



WEEKLY EPIDEMIOLOGICAL BULLETIN

WEEK 32 – 2023

(07-13 August 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 32

Event Based Surveillance (EBS) Highlights:

- During the epidemiological week 32, eighteen alerts were notified through the electronic Community Event Based Surveillance System (eCBS) including 10 human deaths (reported respectively 4 in Rusizi, 4 in Ngororero, 1 in Gatsibo and 1 in Bugesera districts), 6 alerts of human illnesses in Gisagara district, 1 alert of viral hemorrhagic fever and 1 alert of dog bite in Ngororero district
- One alert was identified through the Epidemic Intelligence from Open Source (EIOS): Why East African region is at risk of animal diseases transmitted to humans.

Indicator Based Surveillance (IBS) Highlights:

- 380 immediate reportable diseases were notified by health facilities countrywide. They included the cases of acute flaccid paralysis (AFP), foodborne illness, mumps, severe malaria; bloody diarrhea, measles/rubella, cholera, chicken pox, bacterial meningitis, typhoid fever and VHF.
- 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 32 revealed that, non-bloody diarrhea for under 5 years crossed the epidemic threshold.
- A total of 71 deaths were reported through the electronic Integrated Disease Surveillance and Response (eIDSR) system. The majority of deaths were classified as perinatal deaths and deaths of children under 5 years.

Outbreaks reported in week 32

In the Epi Week 32, there was four outbreaks in Rwanda:

- Ongoing Measles outbreak in Kirehe District
- Ongoing Cholera outbreak in Rubavu district
- Foodborne illness occurred in Gicumbi district and in Gisagara district

Completeness and timeliness

In Epi Week 32, the overall completeness and timeliness of surveillance data reporting in Rwanda was 98% and 97%, respectively.

WEEKLY UPDATES ON EVENT BASED SURVEILLANCE (EBS) EPIDEMIOLOGICAL WEEK 32

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 BASED SURVEILLANCE

a) Community-based mortality surveillance

During the Epi week 32, ten deaths were received from community:

1. 4 deaths from Rusizi district
2. 4 deaths from Ngororero district
3. 1 death from Gatsibo district
4. 1 death from Bugesera district

b) Community event-based surveillance.

During the Epi week 32; 8 alerts were received from the community:

1. 6 alerts of human illness in Gisagara district
2. 1 alert of viral hemorrhagic fever from Ngororero district
3. 1 alert of dog bite from Ngororero district

MEDIA SCAN

During the Epi week 32, one alert was received through Epidemic Intelligence from Open Source (EIOS):

Why East African region is at risk of animal diseases transmitted to humans.

They are likely to be fueled by the increasing temperatures which are favorable for the transmission of pathogens. With the abundance of free-ranging livestock and wildlife and interfaces with humans, the transmission risks could be much higher. This is according to a report released by Traffic, a global NGO which doubles as a wildlife trade monitoring network. The tropical climate in East Africa hosts favorable conditions for transmission risks of various zoonotic diseases. Illegal wildlife trade increases the risk of zoonotic disease transmission due to spill over from wildlife to domestic animals and humans.

Dr Mdetete, an epidemiologist from the Tanzania Veterinary Service, wants a multi-pronged approach to contain the diseases. These have to include investment in healthcare infrastructure, veterinary services and public health systems. Recently reported zoonotic disease outbreaks in East Africa include Marburg virus in Tanzania and Ebola in Uganda in March and January this year respectively. "These viruses are highly contagious and can cause severe illness, often with high mortality rates", the vet expert said in a report seen by The Citizen.

The reported leptospirosis outbreak in southern Tanzania is another contemporary example of zoonotic diseases of concern in the EA region. Over the years, the region has been struggling with a variety of zoonotic diseases, including rabies, brucellosis, and anthrax. Others are Rift Valley Fever, bovine tuberculosis, porcine cysticercosis, African trypanosomiasis, salmonellosis, and borreliosis. He expressed much concern on zoonotic diseases from

the wild animals to humans which are often downplayed or neglected. Transporting wild animals and their products are among activities which predispose humans to zoonotic disease risks. The most common animal species that are reservoirs for zoonotic diseases include non-human primates, bats, rodents, small carnivores, swine, rabbits, and dogs.

According to experts working with the Traffic office in Arusha, a project is underway to reduce zoonotic disease risks in trade. The project will be undertaken with the support of the American and German aid agencies; USAID and GIZ respectively. The project outputs aim to support the East Africa Community (EAC) secretariat in its One Health Action plan to minimize future zoonotic pandemic risks.

