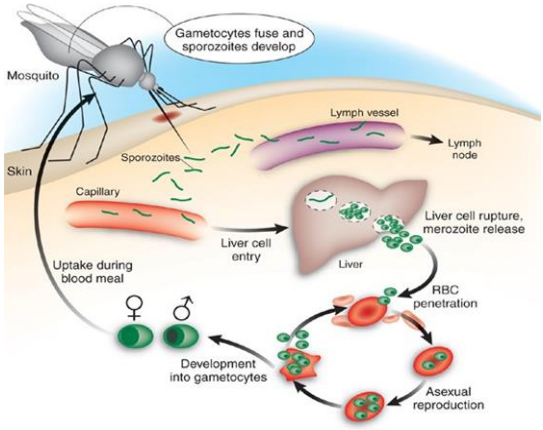
WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

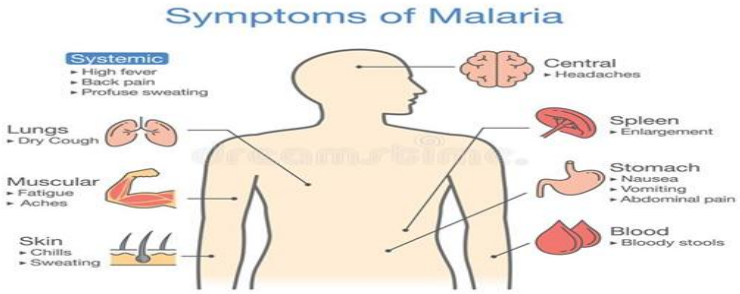
Malaria



Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected female *Anopheles* mosquitoes. It is preventable and curable. There are 5 parasite species that cause malaria in humans, and 2 of these species *Plasmodium falciparum* and *Plasmodium vivax* – pose the greatest threat.

In 2020, nearly half of the world's population was at risk of malaria. Most cases and deaths occur in sub-Saharan Africa. However, the WHO regions of South-East Asia, Eastern Mediterranean, Western Pacific, and the Americas also report significant numbers of cases and deaths.

There were an estimated 241 million cases of malaria in 2020, and the estimated number of malaria deaths stood at 627 000. The WHO African Region carries a disproportionately high share of the global malaria burden. In 2020, the region was home to 95% and 96% of malaria cases and deaths, respectively.



Children under 5 years of age are the most vulnerable group affected by malaria; in 2020, they accounted for about 80% of all malaria deaths in the WHO African Region. Children with severe malaria frequently develop one or more of the following symptoms: severe anaemia, respiratory distress in relation to metabolic acidosis, or cerebral malaria. In adults, multi-organ failure is also frequent. In malaria endemic areas, people may develop partial immunity, allowing asymptomatic infections to occur.

Some population groups are at considerably higher risk of contracting malaria, and developing severe disease, than others. These include infants, children under 5 years of age, pregnant women and patients with HIV/AIDS, as well as non-immune migrants, mobile populations and travellers. National malaria control programmes need to take special measures to protect these population groups from malaria infection, taking into consideration their specific circumstances.

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

EPI WEEK 38

Released October 7, 2022 ISSN 0799-3927

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 –35 to 38 of 2022

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

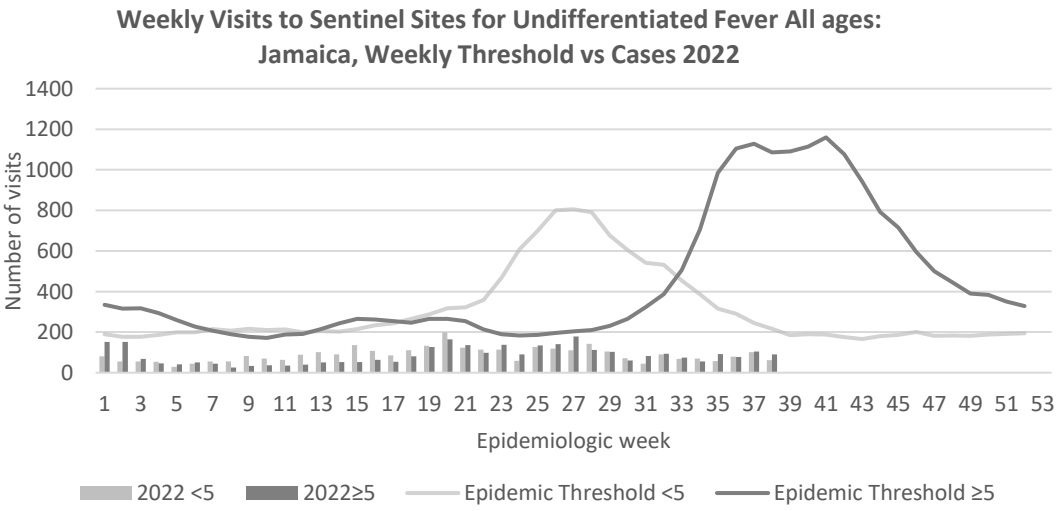
KEY:
Yellow- late submission on Tuesday
Red – late submission after Tuesday

