

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. Malaria mostly spreads to people through the bites of some infected female *Anopheles* mosquitoes. Blood transfusion and contaminated needles may also transmit malaria. The first symptoms may be mild, similar to many febrile illnesses, and difficult to recognize as malaria. Left untreated, *P. falciparum* malaria can progress to severe illness and death within 24 hours.

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*.

Prevention

Malaria can be prevented by avoiding mosquito bites and by taking medicines. Talk to a doctor about taking medicines such as chemoprophylaxis before travelling to areas where malaria is common.

Lower the risk of getting malaria by avoiding mosquito bites:

- Use mosquito nets when sleeping in places where malaria is present
- Use mosquito repellents (containing DEET, IR3535 or Icaridin) after dusk
- Use coils and vaporizers.
- Wear protective clothing.
- Use window screens.

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

EPI WEEK 27



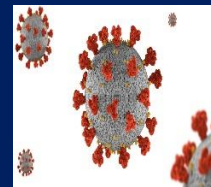
- Syndromic Surveillance
- Accidents
- Violence

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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 - 24 to 27 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												
24	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
25	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
26	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
27	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

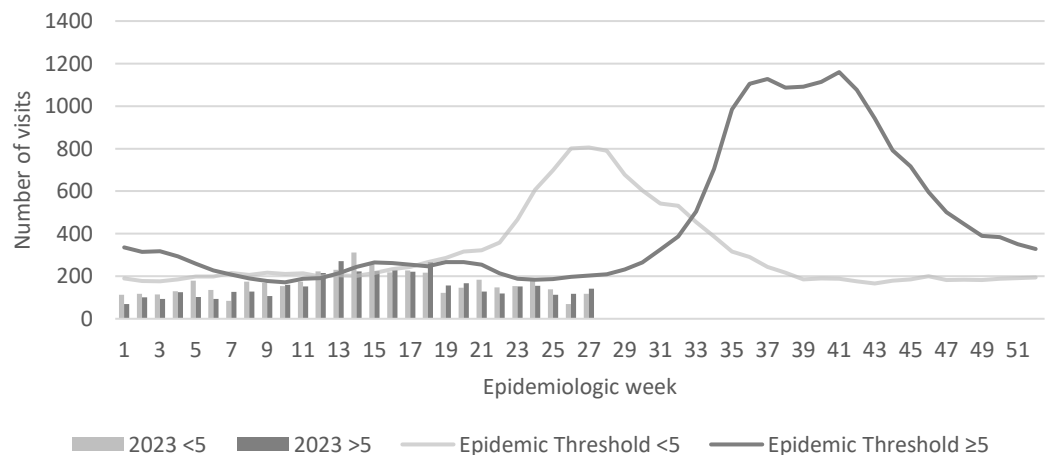
REPORTS FOR SYNDROMIC SURVEILLANCE

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



2 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



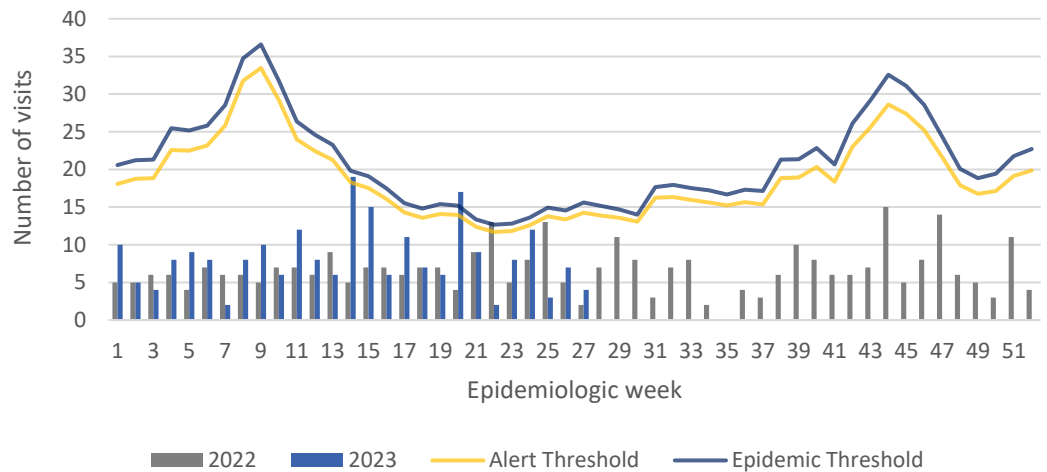
SENTINEL REPORT- 78 sites. Automatic reporting

