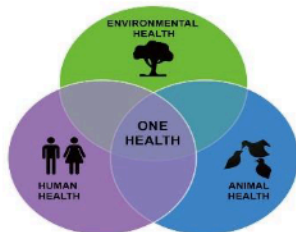


WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL SURVEILLANCE UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

One Health



One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes that the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and interdependent. While health, food, water, energy and environment

are all wider topics with sector-specific concerns, the collaboration across sectors and disciplines contributes to protect health, address health challenges such as the emergence of infectious diseases, antimicrobial resistance, and food safety and promote the health and integrity of our ecosystems.

By linking humans, animals and the environment, One Health can help to address the full spectrum of disease control – from prevention to detection, preparedness, response and management – and contribute to global health security. The approach can be applied at the community, subnational, national, regional and global levels, and relies on shared and effective governance, communication, collaboration and coordination. Having the One Health approach in place makes it easier for people to better understand the co-benefits, risks, trade-offs and opportunities to advance equitable and holistic solutions.

COVID-19 has led to the loss of millions of lives and trillions of dollars from the global economy, an impact that needs to be avoided in the future. The emergence of the SARS-CoV-2 virus has underlined the need to strengthen the One Health approach, with a greater emphasis on connections to the environment, as well as promoting a healthy and green recovery from COVID-19, as described in the WHO manifesto for a healthy recovery from COVID-19. Human health is a pillar of global health security that is sustained directly and indirectly through access to clean air and fresh water, safe food and healthy sustainable diets, and the availability of and access to medicines.

As we come together as a community in the aftermath of this global pandemic, we have an unprecedented opportunity to strengthen cross-sectoral collaboration; increase policy coordination and coherence supported by a more systematic use of robust scientific evidence; and promote the development of integrated indicators and safeguards to address upstream drivers of disease, with a focus on prevention.

These efforts will not only contribute to the prevention of future pandemics but will help to build more resilient and equitable systems, environments, economies and societies.

Taken from WHO website on 23/ July /2024

https://www.who.int/health-topics/one-health#tab=tab_1

https://www.who.int/health-topics/one-health#tab=tab_2

EPI WEEK 28



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 – 25 to 28 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													
25	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
26	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
27	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
28	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

