Republic of Rwanda
Ministry of Health

Rwanda Biomedical Centre
Healthy People, Wealthy Nation

National Health Emergency Response Operations Plan (NHEROP)

September 2024

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FOREWORD

The World encounters a wide and diverse range of risks associated with health emergencies and disasters daily. This includes infectious disease outbreaks, natural hazards, conflicts, unsafe food and water, chemical and radiation incidents, structural collapses, the effects of climate change. Rwanda, like many other countries worldwide is likely to experience large-scale emergencies and disasters that may be due to biological, technological, and natural hazards.

In light of the recent COVID-19 pandemic, as well as other recent outbreaks and natural disasters witnessed in Rwanda, the Ministry of Health in collaboration with other ministries, government agencies and different stakeholders conducted a risk assessment in January 2023 using the STAR to establish the country's risk profile.

This assessment identified 26 hazards facing the Rwandan population and ranked them according to the likelihood of occurrence and their impact. Following this, the National Health Emergency Response Plan was developed for 15 priority hazards.

The Ministry of Health is delighted to present this National Health Emergency Response Operations Plan (NHEROP) which will be the reference document for multisectoral preparedness and response to priority hazards identified. This plan is designed to serve as a guide, outlining a robust set of strategies, protocols, and actions that will ensure a rapid, coordinated, and effective response to a wide range of health emergencies, from infectious disease outbreaks to natural disasters.

The successful implementation of this plan is a collective responsibility that extends to all citizens, healthcare providers, emergency response teams, other governmental bodies and stakeholders.

Dr. Sabin NSANZIMANA

Minister of Health

ACKNOWLEDGEMENT

The Ministry of Health would like to thank the multisectoral team and several line ministries for their contributions to the development of this National Health Emergency Response Operations Plan. We recognize WHO, UNICEF, US CDC, Africa CDC for their technical support during the development of this plan.

We want to express our gratitude to ECSA-HC for providing the technical and financial support over the course of this plan's development.

LIST OF ABBREVIATIONS

AFENET: Africa Field Epidemiology Network

AAR: After Action Review

AFP: Acute Flaccid Paralysis

AFRICA CDC: AFRICA Center for Disease Control

AMR: Antimicrobial Resistance

ARI: Acute respiratory illness

AVoHC-SURGE: African Volunteers of Health Corps- Strengthening and Utilizing Response Groups for Emergencies

CHUB: Centre Hospitalier Universitaire de Butare (University Teaching Hospital of Butare)

CHUK: Centre Hospitalier Universitaire de Kigali (University Teaching Hospital of Kigali)

CEO: Chief Executive Officer

CHWs: Community Health Workers

CIRs: Critical Information Requirements

DGIE: Directorate General of Immigration & Emigration

DH: District Hospital

DRC: Democratic Republic of Congo

DM: Division Manager

DPC: District Police Commander

ECSA-HC: East, Central and Southern Africa Health Community

EEIs: Essential Elements if Information

IEC: Information Education and Communication

EPI: Expanded Program of Immunization

EVD: Ebola Virus Disease

FETP: Field Epidemiology Training Program

FEWS: Flood Early Warning Systems

GAHF: Government-Assisted Health Facilities

HCID: High Consequence Infectious Diseases

HoD: Head of Department

IAP: Incident Action Plan

IBEWS: Impact Based Early Warning Systems

IDSR: Integrated Disease Surveillance and Response

ILI: Influenza-Like Illness

KFH: King Faisal Hospital

IHR: International Health Regulations

IHR-MEF: International Health Regulation **-** Monitoring & Evaluation Framework

IMS: Incidence Management System

IM: Incident Manager

IPC: Infection Prevention and Control

MI: Ministry of Interior

MINAGRI: Ministry of Agriculture and Animal Resources

MINALOC: Ministry of Local Government

MINEMA: Ministry In charge of Emergency Management

MOD: Ministry of Defense

MOE: Ministry of Environment

M&E: Monitoring and Evaluation

NADIMAC: National Disaster Management Committee

NHEROP: National Health Emergency Response Operations Plan

NGOs: Non-Governmental Organizations

NST1: National Strategy for Transformation

OPR: Outbreak Preparation and Response

PH: Provincial Hospital

PHEM: Public Health Emergency Management

PHEMC: Public Health Emergency Management Committee

PHEOC: Public Health Emergency Operation Center

PHEIC: Public Health Emergency of International Concern

PHSEPR: Public Health Surveillance, Emergency Preparedness and Response

RAB: Rwanda Agriculture and Animal Resources Development Board

RBC: Rwanda Biomedical Centre

RCCE: Risk communication and community Engagement

RDF: Rwanda Defense Force

RFDA: Rwanda Food and Drug Authority

REMA: Rwanda Environment Management Authority

RH: Referral Hospital

RMRTH: Rwanda Military Referral and Teaching Hospital

RMS: Rwanda Medical Supply

RNP: Rwanda National Police

RTA: Road Traffic Accident

RVF: Rift Valley Fever

SARI: Severe acute respiratory illness

SITREP: Situation Report

SMART: Specific Measurable Achievable Realistic and Timeframe

SMEs: Subject Matter Experts

STAR: Strategic Tool for Assessing Risks

UNISDR: United Nations International Strategy for Disaster Reduction

USGS: United States Geological Survey

WHO: World Health Organization

UNICEF: United Nations International Children's Emergency Fund

US CDC: United States Center for Disease Control

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INTRODUCTION

Rwanda, like many other nations, constantly faces the potential of encountering diverse emergencies. These crises range from natural disasters such as disease outbreaks, floods, storms, landslides, and earthquakes, often initiated by inherent hazards, to human induced hazards like transportation related incidents. Some emergencies exhibit brief, self-limiting characteristics, while others develop with a more prolonged and for reaching impact on healthcare delivery, health systems, and broader socioeconomic-political structures.

Regardless of their nature, emergencies universally share common features, resulting in increased morbidity and mortality, disturbances to health and social services, displacement of populations, and socioeconomic consequences. The increasing frequency of climate related events and displacements underscores the concurrent and worsening nature of these emergencies.

In response to such public health crises, immediate and coordinated actions across systems, sectors, and stakeholders, guided by defined leadership, are imperative. A National Health Emergency Response Operations Plan (NHEROP) offers the health sector comprehensive guidance, involving key stakeholders, communities, and governance.

The NHEROP takes an all hazards, multi-level, and multi-sectoral approach, encompassing unexpected and slow onset events, and extends to community level response actions.

This plan outlines the objectives, policy, and concept of operations (CONOPS) for responding to emergencies, emphasizing rapid and coordinated actions to preserve lives, reduce health impacts, ensure public safety, and address the basic needs of affected populations. Response efforts typically include immediate actions to remove the affected population from ongoing exposure.

1. CONTEXT

1.1. Country Information

1.1.1. Demographic and geographic situation

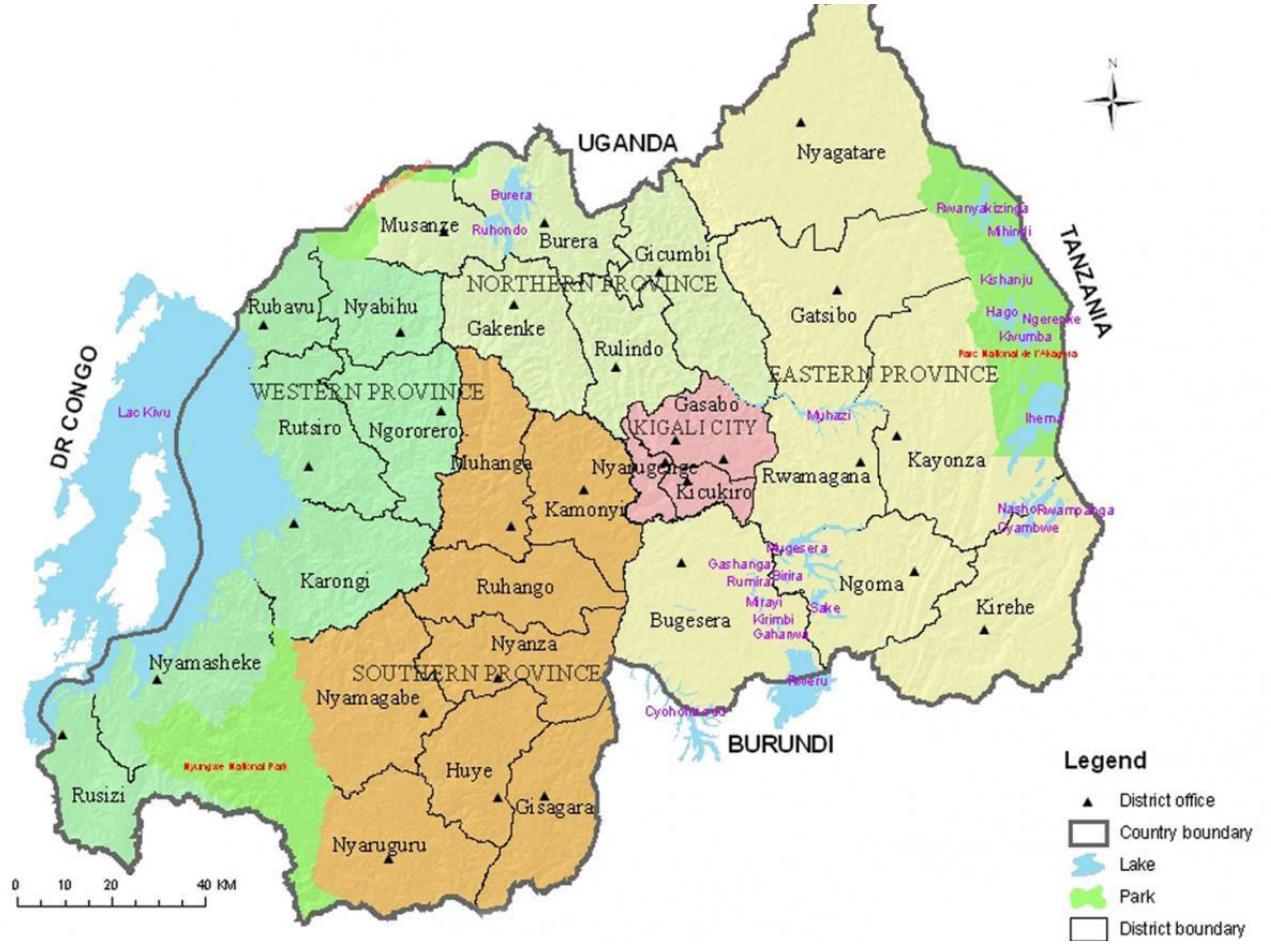
Rwanda, is a landlocked country in the Great Rift Valley of Central Africa, where the African Great Lakes region and South-East Africa converge. It is located a few degrees south of the Equator and occupies an area of 26,338 km2 and is bordered by Uganda to the north, Tanzania to the east, Burundi to the south, and the Democratic Republic of Congo to the west. The Western part of Rwanda is located near a region prone to volcanic activity in Eastern DRC where there are two active volcanic mountains, Nyamuragira and Nyiragongo and this puts Rwanda at risk of lava flows; volcanic eruptions, landslides and earthquakes.

Administratively, the country is divided into four Provinces and the City of Kigali which are also further divided into 30 districts. Moreover, the districts are further divided into 416 Sectors. Additionally, the sectors are further divided into 2,148 cells and lastly, these cells are divided into 14,837 villages.

According to the 5th Population and Housing census (2022) the country has a total population of 13,679,803 people[1] (about 82.42% of whom live in rural areas) and a population density of 519.3/km^2. The life expectancy is estimated at 68.6 as of 2022[2].

1 statistics.gov.rw/publication/size-resident-population
2 https://www.statistics.gov.rw/publication/life-expectancy-birth

Rwanda administrative Map



1.1.2. Climate

Rwanda has a tropical climate and a hilly landscape that stretches from east to west. The country is divided into four major climatic zones: the eastern plains, the central plateau, the highlands, and the regions surrounding Lake Kivu. The eastern plains receive between 900 and 1200 mm of annual rainfall, with mean annual temperatures ranging between 20°C and 21°C. The southern part of the country receives between 1250 and 1400 mm of annual rainfall, with annual mean temperatures ranging between 18 and 19°C. For the central part (Kigali City), the annual total rainfall ranges between 950 and 1250 mm with an annual mean temperature of 22°C while the northern part receives annual rainfall ranging between 1150 and 1450 mm, and its annual mean temperature ranges between 16 and 18°C. However, the western part extreme north receives an annual rainfall of between 1,200 mm and 1,500 mm while in the extreme south annual rainfall ranges between 1,200 and 1,800 mm with the annual mean temperature ranging between 20 and 24°C especially for regions around lake Kivu and Bugarama plain respectively.

For wind-related data in Rwanda currently demonstrates a speed range of 1-13m/s distributed on a national scale. The eastern and western parts of Rwanda are more vulnerable to wind storms. According to the wind thresholds generated by the Meteo Rwanda the impacts induced by wind are observed starting from the 3-6 m/s as moderate, 6.1-13m/s as high and > 13m/s as severe.

