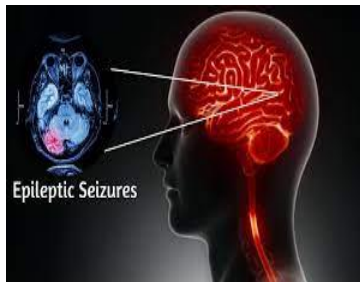


WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

Epilepsy



Epilepsy is a chronic noncommunicable disease of the brain that affects around 50 million people worldwide. It is characterized by recurrent seizures, which are brief episodes of involuntary movement that may involve a part of the body (partial) or the entire body (generalized) and are sometimes accompanied by loss of consciousness and control of bowel or bladder function.

Seizure episodes are a result of excessive electrical discharges in a group of brain cells. Different parts of the brain can be the site of such discharges. Seizures can vary from the briefest lapses of attention or muscle jerks to severe and prolonged convulsions. Seizures can also vary in frequency, from less than one per year to several per day.

One seizure does not signify epilepsy (up to 10% of people worldwide have one seizure during their lifetime). Epilepsy is defined as having two or more unprovoked seizures. Epilepsy is one of the world’s oldest recognized conditions, with written records dating back to 4000 BCE. Fear, misunderstanding, discrimination and social stigma have surrounded epilepsy for centuries. This stigma continues in many countries today and can impact on the quality of life for people with the disease and their families

Signs and symptoms

Characteristics of seizures vary and depend on where in the brain the disturbance first starts, and how far it spreads. Temporary symptoms occur, such as loss of awareness or consciousness, and disturbances of movement, sensation (including vision, hearing and taste), mood, or other cognitive functions.

People with epilepsy tend to have more physical problems (such as fractures and bruising from injuries related to seizures), as well as higher rates of psychological conditions, including anxiety and depression. Similarly, the risk of premature death in people with epilepsy is up to three times higher than in the general population, with the highest rates of premature mortality found in low- and middle-income countries and in rural areas.

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

EPI WEEK 25



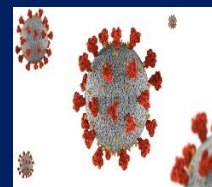
- Syndromic Surveillance
- Accidents
- Violence

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 - 22 to 25 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												
22	On Time	On Time	On Time	On Time	On Time	On Time	Late (W)	On Time	On Time	On Time	On Time	On Time	On Time
23	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
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

