REPUBLIC OF UGANDA

NATIONAL INTEGRATED COMPREHENSIVE CHOLERA PREVENTION

AND CONTROL PLAN,

FISCAL YEARS (2017/18-2021/22)

World Health Organization

unicef
for every child

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ACRONYMNS AND ABBREVIATIONS

AFENET	African Field Epidemiology Network
AWD	Acute Watery Diarrhoea
CAO	Chief Accounting Officer
CDD	Control of Diarrheal Diseases
CHEWS	Community Health Extension Workers
CME	Continuous Medical Education
DHT	District Health Team
EAC	East African Community
EOC	Emergency Operations Center
ESD	Epidemiological Surveillance Division
GAVI	Global Alliance for Vaccines and Initiative
GDP	Gross Domestic Product
GGE	General Government Expenditure
HSSIP	Health Sector Strategic Implementation Plan
IDSR	Integrated Disease Surveillance and Response
IEC	Information, Education and Communication
IPs	Implementing Partners
KCCA	Kampala Capital City Authority
LC	Local Council
LG	Local Government
M&E	Monitoring and Evaluation
MOES	Ministry of Education and Sports
MOH	Ministry of Health
MOFPD	Ministry of Finance Planning and Development
MOLG	Ministry of Local Governments
MPs	Members of Parliament
MSF	Médecins Sans Frontières
MUSPH	Makerere Schools of Public Health
MWE	Ministry of Water and Sanitation
NCPC	National Cholera Prevention Committee
NDP	National Development Plan
NGO	Non-Government Organisation
NICCP17-22	National Integrated Comprehensive Cholera Prevention and Control Plan for Financial Year 2017/18 - 21/22

NHP	National Health Policy
NMS	National Medical Stores
OCV	Oral Cholera Vaccine
OOP	Out of Pocket
OPM	Office of Prime Minister
ORT	Oral Rehydration Therapy
PS	Permanent Secretary
RDC	Resident District Commissioner
RDTs	Rapid Diagnostic Tests
SITREP	Situational Report
THE	Total Health Expenditure
UBOS	Uganda Bureau of Statistics
UN	United Nations
UNEPI	Uganda National Expanded Programme for Immunisation
UNHCR	United Nations High Commission for Refugees
UNHLS	Uganda National Health Laboratories Services
UNICEF	United Nations Children's Fund
UPDF	Uganda People's Defense Forces
URCS	Uganda Red Cross Society
UWASNET	Uganda Water and Sanitation NGO Network
WASH	Water and Sanitation Hygiene
WHO	World Health Organisation

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FOREWORD

Cholera, a preventable diarrheal disease, has continued to cause annual morbidity and mortality in Uganda. Although over the last two decades reported cholera cases and disease distribution has declined, approximately 10% of the country's population still remains vulnerable to the disease. The decline has been largely due to sustained improvement in social services, particularly in increased knowledge on prevention of cholera, and increased access to safe water, sanitation and better medical services.

Cholera prevention and control requires multi-sectoral collaboration as the various factors responsible for cholera propagation cut across several sectors. Major sectors/ ministries in prevention and control are; Ministry of Health (MOH), Ministry of Water and Environment (MWE), Ministry of Local Government (MOLG), Office of the Prime Minister (OPM), Ministry of Education and Sports (MOES), Ministry of Finance Planning and Development (MOFPD), Ministry of Urban Development, etc. The MOH is the lead government sector in prevention and control of cholera outbreaks.

Unfortunately, reduction in cholera morbidity and mortality was not uniform across the country. During the period 2011–2015, the majority (58%) of reported cholera cases were from fishing communities, who make up 5-10% of the Ugandan population (Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), 2011). The other vulnerable groups were the communities along the country's international borders, flood- and landslide-prone areas, as well as rice farmers, slum dwellers, prisons, and mental health institutions.

In most of the cholera affected communities, access to safe water and latrine coverage are less than 50%. Factors responsible for spread of cholera are inadequate access to safe water, poor

sanitation and hygiene, ignorance, and poverty. To address these factors, the MOH and stakeholders have implemented the following interventions coordinated at the central and district levels by the national and district cholera task forces respectively.

- health education and community mobilisation,
- disease surveillance,
- case management, and
- promotion of access to safe water, sanitation and hygiene.

According to the National Development Plan Vision 2040, Uganda will move to middle income status within few years, which should come with elimination of diseases of poverty such as cholera.

In order to consolidate the gains in prevention and control of cholera and move towards elimination, a 5-year strategic plan, (NICCP17-22) has been developed. This plan aims to coordinate resource mobilization and implementation of priority-targeted cholera prevention and control interventions across all levels (national, district, and community).

The major areas of focus for the plan will be:

- Social mobilization and community empowerment (health promotion & education for disease prevention);
- Promotion of access to safe water, good sanitation and hygiene;
- Surveillance and laboratory confirmation of outbreaks,
- Prompt case management and infection control;
- Complementary use of oral cholera vaccine (OCV) for cholera endemic communities; and
- Coordination and stewardship between and for all actors.
- Monitoring, supervision, evaluation and operation research to ensure continued improvement in service delivery.

Since communities with recurrent cholera outbreaks are well identified, implementation of NICCP17-22 will allow for more targeted interventions to be carried out, accelerating reduction of cholera morbidity and mortality.

Finally, I am grateful to all sectors, agencies, and individuals who participated in the technical development of the plan and financing the necessary processes that produced the NICCP17-22.

Prof. Anthony K. Mbonye

Ag.Director General Health Services, Ministry of Health

EXECUTIVE SUMMARY

a) Introduction

Uganda is faced with frequent outbreaks of emerging diseases and high burden of other endemic conditions, including cholera, all of which require dedicated resources for their prevention and control.

However, like many developing countries, Uganda is resource constrained, has an inadequate health development budget, and limited access to life saving technologies implying that efficient and maximized use of the available resources is paramount.

Cholera remains a major public health threat, leading to many cases and deaths annually in Uganda. The country reports an average of 1,850 cholera cases and 45 deaths annually. The districts of Nebbi, Hoima, Buliisa, and Mbale contributed to 60% of all reported cholera cases between 2011-2016.

Cholera is not only a health problem but also a direct consequence of poor quality and quantity of water, poor sanitation, inadequate hygiene, and various environmental, climatic, and socio-economic situations. Within Uganda, some communities are more affected than others. For instance during the period 2011-2015, 58% of the cholera cases occurred among the fishing communities, who constitute roughly 5-10% of the population (Bwire et al., 2017). Other cholera high risk populations are peri-urban slum dwellers, landslide- and flood-prone communities, migratory plantation farmers, street children, and boarder communities.

Poor sanitation costs Uganda approximately 389 billion Ugandan shillings (UGX) and one prolonged cholera outbreak lasting for over a year costs approximately 6 billion UGX in addition to affecting other revenue sectors like tourism and trade (World Bank Water and Sanitation Program, 2012).

Uganda's expenditure on health during FY 2016/17 was US$ 14.3 (UGX 50,000) per capita (Ministry of Health, 2016) which is low compared to the World Health Organisation (WHO) recommended minimum level of US$ 60 (UGX 210,000). In addition, the Total Health Expenditure (THE) as percentage of GDP is low at 1.3%, against the target of 4%. The primary sources of health care financing are households (37%), donors (45%), and government (15%), while the private insurance constitutes a small proportion of the THE.

In regards to cholera prevention and control, the country has made tremendous gains in the last two decades. The number of reported cholera cases, deaths and affected districts have reduced markedly. In 1998 during the *El Nino* period, 43/45 districts (96%) reported cholera cases and deaths, however in 2016, a year with El Nino, 25/112 districts (22%) reported cases and deaths.

These achievements were due to combined efforts of various stakeholders namely: the Ministry of Health (Lead Ministry), Ministry of Water and Environment, Ministry of Education and Sports, Ministry of Local Government, Office of the Prime Minister, Ministry of Finance Planning and Economic Development, Ministry of Urban Development, Ministry of Gender, Ministry of Information, Development Partners, among others.

The strategies that contributed to these gains were, better health care services (detection and management of cases), increased access to safe water, improved sanitation and hygiene, health education of communities using mass media such as FM radios, Universal Primary and Secondary Education and prevailing peace in the country.

However, there were also challenges noted such as inadequate implementation of Public Health Act especially proper sanitation and hygiene at local levels, inadequate resources (human, financial,

and infrastructure), weak coordination of key stakeholders, and adverse weather conditions resulting from global warming.

To address these challenges and consolidate the gains, the Ministry of Health and stakeholders developed a five-year plan, NICCP17-22.

a) The goal and objectives of NICCP17-22

This plan is designed to contribute to the realization of the Vision and aspirations of the National Development Plan II (NDP II 2015/16-2019/20), Health Sector Development Plan (HSDP 2015/16-2019/20), and the National Health Policy II (NHP II 2009/10-2019/20) as well as to the overall National Vision 2040. The plan is also in line with the overall East Africa Community (EAC) Strategy that allows for free movement of people while protecting their health across borders. The plan has the following goal and objectives.

Goal

To reduce the incidence and mortality due to cholera by 50% by fiscal year 2021/22.

Objectives:

1. To raise awareness and promote attitude and practices for cholera prevention, with special focus given to cholera-prone districts.
2. To increase access to safe water, sanitation, and hygiene in cholera-prone districts to the national average identified in the baseline survey.
3. To build and sustain a sensitive and efficient surveillance system at all levels that is able to predict, detect, and respond to cholera outbreaks in a timely manner.
4. To improve the quality of health care so as to prevent complications and reduce mortality by 50%.
5. To protect vulnerable groups through the implementation of targeted interventions including complementary use of OCV for cholera hotspots and endemic communities.
6. To enhance effective multi-sector coordination through local and national structures and resources.

This multi-sectoral plan will be implemented for a period of 5 years, 2017/18-2021/22 with the MOH as Lead Ministry sector but with the other ministries coordinating implementation of interventions in their relevant fields.

The plan has short- and long-term interventions. The short-term activities, such as complementary use of OCV for cholera hotspots and endemic communities, will run up to the second year of implementation, while the long-term activities, such as WASH, Surveillance, Case Management and Health Education and Promotion, will run through to the fifth year.

b) Guiding principles for implementation of NICCP17-22

The following guiding principles will be observed:

- Multi-sectoral and integrated approach
- Community and stakeholder engagement
- Service equity
- Continuous quality improvement
- Gender sensitive and responsive approach

To ensure maximum impact amidst limited resources, priority interventions will be targeted to high risk districts and vulnerable populations.

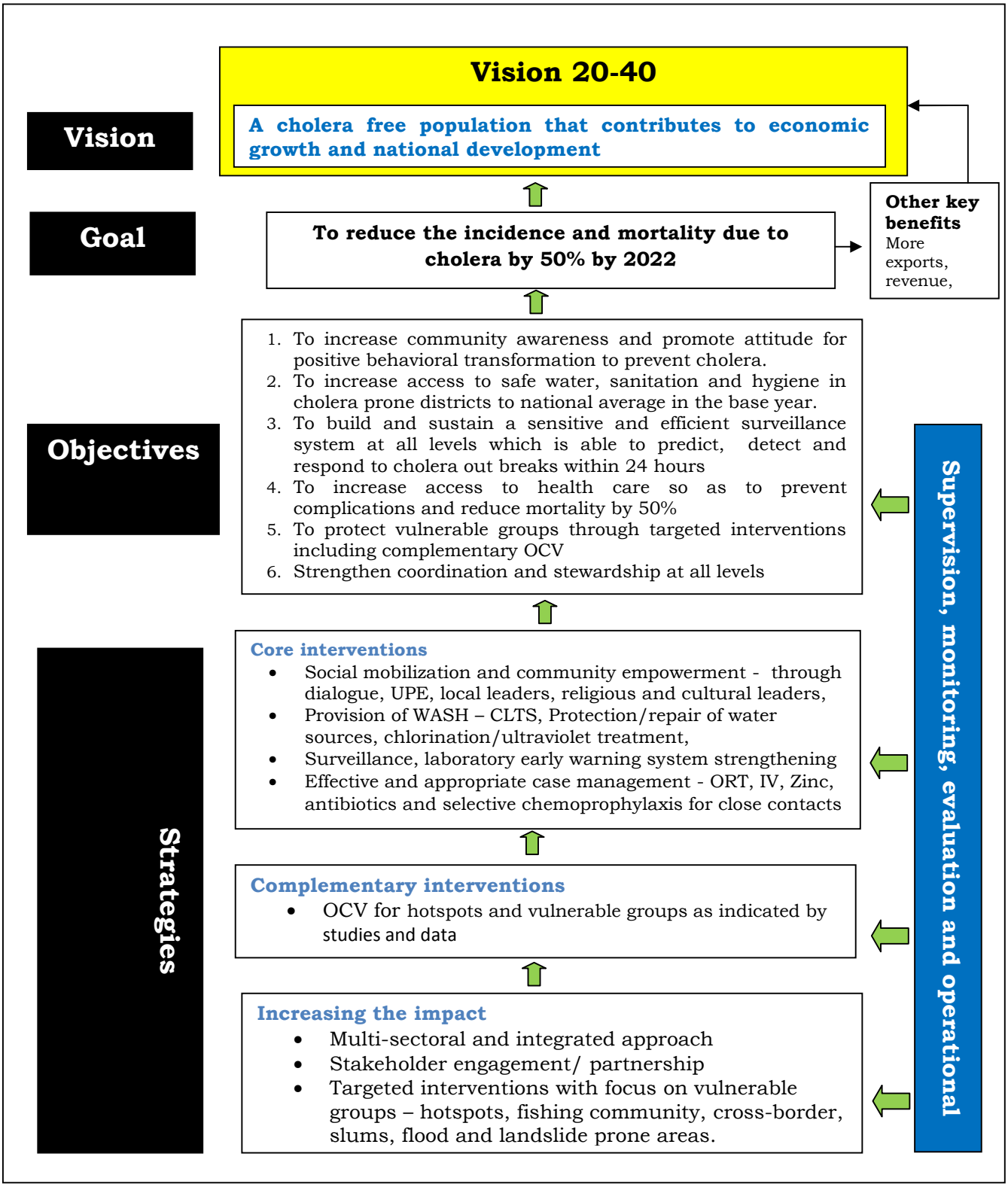
c) Implementation arrangement and total budget for NICCP17-22