1.1.3. Historical emergency data

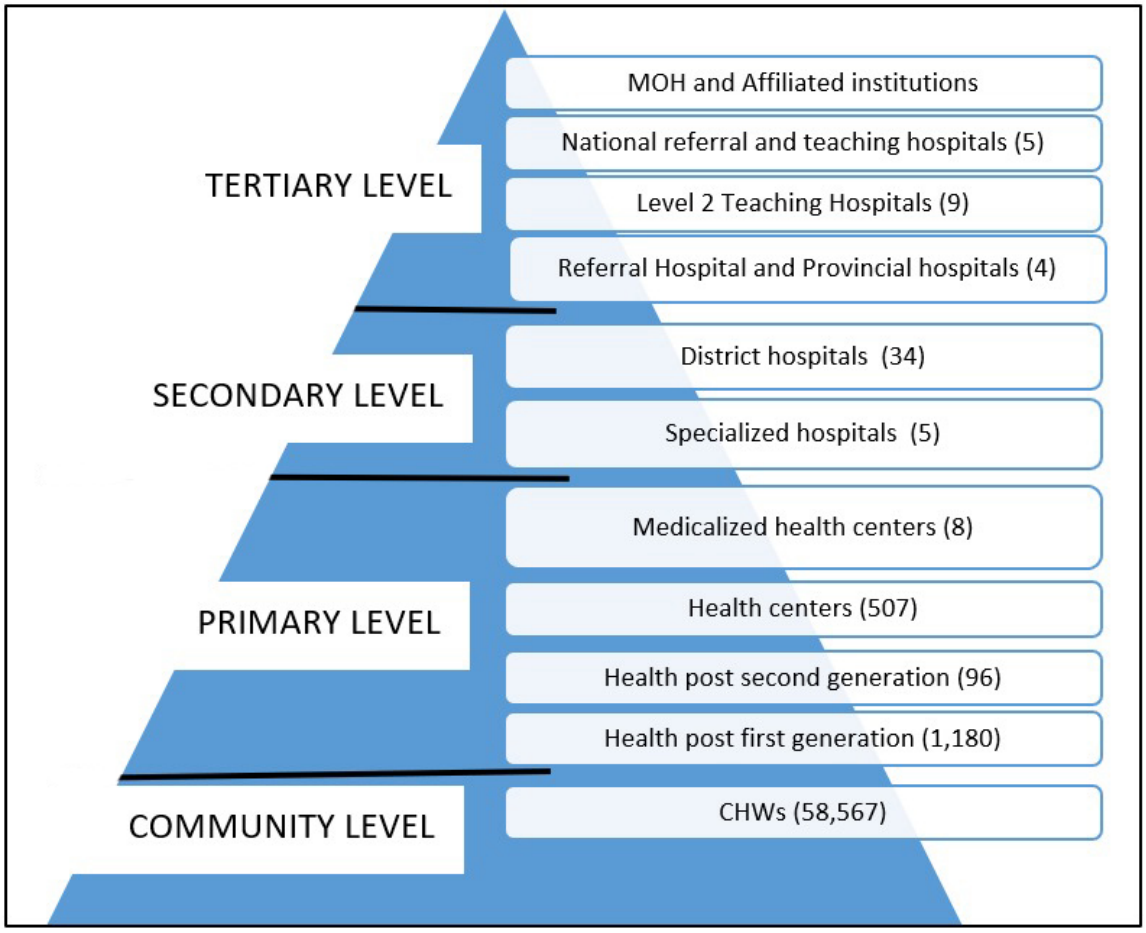
For the past 20 years, Rwanda has experienced a range of hazards stretching from outbreaks such as cholera, measles, rubella, epidemic typhus, meningococcal meningitis, seasonal influenza, food poisoning, Rift Valley Fever, and COVID-19; to disasters such as volcanic activity, earthquake, landslides, chemical events, and floods.

These hazards were managed using a multisectoral approach. Highly contagious infectious diseases were recorded in neighboring countries including Ebola, Marburg and Plague which increases the likelihood of cross border transmission of these diseases.

Table 1: Summary of hazards that occurred from 2003 to 2023

Hazard	Year of Occurrence	Location	Affected Sector
Volcanic Eruption	2003, 2021	Rubavu district	Human, Infrastructures
Earthquake	2003 2008, 2016 2021	Rubavu district Rusizi & Nyamasheke districts Rubavu district	Human, Animal & Infrastructures
Cholera	2003-Present	Rubavu, Rutsiro, Nyamasheke, Karongi, Rusizi, Kayonza & Gatsibo districts	Human
Influenza H1N1	2009	Kigali city	Human & Animal
Landslides/ Floods	2018, 2022, 2023	Gakenke, Nyamasheke, Ngororero, Rubavu, Rutsiro, Karongi and Nyabihu districts	Human, animal & Infrastructures
Epidemic Typhus	2021,2022	Muhanga and Musanze districts	Human
Measles	2010, 2012, 2014, 2016, 2017, 2018, 2019, 2020, 2022, 2023	Nyabihu, Rubavu, Nyanza, Muhanga, Rwamagana, Nyarugenge, Kicukiro, Ngoma, Rusizi, Huye, Nyagatare, Kirehe, Rutsiro, Ngororero and Nyaruguru districts	Human
Rift Valley	2018,2022	Countrywide	Animal
Road Traffic Accident	2003-Present	Countrywide	Human, Animal & Infrastructures
COVID-19	2020-Present	Countrywide	Human

1.2. Health system organization



The Rwandan health system starts from the community represented by Community health workers (CHWs) then the level of primary health care (HPs and HCs), intermediate level which includes DHs and PHs) up to the Referral hospitals for advanced care.

1.2.1. Functions of the Ministry of Health and its affiliated agencies

Ministry of Health

- Elaboration of national health policies, strategies and programs and coordination of the affiliated agencies.
- Drafting laws, disseminating regulations and instructions to promote the health sector, and authorizing private health institutions.
- Monitoring and evaluating the implementation of policies, strategies and programs of the health sector and related sectors.
- Mobilizing resources for the development of the health sector.

Rwanda Biomedical Centre

Rwanda Biomedical Centre (RBC) is the implementation agency of the Ministry of health, mandated to improve the health of the Rwandan population by providing high quality, affordable and sustainable health care services. This is accomplished through the implementation of preventative, rehabilitative, and curative health interventions.

Rwanda Food and Drugs Authority (RFDA)

The Rwanda Food and Drugs Authority (RFDA) mandate is to protect public health through regulation of human and veterinary medicines, vaccines and other biological products, processed foods, medicated cosmetics, medical devices, household chemical substances, tobacco and tobacco products.

Rwanda Medical Supply (RMS) Ltd

RMS objective is to ensure availability of medicines, medical supplies and consumables in the right quantity, with the acceptable quality, to the right place, at the right time and with optimum cost to the Rwandan population.

It is responsible for procuring, storing and distributing drugs, medical supplies and consumables to be used in all public health facilities.

1.2.2. Health Facilities

Health facilities are mandated to provide quality medical care ranging from promotional, preventive, curative and rehabilitation services to the population according to their scope of services as reflected in their respective Minimum Package of Activities.

Types of health facilities in Rwanda

1. **Public health facilities**

   Are categorized as following:

- Health Posts First Generation: 1180
- Health Posts Second Generation: 96
- Health Centers: 507
- Medicalized Health Centers: 8
- Specialized Hospitals: 5
- District Hospitals: 34
- Referral and Provincial Hospitals: 4
- Level two Teaching Hospitals: 9
- National Referral and Teaching Hospitals: 5

2. Government subsidized health facilities (FBOs and NGOs)

These are health facilities owned by Faith Based Organizations and NGOs but do benefit from Government support in terms of staff and infrastructure.

3. Private health facilities

Today, private health facilities are categorized into hospitals, Polyclinics, Clinics, dispensaries and specialized services and each category has its own services package to offer to the population. All private health facilities are subject to regular inspection and licensing to ensure they provide safe and quality medical care.

Table 2: Number of Private Health Facilities per category (2023)

Category	Number
Hospital	4
Polyclinics	28
Specialized clinics	31
General Clinic	122
Dispensary	123
Total	313

1.2.3. Functions of Departments involved in emergency response

The Department of Clinical and Public Health Services in the Ministry of Health is responsible for developing and overseeing the implementation of health policies and strategies as well as establishing legal frameworks for public health emergency management in Rwanda. The Rwanda Biomedical Centre (RBC) is the national health implementation agency operating under the Ministry of Health. The RBC's Public Health Surveillance, Emergency Preparedness and Response (PHSEPR) Division in charge of disease surveillance and response activities. This division is also tasked to coordinate with other government institutions and partners to detect and respond quickly and efficiently in case of any public health event. Public health emergency operations have been decentralized from National to Provincial and district level.

1.3. Public Health Risk Profile

1.3.1. National health emergency risk assessment

Risk assessment is the methodology to determine the nature and extent of risk by analyzing the potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihood, and the environment on which they depend (UNISDR, 2009). Risk assessment involves the identification and characterization of the hazard level and extent of exposure and the assessment of differentials in vulnerability and coping capacity.

The national all hazards risk assessment was conducted in January 2023 using the WHO Strategic Tool for Assessing Risks (STAR), and a total of 26 hazards were assessed.

Table 3. List of hazards and risk level

S/N	Specific Hazard	Risk Level
1	Rift Valley fever	Very high
2	Mining/Quarries accidents	Very high
3	Cholera/ Acute Watery Diarrhea	Very high
4	COVID-19	Very high
5	Influenza (new subtypes)	Very high
6	Antimicrobial-resistant microorganisms	Very high
7	Road Traffic accidents	High
8	Gastroenteritis/Foodborne diseases	High
9	Ebola Virus Disease	High
10	Flood	High
11	Landslide	High
12	Storm	High
13	Poliomyelitis	High
14	Typhoid fever	High
15	Measles	High
16	Chemical spillage	Moderate
17	Nuclear/Radiological exposure	Moderate
18	Structural fires	Moderate
19	Marburg virus disease	Moderate
20	Earthquake	Low
21	Mpox	Low
22	Rabies	Low
23	Brucellosis	Low
24	Volcanic Activity	Low
25	Drought	Very Low
26	Aflatoxicosis	Very Low

1.3.2. Priority hazards identified for contingency planning

1. Rift Valley Fever

Rift Valley fever (RVF) is a viral disease most commonly seen in domesticated animals such as cattle, sheep and goats. The virus mainly circulates in East Africa, with outbreaks of severe disease in countries neighboring Rwanda including Tanzania, Uganda, Kenya. People can get RVF through contact with body fluids, tissues of infected animals, or through bites from infected mosquitoes. Spread from person to person has not been documented.

The first RVF outbreak in Rwanda was recorded in 2018 along the Akagera- Nyabarongo-Akanyaru rivers and Muhazi Lake. Later on in the year 2022, it was followed by a much larger outbreak countrywide, especially in the eastern and southern provinces of Rwanda.

2. Mining/Quarries accidents

Mining in Rwanda started in the early 1930s and since then the mining sector has undergone wide reforms and it is now Rwanda's second-largest export revenue earner in the country. Rwanda is one of the world's largest producers of tin, tantalum, and tungsten (3Ts) and also exports gold and gemstones.

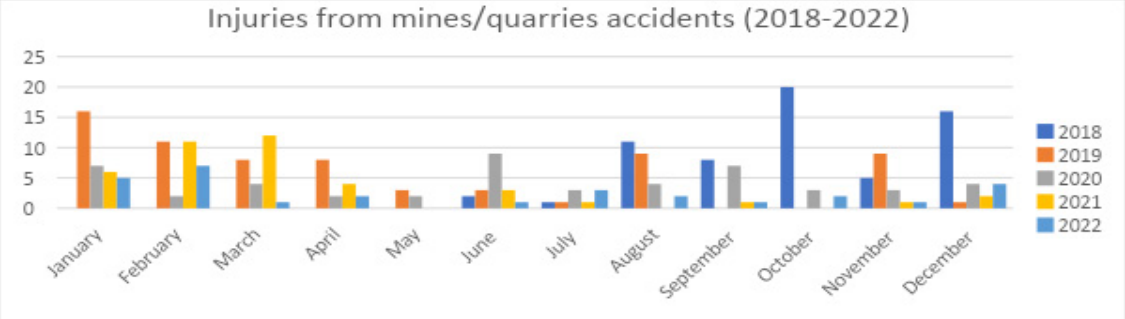


Figure 2. Incidence Injuries due to mines & quarries in 2018-2022

3. Cholera

In Rwanda cholera outbreak seems to be endemic in some districts bordering Lake Kivu. From 2017 to 2021, there were 2,532 registered cases with a 3.5% case fatality rate in Rusizi, Nyamasheke, Karongi, Rutsiro and Rubavu districts.

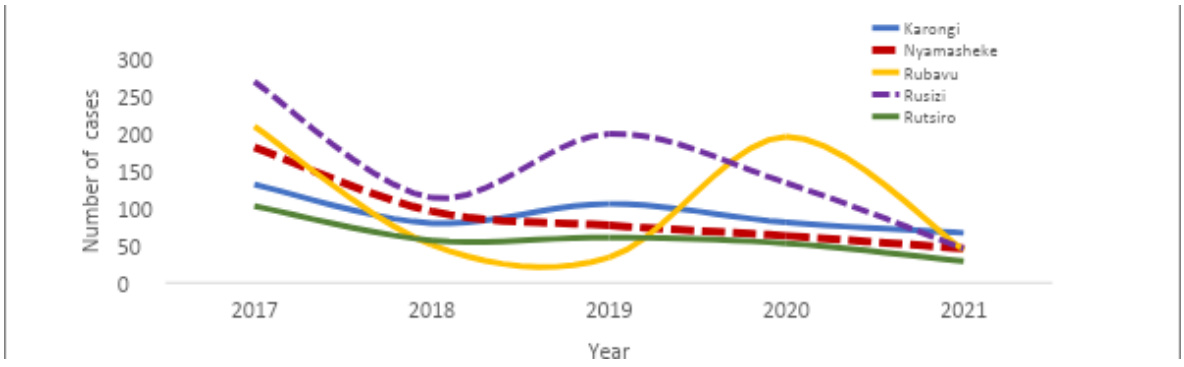


Figure 3. The trend of Cholera Cases per district over the last 5 years

4. COVID-19

Rwanda recorded the first case of COVID-19 on 14th March 2020 and by 15th January 2023 a total of 133,078 cases and 1,468 deaths were recorded. The surveillance at Health Facilities and community levels have been strengthened and routine diagnostic activity using Rapid Antigen tests and genomic surveillance complementing the efforts of early detection of circulating variants has been introduced in all HFs.

5. Influenza

Influenza viruses are always mutating and important antigenic variants appear every two to three years. Since 2008, Rwanda has initiated a sentinel surveillance network to enhance influenza surveillance which is conducted through 6 sentinel surveillance sites within the country.

6. Antimicrobial Resistance

Rwanda has developed and approved the One Health Policy, One Health Strategic Plan and National Action Plan of Antimicrobial resistance and the establishment of a national coordination mechanism is ongoing.

Twelve human health sentinel surveillance sites such as NRL, CHUB, CHUK, RMH, KFH, Kibungo RH, Ruhengeri RH, Gihundwe PH, Nyagatare DH, Butaro DH, Byumba DH, and Gisenyi DH are operational and 5 for animal health namely National Veterinary Reference Laboratory, Huye satellite lab, Rubavu satellite lab, Ngoma satellite lab & Nyagatare satellite lab have been put in place.

7. Road traffic accidents

Road Traffic Accidents (RTA) are categorized into five (5) categories namely fatal, serious, minor, damages only and those involving animals. As of December 19, 2022, a total of 8,660 road traffic accidents (RTAs) were reported, marking an increase from the 4,160 reported in 2020. In 2022, there were 687 recorded deaths, which also saw an increase from the 629 deaths in 2020.

