



# WEEKLY EPIDEMIOLOGICAL BULLETIN

## WEEK 42 – 2023

(16 -22 October 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 42

#### Event Based Surveillance (EBS) Highlights:

- During the epidemiological week 42, two signals were notified through the electronic Community Event Based Surveillance System (eCEBS): there was 1 alert of dog bite and 1 human death.
- Two alerts were identified through the Epidemic Intelligence from Open Source (EIOS):
  - Tanganyika: 4 cases of death due to cholera in Kongolo since last September
  - WHO has reported cholera outbreaks in more than 31 countries since the start of the year

#### Indicator Based Surveillance (IBS) Highlights:

- 267 immediate reportable diseases were notified by health facilities countrywide. These include the cases of acute flaccid paralysis (AFP), foodborne illness, mumps, severe malaria; bloody diarrhea, measles/rubella, cholera, bacterial meningitis and chicken pox.
- For 8 weekly reportable diseases and health events, a thorough analysis conducted for Epi Week 42 revealed that the cases of flu syndrome surpassed the epidemic threshold in catchment area of Gakoma DH, Muhima DH, Rutongo DH, Kabutare DH, Kibagabaga Level 2 Teaching Hospital, Kibilizi DH, Kibogora DH, Murunda DH, Shyira DH and Rwamagana PH.
- A total of 65 deaths were reported through the electronic Integrated Disease Surveillance and Response (eIDSR) system. The majority of deaths were perinatal deaths and deaths of children under 5 years, there was also one death due to severe malaria.

#### Outbreaks updates in week 42

One Outbreak occurred:

- Foodborne illness in Ngoma district, Rurenge sector, Rugese cell, Kajeubaba Village

One ongoing outbreak:

- Bacillary dysentery outbreak in Karongi district, Rwankuba Sector, Nyarusanga Cell- Kiziba refugee camp

#### Completeness and timeliness

In Epi Week 42, 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 42

**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 42, two events were notified from community, including:

- 1 alert of Dog bite from Nyagatare district
- 1 human death from Ngororero district

### MEDIA SCAN

#### 1) **Tanganyika: 4 cases of death due to cholera in Kongolo since last September**

Four people have died of cholera in some 60 cases registered since last September in the Kongolo health zone (Tanganyika province in Democratic Republic of the Congo). The chief physician of the health zone, Dr. Kisubi Nyembo, delivered these figures on Monday, October 16, when the provincial government of Tanganyika was sending inputs for the care of cholera patients.

It welcomed this allocation and reminded the community that the care of cholera patients is free of charge. He also indicated that several actions were being carried out in the health zone, including management, community activities, disinfection of households, chlorination instead of water supply. He also assured the entire community that care is free and has prohibited the care of the sick at home when they have the symptoms of cholera. These inputs to the Kongolo health zone consist of Baxter from RL and other kits.

<https://www.radiookapi.net/2023/10/17/actualite/sante/tanganyika-4-cas-de-deces-dus-au-cholera-kongolo-depuis-septembre-dernier>

#### 2) **WHO has reported cholera outbreaks in more than 31 countries since the start of the year**

Cholera outbreaks have been reported in 31 countries since the beginning of 2023, and about 1 billion people may become ill. This was announced by the Director General of the World Health Organization (WHO), Tedros Adhanom Ghebreyesus, writes TASS. The head of WHO made this statement while speaking to representatives of diplomatic missions in Geneva. "We should have defeated this disease a long time ago, but in fact it is growing," said Ghebreyesus. He added that the number of cases of cholera in 2022 has doubled compared to 2021. Then the head of WHO added that in the current 2023 "it will be even worse." He said at least "31 states had cholera outbreaks in 2023" and that "a billion people are at risk." Cholera outbreaks are of greatest concern in countries such as Burundi, Cameroon, Democratic Republic of Congo, Ethiopia, Tanzania, Sudan, Syria and Zimbabwe. As the director general noted, in the south of the African continent "significant progress has been made" in the fight against this infection, but "the rainy season increases the risk of serious outbreaks.

