THE REPUBLIC OF UGANDA

THE NATIONAL MEDICAL COUNTERMEASURES PLAN FOR PUBLIC HEALTH EMERGENCIES

2023 - 2028

ONE HEALTH APPROACH

Towards a sustainable preparedness and response to Public Health Emergencies

Copies or further information may be obtained from:

Ministry of Health
Permanent Secretary
6 Lourdel Road, Wandegeya;
Kampala, Uganda
Tel: +256 417 771330,
Email: ps@health.go.ug
Website: www.health.go.ug

Ministry of Agriculture, Animal Industry and Fisheries
Permanent Secretary
P.O Box 102, Entebbe Plot 16-18,
Lugard Avenue, Entebbe Uganda.
Email: info@agriculture.go.ug

Ministry of Water and Environment
Permanent Secretary
Plot 3 - 7 Kabalega Crescent Road, Luzira
P.O. Box 20026 Kampala, Uganda
Tel: +256 417 889 400,
Email: mwe@mwe.go.ug
Website: www.mwe.go.ug

Ministry of Tourism, Wildlife & Antiquities, Permanent Secretary
P. O. Box 4241 Kampala, Rwenzori Towers 2nd Floor, Plot 6 Nakasero Road.
Kampala, Uganda.
Website: www.tourism.go.ug

THE REPUBLIC OF UGANDA

THE NATIONAL MEDICAL COUNTERMEASURES PLAN FOR PUBLIC HEALTH EMERGENCIES

2023 - 2028

PREAMBLE

Uganda has experienced several Public Health Emergencies (PHEs) partly because of the proximity to the tropical disease “hot spot”. Throughout all the responses to these emergencies, the country has experienced challenges with logistics across the human, animal and environment sectors. This was demonstrated by the significant dependence on the support from the development partners during recent PHEs. The country needed a strong policy framework to support the development of a sustainable plan for logistics during preparedness for and response to the PHEs.

In 2005, Uganda adopted the Global Health Security approach to improving logistics during the preparedness and response to PHEs. The approach has guided the response to the PHEs including Ebola Virus Disease outbreaks and the COVID-19 pandemic. In 2021, Uganda carried out an Internal Multi-sectorial self-assessment to provide an opportunity to measure its progress in improving health security capacities. The assessment found that the country had limited capacity to activate and coordinate Medical Countermeasures and personnel deployment during PHEs.

The National Medical Countermeasures Plan for Public Health Emergencies as a core strategy for achieving the Global Health Security Agenda and enabling Uganda to be more prepared to respond to PHEs. Stronger emphasis has been put on the principle of the national stockpile and prepositioning to ensure continuous availability and accessibility to Medical Countermeasures, support to deploy personnel and the transportation services for samples and cases.

We wish to express our appreciation to all those who worked tirelessly to produce this document. We call upon the general public, the Government Ministries, Departments and Agencies in the country, Development Partners and the Private Sector to spare no efforts in implementing this National Medical Countermeasures Plan for Public Health Emergencies.

Dr. Henry G. Mwebesa

Director General Health Services - Ministry of Health

Dr. Anna Rose Ademun Okurut

Director Animal Resources - Ministry of Agriculture, Animal Industry and Fisheries

Mr. Mugabi Stephen David

Director Environment Affairs - Ministry of Water & Environment

Mr. Samuel John Mwandha

Executive Director Uganda Wildlife Authority - Ministry of Tourism, Wildlife and Antiquities

TOWARDS A SUSTAINABLE PREPAREDNESS AND RESPONSE TO PUBLIC HEALTH EMERGENCIES IN UGANDA

ENDORSED ON BEHALF OF THE RESPECTIVE GOVERNMENT SECTORS

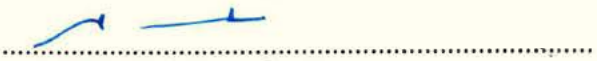
We the undersigned Government Ministries have read and understood the roles and responsibilities of the organizations as outlined in the National Medical Countermeasures Plan for Public Health Emergencies. We will attempt to the best of our respective abilities to execute the roles as identified.

Hon. Dr. Jane Ruth Aceng
Minister of Health

18/11/2022
Date

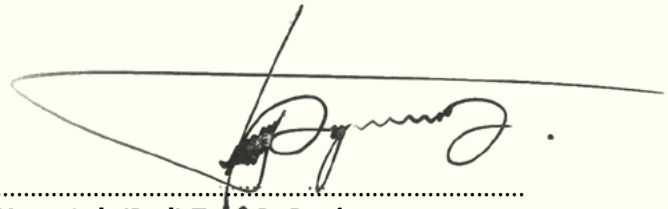
Hon. Frank Tumwebaze
Minister of Agriculture Animal Industry and Fisheries

30/1/2024
Date



Hon. Sam Cheptoris
Minister of Water and Environment

1/8/2023
Date



Hon. Col. (Rtd) Tom R. Butime
Ministry of Tourism, Wildlife and Antiquities

17.01.2023
Date

Robinah Nabbanja
Rt. Hon. Prime Minister

FOREWORD

Uganda is a signatory to the International Health Regulations (IHR) 2005 which guide member states to prioritize health security. The country has responded to several Public Health Emergencies (PHEs) including the Ebola Virus Disease (EVD), Cholera, natural disasters and the COVID-19 pandemic which has presented serious threats to the Ugandans and Africa at large. Uganda joined the GHSA in 2013 to strengthen its health security capabilities to respond to public health threats. The GHSA has guided the country to prepare, detect and respond to potential public health threats in ways that limit their impact on human, animal ecological health and the socio-economic structure of society.

Uganda also developed the National Action Plan for Health Security (NAPHS) 2019 - 2023 from the gaps identified in the 2017 Joint External Evaluation (JEE) of IHR capacities. The NAPHS provides a platform for coordination and collaboration to address emerging health threats and improve national health security using a multi-sectorial and One Health approach. In 2020, a review of the NAPHS revealed improved capacities in IHR at points of entry and response to events, evidenced by Uganda's prompt detection and control of the imported EVD and COVID-19 outbreaks. However, the 2021 Internal Multi-sectorial self-assessment identified a gap in the areas of Medical Countermeasures and personnel deployment.

In 2020, a review of the NAPHS revealed improved capacities in IHR at points of entry and response to events, evidenced by Uganda's prompt detection and control of the imported EVD and COVID-19 outbreaks.

The National Medical Countermeasures Plan for Public Health Emergencies will provide a system to activate and coordinate Medical Countermeasures and personnel during PHEs. We envisage that this plan will strengthen the availability and accessibility of logistics and relevant personnel during the preparedness and response to PHEs.

We humbly call upon all the Government Ministries Departments and Agencies (MDAs) to support the operationalization and implementation of the Medical Countermeasures and personnel deployment. We extend our appreciation to the Ministry of Health for its dedicated support in health security implementation in collaboration with relevant sectors in Uganda.

For God and My Country!

Robinah Nabbanja
Rt. Hon. Prime Minister

ACKNOWLEDGEMENTS

This plan was developed by a technical committee comprising the National One-Health Platform stakeholders. We thank the Government of Uganda leadership, the different Government Ministries, Departments and Agencies under the National One-health Platform.

Special thank you to the keyline Ministry technical directors, Dr. Henry Mwebesa (MOH), Dr. Anne Rose Ademun (MAAIF), Mr. Mugabi Stephen David (MWE), Mr. Sam Mwandha (UWA) for their strategic direction. The focal persons of the National One Health Platform in the different Ministries; Mr. Musa Sekamatte (MOH), Ms. Betty Mbolanyi (MWE), Dr. Patrick Atimnedi (UWA) and Dr. Fred Monje (MAAIF) for their tireless efforts in coordinating and providing technical guidance during the development process.

We thank Harriet Akello (MOH), Obua Thomas Ocwa (MOH), Ahmed Katumba (USAID), Juliet Namugga Kasule (CDC) and Paul Okware (NMS) for their commitment and dedication throughout the development of the plan, coordination of various Ministries, Departments and Agencies, and participation in the development of the plan.

Special attention is given to the United States Government, United Nations Agencies including the WHO, FAO, WFP and UNICEF for the support during the development of the plan.

We further thank Harriet Akello, Ambrose Jakira, Emmanuel Watongola, John Hans Wasswa, and a team of researchers led by Prof. Stephan Wagner and Dr. Bublu Thakur-Weigold, from the research university ETH Zurich in Switzerland, for their technical input during the costing of the National Stockpile for Human Health and PHE supply chain response.

A surveillance officer collecting samples to monitor zoonotic diseases in animals.

TABLE OF CONTENTS

CONTENTS

SECTION ONE:

National Medical Countermeasures Supply Chain Plan

SECTION TWO:

Emergency Response Personnel Deployment Plan for Outbreaks of Infectious Diseases in Uganda

SECTION THREE:

Implementing Case Management Procedures for International Health Regulations (IHR) Relevant Hazards

Appendix

EXECUTIVE SUMMARY

Uganda is among the 30 countries globally to launch the Global Health Security Agenda to accelerate progress in improving prevention, detection, and response capabilities during Public Health Emergencies (PHE). Uganda is vulnerable to PHEs because of its proximal geographical location to the yellow fever, filovirus, and meningitis belts and to the Congo Basin disease 'hot spot'. The National Medical Countermeasures Plan for Public Health Emergencies aims to strengthen the deployment of relevant personnel and to improve access to essential medicines and appropriate technologies during PHE.

The National Medical Countermeasures Plan for Public Health Emergencies was established and governed based on the national one-health platform framework which brings together human health, the environment and animal health sectors with key stakeholders from the different Ministries, Departments and Agencies (MDAs) that play various roles during any PHE. The plan has three components: the Medical Countermeasures supply chain plan, the personnel deployment plan, and case management in alignment with international health regulations plan.

The Medical Countermeasures supply plan component guides the processes to ensure availability, accessibility and utilization of essential medicines and appropriate technologies during PHEs. It describes the key activities during the preparedness, pre-response, activation, response, and recovery phases of the PHE. It also includes the policy framework, as well as the roles of different stakeholders from the different MDAs during a PHE.

The MCM supply chain plan is important in ensuring appropriate selection, quantification, warehousing, distribution, and management of the national stockpile for essential medicines and appropriate technologies during PHE.

The section for health personnel deployment describes the system for activating and coordinating health personnel during PHE. It describes the composition of the rapid response team at a national and subnational level, the deployment of human resources at the local and international level, coordination and supervision of the personnel deployment, facilitation of the health personnel deployed during the response and the demobilization of the rapid response team after the response to PHE.

Further, the component of transportation in the plan guides the management of transport services, the process of transporting personnel and how to carry out patients' referrals during PHE.

The section further guides the process of requesting and receipt of transport services at the national and district levels, procurement process, customs clearance of vehicles and registration of the imported vehicles, re-registration of donated motor vehicles, and costs associated with transporting health personnel, samples, and patient referral during a PHE. The plan also details the coordination process for patients' referrals during a PHE, the type of vehicle to be used and how personnel will be moved from one place to another.

There are three cost implications for implementing the plan. The cost of the annual management of the national stockpile and other additional logistics, the cost of deploying health personnel, and the cost of transporting health personnel, medical samples, and patient's referral during PHE. Each Ministry under the one-health platform is expected to cost and develop an operational plan during any PHE.

The National Medical Countermeasures Plan for Public Health Emergencies will, therefore, work as a reference guide to all stakeholders under the national one-health platform to inform and coordinate activities during a PHE.

ACRONYMS

AU-IBAR	African Union Inter-African Bureau for Animal Resources
CCHF	Crimean Congo Hemorrhagic Fever
CDC	Centers for Disease Control and Prevention
DFID	Department for International Development
DRRT	District Rapid Response Team
EEMS	Electronic Emergency Medical Services
EMS	Emergency Medical Services
IHR	International Health Regulations
JEE	Joint External Evaluation
JMS	Joint Medical Store
M&E	Monitoring and Evaluations
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MAUL	Medical Access Uganda Limited
MCM	Medical Counter Measures
MDA	Ministries, Departments and Agencies
MoA	Memorandum of Agreement
MOFPED	Ministry of Finance Planning and Economic Development
MoH	Ministry of Health
MoU	Memorandum of understanding
MOW&T	Ministry of Works and Transport
MWE	Ministry of Water and Environment

NDA	National Drug Authority
NGO	Non-governmental Organization
NMS	National Medical Stores
NOHP	National One Health Platform
NRRT	National Rapid Response Team
NADDEC	National Animal Disease Diagnostics and Epidemiology Centre
NTF	National Task Force
WOAH	World Organization for Animal Health
OPM	Office of the Prime Minister
PHE	Public Health Emergency
PHEOC	Public Health Emergency Operations Center
PS	Permanent Secretary
PS/ST	Permanent Secretary and Secretary to the Treasury
RVF	Rift Valley Fever
UNBS	Uganda Bureau of Standards
UNICEF	United Nation's Children Fund
UPDF	Uganda Peoples Defense Forces
URA	Uganda Revenue Authority
USAID	United States Agency for International Development
VHF	Viral Hemorrhage Fever
WFP	World Food Program
WHO	World Health Organization

DEFINITION OF KEY TERMS

Medical countermeasures	Regulated life-saving medicines and medical supplies that can be used to diagnose, prevent, protect from, or treat conditions associated with chemical, biological, radiological, or nuclear threats, emerging infectious diseases, or a natural disaster[1]
Supply chain	The system of people, information, processes, and infrastructure that is set up to move materials from its source to where it is consumed by users or patients.
Public health emergencies	An occurrence or imminent threat of an illness or health condition, caused by bioterrorism, epidemic or pandemic disease, or a novel and highly fatal infectious agent or biological toxin, that poses a substantial risk of a significant number of human facilities or incidents, or permanent or long-term disability[2]
Bioterrorism	Is the intentional release of viruses, bacteria, or other germs that can sicken or kill people, livestock, or crops[3]
Reverse Logistics	Is the process of planning, implementing and controlling the efficient cost-effective flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal
Green Logistics	Refers to minimizing the ecological impact of logistics for example reducing energy use of logistics activities and reducing usage of materials
Regional Prepositioning centers	Strategic regional locations where stockpiled MCMs are stored for initial response.
Stockpiling	A disaster mitigation process in which essential MCMs are identified, procured and stocked beforehand to enable an initial response
Chemical Attack	Defined as any substance which through its chemical action on life processes can cause death, temporary incapacitation or permanent harm to humans or animals
Waterborne diseases	Include any illness related to water shortage or water contamination during adverse climate events, such as floods and droughts, and diseases related to vectors with part of their life cycle in water habitats. They include but are not limited to Cholera, Typhoid and Amoebiasis.

1. https://www.cdc.gov/cpr/readiness/mcm.html
2. https://www.cdc.gov/anthrax/bioterrorism/index.html
3. Rogers and Tibben-lembke
4. Classification of Water-Related Disease - R Stanwell-Smith
5. Organisation for the Prohibition of Chemical Weapons

Veterinary officers examine a sick cow during outbreak response.

© FAO\Agatha Ayebazibwe

SECTION ONE

MEDICAL COUNTER MEASURES

1.1. INTRODUCTION

Uganda is vulnerable to Public Health Emergencies (PHEs) due in part to its geographical location in the Congo Basin disease 'hot spot'. Over the past two decades, the country has seen a variety of disease outbreaks including: meningitis, highly pathogenic avian influenza (HPAI), yellow fever, cholera and zoonotic diseases (Ebola, Marburg, Anthrax, Crimean Congo Hemorrhagic Fever (CCHF) and Rift Valley Fever (RVF), some of which are endemic.

Uganda's vulnerability is exacerbated by human pressure on the Great Lakes ecosystem, porous national borders with an influx of refugees and their livestock, migratory wild birds, and globalization of trade and travel. Other potential threats include biological, nuclear, chemical, and radiological hazard, natural and human induced disasters.

Building on IHR 2005, Uganda, as part of a group of 30 countries, launched the Global Health Security Agenda (GHSA) 2024 during the West Africa Ebola outbreak in order to accelerate progress to improved prevention, detection and response capabilities. Objective 9 of the GHSA calls for improved global access to medical countermeasures (MCMs) and establishes as a target, the development of national policy frameworks for sending and receiving MCMs from and to international partners during Public Health Emergencies

One of the principal ways governments are trying to counter similar threats is by signing on and actively participating in building capabilities outlined in International Health Regulations (IHR) and acquiring and stockpiling a panoply of 'medical countermeasures'.

Medical countermeasures are regulated life-saving medicines and medical supplies that can be used to diagnose, prevent, protect from, or treat conditions associated with chemical, biological, radiological, or nuclear threats, emerging infectious diseases, or a natural disaster. These are used to prevent, detect and respond to events associated with above mentioned threats and diseases.

The MCM interventions include ventilators, diagnostics, personal protective equipment (PPE), and patient decontamination supplies; which are critical to preventing, mitigating, or treating the adverse health effects of a public health emergency.

This document establishes the national Medical Countermeasures (MCM) Plan for Public Health Emergencies. The plan is an operational approach to addressing incidents created by the threat or the occurrence of any type of public health emergency that requires distributing MCMs to an affected population.

The plan describes the framework that will allow the One-Health stakeholders to respond to these incidents by identifying the expected responsibilities, functions, operational procedures, and working relationships for MDAs and development partners during the deployment of MCMs. The plan predetermines, to the extent possible, the duties and activities of public health personnel and operations, with the ultimate purpose of protecting the life, health, and well-being of Ugandans.

This plan is not an overall response plan to address all public health crisis needs; rather, its focus is on MCM supply chain operations, with the aim of putting a system in place for activating and coordinating medical counter-measures during a public health emergency in accordance to national and international standards.

Medical countermeasures are regulated life-saving medicines and medical supplies that can be used to diagnose, prevent, protect from, or treat conditions associated with chemical, biological, radiological, or nuclear threats, emerging infectious diseases, or a natural disaster.