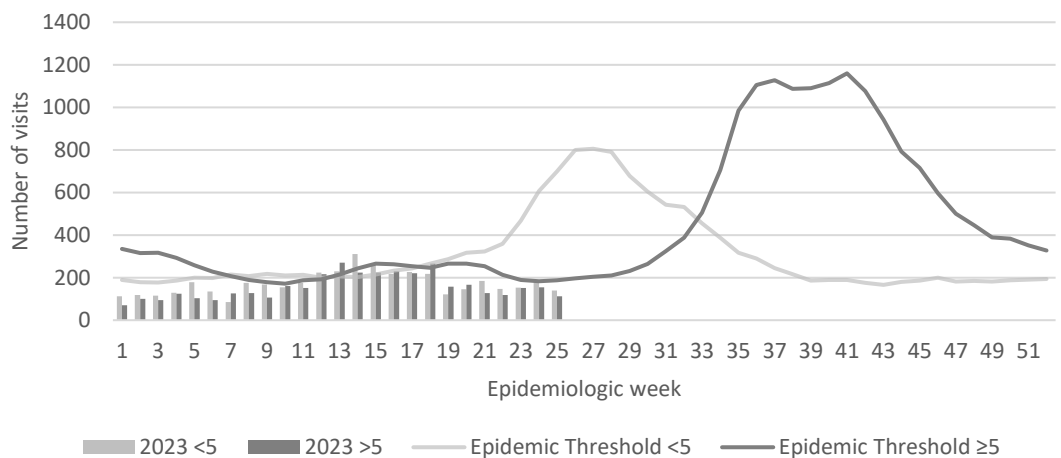
REPORTS FOR SYNDROMIC SURVEILLANCE

UNDIFFERENTIATED FEVER

Temperature of >38°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



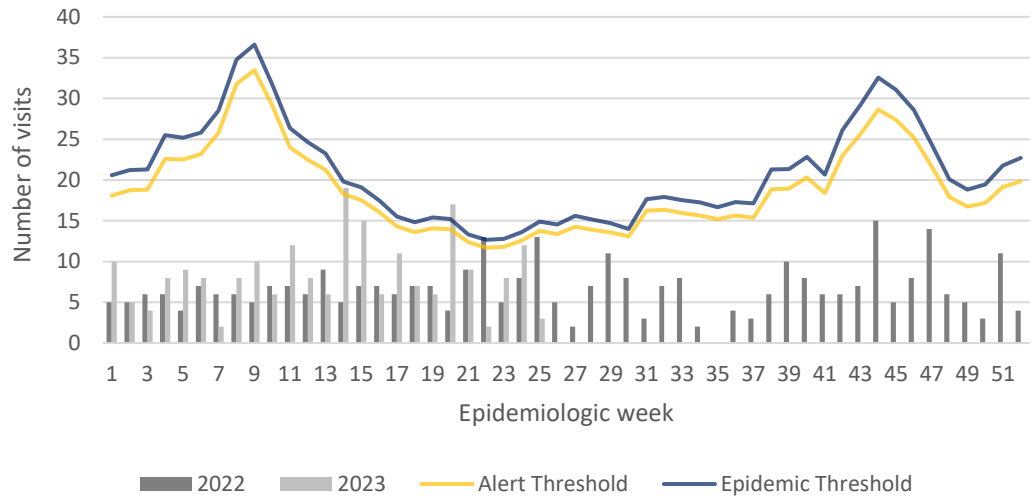
SENTINEL REPORT- 78 sites. Automatic reporting

