

WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Snakebite

SNAKE BITES: DO'S AND DON'T'S

- | | |
|--|--|
| ✓ Stay calm. | ✗ Don't apply a tourniquet or a constriction band. |
| ✓ Call 911 immediately to be evaluated. | ✗ Don't apply ice; it can cause local tissue damage. |
| ✓ Take off anything constricting the area, such as a ring or watch. | ✗ Don't apply heat. |
| ✓ Position the affected area at or above heart level. If you are bitten on the hand, bring it to heart level, and if you're bitten on the leg or foot, elevate it if possible. | ✗ Don't cut the affected area and attempt to suck the venom out. |
| ✓ Go to the emergency room – the sooner the better. | ✗ Don't use a commercially-available extraction device. |
| | ✗ Don't use electrical therapy. |
| | ✗ Don't apply any type of lotions or ointments. |

- Around 81 000 to 138 000 people die each year because of snake bites, and around three times as many amputations and other permanent disabilities are caused by snakebites annually.
- Bites by venomous snakes can cause paralysis that may prevent breathing, bleeding disorders that can lead to a fatal haemorrhage, irreversible kidney failure and tissue damage that can cause permanent disability and limb amputation.
- Agricultural workers and children are the most affected. Children often suffer more severe effects than adults, due to their smaller body mass.

Global situation

Snake bite is a neglected public health issue in many tropical and subtropical countries. About 5.4 million snake bites occur each year, resulting in 1.8 to 2.7 million cases of envenomings (poisoning from snake bites). There are between 81 410 and 137 880 deaths and around three times as many amputations and other permanent disabilities each year.

Most of these occur in Africa, Asia and Latin America. In Asia up to 2 million people are envenomed by snakes each year, while in Africa there are an estimated 435 000 to 580 000 snake bites annually that need treatment. Envenoming affects women, children and farmers in poor rural communities in low- and middle-income countries. The highest burden occurs in countries where health systems are weakest and medical resources sparse.

Bites by venomous snakes can cause acute medical emergencies involving severe paralysis that may prevent breathing, cause bleeding disorders that can lead to fatal haemorrhage, cause irreversible kidney failure and severe local tissue destruction that can cause permanent disability and limb amputation. Children may suffer more severe effects, and can experience the effects more quickly than adults due to their smaller body mass.

Key facts

- Though the exact number of snake bites is unknown, an estimated 5.4 million people are bitten each year with up to 2.7 million envenomings.

EPI WEEK 49



SYNDROMES

PAGE 2



CLASS 1 DISEASES

PAGE 4



INFLUENZA

PAGE 5



DENGUE FEVER

PAGE 6



GASTROENTERITIS

PAGE 7



RESEARCH PAPER

PAGE 8

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 - 46 2021 to 49 of 2021

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

Epi week	Kingston and Saint Andrew	Saint Thomas	Saint Catherine	Portland	Saint Mary	Saint Ann	Trelawny	Saint James	Hanover	Westmoreland	Saint Elizabeth	Manchester	Clarendon
2021													
46	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
47	On Time	On Time	On Time	On Time	Late (T)	On Time	On Time	Late (T)	On Time	On Time	On Time	On Time	Late (T)
48	On Time	On Time	On Time	Late (T)	Late (W)	On Time	Late (T)	On Time	On Time	On Time	On Time	On Time	On Time
49	On Time	On Time	On Time	On Time	On Time	On Time	Late (T)	On Time	Late (T)	On Time	On Time	Late (W)	Late (W)

