

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL SURVEILLANCE UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## Weekly Spotlight

### Water, Sanitation and Hygiene (WASH)



Safe drinking-water, sanitation and hygiene are crucial to human health and well-being. Safe WASH is not only a prerequisite to health, but contributes to livelihoods, school attendance and dignity and helps to create resilient communities living in

healthy environments. Drinking unsafe water impairs health through illnesses such as diarrhoea, and untreated excreta contaminates groundwaters and surface waters used for drinking-water, irrigation, bathing and household purposes.

Chemical contamination of water continues to pose a health burden, whether natural in origin such as arsenic and fluoride, or anthropogenic such as nitrate. Safe and sufficient WASH plays a key role in preventing numerous NTDs such as trachoma, soil-transmitted helminths and schistosomiasis. Diarrhoeal deaths as a result of inadequate WASH were reduced by half during the Millennium Development Goal (MDG) period (1990–2015), with the significant progress on water and sanitation provision playing a key role. Evidence suggests that improving service levels towards safely managed drinking-water or sanitation such as regulated piped water or connections to sewers with wastewater treatment can dramatically improve health by reducing diarrhoeal disease deaths.

Safe drinking-water, sanitation and hygiene (WASH) are crucial to human health and well-being. Safe WASH is not only a prerequisite to health, but contributes to livelihoods, school attendance and dignity and helps to create resilient communities living in healthy environments. Drinking unsafe water impairs health through illnesses such as diarrhoea, and untreated excreta contaminates groundwaters and surface waters used for drinking-water, irrigation, bathing and household purposes. This creates a heavy burden on communities. Chemical contamination of water continues to pose a health burden, whether natural in origin such as arsenic and fluoride, or anthropogenic such as nitrate. Safe and sufficient WASH plays a key role in preventing numerous neglected tropical diseases (NTDs) such as trachoma, soil-transmitted helminths and schistosomiasis.

However, poor WASH conditions still account for more than one million diarrhoeal deaths every year and constrain effective prevention and management of other diseases including malnutrition, NTDs and cholera. Evidence suggests that improving service levels towards safely managed drinking-water or sanitation such as regulated piped water or connections to sewers with wastewater treatment can dramatically improve health by reducing diarrhoeal disease deaths.

Taken from WHO website on 15/November/2024

[https://www.who.int/health-topics/water-sanitation-and-hygiene-wash#tab=tab\\_1](https://www.who.int/health-topics/water-sanitation-and-hygiene-wash#tab=tab_1)  
[https://www.who.int/health-topics/water-sanitation-and-hygiene-wash#tab=tab\\_2](https://www.who.int/health-topics/water-sanitation-and-hygiene-wash#tab=tab_2)

## EPI WEEK 44



Syndromic Surveillance

Accidents

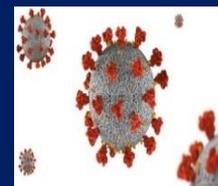
Violence

Pages 2-4



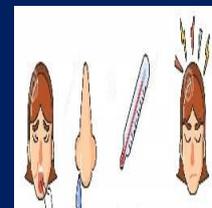
Class 1 Notifiable Events

Page 5



COVID-19

Page 6



Influenza

Page 7



Dengue Fever

Page 8



Research Paper

Page 9

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 – 41 to 44 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												
41	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
42	On Time	On Time	On Time	Late (T)	On Time	Late (T)	On Time	On Time	On Time	On Time	On Time	On Time	On Time
43	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
44	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

