

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL SURVEILLANCE UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## Weekly Spotlight

### Antimicrobial Resistance (Part 1)



Antimicrobials – including antibiotics, antivirals, antifungals, and antiparasitics – are medicines used to prevent and treat infectious diseases in humans, animals and plants.

Antimicrobial Resistance (AMR) occurs when bacteria, viruses, fungi and parasites no longer respond to antimicrobial medicines. As a result of drug resistance, antibiotics and other antimicrobial medicines become ineffective and infections become difficult or impossible to treat, increasing the risk of disease spread, severe illness, disability and death.

AMR is a natural process that happens over time through genetic changes in pathogens. Its emergence and spread is accelerated by human activity, mainly the misuse and overuse of antimicrobials to treat, prevent or control infections in humans, animals and plants.

#### A global concern

Antimicrobial medicines are the cornerstone of modern medicine. The emergence and spread of drug-resistant pathogens threatens our ability to treat common infections and to perform life-saving procedures including cancer chemotherapy and caesarean section, hip replacements, organ transplantation and other surgeries.

In addition, drug-resistant infections impact the health of animals and plants, reduce productivity in farms, and threaten food security.

AMR has significant costs for both health systems and national economies overall. For example, it creates need for more expensive and intensive care, affects productivity of patients or their caregivers through prolonged hospital stays, and harms agricultural productivity.

AMR is a problem for all countries at all income levels. Its spread does not recognize country borders. Contributing factors include lack of access to clean water, sanitation and hygiene (WASH) for both humans and animals; poor infection and disease prevention and control in homes, healthcare facilities and farms; poor access to quality and affordable vaccines, diagnostics and medicines; lack of awareness and knowledge; and lack of enforcement of relevant legislation. People living in low-resource settings and vulnerable populations are especially impacted by both the drivers and consequences of AMR.

Taken from WHO website on 13/December/2024

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

## EPI WEEK 48



Syndromic Surveillance

Accidents

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Class 1 Notifiable Events

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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 – 45 to 48 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													
45	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
46	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time
47	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
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

