WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL SURVEILLANCE UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

Tetanus (Part 3)

Surveillance

Simultaneously with an increase in control measures, it is critical that an epidemiologic surveillance system be established or improved. The most basic form of surveillance can be carried out by review of death records. However, as such records may be incomplete, this activity should only complement more active surveillance and reporting mechanisms. For those areas initially classified as low-risk for neonatal tetanus, improved surveillance will either confirm that status or provide additional information on disease occurrence that will lead to the area being reclassified as high-risk. For those areas already classified as high-risk, the system allows measurement of the impact of neonatal tetanus control measures.

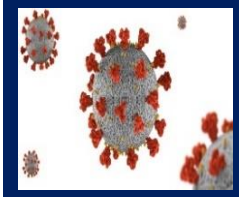
Health care facilities that report tetanus cases should distinguish between neonatal and non-neonatal tetanus. Reports should categorize these cases separately. It may be possible to conduct sentinel surveillance in selected high-risk areas. A representative from the national EPI should inspect such areas periodically. Based on the origin of neonatal patients in a given region, service areas or hospital catchment areas can be established, as well as those areas of the country that do not report cases ("silent" areas). In an adequately functioning surveillance system the ideal is to have both weekly positive and negative reports, that is, the presence or absence of cases should be reported each week. This is very important in helping to define high-risk areas and improve surveillance.

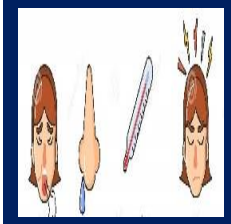
Active Case-Finding

An enhanced surveillance system should incorporate active or periodic case-finding of newborns with tetanus, particularly in those areas that have not been consistent in reporting or that have reported zero cases for a long period of time. These active case-findings should preferably be carried out for several diseases, thereby using the opportunity to investigate if there are cases of flaccid paralysis, suspicions of neonatal tetanus, or cases of rash with fever. In order to find cases, community leaders, pediatric associations, churches, hospitals, and clinics should be asked to assist in identifying possible cases. Door-to-door visits might be used in areas where patients are unlikely to seek medical care and when there are rumors of a neonatal death compatible with tetanus.

Taken from WHO website on 2/April/2025
https://www.paho.org/sites/default/files/FieldGuide_NeonatalTetanus_2ndEd_e.pdf
Pictures taken from https://health.thefuntimesguide.com/getting-tetanus-shot/

EPI WEEK 12





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 – 9 to 12 of 2025

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

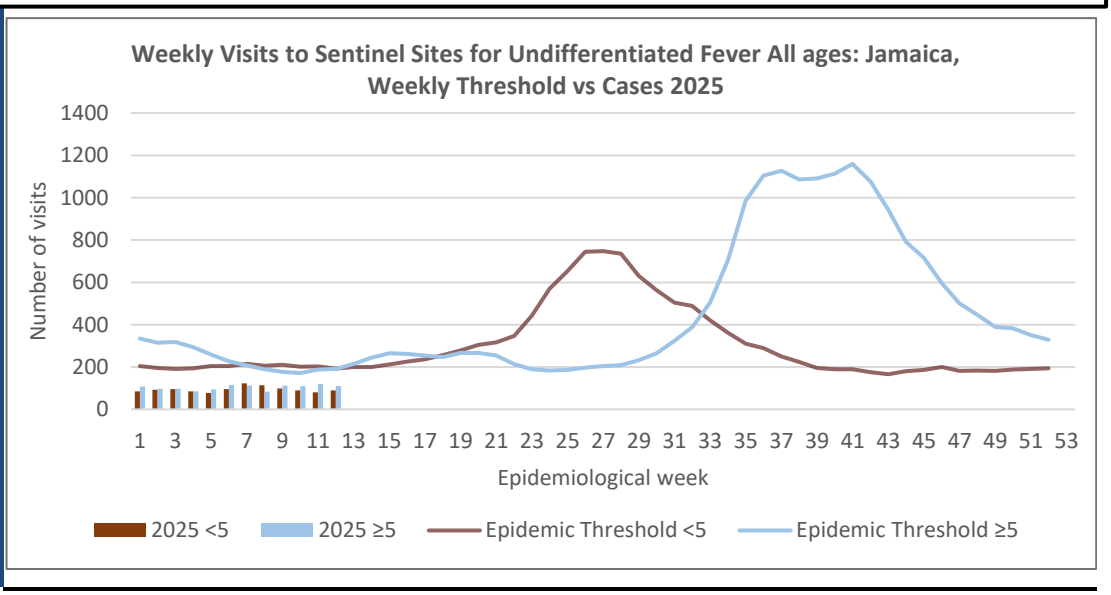
KEY:
Yellow- late submission on Tuesday
Red – late submission after Tuesday

