



WEEKLY EPIDEMIOLOGICAL BULLETIN WEEK 28 – 2023

(10-16 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.

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KEY EPIDEMIOLOGICAL HIGHLIGHTS

EPIDEMIOLOGICAL WEEK 28

Event Based Surveillance (EBS) Highlights:

- During the epidemiological week 28, four alerts were notified through the electronic Community Event Based Surveillance System (eCBS) including 4 human deaths (3 deaths in Rusizi district, 1 death in Bugesera district).
- Three alerts were identified through the Epidemic Intelligence from Open Source (EIOS).

Indicator Based Surveillance (IBS) Highlights:

- 335 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 among others 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 28 revealed that, no disease crossed the epidemic thresholds.
- A total of 66 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.

Ongoing outbreaks

In the Epi Week 28, there was three outbreaks in Rwanda:

- Ongoing Measles outbreak in Kirehe District
- Ongoing Cholera outbreak in Rubavu district
- Foodborne illness occurred in Bweyeye HC, Rusizi district

Completeness and timeliness

In Epi Week 28, 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 28

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 28, four alerts were received from community:

Four Human Deaths:

1. A person who was 63-years-old, Male from Kaboshya village, Rurenge cell, Mwogo sector, Bugesera district passed away on 15/07/2023. He had an unknown illness which might be the possible cause of death.
2. A child who was 3-years-old, Male from Uwinzovu village, Rasano cell, Bweyeye sector, Rusizi district passed away on 11/07/2023. He developed abdominal pain, and loss of weight and was unable to eat. The parents consulted Bweyeye HC on 10/07/2023, the following day the child passed away.
3. A person who was 78-years-old, Male from Cyunyu village, Burunga cell, Gihundwe sector, Rusizi District, passed away on 11/07/2023, he had a chronic respiratory illness.
4. A person who was 56-years-old, Male from Nyindarama village, Kagara cell, Gihundwe sector, Rusizi District, passed away on 10/07/2023. He was a tuberculosis patient.

MEDIA SCAN

During the Epi week 28, three alerts were received through Epidemic Intelligence from Open Source (EIOS):

1. Mysterious Disease Strikes Egyptian Village: Over 200 Infected, Authorities Investigating:

A puzzling and concerning outbreak have struck the Egyptian village of Nag Sanad, located in Al-Aliqat, part of the QoS city in the Qena governorate, south of Cairo. Approximately 200 people have fallen victim to this strange disease, exhibiting a range of distressing symptoms. Residents report experiencing high fevers, broken bones, vomiting, dizziness, and severe headaches that persist for about a week. Speculations suggest that the disease might be linked to mosquitoes, insects, or even water contamination, as the symptoms seem to spread easily among individuals.

Authorities Respond with Urgency

In response to the alarming situation, Egyptian authorities have taken swift action to confront the outbreak in Nag Sanad village. Citizens have undergone sample testing to determine the nature of the infection, while health officials from the governorate's Health Directorate have carried out extensive insect and mosquito spraying operations to disinfect the entire area. Additionally, authorities have collected samples of the village's drinking water to ensure its safety.

As the situation unfolds, a medical delegation has been dispatched to the village to provide medical care and treatment for the affected individuals. The delegation's priority is to understand the mysterious disease, identify its specific type, and pinpoint the root causes behind its rapid spread. Prompt and effective measures are being implemented to contain the outbreak and protect the health and well-being of the villagers. <https://bnn.network/world/egypt/mysterious-disease-strikes-egyptian-village-over-200-infected-authorities-investigating/>

2. Germany sounds E. coli and HUS alert after travel to Egypt

German public health officials have warned of a spike in cases of E. coli among travelers to Egypt. Experts from the Robert Koch Institute (RKI) said they had also seen a rise in connected cases of hemolytic uremic syndrome (HUS). HUS is a severe complication associated with E. coli infections that causes kidney failure. Since the beginning of 2023, 31 cases of E. coli and 10 of HUS in people who were likely infected while on holiday in Egypt have been reported.