1.1.1 Purpose

The purpose of this plan is to provide the operational framework for the Government of Uganda (GoU) to coordinate the forecasting, quantification, procurement, storage, and deployment of devices, biological products drugs and chemicals that are responsive to public health emergency threats. This plan is necessary to assist the MDAs , and districts in implementing effective preparedness, prevention, detection, response, to and recovery mechanisms for public health emergencies that could overwhelm normal medical countermeasure capabilities.

1.1.2. Objectives

The objectives of this plan are:

General objective: Strengthen national MCM supply chain framework for sustainable availability, accessibility, and utilization of medical countermeasures during PHEs.

Specific objectives are:

1. Provide guidance for the different sectors to manage MCMs during PHEs.

2.Strengthen regional, national and international collaboration for the acquisition and deployment/distribution of MCMs during PHEs.

3. Provide the coordination framework for the MCM supply chain for PHEs.

4. Strengthen deployment of human resources for PHEs.

5. Strengthen sample transportation and case referral during PHEs.

1.1.3. Scope

This plan covers diseases of epidemic, pandemic and other events of public health importance that would require an increase in either the quantity of MCMs or the speed with which they would need to be integrated into the response.

The plan covers relevant Ministries, Departments, Agencies and development partners involved in MCM supply chain operations during preparedness and response to PHEs

1.1.4. Justification for MCM Plan

In June, 2017, Uganda volunteered to undertake a Joint External Evaluation of IHR core capacities in the 19 Technical areas.

During the assessment one of the gaps that the assessment pointed out was the lack of an MCM plan for managing PHEs.

Though Uganda has adopted the One Health approach where MDAs manage MCMs in their different sectors hence the need for an MCM plan to harmonize MCM management in all the sectors.

The regular supply chain is designed to deliver MCMs requested by different users per a predetermined schedule.

However, this regular supply chain is inadequate to meet the demand during PHEs. The MCM plan will provide a mechanism to ensure that all sectors have adequate MCMs and personnel to be deployed during the PHEs.

1.1.5. Planning Assumptions and Enabling Legal Framework

1.1.5.1. Planning Assumptions

In preparation for and response to PHEs, the national mechanisms and institutions should execute their functions to fulfill the specific requirements of the emergency system, as follows:

1. The Government of Uganda and its development partners provide timely funding and other resources necessary to implement the plan.

2. The National Task Force (NTF) effectively coordinates the implementation of this MCM plan.

3. The commodities for routine use are sufficient to meet the need for routine Public Health interventions and the MCM only applies to PHEs.

4. The national mechanisms and institutions of Uganda's health systems are set up to efficiently provide supplies for regular health services care. These processes shall necessarily continue during an emergency. In preparation for and response to PHEs, however, the same institutions and facilities will be deployed to deliver MCMs, with operational mechanisms and rules specific to the emergency.

5. Relevant frameworks to guide cross-border movement of MCMs if and when the need arises

1.1.5.2. Enabling Legal Framework

A summary of the legal framework upholding the MCM supply chain activities is as follows:

1. The Constitution of Uganda, Article 20 states that the GoU shall take all practical measures to ensure the provision of basic medical services to the population.

2. The Third National Development Plan 2020/21- 2024/25 - guides on the provision of improved access to and utilization of health services and multi-sectoral collaboration to prevention of diseases to ensure a healthy workforce.

3. The Public Health Act Chapter 281- Consolidates the law regarding preservation of public health and guidance for authorities to notify and enforce precautions against epidemic-prone diseases.

4. The Public Procurement and Disposal of Public Assets Act 2014, as amended, considers the special nature of procurement of medicines and medical supplies. The Act is mandated to regulate procurement and disposal of public assets.

5. National Policy for Disaster Preparedness and Management (2010) mandates the Office of the Prime Minister (OPM) to coordinate all disaster responses in Uganda. The line ministries will coordinate responses to respective disasters as mandated by the National Policy for Disaster Preparedness and Management (2010) and the Health Sector Strategic Plan III (2010/11– 2014/15).

6. The One Health Framework institutes a formal collaboration between the primary response Ministries, Departments, and Agencies (MDAs) and implementing partners. The framework streamlines planning and implementation of the One-Health approach for prevention and control of zoonotic diseases and other public health threats in Uganda.

7. Statutory Instrument No. 34 from 2014 – the national drug policy and authority (importation and exportation of drugs) regulations which streamline the importation and export of medical products, including importation of drugs for donation (PART III).

8. Safety and Occupation is regulated by Act 9 2006 – offer provisions for the healthcare worker's safety and wellbeing.

9. Act 7, Immunization Act 2017 – regulates compulsory immunization of children and other populations, administration of vaccines in extraordinary cases, establishment of an immunization fund, protection of medical practitioners from liability, misleading information about vaccines, protection of medical practitioners against immunisable diseases, state obligations and other regulations.

1.2. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

1.2.1. Primary Response Ministries, Departments, and Agencies

The roles and responsibilities of government MDAs, and other stakeholders are listed below:

1. The Office of the Prime Minister— In charge of disaster preparedness, management and mobilization of resources from the government coffers and coordination of other MDAs involved in PHEs. Provides an early warning system on suspected PHEs.

2. Ministry of Finance, Planning and Economic Development—Responsible for allocating budgets for PHEs as well as mobilizing supplementary budgets for PHEs.

3. Ministry of Health—Responsible for the mobilization of resources such as human resource, health infrastructure, MCMs, health data and information during preparedness and response phases of PHEs. Additionally, the MoH will handle capacity development, technical support supervision to ensure effective supply chain management of MCMs. Further, the MoH coordinates the deployment of MCMs, conducts monitoring and evaluation and research in relation to PHEs in human health.

4. Ministry of Agriculture, Animal Industry and Fisheries—Responsible for identifying, declaring, and responding to public health emergencies within the animal population. For diseases of a public good, MAAIF procures, stores, and distributes veterinary medical supplies. Private good diseases, MAAIF guides on the medical supplies to be used by the farmers. The MAAIF procurement unit is charged with the procurement and distribution of supplies for PHEs response in the animal sector. It also ensures management of reverse logistics that includes excess, unused and expired items for proper redistribution and appropriate safe disposal respectively.

5. Ministry of Defense and Veteran Affairs, Uganda Peoples Defense Forces (UPDF)—Provide security and escort for logistics as guided by the NTF. To support civil authority during PHE through its MCM supply chain system as required by the NTF. UPDF will also provide surge capacity, including vehicles, fuel, and drivers.

6. Ministry of Internal Affairs: Uganda Police Force—Provides transport, security, and escort for logistics as guided by the NTF. Also provides a buffer for surge capacity with regard to logistics (transportation and warehousing) and medical support.

7. Ministry of Local Government—Coordinates and responds to PHEs in collaboration with other MDAs.

8. Ministry of Security—Responsible for investigation and analysis where there is suspected foul play, and technical support in policy analysis. They do safety and security investigation and monitoring of MCM leakages.

9. Ministry of Water and Environment—responsible for providing sound management and sustainable utilization of water and environment resources for the good of the population of Uganda.

10. Central Warehouses for MCM. The public central warehouses will be responsible for the procurement, storage and distribution of MCMs as guided by the different sectors. They will also be responsible for the management of the national strategic stockpile and reverse Logistics. The private central warehouse, as identified by the different sectors, will provide surge capacity for the procurement, storage and distribution of MCM.

Key roles are; provide and ensure availability of clean and safe water. guide on the safe disposal of the healthcare waste and other hazardous materials. Provide adequately and safely managed sanitation services. They also ensure pollution control through protection of fragile ecosystems and conflict aversion and implementation of environment and social

safeguards for sustainable development. water quality monitoring before, during and after PHEs.

Water safety and security planning. Implement sector guidelines for deployment of MCMs in PHEs. Provide early warning information on natural and human induced disasters of activities relating to water and sanitation by its directorates and agencies

11. Uganda Wildlife Authority— Responsible for surveillance activities within the wildlife sector and support MAAIF in response to PHE in the animal sector. They are responsible for detection and response to PHEs.

12. National Drug Authority—Responsible for ensuring that the population has access to safe, efficacious, and cost-effective drugs and for regulating the fast-track importation / exportation of medical supplies and medical technologies.

13. Uganda Revenue Authority— Responsible for collecting revenue on all imports and exports, so they can provide waivers for MCMs imported for PHEs, that have overwhelmed the normal supply chain operations. Responsible for clearance of MCMs during PHEs.

14. Partners—Support existing MCM supply chain mechanism relevant to preparedness and response to PHEs.

1.2.2. Regional/District Response Organizations

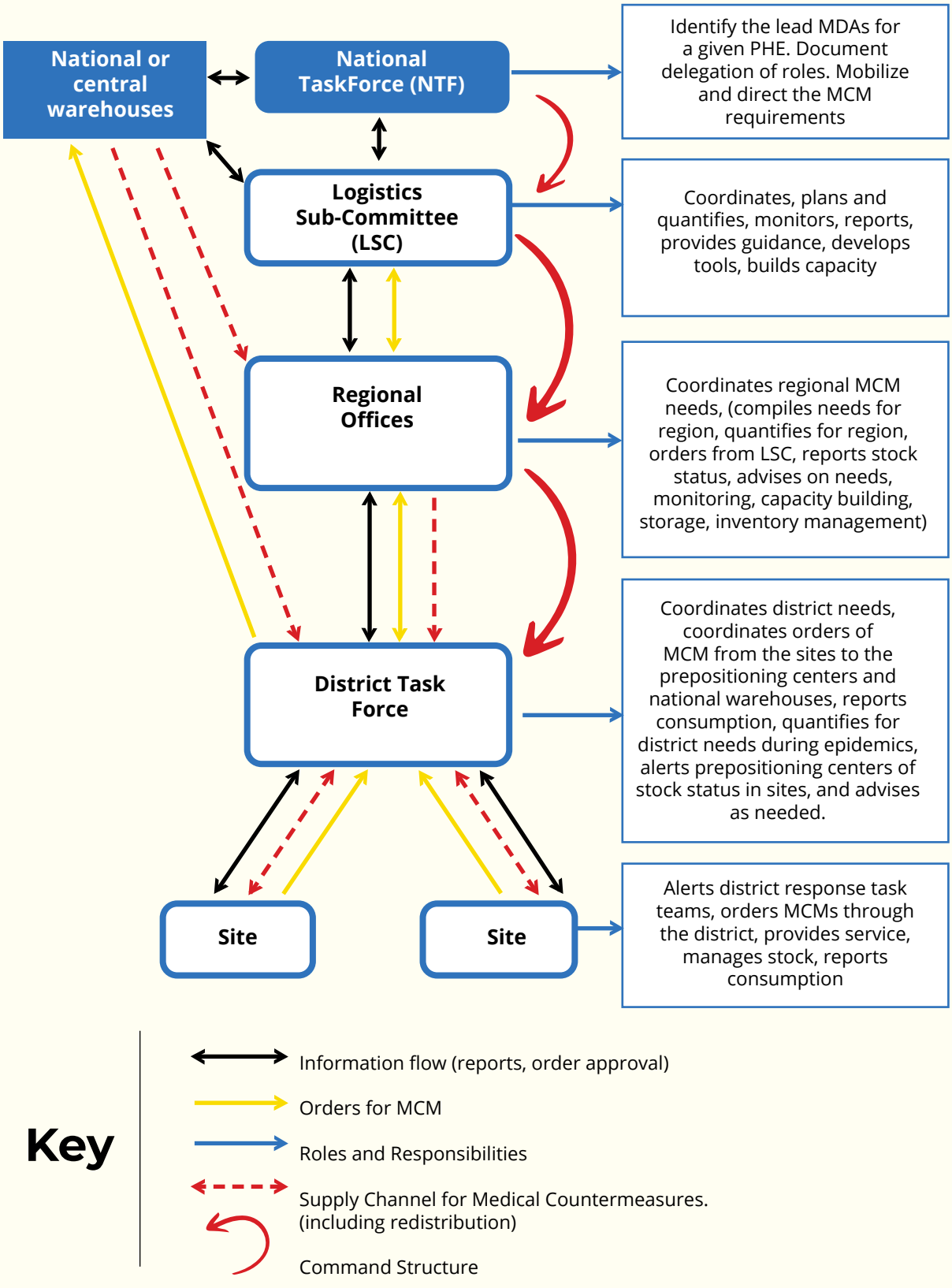
The different MDAs will work through the regional offices and local government systems to coordinate the implementation of the guidelines for deployment of MCMs. Local governments through their governance system will coordinate the site needs, order for MCMs with prepostioning centers and national warehouses, report consumption, quantify district needs during emergencies, alert prepositioning centers of stock status in sites and advise as needed.

1.2.3 Development Partners

The development partners will support the GoU with the necessary resources to respond to PHEs. The resources may include, but not limited to, technical, financial, human resource, logistics, and MCMs.

The Office of the Prime Minister oversees mobilization of resources, including funds for medical countermeasures, and coordination of all MDAs involved in preparedness and response to public health emergencies.

Figure 1: Conceptual Flow of Medical Counter Measures for Public Health Emergencies in the Ugandan Supply Chain



© Management Sciences for Health (MSH)

Veterinary officers conducting a clinical examination on a cow during field visit.

1.3. DIRECTION, CONTROL, AND COORDINATION

1.3.1. Organizational Structure for Medical Counter Measures Supply Chain in Uganda

The organizational structure for PHE supply chain coordination in Uganda is as shown in the Figure 2 below. The NTF is a multi-sectoral and multidisciplinary task force that leads and coordinates responses to PHEs. The Logistics Sub-Committee (LSC) is one of the sub-committees of the NTF. It spearheads the coordination of the logistics function.

The District LSC of the District Task Force (DTF) coordinates all logistics activities at the district level, including provision of regular reports. Positioned between the NTF and the DTFs are the regional prepositioning centres where MCMs will be positioned for preparedness and response to PHEs. At the national level, the line ministries are represented in both the NTF and LSC. At the district level, the DTF team is multi-sectoral and multidisciplinary in its composition. Where local governments do not have the storage capacity, preparedness supplies for all sectors can be prepositioned in the same location.

1.3.2. Direction

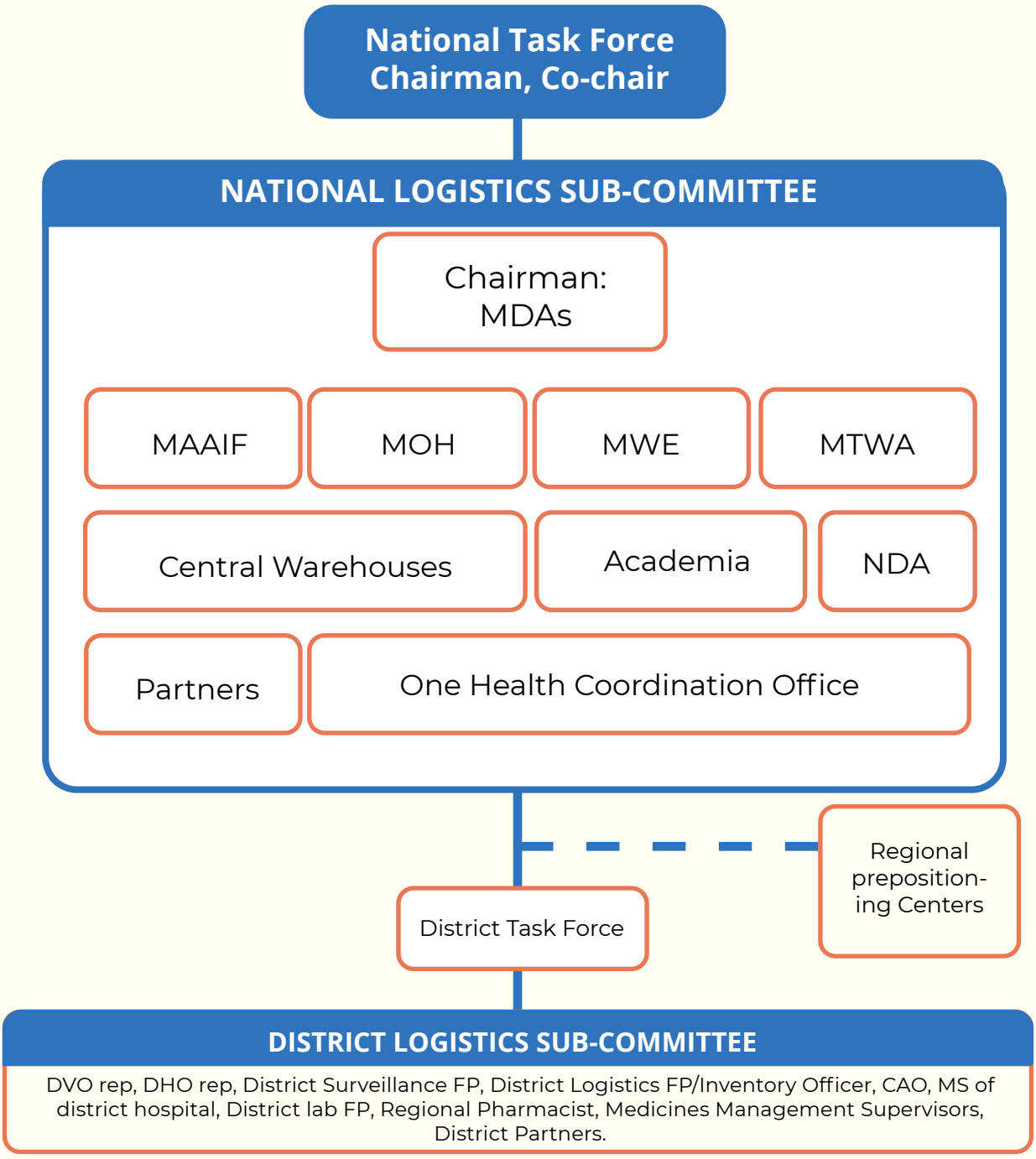
The following is a summary of the roles and responsibilities of organizations that will provide direction during a PHE:

1. The NTF will provide direction, guidance and ensure adherence to procedures for MCM supply chain operations.

2. The LSC of NTF will oversee and document the quantification, forecasting of MCMs, monitoring and tracking the flow of MCM along the supply chain.