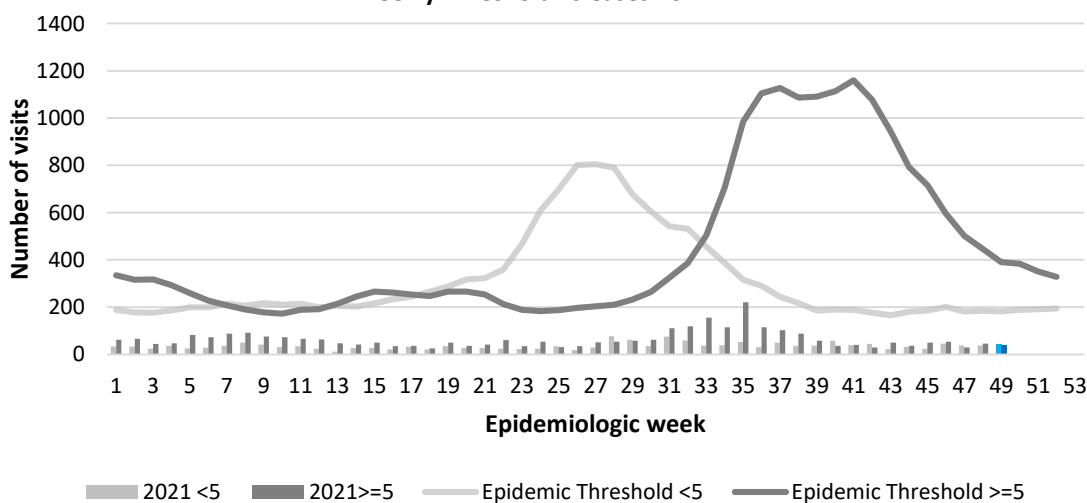
REPORTS FOR SYNDROMIC SURVEILLANCE

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



KEY
VARIATIONS OF BLUE
SHOW CURRENT WEEK

Weekly Visits to Sentinel Sites for Undifferentiated Fever All ages: Jamaica, Weekly Threshold vs Cases 2021



2 NOTIFICATIONS-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
up for all Class One Events



HOSPITAL
ACTIVE
SURVEILLANCE-
30 sites. Actively
pursued



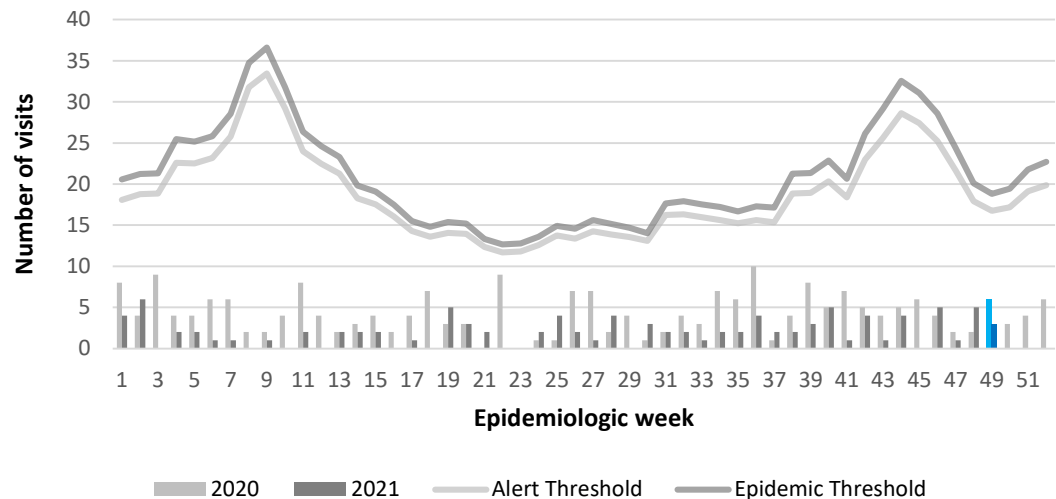
SENTINEL
REPORT- 78 sites.
Automatic reporting

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).



