

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## Weekly Spotlight

### Physical Activity



Insufficient physical activity is one of the leading risk factors for death worldwide and is on the rise in many countries. Regular and adequate physical activity, defined as any bodily movement that requires energy, can reduce the risk of

many noncommunicable diseases and conditions, including hypertension, coronary heart disease, stroke, diabetes, breast and colon cancers and depression.

Other benefits associated with physical activity include improved bone and functional health. The energy expended while being physically active is also a fundamental part of energy balance and weight control. In addition to the multiple health benefits of physical activity, societies that are more active can minimize economic burdens due to medical costs and years of lost productivity, as well as generate additional returns on investment, such as reduced use of fossil fuels, cleaner air and less congested, safer roads.

One in four adults (1.4 billion people worldwide) do not meet the World Health Organization (WHO) recommendations of 150 minutes of moderate-intensity physical activity per week to benefit from the reduced risk of noncommunicable diseases and to improve their health and well-being. Globally, women are less active (32%) compared with men (23%) and inactivity declines in older age in most countries. Also, poorer people, people with disabilities and chronic diseases, marginalized populations, and indigenous people have fewer opportunities to be active. In Latin America and the Caribbean, physical inactivity increased from 33% to 39% between 2011 and 2016. Meeting the recommended levels of physical activity, however, can often be achieved while performing normal, daily routines, otherwise known as active living. Active living may include recreational activities and sports, or it may even be as simple as moving around by bike, walking all the way to work or to the bus stop.

<https://www.paho.org/en/topics/physical-activity>

## EPI WEEK 52



Syndromic Surveillance

Accidents

Violence

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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 - 49 to 52 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													
49	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
50	On Time	On Time	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time	On Time	On Time	On Time	On Time
51	On Time	On Time	On Time	Late (W)	On Time	Late (W)	Late (W)	Late (W)	Late (W)	On Time	Late (W)	Late (W)	Late (W)
52	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time