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													
9	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
10	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
11	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
12	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 $>38^0C$ /100.4^0F (or recent history of fever) with or without an obvious diagnosis or focus of infection.



2 NOTIFICATIONS- All clinical sites

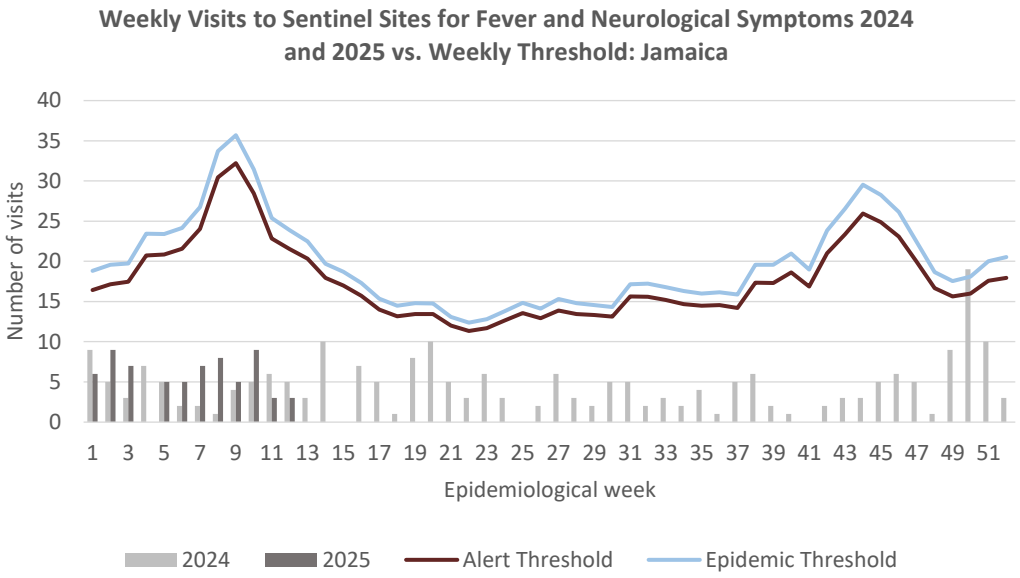
INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

