

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL SURVEILLANCE UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## Weekly Spotlight

### Adolescent Health



Adolescence is the phase of life between childhood and adulthood, from ages 10 to 19. It is a unique stage of human development and an important time for laying the foundations of good health. Adolescents experience rapid physical, cognitive and psychosocial growth. This affects how they feel, think, make decisions, and interact with the world around them. Despite being thought of as a healthy stage of life, there is significant death, illness and injury in the adolescent years. Much of this is preventable or treatable. During this phase, adolescents establish patterns of behaviour – for instance, related to diet, physical activity, substance use, and sexual activity – that can protect their health and the health of others around them, or put their health at risk now and in the future.

To grow and develop in good health, adolescents need information, including age-appropriate comprehensive sexuality education; opportunities to develop life skills; health services that are acceptable, equitable, appropriate and effective; and safe and supportive environments. They also need opportunities to meaningfully participate in the design and delivery of interventions to improve and maintain their health. Expanding such opportunities is key to responding to adolescents’ specific needs and rights. There are more adolescents in the world than ever before: 1.2 billion, totalling one sixth of the global population. This number is expected to rise through 2050, particularly in low- and middle-income countries where close to 90% of 10- to 19-year-olds live. An estimated 1.1 million adolescents die each year. The leading causes are road traffic injuries, suicide and interpersonal violence. Millions of adolescents also experience illness and injury. Causes of mortality and morbidity among adolescents differ by sex and age, and also by geographic region.

For 10-14-year-olds, the leading risks for health are related to water, hygiene and sanitation. Risks for 15-19-year-olds are more often related to behaviours, such as alcohol use and unsafe sex. Poor diet and low physical activity are additional challenges which begin in childhood and adolescence, as does sexual abuse. Older adolescent girls are disproportionately affected by intimate partner violence. Pregnancy complications and unsafe abortions are the leading causes of death among 15-19-year-old girls. Most adolescent mortality and morbidity is preventable or treatable, but adolescents face specific barriers in accessing health information and services. Restrictive laws and policies, parental or partner control, limited knowledge, distance, cost, lack of confidentiality, and provider bias can all restrict adolescents from getting the care they need to grow and develop in good health.

Taken from WHO website on 12/September/2024  
[https://www.who.int/health-topics/adolescent-health#tab=tab\\_1](https://www.who.int/health-topics/adolescent-health#tab=tab_1)  
[https://www.who.int/health-topics/adolescent-health#tab=tab\\_2](https://www.who.int/health-topics/adolescent-health#tab=tab_2)

## EPI WEEK 35



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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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 – 32 to 35 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     |                           |              |                 |          |            |           |          |             |          |              |                 |            |           |
| 32       | 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   |
| 33       | 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   |
| 34       | On Time                   | On Time      | On Time         | On Time  | On Time    | On Time   | On Time  | On Time     | Late (T) | On Time      | On Time         | On Time    | On Time   |
| 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   |

