



WEEKLY EPIDEMIOLOGICAL BULLETIN

WEEK 37 – 2023

(11-17 September 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 37

Event Based Surveillance (EBS) Highlights:

- During the epidemiological week 37, four alerts were notified through the electronic Community Event Based Surveillance System (eCBS), there were 3 human deaths.
- Two alerts were identified through the Epidemic Intelligence from Open Source (EIOS):
 - Saharan Africa: Pioneering programme to bring multiple-disease detection tech
 - UN warns disease outbreak in Libya's flooded east could spark 'a second devastating crisis'

Indicator Based Surveillance (IBS) Highlights:

- 198 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, bacterial meningitis 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 37 revealed that malaria cases crossed the epidemic threshold.
- A total of 60 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 updates in week 37

Outbreaks occurred:

Three outbreaks of foodborne illness occurred respectively in different districts:

- Nyaruguru district (Ruramba sector, Gabiro cell, Buhoro Village),
- Nyamagabe district (Mugano sector, Sovu cell, Nziranziza Village)
- Ngoma district (Sake sector, Kibonde cell, Nyagasani Village)

Completeness and timeliness

In Epi Week 37, 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 37

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

During the Epi week 37, three alerts of human deaths were received from community:

- 1 alert from Ngororero District
- 1 alert from Gicumbi District
- 1 alert from Ngoma district

MEDIA SCAN

During the Epi week 37, two alerts were received through Epidemic Intelligence from Open Source (EIOS):

- **Saharan Africa: Pioneering programme to bring multiple-disease detection tech:**

On Thursday 14 September, members of the Digital Innovations and Diagnostics for Infectious Diseases in Africa project, or DIDIDA, will be part of an event organized by the International Science Summit around the 78th United Nations General Assembly (UNGA78). DIDIDA, supported by £6.75m in funding from the European Union and UKRI, is developing new ways to use lateral flow tests, similar to those used to diagnose COVID-19, to diagnose more than one disease at the same time in even the most remote locations.

The technology aims to diagnose multiple infectious conditions including the five leading causes of death in sub-Saharan Africa: severe respiratory infections, HIV/AIDS, diarrhoea, malaria, and tuberculosis. Together, they kill more than six million people each year. The tests are run on portable devices which use a process called loop-mediated isothermal amplification to test DNA samples collected on lateral flow strips with remarkable sensitivity.

Those devices are linked to mobile phones, where an app developed by the team uses artificial intelligence to analyze the test results and provide a diagnosis. Health workers will be able to deliver recommendations for treatment directly to patients. The results can also be shared directly from the app with regional or national healthcare authorities to help create a real-time dashboard of infections of diseases, including asymptomatic conditions – a key consideration for strategies which aim to eliminate disease outbreaks. The dashboards will also help clinicians to explore the links between infectious and non-communicable diseases including cardiovascular disease and diabetes. The dashboard will also help authorities monitor the spread of diseases as climate change-driven changes in temperature drive parasite-carrying insects beyond their usual home territories. DIDIDA's funding also supports the creation of a new graduate school in sub-Saharan Africa. The school will train 18 new PhDs in areas including artificial intelligence, manufacturing, engineering and synthetic biology to help them make further improvements to the diagnostic technology. They will also train health workers in how to administer the tests.

“More than 50% of the population of sub-Saharan Africa lacks access to essential health services, and in rural areas it's often difficult for patients to get an accurate diagnosis. DIDIDA is working to tackle that problem by providing a system that can be used anywhere to provide patients with appropriate diagnosis and the correct treatments. That will help improve patient outcomes and reduce the antimicrobial resistance that can come from offering patients ineffective drugs based on incorrect diagnoses.

<https://www.hippocraticpost.com/infection-disease/sub-saharan-africa-pioneering-programme-to-bring-multiple-disease-detection-tech/>

- **UN warns disease outbreak in Libya's flooded east could spark 'a second devastating crisis':**

ERNA, Libya (AP) - Officials warned Monday that a disease outbreak in Libya's northeast, where floods have killed thousands, could create “a second devastating crisis” as adults and children fell ill from contaminated water. In a statement, the United Nations Support Mission in Libya said it was particularly concerned about water contamination and the lack of sanitation after two dams collapsed during Mediterranean storm Daniel, sending a wall of water gushing through the eastern city of Derna on Sept. 11. The death toll has varied, with government officials and aid agencies giving tallies ranging from about 4,000 to 11,000 dead.