<https://www.thecitizen.co.tz/tanzania/news/east-africa-news/why-east-african-region-is-at-risk-of-animal-diseases-transmitted-to-humans-4333898> disease threat.

WEEKLY UPDATES ON INDICATOR BASED SURVEILLANCE (IBS) EPIDEMIOLOGICAL WEEK 32

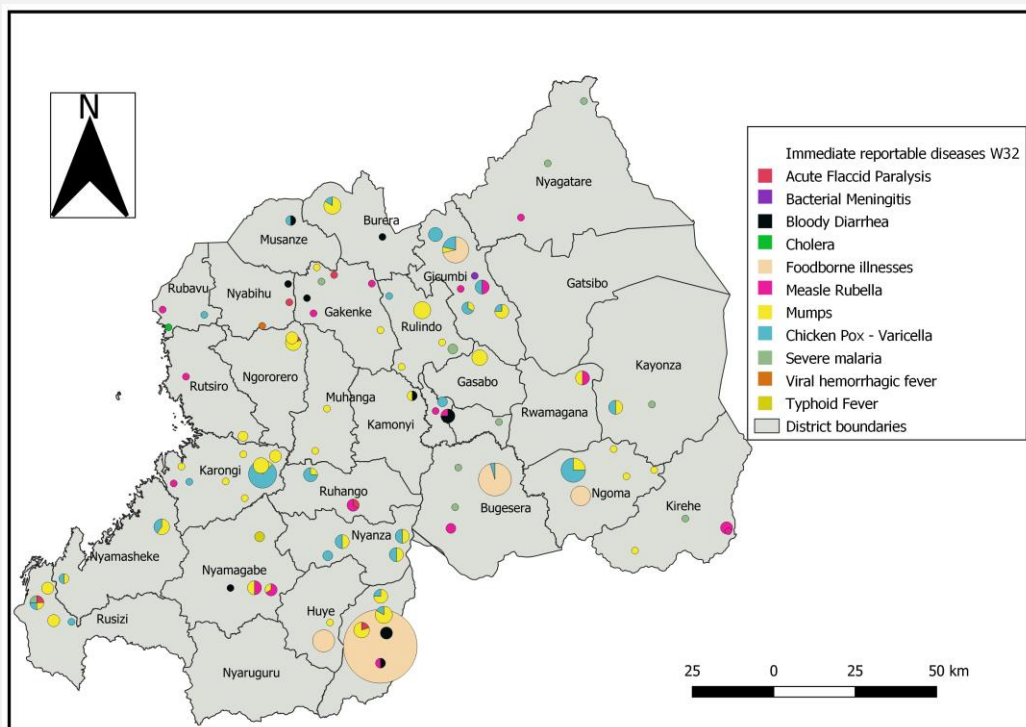
Description: *Rwanda has been implemented Indicator Based Surveillance according to the IDSR 3rd guidelines where approximately 45 priority diseases, health conditions and public health events are being monitored and reported from health facilities countrywide on a regular basis. Diseases that are prone 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 32

During Epi week 32; 380 cases of immediate reportable diseases were notified. They included 160 cases of foodborne illness, 96 cases of mumps, 63 cases of chicken pox, 13 suspected cases of bloody diarrhea, 26 suspected cases of measles/rubella, 11 confirmed cases of severe malaria, 6 suspected cases of acute flaccid paralysis, 1 case of cholera confirmed by RDT, 1 case of suspected bacterial meningitis, 1 case of suspected VHF, 2 cases of typhoid fever. (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 VHF, it was tested negative.
- All confirmed cases and suspected cases had been managed at health facility level.