Epi week	Kingston and Saint Andrew	Saint Thomas	Saint Catherine	Portland	Saint Mary	Saint Ann	Trelawny	Saint James	Hanover	Westmoreland	Saint Elizabeth	Manchester	Clarendon	
2022														
35	On Time	Late (W)	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	
37	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	
38	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 (w)	

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

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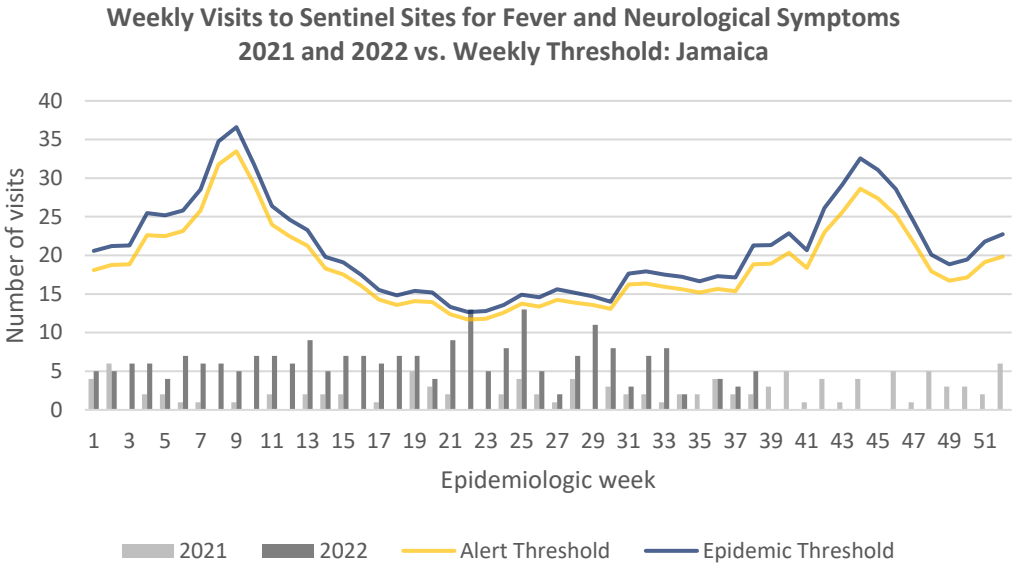
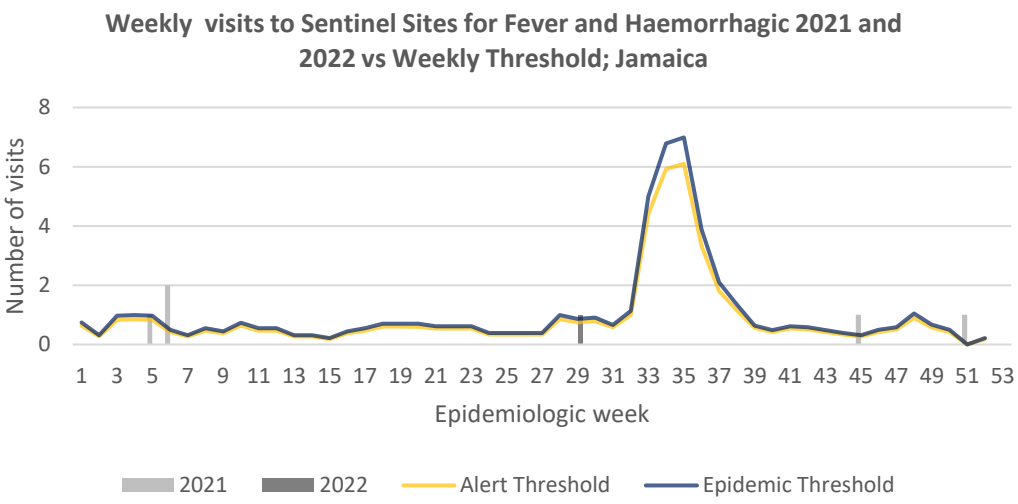
FEVER AND NEUROLOGICAL

