



WEEKLY EPIDEMIOLOGICAL BULLETIN

WEEK 40 – 2023

(02 -08 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.

Authors: Public Health Surveillance & Emergency Preparedness and Response Division

KEY EPIDEMIOLOGICAL HIGHLIGHTS

EPIDEMIOLOGICAL WEEK 40

Event Based Surveillance (EBS) Highlights:

- During the epidemiological week 40, eleven alerts were notified through the electronic Community Event Based Surveillance System (eCEBS): there were 5 alerts of human illness and 6 human deaths.
- Two alert were identified through the Epidemic Intelligence from Open Source (EIOS):
 - Zimbabwe announces 100 suspected cholera deaths and imposes restrictions
 - Mysterious illness outbreak at Irigi girls school in Kenya: Updates, Investigation, and Treatment

Indicator Based Surveillance (IBS) Highlights:

- 227 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, typhoid fever and chicken pox.
- For 8 weekly reportable diseases and health events, a thorough analysis conducted for Epi Week 40 revealed that no disease crossed the epidemic threshold.
- A total of 87 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 40

Outbreaks occurred:

Four outbreaks of foodborne illness occurred respectively in different districts:

- Burera district, Rwerere sector
- Gicumbi District, Ruvune Sector, Rebero Cell, in Bitoma Village
- Rwamagana District, Muyumbu Sector
- Ngoma District, Murama Sector

Completeness and timeliness

In Epi Week 40, the overall completeness and timeliness of surveillance data reporting in Rwanda was 99% and 98% respectively.

WEEKLY UPDATES ON EVENT BASED SURVEILLANCE (EBS) EPIDEMIOLOGICAL WEEK 40

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 40, eleven events were notified from community:

- 6 human deaths:
 - 3 deaths from Ngororero district
 - 1 death from Rusizi district
 - 1 death from Burera district
 - 1 death from Gatsibo district
- 5 alerts of human illnesses:
 - 5 alerts of foodborne illnesses from Gicumbi district: These events are related to the food poisoning outbreak from Gicumbi district

MEDIA SCAN

- **Zimbabwe announces 100 suspected cholera deaths and imposes restrictions**

The government of Zimbabwe is imposing restrictions to stop the spread of cholera, the Associated Press reports. In recent days, 100 suspected cholera deaths have been registered and more than 5,000 possible such cases since the end of last month. The measures include limiting the number of people attending funerals and suspending some public gatherings in the affected areas.

The Ministry of Health announced the number of deaths on Wednesday and reported 30 of them as confirmed cholera through laboratory tests. According to the statement, there are 905 confirmed cases and another 4,609 suspected cases. Cholera is a waterborne disease. It can spread rapidly in areas with poor sanitation and is caused by ingestion of contaminated water or food. Zimbabwe is struggling to access clean water.

Large funeral gatherings, common in the southern African country with crowds mourning the dead, were banned in some of the worst-hit areas of Manicaland and Masvingo provinces. No more than 50 people are allowed to attend a funeral, no food is allowed to be served, and attendees must avoid shaking hands. These are part of the government's measures. Citizens are also advised to stop attending open-air markets, some mass gatherings, as well as outdoor church services, where there is usually no sanitary infrastructure. Restrictions have been imposed more than once in Zimbabwe during repeated cholera epidemics.

In Zimbabwe, poor or non-existent sanitation infrastructure and a shortage of clean water led to regular outbreaks. People in some areas go months without tap water, forcing them to rely on unsafe shallow wells, boreholes or rivers. Raw sewage flowing from burst pipes and piles of uncollected trash add to the risk. More than 4,000 people died in Zimbabwe's worst cholera outbreak in 2008. <https://news.bg/disasters/zimbabwe-nalaga-merki-sled-100-smartni-sluchaya-na-holera.html>

○ Mysterious illness outbreak at Irigi girls' school in Kenya: Updates, Investigation, and Treatment

Kenyan health authorities are investigating a mysterious illness that has infected more than 90 female students, sending them to hospital. The students, who attend Irigi Girls Secondary School in the western region of Kenya, reported difficulty walking and symptoms of knee pain. A senior official from the Ministry of Education, who visited the school, assured parents that the situation was being brought under control and that regular classes would continue for other students.