The plan has seven thematic implementation areas namely; coordination and stewardship; surveillance and laboratory strengthening; case management; water, sanitation and hygiene; social mobilization and community empowerment; complementary use of OCV and supervision, monitoring, evaluation and research.

The total budget for interventions in the plan is UGX 30,710,000,000 equivalent to US$ 8,774,000. This budget is distributed across the five years of implementation. Over 80% of the budget is allocated to preventative interventions focusing on specific groups and communities at high risk of cholera to achieve maximum impact.

Supervision, monitoring, evaluation and research will be done continuously to ensure that gaps are identified and corrected early. New approaches to disease prevention will be explored and rolled out. The summary of NICCP17-22 is shown (**Figure 1**).

Figure 1: Framework for NICCP17-22



Extended benefits of NICCP17-22

- Reporting of cholera is associated with trade and tourism barriers. Reduction of cholera will come with increased trade for Ugandan commodities and the number of tourists visiting the country.

- Furthermore, employment will be created resulting in better revenue collection and ultimately growth in GDP. The combined results of these will provide more impetus towards the middle income status for Uganda and better quality of life for the population.

- In addition to economic gains, cholera interventions will also reduce other diarrheal diseases, water borne infections and the national disease burden as a whole.

Chapter 1: Introduction

1.0 Background

Uganda has 116 districts and one City (the capital city of Kampala) as at June, 2017. The districts are subdivided into 181 counties and 22 municipalities, and 174 town councils, which are further subdivided into 1,382 sub counties, 7,138 parishes, and 66,036 villages (Census, 2014). For ease of follow up, the country is divided into 10 regions based on Uganda Bureau of Statistics (UBOS) statistical regions used during Uganda Demographic and Health Surveys. These regions include Kampala, Central 1, Central 2, East Central, Eastern, Karamoja, North, West Nile, Western, and South Western.

Demographically, Uganda had a projected population of 36.4 million persons in 2016 with an average annual growth rate of 3.03%, the population is expected to peak at 42.4 million people by 2020 and to rise to 102 million by 2050 (UBOS, 2016).

The average household is 4.7 persons, with a sex ratio of 94.5 males per 100 females. An estimated 72% of the population lives in rural areas as compared to 28% in urban centers. 49% of Uganda's population is under the age of 15 and with 18.5% of the total population being under-five.

Uganda's per capita spending on health was US$ 53 per capita in 2011/12, which is low compared to the WHO recommended minimum level of US$ 60. In addition, the THE as percentage of GDP is as low as 1.3%, against the WHO target of 4%. The primary sources of health care financing are households (37%), donors (45%), and government (15%), while the private insurance constitutes a small proportion of THE. The 37% contributed by households is majorly out of pocket spending. This greatly exceeds the recommended maximum of 20% out of pocket (OOP)

expenditure by households recommended by WHO, if the households are not to be pushed into impoverishment. Development partners contribute 45%, the majority being off budget.

The General Government Expenditure (GGE) on health is US$ 9 per capita (NHA, 2013) compared to the HSSIP target of US$ 17 per capita and the WHO Commission of Macro-Economics (CME) on Health recommendation of US$ 34. The government public financing is still below the WHO, CME, and HSSIP recommendations. The percentage of the total government budget allocated to the health sector reduced from 9.6% in 2009/2010 (AHSPR, 2013/14) to 8.7% in 2014/15 (National Budget, 2014).

Economically, the country's gross domestic product (GDP) has steadily been increasing at a rate between 5 – 9%. The percentage of Ugandans living below the poverty line decreased from 56.4% in 1992 to 19.7% in 2012 (State of Uganda population report, 2014). However, poverty remains deeply-rooted in rural areas, where most of the population lives.

The economy is transitioning from an agricultural to an industrial economy, with the service driven economy's key drivers of the economic growth shifting towards more industrialized activities. Development Aid has played a key role in stabilizing and improving the economy over the past 30 years. In addition, diaspora remittances increasingly contribute to the country's economy.

1.1 Rationale

1.1.1 Emerging infectious disease outbreaks and epidemics

The world and Uganda in particular is faced with emerging infectious disease outbreaks and epidemics. Uganda, like many developing countries has inadequate funding, limited access to life-saving technologies, continuing unnecessary deaths from epidemics and preventable diseases. In order to address these challenges, the national strategic focus will be ensuring access to information, increasing partnerships and capacity building efforts, strengthening health systems, and investing in innovations to foster efficiency while focusing on the poor, vulnerable, and at-risk communities.

In partnership with other nations and international organizations including public and private stakeholders, Uganda will seek to accelerate progress towards a world safe and secure from infectious diseases and promote global health security as a national and international priority. The focus is to promote and scale up access to and use of safe water and safe sanitation. Other strategies will be to forecast and prevent epidemics, implement disease preparedness and prompt detection and response to outbreaks. This will be reinforced with robust systems strengthening and monitoring and evaluation mechanisms.

1.1.2 Commitment to national, regional and international, frameworks

The NICCP17-22 is designed to contribute to the realization of the vision and aspirations of the National Development Plan II (NDP II 2015/16-2019/20), Health Sector Development Plan (HSDP 2015/16-2019/20) and the National Health Policy II (NHP II 2009/10-2019/20).

As part of the overall health sector planning framework, NICCP17-22 provides the strategic focus of the sector in the medium term, highlighting how it will contribute, within the constitutional and legal framework, to the overall Vision 2040.

The NICCP17-22 is also in line with the overall East African Community (EAC) strategy that allows for free movement of people while protecting their health across borders.

Finally, NICCP17-22 fulfills the WHO requirement that guides countries to progressively implement priority interventions for cholera prevention, control and elimination.

1.3 Status of sanitation, water, and hygiene

Cholera is not only a health problem. It is the direct consequence of poor sanitation and poor quality and inadequate water supply, themselves linked to various environmental, climatic and socio-economic situations. Access to clean water and sanitation is a human right but cannot be achieved within the health sector only, or solely by technical measures, or at national level alone. It must involve many partners in a coordinated, parallel and sequential, synergistic approach with short- medium- and long-term objectives.

Poor sanitation costs Uganda 389 billion shillings annually and one prolonged episode of cholera cost the country about 6 billion shillings aside from affecting other revenue sectors like tourism and trade (World Bank Water and Sanitation Program, 2012). Access to

safe water, sanitation and hygiene still needs improvement with rural settings having lower coverages than urban areas (**Table 1**).

Table 1: Sanitation and hygiene access in Uganda

Item	Rural	Urban
Access to safe water	67%	71%
Latrine coverage	79%	84%
Hand washing	36%	34%

Source:*MWE, sector performance report, 2016*

Chapter 2: Epidemiology of cholera in Uganda

2.1 What is cholera?

Cholera is an infection of the small intestine by some strains of the bacterium *Vibrio cholerae*. Symptoms may range from none, to mild, to severe. The classic symptom is large amounts of watery diarrhea that lasts a few days. Vomiting and muscle cramps may also occur.

Diarrhea can be so severe that it leads to severe dehydration and electrolyte imbalance within hours and ultimately death. Symptoms may start two hours to five days after exposure to cholera.

Cholera is spread mostly by unsafe water and unsafe food that has been contaminated with human feces containing the bacteria. Humans are the only animal affected.

Risk factors for the disease include poor sanitation, not enough clean drinking water, and poverty. There are concerns that rising sea levels will increase rates of disease.

Prevention involves improved sanitation and access to clean water. Cholera vaccines that are given by mouth provide short-time protection for approximately 3-5 years and are costly compared to other interventions.

Cholera can be diagnosed by a stool test. The primary treatment is rehydration (oral or intravenous) therapy for all persons and zinc supplementation for children. Antibiotics are also beneficial for prevention of spread and to shorten the duration of the illness. Testing to see which antibiotic the cholera organisms are susceptible should be done to guide the choice of antibiotics.

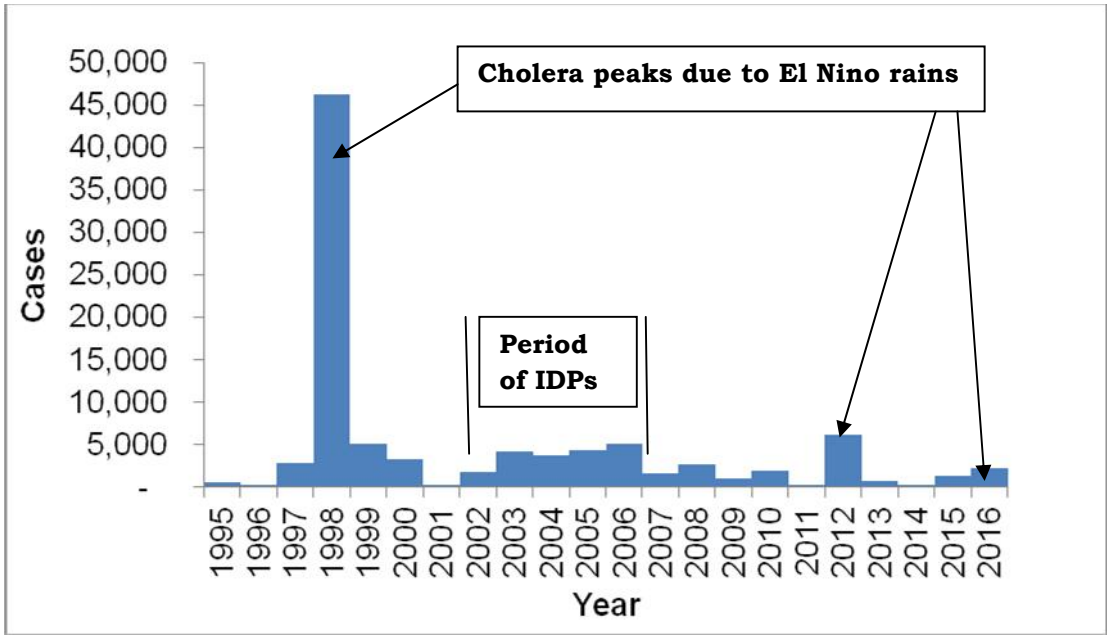
2.2 Cholera epidemics in Uganda

2.2.1 History of cholera in Uganda

First cholera outbreak was in 1971 in Kampala city. By then only few cases were recorded. That was the time that cholera reached Africa. During subsequent years small cholera outbreaks lasting few days to weeks were intermittently recorded and reported to WHO.

In 1990s the outbreaks become more frequent and peaked in 1998 following El Nino. There after cholera was reported annually in several districts. Peaks occurred in El Nino years 1998, 2012, 2016 (**Figure 3**).

