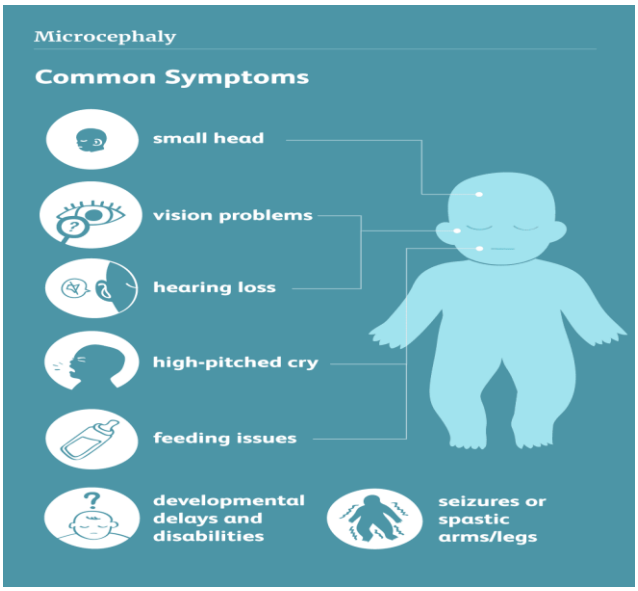
WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Microcephaly



Key facts

- Microcephaly is a condition where a baby is born with a small head or the head stops growing after birth.
- Microcephaly is a rare condition. One baby in several thousand is born with microcephaly.
- The most reliable way to assess whether a baby has microcephaly is to measure head circumference 24 hours after birth, compare the value with WHO growth standards, and continue to measure the rate of head growth in early infancy.
- Babies born with microcephaly may develop convulsions and suffer physical and learning disabilities as they grow older.
- There are no specific tests to determine if a baby will be born with microcephaly, but ultrasound scans in the third trimester of pregnancy can sometimes identify the problem.
- There is no specific treatment for microcephaly.

Causes of microcephaly

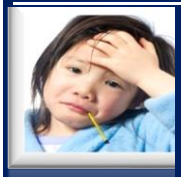
There are many potential causes of microcephaly, but often the cause remains unknown. The most common causes include:

- infections during pregnancy: toxoplasmosis (caused by a parasite found in undercooked meat), Campylobacter pylori, rubella, herpes, syphilis, cytomegalovirus, HIV and Zika;
- exposure to toxic chemicals: maternal exposure to heavy metals like arsenic and mercury, alcohol, radiation, and smoking;
- pre- and perinatal injuries to the developing brain (hypoxia-ischemia, trauma);
- genetic abnormalities such as Down syndrome; and
- severe malnutrition during fetal life.

Based on a systematic review of the literature up to 30 May 2016, WHO has concluded that Zika virus infection during pregnancy is a cause of congenital brain abnormalities, including microcephaly; and that Zika virus is a trigger of Guillain-Barré syndrome.

Source: https://www.who.int/news-room/fact-sheets/detail/microcephaly

EPI WEEK 13



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SENTINEL SYNDROMIC SURVEILLANCE

