The Mobile-based Disaster Risk Monitoring System (DRMS)
A guide to Community-Based Monitoring of Viral hepatitis, Nodding Disease, Ebola and Marburg Epidemics in the communities
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## Abbreviations and Acronyms

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<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>CAO</td>
<td>Chief Administrative Officer</td>
</tr>
<tr>
<td>DDMC</td>
<td>District Disaster Management Committee</td>
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<tr>
<td>DRMS</td>
<td>Disaster Risk Monitoring System</td>
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<tr>
<td>GoU</td>
<td>Government of Uganda</td>
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<tr>
<td>IIRR</td>
<td>International Institute of Rural Reconstruction</td>
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<tr>
<td>NECOC</td>
<td>National Emergency, Coordination and Operational Centre</td>
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<tr>
<td>OPM</td>
<td>Office of the Prime Minister</td>
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<td>SMS</td>
<td>Short Message Service</td>
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<td>UNDP</td>
<td>United Nations Development Fund</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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</table>
Foreword

Uganda is repeatedly exposed to natural disasters such as drought, floods, epidemic and epizootic outbreaks of disease, as well as pests/diseases affecting crop yields. Over the years, the country has responded to various disease outbreaks that have affected people in various parts of the country. The major epidemics that have been faced in the country include; Ebola, Cholera, hepatitis, Nodding Syndrome, jiggers and typhoid among others, which have continued to affect the Eastern, Northern and Western parts of the country and pose a national challenge. The most vulnerable regions are often caught in a vicious cycle of high vulnerability and constant humanitarian need.

With the impacts of disasters falling disproportionately on the most vulnerable and marginalized population groups, the Government of Uganda has a strong incentive to ensure that disaster risk is minimized. While there is a growing understanding and appreciation of the importance of increased disaster response capacity, investment in Disaster Risk Reduction is inadequate to meet capacity needs to anticipate and respond to disasters. Of necessity is increased community engagement and greater political commitment as well as availability of financial resources for Disaster Risk Reduction.

The National Policy for Disaster Preparedness and Management acknowledges the impact of disasters on the lives and livelihoods of the Ugandan people. The Government of Uganda (GoU) disaster risk management strategy highlights the importance of prevention and preparedness underscoring Early Warning (EW) as an important element.

In its effort towards enhancing preparedness and management, the Office of the Prime Minister, Department of Disaster Preparedness and Management has set up the National Emergency Coordination and Operations Centre (NECOC) to take on the role of coordinating Emergency Preparedness and Response. Within this effort, a community-led Disaster Risk Monitoring System has been established at the NECOC. Through this initiative, communities will participate in reporting early warning signs or distress alerts via mobile SMS to notify the NECOC of any occurrences in real-time so that timely mitigation measures and response are provided to reduce the impact of disasters.

Hon. Eng. Hillary Onek

Minister for Refugees, Disaster Preparedness and Management
Acknowledgement

This guideline will facilitate community-based monitoring of early warning signals of epidemics. It has been prepared through collaborative efforts between the Office of the Prime Minister (OPM) and International Institute of Rural Reconstruction (IIRR) with support from UNICEF and funding from UKaid.

The content of this guideline was solicited through consultative dialogues with communities and local leaders in the districts of Kitgum, Bundibugyo and Napak. Trusted indicators which serve as early warning signals for the epidemics under surveillance have been compiled and endorsed by a team of District Health Officials from the Districts at risk and Ministry of Health officials in consultation with communities in these areas.

The staff of IIRR Ms Pamela Nyamutoka Katooro, Miriam Lonah Lorika and Isaac Bwire played a key role in collecting and consolidating all the information that forms the content of this guideline. We extend sincere appreciation to the children, caregivers, teachers, district and sub-county officials that shared their experiences and knowledge of disasters.

Special thanks go to Martin Owor, Gerald Menhya and Solomon Elungat at the Office of the Prime Minister for officiating at the writeshops and meetings that led to the development of this guideline. We acknowledge the invaluable technical support from UNICEF technical Officers Juliet Ssekandi and Nelly Birungi during the planning and implementation of this initiative.
Introduction

These guidelines serve as a set of principles and practices that will be a key reference for disaster management practitioners to identify, assess and report risks affecting the communities so as to inform disaster risk reduction interventions. The guidelines present a set of trusted early warning signals of epidemics that communities can observe and report as well as innovative mobile-based procedures to relay early warning information on hazards and risks.

This initiative is aimed at empowering communities to serve as the first assessment team before or during disaster times so as to mitigate risk or expedite emergency response and build capacity of local disaster management committees in early warning and early action. It will enable tracking the occurrence of small or micro events trends exposing vulnerabilities of communities thus leading to a better resilience building strategy.

