

WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

Malaria



Malaria is a life-threatening disease spread to humans by some types of mosquitoes. It is mostly found in tropical countries. It is preventable and curable. There are 5 *Plasmodium* parasite species that cause malaria in humans and 2 of these species – *P. falciparum* and *P. vivax* – pose the greatest threat. *P. falciparum* is the deadliest malaria parasite and the most prevalent on the African continent. *P. vivax* is the dominant malaria parasite in most countries outside of sub-Saharan Africa. The other malaria species which can infect humans are *P. malariae*, *P. ovale* and *P. knowlesi*.

Symptoms

The most common early symptoms of malaria are fever, headache and chills. Symptoms usually start within 10–15 days of getting bitten by an infected mosquito. Symptoms may be mild for some people, especially for those who have had a malaria infection before. Because some malaria symptoms are not specific, getting tested early is important. Some types of malaria can cause severe illness and death. Infants, children under 5 years, pregnant women, travellers and people with HIV or AIDS are at higher risk. Severe symptoms include:

- extreme tiredness and fatigue
- impaired consciousness
- multiple convulsions
- difficulty breathing
- dark or bloody urine
- jaundice (yellowing of the eyes and skin)
- abnormal bleeding.

People with severe symptoms should get emergency care right away. Getting treatment early for mild malaria can stop the infection from becoming severe. Malaria infection during pregnancy can also cause premature delivery or delivery of a baby with low birth weight.

<https://www.who.int/news-room/fact-sheets/detail/malaria>

EPI WEEK 14



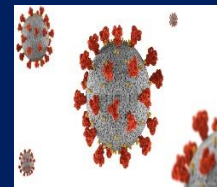
- Syndromic Surveillance
- Accidents
- Violence

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Class 1 Notifiable Events

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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 - 11 to 14 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												
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	On Time
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
14	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

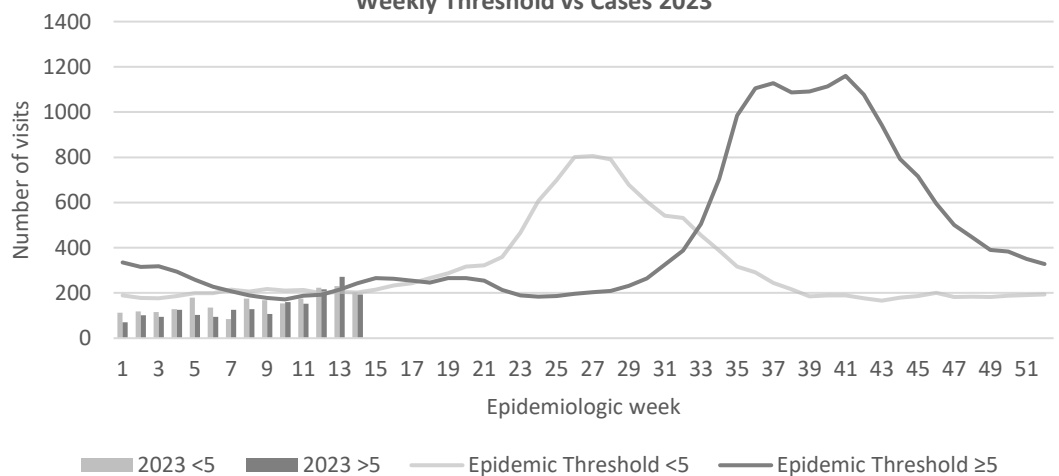
REPORTS FOR SYNDROMIC SURVEILLANCE

UNDIFFERENTIATED FEVER

Temperature of $>38^{\circ}C$ / $100.4^{\circ}F$ (or recent history of fever) with or without an obvious diagnosis or focus of infection.



Weekly Visits to Sentinel Sites for Undifferentiated Fever All ages: Jamaica, Weekly Threshold vs Cases 2023