"It is particularly concerning that countries that eradicated cholera many years ago are experiencing a resurgence of the disease this year," Ghebreyesus said. He highlighted "serious shortages of vital supplies, including oral cholera vaccine." The head of WHO asked the world community to respond to the call for \$160 million to fight cholera: "The time has come to act on this call to avoid unnecessary deaths. According to the WHO newsletter, which was published in early October in Geneva, the number of cases of cholera infection since the beginning of the year has exceeded 582 thousand, and more than 4.5 thousand people have died. Let us remember that cholera is a particularly dangerous infectious disease caused by *Vibrio cholerae*. It appears when a pathogen enters the body with contaminated food or water.

<https://www.sb.by/articles/voz-soobshchila-o-vspyshkakh-kholery-bolee-chem-v-30-stranakh-s-nachala-goda.html>

## WEEKLY UPDATES ON INDICATOR BASED SURVEILLANCE (IBS)

**Description:** *Rwanda had implemented Indicator Based Surveillance according to the IDSR guidelines 3rd edition 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 weekly basis every Monday before midday.*

### A. IMMEDIATE REPORTABLE DISEASES – EPI WEEK 42

During this Epi week, 267 cases of immediate reportable diseases were notified:

- 31 cases of chicken pox were reported by 18 HFs. None crossed the threshold.
- 17 cases of mumps were reported by 14 HCs. None crossed the threshold.
- 18 cases of foodborne illness reported by Kirwa HC of Ngoma district, and CHUB. For those health facilities, the cases crossed the threshold, one outbreak occurred in Kirwa HC is described below, while regarding that occurred in CHUB, the collection of information is ongoing.
- 116 suspected cases of bloody diarrhea (Shigellosis) reported by 35 HCs. In the previous week, 2 samples from Nyarugenge DH were tested positive on *Shigella dysenteriae*, 6 samples from Biryogo HC tested positive: 2 on *shigella flexneri*, 2 on *shigella sonnei*, and 1 on *salmonella*, 1 sample from Byimana HC tested positive on *Shigella flexneri*.
- 45 suspected cases of Measles/Rubella reported by 24 HCs. In the week 41/2023, 2 samples from Kiziba Refugee Camp HC were tested positive on Rubella, they had been managed and cured.
- 29 cases of severe malaria reported by 11 health facilities including CHUB, Byumba DH, Kaduha DH, Kibilizi DH, Kigeme DH, Kirehe DH, Masaka DH, Mibilizi DH, Kigembe HC, Kirarambogo HC and Shingiro HC.
- 8 cases of acute flaccid paralysis reported by 8 health facilities: Byumba HC, Gatunda DH, Karambi (Nyamasheke) HC, Kibeho HC, Matyazo HC, Mugonero DH, Muhoza (Ruhengeri) HC and Rutongo DH.
- 1 confirmed case of cholera (*Vibrio cholerae*/Inaba) was reported by Kibogora DH.
- 2 suspected cases of bacterial meningitis were reported by CHUB