A large proportion of patients – 12 E. coli cases and six HUS cases – were recorded in May and June. They had stayed in different hotels, mainly in Hurghada, which is also the most frequent travel spot in the country.

RKI officials warned of an expectation of more cases and said when people come back from Egypt with diarrhea, stool samples should be tested for E. coli and attention should be paid to the symptoms of HUS, especially in young children. Clinical laboratories were asked to send an isolate or a stool swab of diagnosed E. coli cases in people with a history of travel to Egypt to the National Reference Center for Salmonella and other bacterial pathogens at the RKI for typing. Isolates or stool samples from HUS cases can also be sent to the laboratory for HUS at the University Hospital Münster.

<https://www.foodsafetynews.com/2023/07/germany-sounds-e-coli-and-hus-alert-after-travel-to-egypt/>

3. Malawi cholera update

In a cholera update, the Malawi Ministry of Health reported one additional confirmed case in Nsanje. The total confirmed cases are 58,941 since the first case was reported in March 2023. The total deaths due to cholera remains at 1,766 (3% CFR). All 29 health districts in the country have reported cases and 24 districts have controlled the outbreak. As they are battling the cholera outbreak, people are advised to take care of what they eat or drink. Avoid buying food from streets stands, avoid cold meat, salad vegetables and other uncooked food in restaurants and eat fruits which can be peeled such as oranges or bananas.

<https://outbreaknewstoday.com/malawi-cholera-update-58191/>

WEEKLY UPDATES ON INDICATOR BASED SURVEILLANCE (IBS) EPIDEMIOLOGICAL WEEK 28

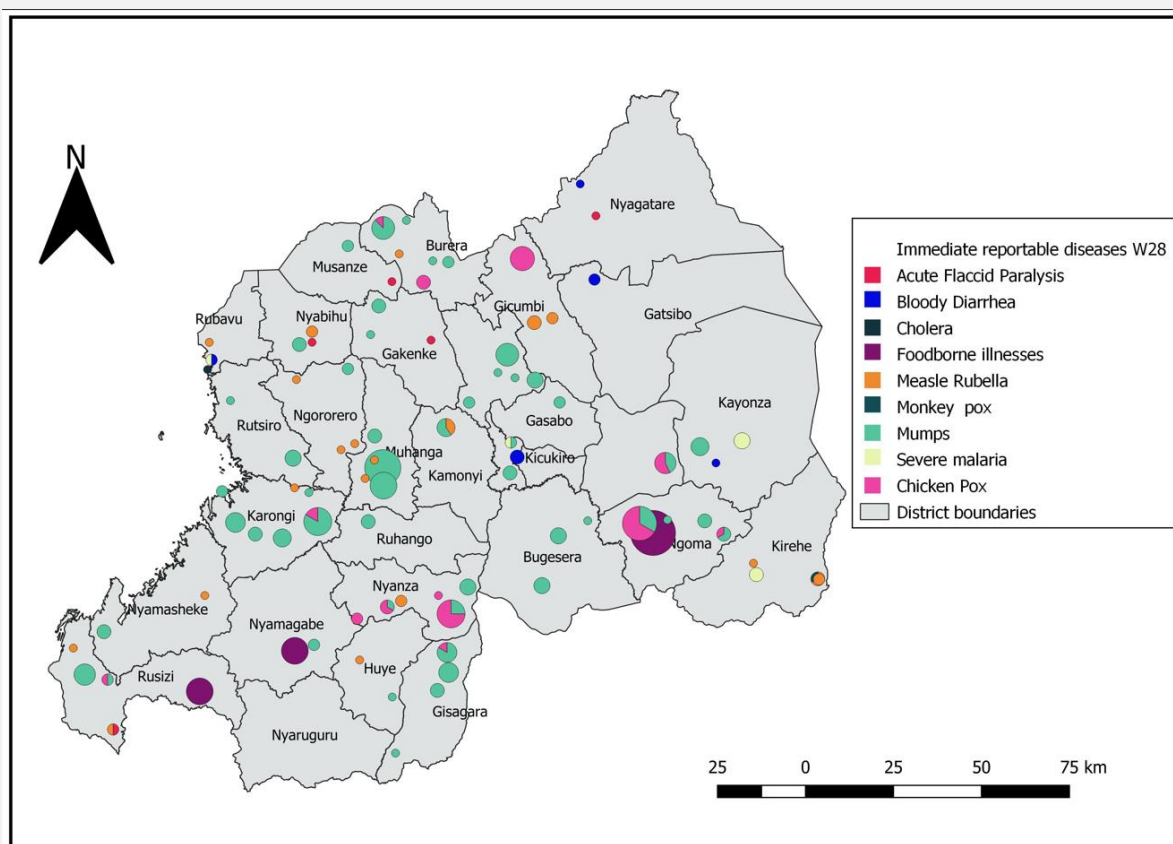
Description: *Rwanda has been implemented Indicator Based Surveillance according to the IDSR 3rd guidelines where approximately 45 priority diseases, health conditions and public health events are being monitored and reported from health facilities countrywide on a regular basis. Diseases that are prone 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 28