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

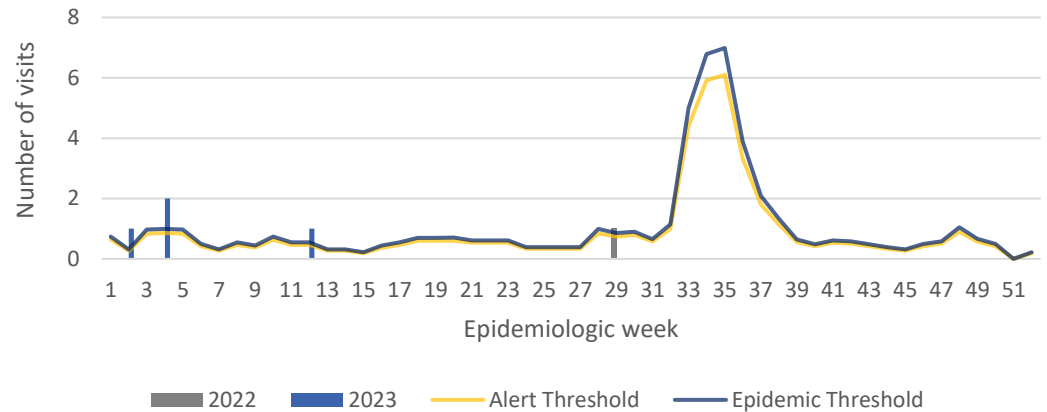


FEVER AND HAEMORRHAGIC

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