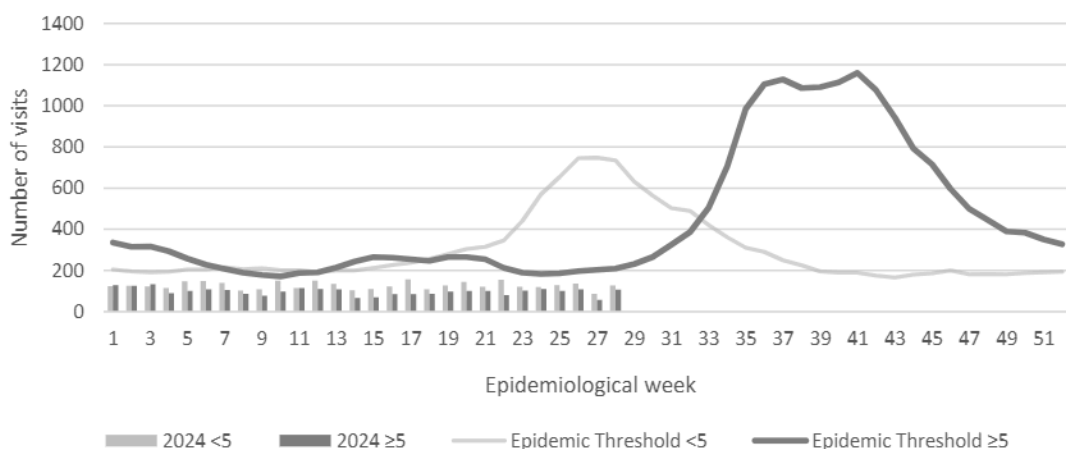
REPORTS FOR SYNDROMIC SURVEILLANCE

UNDIFFERENTIATED FEVER

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



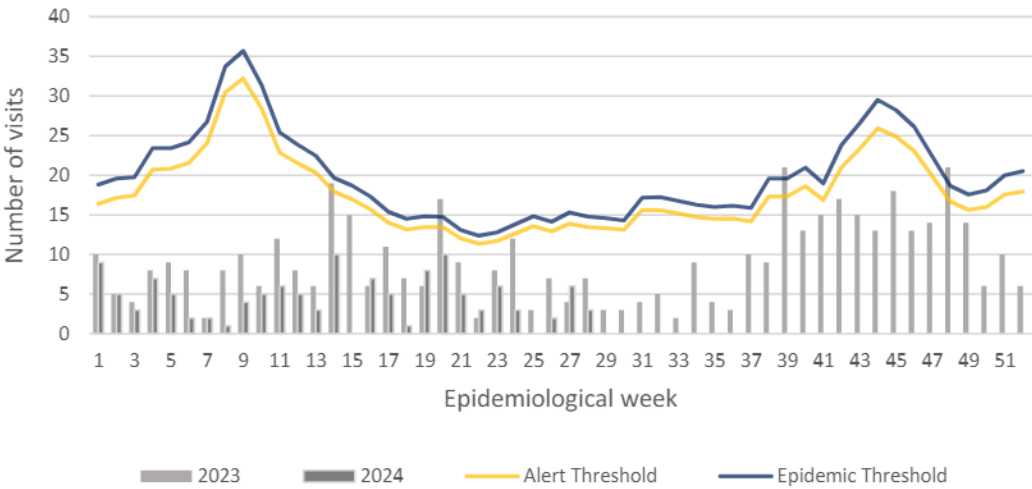
SENTINEL
REPORT- 78 sites.
Automatic reporting

