WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL SURVEILLANCE UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

Oropouche Virus (Part 1)

Oropouche virus disease is caused by the Oropouche virus (OROV) that can cause fever, headache, joint pain, muscle pain, chills, nausea, vomiting and rash. Most people recover on their own, but the disease can cause severe symptoms in some patients. OROV is a segmented single-stranded RNA virus belonging to the family *Peribunyaviridae*, genus *Orthobunyavirus*, which was first identified in 1955 in Vega de Oropouche, Trinidad and Tobago. The virus is transmitted to people through the bite of an infected insect, usually biting midges but also possibly by mosquitoes. It is thus referred to as an arthropod-borne virus (arbovirus). Prior to late 2023, reported cases of Oropouche virus disease were limited to South America, mostly near the Amazon rainforest, and the Caribbean. However, since December 2023, cases have been detected in other areas and have become more severe. In 2024, outbreaks have been documented outbreaks in nonendemic areas, two fatal cases with confirmed infection, and the possibility of mothers transmitting the disease to their babies while pregnant.

Distribution and outbreaks

Oropouche virus disease was the second most common arboviral disease in South America (after dengue) before the emergence of chikungunya and Zika viruses in 2013 and 2015. Prior to late 2023, Oropouche virus disease was reported in Brazil, Bolivia, Colombia, Ecuador, Haiti, Panama, Peru, Trinidad and Tobago, French Guiana and Venezuela; most cases were reported near the Amazon rainforest area. However, since December 2023, there has been an increase in the number of cases reported, including in areas where transmission had not been previously documented. In 2024, locally transmitted Oropouche virus disease was reported in seven countries in Latin America and the Caribbean: Brazil, Bolivia, Colombia, Cuba, Guyana, Peru and the Dominican Republic. Additionally, Oropouche virus disease cases were reported among travellers returning from countries with local transmission to the United States, Canada, Spain, Italy and Germany.

Transmission

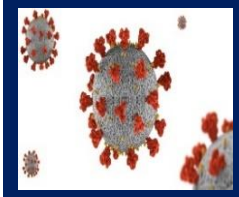
The Oropouche virus is primarily transmitted to humans through the bite of *Culicoides paraensis* midges. *Culex quinquefasciatus, Coquillettidia venezuelensis* and *Aedes serratus* mosquitoes can also act as possible vectors. The virus is believed to circulate in both a sylvatic cycle in forested areas, and in an urban epidemic cycle between insects and people. In the sylvatic cycle, non-human primates, sloths and perhaps birds serve as vertebrate hosts, although a definitive arthropod vector has not been identified.

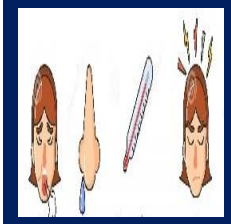
Further studies are underway to better understand the insect vectors and transmission cycles in the current outbreaks.

Previously, there had been no confirmed reports of human-to-human transmission. However, there were reports in Brazil in 2024 of possible fetal infection with Oropouche virus, transmitted from mothers infected during pregnancy.

Taken from WHO website on 18/Sep/2025
https://www.who.int/news-room/fact-sheets/detail/oropouche-virus-disease
https://www.cdc.gov/oropouche/outbreaks/2024/index.html (picture)

EPI WEEK 36





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 – 33 to 36 of 2025

Parish health departments submit reports weekly by 3 p.m. on Tuesdays. Reports submitted after 3 p.m. are considered late.

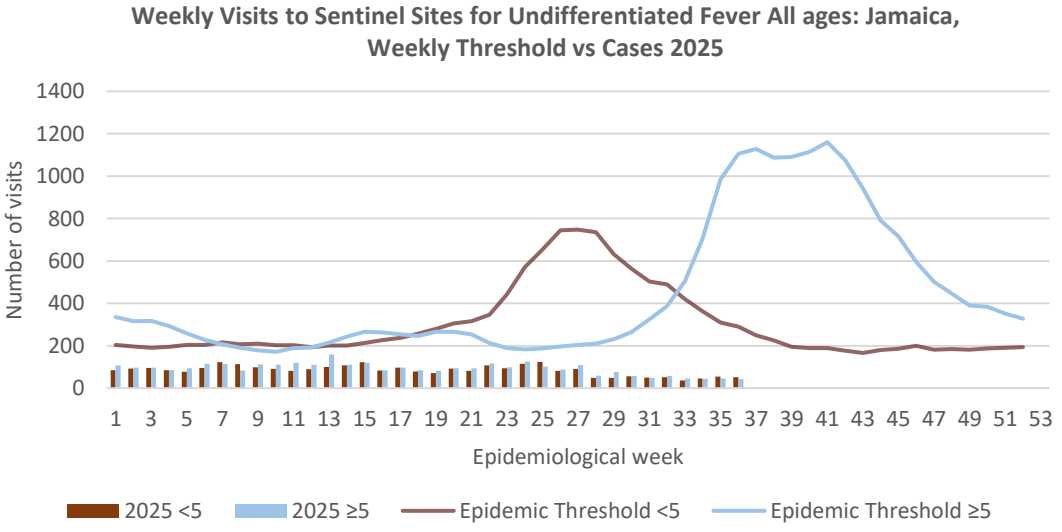
KEY:
Yellow- late submission on Tuesday
Red – late submission after Tuesday