In the Epidemics prone areas, the initiative will facilitate timely reporting of early warning signs and signals for the epidemics as a way of enhancing preparedness for the epidemics and identify a mitigation measure that can be used to contain the epidemic and avoid emergencies of new infections.

Context

An epidemic occurs when there is an unusual increase in the number of cases of an infectious disease that already exists in the region or population concerned, or the appearance of an infection disease previously absent from a region.

An epidemic is defined as the prevalence, in a particular community and at a particular period, of a disease whose magnitude goes beyond normal/expected levels. The diseases include; cholera, meningitis, hepatitis E, Marburg, plague, Ebola, and sleeping sickness. Others are diseases such as diarrhoea, dysentery and typhoid.

The massive chemical or/and alcoholic poisoning may also create a hazardous condition similar to epidemics. Modern epidemics include avian influenza (bird flu), Ebola haemorrhagic fever and malaria. In some parts of Uganda, diseases like meningitis, cholera, HIV/AIDS and Ebola, plague and jiggers constitute hazards.

Crop and livestock epidemics also are common in many parts of the country and cause social and economic loss. Other health related hazards come from radiation, strong tropical winds and the increased threat of global warming. Uncontrollable movements of livestock and plants are some of the chief causes of the associated epidemics. However, some diseases are induced by people particularly through laboratory accidents.

In simple terms, a disease epidemic occurs when there are more cases of that disease than normal. On another note, a pandemic is a worldwide epidemic of a disease. For instance, an influenza pandemic may occur when a new influenza virus appears against which the human population has no immunity. With the increase in global transport, as well as urbanization and overcrowded conditions in some areas, epidemics due to a new influenza virus are likely to take hold around the world, and become a pandemic faster than before. Pandemics can be either mild or severe in the illness and death they cause, and the severity of a pandemic can change over the course of that pandemic.
Figure 1: Map of Uganda showing the common Epidemics and the prone areas.
Key Concepts in Disaster and Epidemic Preparedness

Effective implementation of DRR requires harmonized understanding of the basic concepts. The definitions given below apply to the terms as used in this manual although they may have different meanings in other contexts.

Hazard – describes a potential event (natural or human activity) that could cause loss of life, or damage to property or the environment. The effects if not well managed will progress into a disaster situation.

Vulnerability – Describes to what extent an area, people, physical structures or economic assets are exposed to loss, injury or damage caused by the impact of a hazard.

Disaster- Prone Community – Refers to people living in one geographical area, who are exposed to common hazards due to their location. They may have a common experience responding to hazards and disasters and will have a stake in planning and implementing risk reduction measures.

Disaster Risk: The likelihood of harmful consequences resulting from the interaction of hazards (threats), vulnerable (low capacity or coping ability) and the environment (supporting factors).

Disaster – describes the serious disruption of the functioning of society causing widespread human, material or environmental losses, which exceed the ability of the affected communities to cope using their own resources. Disasters occur when the negative effects of the hazards are not well managed.

Disaster Risk Reduction – is a framework and a tool for communities to determine community risks and describe measures to increase capacities and reduce hazard impacts.
Prevention – Refers to activities designed to stop the occurrence of a disaster event and/or prevent such an occurrence from having harmful effects on communities and facilities.

Mitigation – Refers to measures which can be taken to minimize the destructive and disruptive effects of hazards and thus lessen the magnitude of a disaster.

Preparedness - Refers to activities and measures taken in anticipation of a disaster to ensure that appropriate and effective actions are taken to reduce the impact of disaster.

Capacity: A combination of all the strengths and resources available within a community or organization that can be mobilized and accessed, to allow individuals and communities to reduce the level of risk, or the effects of a disaster.

Coping capabilities/Capacity- Describes the existing practices and structures people and organizations use to withstand, prevent, prepare for, mitigate or quickly recover from unusual, abnormal, and adverse conditions of a disaster event.

Resilience/Resilient – the capacity of the community potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning. This is determined by how a community organizes itself to increase its capacity for learning from past disasters to effectively plan to improve risk reduction measures.

Relief/response: The provision of assistance and/or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can be of an immediate, short-term, or protracted duration.

Early warning: Dissemination of timely & meaningful information to enable those threatened by a hazard to prepare & act appropriately in time to reduce the possibility of harm or loss.

Endemic: The constant presence of a disease or infectious agent within a geographical area or population group.

Epidemic: The occurrence of more cases of disease than expected in a given area or among a specific group of people over a particular period of time.

High-risk group: A group in the community with an elevated risk of disease.

Incidence rate: A measure of the frequency with which an event, such as a new case of illness, occurs in a population over a period of time. The denominator is the population at risk; the numerator is the number of new cases occurring during a given time period.

Outbreak: An epidemic limited to a localized increase in the incidence of a disease.

Pandemic: An epidemic occurring over a very wide area (several countries or continents) and usually affecting a large proportion of the population.