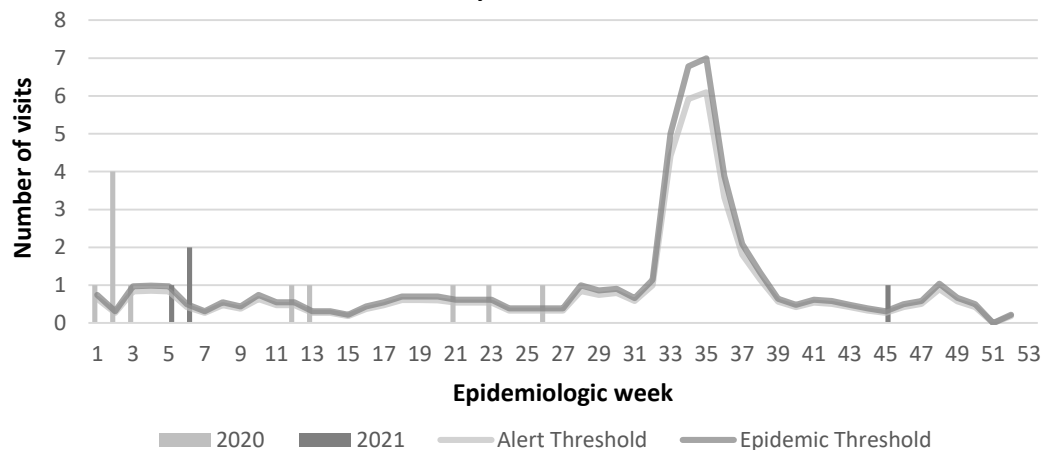
Weekly Visits to Sentinel Sites for Fever and Neurological Symptoms 2020 and 2021 vs. Weekly Threshold: Jamaica

