

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## Climate change and health

### Key facts

- Climate change affects the social and environmental determinants of health – clean air, safe drinking water, sufficient food and secure shelter.
- Between 2030 and 2050, climate change is expected to cause approximately 250 000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress.
- The direct damage costs to health (i.e. excluding costs in health-determining sectors such as agriculture and water and sanitation), is estimated to be between USD 2-4 billion/year by 2030.
- Areas with weak health infrastructure – mostly in developing countries – will be the least able to cope without assistance to prepare and respond.
- Reducing emissions of greenhouse gases through better transport, food and energy-use choices can result in improved health, particularly through reduced air pollution.



### Who is at risk?

All populations will be affected by climate change, but some are more vulnerable than others. People living in small island developing states and other coastal regions, megacities, and mountainous and polar regions are particularly vulnerable.

Children – in particular, children living in poor countries – are among the most vulnerable to the resulting health risks and will be exposed longer to the health consequences. The health effects are also expected to be more severe for elderly people and people with infirmities or pre-existing medical conditions.

Areas with weak health infrastructure – mostly in developing countries – will be the least able to cope without assistance to prepare and respond.



Source:

<https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

## EPI WEEK 33



SYNDROMES

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## SENTINEL SYNDROMIC SURVEILLANCE

## Sentinel Surveillance in Jamaica



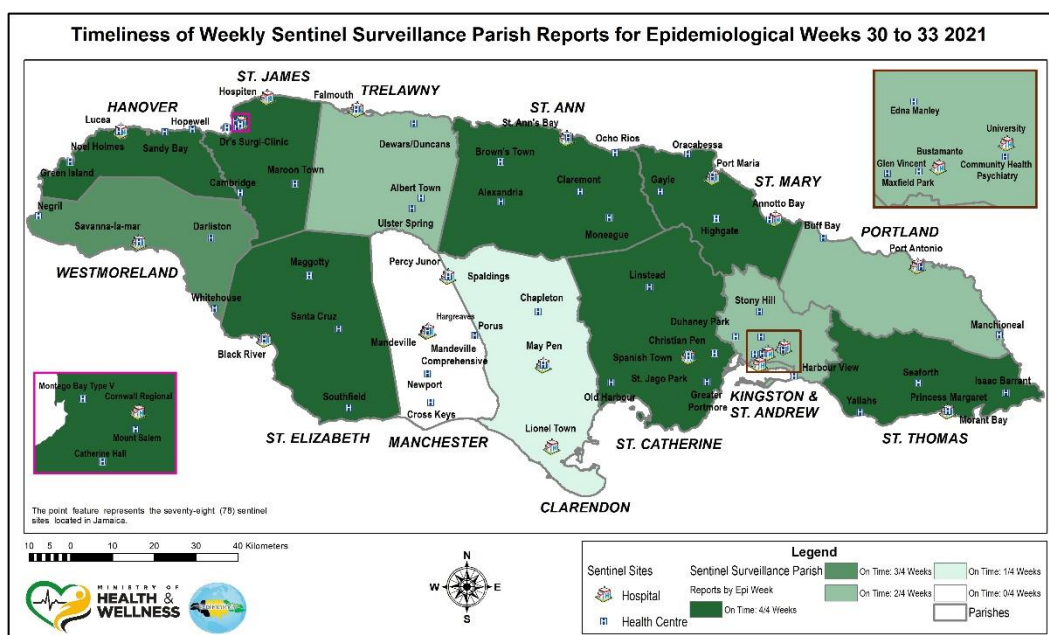
A syndromic surveillance system is good for early detection of and response to public health events.

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.

### Map representing the Timeliness of Weekly Sentinel Surveillance Parish Reports for the Four Most Recent Epidemiological Weeks - 30 2021 to 33 of 2021