"The Ministry of Education, the provincial government and the Department of Public Health are committed to ensuring that children receive appropriate treatment," said Jared Obero, Provincial Education Director. Samples of blood, urine and stool from the affected students were sent to laboratories in the nearby city of Kisumu and the capital, Nairobi. Conclusive results to determine the cause of the disease are expected on the same day. <https://www.archyde.com/mysterious-illness-outbreak-at-irigi-girls-school-in-kenya-updates-investigation-and-treatment/>

WEEKLY UPDATES ON INDICATOR BASED SURVEILLANCE (IBS), EPIDEMIOLOGICAL WEEK 40

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 40

During Epi week 40; 227 cases of immediate reportable diseases were notified.

- 4 cases of chicken pox were reported by 3 HFs. None crossed the threshold.
- 6 cases of mumps were reported by 5 HCs. None crossed the threshold.
- 114 cases of foodborne illness reported by 7 HCs, including Ruvune HC, Muyumbu HC, Kirambo HC, Muko HC, Murehe HC, Rukira HC and Gisiza HC. All these health facilities crossed the threshold, and those cases are described in the outbreak's update section.
- 45 suspected cases of bloody diarrhea reported by 22 HCs. All HCs crossed the alert threshold.
- 31 suspected cases of Measles/Rubella reported by 23 HCs, none crossed the threshold.
- 15 confirmed cases of severe malaria reported by 11 health facilities, and they crossed the alert threshold in Bugarama HC, CHUK, Cyanika (Burera) HC, Gisagara HC, Kibilizi DH, Kigembe HC, Kigeme DH, Mibilizi DH, Rutongo DH, St Francois Rusizi HC and Uwinkingi HC.