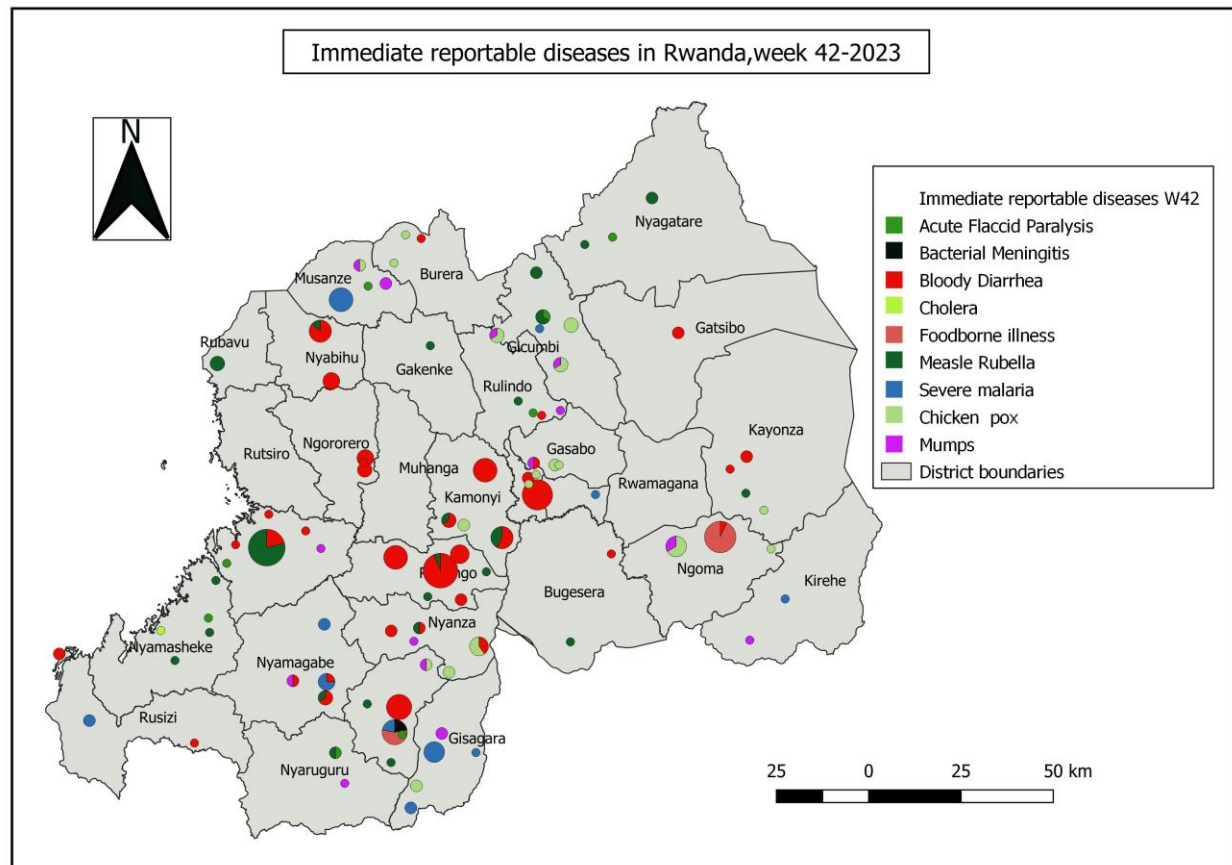
### Notes:

For the diseases whose cases crossed the thresholds, District Hospitals are recommended to investigate.

For diseases requiring laboratory confirmation, the samples were collected and sent to the National Reference Laboratory for confirmation.

All confirmed cases and suspected cases had been managed at health facility level.

