

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## Zoonotic Diseases Series 1: Rabies

**Overview:** Rabies is a viral zoonotic disease that causes progressive and fatal inflammation of the brain and spinal cord. Clinically, it has two forms: **1. Furious rabies** – characterized by hyperactivity and hallucinations. **2. Paralytic rabies** – characterized by paralysis and coma. Although fatal once clinical signs appear, rabies is entirely avoidable; vaccines, medicines and technologies have long been available to prevent death from rabies. Nevertheless, rabies still kills tens of thousands of people each year. Of these cases, approximately 99% are acquired from the bite of an infected dog. **Dog-mediated human rabies** can be eliminated by tackling the disease at its source: infected dogs. Making people aware of how to avoid the bites of rabid dogs, to seek treatment when bitten and to vaccinate animals can successfully disrupt the rabies transmission cycle. Rabies is estimated to cause 59 000 human deaths annually in over 150 countries, with 95% of cases occurring in Africa and Asia. Due to underreporting and uncertain estimates, this number is likely a gross underestimate. The burden of disease is disproportionately borne by rural poor populations, with approximately half of cases attributable to children under 15 years of age.

**Symptoms:** Early symptoms of a rabies infection can include a fever with pain and unusual or unexplained tingling, pricking or burning sensation (paraesthesia) at the wound site. In later states, the virus spreads to the central nervous system, causing fatal inflammation of the brain and spinal cord. The incubation period of the disease can vary from 1 week to 1 year, though it is typically 2–3 months. The two types of rabies show different symptoms. Furious rabies causes signs of hyperactivity, excitable behaviour, hydrophobia (fear of water) and sometimes aerophobia (fear of drafts or of fresh air). Death occurs after a few days due to cardio-respiratory arrest. Paralytic rabies, which accounts for about 20% of the total number of human cases, runs a less dramatic and usually longer course than the furious form. Muscles gradually become paralysed, starting at the site of the bite or scratch. A coma slowly develops and eventually death occurs. The paralytic form of rabies is often misdiagnosed, contributing to the under-reporting of the disease.

**Treatment:** Vaccinating dogs is the most cost-effective strategy for preventing rabies in people, and human rabies vaccines exist for pre-exposure immunization. If you are bitten or scratched by an animal, particularly a dog: 1. Wash the wound immediately with soap or detergent. 2. Flush the wound thoroughly for about 15 minutes with copious amounts of water. 3. Apply an iodine-containing or anti-viral medication to the wound 15 minutes after it has been washed and flushed. 4. Avoid applying irritants to the wounds such as chili powder, plant juices, acids and alkalis. 5. Avoid covering the wound with dressings or bandages. 6. Seek transportation to a health care facility for further assessment and treatment by a healthcare professional.

### RABIES: THE FACTS

**VIRUS TRANSMISSION**  
Saliva of infected animals  
**99%** of human cases are caused by **dog bites**  
The virus attacks the brain  
Rabies is **fatal** once symptoms appear

**TREATMENT**  
Thorough washing of the wound with soap, and, vaccine injections can avoid symptoms and **save lives**.  
**Seek immediate** medical care if bitten.

**HOW TO PREVENT RABIES TRANSMISSION FROM DOGS?**  
Learn **dog body language**  
Raise public **awareness**  
**NO DOG BITE = NO RABIES**

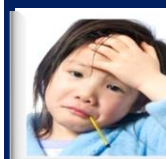
**FATALITIES**  
Rabies affects **poor rural communities** mostly in Asia and Africa  
About **One death every 9 mins**  
**40%** of the victims are children younger than 15

**VACCINATING DOGS SAVES HUMAN LIVES**  
Rabies is **100% preventable**  
Vaccinating **70%** of dogs **breaks rabies transmission cycle** in an area at risk  
Every dog owner is concerned

**28 September • World Rabies Day • #rabies**

[https://www.who.int/health-topics/rabies#tab=tab\\_1](https://www.who.int/health-topics/rabies#tab=tab_1)

## EPI WEEK 42



SYNDROMES

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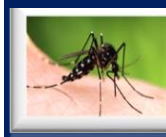
CLASS 1 DISEASES