2 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



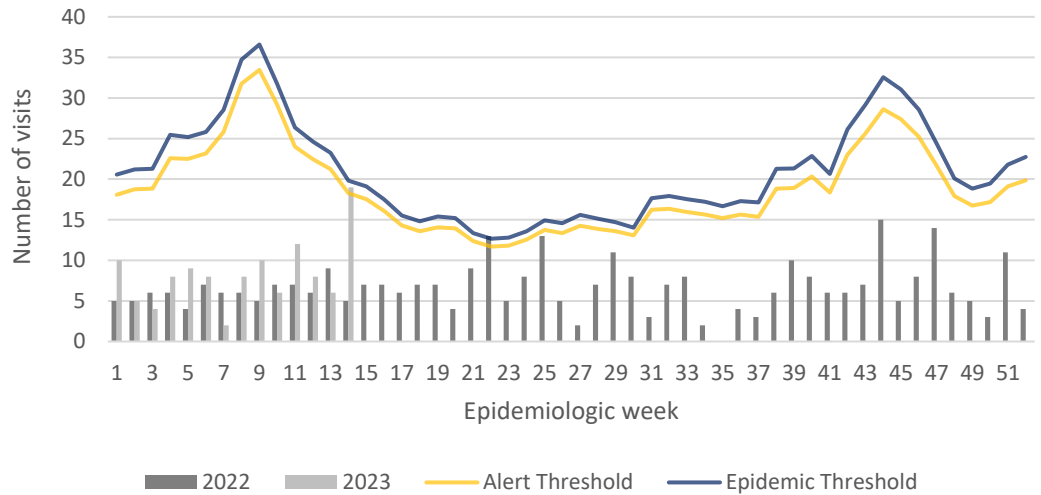
SENTINEL REPORT- 78 sites. Automatic reporting

FEVER AND NEUROLOGICAL

Temperature of $>38^{\circ}\text{C}$ / 100.4°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).



Weekly Visits to Sentinel Sites for Fever and Neurological Symptoms 2022 and 2023 vs. Weekly Threshold: Jamaica

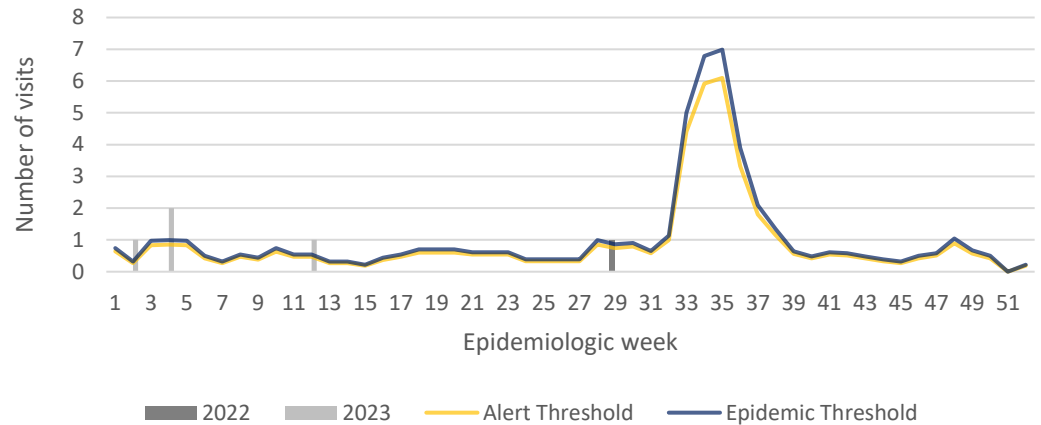


FEVER AND HAEMORRHAGIC

Temperature of $>38^{\circ}\text{C}$ / 100.4°F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



Weekly visits to Sentinel Sites for Fever and Haemorrhagic 2022 and 2023 vs Weekly Threshold; Jamaica



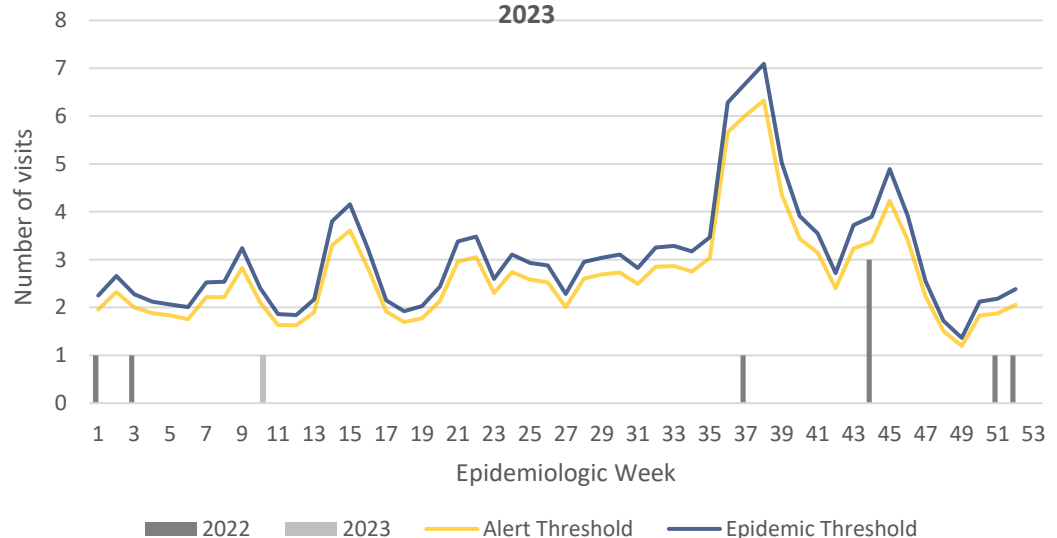
FEVER AND JAUNDICE

Temperature of $>38^{\circ}\text{C}$ / 100.4°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.



