



WEEKLY EPIDEMIOLOGICAL BULLETIN

WEEK 30 – 2023

(24-30 July 2023)

Editorial message

Effective and efficient disease surveillance system contribute to the reduction of morbidity, disability and mortality from disease outbreaks and health emergencies.

This weekly bulletin presents the epidemiological status of the priority diseases, conditions, and events under surveillance in Rwanda. These data are useful to trigger a rapid response for rapid impact, actions and results oriented, a proactive preparedness, risk mitigation and prevention, intelligence, real-time information, and communication for decision making.

Authors: Public Health Surveillance & Emergency Preparedness and Response Division

KEY EPIDEMIOLOGICAL HIGHLIGHTS

EPIDEMIOLOGICAL WEEK 30

Event Based Surveillance (EBS) Highlights:

- During the epidemiological week 30, eight alerts were notified through the electronic Community Event Based Surveillance System (eCBS) including 6 human deaths (reported respectively in Rusizi, Nyagatare, Rutsiro, Karongi districts) and two events of human illness reported in Nyagatare district.
- One alert was identified through the Epidemic Intelligence from Open Source (EIOS).

Indicator Based Surveillance (IBS) Highlights:

- 229 immediate reportable diseases were notified by health facilities countrywide. They included cases of acute flaccid paralysis (AFP), foodborne illness, mumps, severe malaria; bloody diarrhea, measles/rubella, cholera and chicken pox.
- 8 weekly reportable diseases and health events are being reported on weekly basis, they include flu syndrome, simple malaria, severe pneumonia for under 5 years, non-bloody diarrhea for under 5 years, COVID-19, dog bites, brucellosis, and trypanosomiasis. A thorough analysis conducted for Epi Week 30 revealed that, non-bloody diarrhea for under 5 years crossed the epidemic thresholds.
- A total of 73 deaths were reported through the electronic Integrated Disease Surveillance and Response (eIDSR) system. The majority of deaths were classified as perinatal and deaths of children under the age of 5.

Outbreaks occurred or ongoing in week 30-2023

In the Epi Week 30, there was five outbreaks in Rwanda:

- Ongoing Measles outbreak in Kirehe District
- Ongoing Cholera outbreak in Rubavu district
- Four events due to foodborne illness occurred respectively in three districts: Gicumbi, Nyagatare and Rwamagana.

Completeness and timeliness

In Epi Week 30, the overall completeness and timeliness of surveillance data reporting in Rwanda was 99% and 97%, respectively.

WEEKLY UPDATES ON EVENT BASED SURVEILLANCE (EBS) EPIDEMIOLOGICAL WEEK 30

Description: *Event Based Surveillance (EBS) is a type of public health surveillance system that detects and reports unusual health events or disease outbreaks in a timely manner. The system is designed to detect signals of potential public health threats and allow a rapid response to prevent or control the spread of diseases. RBC is implementing EBS through PHS&EPR Division.*

Currently, an electronic Community Event Based Surveillance System (eCBS) and Epidemic Intelligence from Open Source (EIOS) are being used to detect and report events of public health importance from the community and media. The process for establishment of other types of EBS is still being on going.

COMMUNITY EVENT BASED SURVEILLANCE

During the Epi week 30, eight alerts were received from community:

Six Human Deaths:

1. A 40-years-old, Male from Byimana village, Munini cell, Rwankuba sector, Karongi District, passed away on 30/07/2023. The person was known to be HIV positive.
2. A 5months old, Male from Kabuga village, Gakomeye cell, Giheke sector, Rusizi District, passed away on 29/07/2023. She was known to be born with heart illness.
3. A 64-years-old, Male from Kajevuba village, Katabagemu cell, Katabagemu sector, Nyagatare District, passed away on 30/07/2023. The cause of death was an illness.
4. A 2 years-old, Male from Kamunyurwe village, Ngoma cell, Nyabirasi sector, Rutsiro District passed away on 30/07/2023. The kid was eaten by bees, and passed away on his way to the health facility (Nyabirasi HC)

Two alerts of Human Illness (HI)

This event was about chicken pox cases reported on 29/07/2023 in Nyagatare district, Tabagwe sector, Nyagatoma cell, Runyeri village, where a total of 25 cases consulted Tabagwe HC presenting fever and skin rash with many small blisters. The cases were treated and are recovering.

MEDIA SCAN

During the Epi week 30, one alert was received through Epidemic Intelligence from Open Source (EIOS):

Deadly Cholera Outbreak Strikes Kayunga and Namayingo – Health Ministry Confirms

KAMPALA, July 26 (Xinhua) -- Uganda has confirmed the outbreak of cholera after six people tested positive for the disease in the country's central and eastern regions. Emmanuel Ainebyoona, a spokesperson for the Ministry of Health, told journalists in the capital of Kampala on Wednesday that the disease had been confirmed in Uganda's central district of Kayunga and eastern district of Namayingo. "So far about three samples obtained

from Kayunga confirmed positive upon testing at the public health laboratories, and also three samples in Namayingo tested positive," Ainebyoona added. "Our rapid response teams are working with the districts to ensure they contain the spread of cholera."

According to the ministry, the public is being sensitized on measures such as ensuring the masses consume water from safe sources, handwashing, and ensuring that food is fully cooked.

