitoring of foodborne diseases and food contamination	1	<p>Review current laws to develop a food safety policy that formalize roles and responsibilities of each partner to better implement surveillance and response to foodborne diseases. This can provide a basis on which to create a comprehensive food law.</p> <p>Develop a comprehensive national plan on food safety that includes protocols for surveillance and multisectoral outbreak response.</p>
	P.5.2	Mechanisms are established and functioning for the response and management of food safety emergencies	1	<p>Institute internal and external communication protocols to better coordinate foodborne disease response and engage communities in compliance with food safety practices.</p> <p>Conduct a multisectoral simulation exercise on a selected foodborne disease outbreak to reinforce multisectoral surveillance capacities.</p>
Biosafety and biosecurity	P.6.1	Whole-of-government biosafety and biosecurity system in place for all sectors (including human, animal and agriculture facilities)	1	<p>Develop an updated inventory of pathogens in the country to record what facilities house these pathogens, what pathogens are in each of these facilities and list them from most dangerous to less dangerous.</p> <p>Develop a comprehensive national biosafety and biosecurity regulatory framework for human and animal public health programmes based on the list of pathogens in the country that would include but not be limited to pathogen control measures, operational handling and failure reporting systems.</p>
	P.6.2	Biosafety and biosecurity training and practices in all relevant sectors (including human, animal and agriculture)	1	<p>Establish a licensing programme for human and animal facilities based on the guidelines in the biosafety and biosecurity framework.</p> <p>Conduct a needs assessment to identify gaps in biosafety and biosecurity training for human and animal public health programmes.</p> <p>Develop a biosafety/biosecurity training programme for human and animal laboratory facilities that would include but not be limited to international best practices for safe, secure and responsible conduct, the gaps found in the needs assessment, frequency of training and sustained academic training.</p>

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Immuni- zation	P.7.1	Vaccine coverage (measles) as part of national programme	3	Develop promotional community-based education and incentive programmes for pockets of groups and sectors that currently do not comply with immunization. Enforce mechanisms for mandatory immunization during an outbreak, as outlined in the Public Health Act.
	P.7.2	National vaccine access and delivery	4	Expedite and strengthen the process of integrating immunization data onto the DHIS2 system, helping to ensure an integrated health information system. Develop a plan with clear objectives to integrate zoonotic diseases of public health importance into the mainstream immunization programme. Enforce a strategy of immunization in hard-to-reach areas and populations.
DETECT				
National laboratory system	D.1.1	Laboratory testing for detection of priority diseases	2	Develop one list of priority diseases and core tests that is agreed jointly by the human and animal sectors.
	D.1.2	Specimen referral and transport system	2	Develop an MOU between the human and animal sectors that would include but not be limited to sharing of biological specimens, epidemiological data, laboratory reports and alerts, transporta of specimens, and the general management of zoonotic diseases.
	D.1.3	Effective national diagnostic network	2	Increase specimen transport system for the animal sector to include all districts in the country.
	D.1.4	Laboratory quality system	2	Develop a written document for the strategies for tier-specific diagnostic testing for the animal sector. Develop the national quality of standards into a system of licensing for laboratory facilities.
Surveil- lance	D.2.1	Surveillance systems	2	Strengthen the One Health platform by promoting multidisciplinary capacity building through training and supportive supervision to the improve timeliness and completeness of surveillance data.
	D.2.2	Use of electronic tools	2	
	D.2.3	Analysis of surveillance data	2	EBS should be expanded and formalized through the systematic capture of rumours from the public and the development of community-based surveillance. Conduct a review of the current pilot electronic surveillance systems to determine an appropriate streamlined and interoperable solution for both zoonotic and human health. Improve data sharing and feedback mechanisms through the development and dissemination to stakeholders of weekly surveillance bulletins, timely situation reports during outbreaks and annual surveillance reports in both the human and animal sectors following the development of SOPs for data sharing. Build capacity of IDSR focal points in all districts through participation in the Frontline FETP to increase technical knowledge.

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Reporting	D.3.1	System for efficient reporting to FAO, OIE and WHO	2	Build capacity for NFP members by undertaking online learning package and attending dedicated training.
	D.3.2	Reporting network and protocols in country	2	Develop SOPs for the NFP on approving and reporting requirements for potential PHEICs. Ensure the NFP has access to the EIS. Develop guidelines/MOUs for sharing information between government sectors. Develop a framework of agreement for reporting with the United Republic of Tanzania.
Human resources (animal and human health sectors)	D.4.1	An up-to-date multisectoral workforce strategy is in place	2	Conduct a comprehensive human resource mapping and revise the national human resource strategy and HR information system to include other staff such as epidemiologists, laboratory specialists, public health specialists, biostatisticians and staff in animal health in both the public and private sector. This should incorporate mechanisms for regular updates and tracking of the IHR workforce in particular, such as public health specialists (epidemiologists), clinicians, biostatisticians and laboratory scientists. Facilitate the creation and implementation of establishment and progression mechanisms for PHIM staff, including other epidemiologists and key professionals. Institute a mechanism to monitor and evaluate the effectiveness of the FETP and its impact on improving country capacity to prevent, detect and respond to public health events. Establish SOPs and an agreement for deployment of additional human resources in the event of public health emergencies (surge capacity). Identify and train multisectoral and multidisciplinary rapid response teams at all levels, and develop a regularly updated directory.
	D.4.2	Human resources are available to effectively implement IHR	2	
	D.4.3	In-service trainings are available	2	
	D.4.4	FETP or other applied epidemiology training programme in place	3	

Technical areas	Indicator no.	Indicator	Score	Priority Actions
RESPOND				
Emer- gency Prepared- ness	R.1.1	Strategic emergency risk assessments conducted and emergency resources identified and mapped	2	<p>Conduct a health sector Strategic Risk Assessment (STAR).</p> <p>Conduct a comprehensive resource mapping for emergency response which includes human resources.</p>
	R.1.2	National multisectoral multi-hazard emergency preparedness measures, including emergency response plans, are developed, implemented and tested	1	<p>Conduct regular multisectoral simulation exercises on national preparedness and response, involving all relevant stakeholders as well as incorporating lessons learned into the plan.</p> <p>Advocate for and ensure regular budget funding for emergency preparedness and response measures and easy access in times of emergency.</p> <p>Develop multi-hazard public health emergency preparedness and response plans taking into account findings from the risk assessment.</p> <p>Develop SOPs for each sector in the multihazard preparedness plan</p>
Emer- gency response operations	R.2.1	Emergency response coordination	1	<p>Develop a multidisciplinary emergency coordination structure for public health/animal health with clear terms of reference and SOPs which align with the broader national disaster institutional structure.</p> <p>Establish a national hotline that is continuously accessible for both human and animal health staff to call for help in handling diseases of both known and unknown origin.</p>
	R.2.2	Emergency operations centre (EOC) capacities, procedures and plans	1	
	R.2.3	Emergency operations programme	2	<p>Establish permanent national and district EOCs for activation, coordination and management of emergency response operations, including incident management system and training of relevant personnel.</p> <p>Identify a cohort of potential incident managers with specific expertise in the relevant infectious diseases and other PHEICs, to serve as the incident manager for the emergency operations centre.</p>
Linking public health and security authorities	R.3.1	Public health and security authorities (e.g. law enforcement, border control, customs) linked during a suspect or confirmed biological, chemical or radiological event	1	<p>Establish a national policy identifying sectors, roles, responsibilities and high-level areas of work that ensure collaboration and coordination between public health and security personnel, including a formal list of points of contact and triggers for sharing information between the relevant sectors.</p> <p>Develop agreements and/or SOPs between the security sector and all relevant IHR sectors for joint response, including joint risk assessments, to events of public health and security significance.</p> <p>Develop and conduct training for national and district level public health and law enforcement entities in joint investigations, information sharing and emergency response.</p> <p>Conduct a functional simulation exercise to test the synergy between security and public health entities to prevent, detect and respond to an event with public health consequences.</p>

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Medical counter-measures and personnel deployment	R.4.1	System in place for activating and coordinating medical countermeasures during a public health emergency	1	Develop and implement a plan that clearly outlines legal provisions and procedures for sending and receiving medical countermeasures that includes the animal health sector and other IHR-relevant sectors.
	R.4.2	System in place for activating and coordinating health personnel during a public health emergency	1	Develop and implement a pandemic preparedness plan, including zoonotic outbreaks, that addresses countermeasures and personnel deployment. Test developed plans through a functional simulation exercise that includes all relevant stakeholders and could include neighbouring countries in the Southern African Development Community (SADC).
	R.4.3	Case management procedures implemented for IHR relevant hazards	1	Develop a plan and guide for establishing regional and international agreements such as MOUs for sending and receiving Medical Council Malawi (MCM) personnel for support during a public health emergency.
Risk communication	R.5.1	Risk communication systems for unusual/ unexpected events and emergencies	1	Develop an all-hazard, multisectoral emergency risk communication plan. Formalize communication coordination mechanisms with national and international stakeholders.
	R.5.2	Internal and partner coordination for emergency risk communication	2	Develop SOPs and train risk communication personnel to respond effectively during emergencies.
	R.5.3	Public communication for emergencies	2	Build capacity by providing training in risk communication at national and regional levels.
	R.5.4	Communication engagement with affected communities	2	Develop a system of incorporating feedback from the public into public health programmes.
	R.5.5	Addressing perceptions, risky behaviours and misinformation	1	
IHR-RELATED HAZARDS AND POINTS OF ENTRY				
Points of entry	PoE.1	Routine capacities established at points of entry	1	Develop and distribute a multisectoral contingency plan to respond to public health emergencies at the border linked to the national emergency plan.
	PoE.2	Effective public health response at points of entry	1	Dedicate a space for quarantine/isolation of sick individuals at all designated PoE (for example by adapting containers in areas where space is not available). Compile an inventory of available equipment for PoE and equip officers with missing supplies to operationalize their functions (for example border surveillance, inspections). Build capacity by conducting IHR-specific training for all PoE staff and deploying adequate and qualified officers to mentor/supervise personnel. Develop intersectoral mechanisms to coordinate activities between PoE within Malawi and across the borders through joint MOUs and protocols.

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Chemical events	CE.1	Mechanisms established and functioning for detecting and responding to chemical events or emergencies	1	Finalize the establishment of the Malawi Environmental Protection Agency (MEPA) with full authority to coordinate all chemical management issues and adequate resources to do so. Update the national chemical profile. Create a national chemicals information system and national poison centre.
	CE.2	Enabling environment in place for management of chemical events	1	Develop a national chemical management plan. Develop a chemical incident surveillance system for Malawi.
Radiation emergencies	RE.1	Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	1	Conduct baseline public health assessment of radiation safety, in collaboration with the International Atomic Energy Agency. Finalize and implement the radiation emergency preparedness and response plan addressing all elements obligated by the Atomic Energy Act and IHR.
	RE.2	Enabling environment in place for management of radiological and nuclear emergencies	1	Document SOPs for coordination and communication between the Atomic Regulatory Authority, NFP, and all other relevant health sector offices (animal, environment, human). Finalize agreements with border/regional partners to address national gaps in assessment and monitoring capability.

Scores: 1=No capacity; 2=Limited capacity; 3=Developed capacity; 4=Demonstrated capacity; 5=Sustainable capacity.

PREVENT

NATIONAL LEGISLATION, POLICY AND FINANCING

INTRODUCTION

The International Health Regulations (IHR) (2005) provide obligations and rights for States Parties. In some States Parties, implementation of the IHR (2005) may require new or modified legislation. Even if new or revised legislation may not be specifically required, States may still choose to revise some regulations or other instruments in order to facilitate IHR implementation and maintenance. Implementing legislation could serve to institutionalize and strengthen the role of IHR (2005) and operations within the State Party. It can also facilitate coordination among the different entities involved in their implementation. See detailed guidance on IHR (2005) implementation in national legislation at http://www.who.int/ihr/legal_issues/legislation/en/index.html. In addition, policies that identify national structures and responsibilities as well as the allocation of adequate financial resources are also important.

Target

Adequate legal framework for States Parties to support and enable the implementation of all their obligations and rights made by the IHR. Development of new or modified legislation in some States Parties for the implementation of the Regulations. Where new or revised legislation may not be specifically required under a State Party's legal system, the State may revise some legislation, regulations or other instruments in order to facilitate their implementation in a more efficient, effective or beneficial manner. States Parties ensure provision of adequate funding for IHR implementation through the national budget or other mechanisms. Country has access to financial resources for the implementation of IHR capacities. Financing that can be accessed on time and distributed in response to public health emergencies, is available.

LEVEL OF CAPABILITIES

Malawi's legal framework consists of various legislative documents, policies and regulations that empower or enable the implementation of some but not all IHR requirements. The primary documents include the Public Finance Management Act, Local Government Act, Occupational Health and Safety Act, HIV Act 2018, Malawi Bureau of Standards Act, Pharmacy, Medicines and Poisons Board (PMPB) Act and Salt Iodization Act. The Public Health Act, Public Health Institute of Malawi (PHIM) draft bill and Department of Disaster Management Affairs (DODMA) Act are under review or development. While national legislation and policy do not specifically address IHR implementation, Malawi is revising some existing legislation and developing new legislation that should enable it to meet certain IHR obligations. There are also regulatory authorities documented for some but not all IHR-relevant capacities; collaborating technical partners such as the Ministry of Agriculture, Irrigation and Water Development (MOAIWD) and the Ministry of Health and Population (MOH) also appear to have a good understanding of where regulatory authorities are, but regulatory enforcement appears inconsistent. There is evidence of policies, frameworks, and other formal agreements such as Memoranda of Understanding (MOU) and cooperative agreements, as well as a number of informal mechanisms and agreements to implement the IHR.

In some technical areas, formal interagency bodies coordinate priority actions, workplans and funding advocacy, such as One Health and antimicrobial resistance committees. However, no such official body oversees IHR implementation nationally that includes monitoring and evaluation. Domestic resource allocation and mobilization are of significant concern both in normal times and during an emergency. While Malawi has financing processes and mechanisms, only certain aspects of IHR implementation and support receive consistent and timely financing, particularly since DODMA cannot provide support through the National Disaster Appeal Fund. In addition, national funding and international support require better coordination and should include formal structures, processes and transparency, especially with regard to public health events or emergencies requiring action from multiple sectors.

Malawi's efforts to revise and develop more robust legislation and policies present an opportunity to raise awareness of the IHR, clarify roles and responsibilities around its implementation and better coordinate and prioritize the resources needed for the IHR.