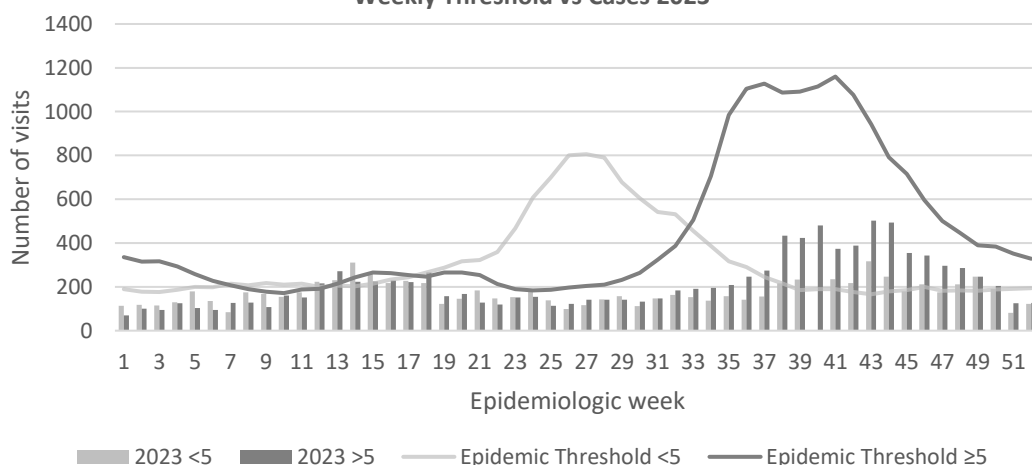
## REPORTS FOR SYNDROMIC SURVEILLANCE

## UNDIFFERENTIATED FEVER

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



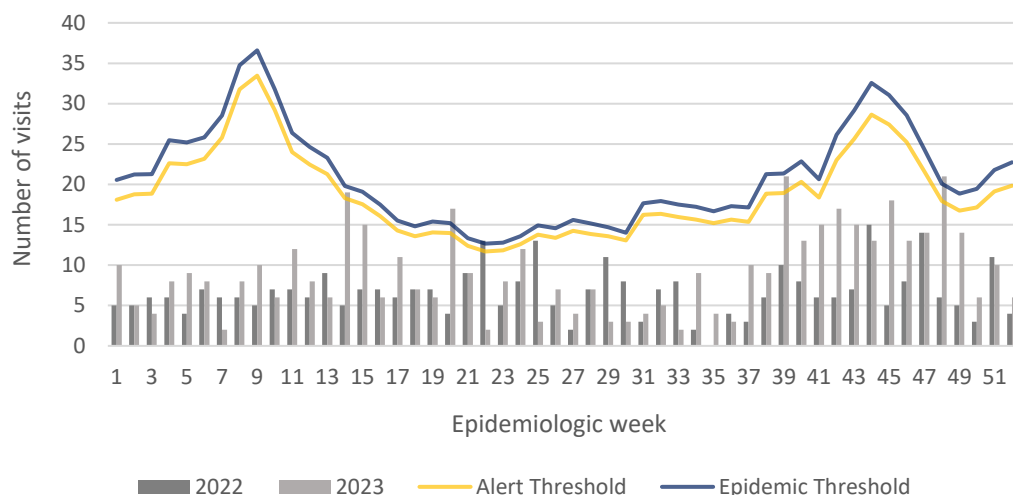
SENTINEL REPORT- 78 sites. Automatic reporting

**FEVER AND NEUROLOGICAL**

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



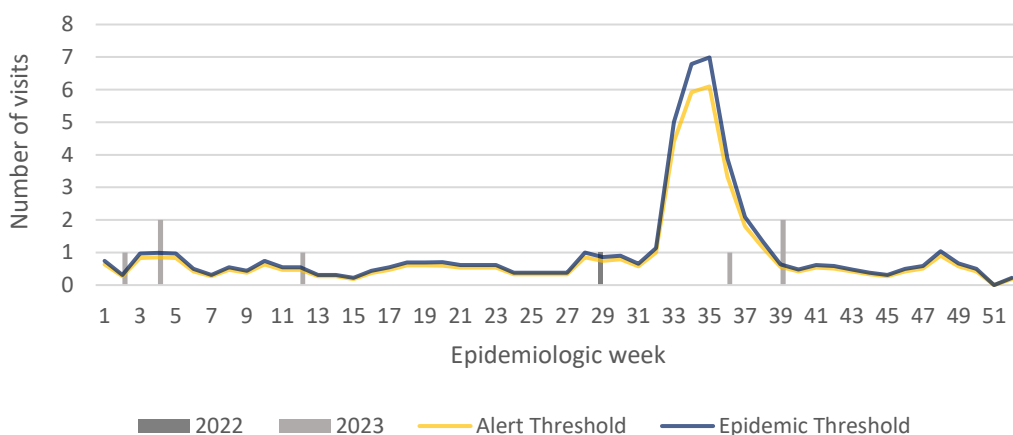
**Weekly Visits to Sentinel Sites for Fever and Neurological Symptoms 2022 and 2023 vs. Weekly Threshold: Jamaica**

**FEVER AND HAEMORRHAGIC**

Temperature of  $>38^{\circ}\text{C}$  /  $100.4^{\circ}\text{F}$  (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**

