

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL SURVEILLANCE UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## Weekly Spotlight

### Tropical Cyclone



Tropical cyclones, also known as typhoons or hurricanes, are among the most destructive weather phenomena. They are intense circular storms that originate over warm tropical oceans, and have maximum sustained wind speeds exceeding 119 kilometres per hour and heavy rains. However, the greatest damage to life and property is not from the wind, but from secondary events such as storm surges, flooding, landslides and tornadoes. Tropical cyclones are referred to by different names depending on where they originate in the world.

- Hurricanes occur in the Atlantic Ocean and the eastern north Pacific Ocean.
- Typhoons occur in the western Pacific Ocean.
- Tropical cyclones occur in the south Pacific Ocean and Indian Ocean.

From 1998-2017, storms, including tropical cyclones and hurricanes, were second only to earthquakes in terms of fatalities, killing 233 000 people. During this time, storms also affected an estimated 726 million people worldwide, meaning they were injured, made homeless, displaced or evacuated during the emergency phase of the disaster. Over the past 30 years the proportion of the world's population living on cyclone-exposed coastlines has increased 192 percent, thus raising the risk of mortality and morbidity in the event of a tropical cyclone. The health impacts of tropical cyclones depend on the number of people living in low-lying coastal areas in the storm's direct path, the built environment including building design, and whether there is sufficient time for warning and evacuation. Tropical cyclones, may directly and indirectly affect health in many ways, for example by:

- increasing cases of drowning and other physical trauma;
- increasing risks of water- and vector-borne infectious diseases;
- increasing mental health effects associated with emergency situations;
- disrupting health systems, facilities and services, leaving communities without access to health care when they are needed most;
- damaging basic infrastructure, such as food and water supplies and safe shelter.

When tropical cyclones cause floods and sea surges, the risk of drowning and water- or vector-borne diseases increase. Additionally, flood waters may contain sewage and chemicals, hide sharp objects made of metal or glass and electrical lines, or host dangerous snakes or reptiles, which can cause diseases, injuries, electrocution and bites.

Taken from WHO website on 27/ May /2024

[https://www.who.int/health-topics/tropical-cyclones/#tab=tab\\_1](https://www.who.int/health-topics/tropical-cyclones/#tab=tab_1)

[https://www.who.int/health-topics/tropical-cyclones/#tab=tab\\_2](https://www.who.int/health-topics/tropical-cyclones/#tab=tab_2)

## EPI WEEK 21



Syndromic Surveillance

Accidents

Violence

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Class 1 Notifiable Events

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Dengue Fever

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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 - 18 to 21 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													
18	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
19	On Time	On Time	On Time	Late (W)	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
20	On Time	On Time	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time	On Time	On Time	On Time	On Time
21	Late (T)	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time