Figure 2, Cholera cases in Uganda 1995-2016



Source: *HMIS, 2000-2016*

2.2.2 Progress made to prevent and control cholera in Uganda

In early 2000s, the Internally Displaced Persons (IDPs) in Western Uganda and Northern Uganda provided good ground for propagation of infection. However with the restoration of peace in all regions of Uganda in 2006, the last decade registered strong progress in the provision of social services, namely improvement in safe water and sanitation coverage, closure of IDPs camps in Northern Uganda, increased enrolment in Universal Primary Education and Universal Secondary Education, increased access to health care, and above all reduction in poverty levels. The districts affected with cholera have reduced markedly from 43/45 (96%) during the 1998 El Nino to about 25/112 (22%) during the 2016 El Nino period.

Seventeen (17) districts were responsible for 90% of all reported cholera cases in the country. The five districts of Nebbi, Hoima, Buliisa, Kasese and Mbale accounted for 61% of the cases (**Table 2**).

Table 2: Top cholera affected districts in Uganda, 2011-2016

District	Cases	Deaths	Percentage by district	Cumulative Percentage
1. Nebbi	2,320	49	21%	21%
2. Hoima	1,731	39	16%	37%
3. Buliisa	1,205	13	11%	48%
4. Kasese	852	18	8%	56%
5. Mbale	530	31	5%	61%
6. Bundibugyo	458	11	4%	65%
7. Kibaale	386	4	3%	68%
8. Namayingo	373	6	3%	71%
9. Kampala	324	7	3%	74%
10. Bulambuli	284	4	3%	76%
11. Butaleja	281	5	3%	79%
12. Arua	255	10	2%	81%
13. Busia	250	5	2%	83%
14. Bududa	216	7	2%	85%

District		Cases	Deaths	Percentage by district	Cumulative Percentage
15.	Sironko	184	8	2%	87%
16.	Ntoroko	183	4	2%	89%
17.	Rukungiri	160	1	1%	90%

Source: *HMIS, 2011-2016*

In all the cholera reporting districts, the common risk factors include inadequate access to safe water, poverty, migratory living habits, and poor sanitation practices due to proximity to large water bodies making construction of pit latrines difficult. Low literacy levels are also strongly correlated to cholera cases.

Targeting these communities with a comprehensive package of cholera control interventions, including the complementary use of OCV on vulnerable groups located along the country border cross points, flood prone/landslide areas (Mt. Elgon Region, Kasese, and Butaleja), and peri-urban slums, could lead to reduction of cholera incidence by at least 50% or more.

2.2.3 Vulnerable groups for cholera

Studies conducted on cholera in Uganda and review of disease surveillance data show that some communities are more affected than others.

Similarly, categorization based on the settlement patterns, major livelihood activity of the cholera affected populations and their location show higher risk of cholera outbreaks in some communities than others (**Table 3**).

Table 3: Vulnerable groups for Cholera in Uganda 2011-2016

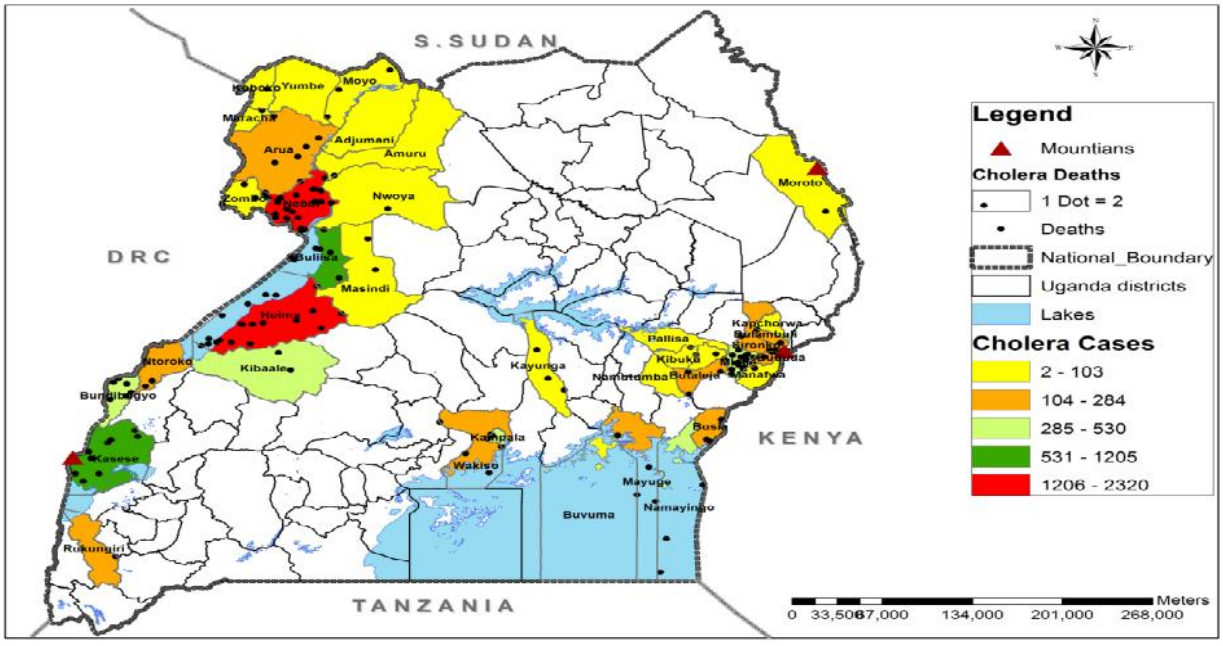
Year	Reported cases	Affected districts	Sub county	Vulnerable group
2011	229	Rukungiri and Kasese	Rwenshama Kayanzi	Fishing community were the majority (n=192, 84%), others were the migratory cotton farmers of Kasese.
2012	6226	Kasese, Bulisa, Nebbi, Hoima, Mbale, Arua, Zombo, Bududa, Butaleja, Sironko and Manafwa	Wanseko, Panyimur, Kaiso-Tonya and Namatala	Fishing community (n= 3,579, 57.5%,), border community (approx. 25%) peri-urban slum dwellers including street children, landslide and flood prone communities.
2013	751	Hoima, Nebbi, Ntoroko, Moyo	Buseruka, Panyinur, Obongi	Fishing community (n=535, 71.3%,) others were; border community, traders
2014	322	Moyo, Hoima, Namayingo, Adjumani and Arua	Obongi, Buseruka, Mutumba and Rhino Camp	Fishing community (n=262, 81%,) and border community
2015	1270 (29)	Kasese, Arua, Hoima, Busia, Maracha, Kampala, Wakiso and Mbale	Mpwondwe Lhuhubiriha TC, Bwera, Katwe TC-lake Edward, slums in municipalities of Mbale (Namatala, Namanyonyi), Buseruka, Kyangwale, Kisenyi, Kanyogoga and Zinga Islands	All affected district were border district. Most affected group within these districts were; fishing community (n=491, 39%,) Peri-urban slums, mental institutions/prisons, street children.
2016	1156 (25)	Mbale Sironko, Bulambuli Kapchorwa, Butaleja, Namayingo	Sironko TC, Muyembe, Mazimasa, Kachonga, Namatala, Mutumba, Kyangwale and	Flood / landslide prone communities (n=781, 68%,), Fishing community (n=238, 21%,) and peri-urban slums

Year	Reported cases	Affected districts	Sub county	Vulnerable group
		Hoima, Bulisa	Kigorobya	

Source: *HMIS 2016*

Though the fishing communities constitute less than 10% of the total Uganda population, available data shows that they bear approximately 60% of the disease. Fishing communities in Buseruka in Hoima district and Panyimur in Nebbi district are some of the identified cholera hotspots. Majority of cholera affected districts are located along the country international borders (**Figure 3**).

Figure 3: Map of Uganda showing reported cholera



Source: *HMIS, 2011-2016*

Chapter 3: NICCP17-22; vision, mission, goal and guiding principles

3.1 Vision

A population free of cholera and other diarrheal diseases that contributes to economic growth and national development.

3.2 Mission

To accelerate elimination of cholera through promotion of multi sectoral, cost effective, efficient and equitable cholera prevention and control interventions for national growth and development.

3.3 Goal

To reduce the incidence and mortality due to cholera by 50% by 2021/22

3.4 Objectives

1. To raise awareness and promote attitude and practices for cholera prevention, with special focus to cholera-prone districts.
2. To increase access to safe water, sanitation, and hygiene in cholera-prone districts to the national average identified in the baseline survey.
3. To build and sustain a sensitive and efficient surveillance system at all levels that is able to predict, detect, and respond to cholera outbreaks in a timely manner.
4. To improve the quality of health care so as to prevent complications and reduce mortality by 50%.
5. To protect vulnerable groups through implementation of targeted interventions including complementary use of OCV for cholera hotspots and endemic communities.

6. To enhance effective multi-sector coordination and stewardship through local and national structures and resources.
7. To strengthen monitoring, supervision, evaluation and research for better service delivery.

3.5 Guiding principles

To ensure maximum impact and benefit to the country, the following principles will be observed during implementation of the NICCP17-22:

a) **Multi-sectorial and integrated approach:** Develop and maintain effective relationships among stakeholders to enhance collaborative planning and operational management of activities at all levels.

b) **Community and stakeholder engagement:** Facilitate community input to understand, own and sustain the full spectrum of preventive and control activities.

c) **Service equity:** Establish, maintain, develop and support services that are best able to meet the needs of patients/clients and their communities during and after an emergency. Ensure that special provisions are made for vulnerable people and hard-to-reach communities so that emergency responses do not create inequalities.

d) **Continuous quality improvement:** Through on-going monitoring and reviews to update capabilities, plans and arrangements, using evidence-based approaches.

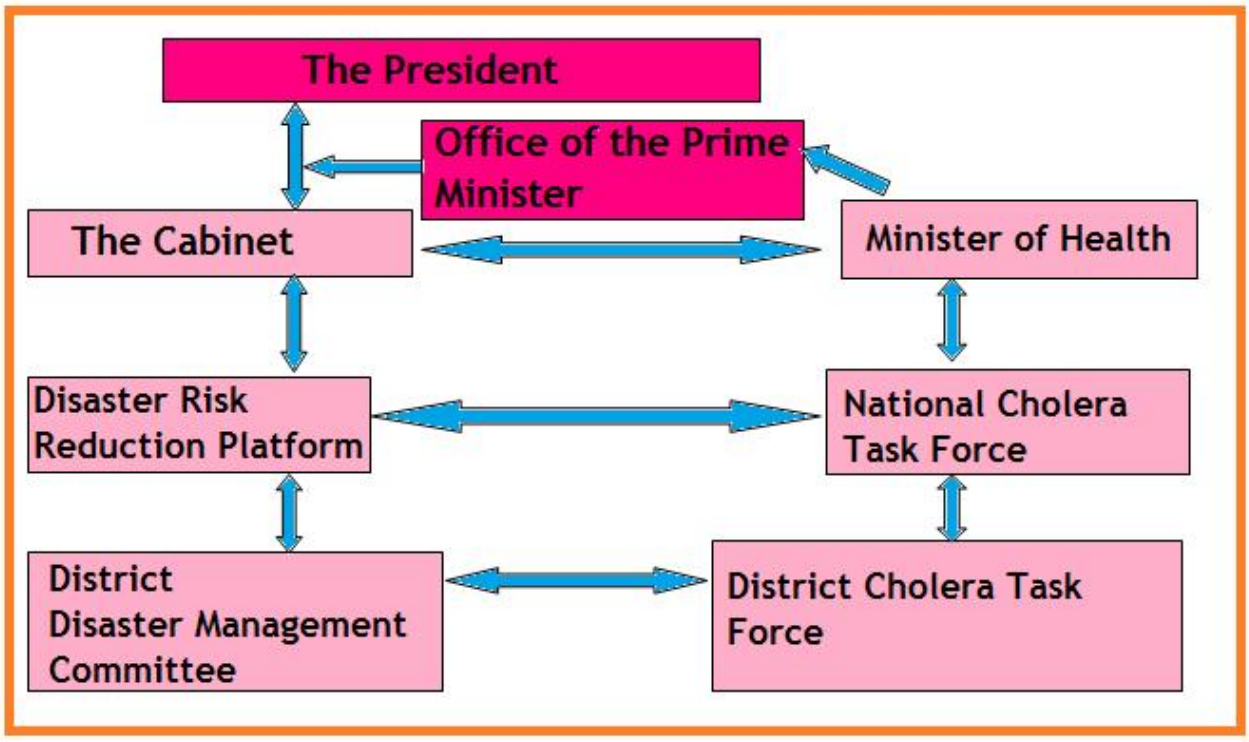
e) **Gender sensitivity and responsiveness approach:** Shall be achieved and strengthened in cholera prevention and control interventions

Chapter 4: Priority interventions areas

4.1 Coordination and stewardship

Overall coordination for disaster preparedness and response including epidemics in the country lies with the Office of the Prime Minister. However, the Ministry of Health is the Lead Ministry in epidemic disease response. Coordination of epidemics including cholera is at two levels namely national and district levels (**Figure 4**).