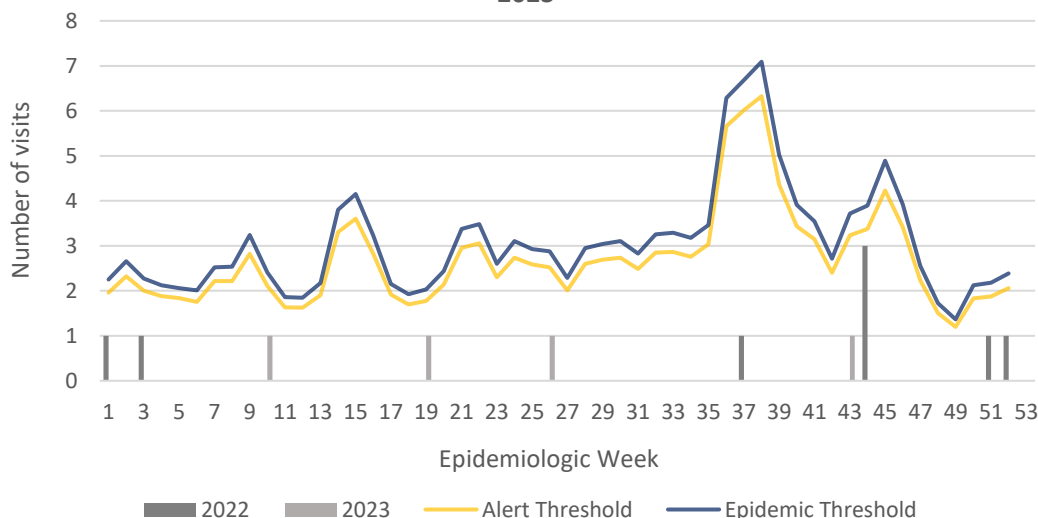
**FEVER AND JAUNDICE**

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



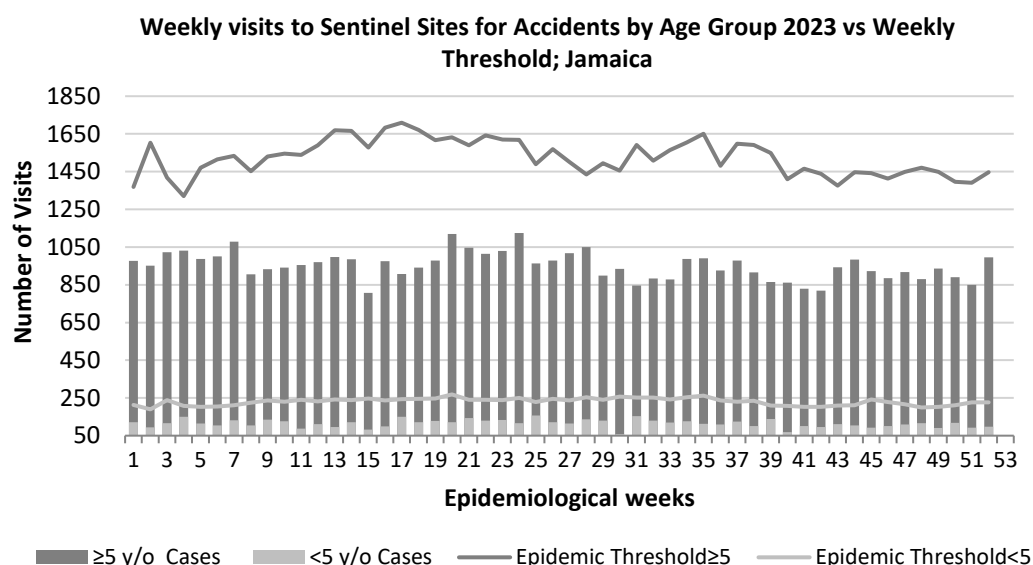
**HOSPITAL  
ACTIVE  
SURVEILLANCE-**  
30 sites. Actively  
pursued