Epi week	Kingston and Saint Andrew	Saint Thomas	Saint Catherine	Portland	Saint Mary	Saint Ann	Trelawny	Saint James	Hanover	Westmoreland	Saint Elizabeth	Manchester	Clarendon
2025													
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	On Time	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
36	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

SYNDROMIC SURVEILLANCE

UNDIFFERENTIATED FEVER

Temperature of >38^0C /100.4^0F (or recent history of fever) with or without an obvious diagnosis or focus of infection.



NOTIFICATIONS- All clinical sites

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HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

SENTINEL REPORT- 78 sites. Automatic reporting

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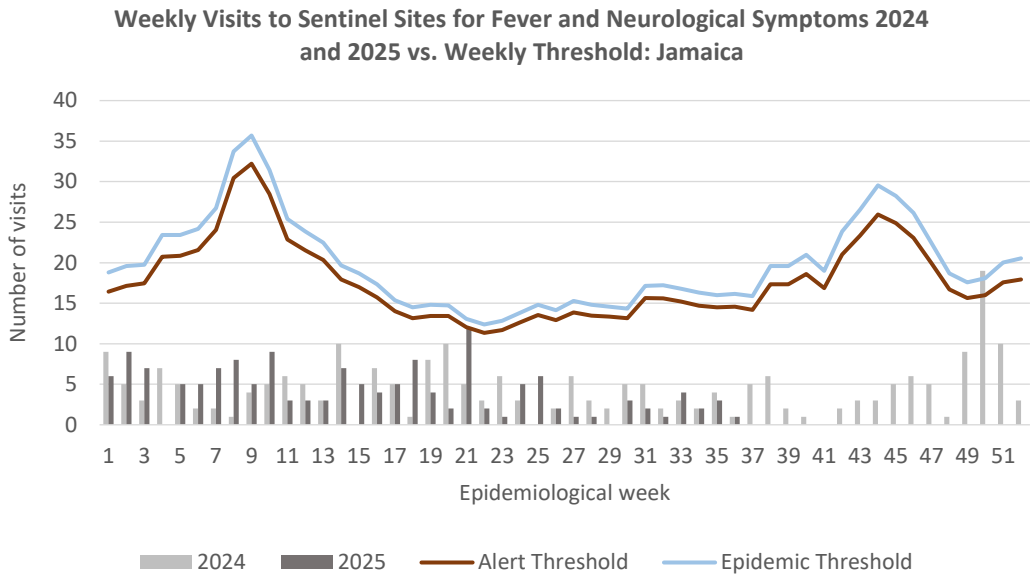
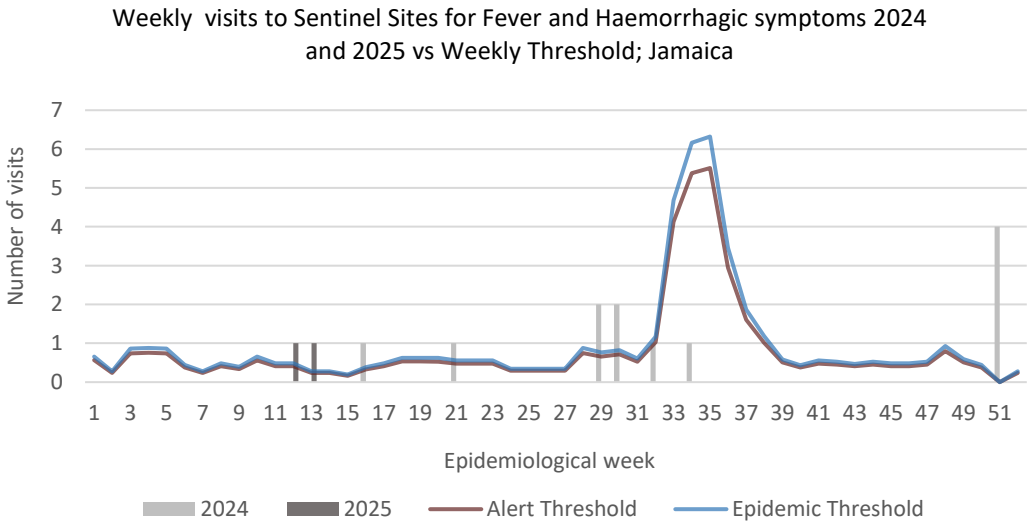
FEVER AND NEUROLOGICAL

Temperature of >38^{0}C /100.4^{0}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).



