

WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

Physical Activity



More than 80% of the world's adolescent population is insufficiently physically active. WHO defines physical activity as any bodily movement produced by skeletal muscles that requires energy expenditure. Physical activity refers to all movement including during leisure time, for transport to get to and from places, or as part of a person's work. Both moderate- and vigorous-intensity physical activity improve health. Popular ways to be active include walking, cycling, wheeling, sports, active recreation and play, and can be done at any level of skill and for enjoyment by everybody. Regular physical activity is proven to help prevent and manage non-communicable diseases such as heart disease, stroke, diabetes and several cancers. It also helps prevent hypertension, maintain healthy body weight and can improve mental health, quality of life and well-being.

How to increase physical activity?

Countries and communities must take action to provide everyone with more opportunities to be active, in order to increase physical activity. This requires a collective effort, both national and local, across different sectors and disciplines to implement policy and solutions appropriate to a country's cultural and social environment to promote, enable and encourage physical activity.

Policies to increase physical activity aim to ensure that:

- walking, cycling and other forms of active non-motorized forms of transport are accessible and safe for all;
- labour and workplace policies encourage active commuting and opportunities for being physically active during the work day;
- childcare, schools and higher education institutions provide supportive and safe spaces and facilities for all students to spend their free time actively;
- primary and secondary schools provide quality physical education that supports children to develop behaviour patterns that will keep them physically active throughout their lives;
- community-based and school-sport programmes provide appropriate opportunities for all ages and abilities;
- sports and recreation facilities provide opportunities for everyone to access and participate in a variety of different sports, dance, exercise and active recreation; and
- health care providers advise and support patients to be regularly active.

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

EPI WEEK 42



Syndromic Surveillance

Accidents

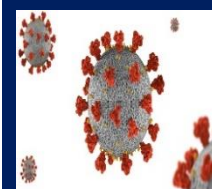
Violence

Pages 2-4



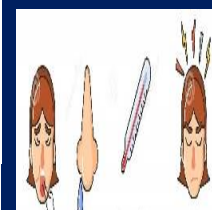
Class 1 Notifiable Events

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COVID-19

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Influenza

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Dengue Fever

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Research Paper

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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 – 39 to 42 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													
39	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
40	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
41	On Time	On Time	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time
42	On Time	On Time	Late (T)	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time

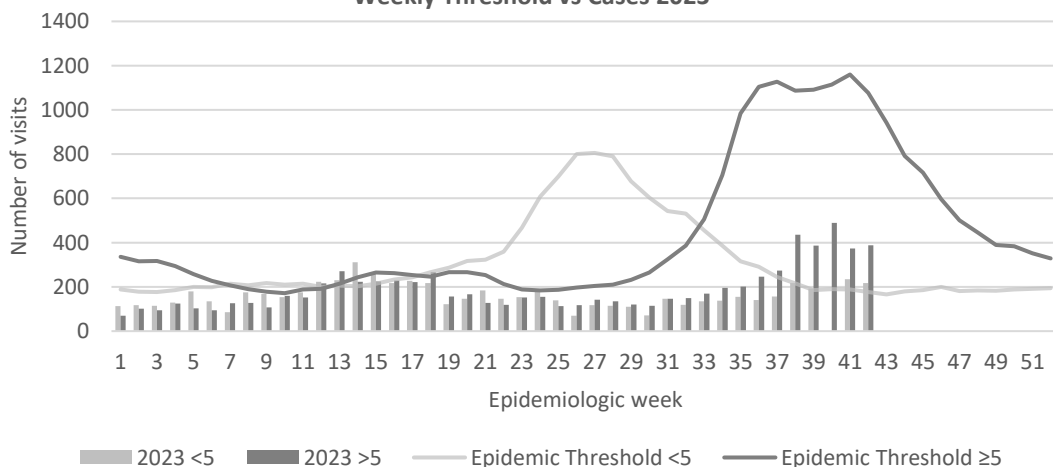
REPORTS FOR SYNDROMIC SURVEILLANCE

UNDIFFERENTIATED FEVER

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



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NOTIFICATIONS-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
up for all Class One Events



