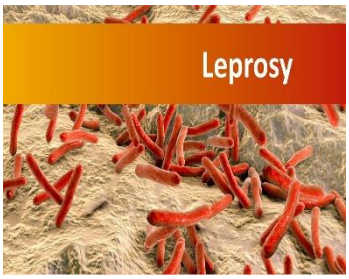
WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

Leprosy



Leprosy is an age-old disease and is described in the literature of ancient civilizations. It is a chronic infectious disease which is caused by a type of bacteria called *Mycobacterium leprae*. The disease affects the skin, the peripheral nerves, mucosa of the upper respiratory tract, and the eyes. Leprosy is curable and treatment in the early stages can prevent disability. Apart from the physical deformity, persons affected by leprosy also face stigmatization and discrimination.

Transmission

The disease is transmitted through droplets from the nose and mouth. Prolonged, close contact over months with someone with untreated leprosy is needed to catch the disease. The disease is not spread through casual contact with a person who has leprosy like shaking hands or hugging, sharing meals or sitting next to each other. Moreover, the patient stops transmitting the disease when they begin treatment.

Diagnosis

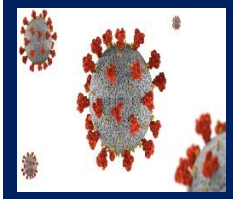
The diagnosis of leprosy is done clinically. Laboratory-based services may be required in cases that are difficult to diagnose. The disease manifests commonly through skin lesion and peripheral nerve involvement. Leprosy is diagnosed by finding at least one of the following cardinal signs: (1) definite loss of sensation in a pale (hypopigmented) or reddish skin patch; (2) thickened or enlarged peripheral nerve, with loss of sensation and/or weakness of the muscles supplied by that nerve; (3) microscopic detection of bacilli in a slit-skin smear.Based on the above, the cases are classified into two types for treatment purposes: Paucibacillary (PB) case and Multibacillary (MB) case.

Treatment

Leprosy is a curable disease. The currently recommended treatment regimen consists of three drugs: dapsone, rifampicin and clofazimine. The combination is referred to as multi-drug therapy (MDT). The duration of treatment is six months for PB and 12 months for MB cases. MDT kills the pathogen and cures the patient. Early diagnosis and prompt treatment can help to prevent disabilities.

https://www.who.int/news-room/fact-sheets/detail/leprosy

EPI WEEK 24



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SENTINEL SYNDROMIC SURVEILLANCE

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 – 21 to 24 of 2023

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

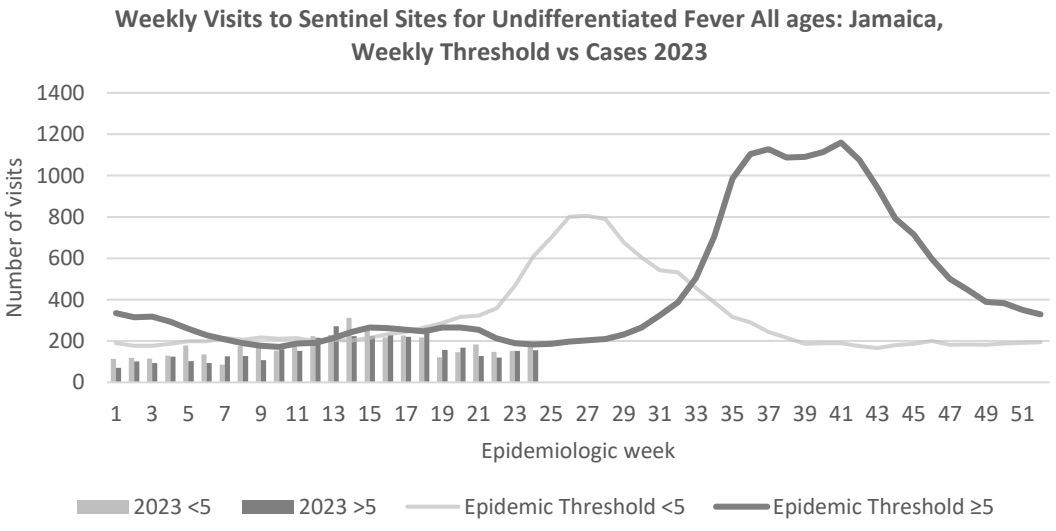
KEY:
Yellow- late submission on Tuesday
Red – late submission after Tuesday

Epi week	Kingston and Saint Andrew	Saint Thomas	Saint Catherine	Portland	Saint Mary	Saint Ann	Trelawny	Saint James	Hanover	Westmoreland	Saint Elizabeth	Manchester	Clarendon
2023													
21	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	Late (T)
22	On Time	On Time	On Time	On Time	On Time	On Time	Late (W)	On Time	On Time	On Time	On Time	On Time	On Time
23	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
24	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.



