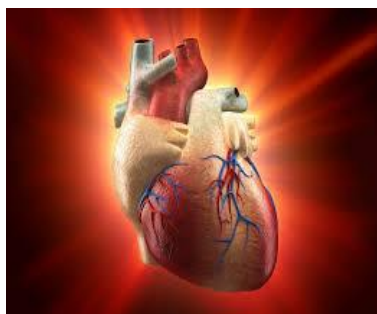


WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

Cardiovascular diseases



Cardiovascular diseases (CVDs) are a group of disorders of the heart and blood vessels. They include:

- coronary heart disease – a disease of the blood vessels supplying the heart muscle;
- cerebrovascular disease – a disease of the blood vessels supplying the brain;
- peripheral arterial disease – a disease of blood vessels supplying the arms and legs;
- rheumatic heart disease – damage to the heart muscle and heart valves from rheumatic fever, caused by streptococcal bacteria;
- congenital heart disease – birth defects that affect the normal development and functioning of the heart caused by malformations of the heart structure from birth; and
- deep vein thrombosis and pulmonary embolism – blood clots in the leg veins, which can dislodge and move to the heart and lungs.

Heart attacks and strokes are usually acute events and are mainly caused by a blockage that prevents blood from flowing to the heart or brain. The most common reason for this is a build-up of fatty deposits on the inner walls of the blood vessels that supply the heart or brain. Strokes can be caused by bleeding from a blood vessel in the brain or from blood clots.

Symptoms of heart attacks and strokes

Often, there are no symptoms of the underlying disease of the blood vessels. A heart attack or stroke may be the first sign of underlying disease. Symptoms of a heart attack include: pain or discomfort in the centre of the chest; and/or pain or discomfort in the arms, the left shoulder, elbows, jaw, or back.

In addition the person may experience difficulty in breathing or shortness of breath; nausea or vomiting; light-headedness or faintness; a cold sweat; and turning pale. Women are more likely than men to have shortness of breath, nausea, vomiting, and back or jaw pain. The most common symptom of a stroke is sudden weakness of the face, arm, or leg, most often on one side of the body. Other symptoms include sudden onset of:

- numbness of the face, arm, or leg, especially on one side of the body;
- confusion, difficulty speaking or understanding speech;
- difficulty seeing with one or both eyes;
- difficulty walking, dizziness and/or loss of balance or coordination;
- severe headache with no known cause; and/or
- fainting or unconsciousness.

People experiencing these symptoms should seek medical care immediately.

[https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds))

EPI WEEK 37



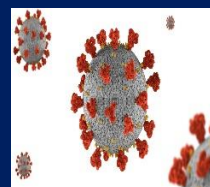
- Syndromic Surveillance
- Accidents
- Violence

Pages 2-4



Class 1 Notifiable Events

Page 5



COVID-19

Page 6



Influenza

Page 7



Dengue Fever

Page 8



Research Paper

Page 9

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 - 34 to 37 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													
34	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	Late (W)
35	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
36	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	Late (T)
37	On Time	On Time	On Time	On Time	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time	On Time	On Time