SENTINEL REPORT- 78 sites. Automatic reporting

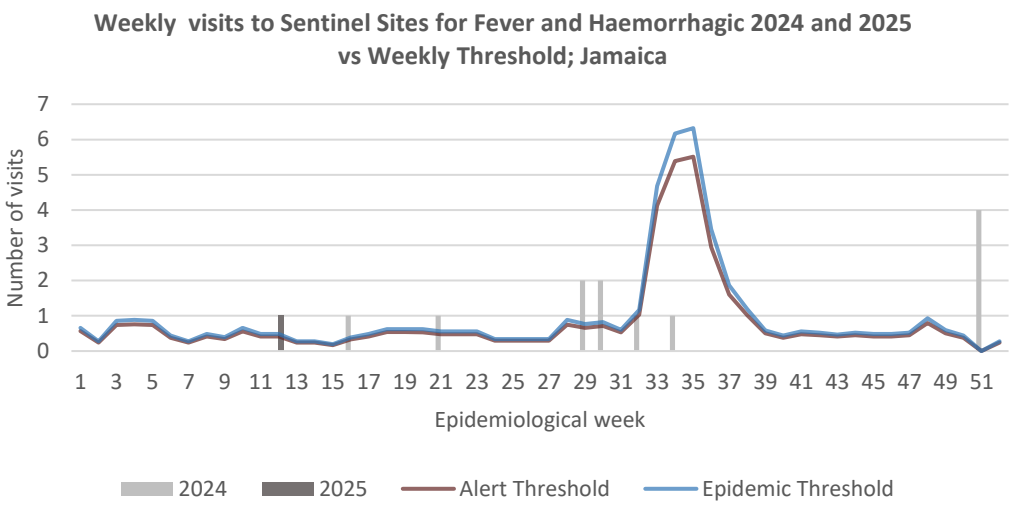
FEVER AND NEUROLOGICAL

Temperature of >38^{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

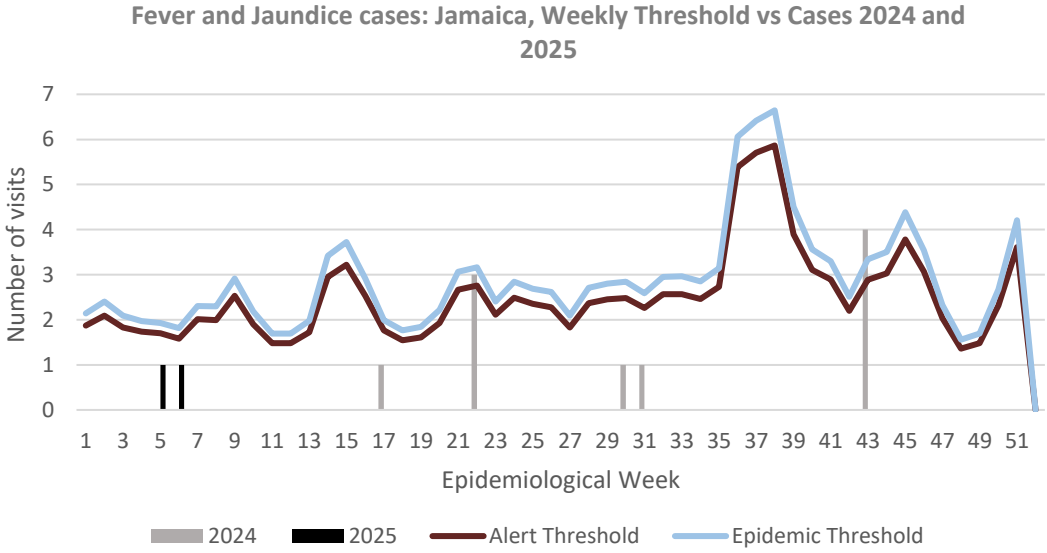
Temperature of >38^0C /100.4^0F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