3. District, city, and urban authorities will direct MCM supply chain operations in accordance with their jurisdictions and authorities and follow the operational intent as directed by National Task Force, Logistics Sub-Committee.

Figure 2: Organizational Structure for PHE Supply Chain Coordination in Uganda



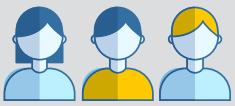
Key:

CAO: Chief Administrative Officer; FP: focal person; MAAIF: Ministry of Agriculture, Animal Industry and Fisheries; MS: Medical Superintendent; MWE: Ministry of Water and Environment; NDA: National Drug Authority; MTWA: Ministry of Tourism, Wildlife and Antiquities.

Roles and responsibilities of organizations during a PHE

The National Task Force, Logistics Sub-Committee

Provides direction, guidance and ensure adherence to procedures for MCM supply chain operations.



The LSC of NTF

Oversee and document the quantification, forecasting of MCMs, monitoring and tracking the flow of MCM along the supply chain

District, City, and Urban Authorities

Direct MCM supply chain operations in accordance with their jurisdictions and authorities and follow the operational intent as directed by NTF.

1.3.3. Control

Roles and responsibilities related to MCM control issues during a PHE are as follows:

1. The National Task Force, Logistics Sub-Committee coordinates prevention, detection, and response to large-scale PHEs including MCM supply chain operations.

2. The National Task Force, Logistics Sub-Committee authorities should use existing incident management system structures for all MCM supply chain actions. These structures, policies, and procedures are outlined in the following plans for emergency response and day-to-day operations:

a. National Multi-Hazard Preparedness and Response Plan

b. National Disaster Policy

c. PHEOC Manual Handbook

d. PHEOC standard operating procedures, including playbook.

e. National One-Health Strategic Plan

f. One-Health Framework

g. One-Health Communication Strategy

h. One-Health memorandum of understanding (MoU)

i. National guidelines, cross-functional maps of core processes, and standard operating procedures for managing the MCM supply chain during PHEs.

3. Districts and urban authorities will retain control of their existing logistics assets and use them accordingly to support MCM supply chain goals and objectives. These authorities will not control or command any national response assets operating in their area of responsibility unless agreed to by the line ministries.

1.3.4. Coordination

An effective MCM supply chain response requires coordination at every level. Coordination encompasses clear planning, communication, reporting, and efficient use of MCM assets.

At the national level, the LSC will assist the NTF to coordinate MCM supply chain activities. The LSC will develop appropriate logistics management information tools for MCMs in PHEs where needed and train and guide actors on their use. The NTF will coordinate with neighboring countries, international agencies, NGOs, OPM, districts, and inter-governmental agencies on MCM- related needs and feed the information to the LSC.

At the regional prepositioning center, the management and coordination of the MCMs will be carried out by the regional referral hospitals under the leadership of the head pharmacist (regional pharmacist).

The team will receive and process orders using the eELMIS from the districts, as stated in the guidelines for the management of essential medicines and health technologies. During the emergency response, orders for MCMs will be subject to expedited approval processes.

In the animal sector, at regional level, the head of the regional veterinary laboratories will coordinate and manage the MCMs as per the guidelines in the line ministries. In the Water and Environment sector;at the regional level, the technical lead at the decongested structure will coordinate and manage MCMs as per the guidance from the Ministry of Water and Environment.

At the district level, the Districts Health Office or the District Veterinary Office will be responsible the coordination of MCMs. They are responsible for approval of orders from sites and coordinate distribution, warehousing and reporting for the MCMs.

1.4. CONCEPT OF OPERATIONS

1.4.1. Overview

This plan will ensure that the GoU has access and availability of MCM supplies in a timely manner and in a usable condition to counteract any PHE. The NTF will identify a credible PHE, coordinate the MCM supply chain system preparedness and response and gather assets to expand the routine supply chain systems to accept an influx of large quantities of MCMs.

The NTF will also strengthen systems and procedures to manage the procurement of MCM supplies and assets. To the greatest extent possible, the NTF and district local governments will use existing supply chain management systems to support MCM operations. In case of inadequacies of MCMs, the line ministries will work closely with partners to close the gap by further strengthening the system to avoid duplication and uncoordinated efforts in the MCM supply chain during a PHE.

A health worker arranging the Logistics in one of the facilities in West Nile

To ensure success, the NTF, through the LSC will:

1. Actively plan for, monitor, detect, respond to, and recover from any indication of an impending public health threat, event, or crisis.

2. Include all responses and potential response partners in reviewing and updating this plan every five years. This includes other GoU agencies, supporting international governments, and NGOs.

3. Access and leverage resources and capabilities of all GoU MDAs, partners, and stakeholders.

4. NTF will create and execute new agreements to obtain more MCMs and other supply chain assets. Whenever necessary, NTF will use existing supply chain systems, infrastructure, authorizations, agreements, framework contracts to execute this role.

5. Advise the MDAs on the use and deployment of appropriate MCMs.

6. In conjunction with MDAs' procurement units, assess the available MCM supply storage, transportation capabilities and identify potential warehouse space if existing storage capabilities are overwhelmed. This will allow for appropriate prepositioning of MCMs for timely preparation and response to PHEs.

7. Review and update the national stockpile list to meet the needs of the target populations likely to be affected by a PHE

i. Test and practice cross-functional MCM supply chain skills

ii. Support facilities/sites to test their preparedness and response plan.

iii. Support facilities to test emergency response at the district level

iv. Build partnerships among stakeholders

v. Support LGs with copies of any MoUs or MoAs governing MCM supply chain operations under this plan

vi. Measure the performance of MCM order fulfilment during after-action reviews.

vii. Pre-define the expected performance and outcome indicators of the MCM plan.

8. Collaborate with the relevant regulatory authorities to continuously review guidelines for

fast-tracking acquisition of MCM supplies both locally and internationally, once a PHE has been noted or declared.

9. Use a structured command system to initiate and manage the flow of MCMs during PHE preparedness and response.

10. Support district administration programs to create by-laws and ordinances appropriate for MCM supply chain operations needed for an effective response.

11. Use results of after-action review reports to improve planning, resource mobilization, and management of future PHEs.

1.4.2. MCM Plan Phases

This MCM plan has four distinct phases of execution during a PHE:

1. Preparedness
2. Activation
3. Response
4. Recovery

Although the plan will deploy much of the same infrastructure, facilities, and human resources of the regular public health system, each phase in the MCM plan has its own objectives, rules, and operational information requirements.

Authorities will therefore execute this plan along all phases according to the playbook described the following sections. That notwithstanding, decision-makers selectively can activate and release MCM supply chain assets to tailor the response to situational needs.

Table 1: This table gives examples of differences between the operations of regular healthcare supply chain operations and the emergency supply. When the outbreak of infectious disease has been declared the emergency supply chain gets activated. The operations of the two differ while they share the same physical supply chain.

Operational strategies	Regular Public Supply Chain	PHE Supply chain Activation phase	PHE Supply chain Response phase
Order fulfilment	Push and pull	Push	Pull
Location of supplies	Centralized	Decentralized	Decentralized
Transport	Bi-monthly replenishments	Transport surge capacity and options triggered by declaration of outbreak	Bi-weekly replenishments
Quantification	Based the forecast and past consumption	Based on prepositioning logic	Based on forecast, past consumption, and morbidity
Items	Standard medical list, kits for lower health facilities	Priority MCMs, kits	Disease specific MCMs
Financing	Annual budget for public health	Annual MoH, MAAIF and MWE budget for PHEs preparedness	Special emergency funds and donations from partners
Approvals	Regular approval	Expedited and decentralized approvals	Expedited and decentralized approvals
Information sharing	Centralized	Decentralized	System-wide
IT system	Routine systems	Emergency systems	Emergency systems

1.4.2.1. Preparedness Phase

This phase outlines the planning actions the line ministries will carry out in advance of an event triggering a public health response, including the plan's formulation, review and development of support agreements and procedural annexes. This phase also allows the MDAs and relevant implementing partners to plan, mobilize resources, train relevant staff, and carry out regular exercises to update the MCM plan to prepare for a response requiring MCM supply chain operations.

As part of the oversight of all MCM supply chain activities, the NTF through the LSC will support the monitoring of the performance of this plan using the agreed indicators.

Preparedness phase activities include the following:

1. Review capabilities: The LSC will review and assess the current MCM supply chain capabilities in tandem with potential threats in terms of warehousing, transportation, staff, material handling equipment, etc. and will create a pre-response analysis report.

2. Negotiate agreements: Stakeholders in emergency supply chain will put in place framework contracts to fill needs (e.g., warehousing, transport, staffing, security, inventory management) identified in the resource gap document and execute memorandum of agreement (MoA) or framework contracts with other agencies, governments, jurisdictions, NGOs, and partners to support the MCM supply chain plan.

3. Expedite clearance. The NTF will collaborate with relevant authorities to expedite interagency clearance procedures and secure written agreements as to the specific waivers that will permit these procedures.

4. Assess sites: The LSC in conjunction with the Uganda Police Force, UPDF, and other security agencies, will assess potential MCM warehouse sites to ensure facilities meet minimal security requirements.

5. Ensure staff safety: The LSC will identify essential MCM supply chain responders and create a plan to provide them with safety measures and prophylaxis, if needed, and to provide advice for Uganda's priority PHEs. This will ensure the safety of staff and should also be extended also to law enforcement personnel (security, UPDF, UPF) irrespective of whether their roles are just providing security during transit, managing public order, etc. The LSC will annually review the definition and quantification of personnel essential to MCM supply chain response and adjust the prophylaxis plan as appropriate.

6. Communications plan: The NTF will establish a communications plan to help the LSC in its control of MCM supply chain operations.

7. Conduct rehearsals with all stakeholders in the PHE system: The NTF will test this plan as prescribed in the National Multi-Hazard Preparedness and Response Plan for Public Health Threats and Emergencies (2016–2020).

The design of public health preparedness and response exercises will be to:

i. Test and practise cross-functional MCM supply chain skills
ii. Support facilities/sites to test their preparedness and response plan.
iii. Support facilities to test emergency response at the district level
iv. Build partnerships among stakeholders
v. Support LGs with copies of any MoUs or MoAs governing MCM supply chain operations under this plan
vi. Measure the performance of MCM order fulfilment during after-action reviews.
vii. Pre-define the expected performance and outcome indicators of the MCM plan.

Preparedness phase implementation issues to consider include:

1. MCM procurement operations will be handled by MDAs' procurement units.

2. The LSC will review MoUs with partners who support this plan.

1.4.2.2. Activation Phase

This phase outlines how LSC will initiate MCM supply chain operations in line with the appropriate response level of the NTF

Activation phase activities include the following:

1. Identifying the PHE: Activating MCM supply chain operations begins with NTF identifying a possible, or impending major public health emergency

2. Gathering information: The NRRT will collect information about the PHE and provide a situational report to the NTF.

3. Making activation decision: The LSC will activate the MCM supply chain.

4. Notify MCM supply chain: The NTF will direct activation of central warehouses as needed to meet the situation.

5. Monitor situation: NTF will collaborate with the District Task Force (DTF) to monitor the situation. The national LSC will periodically inform the NTF on the status of resources and capabilities.

> As part of the oversight of all MCM supply chain activities, the NTF through the LSC will support the monitoring of the performance of this plan using the agreed indicators.

Implementation of activities during the activation phase:

1. An incident manager appointed at the NTF will serve as the focal point for coordinating response activities and the NTF contact for the LSC.

2. The LSC will develop an initial incident-specific MCM requirement list for immediate deployment. The MDAs' procurement units will work with the LSC and the prepositioning centres to deploy MCMs and to conduct the MCM gap analysis that will guide requistions.

3. The LSC with clear terms of reference will assess the functionality of MCM supply chain systems.

4. Respective RDCs will coordinate all district security agencies for the MCM supply chain during PHEs.

5. The NTF will track and document response resources until the end of the post recovery phase.

1.4.2.3. Response Phase

The following list outlines how authorities will conduct MCM supply chain activities in the response phase:

1. Manage MCM supply chain: The appropriate MDAs will support the distribution of MCMs under the provisions of this plan as directed by the NTF and coordinated by the LSC.

2. Procure and receive MCMs: All agencies involved in MCM procurement through direct purchase or donations will coordinate with the LSC.

3. Distribute MCMs: The NTF will direct the distribution of MCMs to meet the crisis needs; the LSC will oversee the distribution of MCMs through the supply chain; prepositioning centers will hold stocks for preparedness and ensure supplies are replenished to support a PHE response, and the District Rapid Response Team (DRRT) will coordinate with the prepositioning centers and partners when needed to supply the sites with appropriate MCMs for specific PHEs. All the levels will in turn provide supply chain information back to the NTF.

Issues to consider during the response phase are as follows:

1. Facilities/sites/entities requesting additional MCMs will send requests to the incident manager. The LSC will coordinate, monitor, and track MCM flow from the central level warehouses and the prepositioning centers and ensure that appropriate feedback from action sites is provided for further planning. Specifically, the LSC will develop operational procedures to manage MCMs during preparedness and response as well as establish a dedicated information system that will facilitate the functionality of MCM supply chain activities, such as routine stock management, order filling, and consumption estimation, while communicating with requesting organizations on their request status.

2. The NTF in collaboration with MDAs and partners to address the MCM surge for warehouse site(s) and/or transport and other relevant assets.

1.4.2.3.1. Stockpiling and Prepositioning Medical Countermeasures

Stockpiling is a mechanism of managing MCMs for purposes of continuous preparedness for PHE to enable quick response. The list of MCMs to be stockpiled will be determined and updated basing on the following criteria:

The list of supplies currently considered for MDAs stockpiling is in Appendix IV

The stockpiled MCMs shall be prepositioned and managed separately from regular supplies to:

i. Decrease approval and total response time (time to initiate dispensing) in a PHE
ii. Increase access to MCMs in a PHE
iii. Decrease the burden on existing mechanisms for dispensing MCMs.
iv. Avert the shrinkage of MCMs and emergency assets through diversion to regular PH needs.

MDAs and their partners may use a mix of prepositioning strategies including: no prepositioning at all, advance deployment, and caching/hoarding at user facilities.

1.4.2.3.2. MCMs Warehouse Operations in Response Phase

MDAs' warehouse operations involve receiving, organizing, storing, staging, and shipping MCMs. These should be stored separately from regular Public Health (PH) items. Unless otherwise directed, these warehouses will apply expedited approval and dispatch processes for the MCMs as specified by the PHE processes. For regular PH operations, they should use their normal warehouse operations systems, and procedures to execute their routine activities in parallel to the emergency response.

1.4.2.3.3. MCM Allocation and Distribution Plan

Under the preparedness mode, MCMs will only be housed at central warehouses and regional prepositioning centers. Following PHE confirmation, the following will be the roles and responsibilities:

1. The respective sites will develop a requisition of MCMs required through the DTF.

2. The LSC will review the requisitions and then will allocate MCMs.

1.4.2.3.4. National Medical Countermeasures and Health Personnel Deployment Plan

The quantities of MCMs allocated by the LSC will be determined by using information relating to the:

a. Projected number of people affected by the PHE.

b. Number of symptomatic patients at hospitals, clinics, and health posts

c. Number of persons reporting to dispensing sites

d. Shipping priority, taking into account critical needs, distance, and time to dispensing sites and the number and the type of transportation available Projected number of animals affected, dead, or exposed in case of a zoonotic disease

f. Projected geographical area affected by the PHE

3. The LSC will coordinate with the regional offices to ensure MCM deliveries to end users.

4. The LSC will develop, operationalize and maintain an electronic inventory management and reporting system to support the management of MCM supply chain operations.

1.4.2.3.5. Distribution of specialized items during PHEs

The distribution of specialized items will be carried out by the central warehouse while adhering to the national and international SOPs and guidelines for handling such MCMs. The specialized items include vaccines, specialized laboratory technologies, medical equipment and some medical waste as guided by the NTF.

The regional offices will therefore not hold cold chain items and items requiring special transportation and storage services unless infrastructure that will support the transportation and warehousing of such MCMs are available in the region.

1.4.2.3.6. MCM Distribution Operations in Response Phase

Successful MCM supply chains require distribution efficiency as illustrated in the steps below:

1. The MDAs' procurement units will use, to the extent possible, existing distribution assets to move MCMs to the regional offices around the country.

2. These procurement units will coordinate with other partners for additional transportation support, in accordance with existing framework agreements.

3. As a contingency measure, MDA procurement units will coordinate with the NTF and the DTF to obtain alternative transportation, if primary transportation means are not sufficient and available.

4. The distributors and recipients of MCM material will be adequately trained on personal protection and code of conduct while serving during a PHE and will follow normal receiving and reporting procedures plus any modifications as outlined in the guidelines for managing MCMs for PHEs in the different line ministries.

1.4.2.4. Recovery Phase

Part of recovery is managing the MCM supply chain operations to the point where routine logistics can meet emergency supply needs. These steps summarize roles and responsibilities in the recovery phase:

1. Notify stakeholders: The NTF will notify stakeholders and partners of timelines and actions to end MCM supply chain operations.

2. Generate a demobilization plan: The NTF in collaboration with stakeholders will develop a demobilization plan.

3. Manage unused material: Upon receipt of the MCMs inventory, the NTF will direct the LSC to manage unused MCMs.

4. Submit report: The MCM warehouse manager(s) will submit final reports to the NTF through the LSC.

5. Prepare after-action review: The LSC will prepare and submit an after-action review draft to the NTF. The incident management team will utilize the draft to prepare and submit a comprehensive after-action review report for consideration by the NTF.

A field officer checks the functionality of a borehole to ensure safe and clean water in Northern Uganda

© Ministry of Water and Environment (MWE)

6. Make corrections: The incident management team will work through the NTF to convene a meeting to prioritize items on the correct action plan matrix and formulate a plan to make corrections as needed.