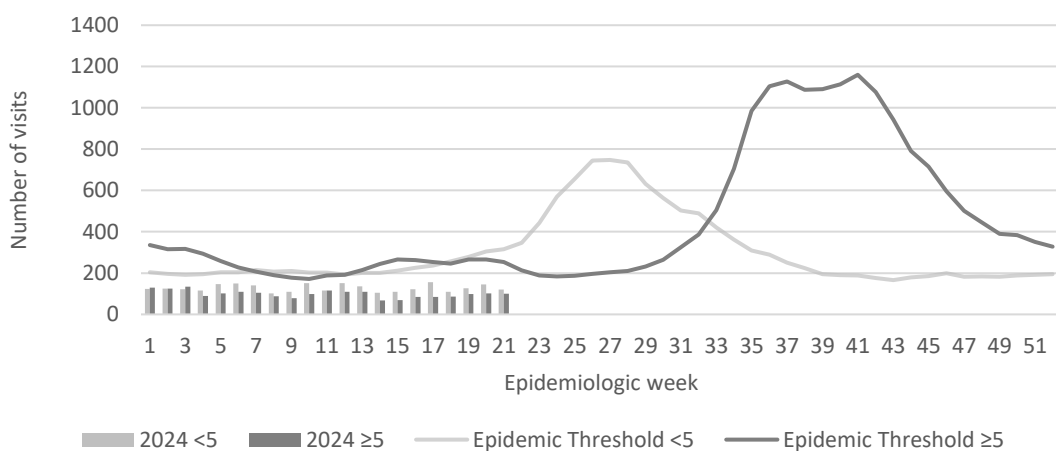
## REPORTS FOR SYNDROMIC SURVEILLANCE

## UNDIFFERENTIATED FEVER

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



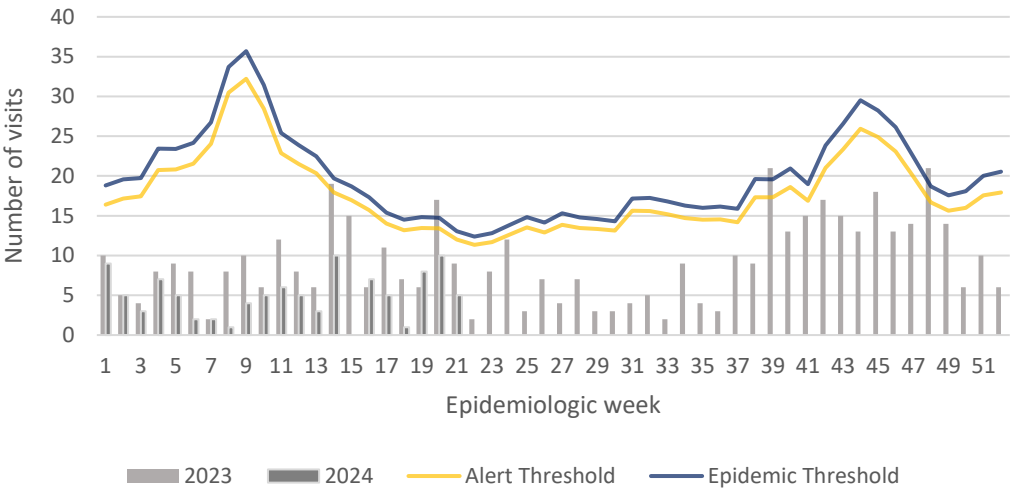
SENTINEL REPORT- 78 sites. Automatic reporting

