

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## Weekly Spotlight

### Syphilis



Syphilis is a preventable and curable bacterial sexually transmitted infection (STI). If untreated, it can cause serious health issues. Syphilis is transmitted during oral, vaginal and anal sex, in pregnancy and through blood transfusion. Syphilis in pregnancy may lead to stillbirth, newborn death and babies born with syphilis (congenital syphilis).

### Symptoms

Many people with syphilis do not notice any symptoms. They can also go unnoticed by healthcare providers. Untreated, syphilis lasts many years. Syphilis has several stages.

#### Primary syphilis (first stage):

- usually lasts around 21 days
- a round, painless, usually hard sore (chancre) appears on the genitals, anus or elsewhere
- the chancre may not be noticed and will heal in 3–10 days
- progresses to the second stage if untreated.

#### Secondary syphilis:

- includes a non-itchy rash, usually on the palms and soles of the feet
- white or grey lesions appear in warm and moist areas, such as the labia or anus, at the site of the chancre
- symptoms will go away without treatment.

#### Latent syphilis:

- often has no symptoms
- progresses to the third and final stage of syphilis (tertiary) after years if untreated
- tertiary syphilis can lead to brain and cardiovascular diseases, among other conditions.

<https://www.who.int/news-room/fact-sheets/detail/syphilis>

## EPI WEEK 28



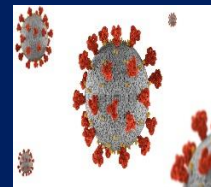
- Syndromic Surveillance  
- Accidents  
- Violence

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Class 1 Notifiable Events

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COVID-19

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Dengue Fever

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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 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												
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	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
28	Late (T)	On Time	On Time	Late (W)	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time

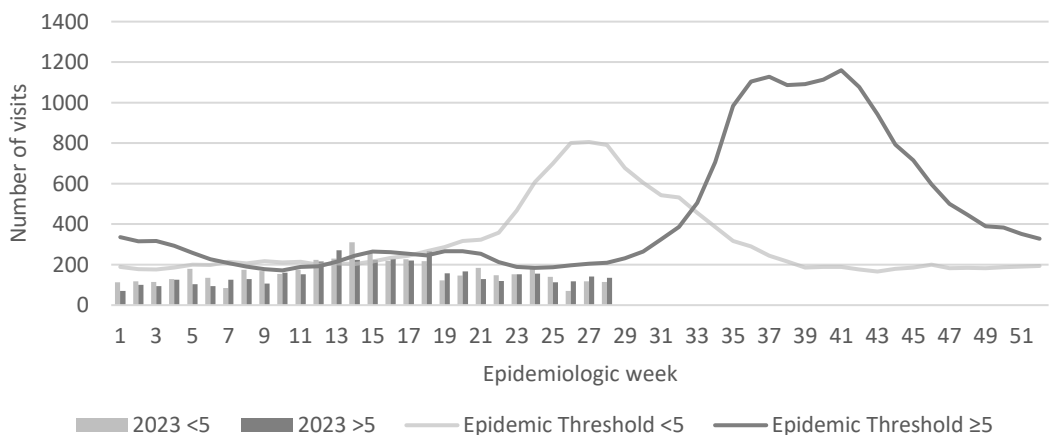
REPORTS FOR SYNDROMIC SURVEILLANCE

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 2023



2 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



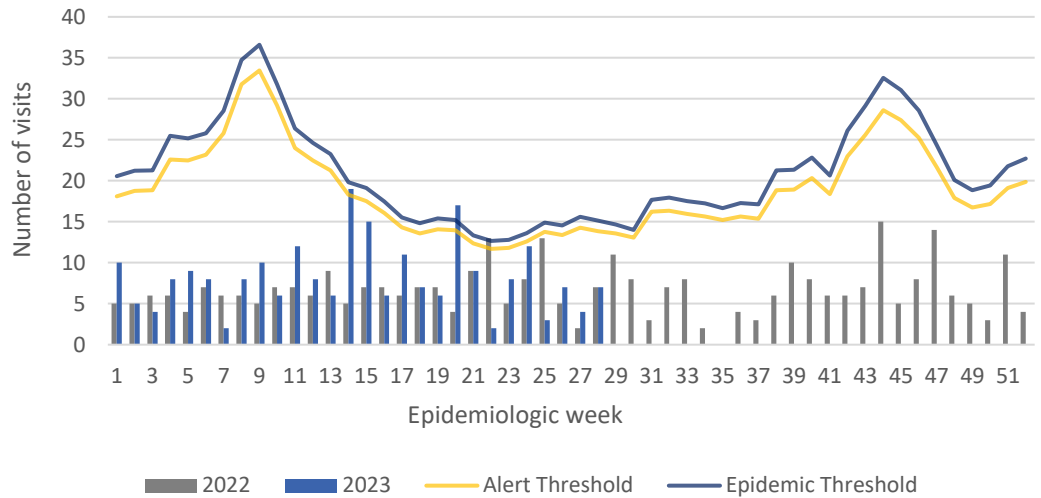
SENTINEL REPORT- 78 sites. Automatic reporting