FEVER AND NEUROLOGICAL

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

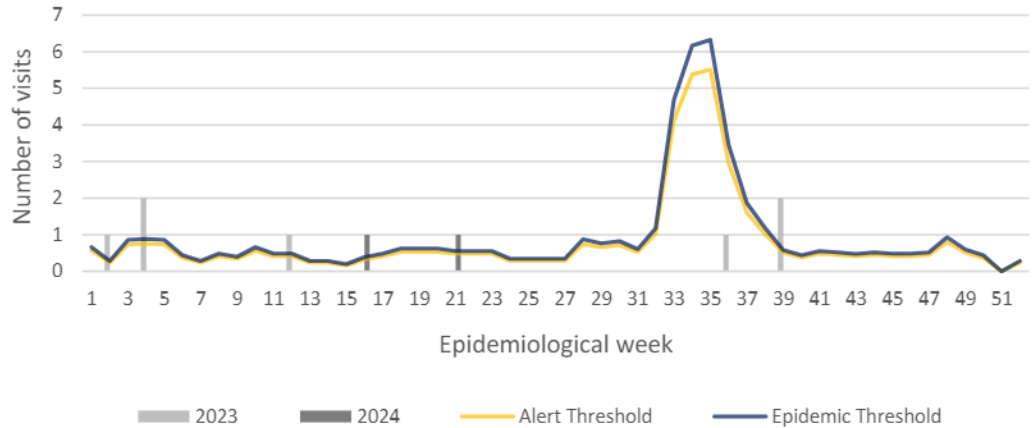


FEVER AND HAEMORRHAGIC

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



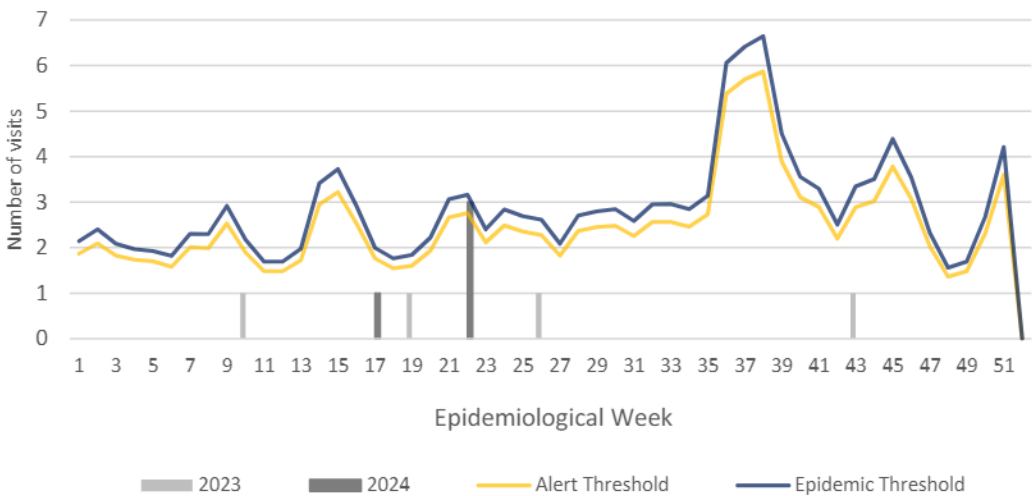
FEVER AND JAUNDICE

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



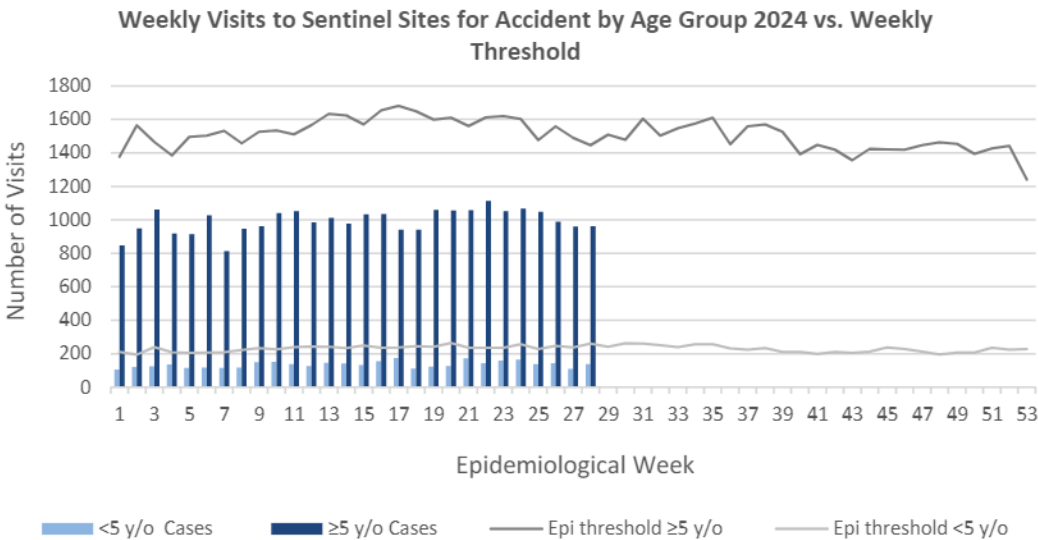
HOSPITAL
ACTIVE
SURVEILLANCE-
30 sites. Actively
pursued