1.5. COMMUNICATIONS AND REPORTING

1.5.1. Communication

Procedures related to communication follow:

1. The LSC will establish procedures for effective communication including but not limited to:

a. A clear and concise description of the situation related to the MCM supply chain.

b. Any results of specimen testing or epi-demiological investigation

c. Information on decisions already made regarding event response.

d. Information on availability of MCMs at national, regional offices, and district levels (if needed).

2. Unless otherwise directed by the NTF, government authorities, regional and district jurisdictions will maintain their normal communications channels with subordinate and adjoining jurisdictions.

3. MDAs in collaboration with the OPM are responsible for official media communications and for approving any public health messages concerning the response or overall situation. Districts and urban authorities will coordinate any information releases.

1.5.2. Reporting

Reporting-related information on MCM supply chain management will be as follows:

1. The NTF will use an emergency logistics management system that enables coordination, recording, and tracking of PHE-related supplies procured by the Government and donations from partners. Responsible point persons in the relevant MDAs and partners that contribute MCM supplies will be able to access the status of the supplies they have donated or provided as well as status on total available stocks across the country at any time before, during, and after an emergency has occurred.

2. The NTF will set reporting guidelines, procedures, and timelines. In general, each jurisdiction will report the information below to the next higher jurisdiction:

a). MCMs situation report from the DTF or appropriate authority

b). Number of affected persons and animals (actual or estimated)

c). Number of new deaths or illnesses attributed to declared event since last reporting period

d). Number of districts under quarantine

e). Number of persons hospitalized.

f). Quantity of supplies used/distributed since the last situation report

g). Anticipated supply needs for next 10 days

h). Estimated area covered by the PHE

h) Name of person making or approving the report and contact phone numbers and email addresses.

3. NTF through the relevant authority will regularly update the general public on public health crisis situation.

1.5.3. Tactical Communication Systems

Tactical communication is required among all response staff at all jurisdictional and logistics levels to control MCM supply chain operations in a PHE as follows:

1. The NTF will use existing communications systems and operational structures for directing, controlling, and reporting on MCM supply chain operations.

2. All parties must be aware that commercial

phone lines are not secure. Authorities must send classified or sensitive information by secure means.

3. The Uganda Communications Commission is the primary agency that supports the NTF's communication needs for the response. This support may include providing secure communications equipment, personnel, training, frequencies, and access to communications infrastructure.

1.6. FINANCE AND ADMINISTRATION

1.6.1. Administration

Collaborations will be sought with numerous entities in financing and management of funds deployed for MCMs, including the following:

1. Government MDAs, like the UPDF, Civil Aviation Authority, Health Policy and Advisory Committee, OPM, Ministry of Finance, Planning and Economic Development, Ministry of Internal Affairs, Ministry of Local Government, Ministry of Justice and Constitutional Affairs, NMS, National Drug Authority, Uganda National Bureau of Standards, Uganda Revenue Authority, Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Ministry of Water and Environment (MWE), Uganda Veterinary Board (UVB), Inter-governmental Authority on Development (IGAD).

2. Private entities such as Mission Aviation Fellowship, freight companies, warehouses, pharmaceutical companies, equipment providers and pharmaceutical manufacturers

3. International agencies including the World Health Organization, UNICEF, World Organization for Animal Health (OIE), Food and Agriculture Organization of the United Nations (FAO), AU-IBAR, Defence Threat Reduction Agency (DTRA), International Atomic Energy Agency (IAEA), USAID, CDC, Uganda Red Cross Society, Global Fund to Fight AIDS, Tuberculosis and Malaria, Médecins sans Frontières, UN High Commission for Refugees, International Organization for Migration, UK Department for International Development, European Union, Deutsche Gesellschaft für Internationale Zusammenar- beit, Belgische Technische Coöperatie, World Food Program, among others.

Formalizing such collaboration will involve MoUs, MoAs, and contracts as appropriate to operationalize the plan.

1.6.2. Finance

The GoU will budget for PHEs through its budgetary frameworks. The OPM will remain the overall coordination center for disaster preparedness across government agencies and sectors and will be funded to execute this role. In addition, the GoU will mobilize resources from UN agencies, implementing partners and the private sector among others through partnerships or any other mutually agreed upon mechanisms in response to PHEs. Each MDA implicated in One Health response must have an emergency quick access fund for timely response to PHEs.

1.7. REVIEW OF THE IMPLEMENTATION PLAN

The National One Health Platform stakeholders, through the NTF, will oversee five-year review of this document to ensure that the MCM supply chain plan is current and reflects the following:

- Lessons learned from previous response experiences (both exercises and actual responses)
- Accomplishments and successes of the previous year
- Research and development in PHEs
- Responses to PHEs in the last year
- Current policies on PHEs
- Strategic plans for new activities.
- Contingency plans
- Editing and updating the implementation plan document

Members of the rapid response team (RRT) during the Ebola outbreak response, Mubende district, 2022.

© Harriet Akello\Ministry of Health

SECTION TWO

EMERGENCY RESPONSE PERSONNEL DEPLOYMENT PLAN FOR OUTBREAKS OF INFECTIOUS DISEASES IN UGANDA

2.0. DEPLOYMENT OF EMERGENCY RESPONSE PERSONNEL DURING PUBLIC HEALTH EMERGENCIES IN ONE HEALTH APPROACH

2.0.1. Introduction.

A well-performing health workforce is critical in the response to any PHE. This section will describe the system for activating and coordinating health personnel during a public health emergency (PHE). It describes the processes and procedures used by the different stakeholders to ensure that the available health personnel effectively respond to any PHEs in Uganda.

The Ministry of Health will be responsible for the activation and coordination of health personnel deployed during PHEs. The role will include mobilization, recruitment and coordination, supervision, facilitation and demobilization of human resources during the preparedness and response to PHEs. The management of the health personnel deployment will take place under the guiding principles from the Ministry of Public Services (MoPS) and the Ministry of Local Government. The personnel deployed will come the MoH or districts' local government. They will be supported by the health personnel deployed from development partners supporting the response at national and subnational levels.

The four compositions of the health personnel to be deployed during public health emergencies include the rapid response team, the emergency medical services team, the case management team working in the treatment unit and the team working in the activated EOC. This proportion of health personnel is bound to change as the country moves through the four stages of response to the PHE, from the preparedness phase to the recovery phase.

2.1. Deployment of Personnel During Public Health Emergencies in the Human Health Sector

The rapid response team will comprise personnel employed in the different MDAs at national and districts levels.

The National Rapid Response Team (NRRT) will be composed of human resources from the Ministry of Health at the national and districts level. They will be supported by technical teams from the different development and implementing partners supporting the Ministry of Health in the preparedness and response to PHEs in human health. The members of the NRRT will come from the appointed incident management team, and they will include:

Coordination Subcommittee

- Chair National Task Force - Director General of Health Services
- All Commissioners health services at the MoH
- Head of National Public Health Emergency Operations Centre (NPHEOC)
- Representatives of the Health Development Partners
- Head of Uganda National Institute of Public Health (UNIPH)
- M& E personnel

Surveillance Subcommittee

- Ass. Commissioner Public Health Emergency
- Ass. Commissioner Veterinary Public Health
- Ass. Commissioner surveillance and Knowledge management
- Ass Commissioner DHI
- Senior Epidemiologists from the Ministry of Health

- In-Charge of Points of Entry Laboratory subcommittee
- Commissioner Uganda National Health Laboratory Services
- Assistance Commissioner Uganda National Health Laboratory Services
- Senior Laboratory technicians and technologists at the Ministry of Health
- Representatives of the Health Development Partners

Logistics subcommittee

- Commissioner pharmaceutical and Natural Medicine or appropriate persons appointed by the NTF
- Logistics officer
- Transport officer from Ministry of Health
- Senior or Principal Pharmacist
- A representative from the government agencies (NDA, UNBS)
- A representative from central warehouses
- A representative from the Human Resources Office
- A representative from the Health Infra-structure Division
- A representative from the Office of the Prime Minister
- Representatives from the relevant Health Development Partners

Case management subcommittee

- Commissioner Health Services: Curative services or appropriate persons appointed by the NTF
- Commissioner Health services: Emergencies services
- Assistant Commissioner Health Services: Environmental Health
- In-charge of IPC as appointed by the NTF
- Assistant Commissioner Health Services: Uganda National Expanded Program on immunization
- In-charge of Treatment unit as appointed by the NTF
- In-charge burial team as appointed by the NTF
- Representatives of the Health Development Partners

Risk communication and Community Mobilization

- Commissioner Health Services: Health Promotion
- Commissioner Health services: Community health
- In-charge community mobilization as appointed by the NTF
- Public Relation Officer of Ministry of Health
- In-charge psychosocial Support
- Representatives of the Health Development Partners

Laboratory Subcommittee

- Commissioner: Uganda National Laboratory and Diagnostic Services
- Assistant Commissioner Uganda National Laboratory Services
- Senior Laboratory Technologists and Technicians
- Immunologists
- Microbiologists
- Laboratory Technologists
- Representatives from the Health Development Partners

To enhance proper administration and service delivery during PHEs, the MoH has divided the subcommittees into pillars. Thus, the reader is encouraged to refer to the latest organogram from the Public Health Emergency Operations Center (PHEOC).

Districts level rapid response team (DRRT)

The DRRT shall comprise the team below:

- Clinician at the district (Medical Officer or Clinical Officer)-case management
- Medical Superintendent and/or In-charge of a Health center IV-Case management
- District health Educator –risk communication
- District Health Officer –coordination
- Chief administrative officer -coordination
- Districts Laboratory Focal Person – Laboratory
- Districts Surveillance Focal Person – Surveillance
- District Biostatistician –Surveillance
- Health Inspector-risk communication
- District Inventory Management officer – Logistics
- Pharmacist at the districts –Logistics

2.1.1. Composition of the health personnel deployed in the treatment unit during PHEs

The health personnel deployed during PHEs in the treatment unit will be assigned in each of the three shifts, and they will include

- Three(3) medical officers
- Six(6) nurses
- Four(4) Infection control and prevention officer (can be nurses or Clinical officers)
- One(1) personnel for psychosocial support
- Three(3) Cleaners
- Two(2) cooks

Depending on the magnitude of the response, the health personnel listed above are adequate to respond to a severe outbreak of PHE in one treatment unit. The assumption is that each regional referral hospital and Mulago national referral hospitals have a treatment unit during PHEs. That will give the country a total of 16 treatment units.

2.1.2. Composition of veterinary personnel deployed for management of animal cases

* Three (3) veterinary officers
* One district veterinary officer
* Four paraprofessionals
* Two laboratory technicians
* Two veterinary epidemiologists
* Two senior laboratory technologists
* One social worker

2.1.3. Composition of the Emergency Medical Services during PHEs

National

1. Commissioner – Overall coordinator - 1
2. Liaison officers – 2
3. National members – 10

Regional

1. Regional EMS coordinators – @1
2. Regional teams – @15

Districts

1. District teams – @5
3. Ambulance vehicle teams - @ 3

2.1.4. Composition of the Public Health Emergency Operation Centre

Once the Ministry of Health has activated the PHEOC, the following personnel will be deployed to support the response to the Emergency response. The nine staff members include;

- IT specialist (1)
- PHE coordinator (1)
- Administration and finance (1)
- Administrator for each pillar (6)

2.1.5. Deployment and remuneration of the staff

2.1.5.1 Deployment of health personnel at national level

The Ministry of Health will quantify and provide the need for more human resources to the Ministry of Public services for approval. A similar request will be submitted to districts levels through the Districts Local Government under the leadership of the District Health Officer and Chief Administrative officers.

The terms and conditions for the recruitment must highlight the purpose of the recruitment, the remuneration, roles and responsibilities of the personnel, period of employment (for those staff will be on contract or) amongst others. The terms and conditions will be developed by the Human Resources department at the national and district level.

The recruitment and management of human resources will be carried out under the Ministry of Public Service and Ministry of Local Government guidelines. The Human Resource department at the national and districts level will support the recruitment process for both government staff and seconded staff from partners who wish to have their recruitment process managed by the Taskforce.

2.1.5.2 Deployment of Health Personnel at international level

During PHEs, government sometimes requests for health expatriates to provide technical support to the NTF in different areas of operation. In such scenario, the responsible pillar is expected to submit a request for the technical support through the NTF to the office of the DIrector General Health Services (DGHS). The request must highlight the roles and responsibilies of the health expert and where necessary, the terms and condition of recruitment.

The respective pillar is expected to work with the Human resource and procurement department of MOH for local recruitment processes. For International recruitment, the DGHS will make an official request to the development partner supporting the recruitment process will be conducted by the NTF and the chair of NTF will make official request to the development partner for recruitment of Public Health experts.

The request will detail the roles, responsibilities and the terms and conditions for the recruitment. Unless stated otherwise, the partner will manage the recruitment and remuneration of the expatriates.

In the event that the Ministry of Health is required

to provide health expatriates to another country responding to PHEs, the National task force will quantify the need, identify the health personnel to be deployed and provide the details to the office of the Director General Health Services (DGHS). The terms and conditions for their recruitment and remuneration must be clearly defined.

For government employees (civil servants), this maybe be in line with the guidelines from the MoPS and health personnel to be deployed must have an official release letter duly signed by the accounting officer. For health personnel working in the private sector, they will seek approval from their employers and may get formal recommendation from the MOH.

For individuals seeking to provide technical support to other countries, the Ministry of Health or District Local Government may provide a recommendation letter where necessary.

2.1.6. Coordination and supervision of the personnel deployment

The management of the One-Health / Public Health personnel deployed will be done through the leadership of each pillar at national and subnational level. The NTF and the DTF, in collaboration with the respective human resource department, will review the performance, contracts and the activities that the health personnel deployed are supposed to do from time to time.

The MDAs, through the NTF, will continue to perform their roles, including planning, resource mobilization, budgeting, technical

support supervision, and collaboration with different stakeholders to ensure an efficient and effective healthcare delivery system during the PHE.

The districts will be responsible for the response to PHEs and management of resources provided by the central government including funding, human resources and infrastructure amongst others. They will do that in collaboration with the Ministry of Health and other MDAs.

2.1.7. Facilitation of the personnel deployed in the response

All the health personnel employed by the Government of Uganda shall receive monthly facilitation according to the guidelines from the Ministry of Public Service. The health personnel will be entitled to facilitation for meals and incidentals, which include Safari Day allowance, per diem, and other allowances as described by the Ministry of Public Service. The source of funding shall be the Government of Uganda or funding support from development partners.

2.1.8. Demobilization of the rapid response team

At the end of every preparedness or response to PHEs, the NTF will organize an After Action Review meeting to draw lessons from the activities during a PHE response. Upon completing the After Action Review meeting for each epidemic, the Rapid Response Teams will be demobilized and will wait for further activation in the next PHE. Before that, the Human resource department of the Ministry of Health, the Districts Local Government and the different development partners must ensure that all staff are fully facilitated before demobilization.

2.1.9. Operational cost and assumptions for deployment of human resources

Health personnel deployed during public health emergencies are entitled to facilitation as guided by the Ministry of Health and Ministry for Public Services. The three main operational costs for health deployment include risk allowance, field allowance (per diem and Safari Day) and cost of transport services.

Assumptions for Facilitation allowances

The Ministry of Health expects that annually, it will spend months either in the preparedness or responding to PHE. The total time spent during the preparedness or in response will be equivalent to responding to PHE countrywide for one month (for mild case scenario), three month (for moderate case scenario) and five months (for severe case scenario. The period is determined basing on the average number of months spent in the last five years to respond or preparings for PHE (excluding COVID-19 pandemic).

Risk Allowance

- All deployed staff will work for eight hours per shift every day.

- The risk payable will be graded as high (in direct contact with the cases or samples) medium (technical staff who are handling matters of response but not directly in touch with the cases and samples) and low (Ad- ministration). The high risk currently is paid 80,000/= (eighty thousand shillings) irrespective of the qualification

- The facilitation for the risk allowance will be as per Ministry of Public guideline or otherwise specified Facilitation for field activities during PHEs.

- All staff who will be assigned to work 40km away from their work station will be entitled to perdiem as prescribed by the Ministry of Public Services or otherwise specified

- All staff who are assigned to work at a place less than 40km from their workstation will receive safari day allowance as prescribed by the Ministry of Public Services or otherwise specified

2.2. DEPLOYMENT OF PERSONNEL DURING PUBLIC HEALTH EMERGENCY IN THE ANIMAL HEALTH SECTOR

2.2.1. Composition of National Rapid Response Team

Coordination Subcommittee

- Minister of State for Animal Industry
- Commissioner Animal Health (CAH)
- Ass. Commissioner Veterinary Diagnostics and Epidemiology (ACDE)
- Assistant Commissioner Veterinary disease control (ACDC)
- One health focal person.