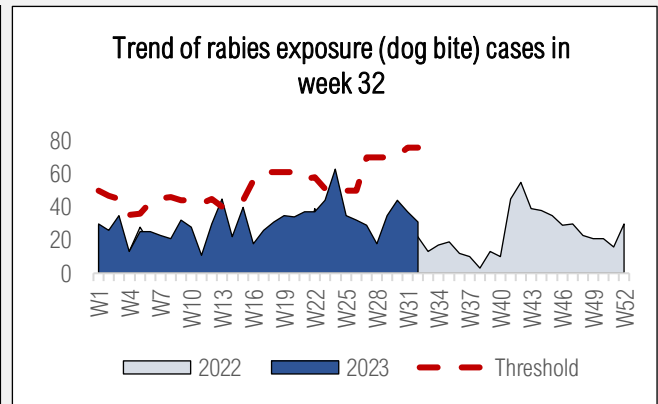
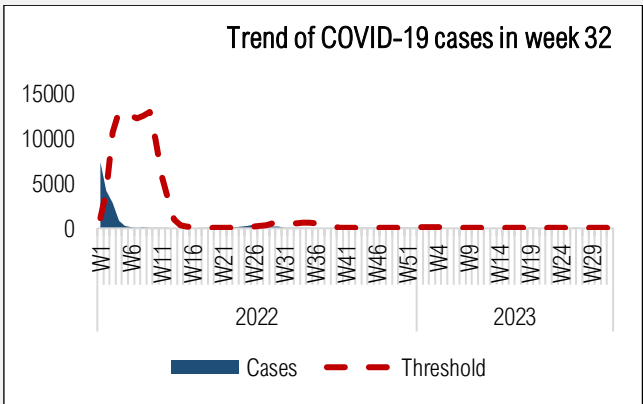
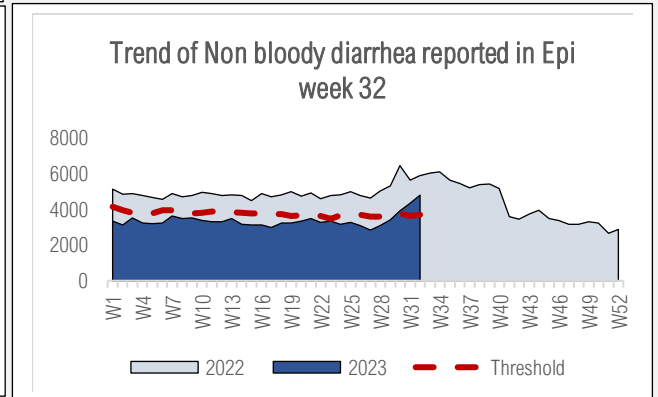
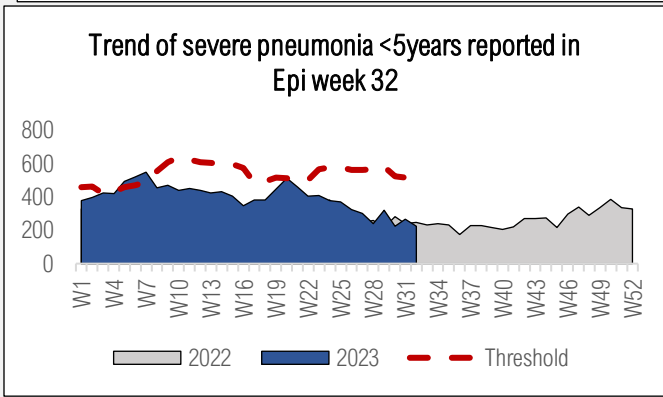
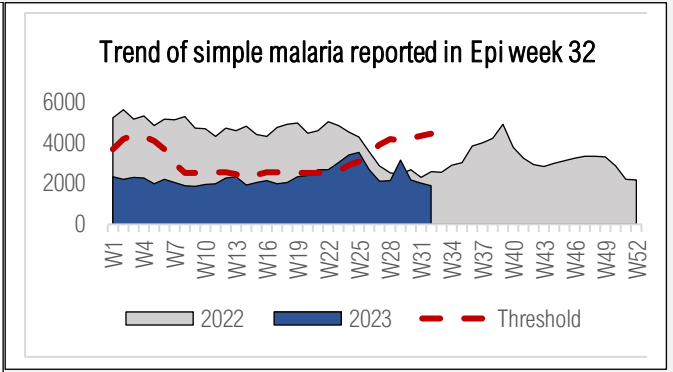
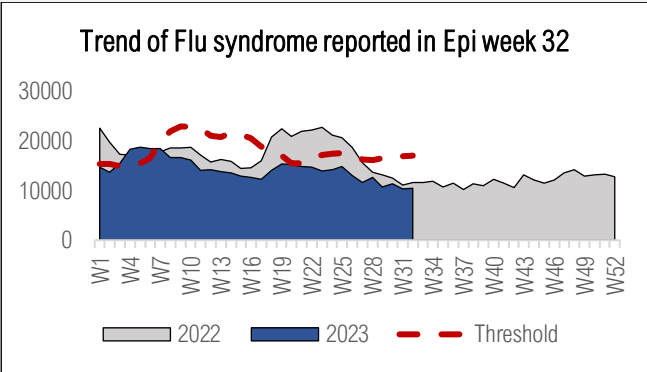