Fever and Jaundice cases: Jamaica, Weekly Threshold vs Cases 2022 and 2023



3 NOTIFICATIONS-
All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



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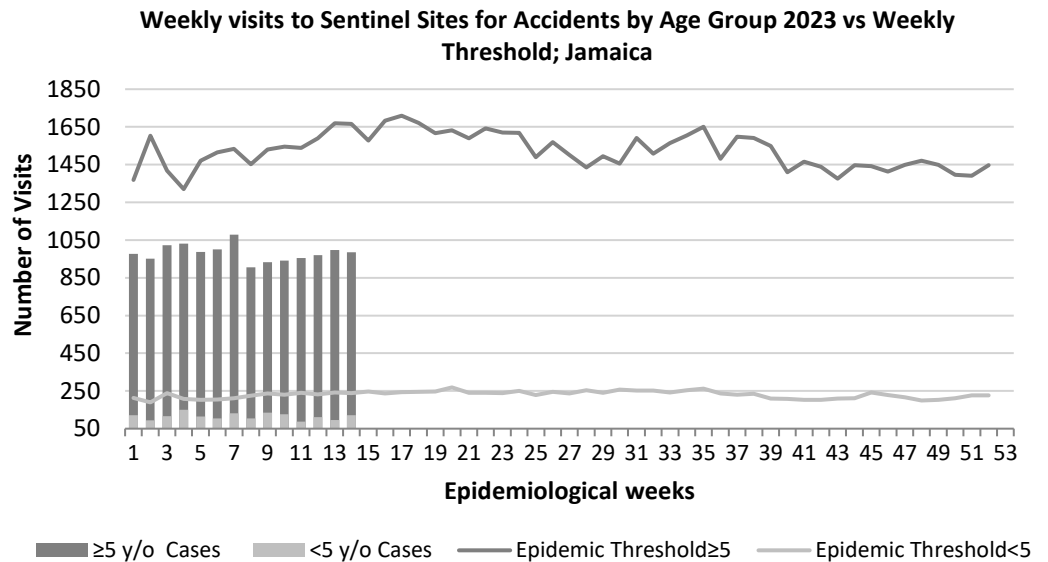