Nine U.N. agencies responding to the disaster are working to prevent diseases from taking hold and creating another crisis in the devastated country, which is receiving 28 tons (25 metric tonnes) of medical supplies from the World Health Organization, the mission said.

Haider al-Saeih, head of Libya's Center for Combating Diseases, said in televised comments Saturday that at least 150 people - 55 of them children - suffered diarrhea after drinking contaminated water in Derna.

The disaster has brought some rare unity to oil-rich Libya, which has been divided between rival administrations since 2014. Both are backed by international patrons and armed militias whose influence in the country has ballooned since a NATO-backed Arab Spring uprising toppled autocratic ruler Moammar Gadhafi in 2011.

The opposing governments have both deployed humanitarian teams to the port city and other affected areas, but poor coordination, difficulty getting aid to the hardest-hit areas and the destruction of Derna's infrastructure, including several bridges, have hampered their efforts.

The International Organization for Migration said Monday that about 40,000 people have been displaced across northeast Libya, including 30,000 in Derna. Residents from the nearby cities of Benghazi and Tobruk have offered to put up the displaced, while volunteers search for survivors buried beneath the rubble.

On Saturday, Libya's general prosecutor, al-Sediq al-Sour, opened an investigation into the collapse of the two dams, built in the 1970s, as well as the allocation of maintenance funds. Derna's mayor, Abdel-Moneim al-Gaithi, was suspended pending an investigation into the disaster.

The health minister from Libya's eastern government, Othman Abduljaleel, said Sunday that his ministry had begun a vaccination program “against diseases that usually occur after disasters such as this one” but didn't elaborate.

<https://www.cp24.com/world/un-warns-disease-outbreak-in-libya-s-flooded-east-could-spark-a-second-devastating-crisis-1.6566648>

WEEKLY UPDATES ON INDICATOR BASED SURVEILLANCE (IBS) EPIDEMIOLOGICAL WEEK 37

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.

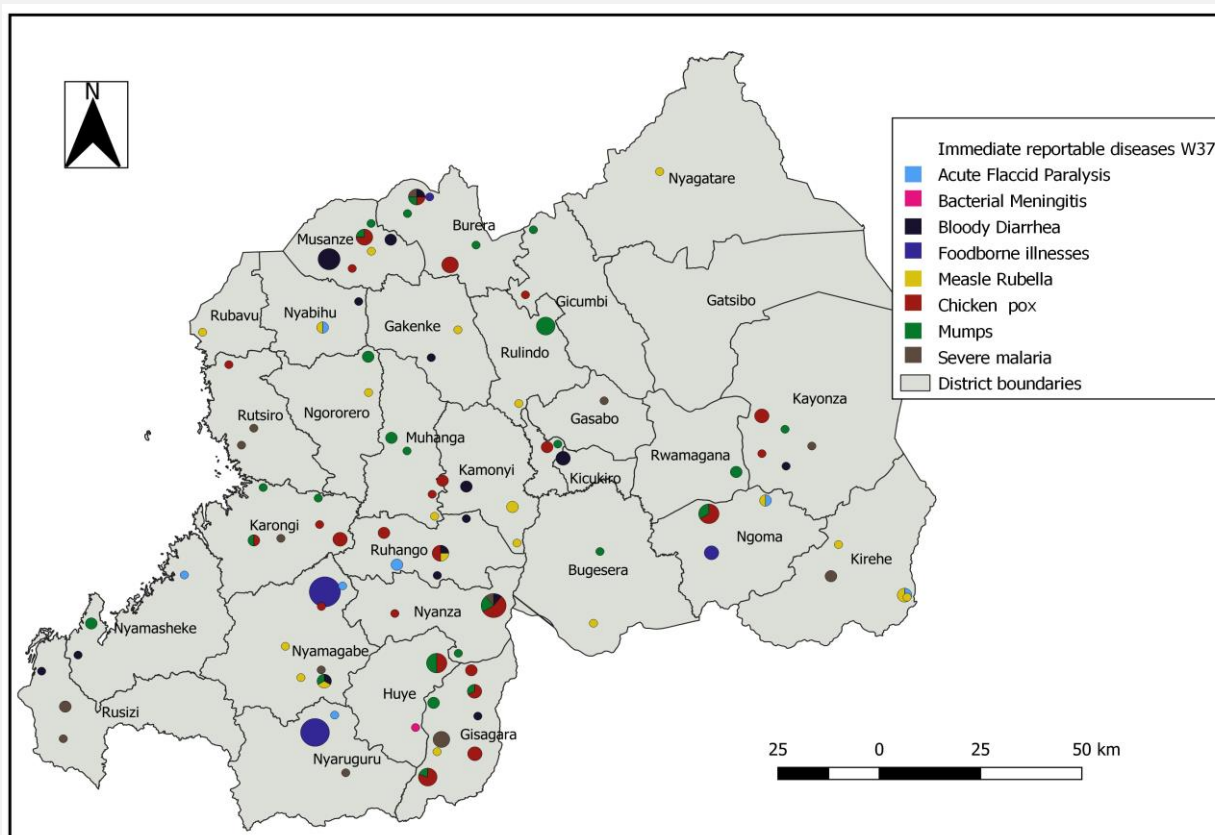
A. IMMEDIATE REPORTABLE DISEASES – EPI WEEK 37