Indicators and scores

P.1.1 The State has assessed, adjusted and aligned its domestic legislation, policies and administrative arrangements in all relevant sectors to enable compliance with the IHR – Score 2

Strengths and best practices

- A supportive legislative framework exists, with identified areas for improvement. The Public Health Act, DODMA Act and draft PHIM Bill are under review and will align with efforts to strengthen IHR capacities.
- The current annual IHR plan is a good platform to coordinate national IHR implementation among technical sectors.
- Many formal and informal groups have identified challenges and gaps in operationalizing existing legislation, policies, and funding mechanisms.

Areas that need strengthening and challenges

- PHIM and its functions have no legal mandate.
- Contingency funding for emergency response is not accessible rapidly (for example within 24 hours).
- Inadequate clarity of responsibilities for IHR implementation especially those related to DODMA and PHIM.
- Cross-sectoral coordination between national IHR stakeholders in the development and implementation of legislation and policy is sporadic.
- Narrow or rigid MOUs on IHR implementation hinder their broader use by other ministries or the national government.
- Existing regulations are not consistently enforced.

P.1.2 Financing is available for the implementation of IHR capacities – Score 2

Strengths and best practices

- PHIM is identified as the national authority for coordinating different sectors in the implementation of IHR-related activities.
- International partners actively support Malawi with both in-kind and financial resources in both normal times and emergencies.

Areas that need strengthening and challenges

- PHIM is insufficiently resourced.
- The role of PHIM in implementing the IHR for capacities mandated or regulated by other ministries is unclear.
- Health security requires additional domestic funding, in particular for strengthening IHR capacities.
- An interministerial health-security resource mobilization strategy is critical for funding and full implementation of IHR core capacities.
- Budget planning and development for supporting IHR implementation among different ministries and departments is poorly coordinated and funding disbursements are delayed.

P.1.3 A financing mechanism and funds are available for the timely response to public health emergencies – Score 1*Strengths and best practices*

- A National Disaster Appeal Fund for emergency use sits within DODMA and is available for certain public health emergencies.

Areas that need strengthening and challenges

- Regular funding is insufficient for required IHR capabilities, which makes financing and responding to public health emergencies extremely difficult.
- Due to strict criteria, DODMA support and the National Disaster Appeal Fund cannot be used in all public health events or emergencies; when used, their capacity and responsiveness are limited.
- International funding covers a significant portion of Malawi's emergency response.
- Capacity to redistribute national and international resources between sectors or regions in the event of a public health emergency is limited and lacks clear, standardized or formal procedures.

Recommendations for priority actions

- Finalize legislation that enables compliance with the IHR across all relevant sectors and provides necessary resources (mobilize political and financial support for this activity).
- Develop a national policy framework that clarifies all ministry roles and responsibilities relevant to IHR capacity implementation.
- Establish mechanisms for coordinated/joint contingency fund management and oversight for public health emergencies that ensures funds are available (for example within 24 hours).

IHR COORDINATION, COMMUNICATION AND ADVOCACY

INTRODUCTION

The effective implementation of the IHR requires multisectoral/multidisciplinary approaches through national partnerships for efficient alert and response systems. Coordination of nationwide resources, including the designation of a national IHR Focal Point, and adequate resources for IHR implementation and communication, is a key requisite for a functioning IHR mechanism at country level.

Target

Multisectoral/multidisciplinary approaches through national partnerships that allow efficient, alert and response systems for effective implementation of the IHR. Coordinate nationwide resources, including sustainable functioning of a National IHR Focal Point – a national centre for IHR communication which is a key obligation of the IHR – that is accessible at all times. States Parties provide WHO with contact details of National IHR Focal Points, continuously update and annually confirm them.

LEVEL OF CAPABILITIES

The MOH has designated PHIM as the national focal point for IHR at a high enough level within the Government of Malawi to ensure a whole-of government approach. Cluster coordination committees for Health, and Water, Sanitation and Hygiene (WASH) meet every two weeks. District public health emergencies management committees meet in the event of emergencies and are chaired by a district commissioner. DODMA coordinates all disaster responses when these are declared.

Formally recognized national IHR focal point terms of reference, SOPs or guidelines for coordination between the NFP and other relevant actors are not in place. A mailing list, WhatsApp smartphone messaging platforms and verbal communication are some of the channels used to coordinate IHR issues. These channels are mainly informal.

There is systematic information exchange between district health offices, animal surveillance units, laboratories, human health surveillance units and other relevant sectors regarding potential zoonotic risks and emerging zoonotic events. However, this is not done in a timely manner. Multisectoral, multidisciplinary coordination and communication mechanisms are not regularly updated or tested, with the exception of a recent outbreak of cholera in 2017-18 which affected 13 districts. Existing action plans have not incorporated lessons learned from these mechanisms. The country has no formal mechanism for IHR advocacy. The functions of the NFP have not been evaluated for effectiveness and simulation exercises are not carried out regularly to test coordination and communication mechanisms.

Indicators and scores

P.2.1 A functional mechanism established for the coordination and integration of relevant sectors in the implementation of IHR – Score 1

Strengths and best practices

- IHR coordination, communication and advocacy mechanisms are located within the PHIM and are visible.
- Some coordination structures exist, such as the health committees and WASH clusters.
- Public health emergencies management committees are established at both national and subnational levels.
- In addition to existing coordination and information sharing platforms, a mailing list and a WhatsApp smartphone messaging platform are used.
- An updated contact directory includes all members of the NFP.

Areas that need strengthening and challenges

- There is no structured mechanism that allows the NFP to communicate effectively with all stakeholders, including WHO and other international experts.
- A proper coordination mechanism to detect and respond to deliberate or accidental events is absent.
- Simulation exercises to test multisectoral, multidisciplinary coordination and communication mechanisms are erratic.
- The functions of the NFP have not been evaluated for effectiveness.

Recommendations for priority actions

- Develop national IHR terms of reference and SOPs that clearly articulate the roles and responsibilities of the different stakeholders for effective national and subnational multisectoral and multidisciplinary coordination and communication.
- Institute formal communication mechanisms with WHO and other international agencies for IHR reporting.
- Plan and conduct joint regular simulation exercises with relevant agencies involved in IHR implementation.
- Put in place mechanisms to continuously assess the effectiveness of the NFP.
- Develop an advocacy plan to ensure all key stakeholders are actively involved in and contribute to IHR implementation.

ANTIMICROBIAL RESISTANCE

INTRODUCTION

Bacteria and other microbes evolve in response to their environment and inevitably develop mechanisms to resist being killed by antimicrobial agents. For many decades, the problem was manageable as the growth of resistance was slow and the pharmaceutical industry continued to create new antibiotics.

Over the past decade, however, this problem has become a crisis. Antimicrobial resistance is evolving at an alarming rate and is outpacing the development of new countermeasures capable of thwarting infections in humans. This situation threatens patient care, economic growth, public health, agriculture, economic security and national security.

Target

A functional system in place for the national response to combat antimicrobial resistance (AMR) with a One-Health approach, including:

- a) Multisectoral work spanning human, animal, crops, food safety and environmental aspects. This comprises developing and implementing a national action plan to combat AMR, consistent with the Global Action Plan (GAP) on AMR.*
- b) Surveillance capacity for AMR and antimicrobial use at the national level, following and using internationally agreed systems such as the WHO Global Antimicrobial Resistance Surveillance System (GLASS) and the OIE global database on use of antimicrobial agents in animals.*
- c) Prevention of AMR in health care facilities, food production and the community, through infection prevention and control measures.*
- d) Ensuring appropriate use of antimicrobials, including assuring quality of available medicines, conservation of existing treatments and access to appropriate antimicrobials when needed, while reducing inappropriate use.*

LEVEL OF CAPABILITIES

Malawi has adopted a multisectoral approach to combating antimicrobial resistance (AMR) and has developed a national AMR strategy (2017-2022) that incorporates an action plan. The strategy was costed, approved and launched in November 2018. Although yearly operational plans are developed, implementation has been suboptimal, mainly because of financial challenges. The national strategy does not address how to improve antimicrobial management in the pharmaceutical industry. There is a functioning national technical working group (TWG) with defined terms of reference for oversight and coordination of AMR-related activities, and programmes and technical expertise from diverse sectors.

A national AMR surveillance plan for human health is being developed and will be incorporated into an integrated disease surveillance and response (IDSR) system. The plan does not cover the animal sector. An integrated One Health national surveillance system manual is also being developed. There is a national microbiology reference laboratory (NMRL) for antimicrobial resistance that monitors nine priority pathogens. The laboratory receives samples from human and veterinary diagnostic laboratories as well as from certain environmental sources. Some 40% of hospital laboratories have the capacity to detect, isolate and identify antimicrobial-resistant organisms, while 20% have enrolled in the WHO Global Antimicrobial Surveillance System (GLASS) since 2016. However, a number of antibiotic sensitivity results have not been acted upon. A sample specific and annual AMR surveillance report is shared with stakeholders. There is no functioning AMR surveillance system in the animal sector and no functional surveillance mechanisms for food hygiene practices.

There are some SOPs and implementation of infection prevention and control (IPC) practices and WASH activities included in assessments of the safety and functionality of health facilities for health emergencies. The national IPC programme, policy and guidelines for human health are under development. There is no national surveillance programme for health care-associated infections (HAI) and no systematic IPC measures in animal health. IPC requires more investment and strengthening to ensure national coordinated direction under a quality management structure.

There is a national committee to recommend antibiotics systems for antimicrobial stewardship. There are also national treatment guidelines but no mechanisms to ensure or enforce appropriate prescription and use of antimicrobials in human health, animal health and food production. One best practice observed was the use of AMR data on the increased resistance of gonorrhoea to ceftriaxone and ciprofloxacin in reviewing treatment guidelines for sexually transmitted infection (STI) management.

Indicators and scores

P.3.1 Effective multisector coordination on AMR – Score 3

Strengths and best practices

- Malawi has a multisectoral AMR strategy and plan (2017-2022) that is costed, approved and launched.
- An AMR operational plan is incorporated into the national strategy.
- A functioning multisectoral coordination structure for AMR (Technical Working Group) is under the MOH.

Areas that need strengthening and challenges

- There is inadequate dissemination of the AMR strategy and plan at all levels to ensure stakeholders are aware of its content and of their roles and responsibilities.
- A system to monitor and evaluate implementation of the AMR strategy is not in place.
- There are inadequate funding sources to ensure a dedicated budget for implementation.

P.3.2 Surveillance of AMR – Score 2

Strengths and best practices

- A national microbiology reference laboratory for AMR detection and reporting, and a national AMR surveillance system with nine priority pathogens, are incorporated into the IDSR.
- Surveillance results are used to inform review of guidance documents such as the national treatment guidelines on STI.
- Some 40% of laboratories have the capacity to detect, isolate and identify antimicrobial-resistant organisms in humans, and 20% of hospital laboratories are enrolled in WHO GLASS.

Areas that need strengthening and challenges

- The AMR surveillance plan has yet to be developed. The scope of the proposed national AMR surveillance plan should be expanded to include the animal sector.
- AMR surveillance data does not include data from animal sources.
- There are no sentinel sites for surveillance of infections caused by AMR pathogens in livestock.

P.3.3 Infection prevention and control – Score 1

Strengths and best practices

- Most health facilities have some IPC SOPs and implementation of IPC/WASH activities.
- A system for integrated assessments of the safety and functionality of health facilities for health emergencies is in place.

Areas that need strengthening and challenges

- A national IPC programme for human health, animal health and food production is needed which includes finalized draft IPC policy and guidelines, and a dissemination strategy.
- A national surveillance programme for health care-associated infections is absent.
- There are no systems in place to regularly monitor IPC at national and subnational levels.

P.3.4 Optimize use of antimicrobial medicines in human and animal health and agriculture – Score 1*Strengths and best practices*

- The national AMR strategy captures activities that ensure the appropriate use of antibiotics in humans.
- There is a national antibiotics selection committee for human health.
- There are national treatment guidelines and an essential drugs list.

Areas that need strengthening and challenges

- The national strategy needs to be expanded to include antimicrobial stewardship, along with mechanisms for the appropriate prescription and use of antimicrobials in human health, animal health and food production.

Recommendations for priority actions

- Incorporate aspects of pharmaceutical production into the AMR strategy and institutionalize a monitoring and evaluation system to track progress of AMR strategy implementation in both human and animal health.
- Establish AMR surveillance in the animal sector.
- Develop and implement an antimicrobial policy to guide the appropriate prescription and use of antimicrobials in both human and animal health.
- Develop SOPs and tools for effective coordination and communication, including AMR data sharing and reporting for both human and animal health.
- Finalize, disseminate and implement the IPC policy and guidelines for human health, animal health and food production, as well as mechanisms to offer supportive supervision, monitoring and evaluation.

ZOONOTIC DISEASES

INTRODUCTION

Zoonotic diseases are communicable diseases that can spread between animals and humans. These diseases are caused by viruses, bacteria, parasites and fungi carried by animals, insects or inanimate vectors that aid in its transmission. Approximately 75% of recently emerging infectious diseases affecting humans are of animal origin; and approximately 60% of all human pathogens are zoonotic.

Target

Functional multisectoral, multidisciplinary mechanisms, policies, systems and practices are in place to minimize the transmission of zoonotic diseases from animals to human populations.

LEVEL OF CAPABILITIES

The threat of zoonotic diseases to human populations is increasing globally. The emergence of new infectious diseases is facilitated by the complex nature of the human-animal interface, itself constantly influenced by climate change, agricultural practices and other factors such as pathogen adaptation, and human and animal migrations. Therefore, managing and responding to risks related to zoonotic diseases is complex and requires multisectoral and multi-institutional cooperation.

The animal health sector of Malawi has independently identified five zoonotic diseases – rabies, bovine tuberculosis, brucellosis, cysticercosis and human African trypanosomiasis – with control policies designed to reduce their spread into humans. However, progress in implementing these policies is slow because of limited resources, a lack of infrastructure and inadequate professional capacities.

Many cases of rabies in both animals and humans have been reported in Malawi. Animal rabies is usually managed at the veterinary departmental level. Human rabies cases are first handled at the veterinary department of the agriculture ministry to confirm actual contact with a rabid animal. Once that is done, the patient is referred to the human health sector for follow-up prophylactic post-exposure treatment.

Except for rabies, there is no formal multisectoral policy for collaboration between the ministries of agriculture and health. All collaborative zoonosis activities are ad hoc and take place whenever a specific event or threat occurs. In 2009, a joint simulation exercise on avian influenza was conducted and a national meeting was held, with regional IHR meetings taking place in Dowa, Mpolneta and Blantyre in August 2018. Other zoonotic diseases, however, have been neglected. As a result, coordination and collaboration on zoonotic diseases between the veterinary and human medical services are non-existent.