The reasons for these RTAs can be attributed to 298 identified hotspots across the country and, in particular, the poor condition of vehicles and those carrying heavy loads that exceed weight limits.

8. Foodborne Illnesses

From July 2021 to June 2022, 21 outbreaks of foodbo rne illnesses were reported from 15 districts, with 924 cases and 20 deaths including 14 that occurred at health facilities, and 6 at community level. Most events were associated with locally fabricated alcoholic drinks (methanol) (9.5%), animal meat (14.3%), and traditional sorghum beverages (28.6%).

9. Ebola Virus Disease (EVD)

No case of EVD has ever been recorded in Rwanda, however outbreaks of EVD have been reported in neighboring countries such as DRC and Uganda. Rwanda faced a high risk of an Ebola outbreak due to frequent cross-border movements of people, goods, and services at various entry and exit points shared with 2 countries.

10. Floods & Landslides

Over the years, floods & landslides have occurred in Rwanda due to heavy rains. In the recent May 2023 floods and landslides, 135 human deaths and 111 injuries were recorded, and 6043 houses were damaged or completely destroyed.

3115.88 ha of cereals, vegetables, and other cash crops were destroyed alongside 4255 farm animal deaths such as cattle, pigs, sheep, and others recorded.

Public infrastructure was significantly affected with water supply systems, water treatment plants, and 305 electric poles being damaged. The transportation infrastructure took a hit, with 20 national roads, 21 district roads, and 47 bridges affected. The education sector also suffered, with 32 classrooms and various facilities damaged or destroyed.

11. Storms:

For wind-related data in Rwanda currently demonstrates a speed range of 1-13m/s distributed on a national scale. The eastern and western parts of Rwanda are more vulnerable to wind storms. According to the wind thresholds generated by the Meteo Rwanda the impacts induced by wind are observed starting from the 3-6 m/s as moderate, 6.1-13m/s as high and > 13m/s as severe.

12. Poliomyelitis

Polio, a potentially deadly infectious disease caused by the poliovirus, has been a global concern for decades. It is targeted to be eradicated by 2030, and Rwanda has made significant effort and was certified to have interrupted transmission since 1993 through vaccination programs and surveillance. However, neighboring countries including DRC and Burundi are still reporting circulating vaccine derived polio virus.

13. Typhoid fever

Rwanda reports sporadic cases of typhoid fever and outbreaks occurred in Kirehe, Gicumbi, Butaro, Gakenke and Huye districts, and the most serious was in September-December 2015 in Kirehe district where a total of 867 cases met the case definition with 7 laboratory confirmed cases, and 2 recorded deaths.

14. Measles

In the past 5 years, Rwanda recorded measles outbreaks in Nyanza, Nyagatare, Rutsiro, Rubavu, Ngororero and Nyaruguru districts. Additionally, measles outbreaks occurred in different prisons (Nyarugenge, Muhanga, Kibungo, Huye and Rwamagana) and Gikondo Transit Center.

Recently, from May to August 2023, Mahama Refugee Camp in Kirehe district reported 14 confirmed cases of measles and 88 suspected cases.

2. Health emergency resources

Health emergency resources are categorized into three components: human, logistic and financial. The available human resources is multisectoral which may include trained emergency management staff and volunteers.

2.1. Human resources

Depending on the type of emergency, Human resources also include all professional groups that are likely to be involved in that response. The current National emergency plan ensures having these resources in place, and an established mechanism that can put them in place rapidly when needed.

2.1.1. Human resources, surge capacities and health partners

Human resources for responding to emergencies are available at community, health facility, district, provincial and national level. Mechanisms are also in place for recruiting surge staff to affected areas.

The Ministry of Health (MOH) in collaboration with WHO, Africa CDC trained a multidisciplinary and multisectoral team of 75 individuals from various institutions who are prepared for rapid deployment to respond to emergencies. This team is called the AVoHC-SURGE team. The AVoHC-SURGE team mebers can be mobilized and deployed within the first 24-48 hours, both within the country and, if necessary, beyond its borders.

In addition, in collaboration with CDC, AFENET and the University of Rwanda, Rwanda Biomedical Centre is implementing 3 tiers of FETP training (advanced, intermediate and frontline). These competency-based workforce development training programs aim to improve the capabilities of frontline workers to prevent, detect, investigate and respond to emergencies.

2.1.2. National/District rapid response teams and Emergency Medical Teams (EMTs)

The Rapid Response Team (RRT) is a multidisciplinary and multi-sectoral team which provides technical support to the overall emergency. They support risk assessment, outbreak investigation, emergency management and outbreak control. During an emergency, the RRT is deployed within 24 – 48 hours.

Emergency Medical teams (EMTs) are teams of health professionals that provide direct clinical care to people affected by emergencies and support local health systems. They include doctors, nurses, physiotherapists, paramedical, emergency medical specialists and others.

2.1.3. National/District surge mechanisms

In any public health emergency that requires National response, the Ministry of Health mobilizes its own staff and where necessary request staff from other Government institutions, Partners

and volunteers for emergency response.

During Level 1 public health emergency which has occurred at district level, the emergency is managed using human resource available within the district in collaboration with its partners and district can mobilize surge staff from non-affected HFs.

2.1.4. International emergency medical teams

The purpose of the Emergency medical team (EMT) is to improve the capacity of national health systems in coordination of rapid response capacities during a disaster, outbreak or other emergency. These teams provide extra capacity and expertise to the country in response to various PHEs. They include already existing partners and other partners that may be identified.

2.2. Logistics

The logistic resources include buildings for emergency command and evacuation, search and rescue equipment, vehicles, stockpiles of relief goods such as food, medicines, water purification, emergency shelter materials, blankets and cooking utensils.

2.2.1. Physical resources

The Physical Resources include infrastructure, supplies and utilities needed by emergency response units like buildings, shelters, electric power, water, vehicles, fuels, medicines, telephones, internet, etc. provided by logistic units at the level of healthcare facilities and institutions.

The medical technology and infrastructure (MTI) division within RBC is responsible for healthcare technology management (HTM) as well as supervision and overseeing the engineering aspects of health facilities infrastructure. It also coordinates the planning activities related to medical equipment for government health facilities.

2.2.2. Health facilities

All health facilities contribute in surveillance, investigation and response to public health emergencies. In case of Emergency, the IMS is activated and the IM coordinates all emergency response activities.

2.2.3. Laboratory Networks

The public laboratory network in Rwanda is aligned with the overall three-tiered organization including national (NRL), district (hospital Laboratories) and peripheral levels (HC's Laboratories. For sample transfer, quality control and supervision/mentorship, the network connects the

National Reference Laboratory with hospital laboratories and these ones are connected with HC's Laboratories. Private Laboratories are linked to the public hospitals laboratories and/or NRL for sample testing.

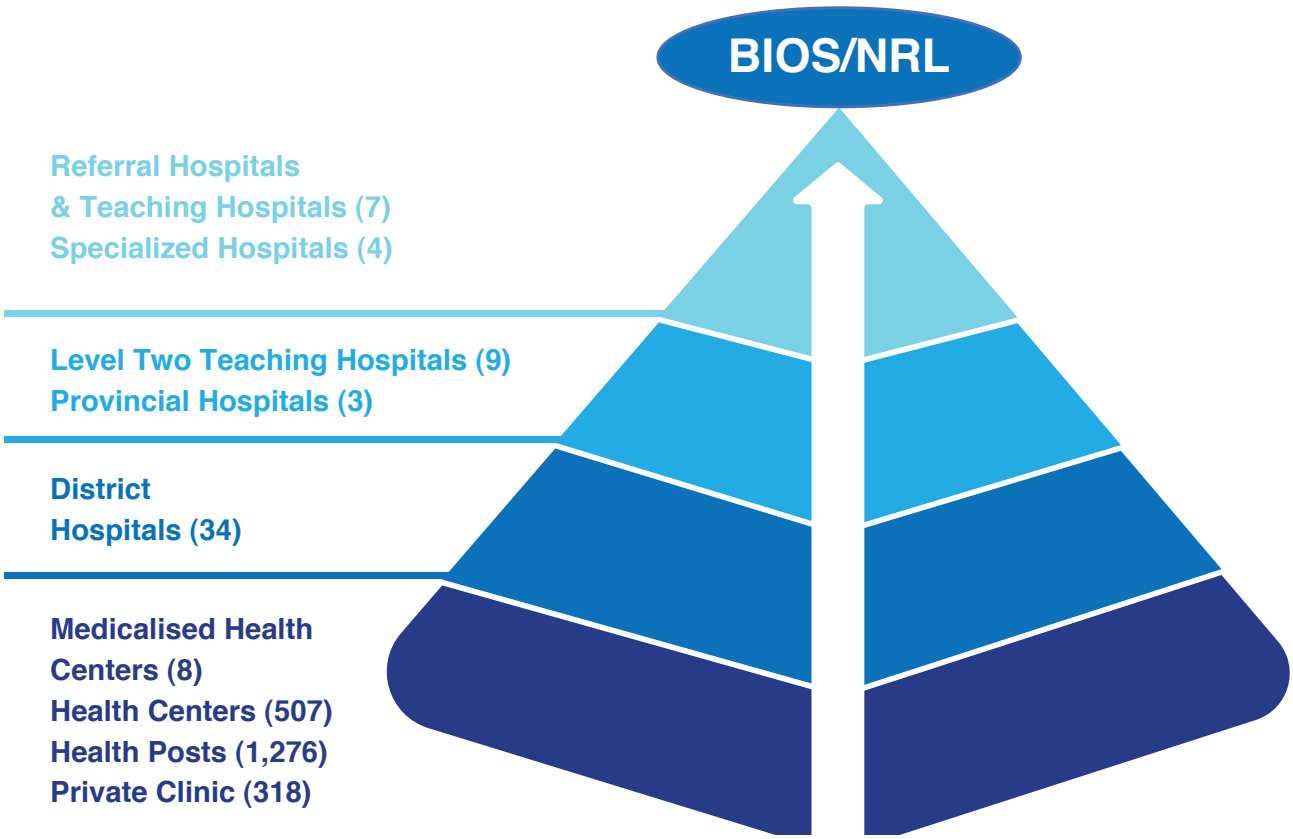


Figure: RBC/BIOS/NRL - Rwanda Laboratory Structure

2.2.4. Strategic health stockpiles

A Stockpile is a large accumulated stock of medicines, vaccines, antidotes, protective equipment, and other medical supplies.

At the central level, the Rwanda medical supply (RMS) under the Ministry of Health is in charge of the procurement and supply of health commodities. It is also responsible for the services of warehousing, and delivery. It also has subordinate branches in all 30 districts of Rwanda to facilitate timely delivery. The Expanded Program of Immunization within RBC is in charge of procuring, storing, and distributing vaccines countrywide.

2.2.5. Blood banks

The RBC's Blood Transfusion Division (BTD) has five Regional Centers for Blood Transfusion that are located in all four provinces and the City of Kigali. (The BTD has developed different plans to deal with emergencies establishingmethods through which the BTD prepares for and responds to disasters.

The Disaster Preparedness Plan (DPP) is designed to provide a framework for ensuring that in the event of a "disaster"; blood collection, testing, and distribution activities are carried out efficiently.

In regards to financial, there is a system in place that ensures funding is available to cover emergency response operations. In Case of an emergency situation, the prime Minister's office calls for a management meeting with concerned ministries. The line Ministry presents a planned budget to respond to the current emergency and work hand in hand with the ministry of Finance to mobilize and manage available and needed resources for the emergency management activities. In addition, various institutions have emergency management in their responsibilities, allocate budget to cover their action plans and to cater for emergencies.

2.3. Financial Resources

Emergency funds are cash reserved through which funds are released rapidly to disaster response sectors for early action and immediate disaster response. It is a budget reserved by the Ministry of finance and Economic Planning specifically set for unplanned expenses or financial emergencies. During a public health emergency, the Ministry of Health mobilizes funds through the Ministry of Finance and Economic Planning and different stakeholders to support in Response.

3. Existing legal frameworks and arrangements for emergencies

3.1. International Agreements

- Sustainable Development Goals (SDGs)
- International Health Regulations (IHR) of 2005
- Global Health Security Agenda (GHSA)
- Universal Health Coverage 2030
- World Organization for Animal Health (OIE) Terrestrial Animal Health Code of 2021
- OIE Aquatic Animal Health Code of 2021
- World Trade Organization-Sanitary and Phytosanitary Agreement Volume 2
- Sendai Framework for Disaster Risk Reduction (2015-2030)
- Early notification and assistance during nuclear emergency (1986)
- Paris Agreement on Climate Change 2016

3.2. Legislations

- Law determining the prevention and fight against contagious diseases for domestic animals in Rwanda (2008)
- Pesticides Act (2002)
- Biosafety Act (2000)
- Environment Management Act (2017)
- The National Disaster Preparedness and Relief Act (1991)
- Disaster Management Law (2015)
- Regulation on radiological and nuclear emergency preparedness and response (2021)
- The EAC Act of One Border Post
- Prime Minister's Order determining organization and functioning of Disaster Management Organs
- LAW N° 58/2018 OF 13/08/2018 ON MINING AND QUARRY OPERATION

3.3. Plans, Strategies and Guidelines

- Health Sector Policy (2015)
- Health Sector Strategic Plan (HSSP IV) (2018-2024)
- National Strategic Plan for Health Security (NAPHS 2023)
- Integrated Disease Surveillance and Response Guidelines 3rd Edition
- Emergency Preparedness and response Plan (2014)
- East African Community (EAC) Protocol on Health
- One Health policy 2021
- Ebola Virus Disease National Contingency Plan 2022
- Clinical Guidelines on COVID 19 Management (2021)
- One Health Strategic Plan (2021-2026)
- National Food and Nutrition Policy (2014)
- Strategic plan for agriculture transformation IV (PSTA 4) (2019)
- National Health Promotion and Social Determinants of Health Strategic plan (2019 2024)
- Risk communication and Community Engagement Plan

4. Existing routine & emergency coordination mechanisms

During routine and emergency situations, the coordination mechanism is done at each sector (E.g Human health, Animal health, Disaster management, Environmental, and Chemical Biological Radiological Nuclear and Explosives (CBRNE), with a few which have been tabulated below in table 3. Depending on the nature and scale of the emergency, a multisectoral approach is used to coordinate the response. When there is no outbreak or any other public health event, the PHEMCs should meet regularly on a quarterly basis.