Surveillance Subcommittee

- Principal Veterinary Officer(s) (PVO epidemics, outbreak investigations, and epidemic
- Veterinary epidemiologists
- Senior Veterinary Officer(s) (SVO)
- Veterinary Inspector

Laboratory

- Ass. Commissioner Veterinary Diagnostics and Epidemiology(ACVDE)
- Principal Laboratory Technician
- Senior Laboratory Technician
- Laboratory Technicians
- Principal Veterinary Officer(s) (PVO)- Planning and Budgeting
- Logistics Officers

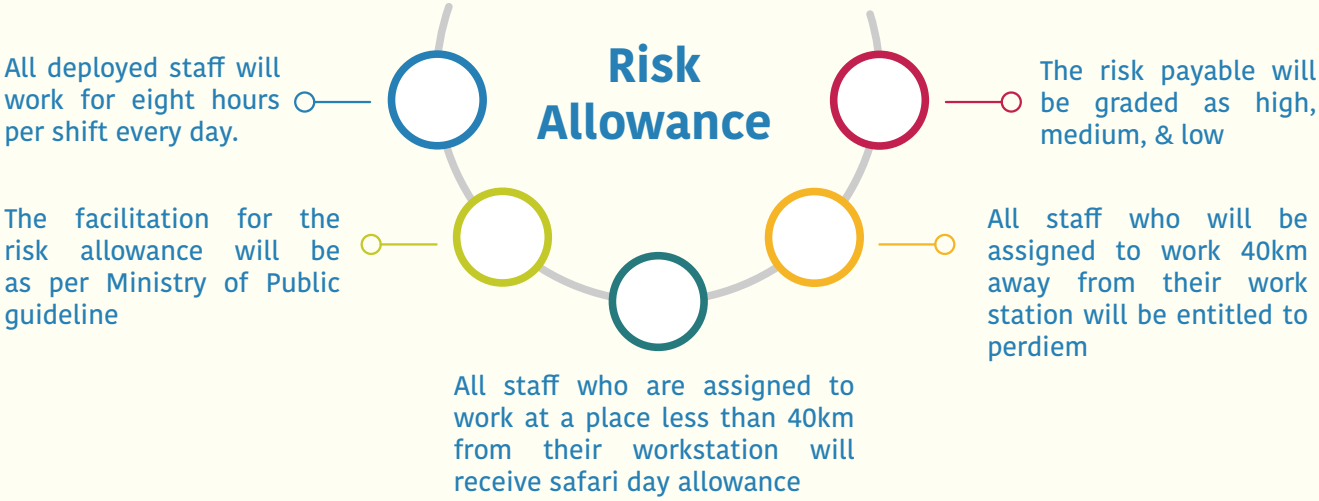
Case management

- Senior Veterinary Officer(s) (SVO)- vaccine and drugs
- Senior Veterinary Officer(s) (SVO)
- Veterinary Inspectors (VI)
- Data Entrant (DE)

Risk Communication

- Public Relations Officer -MAAIF
- Senior Veterinary Officer(s) (SVO) Communication
- Veterinary Inspector (VI)

2.2.2. Districts Rapid Response Team



- Resident District Commissioner (RDC)
- District Police Commander (DPC)
- Chief Administrative Officer (CAO)
- District Veterinary Officer (DVO)
- Senior Veterinary Officer (SVO)
- Veterinary Officer (VO)
- Data Entrant (DE)
- District Laboratory Focal Person- Veterinary sectors
- District Surveillance Focal Person – Veterinary sector
- District Biostatistician

2.2.3. Sub-County

- Veterinary Officers
- Animal Husbandry Officers
- Assistant Animal Husbandry Officers

2.2.4. Community Level

- Private veterinarians
- Assistant animal husbandry officers
- Community Animal Health Workers (common in Hard-to-reach areas like Karamoja region)

2.2.5. Monitoring & Evaluation team

The team shall be composed of M&E specialists at National and districts level

2.2.6. Recruitment and remuneration of additional staff for the response

The NTF in collaboration with MAAIF will be responsible for the rapid response to animal disease outbreaks. They are staff under MAAIF and supported by development partners like Food and Agriculture Organization (FAO) amongst others. For most animal disease outbreaks, MAAIF does not recruit additional staff to support the response.

However, if such a need arises, the Permanent Secretary (PS) - MAAIF will request such support from the Ministry of Public Service. Once approved, additional human resources can be recruited as per the terms and conditions highlighted in the request from the PS MAAIF and through the Public Service Commission or the District Service Commission.

The request for facilitation of staff during the disease outbreak and response will follow the normal process as described by the Ministry of Public Service.

© Ministry of Water and Environment (MWE)

Field officer collecting water samples for disease surveillance

A veterinary officer collecting samples for Influenza virus (Bird flu)

© FAO\Agatha Ayebazibw

2.3 DEPLOYMENT OF PERSONNEL DURING PUBLIC HEALTH EMERGENCY IN THE WATER AND ENVIRONMENT SECTOR

2.3.1 Composition of National Rapid Response Team

Coordination subcommittee

- Minister of Water and Environment
- Permanent Secretary
- Commissioner water and environment liaison
- Commissioner water quality
- Commissioner Urban water and sewerage services
- Commissioner Environment sector support services
- On- Health Focal Person

Surveillance Subcommittee

- Assistant commissioner water and Environment liaison (M&E)
- Principal Environment Officer (s)
- Principal Water Officer(s)
- Principal Environment Health Officer (s)
- Monitoring and Evaluation Officer

Laboratory

- Ass. Commissioner Lab
- Principal Water Analyst
- Senior Water Analyst
- Water Analysts
- Logistics
- Principal Procument officer
- Logistics Officers

Site management

- Senior Water Analyst(s)
- Senior Environment Officer(s) (SEO)
- Senior Environmental Health Officers
- Senior Water engineers
- Officers
- Data Entrant (DE)

Risk Communication

- Public Relation Officer -MWE
- Senior Communication Officer(s) (SCO)

2.3.2. Regional level response team

- Manager Water facility
- Team leader water management zone
- Team leader Environment Affairs
- Manager Water Umbrella
- Senior officer (s)
- Regional Laboratory Focal Person-Water
- Procurement officer
- Statistician

2.3.3. District level response

- Resident District Commissioners (RDC)
- District Police Commander (DPC)
- Chief Administrative Officer (CAO)
- District Water Officer (DWO)
- District Environment Officer (SEO)
- District Community Development Officer (DCDO)

2.3.4. Recruitment and remuneration of additional personnel for the response

The NRRT will be responsible for the rapid response to water and environment related naturally and human induced catastrophes. However, in case need arises, outsourcing through short term contracts shall be communicated.

The remuneration package will be in line with prevailing public service standing orders.

Members of the rapid response team (RRT) set out to collect samples during the Ebola outbreak response, Mubende district, 2022

© Harriet Akello\Ministry of Health

SECTION
TWO

IMPLEMENTING CASE MANAGEMENT PROCEDURES FOR INTERNATIONAL HEALTH REGULATIONS (IHR) RELEVANT HAZARDS

3.1. MANAGEMENT OF PATIENTS' REFERRAL DURING PUBLIC HEALTH EMERGENCIES

3.1.1. Introduction

Public health emergencies require specialized vehicles for the transportation of patients with the provision of care. These transport services include road, water and air ambulances depending on the category of PHE.

Epidemic and pandemic diseases require a functional, well-coordinated and timely emergency medical response for suspected and confirmed cases. An adequate response to patients during PHEs requires a system that responds to three (3) levels, including response at the scene where the suspected PHE patient is taken care of during transportation in standard purposed ambulances, and standard care at the health facility level.

The GoU had already embarked on improving the Emergency Medical Systems as laid out in the National EMS Strategy and Policy. The country has embarked on:

1. Setting up ambulance calls and dispatch centres with a universal code access number. The country currently has 14 of these centres

2. Procurement of ambulances (type B and type C) to be distributed across the fourteen (14) health regions of Uganda with the placement site as county or constituency i.e. 1:100,000 people. The current national target is 460 ambulances, of which 430 will be type B and thirty (30) type C

3. Setting up a triage system at emergency units at the health facility level.

3.1.2. How to coordinate patients referral during PHE

During the preparedness and response stage of any PHE, the trained first responders can initiate the process of patient's or suspect's transfer to the nearest facility for professional assessment and decision-making. The first responders can initiate the ambulance vehicle response through a call and dispatch system. The ambulance vehicle can also be activated by the attending health worker for intra-facility or inter-facility transfers. This transfer process must follow the SOP and guidelines as highlighted by the case management team depending on the type of PHE

Trained professional staff are required in the ambulances and at the emergency units at the health facility. The national target for EMS staff who are required in case of a national epidemic response stands at one thousand twenty five (1025). The health personnel include call and dispatch staff, ambulance crews, emergency physicians and medical officers. One type B ambulance is staffed with an ambulance driver and an emergency medical technician, while type C is staffed with an ambulance driver, an emergency medical technician and a medical officer. The regional call and dispatch centres are coordinated by EMS medical officers.

At the moment, the country has 120 ambulance vehicles that meet the national norms and standards, giving a gap of 340 ambulances.

3.1.3. Categories of different ambulances

Type B ambulances are equipped with basic medical equipment to support life, including oxygen delivery equipment of up to 10 litres.

Type C ambulances are equipped with advanced life support equipment, including intensive care equipment that includes manual defibrillators, monitors, and transport ventilators, so they can

deliver over 20 litres of oxygen per minute. The ambulances may be modified or manufactured to minimize the cross transfer of infection for the highly infectious disease pathogens.

Type D (Advanced life support ambulance or Isolation Transport Ambulance) have a Negative Pressure capsule or a Negative Pressure Patient Cabin designed to minimize the cross transfer of infection for the highly infectious disease pathogens. The ambulances are used to respond to biological, chemical,

and radiological threats that have increased risks to first responders attending to or transporting patients that might carry these contagious ailments. The patient is placed on a stretcher and loaded in a specially designed sealed chamber, which is integrated inside an ambulance. The negative pressure cabins are equipped with an air purification system consisting of UV light and HEPA filters.

There are Two sets of access points will allow the EMS to provide treatment to the patient during transport. After transporting the patient the chamber can be removed for cleaning.

They are, however, not cost-effective for low-income countries like Uganda to afford and use. Currently, Uganda does not have such ambulances.

Table showing the national need for ambulance vehicles in Uganda Estimated need for ambulance vehicles that are activated during PHEs

SN	Area	No of Ambulance
1.	County / Constituency	355
2.	National Specialized Health Institutions	20
3.	Regional Referral Hospitals	28
4.	Water Ambulances (Lake Kyoga, Victoria, Albertine, Bunyonyi and River Nile)	15
5.	UPDF/ Uganda Police	20
6.	MoH / Disaster response/ Highway	17
7.	Air Ambulance (Albert, Central, West, North and East)	5
	Total	**460**

The Ministry of Health also operates water and air ambulance systems, especially in island areas and in other hard-to-reach places. These are unique transport services which are delivered this with the support of other MDAs.

3.1.4. Operational cost

Daily operational costs determine the functionality of an ambulance. These include PPEs, fuel, access to oxygen (refill capacity) and staff costs. Failure to get operational costs leads to disjointed response.

3.1.5. Organization structure and composition of EMS at national and subnational level

EMS is a sub-pillar under the case management Pillar. It has a national command structure, regional command structure and district response teams.

Composition:

National

1. Commissioner – Overall coordinator - 1
2. Liaison officers – 2
3. National members – 10

Regional

1. Regional EMS coordinators – @1
2. Regional teams – @15

Districts

1. District teams – @5
2. Ambulance vehicle teams - @3

The Electronic Emergency Medical Services (EEMS) system is under development, and

during public health emergencies, there is a need to mobilize the EMS team based on estimated needs at each point in time. The Emergency Healthcare Professionals scheme of service has been developed to guide in recruitment and deployment of staff.

Emergency care protocols and guidelines are required for professional patient transfer and referral.

3.2. MANAGEMENT OF ANIMAL CASES DURING PUBLIC HEALTH EMERGENCIES

3.2.1. Team formation and assigning responsibilities

The NTF in collaboration with CAH will Identify the competent veterinary personnel with practical skills in management of public health emergencies of animal origin.

Screening and testing the affected herd

It involves identifying animals with clinical signs of the outbreak, epidemiologically linking the clinical signs followed by laboratory confirmation. Samples from suspected and probable cases can be submitted to the district or regional laboratory. Referrals of samples to the National Animal Diseases Diagnostics and Epidemiological Center (NADDEC) may be if there is no testing capacity at the district and regional veterinary laboratories. This should follow the existing SOPs for animal sample collection, sample packaging, sample transportation and lab sample analysis for the outbreak of interest.

Isolation of suspected, probable and confirmed cases

Activate the operationalization of animal holding grounds/isolation centers. Create compartments for suspected cases, probable cases and confirmed cases. Identify and recruit personnel with practical skills in the management of animal isolation centers. Avail operational resources to facilitate management of animal isolation centers

Case treatment and follow-up

Set up ambulatory clinics at animal isolation centers. Ensure availability of MCMs like drugs, gloves, masks, PPE, gumboots, sanitizers etc. Identify veterinary personnel with practical skills in the treatment of zoonotics of animal origin. Ensure that there is strict case follow-up during treatment regimen and observation of withdrawal period.

Safe disposal of carcasses of dead animals

Develop and disseminate guidelines on disposing of carcasses from dead animals during a public health emergency. Carcasses can be disposed of safely by deep burying in the ground or incineration. Identify and train personnel and equip them with SOPs for safe disposal of animal carcasses during PHEs.

Destruction of animal carcasses

The NTF shall develop, standardize, operationalize and disseminate guidelines for safe disposal of carcasses that have died from a PHE with guidance from MAAIF.

Vaccination of the health herd

In most outbreak emergencies, risk-based vaccination is always considered. Therefore activation of the district and regional vaccine cold chains will ensure quick mobilization for vaccines and supply to high risk areas.

3.3. TRANSPORTATION DURING PUBLIC HEALTH EMERGENCIES.

3.3.1. Introduction

Transportation during public health emergencies is crucial for a successful operation during the response. Critical activities that require transport services include transportation of logistics, samples, patients, animal cases, and public health personnel deployed during PHEs

During preparedness and response to PHEs,

the first step in transport management requires that the logistics team identify and quantify the national need for transportation. These include fleets for logistics, referrals, samples transportation to the central laboratories, transporting personnel and other services as required during the PHE.

3.3.2. Requesting and receipt of transport services at national and districts level

The head of transport at the national and district level is responsible for the management of transport services during PHEs. They ensure that the vehicles are in good mechanical condition and are suitable to carry out the assignment. Further, the officer must ensure that the drivers have a valid driving license and are competent to drive the allocated vehicle. The transport officer in charge will also ensure that all the vehicles used during PHEs are fully insured against any foreseeable risks.

The National Task Force will be responsible for allocating the vehicles at the national and district levels. Through the chairperson of the National Taskforce, a request for transport services is placed by the respective subcommittee to the transport officer. This request should include motor vehicles, personnel, and their facilitation.

3.3.3. Procurement

The NTF will identify needs for motor vehicles to procure. The Task Force, with support from the technical team from the Ministry of Works and Transport, will define the specifications for the motor vehicle required.

The specifications together with the other relevant documents shall be submitted to the procurement section. The procurement process will then begin following the normal government process of procurement as prescribed by the Public Procurement and Disposal Act of 2003(PPDA).

3.3.4. Customs clearance of vehicles and registration of imported vehicles

All vehicle clearance will be coordinated by the NTF. The vehicles will be procured by the Ugandan Government and process of clearance and importation will be done in liaison with the Ministry of Works and Transport.

3.3.5. Re-registration of donated motor vehicles

Normally, development partners donate vehicles and other items to the MDAs for several reasons, depending on the MoUs with MDAs. These will be taken back to the URA Registry of Motor Vehicles before the vehicles are handed over to the responsible MDA.

© Ministry of Health

H.E,Gen. Y.K.Museveni flagging off ambulances to support emergency water transport during Public Health Emergence.


© Ministry of Water and Environment (MWE)

APPENDICES

APPENDIX I: MONITORING AND EVALUATION (M & E)

During the development of the sectoral implementation plans for the National Medical Countermeasures Plan for Public Health Emergencies, each sector will be responsible for developing a monitoring and evaluation (M&E) plan to check the progress of related activities. The sectors shall develop key indicators to monitor progress. The different sectors may agree on common indicators to monitor progress with the implementation of the National Medical Countermeasures Plan for Public Health Emergencies.

The inputs during PHE response include human resource, finance, MCMs and other logistics, and infrastructure.

An evaluation of the activities should be done at the end of the response during the After-Action Review (AAR) meeting and the report is shared. The task force can also monitor and evaluate the interventions to check its effectiveness e.g., MCMs handling and storage, supply chain management, human resources deployment, and transportation services.

Other aspects to monitor include access and availability of services during a PHE and development of action plans for use to improve future responses to PHEs. This can be done using tools that are developed by different sectors during the response.

APPENDIX II: COMMODITIES FOR USE DURING RESPONSE TO PHEs IN THE HUMAN HEALTH SECTOR

* **"yes"** - commodity relevant for the respective disease | * **" No"** - commodity not relevant to the respective disease.