FEVER AND HAEMORRHAGIC

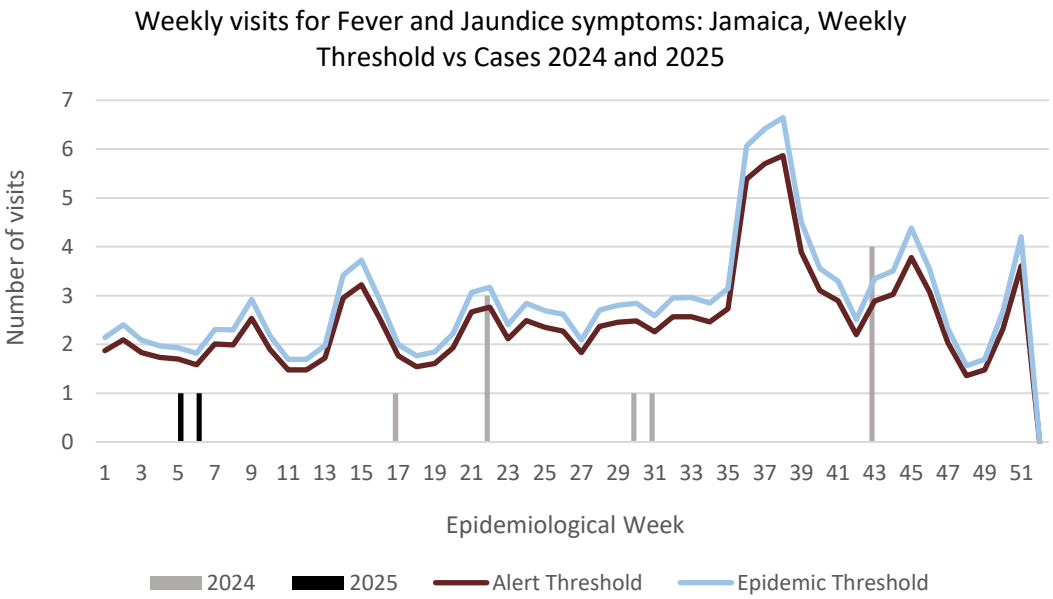
Temperature of >38^0C /100.4^0F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



FEVER AND JAUNDICE

Temperature of >38^0C /100.4^0F (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.



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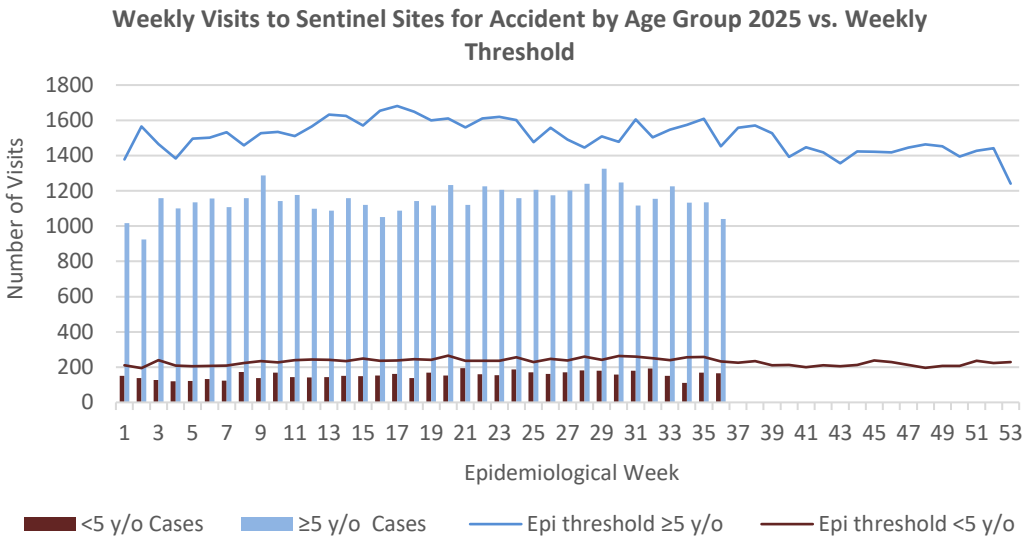
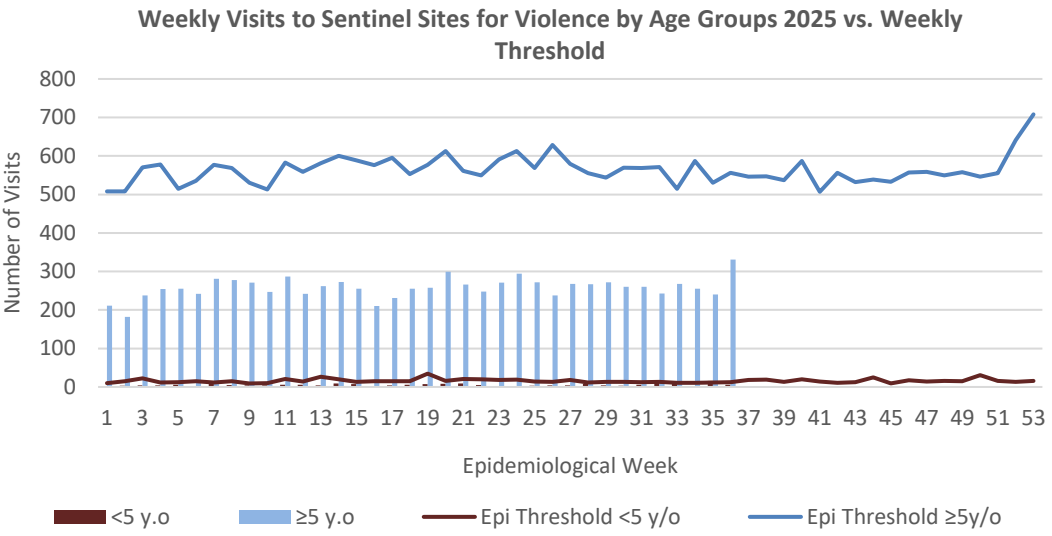
ACCIDENTS