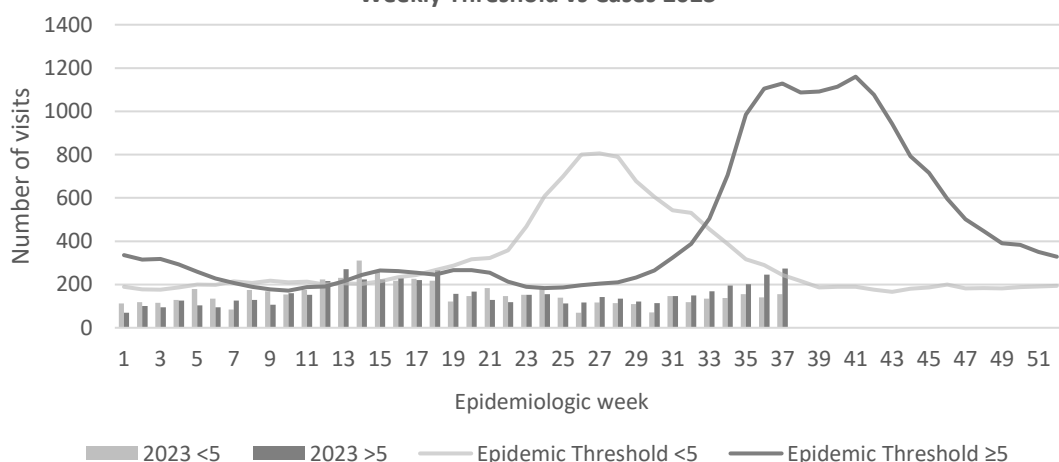
REPORTS FOR SYNDROMIC SURVEILLANCE

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



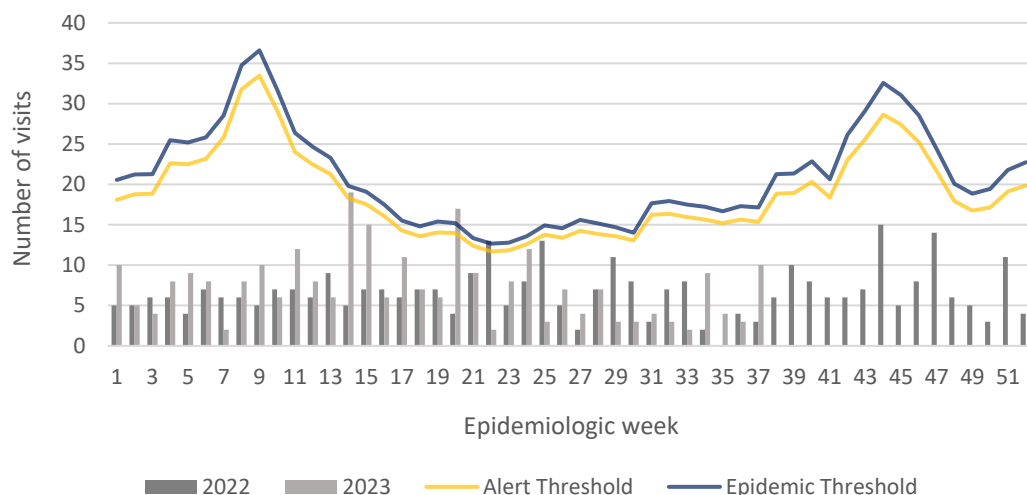
SENTINEL REPORT- 78 sites. Automatic reporting

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).



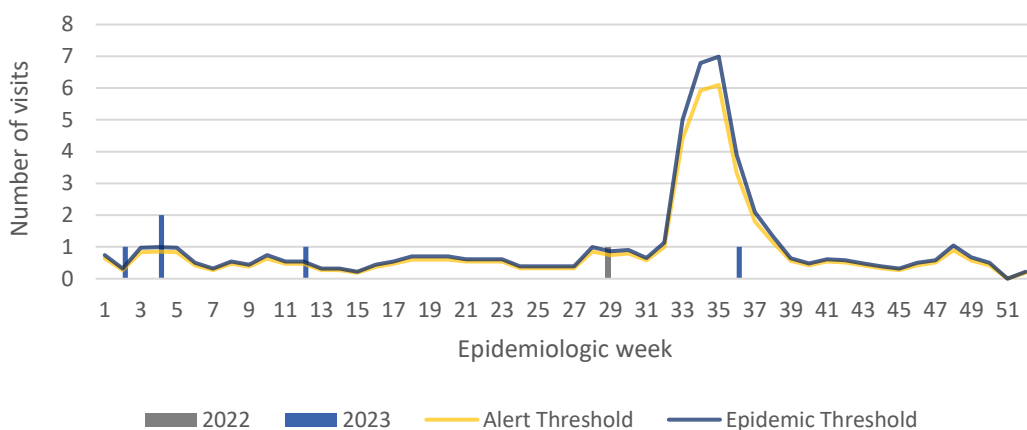
**Weekly Visits to Sentinel Sites for Fever and Neurological Symptoms
2022 and 2023 vs. Weekly Threshold: Jamaica**

