

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## Weekly Spotlight

### Cardiovascular Diseases (CVDs)



Most cardiovascular diseases can be prevented by addressing behavioural risk factors such as tobacco use, unhealthy diet and obesity, physical inactivity and harmful use of alcohol. It is important to detect cardiovascular disease as early as possible so that management with counselling and medicines can begin.

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.

There are also a number of underlying determinants of CVDs. These are a reflection of the major forces driving social, economic and cultural change – globalization, urbanization and population ageing. Other determinants of CVDs include poverty, stress and hereditary factors. In addition, drug treatment of hypertension, diabetes and high blood lipids are necessary to reduce cardiovascular risk and prevent heart attacks and strokes among people with these conditions.

## EPI WEEK 03



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 – 52 , 2023 to 3 of 2024

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 - 2024 |                           |              |                 |          |            |           |          |             |         |              |                 |            |           |
| 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   |
| 1           | 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   |
| 2           | 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   |
| 3           | 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   |

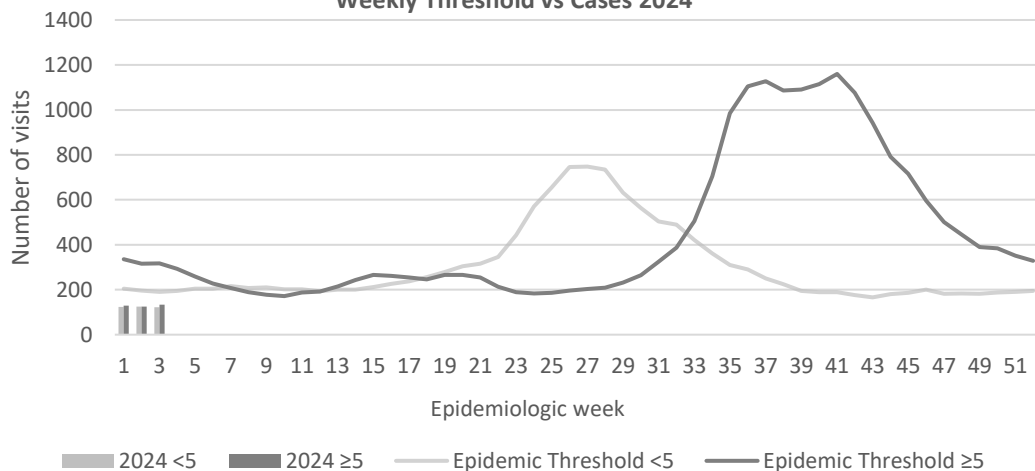
## REPORTS FOR SYNDROMIC SURVEILLANCE

## UNDIFFERENTIATED FEVER

Temperature of  $>38^{\circ}\text{C}$  /  $100.4^{\circ}\text{F}$  (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 2024



2 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



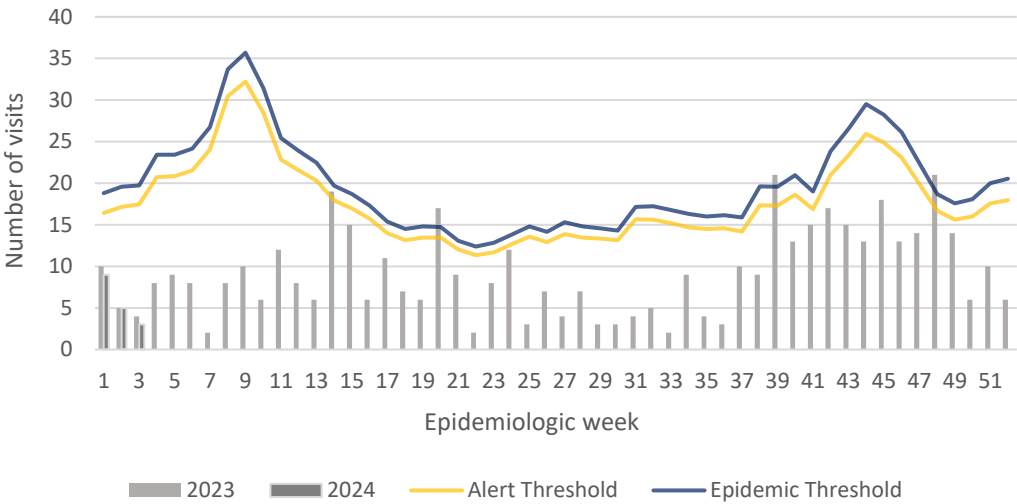
SENTINEL REPORT- 78 sites. Automatic reporting

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  
2023 and 2024 vs. Weekly Threshold: Jamaica

