

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL SURVEILLANCE UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## Weekly Spotlight

### Human Immunodeficiency Virus (Part 1)



Human immunodeficiency virus (HIV) is a virus that attacks the body's immune system. Acquired immunodeficiency syndrome (AIDS) occurs at the most advanced stage of infection. HIV targets the body's white blood cells, weakening the immune system. This makes it easier

to get sick with diseases like tuberculosis, infections and some cancers. HIV is spread from the body fluids of an infected person, including blood, breast milk, semen and vaginal fluids. It can also spread from a mother to her baby. It is not spread by kisses, hugs or sharing food. HIV can be prevented and treated with antiretroviral therapy (ART). Untreated HIV can progress to AIDS, often after many years. World Health Organization (WHO) now defines Advanced HIV Disease (AHD) as CD4 cell count less than 200 cells/mm<sup>3</sup> or WHO stage 3 or 4 in adults and adolescents. All children younger than 5 years of age living with HIV are considered to have advanced HIV disease.

#### Signs and symptoms

The symptoms of HIV vary depending on the stage of infection. HIV spreads more easily in the first few months after a person is infected, but many are unaware of their status until the later stages. In the first few weeks after being infected people may not experience symptoms. Others may have an influenza-like illness including:

- fever
- headache
- rash
- sore throat.

The infection progressively weakens the immune system. This can cause other signs and symptoms:

- swollen lymph nodes
- weight loss
- fever
- diarrhoea
- cough.

Without treatment, people living with HIV infection can also develop severe illnesses:

- tuberculosis (TB)
- cryptococcal meningitis
- severe bacterial infections
- cancers such as lymphomas and Kaposi's sarcoma.

HIV causes other infections to get worse, such as hepatitis C, hepatitis B and mpox.

Taken from WHO website on 30/December/2024  
<https://www.who.int/news-room/fact-sheets/detail/hiv-aids>

## EPI WEEK 51



Syndromic Surveillance

Accidents

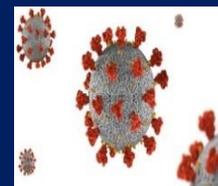
Violence

Pages 2-4



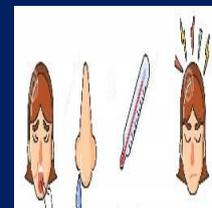
Class 1 Notifiable Events

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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 – 48 to 51 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 |
|----------|---------------------------|--------------|-----------------|----------|------------|-----------|----------|-------------|----------|--------------|-----------------|------------|-----------|
|          | 2024                      |              |                 |          |            |           |          |             |          |              |                 |            |           |
| 48       | 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   |
| 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    | On Time   | On Time  | On Time     | On Time  | On Time      | On Time         | On Time    | On Time   |
| 51       | Late (T)                  | Late (T)     | Late (T)        | Late (T) | On Time    | On Time   | Late (T) | Late (T)    | Late (T) | On Time      | On Time         | On Time    | Late (T)  |