During Epi week 37; 198 cases of immediate reportable diseases were notified. They included:

- 54 cases of chicken pox were reported by 25 health facilities, no health facility crossed the threshold
- 39 cases of mumps reported by 26 HCs, no HC crossed the threshold.
- 30 cases of foodborne illness were reported by 3 health facilities: Mugano HC, Munyiginya HC and Rukoma-Sake HC. These HCs crossed the threshold.
- 26 suspected cases of bloody diarrhea reported by 16 HCs.
- 22 suspected cases of Measles/Rubella were reported by 20 health centers
- 18 confirmed cases of severe malaria reported by 13 health facilities and they crossed the alert threshold: Kigeme DH, Kibilizi DH, Bumbogo HC, Coko HC, Cyanika(Burera)HC, Gakoma HC, Kirehe DH, Murunda DH, Musango HC, Musasa HC, Mushaka HC, Rwinkwavu DH and Mibilizi DH .
- 8 suspected cases of acute flaccid paralysis reported by 8 health facilities that crossed alert threshold: Birembo HC, Gasetza HC, Jenda HC, Gitwe HC, Karengera HC, Mahama HC, Rubaya (Gicumbi) HC and Nyamyumba HC.
- 1 suspected case of bacterial meningitis reported by CHUB, the sample was not taken.

Notes:

- For the diseases whose cases crossed the thresholds are recommended to conduct the investigation
 - For the diseases requiring laboratory confirmation, the samples were collected and sent to the National Reference Laboratory for testing, but for bacterial meningitis, the sample has to be taken for confirmation next time.
 - All confirmed cases and suspected cases had been managed at health facility level.
- (See the distribution of cases by place in the map below)