**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

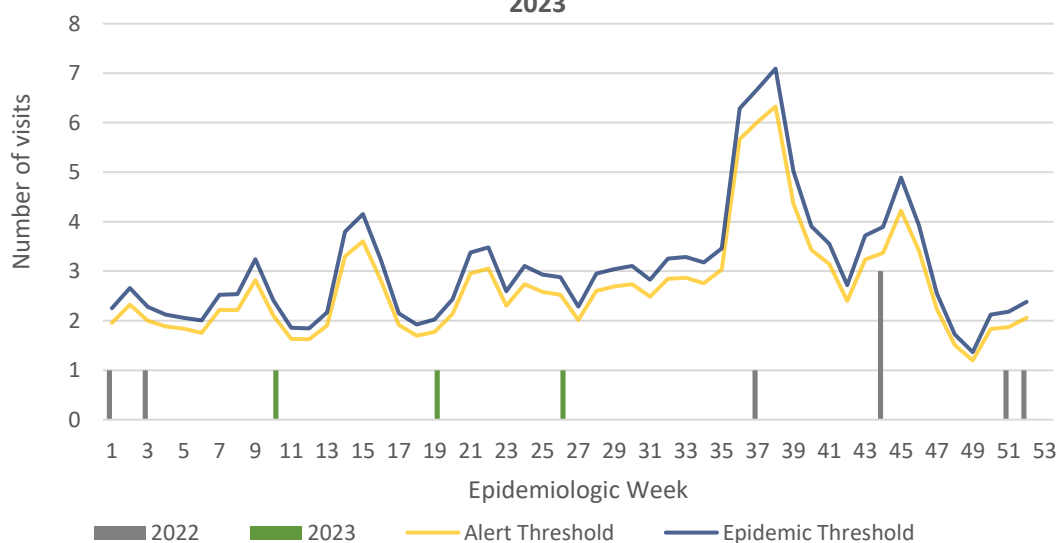
**FEVER AND JAUNDICE**

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
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**HOSPITAL
ACTIVE
SURVEILLANCE-**
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pursued



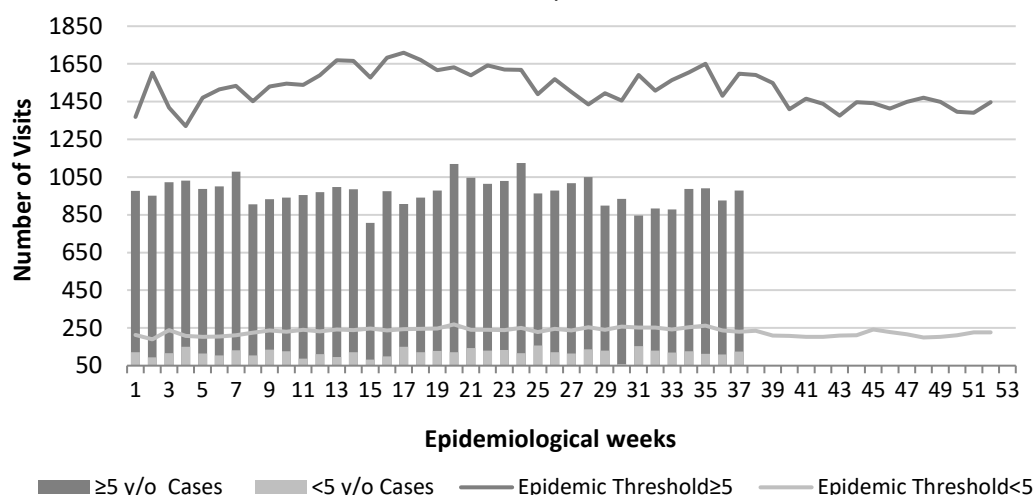
**SENTINEL
REPORT-** 78 sites.
Automatic reporting

ACCIDENTS

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



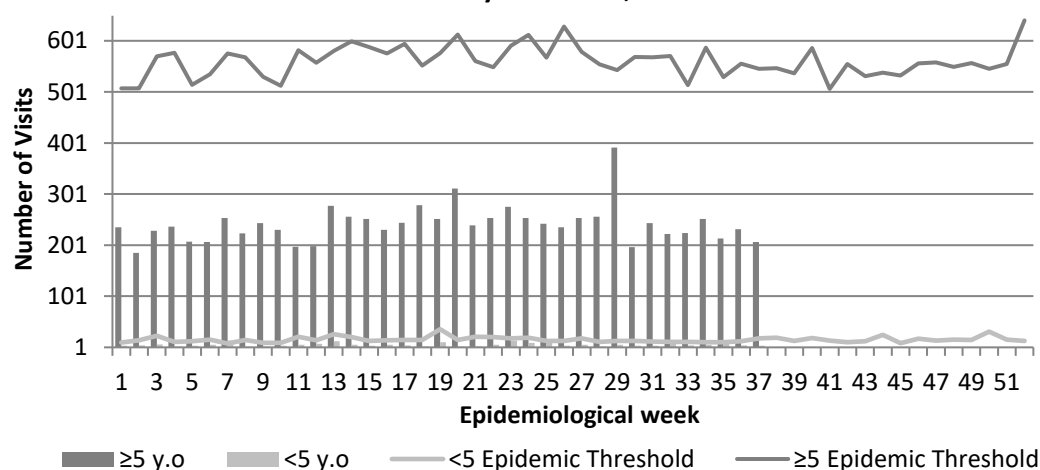
Weekly visits to Sentinel Sites for Accidents by Age Group 2023 vs Weekly Threshold; Jamaica