Table 4: Emergency coordination mechanisms at different levels

Sector	National	Provincial	District	Community	
Human Health	PHEMC which provides guidance in the implementation and operation of the National PHEOC and oversight, strategic guidance in the implementation of functional PHEOCs	Provincial PHEOC supports Districts in response to emergencies.	PHEMC oversees the emergency management at district level	Community Based Surveillance which is coordinated by health centers in the catchment areas	
Animal Health	Veterinary Services Program that oversees the management of outbreaks and other emergencies	-	District Veterinary officer: In charge of veterinary services including management of outbreaks and other emergencies	-	Sector Veterinary officer: In charge of veterinary services including coordination of Community Animal Health workers

Sector	National	Provincial	District	Community	
Disaster Management	-NADIMAC (National Disaster Management Committee) which coordinate relief effort within all institutions -NADIMATEC (National Disaster Management Technical Committee) which provide technical advice to NADIMAC	-	-DIDIMAC (District Disaster Management Committee) which develop disaster management programs and integrate then into the district's action plans	- SEDIMAC (Sector Disaster Management Committee) which mobilizes the community towards their contribution to disaster management.	
Chemical Biological Radiological Nuclear and Explosive (CBRNE)	National CBRNE Committee which coordinate the overall preparedness and response to the emergencies nationwide	-	District CBRNE Committee which coordinate district available resource for prevention, preparedness and response	-Sectoral CBRNE committee which mobilize and communicate to public during CBRNE events	

4.1. National or International Reference Laboratories for Priority Pathogens

4.1.1. National reference laboratories for priority pathogens

The National Reference Laboratory (NRL)'s mandate is to provide referral laboratory services to all healthcare providers in the country, to prepare and distribute laboratory specimen transport media, to develop policies, and to enforce standards for all laboratories in the country. The NRL also oversees the licensing, certification, and accreditation of private and public health laboratories.

In emergency situations, public health facilities with low-level laboratories require sample reference services. They have the capacity to collect the sample, package it and transport it to the National Reference Laboratory or Satellite laboratories. A collaborative framework with the government has been established for private laboratories to assist public laboratories as needed during emergencies.

Samples requiring special considerations, handling, and mainly genomic sequencing and Polymerase Chain Reaction (PCR) are referred to the National Reference Laboratory. However, there are some private laboratories (i.e. Lancet, BMC), University Teaching Hospitals, Referral Hospitals and satellite laboratories in all provinces of Rwanda that are in place to complement and boost the National Reference Laboratory testing capacity.

4.1.2. International reference laboratories for priority pathogens

Rwanda National Reference Laboratory collaborates with external reference laboratory systems such as those for polio, and Multi-Disease-Resistant TB activities. The following known laboratories partnering with NRL for advanced testing or quality control programs:

- Uganda Virus Research Institute in Entebbe, Uganda (UVRI)
- Institute of Tropical Medicine in Antwerp (ITMA), Belgium
- National Institute of Public Health (NIPH) in South Africa
- CDC Atlanta, USA

In case of polio suspicion, the transport of stool specimens is done from HF to the NRL. The NRL in turn ships these specimens to the Ugandan Virus Research Institute in Entebbe, Uganda (UVRI) for confirmation and characterization of the organism. The UVRI is a regional laboratory located in Uganda that engages in health research pertaining to human infections and disease processes associated with or linked to viral etiology and provides expert advice, enables partnerships and communication and serves as a center for training and education.

The results obtained from UVRI are reported back to Rwanda's NRLand HF which sent sample. which

Monitoring for multi-drug resistant TB is done by the NRL, and some specimens are subsequently referred to the external laboratory at the Institute of Tropical Medicine in Antwerp (ITMA), Belgium for quality control (QC) testing.

The QC panel samples for epidemic bacteria, malaria and TB microscopy, CD4 counts, HIV ELISA and Western Blot are received from the National Institute of Public Health (NIPH) in South Africa every quarter.

The QC panels for assessing PCR capacity are received from CDC in Atlanta, USA.

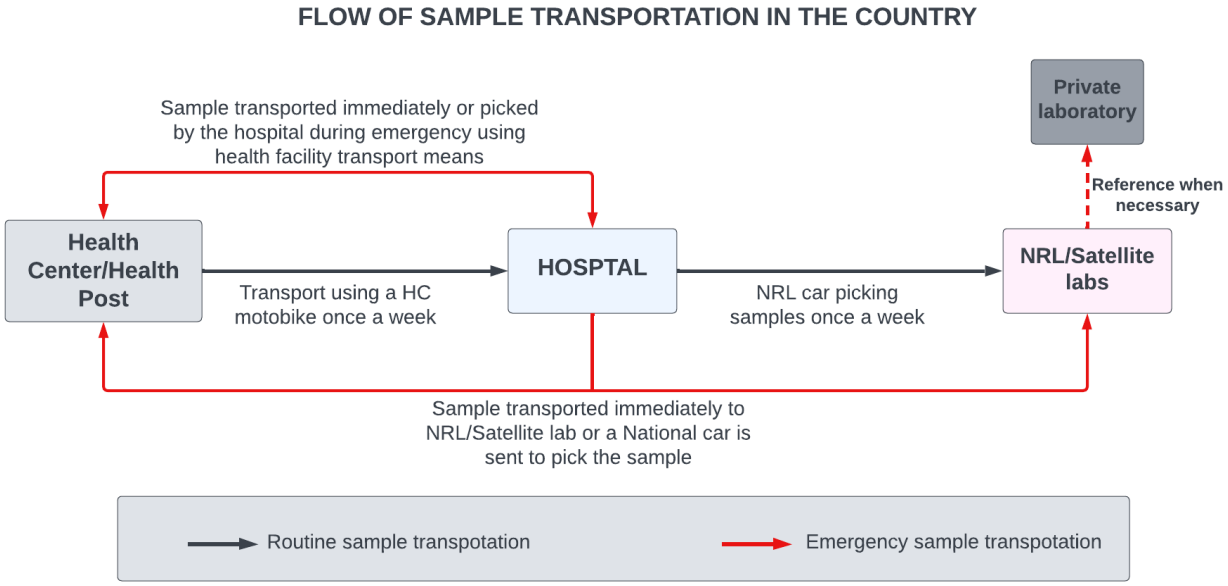
The test samples sent outside the country are packaged and transported according to the international regulations. The results must be sent either by email or any other means by abiding to the turnaround time as defined in the Memorandum of Understanding (MoU) with the testing laboratory.

4.1.3. Shipment modalities of pathogens inside and outside the country.

In the interest of public health, human pathological specimens need to be transported safely, timely, efficiently, and legally from the place where they are collected to the place where they will be analyzed. Regardless of the presumed infectious status of the sample, any specimen of human origin should be packaged and transported in such a way that protects those engaged in transportation from the risk of infection. Risks of infection for personnel involved in transport must be avoided.

Within the country, many health centers transport specimens to District Hospitals by using a Health Center motorbike or ambulance once samples are ready for shipment. Also dedicated vehicles from the National Reference Laboratory pick samples from Hospitals and deliver them to the NRL once a week.

Highly pathogenic samples are packed and transported according to the standard operating procedures for triple packaging and sample transportation respectively.



4.2 Risk Communication and Community Engagement (RCCE) Strategy

4.2.1 Background

According to the World Health Organization (WHO), Risk Communication is defined as the real-time exchange of information, advice and opinions between experts or officials and people who face a hazard or threat to their survival, health, or economic or social wellbeing.[3] Risk Communication uses a range of community engagement approaches and formal mass media communication channels such as radio, television, print media and social media to alert the general public about a real or potential health threat.

Community engagement, on the other hand, is the process of developing relationships and structures that engage communities as equal partners in the creation of emergency response solutions that are acceptable and workable for those they impact. The goal of community engagement is to empower communities to confidently share the leadership, planning and implementation of initiatives throughout the health emergency response cycle.[4]

Rwanda had developed a national RCCE strategy, initially as part of Ebola preparedness efforts and was further adapted to COVID-19 pandemic response strategy. The development of a clear RCCE strategy and plan of action was critical to ensure that people had, and continue to have, access to the right information, delivered in the right way and in a timely manner.

In the context of developing the National Health Emergency Response Operational Plan (NHEROP), there is a need to put in place a comprehensive NHEROP RCCE strategy to raise community awareness, conduct effective evidence based social mobilization, community engagement and public education that support desired social and behavior change and communication management.

This NHEROP RCCE strategy will focus on the 6 identified hazards namely Rift Valley Fever, Mining/Quarries accidents, Cholera/ Acute Watery Diarrhea, COVID-19, Influenza (new subtypes) and Antimicrobial-resistant microorganisms. These hazards were ranked at a very high risk level among the 26 identified using the WHO Strategic Tool for Assessing Risks (STAR).

Providing timely information and engaging the community in regards to these hazards is vital to protecting people's health from emergencies and disasters, attaining health security and building resilient communities and health systems.

4.2.2 Objectives

Main objective

The NHEROP RCCE strategy aims at contributing to the national multi-hazards preparedness and response activities by fostering community engagement in preventing, controlling and curbing the burden of frequent health hazards identified in Rwanda.

3 https://www.who.int/emergencies/risk-communications#:~:text=Risk%20communication%20is%20the%20real,or%20economic%20or%20social%20wellbeing.
4 idem

Specific Objectives:

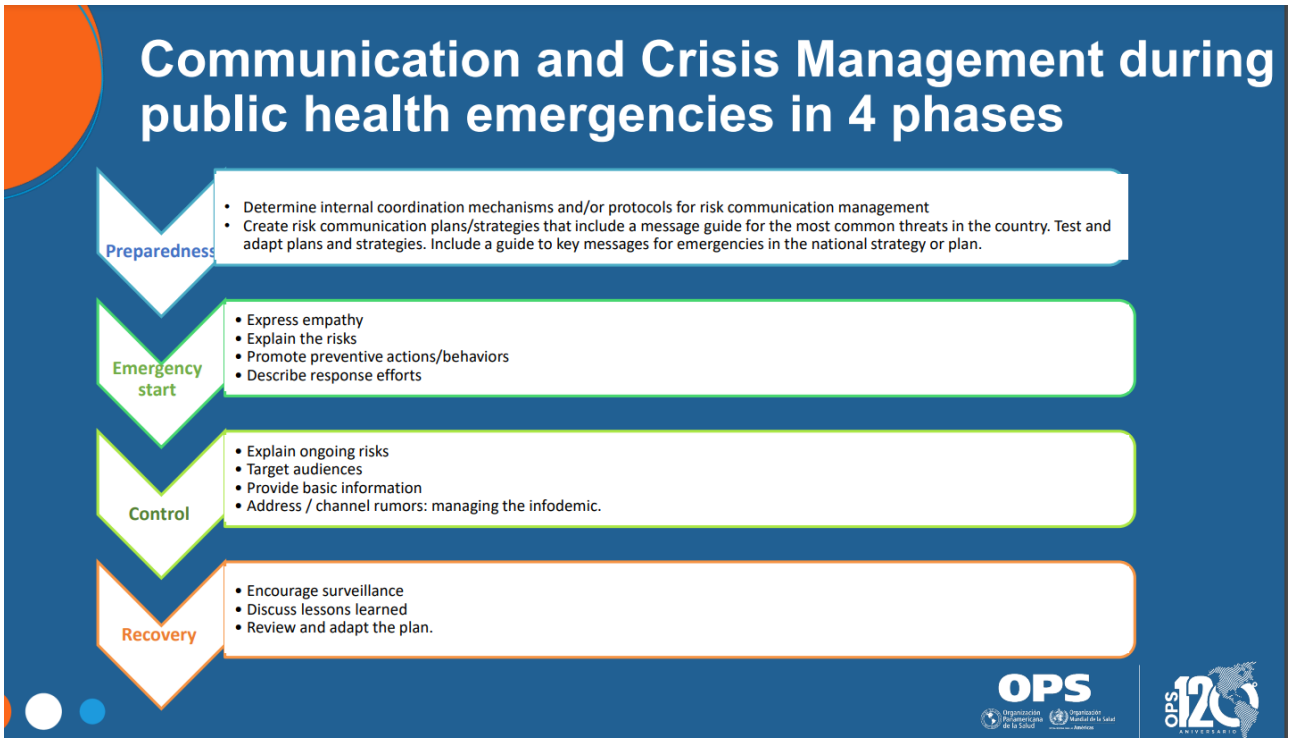
1. Strengthen technical capacity of NHEROP RCCE Task forces at all levels and sustain a well-coordinated, multi-sectoral team of NHEROP RCCE implementing partners for preparedness and responses to emergency health hazards.
2. Guide and ensure development of evidence-based messages, communication materials and approaches for various participants groups to enable people at risk to make informed decisions to mitigate the effects of a threat.
3. Continuously inform, engage and empower the public through timely and consistent provision of key messages and tools through appropriate channels on emergency health hazards.
4. Strengthen evidence-based NHEROP RCCE programming for all hazards through well-structured monitoring and evaluation system, information management, feedback collection and rumor tracking mechanisms.

4.2.3 Guiding principles of RCCE Strategy

The RCCE strategy is guided by the following principles:

- Evidence based approaches: Desk review, conduct early and ongoing assessments to identify essential information about at-risk populations and other stakeholders (perceptions, knowledge, communication channels, barriers...).
- Define and prioritize key NHEROP RCCE objectives and strategy based on the analysis' results.
- Human Rights Based, People Centered, Systems Oriented Approaches.
- Coordination: Build on existing coordination mechanisms and/or create new ones to engage with NHEROP RCCE counterparts in partner organizations at all levels of the response: local, national, and regional.
- Develop, implement and evaluate the endorsed NHEROP RCCE strategy with relevant partners to engage with identified communities, and manage the infodemic.
- Take into consideration the 4 phases of emergency namely:
    - Preparedness phase
    - Emergency start phase
    - Control phase
    - Recovery phase

Emergency phases' matrix



Source: Risk Communication and Community Engagement for Health Emergencies: Practical Aspects (Pan American Health Organization, 2020)

4.2.4 Risk Communication and Community Engagement operational structure

During routine and emergency situations, RCCE, preparedness and response interventions are conducted at each Ministerial/Sectoral level (E.g Human health, Animal health, Disaster management, Environmental, Chemical, Biological, Radiological…) and coordinated by the designated Lead Agency at the national level.

All RCCE stakeholders work as a strong close-knit to achieve the RCCE objectives. Stakeholders must have the authority and responsibility for RCCE in their organizations to ensure that agreed interventions are implemented.