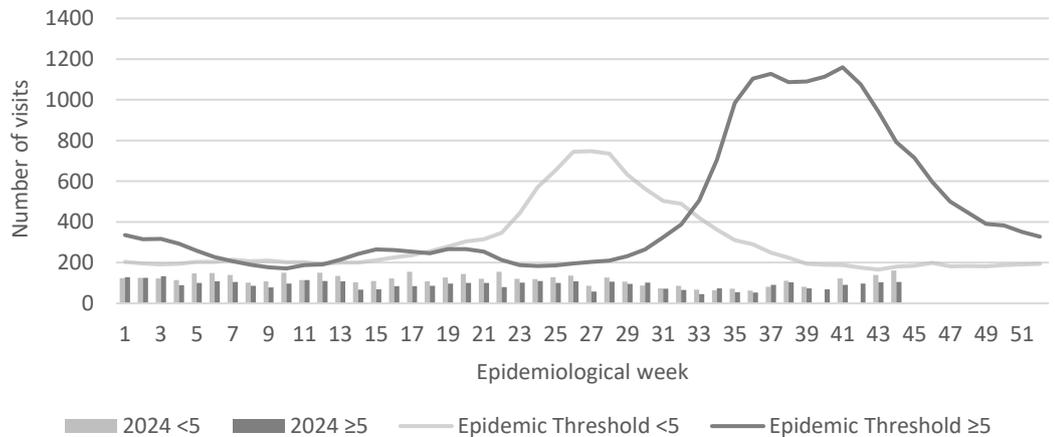
REPORTS FOR SYNDROMIC SURVEILLANCE

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



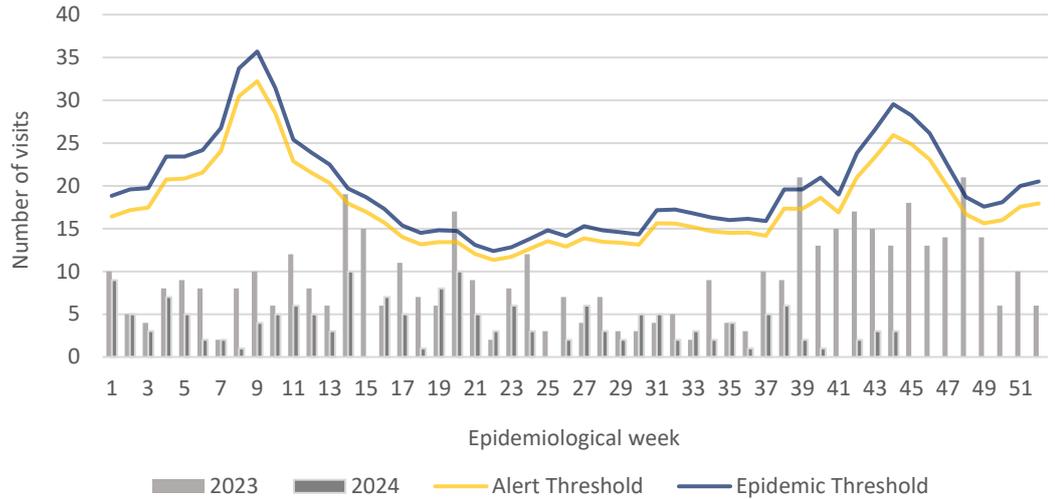
SENTINEL REPORT- 78 sites. Automatic reporting