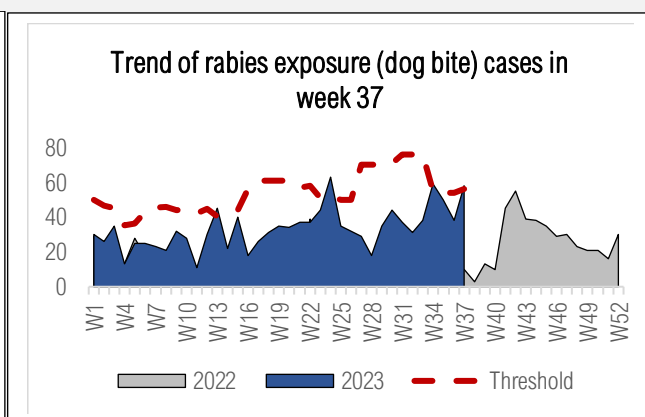
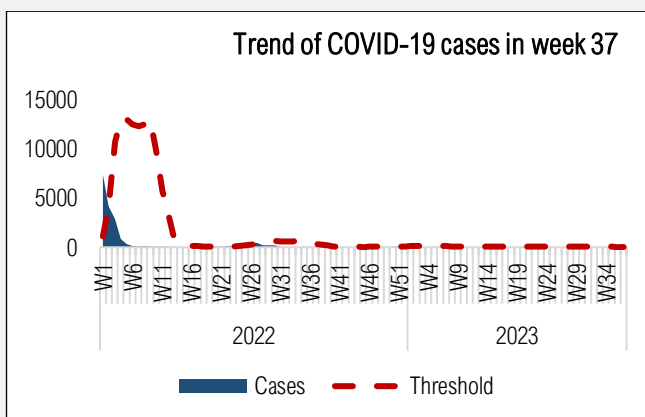
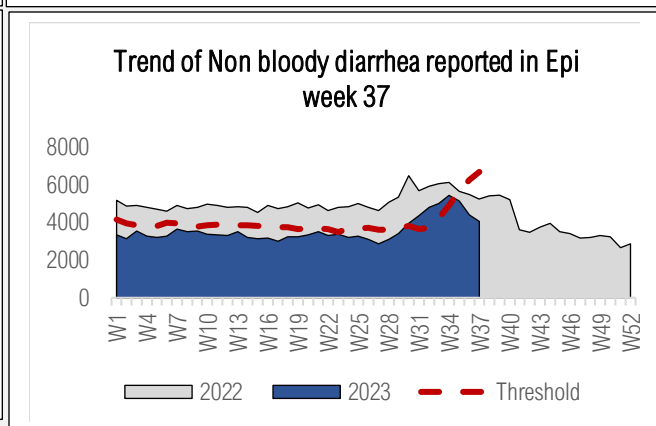
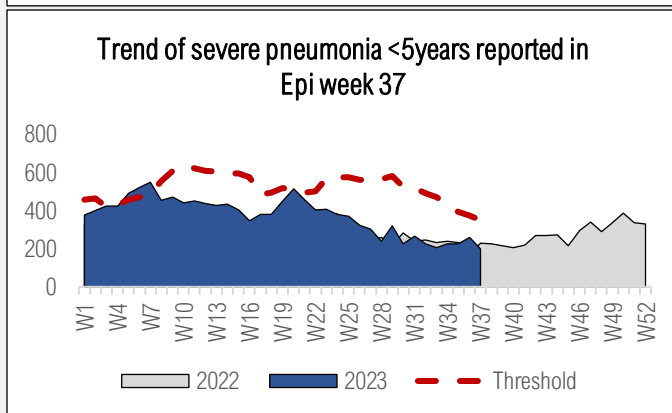
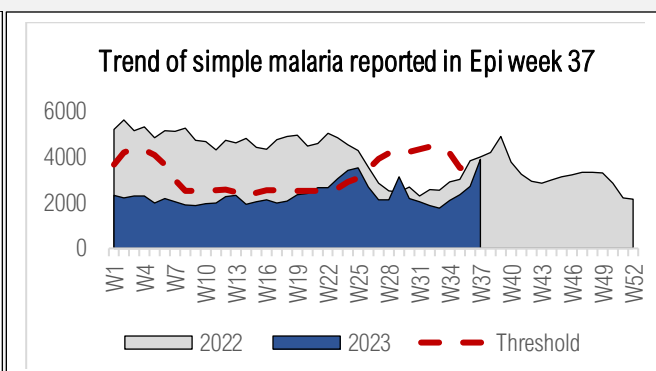
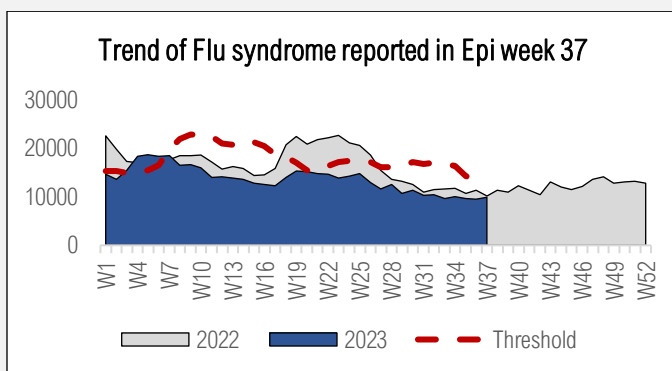


