WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

Childhood Cancer

Cancer occurs in people of all ages and can affect any part of the body. It begins with genetic change in single cells, that then grow into a mass (or tumour), that invades other parts of the body and causes harm and death if left untreated. Unlike cancer in adults, the vast majority of childhood cancers do not have a known cause. Many studies have sought to identify the causes of childhood cancer, but very few cancers in children are caused by environmental or lifestyle factors. Cancer prevention efforts in children should focus on behaviours that will prevent the child from developing preventable cancer as an adult.

Some chronic infections, such as HIV, Epstein-Barr virus and malaria, are risk factors for childhood cancer. They are particularly relevant in LMICs. Other infections can increase a child's risk of developing cancer as an adult, so it is important to be vaccinated (against hepatitis B to help prevent liver cancer and against human papillomavirus to help prevent cervical cancer) and to other pursue other methods such as early detection and treatment of chronic infections that can lead to cancer.Current data suggest that approximately 10% of all children with cancer have a predisposition because of genetic factors.Further research is needed to identify factors impacting cancer development in children.

Improving outcomes of childhood cancer

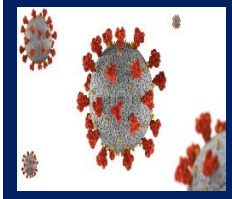
Because it is generally not possible to prevent cancer in children, the most effective strategy to reduce the burden of cancer in children and improve outcomes is to focus on a prompt, correct diagnosis followed by effective, evidence-based therapy with tailored supportive care.

Early diagnosis

When identified early, cancer is more likely to respond to effective treatment and result in a greater probability of survival, less suffering, and often less expensive and less intensive treatment. Significant improvements can be made in the lives of children with cancer by detecting cancer early and avoiding delays in care. A correct diagnosis is essential to treat children with cancer because each cancer requires a specific treatment regimen that may include surgery, radiotherapy, and chemotherapy.

https://www.who.int/news-room/fact-sheets/detail/cancer-in-children

EPI WEEK 33



Sentinel Surveillance in Jamaica

A syndromic surveillance system is good for early detection of and response to public health events.

Sentinel surveillance occurs when selected health facilities (sentinel sites) form a network that reports on certain health conditions on a regular basis, for example, weekly. Reporting is mandatory whether or not there are cases to report.

Jamaica's sentinel surveillance system concentrates on visits to sentinel sites for health events and syndromes of national importance which are reported weekly (see pages 2 -4). There are seventy-eight (78) reporting sentinel sites (hospitals and health centres) across Jamaica.

Table showcasing the Timeliness of Weekly Sentinel Surveillance Parish Reports for the Four Most Recent Epidemiological Weeks – 30 to 33 of 2023

Parish health departments submit reports weekly by 3 p.m. on Tuesdays. Reports submitted after 3 p.m. are considered late.

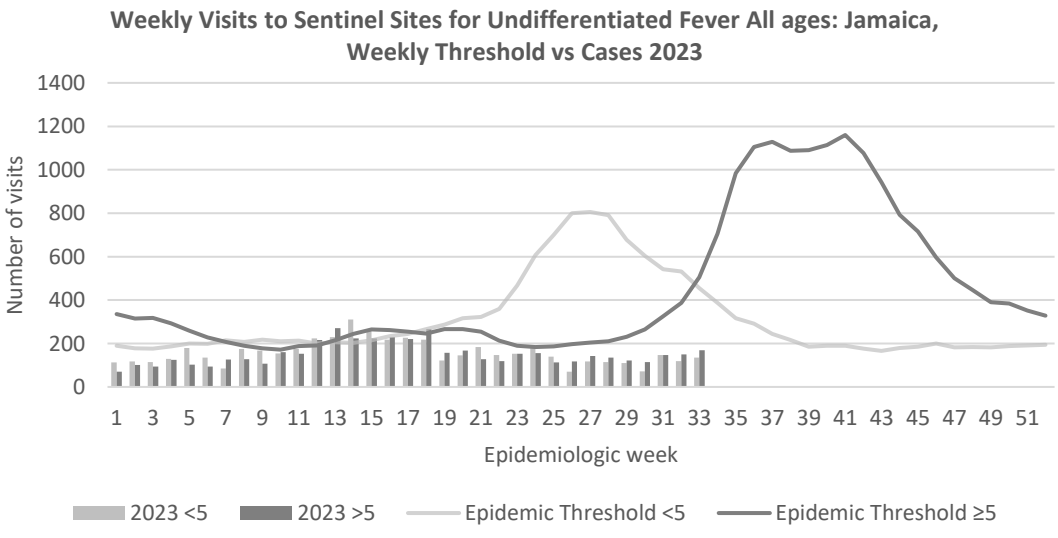
KEY:
Yellow- late submission on Tuesday
Red – late submission after Tuesday

Epi week	Kingston and Saint Andrew	Saint Thomas	Saint Catherine	Portland	Saint Mary	Saint Ann	Trelawny	Saint James	Hanover	Westmoreland	Saint Elizabeth	Manchester	Clarendon
2023													
30	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
31	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
32	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
33	On Time	On Time	Late (W)	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time

REPORTS FOR SYNDROMIC SURVEILLANCE

UNDIFFERENTIATED FEVER

Temperature of >38^0C /100.4^0F (or recent history of fever) with or without an obvious diagnosis or focus of infection.