SENTINEL REPORT- 78 sites. Automatic reporting



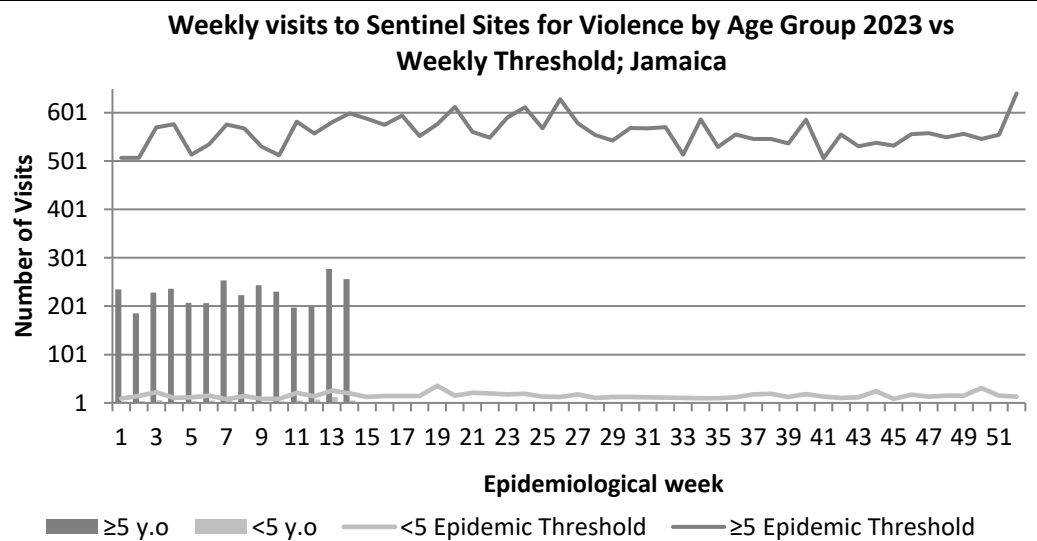
ACCIDENTS

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



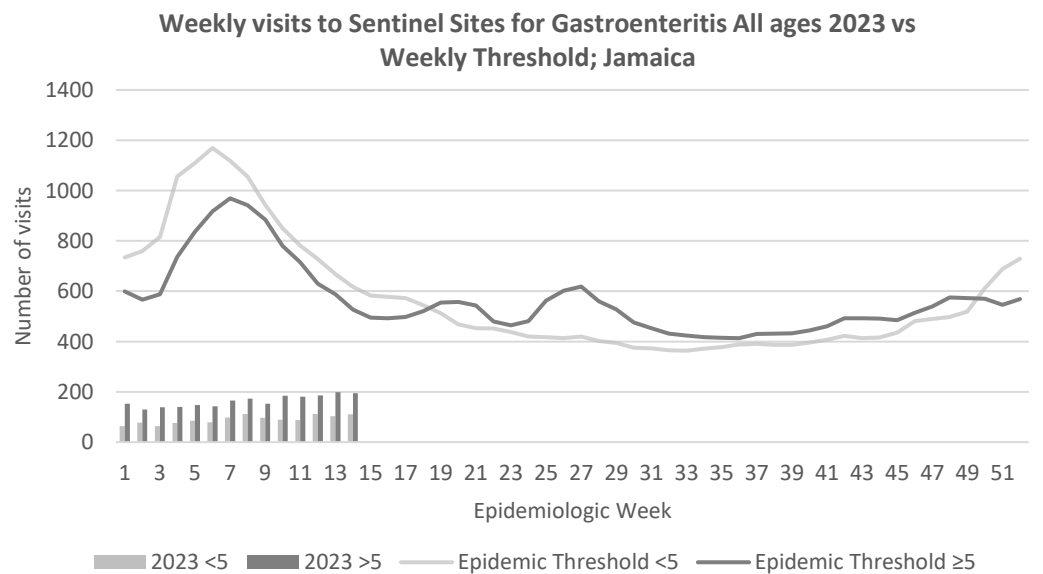
VIOLENCE

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.



4 NOTIFICATIONS-
All clinical sites


INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued


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CLASS ONE NOTIFIABLE EVENTS				Comments	
	CLASS 1 EVENTS	Confirmed YTD ^α		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.	
		CURRENT YEAR 2023	PREVIOUS YEAR 2022		
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning	79 ^β	72 ^β	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.	
	Cholera	0	0		
	Dengue Hemorrhagic Fever ^γ	See Dengue page below	See Dengue page below		
	COVID-19 (SARS-CoV-2)	1804	31957		
	Hansen’s Disease (Leprosy)	0	0		
	Hepatitis B	3	3		
	Hepatitis C	0	0		
	HIV/AIDS	N/A	N/A		
	Malaria (Imported)	0	0		
	Meningitis (Clinically confirmed)	10	6		
	Monkeypox	3	N/A		
EXOTIC/ UNUSUAL	Plague	0	0	^ε CHIKV IgM positive cases ^θ Zika PCR positive cases ^β Updates made to prior weeks in 2020.	
HIGH 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	^α Figures are cumulative totals for all epidemiological weeks year to date.	
	Congenital Rubella Syndrome	0	0		
	Congenital Syphilis	0	0		
	Fever and Rash	Measles	0		0
		Rubella	0		0
	Maternal Deaths ^δ	12	18		
	Ophthalmia Neonatorum	32	29		
	Pertussis-like syndrome	0	0		
	Rheumatic Fever	0	0		
	Tetanus	0	0		
	Tuberculosis	4	5		
	Yellow Fever	0	0		
	Chikungunya ^ε	0	0		
Zika Virus ^θ	0	0			