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

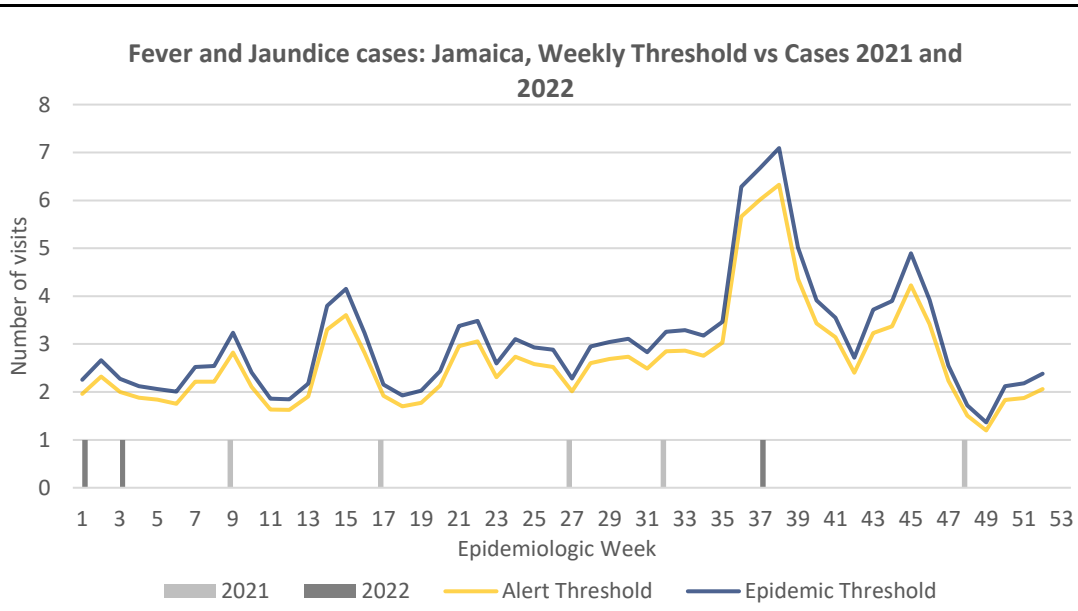
Temperature of >38^0C /100.4^0F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