During Epi week 28; 335 cases of immediate reportable diseases were notified. They include 182 cases of mumps, 48 cases of chicken pox, 53 cases of foodborne illness, 28 suspect cases of measles/rubella, 9 confirmed cases of severe malaria, 8 suspected cases of bloody diarrhea, 5 suspected cases of acute flaccid paralysis, 1 suspected case of monkey pox and 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, except for some diseases whose samples were not sent, including bloody diarrhea. For 35 samples of measles/rubella sent to NRL in the previous week, 4 were tested positive. For the suspected case of monkey pox, the sample was sent to NRL and was tested negative.
- All confirmed cases and suspected cases have been managed at the health facility level. The health facilities are recommended to collect samples and send them to NRL for confirmation as required.

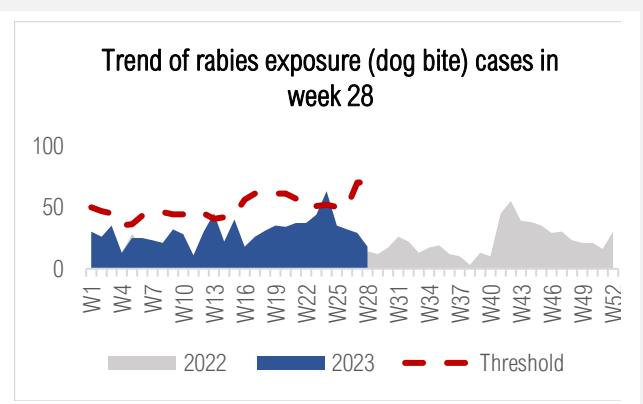
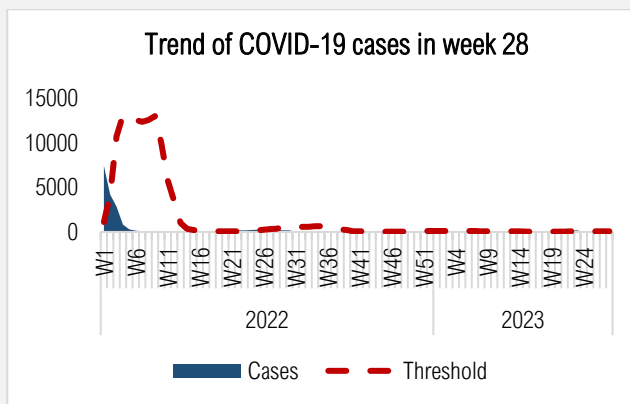
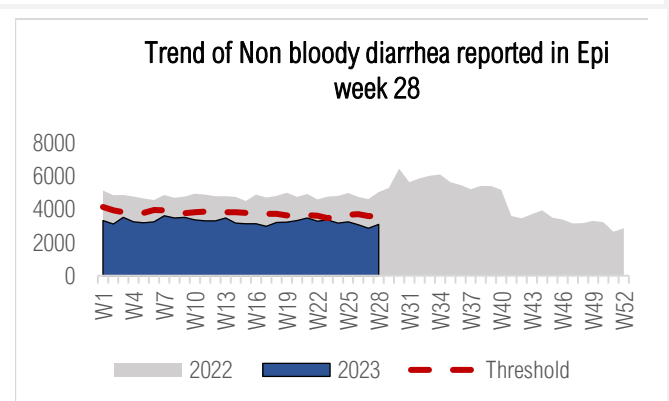
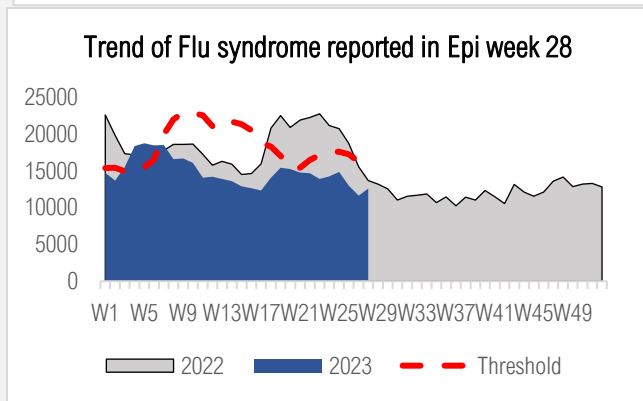
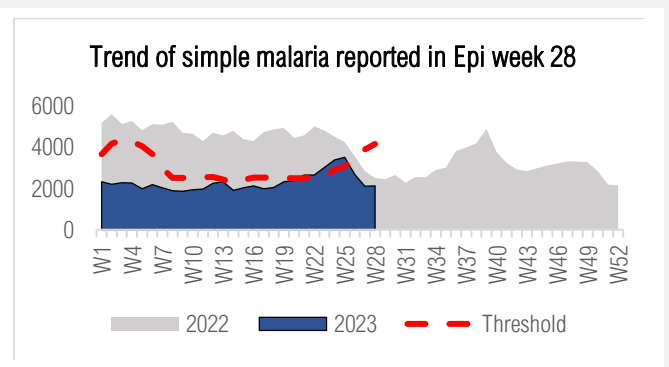
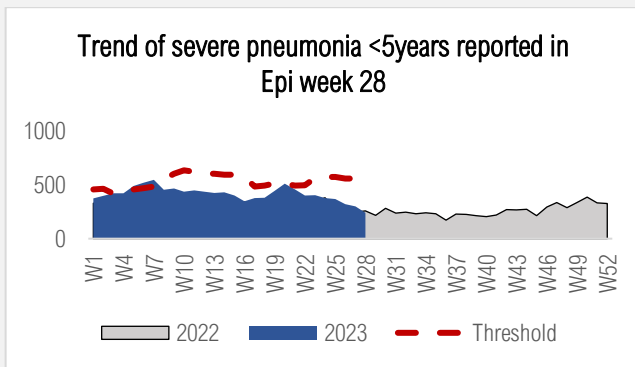


Distribution of immediate reportable diseases in Epi week 28

WEEKLY REPORTABLE DISEASES – EPI WEEK 28

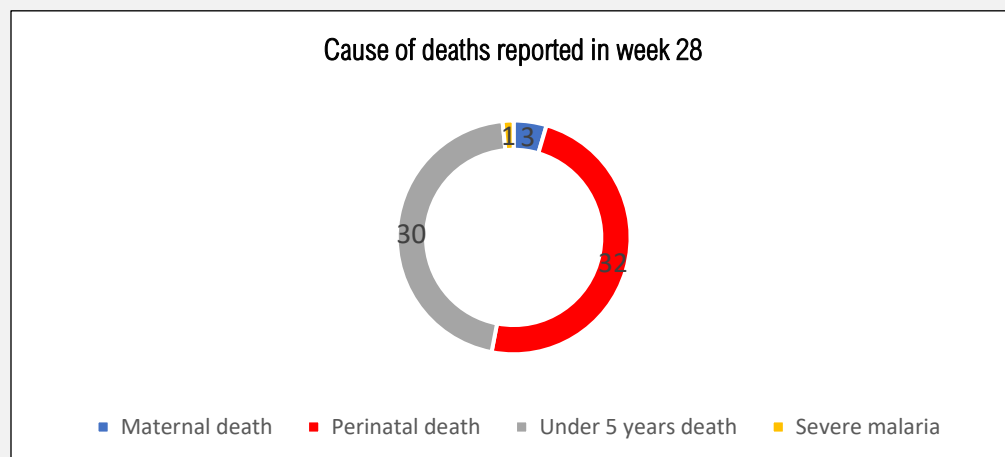
Description: *In Rwanda, after the adaptation of the IDSR 3rd edition, eight diseases & events are being reported and analyzed on a weekly basis. These include flu syndrome, simple malaria, severe pneumonia for under 5 years, non-bloody diarrhea for under 5 years, COVID-19, dog bites, brucellosis, and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