Public health surveillance: The systematic collection, analysis, interpretation, and dissemination of health data on an ongoing basis, to gain knowledge of the pattern of disease occurrence and potential in a community, in order to control and prevent disease in the community.

Active case finding: The process of seeking out cases or health events under surveillance (e.g. house visits by community health visits to identify certain cases or active searching of health records to identify cases based on signs and symptoms documented).

Attack rate: The proportion of those exposed to an infectious agent who become ill. It is the cumulative
incidence of infection in a particular group observed for limited periods and under certain circumstances, such as in an epidemic. It is usually expressed as a percentage but could also be expressed as per 100 or 1000 persons.

Case definition: A set of standard criteria for deciding whether a person has a particular disease or health-related condition, by specifying clinical criteria and limitations on time, place, and person.

Case fatality rate: The proportion of persons with a particular condition (cases) who die from that condition. The denominator is the number of incident cases and the numerator is the number of cause-specific deaths among those cases.

Cluster: Aggregation of relatively uncommon events or diseases in space and/or time, in numbers that are believed or perceived to be greater than could be expected by chance.

Descriptive epidemiology: The aspect of epidemiology concerned with organizing and summarizing health-related data according to time, place, and person.

Positive predictive value: A measure of the predictive value of a reported case or epidemic; the proportion of cases reported by a surveillance system or classified by a case definition that are true cases.

Sensitivity: The ability of a system to detect epidemics and other changes in disease occurrence. The proportion of persons with disease who are correctly identified by a screening test or case definition as having disease.

Specificity: The proportion of persons without disease who are correctly identified by a screening test or case definition as not having disease.

Universal precautions: A set of standard recommendations to minimize the risk of transmission of blood borne pathogens, particularly HIV and Hepatitis B, by health care and public safety workers.
**Early Warning signs**

Monitoring signs and signals of epidemics as they revolve is core in enhancing preparedness for both the communities and the response teams since it creates a strong basis for countering the disease before it spreads to a larger population. Continuous monitoring of signs and signals is essential to generating accurate and timely warnings to disaster management and surveillance practitioners.

The indicators listed in this guideline largely comprise those signs/signals that are observable by the communities and community health workers without necessarily undertaking scientific tests. They are categorised basing on the Disease and the areas where they are most pronounced.

1. Viral Hepatitis

Hepatitis is the inflammation of the liver which comes with a number of symptoms including yellowing of eyes. Viral Hepatitis is the commonest cause of liver cancer all over the world constituting 83% of liver cancer cases. It is one of the most infectious diseases although many people remain unaware of its toll on global health. This makes viral hepatitis a silent killer disease. There are various types of Hepatitis viruses. These have been named chronologically as Hepatitis A, B, C, D and E following their discoveries.

According to the Ministry of Health, 10% of the Ugandans, (more than 3.5 million Ugandans) are living with chronic Hepatitis B infection. Presently, by region Hepatitis B prevalence in Uganda is ranked as follows: North East 21.7%, North Central 19.4%, West Nile 18.7%, Western 10%, Kampala 5.8%, Central 5.8%, Central 5.5% while South West with 2.9%.

Amongst all the types of viral hepatitis, Hepatitis B virus is the most prevalent in Uganda and can be transmitted through health care system by needle sticks injuries, sexual transmission, mother to child and blood transfusion. However, the country has also experienced major outbreaks of hepatitis E epidemic which is purely due to poor sanitation and hygiene.

Some of the indicators presented in the table below are early warning signs of an outbreak of viral hepatitis and the likely conditions that may foster the transmission of the infection.
2. Nodding Disease syndrome

Nodding disease syndrome is a strange illness/disorder that commonly affects children. This condition is characterised by nodding of the head, mental retardation and stunted growth. Investigations have attributed this illness to a number of causes which include post-traumatic stress disorder and Onchocerciasis (Black flies) among others.

According to reports by the Ministry of Health, the disease was first detected in the three districts of Acholi sub-region namely; Kitgum, Pader and Lamwo and by the year 2009, a total of 3,000 cases had been recorded in the three districts. However by 2011, more cases were cited in Lira, Gulu and Oyam.

In the seven treatment centres established by the Ministry of Health, an overall total of 3320 cases of Nodding syndrome were handled with Kitgum General Hospital managing 1,321 cases followed by Atanga HCIII in Pader - 1,210, Palabekkal HC III in Lamwo – 349, Odek in Gulu – 333, Atiak in Gulu – 61, Aromo in Lira – 38 and otwal in Oyam – 8 cases. Some of the indicators presented in the table below are early warning signs of an outbreak of the Nodding Syndrome and the likely conditions that may foster the transmission of the infection.