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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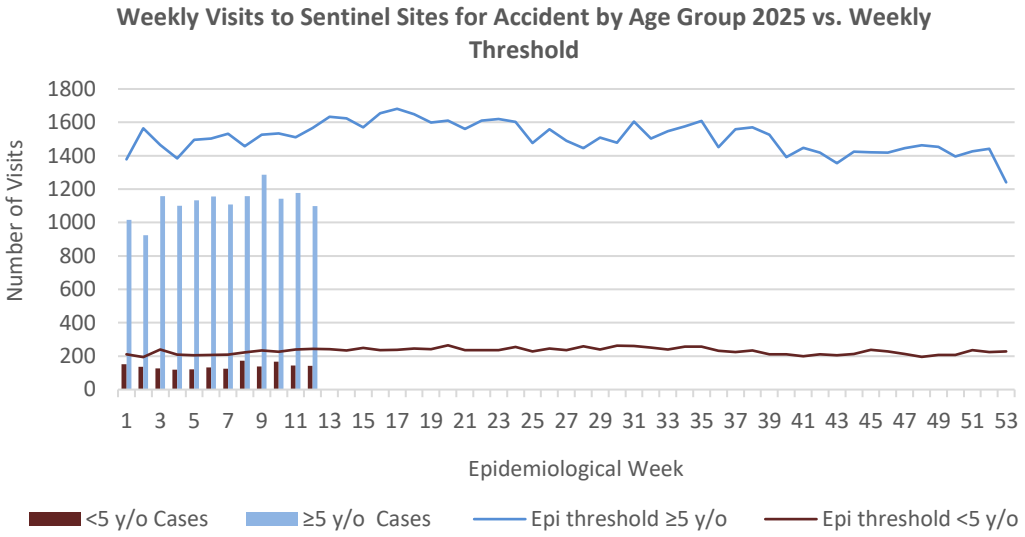
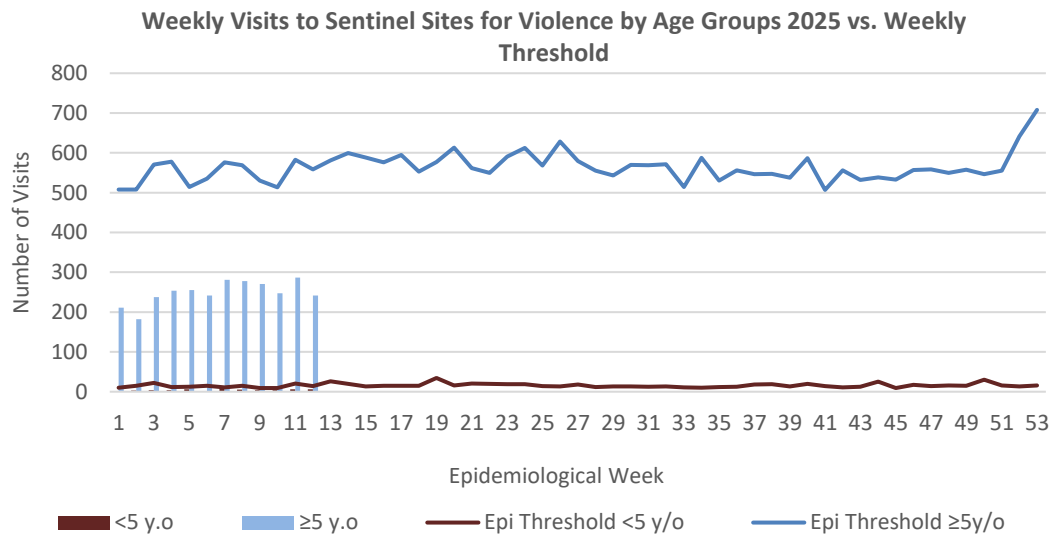
ACCIDENTS