In Epi Week 28, 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 no weekly reportable disease, crossed the epidemic thresholds.



B. DISTRIBUTION OF REPORTED DEATHS IN eIDSR – EPIDEMIOLOGICAL WEEK 28

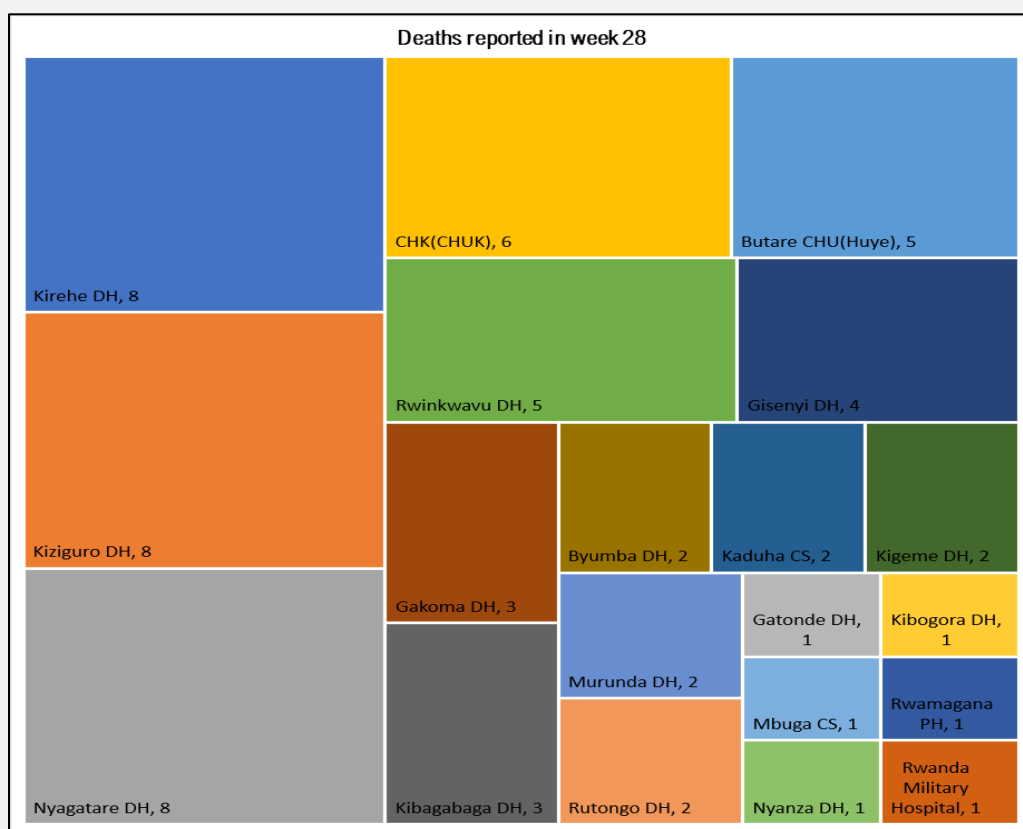
In Epi week 28, as summarized in the Pie Chart below, a total number of 66 deaths were reported through the electronic Integrated Disease Surveillance and Response (eIDSR) system. Among these deaths, 32 (48%) were classified as perinatal, 30 (45%) are deaths of children under 5 years old, 3 (5%) maternal deaths and 1 death due to severe malaria.