NA- Not Available




5 NOTIFICATIONS-
All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



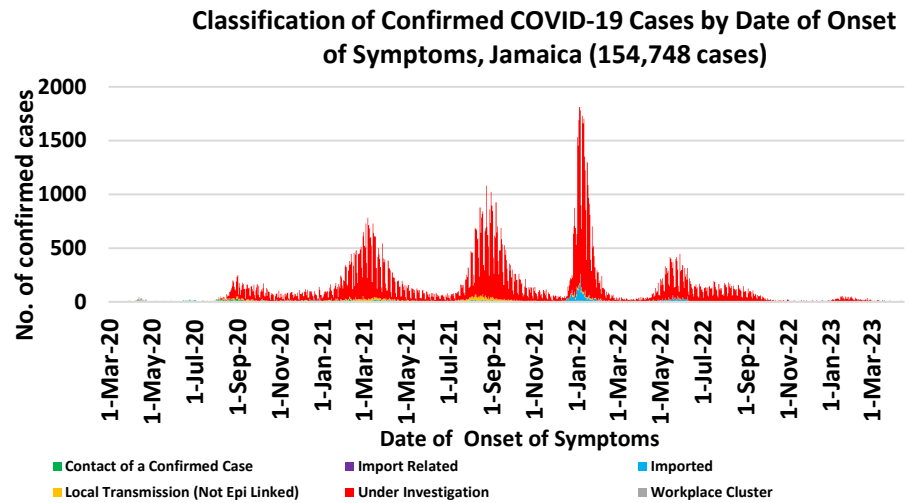
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COVID-19 Surveillance Update

March 10, 2020 – EW 14, 2023

CASES	EW 14	Total
Confirmed	43	154748
Females	28	89275
Males	15	65470
Age Range	41 days old to 87 years	1 day to 108 years

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

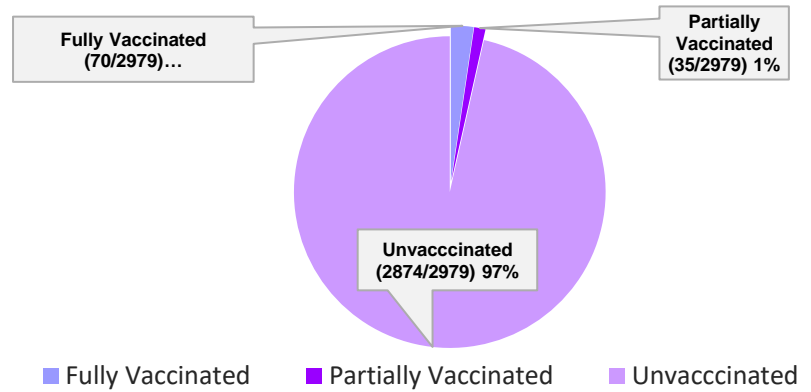


COVID-19 Outcomes

Outcomes	EW 14	Total
ACTIVE *past 2 weeks*		91
DIED – COVID Related	0	3536
Died - NON COVID	0	300
Died - Under Investigation	0	350
Recovered and discharged	0	102761
Repatriated	0	93
Total		154748

*Vaccination programme March 2021 – YTD

2979 COVID-19 Related Deaths since March 1, 2021 – YTD Vaccination Status among COVID-19 Deaths



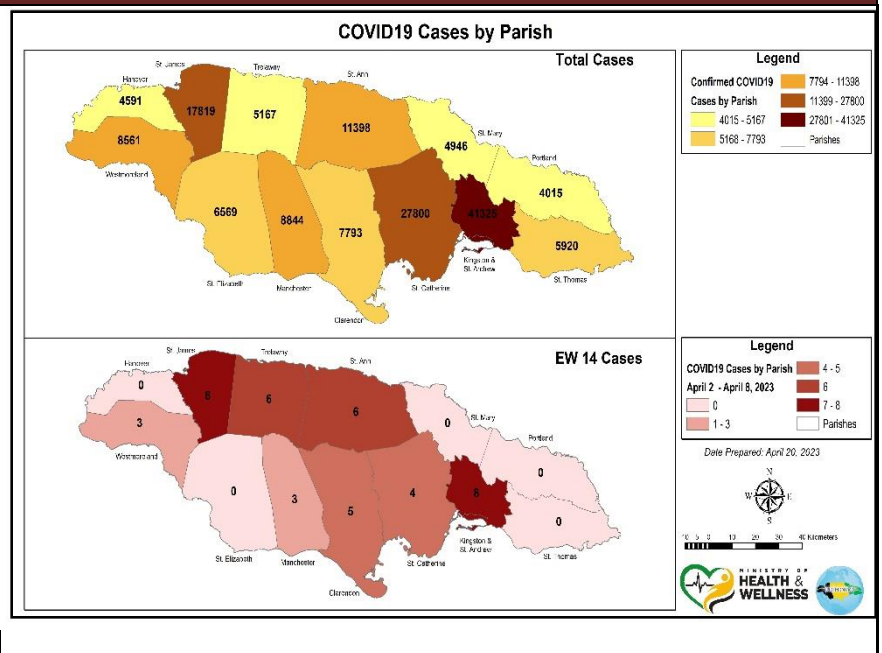
COVID-19 Parish Distribution and Global Statistics