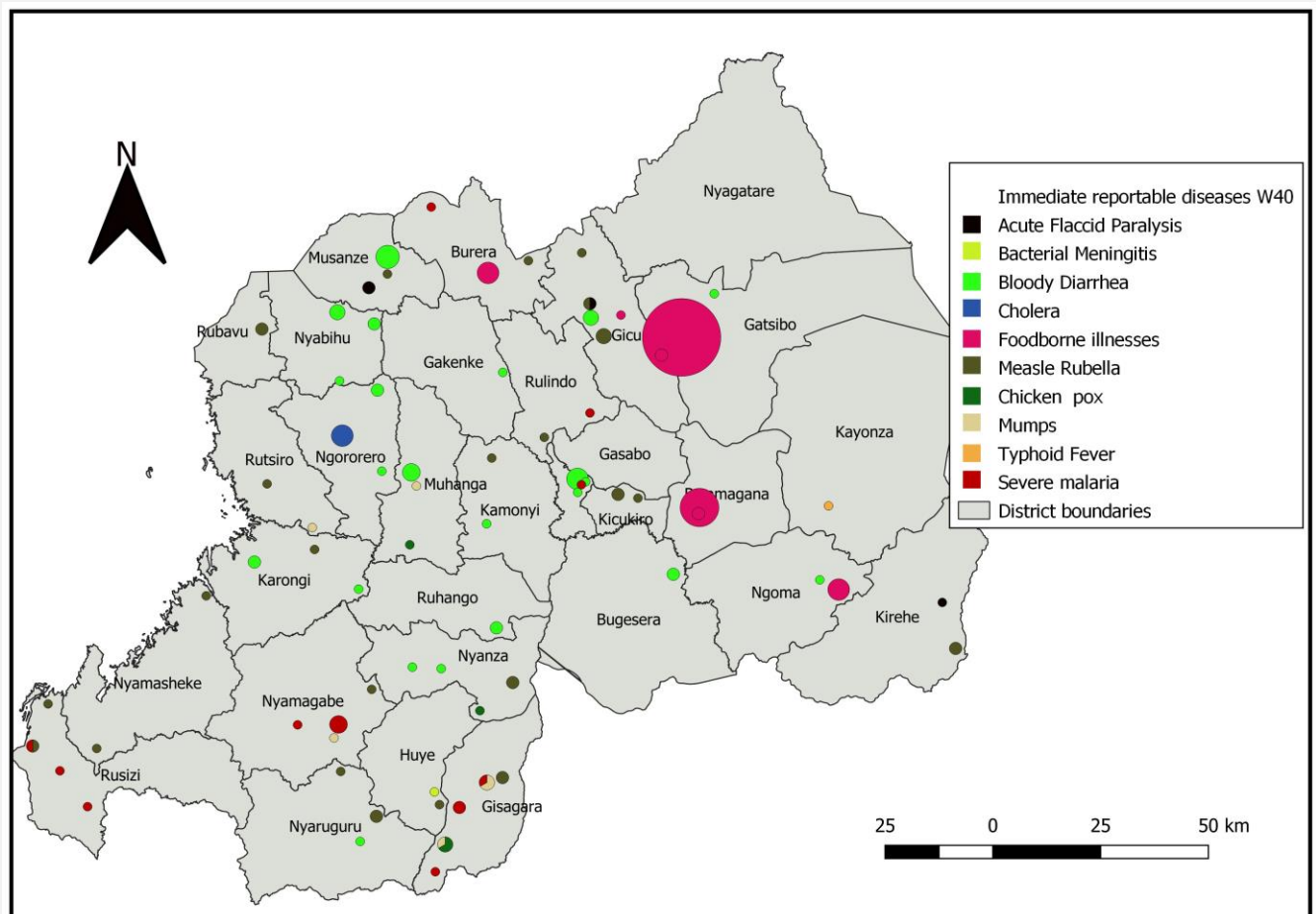
- 4 suspected cases of acute flaccid paralysis reported by 4 health facilities that crossed alert threshold: Gisiza HC, Kabuye HC, Kibeho HC, Kirinda HC and Muhororo HC.
- 6 suspected case of cholera was reported by Ramba HC
- 1 suspected bacterial meningitis was reported by CHUB
- 1 suspected typhoid fever was reported by Kabarondo HC.

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 testing.

All confirmed cases and suspected cases had been managed at health facility level.
(See the distribution of cases by place in the map below).