NOTIFICATIONS- All clinical sites

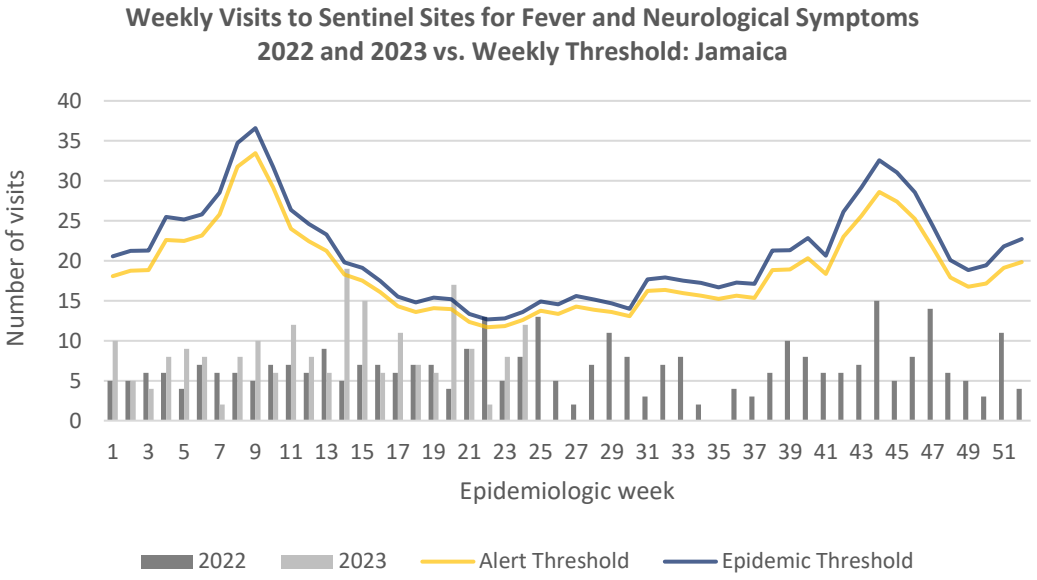
INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