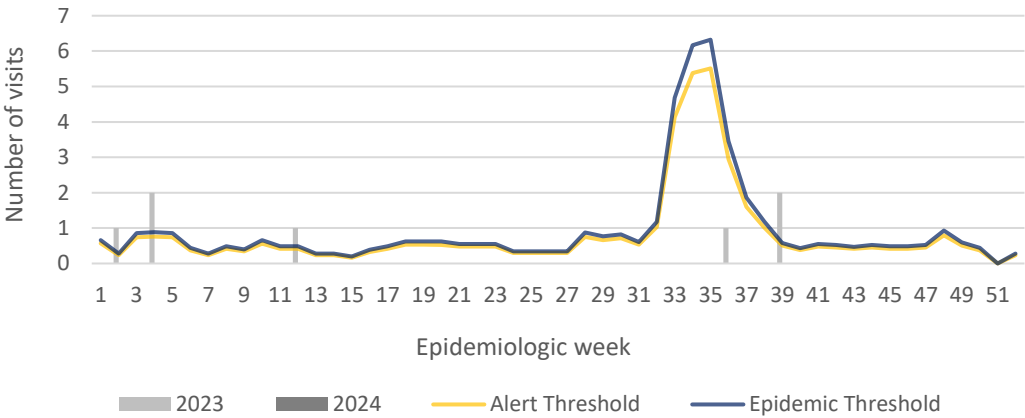


FEVER AND HAEMORRHAGIC

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 2023 and 2024 vs Weekly Threshold; Jamaica



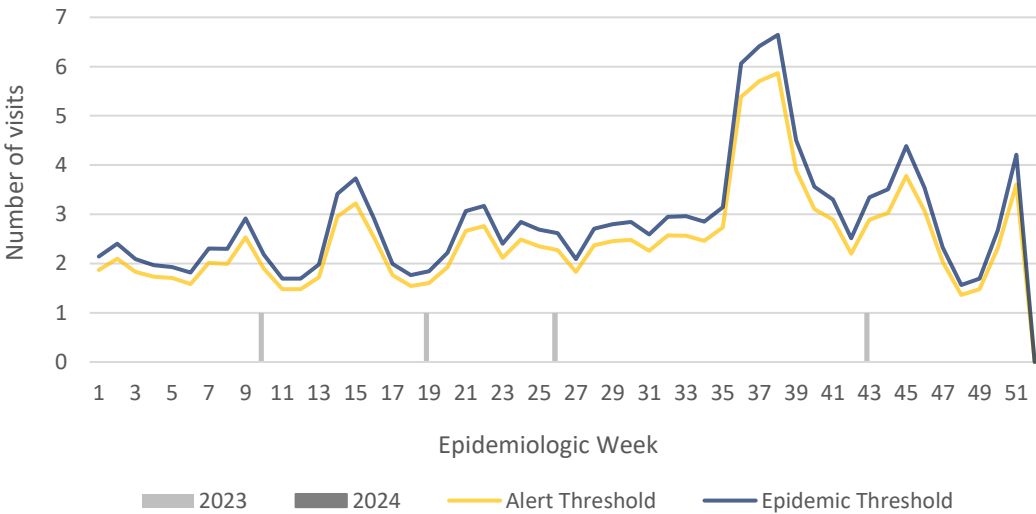
FEVER AND JAUNDICE

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 2023 and 2024



3

NOTIFICATIONS-  
All clinical  
sites



INVESTIGATION  
REPORTS- Detailed Follow  
up for all Class One Events



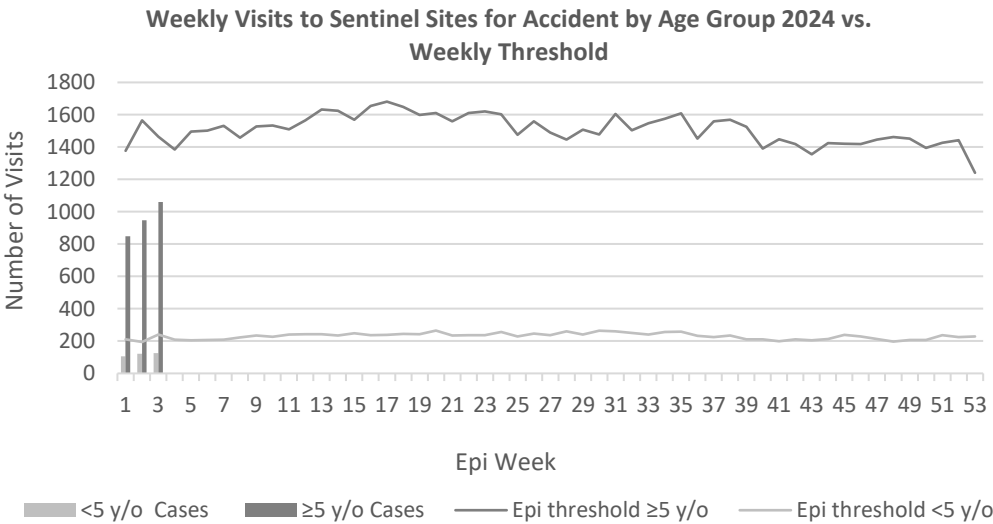
HOSPITAL  
ACTIVE  
SURVEILLANCE-  
30 sites. Actively  
pursued