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
1	Examination gloves	Gloves,exam,la-tex,pwdfree/ni-trile, large small, medium.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Mask, surgical, flat rectangular with folds	Mask, surgical, typeII R tiestrap	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
3	Surgical N95 res-pirator	Mask,N95, test kit	No	Yes	Yes.	No	No	Yes	No	No	Yes	Yes
4	Nose Mask (Air pu-rifying respirator)	Against Nerve agents, blister-ing agents and chocking agents	No	No	No	No	No	No	No	No	No	Yes
5	Coveralls, fluid-re-sistant, disposable, with elastic wrists, ankles and hood	Coverall, protec-tion, CatIII,type 4b,M; XL; L;	No	Yes	Yes	No	No	No	No	No	Yes	Yes
		Coverall, protec-tion, CatIII,Type 3b,L; XL; M;	No	Yes	Yes	No	No	No	No	No	Yes	Yes
		Coverall, type 6b+apron, disp, co-pack, XL; L;	No	Yes	Yes	No	No	No	No	No	Yes	Yes
		Coverall, protec-tion, Category III, type 6b, size M;L	No	Yes	Yes	No	No	No	No	No	Yes	Yes
6	CBRN Semi-Per-meable filtering protective suit	Tyvek or Sara-toga	No	No	No	No	No	No	No	No	No	Yes

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
7	Personal Protective Radiation Dosimeters (RADEYEG-10)	Protection against ionizing radiation, detection of dirty bombs and artificial fissile material	No	No	No	No	No	No	No	No	No	Yes
8	Hood	Hood protection CatIII	No	Yes	Yes	No	No	No	No	No	Yes	Yes
9	Gown, fluid-resistant, disposable, with elastic wrists	Gown, fluid resistant, disposable, with elastic wrists	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
	Face shield, fog-resistant, full Face-length;	Faceshield,-fog-resistant, full Face-length;	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes
10	Protective Goggles	Goggles, protective	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes
11	Scrubs, tops/pants	Scrubs, tops/pants	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
12	Aprons, disposable	Apron, protection, plastic, disposable	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
	Aprons, heavy-duty, reusable	*HE Apron, protection,plastic, reusable	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
11	Gloves, heavy-duty	Gloves,exam,latex,w/o pwdr	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
12	Boots, rubber	Boots, rubber/ PVC, reusable, pair; size42 1; size43 2; size44 2	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
13	Compress gauze	Compress, gauze, anti-sep-tic, 6x3cm, box.	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
14	Compress gauze	Compress, gauze, 10x10cm, non-sterile	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
15	Compress gauze	Compress, gauze, 10x10cm, sterile	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
16	Cotton wool	Cotton wool,500g,roll,	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	Gauze bandage	Ban-dage,gauze,5c-mx5m,roll; Bandage,gauze 8cmx4m,roll	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	Safety box / sharps container (must be labelled 'Bio-hazard')	Container, sharps, leak-proof plastic,4L	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Disinfection Con-sumables / Bio-hazardous Waste Management											
19	Alcohol-based hand rub	Alcohol-based hand rub 60-100ml; 1 litre	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	NaDCC granules (kg)	NaDCC,Chlorine Granules 56%, 1/2kg;	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
21		Chlorine, NaDCC 55%, Granules,25 kg, 40kg, 5kg	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
22	NaDCC tablets	Water purif. (NaDCC) tabs 8.5 mg; 33mg; 67mg; 1.67g 167mg	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
23	Bag, disposable for biohazardous waste (PPE and clinical waste without sharps)	Bag, biohazard, 20L, 6-10 L	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24	Body bags (suit-able for burial or cremation)	Body bag,in-fection con-trol,child; adult;	Yes	Yes	Yes	No	No	Yes	No	No	Yes	Yes
25	Ethanol	Ethanol, dena-turised, 95%	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26	Soap	Soap, toilet, bar, ap-prox .600g; 800g; 1kg,wrapped	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27	Cadaver bag (Ani-mal carcases)		No	No	No	No	No	No	Yes	No	Yes	No
28	Mop with handle		Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
29	Waste segregation bins		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
30	Sodium hypochlo-rite (Jik)	Sodium Hypo-chrorite 5 litres	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
31	CBRN decon/detox wheelable trailer with standard accessories	For rapid decon-tamination and detoxification of people, equip-ment, vehicles, terrain, build-ings, aircrafts, etc.	No	No	No	No	No	No	No	No	Yes	Yes

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
32	BX 24 DECON-TAMINANT/DE-TOXICANT solution	The only chem-ical compound used to de-contaminate and detoxify all CBRN danger-ous agents	No	No	No	No	No	No	No	No	Yes	Yes
Vector Control (new denomination – removed Support Material Consumables)												
33	Bed nets	LLIN,110-150d,w/b/g,180x160x-150cm LxWxH; LLIN,110-150d,w/b/g,190x180x-150cm LxWxH; LLIN,110-150d,w/b/g,alt.dimen-sions LxWxH; LLIN 110-150d,w/b/g,1050x220cm CxH; LLIN,75-100d,w/b/g,180x160x150cm LxWxH; LLIN,75-100d,w/b/g,190x180x150cm LxWxH; LLIN,75-100d,w/b/g,alt.dimensions LxWxH; LLIN 75-100d,w/b/g,1050x220cm CxH	No	No	No	No	Yes	No	No	Yes	No	Yes
34	Insecticide spray-ing		No	No	Yes	No	Yes	Yes	No	No	No	No
	Drugs and Medical Consumables											

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
(merged two families; Drugs and Medical Consumables)												
35	Infusion giving set	Infusion giv-ing set,w/bu-rette,ster,s.u.; Infusion giving set,sterile,s.u.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
36	Infusion (Ringer's lactate – litre)	Sod.lactat.comp. inj 500ml	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
37	Oral Rehydration Salts (ORS)	ORS low osm. 20.5g/1L	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
38	Rabies Vaccine (Human)		No	No	No	No	No	No	Yes	No	No	No
39	Rabies Vaccine (Animal)		No	No	No	No	No	No	No	No	No	No
40	Rabies Antiserum		No	No	No	No	No	No	No	No	No	No
41	Azithromycin pow-der for suspension	Azithromy-cin pdr/or s 200mg/5ml/ BOT-30ml;	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
42	Doxycycline single dose 100mg	Doxycycline 100mg tabs	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
43	Glucose 5%, injec-tion solution	Glucose inj 5% 500ml	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
44	Glucose 50%, injection solution (hypertonic)	Glucose hyper-ton.inj 50% 50mL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
45	Paracetamol	Paracetamol 125mg/5ml or.liq/ BTL-60ml; Parac-etamol disp. tabs/PAC-100, 100mg; 250mg; Paracetamol tabs/PAC-100, 500mg; 100mg	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
46	Polyvidone iodine 10%, bottle	Povidone iodine sol 10%/BOT-500ml; BOT-200ml	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
47	Potassium chlo-ride 100 mg/ml, 10 ml	Potas. chl. 10% sol. 10ml pl. amp	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
48	Zinc sulphate, dispersible tablets 20mg	Zinc 20mg tab-lets	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes
49	Cotrimaxazole tablets	Cotrimaxazole 480 mg; 960 mg tablets	No	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes
50	Diazepam, Inject-able	Diazepam inj 5mg/ml 2ml amp	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
51	Oral Diazepam	Diazepam 5mg tabs/PAC-100 pt;	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
52	Benzy penicillin		Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
53	Ciprofloxacin tablets		Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
54	Promethazine Tabs		Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
55	Erythromycin tablets		Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
56	Oseltamivir tablets		No	Yes	No	No	No	No	No	No	Yes	Yes
57	Ibuprofen tablets		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
58	Influenza Vaccine		No	Yes	No	No	No	No	No	No	No	Yes
59	Amoxicillin cap-sules		Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
60	Blood Plasma		Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
61	Prednisolone		No	Yes	Yes	Yes	No	nio	Yes	No	Yes	Yes
62	Tetanus Antitoxin		No	No	No	No	No	No	Yes	No	Yes	No
63	Ribavirin oral		No	No	No	No	No	No	No	No	Yes	No
64	Ribavirin intrave-nous formulation		No	No	No	No	No	No	No	No	Yes	No
65	Normal Saline IV		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
66	Gentamycin Injec-tion		No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
67	Chloramphenicol 500mg		No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
	Health Facilities Infrastructures and Equipment											
68	Bed,hospital,stan-dard,w/mattress;		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
69	Stretcher,foldable		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
70	Pulse oximeter,-portable,w/access		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
71	Cholera beds	Cholera beds	No	No	No	Yes	No	Yes	No	Yes	No	No

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
72	Blanket	Blanket,surviv-al,220x140cm; Blanket,fleece,-medium,ther-mal,150x200cm; Blanket synthet-ic med.thermal resistance; Blan-kets synthetic high therm resistance	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
73	Oxygen		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
74	Ventilators		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
75	Blood transfusion equipment		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
	Temperature-Con-trolled Supply Chain											
76	Cooler box, with gel packs		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Laboratory Test Equipment and Reagents											

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
77	ELISA and RT PCR Laboratory equipment and reagents	Microplate, ELISA, 96 U-well, box/50; ELISA, in-cubator, 4 plates; ELISA, washer, 8 channel; ELISA, reader, 8 chan-nel; TP,Trepoli-sa 3.0 syphilis ELISA,kit/96**; Human, ELISA syphilis test, kit/96; DENV Detect NS1 ELISA/96; Dialab, ELISA syphi-lis test, kit/96; DENV Detect IgM Capture ELI-SA, kit/96; Den-gue IgM Capture ELISA, kit/96; AiD anti-HIV 1+2 ELISA, kit/480; AiD anti-HIV 1+2 ELISA, kit/96;	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
		Panbio Dengue Early ELISA, kit/96; Panbio Dengue IgM Capture ELISA, kit/96;										

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
		Genscreen Ultra HIV Ag/ Ab ELISA,kit/96; Innotest HCV Ab IV, ELISA,kit/480; Innotest HCV Ab IV,EISA, kit/192; Genscreen Ultra HIV Ag/Ab ELISA,kit/480; Liferiver-Ebola Virus RT-PCR, Kit/25; RealStar Filovirus Screen RT-PCR Kit /96										
78	Packaging trans-port substance, class 6.2	Box,infectious sample trans-port.,UN2814, 2900	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
79	Rapid test for Zaire ebolavirus	SD Q Line Ebola Zaire Ag, kit/25; Liferiver-Ebola Virus RT-PCR, Kit/25; ReEBOV Antigen Rapid Test Kit/50	No	No	Yes	No	No	No	No	No	Yes	No
80	Swabs for buccal sample collection	Swab, cot-ton-tip, sterile tube, box/100; Swab,anti-sep-tic,6x3cm,-box/100	Yes	Yes	Yes	No	No	Yes	No	No	Yes	No
81	Vacuum Tubes, Red		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
82	Vacuum Tubes, EDTA		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
83	Serum vials(Ep-pendorf Tubes)		Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
84	Ziplock bags		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
85	Glass slide		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
86	Filter tips		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
87	Micropipettes 5-100µl		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
88	Micropipettes 50 -200µl		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
89	Micropipettes 100 -1000µl		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
90	Sterile Swabs		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
91	ChemPro 100i	For rapid de-tection and identification of toxic industrial compounds and chemical war-fare agents	No	No	No	No	No	No	No	No	No	Yes
92	ENVI Assay Gold	For detection of biological warfare agents, anthrax inclusive	No	No	No	No	No	No	No	No	Yes	No
	Medical Equip-ment											
93	Infrared ther-mometer	Infrared ther-mometer	No	No	Yes	No	No	No	Yes	No	Yes	No
94	Laryngoscope, adult, child set	Laryngoscope, adult, child, set	Yes	No	No	Yes	Yes	No	No	No	Yes	Yes
95	Neonatal/adult intensive care ventilator	Ventilator, medi-cal, adult - child, w/access	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
96	Oxygen face mask with reservoir bag, disposable	NeoNatalie Resuscitator; Resuscita-tor,hand-op-er.,adult,set	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
97	Needles	Needle, disp, ster / BOX-100, 21G; 19G; 25G; 23G; 22G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
98	Vacutainer Nee-dles		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
99	Syringes	Syringe, disp, 1ml; Syringe, disp, 5ml; Sy-ringe,disp, 1ml; Syringe, disp, 20ml; Syringe, disp, 10ml; Sy-ringe, disp, 2ml	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
100	Cannula	Cannula, IV short, ster, disp, 16G; 24G; 18G; 22G; 20G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
101	Catheter	Catheter, Foley, ster, disp, CH12; CH14; CH10; CH18; Catheter, urethral, ster, disp, CH14; CH12	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
102	Glucometer	Glucometer, electrochemical PoC 1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
103	Sphygmoma-nometer, (adult) , aneroid	Sphygmoma-nometer, (adult), aneroid	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
104	Stethoscope, bin-aural, complete	Stethoscope,bin-aural,complete	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
105	NG tubes for rehy-dration		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
106	Sprayer, hand, dis-infectant, portable, small	Sprayer, hand, disinfectant, por-table, small	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
107	Sprayer, backpack	Sprayer, com-pression type,7.4 litres; 11.35 liters	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
108	Automatic Syring-es		No	No	Yes	No	No	No	Yes	No	No	No
109	Equipment for the humane culling of birds		No	No	Yes	No	No	No	No	No	No	No
110	Bite resistant glove		No	No	No	No	No	No	Yes	No	No	No
	MAAIF/ NADDEC Specific (ELISA KIts, DNA Kits & Chemicals)											
111	Monkey An-ti-Zaire+Sudan+ Reston+ Bundi-bugyo Glycopro-teins combo IgG ELISA Kit, 96 tests, Quantitative		No	No	Yes	No	No	No	No	No	Yes	No

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
112	Brucella antibody cELISA kit		No	No	No	Yes	No	No	No	No	Yes	No
113	Rose bengal rapid kit for Brucella mellitensis		No	No	No	Yes	No	No	No	No	Yes	No
114	IIFT Crimean Congo Fever Virus Mosaic 2 (Animal)		No	No	Yes	No	No	No	No	No	Yes	No
115	Human Crime-an-Congo hemor-rhagic fever virus IgG , CCHF		No	No	Yes	No	No	No	No	No	Yes	No
116	Rabies Conjugate		No	No	No	No	No	No	Yes	No	No	No
117	RVF IgM Capture ELISA Kit a)		No	No	Yes	No	No	No	No	No	No	No
118	RVF Competition ELISA Kit b)		No	No	Yes	No	No	No	No	No	No	No
119	HPAI Test Kit (Highly pathogen-ic avian influenza) (Rapid)		No	Yes	No	No	No	No	No	No	Yes	No
120	Anthrax Test Kit (RDT)		Yes	No	No	No	No	No	No	No	Yes	No
121	Genekam Ready to use PCR kit for Crimean-Congo hemorrhagic virus Real time PCR.		No	No	Yes	No	No	No	No	No	Yes	No

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
122	QiAgen One-Step RT-PCR kit (100 reactions)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
123	QIAquick PCR purification kit		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
124	QIAmp Viral RNA mini kit		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
125	DNeasy Blood & Tissue Kit (250)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
126	Taq PCR Master mix kit		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
127	Superscript III Platinum One-Step qRT-PCR system		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
128	DNA ladder		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
129	PCR Tubes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
130	Tris-Borate EDTA Buffer		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
131	Absolute Ethanol		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
132	Absolute Metha-nol		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
133	Sodium Chloride		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
134	DNAZap and RNa-seZap wipes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
135	Disinfectant, Virkon		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No

	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Try-panos - omia-sis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
136	Hand washing facilities		Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes
137	Buckets		Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes
138	Disease Specif-ic primers and probes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
139	Insect repellants	Mosquito repel-lants, etc	No	No	No	No	Yes	No	No	No	No	No
140	Agar		No	No	No	No	No	No	No	Yes	No	No
140	Transport media (Blair)		No	No	No	No	No	No	No	Yes	No	No
141	Petri dishes		No	No	No	No	No	No	No	Yes	No	No
142	Disposable stool containers		No	No	No	No	No	No	No	Yes	No	No
143	Cholera kit		No	No	No	No	No	No	No	Yes	No	No
144	Central venous line		No	No	No	No	No	No	No	Yes	No	No
145	Brucella selective media		No	No	No	Yes	No	No	No	No	No	No
146	Vector traps		No	No	No	No	Yes	No	No	No	No	No
147	Rapid test kits for Trypanosomiasis		No	No	No	No	Yes	No	No	No	No	No
148	Chemical Warfare Agents Antidotes	Atropine, Oxim-es, Benzodiaz-epines, Sodium Thiosulfate, Sodium nitrile, hydroxocobala-mine, Physosti-gime, Naloxone	No	No	No	No	No	No	No	No	No	Yes

APPENDIX III: COMMODITIES FOR USE DURING RESPONSE TO PHEs IN THE ANIMAL HEALTH SECTOR

* **"yes"** - commodity relevant for the respective disease | **" No"** - commodity not relevant to the respective disease.

No	Item Name	Specifications	An-thrax	Zoo-notic Influen-za Virus	VHFs	Brucel-losis	Trypa-no-so-miasis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
	Personal Protective Equip-ment (PPE)											
1	Examination gloves	Gloves,exam,latex,pwdfree/nitrile, large small, medium.	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
2	Mask, surgical, flat rectan-gular with folds	Mask,surgic,typeIIR tiestrap	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes
3	Surgical N95 respirator	Mask,N95, test kit	Yes	Yes	Yes	No	No	Yes	No	No	Yes	Yes
4	Nose Mask (Air purifying respirator)	Against Nerve agents, blistering agents and chocking agents	No	No	No	No	No	No	No	No	No	Yes
5	Coveralls, fluid-resistant, disposable, with elastic wrists, ankles and hood	Coverall,protection,CatIII,type 4b,M; XL; L;	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes
		Coverall,protection,CatIII,Type 3b,L; XL; M;	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes
		Coverall, type6b+apron, disp, co-pack, XL; L;	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes
		Coverall, protection, Category III, type 6b, size M;L	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes
6	CBRN Semi-Permeable filtering protective suit	Tyvek or Saratoga	No	No	No	No	No	No	No	No	No	Yes
7	Personal Protective Radi-ation Dosimeters (RAD-EYEG-10)	Protection against ionizing radia-tion, detection of dirty bombs and artificial fissile material	No	No	No	No	No	No	No	No	No	Yes
8	Hood	Hood protection CatIII	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes

No	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Trypanosomiasis	Plague	Rabies	Cholera	Biological Attack	Chemical Attack
9	Gown, fluid-resistant, disposable, with elastic wrists	Gown, fluid resistant, disposable, with elastic wrists	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
	Full face shield	Faceshield,fog-resistant,full-Face-length;	Yes	Yes	Yes	No	No	Yes	No	No	Yes	Yes
10	Goggles	Goggles, protective	Yes	Yes	Yes	No	No	Yes	No	No	Yes	Yes
11	Scrubs, tops/pants	Scrubs, tops/pants	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes
12	Aprons, disposable	Apron,protection,plastic,disposable	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
	Aprons, heavy-duty, reusable	*HE Apron, protection, plastic, reusable	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes
11	Gloves, heavy-duty	Gloves,exam,latex,w/o pwdr	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
12	Boots, rubber	Boots,rubber/PVC,reusable,pair; size42 1; size43 2; size44 2	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
13	Compress gauze	Compress,gauze,antiseptic,6x3cm,box;	No	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
14	Compress gauze	Compress,gauze,10x10cm,non-sterile	No	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
15	Compress gauze	Compress,gauze,10x10cm,sterile	No	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
16	Cotton wool	Cotton wool,500g,roll,	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
17	Gauze bandage	Bandage,gauze,5cmx5m,roll; Bandage,gauze 8cmx4m,roll	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
18	Safety box / sharps container (must be labelled 'Biohazard')	Container, sharps, leak-proof plastic,4L	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
	Disinfection Consumables / Biohazardous Waste Management											
19	Alcohol-based hand rub	Alcohol-based hand rub 60-100ml; 1 litre	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