**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 2022 and 2023 vs. Weekly Threshold: Jamaica**

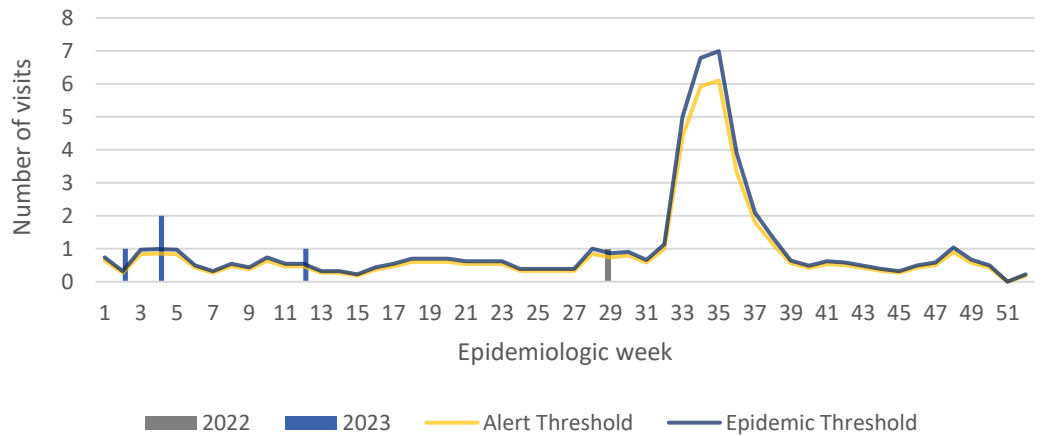


**FEVER AND HAEMORRHAGIC**

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 2022 and 2023 vs Weekly Threshold; Jamaica**