**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**

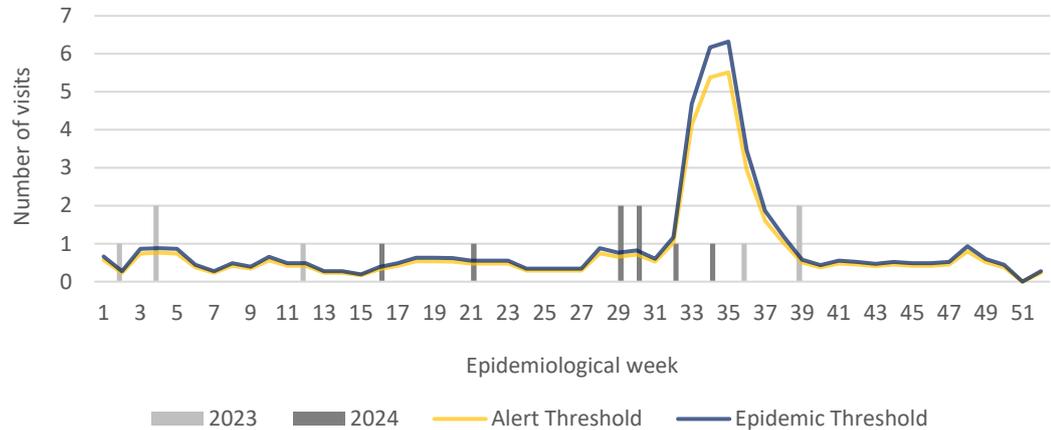


**FEVER AND HAEMORRHAGIC**

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**



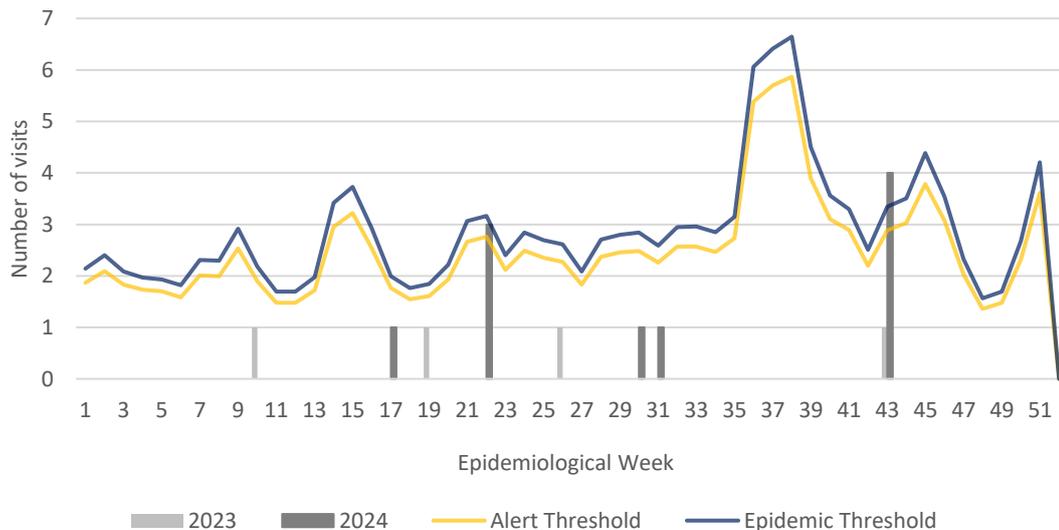
**FEVER AND JAUNDICE**

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

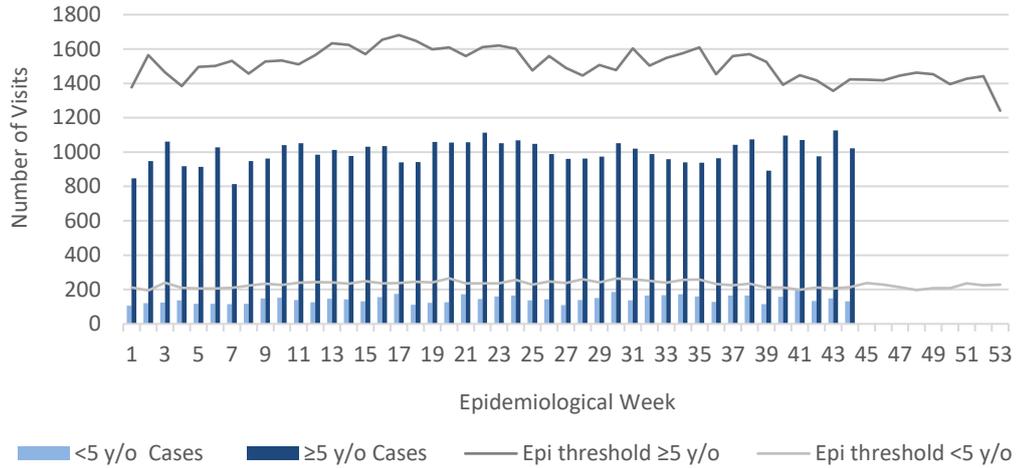


**ACCIDENTS**

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

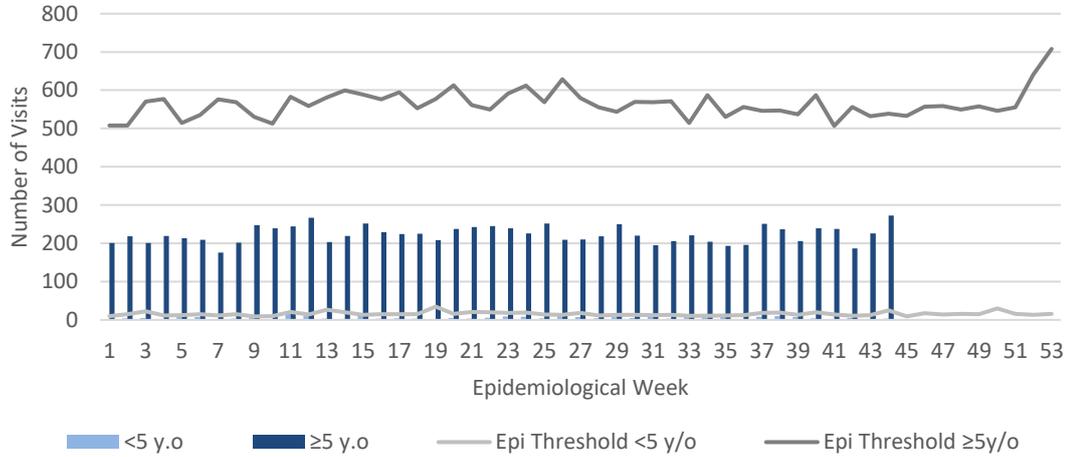


**VIOLENCE**

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

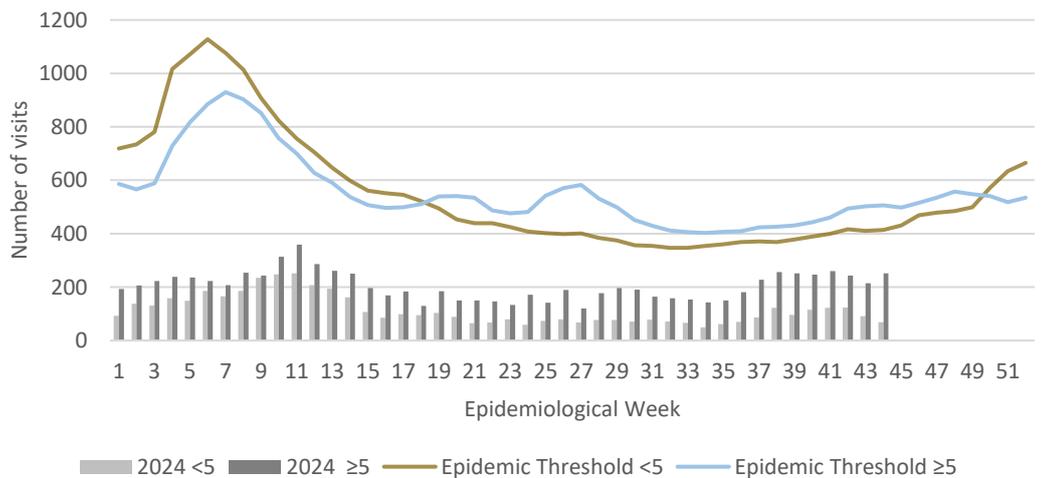


**GASTROENTERITIS**

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	219 <sup>β</sup>	350 <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)	685	3779		