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



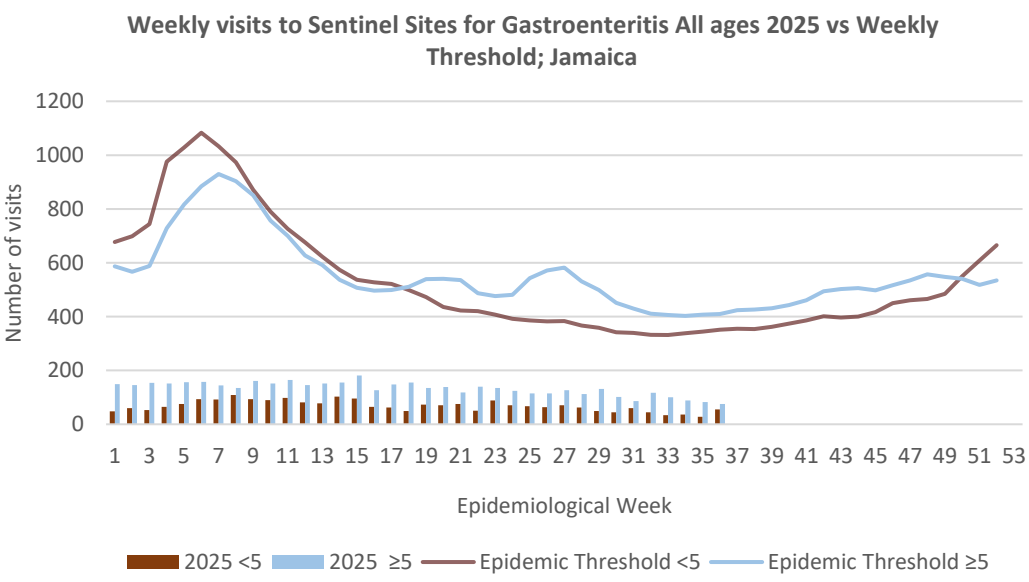
VIOLENCE

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



GASTROENTERITIS

Inflammation of the stomach and intestines, typically resulting from bacterial toxins or viral infection and causing vomiting and diarrhoea.



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CLASS ONE NOTIFIABLE EVENTS

	CLASS 1 EVENTS		Confirmed YTD[α] CURRENT YEAR 2025	PREVIOUS YEAR 2024
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		92[β]	249[β]
	Cholera		0	0
	Severe Dengue[Y]		See Dengue page below	See Dengue page below
	COVID-19 (SARS-CoV-2)		289	639
	Hansen's Disease (Leprosy)		0	0
	Hepatitis B		5	35
	Hepatitis C		1	9
	HIV/AIDS		NA	NA
	Malaria (Imported)		0	0
	Meningitis		11	14
	Monkeypox		1	0
EXOTIC/ UNUSUAL	Plague		0	0
H IGH 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[δ]		42	46
	Ophthalmia Neonatorum		35	144
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		2	0
	Tuberculosis		27	35
	Yellow Fever		0	0
	Chikungunya[ε]		0	0
	Zika Virus[θ]		0	0

Comments

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.

[Y] Dengue Hemorrhagic Fever data include Dengue related deaths;

[δ] Figures include all deaths associated with pregnancy reported for the period.

[ε] CHIKV IgM positive cases

[θ] Zika PCR positive cases

[β] Updates made to prior weeks.

[α] Figures are cumulative totals for all epidemiological weeks year to date.