COVID-19 Virus Structure

SARS-CoV-2

COVID-19 WHO Global Statistics EW11-EW14

Epi Week	Confirmed Cases	Deaths
11	832,479	6,600
12	768,807	5630
13	525,841	2,426
14	536,422	2289
Total (4weeks)	2,663,549	16,945



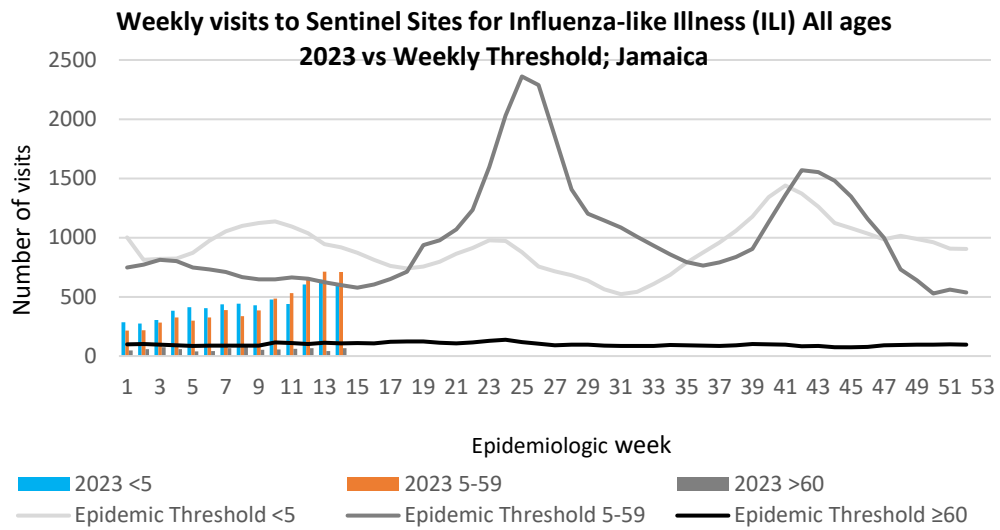
<p>6 NOTIFICATIONS- All clinical sites</p>	<p>INVESTIGATION REPORTS- Detailed Follow up for all Class One Events</p>	<p>HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued</p>	<p>SENTINEL REPORT- 78 sites. Automatic reporting</p>
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NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 14

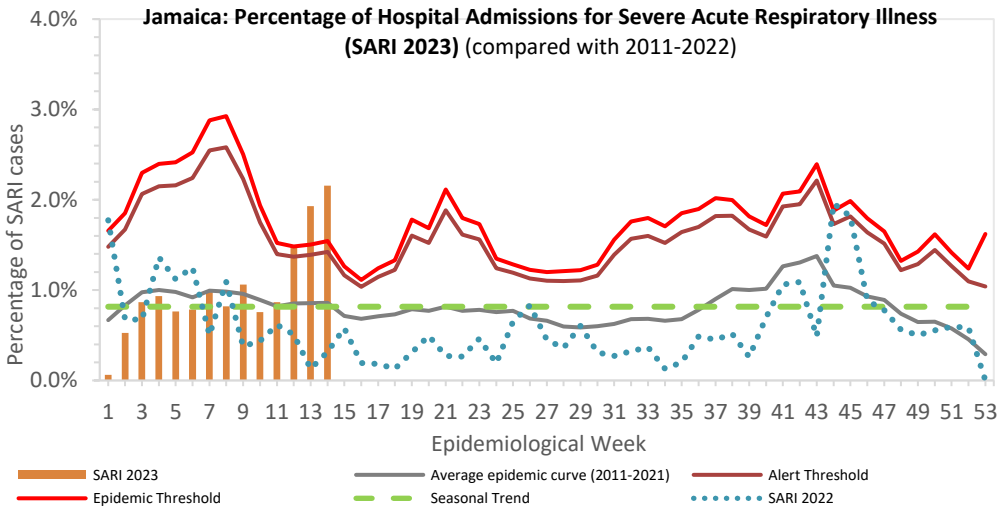
April 2 – April 8, 2023 Epidemiological Week 14

	<i>EW 14</i>	<i>YTD</i>
SARI cases	33	231
Total Influenza positive Samples	0	43
Influenza A	0	12
H3N2	0	1
H1N1pdm09	0	10
Not subtyped	0	1
Influenza B	1	31
B lineage not determined	0	22
B Victoria	1	9
Parainfluenza	0	1
Adenovirus	0	2
RSV	0	13