<https://english.news.cn/africa/20230726/1c23f774940e43a5a16988cd5e2191f9/c.html>

WEEKLY UPDATES ON INDICATOR BASED SURVEILLANCE (IBS) EPIDEMIOLOGICAL WEEK 30

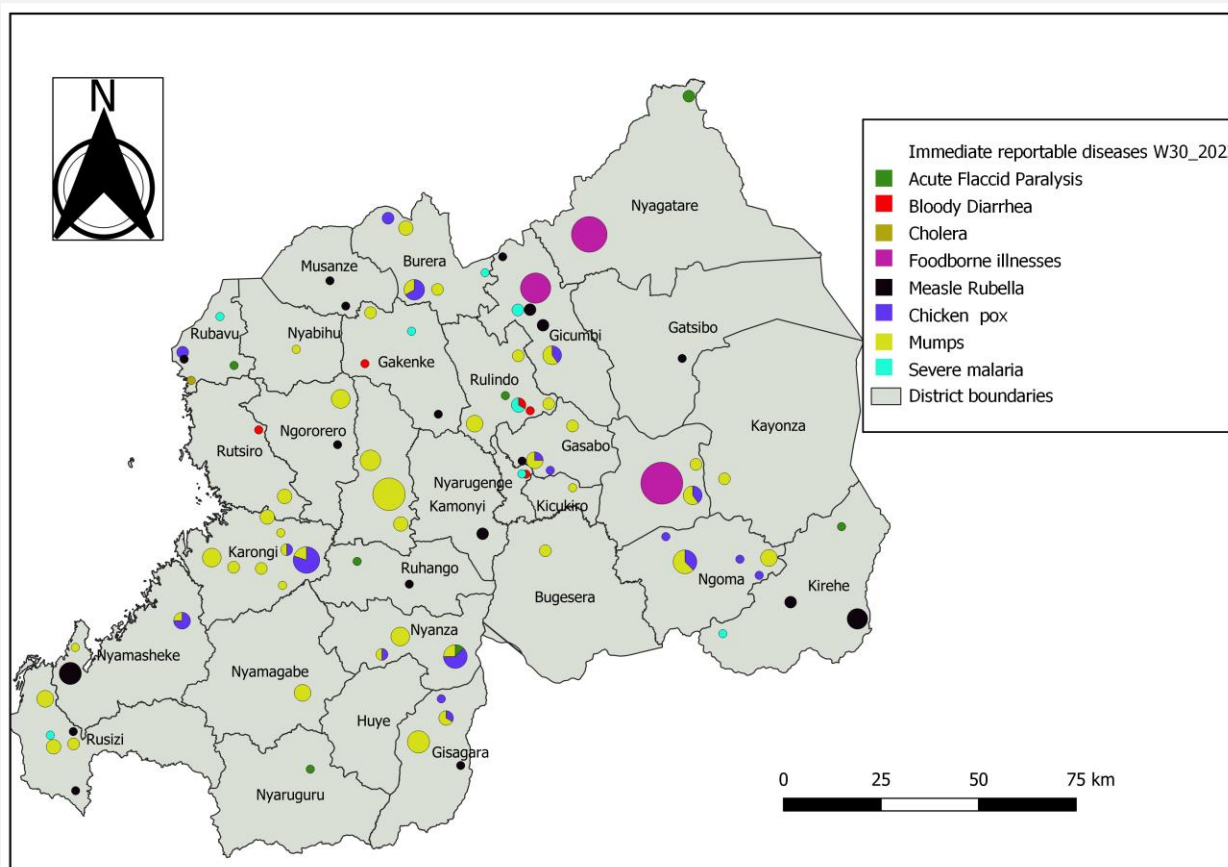
Description: *Rwanda has been implemented Indicator Based Surveillance according to the IDSR 3rd guidelines where approximately 45 priority diseases, health conditions and public health events are being monitored and reported from health facilities countrywide on a regular basis. Diseases that are prone to outbreaks are being reported immediately within 24 hours after detection while diseases that are considered as endemic are reported on a weekly basis, every Monday before midday.*

A. IMMEDIATE REPORTABLE DISEASES – EPI WEEK 29

During Epi week 30; 279 cases of immediate reportable diseases were notified. They include 126 cases of mumps, 40 cases of chicken pox, 56 cases of foodborne illness, 33 suspect cases of measles/rubella, 10 confirmed cases of severe malaria, 5 suspected cases of bloody diarrhea, 8 suspected cases of acute flaccid paralysis, 1 case of cholera confirmed by RDT. (See figure below).

Notes:

- For the diseases requiring laboratory confirmation, the samples were collected and sent to the National Reference Laboratory for testing. For the samples of measles/rubella sent to NRL in the previous week, 5 from Mahama refugee camp were tested positive.
- All confirmed cases and suspected cases have been managed at the health facility level.