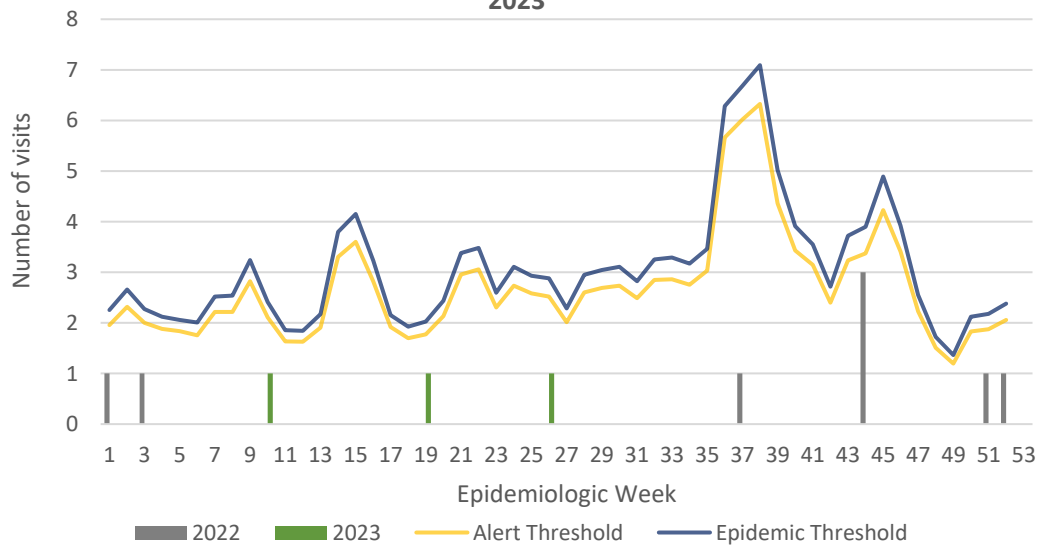
FEVER AND JAUNDICE

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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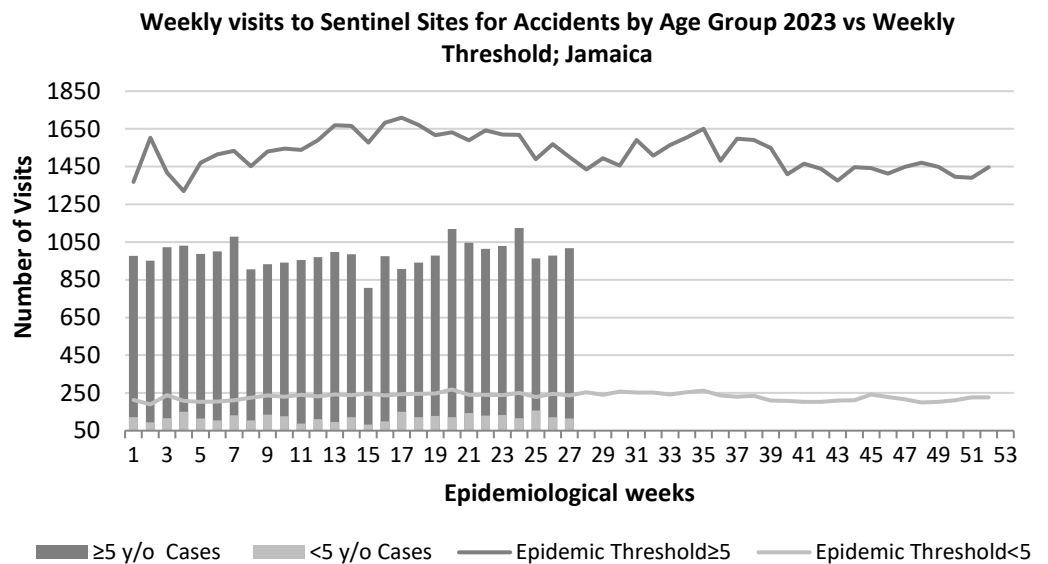