**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 2020 and 2021 vs Weekly Threshold; Jamaica

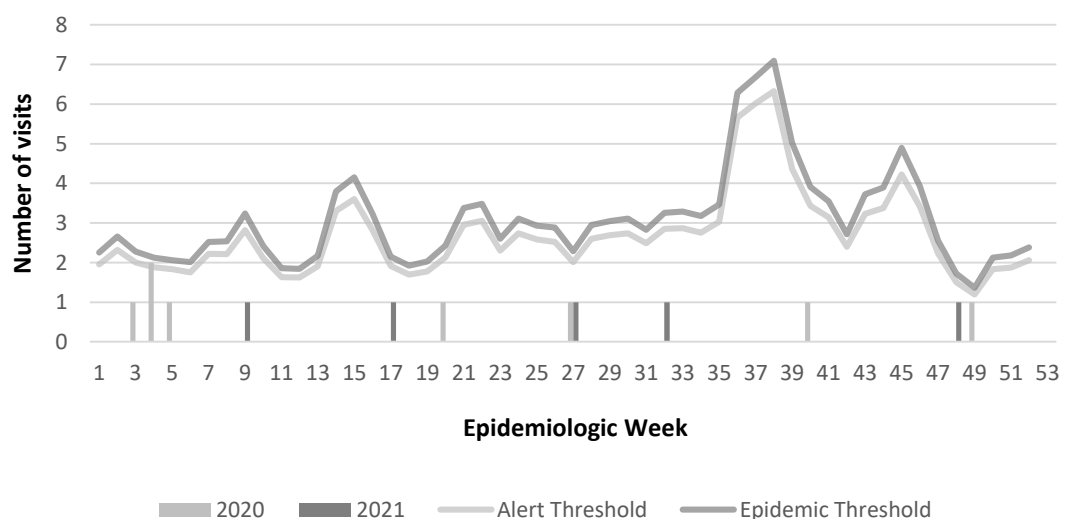
**FEVER AND JAUNDICE**

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 2020 and 2021



3 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

ACCIDENTS

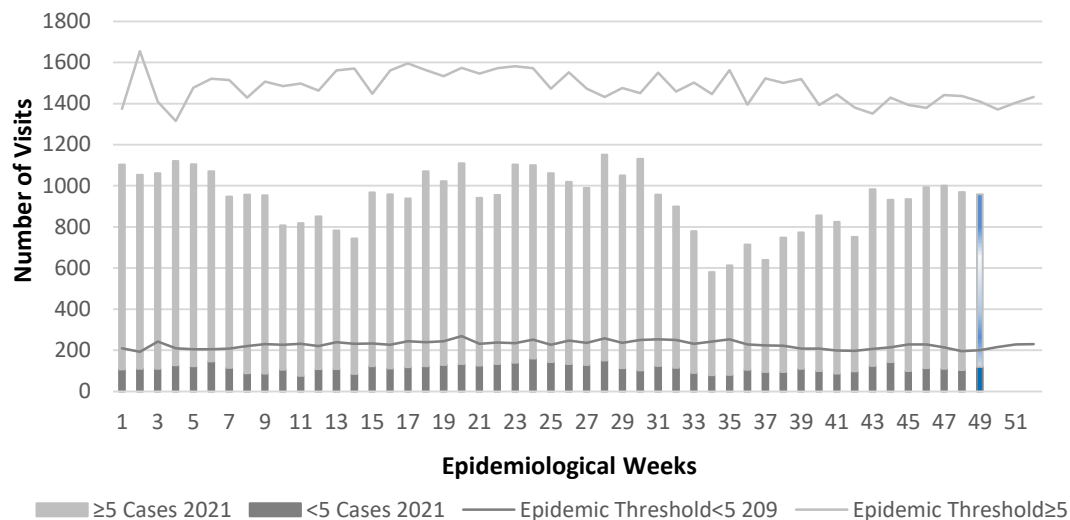
Any injury for which the cause is unintentional, e.g. motor vehicle, falls, burns, etc.

KEY

VARIATIONS OF BLUE SHOW CURRENT WEEK



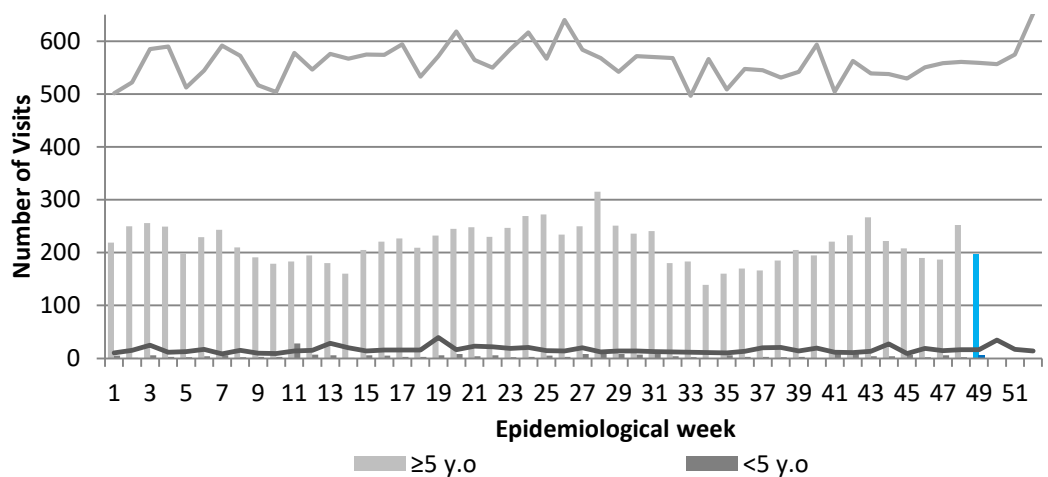
Weekly visits to Sentinel Sites for Accidents by Age Group 2021 vs Weekly Threshold; Jamaica