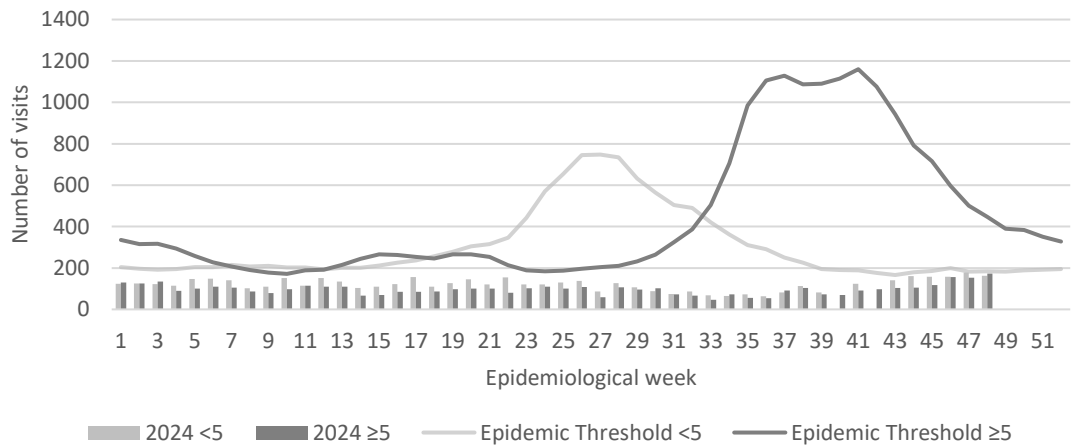
REPORTS FOR SYNDROMIC SURVEILLANCE

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



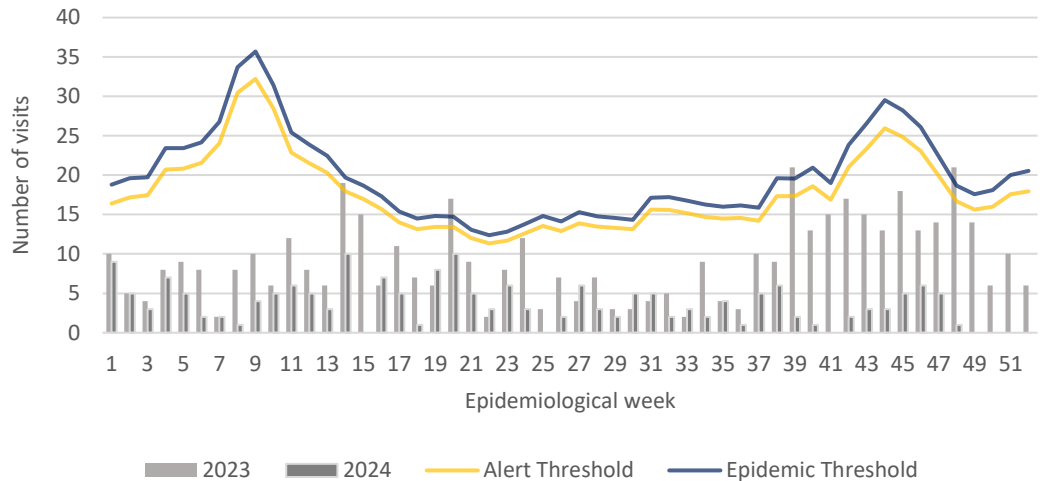
SENTINEL REPORT- 78 sites. Automatic reporting