Figure 4: National and district level coordination and stewardship



4.1.1 National Level

There is a National Cholera Task Force (NTF) consists of national level stakeholders below:

- Ministry of Health (Lead institution)
- Office of Prime Minister
- Ministry of Water and Environment
- Ministry of Local Government
- Ministry of Education
- UN Agencies
- Institutions (Army, Prisons, Police)
- Non Governmental Organisations – Uganda Red Cross and Others
- Private Sector
- Bilateral agencies such as CDC

4.1.2 District Level

At district local government there is a Cholera Committee (DCC) consisting of all district level stakeholders. The DCC is chaired by the Resident District Commissioner (RDC). The RDC spearheads the implementation of the prevention and control of cholera. The key implementers at district level include among others; water department, security and education.

4.1.3 Roles and responsibility of each stakeholder

Allocation of clear roles and responsibilities is key for successful implementation of the plan. In this plan the roles and responsibilities of stakeholders are shown (**Table 4**.)

Table 4: Roles and responsibilities of stakeholders

Stakeholders	Roles / Responsibilities
Ministry of Health	The lead sector and secretariat for the cholera prevention and control
Office of Prime Minister (OPM)	OPM is the leader of government business. OPM receives reports from the lead sector (MOH) and share them with the cabinet. In addition, OPM is responsible for coordinating inter-ministerial meetings, coordination of provision of social services (safe water, sanitation, hygiene etc) for refugees and internally displaced persons to prevent cholera outbreaks in these communities.
Ministry of water and Environment	Provision of adequate safe water and sanitation in the communities. In additional, MWE is charged with monitoring of water sources to ensure good quality.
Ministry of Education and Sports	Promotion of cholera prevention and control in schools and to ensure that school have adequate latrines, hand washing facilities, water supply etc. learners should be taught how to prevent cholera so as to cause change in the community where they leave.
UN Agencies (WHO, UNICEF, UNHCR)	For technical and financial support for cholera prevention and control interventions
Ministry of Local Government	Provide supervision of local governments to ensure implementation of interventions, leadership and policy guide for local governments
Local governments (Districts, Urban Authorities, Kampala Capital City Authority (KCCA) and Municipalities)	Service delivery /implementation of the interventions in NICCP17-22. enact and enforce bye-laws on public health to prevent and control cholera in their communities
Ministry of Agricultural, Animal industry and	In collaboration with local authorities ensure that landing sites have sanitary and hand

Stakeholders	Roles / Responsibilities
Fisheries/ Beach Management Units	washing facilities Work with NEMA, local government to locate the beaches away from the lake shores. In addition enact and enforce bye-laws for prevention and control of cholera. Provide sanitary facilities and ensure hygiene at all landing sites.
International and local NGOs [Uganda Red Cross, AFENET, MSF, Uganda Water and Sanitation NGO network (UWASNET)]	Support government in implementation of the priority interventions (WASH, Case management, surveillance and social mobilization)
Other Ministries (Internal Affairs, Security and Gender, Labour and Social Development)	Coordinate the implementation of the cholera prevention and control interventions in institutions under their jurisdictions e.g. prisons, police and Uganda Peoples Defense Force (UPDF)
Ministry of Finance, Planning and Economic Development	Resource mobilisation and allocation to operationalise the plan
East African Community (EAC)	Support and coordination of cross-border cholera prevention interventions
Teaching institutions and academia (Makerere University, Mbarara University, etc)	Spearhead operational research for evidence based planning and implementations
Bilateral and Multi-lateral donors partnerships (CDC, GAVI)	Provide technical and funding support for the implementation of NICCP17-22
Heads of Special Institutions e.g. schools, prisons, police, UPDF and Mental Facilities	Implementation of cholera prevention and control interventions in the respective institutions

4.1.4. Existing gap in coordination and stewardship

There is weak coordination, leadership and priorisation of cholera prevention interventions in most cholera reporting districts. Coordination meeting are irregular, poorly attended with inadequate follow up on required actions.

Often, the department of health is left alone yet drivers of cholera outbreaks such as lack of safe water, ignorance, illiteracy, negative cultural practices etc. are cross-cutting, requiring all departments.

Effective cholera prevention require careful planning at all levels by all key sectors and teamwork based on clear roles and responsibilities.

4.1.5. Priority activities and indicators

a) Activities

The following activities will be implemented in all cholera prone districts to achieve 100% coverage.

1. Reactivation of the cholera task forces in 100% of districts reporting cholera outbreaks
2. Engage and equip leaders with information to spearhead cholera control and prevention efforts in all districts prone to cholera with focus to 17 most affected districts during previous year 2011-2016.
3. Develop and incorporate cholera prevention plans that have clear roles and responsibility of stakeholders into the district overall plans.
4. Support field visit by leadership (central and district) to affected communities to assess the progress and guide implementation.

5. Conduct annual stakeholder review meeting to share information and assess progress on implementation of the planned activities.

b) Indicators

- Percentage and number of districts with cholera task forces reactivated
- Percentage and number of districts with local leaders (RDC and LC-5) spearheading cholera prevention efforts
- Percentage of districts and number of cholera task force meetings that have participants from all relevant sectors and stakeholders
- Proportion and number of target districts with cholera prevention plans incorporated into the district plan.

4.2 Social mobilization and community empowerment

Social mobilization is an important component for cholera prevention and control efforts that unifies stakeholder towards a common goal. It strengthens community participation and involvement which is critical in the sustainability of priority cholera preventive interventions. Target audiences require adequate information and education to raise awareness so as to appreciate the need and the benefits healthy living environment. The interventions should be rolled out in a sustainable manner leading to community ownership.

4.2.1 Existing gap in social mobilization and community empowerment

Despite efforts to heighten social mobilization and information dissemination about cholera in affected districts, such messages provided by different communicators are most often not harmonized due to a number of factors including lack of cholera-specific communication strategy.

In addition, the widespread negative cultural practices and deep-rooted traditional norms arising from the diverse ethnic backgrounds in the country inhibits adoption of positive hygiene practices for cholera prevention. Furthermore, the low level of formal education and poverty among in these communities make adoption of positive cholera prevention practices a big challenge (Bwire et al., 2017) .

4.2.2. Priority activities and indicators

a) Activities

All sectors have a role to play in behavioral change. NICCP17-22 will prioritise the following activities which will be implemented by stakeholders – MOH, MOES, Ministry of Gender (cultural aspects) etc targeting all high risk districts with focus on 30 districts to improve knowledge and practices on cholera prevention and control to 90% by the end of NICCP17-22.

1. Development and dissemination of cholera specific prevention communication strategy
2. Promote use of appropriate targeted communication such as by Fm radio, drama, music, dissemination of repackaged cholera messages etc
3. Strengthen community participation in cholera prevention through community dialogue, model homesteads and villages.
4. Train and provide Community Health Extension Workers (CHEWS) with cholera prevention IEC materials

5. Mobilize local and cultural/traditional/ religious leader to be agents of change in their communities
6. Promote learning on cholera prevention through schools in endemic setting (sub counties)

b) Indicators

1. Availability of cholera prevention communication strategy at central and district level
2. Proportion and number of districts with CHEWs oriented on cholera prevention
3. Proportion of population in cholera endemic sub counties with knowledge on cholera prevention
4. Proportion and number of districts with cultural, religious or opinion leaders promoting positive culture for cholera prevention.
5. Proportion and number of schools promoting cholera prevention in endemic sub counties within priority districts (eg drink boiled water to be strong and avoid cholera – an *innovative way of communicating important messages*).

4.3 Increased access to safe Water, Sanitation and Hygiene (WASH)

A balanced and integrated WASH approach is essential to prevent cholera outbreaks and reduce mortality. Recent empirical evidence shows that cholera is a common occurrence in areas with poor access to quality water. Every episode/outbreak of cholera sets back growth and development.

Almost 97% of cholera outbreaks are preventable through safe drinking water, basic sanitation and appropriate hygiene behaviour. Water quality interventions suggested in this plan can reduce cholera episodes by up to 90% or more.

In long term, each home should access safe piped water system and have good toilet. However, in order to control cholera and prevent outbreaks short- to medium-term measures such as protection of water sources to avoid faecal contamination, construction and use of latrines, promotion of safe water chain such as installation of chlorine dispensers at water collection points, distribution water purifiers and treatment agents can greatly help to increase access to these services and avoid cholera outbreaks.

Cholera outbreaks have occurred in schools and other public institutions due to poor sanitation and hygiene. The provision of safe water and sanitation facilities in *schools* is an important component in improving learning outcomes but good facilities need to be linked with an improvement in practices particularly hygiene and latrine maintenance to be effective and sustainable.

4.3.1 Current gaps in WASH

Studies on cholera in Uganda have shown that fishing villages are responsible for most (58%) cholera outbreaks (Bwire et al., 2017). These communities have plenty of water; however the water is not safe. Also most cholera affected districts have adequate water but it is contaminated with faecal material or gets contaminated during the process of transportation.

In some scenario homesteads are located very close to the lakeshores making it difficult to construct latrines due to high water table or collapsing soils.

In addition, there is inadequate, poor prioritization of interventions, weak supervision and enforcement of bye-laws by local authorities. Latrines and hand washing facilities are missing in homes and public places.

Regarding schools, latrines and hand-washing facilities are mainly inadequate or absent. The problem is worse with cholera endemic districts where outbreaks have affected learning. Sometimes when

hand washing facilities are provided to some schools, there is poor maintenance of the facilities.

4.3.2. Priority activities, indicators and targets

a) Activities

Availability of plenty of water is a good opportunity that should be exploited in prevention of cholera.

Participation of other sectors and local governments is key if cholera prevention is to be achieved. The following activities will be carried out as part of this plan:

1. Procurement and installation of chlorine dispensers on all major landing sites to achieve 100% coverage.
2. Revitalization and training of community water user committees.
3. Mobilize communities to protect, construct and maintain water sources in all high risk districts to achieve the national coverage of 67% (rural) in targeted communities (sub counties) – establishment of water user committees in all targeted communities.
4. Promotion of installation of solar water pumps at major landing sites in endemic districts to achieve coverage of 50% or more in targeted districts.
5. Follow up on the local authorities to enforce sanitation and settlement bye-laws in all (100%) endemic districts
6. Promote construction and use of latrines, installation of handwashing facilities and hygiene (food, personal and environmental) in public and homesteads (Community Lead Total Sanitation)
7. Strengthen collaboration with other sectors/stakeholders namely National Environmental Management Authority (NEMA) and Beach Management Units (BMU)
8. Conduct regular water quality monitoring of all public water sources

b) Indicators

1. Proportion and number of water sources that have chlorine dispensers installed.
2. Number of new water sources installed.
3. Latrine coverage in targeted areas
4. Availability and number of functional water user committees in targeted communities.
5. Proportion and number of schools and public places with latrines and hand-washing facilities.
6. Proportion and number of target districts enforcing bye-laws on sanitation and settlement.
7. Proportion and number of target districts with regular water quality monitoring reports.

4.4 Strengthening surveillance and early warning systems

Prevention and control of cholera relies on effective surveillance systems. Surveillance is the foundation of an effective targeted prevention and control early warning unit. Strengthening cholera surveillance expedites the detection of the index case and initiation of the outbreak control measures through an integrated approach. This promotes the identification of high risk areas and vulnerable populations which allow quick sharing of information with stakeholders for timely action.

National reporting on priority diseases and events of public health importance has greatly improved. Capacity to confirm and respond

to outbreaks has been built in many districts. However, there is need to intensify support supervision and feed back to sub national levels. Follow up of all suspected outbreaks should be a priority at all levels.

4.4.1 Current gaps in surveillance

Many districts lack resources for timely detection and confirmation of outbreaks leading to the spread of infection before action is taken. In addition, even after detection, follow-up of suspects and contacts is weak leading to propagation and spread of the epidemic.

Cholera outbreaks in border districts are challenging to prevent and control due to several factors which include unilateral country specific measures yet diseases have no borders (Bwire, Mwesawina, Baluku, Kanyanda, & Orach, 2016).

Commonly, interventions are implemented on one side of the border without similar efforts being done in the neighbouring country side.