<table>
<thead>
<tr>
<th>Disease/ Causes and Fostering Epidemic conditions</th>
<th>Early warning Signs of the disease/ Epidemic</th>
<th>Detailed description of the signs and signals</th>
<th>Likely period of occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viral• Hepatitis</td>
<td>Ignorance of the increased cases communities, Health of mild fevers, workers and VHTs about abdominal pain, the disease and its different types amongst the Poor hygiene, sanitation and consumption of contaminated water with • General cases of feacal matter, nausea, fatigue, and Contamination by food handlers amongst the infected • Contact with blood and body fluids of infected persons reported for sexual contact with any yellowing of eyes infected person • Perinatal transmission usually (from a mother to the asymptomatic baby through birth and don't show any breast feeding) • Signs and symptoms Prolonged dry spells and swellings in the abdomen • Social events and gatherings • Sharing of sharp objects and unsterilised medical equipment • Poor Nutrition among the infants •</td>
<td>• Low grade fever which is on and off among the patients • Occurrence of abnormal pains on the right upper quadrant of the abdomen • Swelling of the abdomen due to liver cirrhosis or cancer of the liver • Patients pass out dark urine. • Patients become restless • Impact of the infection is diverse in pregnant mothers</td>
<td>The Infection has a high rate of transmission and can occur at any time of the year but with more likelihood during the festive seasons and celebrations.</td>
</tr>
</tbody>
</table>

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DRMS Guidelines for Monitoring EPIDEMICS

Causes and Fostering conditions

- Nodding Syndrome
  - Infestation by black flies
  - Effects of the bomb shells and explosives during the insurgency
  - Poor Nutrition among the infants

Early warning Signs of the disease/Epidemic

- Increased population of Black flies in the area
- Increased cases of abnormal skin rushes among the children
- Increased cases of fits/convulsions among the children
- Nodding of the heads among the affected children
- Increase in the number of malnourished children
- General weakness of the limbs among children
- Increase in the number of mental retardation cases

Detailed description of the signs and signals

- Affected dries and becomes scaly
- Children fall down abruptly and become unconscious, a situation similar to those affected by epilepsy; sometimes passing out urine and excreting large volumes of saliva.
- Colour of the hair changes to brown and becomes soft, and the body swells
- Children are referred to the supplementary feeding centres and to the mental clinics
- Worsening of the children’s situation in the presence of food substances

Likely period of occurrence

- More prevalent during the rainy seasons and fluctuating during the windy conditions with a relatively low rate of transmission

3. Ebola and Marburg

Ebola Haemorrhagic Fever (EHF) commonly known as Ebola is an acute infectious febrile illness that is associated with bleeding manifestations and very high fatality.

Uganda has experienced several outbreaks of the Ebola virus; the most pronounced cases being registered in 2000, 2007 and 2012. In September 2000, an outbreak of Ebola erupted in Gulu district in northern Uganda. During this time, the virus manifested as a new emerging highly fatal disease, and about 425 cases were reported during that period killing a big number of health workers and nurses in Gulu regional hospital. Seven years later in 2007, the second Ebola outbreak occurred in Bundibugyo district in western Uganda registering about 116 cases followed by a third case of the infection that occurred in 2011 in Luweero district. In July 2012, the country registered 24 cases of Ebola in Bundibugyo district in Western Uganda.

Ebola is caused by a highly infectious virus that spreads through direct contact with bodily fluids. Symptoms include fever, vomiting, diarrhoea, abdominal pain, headache, a measles-like rash, red eyes and, at times, bleeding from body openings.

Marburg virus is very similar to and related to Ebola virus since they both belong to the same Filoviridae family. They two infections are manifested with similar signs and symptoms although Marburg is noted to have worse symptoms.

Uganda has registered a few cases of outbreak of the Marburg virus; in 2007, 4 cases where reported in Kamwenge district, 1 case reported in Kasese district in 2008 all in the western part of the country. In 2014, a report from the Ministry of Health confirmed a single case of Marburg outbreak in Kampala.

The indicators outlined in the table below present early warning signs of an outbreak of the Ebola and Marburg viruses and the likely conditions that may foster the transmission of these infections.
<table>
<thead>
<tr>
<th>Disease/ Epidemic</th>
<th>Causes and Fostering conditions</th>
<th>Early warning Signs of the disease/Epidemic</th>
<th>Detailed description Likely period of the signs and occurrence signals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ebola and Marburg</td>
<td>Contact with infected people especially in crowded environments • Consumption of wild/game meat for example; chimpanzees, gorillas, and forest antelopes • Cross-border Migration</td>
<td>• contact with a • Persistent fevers • symptomsthe following signs: Bleeding from body openings especially for the following</td>
<td>• The infections history of with either /or have an person with Ebola/ Marburg extremelysigns and of Persistent fevers with body openings, transmission either /or the and can occursigns: at any time of rush, for the year, any cases of the year, any cases of Marburg infection, headaches rash, vomiting headaches, • Affected persons become very Diarrhea, abdominal pains weak, lose appetite Occurrence of death of a and have high person with the signs and symptoms of the Ebola/temperatures and Marburg virus are dehydrated</td>
</tr>
</tbody>
</table>
The Disaster Risk Monitoring System (DRMS)

The Disaster Risk Monitoring System is an Early Warning System hosted at the National Emergency Coordination Operations Center (NECOC) at the Office of the Prime Minister. The Early Warning System is an integration of initiatives established to monitor and warn of the threat disasters ahead of time, to trigger timely, appropriate, preventive measures.