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

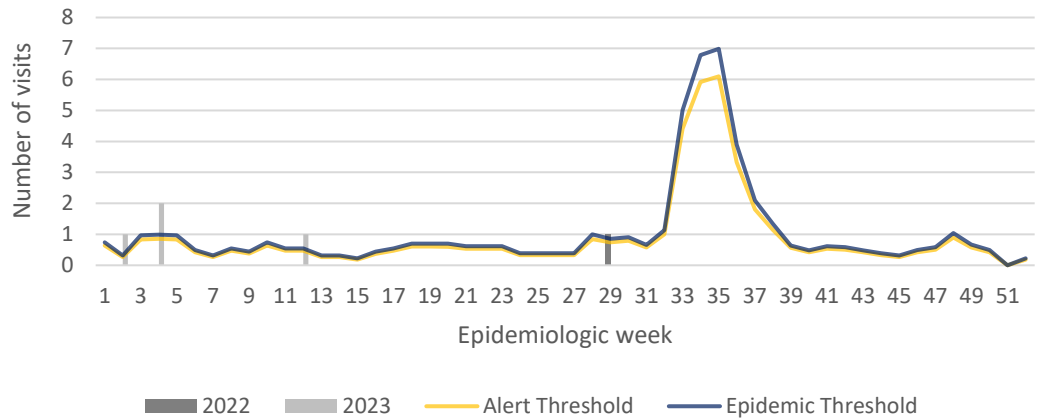


FEVER AND HAEMORRHAGIC

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



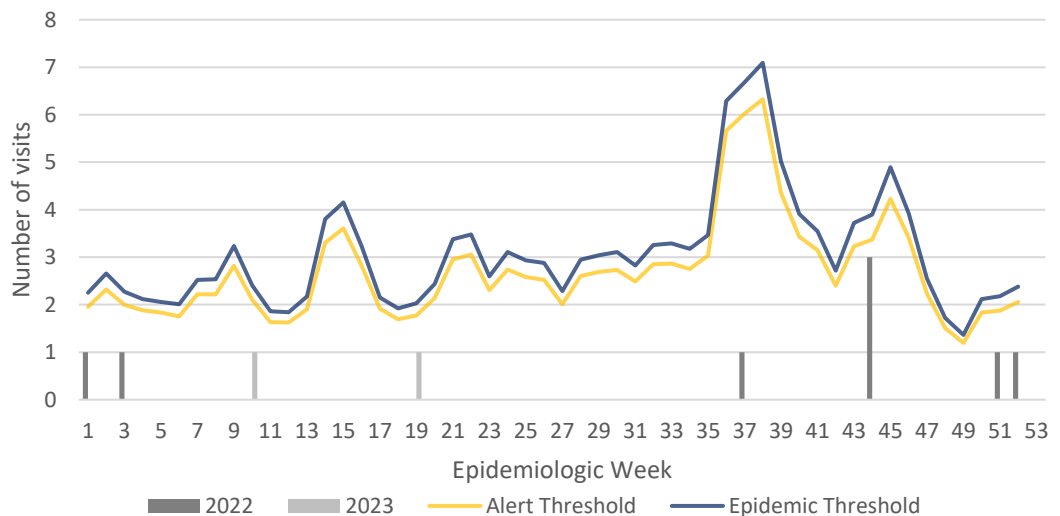
FEVER AND JAUNDICE

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



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

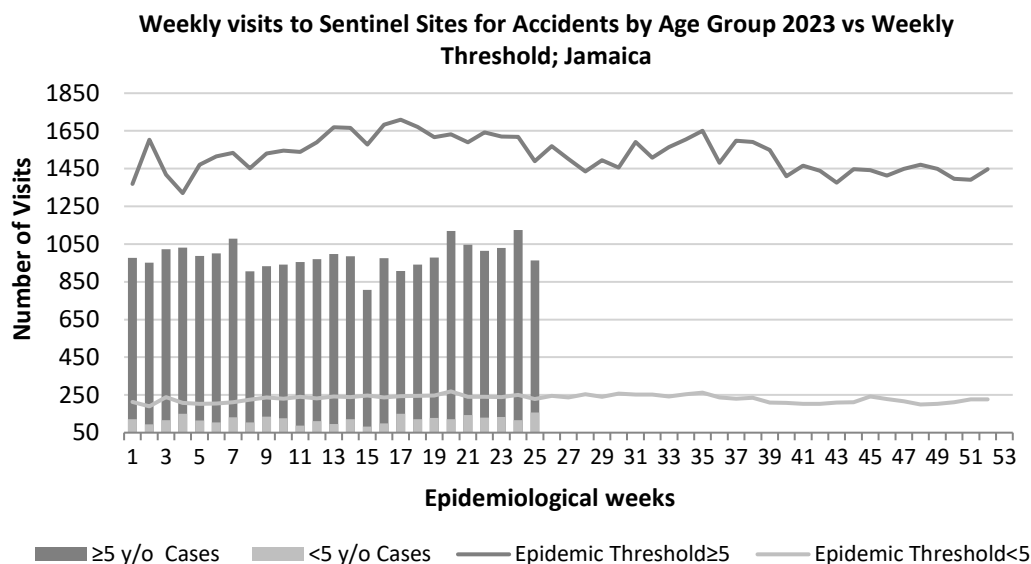


SENTINEL REPORT- 78 sites. Automatic reporting



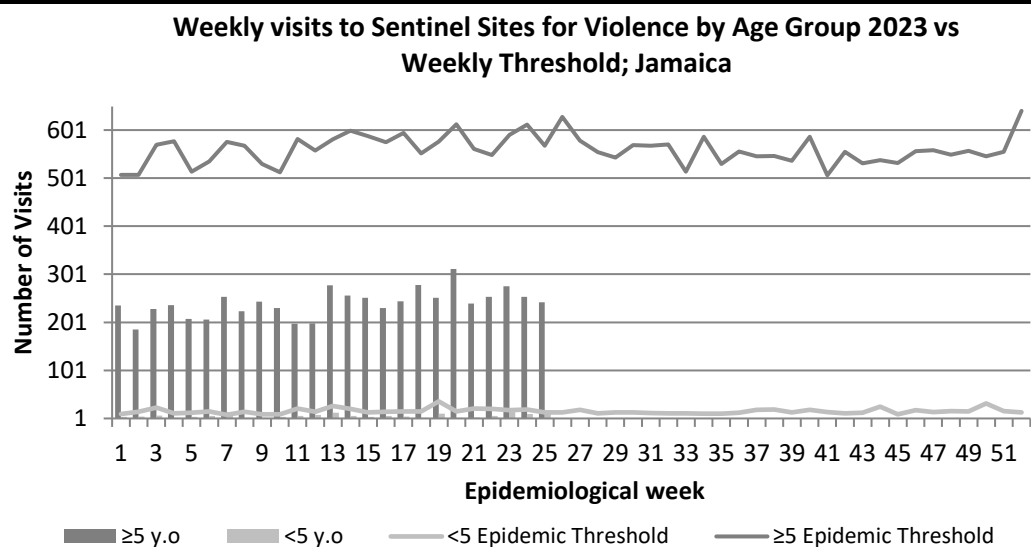
ACCIDENTS

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



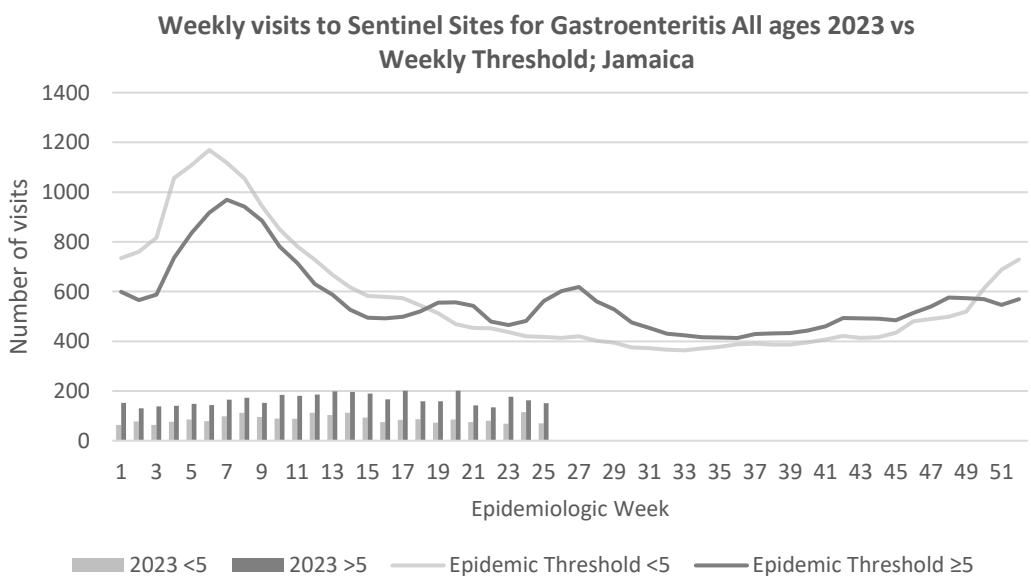
VIOLENCE

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

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

SENTINEL REPORT- 78 sites. Automatic reporting

CLASS ONE NOTIFIABLE EVENTS				Comments
			Confirmed YTD ^α	
	CLASS 1 EVENTS		CURRENT YEAR 2023	PREVIOUS YEAR 2022
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		162 ^β	120 ^β
	Cholera		0	0
	Dengue Hemorrhagic Fever ^γ		See Dengue page below	See Dengue page below
	COVID-19 (SARS-CoV-2)		2434	45573
	Hansen’s Disease (Leprosy)		0	0
	Hepatitis B		22	8
	Hepatitis C		10	2
	HIV/AIDS		N/A	N/A
	Malaria (Imported)		1	0
	Meningitis (Clinically confirmed)		14	13
	Monkeypox		3	N/A
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		25	39
	Ophthalmia Neonatorum		66	48
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		0	2
	Tuberculosis		17	13
	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