**VIOLENCE**

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



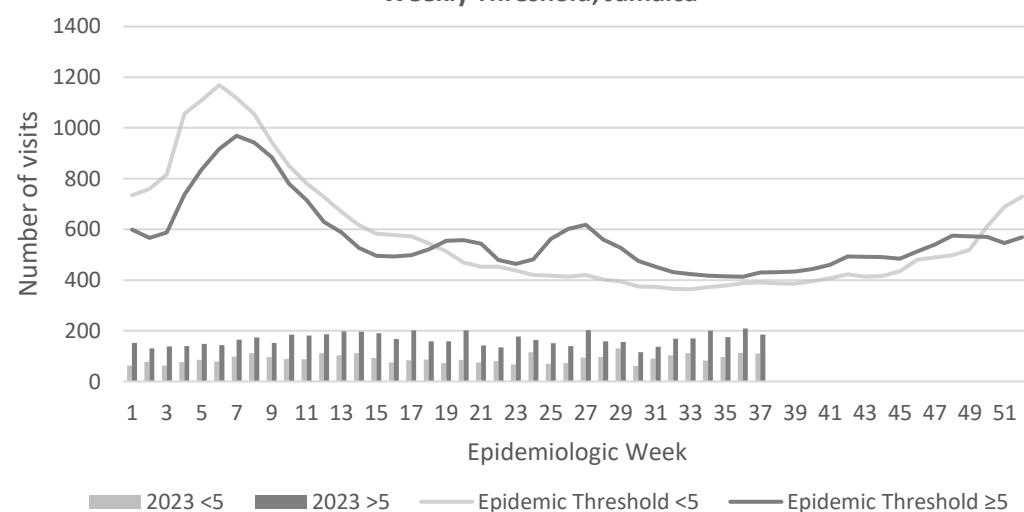
Weekly visits to Sentinel Sites for Violence by Age Group 2023 vs Weekly Threshold; Jamaica

**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 2023 vs Weekly Threshold; Jamaica



4 NOTIFICATIONS-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
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SENTINEL
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Automatic reporting

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		240 ^β	159 ^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)		3589	54318	
	Hansen’s Disease (Leprosy)		0	0	^δ Figures include all deaths associated with pregnancy reported for the period.
	Hepatitis B		46	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		23	15	
	Monkeypox		3	14	^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		36	57	
	Ophthalmia Neonatorum		98	48	
	Pertussis-like syndrome		0	0	
	Rheumatic Fever		0	0	
	Tetanus		0	2	
	Tuberculosis		30	25	
	Yellow Fever		0	0	
Chikungunya ^ε		0	0		
Zika Virus ^θ		0	0		



5 NOTIFICATIONS-
All clinical
sites



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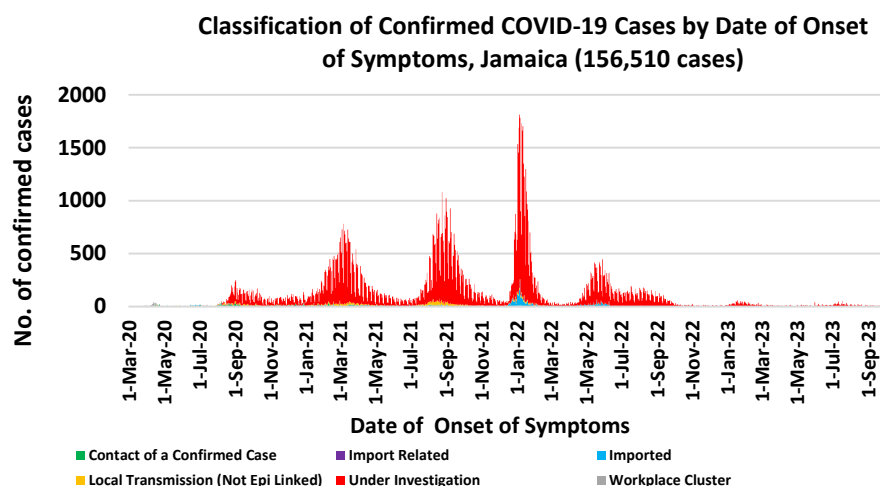