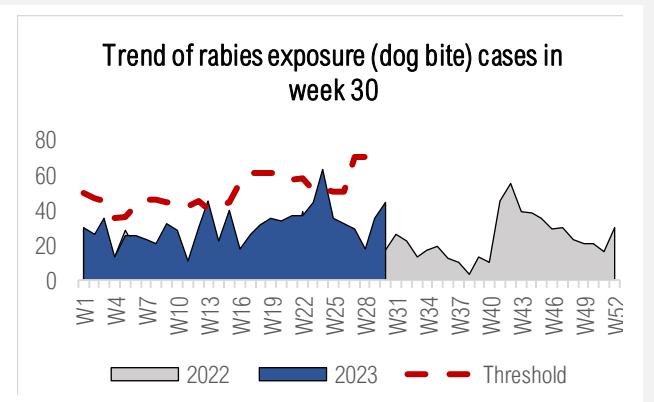
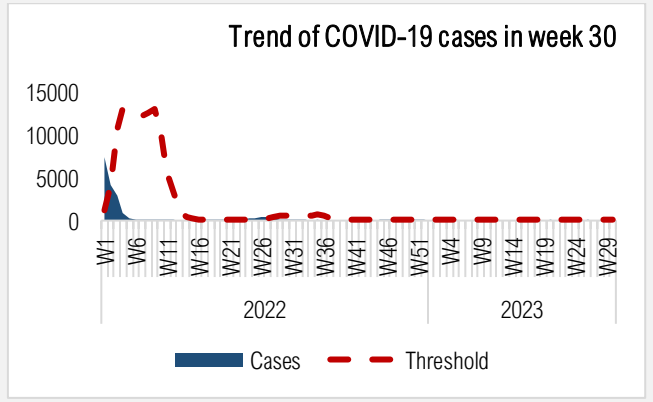
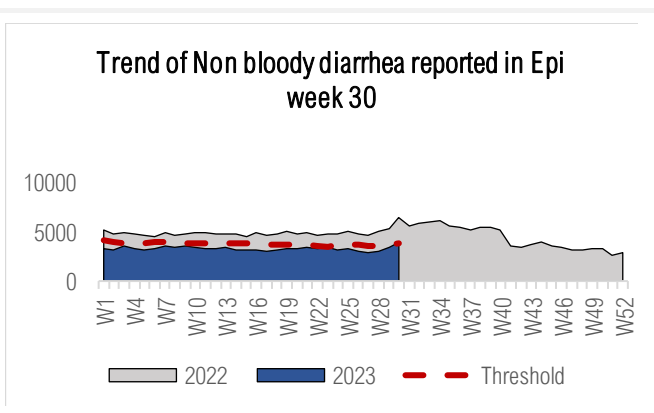
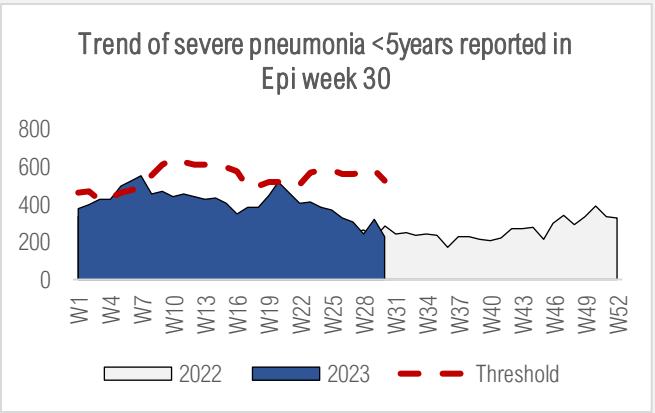
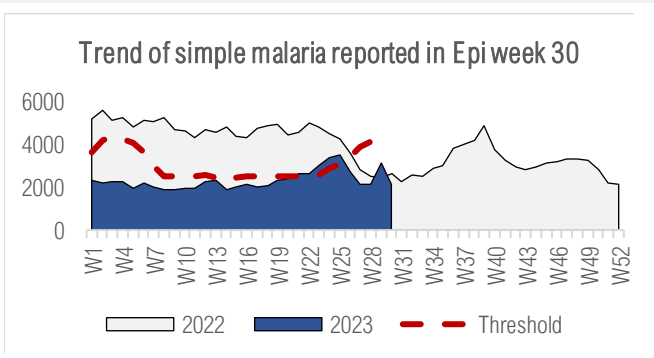
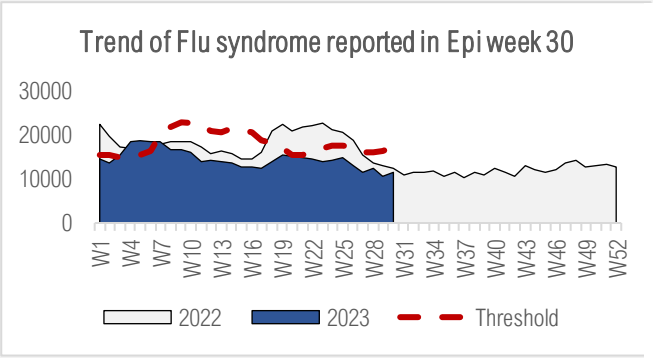