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



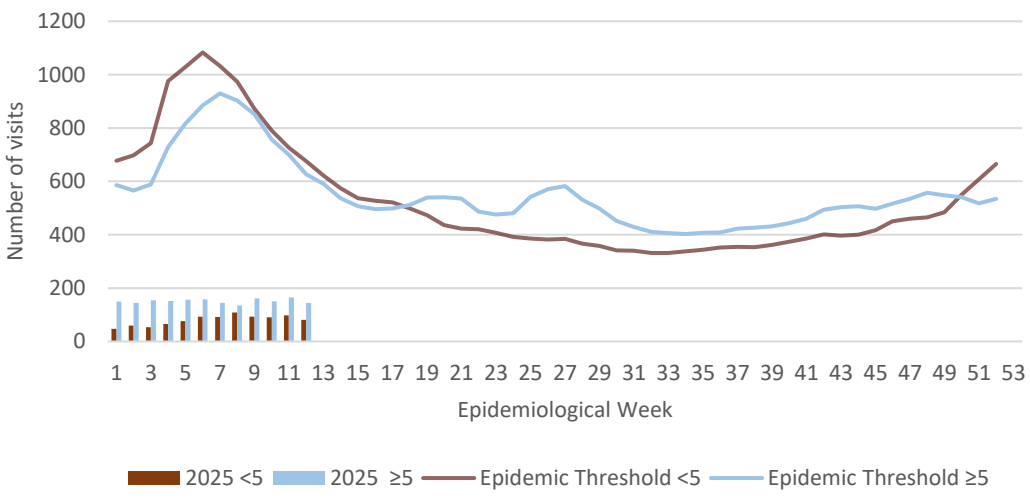
VIOLENCE

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		11[β]	93[β]
	Cholera		0	0
	Severe Dengue[Y]		See Dengue page below	See Dengue page below
	COVID-19 (SARS-CoV-2)		42	156
	Hansen's Disease (Leprosy)		0	0
	Hepatitis B		0	11
	Hepatitis C		0	4
	HIV/AIDS		NA	NA
	Malaria (Imported)		0	0
	Meningitis		4	8
	Monkeypox		0	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]		14	13
	Ophthalmia Neonatorum		2	38
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		1	0
	Tuberculosis		0	15
	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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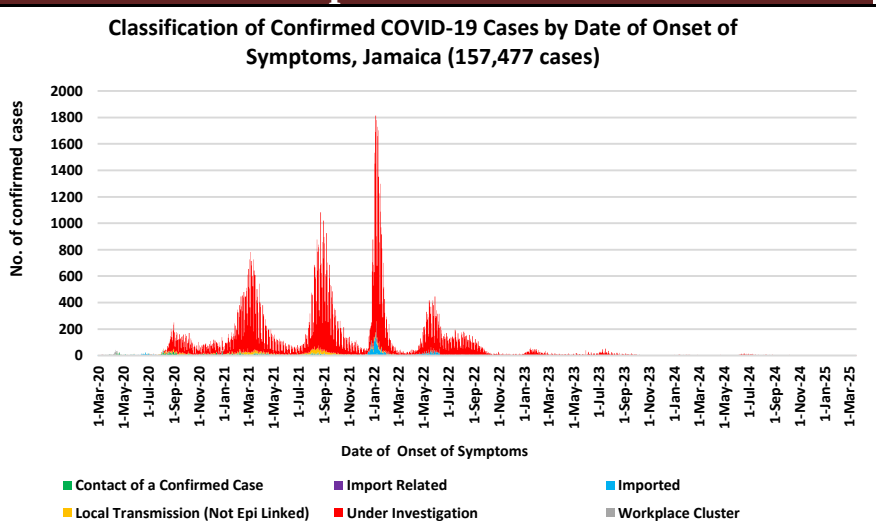
April 4, 2025 ISSN 0799-3927

COVID-19 Surveillance Update

CASES	EW 12	Total
Confirmed	6	157477
Females	5	90732
Males	1	66742
Age Range	3 to 84 years	1 day to 108 years

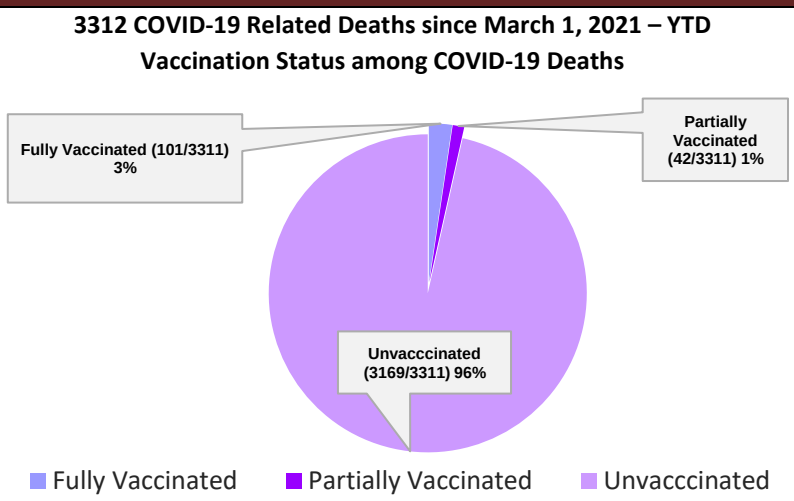
* 3 positive cases had no gender specification
* PCR or Antigen tests are used to confirm cases
* Total represents all cases confirmed from 10 Mar 2020 to the current Epi-Week.



COVID-19 Outcomes

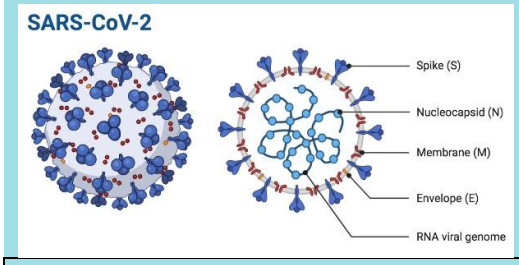
Outcomes	EW 12	Total
ACTIVE *2 weeks*		13
DIED – COVID Related	0	3876
Died - NON COVID	0	396
Died - Under Investigation	0	142
Recovered and discharged	0	103226
Repatriated	0	93
Total		157477