SENTINEL
REPORT- 78 sites.
Automatic reporting

COVID-19 Surveillance Update

March 10, 2020 – EW 37, 2023

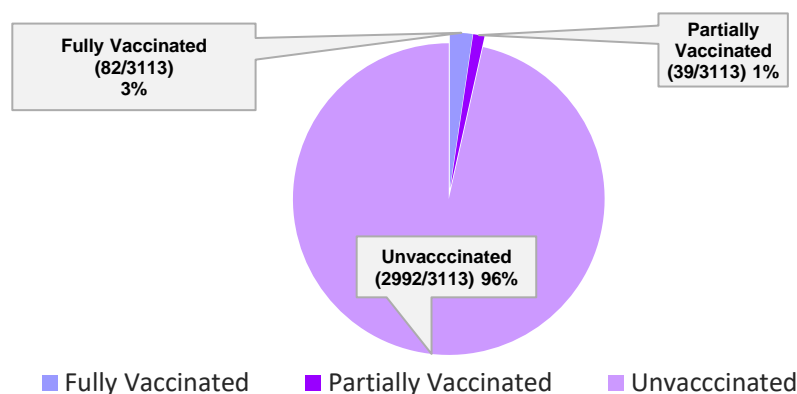
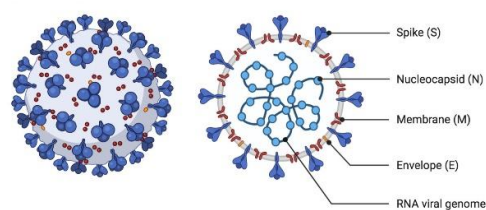
CASES	EW 37	Total
Confirmed	52	156510
Females	29	90221
Males	23	66286
Age Range	17 days old to 94 years	1 day to 108 years
* 3 positive cases had no gender specification * PCR or Antigen tests are used to confirm cases		

**COVID-19 Outcomes**

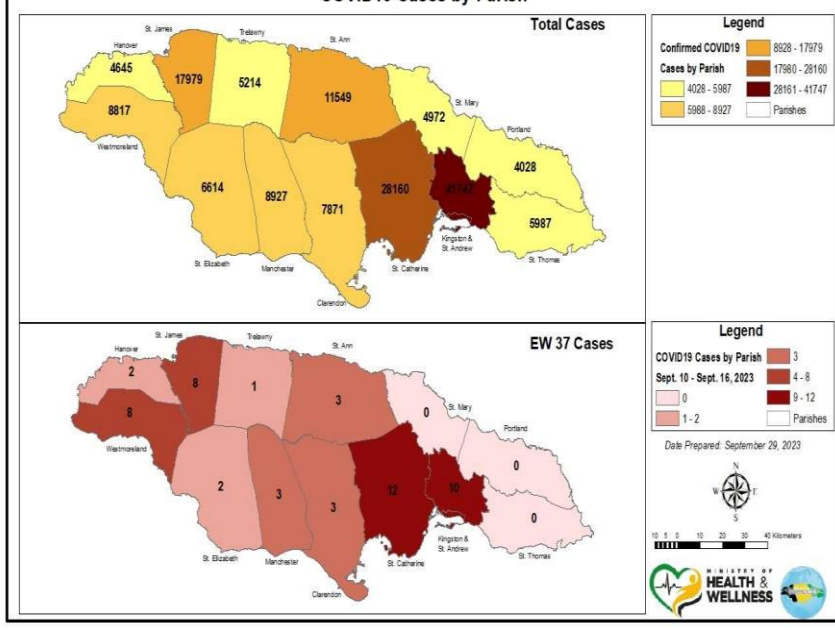
Outcomes	EW 37	Total
ACTIVE *2 weeks*		107
DIED – COVID Related	0	3675
Died - NON COVID	0	337
Died - Under Investigation	0	270
Recovered and discharged	3	103198
Repatriated	0	93
Total		156510

*Vaccination programme March 2021 – YTD

* Total as at current Epi week

**3113 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 EW34-EW37**

Epi Week	Confirmed Cases	Deaths
34	336,282	382
35	228,774	1141
36	82,790	257
37	37,316	170
Total (4weeks)	685,162	1950