Distribution of immediate reportable diseases in Epi week 37

B. WEEKLY REPORTABLE DISEASES – EPI WEEK 37

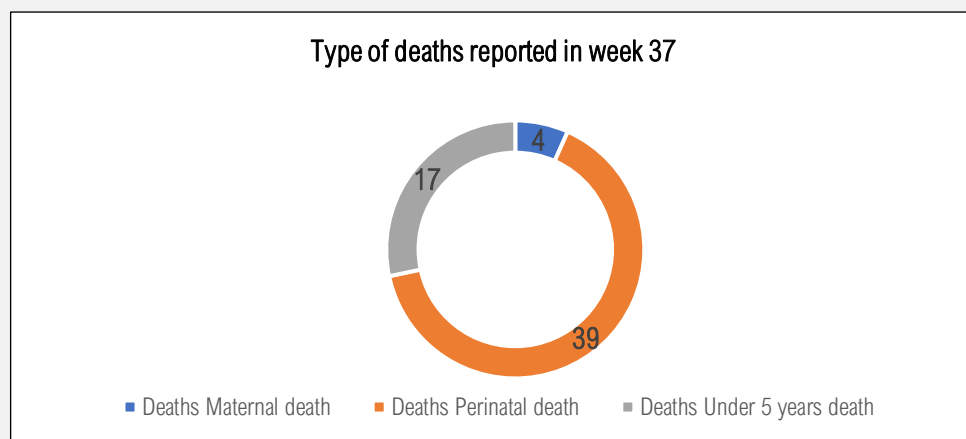
Description: *In Rwanda, after the adaptation of the IDSR 3rd edition, eight diseases & events are being reported and analyzed on a weekly basis. These include flu syndrome, simple malaria, severe pneumonia for under 5 years, non-bloody diarrhea for under 5 years, COVID-19, dog bites, brucellosis, and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

In Epi Week 37, 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 malaria cases crossed the epidemic threshold, especially in the DH catchment areas of Kibilizi DH (malaria cases crossed the thresholds since the week 34 until 37), Gakoma DH, Kabutare DH, Ruhango PH, Kigeme DH, Mibilizi DH, Murunda DH, Kibogora DH, Ruhengeri RH, and Rutongo DH. In the Epi week 37 in Kibilizi DH malaria cases was about 3 times the threshold. The problem is known by the public health authorities, as well as this happens seasonally, and then they are enhancing preventive measures and are planning to conduct the household indoor spraying in October 2023.