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



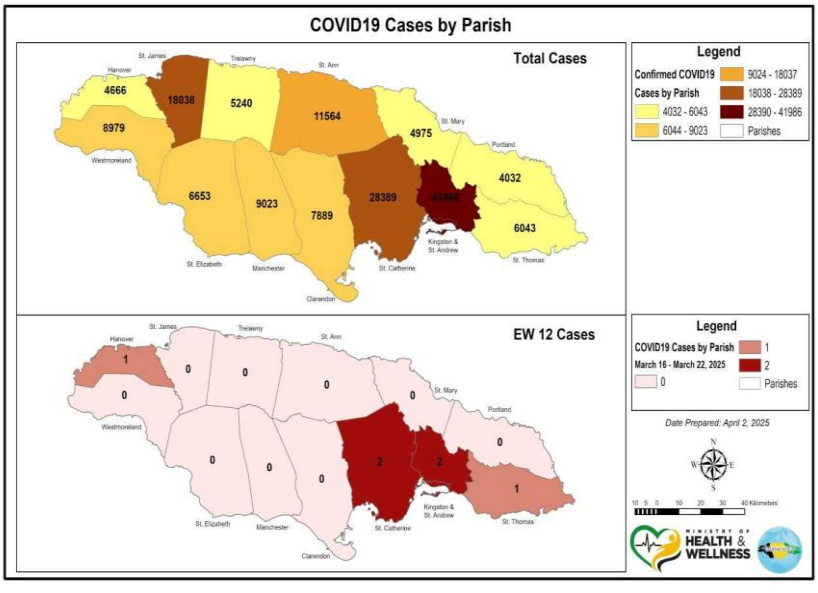
COVID-19 Parish Distribution and Global Statistics

COVID-19 Virus Structure



COVID-19 WHO Global Statistics EW 9 -12, 2025

Epi Week	Confirmed Cases	Deaths
9	37800	769
10	24500	710
11	17600	579
12	12400	400
Total (4weeks)	**92300**	**2458**



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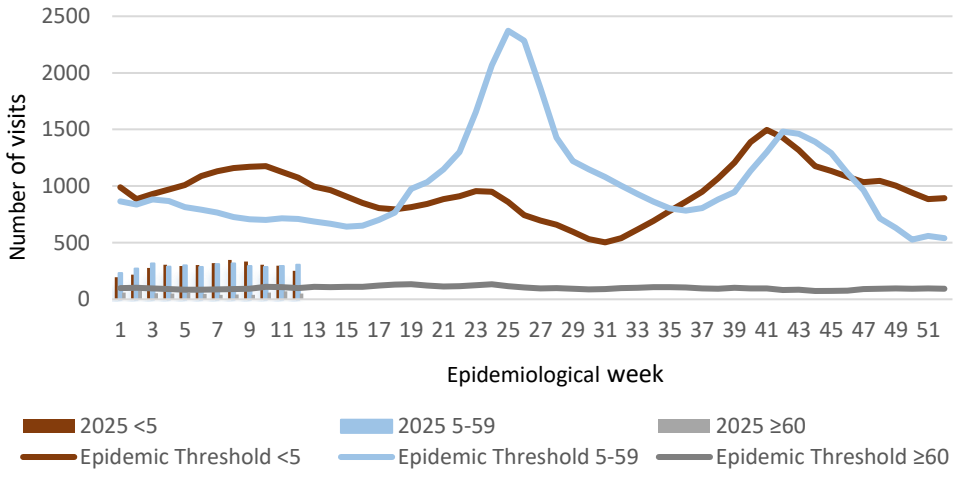
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 12

March 16, 2025 – March 22, 2025 Epidemiological Week 12

	EW 12	*YTD*
SARI cases	4	114
Total Influenza positive Samples	2	119
Influenza A	0	108
H1N1pdm09	0	69
H3N2	0	39
Not subtyped	0	0
Influenza B	2	11
B lineage not determined	0	0
B Victoria	2	11
Parainfluenza	0	0
Adenovirus	0	0
RSV	0	28