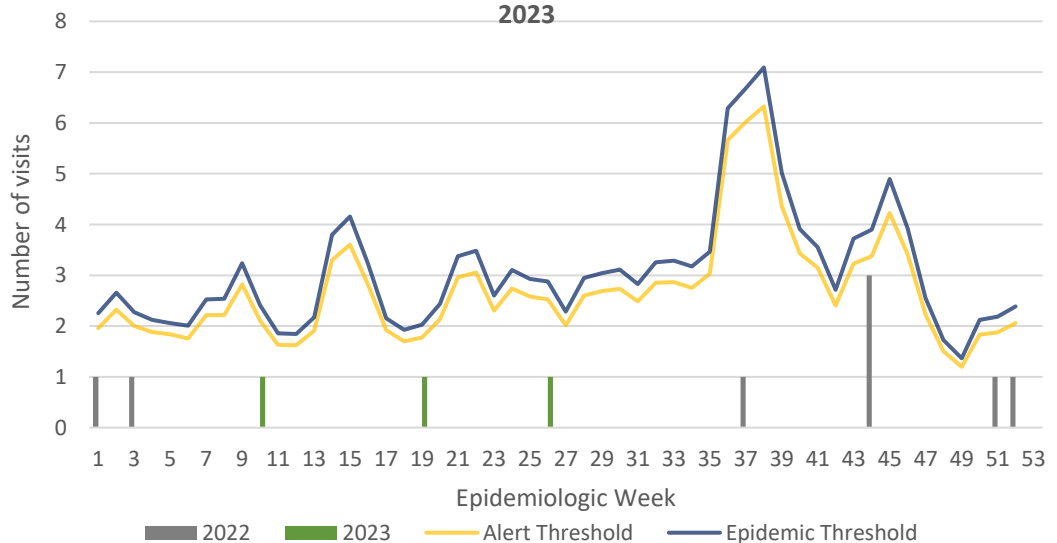
**FEVER AND JAUNDICE**

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 2022 and 2023**



**3 NOTIFICATIONS-**  
All clinical sites



**INVESTIGATION REPORTS-** Detailed Follow up for all Class One Events



**HOSPITAL ACTIVE SURVEILLANCE-** 30 sites. Actively pursued

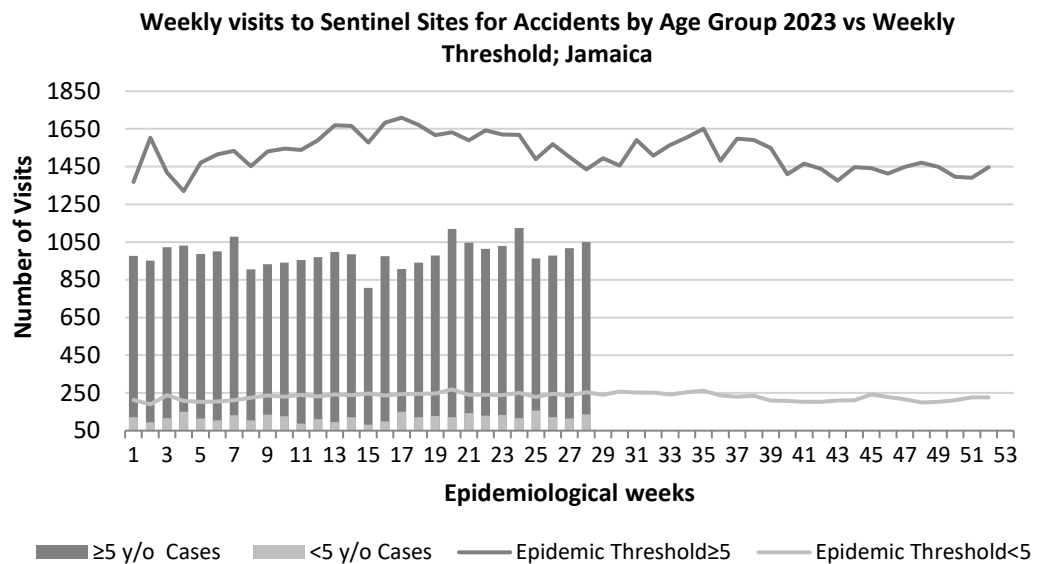


**SENTINEL REPORT-** 78 sites. Automatic reporting



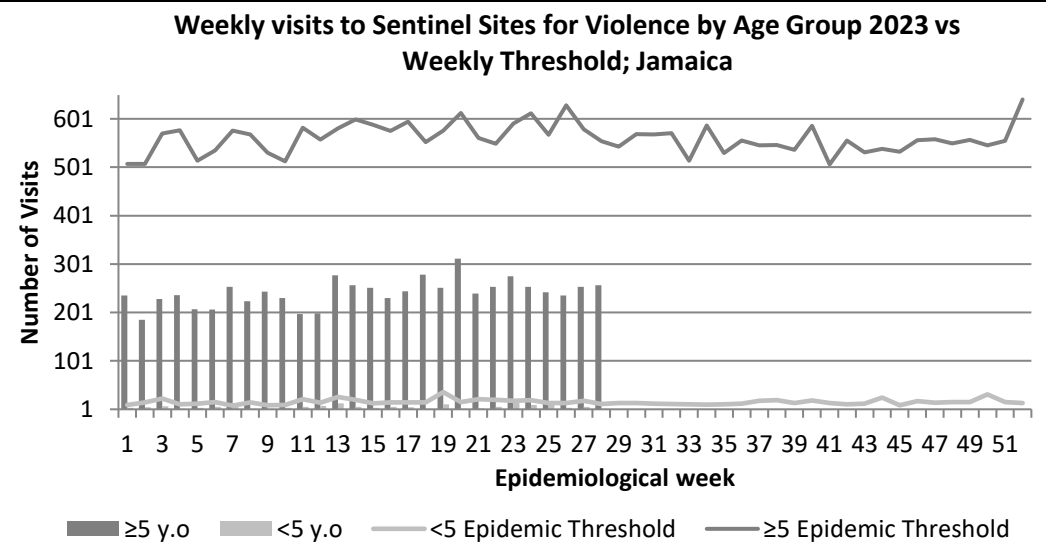
**ACCIDENTS**

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



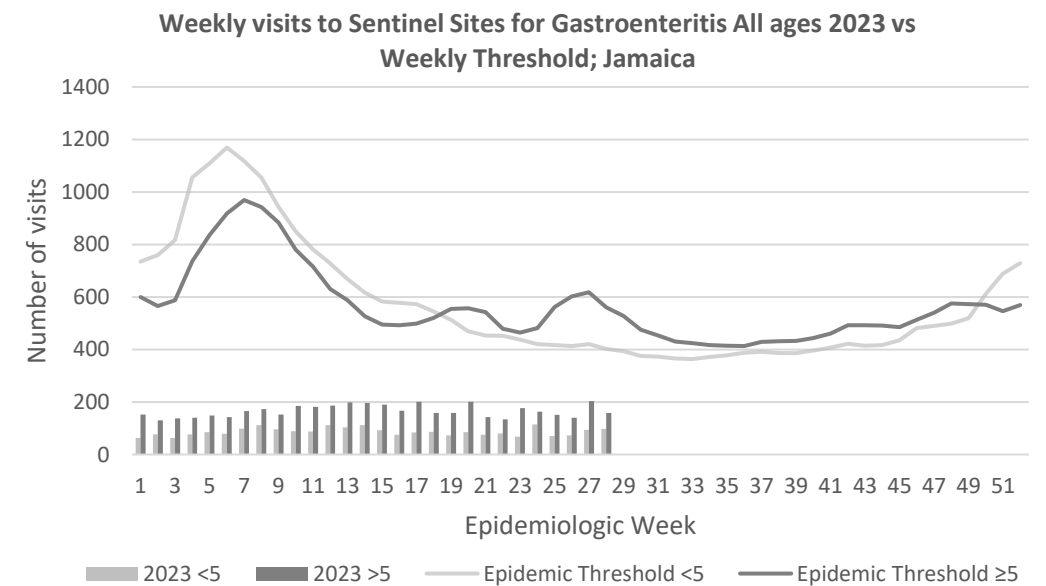
**VIOLENCE**

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- 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 2023	PREVIOUS YEAR 2022		
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning	189 <sup>β</sup>	124 <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		
	Dengue Hemorrhagic Fever <sup>γ</sup>	See Dengue page below	See Dengue page below		
	COVID-19 (SARS-CoV-2)	2844	47885		