SENTINEL
REPORT- 78 sites.
Automatic reporting

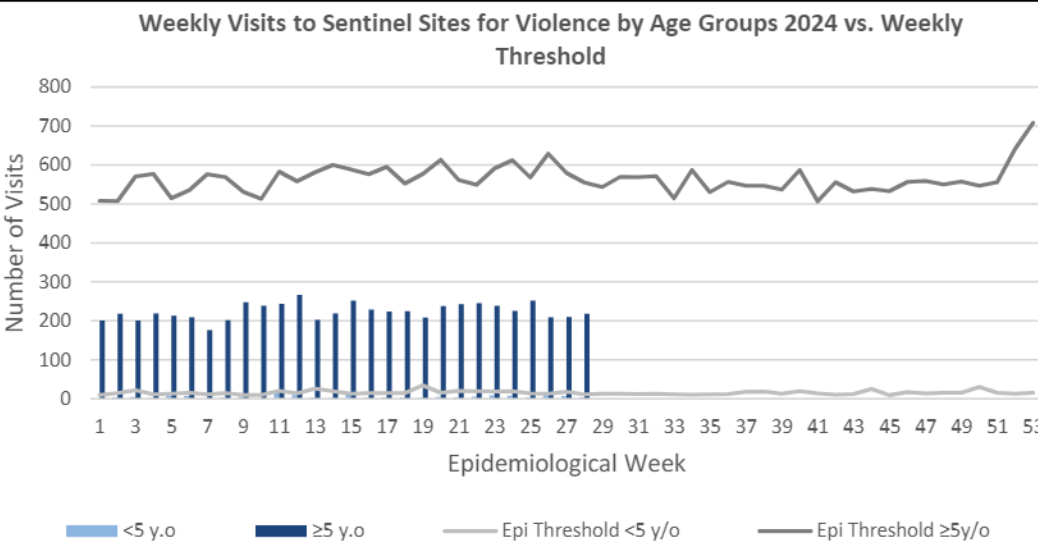
ACCIDENTS

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



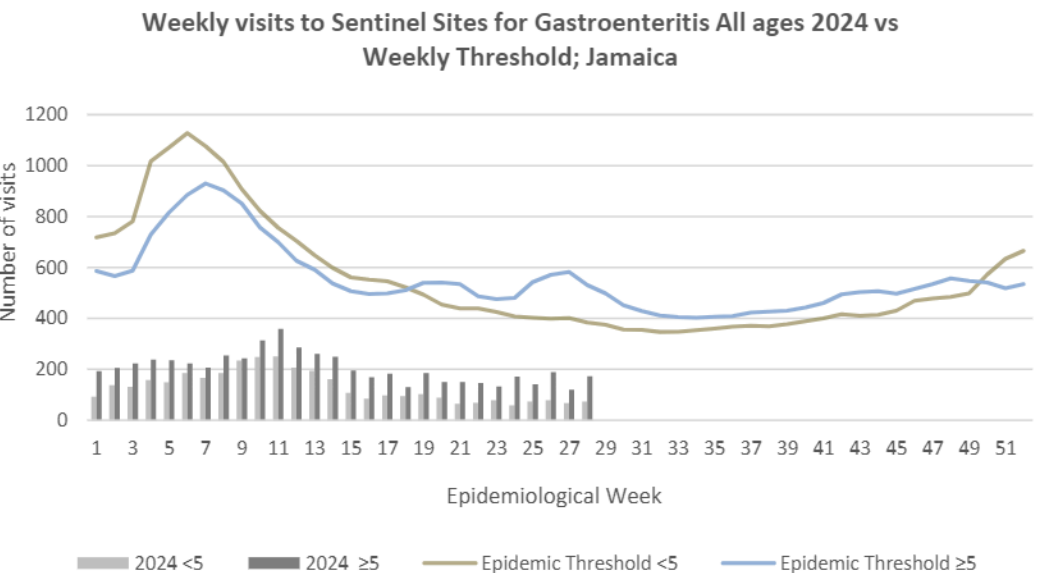
VIOLENCE

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.



4

NOTIFICATIONS-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
up for all Class One Events



HOSPITAL
ACTIVE
SURVEILLANCE-
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SENTINEL
REPORT- 78 sites.
Automatic reporting

CLASS ONE NOTIFIABLE EVENTS					Comments
			Confirmed YTD ^α		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. γ 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.
		CLASS 1 EVENTS	CURRENT YEAR 2024	PREVIOUS YEAR 2023	
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		200 ^β	206 ^β	
	Cholera		0	0	
	Severe Dengue ^γ		See Dengue page below	See Dengue page below	
	COVID-19 (SARS-CoV-2)		469	2856	
	Hansen’s Disease (Leprosy)		0	0	
	Hepatitis B		10	41	
	Hepatitis C		1	21	
	HIV/AIDS		NA	NA	
	Malaria (Imported)		0	0	
	Meningitis		9	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		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 ^δ		35	30	
	Ophthalmia Neonatorum		72	82	
	Pertussis-like syndrome		0	0	
	Rheumatic Fever		0	0	
	Tetanus		0	0	
	Tuberculosis		14	39	
	Yellow Fever		0	0	
	Chikungunya ^ε		0	0	
	Zika Virus ^θ		0	0	NA- Not Available



5 NOTIFICATIONS-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
up for all Class One Events



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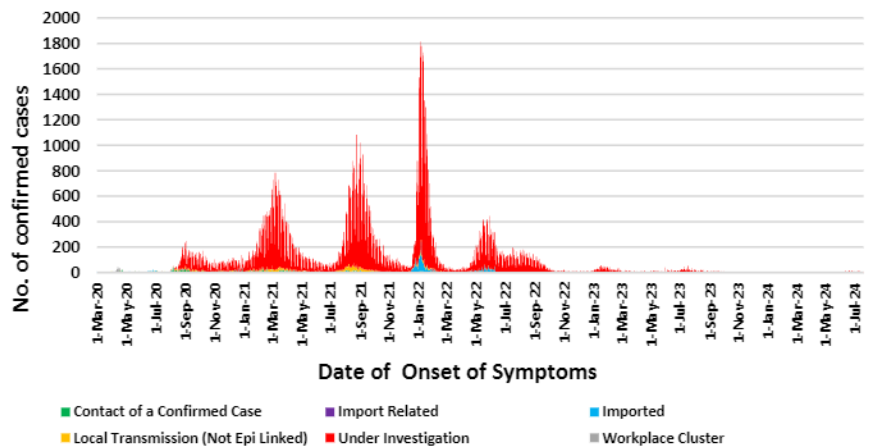


SENTINEL
REPORT- 78 sites.
Automatic reporting

COVID-19 Surveillance Update

CASES	EW 28	Total
Confirmed	53	157221
Females	30	90600
Males	23	66618
Age Range	1 day to 98 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.		