**VIOLENCE**

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



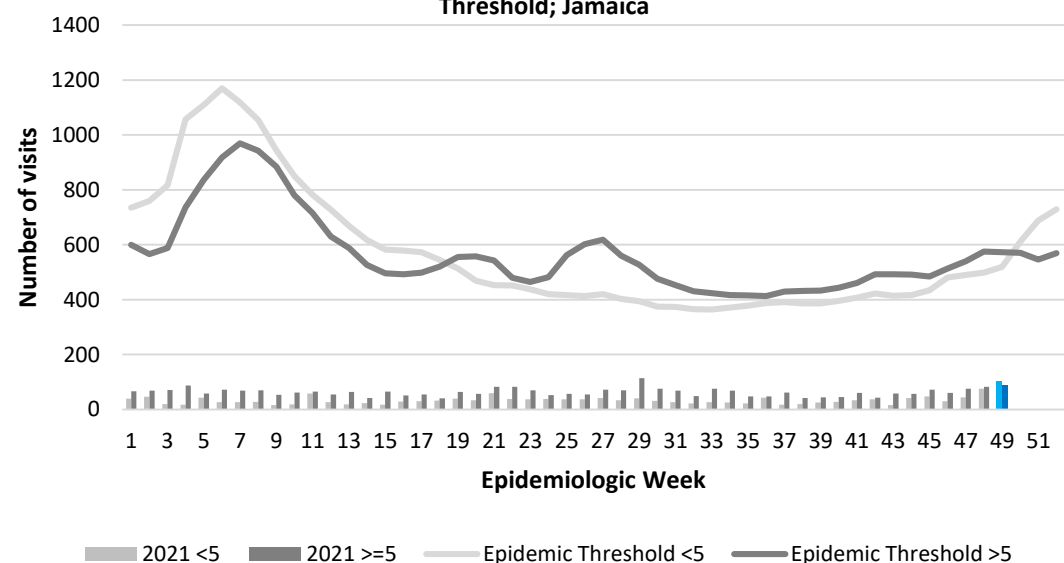
Weekly visits to Sentinel Sites for Violence by Age Group 2021 vs Weekly Threshold; Jamaica

**GASTROENTERITIS**

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



Weekly visits to Sentinel Sites for Gastroenteritis All ages 2021 vs Weekly Threshold; Jamaica



4 NOTIFICATIONS-
All clinical sites



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CLASS ONE NOTIFIABLE EVENTS				Comments
			Confirmed YTD ^α	
	CLASS 1 EVENTS		CURRENT YEAR 2021	PREVIOUS YEAR 2020
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		179 ^β	106
	Cholera		0	0
	Dengue Hemorrhagic Fever ^γ		See Dengue page below	See Dengue page below
	Hansen's Disease (Leprosy)		0	0
	Hepatitis B		2	3
	Hepatitis C		0	0
	HIV/AIDS		NA	NA
	Malaria (Imported)		0	0
	Meningitis (Clinically confirmed)		30	1
EXOTIC/ UNUSUAL	Plague		0	0
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
	Congenital Rubella Syndrome		0	0
	Congenital Syphilis		0	0
	Fever and Rash	Measles	0	0
		Rubella	0	0
	Maternal Deaths ^δ		68	52
	Ophthalmia Neonatorum		209	38
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		0	0
	Tuberculosis		34	29
	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



5 NOTIFICATIONS- All clinical sites



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NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 49

December 5– 11, 2021 Epidemiological Week 49

	EW 49	YTD
SARI cases	18	680
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

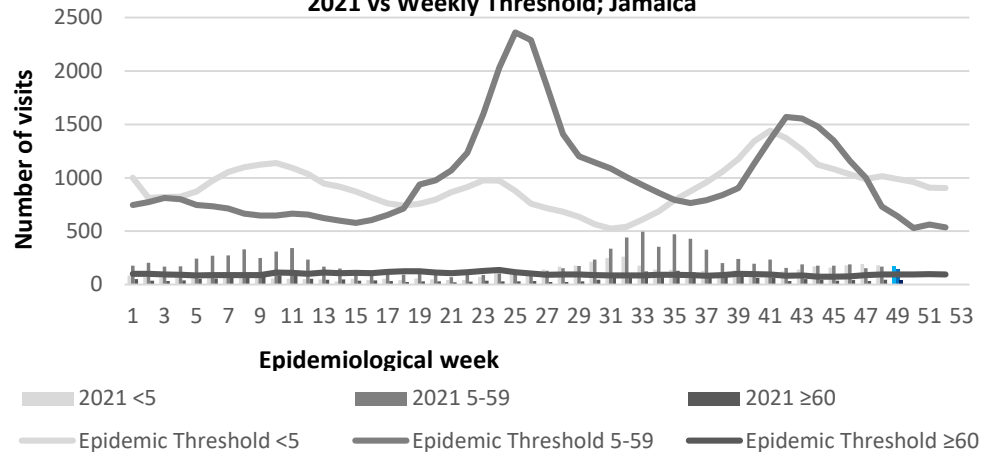
Epi Week Summary

During EW 49 eighteen (18) SARI admissions were reported.