COVID19 Cases by Parish

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



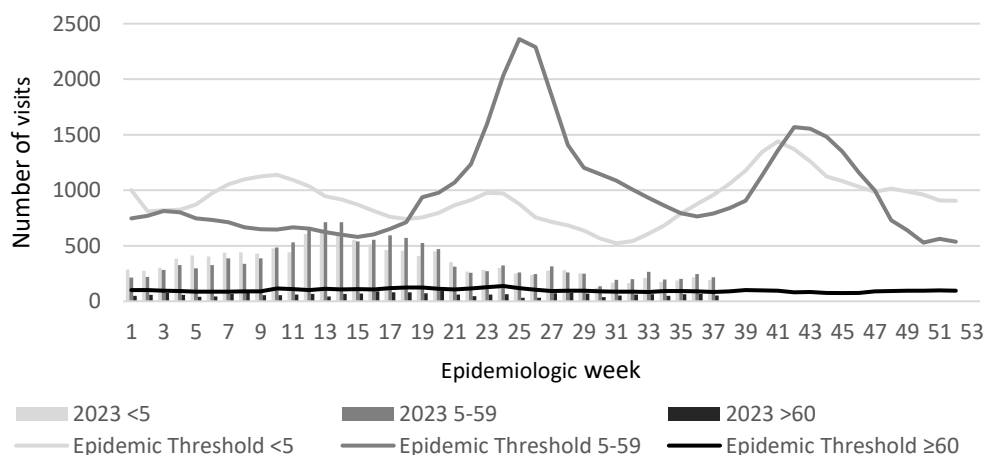
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 37

September 10 – September 16, 2023 Epidemiological Week 37

	EW 37	YTD
SARI cases	4	442
Total Influenza positive Samples	0	178
Influenza A	0	16
H3N2	0	1
H1N1pdm09	0	14
Not subtyped	0	1
Influenza B	0	162
B lineage not determined	0	2
B Victoria	0	160
Parainfluenza	0	1
Adenovirus	0	2
RSV	0	14

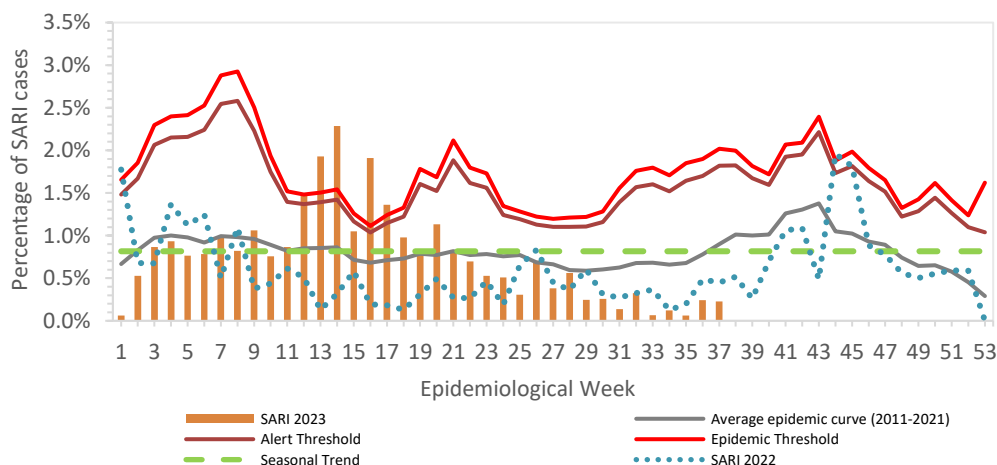
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages
2023 vs Weekly Threshold; Jamaica



Epi Week Summary

During EW 37, four(4) SARI admissions were reported.