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 – 10 to 13 of 2022

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

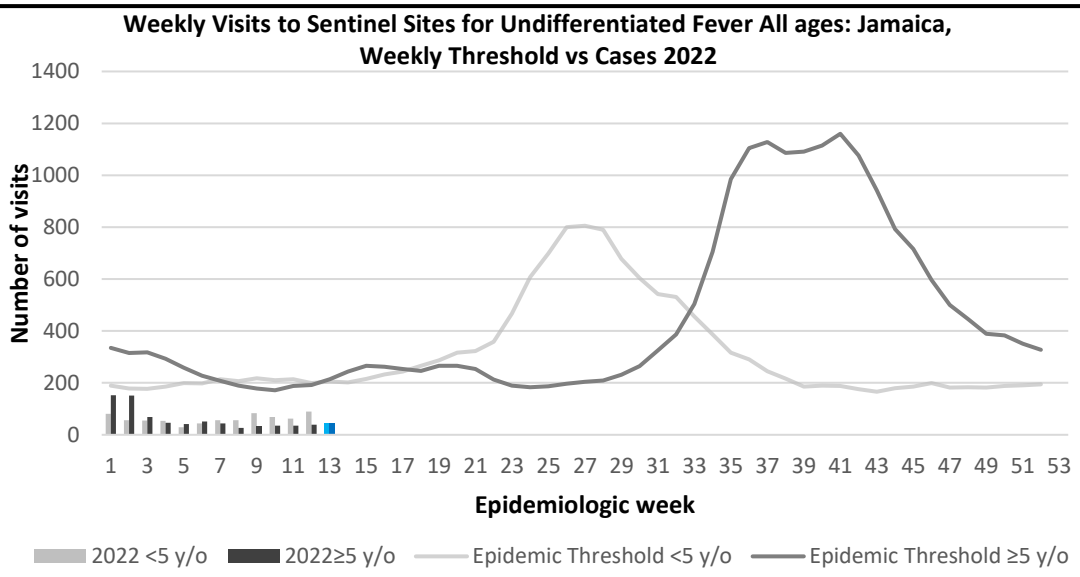
Epi week	Kingston and Saint Andrew	Saint Thomas	Saint Catherine	Portland	Saint Mary	Saint Ann	Trelawny	Saint James	Hanover	Westmoreland	Saint Elizabeth	Manchester	Clarendon
2022													
10	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time	Late (W)
11	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
12	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	Late (W)
13	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