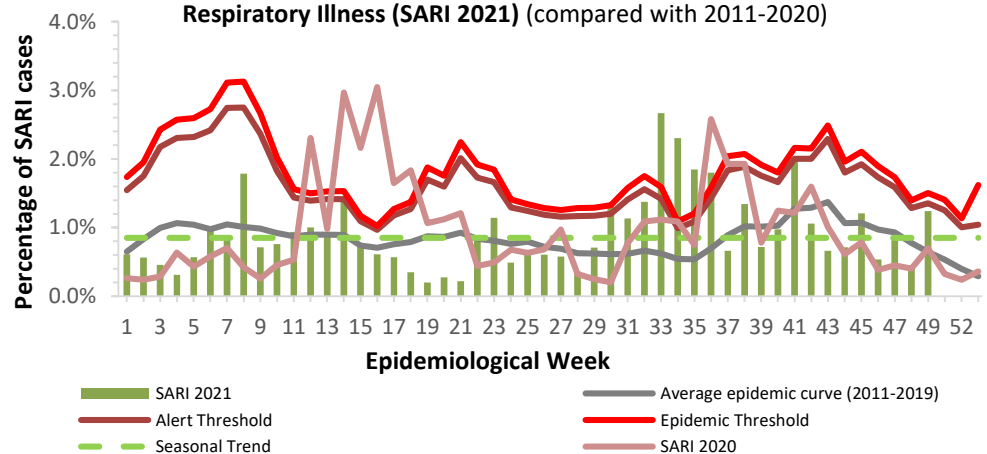
Caribbean Update EW 49

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.

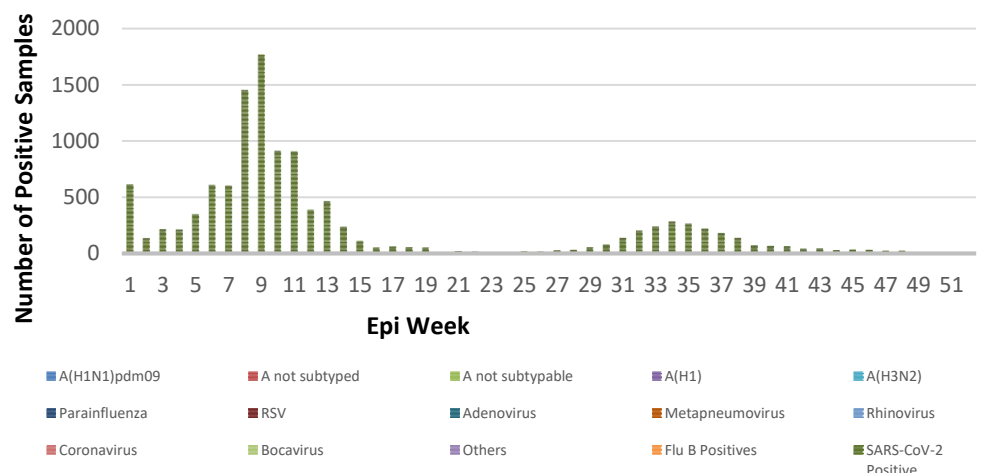
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages
2021 vs Weekly Threshold; Jamaica



Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2021) (compared with 2011-2020)



DISTRIBUTION OF INFLUENZA AND OTHER RESPIRATORY VIRUSES UNDER SURVEILLANCE BY EW



6 NOTIFICATIONS-
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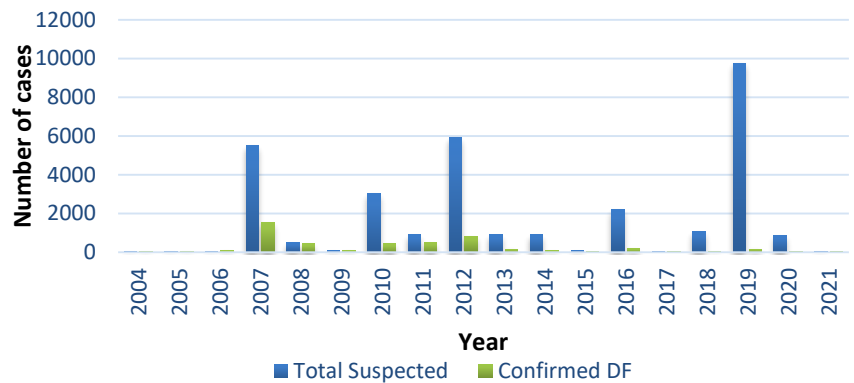
Dengue Bulletin