To address the challenge of outbreaks in border districts through promotion of cross-border surveillance and collaboration at national level.

4.4.2 Priority activities, indicators and targets

a) Activities

Early detection of outbreaks is key in prevention of cholera spread. All efforts should made to identify the index case early and protect the contacts and the immediate communities.

1. Print and disseminate standard case definitions and guidelines to health workers and health facilities in cholera prone districts.

2. Train and equip health workers (Qualified, CHEWs and VHTs) with skills for timely detection of cholera in all health facilities in targeted districts.
3. Train laboratory health workers on field detection of cholera and handling of stool samples.
4. Support targeted districts to detect, investigate cholera outbreaks and rumors and list contacts for chemoprophylaxis.
5. Support districts to collect and transport stool samples to regional referral hospitals and central public health laboratory for conformation and more laboratory testing.
6. Support follow up of cholera contacts and share information with health education and community health workers for appropriate interventions.
7. Procure and distribute cholera diagnostic laboratory supplies for all districts and health facilities.
8. Support cross-border cholera prevention meetings and interventions for selected districts
9. Provide special support to weak districts to follow up suspected cholera outbreaks and clean the data thereafter.

b) Indicators

1. Proportion and number of suspected outbreaks tested with cholera RDTs
2. Percentage and number of rumors and false alerts investigated
3. Proportion and number of districts listing contacts and sharing information with CHEWs for household follow up

4. Proportion and number of health facilities with standard case definitions in targeted districts
5. Proportion and number of cholera outbreaks reported within 24 hours of detection (RDT test) to higher level

4.5 Strengthen case management and infection control

Prevention and treatment of dehydration is the basis of cholera case management. Selective chemoprophylaxis with recommended antibiotics has a role in limiting transmission of the infection. Training of health workers is an essential element for preparedness especially in high-risk areas. All health care facilities that might manage cholera cases should have sufficient supplies that are able to cover the first few days before the arrival of more supplies.

A needs assessment and inventory of supplies should be completed annually for preparedness before any anticipated cholera outbreak. In addition, the health professionals be given skills or specific training for effective and efficient management of cholera cases and deaths.

During cholera outbreaks health workers should strengthen case management and aim at getting case fatality rate of less than 1%. It is important to isolate all suspected and confirmed cholera cases. There should be restriction of movement in and out of the cholera treatment units for the attendants and any other persons.

Appropriate disinfection of patients and their belongings, waste disposal, hygiene in the health facilities and sanitation are key in response. Protective wear should be used when handling infectious materials, buckets and dead bodies.

4.5.1 Current gaps in case management and infection control

Long distance and lack of medical supplies in affected districts leads to delayed medical care as patients arrive late for medical care. Due to this most of the dead occur in the community and are discovered late. Infections tend to spread during cholera burial due to cultural rituals and feasting that accompany the burials. In island lack of transport is an important constraint.

4.5.2 Priority activities, indicators and targets

a) Activities

Good or appropriate patient care and infection control are key component of cholera prevention and control. Health workers should be prepared to handle cholera cases before the outbreak period and should ideally target case fatality rate of less than 1%.

Selective treatment of immediate contacts prevents spread of infection as it removes the germs preventing them from multiplying and causing more infections.

1. Procurement and prepositioning of cholera supplies in endemic districts.
2. Training of health workers in appropriate case patient care and infection control to achieve a target of 90% of all the health care workers at national and in priority districts (National Trainers (TOT), district, health facility and CHEWs).
3. Identify possible cholera treatment units and equip them (human and logistics) for case management in all cholera priority districts (focus on hotspots).
4. Ensure that all contacts receive health education on prevention, water treatment tablets and selective chemoprophylaxis within 3 days (72 hours) of reporting of a cholera case.

5. Set up oral rehydration points in all cholera hotspots immediately after detection of the index case.
6. Support referral of cholera patients from communities to Cholera Treatment Units (CTUs).
7. Conduct supervised burial of suspected cholera dead to prevent infections.

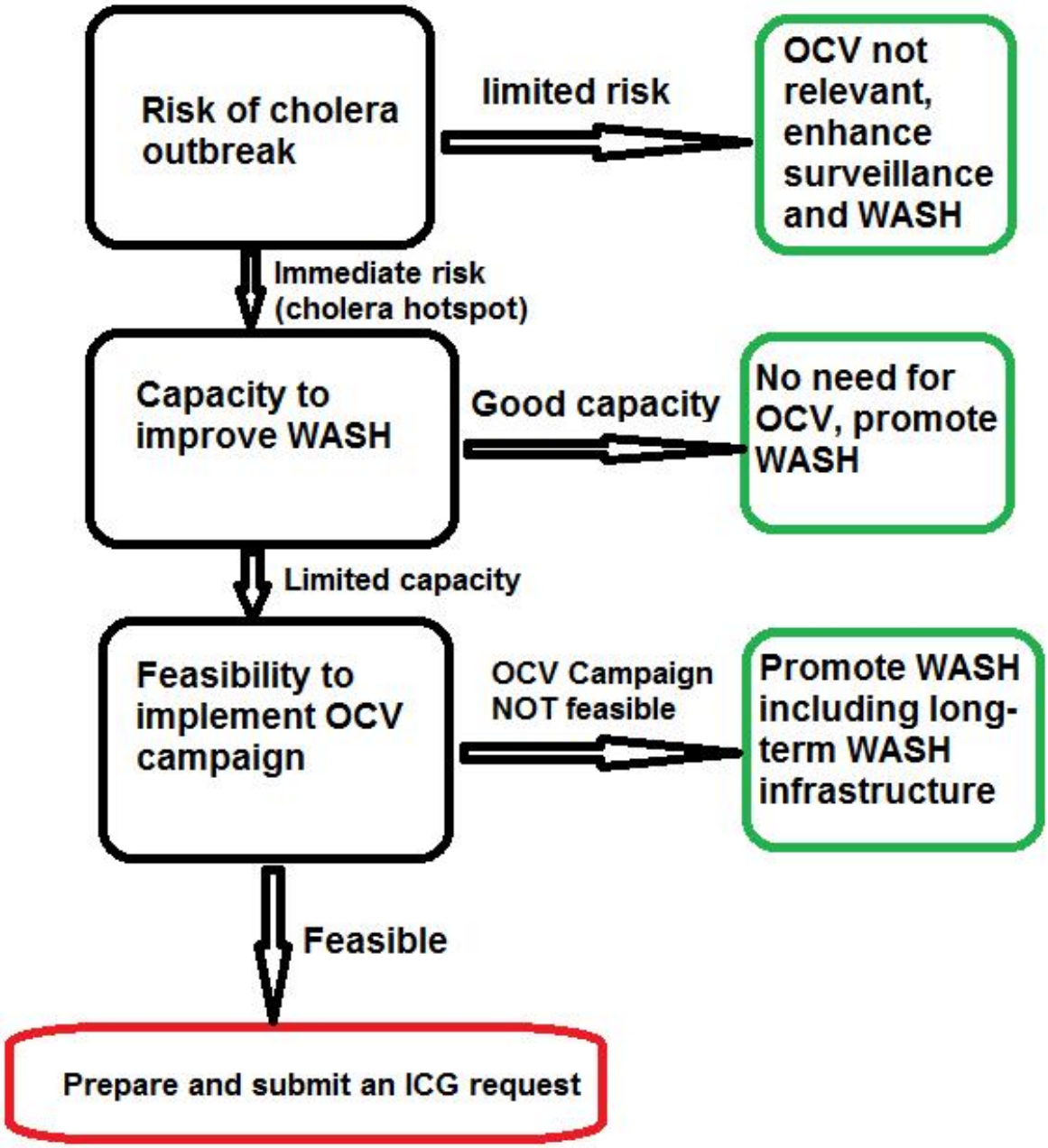
b) Indicators

1. Number of health workers trained on appropriate cholera case management in priority districts.
2. Proportion and number of health facilities in cholera prone subcounties with cholera medicines and supplies.
3. Proportion and number of patients who die from cholera (case fatality rate).
4. Number of immediate contacts that develop cholera
5. Proportion and number cholera dead burial supervised by health workers.

4.6 Oral Cholera Vaccine (OCV)

Oral Cholera Vaccine is an additional new cholera prevention intervention to supplement, not to replace, existing priority cholera control measures. Oral cholera vaccine use is a **short term** measure (3-5 year protection). The addition of OCV in cholera response will be assessed and recommended by the National Cholera Taskforce to achieve the maximum impact (**Figure 5**).

Figure 5, Decision to implement OCV campaign

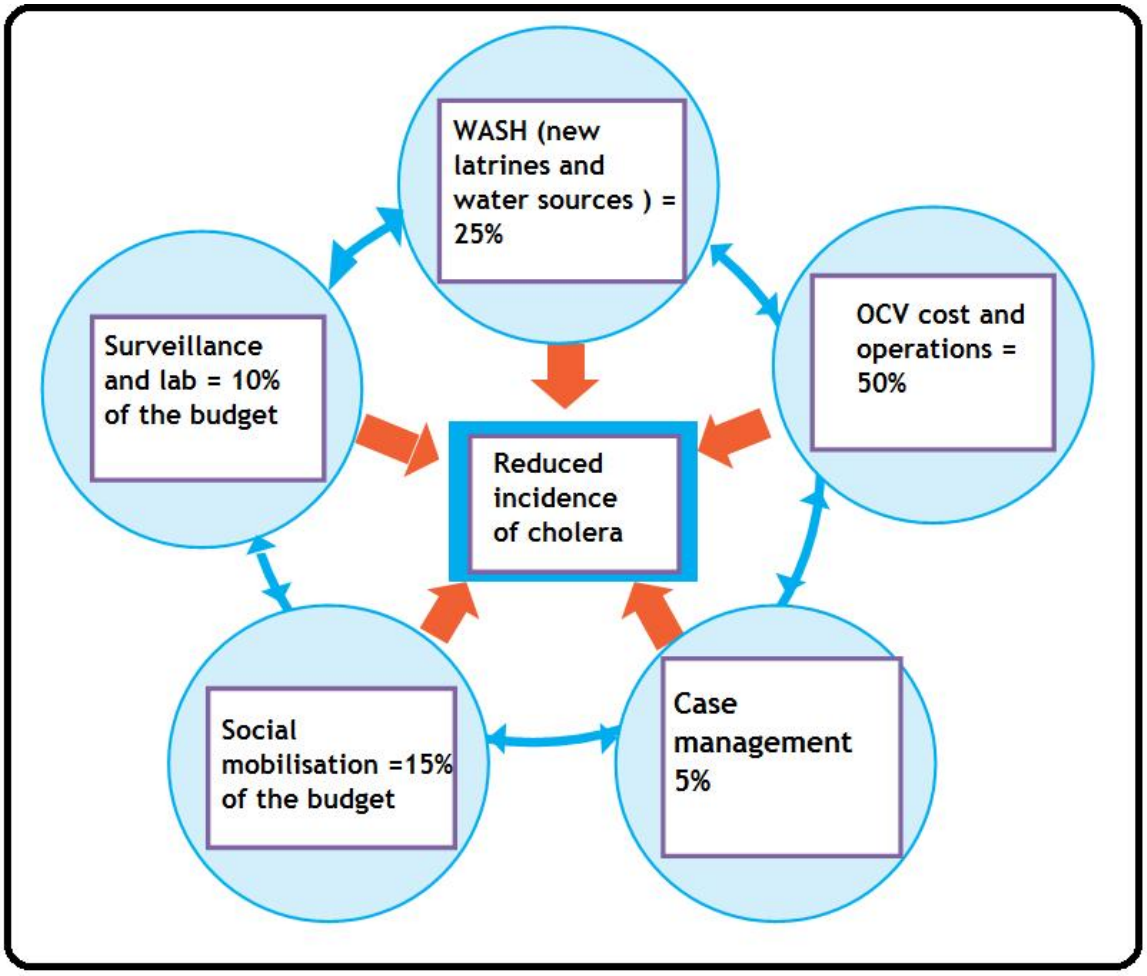


The use of OCV is recommended in endemic setting with well-defined cholera hotspots. While OCV can be useful before or during cholera outbreak, it is preferable that risk assessments and the corresponding vaccination campaigns be carried before the outbreak has occurred for good effect.

It is important to note that the *current vaccines only offer up to 67% protection of the community and for 3-5 years*. The other 33% of the population is not protected and is susceptible to cholera. In addition unlike WASH which prevents all infections the vaccine is specific to cholera and has no effect on *rota virus, dysentery and other diarrheal diseases* which may occur together with cholera. Therefore OCV is complementary intervention to WASH and other interventions and should never be used in isolation.