Effective management of zoonotic diseases requires joint development of protocols, standards and execution by the ministries of agriculture and health as well as other stakeholders. Control of zoonotic diseases, especially among vulnerable rural populations, is critical for livelihoods and national food security.

Malawi urgently needs to develop capabilities to control zoonotic diseases.

Indicators and scores

P.4.1 Coordinated surveillance systems in place in the animal health and public health sectors for zoonotic diseases/pathogens identified as joint priorities – Score 1

Strengths and best practices

- MOUs are in place for rabies surveillance and monitoring with two non-governmental organizations (NGOs); the Lilongwe Society for Prevention and Cruelty of Animals, and Mission Rabies.
- A One Health platform exists but needs to be made operational.
- There is a list of five zoonotic diseases of the greatest public health concern generated by the animal health sector (rabies, bovine tuberculosis, brucellosis, cysticercosis, and human African trypanosomiasis).

Areas that need strengthening and challenges

- The ministries of agriculture and of health work in silos, with no system or mechanism for joint disease surveillance and control of zoonotic diseases.
- There is no system for surveillance or for exchange of epidemiological reports on zoonotic diseases between the two ministries, except informally via the WhatsApp smartphone messaging app.
- The One Health platform needs be activated.
- Veterinary quarantine services or border security procedures for animals and animal products with neighbouring countries and trading partners need to be established.

P.4.2 Mechanisms for responding to infectious and potential zoonotic diseases established and functional – Score 1

Strengths and best practices

- Two Performance of Veterinary Services (PVS) evaluations were conducted in 2007 and 2014 but a gap analysis has yet to be carried out.
- Multisectoral response teams conduct active surveillance during outbreaks when funds are available.
- A veterinary college has been established and at least 15 veterinarians will graduate from it in 2019.
- There are two training colleges training veterinary para-professionals.

Areas that need strengthening and challenges

- There is a shortage of veterinarians in public health.
- Surveillance systems require strengthening.
- There are inadequate ante- and post-mortem inspections at abattoirs and associated premises.
- The veterinary service has gaps in laboratory diagnosis of zoonotic diseases.

Recommendations for priority actions

- Formalize a multisectoral policy for collaboration on zoonotic diseases.
- The Malawi Ministry of Agriculture, Irrigation and Water Development and Malawi Ministry of Health and Population should jointly develop a priority list of zoonotic diseases.
- Establish a coordinated surveillance system for zoonotic diseases and conduct joint simulation exercises.
- Request an OIE performance of veterinary services (PVS) gap analysis for the quantitative evaluation of Malawi's needs and priorities.

FOOD SAFETY

INTRODUCTION

Food- and water-borne diarrhoeal diseases are leading causes of illness and death, particularly in less developed countries. The rapid globalization of food production and trade has increased the potential likelihood of international incidents involving contaminated food. The identification of the source of an outbreak and its containment is critical for control. Risk management capacity with regard to control throughout the food chain continuum must be developed. If epidemiological analysis identifies food as the source of an event, based on a risk assessment, suitable risk management options that ensure the prevention of human cases (or further cases) need to be put in place.

Target

A functional system is in place for surveillance and response capacity of States Parties for foodborne disease and food contamination risks or events with effective communication and collaboration among the sectors responsible for food safety.

LEVEL OF CAPABILITIES

While several laws regulating food safety exist in Malawi, enforcement remains a challenge due to lack of a specific food safety policy describing the role of each ministry and partner in the surveillance and response to foodborne disease outbreaks. Projects supported by WHO and FAO are underway to develop these policies.

In the public health sector, event-based surveillance (EBS) for foodborne diseases is formalized within the IDSR guidelines, where two or more reported cases of foodborne illnesses constitute a threshold for which an investigation should be conducted. Surveillance for specific pathogens known to cause foodborne diseases is also listed in the guidelines, including case definitions and reporting frequencies. The following diseases are included: cholera, Shigella, diarrhoea lasting more than five days, tuberculosis (TB) and anthrax. These guidelines do not include detailed protocols to respond to outbreaks and conduct investigations but do provide a basis from which cases can be followed up. Foodborne disease data are kept in the District Health Information System 2 (DHIS2) database and are available for analysis and production of epidemiology bulletins. Although guidelines exist, there is still a need to develop a detailed surveillance system for both EBS and indicator-based surveillance (IBS).

Teams responding to foodborne disease outbreaks can be composed of various professions such as clinicians or nurses, laboratory specialists, environmental health specialists and animal health professionals if needed. No foodborne disease response plan is available in the country that details protocols to follow in case of an outbreak, and that identifies SOPs, multisectoral coordination and communication procedures, response team roles and responsibilities. Due to this, investigations to follow up on cases of foodborne illnesses are not consistently conducted.

A network of laboratories with both public health and veterinary diagnostic facilities supports food safety activities in the country. Depending on the management or suspected etiology of the case under investigation, specimens may be sent to a specific laboratory; for example, toxicology testing is conducted at the Central Veterinary Laboratory. The laboratory network faces several limitations that prevent it from fully supporting food safety activities. These include understaffing, forcing specimens to be transported to a different facility for testing, and the absence of a courier system dedicated to foodborne disease surveillance. These factors can seriously affect the diagnosis of foodborne pathogens as samples may no longer be viable after a long journey to their destination within the country.

For animal health, the agriculture ministry conducts inspections at abattoirs through dedicated meat inspectors. In areas with inspector shortages, environmental officers fulfil that role. There is no formal collaboration between the animal and public health sectors for sharing data on foodborne disease outbreaks or food inspections.

Indicators and scores

P.5.1 Surveillance systems in place for the detection and monitoring of foodborne diseases and food contamination – Score 1

Strengths and best practices

- EBS components of foodborne outbreaks are clearly listed in the IDSR document and include thresholds for investigation.
- Several foodborne pathogens are identified as priority diseases under IDSR; surveillance indicators and guidelines include case definitions, actions to respond to suspicion, data analysis, sampling and laboratory testing.
- Foodborne disease data are kept in DHIS2 and analysed to identify trends and produce epidemiology reports (for example weekly IDSR bulletins, quarterly epidemiological bulletins).

Areas that need strengthening and challenges

- No detailed protocols or SOPs are available for the consistent surveillance of outbreaks of foodborne pathogens.
- The laboratory network is unable to conduct in-depth investigations into foodborne diseases due to understaffing and poor sample transportation.
- Detection of foodborne pathogens between the human and animal health sectors is poorly coordinated.

P.5.2 Mechanisms are established and functioning for the response and management of food safety emergencies – Score 1

Strengths and best practices

- IDSR guidelines provide some basis for foodborne disease follow-up.
- Response teams made up of various professions can be set up to investigate cases of foodborne disease.

Areas that need strengthening and challenges

- Multisectoral partners involved in foodborne disease response are not aware of their roles and responsibilities.
- A detailed response plan for foodborne diseases describing SOPs, multisectoral collaboration and communication is not available.

Recommendations for priority actions

- Review current laws to develop a food safety policy that formalize roles and responsibilities of each partner to better implement surveillance and response to foodborne diseases. This can provide a basis on which to create a comprehensive food law.
- Develop a comprehensive national plan on food safety that includes protocols for surveillance and multisectoral outbreak response.
- Institute internal and external communication protocols to better coordinate foodborne disease response and engage communities in compliance with food safety practices.
- Conduct a multisectoral simulation exercise on a selected foodborne disease outbreak to reinforce multisectoral surveillance capacities.

BIOSAFETY AND BIOSECURITY

INTRODUCTION

It is vital to work with pathogens in the laboratory to ensure that the global community possesses a robust set of tools – such as drugs, diagnostics, and vaccines – to counter the ever-evolving threat of infectious diseases.

Research with infectious agents is critical for the development and availability of public health and medical tools that are needed to detect, diagnose, recognize and respond to outbreaks of infectious diseases of both natural and deliberate origin. At the same time, the expansion of infrastructure and resources dedicated to work with infectious agents have raised concerns regarding the need to ensure proper biosafety and biosecurity to protect researchers and the community. Biosecurity is important in order to secure infectious agents against those who would deliberately misuse them to harm people, animals, plants or the environment.

Target

A whole-of-government multisectoral national biosafety and biosecurity system with dangerous pathogens identified, held, secured and monitored in a minimal number of facilities according to best practices; biological risk management training and educational outreach conducted to promote a shared culture of responsibility, reduce dual-use risks, mitigate biological proliferation and deliberate use threats, and ensure safe transfer of biological agents; and country-specific biosafety and biosecurity legislation, laboratory licensing and pathogen control measures in place as appropriate.

LEVEL OF CAPABILITIES

Biosecurity and biosafety are underdeveloped in Malawi in both the public and private sectors. There are disparities in biosafety and biosecurity training and facilities for laboratory workers. Malawi has two main laboratory systems: the national laboratory system for human disease and the national laboratory system for animal diseases. There is inadequate funding to support biosafety and biosecurity programmes and initiatives and their oversight and enforcement at the ministry level.

There is limited awareness of international biosafety and biosecurity best practices for the safe, secure and responsible conduct of activities within the public health system. Some elements of biosafety are being practiced and documented but no comprehensive national biosafety system is in place. Very limited biosecurity practices are conducted but no documented procedures or national system exist.

There is no system to identify, hold, secure and monitor dangerous pathogens, no country-specific biosafety or biosecurity legislation and no pathogen control measures. There is limited biosafety monitoring but none for biosecurity. A licensing authority system is being developed that would include biosafety guidelines but no biosecurity elements. A measles reference laboratory is licensed in collaboration with WHO. Some biosafety risk assessments have been conducted for some laboratories, and audits have taken place but are not routine.

Individual laboratories have site-specific biosafety management programmes and supporting documentation, but nothing exists for biosecurity. There is a framework to document, report, investigate and address incidents at the facility level but a national system is not in place to capture a snapshot of what is happening at country level. Laboratory personnel have access to occupational health services for post-exposure prophylaxis treatment but no vaccination policy is established. There are mechanisms to assure the competency of laboratory workers in the form of competency assessment reports. Individual laboratory workers can be licensed in their field of study.

There is a national waste management policy and it is being implemented locally. Each facility has sufficient personal protective equipment based on the risk associated with each position. Biosafety cabinets are not being serviced locally and there is inadequate funding and human capacity to ensure proper maintenance of facilities and equipment.

Training programmes are in place at all facilities for biosafety but not for biosecurity. All staff are provided with training, but the frequency is not defined. Exercises are being performed and include a process to document successes and areas of improvement. Corrective action plans are implemented. The country has limited academic instruction in institutions that train those who work with dangerous pathogens.

Indicators and scores

P.6.1 Whole-of-government biosafety and biosecurity system in place for all sectors (including human, animal and agriculture facilities) – Score 1

Strengths and best practices

- Laboratory personnel have access to and use protective clothes and equipment.
- The transportation system for specimens spans local to out-of-country levels.
- Laboratories have established waste management systems that are implemented locally.
- Post-exposure prophylaxis treatment is provided to all laboratory workers.
- Laboratory workers are licensed for their field to assure competency.

Areas that need strengthening and challenges

- There is no mechanism to monitor and develop an updated record and inventory of pathogens within facilities that store or process dangerous pathogens and toxins.
- There is no comprehensive national biosafety and biosecurity regulatory framework or legislation.
- The country has no regulatory body for licensing laboratories.
- Dangerous pathogens are not consolidated into a minimum number of facilities.
- No vaccination policy for personnel exists.
- There is no local capacity for servicing biosafety containment cabinets.
- Biosafety and biosecurity programmes are not adequately funded.

P.6.2 Biosafety and biosecurity training and practices in all relevant sectors (including human, animal and agriculture) – Score 1

Strengths and best practices

- Biosafety training programmes are in place at all facilities.
- Exercises are performed and include a process to document successes and areas for improvement.

Areas that need strengthening and challenges

- A biosafety and biosecurity training needs assessment has not been conducted.
- There is a lack of funding to sustain a biosafety and biosecurity training programme.

Recommendations for priority actions

- Develop an updated inventory of pathogens in the country to record what facilities house these pathogens, what pathogens are in each of these facilities and list them from most dangerous to less dangerous.
- Develop a comprehensive national biosafety and biosecurity regulatory framework for human and animal public health programmes based on the list of pathogens in the country that would include but not be limited to pathogen control measures, operational handling and failure reporting systems.
- Establish a licensing programme for human and animal facilities based on the guidelines in the biosafety and biosecurity framework.
- Conduct a needs assessment to identify gaps in biosafety and biosecurity training for human and animal public health programmes.
- Develop a biosafety/biosecurity training programme for human and animal laboratory facilities that would include but not be limited to international best practices for safe, secure and responsible conduct, the gaps found in the needs assessment, frequency of training and sustained academic training.

IMMUNIZATION

INTRODUCTION

Immunizations are estimated to prevent more than two million deaths a year globally. Immunization is one of the most successful global health interventions and cost-effective ways to save lives and prevent disease. Measles immunization is emphasized because it is widely recognized as a proxy indicator for overall immunization against vaccine preventable diseases. Countries will also identify and target immunization to populations at risk of other epidemic-prone vaccine preventable diseases of national importance (e.g. cholera, Japanese encephalitis, meningococcal disease, typhoid and yellow fever). Diseases that are transferable from cattle to humans, such as anthrax and rabies, are also included.

Target

A national vaccine delivery system – with nationwide reach, effective distributions, access for marginalized populations, adequate cold chain and ongoing quality control – that is able to respond to new disease threats.

LEVEL OF CAPABILITIES

The Malawi Expanded Programme on Immunization (EPI) covers various vaccine-preventable diseases such as TB, measles-rubella, poliomyelitis, diphtheria, pertussis (whooping cough), rotavirus, pneumococcal tetanus, Haemophilus influenza type B and hepatitis B virus infections. However, it does not take into account zoonotic diseases of public health concern. The country's national vaccine action plan is aligned with the WHO Global Vaccine Action Plan, with the addition of cholera and yellow fever.

Some of the systems in place to monitor vaccine coverage in Malawi include monthly vaccine coverage analyses, periodic Data Quality Assessments, Immunization Coverage Baseline Cluster Surveys conducted in Dowa and Ntchisi districts in 2015 as well as the District Vaccine Data Management Tool.