Distribution of immediate reportable diseases in Epi week 32

WEEKLY REPORTABLE DISEASES – EPI WEEK 32

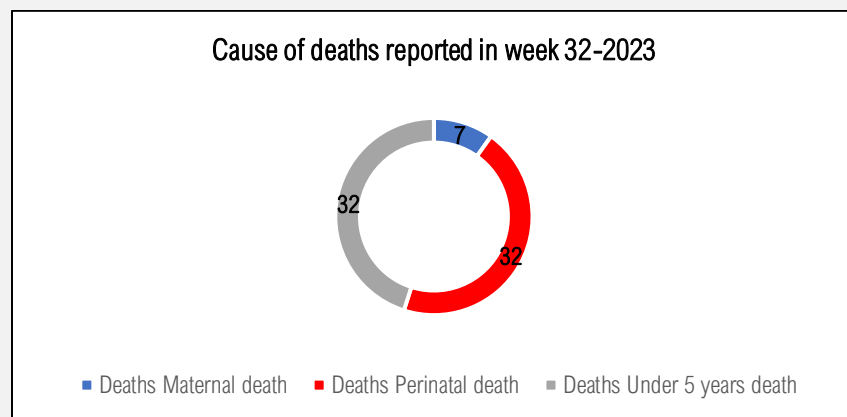
Description: In Rwanda, after the adaptation of the IDSR 3rd edition, eight diseases & events are being reported and analyzed on a weekly basis. These include flu syndrome, simple malaria, severe pneumonia for under 5 years, non-bloody diarrhea for under 5 years, COVID-19, dog bites, brucellosis, and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

In Epi Week 32, 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 threshold. The hospital areas that crossed the threshold included Butaro, Byumba, Kabaya, Kabgayi, Kabutare, Kaduha, Kibilizi, Kibungo RH, Kiziguro, Masaka, Mugonero, Muhororo, Munini, Nemba, Nyagatare, Nyamata, Nyanza, Remera Rukoma, Rwamagana PH, Shyira DHs. A deep follow up is recommended.



B. DISTRIBUTION OF REPORTED DEATHS IN eIDSR – EPIDEMIOLOGICAL WEEK 32

In Epi week 32, as summarized in the Pie Chart below, a total number of 71 deaths were reported through the electronic Integrated Disease Surveillance and Response (eIDSR) system. Among these deaths, 32 (45%) were classified as perinatal, 32 (45%) were deaths of children under 5 years old (included 1 death due to non-bloody diarrhea and 1 death due to severe pneumonia < 5 years) and 7(10%) maternal deaths.