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



## REPORTS FOR SYNDROMIC SURVEILLANCE

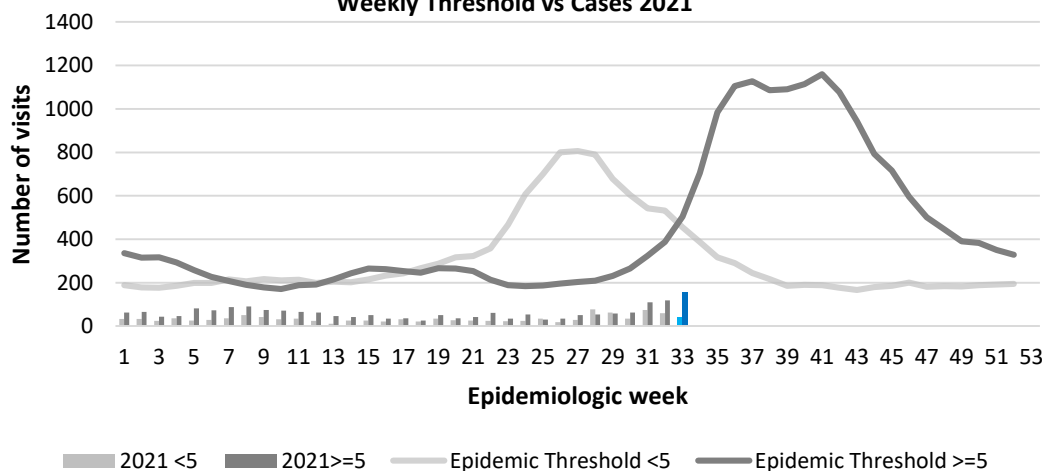
### FEVER

Temperature of  $>38^{\circ}\text{C}$  /  $100.4^{\circ}\text{F}$  (or recent history of fever) with or without an obvious diagnosis or focus of infection.



**KEY**  
VARIATIONS OF BLUE  
SHOW CURRENT WEEK

### Weekly Visits to Sentinel Sites for Undifferentiated Fever All ages: Jamaica, Weekly Threshold vs Cases 2021



2 NOTIFICATIONS-  
All clinical  
sites



INVESTIGATION  
REPORTS- Detailed Follow  
up for all Class One Events



HOSPITAL  
ACTIVE  
SURVEILLANCE-  
30 sites. Actively  
pursued



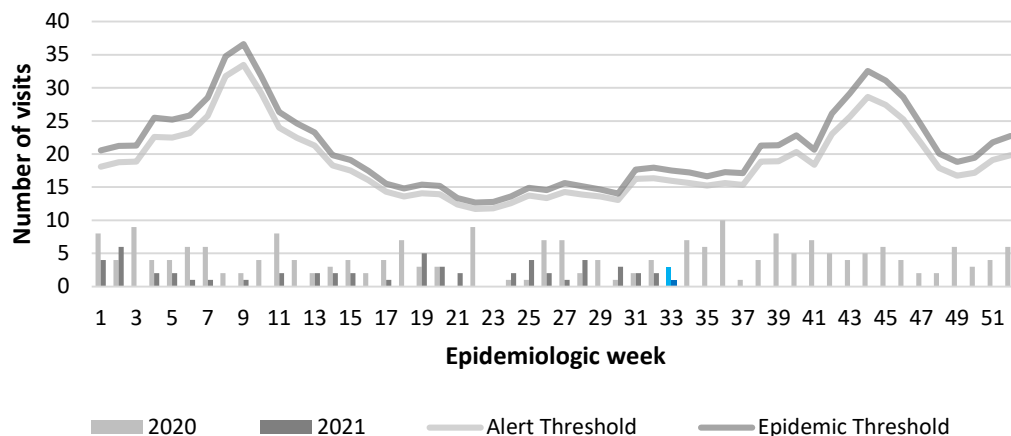
SENTINEL  
REPORT- 78 sites.  
Automatic reporting

**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).



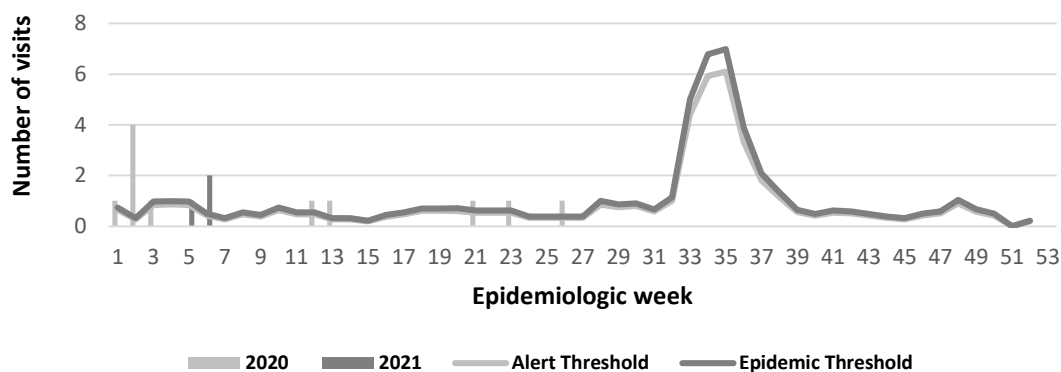
**Weekly Visits to Sentinel Sites for Fever and Neurological Symptoms 2020 and 2021 vs. Weekly Threshold: Jamaica**