To ensure that all interventions are implemented with clear resources allocation that is proportionate to the cost, activities should harmonised during development of OCV campaign micro plan (**Figure 6**).

Figure 6, Allocation of funds for OCV campaign implementation



4.6.1 Information on OCV

Use of OCV is a short term measure that is very important in areas with poor access to safe water and sanitation (Mogasale, Ramani, Wee, Kim, & Chowdhury, 2016). However, when the cases are few it is not cost effective (Schaetti et al., 2012). This is so especially if feasibility of improving safe water is high.

The average cost per dose is equal to USD 1.25. The cost of delivery is also approximately USD 2.00. Two doses are required for each fully vaccinated person which is approximately USD 6.50 or Uganda shilling 23,000 per person vaccinated in addition to expanding cold chain storage capacity because of the high volume of the vaccines.

There are three WHO prequalified inactivated/killed whole-cell OCVs namely; Dukoral (Valneva, Lyon, France), Shanchol (Shantha Biotechnics, Hydrabad, India), and Euvichol (EuBiologic Co, Ltd, Chuncheon, South Korea) that are currently available. The most affordable OCV are Shanchol and Euvichol which can give protection for 3-5 years (Bhattacharya et al, 2013). Dukoral is less appropriate for field use because of higher costs and the need for the buffer.

4.6.2 Priority activities, indicators and targets

a) Activities

To achieve maximum impact from vaccination and to ensure cost-benefit effectiveness, communities located around the lakes will be targeted. A total of 300,000 persons (mainly in fishing villages) will be vaccinated in the first 3 years of NICCP17-22. If the cost of the vaccines reduces, this number will be increased to lie between 300,000-600,000 persons.

1. Conduct risk and vulnerability mapping to identify cholera hotspots (sub-counties or parishes) for integrated OCV (Collect district specific data for submission to ICG or Global Task Force for Cholera Control).
2. Shipment and distribution of vaccines, water purifiers, and other supplies.
3. Development of an integrated OCV campaign micro plan
4. Training of the district teams in target districts (Hoima, Nebbi, Buliisa and Namayingo) to administer OCV to their communities.
5. Sensitisation / mobilisation of communities to participate in OCV campaign
6. Implementation of the campaign beginning with the top cholera affected districts.
7. Monitoring and supervision of the campaign
8. Coverage survey, monitoring for adverse events and documentation of the processes

b) Indicators

1. Oral cholera vaccine vaccination coverage
2. Safe water coverage in specific sub-counties in targeted districts (Nebbi, Hoima, Buliisa and Namayingo)
3. Latrine coverage in specific sub-counties in above targeted districts.

Chapter 5: Supervision, monitoring, evaluation and operational research

5.1 Measures to ensure the goal is achieved as planned

5.1.1 Supervision

Implementation of the NICCP17-22 will be supervised in accordance to standard cholera prevention and control guidelines with particular focus on cholera high risk communities. The NTF provides the overall technical guidance and will report to OPM through the relevant sector structures. Effective supervision should result in positive outcomes for the affected communities, the service providers, supervisors and the nation as a whole.

5.1.2 Monitoring and evaluation

Implementation of interventions shall be monitored and evaluated regularly to further inform processes. A monitoring and evaluation framework has also been structured into the plan where each intervention can be continuously monitored using specific indicators at various intervals to inform the next stage.

A simple supervision and monitoring tool will be developed and disseminated to priority districts to facilitate their work in tracking the progress on the set NICCP17-22 targets based on the following:

1. **Increase in safe water coverage** in specific cholera prone subcounties
2. **Reduction in cholera case fatality rate** (confirmed cases as opposed to suspected cases)
3. **Reduction of cholera incidence and low cholera attack Rates** for targeted sub-counties (Proportion of persons at risk that develop cholera).

Monitoring reports will be used to assess the quality of services provided. **Mid-term** and **end-term evaluation** of the comprehensive plan shall be undertaken to assess how the set objectives and goal have been achieved. It is expected that during the five year period, best practices, lessons learnt, challenges and areas of significant change will be disseminated to stakeholders to provide benchmarks for future planning.

5.1.3 Operational research

Twenty first century is an era where successful interventions are guided by science. Better methods and innovators for solving issues keep coming up. The pathogens also keep evolving in the environment. Studies on this new approaches have to be done to guide interventions.

5.3 Priority activities, indicators and targets

a) Activities

1. Development of a simple district supervision and monitoring tool
2. Conduct a mini-cholera household survey for baseline, mid and end term evaluation; and to performance studies on hygiene knowledge, attitudes, practices and pathogens.
3. Conduct integrated supervision and monitoring visits to targeted districts
4. Documentation of experiences and challenges plus dissemination to stakeholders.

b) Indicators

1. Availability of a simple district supervision and monitoring tool
2. Availability of mini-survey reports
3. Stakeholders meeting report

These indicators should help to progressively assess the achievement of the set NICCP17-22 objectives, targets and goal.

Chapter 6: Implementation arrangement and the budget

6.1 Implementation arrangement

The NICCP17-22 will be implemented for a period of 5 years through the participation of various stakeholders. At national level, MOH and the relevant ministries and departments will coordinate the implementation.

The plan has both short and long term interventions. The short term activities will run up to the second year or intermittently for example complementary use of OCV, case management and procurement of supplies while the long term activities like WASH, surveillance, health education and promotion will run throughout to the fifth year.

The districts, local governments, institutions will be the nucleus of implementation. Districts and local governments will partner with local stakeholders for technical implementation, mobilizing of resources and evaluation. The private sector and CBOs shall be mobilized to fully participate in all thematic areas of the plan. Since cholera disease does not affect all districts evenly, resources will be prioritized to high risk districts and populations as a measure to ensure efficiency and effectiveness.

To ensure sustainability, the community will be empowered to fully participate in cholera prevention and control activities. During implementation gender consideration will be observed at all levels.

Supervision, monitoring, evaluation and operation research have been included in the plan to ensure better scientifically guided results. Mid and end term evaluation will be conducted to assess achievements based on set targets.

6.2 Final budget estimate for NICCP17-22

To compute the final cost estimate, wide consultations took place that included review and reference to previous annual cholera workplans. The average annual budget estimate for previous period was estimated at USD, 1.2-2.0 millions. We used these values and added on the cost of new targeted interventions for the 30 cholera prone districts.

Furthermore, the team conducted literature review on progress and challenges encountered with implementation of similar plans elsewhere in Africa and beyond. Several plans were reviewed the following were examples: Haiti (USD, 2.2 billions), Kenya (USD, 13.2 millions), Democratic Republic of Congo, Sierra Leone (USD, 6.1 millions). Common findings with most of these plans were the failure to attract adequate funding compared to cost estimate.

Using lessons from other country plans, NICCP17-22 prioritized interventions to minimize the budget but still maximize the benefits.

Therefore, the total required budget estimate for NICCP17-22 is Uganda shillings 30,710,000,000, equivalent to USD 8,774,000. Over 80% of the NICCP17-22 budget is for preventive activities. These budget is also spread through the five financial years (FY 2017/18 to 2021/22) to achieve set objectives and the plan goal (**Table 5**).

Table 5: Total budget estimate for all interventions in NICCP17-22

Intervention	FY 2017/2018 (000)	FY 2018/2019 (000)	FY 2019/2020 (000)	FY 2020/2021 (000)	FY 2021/2022 (000)	Total UGX (000)	Total USD (000)	Comment
1. Coordination and stewardship	470,000	310,000	320,000	250,000	400,000	1,750,000	500	Better coordination will ensure efficient use of resources and common goal for all actors
2. Social mobilization and community empowerment	840,000	1,190,000	1,260,000	455,000	455,000	4,200,000	1,200	Repackaging of interventions specific to local communities
3. Promotion of access to safe Water, Sanitation and Hygiene (WASH) using new innovations	2,800,000	3,350,000	1,800,000	1,225,000	395,000	9,570,000	2,734.286	Promotion of water chlorination and purifiers, solar water pumps, WASH. These will be targeted to S/Cs in priority districts
4. Surveillance, laboratory and early warning strengthening	630,000	828,335	809,666	669,667	62,333	3,500,000	1,000	Early detection and lab testing as opposed to syndromic diagnosis
5. Case management and infection control	2,089,500	1,102,500	703,500	731,500	623,000	5,250,000	1,500	
6. Complementary OCV	2,570,000	2,470,000	128,000	58,000	24,000	5,250,000	**1,500**	
7. Supervision, monitoring, evaluation and operational research	305,000	120,000	345,000	90,000	330,000	1,190,000	340	
Total	**9,704,500**	**9,370,835**	**5,366,166**	**3,479,167**	**2,289,333**	**30,710,000**	**8,774**	**80% of the funds are meant for preventive intervention**

Note: For more detailed costed activity estimates refer to **annex 1**.

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ANNEX

Annex 1: Detailed budget estimate for NICCP17-22

Activity	Output	FY 2017/2018 (000)	FY 2018/2019 (000)	FY 2019/2020 (000)	FY 2020/2021 (000)	FY 2021/2022 (000)	Total UGX (000)	USD Total	Responsible sectors/organizations
4.1 Coordination and stewardship									
1.Reactivation / re-establishment of the cholera task forces in 100% of districts reporting cholera outbreaks	Cholera task forces formed and function in all priority districts	40,000	20,000	20,000	20,000	20,000	120,000	34,286	MOH, LGs (districts), Development partners, UN agencies
2. Support priority districts to develop respective cholera prevention plans that are in cooperated into the district annual plans	District cholera prevention plans developed and included into district plan in all targetd districts.	200,000	50,000	50,000,000	50,000	50,000	400,000	114,286	MOH, LGs (districts), Development partners, UN agencies
3. Conduct advocacy meeting with leaders in priority districts to equip them with skills and knowledge to spearhead cholera prevention and control	leaders at all levels equipped with knowledge and skill for cholera prevention and control	80,000	100,000	50,000	70,000	80,000	380,000	108,571	MOH, MWE, LGs (districts), Development partners, UN agencies
4. Support field visit by leadership (central and district) to affected communities to assess the progress and guide	Field visit by leadership to cholera prone communities conducted	100,000	80,000	50,000	50,000	100,000	380,000	108,571	MOH, LGs (districts), MWE, Development partners, UN agencies

Activity	Output	FY 2017/2018 (000)	FY 2018/2019 (000)	FY 2019/2020 (000)	FY 2020/2021 (000)	FY 2021/2022 (000)	Total UGX (000)	USD Total	Responsible sectors/organizations
implementation									
5. Conduct annual stakeholder review meeting to share information and assess progress on implementation of the planned activities.	Annual review meeting held at national and district level.	50,000	60,000	150,000	60,000	150,000	470,000	134,286	MOH, LGs (districts), Development partners, UN agencies
Sub-total for coordination and stewardship	Coordination and leadership for interventions provided	470,000	310,000	320,000	250,000	400,000	1,750,000	500,000	
4.2 Social mobilization and community empowerment									
1. Development and dissemination of cholera specific prevention communication strategy	Cholera specific prevention communication strategy developed and disseminated	120,000	250,000	200,000	60,000	60,000	690,000	197	MOH, LGs (districts), Development partners
2. Promote use of appropriate targeted communication such as by Fm radio, drama, music, dissemination of repackaged cholera messages etc	Use of appropriate targeted communication channels for dissemination of repackaged cholera messages promoted	150,000	230,000	280,000	100,000	100,000	860,000	246	MOH, LGs (districts), Development partners, URC
3. Strengthen community participation in cholera prevention through community dialogue model homesteads and villages.	Community participation in cholera prevention through community dialogue model homesteads and villages strengthened	140,000	220,000	260,000	120,000	120,000	860,000	246	MOH, LGs (districts), Development partners, URC
4. Train and provide Community Health Extension Workers (CHEWS) with cholera prevention IEC materials	Community Health Extension Workers (CHEWS) trained and provided with cholera prevention IEC materials	350,000	280,000	280,000	90,000	90,000	1,090,000	311	MOH, LGs (districts), Development partners, URC