REPORTS FOR SYNDROMIC SURVEILLANCE

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

KEY

VARIATIONS OF BLUE SHOW CURRENT WEEK



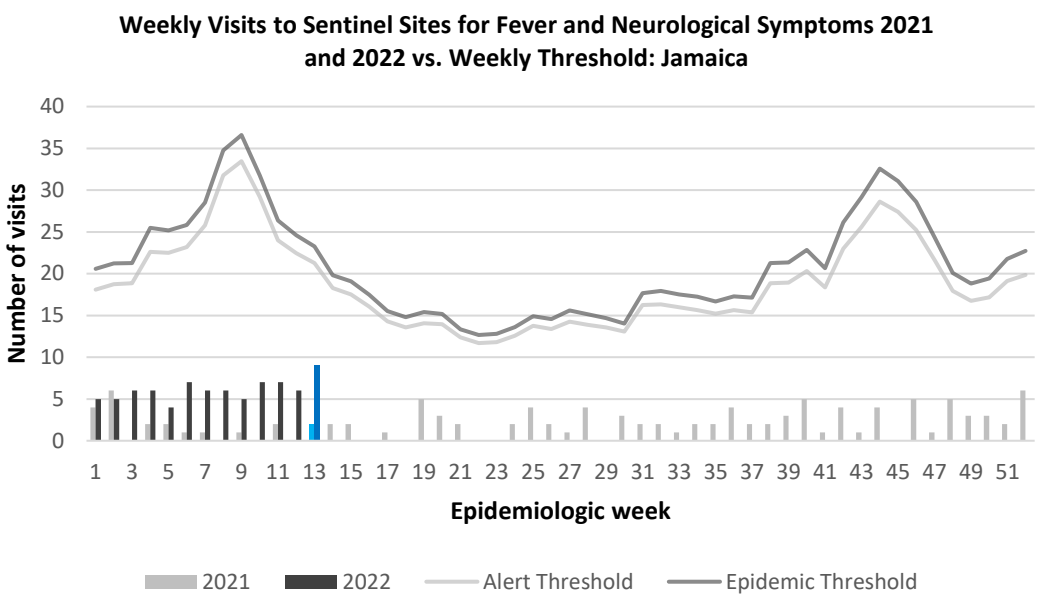
2 NOTIFICATIONS- All clinical sites

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

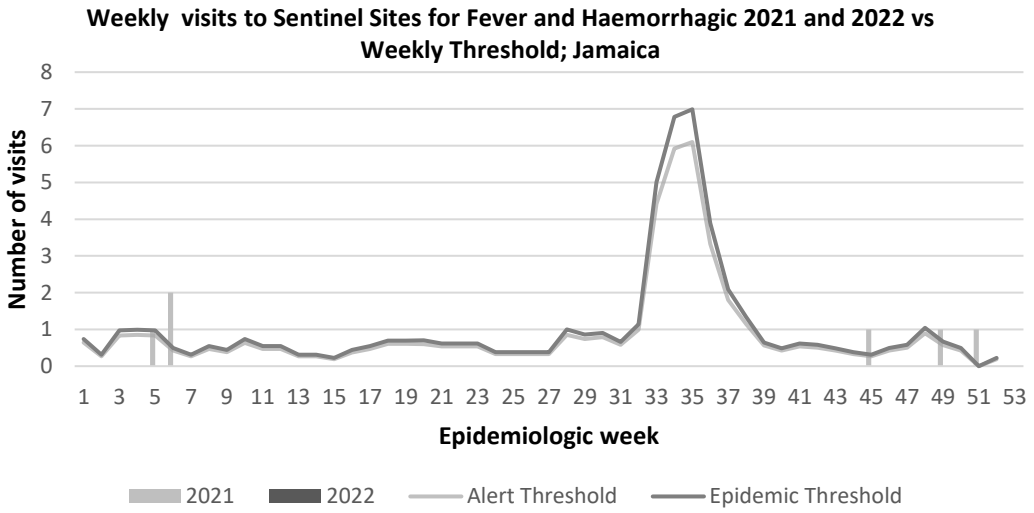
HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

SENTINEL REPORT- 78 sites. Automatic reporting

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).

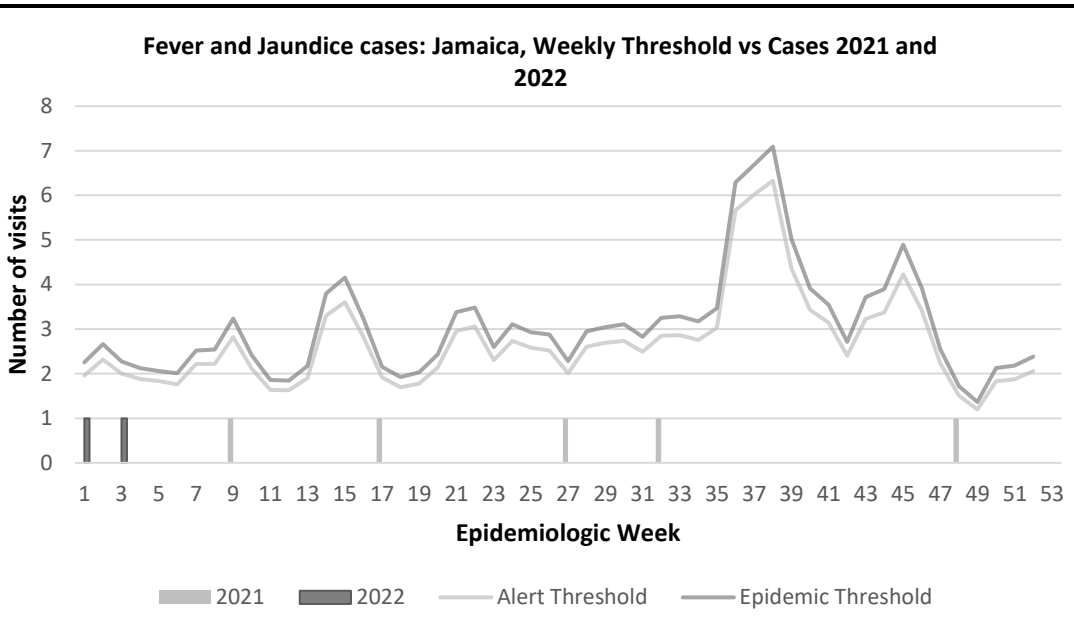


FEVER AND HAEMORRHAGIC
Temperature of >38^0*C* /100.4^0*F* (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



FEVER AND JAUNDICE
Temperature of >38^0*C* /100.4^0*F* (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.