NOTIFICATIONS- All clinical sites

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

SENTINEL REPORT- 78 sites. Automatic reporting

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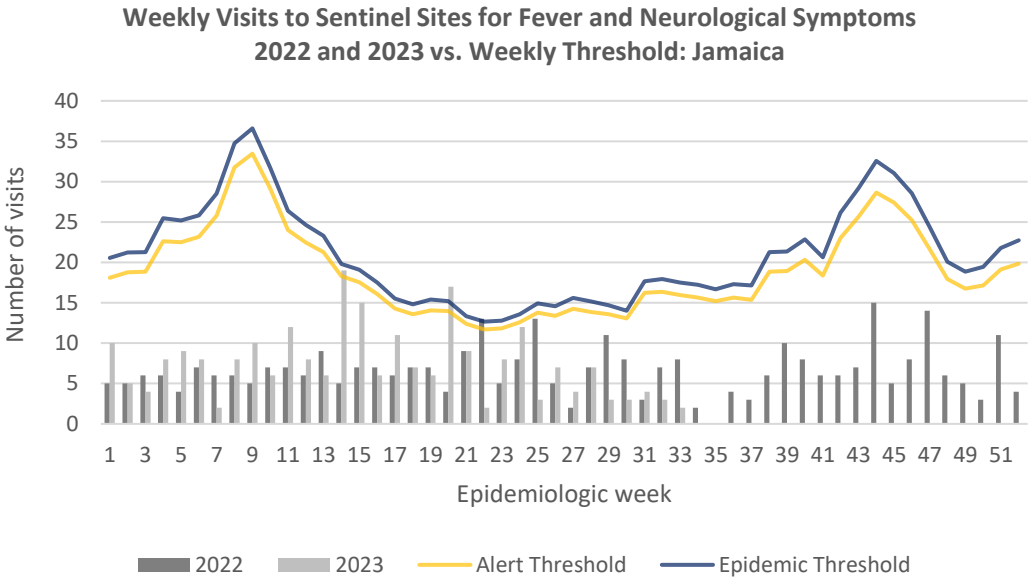
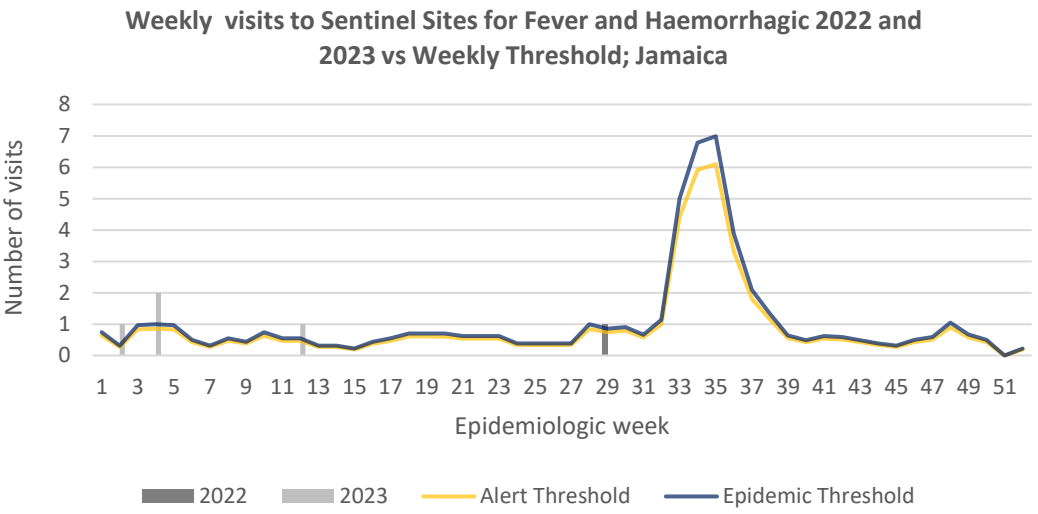
FEVER AND NEUROLOGICAL

Temperature of >38^{0}C /100.4^{0}F (or recent history of fever) in a previously healthy person with or without headache and vomiting. The person must also have meningeal irritation, convulsions, altered consciousness, altered sensory manifestations or paralysis (except AFP).