	Hansen’s Disease (Leprosy)	0	0		
	Hepatitis B	24	58		
	Hepatitis C	3	28		
	HIV/AIDS	NA	NA		
	Malaria (Imported)	2	3		
	Meningitis	12	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>	51	47		
	Ophthalmia Neonatorum	140	143		
	Pertussis-like syndrome	0	0		
	Rheumatic Fever	0	0		
	Tetanus	0	0		
	Tuberculosis	28	58		
	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

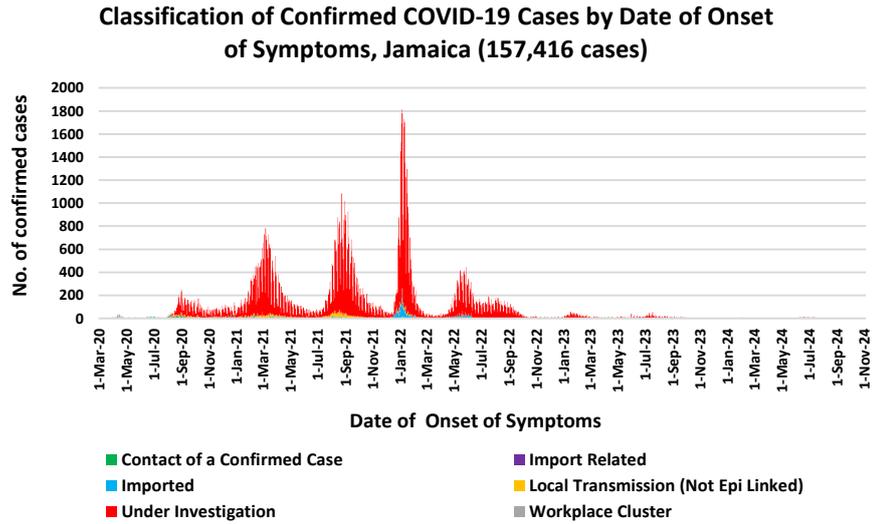


**SENTINEL REPORT-** 78 sites. Automatic reporting

# COVID-19 Surveillance Update

CASES	EW 44	Total
Confirmed	5	157416
Females	2	90700
Males	3	66713
Age Range	7 days to 51 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.