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



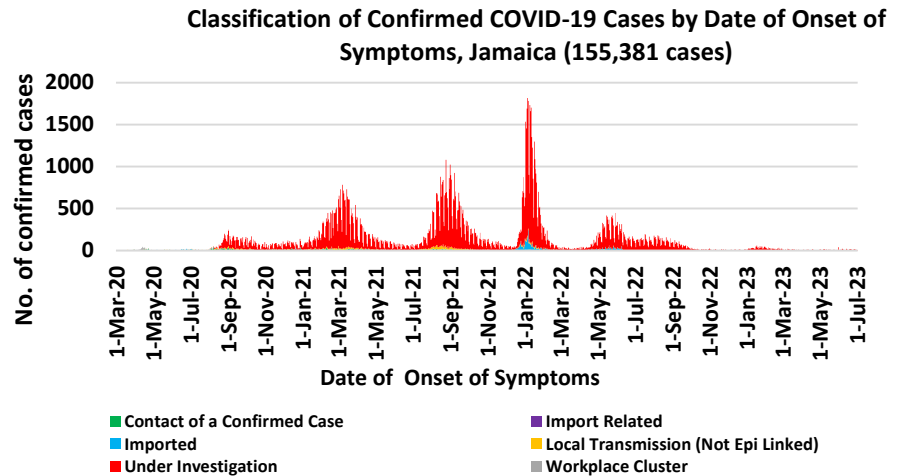
SENTINEL REPORT- 78 sites. Automatic reporting

COVID-19 Surveillance Update

March 10, 2020 – EW 25, 2023

CASES	EW 25	Total
Confirmed	67	155381
Females	32	89602
Males	35	65776
Age Range	2 months old to 89 years	1 day to 108 years

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



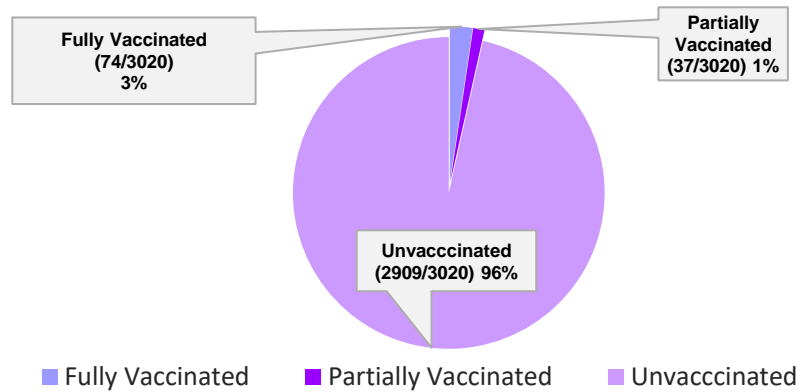
COVID-19 Outcomes

Outcomes	EW 25	Total
ACTIVE *past 2 weeks*		143
DIED – COVID Related	2	3581
Died - NON COVID	0	310
Died - Under Investigation	0	315
Recovered and discharged	11	103022
Repatriated	0	93
Total		155381

*Vaccination programme March 2021 – YTD

3020 COVID-19 Related Deaths since March 1, 2021 – YTD

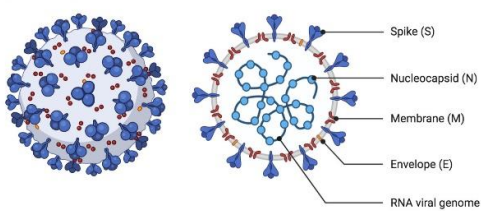
Vaccination Status among COVID-19 Deaths