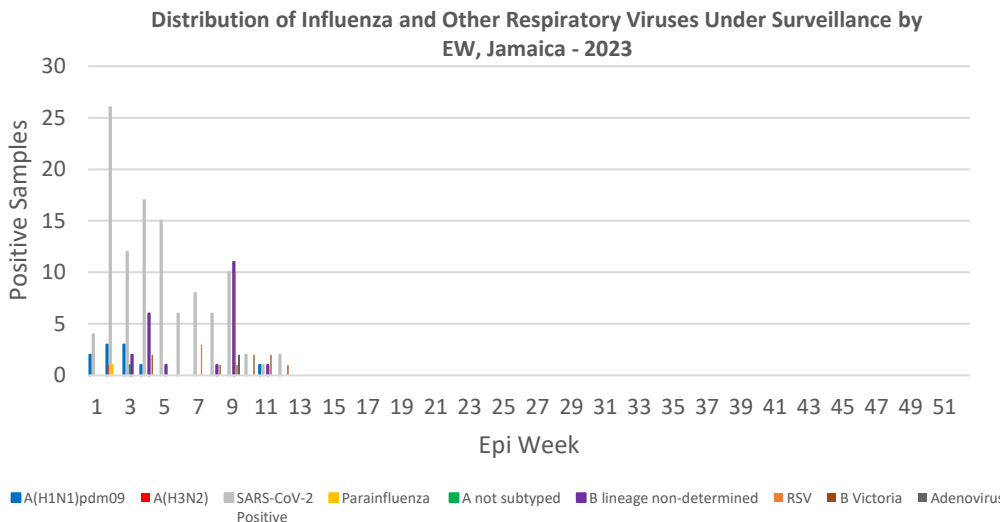
Epi Week Summary

During EW 14, thirty-three (33) SARI admissions were reported.



Caribbean Update EW 14

Caribbean: Influenza percent positivity was moderate, driven by influenza B/Victoria lineage viruses; influenza A(H1N1)pdm09 virus co-circulated. In Belize, influenza activity was increased, with influenza B/Victoria lineage and influenza A(H3N2) co-circulation, at low-intensity levels. SARS-CoV-2 and RSV activity were low in the subregion.



7 NOTIFICATIONS-
All clinical sites

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

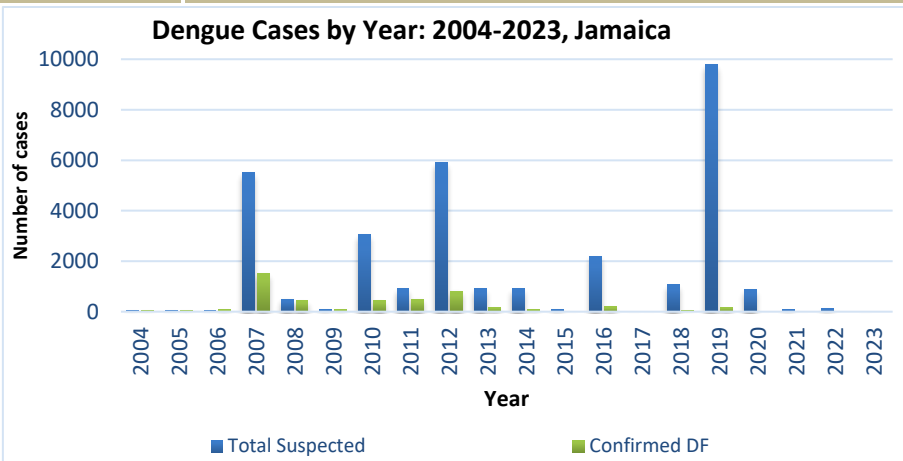
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Dengue Bulletin