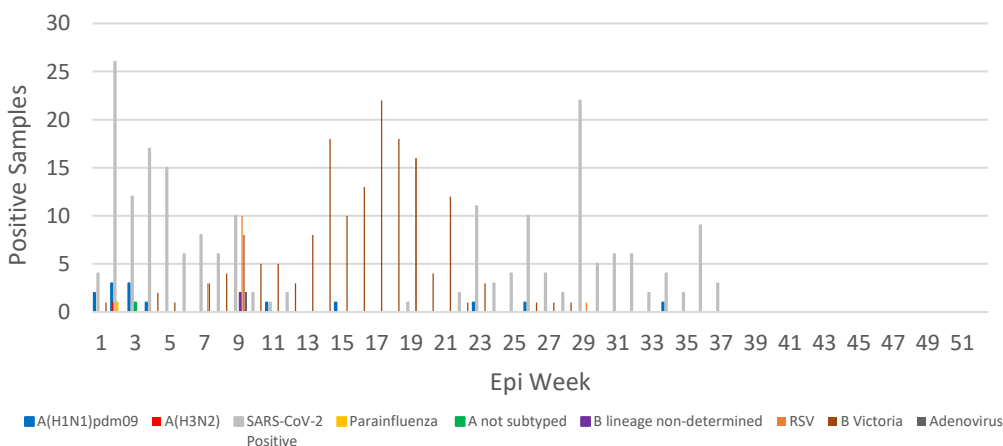
Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2023) (compared with 2011-2021)



Caribbean Update EW 37

Caribbean: Influenza activity continues to exhibit a declining trend over the past 4 EWs. During this period, the predominant influenza viruses have been B/Victoria, with lesser circulation of influenza A, primarily A(H1N1)pdm09. RSV activity has remained low. SARS-CoV-2 activity shows an increasing trend with intermediate to high levels of circulation. ILI and SARI cases have demonstrated a declining trend over the past 4 EWs.

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



7

NOTIFICATIONS-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
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Automatic reporting