HOSPITAL
ACTIVE
SURVEILLANCE-
30 sites. Actively
pursued



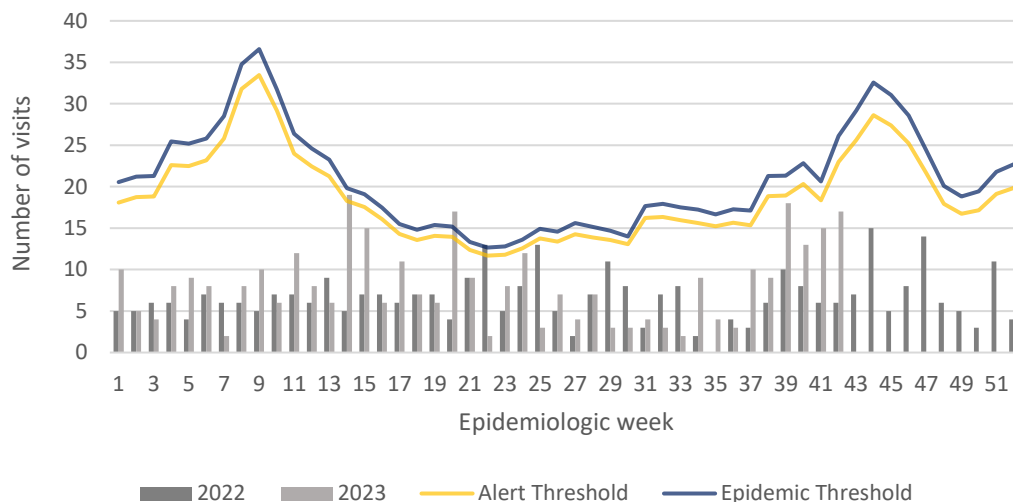
SENTINEL
REPORT- 78 sites.
Automatic reporting

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).



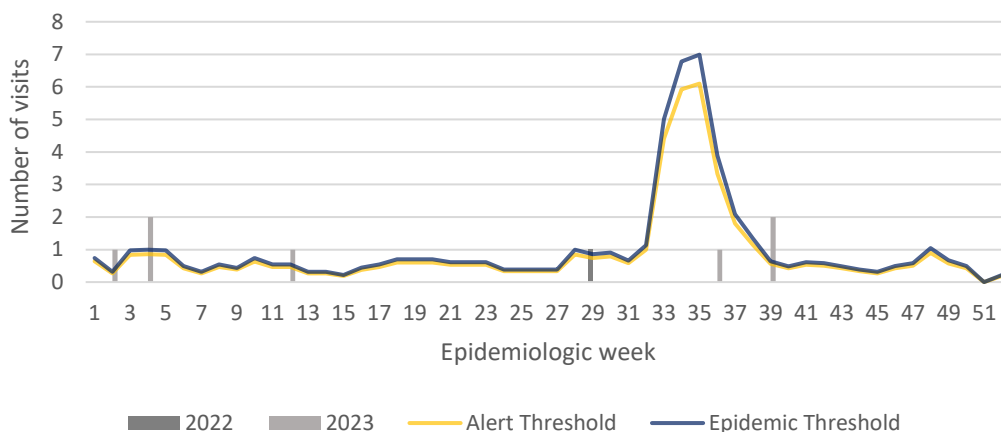
Weekly Visits to Sentinel Sites for Fever and Neurological Symptoms 2022 and 2023 vs. Weekly Threshold: Jamaica