**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**

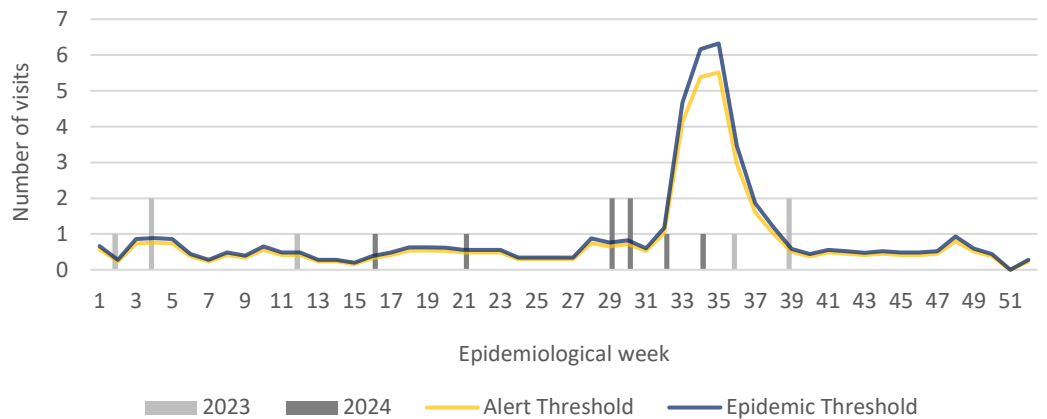


**FEVER AND HAEMORRHAGIC**

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**



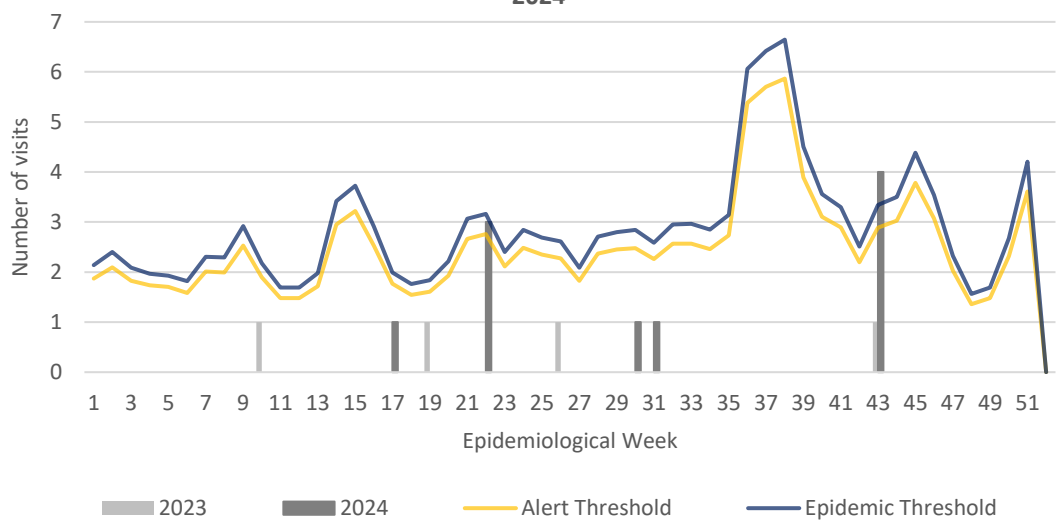
**FEVER AND JAUNDICE**

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

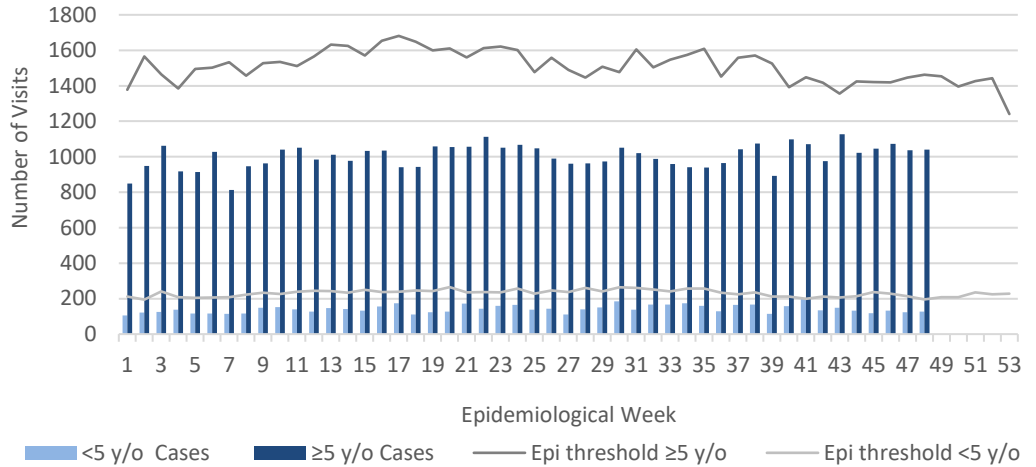


### ACCIDENTS

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

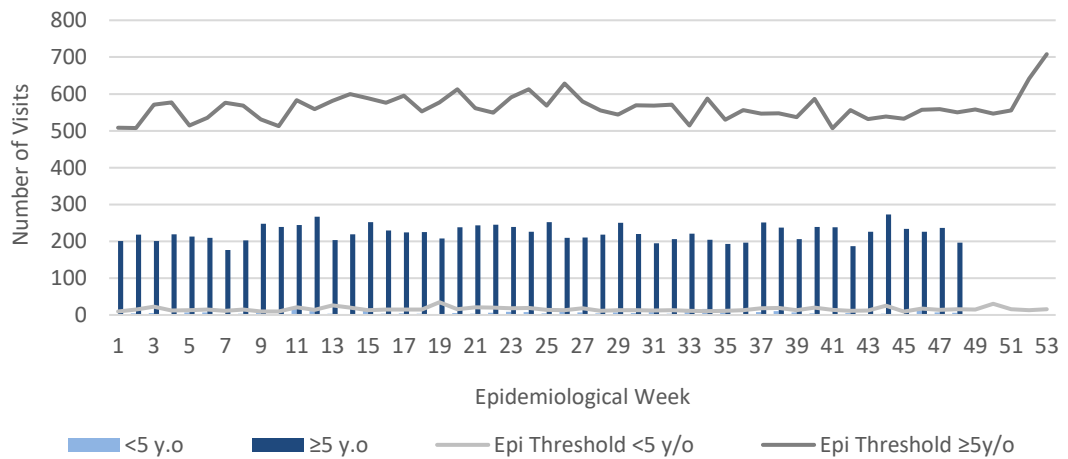


### VIOLENCE

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

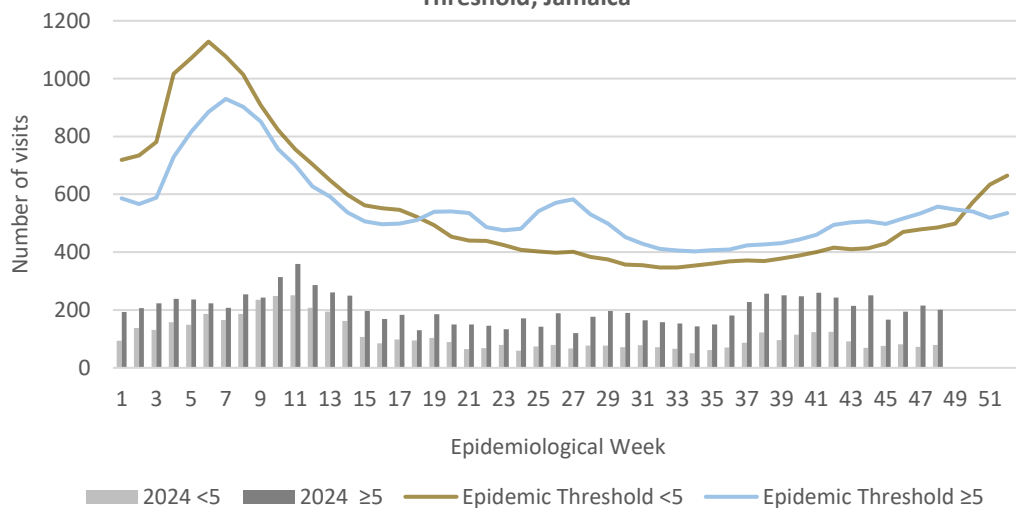


### GASTROENTERITIS

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>			
		CURRENT YEAR 2024	PREVIOUS YEAR 2023		
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning	232 <sup>β</sup>	374 <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.  Pertussis-like syndrome and Tetanus are clinically confirmed classifications.  <sup>γ</sup> Dengue Hemorrhagic Fever data include Dengue related deaths;  <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)	694	3810		
	Hansen’s Disease (Leprosy)	0	0		
	Hepatitis B	27	62		
	Hepatitis C	3	29		
	HIV/AIDS	NA	NA		
	Malaria (Imported)	2	3		
	Meningitis	14	25		
	Monkeypox	0	3		
EXOTIC/ UNUSUAL	Plague	0	0	<sup>ε</sup> CHIKV IgM positive cases <sup>θ</sup> Zika PCR positive cases  <sup>β</sup> Updates made to prior weeks.  <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>	65	55		
	Ophthalmia Neonatorum	175	161		
	Pertussis-like syndrome	0	0		
	Rheumatic Fever	0	0		
	Tetanus	0	0		
	Tuberculosis	33	65		
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