### Geographical distribution of cases:



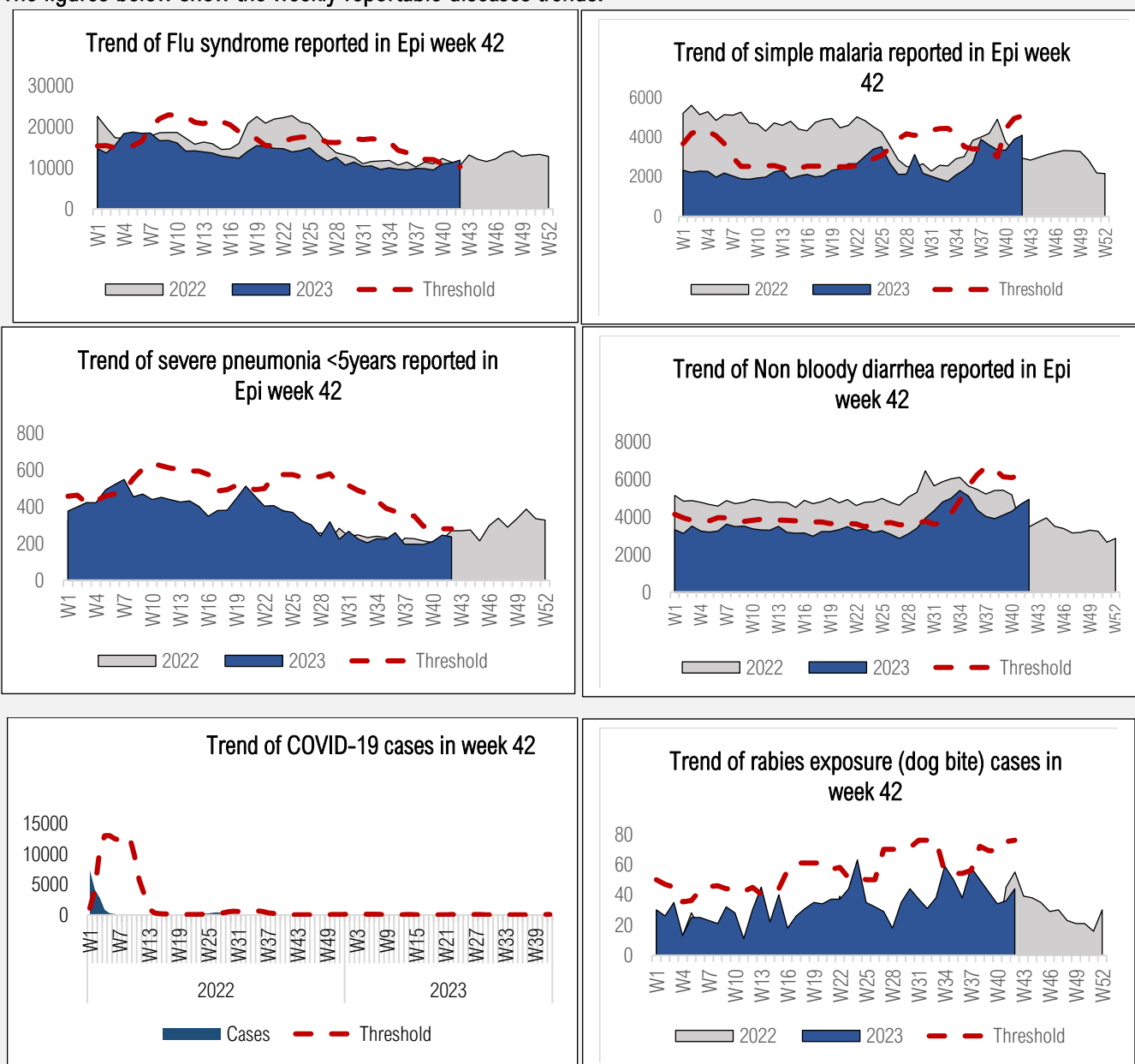
Distribution of immediate reportable diseases in Epi week 42

## B. WEEKLY REPORTABLE DISEASES – EPI WEEK 42

**Description:** In Rwanda, after the adaptation of the IDSR guidelines 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 42, 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 flu syndrome disease surpassed the epidemic threshold, especially in the following Hospital catchment areas: Gakoma, Muhima, Rutongo, Kabutare, Kibagabaga, Kibilizi, Kibogora, Murunda, Shyira DHs and Rwamagana PH. The DHs that surpassed the threshold are recommended to conduct an investigation.