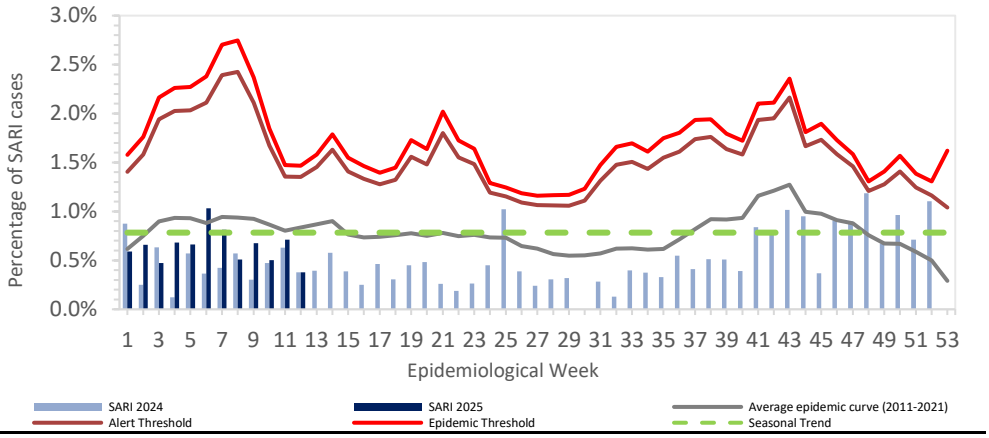
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2025 vs Weekly Threshold; Jamaica



Epi Week Summary

During EW 12, four (4) SARI admissions were reported.

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



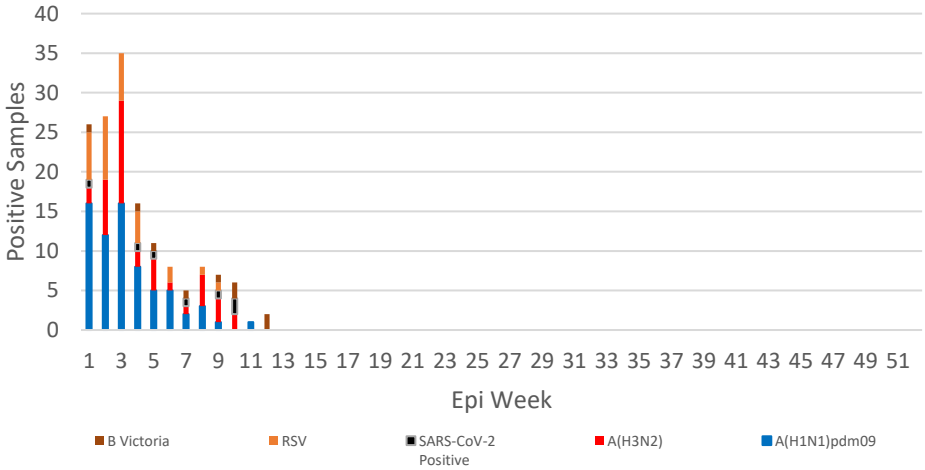
Caribbean Update EW 12

Caribbean: Influenza activity remains high for ILI and decreasing for SARI. The predominant influenza subtype was reported to be A(H1N1)pdm09. RSV cases remain low. SARS-CoV-2 shows and increae in detection for ILI cases

By country: Over the past 4 EW, influenza activity has increased in Cuba, Haiti, Suriname, Barbados and Guyana, while it has decreased in Belize, the Dominican Republic, Jamaica and Saint Lucia. An increase in RSV activity is observed in Suriname and Guyana as well as an increase in SARS-CoV-2 detection in the Dominican Republic, Jamaica and Guyana.