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INFLUENZA

PAGE 5



DENGUE FEVER

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GASTROENTERITIS

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RESEARCH PAPER

PAGE 8

## SENTINEL SYNDROMIC SURVEILLANCE

## Sentinel Surveillance in Jamaica



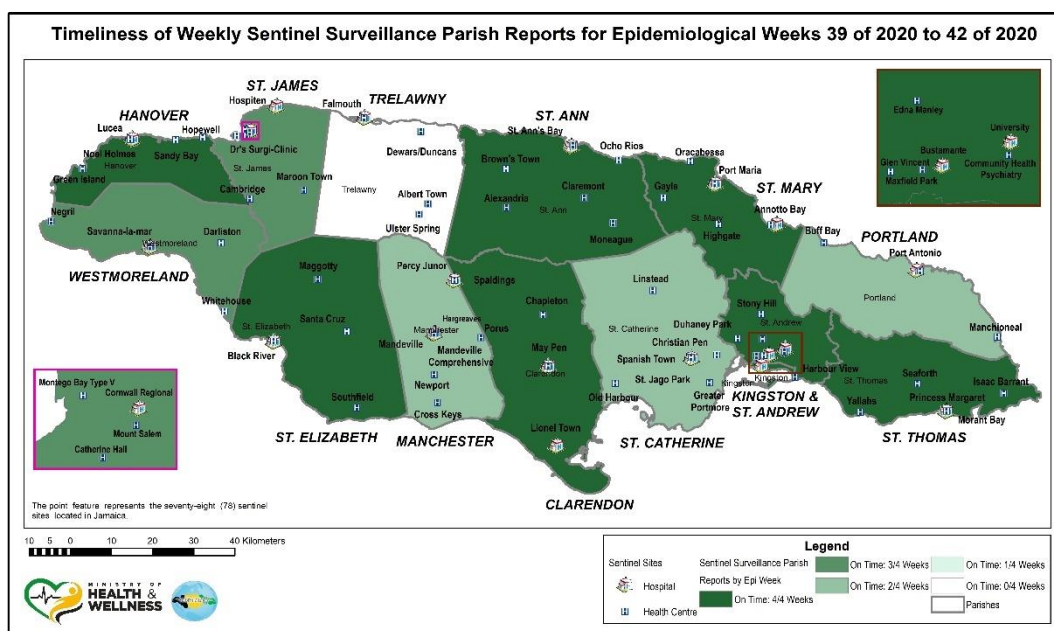
A syndromic surveillance system is good for early detection of and response to public health events.

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 - 39 to 42 of 2020

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

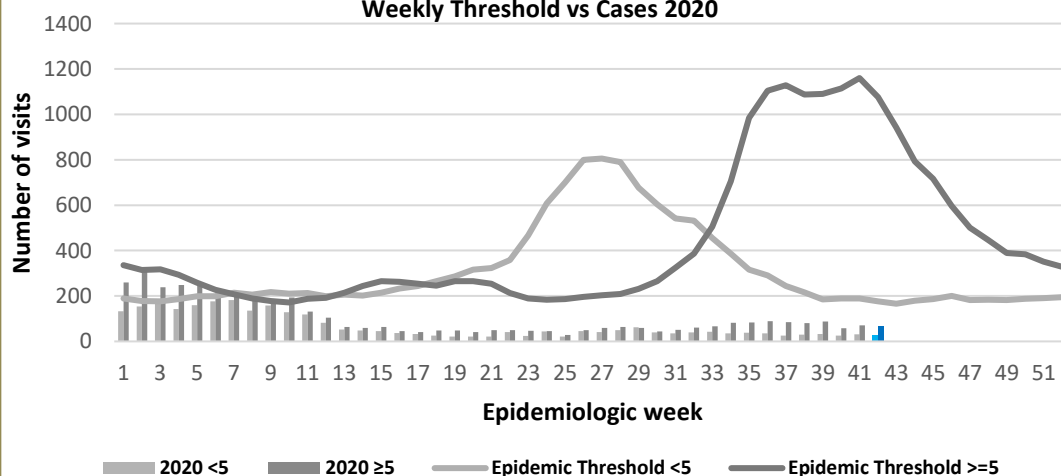
Temperature of  $>38^{\circ}\text{C}$  /  $100.4^{\circ}\text{F}$  (or recent history of fever) with or without an obvious diagnosis or focus of infection.