KEY

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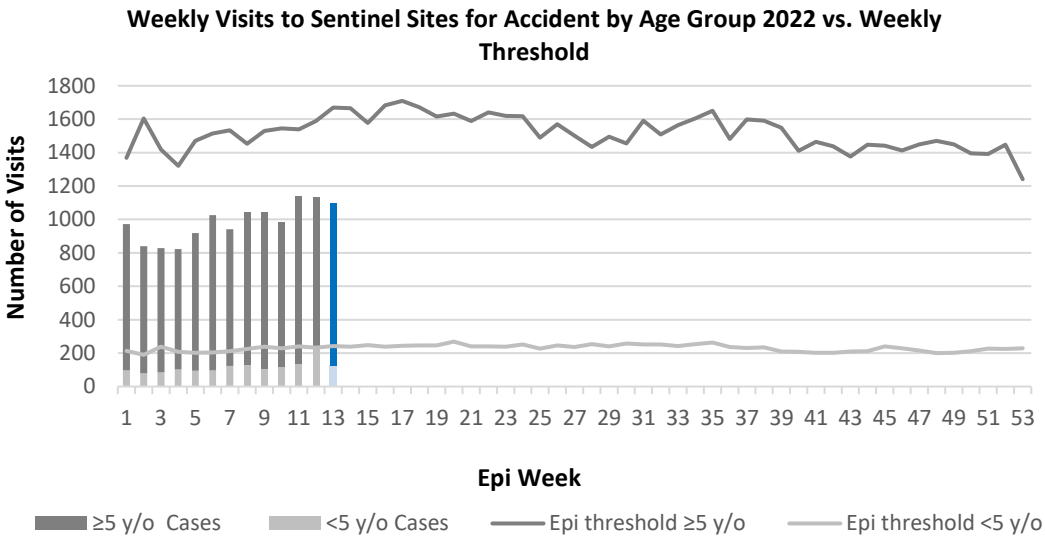
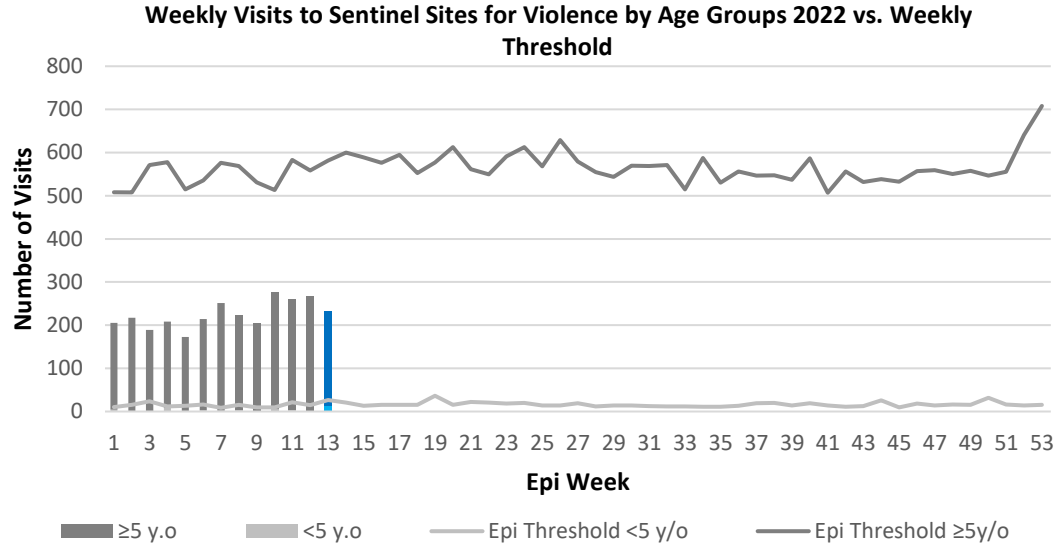