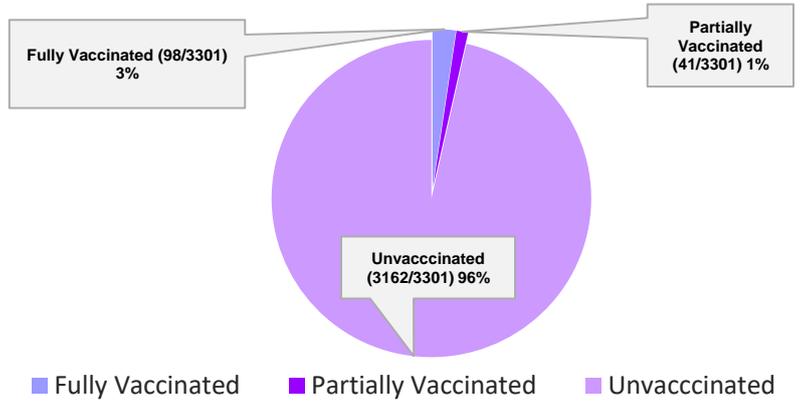


## COVID-19 Outcomes

Outcomes	EW 44	Total
ACTIVE *2 weeks*		9
DIED – COVID Related	0	3865
Died - NON COVID	0	388
Died - Under Investigation	0	154
Recovered and discharged	0	103226
Repatriated	0	93
Total		157416

## 3301 COVID-19 Related Deaths since March 1, 2021 – YTD

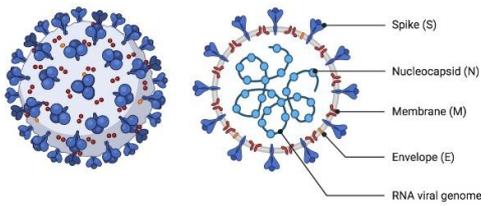
### Vaccination Status among COVID-19 Deaths



## COVID-19 Parish Distribution and Global Statistics

### COVID-19 Virus Structure

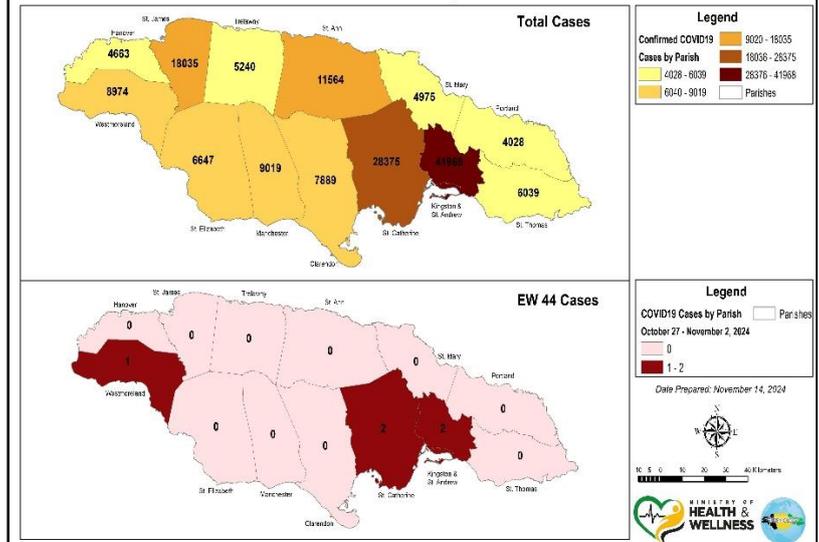
#### SARS-CoV-2



### COVID-19 WHO Global Statistics EW 41-44, 2024

Epi Week	Confirmed Cases	Deaths
41	79200	1200
42	73000	979
43	59200	852
44	53100	641
<b>Total (4weeks)</b>	<b>264500</b>	<b>3672</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