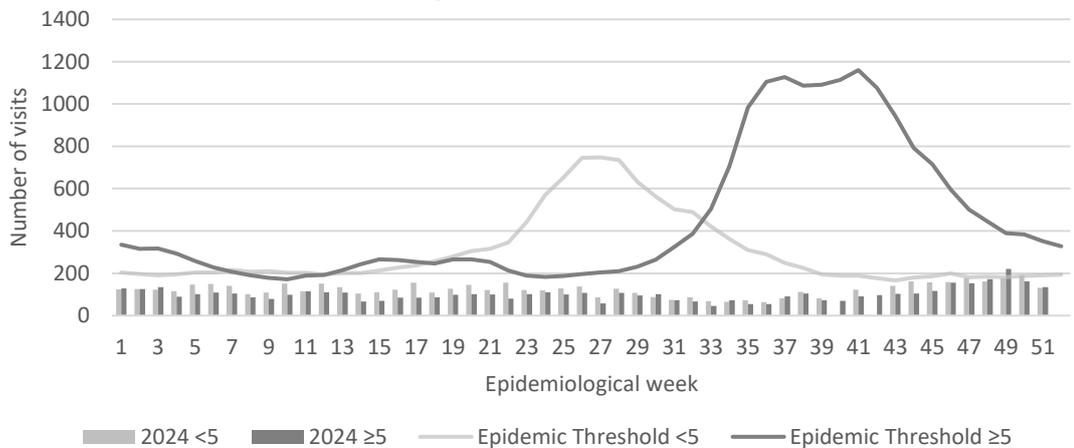
REPORTS FOR SYNDROMIC SURVEILLANCE

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



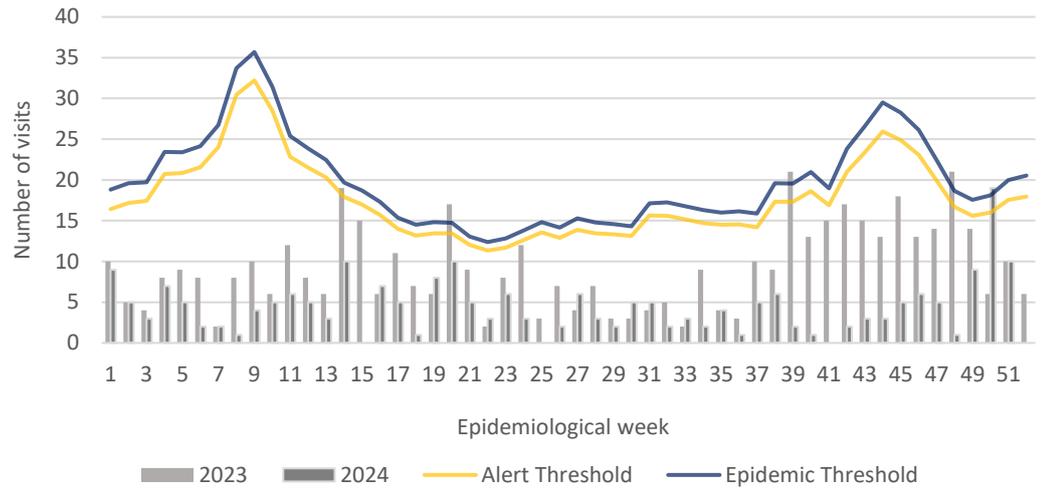
SENTINEL REPORT- 78 sites. Automatic reporting