NA- Not Available

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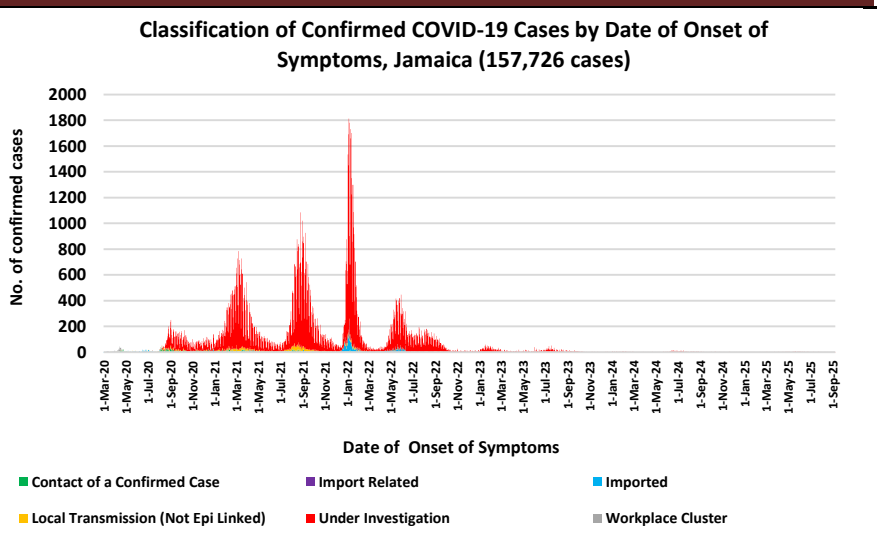
COVID-19 SURVEILLANCE

CASES	EW 36	Total
Confirmed	2	157726
Females	2	90868
Males	0	66855
Age Range	6 to 90 years	1 day to 108 years

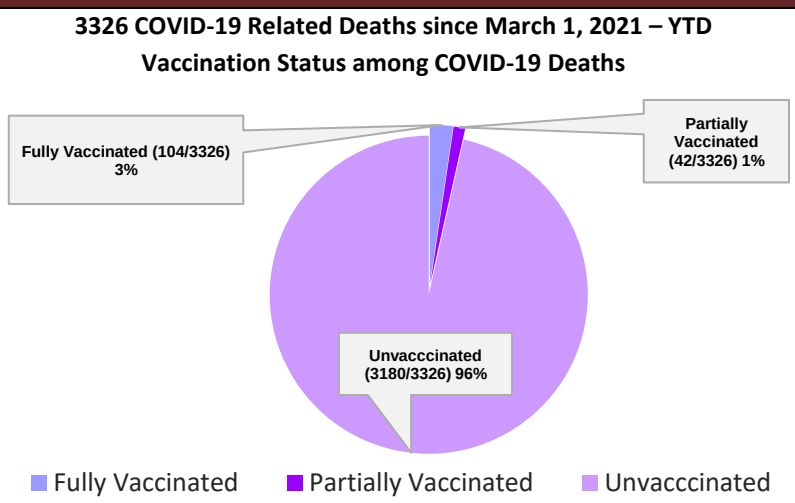
* 3 positive cases had no gender specification
* PCR or Antigen tests are used to confirm cases
* Total represents all cases confirmed from 10 Mar 2020 to the current Epi-Week.



COVID-19 Outcomes

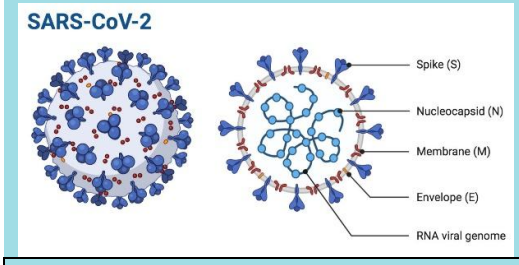
Outcomes	EW 36	Total
ACTIVE *2 weeks*		7
DIED – COVID Related	0	3890
Died - NON COVID	0	403
Died - Under Investigation	0	142
Recovered and discharged	0	103226
Repatriated	0	93
Total		157726