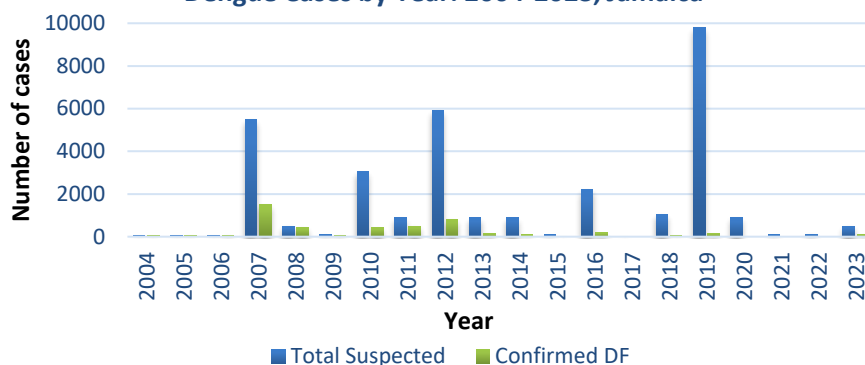
Dengue Bulletin

September 10– September 16, 2023 Epidemiological Week 37


Epidemiological Week 37

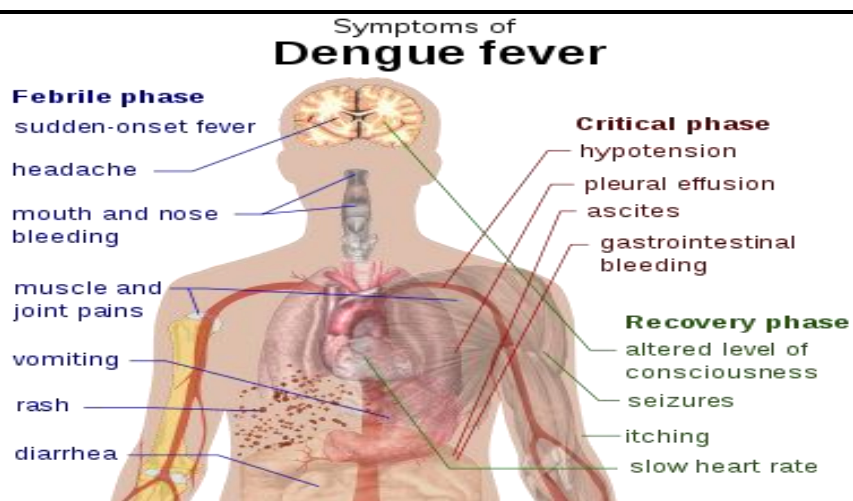


Dengue Cases by Year: 2004-2023, Jamaica



Reported suspected and confirmed dengue with symptom onset in week 37 of 2023

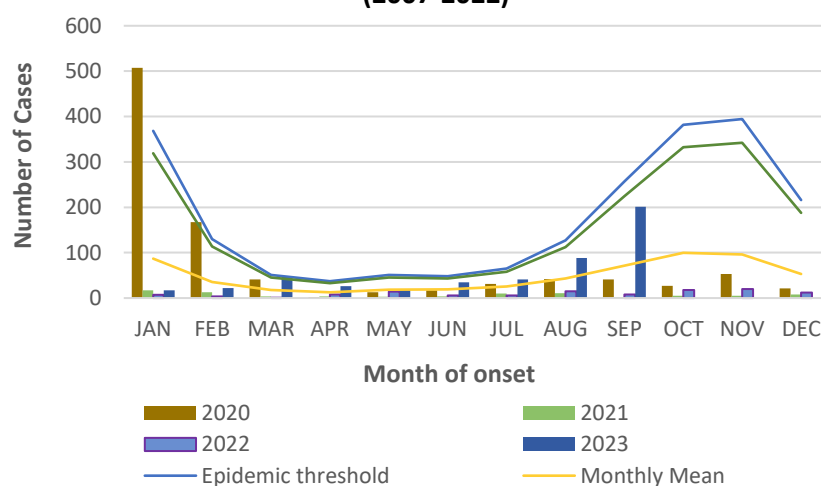
	2023*	
	EW 37	YTD
 Total Suspected Dengue Cases	112	495
Lab Confirmed Dengue cases	1	108
CONFIRMED Dengue Related Deaths	0	0



Points to note:

- *Figure as at September 16, 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

NHRC-21-O3

The Neurodevelopmental Outcomes of Congenital Zika Syndrome in Jamaican Children

R Melbourne-Chambers^{1,5}, P Palmer⁵, Y Brown², T James-Powell^{3,5}, J Tapper^{4,5}, L Mowatt^{1,5}, I Siqueira⁶, C Thorne⁷, ZIKAction Paediatric Registry Study Group, CDC Christie^{1,5}

¹University Hospital of the West Indies, ²Victoria Jubilee Hospital, ³Spanish Town Hospital, ⁴Bustamante Hospital for Children, ⁵The University of the West Indies, ⁶Instituto Gonçalo Moniz-Fiocruz, Brazil, ⁷UCL Great Ormond Street Institute of Child Health, University College London

This project has received funding from the European Union's Horizon 2020 research and Innovation Program under grant agreement No. 734857.

Introduction: As part of a multicentre registry, this study aimed to characterize the clinical, radiological, neurodevelopmental and laboratory features of children antenatally exposed to ZIKV and/or presenting with suspected congenital zika syndrome (CZS) in Jamaica.

Methods: Retrospective study of children potentially exposed to Zika antenatally and attended clinics at/ admitted to either of four public hospitals in the Kingston and St Andrew (KSA) region and St. Catherine, Jamaica who met ≥ 1 inclusion criteria: 1. Microcephalic at birth, 2. Features of CZS 3. Exposed to Zika in utero. Data: maternal demography, antenatal, labour, delivery history, newborn anthropometry, results of hearing, vision screening, neurodevelopmental assessment, laboratory, radiologic investigations were extracted from hospital records. Descriptive and Chi square analyses were performed. Ethical approval was obtained.

Results: 55 participants; 34 (61.8%) female; 4 (7.3%) born premature; 4 (7.2%) neonates -lab confirmed Zika; 6 (10.9%) mothers - lab confirmed Zika, 6 (10.9%) mothers Zika symptomatic (no lab confirmation); 31 (56.4%) congenital microcephaly, 14 (25.9%) severe; 20 (36.3%) craniofacial disproportion, 3 (5.4%) arthrogryposis. 9/34 (26.5%) abnormal ophthalmology findings; 6/12 (50.0 %) abnormal hearing. 26/33 (78.8%) had abnormal neuroimaging findings. 8 (33.3%) ventriculomegaly, 7 (29.2%) cerebral/basal ganglia calcifications, 5 (20.8%) migrational abnormalities, 5 (20.8%) cortical atrophy, 3 (12.5%) cerebellar malformations. 20/36 (55.5%) had developmental delay. There was one death. Developmental delay was associated with abnormal neuroimaging ($p=0.003$), ophthalmology abnormalities ($p=0.023$) and hearing abnormalities ($p=0.005$) but not with head circumference ($p=0.89$).

Conclusions: CZS was more common in Jamaican females. Half developed developmental delay significantly associated with abnormal neuroimaging, ophthalmology and hearing.



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9 NOTIFICATIONS-
All clinical
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INVESTIGATION
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SENTINEL
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Automatic reporting