	Hansen’s Disease (Leprosy)	0	0		
	Hepatitis B	35	8		
	Hepatitis C	15	2		
	HIV/AIDS	N/A	N/A		
	Malaria (Imported)	2	0		
	Meningitis (Clinically confirmed)	15	13		
	Monkeypox	3	1		
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 in 2020.  <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	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 <sup>δ</sup>	27	44		
	Ophthalmia Neonatorum	74	48		
	Pertussis-like syndrome	0	0		
	Rheumatic Fever	0	0		
	Tetanus	0	2		
	Tuberculosis	19	13		
Yellow Fever	0	0			
Chikungunya <sup>ε</sup>	0	0			
Zika Virus <sup>θ</sup>	0	0	NA- Not Available		

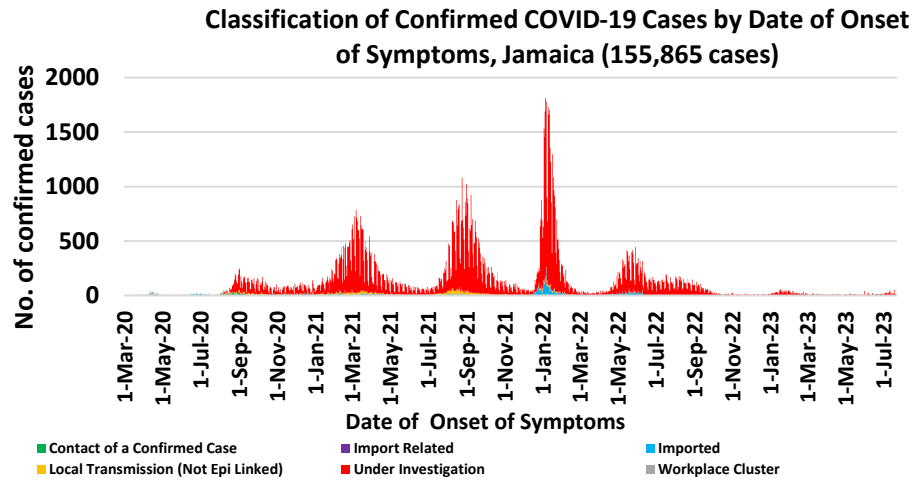
 <p><b>5 NOTIFICATIONS-</b> All clinical sites</p>	 <p><b>INVESTIGATION REPORTS-</b> Detailed Follow up for all Class One Events</p>	 <p><b>HOSPITAL ACTIVE SURVEILLANCE-</b> 30 sites. Actively pursued</p>	 <p><b>SENTINEL REPORT-</b> 78 sites. Automatic reporting</p>
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# COVID-19 Surveillance Update