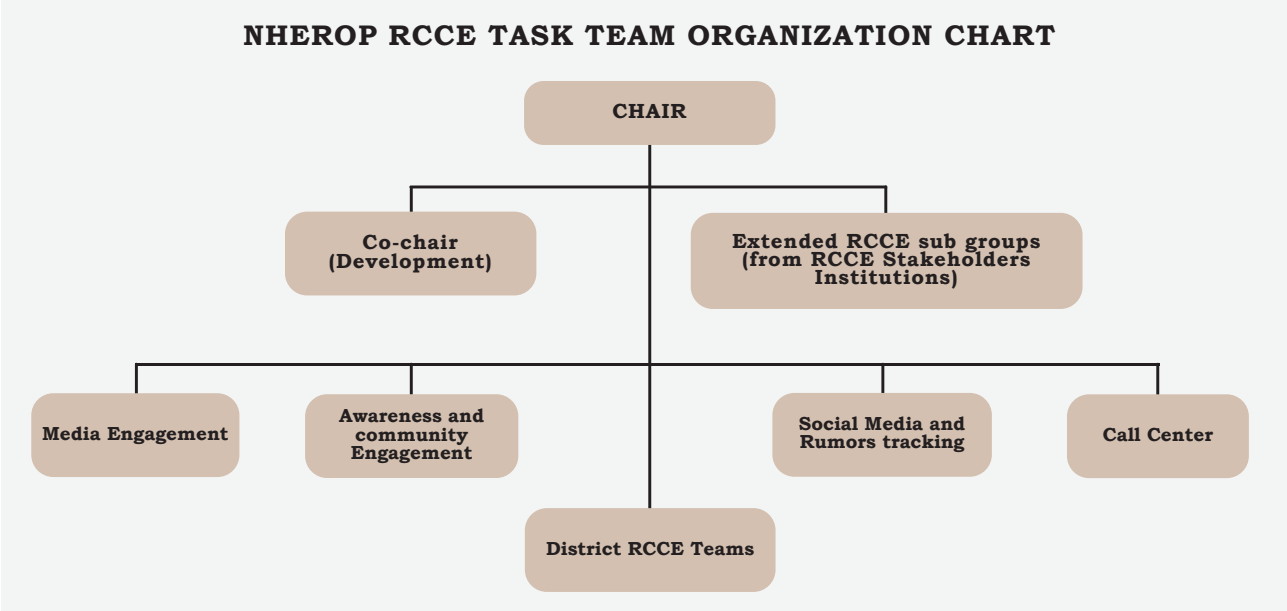
Stakeholders should be able to make decisions on priorities and resources on behalf of their organizations and be responsible for preparing their focal RCCE teams. Membership is based on competency, not simply organizational or stakeholder group representation, to ensure that membership reflects the best possible set of skills to enhance delivery of key functions.

Depending on the nature and the scale of the emergency (i.e. Rift Valley fever Mining/Quarries accidents, Cholera, Acute Watery Diarrhea, COVID-19, and Influenza), a multi-sectoral approach is recommended to coordinate preparedness and response at the national level.

The Health sector has already established a national Health RCCE task team, composed of social cluster ministries and other public and private institutions with health interventions. Nevertheless, there is a need to bring on board institutions working on the identified hazards to establish the NHEROP RCCE task team.

In that regard, the NHEROP RCCE task team members shall be composed of focal persons from but not limited to the Ministry of Health/RBC/RHCC, Ministry of Education, UNICEF, WHO, Directorate of Immigration and Border Management, Ministry of Defense, Rwanda National Police, Ministry of Emergency Management, Ministry of Local Government, Ministry of infrastructures, MINIRENA, IOM, UNHCR, Rwanda Agriculture and Animal Resources Board, Academic and Research Institutions , Civil Societies Organization, Youth and Women associations, Organizations of People with Disabilities, media houses and other relevant organizations recommended by the Chair of the Task team.

Inspired by the existing structure of the National Health RCCE Task Team, currently led by the Rwanda Health Communication Center (Table below), below is the proposal for the RCCE Task team structure:



Details of operationalization of RCCE strategy are guided by the specific SOPs for each of the six identified hazards.

4.2.5. Communication mechanisms during phases of emergency

According to WHO, reciprocal and multidirectional communication with affected populations help them to make informed decisions to protect themselves and their loved ones. It promotes community engagement to establish prevention and self-protection measures, which generates greater confidence and considerably contributes to slowing down diseases expansion and to preventing them. This helps also to mitigate rumors, misinformation, and disinformation situations.

Based on the experience gained from the Covid-19 response and other recent outbreaks in Rwanda, the Rwanda Health Communications Centre (RHCC) Division in collaboration with the Office of the Government Spokesperson (OGS), acquired capacity to conduct social listening - both online and offline, and daily reviews of traditional media and social media platforms in order to generate daily reports on health emergencies and disasters.

Accordingly, different methods and channels shall be used:

- Toll free line to get feedback,
- Daily media reviews (TVs, Radios, and newspapers) to know if the message is being

disseminated,

- Human Centered Approaches implementation (e.g Participatory research, Rapid inquiry, case/social investigation, co-creation of solutions with affected population...),
- Key informant interview with community leaders, religious people etc.

The communication materials used should be mainly in Kinyarwanda language generally to ensure maximum reach of intended audiences but otherwise, the NHEROP RCCE task team can determine the appropriate language and channels. The NHEROP RCCE task team will ensure that the communication materials are inclusive, gender sensitive and adapted to the literacy level of the targeted audience including those living with disabilities.

4.2.6 The RCCE strategy activity plan

The key RCCE activities, outcomes in each phase are described in the table below.

Table 5. Emergency RCCE phases and activities

Phase	Activity	Outcome	Responsible
1. Preparedness phase	• Cost Plan and coordination • KABP survey, desk review, reports about health hazards • Development of SOPs based on recommended guidelines • Capacity building for NHEROP RCCE Task forces at all levels • Development, prepositioning and dissemination of IEC materials and key messages • Establish/ Update a roster of spokespersons, Mapping of social mobilizers, media houses and community communications structures.	• Action plan and detailed Budget developed • Desk review, situation analysis report, Rapid KABP survey reports, • SOPs and strategic plans developed, • Standby communication team at all levels • IEC materials and key messages developed • spokespersons, social mobilizers, media houses mapped	Ministry of Health/ RBC/RHCC, MINEMA,MINALOC and Partners

2. Initial phase (Emergency starts)	• Convene Technical working groups meetings • Conduct a rapid assessment • Review NHEROP RCCE strategies, action plans and functional SOPs • Disseminate IEC materials through different channels	• Updated NHEROP RCCE strategies and action plans available • IEC materials available and disseminated • Functional TWGs with an operational plan	Ministry of Health/ RBC/RHCC, MINEMA and Partners
3. Crisis response and control phase	• Analyze communication channels to decide on channels to use • Implement awareness/NHEROP RCCE activities • Strengthen coordination at all levels • Monitor and evaluate the effectiveness of NHEROP RCCE activities • Rumor tracking and management • NHEROP RCCE Timely reports	• Emergency communication channels established • Timely implementation of NHEROP RCCE interventions • NHEROP RCCE task forces are set and active • NHEROP RCCE activities are monitored • Rumors are tracked, addressed and timely feedback provided • NHEROP RCCE regular reports provided	• Ministry of Health/ RBC/RHCC, MINEMA and Partners

4. Recovery phase	• Review, update and disseminate IEC materials and key messages • Sustain the communication after the emergency depending on the nature of the hazards • Evaluation of interventions (document lessons learnt, best practices, etc)	• NHEROP RCCE activities continued to prevent reoccurrence of the health hazards through different messages • Evaluation reports produced, lessons learnt, and challenges documented.	• Ministry of Health/ RBC/ RHCC, • MINEMA and Partners

5. Emergncy response

Concept of Operations

5.1. Introduction

Emergencies, ranging from disease outbreaks to natural disasters like floods and earthquakes, are global challenges. Rwanda, too, has encountered its share of diverse emergencies. To effectively address these situations, Rwanda has developed a concise Concept of Operations (CONOPS).

A CONOPS is a component of an emergency plan that clarifies the overall approach to responding to an emergency. This concept of operations describes the conceptual approach to national and district level coordination in an emergency response system that should work within a multi-sectoral context.

The concept of operations in emergency response is considered as a foundational document that showcases the strategies, principles, and procedures that guides emergency actions during a period of response, it also serves as a guiding framework, Expressing clearly the principles and strategies that support a country's approach to emergency response. Developed through a collaborative effort involving key stakeholders, this document also outlines the methodologies and procedures essential to coordinate a public Health event.

The procedures required to oversee an emergency response are described in detail in the concept of operations, it explains how the public health emergency response system should work within a multi-stakeholder context. It defines the roles, and responsibilities and describes how the structural or functional elements of the organization will work together to produce a coherent management response.

5.2. Activation of emergency response

5.2.1. Activation levels of emergency response

When an emergency occurs, the RRT conducts rapid risk assessment, and based on the assessment report the activation levels are graded as levels 1, 2 ,3 and 4 described below:

- **Level 1 (Sector):** A public health event limited to one sector, causing minimal public health consequences, and which the sector is capable of managing using its own resources in collaboration with its partners. The Sector Command Post shall be activated by the Executive secretary of the Sector.
- **Level 2 (District):** A public health event limited to one district, that is causing minimal public health consequences, and which the district is capable of managing using its own resources and its partners. The District Command Post shall be activated by the District Mayor.

  The Provincial PHEOC in which the affected district is located will support the response interventions and keep monitoring the evolution of the incident.
- **Level 3 (National):** One or more districts affected by a public health event and the level of response required exceeds the district capacity. The incident is managed using resources from the national level and its partners. During emergency grade 3, the national PHEOC will be fully activated immediately after the risk assessment is completed (within 120 minutes). The Minister of Health will activate the National PHEOC.
- **Level 4 (Beyond National):** One or more districts or the whole country is affected by a public health event with substantial public health consequences, and the existing national resources are limited and therefore require support from multiple sectors or international support. The National Disaster will be declared by NADIMAC.

NB: All emergencies that constitute Public Health Emergencies of International Concern PHEICs) are automatically graded as level 4 emergencies.

Table 6: Level of emergency response

Level	Response consideration	Incident Management	District Command post/ National PHEOC/EOC Activity
One	• The Sector is capable of managing using its own resources in collaboration with its partners • Public health impact and severity are low	The Sector Command Post will be activated by the Sector Executive Secretary who will nominate the IM	• Maintain situational awareness through regular contact with the district RRT • Keep the district command post and PHEMC briefed on the situation. • Continue dynamic risk assessment and re-grade/ escalate as required.

Level	Response consideration	Incident Management	District Command post/ National PHEOC/EOC Activity
Two	• The district is capable of managing using its own resources and its partners • Public Health impact and severity are low	District command post will be activated District Mayor will appoint the IM Provincial PHEOC is partially activated	• Maintain situational awareness through regular contact with the national RRT • Continue dynamic risk assessment and re-grade/ escalate as required. • Keep the National command post and the Provincial PHEOC briefed on the situation.
Three	• The Country is capable of managing using its own resources and its partners	Provincial PHEOCs are fully activated National PHEOC will be activated The Minister of Health will appoint the IM	• Maintain situational awareness through regular contact with the district command post/Provincial PHEOC. • Continue dynamic risk assessment and re-grade/ escalate as required. • Keep national PHEMC briefed on the situation.
Four	• Beyond the capacity of the national level • Multiple agencies involved • Existing national resources are limited and resources/support from other sectors and international support is required	The national disaster will be declared by NADIMAC The IM will be appointed	• Maintain situational awareness through regular practice. • Continue dynamic risk assessment and re-grade/ escalate as required. • Keep NADIMAC briefed on the situation.

5.2.2. Criteria and authority for emergency response activation

a. Activation Criteria

The following criteria may trigger activation:

1. When the disease has reached the epidemic threshold
2. Any emergency/event meeting the criteria of a Public Health Event of International Concern (PHEIC) in line with IHR 2005 guidelines
3. An emergency with high public health impact on the community

b. Authority for activation

- ✓ If the emergency is level 1, the Sector Executive Secretary activate the IMS and appoint the IM.
- ✓ If the emergency is level 2, the district Mayor activates the IMS and appoint the IM, Activation will be based on the results of preliminary and gradual assessments.
- ✓ If the emergency is level 3, the Minister of Health activates the IMS. Activation will be based on the results of preliminary and gradual assessments. The Minister of Health will immediately appoint the IM.
- ✓ If the emergency is level 4, disaster will be declared by NADIMAC

5.2.3. De-escalation Criteria

When the scope, complexity, and severity of the emergency, scale-down, and de-escalation of the level of activation need to be considered. The following criteria should be considered for de-escalation:

- Drastic decrease in number of cases
- All contacts released from precautionary observation
- Decrease in Geographical extension

5.2.4. Deactivation

When the response is declared over, the deactivation will be done by the authority that activated it or any other appointed authority

Criteria for deactivation

The criteria for deactivation include:

- The data trends from the field begin to suggest that the issue being addressed is under control.
- Resources are no longer required.
- The emergency has been declared over by the designated authority

5.3. After Action review

The International Health Regulations (IHR,2005) require countries to develop core public health capacities to prevent, detect and respond to public health events. Following recommendations of the IHR review committee on a second extension for establishing National Public Health Capacities and on IHR Implementation in 2014, the World Health Organization has developed a new IHR Monitoring and Evaluation Framework (IHR_MEF) with three new components. One of the three components is After Action Review – Qualitative review of functional capacity which is conducted after response to public health events.

After action review (AAR) helps to assess actions taken in response to a public health emergency as a means of identifying best practices, gaps, and lessons learned to take corrective actions to improve future response. It is highly recommended to conduct the AAR immediately after the declaration of the end of a public health event and up to three months after the event.

Objectives of AAR

- Demonstrate the functional capacity of existing systems to prevent, detect, and respond to a public health event.
- Identify lessons and develop practical, actionable steps for improving existing preparedness and response systems.
- Share lessons learned from the review with other public health professionals.
- Provide evidence for the development of the national action plan for health security or contribute to other evaluations such as the Joint External Evaluation or simulation exercises.

Methodology

An After-Action Review (AAR) is a qualitative review of actions taken to respond to a real event as a means of identifying best practices, lessons, and gaps in capacity.