Classification of Confirmed COVID-19 Cases by Date of Onset of Symptoms, Jamaica (157,221 cases)

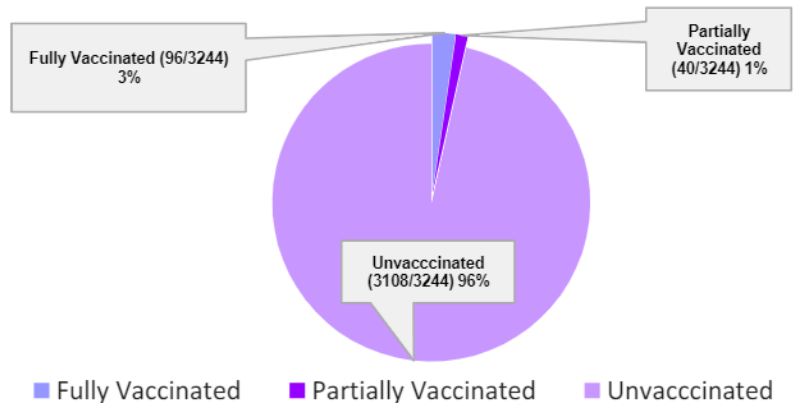


COVID-19 Outcomes

Outcomes	EW 28	Total
ACTIVE *2 weeks*		81
DIED – COVID Related	0	3806
Died - NON COVID	0	370
Died - Under Investigation	0	196
Recovered and discharged	0	103226
Repatriated	0	93
Total		157221

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

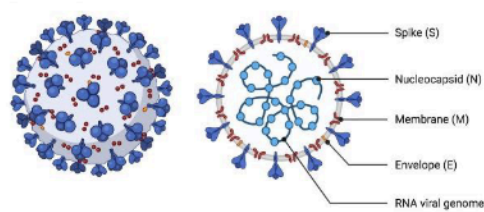
3244 COVID-19 Related Deaths since March 1, 2021 – YTD
 Vaccination Status among COVID-19 Deaths



COVID-19 Parish Distribution and Global Statistics

COVID-19 Virus Structure

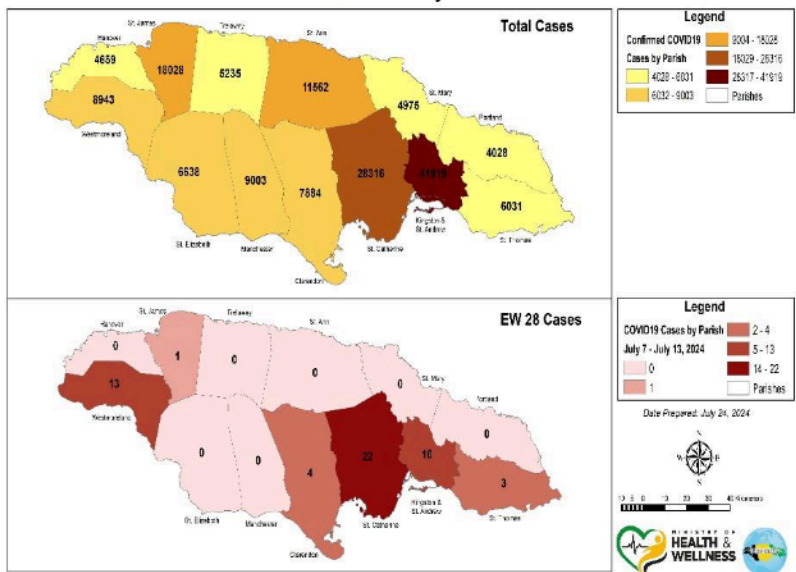
SARS-CoV-2



COVID-19 WHO Global Statistics EW 25-28, 2024

Epi Week	Confirmed Cases	Deaths
25	34400	523
26	31300	624
27	45100	536
28	34400	530
Total (4weeks)	145200	2213

COVID19 Cases by Parish



6 NOTIFICATIONS-
All clinical sites



INVESTIGATION
REPORTS- Detailed Follow up for all Class One Events



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ACTIVE
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30 sites. Actively pursued