FEVER AND HAEMORRHAGIC

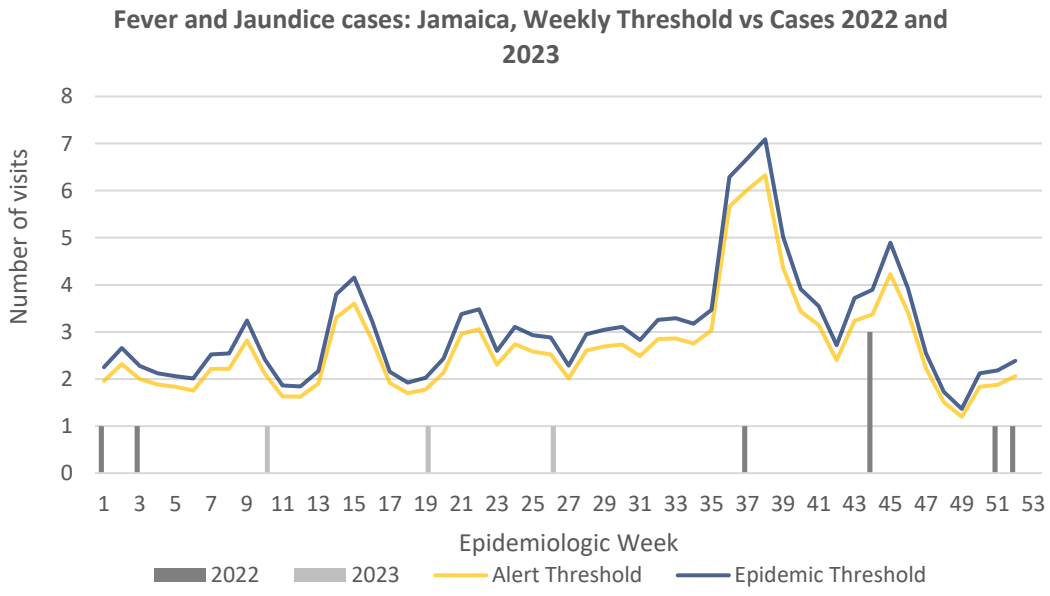
Temperature of >38^0C /100.4^0F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



FEVER AND JAUNDICE

Temperature of >38^0C /100.4^0F (or recent history of fever) in a previously healthy person presenting with jaundice.

The epidemic threshold is used to confirm the emergence of an epidemic in order to implement control measures. It is calculated using the mean reported cases per week plus 2 standard deviations.



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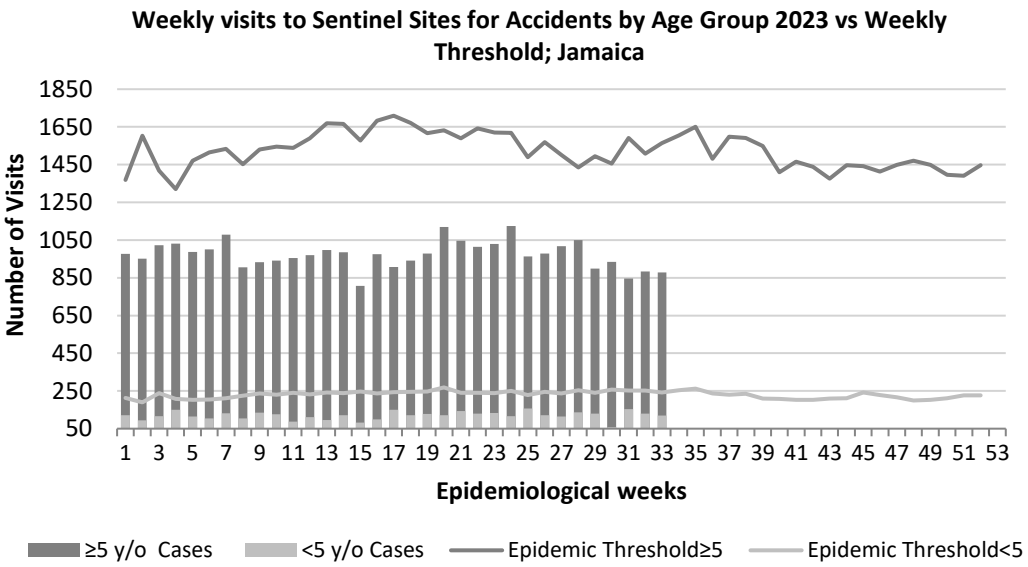
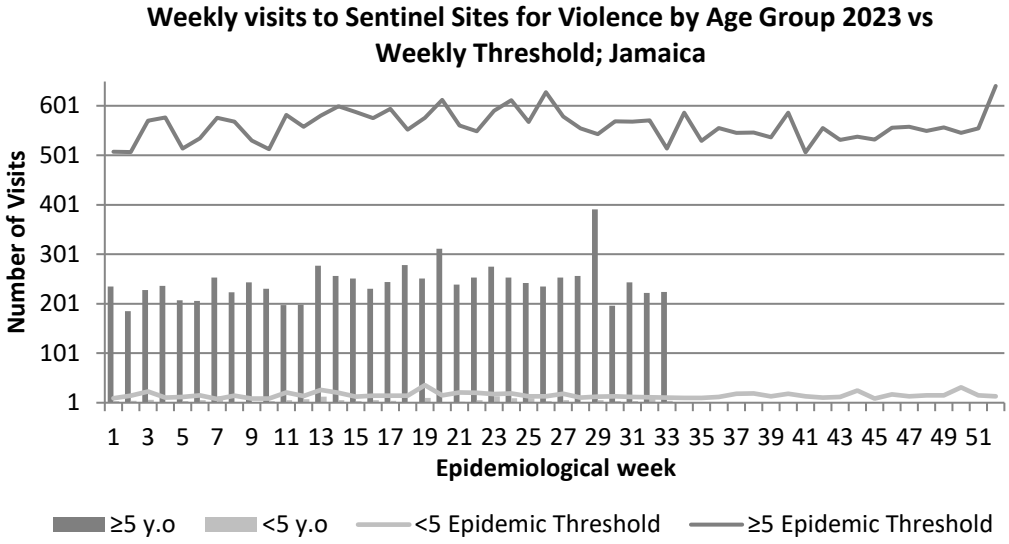
ACCIDENTS