Cause of deaths declared in epi week 28

Deaths were reported from various catchment areas as follow:

- 8 deaths were reported respectively in Kirehe DH, Kiziguro DH and Nyagatare DH
- 6 deaths were reported in CHUKigali.
- 5 deaths were reported respectively in CHUButare and Rwinkwavu DH
- 4 deaths were reported in Gisenyi DH
- 3 deaths were reported respectively in Kibagabaga DH and Gakoma DH
- 2 deaths were reported respectively by Byumba DH, Kaduha DH, Kigeme DH, Murunda DH, Rutongo DH
- 1 death was reported respectively in Gatonde DH, Rwamagana PH, Kibogora DH, Rwanda Military hospital and Mbuga (Kigeme DH).



OUTBREAK AND EVENT UPDATES EPIDEMIOLOGICAL WEEK 28

1. MEASLES ONGOING OUTBREAK

Confirmed cases	24	Date reported:	February 27, 2023	Risk assessment	Low
Epi link cases	69	Source:	NRL, eIDSR		
Death(s)	0	District/HFs:	Kirehe/Mahama Refugee Camp		
Total cases	93	Geoscope:	Low		

Outbreak description: The measles outbreak is still ongoing in Kirehe district since 27th February 2023. During Epi Week 28; 4 additional confirmed cases were found in Mahama Refugee camp, which make it a total of 24 confirmed cases and 69 cases confirmed by epidemiological link.

Ongoing interventions

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

2. CHOLERA ONGOING OUTBREAK IN RUBAVU DISTRICT

Confirmed cases	40	Date reported:	June 14, 2023	Risk assessment	Low
Suspected cases	0	Source:	eIDSR		
Death(s)	1	District/HFs:	Rubavu/ Kigufi HC,		
Total cases	40	Geoscope:	Low		

Outbreak description:

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

As of 20th July, 40 cases meeting cholera case definition have been recorded with 3 confirmed by stool culture and 37 confirmed by RDTs. For the outcome of patients, 37 were cured, 1 died (a female aged of 14) and 2 cases are still hospitalized in Kigufi HC. The source of infection was the use of unsafe water, poor hygiene and sanitation.

Interventions:

- From 21st to 25th June 2023, PHS&EPR Division in collaboration with Gisenyi DH conducted a 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 RUSIZI DISTRICT

Confirmed cases	0	Date reported:	July 10, 2023	Risk assessment	Low
Suspected cases	11	Source:	eIDSR		
Death(s)	0	District/HFs:	Rusizi/ Bweyeye C, Gihundwe DH,		
Total cases	11	Geoscope:	Low		

Outbreak description: On 10th July 2023, 7 children from Bweyeye Sector Cyiyabo cell, Matyazo village were admitted at Bweyeye HC, complaining headache, vomiting, abdominal pain and dizziness after consuming an

unauthorized drink called “UTUYUKI” an alcoholized drink that has not been properly disposed by owner (sellers). Bweyeye HC managed all the cases, and currently all have recovered. 4 additional cases that didn't consult the health facility were recorded, making it a total of 11 cases. Those additional cases are all stable and have recovered.

Interventions:

- Gihundwe district hospital RRT was deployed for further field investigation and active case finding in the community.
- Management of cases

eIDSR REPORTS COMPLETENESS & TIMELINESS EPIDEMIOLOGICAL WEEK 28

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 28, the overall completeness and timeliness of disease surveillance data reporting in Rwanda were 99% and 97%, respectively.