SENTINEL REPORT- 78 sites. Automatic reporting



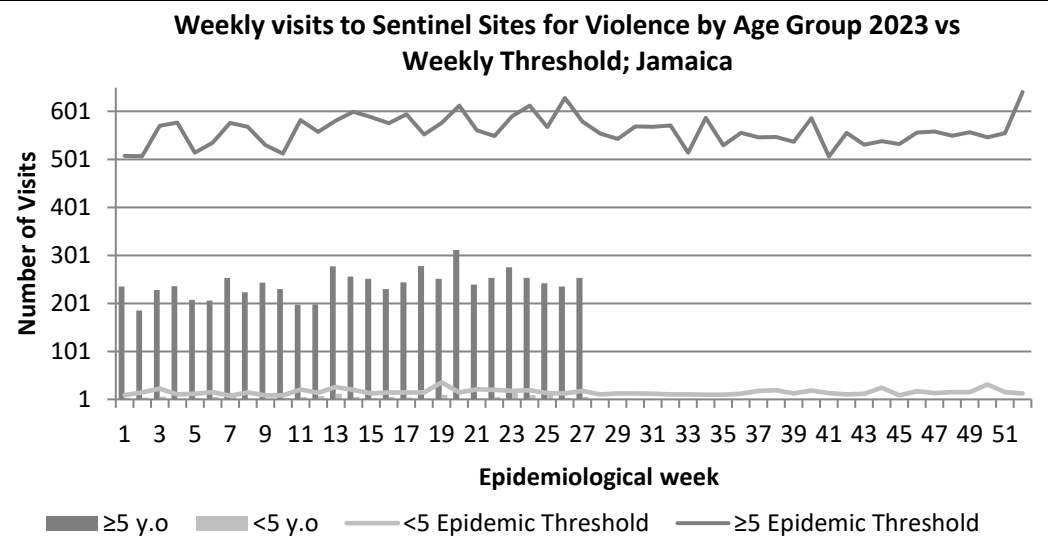
ACCIDENTS

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



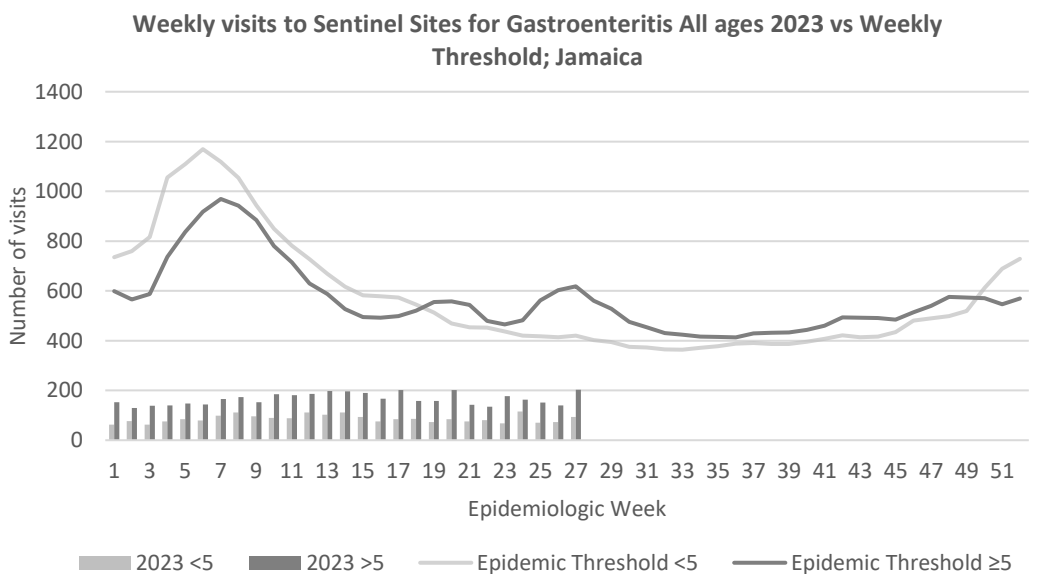
VIOLENCE

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



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CLASS ONE NOTIFIABLE EVENTS				Comments	
	CLASS 1 EVENTS	Confirmed YTD ^α			
		CURRENT YEAR 2023	PREVIOUS YEAR 2022		
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning	182 ^β	121 ^β	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.	
	Cholera	0	0		
	Dengue Hemorrhagic Fever ^γ	See Dengue page below	See Dengue page below		
	COVID-19 (SARS-CoV-2)	2667	47109		
	Hansen’s Disease (Leprosy)	0	0		
	Hepatitis B	34	8		
	Hepatitis C	15	2		
	HIV/AIDS	N/A	N/A		
	Malaria (Imported)	2	0		
	Meningitis (Clinically confirmed)	15	13		
	Monkeypox	3	1		
EXOTIC/ UNUSUAL	Plague	0	0	^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.	
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	27	41		
	Ophthalmia Neonatorum	73	48		
	Pertussis-like syndrome	0	0		
	Rheumatic Fever	0	0		
	Tetanus	0	2		
	Tuberculosis	19	13		
Yellow Fever	0	0			
Chikungunya ^ε	0	0			
Zika Virus ^θ	0	0	NA- Not Available		