**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 2020 and 2021 vs Weekly Threshold; Jamaica**

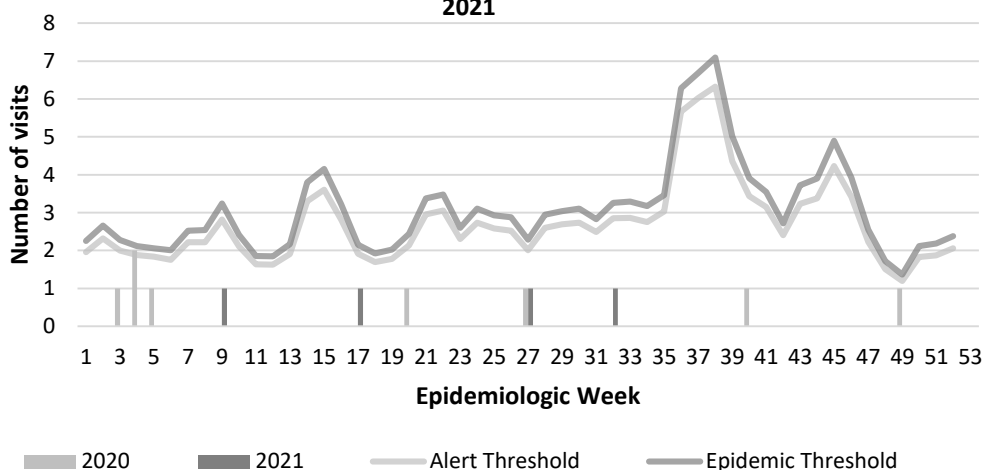
**FEVER AND JAUNDICE**

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 2020 and 2021**



**3 NOTIFICATIONS-**  
All clinical sites



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



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



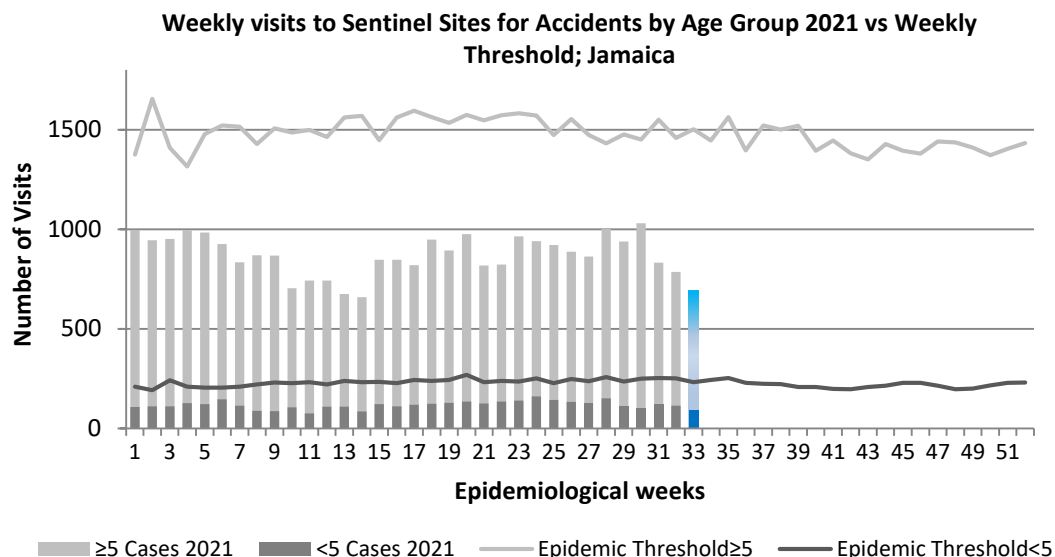
**SENTINEL REPORT-** 78 sites. Automatic reporting