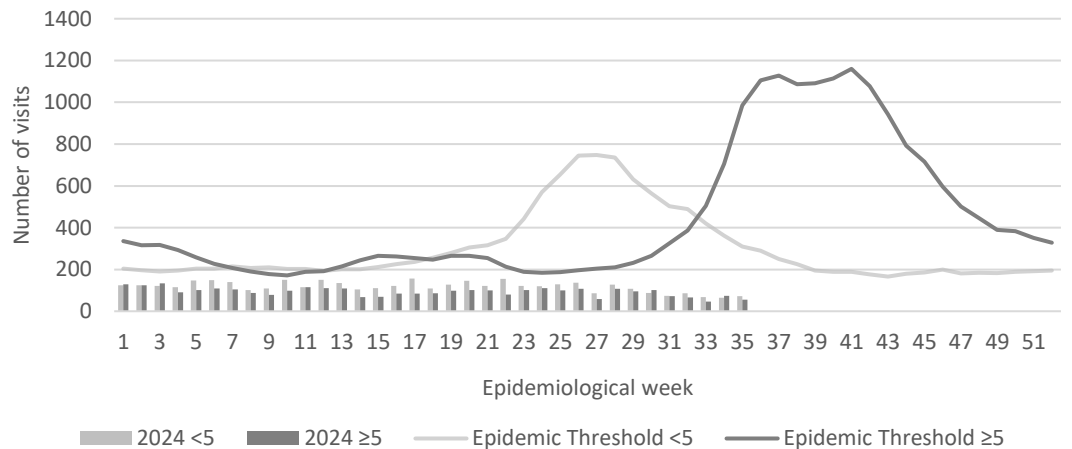
REPORTS FOR SYNDROMIC SURVEILLANCE

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 2024



2 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



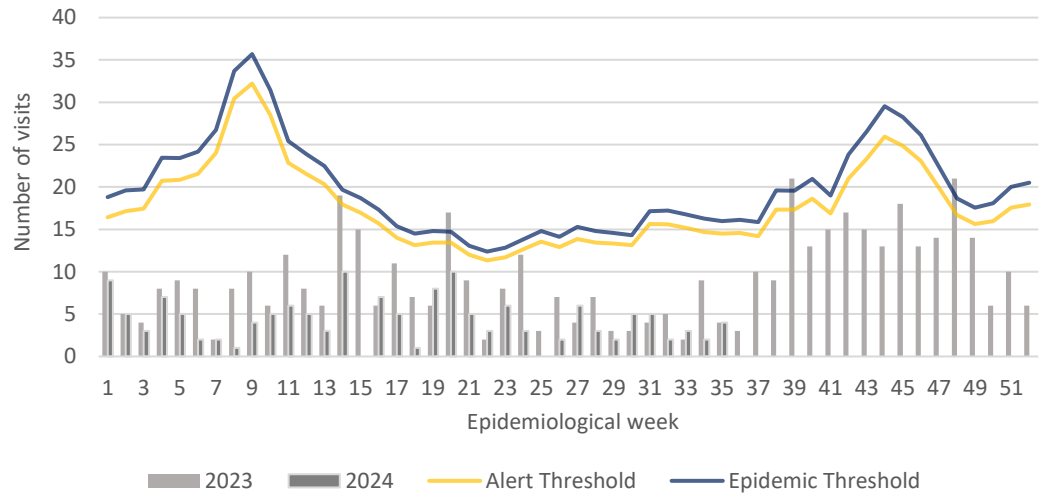
SENTINEL REPORT- 78 sites. Automatic reporting