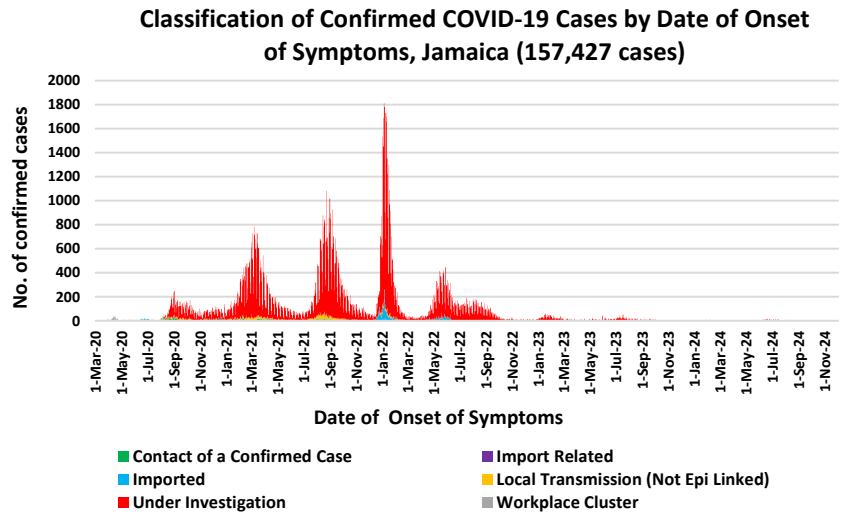


**SENTINEL REPORT-** 78 sites. Automatic reporting

# COVID-19 Surveillance Update

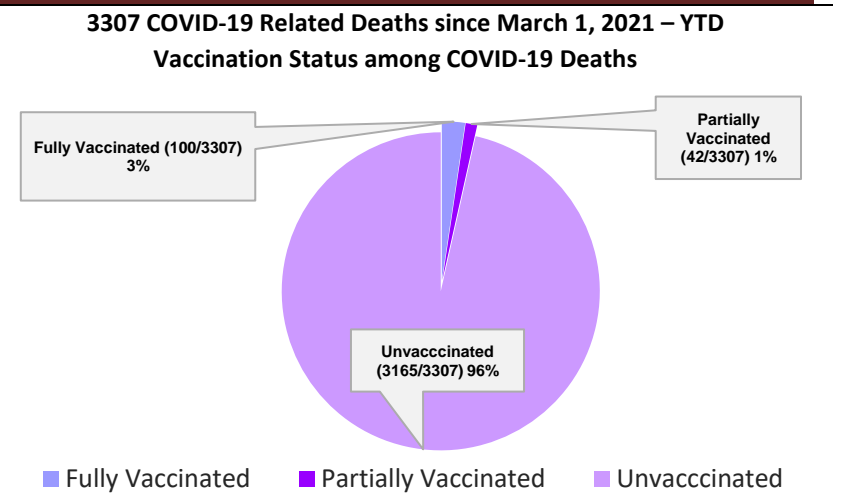
CASES	EW 48	Total
Confirmed	3	157427
Females	2	90705
Males	1	66719
Age Range	3 to 9 years old	1 day to 108 years

\* 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.



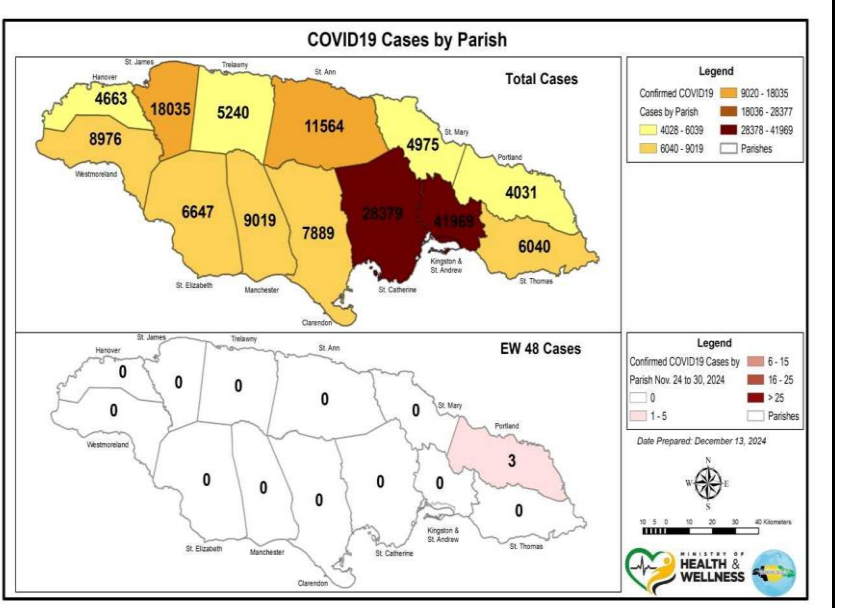
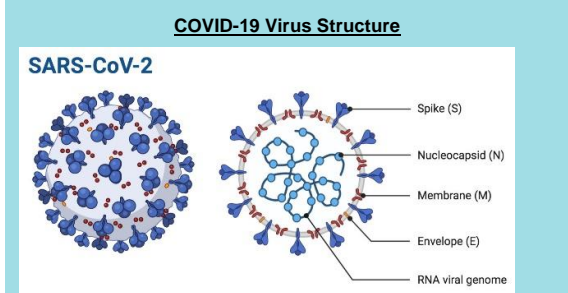
## COVID-19 Outcomes

Outcomes	EW 47	Total
ACTIVE *2 weeks*		5
DIED – COVID Related	0	3871
Died - NON COVID	0	394
Died - Under Investigation	0	143
Recovered and discharged	0	103226
Repatriated	0	93
Total		157427



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

## COVID-19 Parish Distribution and Global Statistics



COVID-19 WHO Global Statistics EW 45-48, 2024		
Epi Week	Confirmed Cases	Deaths
45	46500	835
46	43300	711
47	44100	647
48	47000	472
<b>Total (4weeks)</b>	<b>180900</b>	<b>2665</b>