Distribution of immediate reportable diseases in Epi week 30

WEEKLY REPORTABLE DISEASES – EPI WEEK 30

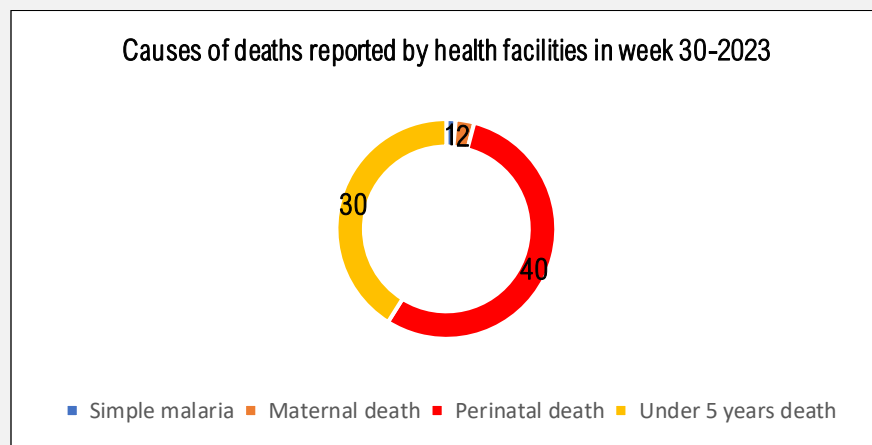
Description: In Rwanda, after the adaptation of the IDSR 3rd edition, eight diseases & events are being reported and analyzed on a weekly basis. These include flu syndrome, simple malaria, severe pneumonia for under 5 years, non-bloody diarrhea for under 5 years, COVID-19, dog bites, brucellosis, and trypanosomiasis. The monitoring trends of these weekly reportable diseases or health events helps to detect an unusual increase early.

In Epi Week 30, a thorough analysis was conducted, comparing the number of reported cases of the eight diseases monitored on a weekly basis to their respective epidemic thresholds. The results of the analysis revealed that non bloody diarrhea for under 5 years cases crossed the epidemic thresholds.



B. DISTRIBUTION OF REPORTED DEATHS IN eIDSR – EPIDEMIOLOGICAL WEEK 30

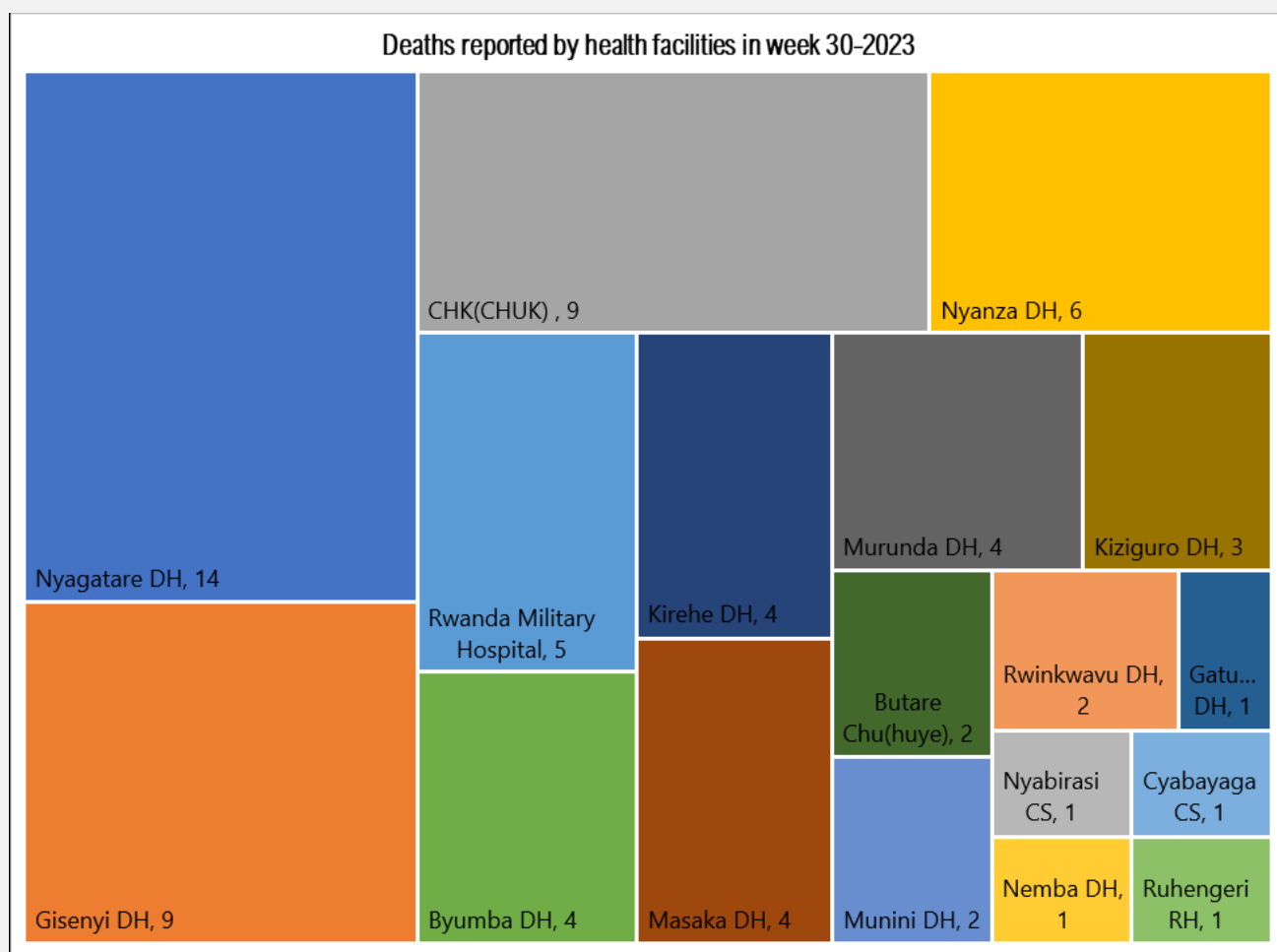
In Epi week 30, as summarized in the Pie Chart below, a total number of 73 deaths were reported through the electronic Integrated Disease Surveillance and Response (eIDSR) system. Among these deaths, 40 (55%) were classified as perinatal, 30 (41%) are deaths of children under 5 years old, 2 (3%) maternal deaths and 1(1%) death due to simple malaria. Among 7 under 5 deaths occurred at Nyagatare DH, 1 death was due to non-bloody diarrhea, 1 was due to severe pneumonia, and 1 under 5 death occurred at Gatunda DH was due to non-bloody diarrhea.