C. DISTRIBUTION OF REPORTED DEATHS IN eIDSR – EPIDEMIOLOGICAL WEEK 37

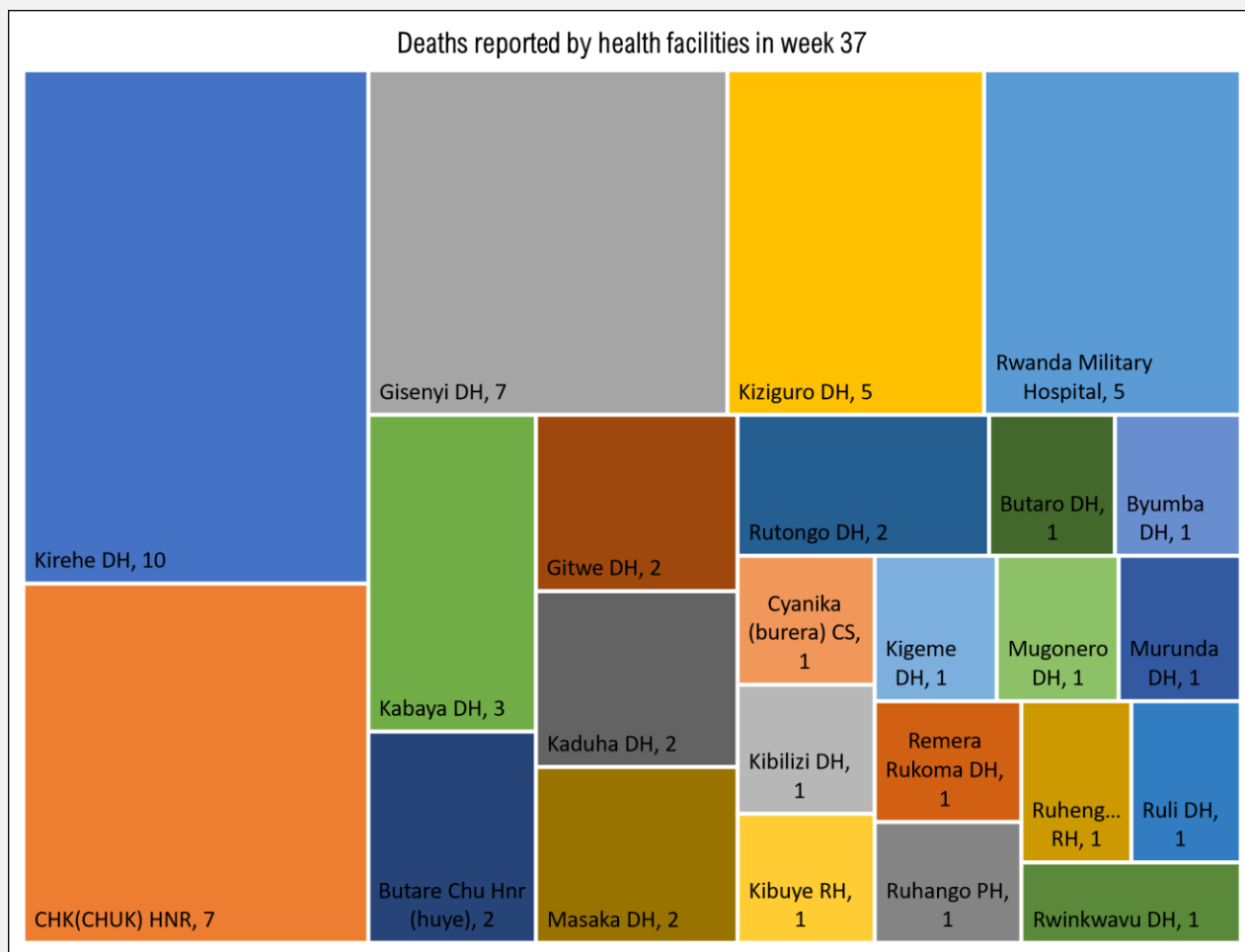
In Epi week 37, as summarized in the Pie Chart below, a total number of 60 deaths were reported through the electronic Integrated Disease Surveillance and Response (eIDSR) system. Among these deaths, 39(65%) were classified as perinatal, 17 (28%) were deaths of children under 5 years old and 4(7%) maternal deaths.



Cause of deaths declared in epi week 37

Deaths were reported from various catchment areas as follow:

- 10 deaths were reported in Kirehe DH
- 7 deaths were reported respectively in CHUK and Gisenyi DH
- 5 deaths were reported respectively in Rwanda Military Hospital and Kiziguro DH
- 3 deaths were reported Kabaya DH
- 2 deaths were reported respectively in CHUB, Gitwe DH, Kaduha DH, Masaka DH, Rutongo DH,
- 1 death was reported respectively in Butaro DH, Byumba DH, Kibilizi DH, Kibuye RH, Kigeme DH, Mugonero DH, Murunda DH, Remera-Rukoma DH, Ruhango PH, Ruli DH, Rwinkwavu DH and Ruhengeri RF.



OUTBREAK AND EVENT UPDATES EPIDEMIOLOGICAL WEEK 37

1. FOODBORNE ILLNESS OCCURRED IN NYARUGURU DISTRICT, RURAMBA SECTOR, GABIRO CELL, BUHORO VILLAGE

Confirmed cases	0	Date reported:	September 16, 2023	Risk assessment	Low
Suspected cases	15	Source:	eIDSR		
Death(s)	0	District/HFs:	Kibeho, Nyamyumba, Ruramba		
			HCs/ Munini DH		
Total cases	15	Geoscope:	Low		

Outbreak description:

On 16/09/2023, patients consulted in Kibeho, Nyamyumba and Ruramba health centers with similar symptoms of abdominal pain, diarrhea, and vomiting following the consumption of sorghum beer (ubushera) in a wedding ceremony held on 15/09/2023. A total of 80 people attended the wedding, but only 15 consulted the health centers. They were transferred to Munini DH for further management. The possible cause of the food poisoning was the sorghum beer.