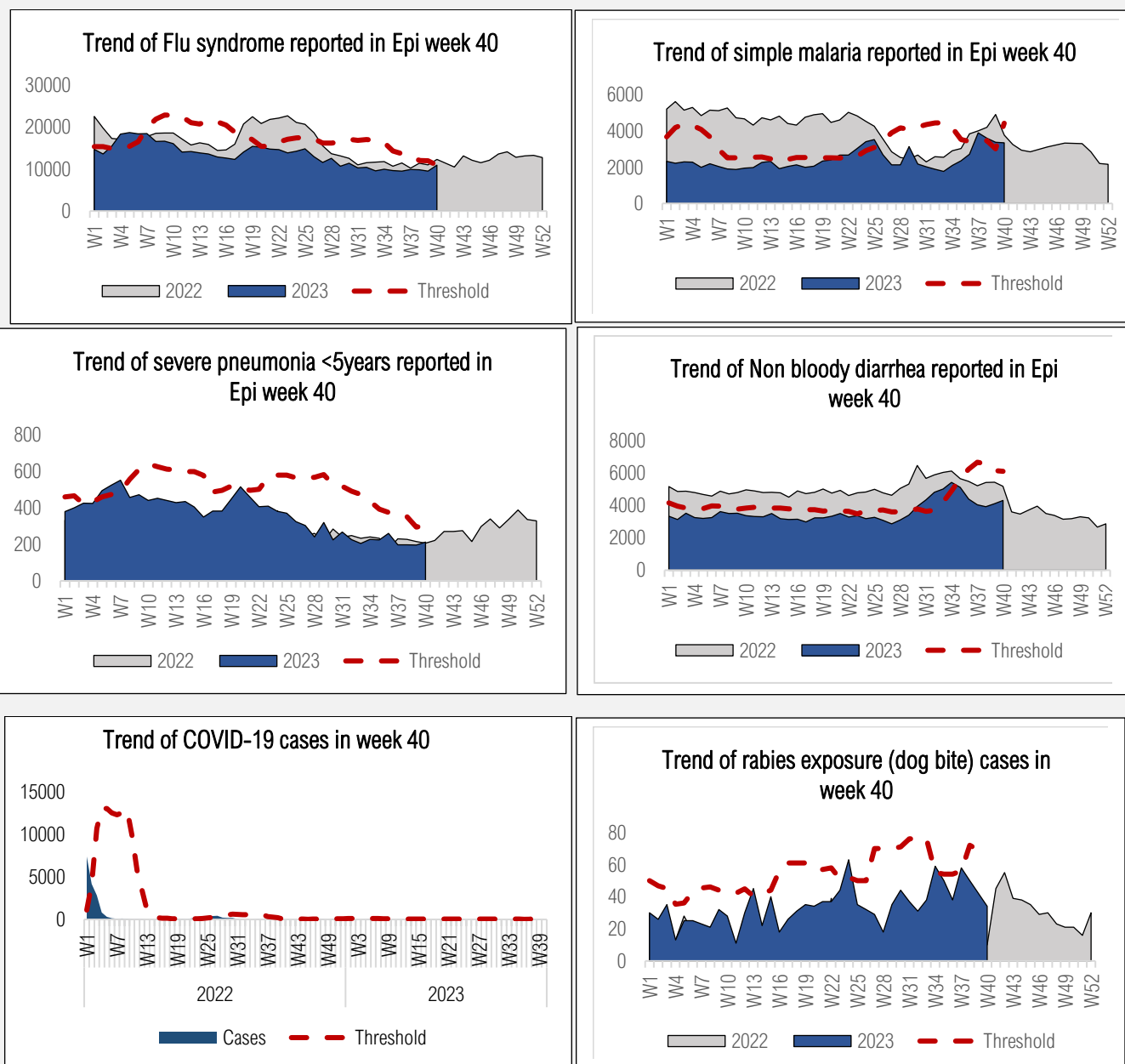


Distribution of immediate reportable diseases in Epi week 40

B. WEEKLY REPORTABLE DISEASES – EPI WEEK 40

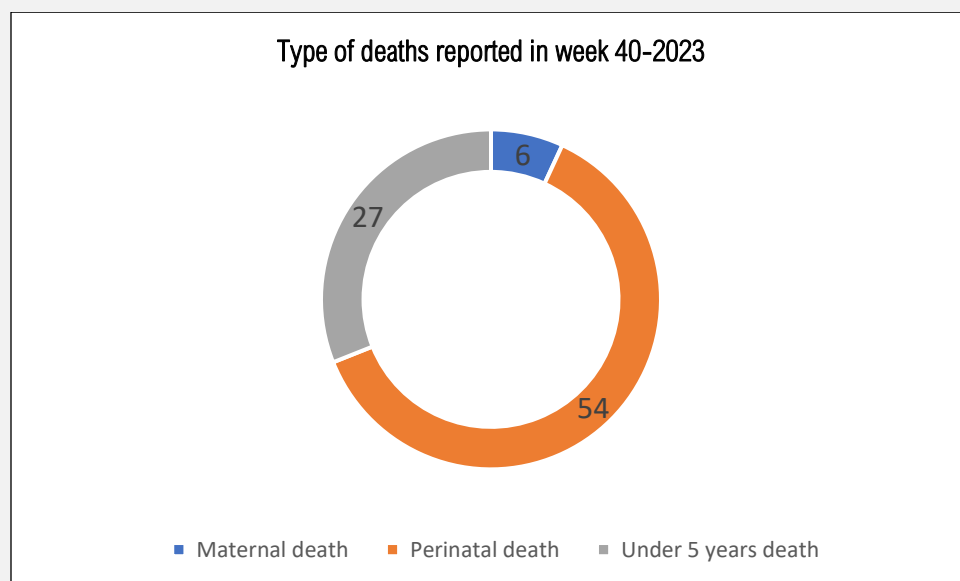
Description: In Rwanda, after the adaptation of the IDSR 3rd edition, eight diseases & events are being reported and analyzed on a weekly basis. These include flu syndrome, simple malaria, severe pneumonia for under 5 years, non-bloody diarrhea for under 5 years, COVID-19, dog bites, brucellosis, and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

In Epi Week 40, 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 disease crossed the epidemic threshold.