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

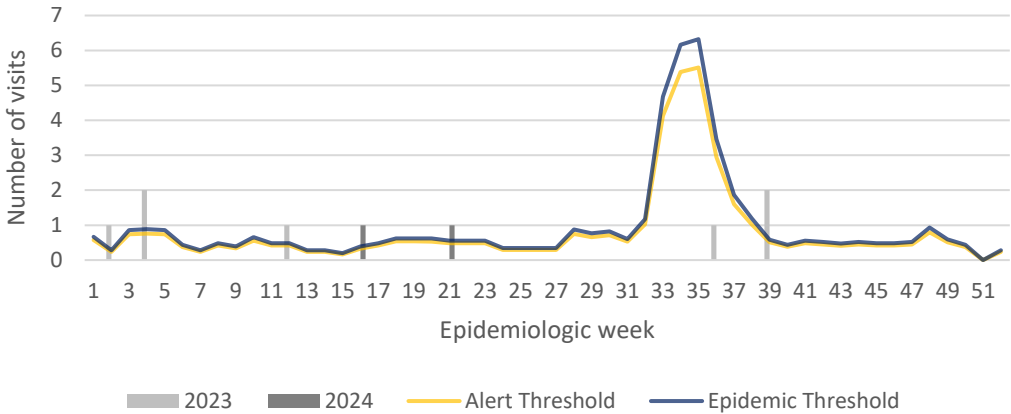


FEVER AND HAEMORRHAGIC

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



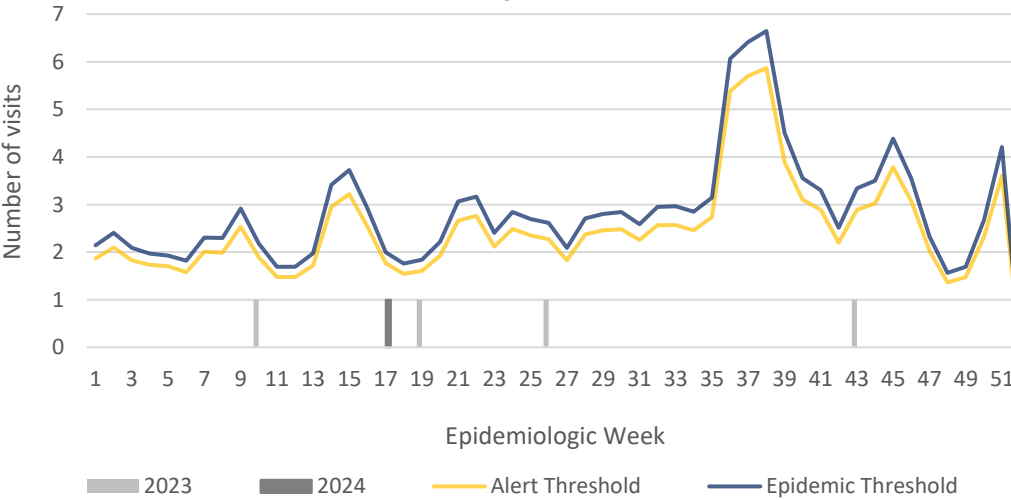
FEVER AND JAUNDICE

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  
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HOSPITAL  
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SURVEILLANCE-  
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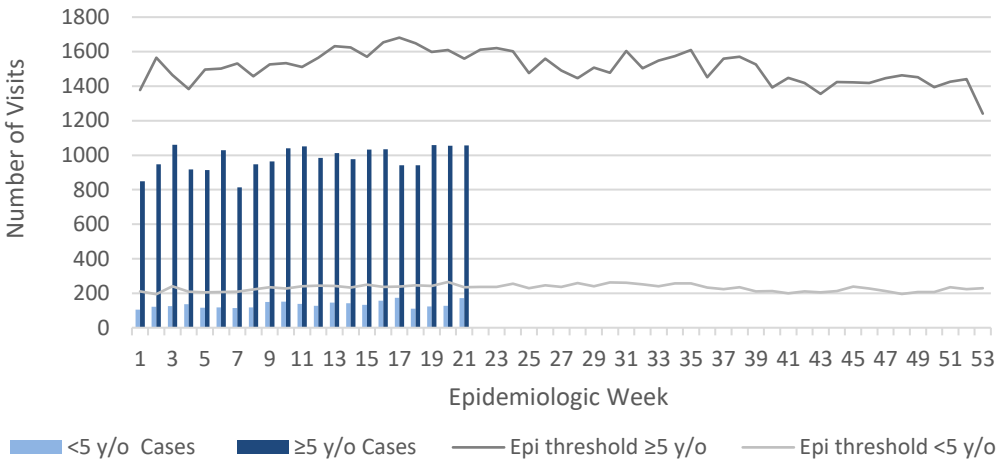
SENTINEL  
REPORT- 78 sites.  
Automatic reporting