December 5- 11, 2021 Epidemiological Week 49

Epidemiological Week 49



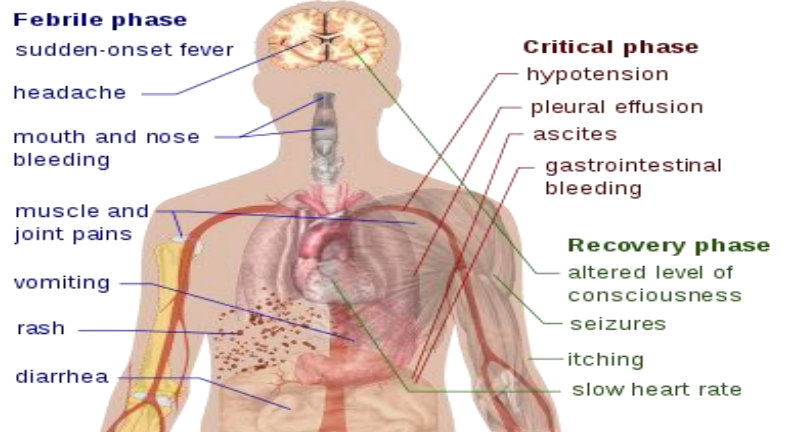
Dengue Cases by Year: 2004-2021, Jamaica



Reported suspected and confirmed dengue with symptom onset in week 49 of 2021

	2021*	
	EW 49	YTD
Total Suspected Dengue Cases	0	60
Lab Confirmed Dengue cases	0	5
CONFIRMED Dengue Related Deaths	0	0

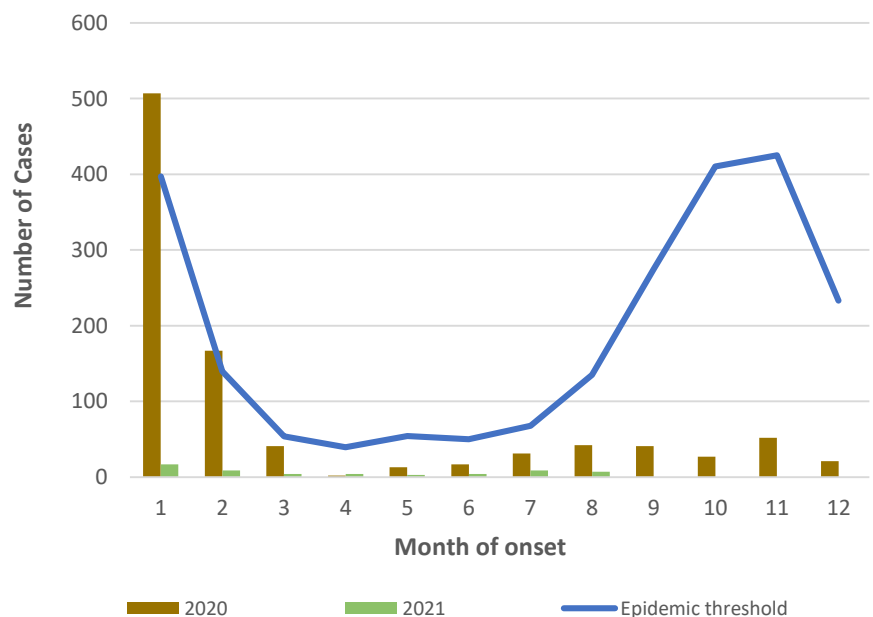
Symptoms of Dengue fever



Points to note:

- *Figure as at November 30, 2021
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

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



7 NOTIFICATIONS-
All clinical
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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.



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8 NOTIFICATIONS-
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