C. DISTRIBUTION OF REPORTED DEATHS IN eIDSR – EPIDEMIOLOGICAL WEEK 40

In Epi week 40, as summarized in the Pie Chart below, a total number of 87 deaths were reported through the electronic Integrated Disease Surveillance and Response (eIDSR) system. Among these deaths, 54 (62%) were classified as perinatal, 27 (31%) were deaths of children under 5 years old, 5 (7%) maternal deaths.

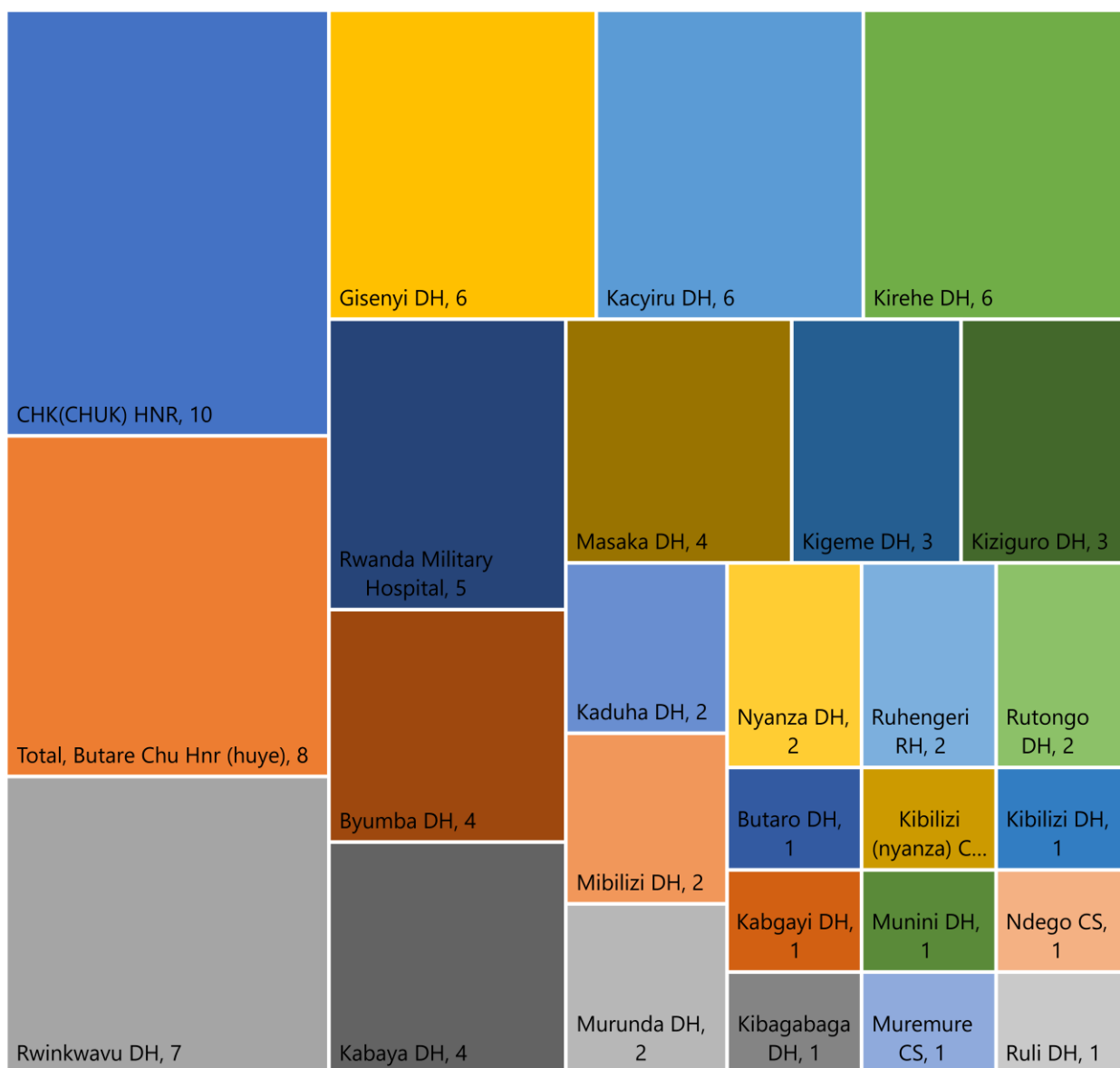


Cause of deaths declared in epi week 40

Deaths were reported from various catchment areas as follow:

- 10 deaths were reported by CHUK
- 8 deaths were reported by CHUB
- 7 deaths were reported by Rwinkwavu DH
- 6 deaths were reported respectively by Gisenyi DH, Kacyiru DH and Kirehe DH
- 5 deaths were reported by Rwanda Military Hospital
- 4 deaths were reported respectively by Byumba DH, Kabaya DH and Masaka DH
- 3 deaths were reported respectively by Kigeme DH and Kiziguro DH
- 2 deaths were reported respectively by Kaduha DH, Mibilizi DH, Murunda DH, Nyanza DH, Rutongo DH and Ruhengeri RH
- 1 death was reported respectively by Butaro DH, Kabgayi DH, Kibagabaga DH, Kibilizi DH, Ruli DH, Munini DH, Kibilizi (Nyanza) HC, Muremure HC and Ndego HC

Deaths reported by health facilities in week 40_2023



OUTBREAK AND EVENT UPDATES EPIDEMIOLOGICAL WEEK 40

1. FOODBORNE ILLNESS OCCURRED IN BURERA DISTRICT, RWERERE SECTOR

Confirmed cases	0	Date reported:	October 2, 2023	Risk assessment	Low
Suspected cases	6	Source:	eIDSR		
Death(s)	0	District/HFs:	Krambo HC/ Butaro DH		
Total cases	6	Geoscope:	Low		

Outbreak description:

On 02/10/2023, patients consulted Krambo HC presenting abdominal pain, diarrhea, headache, and vomiting, after drinking sorghum brew (ubushera) at an event. A total of 6 cases have been recorded. No critical case has been reported. All cases treated and discharged. The possible cause is the consumption of sorghum brew.

Interventions conducted:

- Case management of admitted patients at Krambo HC.
- Food samples collected by RIB
- Active case search in the community and community education, by the RRT of Butaro DH

2. FOODBORNE ILLNESS OCCURRED IN GICUMBI DISTRICT, RUVUNE SECTOR, REBERO CELL, BITOMA VILLAGE

Confirmed cases	0	Date reported:	October 7, 2023	Risk assessment	Low
Suspected cases	80	Source:	eIDSR		
Death(s)	0	District/HFs:	Ruvune HC/ Byumba DH		
Total cases	80	Geoscope:	Low		

Outbreak description:

On 07/10/2023; 56 patients consulted Ruvune HC presenting fever, abdominal pain, diarrhea, and vomiting. The following day, more people consulted Ruvune, Muko and Gisiza Health centers complaining of similar symptoms. They reported to have consumed a non-alcoholic sorghum brew (ubushera), banana wine (umutobe) and local food during a community work. Umutobe was boiled before consumption, while ubushera was diluted with raw water from the swamp because no clean water was available in the household. Those who haven't taken ubushera have no symptoms. A total of 80 cases have been recorded. Among them, 50 patients have been referred to Byumba DH. No critical or death case have been recorded. The possible cause is the consumption of the non-alcoholic Sorghum brew.