SENTINEL REPORT- 78 sites. Automatic reporting

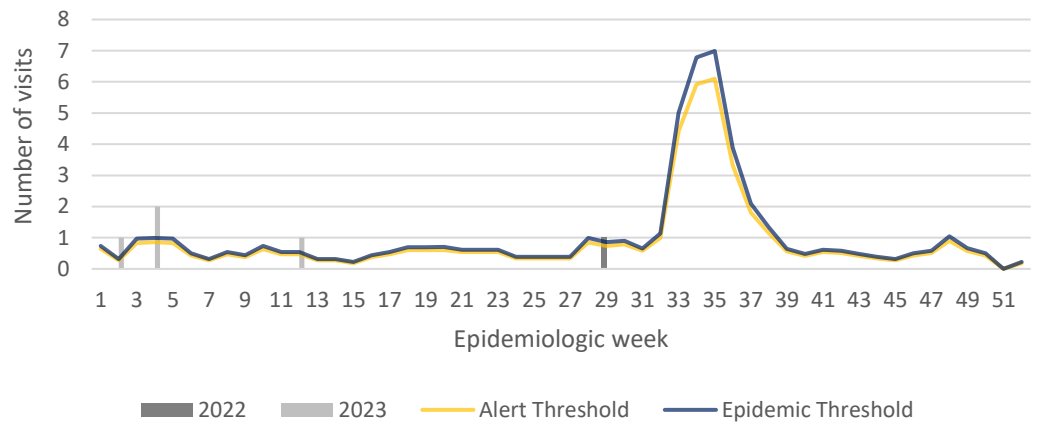
FEVER AND NEUROLOGICAL

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

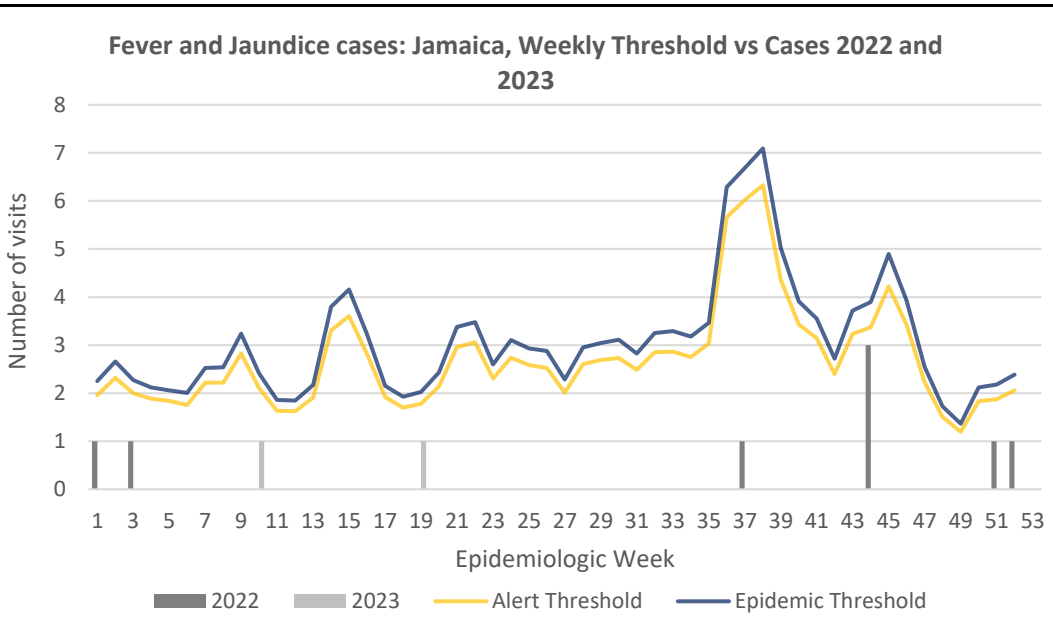
Temperature of >38^0C /100.4^0F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



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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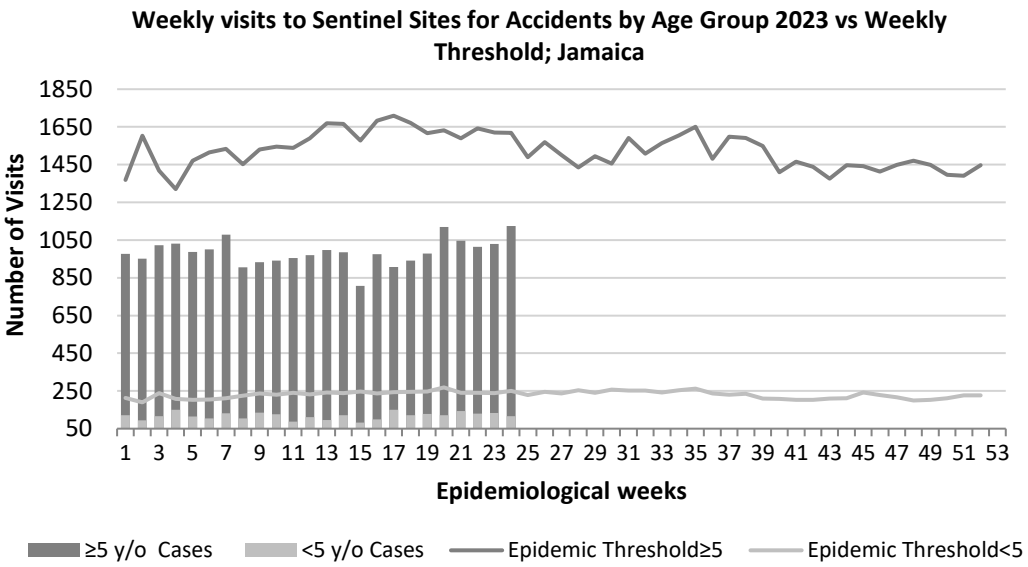
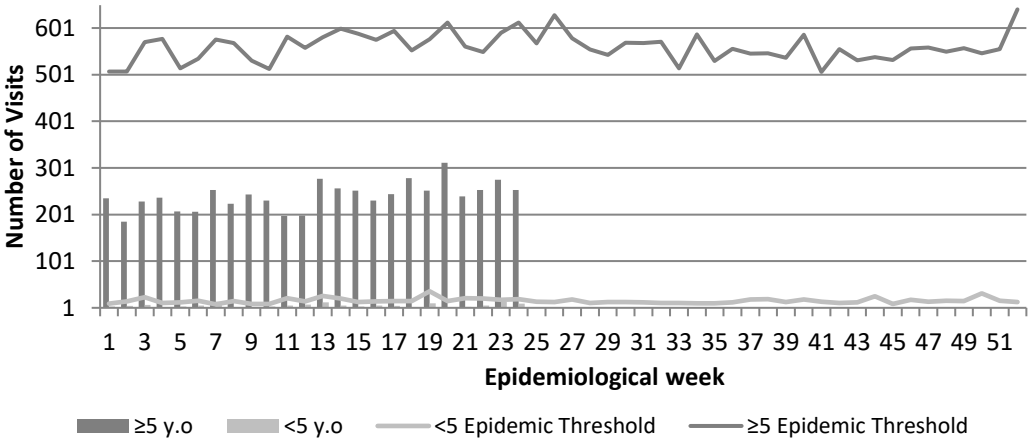
ACCIDENTS