**ACCIDENTS**

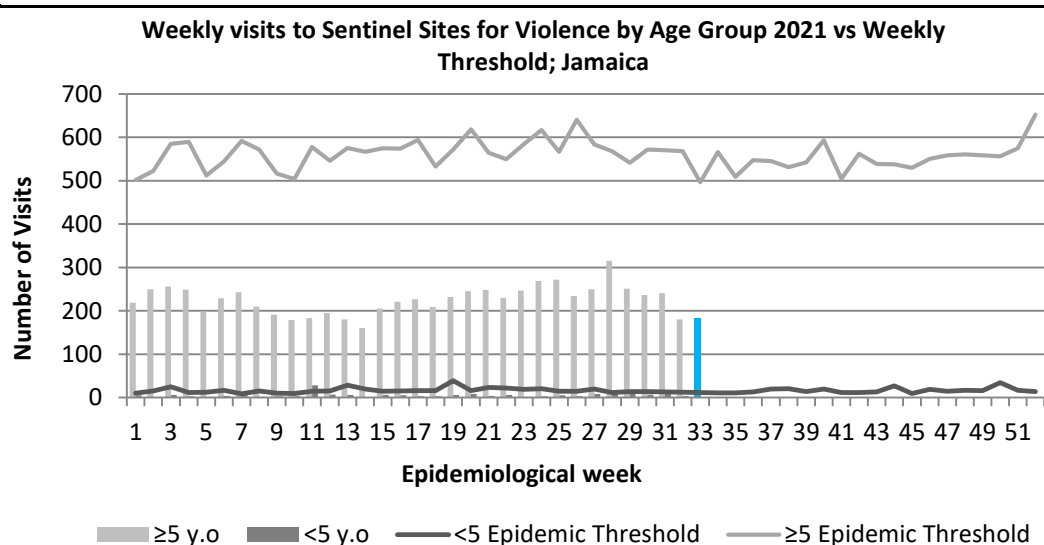
Any injury for which the cause is unintentional, e.g. motor vehicle, falls, burns, etc.