Any injury for which the cause is unintentional, e.g. motor vehicle, falls, burns, etc.



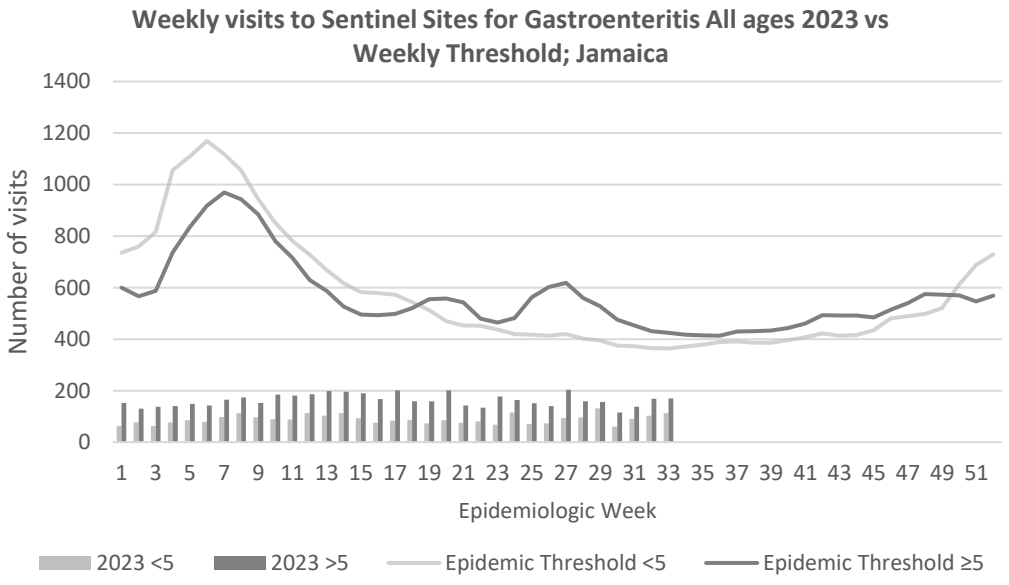
VIOLENCE

Any injury for which the cause is intentional, e.g. gunshot wounds, stab wounds, etc.



GASTROENTERITIS

Inflammation of the stomach and intestines, typically resulting from bacterial toxins or viral infection and causing vomiting and diarrhoea.



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CLASS ONE NOTIFIABLE EVENTS

	CLASS 1 EVENTS		Confirmed YTD[α] CURRENT YEAR 2023	PREVIOUS YEAR 2022
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		213[β]	144[β]
	Cholera		0	0
	Dengue Hemorrhagic Fever[γ]		See Dengue page below	See Dengue page below
	COVID-19 (SARS-CoV-2)		3346	51952
	Hansen's Disease (Leprosy)		0	0
	Hepatitis B		40	8
	Hepatitis C		20	2
	HIV/AIDS		N/A	N/A
	Malaria (Imported)		3	2
	Meningitis (Clinically confirmed)		21	14
	Monkeypox		3	4
EXOTIC/ UNUSUAL	Plague		0	0
H IGH MORBIDITY/ MORTALITY	Meningococcal Meningitis		0	0
	Neonatal Tetanus		0	0
	Typhoid Fever		0	0
	Meningitis H/Flu		0	0
SPECIAL PROGRAMMES	AFP/Polio		0	0
	Congenital Rubella Syndrome		0	0
	Congenital Syphilis		0	0
	Fever and Rash	Measles	0	0
		Rubella	0	0
	Maternal Deaths[δ]		35	47
	Ophthalmia Neonatorum		82	48
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		0	2
	Tuberculosis		25	19
	Yellow Fever		0	0
	Chikungunya[ε]		0	0
	Zika Virus[θ]		0	0

Comments

AFP Field Guides from WHO indicate that for an effective surveillance system, detection rates for AFP should be 1/100,000 population under 15 years old (6 to 7) cases annually.