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



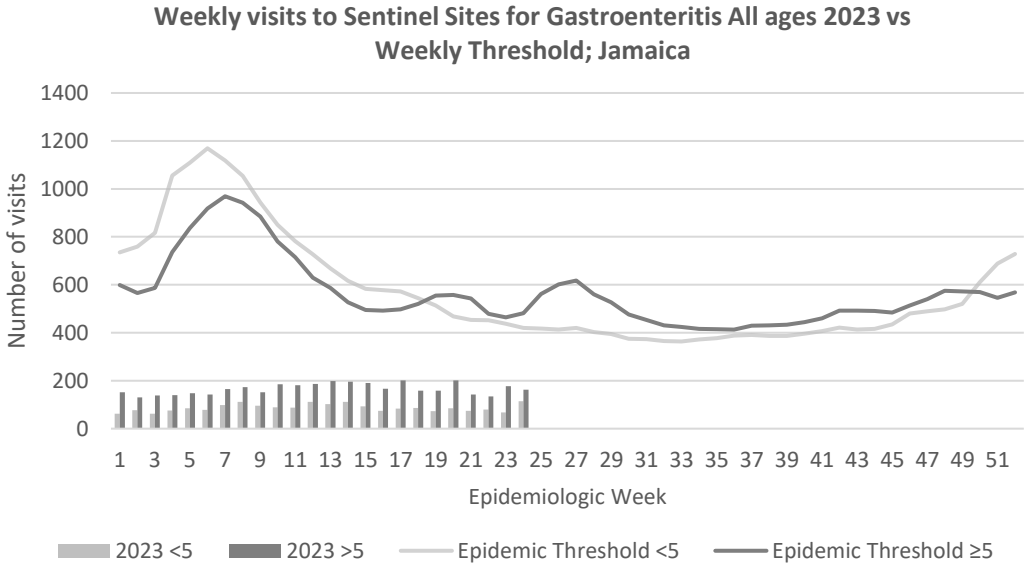
VIOLENCE

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 2023	PREVIOUS YEAR 2022
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		155[β]	115[β]
	Cholera		0	0
	Dengue Hemorrhagic Fever[γ]		See Dengue page below	See Dengue page below
	COVID-19 (SARS-CoV-2)		2357	44757
	Hansen's Disease (Leprosy)		0	0
	Hepatitis B		22	8
	Hepatitis C		8	2
	HIV/AIDS		N/A	N/A
	Malaria (Imported)		1	0
	Meningitis (Clinically confirmed)		14	13
	Monkeypox		3	N/A
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]		24	34
	Ophthalmia Neonatorum		64	48
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		0	2
	Tuberculosis		14	13
	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.

[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 in 2020.

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

NA- Not Available

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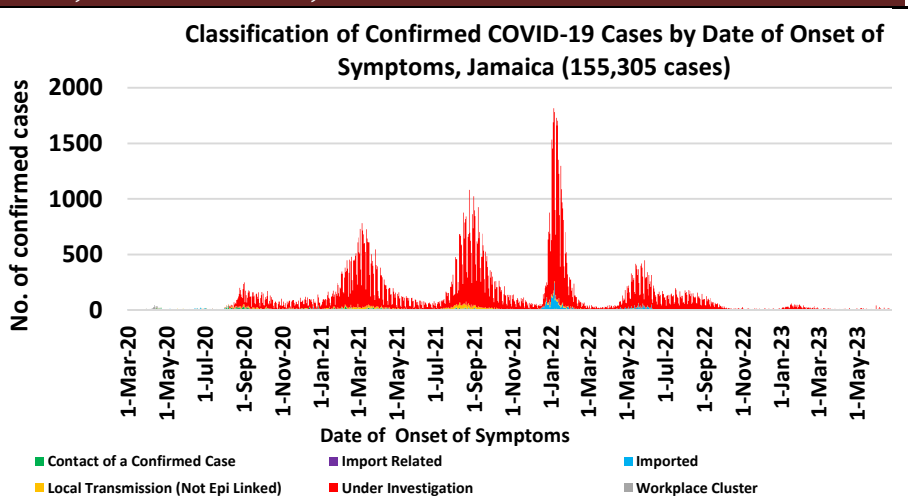
June 30, 2023 ISSN 0799-3927