### KEY

VARIATIONS OF BLUE SHOW CURRENT WEEK

### Weekly Visits to Sentinel Sites for Undifferentiated Fever All ages: Jamaica, Weekly Threshold vs Cases 2020



2 NOTIFICATIONS-  
All clinical  
sites



INVESTIGATION  
REPORTS- Detailed Follow  
up for all Class One Events



HOSPITAL  
ACTIVE  
SURVEILLANCE-  
30 sites. Actively  
pursued



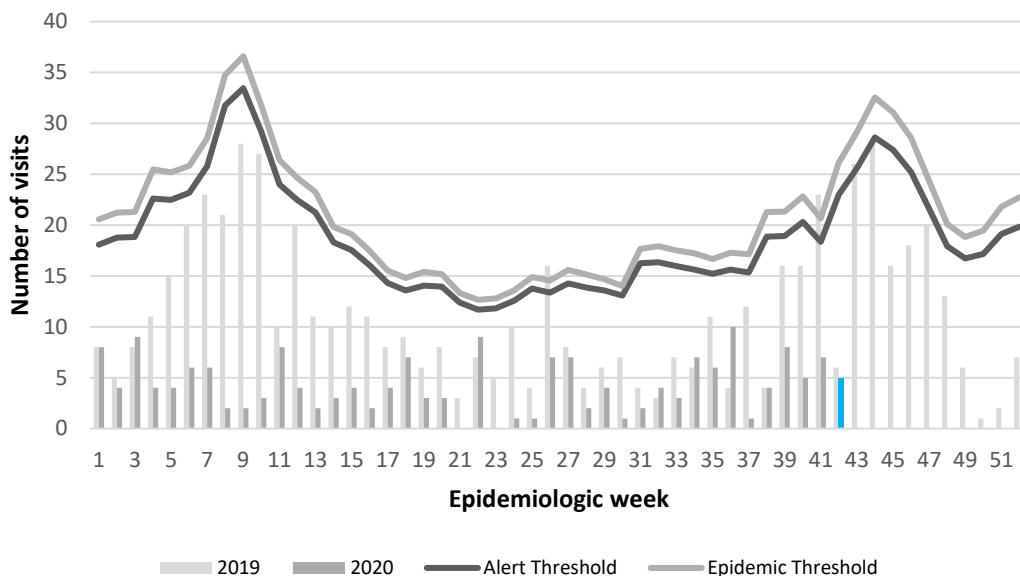
SENTINEL  
REPORT- 78 sites.  
Automatic reporting

**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).



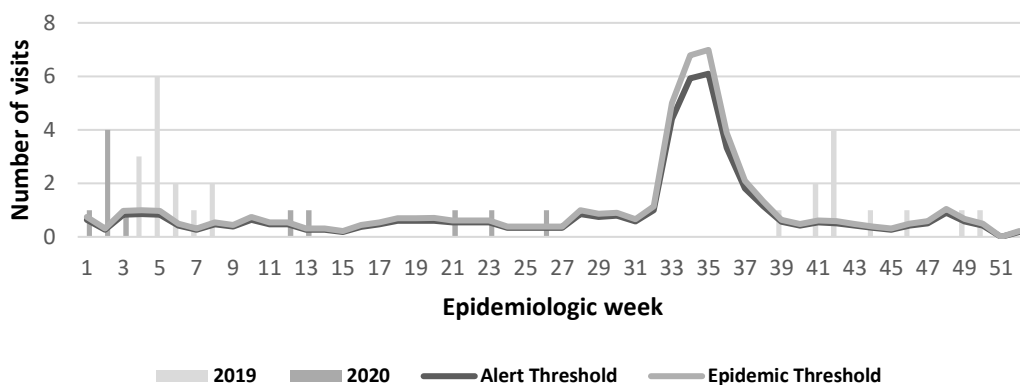
**Weekly Visits to Sentinel Sites for Fever and Neurological Symptoms 2019 and 2020 vs. Weekly Threshold: Jamaica**