**6 NOTIFICATIONS-**  
All clinical sites

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

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

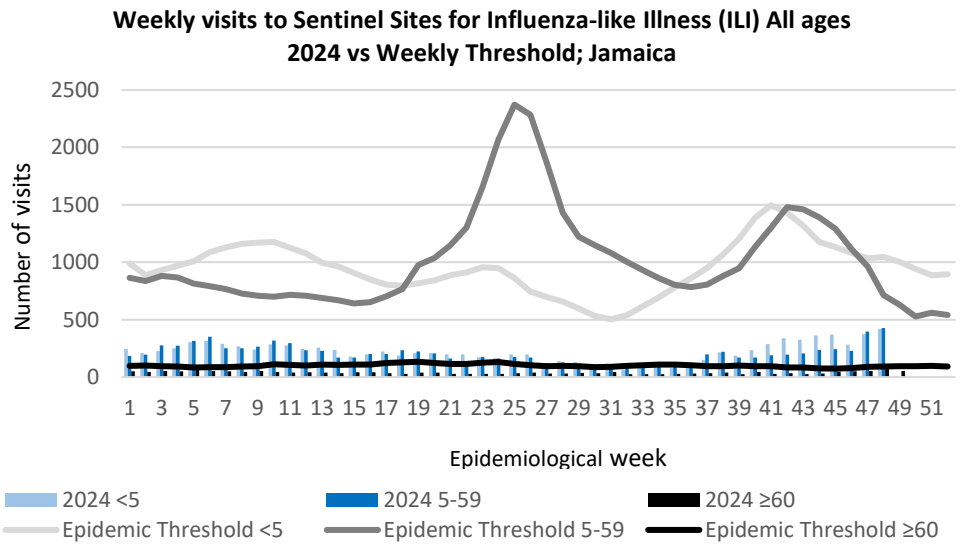
**SENTINEL REPORT-** 78 sites. Automatic reporting

# NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 48

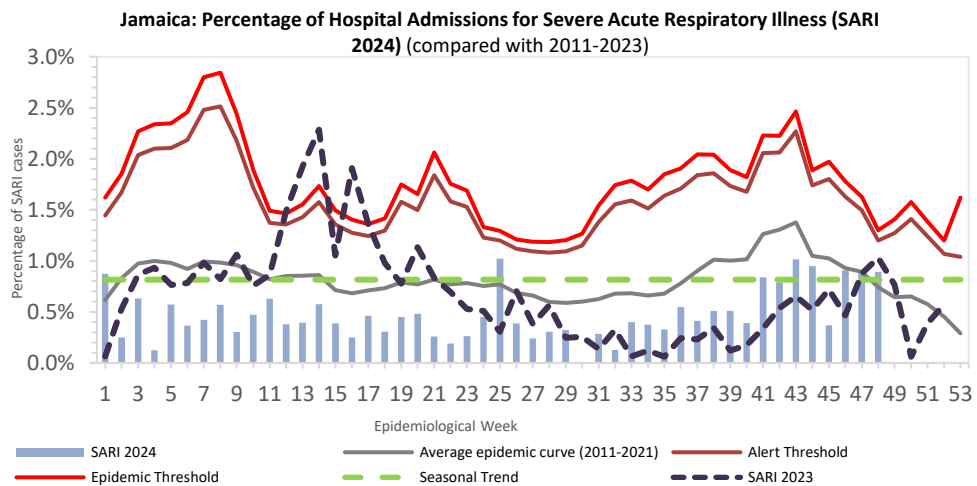
November 24, 2024 – November 30, 2024 Epidemiological Week 48

	EW 48	YTD
SARI cases	20	369
<b>Total Influenza positive Samples</b>	<b>3</b>	<b>202</b>
<b>Influenza A</b>	<b>3</b>	<b>197</b>
H3N2	0	42
H1N1pdm09	3	155
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>5</b>	<b>128</b>



## Epi Week Summary

During EW 48, twenty (20) SARI admissions were reported.