**KEY**

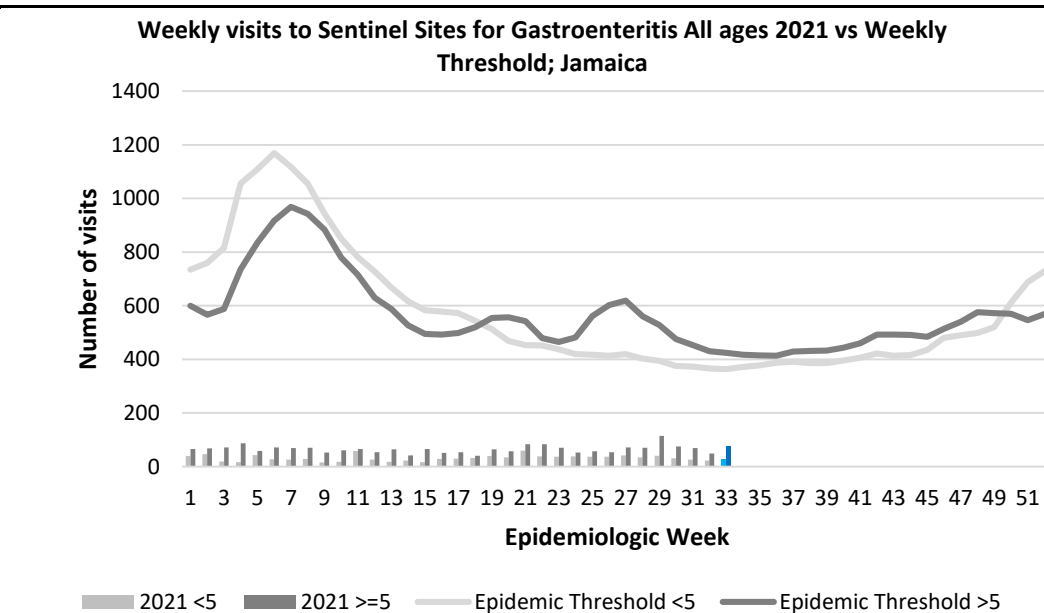
VARIATIONS OF BLUE SHOW CURRENT WEEK

**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
			Confirmed YTD <sup>α</sup>	
	CLASS 1 EVENTS		CURRENT YEAR 2021	PREVIOUS YEAR 2020
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		22 <sup>β</sup>	79
	Cholera		0	0
	Dengue Hemorrhagic Fever <sup>γ</sup>		See Dengue page below	See Dengue page below
	Hansen's Disease (Leprosy)		0	0
	Hepatitis B		2	3
	Hepatitis C		0	0
	HIV/AIDS		NA	NA
	Malaria (Imported)		0	0
	Meningitis (Clinically confirmed)		4	1
EXOTIC/ UNUSUAL	Plague		0	0
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>		23	22
	Ophthalmia Neonatorum		0	38
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		0	0
	Tuberculosis		19	29
	Yellow Fever		0	0
	Chikungunya <sup>ε</sup>		0	0
	Zika Virus <sup>θ</sup>		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.

<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.

<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.

NA- Not Available



5 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



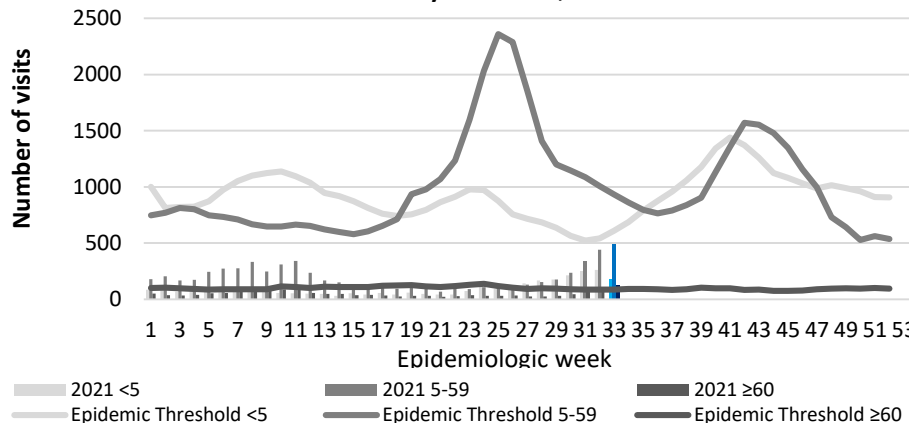
# NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

## EW 33

August 15-21, 2021 Epidemiological Week 33

	EW 33	YTD
SARI cases	34	395
Total Influenza positive Samples	0	0
Influenza A	0	0
H3N2	0	0
H1N1pdm09	0	0
Not subtyped	0	0
Influenza B	0	0
Parainfluenza	0	0

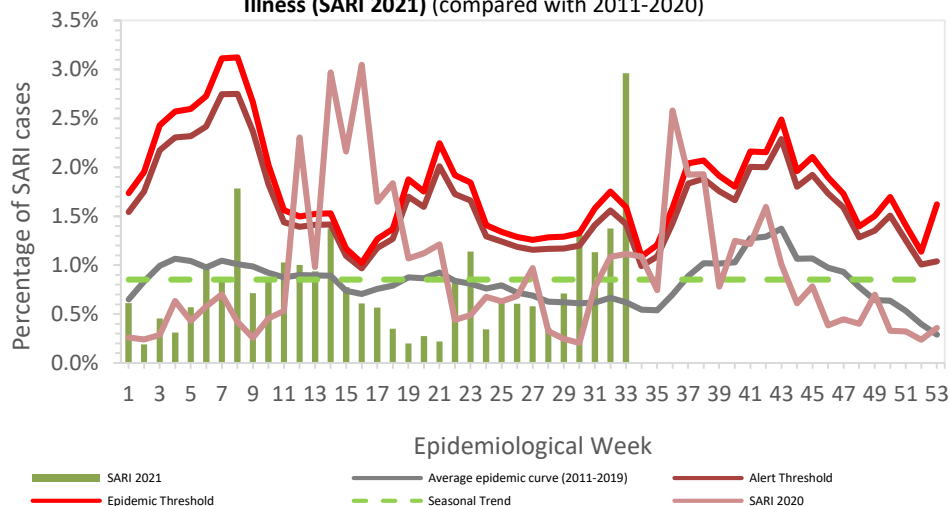
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages  
2021 vs Weekly Threshold; Jamaica



### Epi Week Summary

During EW 33, 24 (twentyfour) SARI admissions were reported.