COVID-19 Surveillance Update

March 10, 2020 – EW 24, 2023

CASES	EW 24	Total
Confirmed	76	155305
Females	43	89556
Males	33	65746
Age Range	21 days old to 94 years	1 day to 108 years

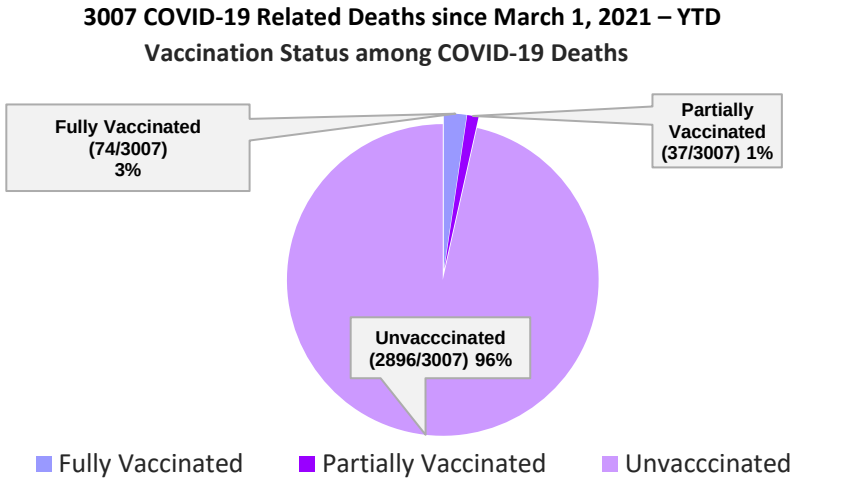
* 3 positive cases had no gender specification
* PCR or Antigen tests are used to confirm cases



COVID-19 Outcomes

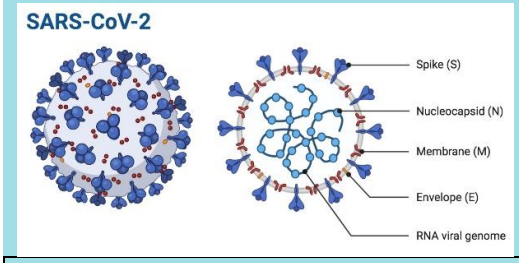
Outcomes	EW 24	Total
ACTIVE *past 2 weeks*		162
DIED – COVID Related	1	3566
Died - NON COVID	0	306
Died - Under Investigation	0	329
Recovered and discharged	9	103011
Repatriated	0	93
Total		155305

*Vaccination programme March 2021 – YTD



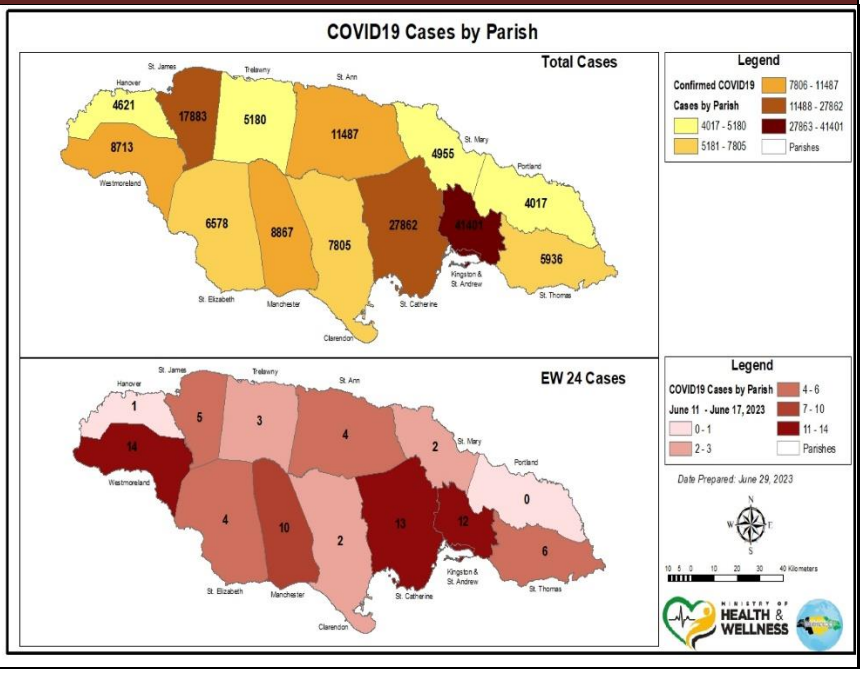
COVID-19 Parish Distribution and Global Statistics