COVID-19 Parish Distribution and Global Statistics

COVID-19 Virus Structure

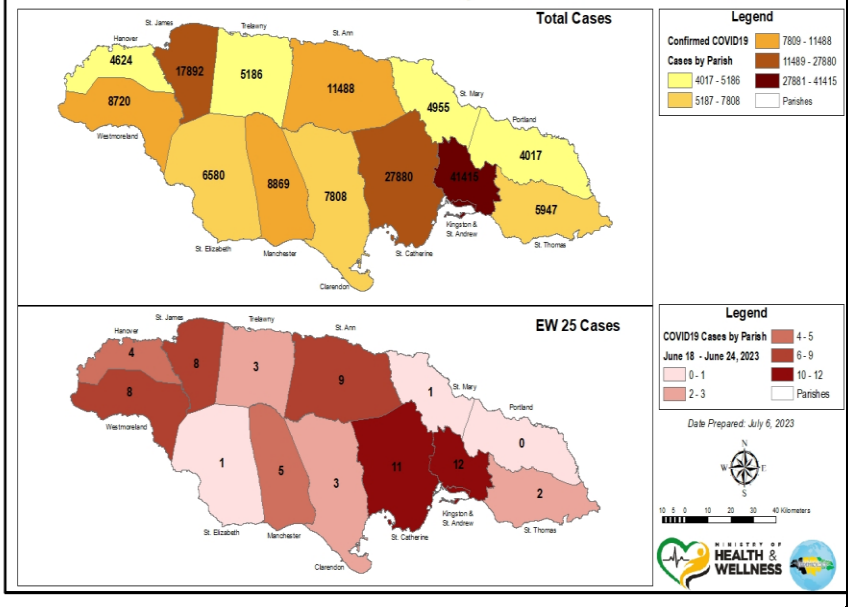
SARS-CoV-2



COVID-19 WHO Global Statistics EW22-EW25

Epi Week	Confirmed Cases	Deaths
22	314,277	1879
23	165,494	909
24	232,096	1492
25	173,440	632
Total (4weeks)	885,307	4,912

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

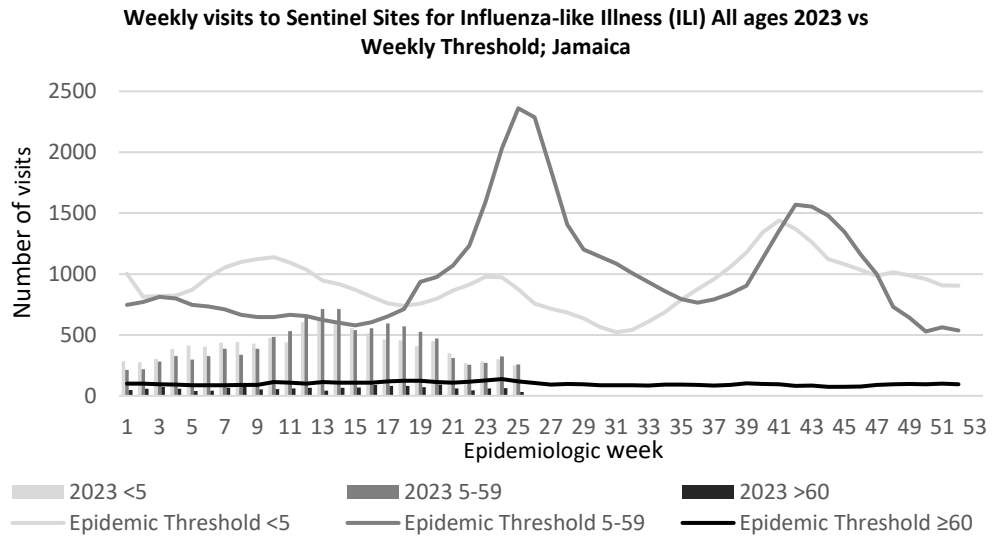


NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 25

June 18 – June 24, 2023 Epidemiological Week 25

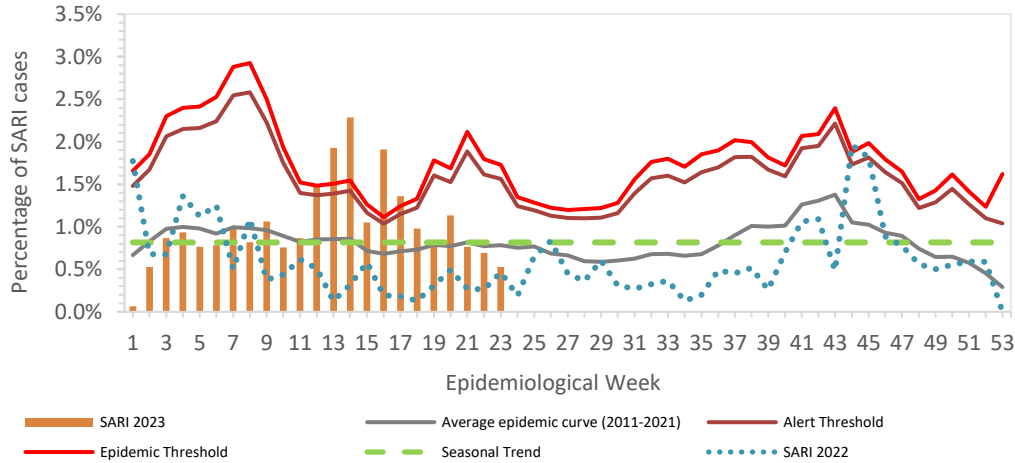
	<i>EW 25</i>	<i>YTD</i>
SARI cases	4	387
Total Influenza positive Samples	0	114
Influenza A	0	14
H3N2	0	1
H1N1pdm09	0	12
Not subtyped	0	1
Influenza B	0	100
B lineage not determined	0	2
B Victoria	0	98
Parainfluenza	0	1
Adenovirus	0	2
RSV	0	13



Epi Week Summary

During EW 25, four (4) SARI admissions were reported.