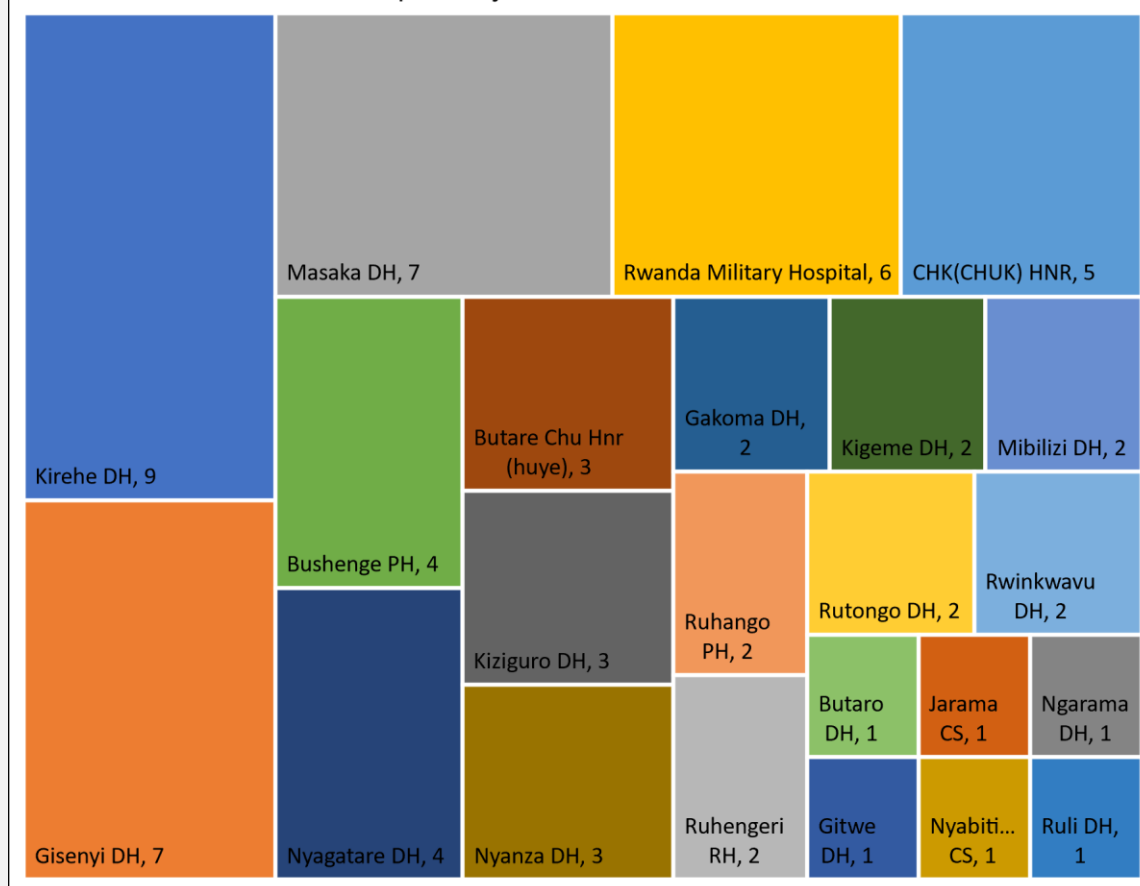


Cause of deaths declared in epi week 32

Deaths were reported from various catchment areas as follow:

- 9 deaths were reported in Kirehe DH
- 7 deaths were respectively reported in Masaka and Gisenyi DHs
- 6 deaths were reported in Rwanda military hospital
- 5 deaths were reported in CHUK
- 4 deaths were reported respectively in Bushenge PH and Nyagatare DH
- 3 deaths were reported respectively in CHUB, Nyanza DH, Kiziguro DH
- 2 deaths were reported respectively Kigeme DH, Gakoma DH, Mibilizi DH, Ruhengeri RH, Ruhango PH, Rwinkwavu DH, Rutongo DH
- 1 death was reported respectively in Butaro DH, Ngarama DH, Gitwe DH, Ruli DH, Jarama HC (in Kibungo RH), Nyabitimbo HC (in Mibilizi DH).

Deaths reported by health facilities in week 32-2023



OUTBREAK AND EVENT UPDATES EPIDEMIOLOGICAL WEEK 32

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

Confirmed cases	30	Date reported:	February 27, 2023	Risk assessment	Low
Epi link cases	68	Source:	NRL, eIDSR		
Death(s)	0	District/HFs:	Kirehe/Mahama Refugee Camp		
Total cases	98	Geoscope:	Low		

Outbreak description: The measles outbreak is still ongoing in Kirehe district since 27th February 2023. As of August 14, 2023, no additional cases were identified in Mahama Refugee camp by laboratory confirmation, which makes it a total of 30 laboratory confirmed cases, while 4 suspected cases were reported during Epi week 32, then there were 68 cases confirmed by epidemiological link. For 4 suspect cases reported in the previous week, the samples were taken and sent to NRL, results are pending.

Ongoing interventions:

- Vaccination campaign

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

2. ONGOING CHOLERA OUTBREAK IN RUBAVU DISTRICT

Confirmed cases	51	Date reported:	June 14, 2023	Risk assessment	Low
Suspected cases	0	Source:	eIDSR		
Death(s)	1	District/HFs:	Rubavu/ Kigufi HC,		
Total cases	51	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 14/08/2023; 51 cases meeting cholera case definition have been recorded with 4 confirmed by stool culture and 47 confirmed by RDTs, (including 3 new cases registered on 06/08/2023). For the outcome of patients, 50 were cured, 1 died (a female aged of 14) and no cases are admitted and no critical case reported. The source of infection was the use of unsafe water, poor hygiene and sanitation.