Cause of deaths declared in epi week 30

Deaths were reported from various catchment areas as follow:

- 14 deaths were reported in Nyagatare DH
- 9 deaths were reported respectively in Gisenyi DH and CHUK
- 6 deaths were reported In Nyanza DH
- 5 deaths were reported in Rwanda Military Hospital
- 4 deaths were reported respectively in Byumba DH, Kirehe DH, Murunda DH, Masaka DH
- 3 deaths were reported respectively in Kiziguro DH
- 2 deaths were reported respectively in CHUB, Rwinkwavu DH and Munini DH
- 1 death was reported respectively in Gatunda DH, Ruhengeri RH, Nemba DH, Nyabirasi HC(Murunda DH) and Cyabayaga HC (Nyagatare DH)



OUTBREAK AND EVENT UPDATES EPIDEMIOLOGICAL WEEK 30

1. ONGOING MEASLES OUTBREAK IN MAHAMA REFUGEE CAMP, KIREHE DISTRICT

Confirmed cases	30	Date reported:	February 27, 2023	Risk assessment	Low
Epi link cases	59	Source:	NRL, eIDSR		
Death(s)	0	District/HFs:	Kirehe/Mahama Refugee Camp		
Total cases	89	Geoscope:	Low		

Outbreak description: The measles outbreak is still ongoing in Kirehe district since 27th February 2023. During Epi Week 30; 5 additional confirmed cases were found in Mahama Refugee camp. As of 31 July 2023, there are 30 laboratory confirmed cases, 59 cases confirmed by epidemiological link and no death.

Ongoing interventions

- Continuous active cases search
- Case management (treatment, isolation)
- Field investigation

2. ONGOING CHOLERA OUTBREAK IN RUBAVU DISTRICT

Confirmed cases	43	Date reported:	June 14, 2023	Risk assessment	Low
Suspected cases	0	Source:	eIDSR		
Death(s)	1	District/HFs:	Rubavu/ Kigufi HC,		
Total cases	43	Geoscope:	Low		

Outbreak description: On 13/06/2023, Kigufi health center, in Rubavu district recorded 2 suspected cases of cholera. This was followed by notification of other 2 cases on June 14 and 15, 2023, respectively. Six stool samples were taken for culture, and all tested positive by pre-culture rapid test. Of them, three were tested positive for *Vibrio Cholerae*/ Inaba on 18/06/2023.

As of 31/07/2023; 43 cases meeting cholera case definition have been recorded with 4 confirmed by stool culture and 39 confirmed by RDTs. For the outcome of patients, 42 were cured, 1 died (a female aged of 14) and 1 case was referred from Kigufi HC to Gisenyi DH. The source of infection was the use of unsafe water, poor hygiene and sanitation.

Interventions:

- Field investigation.
- Case management
- Enhance risk communication and community engagement on prevention and control measures
- Reinforce community awareness on IPC, hygiene and sanitation and wash strategies toward cholera prevention
- Improve the reporting mechanisms and the effective communication and provide interim reports (update on daily basis including the line list)
- Reinforce community surveillance for early detection and active search of new cases

3. FOODBORNE ILLNESS IN GICUMBI DISTRICT, BWISIGE SECTOR, RWONDO VILLAGE

Confirmed cases	0	Date reported:	July 28, 2023	Risk assessment	Low
Suspected cases	6	Source:	eIDSR		
Death(s)	1	District/HFs:	Mukono HC/ Byumba DH		
Total cases	6	Geoscope:	Low		

Outbreak description:

On July 28, 2023, a person in Rwondo Village Bwisige Sector, Gicumbi district reported to Mukono HC that 5 patients in her village were in a critical condition and 1 death occurred. They developed symptoms of vomiting, abdominal pain, diarrhea, and fever. On July 27, 2023; they shared a homemade sorghum drink (ubushera). Currently, all cases are clinically stable.

Interventions:

- Ambulance evacuation of patients from community to Mukono HC.
- Case management of patients.
- Referral of cases and the body to Byumba L2TH, for further management, and autopsy
- Stool samples taken and sent to NRL.

4. FOODBORNE ILLNESS IN NYAGATARE DISTRICT, GATUNDA SECTOR, CYAGAJU CELL AND RAMIRO VILLAGE

Confirmed cases	0	Date reported:	July 24, 2023	Risk assessment	Low
Suspected cases	27	Source:	eIDSR		
Death(s)	0	District/HFs:	Nyarurema HC/ Nyagatare DH		
Total cases	27	Geoscope:	Low		

Outbreak description:

On the 24/07/2023, 27 cases from Nyagatare district, Gatunda sector, Cyagaju cell, Ramiro Village consulted Nyarurema HC presenting diarrhea and abdominal pain. They consumed consumed sorghum brew (ubushera) during a ceremony of child introduction (kwerekana umwana) in Ramiro village, which is the probable cause of the outbreak. Stool samples collected at the health center revealed intestinal worms and yeast (levures). Currently, all cases are treated, and discharged.