SENTINEL  
REPORT- 78 sites.  
Automatic reporting

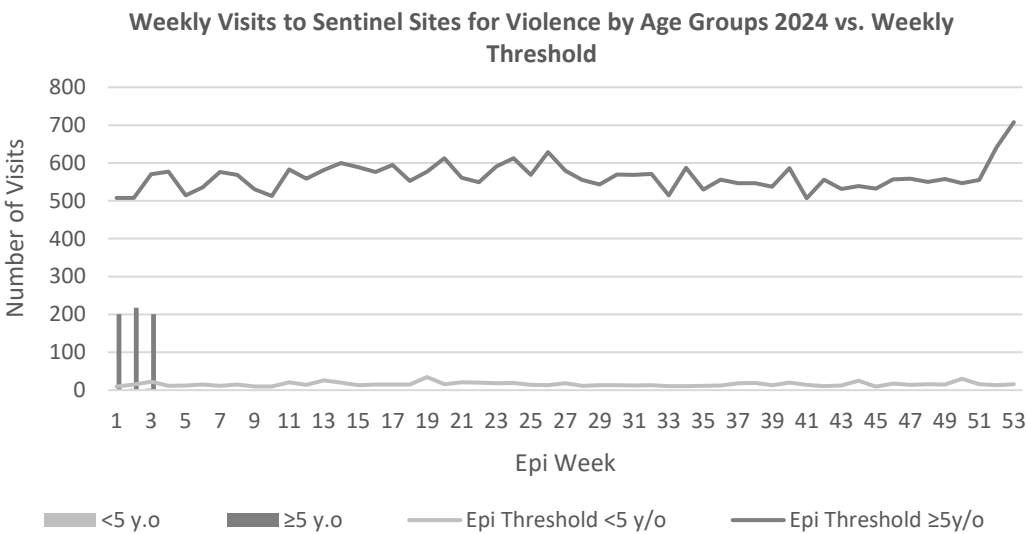
ACCIDENTS

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



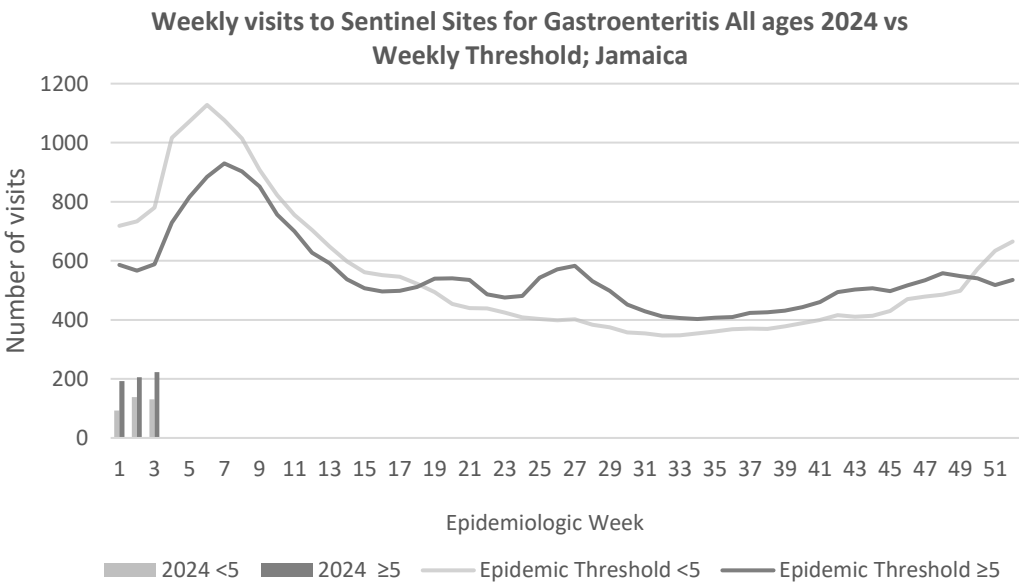
VIOLENCE

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  
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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 2024          | PREVIOUS YEAR 2023    |  |
| NATIONAL /INTERNATIONAL INTEREST | Accidental Poisoning                  |         | 11 <sup>β</sup>            | 22 <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)                 |         | 49                         | 565                   |  |
|                                  | Hansen’s Disease (Leprosy)            |         | 0                          | 0                     | <sup>δ</sup> Figures include all deaths associated with pregnancy reported for the period.   |
|                                  | Hepatitis B                           |         | 0                          | 0                     |  |
|                                  | Hepatitis C                           |         | 0                          | 0                     | <sup>ε</sup> CHIKV IgM positive cases  |
|                                  | HIV/AIDS                              |         | NA                         | NA                    |  |
|                                  | Malaria (Imported)                    |         | 0                          | 0                     | <sup>θ</sup> Zika PCR positive cases   |
|                                  | Meningitis                            |         | 0                          | 3                     |  |