Your role as a DRMS focal point/ Community Disaster Monitor

The DRMS is developed to support information from any simple feature mobile phone capable of sending out an SMS message. It is assumed that in every location, the recruited Disaster Monitor owns a mobile phone and is capable of sending out SMS messages using that phone. The monitor should also be able to read and interpret the communication (feedback) sent to him/her from NECOC. In cases where such communication (e.g. a message informing the communities of outbreak of an epidemic) is meant for the entire community, the focal person is responsible for sharing the information with other community members. Community-based disaster monitors are equipped with the knowledge to report any hazardous situations in their areas to the Office of the Prime Minister, NECOC – Disaster Risk Monitoring System (DRMS) using their Mobile phones.

In the DRMS, information generated by the Disaster focal person from the community is sent through an SMS to NECOC at the Office of the Prime Minister. In order to verify the authenticity of this information, NECOC gets in touch with the DDMCs in the district relating to the message, who then verify the claim of occurrence. On confirmation of the situation, the DDMC communicates the findings of its assessment to NECOC so that the necessary response and relief is then deployed to the affected areas by Government.

At various intervals, polls and advisories may be sent by NECOC to the community persons inquiring about the situation of the disaster and providing relevant information on immediate response actions.

The NECOC toll free line 0800 177 777

The Department of Disaster Preparedness established a toll free line where any person with a telephone device can be able to report occurrence of a disaster or hazardous situation in their communities. The toll free line is available 24 hours a day 7 days a week and officials sitting at the NECOC are able to respond to calls from various callers and provide relevant guidance relating to the occurrence.
How to report disaster signals

Part 1: Reporting a Disaster Risk Alert to NECOC by SMS

The DRMS is designed to receive information from any mobile device regardless of the telecom service provider subscribes to by the reporter.

On observation of an early warning sign/signal in his/her area, the reporter is supposed to send the SMS message to the short code 6700 in the format below:

NECOC <dot> District <dot> Sub-County <dot> then the detailed message reporting the situation.

Scenario 1: Previous reports from the office of the DHO have presented concern about the increasing cases of Hepatitis B in the areas of Northern Uganda specifically the districts of Gulu, Nwoya, Maracha and Kitgum. In the recent past, there are increased cases of mild fevers, abdominals pains and diarrhoea amongst the community members of Purongo Sub County, Nwoya District. A closer observation of some of these victims, their eyes appear yellowish, a situation which is different from the normal appearance of the eyes.

When the DRM focal person in Purongo Sub-county observes these signs, he is fast to send a message to the NECOC informing them of the likeliness of an outbreak as follows:

“NECOC.Nwoya.Purongo. I have observed people with signs of Hepatitis in my area, there are more cases of fever, diarrhoea among the community and some people with yellowing eyes can easily be identified amongst the victims. this example is illustrated in the figure below:

Important to Note: The message always starts with the word NECOC and extra care should be noted while spelling the district/ sub county name for easy association.
Part 2: Responding to a Poll sent by NECOC

NECOC may send out polls inquiring about the situation of a hazard/ disaster in an area. This may happen during a time when OPM anticipates occurrence of a disaster in a particular area or when a hazardous situation has been reported and confirmed by the DDMC as a disaster. NECOC does this a as a way of keeping track of the situation of the disaster and ensuring that the communities are involved in the Disaster Preparedness and Management.

Scenario 2: There has been an outbreak of Ebola among in the western part of the country over the past 3 months and the MOH with other partners have managed to contain the situation and the Government wants to declare western Uganda Ebola free. Before this announcement is made, the NECOC wants to consult with its Disaster Monitors in this area to understand the situation of the Epidemic in their areas. As such the NECOC does this by sending out a poll to its Disaster focal persons in the areas that were initially affected by the epidemic. Each poll is sent with a unique key word which is displayed in the SMS with the poll question. The poll key- word changes from poll to poll.

An example of a poll sent out to the community monitors by NECOC could read "Have you registered any new infections of the EBOLA virus in your area? Respond with a Keyword EBOLA"

On receiving the poll question, the Community focal person will respond to the poll while reporting the situation in his/her area. The format for responding to the poll is:

NECOC POLL <space> Keyword <space> then response/ Answer.