Interventions:

- Case management of patients
- Community education on hygiene

5. FOODBORNE ILLNESS IN RWAMAGANA DISTRICT, MUHAZI SECTOR, KARITUTU CELL

Confirmed cases	0	Date reported:	July 22, 2023	Risk assessment	Low
Suspected cases	25	Source:	eIDSR		
Death(s)	0	District/HFs:	Rwamagana district/ Nzige HC		
Total cases	25	Geoscope:	Low		

Outbreak description:




On the 22/07/2023; 25 cases from Rwamagana district, Nzige Sector consulted Nzige HC complaining watery Diarrhea, abdominal pain, vomiting and headache after attending baptism ceremony in Nzige. Among them, 2 were severely dehydrated and were transferred to Rwamagana PH. They consumed rice, beans, cabbage banana, potatoes and sorghum brew (Ubushera) which was the probable cause of this outbreak. Currently, all cases are treated, and discharged.

Interventions:

- Case management of patients
- Field investigation

eIDSR REPORTS COMPLETENESS & TIMELINESS EPIDEMIOLOGICAL WEEK 30

In Rwanda, eIDSR reports completeness and timeliness are scored as follow:

-  **Greater or equal to 80%: High,**
-  **Between 60% and 79%: Moderate,**
-  **Less than 60%: Low.**

In the Epi Week 30, the overall completeness and timeliness of disease surveillance data reporting in Rwanda were 99% and 97%, respectively.

With regards to completeness of surveillance reports, all hospitals had the high completeness (>80%), that was to be appreciated. For the timeliness the overall score was 97%, almost all hospitals had the high timeliness (>80%), except two hospitals that had a moderate score: Nyamata DH and Muhororo DH.

Notes: There was an improvement of completeness. However, for the timeliness, the health facilities that had not a high score had been recommended to improve the reporting by submitting weekly surveillance reports not later than Monday before 12:00.

Details, on completeness and timeliness for all health facilities are showed in the figure below.

	Completeness																													
Hospital catchment area	W01	W02	W03	W04	W05	W06	W07	W08	W09	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W24	W25	W26	W27	W28	W29	W30
Nyagatare	100	100	100	100	100	86	93	93	100	93	100	100	86	93	100	100	100	94	86	100	86	100	100	100	100	93	100	100	100	100
Gatunda	100	100	100	100	100	100	100	100	100	78	100	100	89	100	100	100	100	100	100	100	100	100	100	100	100	89	100	100	100	100
Ngarara	88	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Kiziguro	100	100	100	100	100	100	100	100	100	100	100	100	100	92	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Gahini	100	100	100	100	100	100	89	89	78	100	100	78	100	100	100	100	100	78	100	100	100	100	100	89	100	100	100	100	100	100
Rwinkwavu	100	100	100	100	100	100	100	100	100	100	100	88	100	88	88	88	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Kibungo	94	100	94	100	100	100	100	100	100	100	100	100	100	94	100	100	100	94	100	100	100	100	100	94	100	100	100	100	100	100
Kirehe	100	100	100	100	100	100	100	100	100	90	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	95
Rwamagana	76	71	88	100	100	94	100	100	94	100	88	94	100	100	100	100	100	100	94	100	100	100	100	100	100	100	100	100	100	100
Nyamata	100	94	100	94	100	100	100	100	100	100	100	100	100	100	100	88	88	100	94	100	94	100	100	88	88	88	94	100	100	
Kinhiira	100	100	100	100	100	89	89	100	89	89	89	100	89	89	89	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Rutongo	93	87	93	87	100	100	100	100	100	93	93	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Gatonde	100	86	100	100	100	100	100	100	100	86	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Butaro	80	85	95	95	75	90	95	95	95	100	95	100	95	100	100	95	100	95	100	90	100	100	100	100	95	75	100	100	100	100