The EPI largely depends on financial support from the Global Alliance for Vaccines and Immunization (Gavi, the Vaccine Alliance) through a current Health Systems Immunization Strengthening grant while WHO, the United Nations Children's Fund (UNICEF), John Snow Inc., and the United States Agency for International Development (USAID) offer technical support. Efforts are underway to integrate immunization data with DHIS2. In addition, there is a defined structure and mechanisms to ensure a sustainable supply chain. These include quantification exercises of vaccines and supplies through the National Immunization Quantification, which uses the National Statistical Office figures for the replenishment of vaccines to regions and districts, and the consideration of global vaccine stock levels when reviewing domestic stock levels. To ensure the vaccine cold chain, the MOH provides training for cold chain technicians and supply chain officers, and is currently in the process of replacing cold chain equipment.

Indicators and scores

P.7.1 Vaccine coverage (measles) as part of national programme – Score 3

Strengths and best practices

- The national vaccine action plan is aligned with the WHO Global Vaccine Action Plan and includes other important vaccines such as cholera and yellow fever.
- The country has a comprehensive multiyear national immunization plan and an annual operational plan.
- Public perception of immunization is monitored and vaccination presentations and campaigns address perception issues.

Areas that need strengthening and challenges

- Zoonotic diseases of national concern are not included in the immunization plan.
- There are no effective incentive programmes to encourage or support routine vaccination among populations with relatively low coverage.

P.7.2 National vaccine access and delivery – Score 4

Strengths and best practices

- The country has systems that monitor vaccine coverage such as the District Vaccine Data Management Tool.
- Monthly periodic vaccine coverage analyses are undertaken.
- National systems ensure a continuous cold chain for vaccine delivery by replacing older cold chain equipment, training cold chain technicians and training supply chain officers in immunization supply chain management.
- Malawi has a well-defined structure and mechanisms that ensure a sustainable vaccine supply, such as a vaccine quantification exercise using the National Immunization Quantification tool.
- Global vaccine stock levels using Visibility for Vaccines, or VIVA, are taken into account when reviewing domestic stock levels.

Areas that need strengthening and challenges

- Malawi relies heavily on external partners to support national access and delivery, which poses a risk to the programme's sustainability.

Recommendations for priority actions

- Develop promotional community-based education and incentive programmes for pockets of groups and sectors that currently do not comply with immunization.
- Enforce mechanisms for mandatory immunization during an outbreak, as outlined in the Public Health Act.
- Expedite and strengthen the process of integrating immunization data onto the DHIS2 system, helping to ensure an integrated health information system.
- Develop a plan with clear objectives to integrate zoonotic diseases of public health importance into the mainstream immunization programme.
- Enforce a strategy of immunization in hard-to-reach areas and populations.

DETECT

NATIONAL LABORATORY SYSTEM

INTRODUCTION

Public health laboratories provide essential services including disease and outbreak detection, emergency response, environmental monitoring and disease surveillance. State and local public health laboratories can serve as a focal point for a national system, through their core functions for human, veterinary and food safety including disease prevention, control and surveillance; integrated data management; reference and specialized testing; laboratory oversight; emergency response; public health research; training and education; and partnerships and communication.

Target

Surveillance with a national laboratory system, including all relevant sectors, particularly human and animal health, and effective modern point-of-care and laboratory-based diagnostics.

LEVEL OF CAPABILITIES

Malawi has two main laboratory systems: a national laboratory system for human diseases and a national laboratory system for animal diseases. Each sector has its own national reference laboratory. The country has defined priority diseases for both human and animal groups but there has not been input from both sectors for one uniform list. Both groups are able to conduct their respective tests. No partnership exists between the two sectors to share biological specimens, epidemiologic data, laboratory reports or alerts, or general management of zoonotic diseases.

Both laboratory systems have incorporated a tier system so that testing can be referred from lower-level laboratories with no testing facilities to higher-level ones. Most laboratories in both sectors have some sort of quality assurance in place. An antimicrobial susceptibility programme exists for testing and reporting.

Transporting specimens to and from laboratories is efficient and well developed for the human laboratory group but lacking for the animal group. Transportation capacity consists of district to central level to referral laboratories to outside the country. National legislation covers the transport of infectious substances in Categories A and B and training for individuals is available. Both human and animal laboratory groups contract private couriers for transport.

The human sector has the capability to reach all areas in the country in a reasonable amount of time but the animal sector lacks this ability. An MOU is available with laboratories outside the country for specialized testing not available in the country.

Malawi has strategies to conduct point-of-care and farm-based diagnostics, but they do not cover all the country's priority diseases. There is a mechanism to improve availability of point-of-care sites across the country. The country has developed strategies for tier-specific diagnostics, but the animal sector has not documented these strategies.

There is a national waste management policy and it is being implemented locally. Each facility has sufficient personal protective equipment based on the risk associated with each position. Biosafety cabinets are not being serviced locally and there is inadequate funding and human capacity to ensure proper maintenance of facilities and equipment. There is a procurement process for necessary media and reagents but not all tests have the required equipment.

Malawi is able to perform advanced molecular and serological testing for confirmation or reconfirmation of diagnoses. Some tests have a national diagnostic algorithm such as HIV testing services, TB diagnostics tests and malaria. Malawi participates in a regional and international laboratory network and a measles reference laboratory is licensed in collaboration with WHO.

Malawi has a national external quality assurance (EQA) programme for proficiency testing or rechecking for some serology, haematology, biochemistry, bacteriology and parasitology. More than 90% of public laboratories and over 70% of private laboratories participate in this programme, which is mandatory for public laboratories but optional for private ones.

Indicators and scores

D.1.1 Laboratory testing for detection of priority diseases – Score 2

Strengths and best practices

- A national diagnostic algorithm for HIV and TB exists and is aligned to WHO standards.
- Core tests for human and animal priority diseases are implemented effectively.
- Agreements outside the country are in place for tests that cannot be conducted in the country.
- A procurement process for acquiring necessary media and reagents is available.
- The laboratory system can manage testing and reporting on antimicrobial susceptibility by the antimicrobial resistance group.

Areas that need strengthening and challenges

- There is no list of priority diseases and core tests agreed by human and animal sectors, only individual lists.
- No partnership exists between the human and animal sectors.
- Required equipment is not available for some testing procedures.

D.1.2 Specimen referral and transport system – Score 2

Strengths and best practices

- The human sector's transport system is well developed and can transport specimens to and from all laboratories and to other countries.
- There is a mechanism to fast track high-priority specimens.
- A tracking system documents shipment and receipt.
- Guidelines exist for scheduling and transit times.
- The country participates in a regional laboratory network.

Areas that need strengthening and challenges

- Timely transport to and from all districts is not available in the animal sector.
- The animal and human sectors do not share a transport system.

D.1.3 Effective national diagnostic network – Score 2*Strengths and best practices*

- Tier-specific diagnostic strategies are in place for both sectors but are not documented in the animal sector.
- Clinical sites across the country have a mechanism to improve the availability of point-of-care diagnostics.
- There is capacity to perform advanced molecular and serological testing.

Areas that need strengthening and challenges

- Strategies to conduct point-of-care and farm-based diagnostics are in place but do not cover all priority diseases.

D.1.4 Laboratory quality system – Score 2*Strengths and best practices*

- A measles reference laboratory is licensed in collaboration with WHO.
- National quality standards are developed.
- Standard supervision checklists are in place and reported to laboratories after supervision visits.
- More than 90% of public laboratories participate in the EQA programme.
- More than 70% of private laboratories participate in the EQA programme, which is optional for them.

Areas that need strengthening and challenges

- No licensing system exists for the national quality of standards.
- Virology does not participate in the national EQA programme.

Recommendations for priority actions

- Develop one list of priority diseases and core tests that is agreed jointly by the human and animal sectors.
- Develop an MOU between the human and animal sectors that would include but not be limited to sharing of biological specimens, epidemiological data, laboratory reports and alerts, transport of specimens, and the general management of zoonotic diseases.
- Increase specimen transport system for the animal sector to include all districts in the country.
- Develop a written document for the strategies for tier-specific diagnostic testing for the animal sector.
- Develop the national quality of standards into a system of licensing for laboratory facilities.

SURVEILLANCE

INTRODUCTION

The purpose of real-time surveillance is to advance the safety, security and resilience of the nation by leading an integrated surveillance effort that facilitates early warning and situational awareness of all IHR hazard-related events.

Target

(1) Strengthened foundational indicator- and event-based surveillance that are able to detect events of significance for public health and health security; (2) improved communication and collaboration across sectors and between subnational (local and intermediate), national and international levels of authority regarding surveillance of events of public health significance; and (3) improved national and intermediate level regional capacity to analyse and link data from and between, strengthened, early-warning surveillance, including interoperable, interconnected electronic tools. This would include epidemiologic, clinical, laboratory, environmental testing, product safety and quality and bioinformatics data; and advancement in fulfilling the core capacity requirements for surveillance in accordance with the IHR and OIE guidelines.

LEVEL OF CAPABILITIES

Malawi adopted the IDSR strategy in 2003. The most recent version of the technical guidelines was produced in 2014 with 19 diseases, conditions and events selected for immediate and weekly reporting, nine for monthly reporting and 14 for quarterly reporting.

A reporting structure exists for indicator-based surveillance (IBS) from health facilities using in- and out-patient registers to complete an IDSR paper reporting tool. This is transmitted by the WhatsApp smartphone messaging app, phone calls or delivered by drivers at the district level where the data is entered into DHIS2 and then transmitted to the MOH. While information is received for those priority conditions identified for monthly and quarterly reporting, there is no systematic timely, immediate and weekly reporting. Weekly reporting was revitalized in week 26 of 2018; although the timeliness and completeness is currently poor (less than 60% for timeliness and less than 40% for completeness), there is momentum to address this. For immediate reporting, information is transmitted by phone or WhatsApp to the district and national levels where it should be recorded in an outbreak log (these are not actively maintained), followed by case-based reporting forms. Laboratory data is not integrated with surveillance data and risk assessment is a gap at all levels.

Vertical surveillance systems for some priority diseases such as HIV and TB exist in parallel to capture programmatic indicators and are covered in biannual reports.

Elements of an events-based surveillance (EBS) system exist but data capture is not systematic. For example, there are village health committees, and community health workers have been identified who use lay-person case definitions. Rumours received from the community or media are not collected formally but a community health information system is being developed.

All 29 districts have an IDSR focal point as well as health surveillance assistants at facility level. Training in IDSR has been conducted in eight of the 29 districts and needs to be rapidly scaled up. An IDSR online e-learning package has been promoted but poor internet connectivity has limited its use. Supportive supervision of data quality takes place only for HIV and TB, not for other epidemic-prone diseases.

Several electronic reporting systems are piloted through partner support. These include Argus in 10 districts for weekly reporting, eIDSR for text message alerts arising from cross-border surveillance and a syndromic surveillance system using electronic medical records. National rollout of these systems needs careful review and integration into the scheduled Health Information System (HIS) interoperability plan.

Bulletins featuring analysis of surveillance data are produced on an ad hoc basis and do not capture all priority diseases, but weekly situation reports were developed for cholera outbreaks in 2018.

A list of priority zoonotic conditions exists, along with a clear structure for reporting that includes the assignment of animal health officers in communities and area supervisors overseeing a wider geographic area. No regular surveillance bulletins exist for zoonotic diseases and there is a lack of information sharing between the ministries of health and agriculture. An electronic surveillance system was piloted for animal health but was too expensive to maintain.

Indicators and scores

D.2.1 Surveillance systems – Score 2

Strengths and best practices

- Technical guidelines and priority disease lists are developed for human and animal health and an IBS system exists.
- Monthly and quarterly data collection, collation and reporting take place.
- IDSR training has been conducted including the use of the online learning platform.
- Recent momentum has improved timeliness and completeness indicators.
- IDSR focal points exist in all districts.

Areas that need strengthening and challenges

- Collection and systematic collation of data on immediate reports of epidemic-prone diseases recorded in outbreak logs is lacking.
- IDSR training and supportive supervision in districts and health facilities should be regularly carried out to improve timeliness and completeness indicators to above 80%.
- There is a need to expand and formalize EBS through the systematic capture of rumours and the development of community-based surveillance.
- There is a need for district IDSR focal points to undertake the frontline field epidemiology training programme (Frontline FETP) to increase their technical knowledge and build capacity.
- Data from laboratories is not reported to the IDSR team to facilitate linking epidemiological and laboratory data or enhance the understanding of outbreaks.

D.2.2 Use of electronic tools – Score 2

Strengths and best practices

- DHIS2 is available in all districts for data capture and is used for monthly and quarterly reports.
- Several electronic tools are being piloted to assist with immediate notification, weekly reporting and syndromic surveillance.
- An interoperability plan for a Health Information System is under development.

Areas that need strengthening and challenges

- The current DHIS2 system needs to be used in a timely manner for weekly reporting of epidemic-prone diseases.
- Current pilot electronic surveillance systems should be reviewed to inform the development of an interoperable electronic surveillance system that integrates immediate reporting of epidemic-prone diseases with weekly zero reporting.

- A cost-effective electronic reporting tool for zoonotic diseases needs to be identified and rolled out to improve timely data collection, analysis and reporting. This should be interoperable with the public health system.

D.2.3 Analysis of surveillance data – Score 2

Strengths and best practices

- Weekly situation updates on cholera outbreaks took place in 2018.
- Weekly bulletins are produced but on an ad hoc basis.
- Basic descriptive analysis is feasible at the district level.

Areas that need strengthening and challenges

- Weekly bulletins (including analysis of epidemic-prone disease thresholds) are not regularly produced and disseminated to all stakeholders for animal and human health.
- Develop and disseminate annual IDSR reports, possibly via the PHIM website.
- There is inadequate supportive supervision that includes review and feedback of district-level analyses.

Recommendations for priority actions

- Strengthen the One Health platform by promoting multidisciplinary capacity building through training and supportive supervision to the improve timeliness and completeness of surveillance data.
- EBS should be expanded and formalized through the systematic capture of rumours from the public and the development of community-based surveillance.
- Conduct a review of the current pilot electronic surveillance systems to determine an appropriate streamlined and interoperable solution for both zoonotic and human health.
- Improve data sharing and feedback mechanisms through the development and dissemination to stakeholders of weekly surveillance bulletins, timely situation reports during outbreaks and annual surveillance reports in both the human and animal sectors following the development of SOPs for data sharing.
- Build capacity of IDSR focal points in all districts through participation in the Frontline FETP to increase technical knowledge.

REPORTING

INTRODUCTION

Health threats at the human–animal–ecosystem interface have increased over the past decades, as pathogens continue to evolve and adapt to new hosts and environments, imposing a burden on human and animal health systems. Collaborative multidisciplinary reporting on the health of humans, animals and ecosystems reduces the risk of diseases at the interfaces between them. The national IHR focal points, the OIE delegate, and WAHIS national focal point should have access to a toolkit of best practices, model procedures, reporting templates, and training materials to facilitate rapid (within 24 hours) notification of events that may constitute a public health emergency of international concern (PHEIC) to WHO and listed diseases to OIE, and will be able to rapidly (within 24/48 hours) respond to communications from these organizations.