5 NOTIFICATIONS-
All clinical sites



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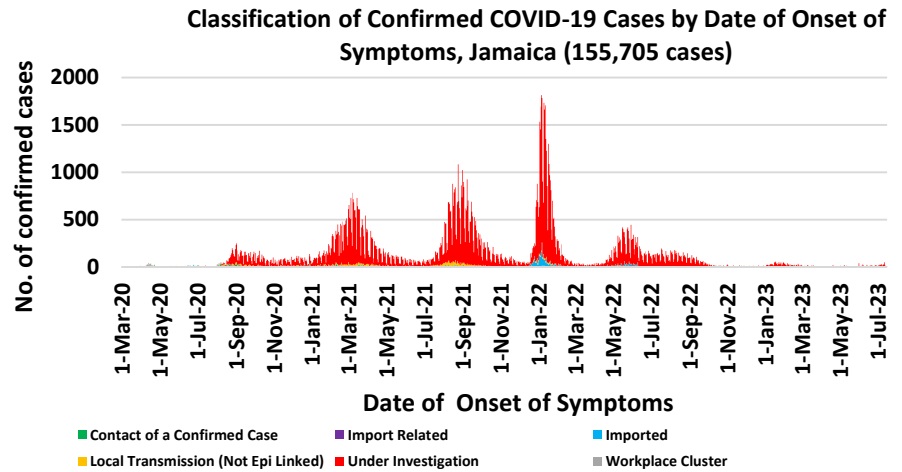
SENTINEL REPORT- 78 sites. Automatic reporting

COVID-19 Surveillance Update

March 10, 2020 – EW 27, 2023

CASES	EW 27	Total
Confirmed	109	155705
Females	59	89790
Males	50	65912
Age Range	35 days old to 95 years	1 day to 108 years

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

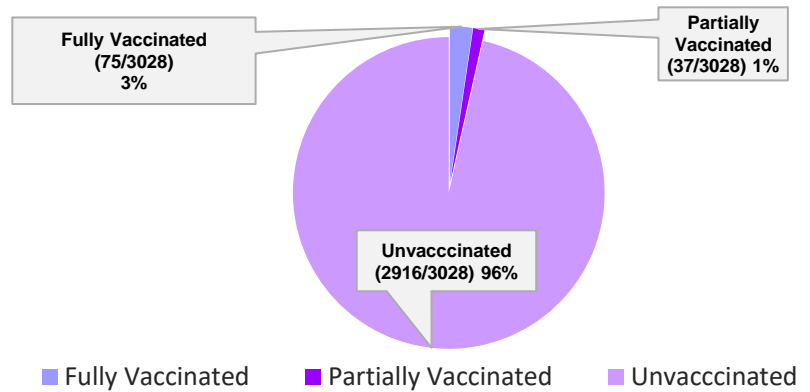


COVID-19 Outcomes

Outcomes	EW 27	Total
ACTIVE *past 2 weeks*		201
DIED – COVID Related	1	3588
Died - NON COVID	0	312
Died - Under Investigation	1	317
Recovered and discharged	16	103047
Repatriated	0	93
Total		155705

*Vaccination programme March 2021 – YTD
* Total as at current Epi week

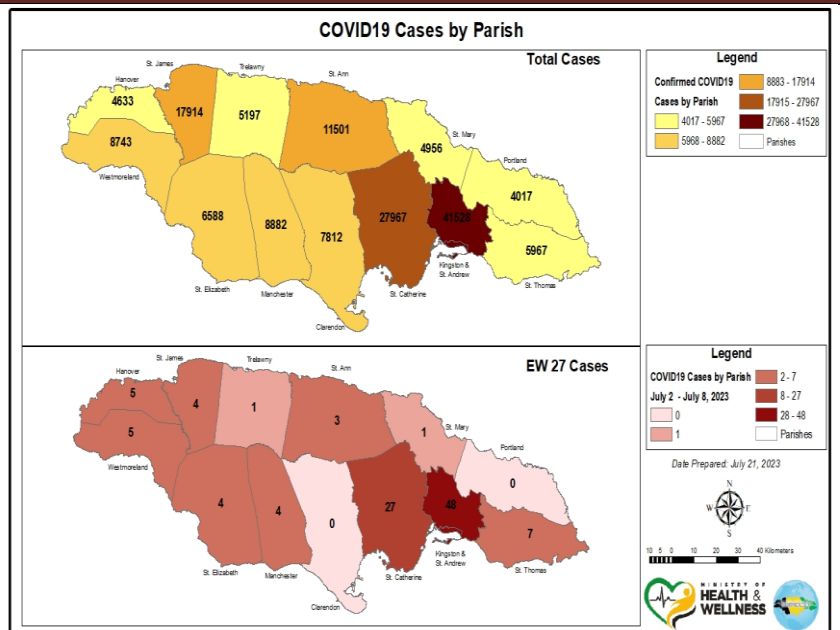
3028 COVID-19 Related Deaths since March 1, 2021 – YTD Vaccination Status among COVID-19 Deaths