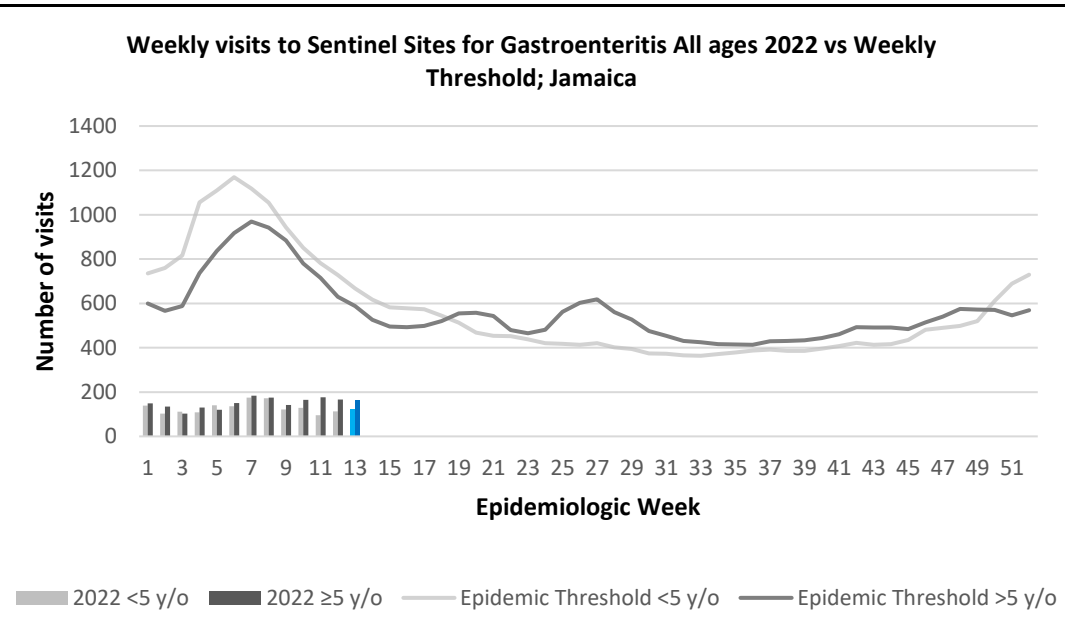
VIOLENCE

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 2022	Confirmed YTD[α] PREVIOUS YEAR 2021
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		31[β]	27[β]
	Cholera		0	0
	Dengue Hemorrhagic Fever[γ]		See Dengue page below	See Dengue page below
	COVID-19 (SARS-CoV-2)		31919	29844
	Hansen's Disease (Leprosy)		0	0
	Hepatitis B		3	4
	Hepatitis C		0	1
	HIV/AIDS		NA	NA
	Malaria (Imported)		0	0
	Meningitis (Clinically confirmed)		2	3
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]		8	9
	Ophthalmia Neonatorum		29	23
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		0	0
	Tuberculosis		5	11
	Yellow Fever		0	0
	Chikungunya[ε]		0	0
	Zika Virus[θ]		0	0

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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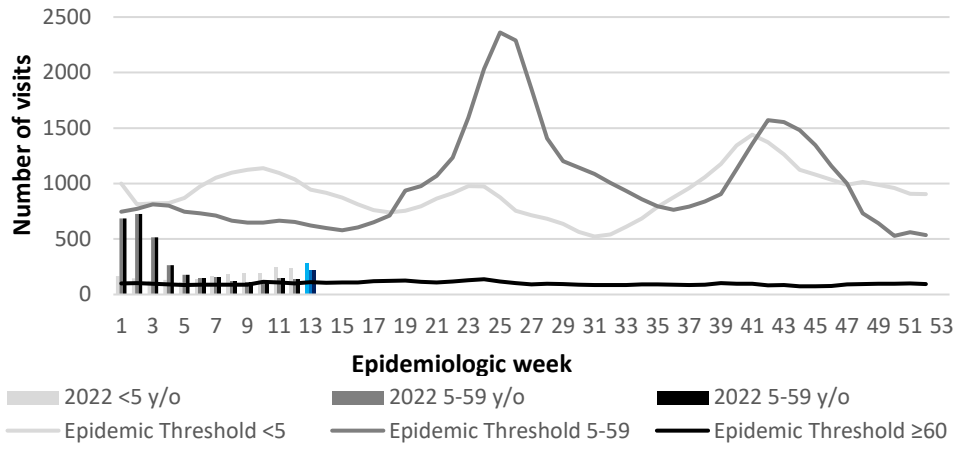
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 13

March 27– April 2, 2022 Epidemiological Week 13

	EW 13	*YTD*
SARI cases	*2*	*162*
Total Influenza positive Samples	*0*	*0*
Influenza A	*0*	*0*
H3N2	*0*	*0*
H1N1pdm09	*0*	*0*
Not subtyped	*0*	*0*
Influenza B	*0*	*0*
Parainfluenza	*0*	*0*