Activity	Output	FY 2017/2018 (000)	FY 2018/2019 (000)	FY 2019/2020 (000)	FY 2020/2021 (000)	FY 2021/2022 (000)	Total UGX (000)	USD Total	Responsible sectors/organizations
5. Mobilize local and cultural/traditional/ religious leader to be agents of change in their communities	Local, Cultural, Traditional, Religious leaders as agents of change in their communities mobilized	50,000	120,000	150,000	50,000	50,000	420,000	120	LGs (districts), Development partners, URC
6. Promote learning on cholera prevention through schools in endemic setting (sub counties)	Learning on cholera prevention through schools in endemic setting (sub counties) promoted	30,000	90,000	90,000	35,000	35,000	280,000	80	MOH, LGs (districts), MOES, Development partners, URC
	Total	840,000	1,190,000	1,260,000	455,000	455,000	4,200,000	1,200	
4.3 Promotion of access to safe Water, Sanitation and Hygiene (WASH) using new innovations									
1. Procurement and installation of chlorine dispensers on all major landing sites to achieve 100% coverage	Chlorine dispensers available in all the landing sites	1,400,000	2,000,000	500,000	50,000	50,000	4,000,000	1,142,857	MOH, LGs (districts), Development partners, URC
2. Revitalization and training of community water user committees	Water user committees available on all sources of water in cholera prone districts	50,000	100,000	100,000	800,000	20,000	1,070,000	305,714	MOH, LGs (districts), Development partners, URC
3. Mobilize communities to protect, construct and maintain water sources in all high risk districts to achieve the national coverage of 67% (rural) in targeted communities (sub counties) – establishment of water user committees in all targeted communities	Availability of safer water sources constructed, protected in high risk districts by the communities	150,000	200,000	200,000	100,000	50,000	700,000	200,000	MOH, LGs (districts), Development partners, URC
4.Promotion of installation of solar	Solar water pumps available in 50%	1,000,000	800,000	500,000	25,000	25,000	2,350,000	671,429	MOH, MWE, LGs (districts),

Activity	Output	FY 2017/2018 (000)	FY 2018/2019 (000)	FY 2019/2020 (000)	FY 2020/2021 (000)	FY 2021/2022 (000)	Total UGX (000)	USD Total	Responsible sectors/organizations
water pumps at major landing sites in endemic districts to achieve coverage of 50% or more in targeted districts	land sites in cholera endemic districts								Development partners, URC
5. Follow up on the local authorities to enforce sanitation and settlement bye-laws in all (100%) endemic districts	100% follow up visits done on local authorities to enforce sanitation and settlement of bye-Laws in all cholera endemic districts	50,000	100,000	200,000	20,000	20,000,	390,000	111,429	MOH, MWE, MOLG, LGs (districts), Development partners, URC
6. Promote construction and use of latrines, installation of hand washing facilities and hygiene (food, personal and environmental) in public and homesteads (Community Lead Total Sanitation)	No of new latrines constructed with hand washing facilities and hygiene(food, personal and environment) promotion done in public and homesteads (community Lead Total Sanitation)	50,000	50,000	100,000	30,000	30,000	260,000	74,286	MOH, MWE, MOES, LGs (districts), Development partners, URC
7.Strengthen collaboration with other sectors/stakeholders namely National Environmental Management Authority (NEMA) and Beach Management Units (BMU)	Other sectors/Stakeholders like NEMA, BMU working closely with MoH, districts and other stakeholders involved in cholera control.	50,000	50,000	50,000	50,000	50,000	250,000	71,429	MOH, LGs (districts), Development partners, URC
8.Conduct regular water quality monitoring of all public water sources	Report on monitored public water sources on the quality water	50,000	50,000	150,000	150,000	150,000	550,000	157,143	MOH,OPM, LGs (districts), MAAIF, Development partners, URC
Sub-total for WASH	Safe water available in more than 50% of cholera hotspots	2,800,000	3,350,000	1,800,000	1,225,000	395,000	9,570,000	2,734,286	

Activity	Output	FY 2017/2018 (000)	FY 2018/2019 (000)	FY 2019/2020 (000)	FY 2020/2021 (000)	FY 2021/2022 (000)	Total UGX (000)	USD Total	Responsible sectors/organizations
4.4 Surveillance, laboratory and early warning strengthening									
1. Print and disseminate standard case definitions and guidelines to health workers, health facilities in cholera prone districts.	Cholera medicines and supplies (Kits) available in appropriate locations (ringers lactate, ORS, antibiotics for cholera, disinfectants etc)	175,000	70,000	58,333	129,500	40,833	473,667	135,333	MOH, LGs (districts), Development partners, UN agencies
2. Train and equip health workers s (Qualified and CHEW) with skill for timely detection of cholera in the community and at health facility level in all targeted districts	Health workers at all levels equipped with appropriate skills to detect and investigate outbreaks	70,000	186,667	186,667	112,000	186,667	742,000	212,000	MOH, LGs (districts), Development partners, UN agencies
3. Train laboratory health workers on field detection of cholera with RDTs and handling of stool samples	Laboratory health workers trained in using RDTs and safe handling of stool samples.	35,000	58,333	56,000	59,500	38,500	247,333	70,667	MOH, LGs (districts), Development partners, UN agencies
4. Support target districts to detect, investigate cholera outbreaks and rumors and list cholera contacts for chemoprophylaxis	Districts with gaps supported to investigate cholera outbreaks and rumors. Contacts listed for chemoprophylaxis.	70,000	198,333	198,333	164,500	38,500	669,667	191,333	MOH, LGs (districts), Development partners, UN agencies
5. Support districts to collect and transport stool samples to regional referral hospitals (RRHs) and Central Public Health Laboratory (CPHL) for conformation and more laboratory testing.	Districts supported to transport stool samples for further testing.	70,000	58,333	56,000	40,833	77,000	302,167	86,333	MOH, LGs (districts), Development partners, UN agencies

Activity	Output	FY 2017/2018 (000)	FY 2018/2019 (000)	FY 2019/2020 (000)	FY 2020/2021 (000)	FY 2021/2022 (000)	Total UGX (000)	USD Total	Responsible sectors/organizations
6. Procure and distribute laboratory supplies to all districts and health facilities	Laboratory supplies procured and distributed to laboratories	77,000	79,452	102,783	40,833	63,000	363,069	103,734	MOH, LGs (districts), Development partners, UN agencies
7. Support cross border cholera prevention meetings, information sharing and interventions in targeted districts	Information shared between neighboring border districts	105,000	118,882	116,549	81,667	79,333	501,431	143,266	MOH, LGs (districts), Development partners, UN agencies
8. Provide special support to weak districts to follow up suspected cholera outbreaks and clean the data thereafter.	Weak districts identified and given special support to detect outbreaks	28,000	58,333	35,000	40,833	38,500	200,667	57,333	MOH, LGs (districts), Development partners, UN agencies
Sub-total for surveillance, laboratory and early warning	Timely detection of outbreaks done	630,000	828,335	809,666	669,667	562,333	3,500,000	1,000,000	
4.5 Strengthen case management and infection control									
1. Procurement and prepositioning of cholera supplies in endemic districts	Cholera medicines and supplies (Kits) available in appropriate locations (ringers lactate, ORS, antibiotics for cholera, disinfectants etc)	140,000	98,000	52,500	45,500	35,000	371,000	106,000	MOH, LGs (districts), Development partners
2. Training, orientation and mentoring of health workers on cholera prevention and control - identification, infection control, administration recommended treatment, monitoring of patients etc as per the standards	Health workers available in CTUs and ORT corners (CHEWS) with skill for identification , classification, management and referral of cases as per standards for cholera	280,000	140,000	105,000	175,000	140,000	840,000	240,000	MOH, LGs (districts), Development partners, URC

Activity	Output	FY 2017/2018 (000)	FY 2018/2019 (000)	FY 2019/2020 (000)	FY 2020/2021 (000)	FY 2021/2022 (000)	Total UGX (000)	USD Total	Responsible sectors/organizations
3. Identify possible cholera treatment units and equip them for case management in all cholera priority districts (focus on hotspots).	Possible CTU sites identified, equipped and transformed into CTUs for treatment of cholera patients	329,000	192,500	105,000	122,500	98,000	847,000	242,000	MOH, LGs (districts), Development partners, URC
4. Ensure that all contacts receive health education on prevention and selective chemoprophylaxis within 3 days (72 hours) of reporting of a cholera case.	New infections prevented through health education and selective chemoprophylaxis of the contacts.	280,000	140,000	70,000	38,500	35,000	563,500	161,000	MOH, LGs (districts), Development partners, URC
5. Set up oral rehydration points in all cholera hotspots immediately after detection of the index case.	ORT corners established in affected communities to ensure timely treatment	70,000	35,000	17,500	35,000	35,000	192,500	55,000	LGs (districts), Development partners, URC
6. Support referral of cholera patients from communities to CTUs	Ambulances and health workers available and supported. Vehicles fuelled for referral of patients from communities to CTUs	150,500	77,000	38,500	52,500	52,500	371,000	106,000	MOH, LGs (districts), Development partners, URC
7. Burial team set up and deployed to burry cholera dead.	Supervised burial of cholera dead carried out by health workers.	140,000	70,000	35,000	17,500	17,500	280,000	80,000	MOH, LGs (districts), Development partners, URC
Sub-total for Case management and infection control	Cholera patients and contacts provided with appropriate treatment and protection	2,089,500	1,102,500	703,500	731,500	623,000	5,250,000	1,500,000	
4.6 Complementary OCV									
1. Identification/ mapping of vulnerable	Mapping of cholera hotspots and vulnerability risk	35,000	35,000	-	-	-	70,000	20,000	MOH, LGs (districts), MWE, MOES,

Activity	Output	FY 2017/2018 (000)	FY 2018/2019 (000)	FY 2019/2020 (000)	FY 2020/2021 (000)	FY 2021/2022 (000)	Total UGX (000)	USD Total	Responsible sectors/organizations
communities for OCV through collection, analysis and interpretation of data	assessments done								OPM Development partners
2. Application, procurement and shipment of OCV	600,000 doses divide into two equal quantities for communities in cholera hotspots (300,000 persons)	1,764,000	1,764,000	-	-	-	3,528,000	1,008,000	MOH, LGs (districts), Development partners, URC. If the cost of OCV reduces more doses will be procured with the same funds
3.Distribution of OCV from National store to districts and from districts to the vaccination points	All vaccination points in selected cholera hotspot issued with required OCV and related supplies.	15,000	15,000	-	-	-	30,000	8,571	MOH, LGs (districts), Development partners, URC
4. Development of integrated OCV campaign district specific microplams	District micro plans available in priority districts	20,000	20,000	-	-	-	40,000	11,429	MOH, LGs (districts), Development partners, URC
5. Training of the district teams in target districts (Hoima, Nebbi, Bulisa and Namayingo) to administer OCV to their communities.	District teams trained to implement integrated OCV campaign	106,000	106,000	-	-	-	212,000	60,571	MOH, LGs (districts), Development partners, URC
6. Sensitizations / mobilization of communities to participate in OCV campaign	Awareness on OCV raised in the tarted areas	100,000	100,000	8,000	8,000	4,000	220,000	62,857	MOH, LGs (districts), MOES, Development partners
7. WASH promoted during OCV campaign	Access to safe water, sanitation and hygiene increased in sub counties targeted for OCV	150,000	150,000	20,000	20,000	10,000	350,000	100,000	MOH, LGs (districts), MWE, MOES, Development partners, URC
7. Implementation of OCV campaign beginning with the	OCV campaign conducted	110,000	110,000	-	-	-	220,000	62,857	MOH, LGs (districts), Development

Activity	Output	FY 2017/2018 (000)	FY 2018/2019 (000)	FY 2019/2020 (000)	FY 2020/2021 (000)	FY 2021/2022 (000)	Total UGX (000)	USD Total	Responsible sectors/organizations
top cholera affected districts - hotspots.									partners, URC
8. Monitoring for adverse event and documentation of the processes (Includes a pick up for follow up that will be procures in the first year) .	Monitoring and documentation of OCV campaign conducted	170,000	70,000	30,000	30,000	10,000	310,000	88,571	MOH, LGs (districts), Development partners, URC
9. OCV Coverage survey	OCV coverage established	100,000	100,000	70,000	-	-	270,000	77,143	MOH, LGs (districts), Development partners, URC
Sub-total for Complementary OCV	Populations in cholera hotspots (Nebbi, Hoima, Bulisa and Namayingo) vaccinated with OCV	2,570,000	2,470,000	128,000	58,000	24,000	5,250,000	1,500,000	
4.7. Supervision, monitoring, evaluation and research									
1.Development and dissemination of a simple district supervision and monitoring tool	Simple tool for supervision and monitoring of interventions available and disseminated	100,000	20,000		10,000		130,000	37,143	MOH, LGs (districts), Development partners, UN agencies
2. Conduct a mini-cholera household survey for baseline, mid and end term evaluation; and to performance studies on hygiene knowledge, attitudes, practices and pathogens.	Baseline, mid term and end term report available	125,000	-	125,000	-	130,000	380,000	108,571	MOH, LGs (districts), Development partners, UN agencies
3.Conduct integrated supervision and monitoring visits to targeted districts	supervision and monitoring done	80,000	100,000	100,000	80,000	80,000	440,000	125,714	MOH, MWE, MOES, LGs (districts), OPM, MAAIF, Development partners, UN agencies

Activity	Output	FY 2017/2018 (000)	FY 2018/2019 (000)	FY 2019/2020 (000)	FY 2020/2021 (000)	FY 2021/2022 (000)	Total UGX (000)	USD Total	Responsible sectors/organizations
4. Documentation of good experiences, and challenges during implementation	Documentation of experiences recorded		-	120,000		120,000	240,000	68,571	MOH, LGs (districts), MWE, Universities, Development partners, UN agencies
Sub-total for Coordination and stewardship		**305,000**	**120,000**	**345,000**	**90,000**	**330,000**	**1,190,000**	**340,000**	
Grand total	**Cholera prevented, cases reduced by 50%.**	**9,704,500**	**9,370,835**	**5,366,166**	**3,479,167**	**2,289,333**	**30,710,000**	**8,774**	**All stakeholders**

Annex 2: Speech by the Hon. Minister of Health during the launch of NICCP17-22 and the New Cholera Prevention and Control Guidelines, June 2017, Ridar Hotel, Mukono district

- Representatives from OPM, MWE, MOES
- The World Health Organization Representative
- Members of Top Management of Ministry of Health
- Secretaries for Social Services in the Local Governments
- Representative from Makerere University School of Public Health
- All our Development Partners present
- Members of the press
- Participants
- Ladies and gentlemen

Good afternoon.