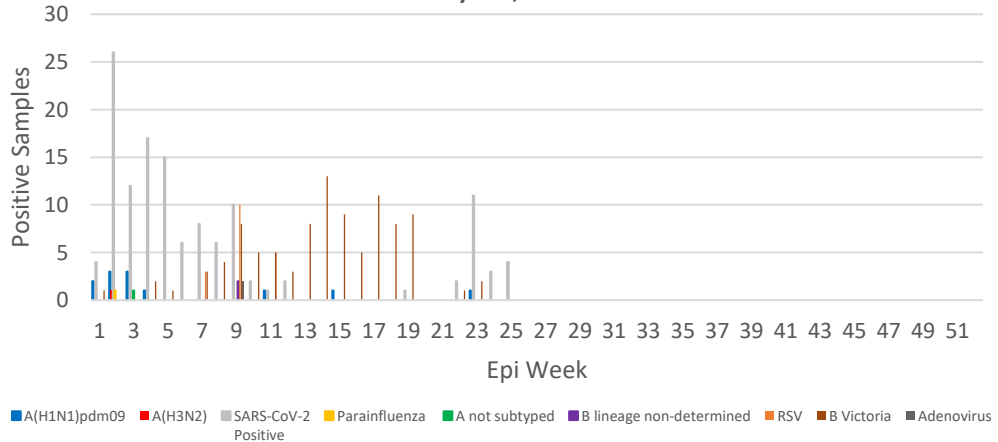
Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2023) (compared with 2011-2021)



Caribbean Update EW 25

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 has increased in the last 4 weeks and is currently at intermediate levels of circulation. Cases of ILI and SARI have shown an increase due to positive SARS-CoV-2 cases and to a lesser extent influenza cases.

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



7 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



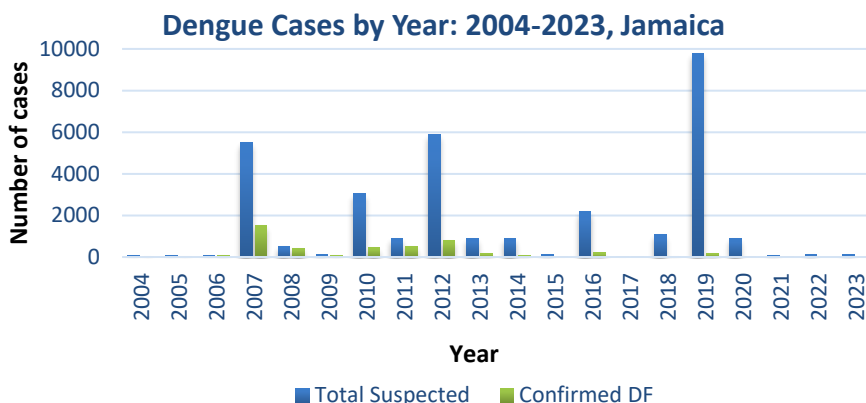
SENTINEL REPORT- 78 sites. Automatic reporting