The AAR exercise uses an interactive, structured methodology with user-friendly material, group exercises, and interactive facilitation techniques. The method of AAR should consider the 5 Ws to effectively identify progress and challenges:

- What was in place before the response?
- What happened during the response?
- What went well? What went wrong? Why?
- What can we do to improve for next time?
- Way forward/Corrective Action Plan

5.4. Response structure, roles, and responsibilities

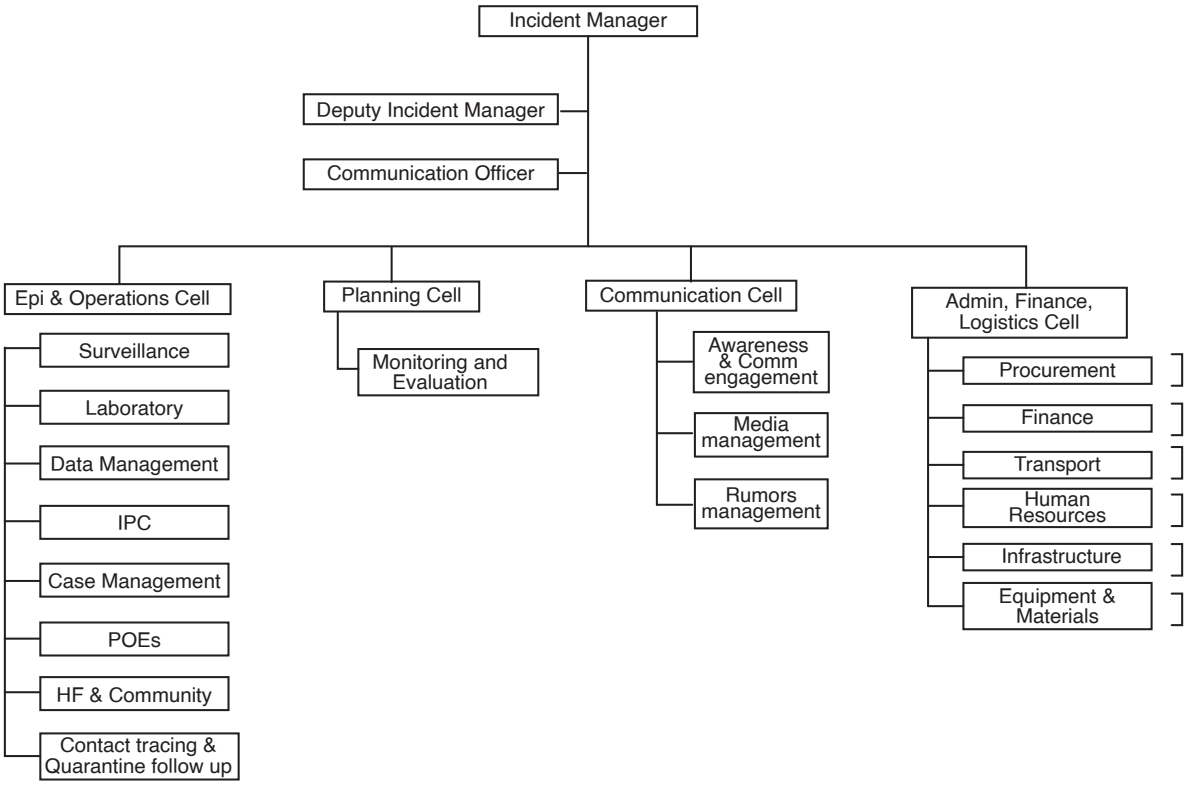
5.4.1. Incident Management System

The IMS is used for coordination of response to public health emergencies. The IMS is an internationally recognized standard emergency management tool that provides a common organizational model for all hazards and emergencies.

The IMS provides a standardized, scalable, and adaptable approach to respond to PHEs, enables a coordinated response among various agencies, establishes a common process for planning and management of resources by objectives, and improves effective communication.

PHEOC plays a vital role in the IMS, as it is the focal point or hub for the coordination of information and resources to support incident management activities.

INCIDENT MANAGEMENT STRUCTURE



The IMS embraces five functions: Management, Operations, Planning, Logistics, and Administration/Finance.

1. **Management:** It sets the response objectives, strategies, and priorities; including public communication and liaising with agencies and the safety of responders. The IM is responsible for the overall management of the response operation. The role of the IM can be assumed by a designated deputy IM. Leaders of the other four sections directly report to the IM.

The following functions fall under the management section: PHEOC manager, communication officer, liaison officer, and safety officer.

2. **Operations:** It guides the use of resources to directly respond to the emergency.

The following sections fall under the operation function: surveillance, laboratory, epidemiological data management, environmental health (water, sanitation, and hygiene), risk communication and community engagement, case management, and vaccination.

3. **Planning:** It supports the emergency action planning and budgeting process by tracking resources and collecting and analyzing information. This function is responsible for preparing an incident action plan and the Situation Report (SitRep) which documents the emergency.

   This function is also responsible for monitoring and evaluation of response activities.

4. **Logistics:** It acquires, tracks, stores, distributes, maintains, and disposes of material resources required for an emergency response.

The following sections fall under the logistics function: Food and beverage, medical Supply, Facilities, and Ground Support unit (Catering, Transport, and Accommodation).

5. **Administrative and finance:** It organizes all financial and administrative tasks including accounting, procurement, human resource, etc.

The following sections fall under the Administrative and Finance function: procurement, finance, compensation and cost, accounting, Human resources, and Record management.

The incident manager: is responsible for determining the IMS structure and defining staffing requirements. Continuous assessment will be conducted, and the structure will be reviewed based on the scale and complexity of the emergency.

54.2. Response Coordination Levels

There are 3 response coordination levels at the national and district levels: strategic, operational, and tactical level.

National level:

1. **Strategic level:** This highest level of strategic coordination and policy-making is represented by the National Public Health Emergency Management Committee (PHEMC) led by the Minister of Health.

This level will:

- Provide high-level direction for the response
- Determine the need to declare a national-level emergency
- Determine when the state of national level emergency has ended
- Make and endorse policy required to enable the response
- Coordinate the response of national-level agencies
- Mobilize resources both within and without government

During a response, this level will hold meetings at least once every week

2. **Operational (coordination) level:** This level is represented by the national PHEOC and during the emergency the Incident Management structure at the national level led by IM will be constituted to coordinate the emergency.

3. **Tactical (implementation) level:** This level represented by the national RRT will be responsible for the day-to-day actions to achieve the established strategic and operational goals and objectives.

District level:

1. **Strategic level:** This highest level of strategic coordination and policy-making is represented

by the district Public Health Emergency Management Committee (PHEMC) led by the Mayor of the district.

This level will:

- Provide high-level direction for the response
- Determine the need to declare a district-level emergency
- Determine when the emergency has ended
- Make and endorse policy required to enable the response
- Coordinate the response of district-level agencies
- Mobilize resources

During the response, this level will hold meetings at least once every week

2. **Operational (coordination) level:** This level is represented by the command post and during the emergency the Incident Management structure led by IM appointed by the Mayor of the district will be constituted to coordinate the emergency.

3. **Tactical (implementation) level:** This level represented by the district RRT will be responsible for the day-to-day actions to achieve the established strategic and operational goals and objectives.

5.4.3. Composition, Roles and responsibilities of the national and district PHEMC AND RRT

PHEMC members at the National level

- Minister of Health (Chair)
- Minister of Local Government
- Minister of Emergency Management
- Minister of Internal Security
- Rwanda Defense Force representative
- Rwanda National Police Representative
- Immigration and Emigration Representative
- DG Rwanda Biomedical Center (RBC)
- DG Rwanda Agricultural and animal resources development Board (RAB)
- DG Rwanda Food and Drugs Authority (Rwanda FDA)
- CEO Rwanda Medical Supply (RMS)
- Head of Clinical and Public Health Services / Ministry of Health (MoH)
- Public Health Surveillance, Emergency Preparedness and Response Division Manager

- National Reference Laboratory Division Manager
- Rwanda health communication Division Manager

PHEMC members at District level

- District Mayor (Chair)
- District Police Commander (DPC)
- District Army Representative
- Vice Mayor in Charge of Social Affairs
- Director of District Hospital
- District Director of Health
- District Immigration Officer
- In charge of veterinary services
- District Health Promotion and disease prevention Officer
- District Public Relations Officer
- District RMS Representative
- Disaster Management Officer

Members of the Public Health Emergency Rapid Response Teams:

National Rapid Response Team (RRT) composition:

1. Director of Outbreak Preparedness and Response Unit (RRT Coordinator)
2. Epidemiologists
3. Public health experts
4. Infectious Disease Specialists
5. Clinicians
6. Environmental Health Officer/IPC
7. Laboratory personnel,
8. Pharmacists
9. Nurses
10. Veterinary
11. Mental health staff
12. Communication Officer
13. Logistic staff
14. Surveillance officer

15. Data Manager/Statistician
16. Any other member depending on the type of emergency

District Rapid Response Team (RRT) composition:

1. Hospital Clinical Director (Team Lead/Coordinator)
2. The Lab Manager
3. Pharmacist of hospital
4. Hospital M&E Officer
5. IDSR focal person
6. EPI supervisor
7. Data manager
8. Environmental health officer
9. CHWs supervisor
10. District Director of Health
11. District Health Promotion and Disease Prevention Officer
12. District Hygiene and Sanitation Officer
13. Hospital Logistics officer
14. District veterinary officer
15. Any other member depending on the type of emergency

Roles and responsibilities of the national and district PHERRT

- Investigate rumors and reported outbreaks, verify diagnosis and other public health emergencies including laboratory confirmation;
- Make a follow up by visiting and interviewing exposed individuals, establish a case definition and work with community to find additional cases;
- Assist in laying out mechanisms for implementation of Infection Preventive Control Measures;
- Assist in generating a line list of the cases, and perform descriptive analysis to generate hypothesis including planning for a further analytical study;
- Propose appropriate strategies and control measures including risk communications activities;
- Coordinate rapid response actions with partners and other agencies;
- Initiate the implementation of the proposed control measures including capacity building;
- Conduct ongoing monitoring and evaluation of effectiveness of control measures through continuous epidemiological analysis of the event;

- Conduct Risk Assessments to determine if the outbreak is a potential PHEIC;
- Prepare detailed investigation reports to share with PHEMC
- Contribute to ongoing preparedness assessments and the final evaluation of any outbreak response.;
- Meet daily during outbreaks, and quarterly when there is no outbreak;
- Participate in simulation exercises

5.4.4. Surge staff

Normally, the surge staff are multi-disciplinary and multi-sectoral Subject Matter Experts (SMEs), who can be mobilized and deployed to support response activities.

Depending on the scale of an emergency, positions are identified in the Incident Management System; numbers and categories of SMEs to be mobilized are determined based on the specificity and magnitude of the emergency.

The Rwanda Biomedical Centre (RBC) in collaboration with WHO trained a multidisciplinary and multisectoral team of 75 people from different institutions comprising an array of profiles to serve as African Volunteers of Health corps-SURGE(AVoHC-SURGE) members who will be deployed to respond to emergencies, within and outside the country as required.

The Field Epidemiology Training Program (FETP) advanced, intermediate and frontline trainees will also be used as surge staff. Additional trained staff from different ministries and institutions can be deployed to support response activities.

ANNEXES

Annex 1: Terms of Reference for the Incident Management Team

Incident Manager	**Description:** The IM is responsible for managing a public health emergency effectively and efficiently: Should be a person chosen based on his knowledge and experience of the identified threat, emergency, or epidemic (subject matter expert). The duties of the incident manager shall come to an end after the official determination of the end of the threat, emergency, or epidemic for which he or she was appointed. **Roles/Responsibilities:** The role of an incident manager should include: • Responsible for managing the incident- Oversees all operations of the outbreak response • Developing event objectives, managing all operations, application of resources • Establishes the appropriate staffing level for the IMS and continuously monitors operational effectiveness of the response • Responsible for the overall incident action plan • Provides leadership and direction • Responsible for situation reporting to senior leadership • Sets priorities and defines the organization of the response teams

Deputy Incident Manager	• Assume the responsibility of the incident manager when needed • Performs specific tasks as requested by the incident manager • Implements directives from senior managers
Public Information Officer (PIO)	**Reports to Incident Manager** **Description:** The role of the PIO is to interface with the public, media, and other stakeholders to provide accurate response-related information and updates of the incident or event **Responsibilities:** • Responsible for the development of information for an emergency to the public • Control and coordinate the release of information to the media • Prepare press releases and news conferences • Leads communication team • Obtain media information that may be useful to emergency planning • Develop and implement strategies for the control of myths, rumors and misinformation control • Provides accurate and timely status reports to the Incident Manager • Developing strategies and procedures for working effectively with the media. • Speaking directly to the public or media to address questions and represent the organization. • Performs a key public information-monitoring role, such as implementing measures for rumor control • Develops and distributes community information releases through local and national media such as TV, radio, or newspaper, and the use of social media networks • Assist in developing/tailoring messages to needs of affected communities and ensure linguistic, cultural, and other special considerations are addressed.

Liaison Officer	**Reports to Incident Manager** **Description:** The role of the LNO is to facilitate communication and cooperation between partner organizations outside of the IMS structure that support the emergency response. **Responsibilities:** • Maintains up-to-date lists of partner agencies (governmental and nongovernmental) who are part of the larger response framework or disaster management authorities • Coordinate with other IMS functions to obtain and share current response-specific CIRs and EEIs with partner representatives. • Coordinate with the Operations function to ensure relevant partner representatives are included in distribution lists and verify any information that is received • Manage formal and informal requests from partner organization

Safety / Security Officer	**Reports to Incident Manager** **Roles/Responsibilities:** • Monitors and assesses hazards in the field • Develops measures for ensuring personnel safety. • Participates in developing the Incident Action Plan (IAP) and provides safety-related input. • Provide safety briefings and distribute safety messages. • Monitors incident operations and advises the IM on all matters relating to the health and safety of emergency response personnel. • Stops and prevents unsafe actions during incident operations. • Gives guidance on the psychological and emotional challenges that staff may face during response activities. • Ensures proper safety procedures are adhered to through response activities.