**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

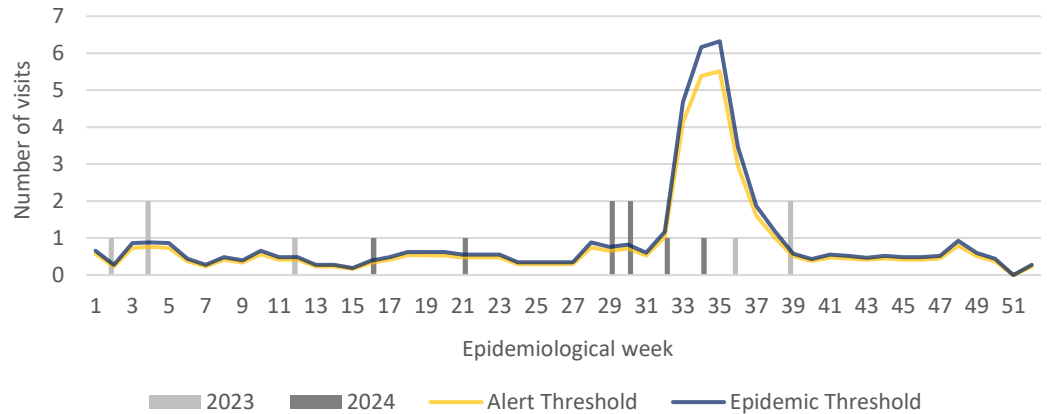


**FEVER AND HAEMORRHAGIC**

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



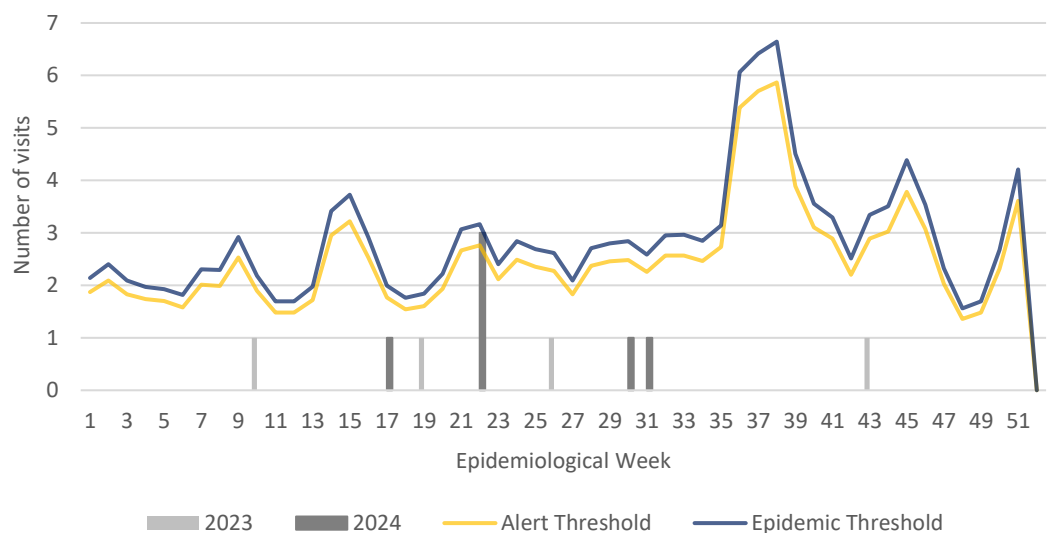
**FEVER AND JAUNDICE**

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

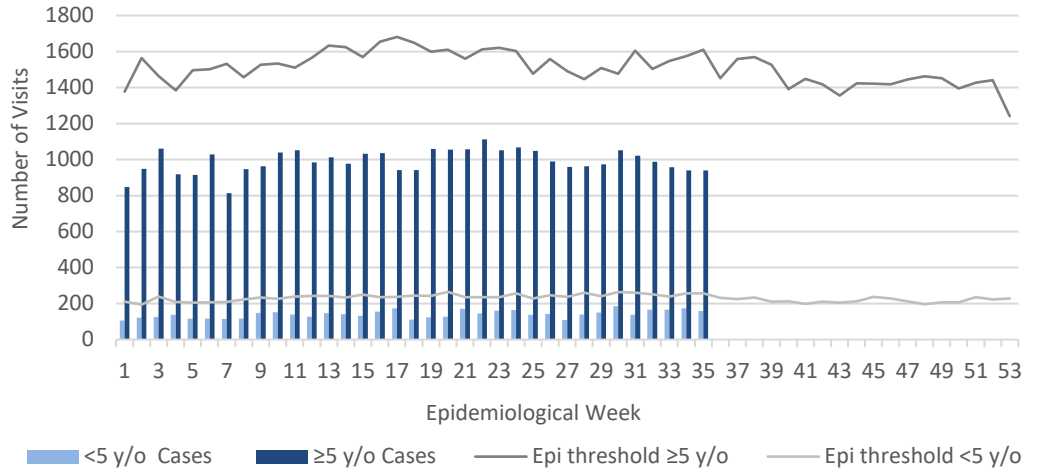


**ACCIDENTS**

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**

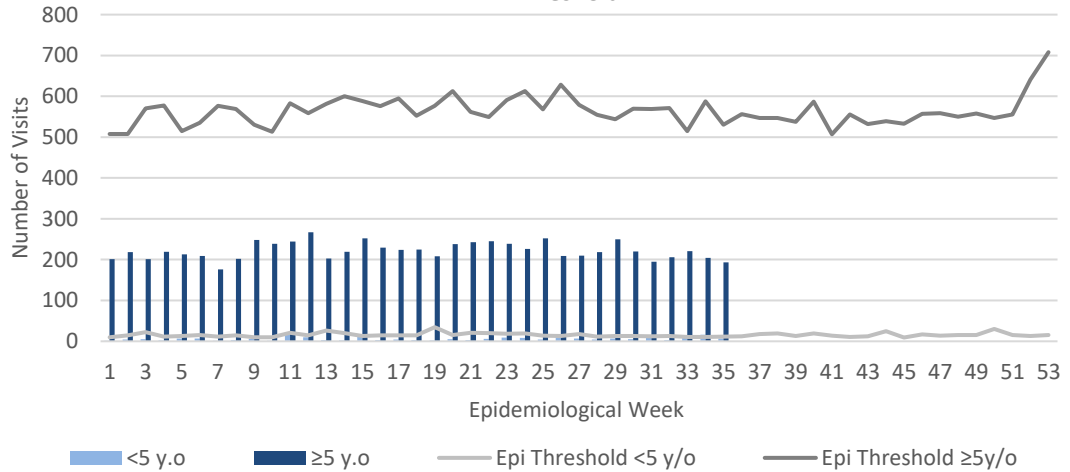


**VIOLENCE**

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**

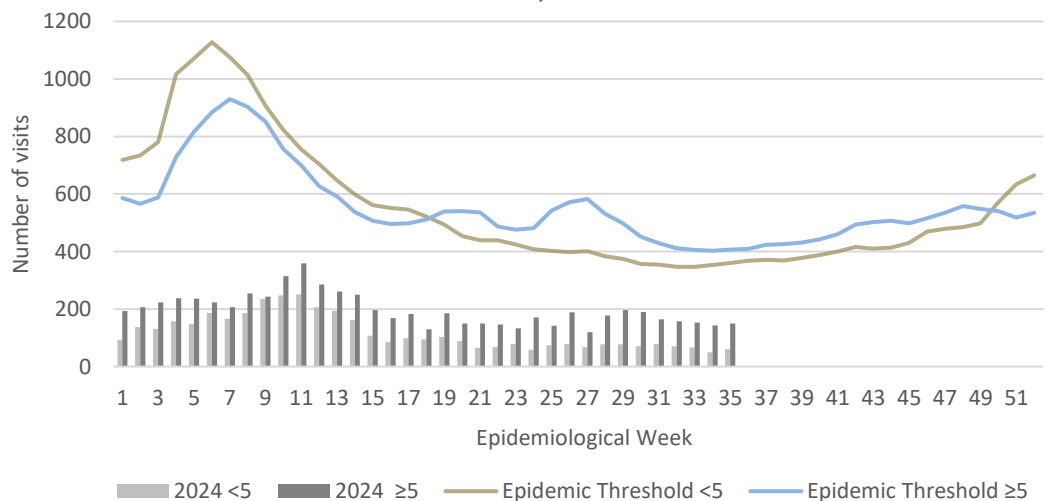


**GASTROENTERITIS**

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> |                       | 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.   |   |
|                                  |                              | CURRENT YEAR 2024          | PREVIOUS YEAR 2023    |  |   |
| NATIONAL /INTERNATIONAL INTEREST | Accidental Poisoning         | 206 <sup>β</sup>           | 255 <sup>β</sup>      | 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)        | 627                        | 3496                  |  |   |
|                                  | Hansen’s Disease (Leprosy)   | 0                          | 0                     |  |   |
|                                  | Hepatitis B                  | 16                         | 50                    |  |   |
|                                  | Hepatitis C                  | 3                          | 24                    |  |   |
|                                  | HIV/AIDS                     | NA                         | NA                    |  |   |
|                                  | Malaria (Imported)           | 2                          | 3                     |  |   |
|                                  | Meningitis                   | 9                          | 20                    |  |   |
|                                  | 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.   |   |