Pertussis-like syndrome and Tetanus are clinically confirmed classifications.

[γ] Dengue Hemorrhagic Fever data include Dengue related deaths;

[δ] Figures include all deaths associated with pregnancy reported for the period.

[ε] CHIKV IgM positive cases

[θ] Zika PCR positive cases

[β] Updates made to prior weeks in 2020.

[α] Figures are cumulative totals for all epidemiological weeks year to date.

NA- Not Available

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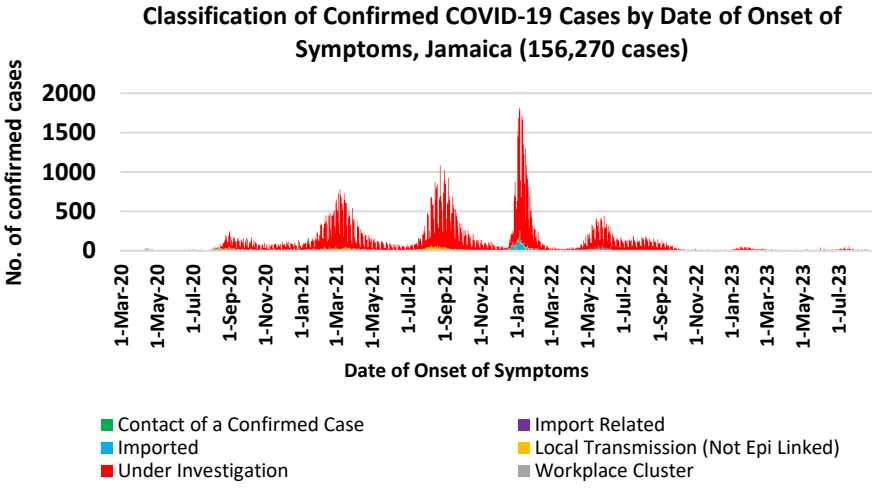
COVID-19 Surveillance Update

March 10, 2020 – EW 33, 2023

CASES	EW 33	Total
Confirmed	72	156270
Females	46	90087
Males	26	66180
Age Range	32 days old to 94 years	1 day to 108 years

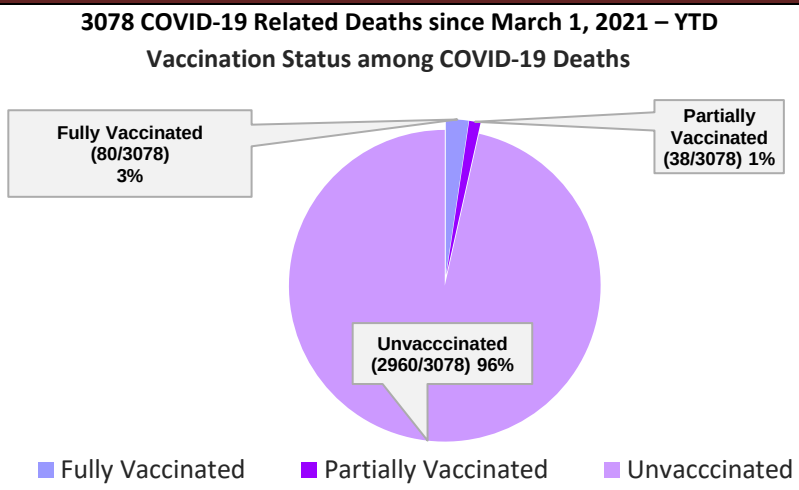
* 3 positive cases had no gender specification
* PCR or Antigen tests are used to confirm cases



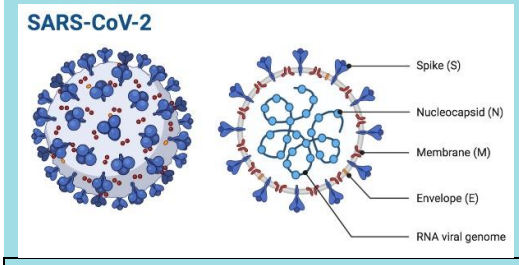
COVID-19 Outcomes

Outcomes	EW 33	Total
ACTIVE *2 weeks*		131
DIED – COVID Related	1	3640
Died - NON COVID	0	320
Died - Under Investigation	0	287
Recovered and discharged	11	103173
Repatriated	0	93
Total		156270