**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**

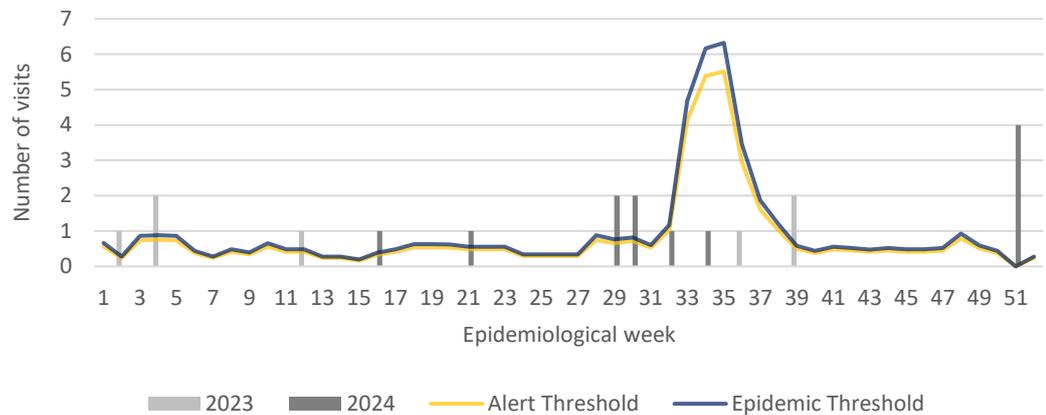


**FEVER AND HAEMORRHAGIC**

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**



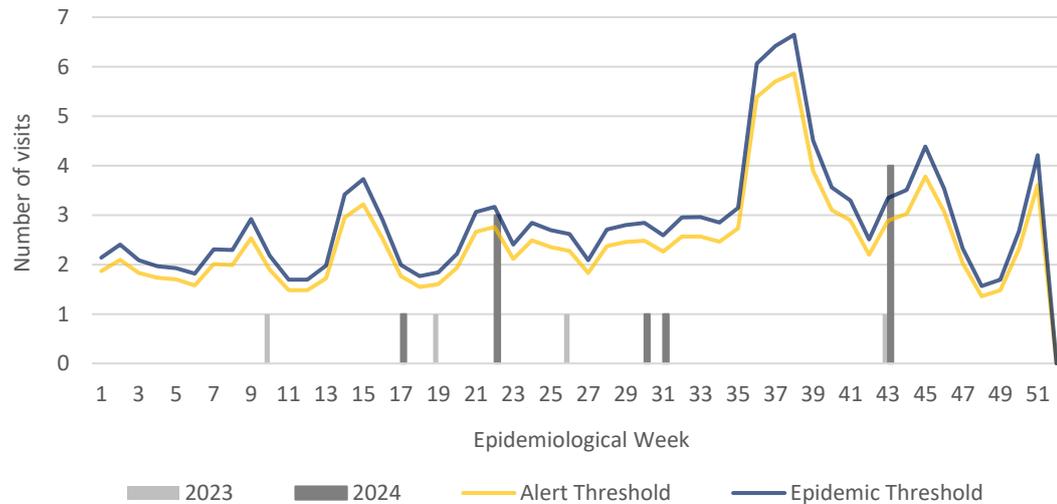
**FEVER AND JAUNDICE**

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

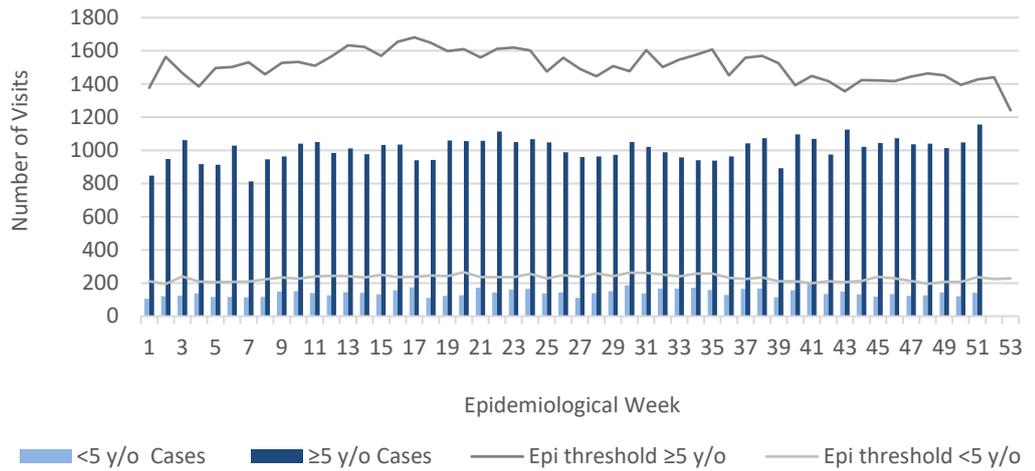


**ACCIDENTS**

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



**Weekly Visits to Sentinel Sites for Accident by Age Group 2024 vs. Weekly Threshold**

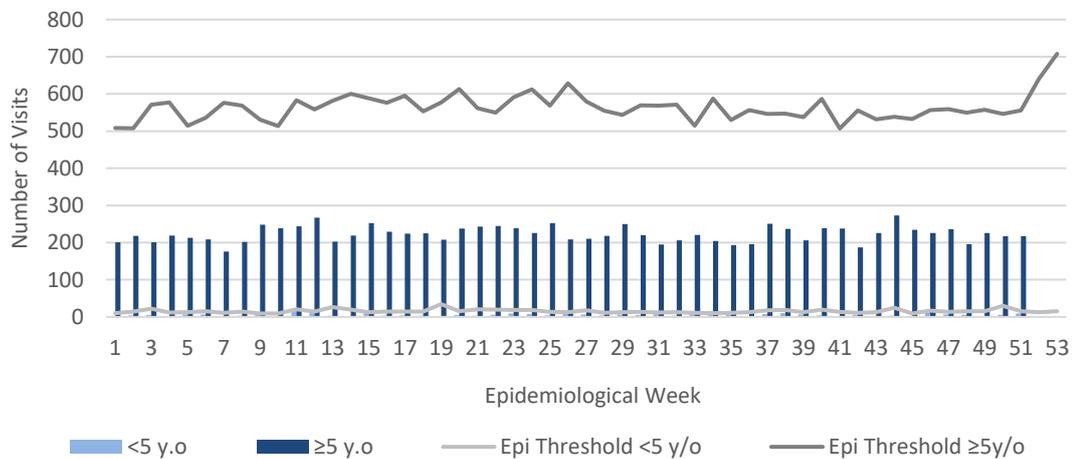


**VIOLENCE**

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



**Weekly Visits to Sentinel Sites for Violence by Age Groups 2024 vs. Weekly Threshold**

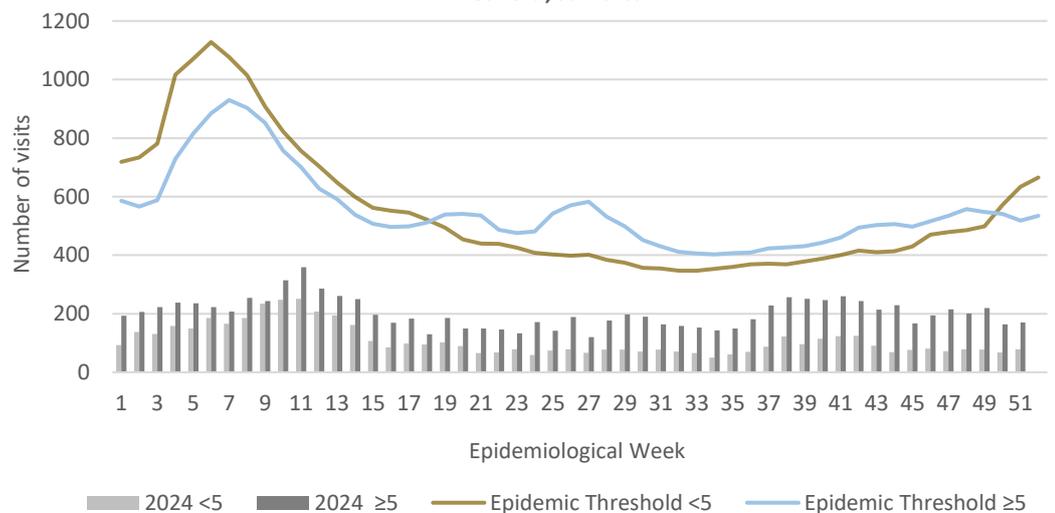


**GASTROENTERITIS**

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 2024 vs Weekly Threshold; Jamaica**



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



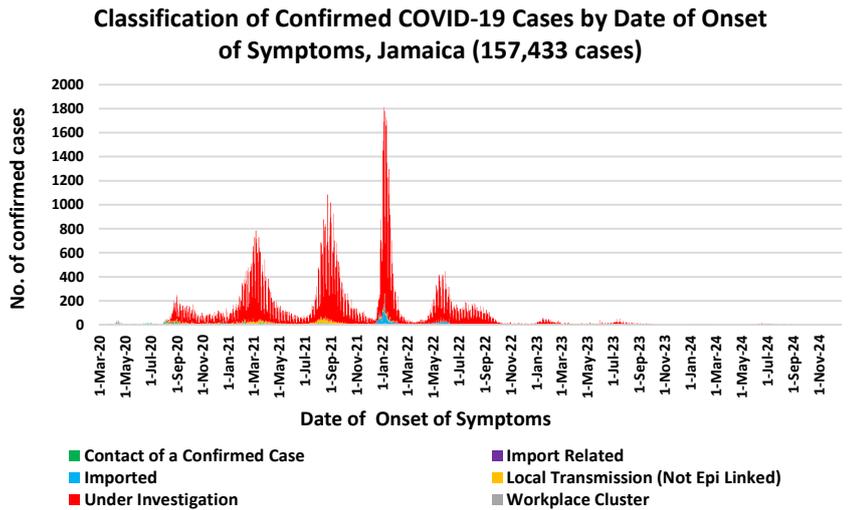
| CLASS ONE NOTIFIABLE EVENTS      |                              |                            |                       | Comments   |   |
|----------------------------------|------------------------------|----------------------------|-----------------------|--|---|
|                                  | CLASS 1 EVENTS               | Confirmed YTD <sup>α</sup> |                       |  |   |
|                                  |                              | CURRENT YEAR 2024          | PREVIOUS YEAR 2023    |  |   |
| NATIONAL /INTERNATIONAL INTEREST | Accidental Poisoning         | 235 <sup>β</sup>           | 396 <sup>β</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.<br><br>Pertussis-like syndrome and Tetanus are clinically confirmed classifications.<br><br><sup>γ</sup> Dengue Hemorrhagic Fever data include Dengue related deaths;<br><br><sup>δ</sup> Figures include all deaths associated with pregnancy reported for the period. |   |
|                                  | Cholera                      | 0                          | 0                     |  |   |
|                                  | Severe Dengue <sup>γ</sup>   | See Dengue page below      | See Dengue page below |  |   |
|                                  | COVID-19 (SARS-CoV-2)        | 702                        | 3837                  |  |   |