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

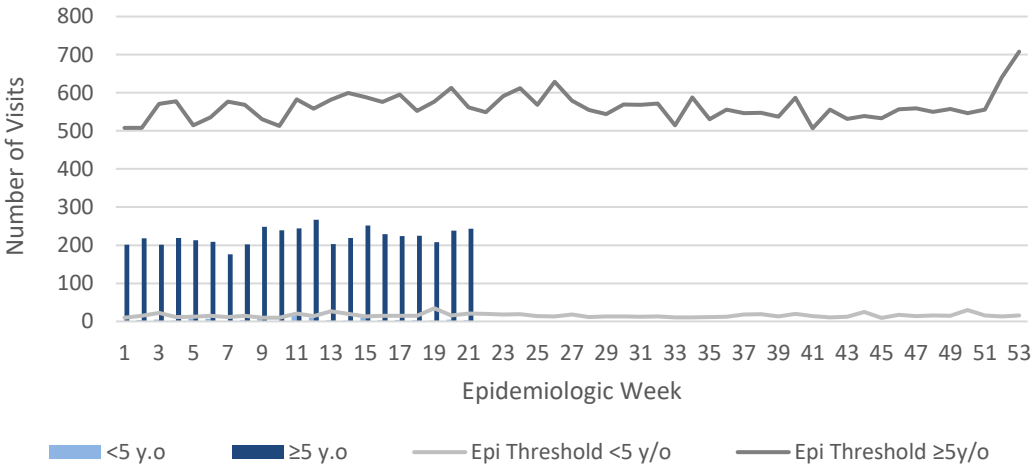


VIOLENCE

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

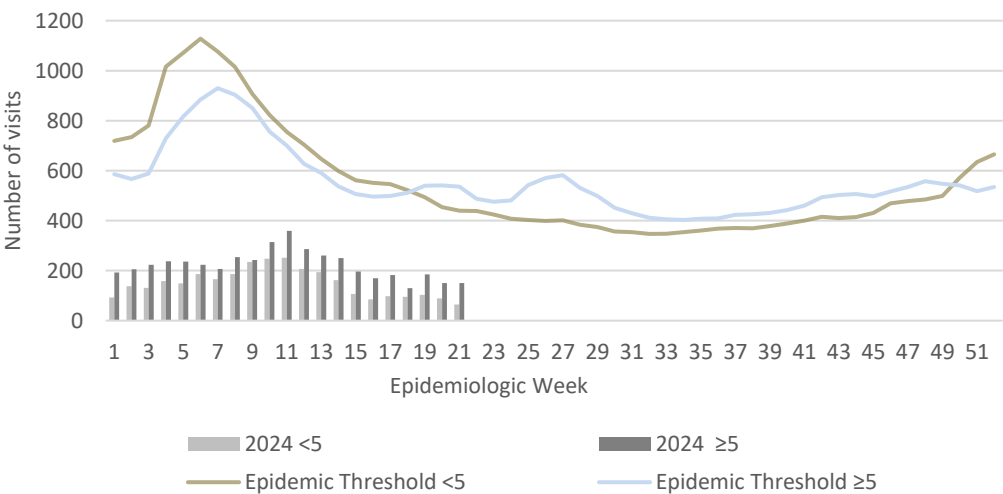


GASTROENTERITIS

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

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CLASS ONE NOTIFIABLE EVENTS				Comments
			Confirmed YTD <sup>α</sup>	
	CLASS 1 EVENTS		CURRENT YEAR 2024	PREVIOUS YEAR 2023
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		158 <sup>β</sup>	158 <sup>β</sup>
	Cholera		0	0
	Severe Dengue <sup>γ</sup>		See Dengue page below	See Dengue page below
	COVID-19 (SARS-CoV-2)		200	2158
	Hansen's Disease (Leprosy)		0	0
	Hepatitis B		5	40
	Hepatitis C		1	15
	HIV/AIDS		NA	NA
	Malaria (Imported)		0	0
	Meningitis		8	17
	Monkeypox		0	3
EXOTIC/ UNUSUAL	Plague		0	0
HIGH MORBIDITY/ MORTALITY	Meningococcal Meningitis		0	0
	Neonatal Tetanus		0	0
	Typhoid Fever		0	0
	Meningitis H/Flu		0	0
SPECIAL PROGRAMMES	AFP/Polio		0	0
	Congenital Rubella Syndrome		0	0
	Congenital Syphilis		0	0
	Fever and Rash	Measles	0	0
		Rubella	0	0
	Maternal Deaths <sup>δ</sup>		26	21
	Ophthalmia Neonatorum		60	59
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		0	0
	Tuberculosis		8	29
	Yellow Fever		0	0
	Chikungunya <sup>ε</sup>		0	0
	Zika Virus <sup>θ</sup>		0	0

AFP Field Guides from WHO indicate that for an effective surveillance system, detection rates for AFP should be 1/100,000 population under 15 years old (6 to 7) cases annually.

Pertussis-like syndrome and Tetanus are clinically confirmed classifications.

<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.

<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.

NA- Not Available

5 NOTIFICATIONS-  
All clinical sites

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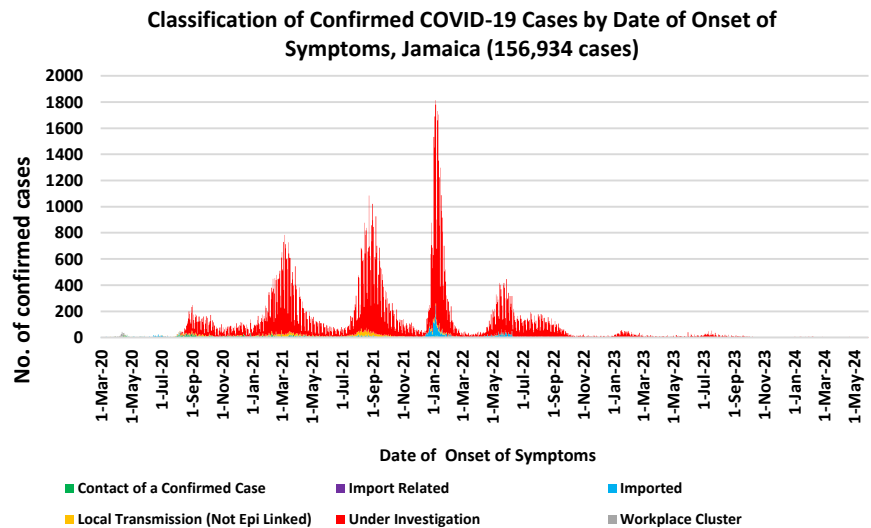
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# COVID-19 Surveillance Update