**SENTINEL  
REPORT-** 78 sites.  
Automatic reporting

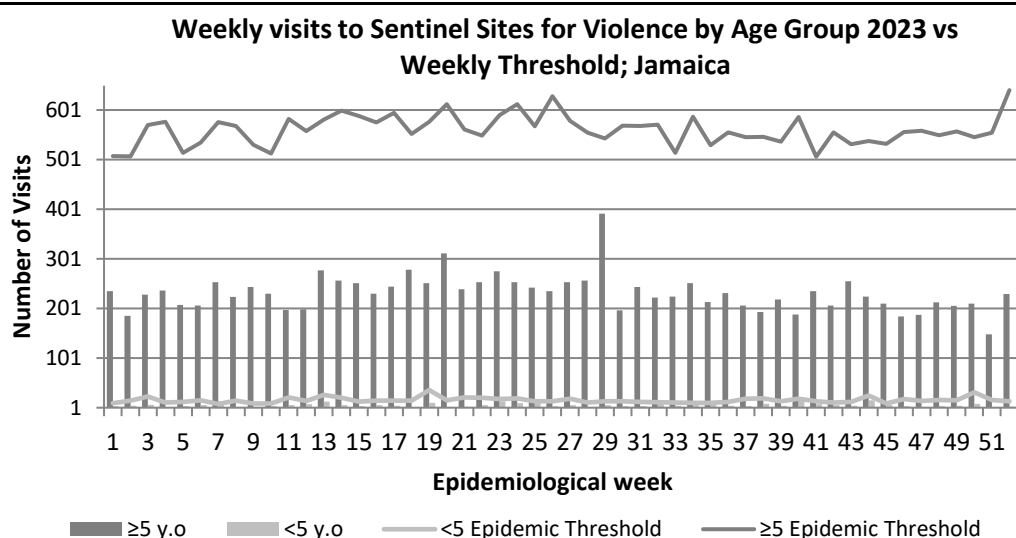
## ACCIDENTS

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



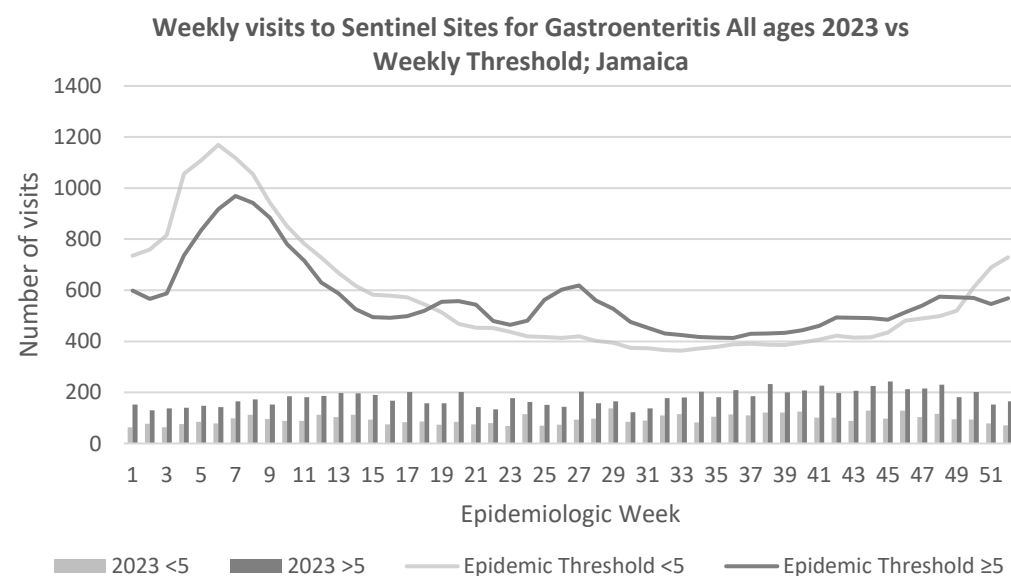
## VIOLENCE

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  
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CLASS ONE NOTIFIABLE EVENTS					Comments
			Confirmed YTD <sup>α</sup>		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		383 <sup>β</sup>	209 <sup>β</sup>	Pertussis-like syndrome and Tetanus are clinically confirmed classifications.
	Cholera		0	0	
	Dengue Hemorrhagic Fever <sup>γ</sup>		See Dengue page below	See Dengue page below	<sup>γ</sup> Dengue Hemorrhagic Fever data include Dengue related deaths;
	COVID-19 (SARS-CoV-2)		3834	55724	
	Hansen’s Disease (Leprosy)		0	1	<sup>δ</sup> Figures include all deaths associated with pregnancy reported for the period.
	Hepatitis B		54	39	
	Hepatitis C		25	2	<sup>ε</sup> CHIKV IgM positive cases
	HIV/AIDS		N/A	N/A	
	Malaria (Imported)		3	2	<sup>θ</sup> Zika PCR positive cases
	Meningitis		32	18	
	Monkeypox		3	18	<sup>β</sup> Updates made to prior weeks.
EXOTIC/ UNUSUAL	Plague		0	0	
HIGH MORBIDITY/ MORTALITY	Meningococcal Meningitis		0	0	<sup>α</sup> 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 <sup>δ</sup>		58	66	
	Ophthalmia Neonatorum		142	183	
	Pertussis-like syndrome		0	0	
	Rheumatic Fever		0	0	
	Tetanus		0	2	
	Tuberculosis		60	71	
	Yellow Fever		0	0	
	Chikungunya <sup>ε</sup>		0	0	
	Zika Virus <sup>θ</sup>		0	0	