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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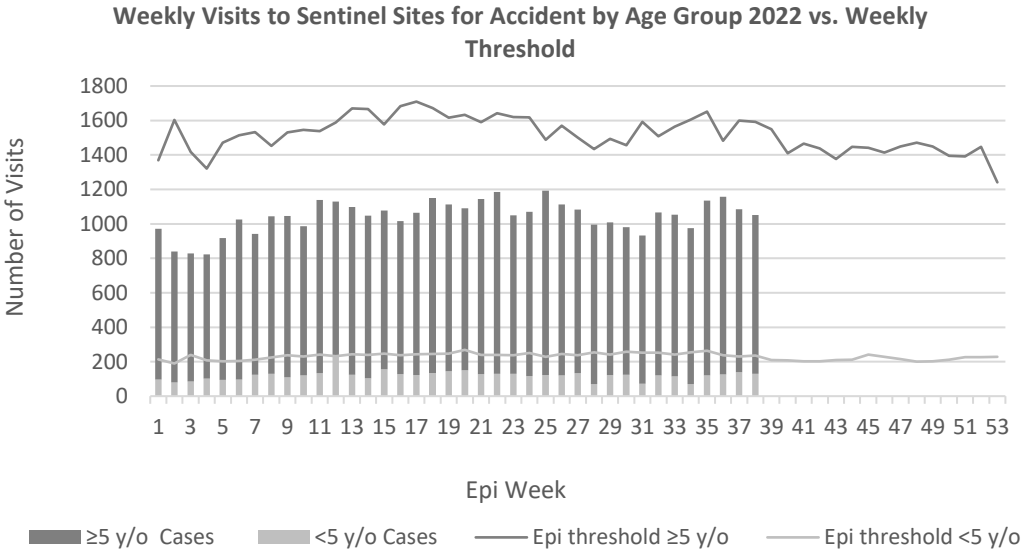
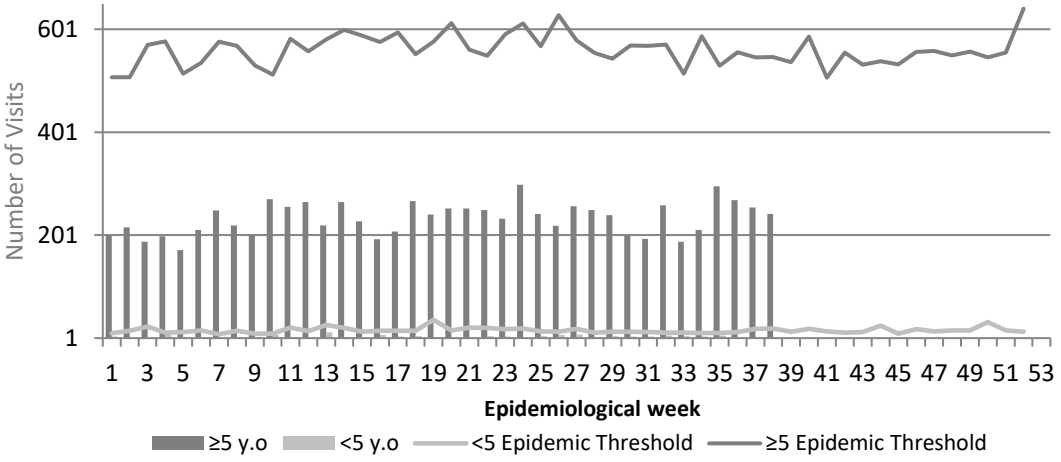
ACCIDENTS

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



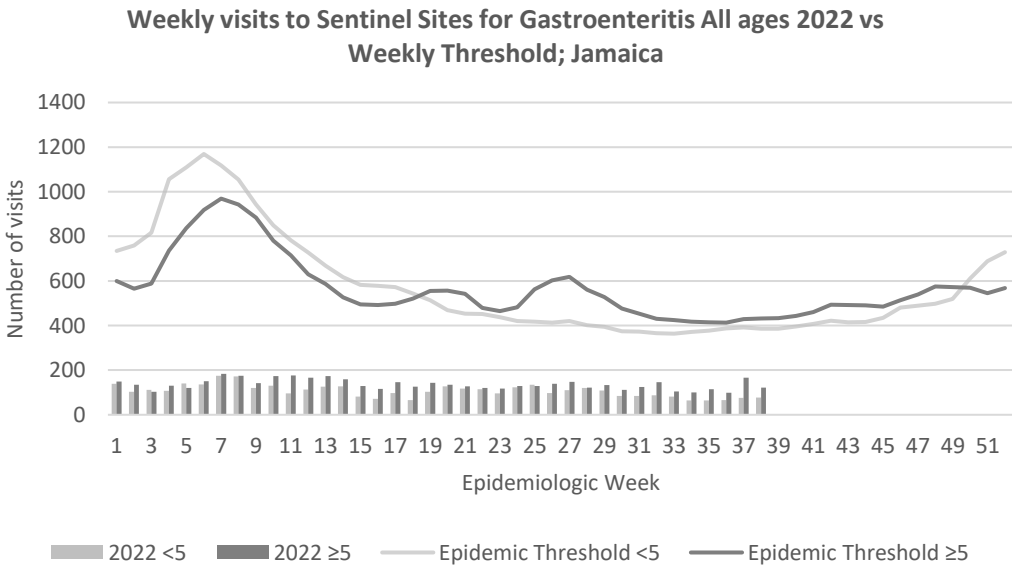
VIOLENCE

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 2022	Confirmed YTD[α] PREVIOUS YEAR 2021
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		155[β]	128[β]
	Cholera		0	0
	Dengue Hemorrhagic Fever[γ]		See Dengue page below	See Dengue page below
	COVID-19 (SARS-CoV-2)		54645	70246
	Hansen's Disease (Leprosy)		0	0
	Hepatitis B		8	6
	Hepatitis C		2	4
	HIV/AIDS		NA	NA
	Malaria (Imported)		0	0
	Meningitis (Clinically confirmed)		15	31
	Monkeypox		14	NA
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]		52	66
	Ophthalmia Neonatorum		48	40
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		0	0
	Tuberculosis		19	19
	Yellow Fever		0	0
	Chikungunya[ε]		0	0
	Zika Virus[θ]		0	0