March 10, 2020 – EW 28, 2023

CASES	EW 28	Total
Confirmed	174	155865
Females	102	89863
Males	72	65999
Age Range	11 days old to 95 years	1 day to 108 years

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

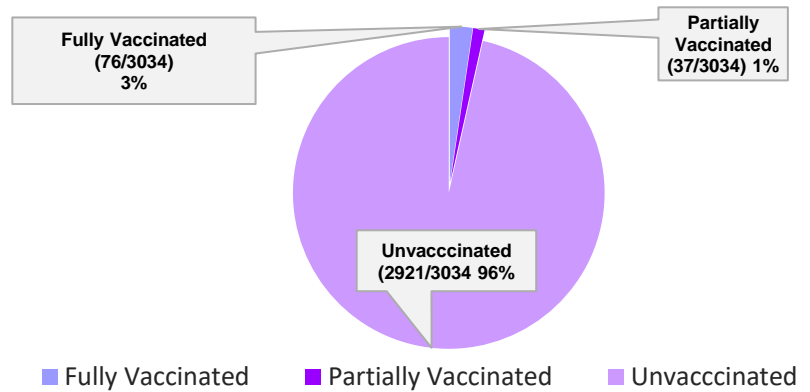


## COVID-19 Outcomes

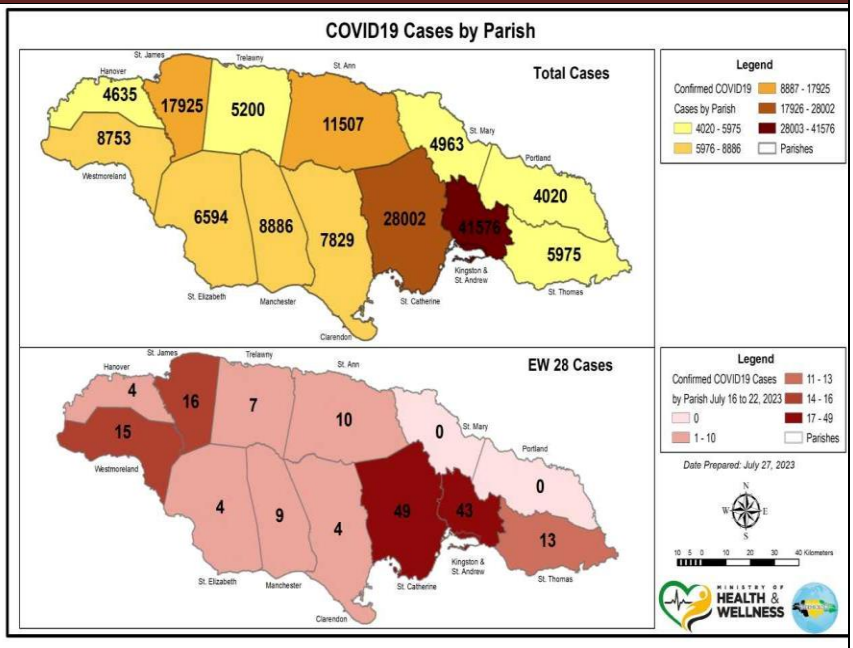
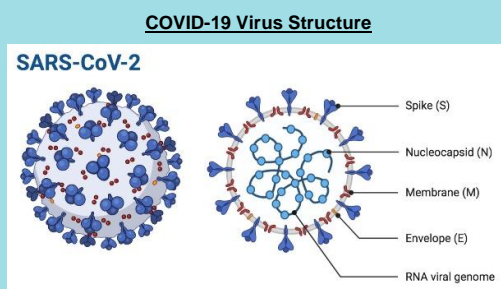
Outcomes	EW 28	Total
ACTIVE *past 2 weeks*		283
DIED – COVID Related	1	3596
Died - NON COVID	0	315
Died - Under Investigation	1	308
Recovered and discharged	12	103072
Repatriated	0	93
<b>Total</b>		<b>155865</b>