5 NOTIFICATIONS-  
All clinical  
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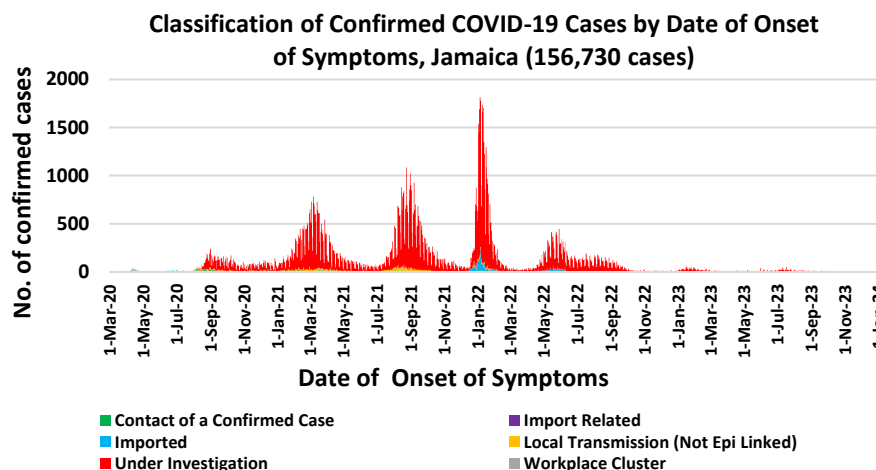
SENTINEL  
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**COVID-19 Surveillance Update**

March 10, 2020 – EW 52, 2023

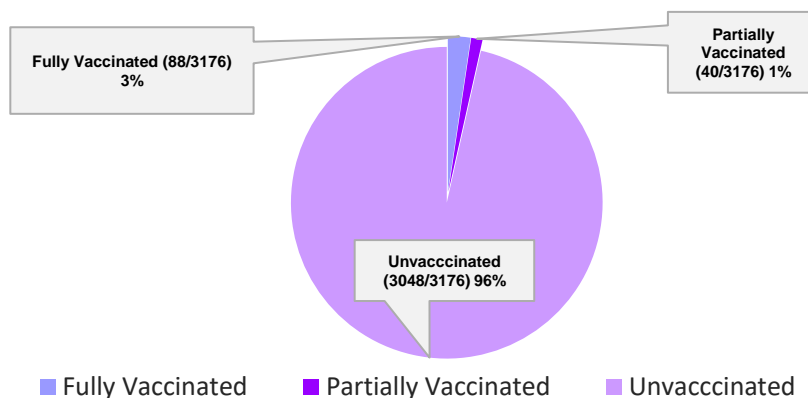
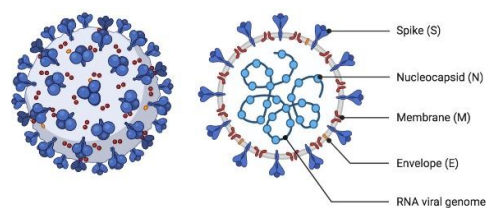
CASES	EW 52	Total
Confirmed	5	156730
Females	2	90328
Males	3	66399
Age Range	40 years old to 80 years	1 day to 108 years
* 3 positive cases had no gender specification * PCR or Antigen tests are used to confirm cases		

**COVID-19 Outcomes**

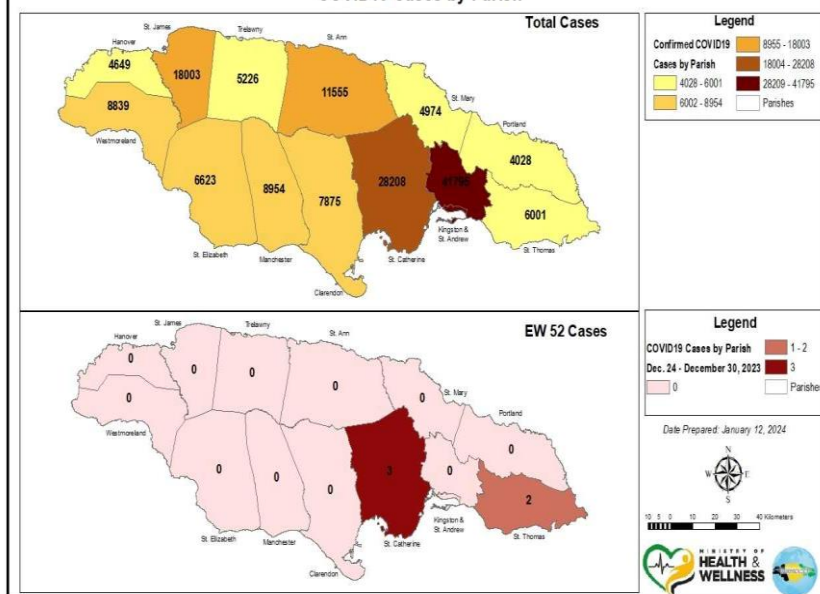
Outcomes	EW 52	Total
ACTIVE *2 weeks*		15
DIED – COVID Related	0	3738
Died - NON COVID	0	349
Died - Under Investigation	0	259
Recovered and discharged	0	103226
Repatriated	0	93
Total		156730