No	Item Name	Specifications	An-thrax	Zoo-notic Influen-za Virus	VHFs	Brucel-losis	Trypa-no-so-miasis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
20	NaDCC granules (kg)	NaDCC,Chlorine Granules 56%, 1/2kg;	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
21		Chlorine, NaDCC 55%, Granules,25 kg, 40kg, 5kg	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
22	NaDCC tablets	Water purif.(NaDCC) tabs 8.5 mg; 33mg; 67mg; 1.67g 167mg	Yes	No	No	No	No	Yes	Yes	No	Yes	Yes
23	Bag, disposable for biohaz-ardous waste (PPE and clini-cal waste without sharps)	Bag, biohazard, 20L, 6-10 L	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes
24	Body bags (suitable for burial or cremation)	Body bag,infection control,child; adult;	No	No	No	No	No	Yes	No	No	Yes	Yes
25	Ethanol	Ethanol, denaturised, 95%	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
26	Soap	Soap,toilet,bar,approx.600g; 800g; 1kg,wrapped	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes
27	Cadaver bag (Animal car-cases)		Yes	No	No	No	No	Yes	Yes	No	Yes	No
28	Mop with handle		Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
29	Waste segregation bins		Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
	F 10											
	Cetrimide 1%		Yes			Yes				Yes		
	Hydrogen peroxide			Yes	No	No	No	Yes	Yes	No	No	Yes
30	Sodium hypochlorite (Jik)	Sodium Hypochrorite 5 litres	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
31	CBRN decon/detox wheel-able trailer with standard accessories	For rapid decontamination and de-toxification of people, equipment, vehicles, terrain, buildings, aircrafts, etc.	No	No	No	No	No	No	No	No	Yes	Yes
32	BX 24 DECONTAMINANT/ DETOXICANT solution	The only chemical compound used to decontaminate and detoxify all CBRN dangerous agents	No	No	No	No	No	No	No	No	Yes	Yes
Vector Control (new denomination – removed Support Material Consumables)												

No	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Trypanosomiasis	Plague	Rabies	Cholera	Biological Attack	Chemical Attack
33	Bed nets	LLIN, 110-150d, w/b/g, 180x160x-150cm LxWxH; LLIN, 110-150d, w/b/g, 190x180x150cm LxWxH; LLIN, 110-150d,w/b/g, alt. dimensions LxWxH; LLIN 110-150d, w/b/g, 1050x220cm CxH; LLIN, 75-100d, w/b/g, 180x160x150cm LxWxH; LLIN, 75-100d, w/b/g, 190x180x-150cm LxWxH; LLIN, 75-100d, w/b/g, alt. dimensions LxWxH; LLIN 75-100d, w/b/g, 1050x220cm CxH										
	No	No	No	No	No	No	No	No	No	Yes		
34	Insecticide spraying		No	No	Yes	No	Yes	Yes	No	No	No	No
Drugs and Medical Consumables (merged two families; Drugs and Medical Consumables)												
35	Infusion giving set	Infusion giving set,w/burette,ster,s.u.; Infusion giving set,sterile,s.u.	No	No	No	No	No	No	Yes	No	Yes	Yes
36	Infusion (Ringer's lactate – litre)	Sod.lactat.comp.inj 500ml	No	No	No	No	No	No	Yes	No	Yes	Yes
37	Oral Rehydration Salts (ORS)	ORS low osm. 20.5g/1L	No	No	No	No	No	No	Yes	No	Yes	Yes
38	Rabies Vaccine (Human)	Rabivax-s	No	No	No	No	No	No	No	No	No	No
39	Rabies Vaccine (Animal)	Rabisin or R	No	No	No	No	No	No	Yes	No	No	No
40	Rabies Antiserum		No	No	No	No	No	No	No	No	No	No
41	Azithromycin powder for suspension	Azithromycin pdr/or s 200mg/5ml/BOT-30ml;	No	No	No	No	No	No	Yes	No	Yes	Yes
42	Doxycycline single dose 100mg	Doxycycline 100mg tabs	No	No	No	No	No	No	Yes	No	Yes	Yes
43	Glucose 5%, injection solution	Glucose inj 5% 500ml	No	No	No	No	No	No	Yes	No	Yes	Yes

No	Item Name	Specifications	Anthrax	Zoonotic Influenza Virus	VHFs	Brucellosis	Trypanosomiasis	Plague	Rabies	Cholera	Biological Attack	Chemical Attack
44	Glucose 50%, injection solution (hypertonic)	Glucose hyperton.inj 50% 50mL	No	No	No	No	No	No	Yes	No	Yes	Yes
45	Paracetamol	Paracetamol 125mg/5ml or.liq/BTL-60ml; Paracetamol disp. tabs/PAC-100, 100mg; 250mg; Paracetamol tabs/PAC-100, 500mg; 100mg	No	No	No	No	No	No	Yes	No	Yes	Yes
46	Polyvidone iodine 10%, bottle	Povidone iodine sol 10%/BOT-500ml; BOT-200ml	No	No	No	No	No	No	Yes	No	Yes	Yes
47	Potassium chloride 100 mg/ml, 10 ml	Potas. chl. 10% sol. 10ml pl. amp	No	No	No	No	No	No	Yes	No	Yes	Yes
48	Zinc sulphate, dispersible tablets 20mg	Zinc 20mg tablets	No	No	No	No	No	No	No	No	Yes	Yes
49	Cotrimaxazole tablets	Cotrimaxazole 480 mg; 960 mg tablets	No	No	No	No	No	No	Yes	No	No	Yes
50	Diazepam, Injectable	Diazepam inj 5mg/ml 2ml amp	No	No	No	No	No	No	Yes	No	Yes	Yes
51	Oral Diazepam	Diazepam 5mg tabs/PAC-100 pt;	No	No	No	No	No	No	Yes	No	Yes	Yes
52	Benzy penicillin		No	No	No	No	No	No	Yes	No	Yes	Yes
53	Ciprofloxacin tablets		No	No	No	No	No	No	Yes	No	Yes	Yes
54	Promethazine Tabs		No	No	No	No	No	No	Yes	No	Yes	Yes
55	Erythromycin tablets		No	No	No	No	No	No	Yes	No	Yes	Yes
56	Oseltamivir tablets		No	No	No	No	No	No	No	No	Yes	Yes
57	Ibuprofen tablets		No	No	No	No	No	No	Yes	No	Yes	Yes
58	Influenza Vaccine		No	No	No	No	No	No	No	No	No	Yes
59	Amoxicillin capsules		No	No	No	No	No	No	Yes	No	Yes	Yes
60	Blood Plasma		No	No	No	No	No	No	No	No	Yes	Yes
61	Prednisolone		No	No	No	No	No	No	Yes	No	Yes	Yes
62	Tetanus Antitoxin		No	No	No	No	No	No	Yes	No	Yes	No
63	Ribavirin oral		No	No	No	No	No	No	No	No	Yes	No
64	Ribavirin intravenous formulation		No	No	No	No	No	No	No	No	Yes	No
65	Normal Saline IV		No	No	No	No	No	No	Yes	No	Yes	Yes

No	Item Name	Specifications	An-thrax	Zoo-notic Influen-za Virus	VHFs	Brucel-losis	Trypa-no-so-miasis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
66	Gentamycin Injection		No	No	No	No	No	No	Yes	No	Yes	Yes
67	Chloramphenicol 500mg		No	No	No	No	No	No	Yes	No	Yes	Yes
	Health Facilities Infrastruc-tures and Equipment											
68	Bed,hospital,standard,w/ mattress;		No	No	No	No	No	No	Yes	No	Yes	Yes
69	Stretcher,foldable		No	No	No	No	No	No	Yes	No	Yes	Yes
70	Pulse oximeter,portable,w/ access		No	No	No	No	No	No	Yes	No	Yes	Yes
71	Cholera beds	Cholera beds	No	No	No	No	No	No	No	No	No	No
72	Blanket	Blanket, survival,220x140cm; Blanket, fleece, medium, ther-mal,150x200cm; Blanket synthetic med. thermal resistance; Blankets synthetic high therm resistance	No	No	No	No	No	No	No	No	Yes	Yes
73	Oxygen		No	No	No	No	No	No	Yes	No	Yes	Yes
74	Ventilators		No	No	No	No	No	No	Yes	No	Yes	Yes
75	Blood transfusion equip-ment		No	No	No	No	No	No	Yes	No	Yes	Yes
	Temperature-Controlled Supply Chain											
76	Cooler box, with gel packs		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
	Laboratory Test Equipment and Reagents											

No	Item Name	Specifications	An-thrax	Zoo-notic Influen-za Virus	VHFs	Brucel-losis	Trypa-no-so-miasis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
77	ELISA and RT PCR Laborato-ry equipment and reagents	Microplate, ELISA, 96 U-well, box/50; ELISA, incubator, 4 plates; ELISA, washer, 8 channel; ELISA, reader, 8 channel; TP,Trepolisa 3.0 syphilis ELISA,kit/96**; DENV Detect NS1 ELISA/96; DENV Detect IgM Capture ELISA, kit/96; Dengue IgM Capture ELISA, kit/96; AiD anti-HIV 1+2 ELISA, kit/480; AiD anti-HIV 1+2 ELISA, kit/96; Panbio Dengue Early ELISA, kit/96; Panbio Dengue IgM Capture ELISA, kit/96; Gen-screen Ultra HIV Ag/Ab ELISA,kit/96; Innotest HCV Ab IV,ELISA,kit/480; Innotest HCV Ab IV,ELISA,kit/192; Genscreen Ultra HIV Ag/Ab ELISA,kit/480; Liferiver-Ebola Virus RT-PCR, Kit/25; RealStar Filovirus Screen RT-PCR Kit /96	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
78	Packaging transport sub-stance, class 6.2	Box,infectious sample trans-port.,UN2814, 2900	Yes	Yes	Yes	Yes	Yes	Yes		No	Yes	Yes
79	Rapid test for Zaire ebola-virus	SD Q Line Ebola Zaire Ag, kit/25; Liferiver-Ebola Virus RT-PCR, Kit/25; ReEBOV Antigen Rapid Test Kit/50	No		Yes	No	No	No	No	No	Yes	No
80	Swabs for buccal sample collection	Swab, cotton-tip, sterile tube, box/100; Swab,anti-septic,6x3cm,-box/100	Yes	Yes	Yes	No	No	Yes	No	No	Yes	No
81	Vacuum Tubes, Red		No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes
82	Vacuum Tubes, EDTA		No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes
83	Serum vials(Eppendorf Tubes)		No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
84	Ziplock bags		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
85	Glass slide		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

No	Item Name	Specifications	An-thrax	Zoo-notic Influen-za Virus	VHFs	Brucel-losis	Trypa-no-so-miasis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
86	Filter tips		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
87	Micropipettes 5-100µl		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
88	Micropipettes 50 -200µl		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
89	Micropipettes 100 -1000µl		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
90	Sterile Swabs		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
91	ChemPro 100i	For rapid detection and identification of toxic industrial compounds and chemical warfare agents	No	No	No	No	No	No	No	No	No	Yes
92	ENVI Assay Gold	For detection of biological warfare agents, anthrax inclusive	No	No	No	No	No	No	No	No	Yes	No
	Medical Equipment											
93	Infrared thermometer	Infrared thermometer	No	No	No	No	No	No	Yes	No	Yes	No
94	Laryngoscope, adult, child set	Laryngoscope, adult, child, set	No	No	No	No	No	No	No	No	Yes	Yes
95	Neonatal/adult intensive care ventilator	Ventilator,medical,adult-child,w/ access	No	No	No	No	No	No	No	No	Yes	Yes
96	Oxygen face mask with reservoir bag, disposable	NeoNatalie Resuscitator; Resuscitator,hand-oper.,adult,set	No	No	No	No	No	No	No	No	Yes	Yes
97	Needles	Needle,disp,ster/BOX-100, 21G; 19G; 25G; 23G; 22G	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes
98	Vacutainer Needles		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
99	Syringes	Syringe, disp, 1ml Syringe, disp, 5ml Syringe, disp, 1ml Syringe, disp, 20ml Syringe, disp, 10ml Syringe, disp, 2ml	Yes	Yes	Yes	No	No	No	Yes	No	Yes	Yes
100	Cannula	Cannula,IV short,ster,disp,16G; 24G; 18G; 22G; 20G	No	No	Yes	No	No	No	Yes	No	Yes	Yes

No	Item Name	Specifications	An-thrax	Zoo-notic Influen-za Virus	VHFs	Brucel-losis	Trypa-no-so-miasis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
101	Catheter	Catheter,Foley,ster,disp,CH12; CH14; CH10; CH18; Catheter,ure-thral,ster,disp, CH14; CH12	No	No	Yes	No	No	No	Yes	No	Yes	Yes
102	Glucometer	Glucometer, electrochemical PoC 1	No	No	No	No	No	No	Yes	No	Yes	Yes
103	Sphygmomanometer, (adult) , aneroid	Sphygmomanometer,(adult),aner-oid	No	No	No	No	No	No	Yes	No	Yes	Yes
104	Stethoscope, binaural, complete	Stethoscope,binaural,complete	No	No	No	No	No	No	Yes	No	Yes	Yes
105	NG tubes for rehydration		No	No	No	No	No	No	Yes	No	Yes	Yes
106	Sprayer, hand, disinfectant, portable, small	Sprayer, hand, disinfectant, porta-ble, small	Yes	Yes	No	Yes	No	Yes	No	No	Yes	Yes
107	Sprayer, backpack	Sprayer,compression type,7.4 litres; 11.35 liters	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes
	Animal Equipment											
108	Automatic Syringes		No	No	No	No	No	No	Yes	No	No	No
109	Equipment for the humane culling of birds		No	Yes	No	No	No	No	No	No	No	No
110	Bite resistant glove		No	No	No	No	No	No	Yes	No	No	No
	MAAIF/ NADDEC Specif-ic (ELISA KIts, DNA Kits & Chemicals)											
111	Monkey Anti-Zaire+Sudan+ Reston+ Bundibugyo Glyco-proteins combo IgG ELISA Kit, 96 tests, Quantitative		No	No	Yes	No	No	No	No	No	Yes	No
112	Brucella antibody cELISA kit		No	No	No	Yes	No	No	No	No	Yes	No
113	Rose bengal rapid kit for Brucella Arbortus		No	No	No	Yes	No	No	No	No	Yes	No
114	Rose bengal rapid kit for Brucella mellitensis		No	No	No	Yes	No	No	No	No	Yes	No
115	Rose Bengal rapid kit		No	No	No	Yes	No	No	No	No	Yes	No
116	IIFT Crimean Congo Fever Virus Mosaic 2 (Animal)		No	No	Yes	No	No	No	No	No	Yes	No

No	Item Name	Specifications	An-thrax	Zoo-notic Influen-za Virus	VHFs	Brucel-losis	Trypa-no-so-miasis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
117	Human Crimean-Congo hemorrhagic fever virus IgG , CCHF		No	No	Yes	No	No	No	No	No	Yes	No
118	Rabies Conjugate		No	No	No	No	No	No	Yes	No	No	No
119	RVF IgM Capture ELISA Kit a)		No	No	No	No	No	No	No	No	No	No
120	RVF Competition ELISA Kit b)		No	No	No	No	No	No	No	No	No	No
121	RVF		No	No	No	No	No	No	Yes	No	No	No
122	HPAI Test Kit (Highly pathogenic avian influenza) (Rapid)		No	Yes	No	No	No	No	No	No	Yes	No
123	Anthrax Test Kit (RDT)		Yes	No	No	No	No	No	No	No	Yes	No
124	Genekam Ready to use PCR kit for Crimean-Congo hemorrhagic virus Real time PCR.		No	No	Yes	No	No	No	No	No	Yes	No
125	QiAgen One-Step RT-PCR kit (100 reactions)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
126	QIAquick PCR purification kit		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
127	QIAmp Viral RNA mini kit		No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
128	DNeasy Blood & Tissue Kit (250)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
129	Taq PCR Master mix kit		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
130	Superscript III Platinum One-Step qRT-PCR system		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
131	DNA ladder		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
132	PCR Tubes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
133	Tris-Borate EDTA Buffer		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
134	Absolute Ethanol		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No

No	Item Name	Specifications	An-thrax	Zoo-notic Influen-za Virus	VHFs	Brucel-losis	Trypa-no-so-miasis	Plague	Ra-bies	Chol-era	Bio-logical Attack	Chemical Attack
135	Absolute Methanol		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
136	Sodium Chloride		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
137	DNAZap and RNaseZap wipes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
138	Disinfectant, Virkon		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
	Others											
139	Hand washing facilities		Yes	Yes	Yes	No	No	Yes	No	No	Yes	Yes
140	Buckets		Yes	Yes	Yes	No	No	Yes	No	No	Yes	Yes
141	Disease Specific primers and probes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
142	Insect repellants	Mosquito repellants, etc	No	No	No	No	Yes	No	No	No	No	No
143	Agar		No	No	No	No	No	No	No	No	No	No
144	Transport media (Blair)		No	No	No	No	No	No	No	No	No	No
145	Petri dishes		No	No	No	No	No	No	No	No	No	No
146	Disposable stool containers		No	No	No	No	No	No	No	No	No	No
147	Cholera kit		No	No	No	No	No	No	No	No	No	No
148	Central venous line		No	No	No	No	No	No	No	No	No	No
149	Brucella selcetive media		No	No	No	Yes	No	No	No	No	No	No
150	Vector traps		No	No	No	No	Yes	No	No	No	No	No
151	Rapid test kits for Trypano-somiasis		No	No	No	No	Yes	No	No	No	No	No
152	Chemical Warfare Agents Antidotes	Atropine, Oximes, Benzodiazepines, Sodium Thiosulfate, Sodium nitrile, hydroxocobalamine, Physostigime, Naloxone	No	No	No	No	No	No	No	No	No	Yes
153	Disposable syringes	Species specific	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
154	Disposable needles	Species Specific(Pig,Cattle,Goat,-Companion animals)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
155	Specimen Carriers		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

APPENDIX IV: Commodities for use during response to PHEs in the Water and Environment Sector