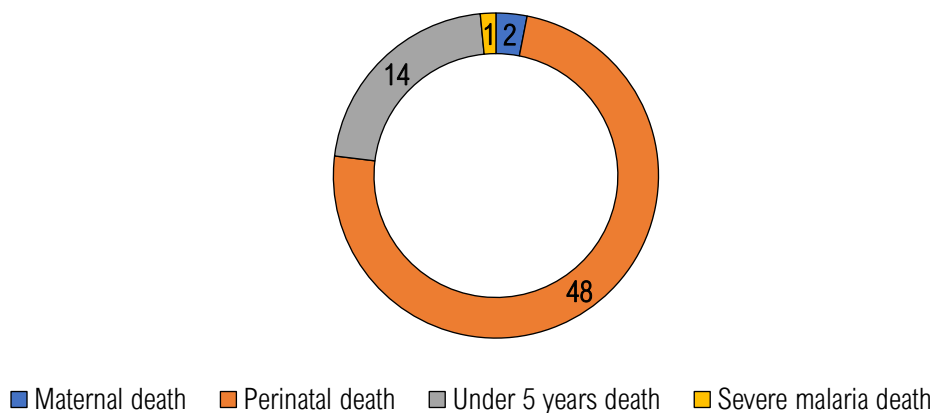
The figures below show the weekly reportable diseases trends:



### C. DISTRIBUTION OF REPORTED DEATHS IN eIDSR – EPIDEMIOLOGICAL WEEK 42

As summarized in the Pie Chart below, a total number of 65 deaths were reported through the electronic Integrated Disease Surveillance and Response (eIDSR) system. Among these deaths, 48 (74%) were perinatal, 14 (22%) were deaths of children under 5 years old (including 1 death was due to non-bloody diarrhea), 2 (3%) maternal deaths and 1(1%) death due to severe malaria.

### Type of deaths reported by health facilities in week 42-2023

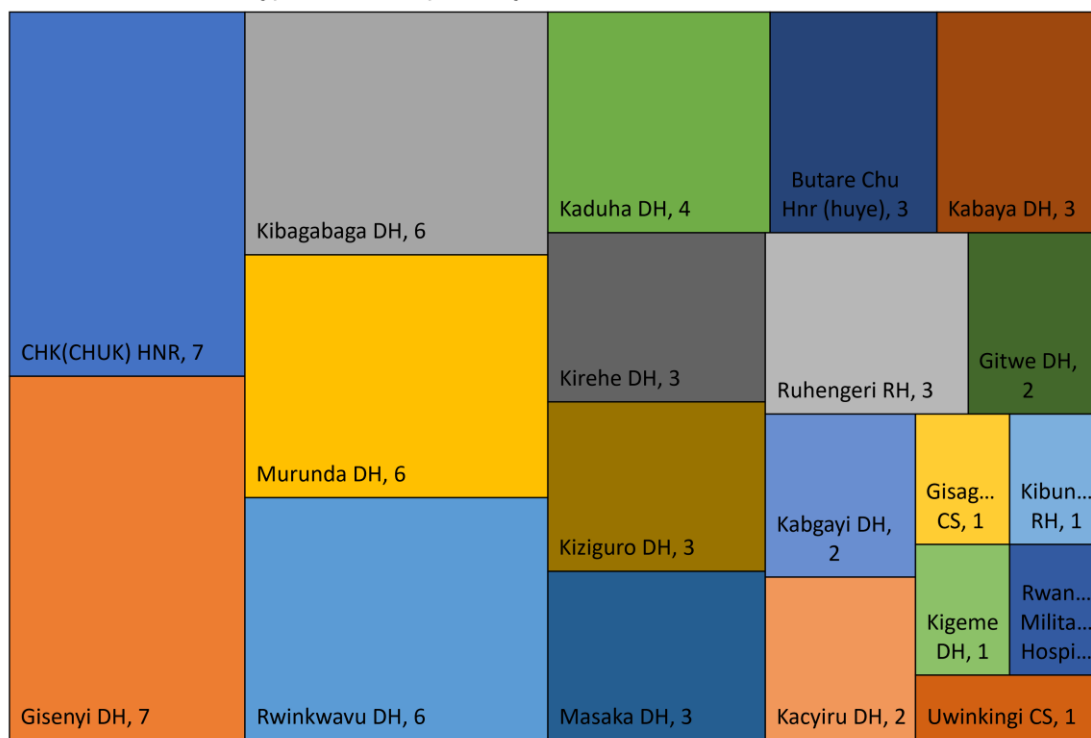


Cause of deaths declared in epi week 42

Deaths were reported from various catchment areas as follow:

- 7 deaths were reported respectively by CHUK and Gisenyi DH
- 6 deaths were reported respectively by Kibagabaga, Rwinkwavu and Murunda DHs
- 4 deaths were reported by Kaduha DH
- 3 deaths were reported respectively by CHUB, Ruhengeri RH, Kabaya, Kirehe, Kiziguro, Masaka DHs
- 2 deaths were reported by Gitwe, Kabgayi, Kacyiru DHs
- 1 was reported respectively by Kibungo RH, Rwanda Military Hospital, Gisagara HC and Uwinkingi HC

### Type of deaths reported by health facilities in week 42-2023





## OUTBREAK AND EVENT UPDATES IN EPIDEMIOLOGICAL WEEK 42

### 1. FOODBORNE ILLNESS OCCURRED IN NGOMA DISTRICT, RURENGE SECTOR, RUGESE CELL, KAJEVUBA VILLAGE

Confirmed cases	0	Date reported:	October 20, 2023	Risk assessment	Low
Suspected cases	13	Source:	eIDSR		
Death(s)	0	District	Kirwa HC/Kibungo RH		
Total cases	13	Geoscope:	Low		

#### Outbreak description:

On 20/10/2023, patients from Kajevuba village consulted Kirwa HC with abdominal pain, diarrhea and vomiting following the consumption of non-alcoholic sorghum brew (ubushera) brewed at their neighbor's home. A total of 13 cases were recorded, 3 of them, were referred to Kibungo RH for further management and the remaining 10 cases were managed at the health center. All patients have been treated and have recovered. No deaths occurred. Stool samples tested at HF revealed the presence of entamoeba histolytica and white blood cell

#### Interventions conducted:

- Stool samples collection and laboratory diagnostic
- Case management

### 2. BACILLARY DYSENTERY OUTBREAK IN KARONGI DISTRICT, RWANKUBA SECTOR, NYARUSANGA CELL- KIZIBA REFUGEE CAMP

Confirmed cases	04	Date reported:	September 3, 2023	Risk assessment	Low
Suspected cases	06	Source:	eIDSR		
Death(s)	0	District/HFs:	Kiziba camp/ Kibuye RH		
Total cases	10	Geoscope:	Low		

#### Outbreak description:

Since 03/09/2023, there has been a surge in suspected Shigella infections at Kiziba camp. On 10/10/2023, an outbreak was confirmed with 4 confirmed cases in the camp. Currently, 13 suspect cases have been identified so far; samples were taken, and results are pending, no death occurred.

#### Interventions conducted:

- Field investigation was conducted by Kibuye RH and PHSEPR Division Team
- Case management
- Community awareness on water, sanitation and hygiene, appropriate waste disposal and the use of treated water

#### Interventions conducted:

- Field investigation was conducted by Kibuye RH RRT team and PHS&EPR team



- Case management of suspect patients
- Samples collected and sent to NRL
- Community awareness on water, sanitation and hygiene, appropriate waste disposal and the use of treated water

## eIDSR REPORTS COMPLETENESS & TIMELINESS EPIDEMIOLOGICAL WEEK 42

*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 42, the overall completeness and timeliness of disease surveillance data reporting in Rwanda was 99% and 97%, respectively. With regards to completeness of surveillance reports, almost all hospitals had a high completeness (>80%) except Caraes Ndera. For the timeliness, the overall score was 97%. Almost all hospitals had a high timeliness (>80%), except Caraes Ndera that had a low score (<60%) and Gitwe DH that had a moderate timeliness score (between 60% and 79%).