*Vaccination programme March 2021 – YTD
* Total as at current Epi week

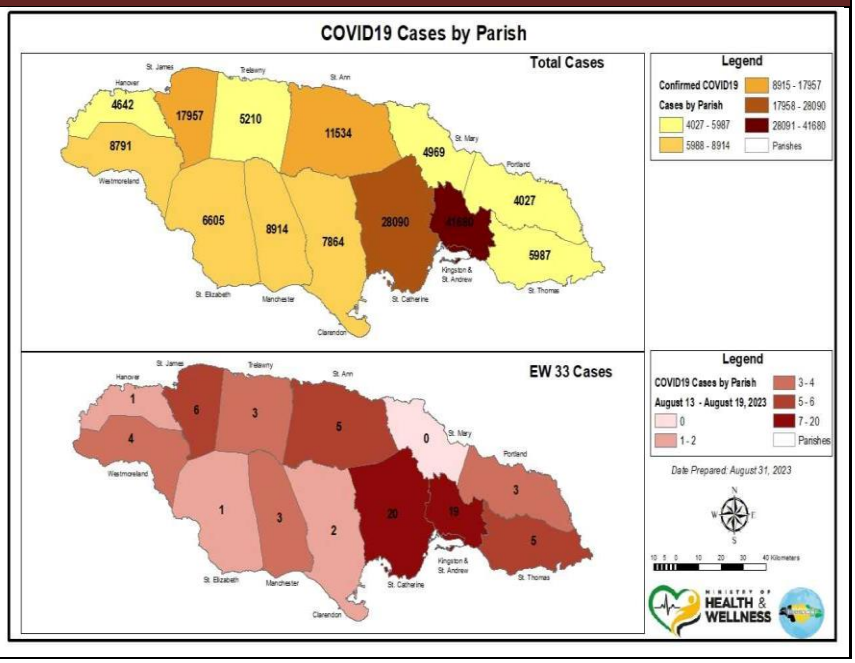


COVID-19 Parish Distribution and Global Statistics



COVID-19 WHO Global Statistics EW30-EW33

Epi Week	Confirmed Cases	Deaths
30	699,979	763
31	120,799	307
32	265,946	386
33	325,526	432
Total (4weeks)	**1,412,250**	**1,888**



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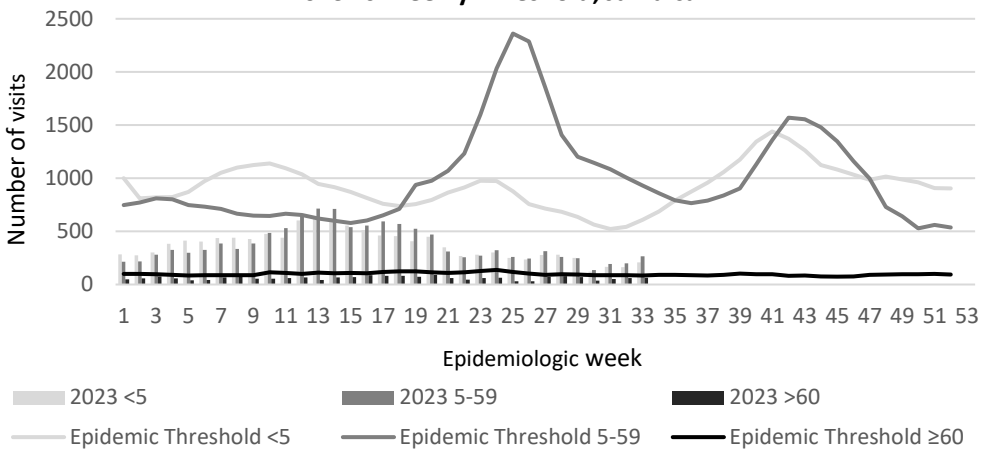
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 33

August 13 – August 19, 2023 Epidemiological Week 33

	EW 33	*YTD*
SARI cases	**1**	**430**
Total Influenza positive Samples	**0**	**176**
Influenza A	**0**	**15**
H3N2	0	1
H1N1pdm09	0	13
Not subtyped	0	1
Influenza B	**0**	**161**
B lineage not determined	**0**	**2**
B Victoria	**0**	**159**
Parainfluenza	**0**	**1**
Adenovirus	**0**	**2**
RSV	**0**	**14**