Planning Officer	**Reports to Incident Manager** **Description:** The planning section chief is responsible for the collection, evaluation, dissemination, and use of information about the incident, maintaining the status of resources, future planning Intra/ After Action Review (AAR), addressing and applying Lessons Learnt, and defining demobilization requirements for emergency response elements, future planning for long-term response and second scenario planning. **Roles/Responsibilities:** • Receives, compiles, evaluates, and analyses all outbreak information • provides updated status reports • Develops objectives, strategies and action plans • Supervise preparation of the IAP and Situational Report (SITREP) • Provide information to the Incident Manager (IM) and the Operation Section Chief for their input to the IAP and SITREP • Develops and communicates operational information • Keeps records and ensures proper documentation of the response • Prepares and maintains resource status boards • Establish reporting requirements for sections, disseminate response reports • Maintain situational awareness and creates common operating picture for the incident. • Oversee preparation and implementation of the Incident Demobilization Plan when the IM authorizes deactivation.

Logistics Officer	**Reports to Incidence Manager** **Description:** The logistics function acquires, deploys, and tracks resources **Roles/Responsibilities:** • estimate the needs of response equipment, supplies, transport, and communication equipment • Review IAP and estimate section needs for the next operational period or shift through Liaison Officer • manage the procurement of supplies and essential response equipment, communications systems • develop a distribution plan in collaboration with partners for all supplies and equipment from central level to the points of use • Coordinate the deployment of resources with partners at the local level and from NGOs or other government agencies

Administrative and Finance Officer	**Reports to Incidence Manager** **Description:** Organize, direct, and coordinate functions related to finance and administration. **Roles/Responsibilities:** • Prepares, manages, and monitors budgets • Tracks material and human resource costs • Processes compensation claims • Maintains administrative records- such as updating arrival and departure dates for deployed personnel • Prepares procurement contracts • Processes payments (timekeeping, incentive, insurance) • Prepare regular reports on budget and financial status • advise IM on the current status of financial and procurement tasks • Review IAP and estimate section needs for next operational period or • shift • monitor expenditure for the response, including cash flows, and work with partners on cost-sharing arrangements
Operations Officer	**Reports to Incident Manager** **Description:** The operations function is responsible for using resources to respond directly to the emergency. It establishes tactics and directs operational resources to achieve response objectives. At the field level, this function provides a direct response to an incident; at higher levels, it provides coordination and technical guidance. **Roles/Responsibilities:** • Submit planned activities to the plan section for Incident action plan development • Oversees technical activities such as, but not limited to, surveillance, laboratory, case management, social mobilization, outbreak investigations operations, and IPC. • Ensure core capacity and technical guidelines for response and operations is well established in affected areas • Submit request for resources and funds to logistics, finance, and admin • Plan for the activities, assign responsibilities, and implement response operational activities • Develop and communicate operational information to planning section and IM as requested • Prepare and submit cumulative and progress implementation report to the IM at the designated frequency within the operational period. • Use information technology and apply ethical principles in accessing, collecting, analyzing, using, maintaining, and disseminating data and information • Monitor, track, and distribute: o Response objectives o Requests for Information and Assistance o Incident Action Plans (IAPs) o Response Situation Reports (SITREPs)

Surveillance Officers	• submit the plan and request funds • plan for the activities, assign responsibilities and implement • prepare protocols for surveillance at community and health centres • ensure that active case finding and contact tracing is done well at both national and regional levels • prepare a standard protocol for contact tracing • follow up all contacts and ensure that a database for all the contacts is in place • ensure core capacity for surveillance and response is well established at all community, health facilities and ports of entry • oversee capacity building for health workers on surveillance and response • work with GIS to map key epidemiological parameters • collate, analyse, interpret and report summary data (e.g. daily counts of cases/deaths) • generate descriptive epidemiology and data visualization • manage the implementation within the approved budget • manage outbreak data: analyses data regularly for trends and establishes transmission chains • supervise, monitor and evaluate implementation at national and regional levels • prepare and submit cumulative and progress implementation report to the task force • closely link with infection control and social mobilization groups

Data Management / GIS staff	• collect, collate epidemiological data from regions • manage database including content, structure, file location, backup system • work with surveillance and epidemiology to map and visualize data • incorporate all relevant data to produce map products, statistical data for reports and/or analysis
Laboratory staff	• prepare guidelines, policies and manual • ensure all laboratories provides services consistently and accurately • provide supportive supervision to laboratories • provide advice to case management on treatment guidelines • ensure laboratories have supplies • provide technical assistance on testing referral samples • provide technical trainings (in service trainings) to lab personnel in the country • conduct supportive supervision to laboratories • mentor laboratories in microbiology practices and quality management system • provide technical advice on sample management (sample transportation) • confirm the outbreak • link the confirmed cases with epidemiology • professionally and effectively perform referral laboratory testing services to produce accurate, reliable, timely and precise results

Case Management staff	• conduct assessment, care coordination, evaluation, and advocacy for services to meet the impacted populations health needs during a disease outbreak. • acquire and provide to the other subcommittees and the task force detailed information regarding the impacted population to establish an intervention and response plan • work with the community health officers in impacted areas to assist in the development, and implementation of response actions; assure that services provided are specified in the treatment plan(s) and monitor progress toward treatment goals • regularly attend the coordination and the task force meetings to provide updates and exchange pertinent information • review and advice on the requests from regions before processing them for support
Social Mobilization staff	• monitor implementation of social mobilization and health education activities • develop or revise IEC materials to be used at field level • ensure provision of training to community health workers • conduct house to house awareness on the disease to reduce denial and provide information to help prevent the spread of disease within the community • search for victims and refer to appropriate health care facilities for treatment • spearhead the distribution of response supplies, etc. at the community level • develop and implement a communications plan to support response activities • develop and periodically update appropriate “action points” concerning the response for dissemination to all appropriate policy makers

Annex 2: Emergency Risk Assessment Template

[EMERGENCY NAME], [EMERGENCY LOCATION]

Date and version of current assessment:

Choose the date, select version

Date(s) and version(s) of previous assessment(s):

Overall risk and confidence (based on information available at time of assessment)

Overall risk			Confidence in available information		
District	**National**	**Global**	**District**	**National**	**Global**

Risk statement

Risk questions (assess scenario where no further interventions are implemented)

Risk question		Assessment		Risk	Rationale
Potential risk for human health	District	**Likelihood**	**Consequences**		
	National				
	Global				
Risk of emergency spreading	District				
	National				
	Global				
Risk of insufficient control capacities with available resources	District				
	National				
	Global				
Add additional risk question if needed; otherwise, delete	District				
	National				
	Global				

	Action	Time frame
☐	Refer to the emergency for review by the IHR Emergency Committee for consideration as a PHEIC (Art 12, IHR)	
☐	Immediate activation of (IMS) as urgent public health response is required	
☐	Recommend setting up of grading call	
☐	Immediate support to response, but within the limit of Contingency Funds for Emergencies(CFE) (no grading recommended at this point in time)	
☐	Rapidly seek further information and repeat Rapid Risk Assessment(RRA) (including field risk assessment)	
☐	Continue to monitor closely	
☐	No further risk assessment is required for this event, return to the routine activities	

Major actions recommended by the risk assessment team

[+]If chosen, list actions and identify **persons responsible and due dates** for each action in section 2 (Supporting information)

Target audience/ channel	Planned	Done	First date	Last update
Inform WHO country representative		☐	Choose date	Choose date
Inform Director- Africa CDC		☐	Choose date	Choose date
Inform Country Director - US.CDC		☐	Choose date	Choose date
Inform Country Leads of International Agencies		☐	Choose date	Choose date
Inform MOH and Line Ministries		☐	Choose date	Choose date
Public SITREP	☐	☐	Choose date	Choose date
Media talking points (coordinate with Communications)	☐	☐	Choose date	Choose date
Other – specify:	☐	☐	Choose date	Choose date

Communications

Supporting information

Hazard assessment

Expand

Exposure assessment

Expand

Context assessment

Capacities	Vulnerabilities
Expand	*Expand*

Brief context summary

Immediate actions (not a detailed response plan, state if no action required)

List here

Risk assessment team members

List names and roles

Annex 3: Shift Plan During Activation

Date:

Day, DD/MM/YYYY

Time in 24 Hrs

Note:Shifts will run between 7 hrs to 24 hrs.

		Time in 24 hours																
Function	**Name**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
Data Analysis	Dr. Joy	X																	
	James									X									
ICT	David	X																	

Annex 4: Transfer of Responsibility During Activation

Date	Name	Function	Sign time	in	Sign time	out	Major responsibilities to be shifted

Annex 5: Incident Action Plan Template

INCIDENT ACTION PLAN (IAP)				
Incident Name and Incident Action Plan Version				
Incident Name:	**Operational Period (Date/Time):**		**IAP Type:** Initial ☐ Update ☐ Final ☐	
Risk level:	**PHEOC Activation level:**			
Functional IMS Position	**Name**	**Email**		**Phone**
IMS Management Leadership and Staff				
Incident Manager				
Deputy Incident Manager				
Core IMS Functions				
Operations Section				
Plans Section				
Logistics Section				
Finance & Administration Section				
Expanded IMS Functions				
Liaison Officer				
Safety Officer				
Public Information Officer				
Response Branch Operations				
Current Operations Branch				
Laboratory Branch				
Case Management Branch				
Epidemiology Branch				

Situation/Actions for Current Operational Period				
Background:				
Situation/Actions for Current Operational Period (continued)				
Current Activities: **Ministry/Department Response Mission**: **Response Mode Critical Information Requirements (CIRs)**				
Planning Assumptions (Evidence-based facts and assumptions in the context of developing the plan.)				
Response Objectives (SMART: Specific, Measure, Achievable, Realistic, Timeframe)				
Response strategies				
Sections / Functional Area Operational Objectives / Expected results				
Response activities				
SNo.	**Activity / Task**	**Responsible**	**Cost**	**Completion date**

Triggers That May Increase the Response Tempo and/or Raise the Response Level
Triggers That May Return Centralized Response Operations to a Program Management Level
Pending Briefings for Operational Period
Scheduled Meetings for the Operational Period
Safety and Security Concerns
a visual depiction of the incident location or locations here.
Current Organization

Annex 6: Job Action Sheet Template

Incident Management System Job Action Sheets

A Job Action Sheet, or JAS, is a tool for defining and performing a specific IMS response functional role. The tasks on the Job Action Sheet can and should be amended to fit the situation by adding or deleting tasks. **The Section lead who is issuing the Job Action Sheet should review for applicability and add in writing any incident-specific instructions or changes.** The key elements are:

Position Title: The name of the emergency response functional role.

Note that these generally are not the same as every day, non-emergency job titles.

Reports to: The supervisor that has direct authority over the staff.

Mission: The purpose of the role, and a brief guiding principle for the responder to keep in mind.

Immediate:

- ☐ Tasks that must be completed first upon assuming the role or coming on duty.

Intermediate:

- ☐ Tasks to be completed after the immediate tasks are addressed.

Extended:

- ☐ Tasks to be completed later or on an ongoing basis during the work shift.

Annex 7: Summary of Incident Update to Leadership

Incident update to leadership
As of dd/mm/yyyy, update # xxx **1.SITUATION UPDATE** Very brief summary..... .... **2.ACTIONS UNDERTAKEN** Very brief summary in bullet points .... **3.ISSUES AND CHALLENGES** Highlight major issues and challenges that require leadership attention .... **4.NEXT STEPS FOR DECISION** Bullet points that require high level decision

Reporter:

Annex 8: Request Assistance Template

REQUEST MEMO

TO : Director General - Rwanda Biomedical Center

FROM: Incident Manager - Cholera Outbreak

SUBJECT: REQUEST FOR INFECTION AND PREVENTION CONTROL (IPC) MATERIALS TO SUPPORT RUBAVU DISTRICT CHOLERA OUTBREAK

DATE: X June 2020

Based on the ongoing Cholera outbreak in **RUBAVU DISTRICT**, it has been reported in SITREP dated xx/xx/xxxx that the response team is challenged with IPC materials in the treatment center. The following is the request of the response team:

No	Item	Quantity
1	Coveralls	3 cartons
2	Gloves	3 cartons
3	Cadaver bags	2 cartons
4	Disinfectants	2000 Shippers
5	Granular Chlorine	1000 KG

In view of the above, I will appreciate your prompt support as indicated in this communication.

See attached supporting documents (SITREP, budget, etc)

Thanks for your continuous support

Annex 9: SITREP Template

Ministry of Health (MoH) or Rwanda Biomedical Center (RBC) HEADER

Situational Report (SITREP)			
Outbreak Name		**Country affected**	
Date & Time of report		**Investigation start date**	
Prepared by			
Status (activation level)	**Activation date dd/mm/yyyy**		
Frequency of report			

1. HIGHLIGHTS

- No. Cases reported this week/day. Compare to previous week/day.
- Cumulative case numbers to date e.g. From 'dd month year' until 'dd month year', a total of XXX (SUSPECTED/PROBABLE/CONFIRMED) cases including XX deaths of DISEASE/ SYNDROME have been reported from LOCATION.
- Summary of key challenges

2. BACKGROUND

Brief description of

- How and when the outbreak was recognized
- Description of disease burden in the country
- Overview of initial rapid situation assessment
- Date of outbreak declaration

3. EPIDEMIOLOGY & SURVEILLANCE

Case definition (please include as an annex)

Include the definition of suspected, probable, and confirmed cases as an annex so it is clear what the data is referring to.

Descriptive epidemiology

Please use graphs, tables, and maps for visualisation of the data by time, place, and person. Please make sure all figures have clear titles including the population being displayed e.g. n=. Please make sure all axis and legends are clearly labelled. Please ensure sufficient interpretation is provided to aid the reader.

- Number of cases to date: (as a table) o new and cumulative (suspected, probable, confirmed)

- deaths: count and CFR%
- Incidence/attack rate (e.g. number of cases per 100,000 population)

- Case/person characteristics (e.g. age, sex, occupation, risk factors): comment on the most affected groups if present
- Time trends: Epi curve
- Geographical distribution (maps preferable, describe new areas affected)
- Clinical description (e.g. symptoms, duration, no. Cases hospitalizations)
- Analysis by exposure
- Source investigations
- State any delays in notification

Contact tracing summary (for events where contact tracing is necessary)

- No. contacts, no. seen, no. traced, no. missing, no. completed follow-up, no. become symptomatic o by the lowest geographical location possible

4. LABORATORY INVESTIGATIONS

- Summary of tests performed and results
- Subtyping (this section may be combined with the epidemiology description above)

5. ENVIRONMENTAL ASSESSMENT

- If completed, summarize the findings of any environmental investigations to date (e.g. water testing, vendor inspections, community assessments, etc.)