(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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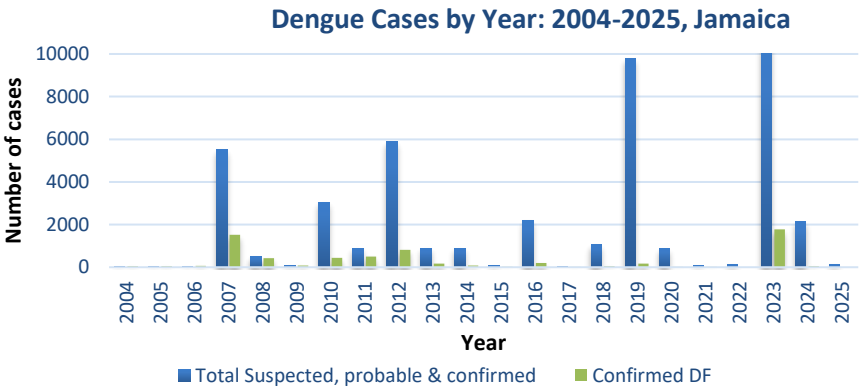
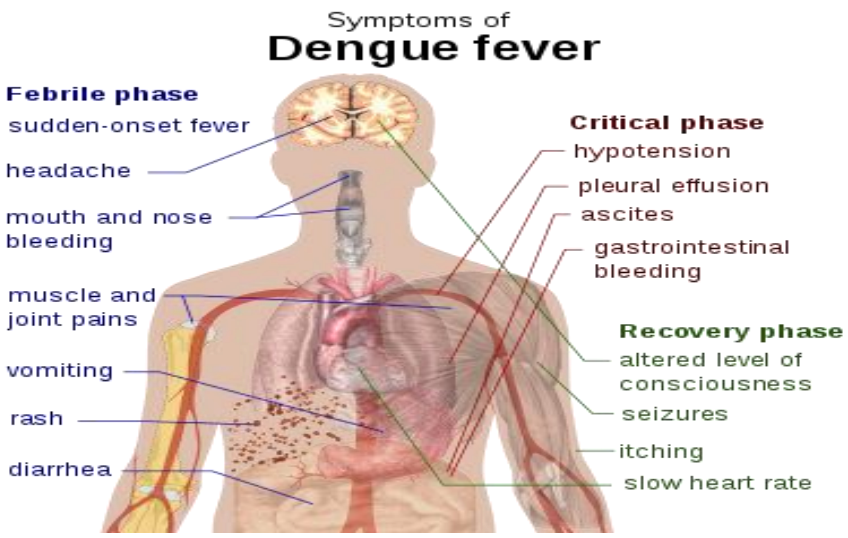
Dengue Bulletin

March 16, 2024 – March 22, 2025 Epidemiological Week 12 | Epidemiological Week 12



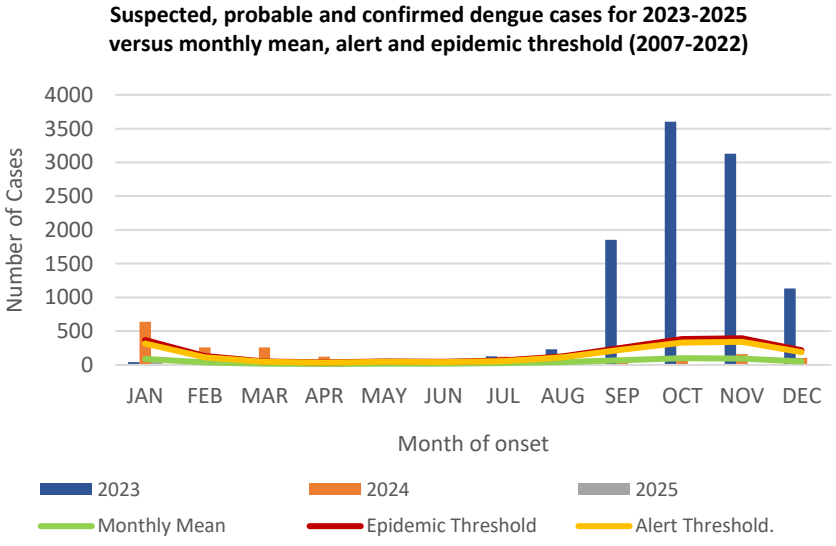
Reported suspected, probable and confirmed dengue with symptom onset in week 12 of 2025

	2025*	
	EW 12	YTD
Total Suspected, Probable & Confirmed Dengue Cases	1	121
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, April 4, 2025**
- **Only PCR positive dengue cases are reported as confirmed.**
- **IgM positive cases are classified as presumed dengue.**



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RESEARCH PAPER

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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