COVID-19 Parish Distribution and Global Statistics

COVID-19 Virus Structure

SARS-CoV-2



COVID-19 WHO Global Statistics EW24-EW27

Epi Week	Confirmed Cases	Deaths
24	236,586	1935
25	195,745	988
26	196,728	1191
27	207,285	446
Total (4weeks)	836,344	4560

6 NOTIFICATIONS-
All clinical sites

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

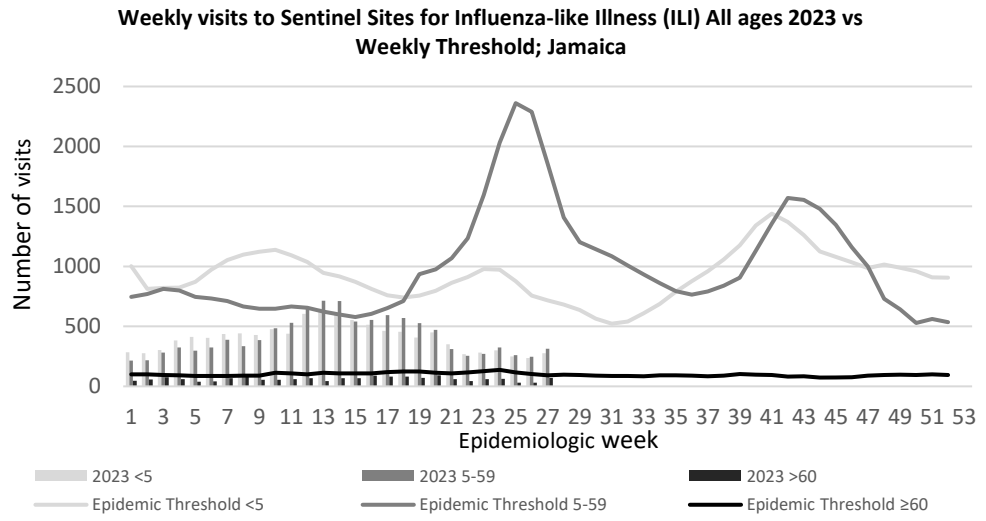
SENTINEL REPORT- 78 sites. Automatic reporting

NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 27

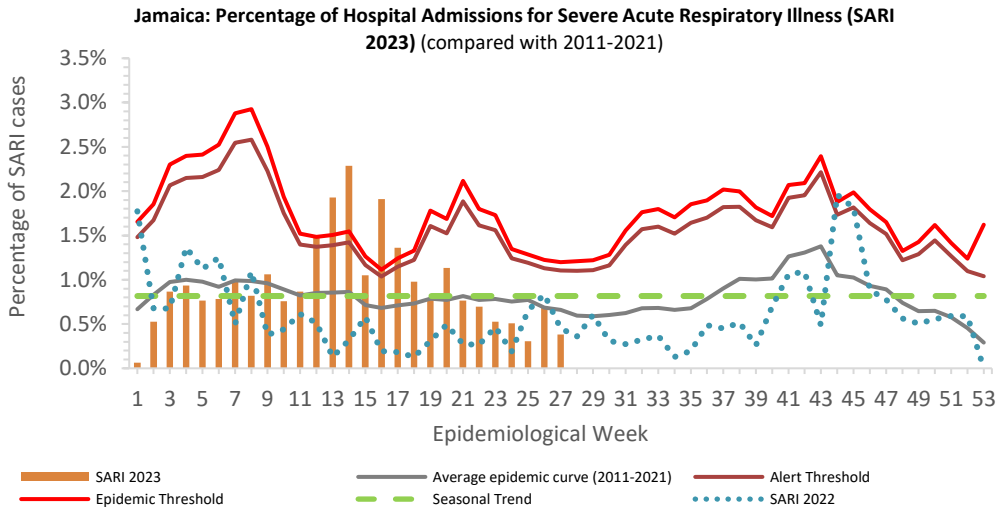
July 02 – July 08, 2023 Epidemiological Week 27