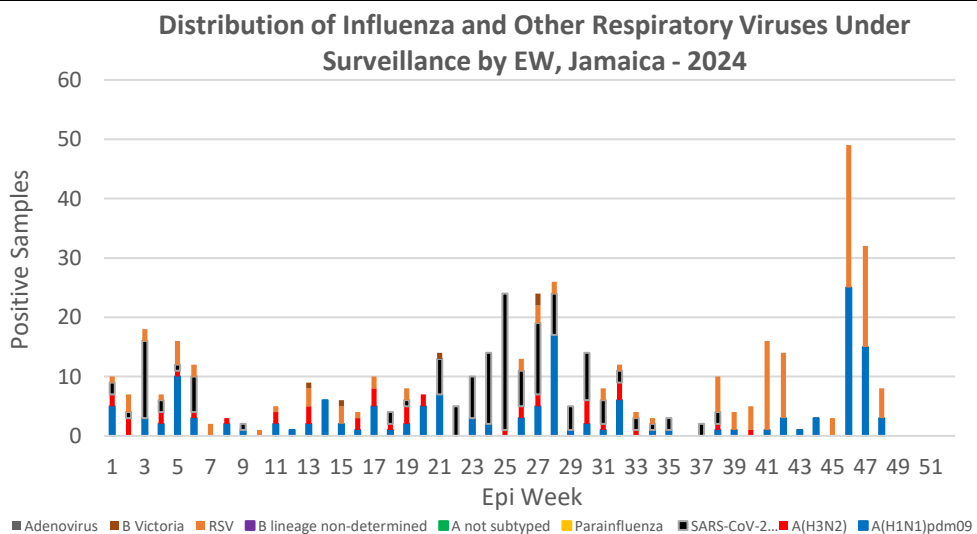


## Caribbean Update EW 48

**Caribbean:** ILI cases have shown a slight increase, previously associated with RSV-positive cases. SARI cases remain low. Influenza activity has increased, with activity reported in several countries in the subregion, predominantly A(H1N1)pdm09. RSV activity has risen sharply in several countries over the past four EWs. In contrast, SARS-CoV-2 activity, after a rise in prior weeks, has declined again to low levels.

**By country:** In the past four EWs, influenza activity has been reported in Belize, Barbados, St. Lucia, Jamaica and the Cayman Islands. RSV activity has been detected in Belize, the Dominican Republic, Jamaica, Barbados, the Cayman Islands, Guyana, and Saint Vincent and the Grenadines. In Jamaica, SARI cases are at epidemic levels, and pneumonia cases are extraordinarily high. Over the last four EWs, influenza activity has risen above the epidemic threshold, along with increasing RSV activity.

(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

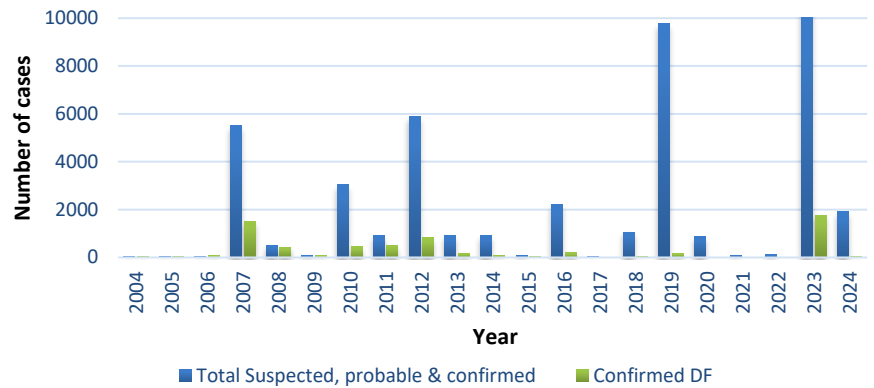
# Dengue Bulletin

November 24, 2024 – November 30, 2024 Epidemiological Week 48

Epidemiological Week 48



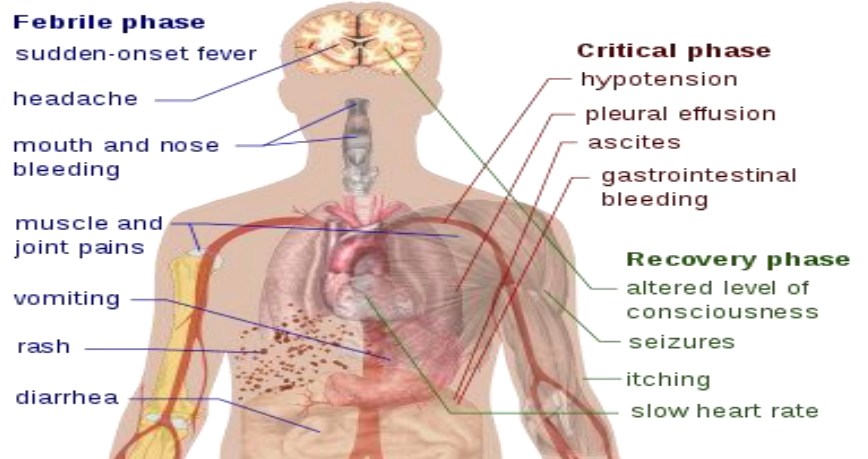
Dengue Cases by Year: 2004-2024, Jamaica