Interventions:

- 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
- Reinforce community surveillance for early detection and active search of new cases

3. FOODBORNE ILLNESS OCCURRED IN GICUMBI DISTRICT, BWISIGE SECTOR

Confirmed cases	0	Date reported:	August 10, 2023	Risk assessment	Low
Suspected cases	12	Source:	eIDSR		
Death(s)	0	District/HFs:	Mukono HC/ Byumba DH		
Total cases	12	Geoscope:	Low		

Outbreak description:

On the 10/08/2023, 2 patients consulted Mukono HC with abdominal pain after attending an after-wedding ceremony in Gatsibo district commonly known as Kurisha. On 11/08/2023, 8 more people who attended the same ceremony consulted with similar symptom. They reported to have consumed only rice and beans, with no drinks. Currently, all patients are treated and discharged and no death occurred.

Interventions conducted:

- Case management of the patients
- Stool samples collected were tested negative

4. FOODBORNE ILLNESS OCCURRED IN GISAGARA, SAVE SECTOR

Confirmed cases	0	Date reported:	August 07, 2023	Risk assessment	Low
Suspected cases	122	Source:	eIDSR		
Death(s)	0	District/HFs:	Save HC/ Kabutare DH		
Total cases	122	Geoscope:	Low		

Outbreak description:




On 07/08/2023, 84 patients consulted in Save HC after consuming sorghum beer in a wedding ceremony the previous day. They presented abdominal pain, headache, diarrhea, and vomiting. A total of 122 cases were recorded. Among them, 14 cases were transferred to Kabutare DH for further treatment. Currently, all patients are treated and discharged.

Interventions conducted:

- Case management of the patients
- Stool and drink samples were collected and sent to NRL.
- Field investigation by Gakoma DH rapid response team

eIDSR REPORTS COMPLETENESS & TIMELINESS EPIDEMIOLOGICAL WEEK 32

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 32, the overall completeness and timeliness of disease surveillance data reporting in Rwanda were 98% and 97%, respectively.

With regards to completeness of surveillance reports, almost all hospitals had the high completeness (>80%), except two hospitals including one that had the moderate score (Ruhango PH) and one with low score (Kacyiru police hospital). For the timeliness, the overall score was 97%, almost all hospitals had the high timeliness (>80%), except also two hospitals, including one hospital that had the moderate score (Ruhango PH) and one with low score (Kacyiru police hospital).

Notes: The health facilities that did not have 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	W31	W32				
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	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	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	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	100	92	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	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	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	100	94	100	100	100	100	100	100	94	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	100	95	95	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	100	100	100	100	100	100		
Nyamata	100	94	100	94	100	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	88	100	100			
Kinihira	100	100	100	100	100	100	89	89	100	89	89	100	89	89	89	100	100	100	100	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	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	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	100	85	95	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	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	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	100	94	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	96	100	96	100	100	100	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	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	100	100	95	100	100	100		
Kabagayi	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	100	100	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	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	100	100	100	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	100	100	100	100	100	100	100	
Ruhango	88	100	100	100	88	88	75	88	88	100	100	63	75	63	63	75	50	88	75	63	88	63	100	100	100	75	100	100	88	88	100	75	100	100	100	
Remera	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	100	100	100	93	100	100	100	
Rukoma	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	100	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	84	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	100	92	100	100	100	100	100	100	100	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	100	100	100	100	100	100	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	94	100	100	100	100	100	100	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	100	88	75	100	100	88	88	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	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	100	92	92	100	100	100	100	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	100	83	100	100	100	100	100	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	100	86	100	100	100	100	100	100	100	100	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	82	94	88	94	100	100	100	
Muhororo	100	100	100	100	100	100	100	100	100	100	100	100	100	90																						

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	W29	W30	W31	W32		
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	100	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	100	89	100	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	100	88	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	92	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	89	100	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	100	100	100	
Kibungo	94	100	94	100	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	94	100	94	
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	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	100	100	94	94	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	82	76	82	94	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	78	100	89	100	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	100	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	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	85	90	90	
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	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	100	100	100	
Ruhengeri	94	89	89	100	83	89	83	72	94	94	94	78	94	83	89	89	89	89	100	94	89	89	100	100	89	100	94	89	94	94	94	100	100	
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	96	100	100	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	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	100	100	100	
Kabagayi	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	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	100	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	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	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	75	88	100	63	100	
Remera	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	93	100	100	
Rukoma	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	100	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	79	95	95	95	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	92	100	100	100	85	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	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	94	100	100	
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	100	88	88	88	75	100	100	88	88	
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	93	100	100	100	100	
Kibuye	100	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	92	100	92	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	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	100	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	88	94	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	80	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	100	100	100	100	86	100
Gihundwe	100	100	90	1																														