Ruli	100	100	100	100	100	100	100	100	100	100	90	90	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nemba	100	100	100	100	100	89	100	100	100	89	100	100	100	89	100	100	100	89	100	100	100	89	100	100	100	100	100	100	100	100
Ruhengeri	94	94	94	100	83	89	89	89	100	94	94	83	94	89	94	89	94	94	100	100	89	100	100	100	100	100	100	100	100	94
Byumba	96	100	100	96	96	96	100	100	100	96	100	96	96	92	100	100	100	96	100	96	100	96	100	100	100	100	100	100	100	100
CHUB	0	100	100	100	100	100	100	100	0	0	100	100	100	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Kabutare	84	95	100	100	95	95	95	95	89	95	95	100	89	89	100	100	89	95	100	100	100	100	89	100	89	100	100	100	100	95
Kabgayi	100	100	92	85	100	92	92	100	100	92	92	100	92	85	100	100	92	100	100	100	92	100	100	100	92	100	100	100	100	100
Kibilizi	100	100	100	100	100	100	100	100	100	100	100	82	91	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Gakoma	83	100	100	100	83	100	100	100	83	100	100	100	67	100	100	100	83	83	67	100	100	100	100	100	100	83	100	100	100	100
Gitwe	100	100	89	100	100	78	100	100	100	100	100	100	89	100	100	78	89	100	100	89	100	89	100	100	67	100	100	100	100	100
Ruhango	88	100	100	100	88	88	75	88	88	100	100	63	75	63	63	75	60	88	75	63	88	63	100	100	75	100	100	88	88	88
Remera	100	100	100	93	100	100	100	100	100	100	100	93	100	100	100	100	100	93	100	100	93	93	93	100	100	100	100	100	100	100
Rukoma	84	84	89	79	95	100	89	89	74	95	100	79	79	89	100	100	95	89	100	100	84	100	95	100	89	100	100	84	100	100
Nyanza	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Kigeme	77	77	100	92	100	92	100	100	100	100	92	100	92	85	100	100	100	100	100	92	100	100	100	100	100	100	100	100	100	100
Kaduha	100	90	100	100	100	100	100	100	100	100	100	90	100	100	100	90	90	90	90	90	90	100	80	100	90	100	100	100	100	100
Munini	100	94	100	100	100	94	100	100	100	100	100	100	100	100	100	94	88	94	100	94	100	100	94	100	100	100	100	100	100	100
Bushenge	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	88	100	88	100	100	100	100	100	100	88	75	100	100	100
Kibogora	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	93	100	100	93	100	100	100	100	100	100	100	100	100	100
Kibuye	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	92	92	100	100	100	100	100	100	100	100	100
Kirinda	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	83	100	100	100	100	100	100	100	100	100	100	100	100
Mugonero	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	86	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Shyira	100	100	100	100	88	100	100	100	100	100	100	94	94	100	100	94	100	76	100	94	100	76	88	100	100	100	94	82	94	94
Muhororo	100	100	100	100	100	100	100	100	100	100	100	100	100	90	100	100	80	100	100	90	100	100	100	100	90	100	100	100	100	100
Kabaya	86	100	100	100	100	100	100	100	86	100	100	100	100	100	100	100	86	100	100	100	100	100	100	100	100	100	100	100	100	100
Gihundwe	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	90	100	100	100	100	100
Mibilizi	100	100	100	100	100	100	100	100	100	100	100	92	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Gisenyi	100	100	100	100	100	100	100	100	100	94	100	100	100	100	100	100	94	100	100	100	100	94	100	100	100	100	100	88	88	88
Murunda	89	100	100	100	100	95	100	100	100	100	100	95	95	100	100	95	89	89	95	100	100	100	100	100	100	100	100	100	100	89
CHUK	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nyarugenge	100	100	89	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	89	100	100	100	100	100
Muhima	100	100	100	100	100	100	100	100	100	75	100	100	100	100	100	100	100	100	100	100	100	100	100	100	75	100	100	100	100	100
RMH	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	100	100	100	100	100	100	100	0	0	100	100	100	100
Masaka	100	100	100	92	100	100	100	100	100	100	100	100	100	100	100	92	100	100	100	100	100	100	100	100	92	92	100	100	100	100
Kigababag	90	86	95	95																										