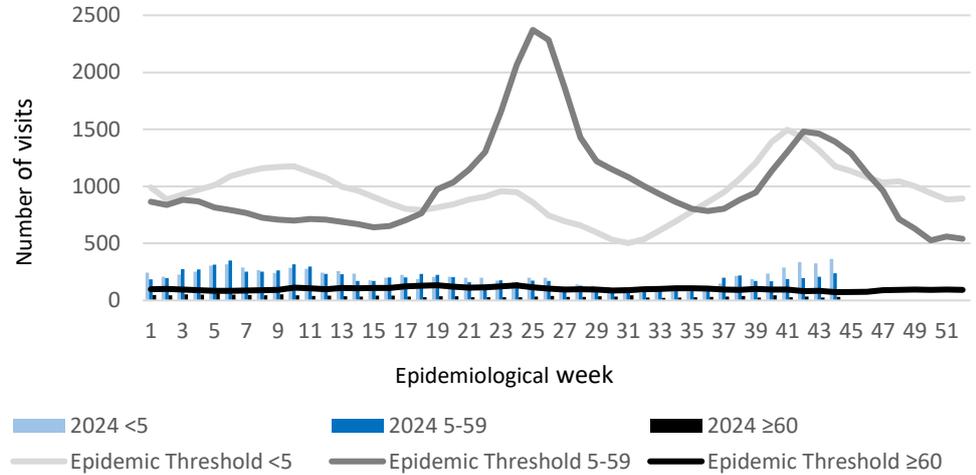
# NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 44

October 27, 2024 – November 2, 2024 Epidemiological Week 44

	EW 44	YTD
SARI cases	16	312
<b>Total Influenza positive Samples</b>	<b>2</b>	<b>154</b>
<b>Influenza A</b>	<b>2</b>	<b>149</b>
H3N2	0	40
H1N1pdm09	2	109
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>45</b>

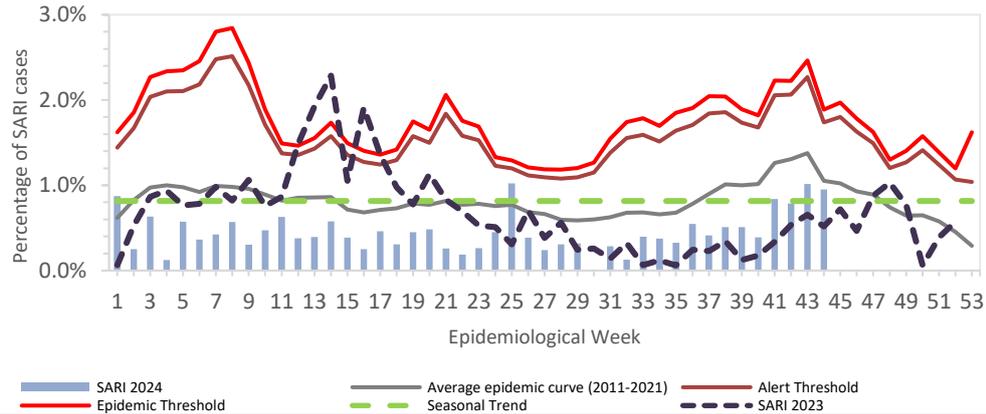
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2024 vs Weekly Threshold; Jamaica



**Epi Week Summary**

During EW 44, sixteen (16) SARI admissions were reported.