| 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                     | <sup>α</sup> Figures are cumulative totals for all epidemiological weeks year to date.   |   |
|                                  | Congenital Rubella Syndrome  | 0                          | 0                     |  |   |
|                                  | Congenital Syphilis          | 0                          | 0                     |  |   |
|                                  | Fever and Rash               | Measles                    | 0                     |  | 0 |
|                                  |                              | Rubella                    | 0                     |  | 0 |
|                                  | Maternal Deaths <sup>δ</sup> | 43                         | 38                    |  |   |
|                                  | Ophthalmia Neonatorum        | 94                         | 92                    |  |   |
|                                  | Pertussis-like syndrome      | 0                          | 0                     |  |   |
|                                  | Rheumatic Fever              | 0                          | 0                     |  |   |
|                                  | Tetanus                      | 0                          | 0                     |  |   |
|                                  | Tuberculosis                 | 21                         | 46                    |  |   |
|                                  | Yellow Fever                 | 0                          | 0                     |  |   |
|                                  | Chikungunya <sup>ε</sup>     | 0                          | 0                     |  |   |
| Zika Virus <sup>θ</sup>          | 0                            | 0                          |                       |  |   |

NA- Not Available



**5 NOTIFICATIONS-**  
All clinical sites



**INVESTIGATION REPORTS-** Detailed Follow up for all Class One Events



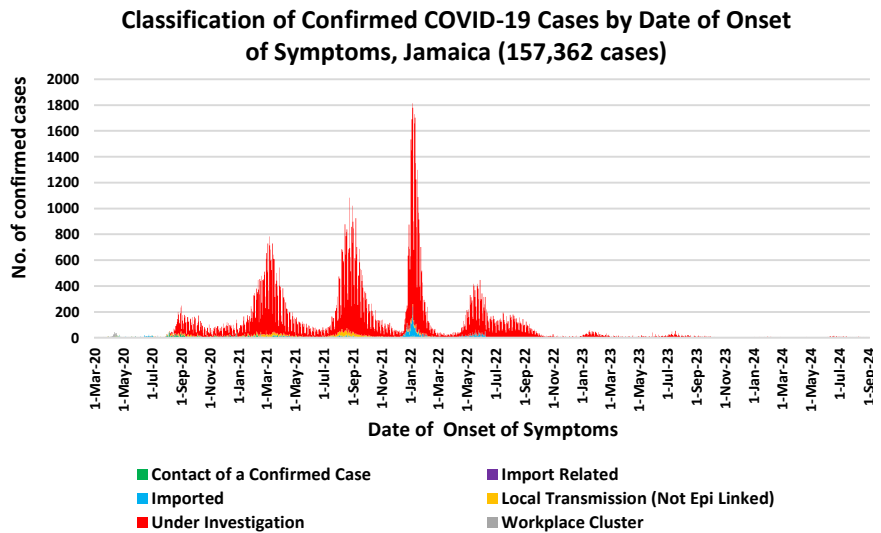
**HOSPITAL ACTIVE SURVEILLANCE-** 30 sites. Actively pursued