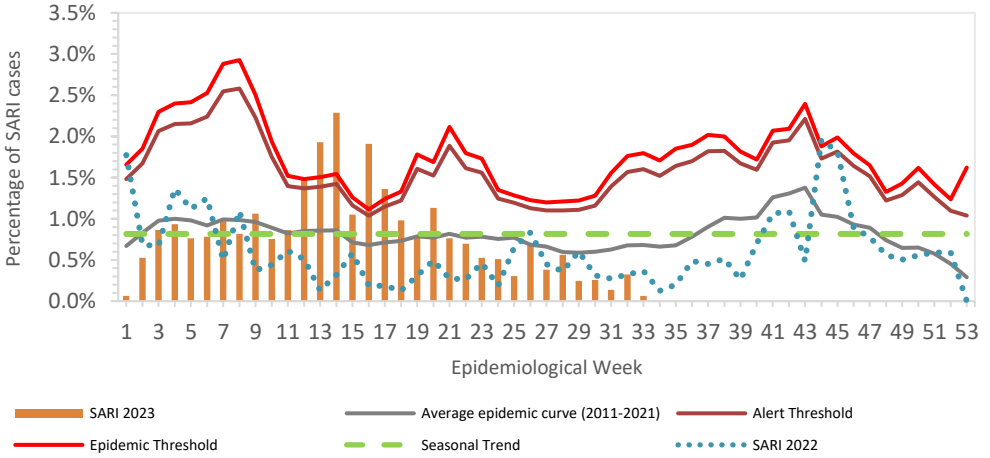
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2023 vs Weekly Threshold; Jamaica



Epi Week Summary

During EW 33, One (1) SARI admissions were reported.

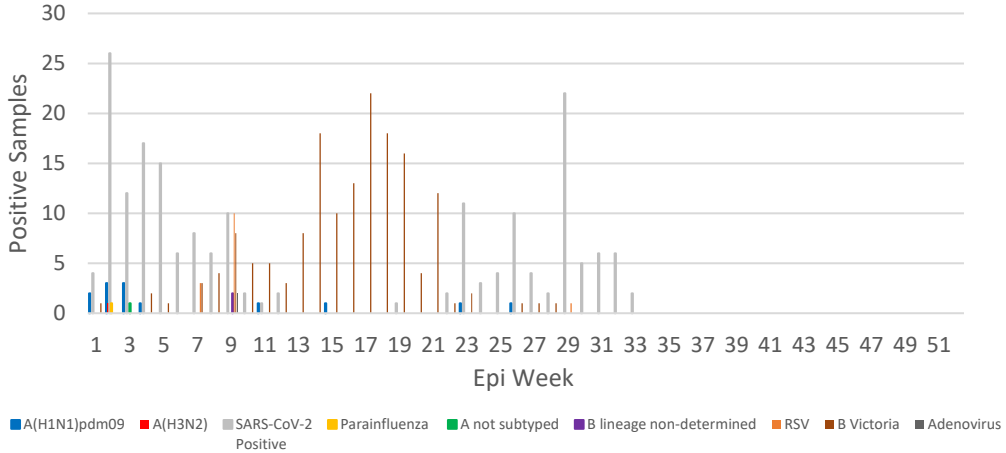
Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2023) (compared with 2011-2021)



Caribbean Update EW 33

Caribbean: After an increase in previous weeks, influenza activity has shown a decreasing trend in the last 4 EWs. During the last 4 EWs, the predominant influenza viruses have been B/Victoria, with lesser circulation of influenza A, mainly A(H1N1)pdm09. RSV activity has remained low. After showing an increase, the activity of SARS-CoV-2 has exhibited a decreasing trend over the past 4 epidemiological weeks and is currently at intermediate levels of circulation. Cases of ILI and SARI, after an increase due to positive cases of influenza and SARS-CoV-2 in previous EWs, have shown a decreasing trend in the last 4 EWs.

Distribution of Influenza and Other Respiratory Viruses Under Surveillance by EW, Jamaica - 2023