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



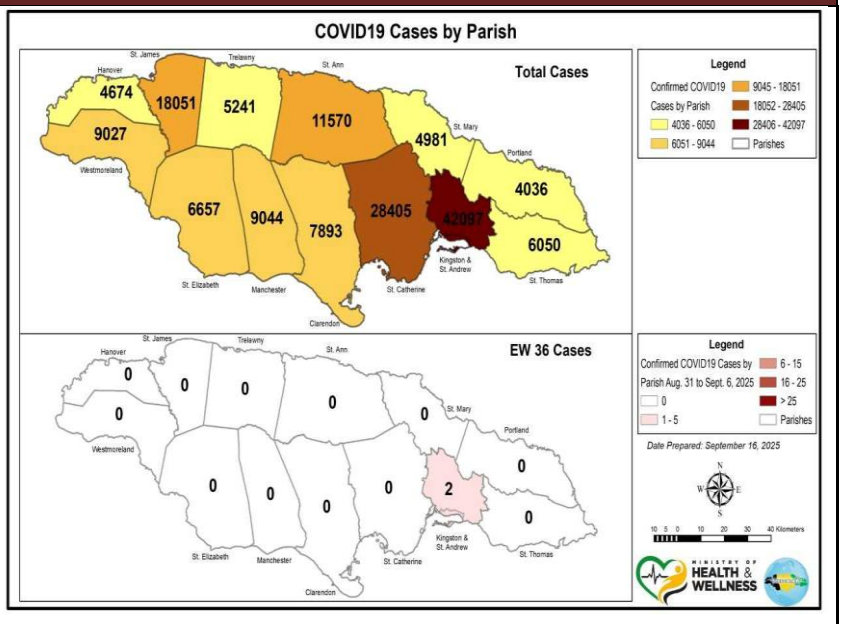
COVID-19 Parish Distribution and Global Statistics

COVID-19 Virus Structure



COVID-19 WHO Global Statistics EW 33 -36 2025

Epi Week	Confirmed Cases	Deaths
33	17700	278
34	21700	322
35	26700	341
36	27000	308
Total (4weeks)	**93100**	**1249**



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September 19, 2025 ISSN 0799-3927

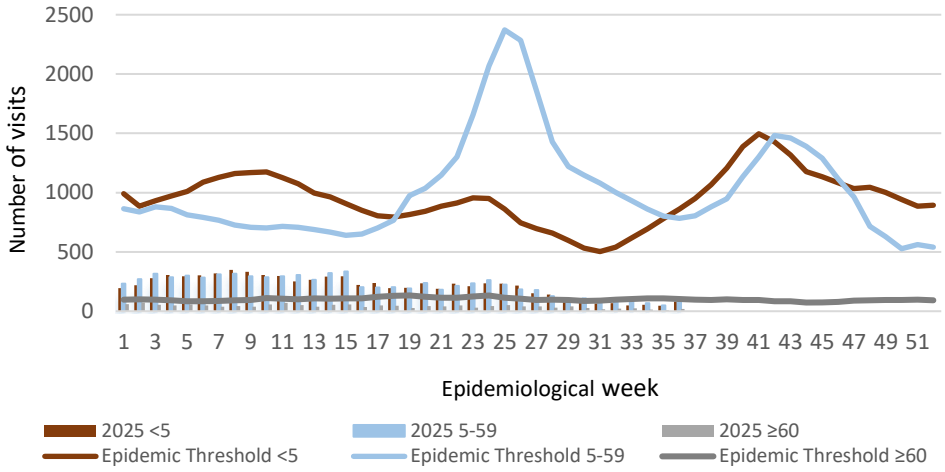
INFLUENZA SURVEILLANCE

EW 36

August 31, 2025 – September 6, 2025 Epidemiological Week 36

	EW 36	*YTD*
SARI cases	0	304
Total Influenza positive Samples	**0**	**172**
Influenza A	**0**	**147**
H1N1pdm09	0	79
H3N2	0	68
Not subtyped	0	0
Influenza B	**0**	**25**
B lineage not determined	0	0
B Victoria	0	25
Parainfluenza	0	0
Adenovirus	0	0
RSV	0	30

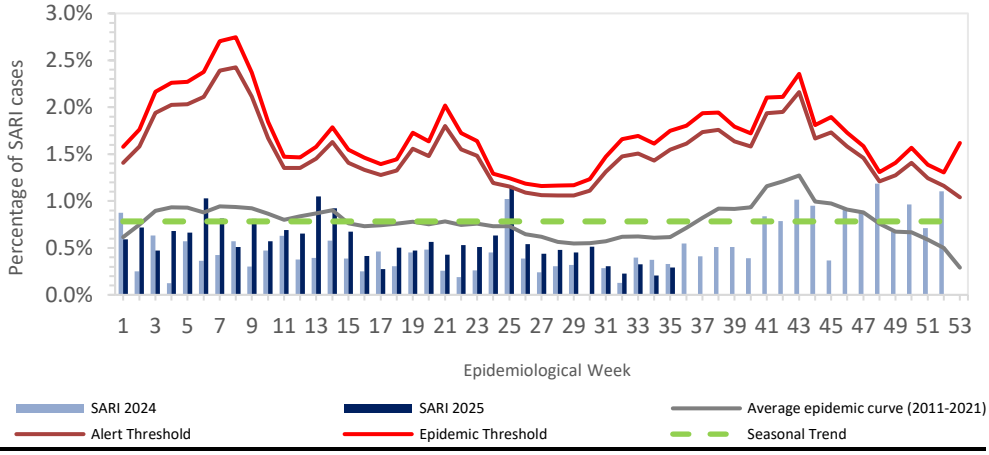
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2025 vs Weekly Threshold; Jamaica



Epi Week Summary

During EW 36, Zero (0) SARI admissions was reported.

Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2025) (compared with 2011-2024)

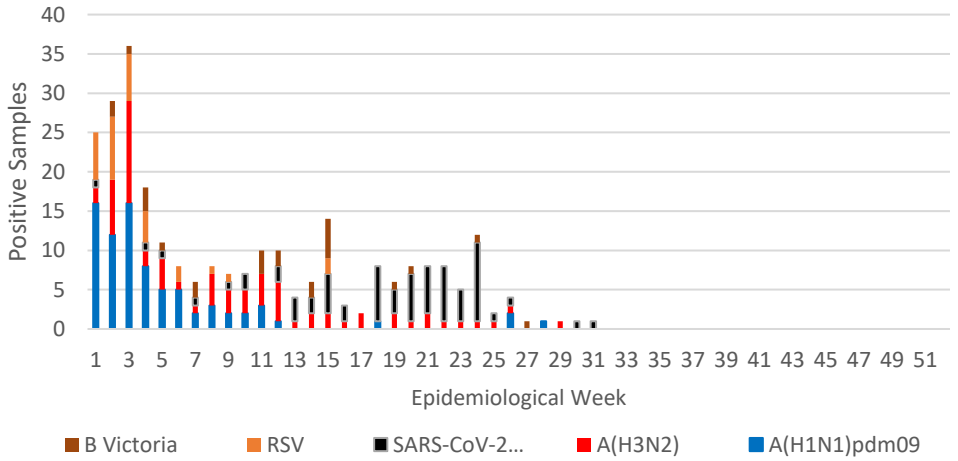


Caribbean Update EW 36

Influenza activity primarily driven by A(H1N1)pdm09, decreased in the latest EW, with a sudregional posivity rate of 8.5%. In Haiti, Belize and Saint Lucia, influenza activity remains at epidemic levels but shows a downward trend. In constrast, in Cuba, Jamaica, Suriname and the Dominican Rupublic, it remains at interseasonal levels. In Barbados and the Cayman Islands, influenza activity remains low. In Guyana, activity increased compared to the previous EW, with a positivity rate of 9.6%. RSV circulation in the subregion decreased compared to the previous EW, with positivity rate of 4.9%. In Cuba, the Dominincan Republic, the Cayman Islands and Saint Vincent and the Grenadines, circulation decreased compared to the previous EW. In Guyana, circulation increased compared to the previous EW. SARS-CoV-2 activity increased this EW compared to the previous one, with a subregional positivity rate of 19.8%. In Belize, Haiti, the Dominican Republic, Jamaica, Guyana, and Saint Vincent and the Grenadines, activity decreased. In Cuba, Saint Lucia, Barbados and the Cayman Islands, positivity increased

(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 - 2025



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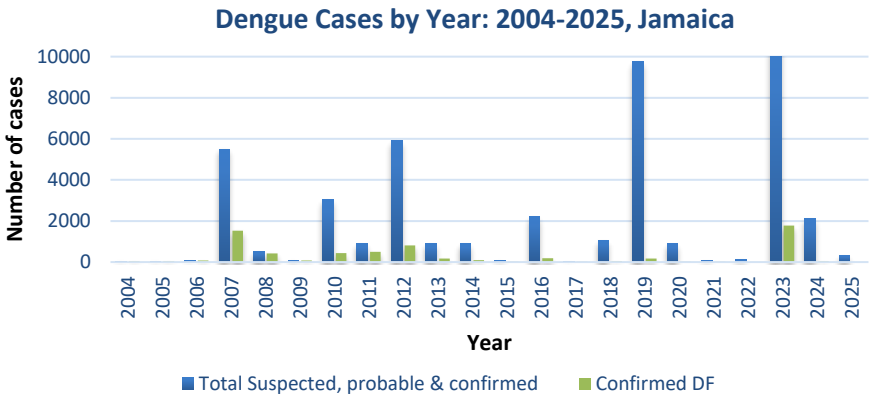
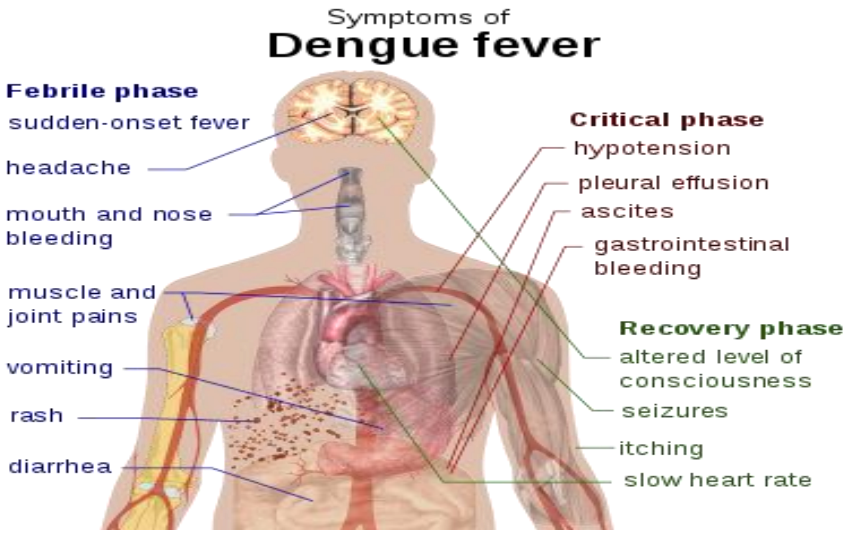
DENGUE SURVEILLANCE