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

# COVID-19 Surveillance Update

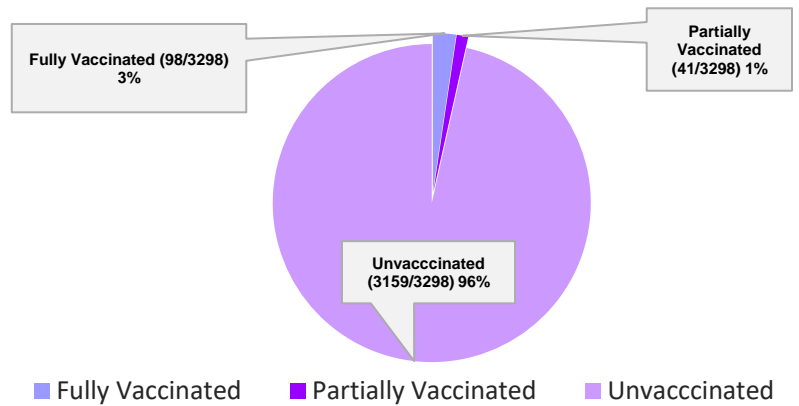
| CASES  | EW 35                    | Total              |
|--|--------------------------|--------------------|
| Confirmed  | 16                       | 157362             |
| Females  | 10                       | 90676              |
| Males  | 6                        | 66683              |
| Age Range  | 9 months to 88 years old | 1 day to 108 years |
| * 3 positive cases had no gender specification<br>* PCR or Antigen tests are used to confirm cases<br>* Total represents all cases confirmed from 10 Mar 2020 to the current Epi-Week. |                          |                    |



## COVID-19 Outcomes

| Outcomes  | EW 35 | Total  |
|---|-------|--------|
| ACTIVE<br>*2 weeks*   |       | 46     |
| DIED – COVID Related  | 0     | 3862   |
| Died - NON COVID  | 0     | 381    |
| Died - Under Investigation  | 0     | 150    |
| Recovered and discharged  | 0     | 103226 |
| Repatriated   | 0     | 93     |
| Total   |       | 157362 |
| *Vaccination programme March 2021 – YTD<br>* Total as at current Epi week |       |        |

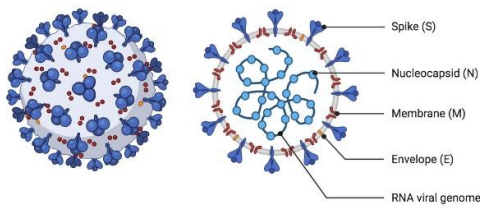
## 3298 COVID-19 Related Deaths since March 1, 2021 – YTD Vaccination Status among COVID-19 Deaths



## COVID-19 Parish Distribution and Global Statistics

### COVID-19 Virus Structure

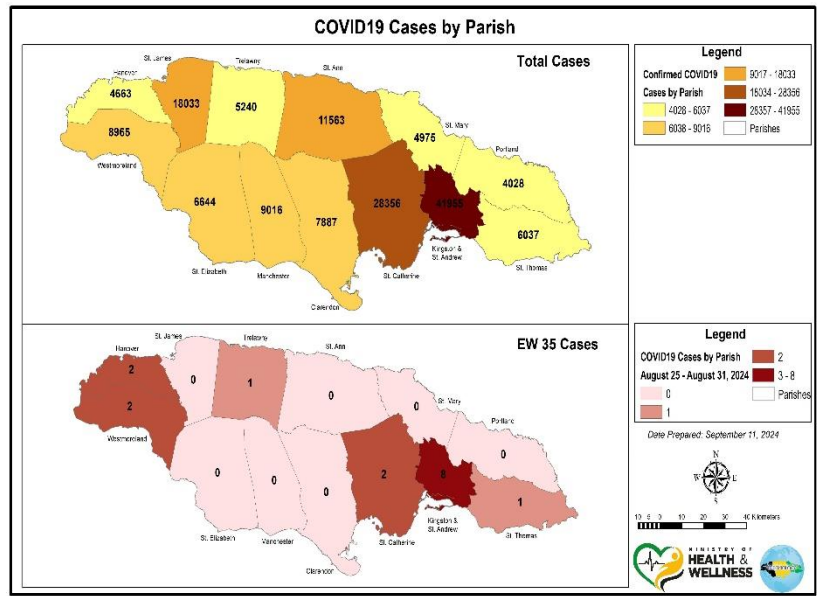
#### SARS-CoV-2



### COVID-19 WHO Global Statistics EW 32-35, 2024

| Epi Week              | Confirmed Cases      | Deaths               |
|-----------------------|----------------------|----------------------|
| 32                    | 60900                | 1200                 |
| 33                    | 61100                | 1200                 |
| 34                    | 58600                | 997                  |
| 35                    | *updates unavailable | *updates unavailable |
| <b>Total (4weeks)</b> | <b>180600</b>        | <b>3397</b>          |