**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

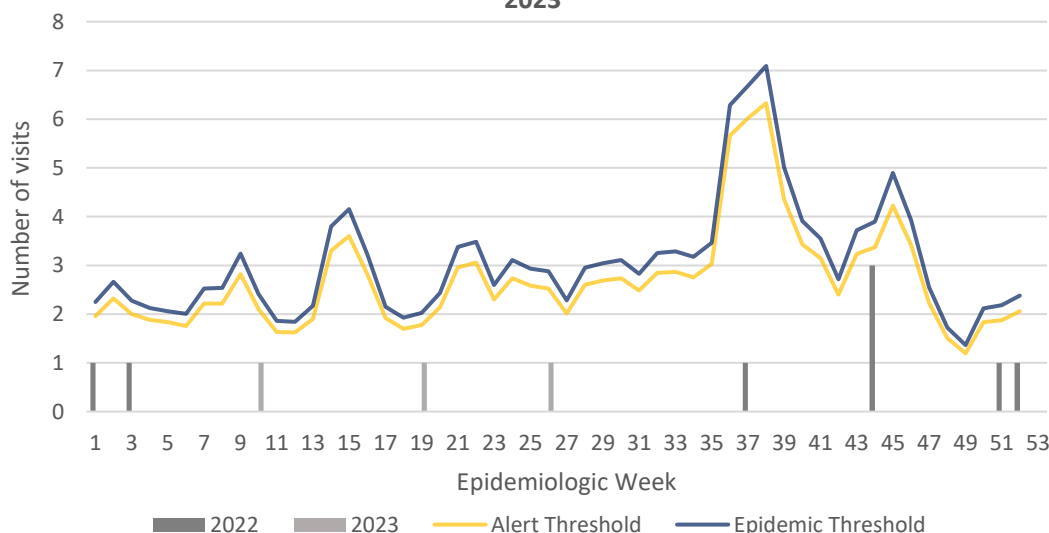
**FEVER AND JAUNDICE**

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



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NOTIFICATIONS-
All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