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



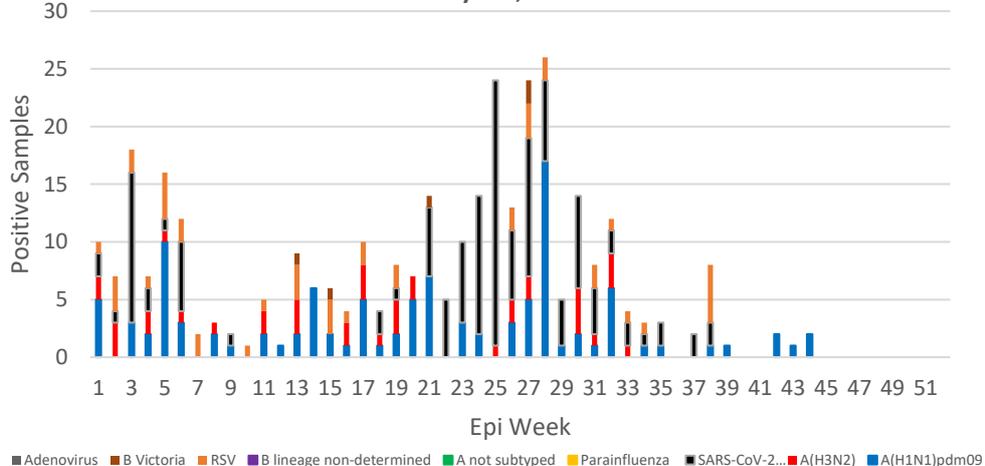
**Caribbean Update EW 44**

**Caribbean:** ILI cases have remained low over the last four EW, although there is an increase in RSV positivity. SARI cases have also remained low. Influenza activity fluctuates at low levels, predominantly A(H3N2) and A(H1N1) pdm09. RSV activity has risen sharply in several countries during the last four EW. SARS-CoV-2 activity remains low with a downward trend.

**By country:** In the last four EW, influenza activity has been reported in Belize, Jamaica and Guyana. Likewise, SARS-CoV-2 activity has been documented in Haiti, Barbados and Saint Vincent and the Grenadines. In addition, RSV activity has been detected in the Dominican Republic, Barbados, the Cayman Islands, Guyana and Saint Vincent and the Grenadines. Jamaica: SARI cases have exceeded the epidemic threshold. Pneumonia cases are at moderate levels. Influenza activity has risen above the epidemic threshold over the last four EW, alongside fluctuating activity of SARS-CoV-2 and RSV activity.

(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



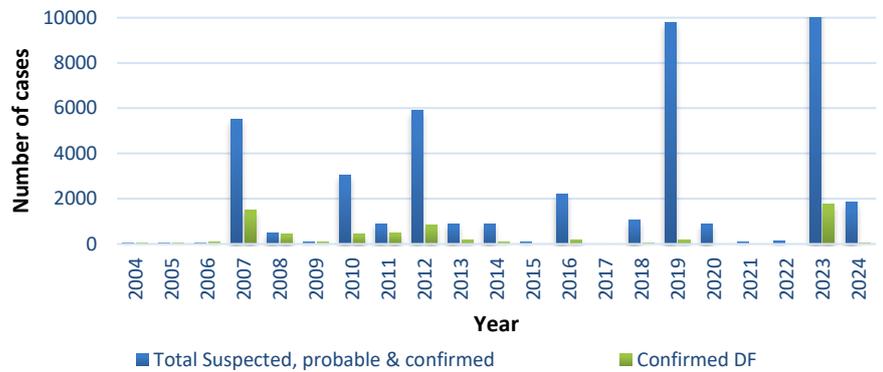
# Dengue Bulletin

October 27, 2024 – November 2, 2024 Epidemiological Week 44

Epidemiological Week 44



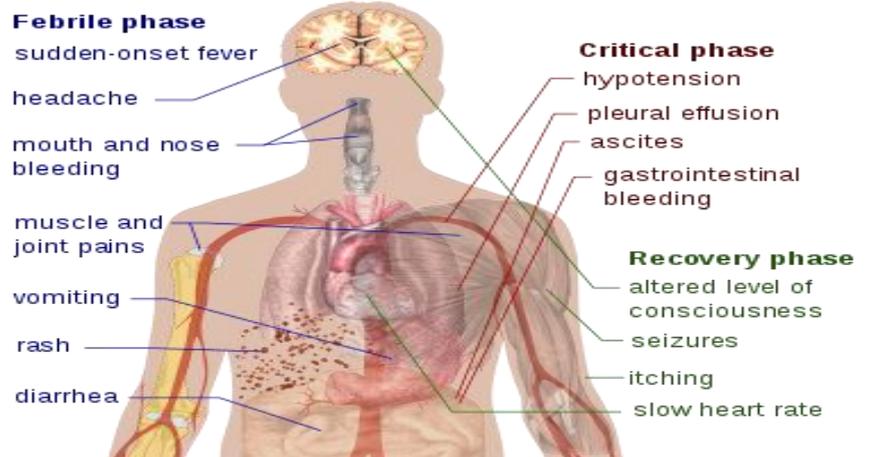
Dengue Cases by Year: 2004-2024, Jamaica