|                                  | Hansen’s Disease (Leprosy)   | 0                          | 0                     |  |   |
|                                  | Hepatitis B                  | 29                         | 63                    |  |   |
|                                  | Hepatitis C                  | 4                          | 31                    |  |   |
|                                  | HIV/AIDS                     | NA                         | NA                    |  |   |
|                                  | Malaria (Imported)           | 4                          | 3                     |  |   |
|                                  | Meningitis                   | 15                         | 31                    |  |   |
|                                  | Monkeypox                    | 0                          | 3                     |  |   |
| EXOTIC/ UNUSUAL                  | Plague                       | 0                          | 0                     | <sup>ε</sup> CHIKV IgM positive cases<br><sup>θ</sup> Zika PCR positive cases<br><br><sup>β</sup> Updates made to prior weeks.<br><br><sup>α</sup> 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             | 1                          | 2                     |  |   |
| 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> | 67                         | 61                    |  |   |
|                                  | Ophthalmia Neonatorum        | 181                        | 170                   |  |   |
|                                  | Pertussis-like syndrome      | 0                          | 0                     |  |   |
|                                  | Rheumatic Fever              | 0                          | 0                     |  |   |
|                                  | Tetanus                      | 0                          | 0                     |  |   |
|                                  | Tuberculosis                 | 33                         | 66                    |  |   |
| Yellow Fever                     | 0                            | 0                          |                       |  |   |
| Chikungunya <sup>ε</sup>         | 0                            | 0                          |                       |  |   |
| Zika Virus <sup>θ</sup>          | 0                            | 0                          | NA- Not Available     |  |   |