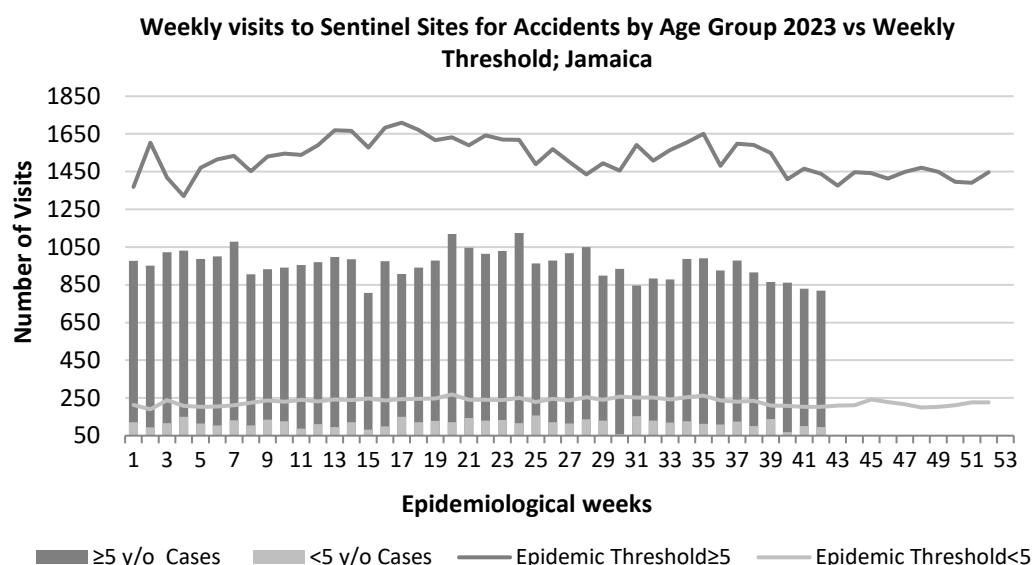


SENTINEL REPORT- 78 sites. Automatic reporting

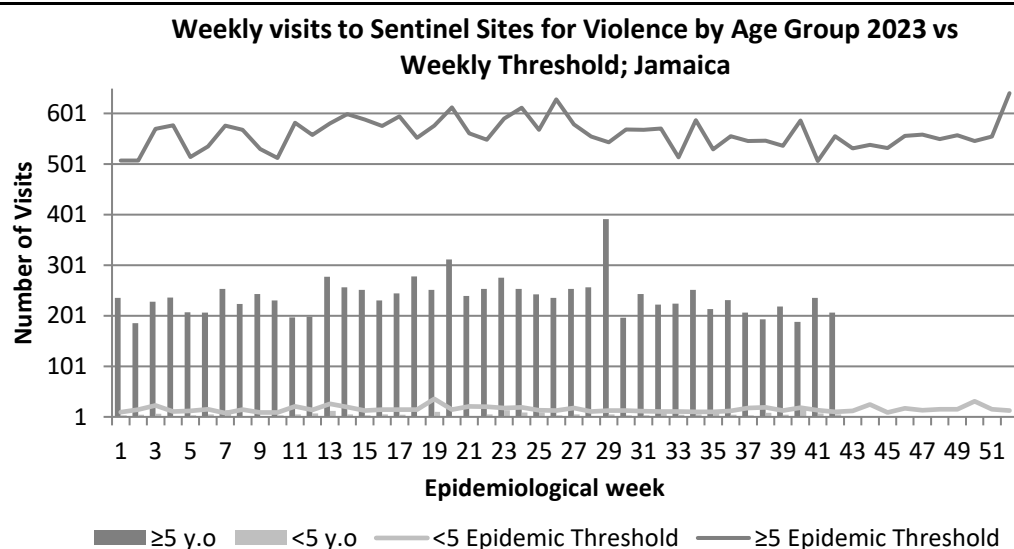


ACCIDENTS

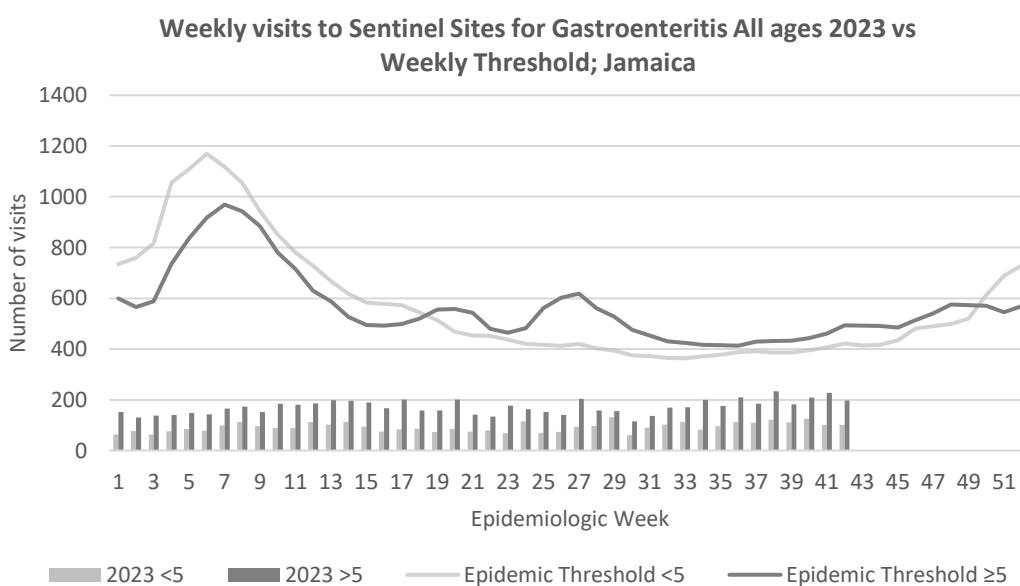
Any injury for which the cause is unintentional, e.g. motor vehicle, falls, burns, etc.

**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



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CLASS ONE NOTIFIABLE EVENTS					Comments
			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.
	CLASS 1 EVENTS		CURRENT YEAR 2023	PREVIOUS YEAR 2022	
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		269 ^β	180 ^β	Pertussis-like syndrome and Tetanus are clinically confirmed classifications.
	Cholera		0	0	
	Dengue Hemorrhagic Fever ^γ		See Dengue page below	See Dengue page below	^γ Dengue Hemorrhagic Fever data include Dengue related deaths;
	COVID-19 (SARS-CoV-2)		3762	55158	
	Hansen’s Disease (Leprosy)		0	0	^δ Figures include all deaths associated with pregnancy reported for the period.
	Hepatitis B		49	26	
	Hepatitis C		24	2	^ε CHIKV IgM positive cases
	HIV/AIDS		N/A	N/A	
	Malaria (Imported)		3	2	^θ Zika PCR positive cases
	Meningitis		25	18	
	Monkeypox		3	16	^β Updates made to prior weeks.
EXOTIC/ UNUSUAL	Plague		0	0	
HIGH MORBIDITY/ MORTALITY	Meningococcal Meningitis		0	0	^α Figures are cumulative totals for all epidemiological weeks year to date.
	Neonatal Tetanus		0	0	
	Typhoid Fever		0	0	NA- Not Available
	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		40	59	
	Ophthalmia Neonatorum		106	125	
	Pertussis-like syndrome		0	0	
	Rheumatic Fever		0	0	
	Tetanus		0	2	
	Tuberculosis		36	33	
	Yellow Fever		0	0	
Chikungunya ^ε		0	0		
Zika Virus ^θ		0	0		