\*Vaccination programme March 2021 – YTD

\* Total as at current Epi week

**3176 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 EW49-EW52**

Epi Week	Confirmed Cases	Deaths
49	430,266	1311
50	437,100	1400
51	339,900	2400
52	141,100	1200
Total (4weeks)	1,348,366	6,311

**COVID19 Cases by Parish**

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NOTIFICATIONS-  
All clinical  
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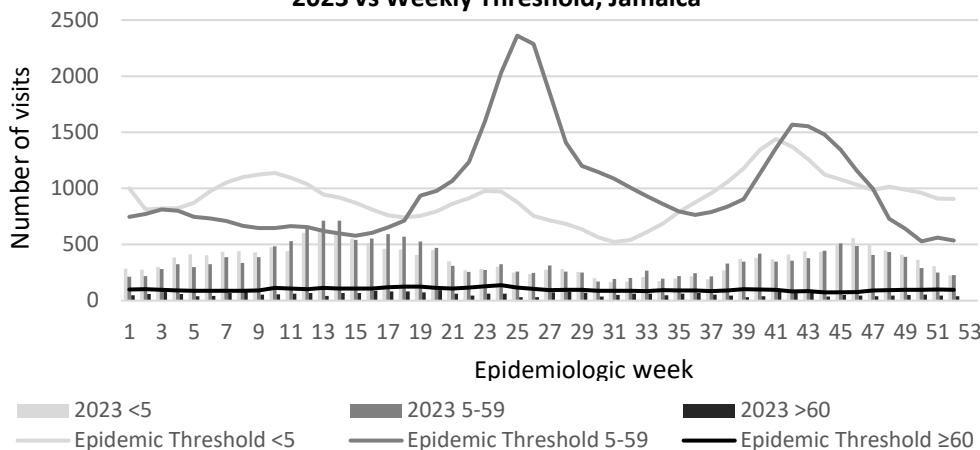
# NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

## EW 52

December 24 – December 30, 2023 Epidemiological Week 52

	EW 52	YTD
SARI cases	8	570
Total Influenza positive Samples	2	242
Influenza A	2	78
H3N2	0	1
H1N1pdm09	2	76
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	43

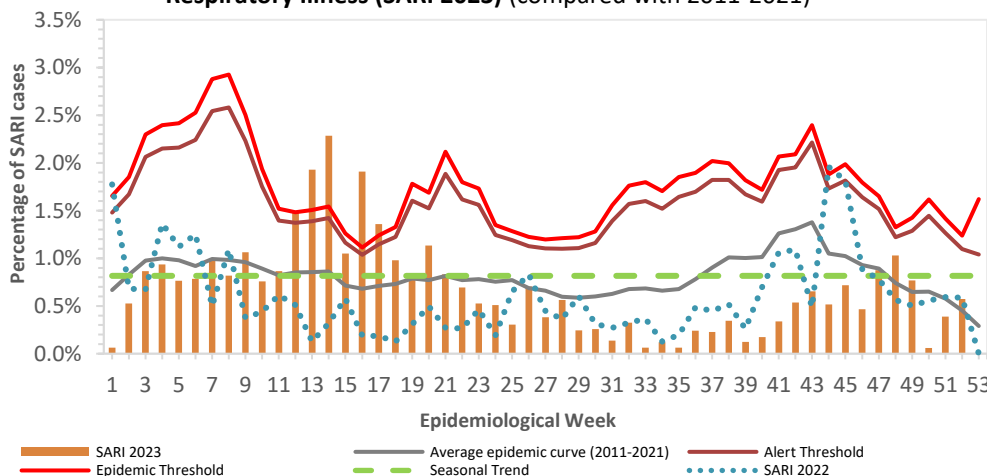
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages  
2023 vs Weekly Threshold; Jamaica



### Epi Week Summary

During EW 52, eight (8) SARI admissions were reported.