Interventions conducted:

- Case management of the patients by the health facilities
- Outbreak investigation by Byumba DH RRT
- Stool samples were collected by Byumba DH and sent to NRL; food samples were collected by Rwanda Forensic Laboratory

3. FOODBORNE ILLNESS OCCURRED IN MUYUMBU SECTOR, RWAMAGANA DISTRICT

Confirmed cases	0	Date reported:	October 08, 2023	Risk assessment	Low
Suspected cases	21	Source:	eIDSR		
Death(s)	0	District/HFs:	Muyumbu HC/ Rwamagana PH		
Total cases	21	Geoscope:	Low		

Outbreak description:

On 08/10/2023, 4 patients started consulting Muyumbu HC presenting similar symptoms of abdominal pain, diarrhea, and vomiting following the consumption of meat and kawunga in their household in Ntebe Cell, Kanyinya Village. Currently, 3 patients are stable and were discharged and 1 is under observation at the health center. The possible cause is the consumption of contaminated food.

On the same day, 08/10/2023; 17 patients consulted at Muyumbu HC and Murehe HP with symptoms of diarrhea, vomiting, and abdominal pain following consumption of non-alcoholic sorghum brew (ubushera) in a ceremony held at their neighbor's home in Nyarukombe cell, Kinunga village. All patients were treated and discharged. The possible cause is the consumption of non-alcoholic sorghum brew (ubushera).

Interventions conducted:

- Case management of patients admitted at Muyumbu HC.
- A multidisciplinary team comprising health center staff and local leaders conducted investigations at the two households.
- Sample of the beverage and food consumed were collected for further analysis
- Stool samples were taken and sent to the National Reference Laboratory

4. FOODBORNE ILLNESS IN NGOMA DISTRICT, MURAMA SECTOR

Confirmed cases	0	Date reported:	October 01, 2023	Risk assessment	Low
Suspected cases	6	Source:	eIDSR		
Death(s)	0	District/HFs:	Rukira HC/ Kibungo RH		
Total cases	6	Geoscope:	Low		

Description




On 01/10/2023; 6 people from the same household consulted at Rukira HC presenting similar symptoms of abdominal pain and diarrhea. These symptoms were reported to have occurred shortly after the family consumed milk at their home. Due to the severity of their conditions, Rukira HC transferred all six patients to Kibungo Referral Hospital (RH) for further medical care. Currently, all six patients have been discharged from the hospital.

Interventions conducted:

Case management of admitted patients by Kibungo RH and Rukira HC.

eIDSR REPORTS COMPLETENESS & TIMELINESS EPIDEMIOLOGICAL WEEK 40

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 39, the overall completeness and timeliness of disease surveillance data reporting in Rwanda was 99% and 98%, respectively. With regards to completeness of surveillance reports, all hospitals had the high completeness (>80%). For the timeliness, the overall score was 98%, almost all hospitals had the high timeliness (>80%), except Ruhango provincial hospital that had a moderate timeliness score (between 60% and 79%).

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	W38	W39	W40			
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	93	100	100	93	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	
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	100	100	100	100		
Kiziguro	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	100	92	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	89	100	100	100	89	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	
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	
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	95	100	100		
Rwamagana	76	71	88	100	100	94	100	100	94	100	88	94	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	94	100	100	100		
Nyamata	100	94	100	94	100	100	100	100	100	100	100	100	100	100	100	88	88	100	94	100	94	100	100	88	88	88	94	100	100	88	100	88	94	100	88	94	100	100	100	100	100		
Kinihira	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	
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	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	100	100	100	100	100	
Butaro	80	85	95	95	75	90	95	95	95	100	95	100	95	100	95	100	95	100	90	100	100	100	100	95	75	100	100	100	100	85	95	100	100	100	100	100	100	100	100	100	100	100	
Ruli	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	
Nemba	100	100	100	100	100	89	100	100	100	89	100	100	89	100	100	100	100	89	100	100	100	89	100	100	89	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	100	89	100	100	100	100	100	100	100	100	100	94	100	94	89	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	100	96	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	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	
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	
Kibagayi	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	
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		
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	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	89	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	80	88	75	63	88	63	100	100	100	75	100	100	88	88	100	75	88	100	100	100	100	100	100	100	88	100	
Remera	100	100	100	93	100	100	100	100	100	100	100	100	93	100	100	100	100	93	100	93	93	100	100	100	100	100	100	100	100	100	93	100	100	100	100	100	100	100	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	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	95	89	100	84	100	95	100	100	89	100	100	100	84	100	100	95	95	100	95	100	100	100	100	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	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	100	100	100	100	
Munini	100	94	100	100	100	94	100	100	100	100	100	100	100	100	100	94	88	94	100	94	100	94	100	9																			