Target

Timely and accurate disease reporting according to WHO requirements and consistent reporting to/information of FAO and OIE.

LEVEL OF CAPABILITIES

A national focal point (NFP), an operational OIE delegate and a World Animal Health Information System (WAHIS) national focal point have all been designated. The NFP and OIE delegate communicate informally through the WhatsApp smartphone messaging app when rapid information exchange is needed. There are no formal mechanisms for public health, animal health and security authorities to make decisions on reporting, although there are plans to develop an MOU with key sectors.

Two staff have been formally trained for IHR NFP functions although more staff should be trained. In 2018, the IHR Annex 2 decision instrument was not used for any potential public health emergency of international concern (PHEIC), including cholera outbreaks, which were subsequently notified following a verification request from WHO under IHR Article 10. The NFP does not use the IHR Event Information Site (EIS).

There are multiple mechanisms for reporting potential PHEICs in the country from within the MOH and with other ministries including IDSR, a One Health committee and programme-specific forums. However, they have no MOUs, SOPs or guidelines to approve and report a potential PHEIC to WHO. Additionally, the lack of a functioning emergency operations centre (EOC) and dedicated handsets for communication hampers the coordination of reporting.

There is a framework of agreement for reporting between Malawi and its neighbours, Mozambique and Zambia, but no framework with the United Republic of Tanzania. The NFP exchanges information informally with NFPs in Zambia and Mozambique through WhatsApp groups.

The OIE delegate actively reports events that fulfil specified criteria to OIE. This was demonstrated by reporting two events to OIE which fulfilled reporting criteria in 2018; an anthrax outbreak and a foot and mouth disease outbreak. Food safety issues of microbiological origin are not reported through the NFP or to the OIE delegate.

Indicators and scores

D.3.1 System for efficient reporting to FAO, OIE and WHO – Score 2

It should be noted that the OIE delegate fulfils the criteria for developed capacity, score 3, as evidenced by filed reports for zoonotic disease as per OIE processes.

Strengths and best practices

- The NFP, OIE delegate and WAHIS national focal point are designated.
- The OIE delegate has filed reports on zoonotic outbreaks occurring in Malawi in 2018, in accordance with OIE processes.
- Frameworks of agreement for cross-border collaboration with Zambia and Mozambique are established.
- WhatsApp smartphone messaging groups have been set up for informal, rapid information sharing, both in Malawi between the NFP and OIE delegate, and between neighbouring country NFPs (Zambia, Mozambique and the United Republic of Tanzania).

Areas that need strengthening and challenges

- The NFP receives inadequate training in their obligations to increase their understanding of IHR reporting mechanisms, in particular the IHR Annex 2 decision instrument; this could be accessed through online IHR learning packages. It is also found in the Malawi IDSR technical guidelines.
- The operationalization of the framework of agreement with Zambia and Mozambique is sub-optimal and there is no established framework with the United Republic of Tanzania.

D.3.2 Reporting network and protocols in country – Score 2

Strengths and best practices

- An update of the Public Health Act, and the development of legislation for the PHIM to incorporate requirements of IHR (2005), are underway.
- In-country reporting structures from local to national levels to WHO (through IDSR) and OIE exist.

Areas that need strengthening and challenges

- The procedures and approvals for reporting on a potential PHEIC to WHO have not yet been formalized.
- SOPs on NFP reporting requirements based on the template provided by WHO have not been developed.
- A definitive mechanism for cross-sectoral decision making on a potential PHEIC has not yet been established.

Recommendations for priority actions

- Build capacity for NFP members by undertaking online learning package and attending dedicated training.
- Develop SOPs for the NFP on approving and reporting requirements for potential PHEICs.
- Ensure the NFP has access to the EIS.
- Develop guidelines/MOUs for sharing information between government sectors.
- Develop a framework of agreement for reporting with the United Republic of Tanzania.

HUMAN RESOURCES

INTRODUCTION

Human resources are important in order to develop a sustainable public health system over time by developing and maintaining a highly qualified public health workforce with appropriate technical training, scientific skills and subject matter expertise. Human resources include nurses and midwives, physicians, public health and environmental specialists, social scientists, communication, occupational health, laboratory scientists/technicians, biostatisticians, IT specialists and biomedical technicians and a corresponding workforce in the animal sector: veterinarians, animal health professionals, para-veterinarians, epidemiologists, IT specialists etc.

The recommended density of doctors, nurses and midwives per 1,000 populations for operational routine services is 4.45 plus 30% surge capacity. The optimal target for surveillance is one trained (field) epidemiologist (or equivalent) per 200,000 populations who can systematically cooperate to meet relevant IHR and PVS core competencies. One trained epidemiologist is needed per rapid response team.

Target

States Parties with skilled and competent health personnel for sustainable and functional public health surveillance and response at all levels of the health system and the effective implementation of the IHR (2005).

LEVEL OF CAPABILITIES

Malawi has a strategy for the development of the human health workforce (2018-2022) that is aligned to the Health Sector Strategic Plan (HSSP) 11 (2017-2022). The human resources strategy does not cover key public health professionals required for IHR such as epidemiologists, social scientists, information technology (IT) specialists, veterinarians, livestock specialists and certain categories of community health workers in both the public and private health sectors. Likewise, the Human Resource Management Information System (HRMIS) does not capture information on these professionals.

There is some capacity to implement IHR. The country has no established positions for professionals such as epidemiologists and social scientists, although qualified staff do provide services in various positions. Nor do designated IHR focal points at PHIM have formal posts in the government structure. The country has a 45% vacancy rate in the health sector and some staff are working in positions for which they were not originally employed. There are plans to increase the number of health workers to deliver the Essential Health Package by 2022 from 19,266 to 34,557. These include medical officers, nurses, pharmacy technicians and health surveillance assistants. The vacancy rate in the animal sector is about 50%. There are no job descriptions, and attrition is a major concern in both the public health and veterinary sectors. Multidisciplinary rapid response teams for human- and animal-related health emergencies have not been formally identified or trained. There are no established procedures for local or international surge capacity during outbreaks.

Several government and private institutions, as well as NGOs, can provide in-service training programmes. Generally, however, in-service training, including training in outbreak preparedness and response in both human and animal health, is ad hoc within and across government, donors and NGOs. There are no national guidelines for in-service training or continuous professional development.

PHIM has instituted a basic Frontline FETP. However, the effectiveness of field epidemiology training and its impact on IHR capacity need to be monitored and evaluated. Bachelor's degree-level and specialist nurses, and medical officers, graduate from the University of Malawi. The country also plans to include IHR in all pre-service human and animal health training programmes.

Indicators and scores

D.4.1 An up-to-date multisectoral workforce strategy is in place – Score 2

Strengths and best practices

- Multidisciplinary HR capacity (epidemiologists, veterinarians, clinicians and laboratory specialists) is available at national level and in some provinces.
- Some incentives are in place to retain the existing public health workforce in the country.

Areas that need strengthening and challenges

- The HR strategy for the human health sector could be expanded to include other key IHR professionals.
- The Human Resource Management Information System needs to capture information on public health professionals implementing IHR.

D.4.2 Human resources are available to effectively implement IHR – Score 2

Strengths and best practices

- Some capacity exists to implement IHR and there is an above-average capacity of required clinical staff to deliver the Essential Health Package.
- There is a PHIM strategy that outlines positions for the public health workforce at various levels.

Areas that need strengthening and challenges

- There are no clear job descriptions and measures to minimize attrition are lacking.
- Vacant positions for different categories of animal and human health staff to implement IHR need to be filled.
- Multisectoral and multidisciplinary rapid response teams for all IHR emergencies at all levels should be designated and trained.
- Procedures for local and international surge capacity during outbreaks have not been outlined.

D.4.3. In-service trainings are available – Score 2

Strengths and best practices

- Some programmes, institutions or professional bodies provide some in-service training and other CPE programmes.
- Some environmental health officers, medical assistants, clinical officers, nurses, doctors, laboratory personnel, HSAs, HMIS personnel received special training in outbreak preparedness and response.

Areas that need strengthening and challenges

- Structured in-service training based on training needs assessments and monitoring of effectiveness of training programmes are not in place.
- There is no training that includes joint exercises for multidisciplinary teams.

D.4.4 FETP or other applied epidemiology training programme in place – Score 3*Strengths and best practices*

- A Frontline FETP, supporting outbreak investigation and reporting is available, with 69 graduates so far.
- There is one person attending the advanced FETP outside the country with plans for two more people to be trained.

Areas that need strengthening and challenges

- The PHIM needs to explore the feasibility of introducing an advanced FETP.
- The effectiveness of the FETP has not yet been evaluated.

Recommendations for priority actions

- Conduct a comprehensive human resource mapping and revise the national human resource strategy and HR information system to include other staff such as epidemiologists, laboratory specialists, public health specialists, biostatisticians and staff in animal health in both the public and private sector. This should incorporate mechanisms for regular updates and tracking of the IHR workforce in particular, such as public health specialists (epidemiologists), clinicians, biostatisticians and laboratory scientists.
- Facilitate the creation and implementation of establishment and progression mechanisms for PHIM staff, including other epidemiologists and key professionals.
- Institute a mechanism to monitor and evaluate the effectiveness of the FETP and its impact on improving country capacity to prevent, detect and respond to public health events.
- Establish SOPs and an agreement for deployment of additional human resources in the event of public health emergencies (surge capacity).
- Identify and train multisectoral and multidisciplinary rapid response teams at all levels and develop a regularly updated directory.

RESPOND

EMERGENCY PREPAREDNESS

INTRODUCTION

Emergency preparedness is defined as “the knowledge and capacities and organizational systems developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent, emerging or current emergencies.” A state of preparedness is the combination of planning, allocation of resources, training, exercising, and organizing to build, sustain, and improve operational capabilities at national, intermediate and local or primary response level based on strategic risk assessments. A strategic risk assessment identifies, analyses and evaluates the range of risks in a country and enables risks to be assigned a level of priority. Strategic risk assessments include analyses of potential hazards, exposures and vulnerabilities, identification and mapping of available resources, and analyses of capacities (routine and surge) at the national, intermediate and local or primary levels to manage the risks of outbreaks and other emergencies. Emergency preparedness applies to any hazard that may cause an emergency, including relevant biological, chemical, radiological and nuclear hazards, natural hazards, other technological hazards and societal hazards.

Target

(1) Existence of national strategic multi-hazard emergency risk assessments, risk profiles, and resource mapping (2) Existence of multi-hazard emergency response plans, (3) Evidence, from after action and other reviews, of effective and efficient multisectoral emergency response operations for outbreaks and other public health emergencies.

LEVEL OF CAPABILITIES

Malawi has a national emergency risk profile based on strategic multihazard emergency risk assessments, with the last assessment conducted by DODMA in 2018. Profiles are reviewed and updated annually to accommodate emerging threats or changing risks. This framework is supported by a well-defined national risk management structure that ranges from village civil protection committees at community level, to district civil protection committees, leading up to DODMA and a multisectoral national disaster preparedness and relief committee at national level.

DODMA is officially responsible for the management of disasters of every nature, including public health events, but the animal health sector is not formally covered. There is also insufficient clarity on the flow of responsibility and mandate for PHEICs that may not necessarily be classified as disasters. This includes clarity on resource allocation for both emergency preparedness and response, as well as access to the National Disaster Appeal Fund managed by DODMA.

The need to improve the use of other elements of the IHR Monitoring and Evaluation Framework, such as simulation exercises and after action reviews as part of emergency preparedness efforts, remains. The few simulation exercises that are undertaken are ad hoc and fragmented, and are currently being conducted by the Ministry of National Defence without a multisectoral approach.

Equipment and medical, food and other supplies for disaster response are stockpiled at regional but not district level. There are distribution plans for food items but none for pharmaceutical and other equipment.

Indicators and scores

R.1.1 Strategic emergency risk assessments conducted and emergency resources identified and mapped – Score 2

Strengths and best practices

- Malawi has a national emergency risk profile based on strategic multihazard emergency risk assessments, with the last assessment conducted in 2018. Emergency risk profiles are reviewed and updated annually to accommodate emerging threats or changing risks.
- National risk profiles and resources are shared with relevant sectors by DODMA.

Areas that need strengthening and challenges

- Malawi has no fully functional emergency operations centre (EOC).
- The multihazard contingency plan does not address all emergency preparedness for IHR-relevant hazards, including those that have the potential to cause PHEICs.
- There is no regular budget for funding emergency preparedness measures for human and animal health within DODMA, and access to contingency funding in times of emergencies is slow.
- There are no SOPs in the multihazard preparedness plan for each sector.

R.1.2 National multisectoral multihazard emergency preparedness measures, including emergency response plans, are developed, implemented and tested – Score 1

Strengths and best practices

- The national multisectoral multihazard response plan is based on a strategic emergency risk assessment, capacity assessments and resource mapping; district-level multihazard emergency response plans are available.
- A national inventory lists available resources such as pharmaceuticals, protective equipment and other equipment; resources for emergency response are stockpiled in warehouses in all regions.

Areas that need strengthening and challenges

- There is no evidence of consistent multisectoral simulation exercises that test the strengths and weaknesses of emergency preparedness and response.
- Multisectoral rapid response teams as part of preparedness are fragmented, inadequately trained for IHR (2005) and poorly coordinated.
- The emergency response plan does not incorporate all IHR-relevant hazards, including those with the potential to cause PHEICs.
- Emergency or contingency funds are not readily available for a response by public health, animal health and other relevant sectors and there are no clear procedures for resource allocation.

Recommendations for priority actions

- Conduct a health sector Strategic Risk Assessment (STAR).
- Conduct a comprehensive resource mapping for emergency response which includes human resources.
- Conduct regular multisectoral simulation exercises on national preparedness and response, involving all relevant stakeholders as well as incorporating lessons learned into the plan.
- Advocate for and ensure regular budget funding for emergency preparedness and response measures and easy access in times of emergency.
- Develop multi-hazard public health emergency preparedness and response plans taking into account findings from the risk assessment.
- Develop SOPs for each sector in the multihazard preparedness plan.

EMERGENCY RESPONSE OPERATIONS

INTRODUCTION

A public health emergency operations centre is a central location for coordinating operational information and resources for strategic management of public health emergencies and emergency exercises. Emergency operations centres provide communication and information tools and services, and a management system during a response to an emergency or emergency exercise. They also provide other essential functions to support decision-making and implementation, coordination and collaboration.