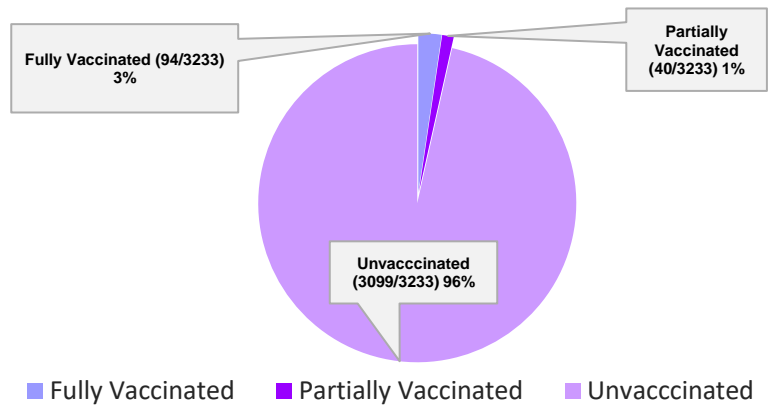
CASES	EW 21	Total
Confirmed	8	156934
Females	6	90439
Males	2	66492
Age Range	2 years to 75 years old	1 day to 108 years
* 3 positive cases had no gender specification * PCR or Antigen tests are used to confirm cases * Total represents all cases confirmed from 10 Mar 2020 to the current Epi-Week.		



## COVID-19 Outcomes

Outcomes	EW 21	Total
ACTIVE *2 weeks*		13
DIED – COVID Related	0	3802
Died - NON COVID	0	370
Died - Under Investigation	0	196
Recovered and discharged	0	103226
Repatriated	0	93
Total		156934
*Vaccination programme March 2021 – YTD * Total as at current Epi week		

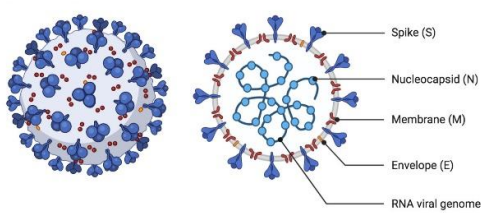
## 3233 COVID-19 Related Deaths since March 1, 2021 – YTD Vaccination Status among COVID-19 Deaths



## COVID-19 Parish Distribution and Global Statistics

### COVID-19 Virus Structure

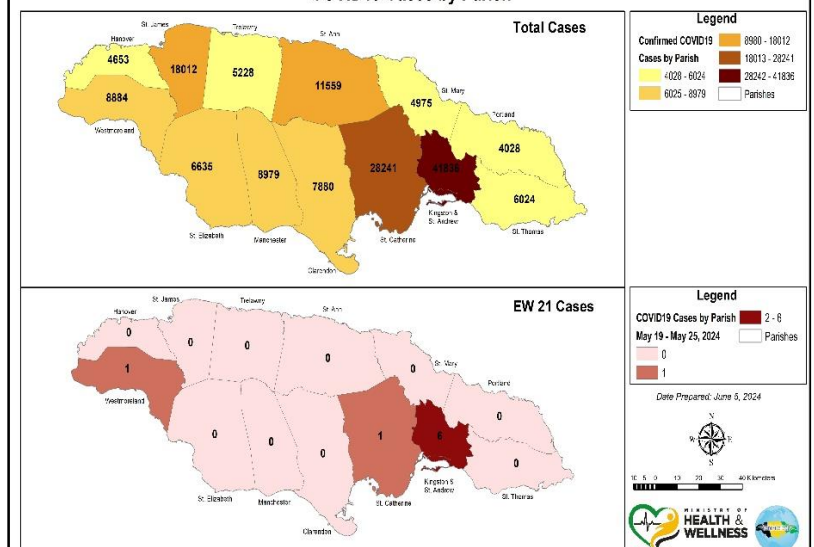
#### SARS-CoV-2



### COVID-19 WHO Global Statistics EW 18-21, 2024

Epi Week	Confirmed Cases	Deaths
18	34 300	574
19	30 800	542
20	32 700	430
21	36 000	321
Total (4weeks)	133 800	1867