COVID-19 Virus Structure



COVID-19 WHO Global Statistics EW21-EW24

Epi Week	Confirmed Cases	Deaths
21	324,910	1673
22	314,277	1849
23	164,038	873
24	220,911	1356
Total (4weeks)	**1,024,136**	**5,751**



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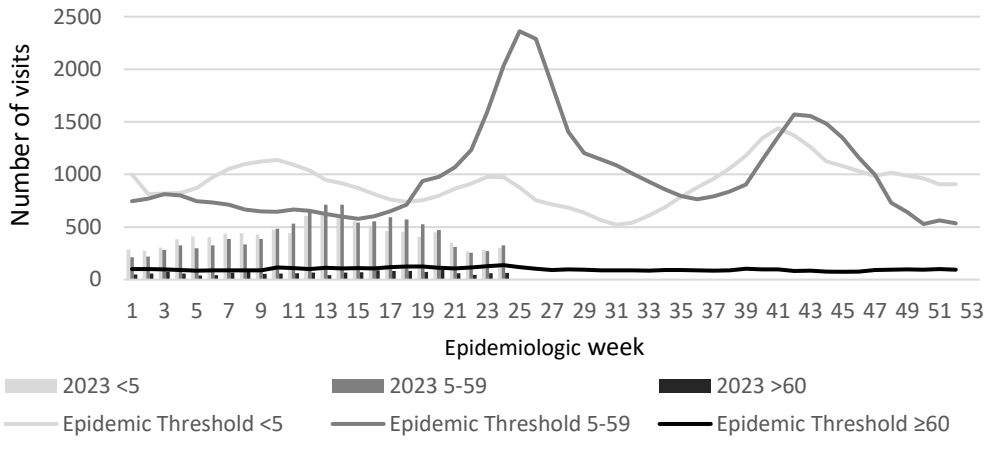
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 24

June 11 – June 17, 2023 Epidemiological Week 24

	EW 24	*YTD*
SARI cases	**8**	**383**
Total Influenza positive Samples	**0**	**109**
Influenza A	**0**	**14**
H3N2	0	1
H1N1pdm09	0	12
Not subtyped	0	1
Influenza B	**0**	**95**
B lineage not determined	0	2
B Victoria	0	93
Parainfluenza	**0**	**1**
Adenovirus	**0**	**2**
RSV	**0**	**13**

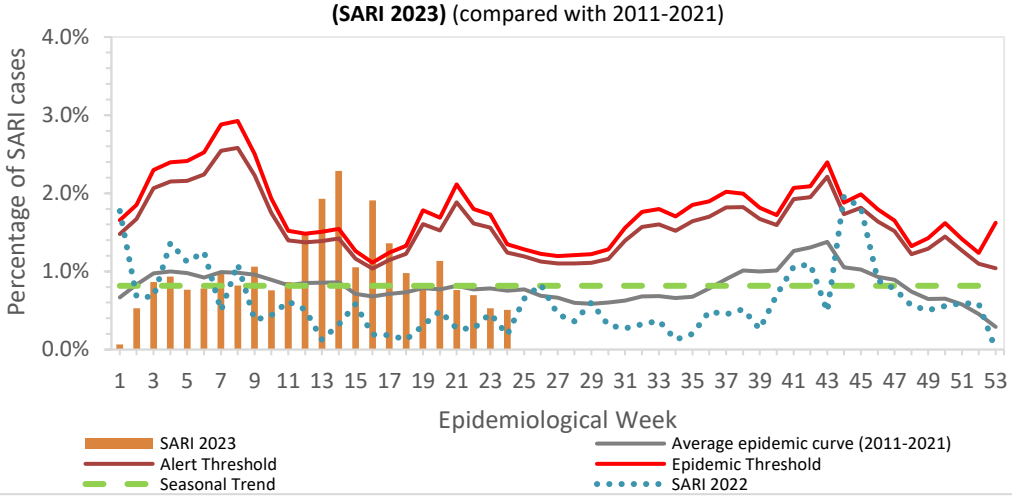
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2023 vs Weekly Threshold; Jamaica



Epi Week Summary

During EW 24, eight (8) SARI admissions were reported.