Considering the example above, the Disaster Monitor may respond to the poll as in the example below:

NECOC POLL EBOLAYes, two more people with signs Ebola have been isolated in Kisuba HC3, Kisuba Sub County for examination.
NCOCPOLL EBOLA: Yes, two more people with signs of Ebola have been isolated in Kisumu HCJ, Kisumu Sub County for examination.
Answers to Potential Questions

When Should I send a message to NECOC?
As a disaster monitor in your community, you are mandated to report any Risk/ hazard in your community that may translate into a disaster. This will serve as an early warning and will enhance the Office of the Prime Minister to prepare and coordinate the necessary response to mitigate the Disaster hence saving lives and property.

How do I send messages to NECOC about a Disaster occurrence?
On observation of any Disastrous situation, the Disaster Monitor uses his mobile phone to send an SMS message to the short code 6700 reporting the situation. The monitor follows the format NECOC <dot> District <dot> Sub-County <dot> then the detailed message reporting the situation then send the message to the code 6700.

How do I know that my message has been received by OPM?
When a message is sent to OPM and received, a feedback message informing you that “your message has been received and taken care of” will be sent back to you.

What should I do if fail to send a message using my phone yet I see a disaster?
When you fail to send an SMS message reporting a disaster in your area, you may try to contact OPM through other means of communication such the NECOC toll free line.

Can I report a disaster from an area different from where I stay?
A disaster monitor should be able to report a disaster that has occurred in any area. However, he/she should be careful to give correct information on the district and sub county name of the area where he/she is reporting the disaster.

After sending the message, how long does it take before response is sent to the affected area?
After receiving information on the occurrence of the disaster, the OPM contacts the DDMC to generate more information about the disaster and identify the possible relief requirements. Depending on the time taken by this process, action is taken after receiving the necessary information from the DDMC which is chaired by the CAO.

What is the maximum length of the message I can send with SMS?
The DRMS does not limit the reporter on the depth of information he/she provides to NECOC. Therefore, the Monitor can send information of any length and can send as many messages to the level where he/she feels has adequately communicated the catastrophe.

Can I send a message using a mobile phone belonging to another person?
With any mobile phone, using any network, a focal person is able to send information to NECOC provided they follow the format highlighted above while communication their message.
Definition of key Terms

Capacity: The combination of strengths and resources available within the community or organisation that can be mobilised and accessed to allow individuals and communities to cope with a threat or resist the impact of a hazard.

Climate Change: Refers to any change in climate over time, whether due to natural variability or as a result of human activity (IPCC, 2001).

Disaster: A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources.

Disaster Risk Management: Means continuous and dynamic multi-sectoral, multi-disciplinary process of planning and management which seeks by systematic study and analysis of disasters, to improve measures relating to the prevention, mitigation, preparedness, emergency response and post disaster recovery.

District Emergency Coordination and Response Centre (DECOC): Means the 24 hour district disaster working base where emergency incident reports are received, maps, data and equipment are displayed or placed on standby to assist in emergency response co-coordination and communication.

Emergency: Means a condition of disaster or of extreme peril to the safety of persons and property caused by such conditions as air pollution, fire, flood, hazardous material incident, storm, epidemic, riot, drought, sudden and severe energy shortage, plant or animal infestations other than conditions resulting from a labour controversy.

Emergency phase: Means the period during which extraordinary measures have to be taken. Special emergency procedures and authorities may be applied to support human needs, sustain livelihoods, and protect property to avoid the onset of a disaster. This phase can encompass pre-disaster, disaster alert, disaster relief and recovery periods. An emergency phase may be quite extensive, as in a slow onset disaster such as a famine. It can also be relatively short-lived, as after an earthquake.

Environmental health: Means the wellbeing of man in relation to those factors in his or her environment which may be responsible for harmful effects on his health.

Epidemics: Means exposure to a toxin resulting in pronounced rise in a number of cases of parasitic or infectious origin.

Food: Means any article used for food or drink other than drugs or water, but includes ice, and any articles which ordinarily enters into or is used in the composition or preparation of human food, and includes flavouring matters and condiments.

Hazard: Means a rare or extreme event in the natural or man-made environment that adversely affects human life, property or activity to the extent of causing disaster. A hazard is a natural or man-made phenomenon which may cause physical damage, economic losses, or threaten human life and well-being if it occurs in an area of human settlement, agricultural, or industrial activity. Note, however, that in engineering, the term is used in a more specific, mathematical sense to mean the probability of the occurrence, within a specified period of time and a given area, of a particular, potential damaging phenomenon of a given severity or intensity.
Human settlement: Means any building or tent together with the land on which it is situated and the adjoining land used in connection with it, and includes any vehicle, conveyance or vessel;

Infectious disease: Means any disease which can be communicated directly or indirectly by any person or livestock suffering from it to any other person;

Local disaster management committee: Consists of persons elected at sub-county level;

Local government: Has the same meaning assigned to it by the Local Government Act, 1997 and its subsequent amendments;

Mitigation: Means measures which lessen the impact of a disaster phenomenon by improving a society's ability to absorb the impact with minimum damage or disruptive effect. It is a collective term used to encompass all activities undertaken in anticipation of the occurrence of a potentially disastrous event, including preparedness and long-term risk reduction measures. The process of planning and implementing measures to reduce the risks associated with known natural and man-made hazards and to deal with disasters, which do occur.