### 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

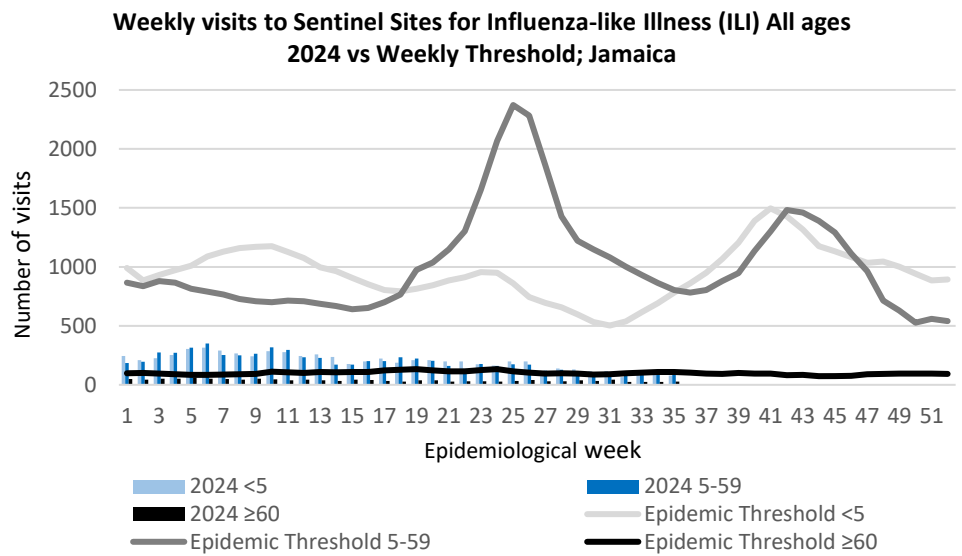


# NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 35

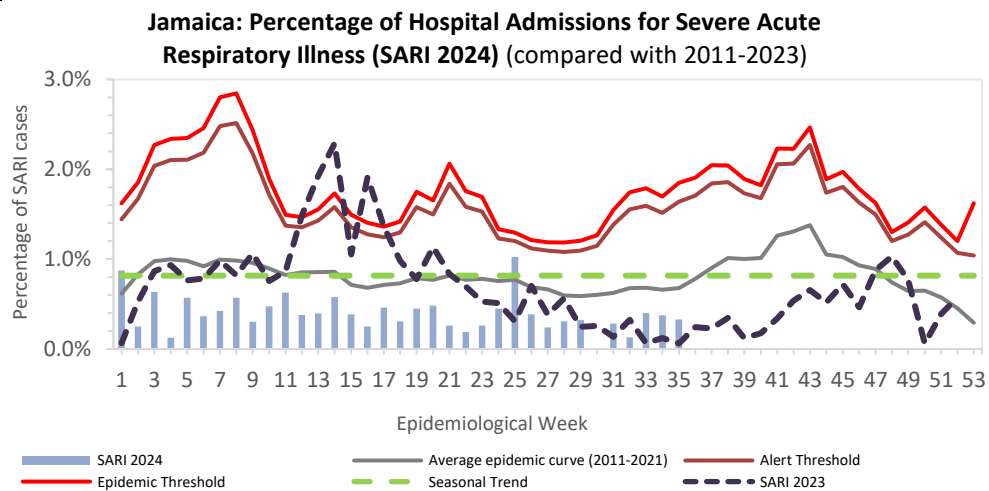
August 25, 2024 – August 31, 2024 Epidemiological Week 35

|   | EW 35    | YTD        |
|---|----------|------------|
| SARI cases                              | 5        | 217        |
| <b>Total Influenza positive Samples</b> | <b>0</b> | <b>133</b> |
| <b>Influenza A</b>                      | <b>0</b> | <b>128</b> |
| H3N2                                    | 0        | 35         |
| H1N1pdm09                               | 0        | 93         |
| 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>35</b>  |



## Epi Week Summary

During EW 35, five (5) SARI admissions were reported.