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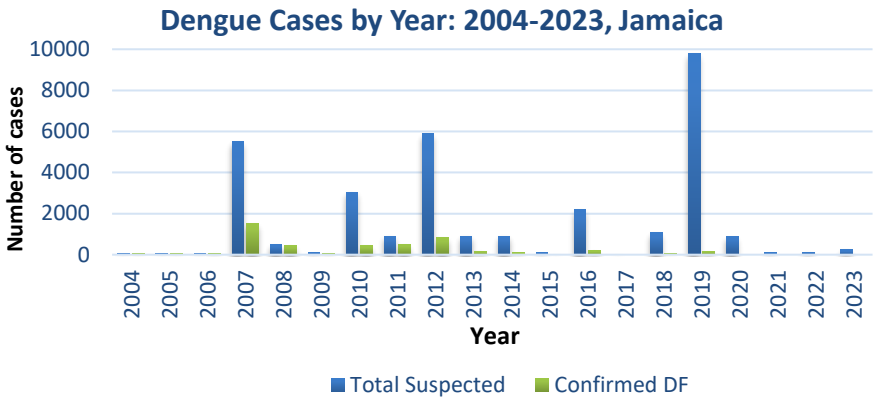
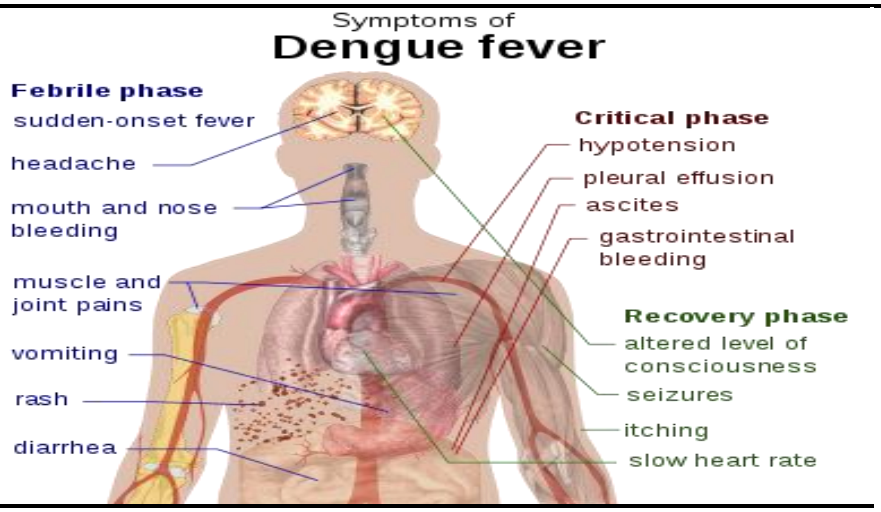
Dengue Bulletin

August 13 – August 19, 2023 Epidemiological Week 33 | Epidemiological Week 33



Reported suspected and confirmed dengue with symptom onset in week 33 of 2023

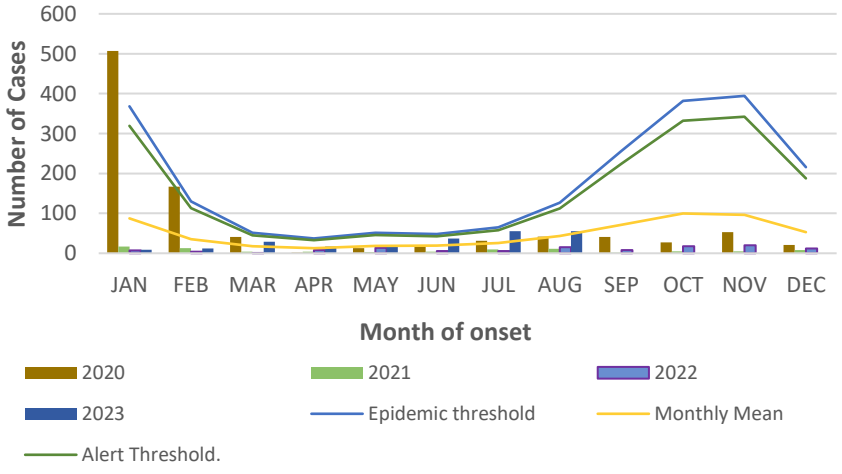
	2023*	
	EW 33	YTD
Total Suspected Dengue Cases	20	228
Lab Confirmed Dengue cases	0	9
CONFIRMED Dengue Related Deaths	0	0



Points to note:

- *Figure as at August 19, 2023
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

Suspected dengue cases for 2020, 2021, 2022 and 2023 versus monthly mean, alert, and epidemic thresholds (2007-2022)



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RESEARCH PAPER

Abstract

Low Glycemic Index Jamaican Foods Preserve Activity Levels of Antioxidant Enzymes and Histology of the Pancreas and Liver in Diabetic Rats

Francis R D[1,2,3], Gardner M T[3], Wheatley A O[2] and Asemota H N[2,3]
[1]Scientific Research Council, [2]The Biotechnology Centre and [3]Department of Basic Medical Sciences, University of the West Indies, Mona, Kingston, Jamaica.

Objectives: To investigate the effects of the consumption of low (boiled banana and sweet potato), medium (boiled yellow yam and ripe plantain) and high (boiled sweet yam and dasheen) GI Jamaican foods on biochemical variables and histology of the pancreas and liver in high-fat diet-fed and streptozotocin-induced diabetic rats (HFD-STZ).

Method: The effects of the foods on antioxidant enzymes activity, liver, pancreas histology and blood glucose levels were determined and compared in adult HFD-STZ (35 mg/kg, i.p.) and normal rats (control), divided into eight groups (8 rats each) for twelve weeks. Serum and tissue biochemical factors were measured and organ histoarchitecture examined at the end of the study.

Results: Our findings suggest that it may be possible to improve glycemic control, antioxidant defense system and histoarchitecture of the pancreas and liver via consumption of low and medium GI foods in rats.

Conclusion: Incorporating boiled banana, sweet potato, yellow yam and ripe plantain in the diabetic menu may aid in better management of *Diabetes mellitus*.

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