	Timeliness																													
Hospital catchment area	W01	W02	W03	W04	W05	W06	W07	W08	W09	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W24	W25	W26	W27	W28	W29	W30
Nyagatare	100	100	100	100	100	86	93	93	93	93	100	100	86	79	86	94	79	94	94	86	79	93	86	93	100	79	100	100	93	100
Gatunda	100	100	100	100	100	100	100	100	100	78	89	100	89	100	100	100	78	100	100	100	89	89	100	100	100	67	100	100	100	89
Ngarama	88	100	100	100	100	100	88	100	100	100	100	100	100	100	100	100	75	100	100	100	100	100	100	100	100	88	100	100	100	88
Kiziguro	100	100	100	100	100	100	100	100	100	100	100	100	100	92	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Gahini	100	100	100	100	100	89	89	89	78	100	100	78	100	100	100	100	100	78	78	100	100	100	100	89	100	67	78	100	89	100
Rwinkwavu	100	88	100	100	100	100	100	100	100	88	88	88	100	63	75	100	88	100	100	100	100	100	100	100	100	88	88	88	100	100
Kibungo	94	100	94	100	100	100	100	100	100	100	100	100	94	100	100	100	94	94	100	100	100	100	100	94	100	100	100	94	100	
Kirehe	100	100	100	100	95	95	100	100	100	90	95	100	100	90	100	100	85	95	95	100	100	100	100	95	100	85	100	100	95	95
Rwamagara	76	65	53	82	76	88	100	100	94	100	100	94	94	94	100	88	71	94	94	100	100	94	88	88	88	89	100	94	100	100
Nyamata	100	88	76	94	88	94	94	100	88	100	88	100	94	76	100	100	76	100	100	82	94	88	100	94	88	47	76	94	82	76
Kinihira	100	100	100	100	89	100	89	67	100	89	78	89	100	89	89	89	89	89	89	100	100	100	67	100	89	100	100	89	78	100
Rutongo	93	87	93	73	100	100	100	100	100	93	93	100	93	100	100	100	100	100	100	93	100	93	93	93	100	100	100	93	100	100
Gatonde	100	86	100	100	100	100	100	100	100	86	100	100	86	100	100	100	71	100	100	100	100	100	100	71	100	100	100	100	100	100
Butaro	80	85	80	75	65	90	85	95	90	95	90	90	85	75	85	95	75	85	85	85	90	85	85	90	95	60	100	95	90	100
Ruli	100	100	100	100	100	100	90	100	100	100	90	90	100	100	100	90	100	100	100	100	100	100	100	100	100	90	100	100	100	100
Nemba	100	100	89	100	100	89	100	100	100	89	78	100	100	78	100	100	67	89	89	100	100	89	100	89	89	89	89	100	100	100
Ruhengeri	94	89	89	100	83	89	83	72	94	94	94	78	94	83	89	89	89	100	100	94	89	89	100	100	100	89	100	94	89	94
Byumba	96	100	96	96	88	96	100	100	100	96	96	96	96	81	96	96	96	96	96	100	100	96	96	100	96	96	100	100	100	100
CHUB	0	100	100	100	100	100	100	0	0	0	0	100	100	0	100	100	0	100	100	100	100	100	0	100	100	100	100	100	100	100
Kabutare	84	89	89	95	84	89	89	89	84	95	74	100	100	79	100	100	53	95	95	100	100	100	84	89	95	79	95	100	95	95
Kabgayi	100	92	92	85	92	77	92	85	85	100	92	92	92	69	92	92	69	100	100	100	92	100	92	92	100	92	100	100	92	100
Kibilizi	100	100	100	100	100	100	82	100	100	100	100	82	91	82	91	91	91	100	100	100	100	100	100	100	100	91	100	100	100	100
Gakoma	83	100	100	100	83	67	83	100	83	100	100	100	67	50	83	67	50	83	83	83	67	100	83	50	100	83	100	100	100	100
Gitwe	100	100	89	89	89	78	100	78	100	100	89	89	100	67	100	78	44	89	89	100	89	89	89	100	100	56	89	100	89	100
Ruhango	88	88	88	100	88	88	75	88	88	88	100	63	75	50	63	50	38	75	75	63	75	63	100	63	100	75	100	100	75	88
Remera																														
Rukoma	100	100	100	93	100	100	100	100	100	100	93	100	93	93	93	100	93	93	93	100	100	93	93	87	100	93	100	100	93	100
Nyanza	84	84	89	79	74	100	89	84	63	89	84	74	68	47	89	95	47	89	89	89	84	95	89	95	95	74	84	95	79	95
Kigeme	77	69	92	92	100	92	100	92	100	100	92	100	92	46	100	85	46	100	100	92	92	100	92	100	92	100	100	100	100	100
Kaduha	100	90	90	100	100	100	100	100	90	100	100	90	90	80	90	100	60	90	90	90	90	100	90	80	100	70	90	100	100	100
Munini	100	94	100	100	100	94	94	100	100	94	88	94	100	82	100	100	88	82	82	88	94	88	100	88	100	100	100	94	100	94
Bushenge	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	63	100	100	100	100	100	100	100	88	88	88	75	100	100
Kibogora	100	100	100	100	100	100	93	100	100	100	100	100	100	100	93	93	86	100	100	93	100	100	100	100	93	100	100	93	100	100
Kibuye	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	92	92	100	92	85	100	92	100	100	100	100	92	100
Kirinda	100	100	100	100	100	100	100	100	100	100	100	100	100	83	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mugonero	100	100	100	100	86	100	100	100	100	100	86	100	100	86	100	100	86	100	100	100	100	86	100	86	86	100	100	100	100	100
Shyira	100	100	100	100	100	88	100	100	100	100	100	100	94	88	94	100	79	100	100	100	94	94	76	88	100	82	100	94	82	94
Muhororo	100	100	90	100	100	100	100	90	100	100	100	100	100	80	70	100	30	80	80	100	90	90	90	70	80	70	100	100	80	70
Kabaya	86	100	100	86	100	100	71	100	71	100	100	100	100	71	100	86	100	86	86	100	100	100	100	100	100	100	100	100	100	100
Gihundwe	100	100	90	100	80	100	90	90	90	100	100	100	100	90	90	100	70	100	100	100	100	100	100	100	100	70	100	100	100	100
Mibilizi	100	100	100	100	100	100	100	100	100	83	100	100	92	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Gisenyi	100	100	94	100	100	100	100	100	100	94	94	100	100	100	88	100	88	100	100	94	100	94	88	100	94	94	100	100	81	100
Murunda	89	100	95	100	100	95	100	95	100	95	95	100	84	95	100	89	95	89	89	95	100	95	89	100	95	95	100	89	95	89
CHUK	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nyarugeng	100	100	100	100	100	100	100	89	100	100	100	100	100	100	100	100	78	100	100	100	100	100	100	100	100	89	100	100	100	100
Muhima	100	100	100	100	100	100	100	100	100	75	100	100	100	100	100	90	75	100	100	100	100	100	100	100	100	75	100	100	100	100
RMH	100	100	0	100	100	0	100	100	100	100	100	100	100	0	0	100	0	100	100	100	100	100	0	100	0	0	0	100	100	100
Masaka	100	100	100	92	100	92	100	100	100	92	100	100	92	92	92	100	92	100	100	100	100	100	92	100	92	92	100	100	100	100
Kigababag	90	81	100	90	90	95	90	100	86	100	90	90	95	76	95	90	57	100	100	100	95	95	81	95	100	67	90	100	95	95
Kacyiru	0	100	100	100	100	100	100	100	100	100	0	0	100	0	0	0	0	100	100	0	100	100	100	100	100	0	100			