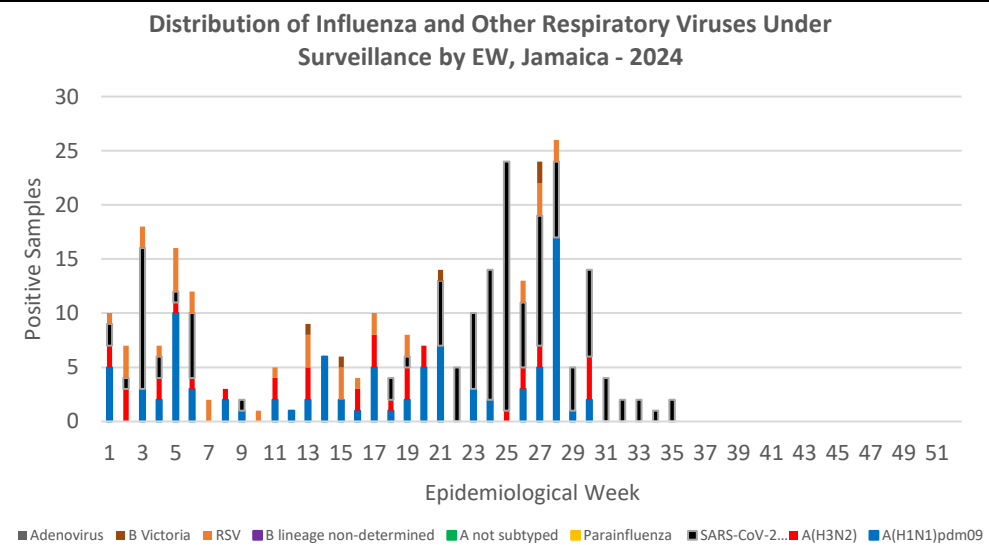


## Caribbean Update EW 35

**Caribbean:** Following the rise observed in previous weeks, ILI cases have shown a decreasing trend over the past four EW, associated with a higher proportion of positive influenza cases. SARI cases have remained low though with an increasing proportion of positive SARS-CoV-2. Influenza activity declining over the past four Ew, with A(H3N2) being predominant, followed by A(H1N1)pd09. RSV activity has remained low, while SARS-CoV-2 activity remains high.

**By country:** In the last four EW, influenza activity has been observed in Belize, the Dominican Republic and Guyana. Additionally, SARS-CoV-2 activity has been recorded in Belize, Haiti, Jamaica, Barbados, Guyana, and Saint Vincent and the Grenadines.

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



**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

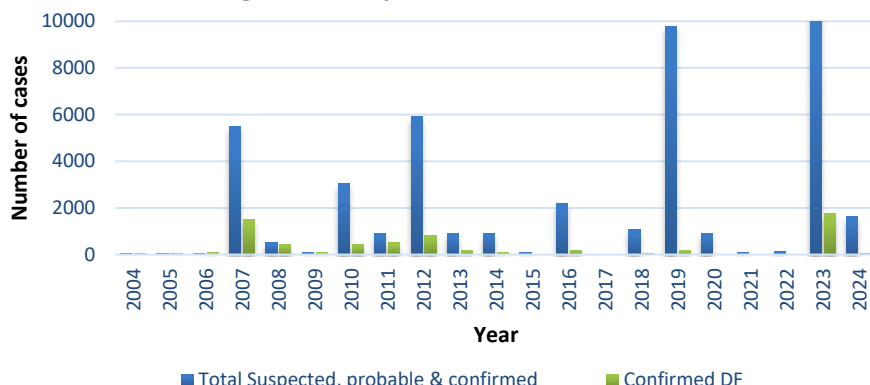
# Dengue Bulletin

August 25, 2024 – August 31, 2024 Epidemiological Week 35

Epidemiological Week 35



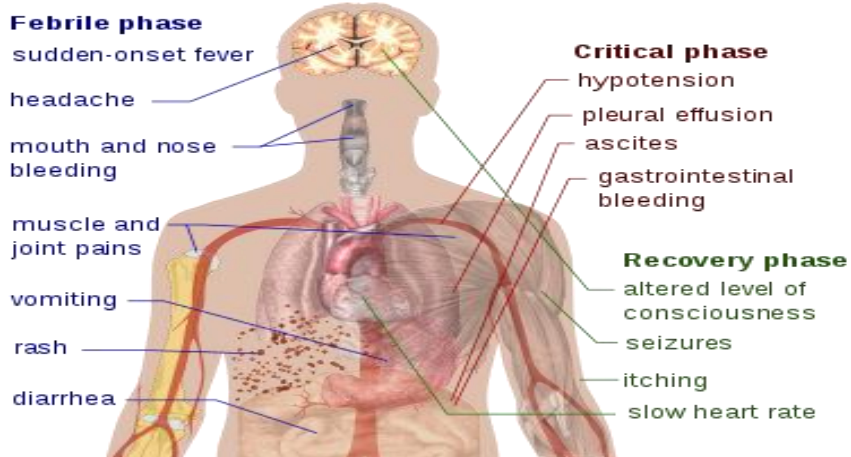
Dengue Cases by Year: 2004-2024, Jamaica