Natural disaster: Means a disaster originating from a natural mishap.

Natural phenomena: Means extreme climatological, hydrological or geological process that do not pose any threat to persons or property.

Occupational health: Means the state or process of achieving the health of workers in all workplaces, situations and occupations.

Population displacements: Are usually associated with crisis-induced mass migration in which large numbers of people are forced to leave their homes to seek alternative means of survival. Such mass movements normally result from the effects of conflict, severe food shortages and collapse of economic support systems.

Preparedness: Involves the development and regular testing of warning systems and plans for evacuation or other measures to be taken during a disaster alert period to minimize potential loss of life and physical damage; the education and training of officials and the population at risk; the establishment of policies, standards, organizational arrangements and operational plans to be applied following a disaster impact; the securing of resources (possibly including the stockpiling of supplies and the earmarking of funds); and the training of intervention teams. It must be supported by enabling legislation.

Preparedness activities: Means a set of activities which enhance the abilities of individuals, communities, and businesses to respond to a disaster. Disaster exercises, disaster-preparedness training, and public education are examples of preparedness activities.

Prevention: Means those measures which are aimed at stopping a disaster from occurring or preventing such occurrence having harmful effects on communities or groups of individuals.

Reconstruction: Means the actions taken to establish a community after a period of rehabilitation subsequent to a disaster. Actions would include reconstruction/rehabilitation of houses, restoration of all services to enable the affected community resume its pre-disaster state.

Recovery: Means the process by which the nation, communities or groups of individuals are assisted to return to their proper level of functioning and livelihood following a disaster.
Rehabilitation: Means the operation and decision taken after a disaster with a view to restoring a stricken community to its former living conditions, while encouraging and facilitating the necessary adjustments to the changes caused by the disaster.

Relief phase: Means the period immediately following the occurrence of a sudden disaster or the late discovery of a neglected or deteriorated slow on-set situation when exceptional measures have to be taken to search and find the survivors as well as meet their basic needs for shelter, water, food and medical care.

Relief and Rescue: Exceptional measures to save lives and care for survivors to enable them meet basic needs at a time period immediately following the disaster period. The distinction between rescue and relief is that rescue focuses on securing life while relief focuses on sustaining life.

Response: Means activities to address the immediate and short-term effects of an emergency or disaster. Response includes immediate actions to save lives, protect property, and meet basic human needs. Based on the requirements of the situation, response assistance will be provided to an affected area under the National Response Plan using a partial activation of selected primary agencies or the full activation of all the primary agencies to meet the needs of the situation. Response activities, during the immediate aftermath of a disaster, deal with emergency needs and restore community services. For example, mass care, spontaneous and professional search and rescue, damage assessment, and provision of communications are ways that people and organizations respond.

Risk: Is the probability that a hazard will occur and means expected losses due to the particular hazard. It is the product of a hazard and vulnerability.

Risk Assessment: A methodology to determine the nature & extent of risk by analyzing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods & the environment on which they depend.

Sanitation: Encompasses the isolation of excreta from the environment, maintenance of personal hygiene, safe disposal of solid waste, the safe drinking water chain and vector control.

Slow-on-set disasters: Sometimes creeping disasters or situations in which the ability of people to acquire food and other necessities of life slowly declines to a point where survival is ultimately jeopardized. Such situations are typically brought on or precipitated by drought, crop failure, pest diseases, or other forms of “ecological disaster, or neglect. If detected early enough, remedial action can be taken to prevent excessive human distress or suffering occurring. However, if neglected, the result can be widespread destitution and suffering, and a need for emergency humanitarianism assistance as in the aftermath of sudden disasters.

Sudden-on-set disasters: Means sudden calamities caused by natural phenomena such as earthquakes, floods, tropical storms, or volcanic eruptions. They strike with little or no warning and have an immediate adverse impact on human populations, activities and economic systems.

Technological disaster: Means a disaster originating from a technical mishap. Invariably, this is a situation in which a large number of people, property, infrastructure, or economic activity is directly and adversely affected by a major industrial accident, severe pollution incident, nuclear accident, air crashes (in populated areas), major fire, or explosion.

Vulnerability Analysis: Means the process of estimating the vulnerability to potential disaster hazards. For more general socio-economic purposes, it involves consideration of all significant elements in society, including physical, social and economic considerations (both short and long-term) and the extent to which
essential services (and traditional and local coping mechanisms) are able to continue functioning.