|                                  | Monkeypox                             |         | 0                          | 0                     | <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>          |         | 4                          | 1                     |  |
|                                  | Ophthalmia Neonatorum                 |         | 9                          | 4                     |  |
|                                  | Pertussis-like syndrome               |         | 0                          | 0                     |  |
|                                  | Rheumatic Fever                       |         | 0                          | 0                     |  |
|                                  | Tetanus                               |         | 0                          | 0                     |  |
|                                  | Tuberculosis                          |         | 0                          | 0                     |  |
|                                  | Yellow Fever                          |         | 0                          | 0                     |  |
| Chikungunya <sup>ε</sup>         |                                       | 0       | 0                          |                       |  |
| Zika Virus <sup>θ</sup>          |                                       | 0       | 0                          |                       |  |



5 NOTIFICATIONS-  
All clinical  
sites



INVESTIGATION  
REPORTS- Detailed Follow  
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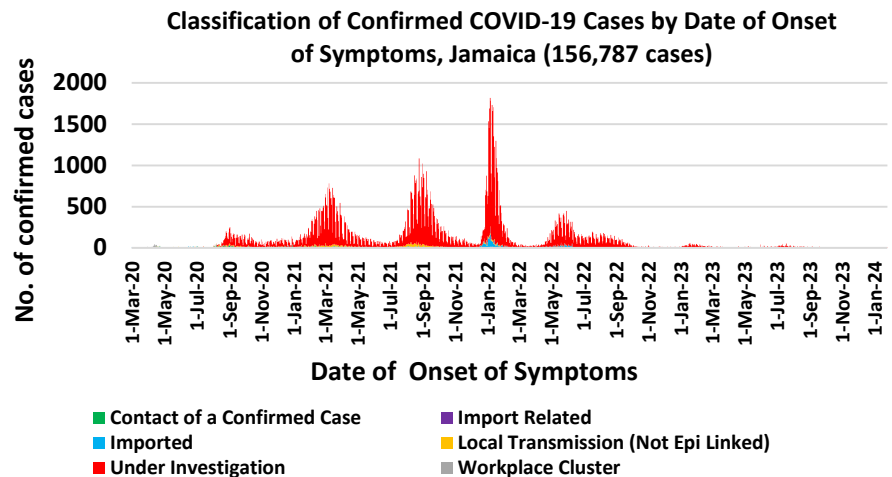
SENTINEL  
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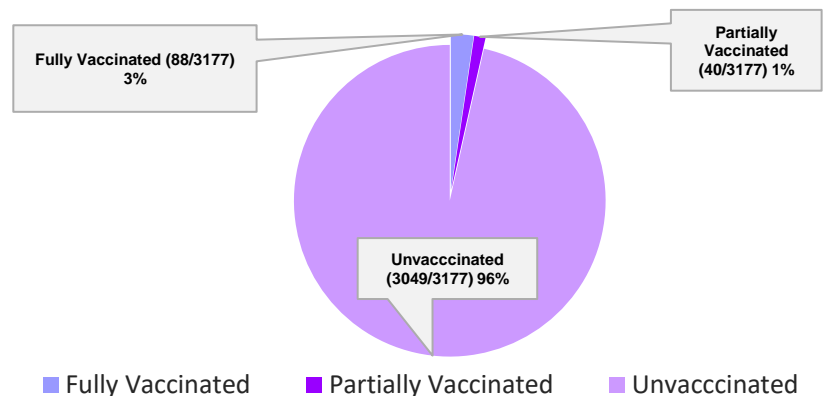
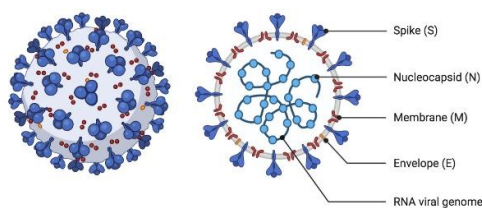
**COVID-19 Surveillance Update**