### COVID19 Cases by Parish



6 NOTIFICATIONS-  
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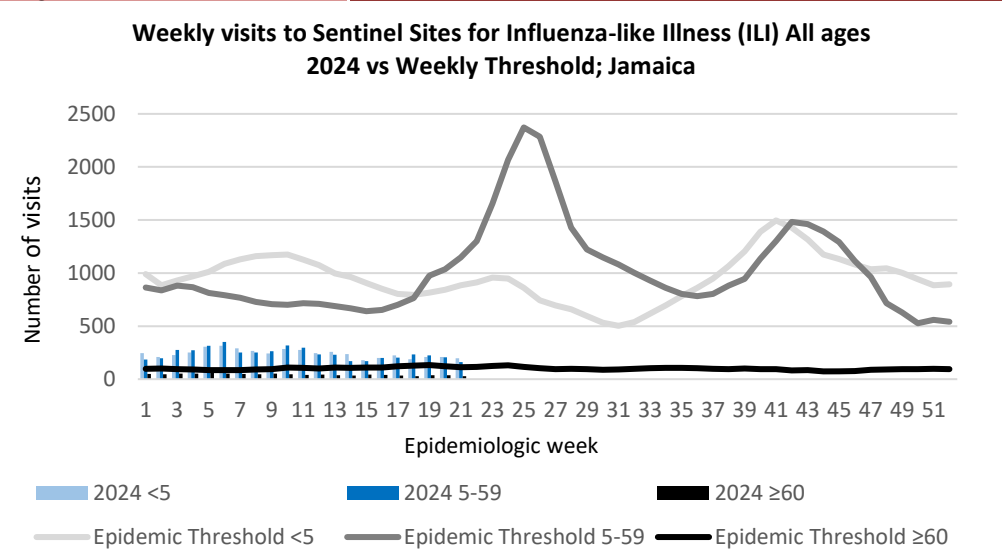
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NATIONAL SURVEILLANCE UNIT  
INFLUENZA REPORT

May 19, 2024 – May 25, 2024 Epidemiological Week 21

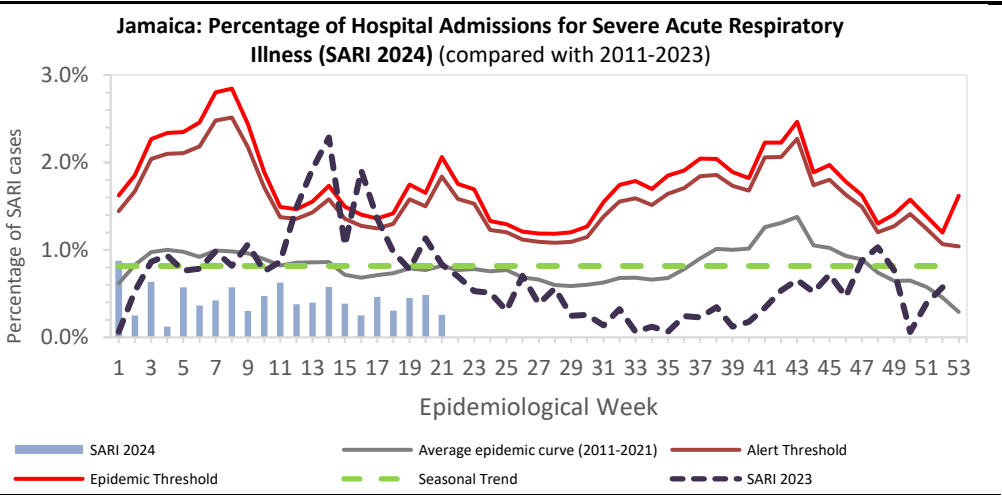
EW 21

	EW 21	YTD
SARI cases	4	146
Total Influenza positive Samples	0	74
Influenza A	0	72
H3N2	0	22
H1N1pdm09	0	50
Not subtyped	0	0
Influenza B	0	2
B lineage not determined	0	0
B Victoria	0	2
Parainfluenza	0	0
Adenovirus	0	0
RSV	0	26



**Epi Week Summary**

During EW 21, four (4) SARI admissions were reported.