Vulnerability: Means the extent to which a community, structure, service, or geographic area is likely to be damaged or disrupted by the impact of a particular disaster hazard, on account of their nature, construction and proximity to hazardous terrain or a disaster-prone area. For engineering purposes, vulnerability is a mathematical function defined as the degree of loss to a given element at risk, or set of such elements, expected to result from the impact of a disaster hazard of a given magnitude. It is specific to a particular type of structure, and expressed on a scale of 0 (no damage) to 1 (total damage). For more general socio-economic purposes and macro-level analyses, vulnerability is a less-strictly-defined concept. It incorporates considerations of both the intrinsic value of the elements concerned and their functional value in contributing to communal well-being in general and to emergency response and post-disaster recovery in particular. In many cases, it is necessary (and sufficient) to settle for a qualitative classification in terms of “high”, “medium” and “low”; or explicit statements concerning the disruption likely to be suffered.

Vulnerable groups: Means categories persons likely to be affected when a disaster strikes or persons with special needs, invariably defined to include: unaccompanied minors, the elderly, the mentally and physically disable, victims of physical abuse or violence and pregnant, lactating or single women whose precarious status needs special attention.
Some of the Districts Prone to Epidemics with their respective sub counties

<table>
<thead>
<tr>
<th>District</th>
<th>SUB COUNTIES</th>
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</thead>
<tbody>
<tr>
<td>Kitgum District</td>
<td>Kitgum Matidi, Kitgum T.C, Labongo Akwang, Labongo Amida, Labongo Layamo, Lagoro, Mucwini, Namokora, Omiya Anyima, Orom</td>
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<tr>
<td>Pader District</td>
<td>ACHOLIBUR, ANGAGURA, ATANGA, AWERE, LAGUTI, LAPUL, LATANYA, OGOM, PADER, PADER T.C., PAJULE, PURANGA</td>
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<tr>
<td>Bundibugyo District</td>
<td>BUBANDI, BUBUKWANGA, BUKONZO, BUNDIBUGYO T.C, BUSARU, HARUGALE, KASITU, KIRUMYA, KISUBBA, MIRAMBI, NDUGUTO, NGAMBA, NTOTORO, NYAHUKA T.C, SINDILA</td>
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<tr>
<td>Napak District</td>
<td>IRIIRI, LOKOPO, LOPEEI, LORENGEORA, LOTOME, MATANY, NAPAK T.C, NGOLERIET</td>
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<td>Gulu District</td>
<td>AWACH, BAR DEGE, BOBI, BUNGATIRA, KORO, LAKWANA, LALOGI, LAROO LAYIBI, ODEK, ONGAKO, PAICHO, PALARO, PATIKO, PECE, UNYAMA</td>
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<td>Kibale District</td>
<td>BIREMBO, BUBANGO, BURORA, BWAMIRAMIRA, BWANSWA, BWIKARA, KABAMBA, KAGADI, KAGADI T.C, KAKINDO, KAKUMIRO T.C, KASAMBYA, KIBALE T.C, KIRANGA, KISITA, KYAKABADIIMA, KYANAIISOKE, KYATEREKERA, KYEBANDO, KYENZIGE, MABAALE, MATALE, MPASAANA, MPEEFU, MUGARAMA, MUHORRO T.C, NALWEYO, NDAIGA, NKOOKO, NYAMARUNDA, NYAMARWA, PAACWA, RUGASHARI, RUTEETE</td>
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<tr>
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<td>AGORO, LAMWO T.C, LOKUNG, MADI OPEI, PADIBE EAST, PADIBE T.C, PADIBE WEST, PALABEK GEM, PALABEK KAL, PALABEK OGILI, PALOGA</td>
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<td>ARUA</td>
<td>ADUMI, AII-VU, AJIA, ANYIRIBU, ARIVU, AROI, ARUA HILL, AYIVUNI, BILEAFE, DAMamu, EWANGA, KATRINI, LOGIRI MANIBE, ODUPI, OFFAKA, OGOKO, OKOLLO, OLUKO, OMUGO, PAJULU, PAWOR, RHINO CAMP, RIGBO, RIVER OLI, ULEPPI, URIAMA, VURRA</td>
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<tr>
<td>Kaabong District</td>
<td>KAABONG EAST, KAABONG T.C., KAABONG WEST, KALAPATA, KAMION, KAPEDO, KATHILE, KAWALAKOL, LOBALANGIT, LODIKO, LOLELIA, LOYORO, NAPORE KARENGA, SIDOK</td>
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<tr>
<td>ADJUMANI</td>
<td>ADJUMANI T.C, ADROPI, ARINYAPI, CIFORO, DZAIPi, ITIRIKWA, OFUA, PACARA, PAKELE, UKUSIJONI</td>
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