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

### 3034 COVID-19 Related Deaths since March 1, 2021 – YTD Vaccination Status among COVID-19 Deaths



## COVID-19 Parish Distribution and Global Statistics



### COVID-19 WHO Global Statistics EW25-EW28

Epi Week	Confirmed Cases	Deaths
25	195,046	1299
26	201,806	1272
27	213,386	608
28	258,210	527
<b>Total (4weeks)</b>	<b>868,448</b>	<b>3706</b>

**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

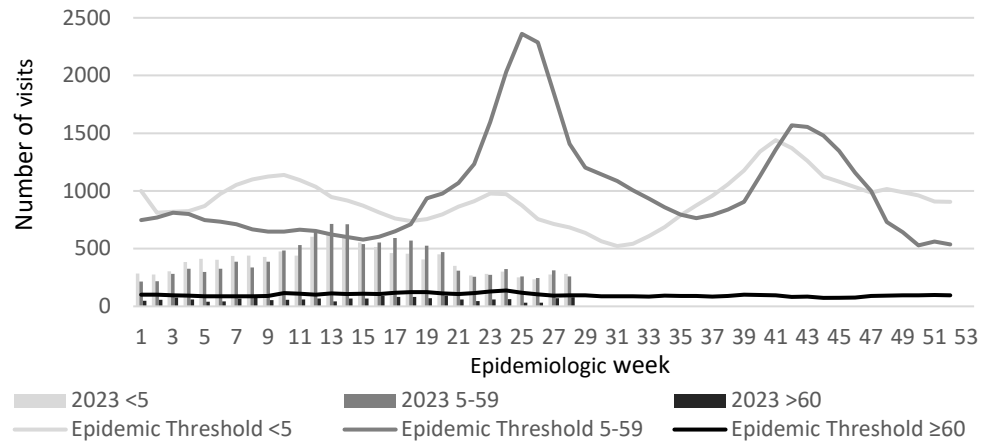
# NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

*EW 28*

July 09 – July 15, 2023 Epidemiological Week 28

	<i>EW 28</i>	<i>YTD</i>
SARI cases	9	418
Total Influenza positive Samples	0	131
<b>Influenza A</b>	<b>0</b>	<b>14</b>
H3N2	0	1
H1N1pdm09	0	12
Not subtyped	0	1
<b>Influenza B</b>	<b>0</b>	<b>117</b>
B lineage not determined	0	2
B Victoria	0	115
<b>Parainfluenza</b>	<b>0</b>	<b>1</b>
<b>Adenovirus</b>	<b>0</b>	<b>2</b>
<b>RSV</b>	<b>0</b>	<b>13</b>

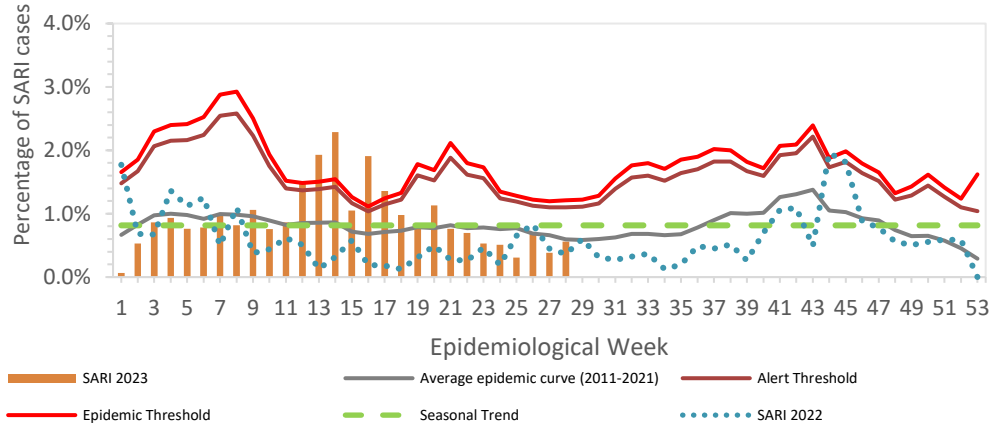
**Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2023 vs Weekly Threshold; Jamaica**