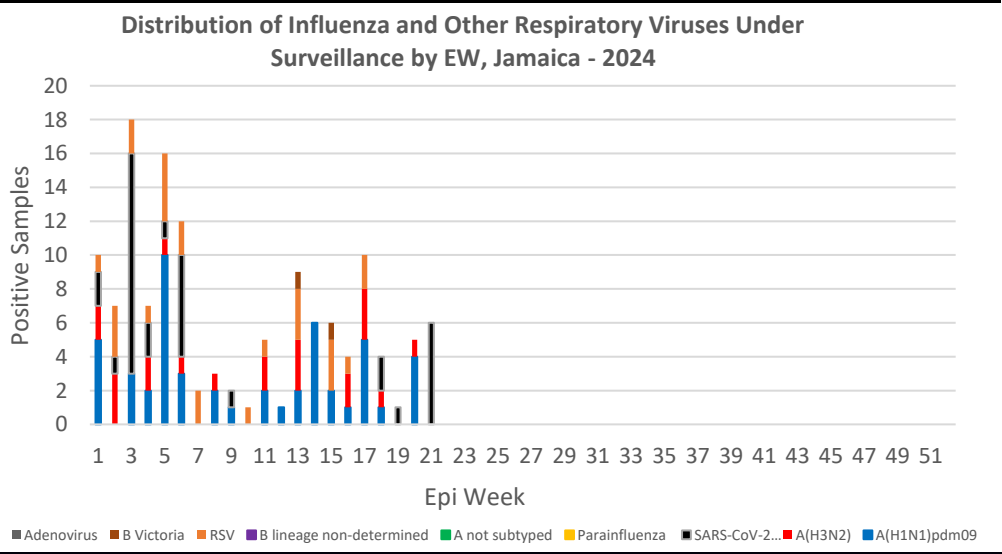


**Caribbean Update EW 21**

Caribbean: ILI and SARI cases have been declining over the past four weeks, with most positive cases attributable to influenza and SARS-CoV-2. Influenza activity has fluctuated at low levels during the last four EWs. During this period, the predominant viruses have been type A(H3N2), with concurrent circulation of influenza A(H1N1)pdm09 and, to a lesser extent, B/ Victoria. RSV activity has remained low. SARS-CoV-2 activity has shown a marked increase in the last two weeks, reaching elevated levels.

By country: Influenza activity has been shown over the last four EWs in Guyana and the Cayman Islands. SARS –CoV-2 activity was been noted in Barbados, Guyana, and the Cayman Islands.

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



7 NOTIFICATIONS- All clinical sites

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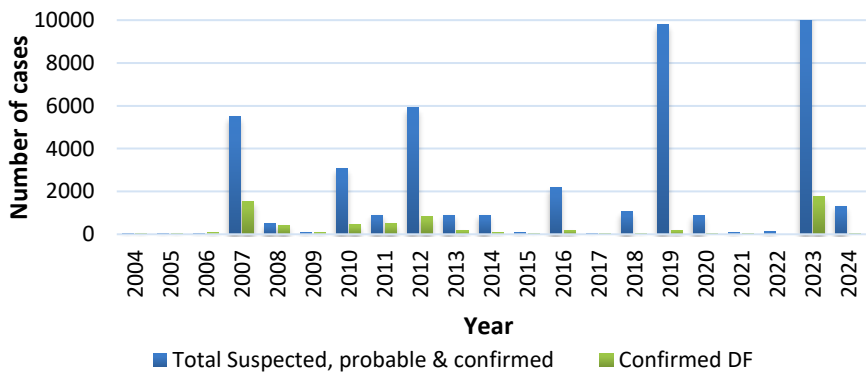
SENTINEL REPORT- 78 sites. Automatic reporting

# Dengue Bulletin


May 19, 2024 – May 25, 2024 Epidemiological Week 21

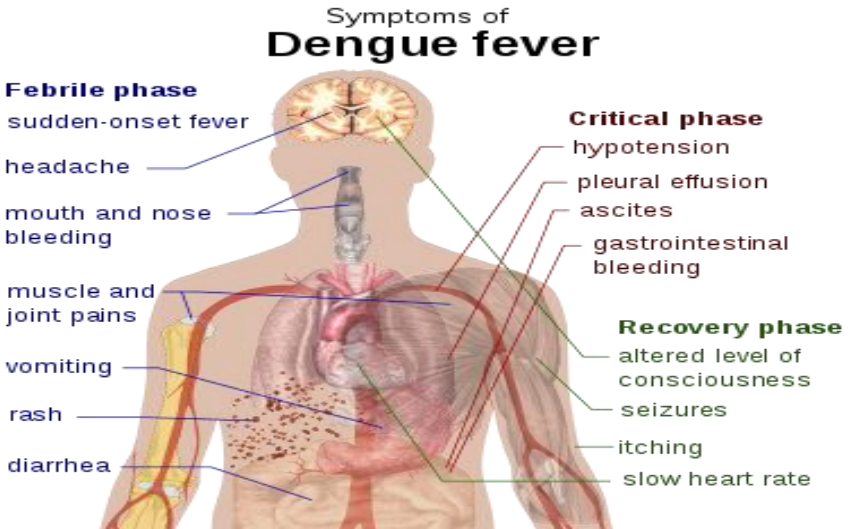


Dengue Cases by Year: 2004-2024, Jamaica



Reported suspected, probable and confirmed dengue with symptom onset in week 21 of 2024