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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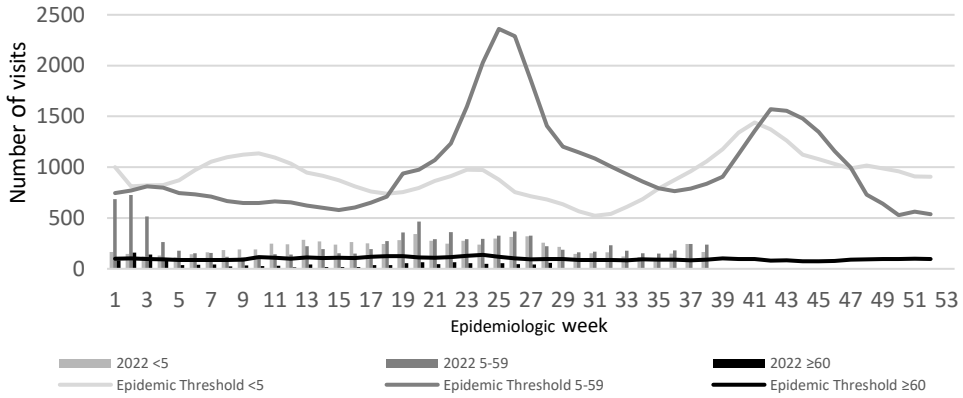
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 38

September 18 – September 24, 2022 Epidemiological Week 38

	EW 38	*YTD*
SARI cases	*9*	*309*
Total Influenza positive Samples	*0*	*19*
Influenza A	*0*	*19*
H3N2	*0*	*18*
H1N1pdm09	*0*	*1*
Not subtyped	*0*	*0*
Influenza B	*0*	*0*
Parainfluenza	*0*	*0*

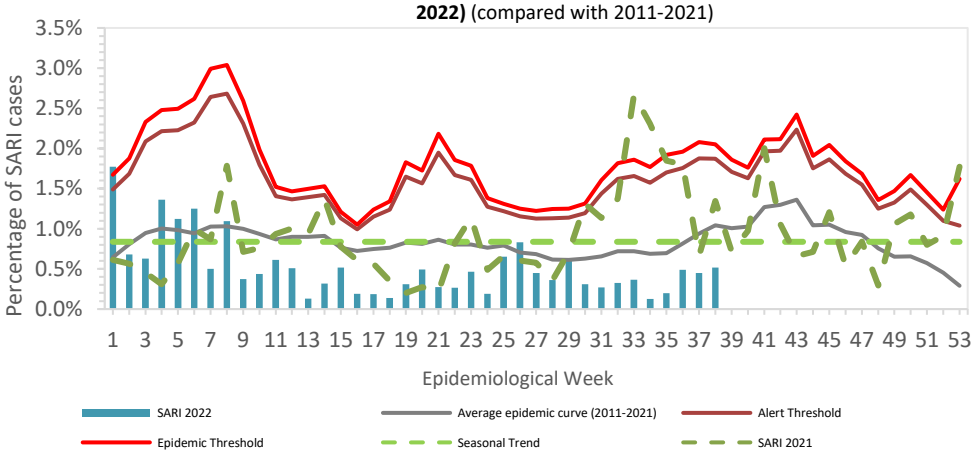
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2022 vs WEekly Threshold; Jamaica