Dengue Bulletin

June 18 – June 24, 2023 Epidemiological Week 25

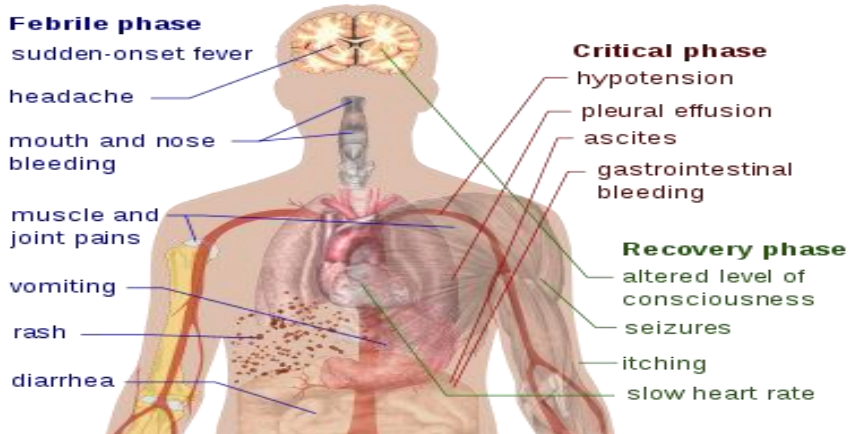
Epidemiological Week 25



Reported suspected and confirmed dengue with symptom onset in week 25 of 2023

	2023*	
	EW 25	YTD
 Total Suspected Dengue Cases	6	98
Lab Confirmed Dengue cases	0	0
CONFIRMED Dengue Related Deaths	0	0

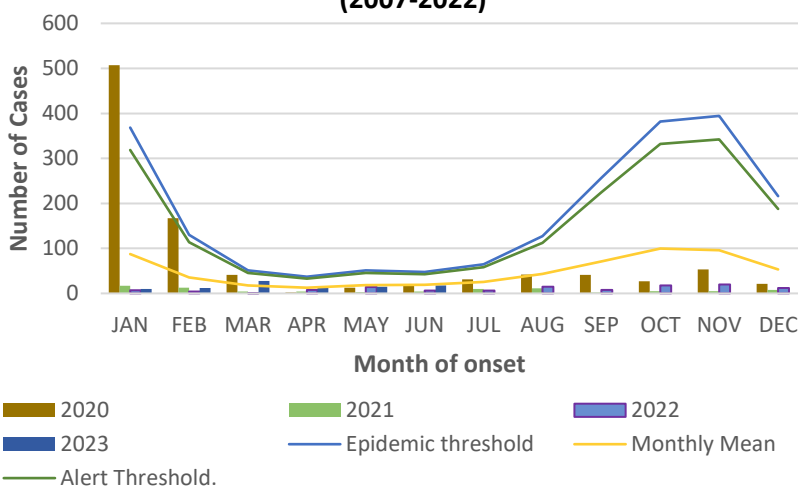
Symptoms of Dengue fever



Points to note:

- *Figure as at June 24, 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

Diabetes mHealth: Perceptions of physicians and the experience of T2DM patients in regards to a mobile application for Jamaicans

Alicia Brown, Sheldon Connor, Sheckardo Daley, Daniella McCalla, Fabian Rose, and Susan A. Muir

Objectives This study had two aims: to identify mHealth features deemed suitable by physicians and to measure the experience of type 2 diabetes mellitus (T2DM) patients using a diabetes mobile application in Jamaica.

Methods The study was a cross sectional study of physicians who treat T2DM patients as well as T2DM patients aged 18-80. Subjects were recruited within St. Andrew, Kingston and St. Catherine, Jamaica, using convenient sampling. A diabetes mobile application was developed for the Android platform, which tracked blood sugar, blood pressure, weight and diet. Data was collected using interviews of physicians as well as surveys and observations of patients using the application.

Results The majority of physicians expected that a mHealth application would help with monitoring of the disease. The features that were deemed to be most important were monitoring, tailored education (that provide encouraging simple messages to patients), as well as sharing of information between patients and physicians. Thirty-two percent (32%) of the patients rated the application as excellent while sixty-eight percent (68%) rated it as good or fairly good. The two most valuable features were blood sugar (82%) and blood pressure (41%). Surprisingly, patients over sixty adapted well to the application. Nineteen patients (86%) indicated that they were extremely likely or likely to recommend the application while three (14%) were neutral.

Conclusion Jamaican physicians believed that the most important specifications were monitoring, tailored feedback to patients, and patient-provider communication. Most of the Jamaican T2DM patients were satisfied with and would recommend using a mobile application.



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9 NOTIFICATIONS-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
up for all Class One Events



HOSPITAL
ACTIVE
SURVEILLANCE-
30 sites. Actively
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SENTINEL
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