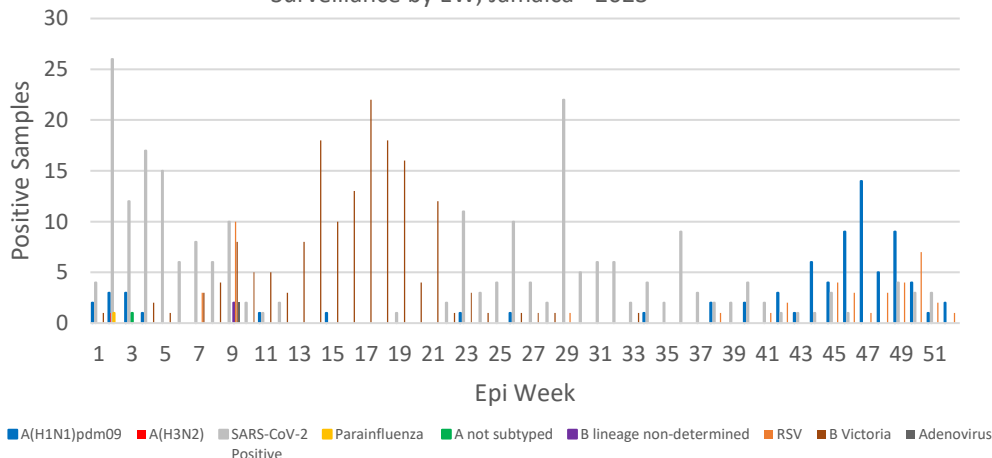
Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2023) (compared with 2011-2021)



### Caribbean Update EW 52

**Caribbean:** Influenza activity has fluctuated at moderate levels over the last four EWs. During this period, the predominant viruses have been influenza A(H1N1)pdm09, followed by influenza A(H3N2) and, to a lesser extent, influenza B/Victoria. Haiti continues to experience epidemic SARI activity in the last four EWs, with epidemic positivity rates for influenza and a decrease in SARS-CoV-2 to low levels in the last EW. In Jamaica, SARS-CoV-2 activity has slightly increased, accompanied by a pronounced rise in RSV activity in the last four EWs, with epidemic levels of pneumonia and acute respiratory infection. Saint Lucia continues to experience high levels of SARS-CoV-2 activity and an increase in RSV and influenza activity, with declining SARI activity above the moderate activity threshold. In Barbados, influenza activity remains at intermediate and rising levels, RSV activity remains at intermediate levels and has decreased in the last three EWs, while SARS-CoV-2 activity continues to decrease at low levels.

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



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All clinical sites



**INVESTIGATION**  
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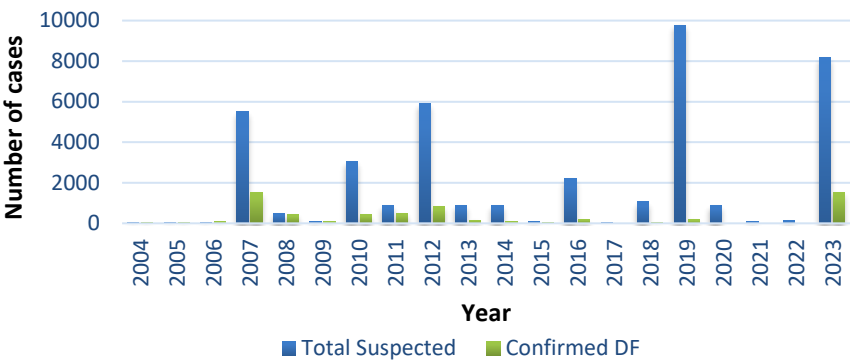
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# Dengue Bulletin


December 24 – December 30, 2023 Epidemiological Week 52      Epidemiological Week 52