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			
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	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	100	100	100	100	100	89	100	89	100	
Ngarama	88	100	100	100	100	100	100	88	100	100	100	100	100	100	100	100	100	75	100	100	100	100	100	100	100	88	100	100	100	100	88	100	100	100	100	100	88	100	88	100	88	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	
Gahini	100	100	100	100	100	89	89	89	78	100	100	78	100	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	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	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	100	94	94	100	100	100	100	94	100	100	100	100	94	100	94	100	100	100	100	100	100	94	100	94	100	
Kirehe	100	100	100	100	95	95	100	100	100	90	95	100	100	90	100	100	85	95	95	100	100	100	100	95	100	85	100	100	95	95	85	100	100	100	100	100	100	100	100	90	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	88	89	100	94	100	94	94	100	100	100	94	100	89	100	100	100	100	
Nyamata	100	88	76	94	88	94	94	100	88	100	89	67	100	89	78	89	100	89	89	89	89	89	100	67	100	89	100	100	88	78	100	89	100	100	100	100	100	100	100	100	100	100	100
Kinihira	100	100	100	100	100	100	100	89	67	100	89	78	89	100	89	89	89	89	89	89	89	100	100	100	100	67	100	89	100	100	88	78	100	89	100	100	100	100	100	100	100	100	100
Rutongo	93	87	93	73	100	100	100	100	100	93	93	100	93	100	100	100	100	100	100	100	100	93	100	93	93	93	100	100	100	93	100	100	100	100	100	100	100	93	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	100	71	100	100	100	100	100	100	100	100	86	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	90	90	
Ruli	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	90	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nemba	100	100	89	100	100	100	89	100	100	100	89	78	100	100	78	100	100	67	89	89	100	100	89	100	89	89	89	100	100	100	100	100	100	100	78	100	100	100	89	100	100	100	
Ruhengeri	94	89	89	100	83	89	83	72	94	94	94	78	94	83	89	89	89	100	100	94	89	89	100	100	100	89	100	94	89	94	94	100	89	89	100	100	100	100	94	100	100	100	
Byumba	96	100	96	96	88	96	100	100	100	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	100	100	100	100	100	100	100	100	96	100	96	100	96	100	100	
CHUB	0	100	100	100	100	100	100	100	0	0	0	0	100	100	0	100	100	0	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
Kabutare	84	89	89	95	84	89	89	89	84	95	74	100	100	79	100	100	53	95	95	100	100	100	100	84	89	95	79	95	100	95	95	100	100	100	100	89	95	95	95	95	100	100	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	92	100	92	100	92	100	100	100	100	100	100	100	100	100	85	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	100	100	100	100	100	100	100	100	100	91	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	83	100	100	83	100	100	100	100	100	100	100
Gitwe	100	100	89	89	89	78	100	78	100	100	89	89	100	60	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	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	88	88	100	100	100	100	100	100	100	75	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	93	100	93	100	100	93	100	93	87	93	
Rukoma	100	100	100	93	100	100	100	100	100	100	93	100	93	93	93	100	93	93	93	100	100	93	93	87	100	93	100	100	93	100	93	100	93	100	100	100	93	100	93	87	93	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	89		
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	92	100	92	92	92	92	
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	100	100	100	100	100	100	90	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</																		