|  |  |  |  |
|--|--|--|--|
|  <p><b>5 NOTIFICATIONS-</b><br/>All clinical sites</p> |  <p><b>INVESTIGATION REPORTS-</b> Detailed Follow up for all Class One Events</p> |  <p><b>HOSPITAL ACTIVE SURVEILLANCE-</b> 30 sites. Actively pursued</p> |  <p><b>SENTINEL REPORT-</b> 78 sites. Automatic reporting</p> |
|--|--|--|--|

# COVID-19 Surveillance Update

| CASES     | EW 51             | Total              |
|-----------|-------------------|--------------------|
| Confirmed | 3                 | 157433             |
| Females   | 3                 | 90710              |
| Males     | 0                 | 66720              |
| Age Range | 3 to 40 years old | 1 day to 108 years |

\* 3 positive cases had no gender specification  
 \* PCR or Antigen tests are used to confirm cases  
 \* Total represents all cases confirmed from 10 Mar 2020 to the current Epi-Week.

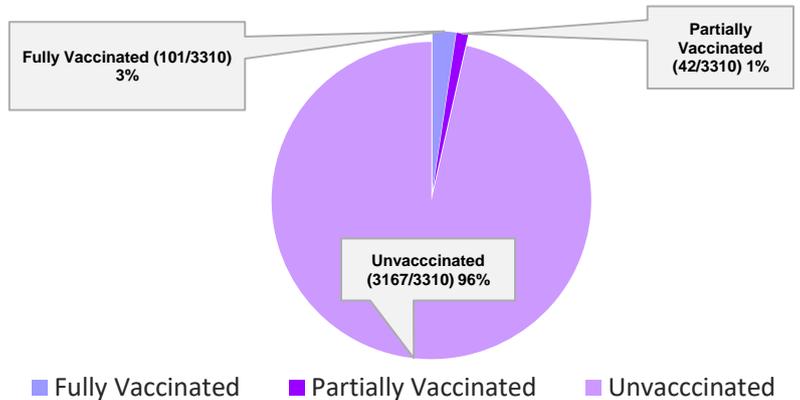


## COVID-19 Outcomes

| Outcomes                   | EW 51 | Total  |
|----------------------------|-------|--------|
| ACTIVE *2 weeks*           |       | 6      |
| DIED – COVID Related       | 0     | 3874   |
| Died - NON COVID           | 0     | 394    |
| Died - Under Investigation | 0     | 143    |
| Recovered and discharged   | 0     | 103226 |
| Repatriated                | 0     | 93     |
| Total                      |       | 157433 |

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

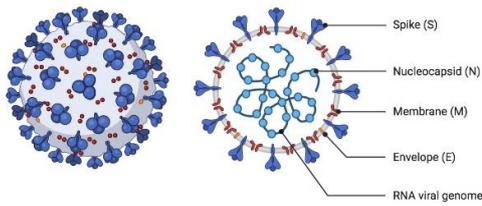
## 3310 COVID-19 Related Deaths since March 1, 2021 – YTD Vaccination Status among COVID-19 Deaths