	EW 27	YTD
SARI cases	6	405
Total Influenza positive Samples	0	131
Influenza A	0	14
H3N2	0	1
H1N1pdm09	0	12
Not subtyped	0	1
Influenza B	0	117
B lineage not determined	0	2
B Victoria	0	115
Parainfluenza	0	1
Adenovirus	0	2
RSV	0	13



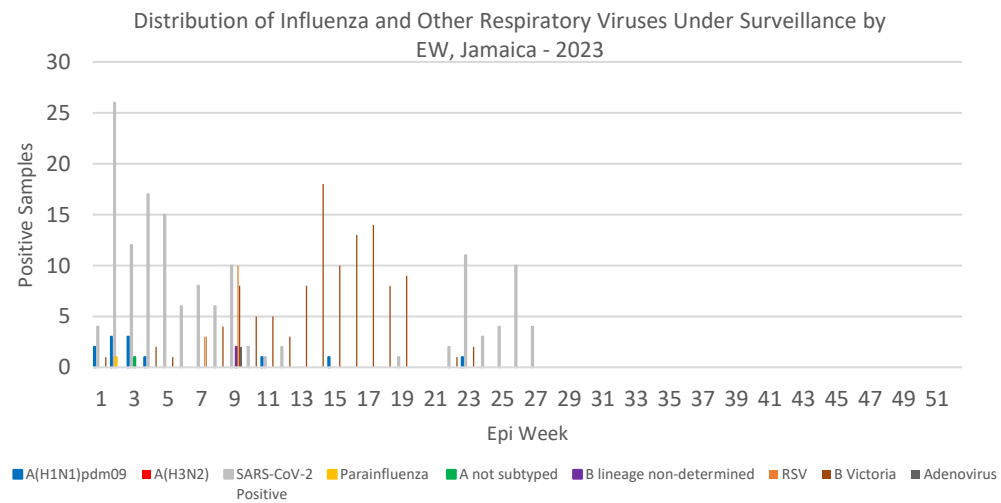
Epi Week Summary

During EW 27, SIX (6) SARI admissions were reported.



Caribbean Update EW 27

Caribbean: Influenza activity has shown a decreasing trend. During the last 4 EWs, the predominant influenza viruses have been B/Victoria, with lesser circulation of influenza A (mainly A(H1N1)pdm09). RSV activity has remained low. SARS-CoV-2 activity after showing an increase in previous weeks, has been decreasing in the last 4 EW and is currently at intermediate levels of circulation. Cases of ILI and SARI which had increased due to positive cases of SARS-CoV-2 and influenza in previous weeks, have shown a decreasing trend in the last 4 EW.



7 NOTIFICATIONS-
All clinical sites

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

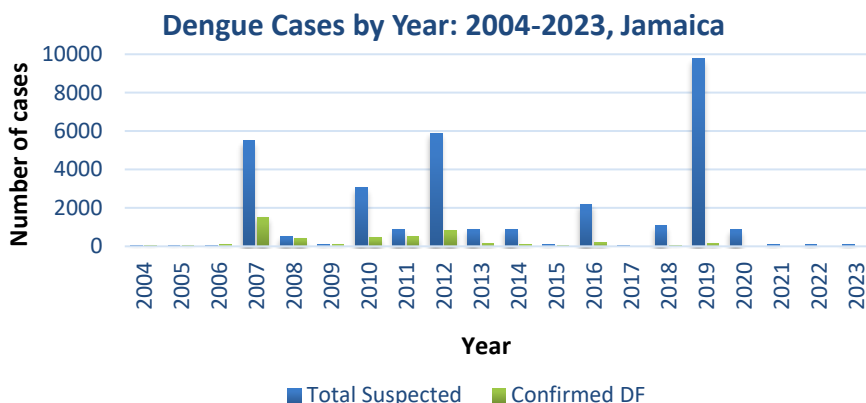
HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