August 31, 2025 – September 6, 2025 Epidemiological Week 36 | Epidemiological Week 36



Reported suspected, probable and confirmed dengue with symptom onset in week 36 of 2025

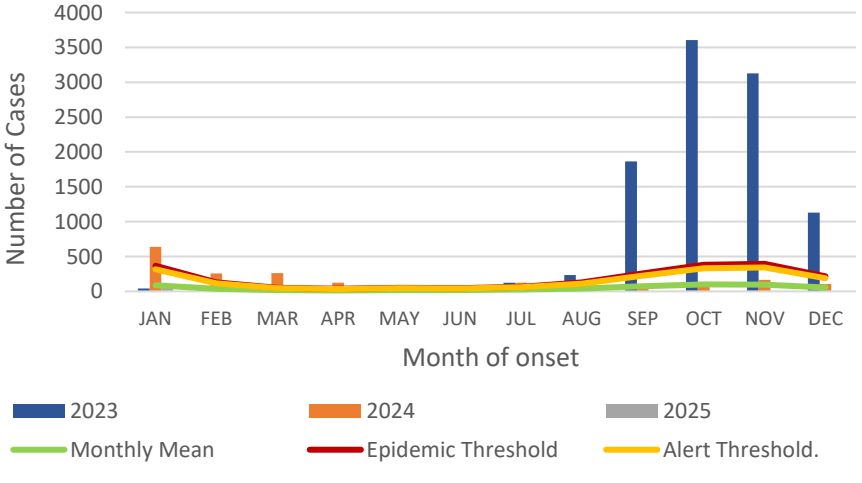
	2025*	
	EW 36	YTD
Total Suspected, Probable & Confirmed Dengue Cases	1	335
Lab Confirmed Dengue cases	0	0
CONFIRMED Dengue Related Deaths	0	0



Points to note:

- **Dengue deaths are reported based on date of death.**
- ***Figure as at September 19, 2025**
- **Only PCR positive dengue cases are reported as confirmed.**
- **IgM positive cases are classified as probable dengue.**

Suspected, probable and confirmed dengue cases for 2023-2025 versus monthly mean, alert and epidemic threshold (2007-2022)



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RESEARCH ABSTRACT

Abstract

NHRC-23-O09

Combined supplementation of S-nitrosoglutathione and glutathione improves glycaemic control in type 2 diabetic rats

Wright, A[1] , Bryan, S.[1]

[1]*The University of the West Indies, Mona, Jamaica*

Objectives: To investigate the effect of the combined supplementation of S-nitrosoglutathione and glutathione on blood glucose concentration in type 2 diabetic rats.

Methods: A type 2 diabetic animal model was developed over 4 weeks using 10% fructose solution and low-dose streptozotocin (40 mg/kg BW). Thirty Sprague-Dawley rats were separated equally into five treatment groups, namely, normal control (NC), diabetic control (DC), S-nitrosoglutathione (GSNO), glutathione (GSH) and S-nitrosoglutathione combined with glutathione (GSNO + GSH). The compounds were administered orally (once daily) for 4 weeks, and weekly non-fasting blood glucose concentration was obtained throughout the study. Plasma insulin concentration, in addition to food and fluid intake were also determined at the end of treatment. Data was collected and statistical analysis was done using One-way ANOVA with Tukey post-hoc test and a p-value < 0.05 was considered statistically significant.

Results: A successful non-genetic animal model of type 2 diabetes was developed. There was a notable reduction in the non-fasting blood glucose concentration following supplementation with GSH only which was even more pronounced with GSNO + GSH treatment ($p < 0.05$) over the 4 weeks. A concomitant marked increase in insulin concentration for both treatment groups was observed ($p < 0.05$). The significant decrease in the non-fasting blood glucose concentration was accompanied by a decrease in food and fluid intake for both groups.

Conclusion: Combined supplementation of S-nitrosoglutathione and glutathione improved glycaemic control possibly through an insulin-dependent mechanism and decreased symptoms of polyphagia and polydipsia in type 2 diabetic rats. This combined supplementation could potentially be a new treatment strategy for managing type 2 diabetes mellitus.

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