Epi Week Summary

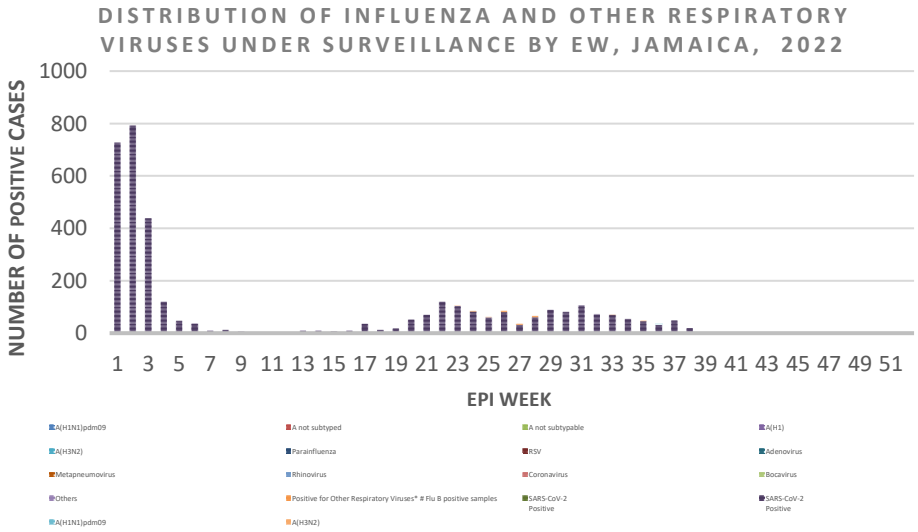
During EW 38, nine (9) SARI admissions were reported.

Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2022) (compared with 2011-2021)



Caribbean Update EW 38

Caribbean: Influenza activity remained low with the predominance of the influenza A(H3N2) virus. Dominica, the Dominican Republic, and Saint Lucia reported increased SARS-CoV-2 activity, while ILI consultations were increased in Martinique.



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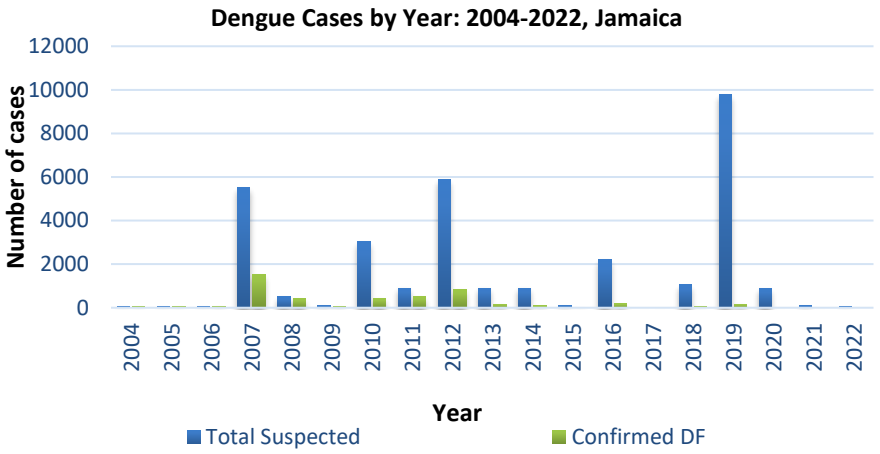
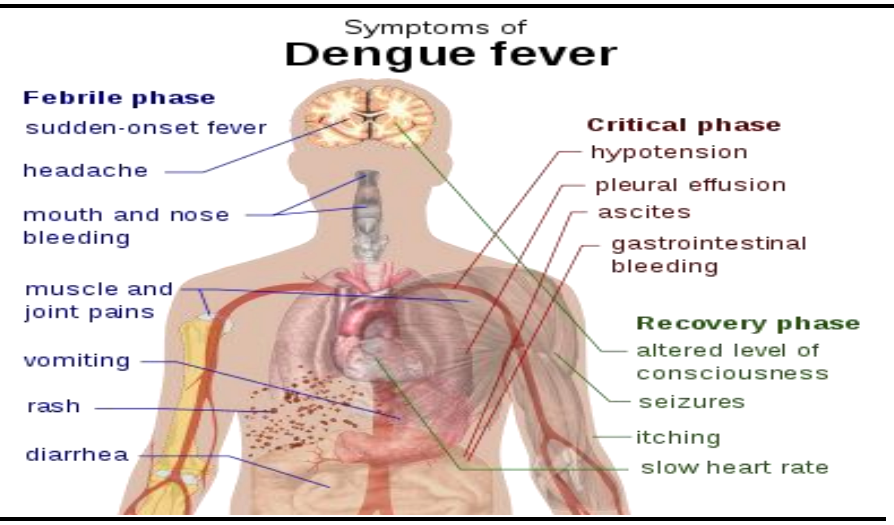
Dengue Bulletin

September 18- September 24, 2022 Epidemiological Week 38 | Epidemiological Week 38