Target

Countries will have a coordination mechanism, incident management systems, exercise management programmes and public health emergency operation centre (EOC) functioning according to minimum common standards; maintaining trained, functioning, multisectoral rapid response teams, and trained EOC staff capable of activating a coordinated emergency response within 120 minutes of the identification of an emergency.

LEVEL OF CAPABILITIES

Malawi recently responded to several outbreaks: typhoid in Mchinji district (2016), a cholera outbreak in 13 districts (2017-18) and more recently, anthrax in hippopotamuses in Balaka. Despite Malawi's limited resources and capacities, including the lack of a multidisciplinary emergency coordination department or unit for public health and animal health, the country was able to mount a multisectoral response to recent outbreaks.

While DODMA is officially responsible for the management of disasters of every nature, including public health, there is insufficient clarity on the flow of responsibility and mandate for PHEICs that may not necessarily be classified as disasters. This includes clarity on resource allocation for both emergency preparedness and response, as well as access to the National Disaster Appeal Fund managed by DODMA.

DODMA conducted a limited number of simulation exercises, with the involvement of very few sectors. Stronger multisectoral coordination of both simulation exercises and after action reviews is needed, as part of the IHR Monitoring and Evaluation Framework in both preparedness and response efforts.

The strides in emergency response have taken place in the absence of a fully functional emergency operations centre (EOC) and incident management system. This provides a strong foundation to build, expand and fully operationalize the existing mechanisms for an EOC.

Indicators and scores

R.2.1 Emergency Response Coordination – Score 1

Strengths and best practices

- Most districts have strengthened their capacity to manage emergency response, through district public health emergency management committees reporting to the district civil protection committees.

- A national health sector emergency response coordination mechanism and an incident management system exist through the One Health committee.
- The One Health committee is able to convene participants from all relevant ministries and agencies and other national and multinational partners for emergency response.

Areas that need strengthening and challenges

- There is no continually operational hotline for human and animal health staff to call for help in handling a disease of unknown origin.
- There is no health sector emergency response coordination mechanism for emergencies.

R.2.2 Emergency Operations Centre Capacities, Procedures and Plans – Score 1

Strengths and best practices

- Despite the absence of a fully functional EOC, capacity to respond to public health events have been tested through national coordination of operations in response to recent anthrax, cholera and typhoid outbreaks.

Areas that need strengthening and challenges

- There is no fully functional national and district level EOC with trained staff to activate and coordinate an emergency response.
- No incident management systems training has been held at national or district levels.
- There is no national health EOC plan that includes roles for public health science (epidemiology, medical and other subject matter expertise), public communication or partner liaison.

R.2.3 Emergency Exercise Management Programme – Score 2

Strengths and best practices

- DODMA is mandated to coordinate disaster risk management programmes in the country including public health.

Areas that need strengthening and challenges

- The few simulation exercises conducted by DODMA are ad hoc and fragmented, with little involvement of other relevant sectors.
- There is a lack of adequately trained personnel for rapid response teams for IHR competence.

Recommendations for priority actions

- Develop a multidisciplinary emergency coordination structure for public health/animal health with clear terms of reference and SOPs which align with the broader national disaster institutional structure.
- Establish a national hotline that is continuously accessible for both human and animal health staff to call for help in handling diseases of both known and unknown origin.
- Establish permanent national and district EOCs for activation, coordination and management of emergency response operations, including incident management system and training of relevant personnel.
- Identify a cohort of potential incident managers with specific expertise in the relevant infectious diseases and other PHEICs, to serve as the incident manager for the emergency operations centre.

LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

INTRODUCTION

Public health emergencies pose special challenges for law enforcement, whether the threat is manmade or naturally occurring. In a public health emergency, law enforcement will need to quickly coordinate its response with public health and medical officials.

Target

Country conducts a rapid, multisectoral response for any event of suspected or confirmed deliberate origin, including the capacity to link public health and law enforcement, and to provide timely international assistance.

LEVEL OF CAPABILITIES

Malawi is aware of the importance in the IHR of multisectoral collaboration between security personnel and officials working in animal health, human health, radiation, chemical and other relevant sectors. The Immigration Department, the Malawi Police Service, the Malawi Defence Force, local authority fire brigades, civil aviation fire brigades, industrial fire brigades, the Malawi Prison Service and DODMA all provide support during emergencies of public health concern and in disasters. Also, the Malawi Bureau of Standards and the Pharmacy, Medicines and Poisons Board are mandated to assess potential biological, chemical and radiological events that may have been initiated deliberately in the country. A national profile assesses the national infrastructure for management of chemicals.

There are no documented points of contact or triggers for notification and information sharing. No MOUs exist, and no joint investigations or simulation exercises have been conducted. In addition, there are no training materials for public health and law enforcement entities for these joint investigations. While interventions by uniformed personnel during emergencies appear ad hoc and are based on informal understandings and agreements, they do seem to work fairly effectively.

The Government of Malawi is linked to the International Criminal Police Organization (Interpol) through the Malawi Police Service under the Ministry of Homeland Security. A Public Health Act from 1948 (which is under review) provides a legal framework for government to mandatorily detain or quarantine an individual who presents a public health risk.

Indicators and scores

R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) linked during a suspect or confirmed biological, chemical or radiological event – Score 1

Strengths and best practices

- Existing legislation enables public health authorities to mandatorily detain or quarantine individuals who present a public health risk.
- Law enforcement agencies maintain direct contact with the international security community, including Interpol.
- The Malawi Immigration Department, Defence Force, fire brigades and the police service support cross-border and internal public health and security management; they also facilitate screening and emergency management at points of entry (PoE).
- Representatives of the security agencies and relevant public health entities are included in informal information sharing platforms.
- The Malawi Immigration Department and the Civil Aviation Authority work closely with public health authorities to support actions at PoE routinely and during disasters.

Areas that need strengthening and challenges

- There are no formal or official agreements or MOUs between public health and security entities outlining roles, responsibilities, information sharing practices and collaboration during emergency events.
- No training has been conducted jointly at either national or district level for neither the public health and security authorities on topics related to information sharing and joint investigations/ responses.
- There is no encompassing plan in place currently covering response to possible biological, chemical and radiological events.
- Mechanisms to encourage regular reporting and information sharing between the public health and security authorities are absent.

Recommendations for priority actions

- Establish a national policy identifying sectors, roles, responsibilities and high-level areas of work that ensure collaboration and coordination between public health and security personnel, including a formal list of points of contact and triggers for sharing information between the relevant sectors.
- Develop agreements and/or SOPs between the security sector and all relevant IHR sectors for joint response, including joint risk assessments, to events of public health and security significance.
- Develop and conduct training for national and district level public health and law enforcement entities in joint investigations, information sharing and emergency response.
- Conduct a functional simulation exercise to test the synergy between security and public health entities to prevent, detect and respond to an event with public health consequences.

MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

INTRODUCTION

Medical countermeasures are vital to national security and protect nations from potentially catastrophic infectious disease threats. Investments in medical countermeasures create opportunities to improve overall public health. In addition, it is important to have trained personnel who can be deployed in case of a public health emergency for response. Regional (international) collaboration will assist countries in overcoming the legal, logistical and regulatory challenges to deployment of public health and medical personnel from one country to another. Case management procedures should be available to all staff, and implemented across the system during health emergencies due to IHR related hazards.

Target

National framework for transferring (sending and receiving) medical countermeasures, and public health and medical personnel from international partners during public health emergencies and procedures for case management of events due to IHR related hazards.

LEVEL OF CAPABILITIES

Malawi has trained staff for case management of IHR-related emergencies, including but not limited to the ability to recognize, treat and refer infectious diseases, exacerbation of non-communicable diseases and others. However, there is no plan that identifies procedures and decision making related to sending and receiving health personnel during a public health emergency.

Accreditation of local health staff is managed by the Medical Council as well as Nurses and Midwives Council. However, there is no provision to extend this to personnel deployed to Malawi from other countries or organizations for emergency response operations. Legal frameworks within which personnel are deployed to and out of Malawi have not been elaborated.

Given the limited or non-existent local production of antimicrobials and vaccines, systems should be strengthened to enable sufficient stockpiling and distribution of these pharmaceuticals both before and during emergencies. Resilient supply chain management systems should also be put in place to procure vaccines from international markets in a timely manner during emergencies.

It may be worth exploring the possibility of developing the capacity to send and receive medical countermeasures within regional organizations such as the Southern African Development Community and the African Union. Existing regional cooperation could help facilitate this. In addition, Malawi could join other international personnel deployment agreements such as the WHO Global Outbreak Alert and Response Network (GOARN).

Indicators and scores

R.4.1 System in place for activating and coordinating medical countermeasures during a public health emergency – Score 1

Strengths and best practices

- An agreement exists with Central Medical Stores Trust in Malawi to procure medical countermeasures during a public health emergency.

- Malawi has a stockpile of medical countermeasures for national use in a public health emergency.
- The country has limited capacity to produce some medical and laboratory supplies and equipment.
- Dedicated resource and staffing have been identified with UNICEF for logistics related to the delivery and receipt of countermeasures.

Areas that need strengthening and challenges

- The country has no plan that outlines a system for procuring or distributing medical or animal countermeasures during public health emergencies.
- There is no involvement in any regional/international countermeasure distribution agreements.
- A detailed distribution plan for stockpiles in the event of an emergency is not in place.

R.4.2 System in place for activating and coordinating health personnel during a public health emergency – Score 1

Strengths and best practices

- The country has service delivery guidelines available.

Areas that need strengthening and challenges

- The country has no plan for sending and receiving health personnel during a public health emergency.
- There are no plans for surge staffing, including triggers for requesting personnel from other countries.
- There is no involvement in regional and international personnel deployment agreements, such as the WHO Global Outbreak Alert and Response Network.

R.4.3 Case management procedures implemented for IHR relevant hazards – Score 1

Strengths and best practices

- Case management guidelines for priority diseases and IHR-relevant hazards are in place at all health system levels.
- SOPs aligned with national or international guidelines for the management and transport of potentially infectious patients are in place at the local level and PoE.

Areas that need strengthening and challenges

- There are no patient referral and transportation mechanisms such as designated ambulances, hospitals and SOPs.

Recommendations for priority actions

- Develop and implement a plan that clearly outlines legal provisions and procedures for sending and receiving medical countermeasures that includes the animal health sector and other IHR-relevant sectors.
- Develop and implement a pandemic preparedness plan, including zoonotic outbreaks, that addresses countermeasures and personnel deployment.
- Test developed plans through a functional simulation exercise that includes all relevant stakeholders and could include neighbouring countries in the Southern African Development Community (SADC).
- Develop a plan and guide for establishing regional and international agreements such as MOUs for sending and receiving Medical Council Malawi (MCM) personnel for support during a public health emergency.

RISK COMMUNICATION

INTRODUCTION

Risk communication should be a multilevel and multifaceted process which aims at helping stakeholders define risks, identify hazards, assess vulnerabilities and promote community resilience, thereby promoting the capacity to cope with an unfolding public health emergency. An essential part of risk communication is the dissemination of information to the public about health risks and events, such as disease outbreaks. For any communication about risk caused by a specific event to be effective, the social, religious, cultural, political and economic aspects associated with the event should be taken into account, including the voice of the affected population.

Target

State Parties use multilevel and multifaceted risk communication capacity. Real-time exchange of information, advice and opinions between experts and officials or people who face a threat or hazard (health or economic or social wellbeing) to their survival, so that informed decisions can be made to mitigate the effects of the threat or hazard and protective and preventive action can be taken. This includes a mix of communication and engagement strategies, such as media and social media communication, mass awareness campaigns, health promotion, social mobilization, stakeholder engagement and community engagement.

LEVEL OF CAPABILITIES

At the MOH, risk communication is coordinated by the Health Education Section. A Health Promotion Policy was developed in 2013 to create public awareness, facilitate community participation and promote access to client-friendly health services. A National Health Communication Strategy 2015-2020 includes guiding principles and strategies promoting risk communication. The strategy also identifies credible sources of information and influential members of the public who can contribute to influencing behaviour change. There is no comprehensive national risk communication multihazard plan.

A key challenge is implementing the Health Promotion Policy and the National Health Communication Strategy 2015-2020. Additionally, there has been no midterm review of either document to incorporate lessons learned from previous outbreaks and feedback from affected communities.

Communicating with the public is poorly coordinated and needs to be streamlined. Communication takes place through mass media, especially radio, which reaches 78% of the population. A variety of media platforms are used to target messages to specific audiences. These include newspapers, community radio, television, social media and online. A Quality Assurance and Quality Improvement Subcommittee was established by the MOH to ensure standards are maintained in developing and disseminating health messages.

Risk communication is a cross-cutting core capacity that contributes to all other IHR capacities. Guidance on risk communication is provided when required by other programmes in the MOH.

A technical working group (TWG) coordinates risk communication among partners, especially during public health events. Coordination and resources for risk communication need to be strengthened.

Indicators and scores

R.5.1 Risk communication systems for unusual/unexpected events and emergencies – Score 1

Strengths and best practices

- The Health Promotion Policy 2013 and the National Health Communication Strategy 2015-2020 have aspects of risk communication.
- A health education section is located under the MOH preventive health programme.
- A health promotion TWG coordinates health promotion interventions for all programmes.
- Health promotion is a required module in the Bachelor of Science degree (BSc) in Environmental Health.

Areas that need strengthening and challenges

- There is no all-hazard, multisectoral emergency risk communication plan to respond to public health events.
- There are insufficient and inadequately trained personnel to plan and implement risk communication strategies at all levels.
- There is inadequate funding for risk communication.

R.5.2 Internal and partner coordination for emergency risk communication – Score 2

Strengths and best practices

- Yearly mapping of partners takes place and includes contact persons, areas of focus and areas of operation.
- Some MOH staff are trained in risk communication.

Areas that need strengthening and challenges

- Various agencies are involved in risk communication, with very little coordination. Efforts sometimes appear to be programme-led, which results in delays and the release of inconsistent and contradictory information.
- There is no guideline or SOP for internal and partner coordination.
- MOH staff and partners lack the capacity to implement risk communication strategies.

R.5.3 Public communication for emergencies – Score 2

Strengths and best practices

- Spokespersons are mandated to communicate with the public at various levels.
- Multiple informal or formal mechanisms coordinate communication among national stakeholders and response agencies during an emergency.
- Permanent staff are dedicated to risk communication during emergencies at national and district levels.
- Information, Education and Communication (IEC) materials have been translated into local languages.

Areas that need strengthening and challenges

- There is no guideline on how to communicate with the public during public health events.
- There is no system to routinely collect feedback and monitor the effect of mass and electronic media communication.
- Staff assigned to communicate with the public are not trained.
- No simulation exercises take place to test the effectiveness of communication coordination.