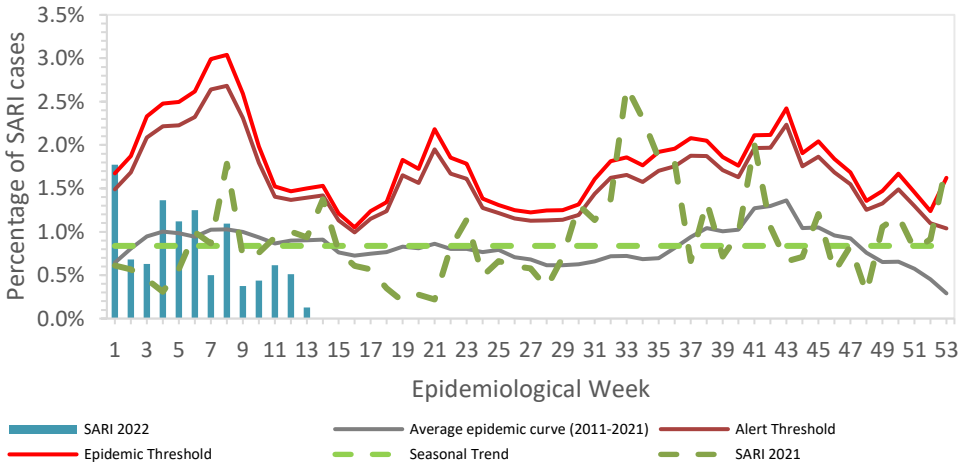
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2022 vs Weekly Threshold; Jamaica



Epi Week Summary

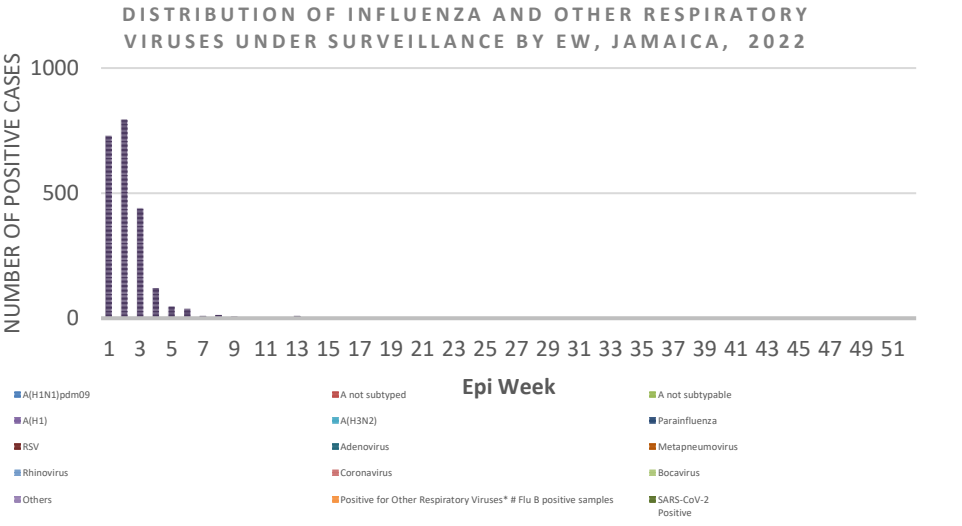
During EW 13, two (2) SARI admissions were reported.

Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2022) (compared with 2011-2021)



Caribbean Update EW 13

Caribbean: Influenza activity remained low. In Belize, SARS-CoV-2 and RSV detections continued to increase and in Haiti, SARS-CoV-2 activity continued elevated and increasing.