## COVID-19 Parish Distribution and Global Statistics

### COVID-19 Virus Structure

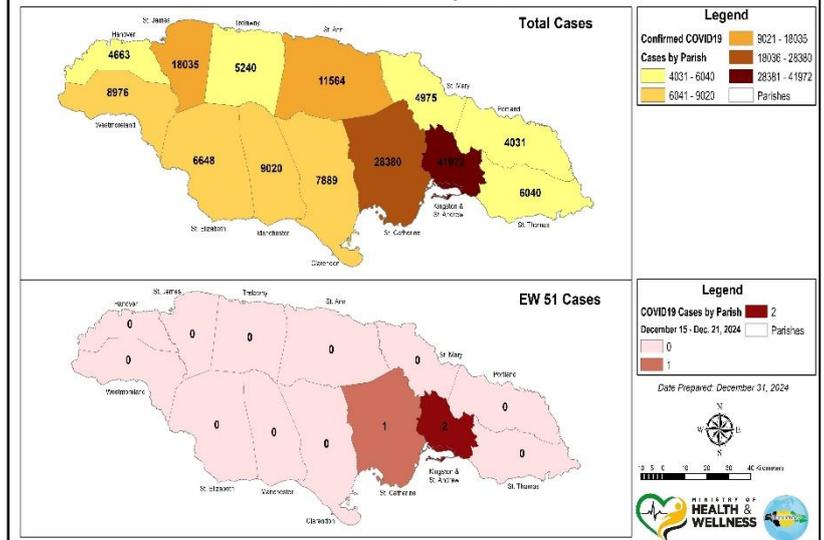
#### SARS-CoV-2



### COVID-19 WHO Global Statistics EW 48-51, 2024

| Epi Week              | Confirmed Cases | Deaths      |
|-----------------------|-----------------|-------------|
| 48                    | 47500           | 628         |
| 49                    | 49600           | 654         |
| 50                    | 50600           | 563         |
| 51                    | 47600           | 525         |
| <b>Total (4weeks)</b> | <b>195300</b>   | <b>2370</b> |

### COVID-19 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



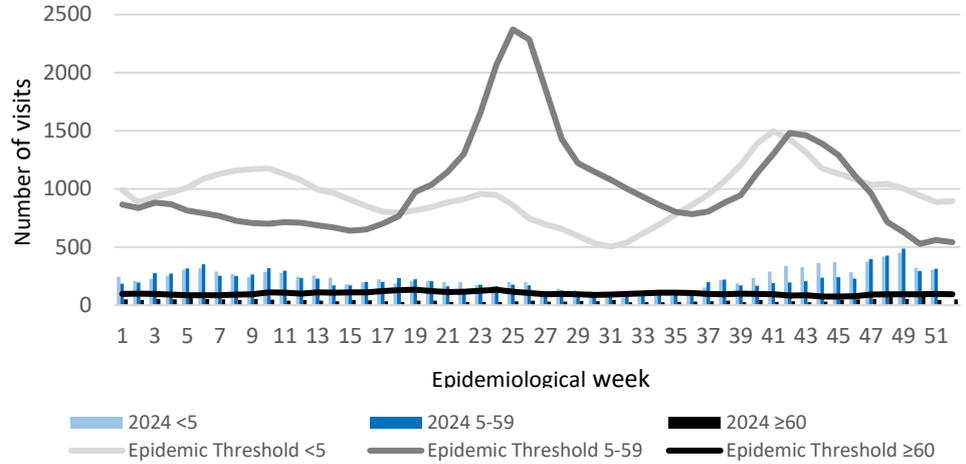
# NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

*EW 51*

December 15, 2024 – December 21, 2024 Epidemiological Week 51

|   | EW 51     | YTD        |
|---|-----------|------------|
| SARI cases                              | 11        | 408        |
| <b>Total Influenza positive Samples</b> | <b>13</b> | <b>266</b> |
| <b>Influenza A</b>                      | <b>13</b> | <b>261</b> |
| H3N2                                    | 0         | 50         |
| H1N1pdm09                               | 13        | 211        |
| Not subtyped                            | 0         | 0          |
| <b>Influenza B</b>                      | <b>0</b>  | <b>5</b>   |
| B lineage not determined                | 0         | 0          |
| B Victoria                              | 0         | 5          |
| <b>Parainfluenza</b>                    | <b>0</b>  | <b>0</b>   |
| <b>Adenovirus</b>                       | <b>0</b>  | <b>0</b>   |
| <b>RSV</b>                              | <b>0</b>  | <b>257</b> |

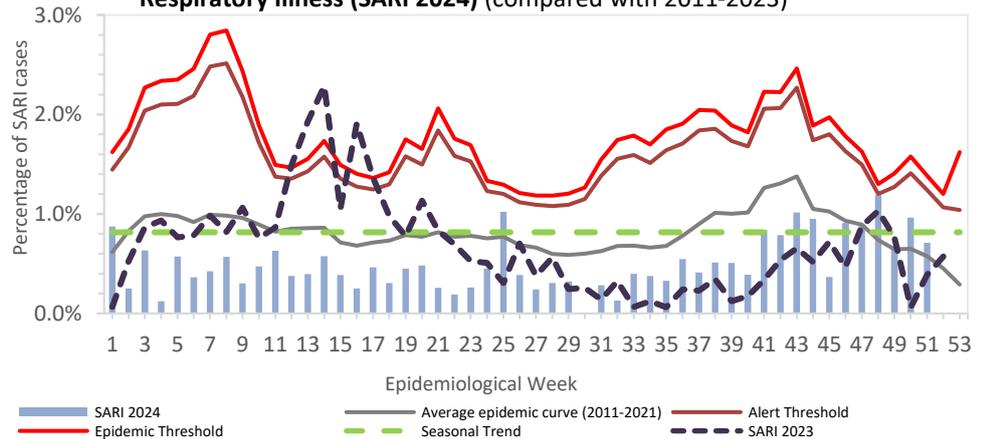
**Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2024 vs Weekly Threshold; Jamaica**



**Epi Week Summary**

During EW 51, eleven (11) SARI admissions were reported.

**Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2024) (compared with 2011-2023)**



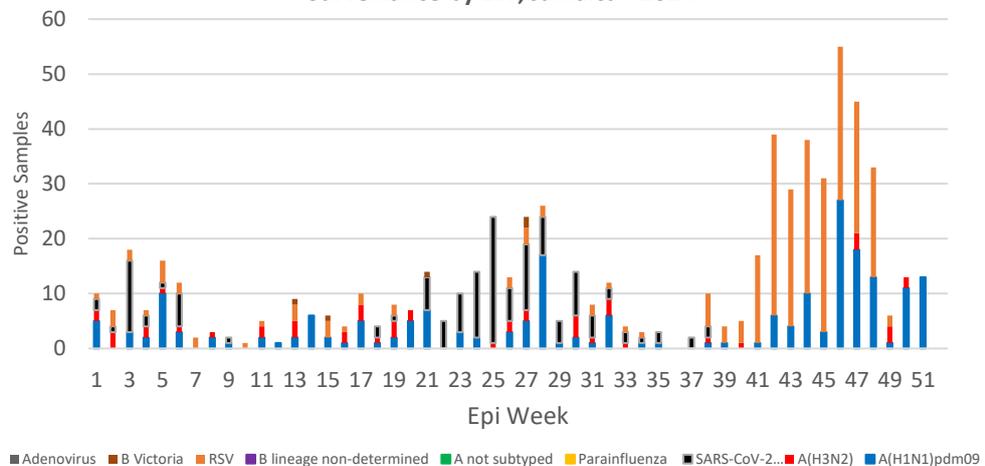
**Caribbean Update EW 51**

**Caribbean:** ILI cases have shown a slight increase, while SARI cases remain low. Influenza activity has risen, with circulation reported in multiple countries in the subregion, predominantly A(H1N1)pdm09. RSV activity remains elevated but has declined over the past four EWs. In contrast, SARS-CoV-2 activity continues at low levels.

**By country:** Over the past four EWs, influenza activity has been reported in Barbados, Saint Lucia, Jamaica, Suriname and Saint Vincent and the Grenadines. RSV activity has been detected in Belize, the Dominican Republic, Suriname, Barbados, Guyana and Saint Vincent and the Grenadines.

(taken from PAHO Respiratory viruses weekly report) <https://www.paho.org/en/influenza-situation-report>