R.5.4 Communication engagement with affected communities – Score 2*Strengths and best practices*

- The health promotion section has mechanisms to reach out to affected or at-risk populations during health emergencies at national, district and local levels.
- Health surveillance assistants trained in community mobilization are available at facility level.
- A community health strategy is available.

Areas that need strengthening and challenges

- There is no agreed plan, guideline or SOP among partners on how to engage communities during outbreaks and ensure their representation at all levels.
- There is no system that involves and empowers communities to face challenges.
- There is no monitoring system that ensures risk communication strategies reach affected communities.

R.5.5 Addressing perceptions, risky behaviours and misinformation – Score 1*Strengths and best practices*

- Ad hoc systems gather information on perceptions, risky behaviours and misinformation but are not systematically used to guide the response.

Areas that need strengthening and challenges

- There is no decentralized system for listening to the public and managing rumours.
- There is no developed system to incorporate the public's feedback into response programmes.

Recommendations for priority actions

- Develop an all-hazard, multisectoral emergency risk communication plan.
- Formalize communication coordination mechanisms with national and international stakeholders.
- Develop SOPs and train risk communication personnel to respond effectively during emergencies.
- Build capacity by providing training in risk communication at national and regional levels.
- Develop a system of incorporating feedback from the public into public health programmes.

IHR-RELATED HAZARDS AND POINTS OF ENTRY

POINTS OF ENTRY

INTRODUCTION

All core capacities and potential hazards apply to “points of entry” and thus enable the effective application of health measures to prevent international spread of diseases. States Parties are required to maintain core capacities at designated international airports and ports (and where justified for public health reasons, a State Party may designate ground crossings), which will implement specific public health measures required to manage a variety of public health risks.

Target

States Parties designate and maintain core capacities at international airports and ports (and where justified for public health reasons, a State Party may designate ground crossings) that implement specific public health measures required to manage a variety of public health risks.

LEVEL OF CAPABILITIES

The Malawi Public Health Law gives the MOH the authority to oversee health matters at the border. Several other documents provide support for surveillance activities at the PoE, including the IHR (2005) and Guidelines for Port Health Services. In addition, a National Environmental Health Policy is under development, which will further describe roles and responsibilities of various partners.

There are 15 official PoE in the country, eight of which are designated IHR ports. Most designated PoE have limited staff, equipment and premises to perform on-site services, such as the prompt assessment, isolation, care and transport of sick travellers. However, arrangements exist with nearby medical facilities for the transfer of sick individuals. Understaffing is a challenge at many border posts, leading to gaps in surveillance as travellers may cross when port officers are absent.

Airport capacities are vastly superior to land crossings; for example, Lilongwe International Airport has seven port health officers as well as a dedicated isolation and quarantine area for sick travellers.

The Guidelines for Port Health Services contain detailed protocols that outline the processes for many of the officers' duties, such as conducting traveller health checks, inspecting food, vector control and more. Health surveillance and referral forms are also included in the document. At the time of this evaluation, these guidelines had been distributed in electronic form only and not all officers were able to receive them in this format.

The West African Ebola Crisis of 2014 led to the development of disease-specific training and SOPs, as well as the distribution of supplies (for example infrared thermometers) to prepare for a potential Ebola incursion in the country. In addition, supervisory visits have been conducted to some PoE to assess their readiness to respond to potential Ebola cases detected at the border. Similar written protocols for other diseases are not in place, although port health officers may dispose of case definitions for various diseases of interest. Additional disease information can be distributed in response to a health situation.

Although guidelines for vector control exist, there is no evidence that these activities are ongoing at the border, due to the lack of necessary equipment and supplies. In emergencies, resources can be provided to engage in vector control.

Coordination between PoE in the country remains limited and there are no protocols to exchange information within the network. Likewise, no MOUs have been developed for cross-border communication.

Animal health officers conduct inspections of animal movements across the border. Similar challenges as those faced by human health counterparts restrict the work of animal health officers at PoE, including limited staff, supplies and facilities. Although there is no formalized protocol for joint activities between animal and public health officers at border crossings, informal collaboration may occur if agents of both sectors are present at the same border post.

Indicators and scores

PoE.1 Routine capacities established at points of entry – Score 1

Strengths and best practices

- Arrangements between PoE and local health facilities exist for the transfer and care of ill travellers.
- Following the implementation of Ebola preparedness programmes, staff received training and supplies to respond to a potential incursion of the disease.
- Health officers and a dedicated isolation and quarantine area are available at the airport.

Areas that need strengthening and challenges

- Designated PoE have very limited capacity to conduct prompt assessments of sick travellers, isolate them in a dedicated space and transport them to health facilities.
- Limited staff makes it difficult to properly check all incoming travellers at many PoE.
- There are no vector control activities due to lack of resources.

PoE.2 Effective public health response at points of entry – Score 1

Strengths and best practices

- Guidelines for Port Health Services are developed and distributed.
- SOPs for the response to travellers suspected of Ebola infection are developed and distributed to PoE.

Areas that need strengthening and challenges

- There is no multisectoral emergency contingency plan at each PoE to respond to public health emergencies.
- No MOU exists for cross-border communication.
- There is little coordination among the PoE network within Malawi.

Recommendations for priority actions

- Develop and distribute a multisectoral contingency plan to respond to public health emergencies at the border linked to the national emergency plan.
- Dedicate a space for quarantine/isolation of sick individuals at all designated PoE (for example by adapting containers in areas where space is not available).
- Compile an inventory of available equipment for PoE and equip officers with missing supplies to operationalize their functions (for example border surveillance, inspections).
- Build capacity by conducting IHR-specific training for all PoE staff and deploying adequate and qualified officers to mentor/supervise personnel.
- Develop intersectoral mechanisms to coordinate activities between PoE within Malawi and across the borders through joint MOUs and protocols.

CHEMICAL EVENTS

INTRODUCTION

Timely detection and effective response of potential chemical risks and/or events requires collaboration with other sectors responsible for chemical safety, industries, transportation and safe disposal. This would entail that State Parties need to have surveillance and response capacity to manage chemical risk or events and effective communication and collaboration among the sectors responsible for chemical safety.

Target

States Parties with surveillance and response capacity for chemical risks or events. This requires effective communication and collaboration among the sectors responsible for chemical safety, industries, transportation and safe disposal, animal health and the environment.

LEVEL OF CAPABILITIES

Malawi has limited capacity in relation to chemical events or emergencies. While various interministerial commissions and coordinating mechanisms exist, there is little or no coordination between them, which leads to duplication and ineffectiveness. Malawi reported it has a single national coordinating committee for the assessment and management of chemicals, but it does not meet regularly and has not met in the last two years. Personnel and technical capabilities to detect, assess, and respond to or manage chemical events are inadequate and insufficient. The absence of a specific institution to coordinate chemical management creates a significant gap because the institutions involved operate under broad mandates; as such, there is no strict follow-up of chemical management issues.

In 2010, a National Profile to Assess the National Infrastructure for Management of Chemicals was developed with the technical assistance of the United Nations Institute for Training and Research (UNITAR) and the financial support of the Strategic Approach to International Chemicals Management (SAICM) Quick Start Programme Trust Fund. This project resulted in a number of recommendations and actions items. Additionally, the country has broad but insufficient technical expertise relevant to chemical event management, for example pathology, chemistry, toxicology and environmental science. This limited national capacity is not fully exploited or coordinated because of the low prominence of chemical management issues at the national level. Malawi also has a number of academic and research institutions hosting laboratories in various scientific disciplines that could be leveraged for chemical research and national capacity building.

Malawi does not have a national chemical information system, which makes accessing and disseminating chemical information problematic. This would be a critical first step toward establishing a national poison control centre. There is also no chemical event surveillance system, which further affects the country's ability to detect and assess potential chemical risks and impacts. Limited access to updated technology, tools and methods used in some institutions hinders management of chemical events and inhibits chemical analysis. In addition, a fragmented management of chemical issues (for example chemical management designated as a supplementary or non-line function) undermines the prioritization of chemical and chemical event management and appropriate resourcing. Malawi reports that it is in the process of establishing the Malawi Environmental Protection Agency, which will have full authority and resources to coordinate all chemical management issues, among other functions.

Indicators and scores

CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies – Score 1

Strengths and best practices

- The Malawi Bureau of Standards and the Malawi Competition and Fair-Trading Commission have legal authority to monitor consumer products (foodstuffs and goods) for chemical hazards.
- The Globally Harmonized System is applied in Malawi and chemical hazard identification systems are already in place in the country, both in the transport sector and the industrial and commercial sector; these also apply to small and medium-sized enterprises.

Areas that need strengthening and challenges

- There is minimal national capability for the detection, monitoring, and surveillance of or response to various chemicals.
- There are no established procedures for risk assessment in chemicals surveillance and monitoring to inform a chemical event response.
- National resource needs (financial, human and material) as well as training gaps have not been identified.
- Guidelines or manuals on the surveillance, assessment and management of chemical events, intoxication and poisoning are non-existent.
- Malawi does not have a specific chemical emergency preparedness, response and follow-up unit.
- No training is available to prepare emergency services such as fire, police or civil defence personnel to deal with a chemical incident, or for medical and paramedical staff to handle and treat chemically exposed persons.
- There is no chemicals information system poison control centre or service to provide advice on chemical emergencies or poisoning.
- Local hospitals do not have patient decontamination facilities, but do have stocks of antidotes, medicines and appropriate equipment for chemical emergencies.
- Health and emergency services are not equipped to transport chemically exposed persons.

CE.2 Enabling environment in place for management of chemical events – Score 1

Strengths and best practices

- Malawi reports it is establishing the Malawi Environmental Protection Agency.
- Malawi has supportive non-regulatory mechanisms to manage chemicals, including voluntary mechanisms within industry and the Pesticide Suppliers Association of Malawi.

Areas that need strengthening and challenges

- Malawi does not have a national chemicals emergency plan and chemicals are not part of a disaster management plan.
- No legal framework exists that regulates the transport of hazardous chemicals within Malawi.
- Existing regulations that could have an impact on chemicals management are not fully enforced.
- Some companies transporting hazardous chemicals use international safety and transportation codes of practice but are not currently monitored.
- There is limited personnel to monitor the movement of illegal chemicals into the country.
- Chemical imports, exports and event or incident records are not captured in a user-friendly database.

- There is no chemicals waste transportation infrastructure and few facilities for the disposal of chemicals and related waste in the country.
- The Malawi Revenue Authority keeps a record of the quantity and nature of imported chemicals, but it is not consistently audited.
- A registration system for the transportation of bulk chemicals (such as from the point of importation or manufacture to the end user) is not regularly audited or systematically used for health event monitoring or surveillance.

Recommendations for priority actions

- Finalize the establishment of the Malawi Environmental Protection Agency (MEPA) with full authority to coordinate all chemical management issues and adequate resources to do so.
- Update the national chemical profile.
- Create a national chemicals information system and national poison centre.
- Develop a national chemical management plan.
- Develop a chemical incident surveillance system for Malawi.

RADIATION EMERGENCIES

INTRODUCTION

To counter radiological and nuclear emergencies, timely detection and an effective response towards potential radiological and nuclear hazards/events/emergencies are required in collaboration with sectors responsible for radiation emergency management.

Target

States Parties should have surveillance and response capacity for radiological emergencies and nuclear accidents. This requires effective coordination among all sectors involved in radiation emergencies preparedness and response.

LEVEL OF CAPABILITIES

Malawi is working hard to implement IHR capacities for radiation emergencies. The country became a signatory of the Early Notification and Assistance in Case of Nuclear Emergency (1986) conventions and a member of the International Atomic Energy Agency (IAEA) in 2006. In 2011, Malawi established the Atomic Energy Act (AEA) to protect people and the environment against the harmful effects of radiation sources, nuclear and radioactive materials. The act also established Malawi's Atomic Energy Regulatory Authority (AERA). In 2017, a Regulatory Authority Advisory Mission assessed the current regulatory framework to compare institutional, policy and legislative arrangements with the requirements of IAEA; the report is still pending.

Malawi has no baseline on public health assessments with regard to radiation safety and there are no procedures for risk assessment in radiological surveillance and monitoring, or to trigger or scope a response of suitable composition and magnitude. While Malawi has no national radiation emergency response plan, it reports that AERA is working to develop the National Radiological Emergency Preparedness and Response plan through a European Union Chemical, Biological, Radiological and Nuclear initiative. As part of the development of this plan, Malawi reported it is identifying gaps and necessary resources to establish the requirements for detection, assessment, response and recovery arrangements. Malawi has access to training programmes for emergency responders organized by various international organizations including the European Union, but implementation is not feasible due to the lack of local resources for response. AERA is also developing an MOU to enable it to access laboratory services in neighbouring countries, including the United Republic of Tanzania.

At present, AERA uses powers provided under the Atomic Energy Act of 2011 to investigate radioactive contamination and the Malawi Bureau of Standards has a laboratory to assess radioactive contamination in environmental samples. Malawi reports that AERA is currently developing an inspection and monitoring programme that will monitor and investigate contamination in various materials, including food.

Indicators and scores

RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies – Score 1

Strengths and best practices

- AERA is designated as the responsible agency for radiation surveillance and monitoring.
- AERA is developing an MOU with neighbouring countries to enable national access to laboratory services.

Areas that need strengthening and challenges

- There is no national policy or plan to detect, assess and respond to radiation emergencies, although AERA is currently drafting a radiation emergency preparedness and response plan.
- There is no laboratory capacity in the country or access to laboratory services abroad to monitor and assess internal contamination and radiation exposure of humans or animals in case of a radiation emergency.
- There is inadequate monitoring capability and mechanisms for radiation emergencies.
- No risk assessment procedures exist for radiological surveillance and monitoring.
- There is no inventory of reference or designated health care facilities for radiation emergencies.
- There are no protocols or guidelines for case management of persons over-exposed to ionizing radiation.

RE.2 Enabling environment in place for management of radiation emergencies – Score 1*Strengths and best practices*

- AERA is established and exercises regulatory control over the peaceful uses of radiation sources, nuclear material and other radioactive material.
- In 2017, a Regulatory Authority Advisory Mission visited Malawi to assess the current regulatory framework and develop a comparison with the requirements of the IAEA; the report is yet to be delivered to Malawi.