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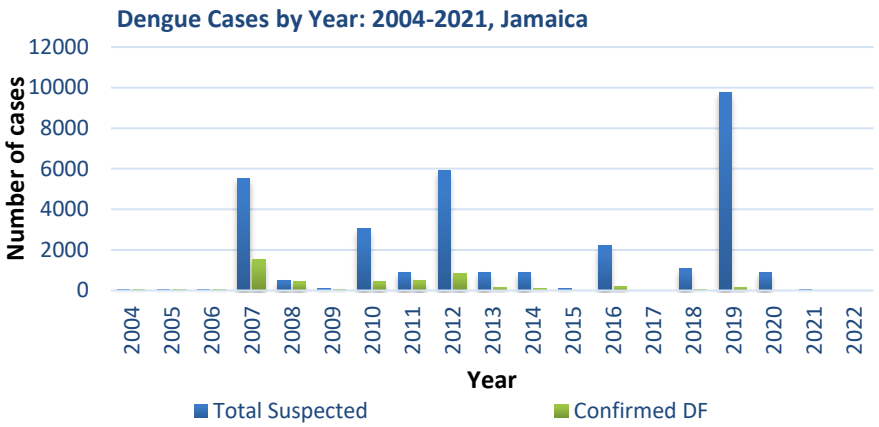
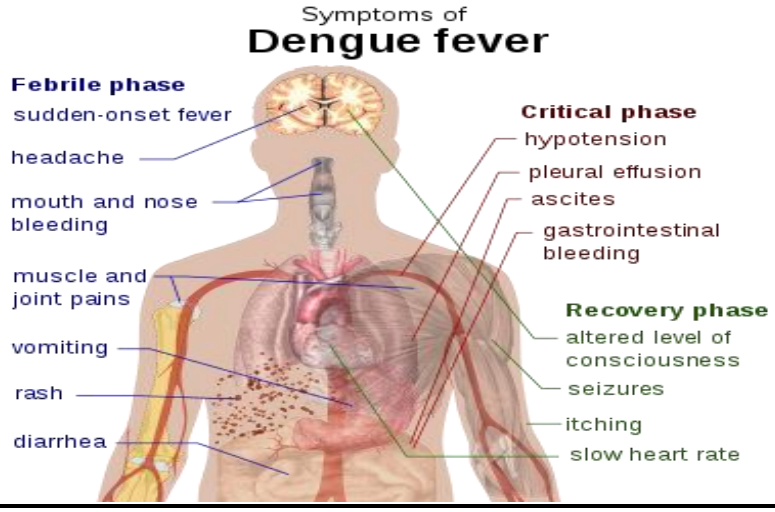
Dengue Bulletin

March 27 – April 2, 2022 Epidemiological Week 13 | Epidemiological Week 13



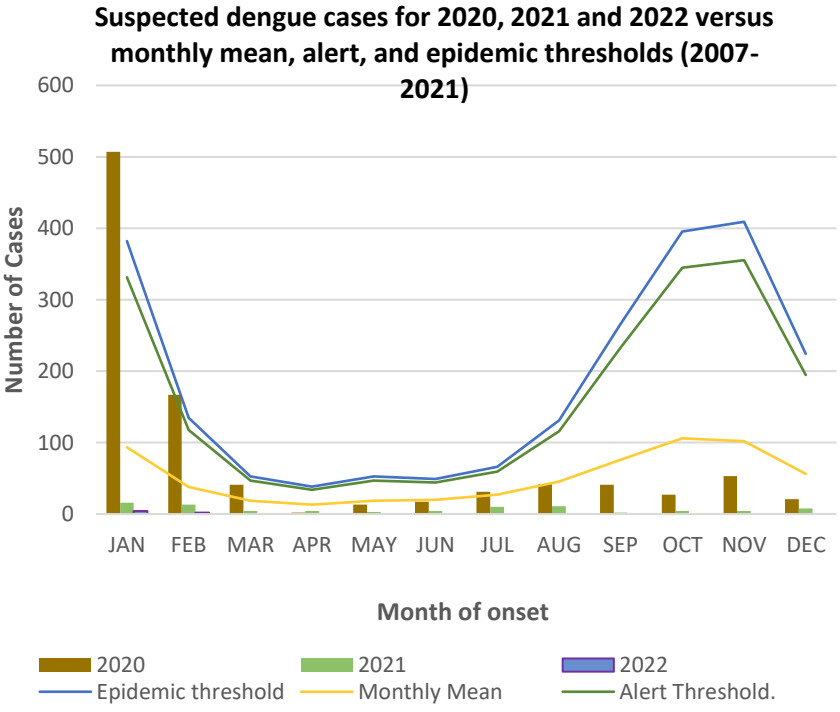
Reported suspected and confirmed dengue with symptom onset in week 13 of 2022

	2022*	
	EW 13	YTD
Total Suspected Dengue Cases	0	6
Lab Confirmed Dengue cases	0	0
CONFIRMED Dengue Related Deaths	0	0



Points to note:

- *Figure as at April 5, 2022
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.



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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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