**Epi Week Summary**

**During EW 28, nine (9) SARI admissions were reported.**

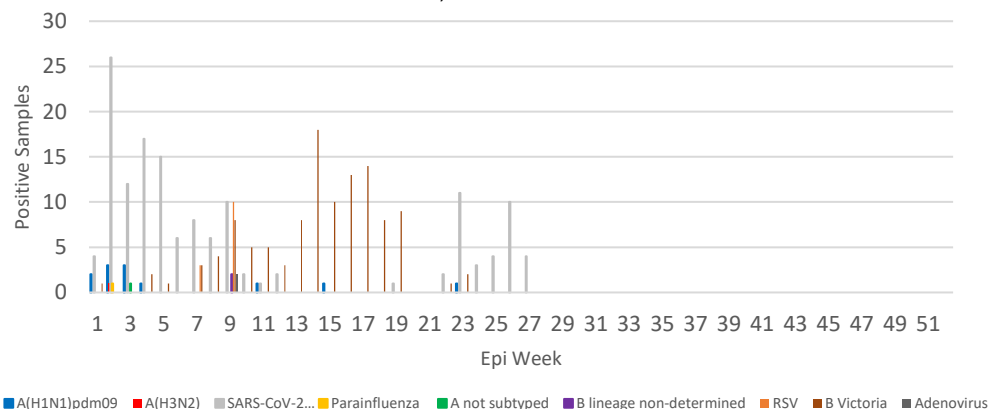
**Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2023) (compared with 2011-2021)**



**Caribbean Update EW 28**

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

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



**7 NOTIFICATIONS-**  
All clinical sites

**INVESTIGATION REPORTS-** Detailed Follow up for all Class One Events

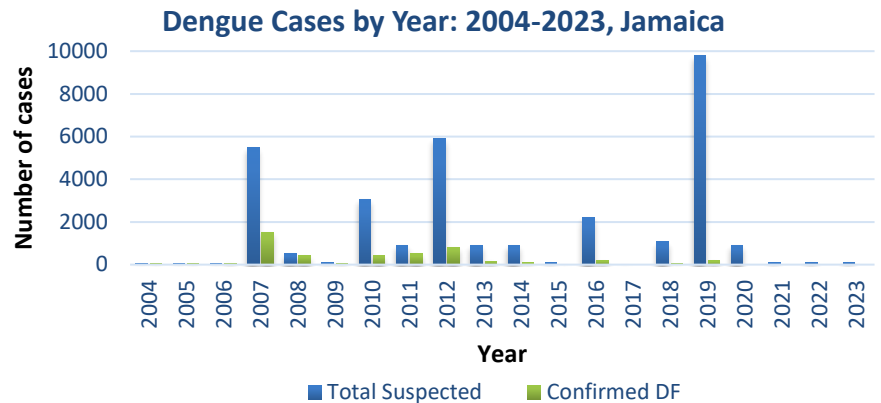
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# Dengue Bulletin

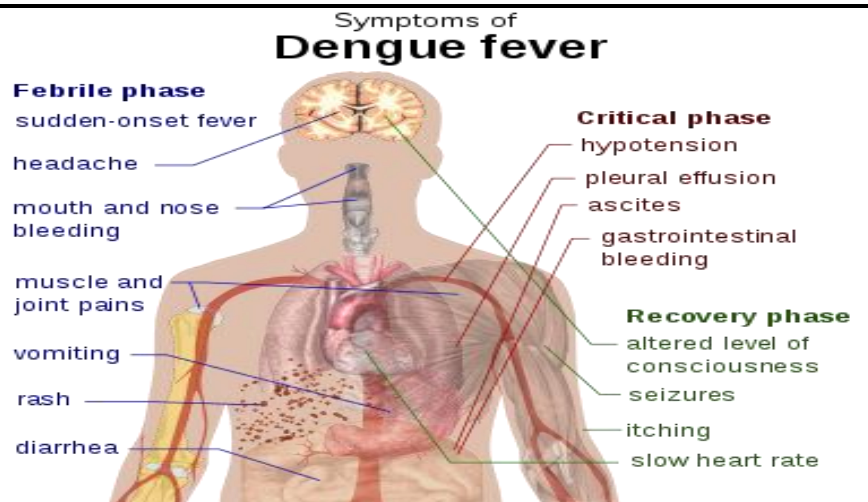
July 09 – July 15, 2023 Epidemiological Week 28