## Reported suspected, probable and confirmed dengue with symptom onset in week 48 of 2024

	2024*	
	EW 48	YTD
Total Suspected, Probable & Confirmed Dengue Cases	2	1914
Lab Confirmed Dengue cases	0	43
CONFIRMED Dengue Related Deaths	0	2

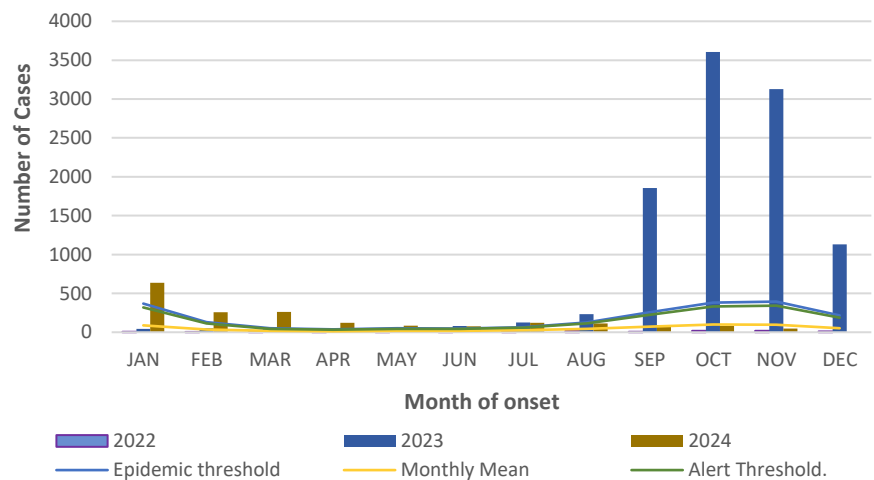
## Symptoms of Dengue fever



### Points to note:

- Dengue deaths are reported based on date of death.
- \*Figure as at December 11, 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





# RESEARCH PAPER

## Abstract

NHRC-23-P07

### Unravelling the Silent Threat: Venous Thromboembolism in Gynaecology Patients

Daley C<sup>1</sup>, Blake A<sup>2</sup>, Charles P<sup>1</sup> Rattray C<sup>1</sup> Medley N<sup>1</sup>

<sup>1</sup>University Hospital of the West Indies, Mona, Jamaica, <sup>2</sup>Epidemiology Research Unit, Caribbean Institute for Health Research, UWI, Mona, Jamaica

**Objectives:** To determine the incidence and risk factors of venous thromboembolism (VTE) among patients with Gynaecologic malignancies

**Methods:** This is a case control study. The medical records of patients diagnosed with VTE, at the University Hospital of the West Indies, from January 1, 2011 to December 31, 2020 were retrieved. A sample of 66 Gynaecologic oncology patients without DVT were selected by simple randomization. The main predictor variables include: age, body mass index, anaemia, cancer site, grade, stage, and method of treatment. Descriptive univariate analyses of variables were done using frequencies and percentages for categorical variables and means and standard deviation for continuous data. Bivariate analyses for associations were done using chi-square test. Logistic regression and survival analysis (Kaplan Meier estimate and the cox proportional hazard model) were performed to ascertain the effects of covariates on the outcome of VTE. Statistical significance was  $p < 0.05$

**Results:** The incidence of VTE among Gynaecology patients was 2.4% compared to an overall incidence of 0.95%. More than half of the patients with VTE had stage 4 disease.

The likelihood of VTE increased in patients with high grade disease (OR 34.7), increasing age (odds ratio 1.07, C.I. 1.024 to 1.118), and significant anaemia (odds ratio 21.4, C.I.: 1.73 to 264.7). The median time to diagnosis of VTE for low- grade and high-grade tumours were 4 and 7 months respectively (Log Rank 0.129) with an increased risk in patients with high grade disease (Hazard Ratio of 85.36, 95% C.I 1.99 to 3658.11) and decreased risk following surgery (Hazard Ratio of 0.03, 95% C.I: 0.001 to 0.739).

**Conclusion:** There is a higher incidence of VTE among Gynaecologic oncology patients. The significant risk factors are age, anaemia, cancer grade and stage.



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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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