## Reported suspected, probable and confirmed dengue with symptom onset in week 35 of 2024

|  | 2024* |      |
|--|-------|------|
|  | EW 35 | YTD  |
| Total Suspected, Probable & Confirmed Dengue Cases | 10    | 1633 |
| Lab Confirmed Dengue cases                         | 0     | 39   |
| CONFIRMED Dengue Related Deaths                    | 0     | 1    |

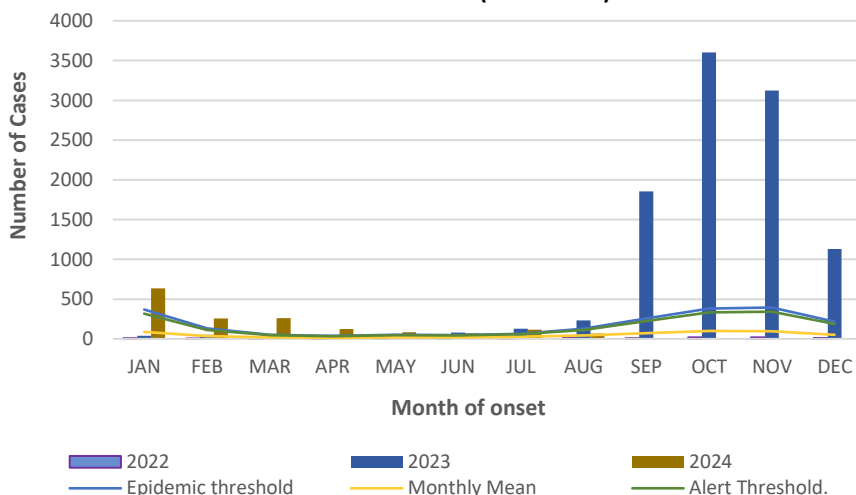
## Symptoms of Dengue fever



### Points to note:

- Dengue deaths are reported based on date of death.
- \*Figure as at September 12, 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-O15

### A cross-sectional survey of antibiotic use among patients admitted at two urban hospitals in Jamaica

Mc Gowan, D<sup>1,2</sup>, Pate- Robinson K<sup>1</sup>, Ferguson, TS<sup>1</sup>, Thorbourne A<sup>1</sup>, Mitchell A<sup>1</sup>, Headley C<sup>2</sup>, Prout J<sup>2</sup>, Thompson T<sup>1</sup>

<sup>1</sup>University of the West Indies Mona Jamaica, <sup>2</sup>Cornwall Regional Hospital Montego Bay Jamaica

**Objectives:** To estimate prevalence of antibiotic use, evaluate antibiotic usage patterns, antimicrobial stewardship and estimate the direct costs for antimicrobial use at the Cornwall Regional Hospital (CRH) and the University Hospital of the West Indies (UHWI).

**Methods:** We conducted a cross-sectional clinical chart review involving 368 patients admitted to the UHWI and CRH on specific days from August 2021 to January 2022. Data were extracted using a project specific questionnaire and analyzed using Stata 17. Prevalent antibiotic use was defined as being administered at least one antimicrobial during the survey day. Annual costs were estimated using costs/dose for each antibiotic provided by the hospital pharmacy.

**Results:** Analyses included 163 UHWI participants and 205 CRH participants. Mean age (SD) was 44.89 years (24.42). Overall prevalence of antibiotic use was 54% (n=199). Prevalence was similar at UHWI and CRH (57% vs. 51%, p=0.149)

Cephalosporins were the predominant antibiotic class prescribed (27%, n=103). Statistically significant differences in antimicrobial stewardship indicators were observed between the two facilities: supporting microbiology cultures done, 51.3% UHWI, 29.8% CRH (p value < 0.001), antibiotic review date documented, 17.8% UHWI, 5.4% CRH (p value 0.005), evidence of de-escalation, 9.5% UHWI, 0% CRH (p = 0.001). Annual direct cost of antimicrobial usage in these institutions amounted to \$ 1.77 million USD.

**Conclusion:** Approximately half of patients admitted to these Jamaican hospitals receive antimicrobial therapy with cephalosporins being the most common antibiotics used. Clinically relevant gaps in antimicrobial stewardship were observed at both institutions. Antibiotic usage carries substantial direct costs.



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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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REPORT- 78 sites.  
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