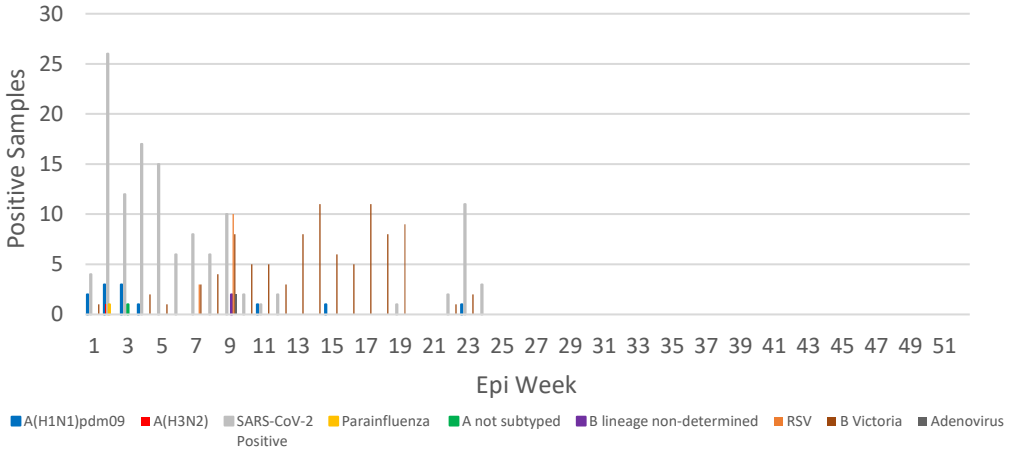
Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2023) (compared with 2011-2021)



Caribbean Update EW 24

Caribbean: Influenza activity has shown a decreasing trend. During the last 4 epidemiological weeks, the predominant influenza viruses have been B/Victoria, with lesser circulation of influenza A (mainly A(H1N1)pdm09). RSV activity has remained low. SARSCoV-2 activity has increased in the last 4 weeks and is currently at intermediate levels of circulation. Cases of ILI have shown a slight increase due to positive SARS-CoV-2 cases. SARI cases remain low.

Distribution of Influenza and Other Respiratory Viruses Under Surveillance by EW, Jamaica - 2023



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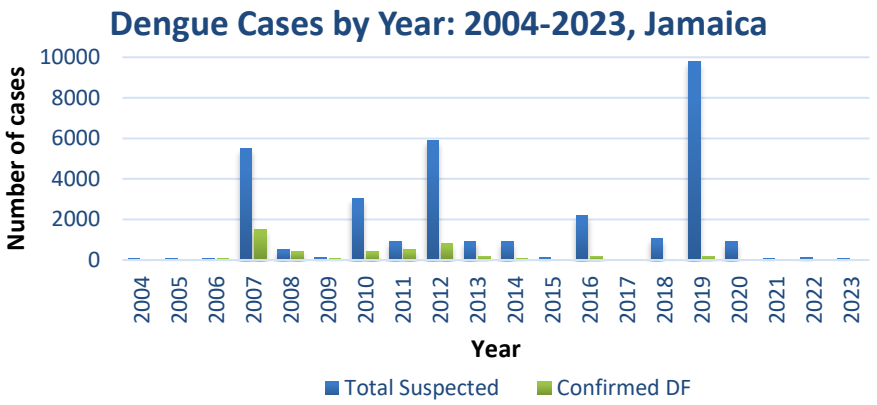
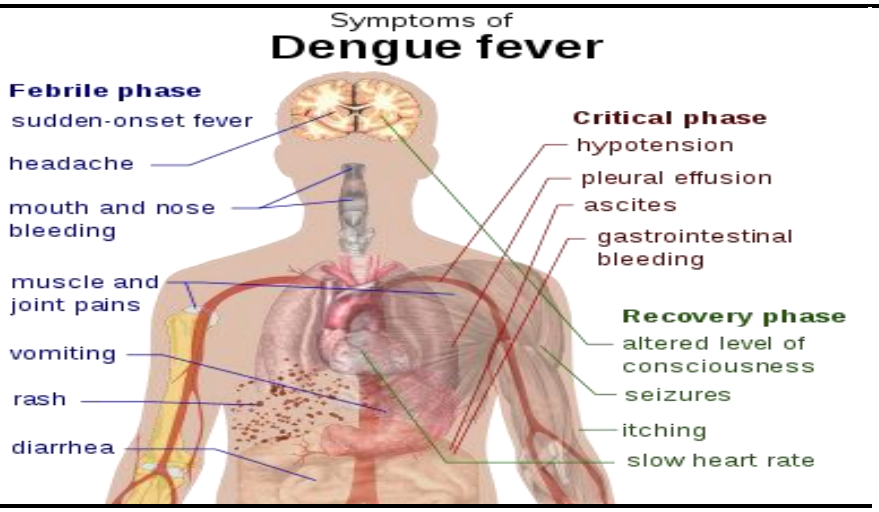
Dengue Bulletin