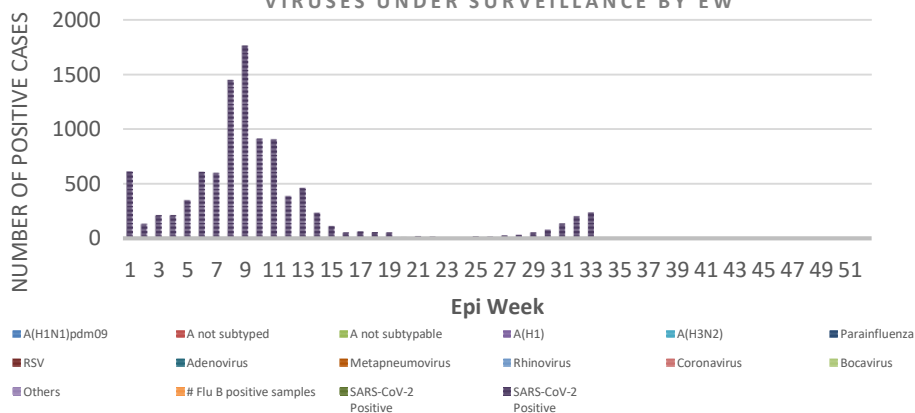
Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2021) (compared with 2011-2020)



### Caribbean Update EW 33

**Caribbean:** Influenza activity remained low. In Belize, SARS-CoV-2 and RSV detections continued to increase and in Haiti, SARS-CoV-2 activity continued elevated and increasing.

DISTRIBUTION OF INFLUENZA AND OTHER RESPIRATORY VIRUSES UNDER SURVEILLANCE BY EW



6 NOTIFICATIONS-  
All clinical  
sites



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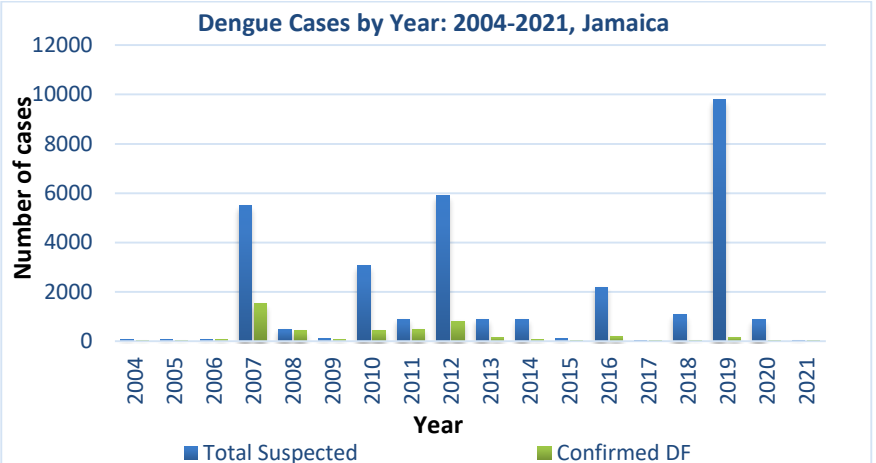