March 10, 2020 – EW 03, 2024

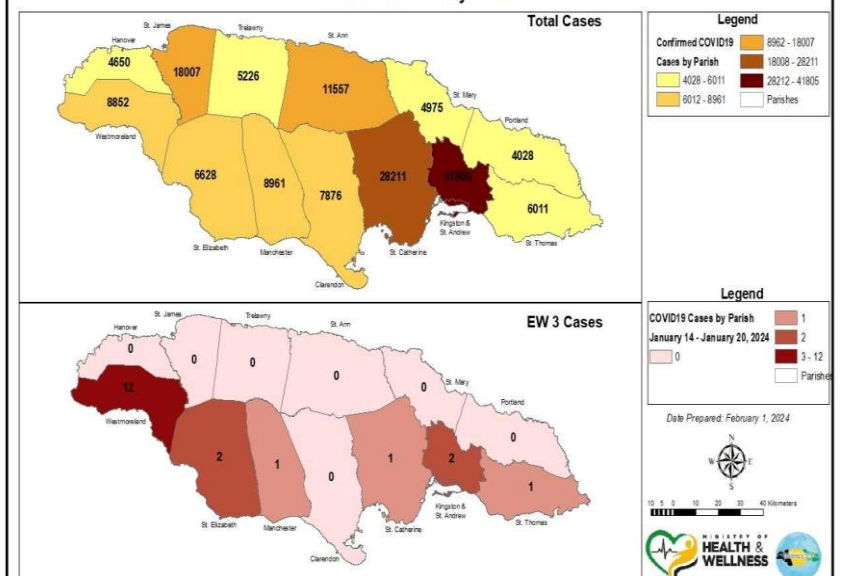
| CASES  | EW 03                   | Total              |
|--|-------------------------|--------------------|
| Confirmed  | 19                      | 156787             |
| Females  | 12                      | 90357              |
| Males  | 7                       | 66427              |
| Age Range  | 2 years old to 95 years | 1 day to 108 years |
| * 3 positive cases had no gender specification<br>* PCR or Antigen tests are used to confirm cases |                         |                    |

**COVID-19 Outcomes**

| Outcomes  | EW 03 | Total  |
|---|-------|--------|
| ACTIVE<br>*2 weeks*   |       | 26     |
| DIED – COVID Related  | 0     | 3739   |
| Died - NON COVID  | 0     | 349    |
| Died - Under Investigation  | 0     | 259    |
| Recovered and discharged  | 0     | 103226 |
| Repatriated   | 0     | 93     |
| Total   |       | 156787 |
| *Vaccination programme March 2021 – YTD<br>* Total as at current Epi week |       |        |

**3177 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 EW 52, 2023-EW 3, 2024**

| Epi Week       | Confirmed Cases | Deaths |
|----------------|-----------------|--------|
| 52             | 356,900         | 3,300  |
| 1              | 260,900         | 3,200  |
| 2              | 179,800         | 3,000  |
| 3              | 143,700         | 2,100  |
| Total (4weeks) | 941,300         | 11,600 |

**COVID19 Cases by Parish**

6 NOTIFICATIONS-  
All clinical sites



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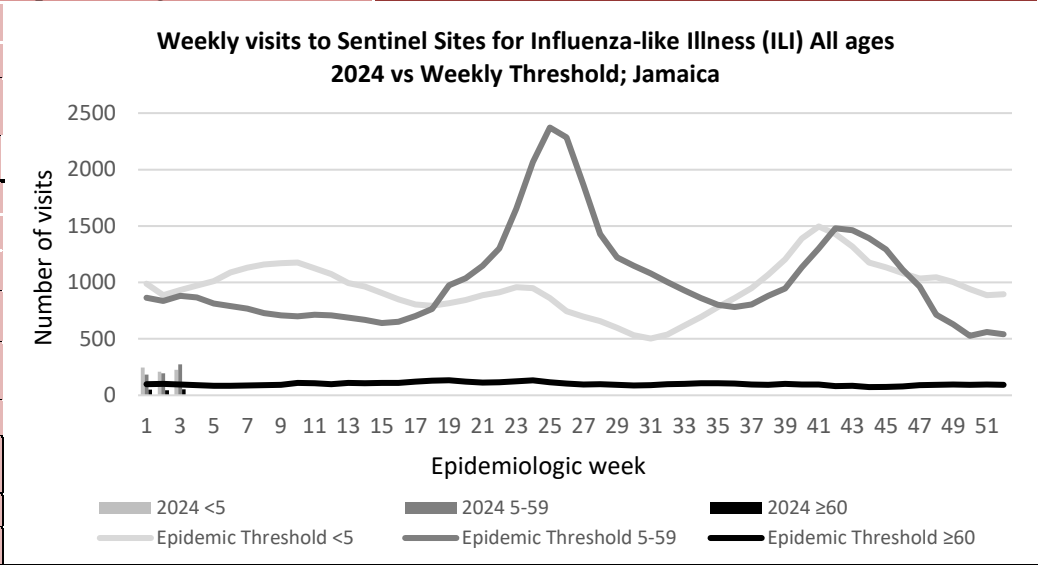
SENTINEL  
REPORT- 78 sites.  
Automatic reporting