5 NOTIFICATIONS-
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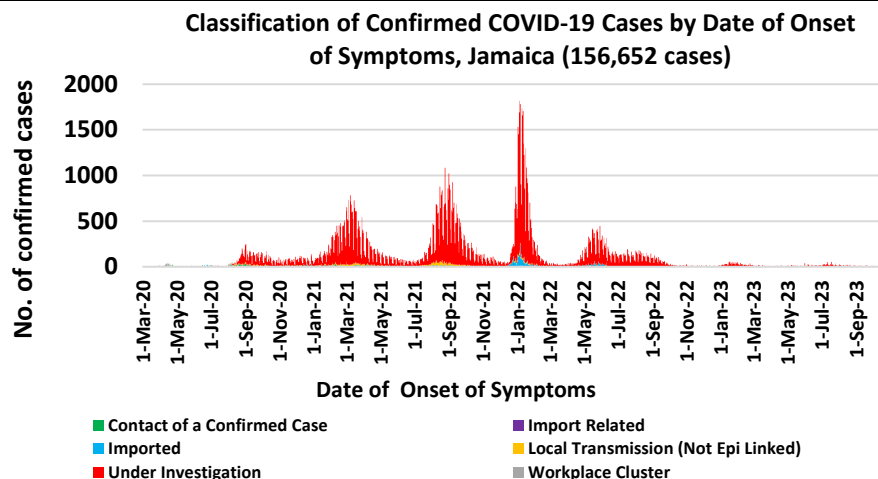


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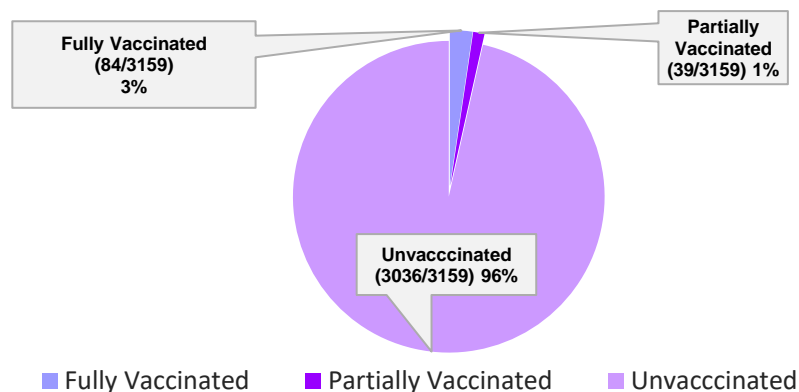
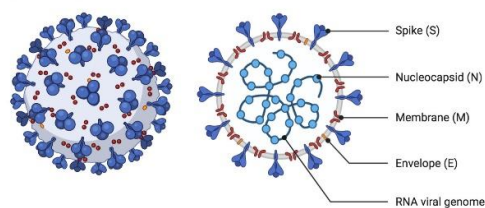
COVID-19 Surveillance Update

March 10, 2020 – EW 42, 2023

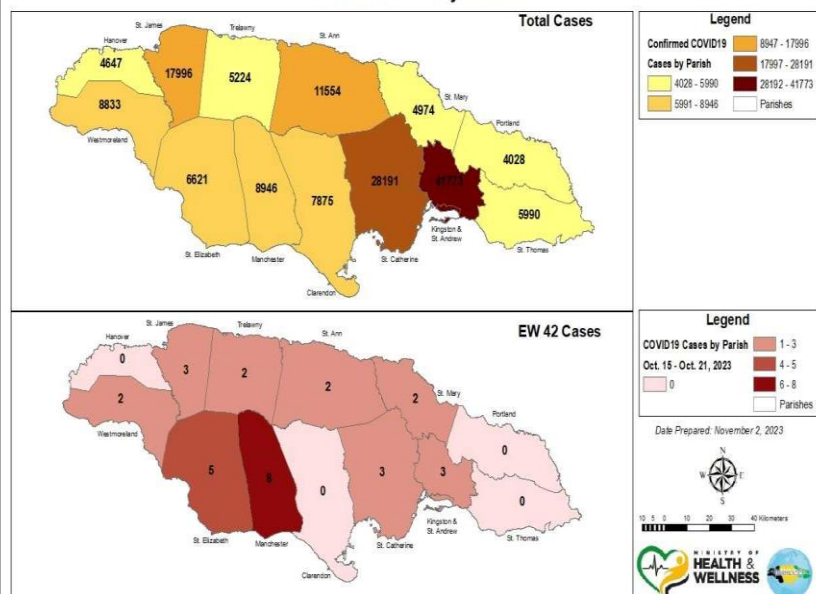
CASES	EW 42	Total
Confirmed	30	156652
Females	14	90287
Males	16	66362
Age Range	6 days old to 91 years	1 day to 108 years
* 3 positive cases had no gender specification * PCR or Antigen tests are used to confirm cases		