**Notes:** The health facilities that did not have a high score for completeness and 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	W38	W39	W40	W41	W42						
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	93	100	100	93	100	100	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	100	100	100	100	100	100	100	100	100	100	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	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	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	100	100	100	89	100	100	89	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	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	100	94	100	100	100	100	100	100	100	100	100	100	94	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	100	100	100	95	100	95	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	100	100	94	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	100	100	100	100	100	100	100	100	100		
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	100	100	100	100	100	100	100	100	100	
Rutondo	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	100	100	100	100	100	100	100	100	100		
Gatonde	100	86	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	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	95	100	95	100	95	100	90	100	100	100	95	75	100	100	100	85	95	100	100	100	100	100	100	100	100	100	100	100	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	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	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	89	100	100	100	100	100	100	100	100	100	100	94	100	100	94	89	100	100	100	100	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	96	100	96	100	100	100	100	100	100	100	100	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	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	100	95	95	95	100	100	100	100	100	100	100	100	100	100	
Kabayi	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	100	100	100	100	100	100	100	100	100	100	100	100	100
Kibizi	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	91	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	100	83	83	67	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	83	100	100	
Gihwe	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	89	100	100	100	100	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	60	88	75	63	88	63	100	100	75	100	100	88	88	100	75	88	100	100	100	100	100	100	100	100	100	88	100	100	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	100	100	100	93	100	100	100	100	100	100	100	100	93	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	100	95	100	100	95	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	100	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	96	90	100	80	100	90	100	100	100	100	100	100	100	100	100	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	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	100	100	100	100	100	100	100	100	100	88	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																		

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	W33	W34	W35	W36	W37	W38	W39	W40	W41	W42		
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	93	100	93	100	93	93	100	100	100	93	100	86	
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	100	100	100	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	100	100	100	100	88	100	88	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	100	100	92	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	89	100	78	100	100	89	100	89	89	89	89	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	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	94	100	100	100	100	94	100	100	100	100	94	100	94	100	100	100	100	100	100	100	94	100	94	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	95	95	85	100	100	100	100	100	100	100	100	90	100	95	100	
Rwamagana	76	65	53	82	76	88	100	100	100	94	94	100	94	94	100	88	71	94	94	100	100	94	88	88	88	89	100	94	100	94	94	100	100	100	100	94	100	89	100	100	100	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	82	94	88	88	94	82	88	94	88	100	65	100		
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	89	78	100	89	100	100	100	100	100	100	100	100	100	100	100	89	100	
Rutongo	93	87	93	73	100	100	100	100	100	93	93	100	93	100	100	100	100	100	100	100	93	93	93	93	100	100	100	93	100	100	100	100	100	100	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	86	100	100	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	100	100	90	100	90	90	90	90	95	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	100	100	100	100	100	100	100	100	100	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	78	100	100	100	89	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	100	94	89	89	100	100	89	100	94	89	94	94	100	89	89	100	100	100	94	100	100	100	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	100	100	100	100	100	100	100	100	100	100	96	100	96	100	96	100	100	
CHUB	0	100	100	100	100	100	0	0	0	0	100	100	0	100	100	0	100	100	100	100	100	100	100	0	100	100	100	100	100	100	100	100	100	100	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	83	95	95	100	100	100	84	89	95	79	95	100	95	95	100	100	100	100	89	95	95	95	100	100	100	95	100	100
Kabgayi	100	92	92	85	92	77	92	85	85	100	92	92	92	69	92	92	69	100	100	100	100	92	100	92	92	100	92	100	92	100	92	100	100	100	100	100	100	100	100	100	85	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	100	91	100	100	100	100	100	100	100	100	100	91	100	100	100	100	100	91	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	83	100	100	83	100	100	100	100	100	83	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	89	89	100	100	100	100	100	100	100	100	67	
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	88	88	100	100	100	100	100	100	75	88	88	
Remera	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	100	100	100	100	100	100	
Rukoma	100	100	100	93	100	100	100	100	100	93	100	93	93	93	100	93	93	93	93	100	93	93	93	87	100	93	100	100	93	100	93	100	93	100	100	93	100	93	87	93	100	93		
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	95	95	89	100	89	95	89	100	100		
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	100	100	100	100	92	100	92	92	100		
Kaduha	100	90	90	100	100	100	100	100	90	100	100																																	