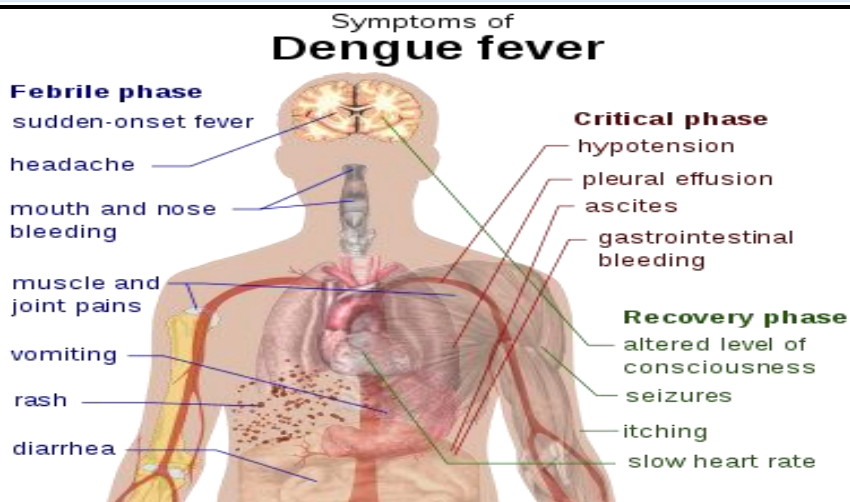
April 2 – April 8, 2023 Epidemiological Week 14

Epidemiological Week 14



Reported suspected and confirmed dengue with symptom onset in week 14 of 2023

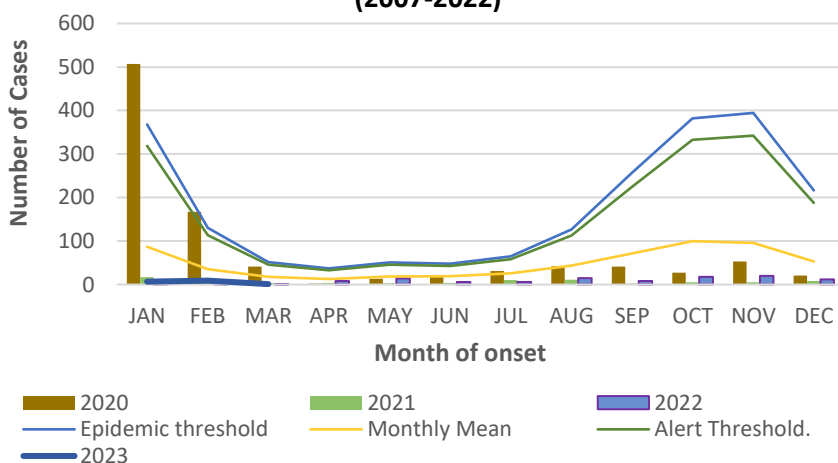
	2023*	
	EW 14	YTD
 Total Suspected Dengue Cases	0	22
Lab Confirmed Dengue cases	0	0
CONFIRMED Dengue Related Deaths	0	0



Points to note:

- *Figure as at April 8, 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)



8 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



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SENTINEL REPORT- 78 sites. Automatic reporting

RESEARCH PAPER

Abstract

***Entada gigas*: Underutilized Plant for Food and Nutrition from an Indigenous Community in Jamaica**

Foster S R, Randle M M, Bozra D, Riley C K, Watson C T

Scientific Research Council, Kingston, Jamaica

Background: *Entada gigas* (cacao) is a leguminous plant used by the Accompong maroons from St. Elizabeth, Jamaica, for medicinal and nutritional purposes. The plant seeds contain high protein levels, but are underutilized due to the anti-nutrients present.

Objectives: The effects of three processing methods (soaking, cooking and autoclaving) on proximate composition, anti-nutritional compounds and mineral content of *E. gigas* seeds collected were investigated.

Methods: Qualitative and quantitative evaluations of active phytochemical constituents, proximate and mineral analyses were performed on differentially processed *E. gigas* seed extracts using standard assays.

Results: Nutritional composition of mature *E. gigas* seeds corresponds with most edible legumes containing per 100 g edible portion: carbohydrate 50-55 g, protein 21-26 g, fat 15-20 g, crude fibre 5.3 g, and moisture 4.4 -5.9 g. Essential minerals including calcium (84.87 mg/L), iron (3.24 mg/L), potassium (793 mg/L), magnesium (112 mg/L), manganese (0.94 mg/L), sodium (7.24 mg/L) and zinc (1.49 mg/L) were also detected. Flavonoids, glycosides, steroids, terpenoids, saponins, tannins and phenols were among the phytochemicals present. Anti-nutritional substances present in the raw seeds, were effectively diminished after soaking for 21 days without significantly affecting the nutritionally beneficial compounds.

Conclusion: *Entada gigas* has nutritive values, comparable to other plant protein sources. Hence, its utilization is encouraged provided that an appropriate processing method is used to reduce the anti-nutrient content.

(Funded by Scientific Research Council)



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9 NOTIFICATIONS-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
up for all Class One Events



HOSPITAL
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30 sites. Actively
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REPORT- 78 sites.
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