SENTINEL REPORT- 78 sites. Automatic reporting


Dengue Bulletin

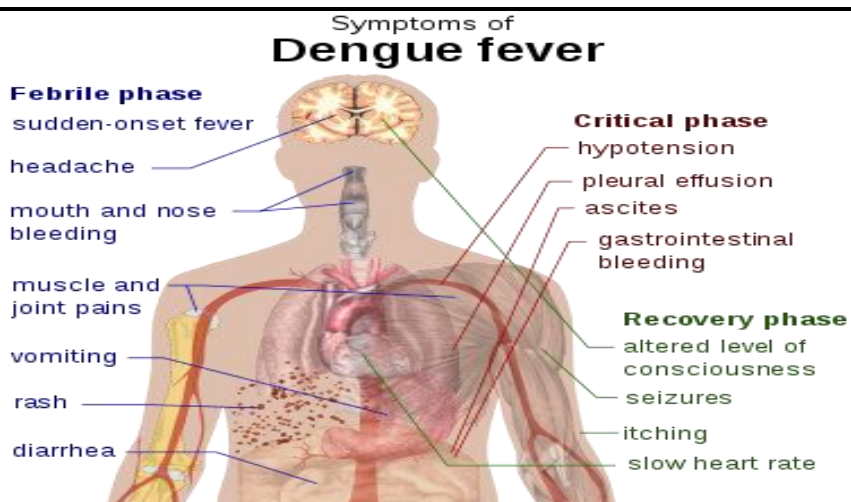
July 02 – July 08, 2023 Epidemiological Week 27

Epidemiological Week 27



Reported suspected and confirmed dengue with symptom onset in week 27 of 2023

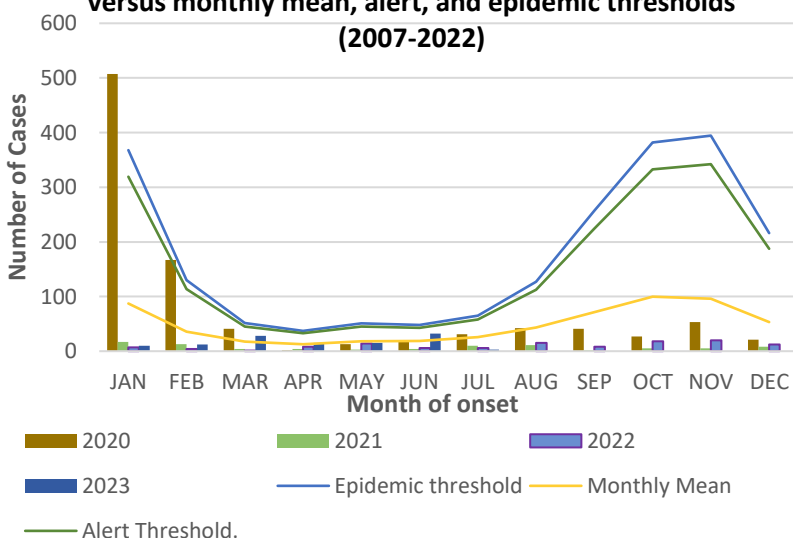
	2023*	
	EW 27	YTD
 Total Suspected Dengue Cases	2	115
Lab Confirmed Dengue cases	0	0
CONFIRMED Dengue Related Deaths	0	0



Points to note:

- *Figure as at July 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

HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

SENTINEL REPORT- 78 sites. Automatic reporting

RESEARCH PAPER

Abstract

THE EPIDEMIOLOGY OF OSTEOMYELITIS IN THE SICKLE CELL POPULATION OF JAMAICA

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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-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
up for all Class One Events



HOSPITAL
ACTIVE
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30 sites. Actively
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SENTINEL
REPORT- 78 sites.
Automatic reporting