**Distribution of Influenza and Other Respiratory Viruses Under Surveillance by EW, Jamaica - 2024**



**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



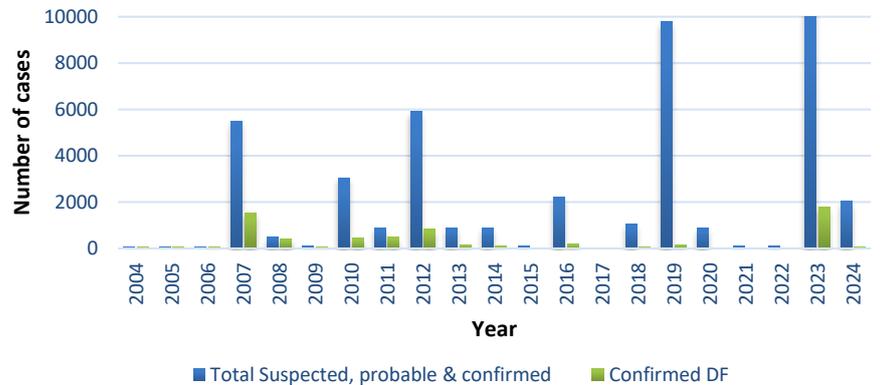
# Dengue Bulletin

December 15, 2024 – December 21, 2024 Epidemiological Week 51

Epidemiological Week 51

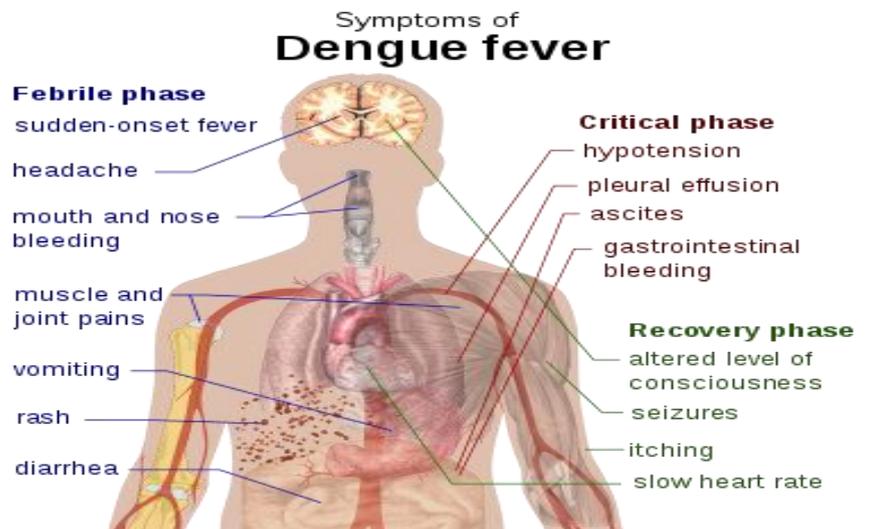


Dengue Cases by Year: 2004-2024, Jamaica



## Reported suspected, probable and confirmed dengue with symptom onset in week 51 of 2024

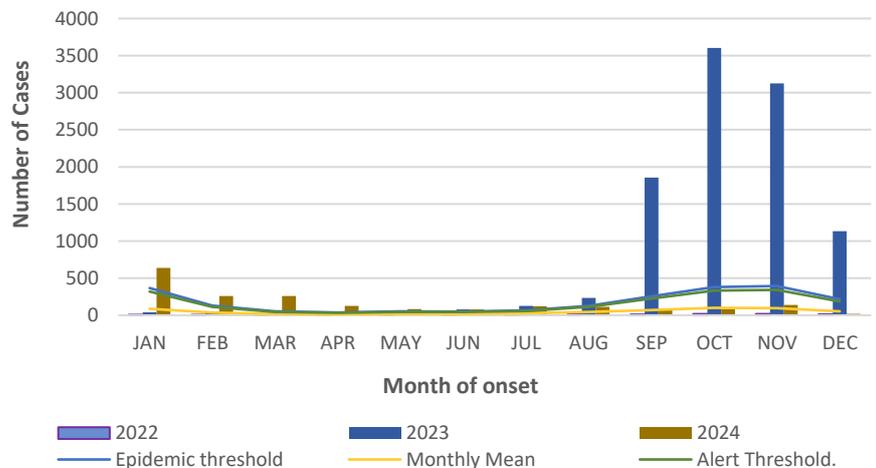
|   | 2024* |      |
|---|-------|------|
|   | EW 51 | YTD  |
|  Total Suspected, Probable & Confirmed Dengue Cases | 0     | 2034 |
| Lab Confirmed Dengue cases  | 0     | 43   |
| CONFIRMED Dengue Related Deaths   | 0     | 1    |



### Points to note:

- Dengue deaths are reported based on date of death.
- \*Figure as at December 24, 2024
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

Suspected, probable and confirmed dengue cases for 2022 - 2024 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



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# RESEARCH PAPER

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## Abstract

NHRC-23-P10

### Study of Online Mental Health Students Support: Feasibility of Technology Integrated Services for Tertiary Institutions in Jamaica

Kotra MK<sup>1</sup>

<sup>1</sup>University of the Commonwealth Caribbean, Kingston, Jamaica

**Background:** Mental well-being of students in tertiary institutions is considered important as it enhance cognitive skills, academic and overall development of students. There is a link between high maladjustment and relationship, depression, stress, personality, addiction to mention a few problems on rise among students in tertiary institutions and its negative effects.

**Objectives:** To understand and review the students' mental health problems and their needs at tertiary institutions in Jamaica. To highlight the mental well-being solutions for students at tertiary institutions in Jamaica using integrating advanced online technologies. To examine how online technology based help for students' mental health problems and well-being can be an effective alternative approach for tertiary institutions in Jamaica.

**Methods:** Mixed methods design was used for the study University of the Commonwealth students online help system quires. Post COVID-19 pandemic years 2020 to 2022 data was analysed using frequency and percentages as well as content analysis for academic stress and relationship issued linked mental health problems.

**Results:** It was found out that 92% of students online help required help during the post COVID-19 pandemic years. The 2020-21 academic year was linked to academic stress related mental health issues and 88% of students reflected anxiety, relationship based emotional problems and 38% showed depression symptoms. 79% women student asked for online help for their problems which are indirectly linked to mental health.

**Conclusion:** In the age of technology driven tertiary education there is no other way but to use online technology support services to meet the growing demands, facilitate more helping seeking behaviour, quick access and easy self-learning interventions for positive mental health and well-being for student academic success and overall development at tertiary institutions in Jamaica. Integrated offline and online technology integrated mental health support services will bridge the gap of students' mental health and well-being at the tertiary institutes.



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9 NOTIFICATIONS-  
All clinical  
sites



INVESTIGATION  
REPORTS- Detailed Follow  
up for all Class One Events



HOSPITAL  
ACTIVE  
SURVEILLANCE-  
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