**COVID-19 Outcomes**

Outcomes	EW 42	Total
ACTIVE *2 weeks*		49
DIED – COVID Related	0	3721
Died - NON COVID	0	345
Died - Under Investigation	0	261
Recovered and discharged	5	103218
Repatriated	0	93
Total		156652
*Vaccination programme March 2021 – YTD * Total as at current Epi week		

**3159 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 EW39-EW42**

Epi Week	Confirmed Cases	Deaths
39	157,845	1,561
40	141,576	1,202
41	120,460	1,798
42	52,499	291
Total (4weeks)	472,380	4,852

COVID19 Cases by Parish

6 NOTIFICATIONS-
All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



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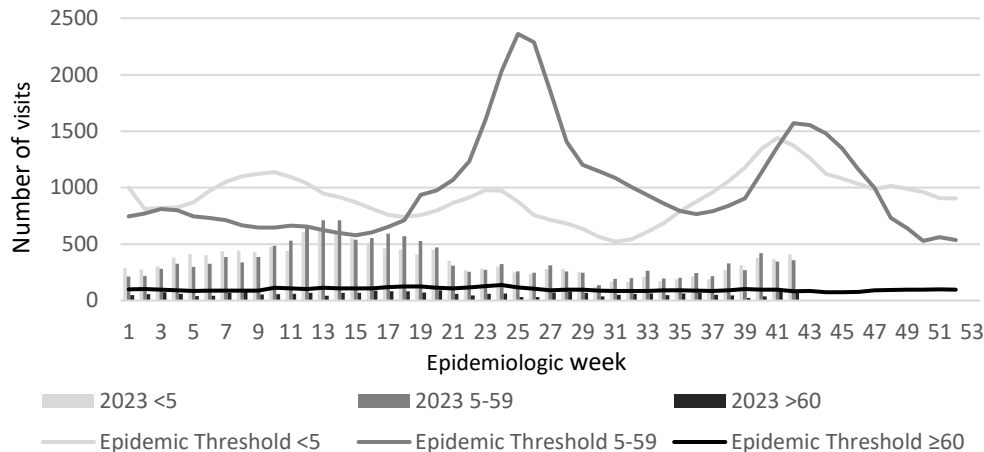
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 42

October 15 – October 21, 2023 Epidemiological Week 42

	EW 42	YTD
SARI cases	9	468
Total Influenza positive Samples	2	185
Influenza A	2	21
H3N2	0	1
H1N1pdm09	2	19
Not subtyped	0	1
Influenza B	0	164
B lineage not determined	0	2
B Victoria	0	162
Parainfluenza	0	1
Adenovirus	0	2
RSV	1	17

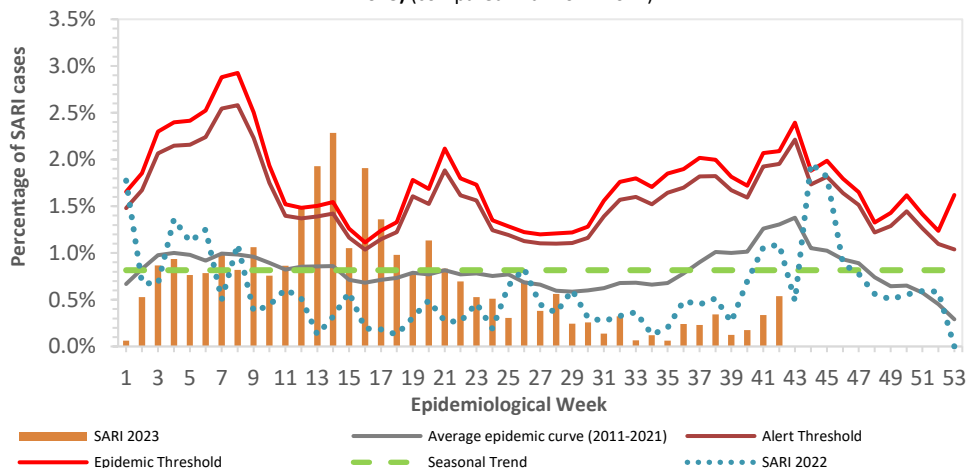
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages
2023 vs Weekly Threshold; Jamaica



Epi Week Summary

During EW 42, nine (9) SARI admissions were reported.