Areas that need strengthening and challenges

- Coordination and communication between AERA and the MOH or IHR focal point is informal.
- Human resources are insufficient to meet the needs of radiation protection and safety.
- No radiation safety assessments have been conducted in the past five years (such as an emergency preparedness review by IAEA).
- Financial resources are insufficient to meet the needs of radiation protection and safety.
- There is no inventory of reference or designated healthcare facilities for radiation emergencies.
- There are no training or exercises for staff to detect and respond to radiation events or emergencies at local, district or national levels.
- There are no agreements or partnerships with WHO's Radiation Emergency Medical Preparedness and Assistance Network (REMPAN), WHO's global biodosimetry network of laboratories for radiation emergencies (Biodiesel) or the IAEA Response Assistance Network (RANET).

Recommendations for priority actions

- Conduct baseline public health assessment of radiation safety, in collaboration with the International Atomic Energy Agency.
- Finalize and implement the radiation emergency preparedness and response plan addressing all elements obligated by the Atomic Energy Act and IHR.
- Document SOPs for coordination and communication between the Atomic Regulatory Authority, NFP, and all other relevant health sector offices (animal, environment, human).
- Finalize agreements with border/regional partners to address national gaps in assessment and monitoring capability.

APPENDIX 1: JEE BACKGROUND

Mission place and dates

Mponela, Malawi, from 11 to 15 February 2019

Mission team members

- Dr Sally-Ann Ohene, Ghana, WHO Country Office of Ghana (team lead)
- Mr Cody Ray Thornton, USA, Department of Health and Human Services/Assistant Secretary for Preparedness and Response (team co-lead)
- Dr Gertrude S. Avortri, Zimbabwe, WHO Regional Office for Africa/Health Systems and Services
- Ms Aminata Grace Kobie, Congo, WHO Regional Office for Africa
- Dr Esther Hamblion, the Republic of the Congo, WHO Regional Office for Africa
- Dr Gaël Lamielle, Italy, Food and Agriculture Organization of the United Nations
- Dr Junaidu Ahmed Maina, Nigeria, World Organisation for Animal Health
- Dr Antonio Oke, the Republic of the Congo, WHO Regional Office for Africa
- Dr Isaac Phiri, Zimbabwe, Ministry of Health
- Ms Kimberly Slaughter, USA, Department of Health and Human Services/Centers for Disease Control and Prevention
- Mr Phillip Talboy, USA, Department of Health and Human Services/Centers for Disease Control and Prevention
- Mr Roland K. Wango, Senegal, WHO/Regional Office for Africa
- Ms Zandile Zibwowa, Switzerland, WHO headquarters/Health Systems and Services
- Ms Leyla Alyanak, France, consultant

Objective

To assess Malawi's capacities and capabilities relevant to the 19 technical areas of the JEE tool for providing baseline data to support Malawi's efforts to reform and improve their public health security.

The JEE process

The JEE process is a peer-to-peer review. The entire external evaluation, including discussions around the priority actions, the strengths, the areas that need strengthening, best practices, challenges and the scores are collaborative, with JEE team members and host country experts seeking full agreement on all aspects of the final report findings and recommendations.

Should there be significant and irreconcilable disagreement between the external team members and the host country experts, or among the external experts, or among the host country experts, the JEE team lead will decide the outcome; this will be noted in the final report along with the justification for each party's position.

Limitations and assumptions

- The evaluation was limited to one week, which limited the amount and depth of information that could be managed.
- It is assumed that the results of this evaluation will be publicly available.
- The evaluation is not just an audit. Information provided by Malawi will not be independently verified but will be discussed and the evaluation rating mutually agreed to by the host country and the evaluation team. This is a peer-to-peer review.

Key host country participants and institutions

Dr Dan Namarika, Secretary for Health, Malawi

Participating institutions:

- Malawi Ministry of Health and Population
- Malawi Ministry of Agriculture, Irrigation and Water Development
- Malawi Homeland Ministry
- Malawi Ministry of National Defence
- Malawi Ministry of Foreign Affairs
- Malawi Ministry of Natural Resources, Energy and Mining
- Malawi Ministry of Finance, Economic Planning and Development

- WHO Country Office
- Norwegian Institute of Public Health
- Malawi Law Commission
- Lilongwe City Council
- CDC-Malawi
- I-Tech Malawi
- Lilongwe Society for the Protection and Care of Animals

List of participants

NO	NAME	DESIGNATION	COUNTRY
1	Dr Dan Namarika	Secretary for Health	Malawi
2	Dr Charles Mwansambo	Chief of Health Services	Malawi
3	Mr Kennedy Nkhoma	Chief Director	Malawi
4	Dr Storn Kabuluzi	Preventive Health Service Director	Malawi
5	Dr Patrick Chikungwa	Animal Health Director	Malawi
6	Ms Veronica Z. Chidothe	Director of Administration	Malawi
7	Mr Louis N. Njaya	Director Human Resource Director	Malawi
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9	Franklin Tembo	Lieutenant Colonel	Malawi
10	Dr Julius L. C. Chulu	Animal Health	Malawi
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12	Mr Wilings Selema	Deputy Director Planning	Malawi
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14	Mr Ambonishe Mwalwimba	CRVS Cordinator	Malawi
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22	Mr Gift Kachoka	Environmental Health Officer	Malawi
23	Mrs. Mwakamwereti Kanjo	Communications	Malawi
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25	Ms Catherine Chiwaula	CHN Focal Person	Malawi
26	Ms Rosemary Bilesi	Chief Reproductive Health Officer	Malawi
27	Mr Wiseman C. Chimwaza	PEHO	Malawi
28	Mr Holystone M. Kafanikhale	PEHO	Malawi
29	Mr Timlton K. Moyo	Epi Officer	Malawi
30	Mr Alick F. Banda	Lab Technician	Malawi
31	Mr Penjani Phiri	ICT OFFICER	Malawi
32	Mr Ephod Kachigwada	Relief & Rehabilitation	Malawi
33	Mr Vincent Kamforzi	Public Health Intern	Malawi
34	Mr Boniface Grem	EHO,	Malawi
35	Mr Settie Kanyanda	FETP- Technical Advisor	Malawi
36	Dr Joseph Nkhoma	Animal Health Officer	Malawi
37	Mr Alexie J. Kaliati	Chief Lab Technician	Malawi
38	Dr Gilson R. Njunga	Act. Deputy Director	Malawi
39	Amon Chimbanga	Lab Officer- Captain	Malawi
40	Mr Jelita Gondwe	Nutrition Lab officer	Malawi

NO	NAME	DESIGNATION	COUNTRY
41	Ms Eddah Chavula	Assistant Chief Law Reform Officer	Malawi
42	Ms Elizabeth Chingayipe	Chief Primary Health Care Officer	Malawi
43	Dr Gladson Kamwendo	Veterinary epidemiologist	Malawi
44	Mr Laphiod Chisuwo	Chief Lab Technologist	Malawi
45	Mr Allone Ganizani	DDPHS - EHS	Malawi
46	Mr Rowland Moyo	Research	Malawi
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88	Dr Sally-Ann Ohene	DPC	Ghana
89	Roland K. Wango	JEE Coordinator AFRO	Senegal

Supporting documentation provided by host country

NATIONAL LEGISLATION, POLICY AND FINANCING

- Public Health Act (under review)
- Draft PHIM Bill
- PHIM Strategic Plan (2018/22)
- PHIM Annual Plan 2018/19)
- Contingency Plan 2018/19
- National HSSPII 2017-2022
- National Health Policy 2018
- Parliamentary Act
- Government Financial Statement 2018/19
- Public Finance Management Act 2003
- Government Financial Statement 2018/19 (Approved Budget)
- National Budget 2018/19
- Animal Health Plan
- IHR Annual Plan 2018/19
- Annual Financial Statements
- Local Government Act
- HIV Act 2018
- Environment Management (Chemical and Toxic substances) Regulations 2008
- Malawi Bureau of Standards Act
- PMPB Act
- AMR Strategy
- Internal IHR Assessment Report
- PoE guidelines
- Cross border minutes, TORs

- PHIM Strategic Plan
- MOU with World bank
- MOU with National Institute of Public Health
- MOUs for cross-border collaboration
- Public Procurement and Disposal of Assets Act
- District Civil Protection Committees minutes
- Preparedness and response plans
- Service-Level Agreements
- Act of Parliament for the establishment of DODMA
- Minutes of technical and cluster meetings

IHR COORDINATION, COMMUNICATION AND ADVOCACY

- IHR TORs – National Level
- Contact directory of national IHR focal points
- Strategic Plan for the Public Health Institute of Malawi (PHIM)
- Health Emergencies Technical Committee Meeting minutes
- Minutes for Joint Health and WASH meeting
- Framework for cross-border collaboration
- Communiqué on cross-border collaboration between Malawi, Mozambique and Zimbabwe on Cholera and other Communicable Diseases
- WASH

ANTIMICROBIAL RESISTANCE

- Government of the Republic of Malawi. Antimicrobial Resistance Strategy 2017-2022
- Ministry of Health and Population, Malawi standards treatment guidelines, and essential medicines list 5th Edition 2015
- Malawi AMR TWG TORs
- 2017/2018 AMR annual workplan
- 2017/2018 AMR Annual Report
- IDSR Guidelines 2015
- GLASS Manual
- GLASS report 2018
- STI Syndromic treatment guidelines 2017
- Quality Management Directorate (QMD) Strategy
- Department of Animal Health and Livestock Development Policy 2006.
- Guide to Agriculture Production (GAP)
- Animal production handbooks/manuals for different animal species
- Notifiable Livestock Disease Notification Form
- Department of Animal Health and Livestock Development organogram
- Various meeting reports
- Abattoir manual
- Abattoir inspection checklist
- Abattoir licensing procedures

ZOONOTIC DISEASES

- Performance of Veterinary Services 2014
- Emergency Transboundary and other notifiable diseases reporting form
- Meat and Meat Products Act
- Animal Health/Veterinary Section on Policy
- Generic Diseases Emergency Preparedness Plan for Malawi (Chart)
- Statement from the Ministry of Agriculture, Irrigation and Water Development during the official opening of the Joint External Evaluation (JEE) on the implementation of International Health Regulations (IHR 2005), 11 February 2019

FOOD SAFETY

- Epidemiological Bulletin January-March 2018
- Integrated Disease Surveillance and Response Guidelines for Malawi
- Malawi Public Health Law
- Republic of Malawi. Weekly IDSR Epidemiology Bulletin. Volume 1, Issue 20. 13 November 2018

IMMUNIZATION

- Global Vaccine Action Plan 2011-2020
- Immunization in Practice (IIP) modules
- EPI Comprehensive and in-depth review 2015
- PCV, Rota, and MSD Post Introduction Evaluation (PIE)
- EPI Mid-level Management Modules (2014)
- Comprehensive multi-year national immunization plan 2016-2020
- Gavi Grant Performance Framework (GPF)
- EPI Policy
- HSSP II
- District Vaccine Data Management Tool and DHIS2
- Regular Reviews report
- Data Quality Audit reports
- Coverage survey reports
- Sock Management Tool report

SURVEILLANCE

- IDSR Technical Guidelines 2014
- IDSR participant modules
- IDSR facilitator module
- DHIS2 database and guidelines
- Generic disease emergency preparedness plan for Animal Health
- Cholera weekly reports
- Outbreak investigation reports
- Quarterly epidemiological bulletin
- IDSR weekly bulletin
- IDSR training report

REPORTING

- Framework of agreement between Malawi, Mozambique and Zambia
- Draft Public Health Act
- Draft PHIM Bill

HUMAN RESOURCES

- Ministry of Health and Population. Malawi human resources for health strategic plan 2018-2022.

EMERGENCY PREPAREDNESS

- 2018 Contingency Plan
- Cholera Preparedness Plan
- Ebola Preparedness Plan
- SOPs for EOC at district and national levels
- SOPs for disaster response
- Disaster Risk Management Bill
- National Strategic Multi-hazard Risk Assessment

EMERGENCY RESPONSE

- EOC plan or SOPs (national and district)
- National Disaster Risk Management policy 2015
- National Disaster Risk Management Communication Strategy 2014

MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

- Logistic management information systems report/Monthly drug consumption reports
- 2017/18 Annual Budget
- Cholera guidelines
- Infection prevention guidelines
- National Contingency Plan
- Cholera, schistosomiasis / bilharzia, HIV management guidelines
- Ebola management guidelines
- Guidelines for Port Health Services
- Referral SOPs/guidelines, Malawi Cholera Response Manual for Health Workers 2018, Ebola guidelines, H1N1 guidelines
- Training report on trauma management training at national level facilitated by MOH at College Health Sciences (2017 to 2018)
- Ebola training report
- Cholera training report
- IDSR training report

RISK COMMUNICATION

- National Health Promotion Policy 2013
- National Health Communication Strategy 2015-2020

- Minutes of Technical Working Group meetings
- Mapping of stakeholders
- TOR and memo for Public Relations Officers
- Support for service delivery integration SSDI 2012

POINTS OF ENTRY

- Brief report on districts' preparedness for Ebola virus disease (7-10 July 2015)
- Checklist for supervising Ebola virus disease activities at district and central hospital levels
- National Environmental Health Policy (2018 draft)
- Guidelines for Port Health Services
- Public Health Act of Malawi
- OIE PVS Evaluation Follow-Up Mission Report for Malawi
- Standard Operating Procedures for the Surveillance of Ebola Fever at Point of Entry

CHEMICAL EVENTS

- National Profile to assess the national infrastructure for management of chemicals 2010
- Environment Management (Chemicals and Toxic Substances Management) Regulations 2008
- Water Resources Act (Cap 72:03)
- Water Resources (Water Pollution Control) Regulations
- Water Resources (Controlled Water Areas) Order 1993
- Fisheries Act 1974 (Cap 66: 05)
- Control of Animal Diseases Act 1967 (Cap 66: 02)
- Pesticides Act 2002 (Cap 35: 04)
- Pharmacy, Medicines and Poisons 1988 (Cap 35: 01)
- Public Health Act, 1982 as amended (Cap 34: 01)
- Dangerous Drugs Act, 1982 as Amended (Cap 35: 02)
- Energy Regulation Act 2004
- Liquid Fuel and Gas (Production and Supply) Act 2004
- Occupational Safety, Health and Welfare 1997 (Cap 55: 07)
- Consumer Protection Act No. 14 of 2003
- Malawi Bureau of Standards Act 1987 (Cap 51:02)
- Strategic approach to international chemical management 2020 implementation

RADIATION EMERGENCIES

- Atomic Energy Act 2011
- National Energy Policy 2004
- Environment Management Act 2008
- Occupational Safety and Health Act 1988
- Mines and Minerals Act
- Control of Goods Act



JOINT EXTERNAL EVALUATION
OF IHR CORE CAPACITIES
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REPUBLIC OF MALAWI

Mission report:
11–15 February 2019