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Automatic reporting



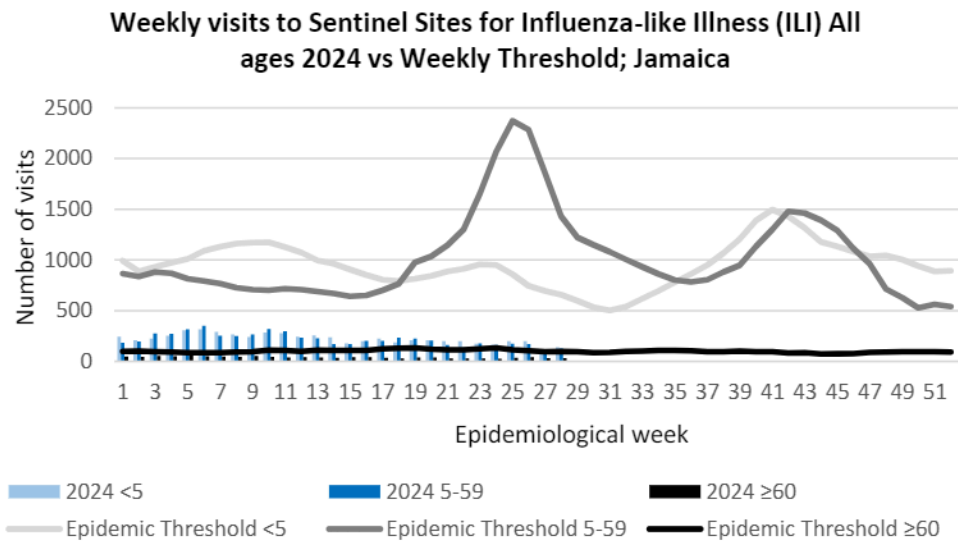
NATIONAL SURVEILLANCE UNIT

INFLUENZA REPORT

July 7, 2024 – July 13, 2024 Epidemiological Week 28

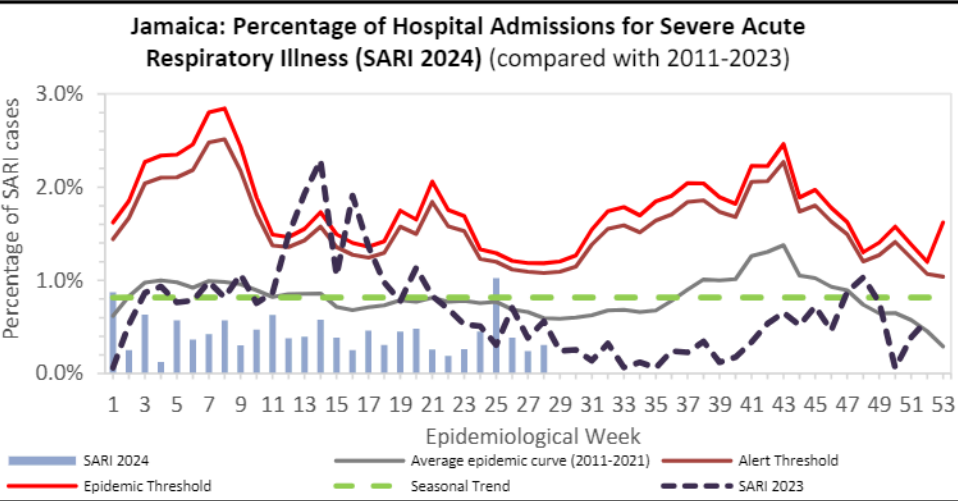
EW 28

	EW 28	YTD
SARI cases	5	189
Total Influenza positive Samples	0	100
Influenza A	0	95
H3N2	0	28
H1N1pdm09	0	67
Not subtyped	0	0
Influenza B	0	5
B lineage not determined	0	0
B Victoria	0	5
Parainfluenza	0	0
Adenovirus	0	0
RSV	0	28



Epi Week Summary

During EW 28, five (5) SARI admissions were reported.