June 11 – June 17, 2023 Epidemiological Week 24 | Epidemiological Week 24



Reported suspected and confirmed dengue with symptom onset in week 24 of 2023

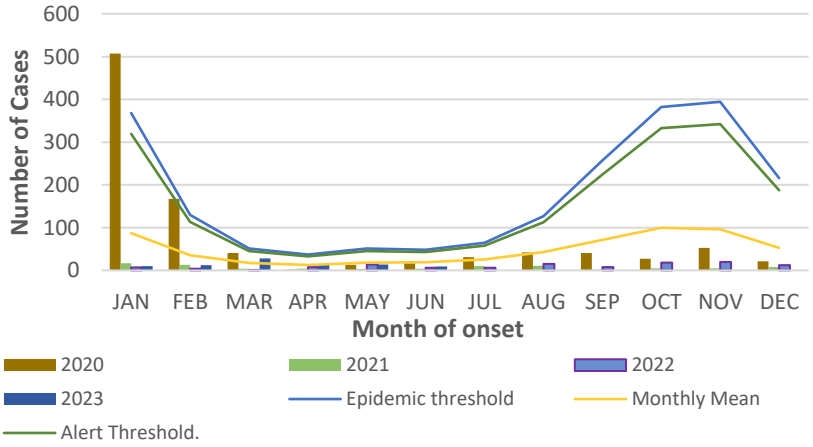
	2023*	
	EW 24	YTD
Total Suspected Dengue Cases	3	84
Lab Confirmed Dengue cases	0	0
CONFIRMED Dengue Related Deaths	0	0



Points to note:

- *Figure as at June 17, 2023
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

Suspected dengue cases for 2020, 2021, 2022 and 2023 versus monthly mean, alert, and epidemic thresholds (2007-2022)



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RESEARCH PAPER

Abstract

The use of breadfruit-based media to improve the turnaround time and identification of fungal specimen.

A Bruce-Mowatt[1], S Mair[1], M Smikle[1], G. Reynolds-Campbell[1] [1]Department of Microbiology, University of the West Indies, Mona, Kingston 7, Jamaica

Objective: To determine the effectiveness of a breadfruit-based media (BFM) for the enhancement of sporulation, growth and identification of fungal pathogens; a feat that would improve the turnaround time currently observed at the mycology laboratory at the University of the West Indies (UWI).

Methods: The BFM was pre-prepared using sterile techniques and inoculated with a total of 25 previously identified fungal clinical isolates (eg. *Trichophyton* spp., *Fusarium* spp, *Chaetominum* spp, *Bipolaris* sp, *Curvalaria* sp, and *Aspergillus flavus)*. For the purposes of quality control ATTC strains of *E. coli* and *Candida albicans* were inoculated unto the media following standard microbiological procedures.

All 27 species were also inoculated unto other standard media in use in the laboratory to allow for observation and comparison of the key features ie: enhancements to growth rate, sporulation characteristics, texture, colour etc. The isolates from resulting cultures were then identified using routine mycological tests. The observer was blinded as to the type of media in use.

Results: All 27 species of organisms grew within 18-48 hours and showed enhanced characteristic features.

Conclusion*:* Breadfruit, a sustainable Jamaican food staple, when prepared appropriately, can be used to supplement media for enhanced fungal isolation and identification.

BFM proved to be a superior media that facilitated improved turnaround time, positioning itself as a possible industrial asset to the health sector. Further studies are needed to assess its capacity for improved isolation and identification of bacterial pathogens.