Sample collection and analysis requirements		
	Specs	**Pack size**
Swabs	Amies+ Charcoal	100pcs/pack
Falcon tubes	50mls	10pcs/pack
knap sack sprayer	-	Pcs
Jik	-	5litres
Ethanol	-	20litres
Hair caps	-	Pcs
Gloves (Nitrile)	Powder free	50pairs
Biohazard bags	Red	Pcs
Autoclave bags	Red/Black (Big size)	Pcs
Pair of Scissors	-	Pcs
Cool boxes (Pharmaceutical grade)	-	Pcs
Needles and shringes	5mls	100/pc
Sharpie Parmanent Markers	Black and Blue	Pcs
Cryo boxes Plastic	Pcs	Pcs
Petri dishes 90mmx15mm	500pcs/pack	boxes
Petri dishes 15mmx150mm	240pcs/pack	boxes
Conical flask 250ml	Pcs	boxes
Conical flask 500ml	Pcs	boxes
Glass media bottles	Pcs	boxes
Small testbed brushes	Packs	packs
Disposable paper towels	24rolls/box	packs
Soap	20L/jerry can	
Soap	5 litre/jerry can	
Sodium hypochlorite	5 litresX4/box	
Alcohol	20litres/Jerry can	
Disposable paper towels	24rolls/box	
Printing paper	5 reams/box	
Analysis (Part 1: Culture)		
Slides	-	50pcs/ Pack
Blood agar base powder	-	500g
Nutrient agar	-	500g
Macconkey with CV	-	500g
XLD		500g
Brain heart infusion (BHI)		500g
Slanetz & Bartley agar powder		500g
Campylobacter Blood free agar base		500g
CCDA suppliment	Vials of 5 mls	10 vials of 5 ml/ pack
Campygene Kits		10 pcs/pack
Alminium foil		Roll
Plastic loops	10µl/ 1µl	20/pack
Identification		
Gram stains	-	Set
Applicators sticks		100 sticks/pack
Oxidase	-	50 strips/pack
3% Hydrogen Peroxide		Bottle of 100 mls
TSI Powder	-	500g
SIM Powder	-	500g
Citrate Powder	-	500g
Urea Powder	-	500g
40% Sterile Urea solution	Vials of 5mls	Vial
Bile Esculin powder	-	500g
Kovacs reagent	-	100ml
Antibiotic Susceptability Testing (AST)		
Normal saline (0.85%)	500 mls	Bottle of 100 mls
Disposable Petridishes	100*150 mm	240 pcs/pack
Sterile swabs plain	Plain	100 pcs/pack
Ampicillin (AMP)	10 µg	4 cartridges of 50 discs/pack

APPENDIX V:

TRANSPORTATION COSTS DURING PUBLIC HEALTH EMERGENCIES

Assumption 1: Where distances to be travelled are not known, the following fuel needs should be considered, for example when planning for PHE:

Type of Vehicle	**Assumption for fuel consumption**
Motorcycle	7 liters per day
Field vehicle	30 liters per day
Ambulance and sample collection vehicles	50 liters per day

*Source: Ministry of Works and Transport

Assumption 2: Where distances to be travelled are known, the following fuel needs should be considered, for example when requisitioning for facilitation for activites:

Type of vehicle	**Distance in kilometers per liter of fuel**
Motorcycle	25 kilometers/liter
Field Vehicle	7 kilometers/liter
Truck	4.4 kilometers/liter

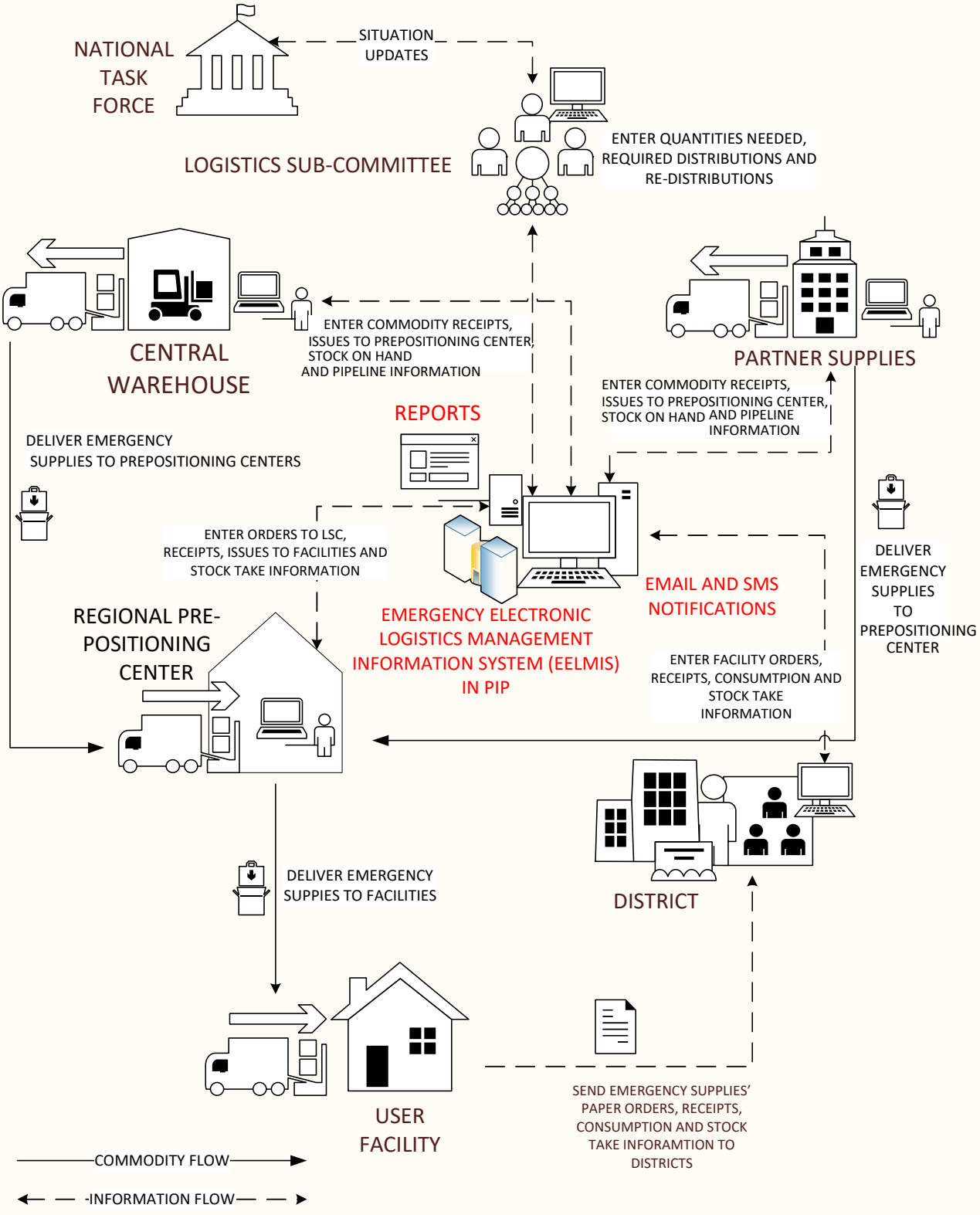
*Source: Ministry of Works and Transport

APPENDIX VI: Decision Process of Prepositioning for PHEs

Figure: Process to guide the different key line ministries in making a prepositioning decision

To inform and structure the prepositioning decision, a prepositioning decision support process has been created by MoH and the university of ETH Zurich. The process can be used to inform, guide, and structure the prepositioning decision by the different key line ministries. The decision factors inform which information needs to be considered in which decision. Factor information should be gathered before the discussion. Discussion on the priority is needed when there is no sufficient historical data or no estimation available for the quantification. The risk mapping and the prioritization of the different diseases must be done once.

APPENDIX VII: An example of an electronic emergency logistics management information system used in the human health sector



APPENDIX VIII: PARTICIPANTS AND ORGANIZATIONS INVOLVED IN PREPARATION OF THIS DOCUMENT

NO	NAME	ORGANISATION	TITLE
1	Mr. Morries Seru	Ministry of Health	Commissioner Pharmacy
2	Ms. Neville Okuna Oteba (RT)	Ministry of Health	Commissioner
3	Ms. Martha Grace Ajulong	Ministry of Health	Ass. Commissioner Supply Chain
4	Ms. Harriet Akello	Ministry of Health (Team Lead)	Senior Pharmacist
5	Mr. Thomas Obua Chwa	Ministry of Health	Principal Pharmacist
6	Mr. Emmanuel Watongola Mubiru	Ministry of Health	Laboratory Supply Chain Officer
7	Mr. Ambrose Jakira	Ministry of Health	Health Products Quantification Specialist
8	Dr. Atek Kagirita	Ministry of Health	Ag. ACHS – Lab
9	Ms. Dativa Aliddeki	Ministry of Health/PHEOC	Administrator
10	Dr. Allan Muruta	Ministry of Health	ACHS - NDC
11	Dr JB Wwaniaye	Ministry of Health	CHS- Emergency Services
12	Dr. Patrick Tusiime	Ministry of Health	CHS - NDC
13	Mr. Fred Ssebisubi(RT)	Ministry of Health	Asst. Commissioner – Pharmacy
14	Mr. Rodney Tabaruka Tibaruha	Ministry of Health	Senior Pharmacist
15	Mr. Ronnie Bukenya	Ministry of Health	Transport Assistant
16	Dr. Shamira Nakalembe	Ministry of Health	Principal Medical Officer
17	Dr. Issa Makumbi	Ministry of Health/PHEOC	Coordinator
18	Mr. Milton Wetaka Makoba	Ministry of Health/PHEOC	Laboratory Specialist
19	Ms. Judith Kyokushaba	Ministry of Health	Laboratory Supply Chain Advisor
20	Ms. Pamela Achii	Ministry of Health	Procurement and Supply Chain Specialist
21	Dr. Lawrence Kisuule	Ministry of Agriculture, Animal Industries and Fisheries	Senior Veterinary Inspector
22	Ms. Masitula Mbayiwa	Ministry of Agriculture, Animal Industries and Fisheries	Stores Person
23	Dr. Paul Lumu	Ministry of Agriculture, Animal Industries and Fisheries	Senior Veterinary Officer
24	Dr. Aminah Namwabira	Ministry of Agriculture, Animal Industry, and Fisheries	Senior Veterinary Inspector
25	Ms. Mary Nanfuka	Ministry of Agriculture, Animal Industry, and Fisheries	Principal Laboratory Technician

26	Ms. Frank Mayanja	Ministry of Agriculture, Animal Industry, and Fisheries	Laboratory Technician
27	Dr. Rodgers Kalanda	Ministry of Agriculture, Animal Industry, and Fisheries	Veterinary Inspector
28	Dr. Priscilla Babirye	Ministry of Agriculture Animal Industry and Fisheries	Veterinary Inspector
29	Ms. Mary Nanfuka	Ministry of Agriculture Animal Industry and Fisheries	Principal Laboratory Technician
30	Dr. Fred Monje	Ministry of Agriculture Animal Industry and Fisheries	Senior Veterinary Officer
31	Ms. Carolyn Namatovu	Ministry of Agriculture Animal Industry and Fisheries	Laboratory Technicians
32	Dr. Stella Atim	Ministry of Agriculture Animal Industry and Fisheries	Principal Veterinary Officer
33	Ms. Betty Mbolanyi	Ministry of Water and Environment	Principal Environment Officer
34	Mr. Simon Etimu	Ministry of Water and Environment	Assistant Commissioner
35	Mr. Katumba Godfrey	Ministry of Water and Environment	Principal Water Analyst
36	Mr. Mujjabi Mukasa Martin	Ministry of Water and Environment	Senior Environmental Health Officer
37	Mr. Dadinoh Ndibarema	Ministry of Water and Environment	Environment Officer
38	Mr. Lina Kukundakwe	Ministry of Water and Environment	Procurement Officer
39	Mr. David Stephen Mugabi	Ministry of Water and Environment	Director Environment
40	Major Godwin Bagyenzi Bagashe	Uganda Peoples Defense Forces	Science officer- Biosecurity/Biodefence Systems
41	Mr. Remember Kenneth	Uganda Peoples Defense Forces	Pharmacist
42	Dr. Joseph Mugagga Lubega	Uganda Peoples Defense Forces	CBRNe Specialist
43	Mr. Arnold Kabbale	Ministry of Security	Senior Pharmacist
44	Mr. Faye Bagamuhunda	Ministry of Security	Public Health specialist
45	Ms. Florence Nabawanuka Sebutinde	National One Health Platform Secretariat	Public Health Officer
46	Dr. Immaculate Asiimwe	National One Health Platform Secretariat	Public Health Officer
47	Mr. Sebalu Andrew	Uganda Wildlife Authority	Procurement Officer
48	Dr. Joseph Ngobi Mwoga	World Health Organization	Epidermiologist
49	Dr. Eric Lugada	Management Sciences for Health	Chief of Party
50	Mr. Ahmed Katumba	Management Sciences for Health	Senior Technical Advisor
51	Mr. Henry Oundo	Management Sciences for Health	Technical Advisor
52	Mr. John Hans Wasswa	Management Sciences for Health	Technical Advisor

53	Mr. Martin Oteba	Management Sciences for Health	Deputy Chief of Party
54	Mr. Denis Okidi Ladwar	Management Sciences for Health	Director - Supply Chain
55	Mr. Sam Muwanguzi	Management Sciences for Health	Principal Programmer
56	Ms. Sarah Taratwebirwe	Management Sciences for Health	Technical Officer
57	Mr. Brian Sekayombya	Management Sciences for Health	Technical Advisor
58	Mr. Joshua Musasizi	Management Sciences for Health	Knowledge Exchange Specialist
59	Dr. Lydia Nakanjako	Management Sciences for Health	Technical Advisor SC - PHE
60	Ms. Shamim Nakade	Management Sciences for Health	National Activity Manager
61	Mr. Donalson Omech	Management Sciences for Health	Project Officer
62	Mr. Emmanuel Isaac Namoma	Management Sciences for Health	Technical Officer
63	Mr. Joseph Vitale	Centers for Diseases Control and Prevention/Division of Strategic National Stockpile	Public Health Advisor
64	Ms. Nampa Linacy	Management Sciences for Health	Technical Advisor
65	Ms. Juliet Namugga Kasule	Centers for Diseases Control and Prevention	Public Health Administrator DGHP
66	Mr. Michael Ayers	Centers for Diseases Control and Prevention/Division of Strategic National Stockpile	Emergence Management Specialist
67	Mr. Michael G. Elliott	Centers for Diseases Control and Prevention/Division of Strategic National Stockpile	Public Health specialist
68	Mr. Steven A. Adams	Centers for Diseases Control and Prevention/Division of Strategic National Stockpile	Public Health specialist
69	Mr. Thomas Jackson	Centers for Diseases Control and Prevention/Division of Strategic National Stockpile	Senior Training Manager
70	Mr. Peter Babigumira Ahabwe	Infectious Diseases Institute	Project Pharmacist
71	Mr. John Baptist Kibanga	Infectious Diseases Institute	Public Health specialist
72	Mr. Julius Mubiru	Kampala Capital City Authority	Medical Logistics Officer
73	Dr. Edward Kule	Kasese District Local Government	Medical Officer
74	Dr. Samuel Muhindo	Kasese District Local Government	District Surveillance Focal Person
75	Ms. Lillian Nakalanzi	Makerere University	Lecturer
76	Mr. Freddy Kitutu	Makerere University, School of Pharmacy	Lecturer
77	Mr. Rajab Kalidi	Makerere University, School of Pharmacy	Lecturer

78	Dr. Sarah Paige	USAID	Global Health Security Advisor
79	Ms. Victoria Nakiganda	USAID	Program Management Specialist
80	Dr. Willy Nguma	Arua District Local Government	District Health Officer
81	Dr. Agaba Byamukama	Nakasongola District Local Government	District Health Officer
82	Mr. David Walusimbi	National Drug Authority	Regulatory Officer
83	Mr.Wilfred Opira	National Drug Authority	Regulatory Officer
84	Mr.Paul Okware	National Medical Stores	Head, Sales
85	Dr.Musa Sekamatte	National One Health Platform	Senior Epidemiologist
86	Ms.Florence Nabawanuka Sebutinde	National One Health Platform Secretariat	Public Health Officer
87	Dr.Immaculate Asiimwe	National One Health Platform Secretariat	Public Health Officer
88	Mr. Peter Oumo	Uganda Police Force	Public Health Specialist
89	Mr. Sylvia Baluka Angubua	Uganda Veterinary Association	President
90	Mr. Oumo David (RIP)	Moroto Regional Referral Hospital	Principalle Dispenser
91	Mr. Nankoola Denis	Gulu Regional Referral Hospital	Senior Pharmacist
92	Ms. Stella Nanyonga	Naguru Regional Referral Hospital	Senior Pharmacist
93	Ms. Margaret Arbigaba	Hioma Regional Referral Hospital	Senior Pharmacist
94	Mr. Opio Patrick Odongo	Mubende Regional Referral Hospital	Senior Pharmacist
95	Mr. Aguma Daniel	Lira Regional Referral Hospital	Pharmacist
96	Mr. Olum William	Jinja Regional Referral Hospital	Senior Pharmacist
97	Mr. Timothy Kabonera	Masaka Regional Referral Hospital	Pharmacist
98	Mr. Manzi Gerald	Mbarara Regional Referral Hospital	Pharmacist
99	Mr. Sande Alex	Mbale Regional Referral Hospital	Senior Pharmacist
100	Mr. Onzima Mark	Arua Regional referral Hospital	Principal Dispenser
101	Mr. Seguya Simon	Fort Portal Regional Referral Hospital	Senior Pharmacist
102	Ms. Vicky Nyombi	Mulago National Referral Hospital	Senior Pharmacist
103	Mr. Falisy Lule	Kiruddu National Referral Hospital	Senior Pharmacist
104	Ms. Ayebazibwe Agatha	Food and Agriculture Organisation	Communications

Concept, Design & Layout:
Joshua Musasizi, @smartjosh

OUR PARTNERS

National Medical Countermeasures Plan for Public Health Emergencies