NATIONAL SURVEILLANCE UNIT  
INFLUENZA REPORT

EW 3

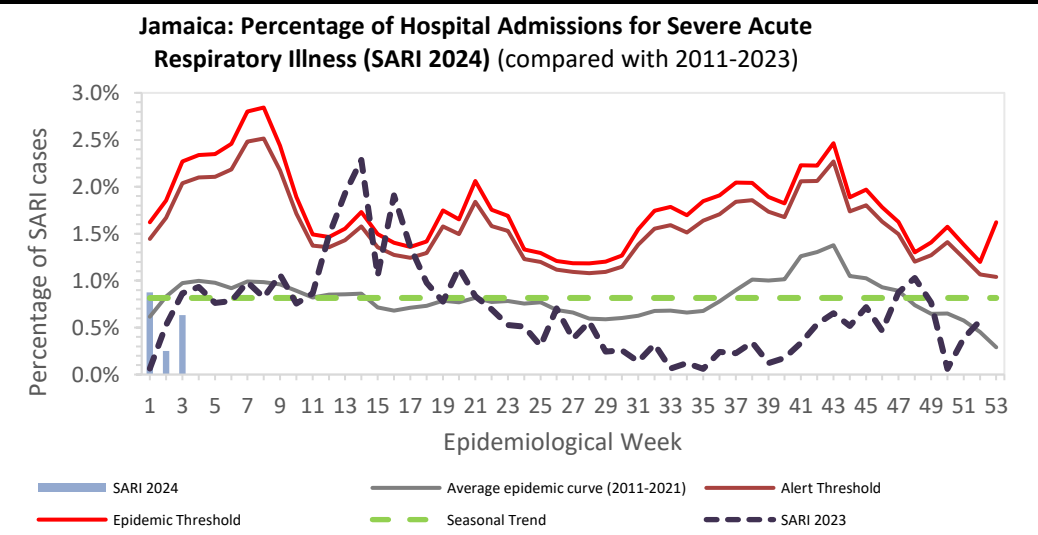
January 14, 2023 – January 20, 2024 Epidemiological Week 03

|                                  | EW 03 | YTD |
|----------------------------------|-------|-----|
| SARI cases                       | 10    | 27  |
| Total Influenza positive Samples | 1     | 10  |
| Influenza A                      | 1     | 10  |
| H3N2                             | 0     | 4   |
| H1N1pdm09                        | 1     | 6   |
| Not subtyped                     | 0     | 0   |
| Influenza B                      | 0     | 0   |
| B lineage not determined         | 0     | 0   |
| B Victoria                       | 0     | 0   |
| Parainfluenza                    | 0     | 0   |
| Adenovirus                       | 0     | 0   |
| RSV                              | 0     | 4   |