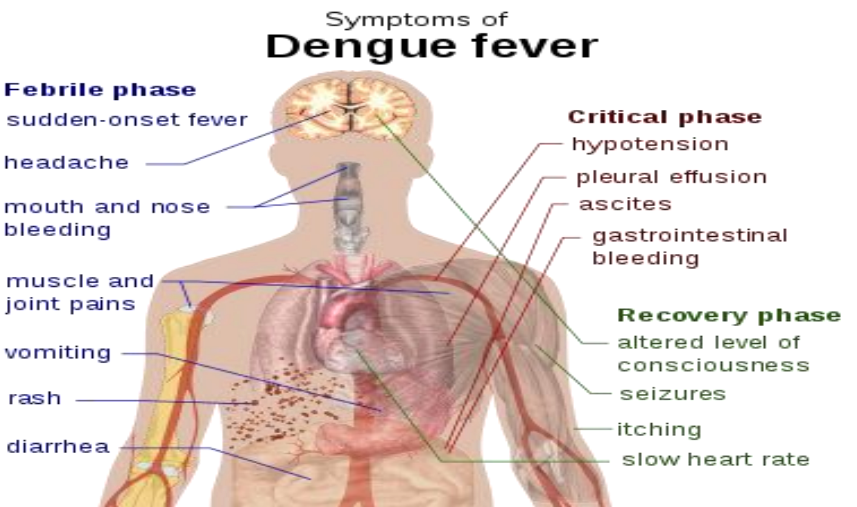


Dengue Cases by Year: 2004-2023, Jamaica



## Reported suspected and confirmed dengue with symptom onset in week 52 of 2023

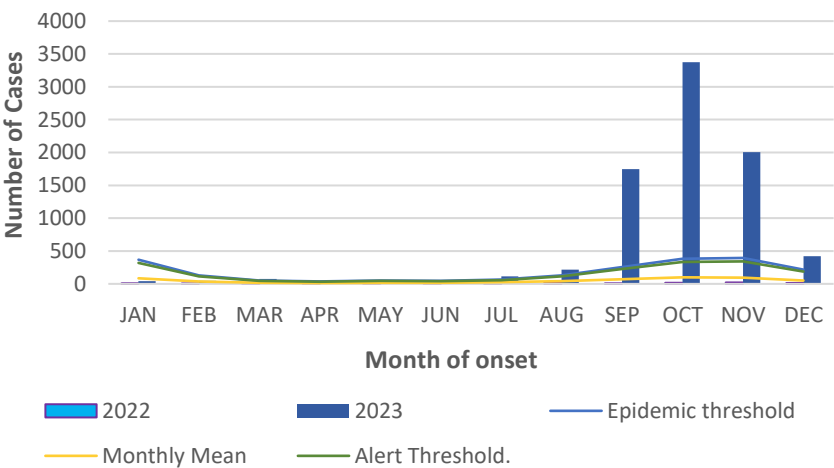
	2023*	
	EW 52	YTD
 Total Suspected & Confirmed Dengue Cases	88	8180
Lab Confirmed Dengue cases	0	1534
CONFIRMED Dengue Related Deaths	0	6



### Points to note:

- \*Figure as at January 11, 2024
- 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)





# RESEARCH PAPER

## Abstract

### THE EPIDEMIOLOGY OF OSTEOMYELITIS IN THE SICKLE CELL POPULATION OF JAMAICA

Dr. Wayne Palmer, Dr. Darren Fray, Professor Knight- Madden, Dr. Andrew Ameerally  
Orthopaedics, Department Of Surgery, Anaesthesia And Intensive Care, University Hospital Of The West  
Indies

**Introduction:** Knowing the most likely causative organism causing osteomyelitis in the sickle cell population is crucial in implementing empirical therapy; the most common causative organism varies globally.

**Objectives:** To determine the epidemiology of culture proven osteomyelitis in patients who attended the Sickle Cell Unit (SCU) from 2008- 2018, in particular, to determine the most common organisms and whether there was an association of the causal organism with patient location or disease severity.

**Methods:** Ethical approval was obtained from The University of the West Indies Ethics Committee. The charts of all eligible patients were examined. The gender, age, address of individuals and the site of the osteomyelitis and causative organism were extracted. Polyostotic episodes and those which required greater than 42 days of antibiotics were deemed severe. Data were analyzed using SPSS; associations were assessed using the Pearson Chai- Squared Test.

**Results:** Forty three patients met the inclusion criteria; 26 males and 17 females with the mean age being 16.5 years (Range 1-60). St. Catherine was the most common parish. The most prevalent organisms included Salmonella (42%), Staphylococcus Aureus (26%) and Enterobacter (12%). Commonly affected sites included the Tibia (44%), Humerus (26%) and Femur (16%), 7% were severe. There was no association between the causal organism and patient location ( $p=0.196$ ) or disease severity ( $p=0.367$ ).

**Conclusion:** Salmonella was the most common organism causing osteomyelitis in persons attending the SCU. Specific education of patients in avoidance of exposure to this organism may be helpful.



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9 NOTIFICATIONS-  
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