## Reported suspected, probable and confirmed dengue with symptom onset in week 44 of 2024

	2024*	
	EW 44	YTD
 Total Suspected, Probable & Confirmed Dengue Cases	11	1841
Lab Confirmed Dengue cases	0	43
CONFIRMED Dengue Related Deaths	0	2

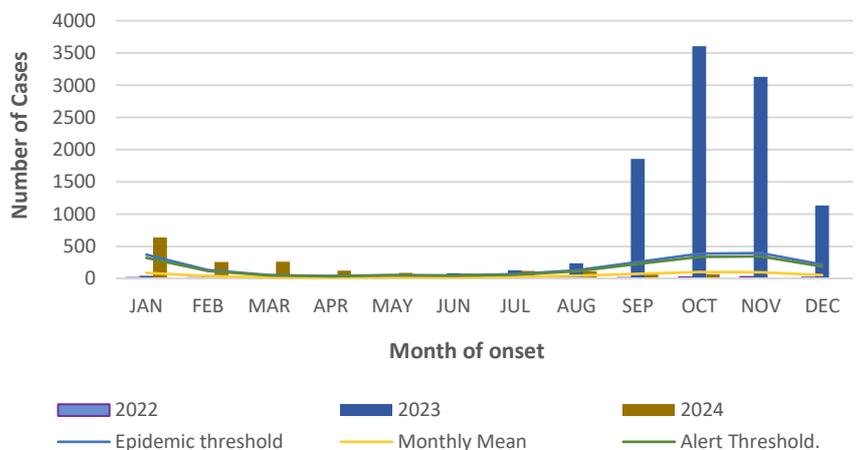
## Symptoms of Dengue fever



### Points to note:

- Dengue deaths are reported based on date of death.
- \*Figure as at November 15, 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-P03

#### Stroke in the young: understanding the role of arterial stiffness in children with sickle cell anaemia based on Transcranial Doppler velocity defined stroke categories.

Rankine-Mullings AE<sup>1</sup>, Younger-Coleman N<sup>1</sup>, Soares D<sup>1</sup>, Aldred K<sup>1</sup>, Wisdom-Phipps W<sup>1</sup>, Mullings G<sup>2</sup>, Reid M<sup>1</sup>

<sup>1</sup>University of the West Indies, Mona, Kingston, 7, Jamaica, <sup>2</sup>2023 Graduate Faculty of Medical Sciences, University of the West Indies, Mona, Kingston 7, Jamaica

**Objectives:** To determine whether arterial stiffness (mean aortic pulse wave velocity), a well-known risk factor for stroke, is significantly different in children with sickle cell anaemia with low or high stroke risk based on cerebral blood flow velocity measured using Transcranial Doppler (TCD) ultrasonography.

**Methods:** The highest TCD-defined stroke risk category, (low risk=TCD velocity < 170 cm/sec (Group 1) or High risk= TCD velocity  $\geq$  200cm/sec (Group 2)) recorded between May 2013 and January 2022 for children registered at the Sickle Cell Unit with sickle cell anaemia, who would be between 4.0 to 16.9 years of age during the period February to November 2023 was identified. Aortic Pulse wave velocity, (metres/second), an indicator of arterial stiffness was measured in all patients with an Arteriograph 24 (Tensiomed, Budapest, Hungary). TCD velocity, clinical and biological correlates were measured.

**Results:** There were 4 participants (2 Males, 2 Females) in Group 1 and 7 participants (2 Males, 5 Females) in Group 2. The anthropometric means (sd) were age, 10.8 years (3.4), height, 136 cm (15.8), mid upper arm circumference, 19.5 cm (3.3). There were no significant differences in mean anthropometric values, gender distribution, history of breast feeding, vitamin D and haemoglobin concentrations by group. The mean (sd) aortic pulse wave velocity was higher in Group 2 (high risk), 5.6 (0.73), than Group 1 (low risk), 5.1 (0.44) cm/sec but this was not statistically significant.

**Conclusion:** In this preliminary study, mean aortic pulse wave velocity was not significantly different among high or low stroke risk groups. Results of the larger study are awaited.



The Ministry of Health and Wellness  
15 Knutsford Boulevard, Kingston 5, Jamaica  
Tele: (876) 633-7924  
Email: surveillance@moh.gov.jm

9 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