6. PUBLIC HEALTH ACTION / RESPONSE INTERVENTIONS

Describe the response measures implemented by the thematic area and any impact seen. Please add additional pillars if required e.g. vector control, operational research

1. COORDINATION
2. SURVEILLANCE
3. LABORATORY
4. CASE MANAGEMENT
5. HAZARD CONTAINMENT
6. WASH & IPC
7. RISK COMMUNICATION, COMMUNITY ENGAGEMENT & SOCIAL MOBILIZATION
8. LOGISTICS

7. CHALLENGES/GAPS

8. RECOMMENDATIONS & PRIORITY FOLLOW-UP ACTIONS

- COORDINATION AND LEADERSHIP
- SURVEILLANCE
- LABORATORY
- CASE MANAGEME NT
- HAZARD CONTAINMENT
- WASH & IPC
- RISK COMMUNICATION, COMMUNITY MOBILISATION & SOCIAL ENGAGEMENT
- LOGISTICS

9. CONCLUSIONS

Provide concluding remarks on the overall perspective of the event including future outlook

Re-echo key messages for urgent attention.

Point of contact of PHEOC and / or the report (the persons to whom questions regarding the report are directed

Annex 10: Partner Mapping matrix, 4Ws (what, who, where and when)

No.	Activity (What)		Organization (Who)	Location (Where)		Start date (When)	End date	Status
	Area	Specific activity		Province	District			

Annex 11: Grading Reporting Form

GRADING REPORTING FORM				
Incident name:				
Done by technical team				
Date: **Time:**	**Chair:** **Minutes taker:** **Participants:**			
Country name	**Emergency Type:**			
Grading level decision	**E.g. Level 1, 2....**			
Agenda	**Grading meeting for ....**			
Situation analysis – summary				
Risk assessment - summary				
Assessment of grading criteria	**Scale (provide assessment for each:** **1) Increased number of cases:** **2) Geographical spread: Urgency:** **3) Complexity:** **4) Capacity:**			
Names and contacts of key staff	•			•
Immediate actions	•			•
AGREED IMMEDIATE NEXT STEPS				
Action	**Details**	**Person responsible**	**Date**	
	1.			
	2.			
	3.			
Decision and approval Comment:				
Approved by: ..... **signature:**				

REFERENCES

- Framework and standards for country health information systems/Health Metrics Network, World Health Organization. 2008. http://www.who.int/healthmetrics/documents/hmn_framework200803. pdf
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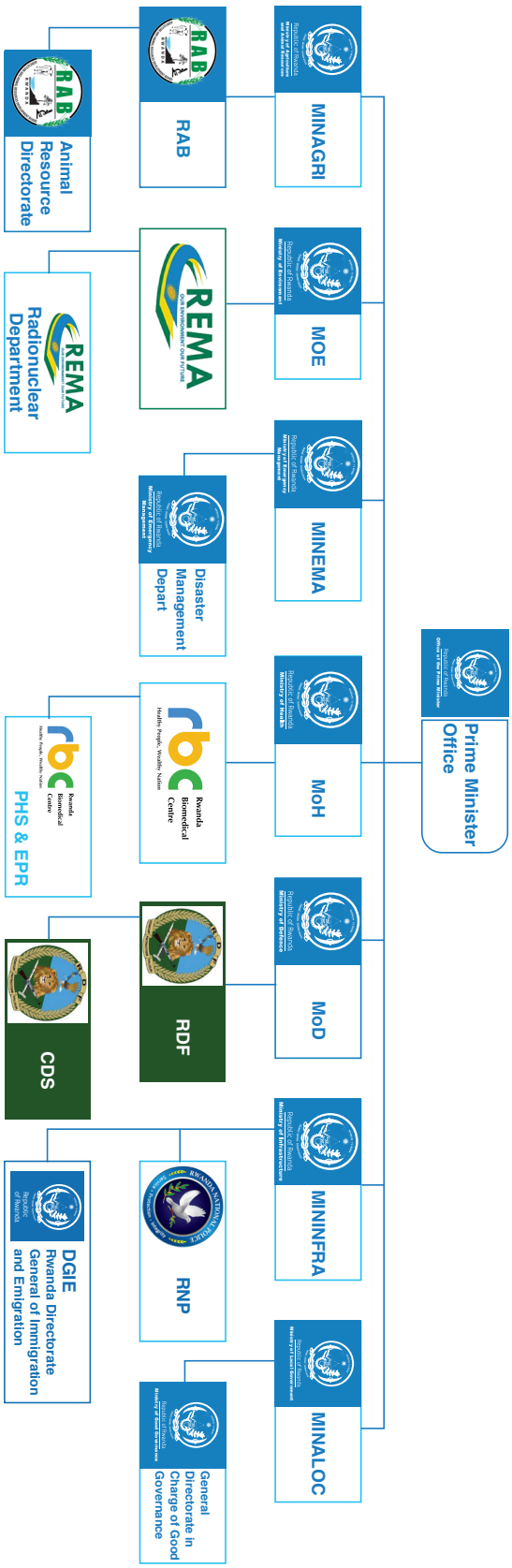
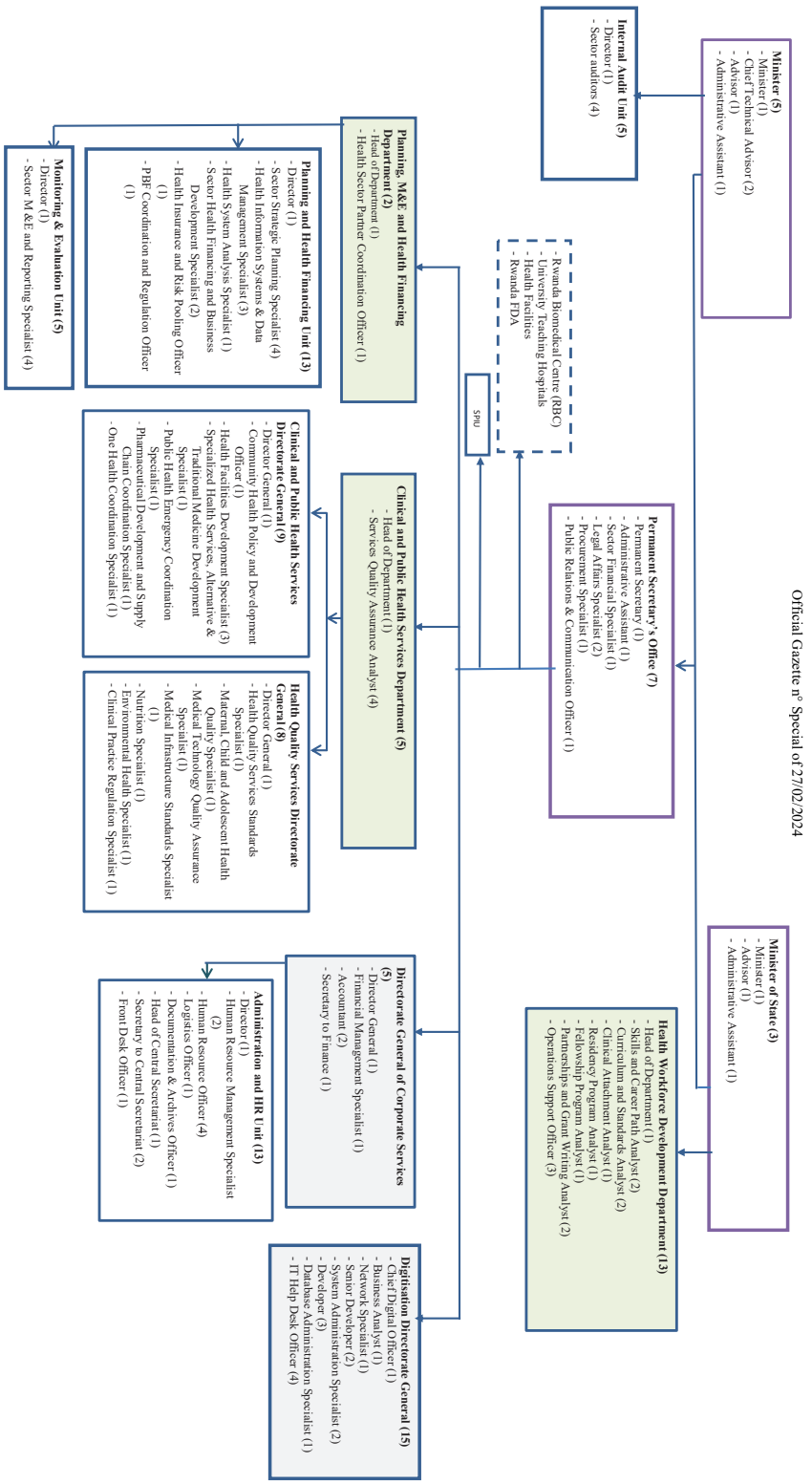
- Zambia National Disaster Management & Mitigation Act, 2010 No. 13
- Zambia National Public Health Act. Cap 295
- First Draft Act for the establishment of Zambia National Public Health Institute, 2019
- Zambia Public Health Emergency Operation Center Guidelines, 2019
- WHO PHEOC Framework, 2015 - https://www.who.int/publications/i/item/frameworkfor-a-public-health-emergency-operations-centre
- Zambia Environmental Management Act. 2011 N0, 12
- Zambia Vulnerability Risk Analysis and mapping report, 2018
- World Health Organization PHEOC handbook, 2017
- Zambia Draft PHEOC Plan, 2019

LIST OF ANNEXES

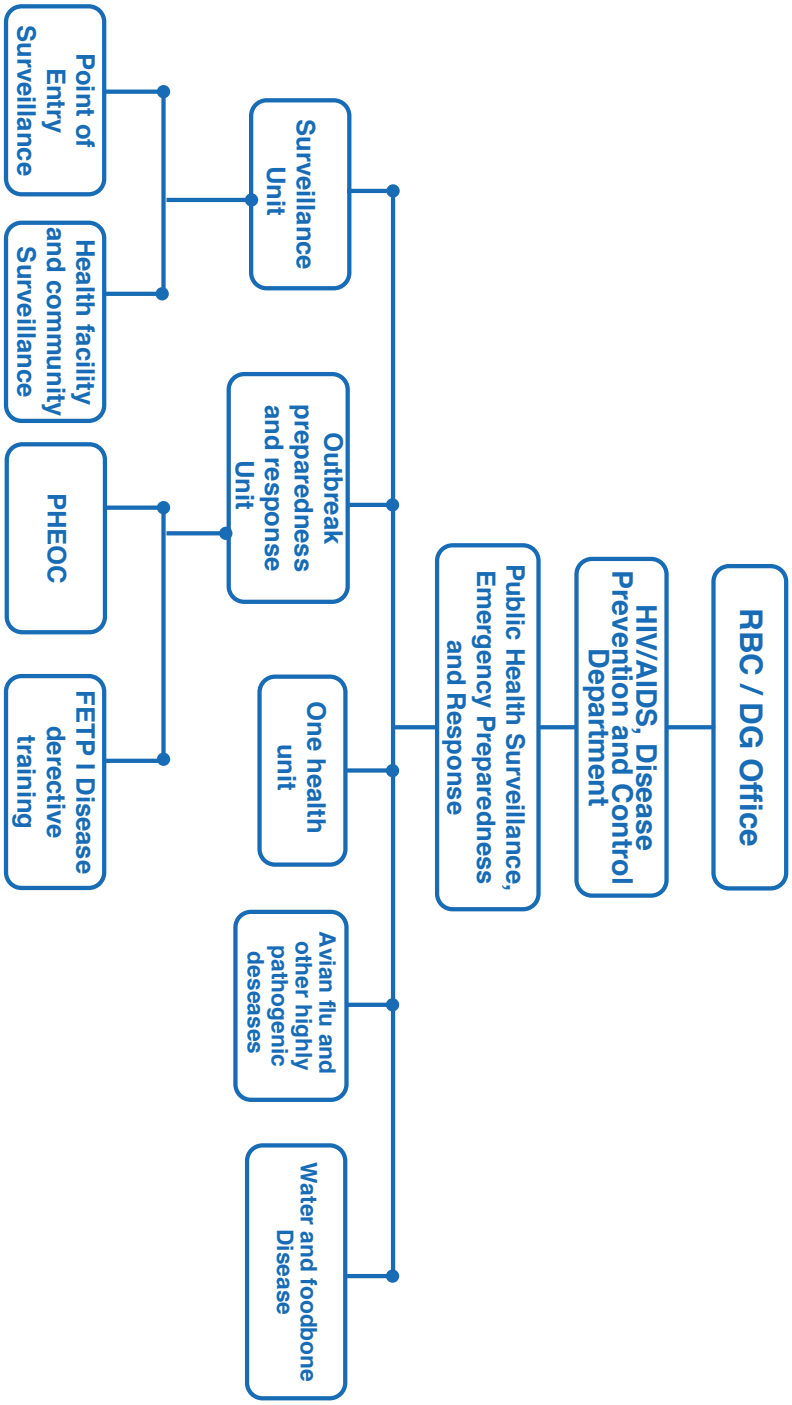
Annex 1: Disaster management structure



Annex 2:Organigram of Ministry of Health



Annex 3 : Flowchart of the RBC Public health emergency response



Annex 4:List of key plans and strategies on health system strengthening on which a recovery plan could be based.

NO	KEY PLANS & STRATEGIES
	A national strategy to strengthen the healthcare system for respiratory care Improving medical oxygen accessibility).
	Task force for Covid 19 Vaccination programme
	Health Sector Strategic Plan 2018-2024 (HSSPIV)
	Rwanda Health Sector Policy 2015
	Rwanda National Strategy for Health Professions Development NHSPD 2020-2030
	Policy of traditional-complementary-alternative medicine 2014-2023
	MINISTERIAL INSTRUCTIONS N° 20/7017 OF 31/08/2021 DETERMINING THE METHODOLOGY TO DEFINE THE COMMUNITY-BASED HEALTH INSURANCE BENEFIT PACKAGE
	Economic Recovery Fund (ERF): The Economic Recovery Fund was established to support the recovery of businesses severely affected by COVID-19 so that they can quickly resume operations and safeguard jobs.
	PRESIDENTIAL ORDER N° 67/01 OF 20/10/2009 ESTABLISHING FOOD SUPPLEMENTS REGULATION
	National Community outreaches programs
	1. Medical missions
	2. Assessment report on the continuity of essential health services during Covid 19 pandemic
	3. Rwanda Hospital Accreditation and Progressive Performance Assessments