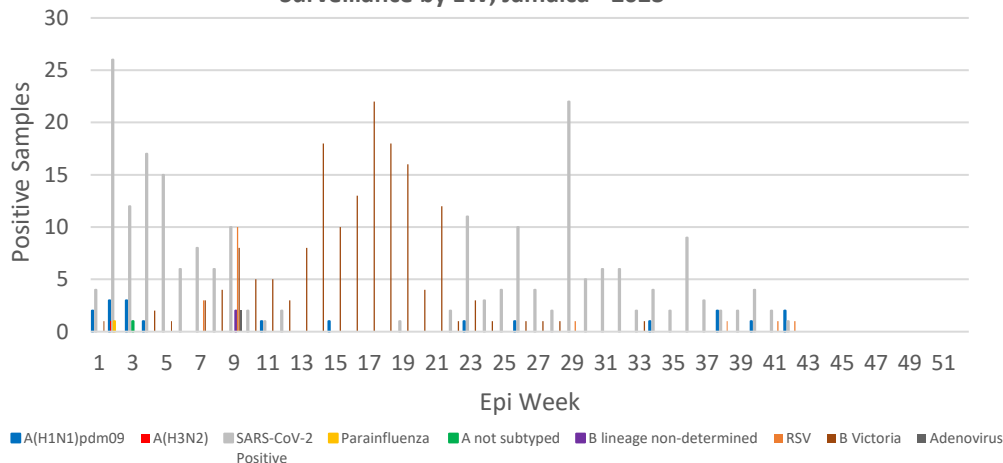
Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI) 2023) (compared with 2011-2021)



Caribbean Update EW 42

Caribbean: Influenza activity continues to show a decreasing trend in the last four EWs. During this period, the predominant viruses have been influenza B/Victoria, with lesser circulation of influenza A, mainly A(H1N1)pdm09, followed by influenza A(H3N2). RSV activity has remained low, showing a slight increase. SARS-CoV-2 activity has remained at intermediate levels, with a decreasing trend in the last four EWs. Cases of ILI and SARI have shown a decreasing trend in the last four EWs. Barbados, Guyana, Jamaica, and Saint Lucia have maintained high levels of SARS-CoV-2 circulation.

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



7 NOTIFICATIONS-
All clinical
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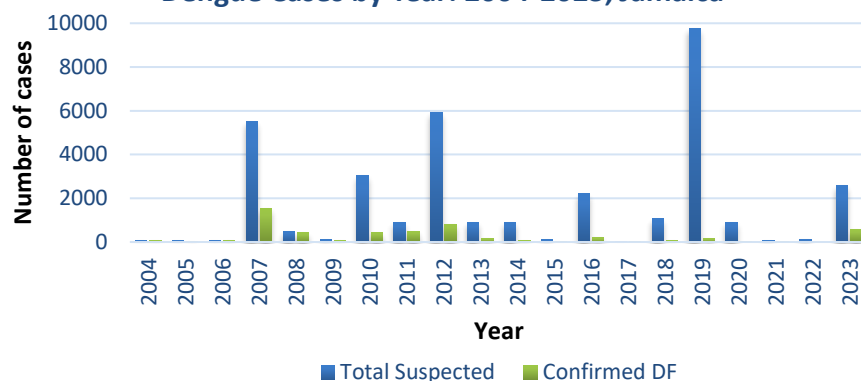
Dengue Bulletin

October 15– October 21, 2023 Epidemiological Week 42

Epidemiological Week 42



Dengue Cases by Year: 2004-2023, Jamaica



Reported suspected and confirmed dengue with symptom onset in week 42 of 2023

	2023*	
	EW 42	YTD
Total Suspected & Confirmed Dengue Cases	22	2563
Lab Confirmed Dengue cases	0	577
CONFIRMED Dengue Related Deaths	0	2