Epidemiological Week 28



## Reported suspected and confirmed dengue with symptom onset in week 28 of 2023

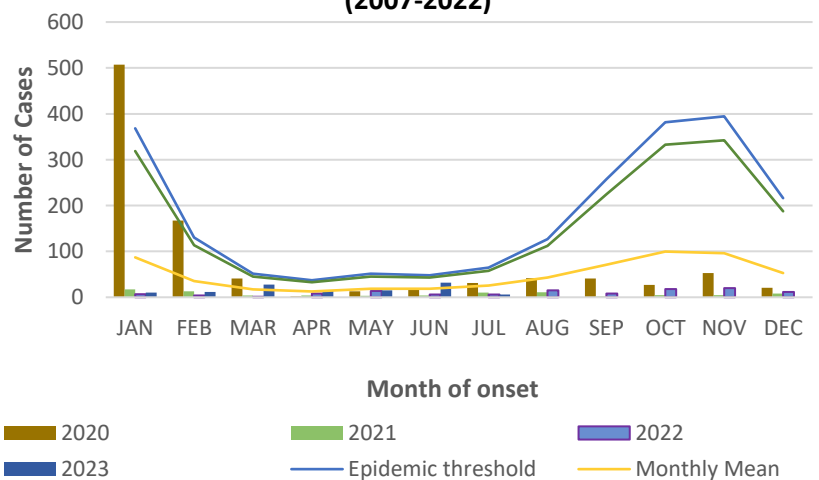
	2023*	
	EW 28	YTD
Total Suspected Dengue Cases	3	118
Lab Confirmed Dengue cases	0	0
<b>CONFIRMED</b> Dengue Related Deaths	0	0



### Points to note:

- \*Figure as at July 15, 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)



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

### Molecular Analysis and Genomic Characterization of Opportunistic Pathogens from the Oral Cavity

Gad Onywere<sup>1</sup>, Paul Gyles<sup>1</sup> and Patience Bazuaye-Alonge<sup>1</sup>  
<sup>1</sup>Department of Biology, Chemistry and Environmental Science  
Northern Caribbean University, Jamaica West Indies

**Aim:** This study aimed at charactering oral opportunistic pathogens of the bacterial species using molecular analysis.

**Method:** Six oral opportunistic pathogens were isolated, identified and characterized from the oral cavity. They were: *Streptococcus mutans*, *Staphylococcus aureus*, Methicillin Resistant *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Enterococcus spp.* and *Pseudomonas aeruginosa*. DNA was extracted from these pathogens and analyzed using 0.8% agarose gel electrophoresis for the presence of genomic DNA. The DNA samples were further analyzed using Polymerase Chain Reaction (PCR).

**Results:** The presence of unique virulent genes was seen in each of the DNA samples analyzed. Virulent genes were detected and amplified bacterial genome: *Klebsiella pneumoniae* Uge, Meg A, rmpA, Kfu, fimH. *Staphylococcus aureus* and *MRSA* TSST-1, entrotoxin A, entrotoxin B, Fem A and *Streptococcus mutans* gtfB, spaP. Amplification of virulent genes implicated the pathogenicity of these oral microbes. Genes encode for proteins that aid in biofilm formation and defense mechanism of the oral microbes.

**Conclusion:** The study concluded that successful characterization of opportunistic pathogens, inhabiting the oral cavity was significant in providing additional knowledge for efficient control strategies and treatment of oral infections. Further work is being done to identify and examine the possibility of creating antibodies that can focus on antigens in the oral cavity.

**Key words:** oral cavity, opportunistic pathogens, virulence genes, polymerase chain reaction.



The Ministry of Health and Wellness  
24-26 Grenada Crescent  
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  
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SENTINEL  
REPORT- 78 sites.  
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