With regards to completeness of surveillance reports, almost all hospitals had the high completeness (>80%), except Bushenge Provincial Hospital that had a moderate score (75%)

The overall timeliness score was 97%. almost all hospitals had the high timeliness (>80%), except Bushenge Provincial Hospital that had a moderate score

Notes: There was an improvement of completeness and timeliness. However, for an effective surveillance and early detection of outbreaks, one health facility that had not a high score had been recommended to improve the reporting through the submission of all 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
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
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
Ngarama	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
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
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
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
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
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
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
Nyamata	100	94	100	94	100	100	100	100	100	100	100	100	100	100	100	88	88	100	94	100	94	100	100	100	88	88	88	94
Kinihira	100	100	100	100	100	100	89	89	100	89	89	100	100	89	89	89	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
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
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
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
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
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
Byumba	96	100	100	96	96	96	100	100	100	96	100	96	96	92	100	100	100	96	100	96	100	100	96	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
Kabutare	84	95	100	100	95	95	95	95	89	95	95	100	100	89	100	100	89	95	100	100	100	100	89	100	100	89	100	100
Kabgayi	100	100	92	85	100	92	92	92	92	100	100	92	92	85	100	100	92	100	100	100	92	100	100	100	100	92	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
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
Gitwe	100	100	89	100	100	78	100	100	100	100	100	100	100	89	100	100	78	89	100	100	89	100	89	100	100	67	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	100	75	100	100
Remera																												
Rukoma	100	100	100	93	100	100	100	100	100	100	100	100	93	100	100	100	100	100	93	100	100	93	93	93	100	100	100	100
Nyanza	84	84	89	79	95	100	89	89	74	95	100	79	79	89	100	100	95	89	100	100	84	100	95	100	100	89	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
Kaduha	100	90	100	100	100	100	100	100	100	100	100	100	90	100	100	100	90	90	90	90	90	100	100	80	100	90	100	100
Munini	100	94	100	100	100	94	100	100	100	100	100	100	100	100	100	100	94	88	94	100	94	100	100	94	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
Kibogora	100	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
Kibuye	100	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
Kirinda	100	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
Mugonero	100	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
Shyira	100	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
Muhororo	100	100	100	100	100	100	100	100	100	100	100	100	100	90	100	100	100	80	100	100	90	100	100	100	100	90	100	100
Kabaya	86	100	100	100	100	100	100	100	86	100	100	100	100	100	100	100	100	86	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	100	90	100	100
Mibilizi	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
Gisenyi	100	100	100	100	100	100	100	100	100	94	100	100	100	100	100	100	94	100	100	100	100	100	94	100	100	100	100	100
Murunda	89	100	100	100	100	95	100	100	100	100	100	100	95	95	100	100	95	89	89	95	100	100	100	100	100	100	100	100
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
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	100	89	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	100	75	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	100	0	0	100
Masaka	100	100	100	92	100	100	100	100	100	100	100	100	100	100	100	100	92	100	100	100	100	100	100	100	100	92	92	100
Kigababaga	90	86	95	95	90	95	100	100	90	100	100	100	95	95	100	95	100	100	90	100	95	95	86	95	95	81	100	100
Kacyiru	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	100	100	100	100	100	100	100	100	100
KFH	0	0	100	100	100	100	100	100	0	100	100	100	100	100	100	100	100	0	0	100	0	100	0	0	100	100	100	100
Ndera	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	100	100	100	100
Nyabikenke	80	80																										

Hospital catchment area	Timeliness																											
	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
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
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
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
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
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
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
Kibungo	94	100	94	100	100	100	100	100	100	100	100	100	100	94	100	100	100	94	94	100	100	100	100	94	100	100	100	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
Rwamagana	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
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
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
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
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
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
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
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
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
Byumba	96	100	96	96	88	96	100	100	100	96	96	96	96	81	96	96	96	96	96	96	100	96	96	100	96	96	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
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
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
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
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
Gitwe	100	100	89	89	89	78	100	78	100	100	89	89	100	67	100	78	44	89	89	100	89	89	100	100	56	89	100	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
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
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
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	100	92	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
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
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
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	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
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
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	86	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
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
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
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
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
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
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
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
Nyarugenge	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
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
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
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	100	92	92	100
Kigababaga	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
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	100
KFH	0	0	100	100	100	100	0	100	0	100	100	100	100	0	100	100	0	100	100	0	100	100	0	0	100	0	100	100
Caraes																	0								0	0		
Ndera	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
Nyabikenke	80	80	80	60	80	80	80	80	100	100	100	100	100	60	100	100	80	100	100	100	80							