Symptoms of Dengue fever

Febrile phase

sudden-onset fever

headache

mouth and nose bleeding

muscle and joint pains

vomiting

rash

diarrhea

Critical phase

hypotension

pleural effusion

ascites

gastrointestinal bleeding

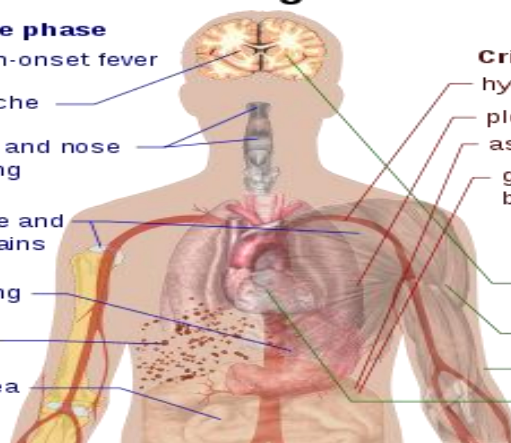
Recovery phase

altered level of consciousness

seizures

itching

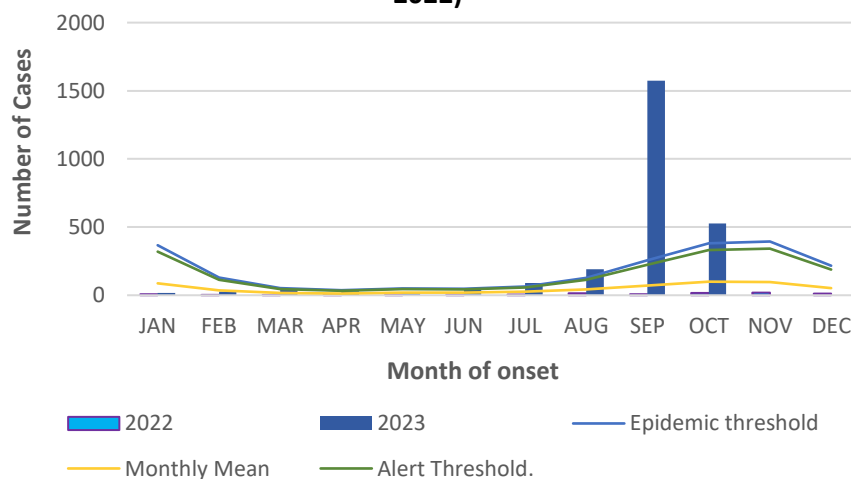
slow heart rate



Points to note:

- *Figure as at October 21, 2023
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

Suspected dengue cases for 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

The Efficacy of *Citrus aurantifolia* (Key Lime) as an inhibitory agent on selected bacteria, and fungi in Jamaica.

Theodore Campbell, Shanique Briscoe, Stephanie Gayle, Tanisha McInnis, Kay-Ann Hylton, Lisa Scarlett
The University of Technology, Jamaica

The ability of microorganisms to develop resistance mechanisms to counter the inhibitory action of antimicrobial agents has resulted in declining treatment options, which culminates in increased treatment failures, deaths, higher healthcare cost, and loss of productivity. This is further compounded by the small number of novel antimicrobial agents being developed by pharmaceutical companies. Being cognizant of the need for new treatment options, this research is focused on determining the antimicrobial activity of *Citrus aurantifolia* (Key Lime) the specie of lime commonly found in Jamaica. This study aims to investigate the antimicrobial activity of *Citrus aurantifolia* (Key Lime) also known as lime fruit, Swingle, Mexican or West Indian lime, on selected bacteria, and fungi.

Citrus aurantifolia (Key Lime) juice was investigated using both disc diffusion and well diffusion methods for its inhibitory activity against the organisms, *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Corynebacterium* specie, *Pseudomonas aeruginosa*, *Candida albicans*, *Microsporum gypseum* and *Aspergillus niger*. The minimal inhibitory concentration (MIC) was determined using a range of 1:1 – 1:32 dilutions of the lime juice.

Citrus aurantifolia juice exhibited inhibitory activity against *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Corynebacterium* specie, *Pseudomonas aeruginosa*, and *Microsporum gypseum* as they all recorded zones of inhibition. *Staphylococcus aureus* had the lowest of MIC value >1:32.

The findings have indicated that *Citrus aurantifolia* has both antibacterial and antifungal properties and will inhibit select bacteria and mould which are potentially pathogenic. The findings also suggest that *Citrus aurantifolia* has the potential to be utilized as an antimicrobial agent.



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9 NOTIFICATIONS-
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