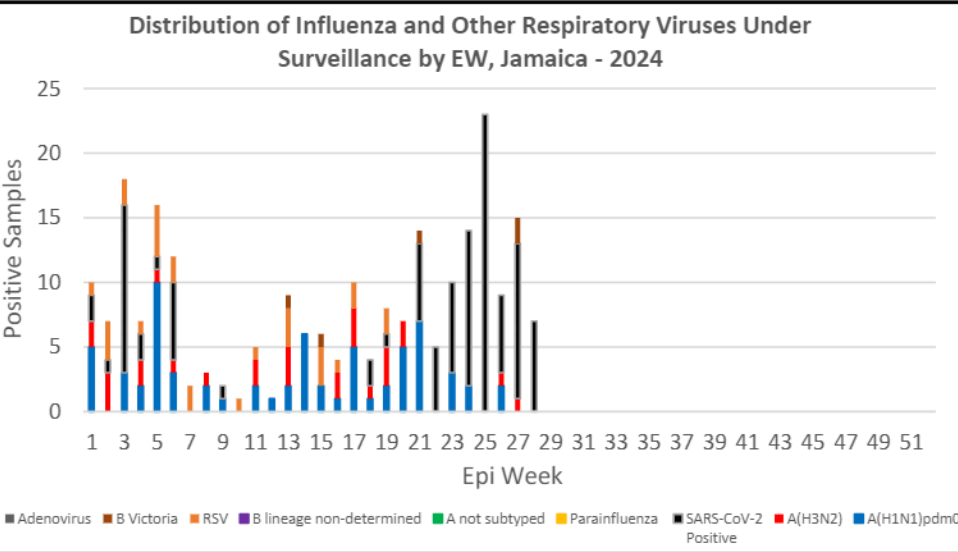
Caribbean Update EW 28

Caribbean: In the last four EWs, ILI cases have increased, associated with a higher proportion of positive SARS-CoV-2 and influenza cases. Although SARI cases have remained low, there has been an increase in the proportion of positive SARS-CoV-2 and Influenza cases. Influenza activity has remained at intermediate levels during the last four EWs. During this period, the predominant viruses have been type A(H3N2), with less circulation of influenza A(H1N1)pdm09. RSV activity has remained low. SARS-CoV-2 activity remains stable at elevated levels.

By country: Influenza activity has been observed in the last four EWs in the Dominican Republic, Jamaica and Guyana. SARS-CoV-2 activity was observed in Belize, the Dominican Republic, Jamaica, Saint Lucia, Suriname, Barbados, Guyana, the Cayman Islands and Saint Vincent and the Grenadines.

Jamaica: There has been an increase in SARI cases above the epidemic threshold, coinciding with a marked increase in SARS-CoV-2 and influenza activity.

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

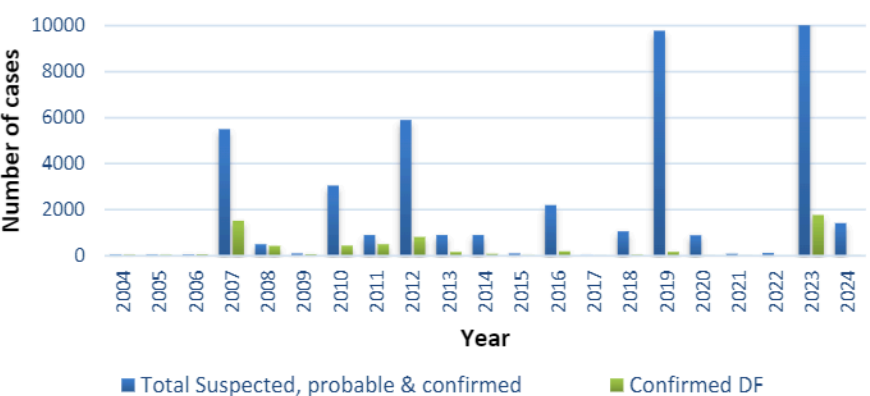


Dengue Bulletin


July 7, 2024 – July 13, 2024 Epidemiological Week 28



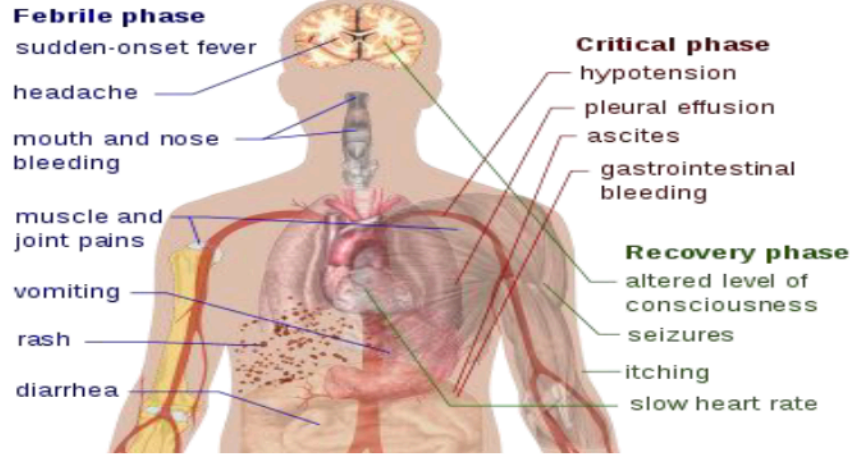
Dengue Cases by Year: 2004-2024, Jamaica