It gives me great pleasure to be with you today to launch two important documents that is the National integrated Comprehensive Cholera Plan 2017/22 (NICCP17-22) and the new cholera prevention and control guidelines for Uganda.

As you are aware in few years from now Uganda will join middle income status which is incompatible with preventable diseases such as cholera. I note with satisfaction the timing of this launching which resonates very well with "Kisanja Hakuna Muchezo".

The time to say goodbye to cholera outbreaks starts today! This is because we have the arsenal to fight it.

That is the National Integrated Comprehensive Cholera Plan in which multi-sectoral and collective efforts are embedded. This is because the risk factors for cholera prevention cut through a number of sectors. I am happy to see all key relevant sectors and actors represented in this meeting.

The task before us is surmountable and doable for example the last confirmed cholera case was in Buliisa district in November 2016. We know that the top 5 districts for cholera cases are Nebbi in Northern Uganda, Hoima, Buliisa, Kasese in Western Uganda, and Mbale, in Eastern Uganda which contribute 60% of all cholera cases in the country.

In addition, the research that the Ministry of Health conducted with Makerere University showed that 58% of all cholera cases were from the fishing villages who make up the less than 5% of the total Uganda population. In all the cholera reporting districts the common risk factors include: inadequate access to safe water, poor sanitation and hygiene.

Since we know where the problem is and the risk factors, then most important aspect is good governance to ensure that our people can access safe water, good sanitation and promotion of environmental and individual hygiene.

The national and district stewardship need to work together to provide sustainable social services, mobilize and empower the high risk communities to kick cholera out of Uganda.

Cholera is severe watery diarrheal disease that kills within few hours. It can be imported or exported as it happened in Haiti and devastated this country. Cholera a preventable diseases has serious fatal and economical consequences for the households and the country. This was clearly demonstrated in 2008 when an outbreak hit one of the countries in Southern Africa and the economy was paralysed and 4300 deaths reported. The total cost of controlling this outbreak was USD 18 millions. We should not allow such situation to face us too.

As I talk now, cholera outbreak is in the Horn of Africa causing humanitarian crisis where 30,000 – 40,000 cases with 360 - 780

deaths are reported in each of three countries of Yemen, Somalia and Ethopia.

In order to register and consolidate progress, we must focus on the priority interventions namely: good stewardship at all levels, increased access to safe water, good sanitation and hygiene, community mobilization and empowerment and effective public health services.

We have provided hard and soft copies on the Ministry of Health Website of the Plan and Guidelines for the districts to access and use in prevention of cholera.

My appeal to you all is to focus on the key interventions mentioned above and others like bye-laws to prevent cholera in Uganda and reduce new cases by 50%.

Last but not least, I wish to convey the government of Uganda gratitude and appreciation for the unreserved support in the development of these documents which I am going to launch.

It is now my pleasure to launch "The National Integrated Comprehensive Cholera Plan Fiscal Years 2017/22" and Cholera Prevention and Control Guidelines.

THANK YOU FOR LISTENING TO ME!

For God and My Country

Hon. Dr. Joyce Moriku Kaducu

Minister of State for Health - Primary Health Care

Annex 3: Participants in regional consultative meetings held in Arua, Mbale and Hoima Districts

No	Name	Designation
1	Acia Marino	DEO-Arua
2	Odaa Tiyo Taylor	DWO-Arua
3	Ayeyo Kennedy	CEFORD-Arua
4	Tiko Beatrice	DHI-Arua
5	Dradiku Christopher	ARRH-URC Arua
6	Ojjo ZUBEIR	ADHO-EH Yumbe
7	Luriga Rasulu	DEO – Yumbe
8	Magara Bernard Aira	DWO –Yumbe
9	Said Candia Abdul	CBO – Yumbe
10	Geria Patrick	URC- Yumbe
11	Ukoku Yona	URC – Adjumani
12	Adrani Patrick	CBO-Adjumani
13	Manga Godfrey Ilemaiya	DHT-Adjumani
14	Drichi Wilson Tokwenyi	DWO – Adjumani
15	Dima Robert	DEO-Adjumani
16	Bati-Ya-Mungu Patrick	URC-Gulu
17	Teo Namata	CBO-Gulu
18	Owiny Dickens Amercianus	DHT-Gulu
19	Olal Andrew P'obong	DWO- Gulu
20	Obot Robinson	DEO- Gulu
21	Wandawa Kakai Jennifer	CBO-Mbale
22	Alupo Deborah	DHE-Mbale
23	Wandera Simon Peter	DWO-Mbale
24	Nangosya Mike Masikye	DEO-Mbale
25	Frances Amulen	URC-Tororo
26	Amuler Harriet Martha	DHI-Tororo
27	Opio Moses	DWO-Tororo
28	Yona Gamusi	DEO- Tororo
29	Nayisiga Ereth	CBO-Butaleja
30	Isogoli Henry	DHI-Butaleja
31	Wasige Richard	DWO-Butaleja
32	Kalyebbi Philip	DEO-Butaleja
33	Tulidayo Hassan	URC-Pallisa
34	Teru Timothy	DHI-Pallisa
35	Okuma John Francis	DWO-Pallisa

No	Name	Designation
36	Buyinza Magumba Patrick	DEO-Pallisa
37	Bukenya Emmanuel	URC- Busia
38	Wabwire Tony Bredrick	DHT-Busia
39	Lubega Joseph	DWO-Busia
40	Namwamba Wilberforce Angajo	DEO-Busia
41	Wamukota Stephen	URC-Hoima
42	Mboineki Stanley	CBO-Hoima
43	Kwebiha Solomon	DHT-Hoima
44	Luswata Ibrahim	DWO- Hoima
45	Kyomuhendo Robert	DEO-Hoima
46	Tumusiime Everlyne	URC-Bulisa
47	Magambo James	CBO-Bulisa
48	Kusemererwa Harriet	DHT-Bulisa
49	Sabiiti Titus	DWO-Bulisa
50	Byenkya Christopher	DEO-Bulisa
51	Buzaale Geofrey	URC-Kabarole
52	Kabasinguzi Pamela Teddy	CBO-Kabarole
53	Kemigabo Catherine	DHT-Kabarole
54	Mugabe Pius Katuramu	DWO- Kabarole
55	Rwakaikara Patrick	DEO-Kabarole
56	Kipurah Gideon	URC-Kasese
57	Birungi Ben Henry	CBO-Kasese
58	Bwambale Ericana Musoka	DHT-Kasese
59	Bagonza Steven	DWO-Kasese
60	Muhindo Jerome	DEO-Kasese
CBO (Community Based Organisation), DHI (District Health Inspector), DHT (District Health Team), DWO (District Water Officer), URC (Uganda Red Cross)		

Annex 4: List of participants present during the launching of NICCP17-22, June 2017, Ridar Hotel, Mukono district

Name	Designation	ORGANISATION
Dr. Joyce Moriku Kaducu	Hon. Minister of State For Health - Primary Health Care	MOH _**Chief Guest**
Dr. Jane Ruth Aceng	Hon. Minister of Health	MOH
Professor A. K. Mbonye	AG. DGHS	MOH
Dr. Kagwa Paul	AG CHS(CH)	MOH
Dr. Issa Makumbi	Manager	EOC
Dr. Jackson Amone	CHS (Integrated Clinical Servicers)	MOH
Dr. Patrike Tusiime	CHS/NDC	MOH
Dr. Mangeni Francis A	Sec. For Health	NAMAYINGO DISTRICT
Dr. Ruyonga Joseph	DHO	HOIMA DISTRICT
Mulindambura M Jack	Se. For Health	HOIMA DISTRICT
Dr. Magoola Patrick	DHO	NAMAYINGO DISTRICT
Dr. Matovu Ahamed	DHO	KAYUNGA DISTRICT
Okecha Jean Andrew	DWO	NEBBI DISTRICT
Dr. Bwire Godfrey	PMO	MOH
Mike Musisi Musoke	Journalist	UBC TV
David Matseketse	HO	UNICEF
Zainah Kabami	Epid	MOH
Ongole Francis	Sen. Lab Technologist	CPHL/UNHLS
Fred Mulabya	SPHI	MOH
Visia Teddy Joy	Buliisa	SEC HEALTH
Akugizibwe Juliet	Bulisa Water Officer	BDLG
Bazibu Monic	Senior Public Health Nurse	BUTABIKA HOSP
Okumudavid Cyrus	DHO	TORORO DLG
Eng. Ian Arebahona	Principal Engineer	MIN.WATER & ENVIRONMENT
Cecilia Okoth	Reporter	NEW VISION
Dr. Jakor Oryemo	DHO	NEBBI DLG
Oryekwun Fred Gabriel	Sec. Soc. Services	NEBBI

Name	Designation	ORGANISATION
Komuhendo Judith	Nursing	MULAGO HOSP
Kasimba K Samuel	DHE FOR DHO	KASESE L. GOV'T
Bikumbi Habib	P/H	KASESE
John V Sserwaniko	Journalist	RED PEPPER
Wilfred Sanyu	Journalist	NEWVISION
Martha Naigaga	Dan. Coordinator	MWE/DWD
Dr Bubikire Stanley	PMO	MOH
Kiiza. K Peter	M/O	MOH
Wandera Steven	WASH Officer	UNICEF
Ruth Kabugo	Sec. For Health	KASESE
Katuko Joel	News Reporter	NBS TV
Innocent Komakech	Technical Officer	WHO
Mawanda Christopher	District Water Officer	BULIISA
Kusemererwa Harriet	DHO	BULIISA
Ritah Kagwa	Consultant	SPRING BOARD
James Mugisha	SHP	MOH
Sam Nalwala	Media	MOH
Vivian N Serwanjja	PRO	MOH
Dr Waniaye John Baptist	CHS/Ambulance Services	MOH
Dr Ssali Charles	SDS	MOH
Dr. Nakinsige Anne	SMO	MOH
Dr. Julius Simon Otim	Manager	KCCA
Kajumba Joseph	Principal Inspection Officer, TES	MOES
Amanda Ottosson	BCC	MOH
Prof. Christopher Garimoi Orach	Deputy Dean School Of Public Health	MAKERERE UNIVERSITY
Isaac Sugar-Ray	HCS/HP&E	MOH
Birungi Betty	SEC/HP&E	MOH
Kalyebi Peter	SPHI	MOH
Komuhendo Judith Jolly	Nursing Officer	MULAGO HOSPITAL
Pande Gerald	EHO/ Epidemiologist	MOH
Aguti Grace Mary	Nursing Officer	MULAGO HOSPITAL
Christine N Kayondo	Secretary	MOH
Rose Nakabugo	Assistant Commissioner / Disaster Management	OPM
Miriam Kayendeke	MUKSPH	MUK-SPH
Paul Bitex Okot	EPR Manager	URCS
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