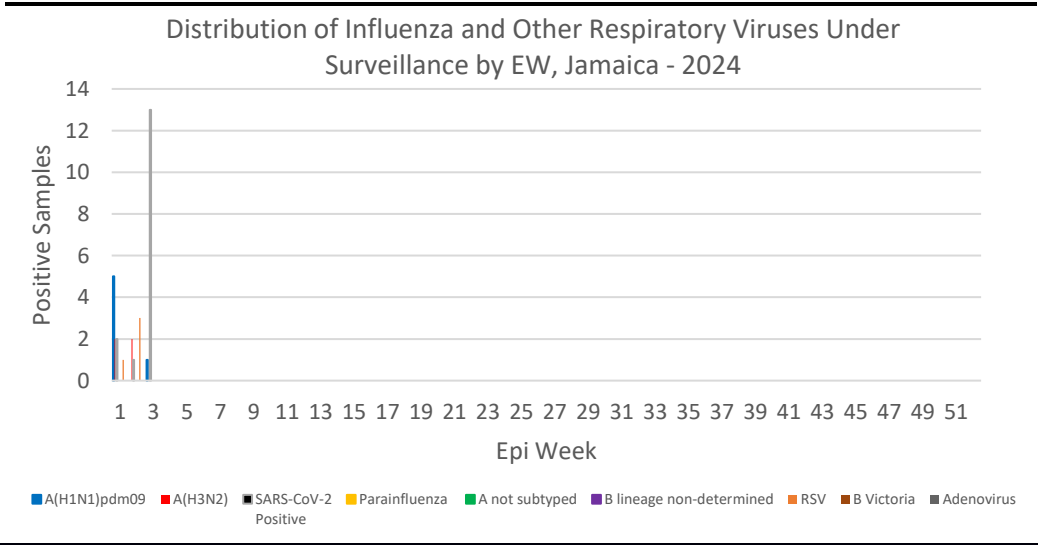
**Epi Week Summary**

During EW 03, ten (10) SARI admissions were reported.



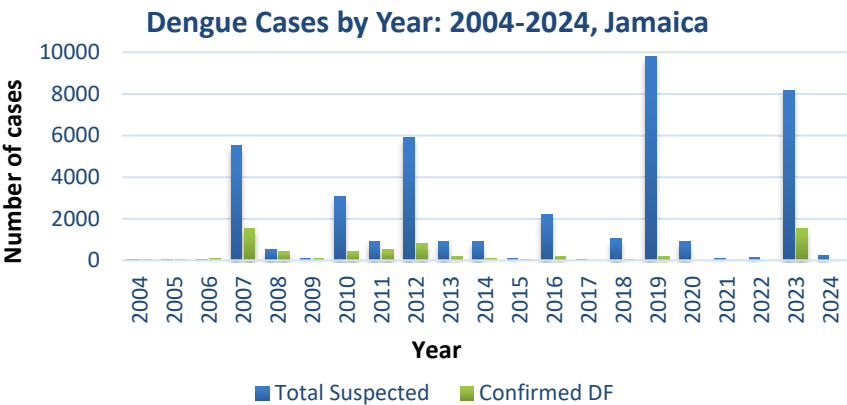
**Caribbean Update EW 3**

Caribbean: ILI cases have shown an increase in the last four weeks associated with an increase in positive cases of influenza, while SARI cases have remained in decline. Influenza activity has decreased in the last two EWs, reaching intermediate circulation levels. During this period, predominant viruses have been A (H1N1) pdm09 , followed by A( H3N2) , and to a lesser extent, B/Victoria. RSV activity has remained low. SARS CoV-2 activity has increased in the last four EWs, reaching high levels. By countries: Elevated influenza activity has been observed in the Dominican Republic, Jamaica , the Cayman Islands, Guyana, and Saint Vincent and the Grenadines. Elevated SARS- CoV-2 activity has been observed in Belize, Dominica , Jamaica, Saint Lucia, Barbados, the Cayman Islands, Guyana, and Saint Vincent and the Grenadines. (adopted from PAHO Respiratory viruses weekly report)