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# Dengue Bulletin

August 15-21, 2021 Epidemiological Week 33

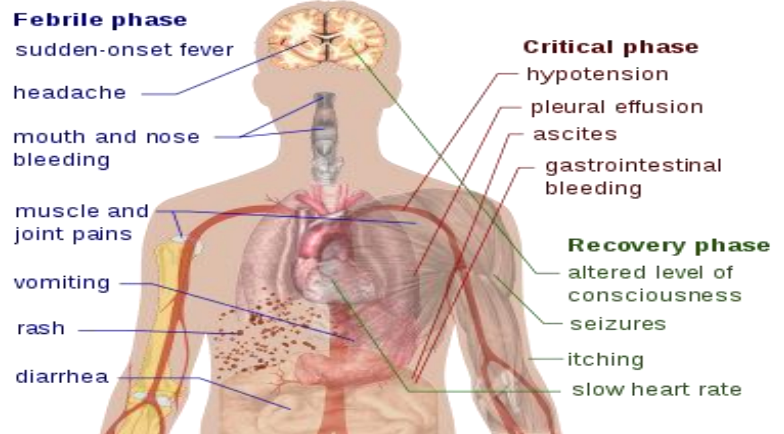
Epidemiological Week 33



## Reported suspected and confirmed dengue with symptom onset in week 33 of 2021

	2021*	
	EW 33	YTD
Total Suspected Dengue Cases	0	37
Lab Confirmed Dengue cases	0	5
CONFIRMED Dengue Related Deaths	0	0

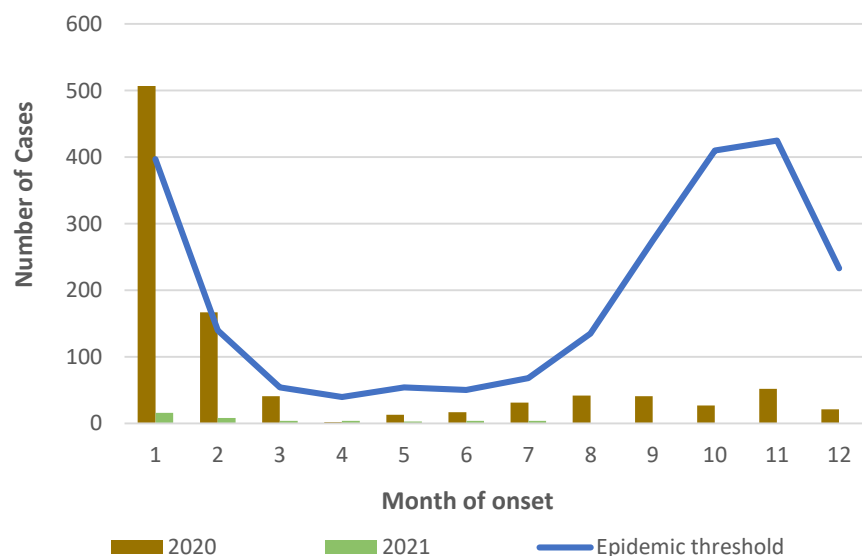
## Symptoms of Dengue fever



## Points to note:

- \*Figure as at August 5, 2021
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

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



**7 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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# RESEARCH PAPER

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## ABSTRACT

### Diabetes Health: Perceptions of physicians and the experience of T2DM patients in regards to a mobile application for Jamaicans

*Alicia Brown, Sheldon Connor, Shekardo Daley, Daniella McCalla, Fabian Rose, and Susan A. Muir*

**Objectives** This study had two aims: to identify mHealth features deemed suitable by physicians and to measure the experience of type 2 diabetes mellitus (T2DM) patients using a diabetes mobile application in Jamaica.

**Methods** The study was a cross sectional study of physicians who treat T2DM patients as well as T2DM patients aged 18-80. Subjects were recruited within St. Andrew, Kingston and St. Catherine, Jamaica, using convenient sampling. A diabetes mobile application was developed for the Android platform, which tracked blood sugar, blood pressure, weight and diet. Data was collected using interviews of physicians as well as surveys and observations of patients using the application.

**Results** The majority of physicians expected that a mHealth application would help with monitoring of the disease. The features that were deemed to be most important were monitoring, tailored education (that provide encouraging simple messages to patients), as well as sharing of information between patients and physicians. Thirty-two percent (32%) of the patients rated the application as excellent while sixty-eight percent (68%) rated it as good or fairly good. The two most valuable features were blood sugar (82%) and blood pressure (41%). Surprisingly, patients over sixty adapted well to the application. Nineteen patients (86%) indicated that they were extremely likely or likely to recommend the application while three (14%) were neutral.

**Conclusion** Jamaican physicians believed that the most important specifications were monitoring, tailored feedback to patients, and patient-provider communication. Most of the Jamaican T2DM patients were satisfied with and would recommend using a mobile application



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8 NOTIFICATIONS-  
All clinical  
sites



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REPORTS- Detailed Follow  
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