Interventions conducted:

- Case management of the patients

2. FOODBORNE ILLNESS OCCURRED IN NYAMAGABE DISTRICT, MUGANO SECTOR, SOVU CELL, NZIRANZIZA VILLAGE

Confirmed cases	0	Date reported:	September 12, 2023	Risk assessment	Low
Suspected cases	14	Source:	eIDSR		
Death(s)	0	District/HFs:	Mugano HC/ Kaduha DH		
Total cases	14	Geoscope:	Low		

Outbreak description:

On 12/09/2023, 14 patients consulted in Mugano HC with similar symptoms of abdominal pain, diarrhea, and headache following the consumption of sorghum beer (ubushera) and banana juice (umutobe) in a baptsim ceremony held on 10/09/2023. Among the 14 patients, 4 were hospitalized and 1 pregnant woman was transferred to Kaduha DH. No critical case was recorded.

Interventions conducted:

- Case management of the patients
- Kaduha DH RRT was deployed for field investigation
- Stool samples were collected and sent to NRL

3. FOODBORNE ILLNESS OCCURRED IN NGOMA DISTRICT, SAKE SECTOR, KIBONDE CELL, NYAGASANI VILLAGE

Confirmed cases	0	Date reported:	September 13, 2023	Risk assessment	Low
Suspected cases	3	Source:	eIDSR		
Death(s)	1	District/HFs:	Rukoma-Sake HC/ Kibungo RH		
Total cases	3	Geoscope:	Low		

Outbreak description:




On 13/09/2023, three children aged 9, 8, and 2 years old respectively, were brought to Rukoma-sake HC with similar symptoms of diarrhea, headache, abdominal pain, and body weakness. These symptoms occurred after they consumed cassava dough and sunflower sauce at a neighbor's house on 12/09/2023. The meal had been shared by four children from the same family, but sadly, one 5-year-old child passed away before reaching the health facility. The 3 children have been transferred to Kibungo RH for further treatment.

Interventions conducted:

- Case management of the patients
- A team led by the sector executive secretary, security organs, and HC leaders visited the home where the food was served for further investigation.
- Body of the deceased was transported by RIB to the Rwanda Forensic Institute for Autopsy.

eIDSR REPORTS COMPLETENESS & TIMELINESS EPIDEMIOLOGICAL WEEK 37

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 37, the overall completeness and timeliness of disease surveillance data reporting in Rwanda was 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 Rwanda military hospital, King Faysal hospital and Kacyiru police hospital that had a low timeliness score (less than 60%).

Notes: The health facilities that did not have a high score for the timeliness 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 figures below.

Hospital catchment area	Completeness																																					
	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	W33	W34	W35	W36	W37	
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	100	83	100	100	100	100	100	93	100	100	93	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	100	89	100	100	100	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	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	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	100	89	100	100	100	100	100	100	100	89	100	100	100	89	100
Rwinkwavu	100	100	100	100	100	100	100	100	100	100	100	88	100	88	88	100	100	100	100	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	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	100	95	95	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	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	88	94	100	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	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	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	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	85	95	100	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	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	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	100	100	94	89	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	100	100	100	100	100	100	100	100	100	100
CHUB	0	100	100	100	100	100	100	100	0	0	100	100	0	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
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	95	100	100	100	95	95	95	95	
Kabagayi	100	100	92	85	100	92	92	92	100	100	92	92	85	100	100	92	100	100	100	100	92	100	100	100	100	92	100	100	100	100	100	100	100	100	100	100	100	100
Kibizi	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	91	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	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	100	67	100	100	100	100	100	89	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	88	100	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	93	100	100	100	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	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	95	95	100	95	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	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	100	100	80	100	90	100	100	100	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	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	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	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	100	100	100	100	92	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</									