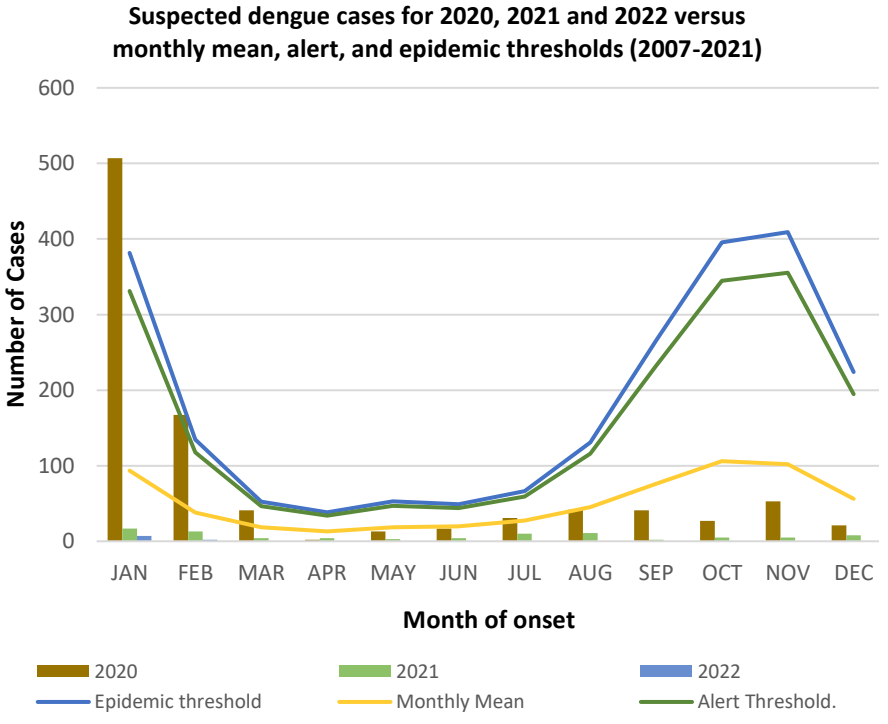
Reported suspected and confirmed dengue with symptom onset in week 38 of 2022

	2022*	
	EW 38	YTD
Total Suspected Dengue Cases	0	59
Lab Confirmed Dengue cases	0	0
CONFIRMED Dengue Related Deaths	0	0



Points to note:

- *Figure as at Sep 24, 2022
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.



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RESEARCH PAPER

NHRC-21-O1

Clinical Features and Outcomes among Cases of SARS-CoV-2 Infection in Kingston, Jamaica: A Retrospective Case Series

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[2] *Department of Surgery, Radiology, Anaesthesia and Intensive Care, The University of the West Indies, Mona, Kingston 7, Jamaica*
[3] *Caribbean Institute for Health Research, The University of the West Indies, Kingston 7, Jamaica*
[4] *Centers for Disease Control and Prevention, Caribbean Regional Office (CDC/CRO), Kingston, Jamaica*

Objectives: To describe the demographic, clinical characteristics and indicators of poor outcomes among hospitalized adults infected with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) in Jamaica.

Methods: A retrospective clinical chart review of 362 SARS-CoV-2 infected patients who were admitted to the University Hospital of the West Indies between March and December 2020, was performed. Data were analyzed using Stata 16 and SPSS version 21.

Results: Analyses included 362 participants (218 males; 144 females); mean age was 59.5 years among males and 55.7 years among females. Pre-existing hypertension, diabetes mellitus, cardiovascular disease, obesity and chronic kidney disease were the most common reported comorbidities. Cough, shortness of breath, fever and malaise were the most common presenting symptoms. Sixty-two percent of patients were moderately to severely ill on admission; 11% were critically ill; 17.9 % were admitted to the Intensive Care Unit. Death occurred in 62 (17%) patients (95% CI 13.6-21.4%). Having diabetes and male sex showed non-significant increased odds of death, OR 1.5 and 1.3, respectively. Factors independently associated with increased odds of death were age (OR 1.03 per year, p=0.013) and obesity (OR 2.26, p=0.017). Obese participants also had 5-fold higher odds of respiratory failure (p<0.001), 5-fold higher odds of acute kidney injury (p<0.001) and 3-fold higher odds of sepsis (p=0.013).

Conclusion: The mortality rate was 17% among admitted adult SARS-CoV-2 patients with age and obesity being independent risk factors for excess morbidity and mortality. Early identification of high-risk patient subgroups may facilitate targeted interventions geared at improving outcomes.

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