Reported suspected, probable and confirmed dengue with symptom onset in week 28 of 2024

	2024*	
	EW 28	YTD
Total Suspected, Probable & Confirmed Dengue Cases	0	1418
Lab Confirmed Dengue cases	0	5
CONFIRMED Dengue Related Deaths	0	0

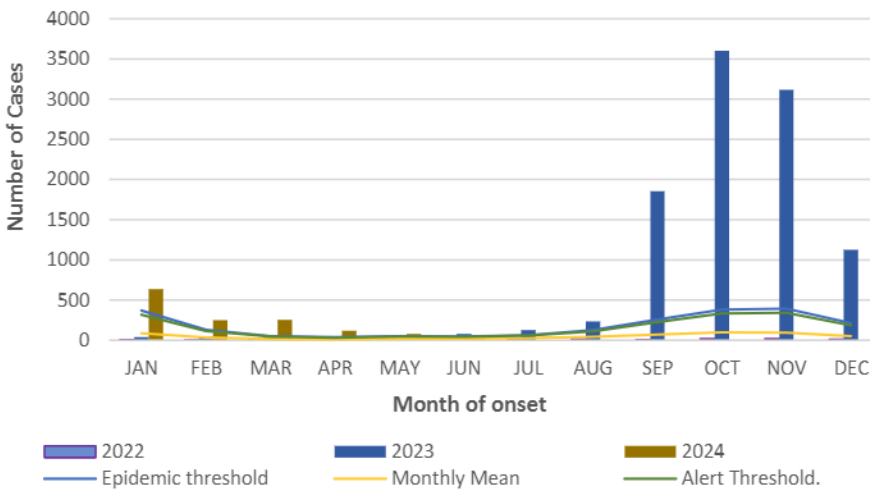
Symptoms of Dengue fever



Points to note:

- Dengue deaths are reported based on date of death.
- *Figure as at July 24, 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-O08

The effects of semi-purified fractions from *Plectranthus blumei* (Joseph Coat) in normal healthy Sprague-Dawley rats.

Gordon A and Alexander-Lindo R

The University of the West Indies, Mona Campus, Kingston 7, Jamaica.

Objective: To investigate the effects of semi-purified fractions from ethyl acetate crude extract of *Plectranthus blumei* (Joseph Coat) on blood glucose levels in normal, healthy Sprague-Dawley rats.

Method: Ethyl acetate crude extract was obtained and purified using chromatographic techniques. The fractions AG/A-AG/J were collected and grouped according to similar TLC profiles and the active hypoglycaemic fraction AG/F was further purified to obtain sub-fractions AG/F1-AG/F6 which were bioassayed using the Oral Glucose Tolerance Test (OGTT). A fasting blood glucose reading was obtained followed by intravenous administration of the semi-purified fractions (30 mg/kg body weight (BW), 20 mg/kg BW) versus the control dimethyl sulfoxide (DMSO).

Results: At 30 mg/kg BW the fraction AG/F showed the most significant hypoglycaemic activity throughout the entire OGTT. Hypoglycaemic activity was observed at time intervals 30 minute (3.09 ± 0.52 mmol/L vs 6.01 ± 0.29 mmol/L; $P = 0.001$); 90 minute (5.22 ± 0.26 mmol/L vs 7.49 ± 0.61 mmol/L; $P = 0.006$) when compared with the control DMSO. The subfractions AG/F1-AG/F6 were administered intravenously at 20 mg/kg BW where fraction AG/F5 showed the most hypoglycaemic activity. Significant lowering was observed throughout the experiment at time intervals 60 minute (2.62 ± 0.60 mmol/L vs 5.69 ± 0.23 mmol/L; $P = 0.004$); 120 minute (3.86 ± 0.85 mmol/L vs 6.43 ± 0.47 mmol/L; $P = 0.022$) when compared with DMSO. The subfractions AG/F indicated compounds which are fatty acids and phenolic in nature.

Conclusion: Bioassay-guided purification of the ethyl acetate crude extract resulted in sub-fractions showing hypoglycaemic capabilities.



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Email: surveillance@moh.gov.jm



9 NOTIFICATIONS-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
up for all Class One Events



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SENTINEL
REPORT- 78 sites.
Automatic reporting