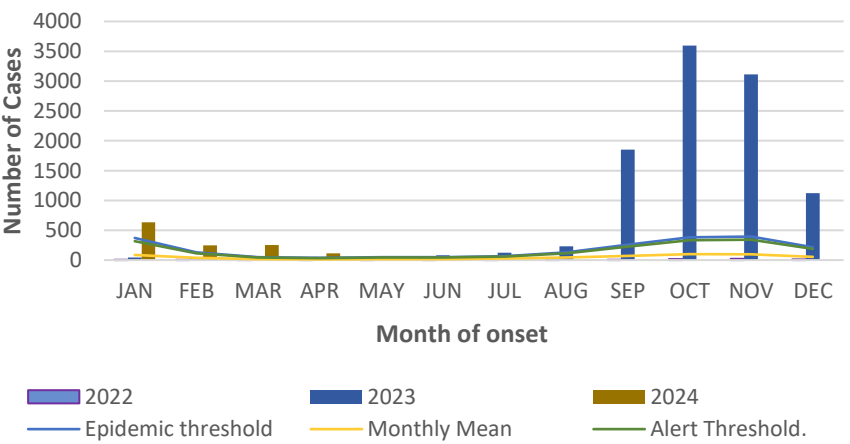
	2024*	
	EW 21	YTD
 Total Suspected, Probable & Confirmed Dengue Cases	6	1311
Lab Confirmed Dengue cases	0	5
CONFIRMED Dengue Related Deaths	0	0



Points to note:

- Dengue deaths are reported based on date of death.
- \*Figure as at June 5, 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



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SENTINEL REPORT- 78 sites. Automatic reporting



# RESEARCH PAPER

## Abstract

NHRC-23-O01

### Potential years of life lost in Jamaica, 2010 – 2020

Campbell E<sup>1</sup>, Harris A<sup>1</sup>, Grant A<sup>1</sup>, Anderson S<sup>1</sup>, Martin-Chen N<sup>1</sup>, Webster-Kerr K<sup>1</sup>

<sup>1</sup>Ministry of Health and Wellness, Jamaica

**Aim:** To analyze trends in potential years of life lost (PYLL) between 2010 and 2020 in Jamaica.

**Methods:** National mortality and demographic data were obtained from the Registrar General's Department and Statistical Institute of Jamaica. PYLL was computed as the sum of all deaths at each age multiplied by years of life lost before 75 years per 100,000 population. PYLL was ranked by disease category, calendar year and sex. The relative percentage change was calculated, and chi-square tests used to evaluate trends between 2010 and 2020.

**Results:** The leading causes of mortality were non-communicable diseases (NCDs; 4,720/100,000), followed by external causes (2,805/100,000). When disaggregated by disease, the highest mean PYLL for 2010-2020 was observed for assault (1,641/100,000) in the overall population and in males (3,086/100,000), versus females (329/100,000). The second-highest PYLL was for human immunodeficiency virus (HIV) overall (547/100,000), and in males (573/100,000). However, HIV was the leading cause of premature death in females (520/100,000), with a significant decrease for both sexes between 2010-2020 (-32%;  $p=0.005$ ). Diabetes had the third-highest PYLL (514/100,000) in the population and in males (553/100,000). It was the second leading cause of premature death in females (509/100,000), with a significant increase in the past decade for both sexes (64%,  $p=0.002$ ). There were significant increases in PYLL from 2010-2020 for NCDs such as hypertensive diseases (91%,  $p=0.001$ ), ischemic heart disease (84%,  $p=0.003$ ) and stroke (44%,  $p=0.007$ ).

**Conclusions:** This analysis highlights the burden of premature death in Jamaica and suggests that individuals are dying before their life expectancy.



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9 NOTIFICATIONS-  
All clinical  
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INVESTIGATION  
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