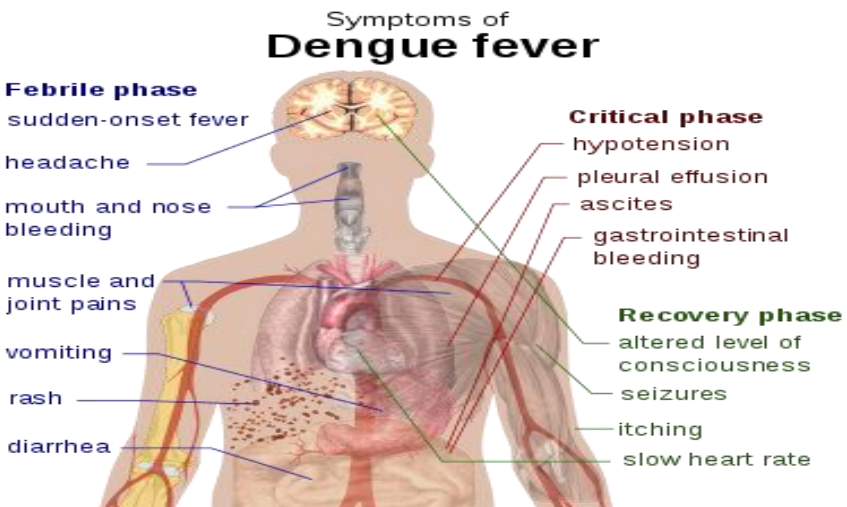


# Dengue Bulletin

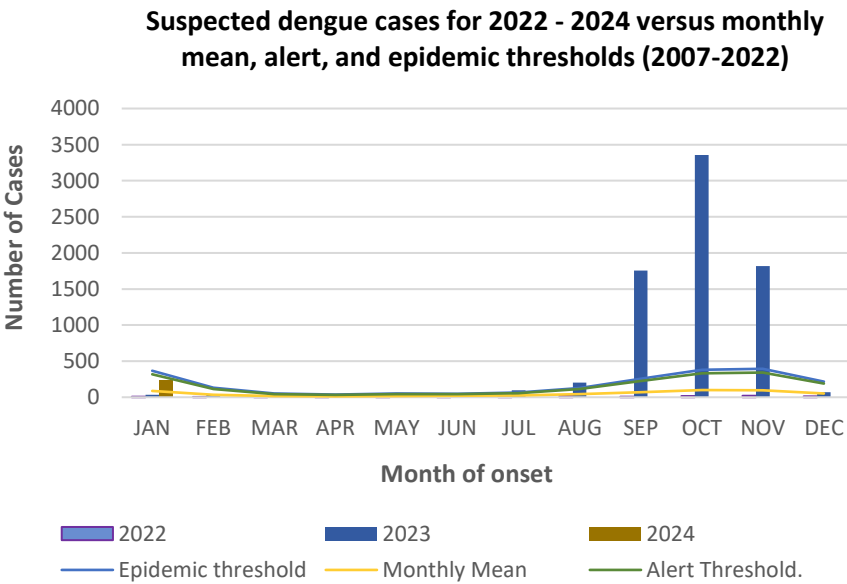
January 14, 2023 – January 20, 2024 Epidemiological Week 03      Epidemiological Week 03



| Reported suspected and confirmed dengue with symptom onset in week 03 of 2024 |       |     |
|---|-------|-----|
|   | 2024* |     |
|   | EW 03 | YTD |
| Total Suspected & Confirmed Dengue Cases                                      | 54    | 233 |
| Lab Confirmed Dengue cases  | 0     | 0   |
| CONFIRMED Dengue Related Deaths   | 0     | 0   |



- Points to note:**
- \*Figure as at February 02, 2024
  - Only PCR positive dengue cases are reported as confirmed.
  - IgM positive cases are classified as presumed dengue.





# RESEARCH PAPER

## Abstract

NHRC\_22\_P1

### The coexistence of non-communicable diseases and mental illnesses among persons in two (2) Jamaican hospitals

Lynch, M<sup>1</sup>

<sup>1</sup>University of the West Indies, Mona, Jamaica

#### Objectives:

1. To examine the prevalence of depression, general anxiety disorder (GAD) and substance misuse disorders among patients with diabetes and/or hypertension in Jamaica.
2. To examine the prevalence of diabetes and hypertension among psychiatric patients diagnosed with depression, general anxiety disorder and substance misuse disorders in Jamaica.
3. To explore the interrelations of the signs and symptoms and risk factors of diabetes and/or hypertension and depression, GAD and/or substance misuse disorder

**Methods:** A mixed method study with a descriptive cross-sectional analysis was conducted using the DASS-21 Modified tool amongst patients diagnosed with diabetes and/or hypertension attending an NCD clinic in May Pen (n=132). The DASS-21 Modified Scale was used to assess GAD and depression. A content analysis of 213 psychiatric patients' dockets at a hospital in Kingston (n=150) and a hospital in May Pen (n=63) was conducted to assess the coexistence of NCDs to assemble information on the screening practices of healthcare professionals.

**Results:** This study showed a high prevalence of mental disorders (depression and/or GAD) among NCD patients (diabetic and/or hypertensive) of 57.3%. It was revealed that 27.5 % of patients diagnosed with depression in the study population have diabetes, 43.2% of patients diagnosed with depression have hypertension as well, 20.7% of patients diagnosed with GAD have diabetes, 82.8% of patients diagnosed with GAD have hypertension and 19.1% (n=17) of patients were found to have both diabetes and hypertension with majority having depression (n=11).

**Conclusion:** NCDs with comorbid mental illness are a growing public health issue in Jamaica. Depression, anxiety and/or GAD are prevalent and underdiagnosed in persons with NCDs such as diabetes and hypertension in Jamaica. The NCD programme should make immediate efforts to provide mental health care as a part of the holistic care package for persons with NCDs.



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9 NOTIFICATIONS-  
All clinical  
sites



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