**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 2019 and 2020 vs Weekly Threshold; Jamaica**

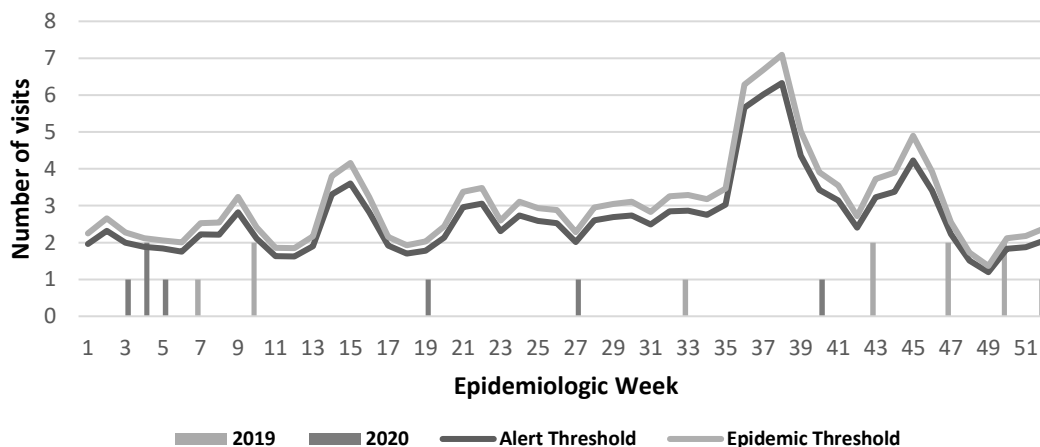
**FEVER AND JAUNDICE**

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 2019 and 2020**



**3 NOTIFICATIONS-**  
All clinical sites



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



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



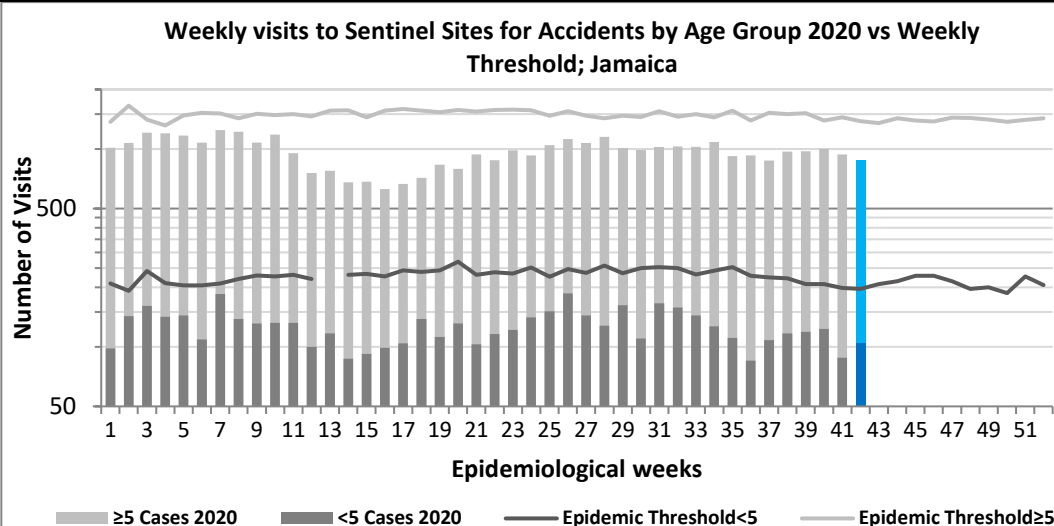
**SENTINEL REPORT-** 78 sites. Automatic reporting

**ACCIDENTS**

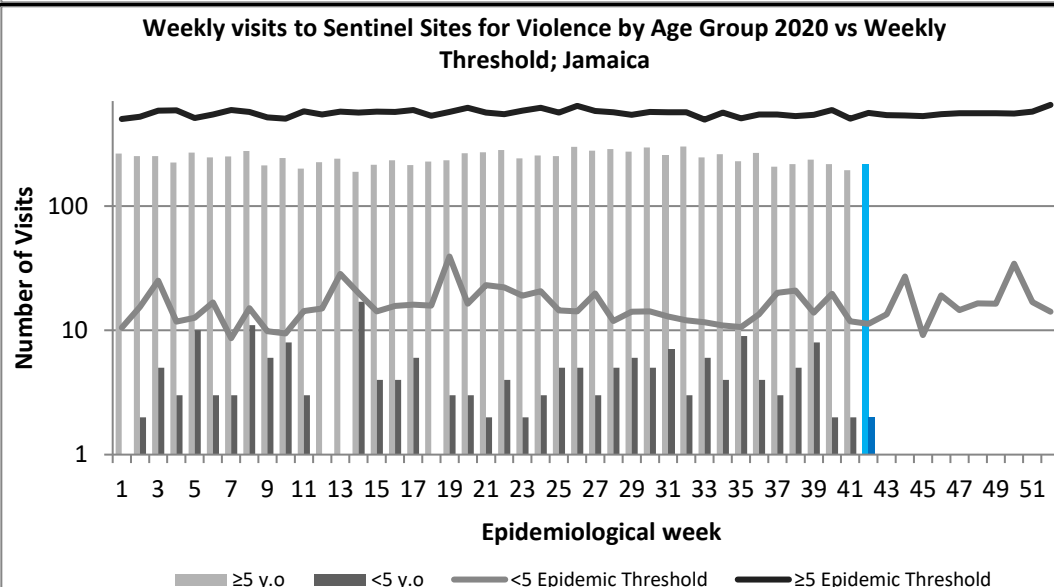
Any injury for which the cause is unintentional, e.g. motor vehicle, falls, burns, etc.

**KEY**

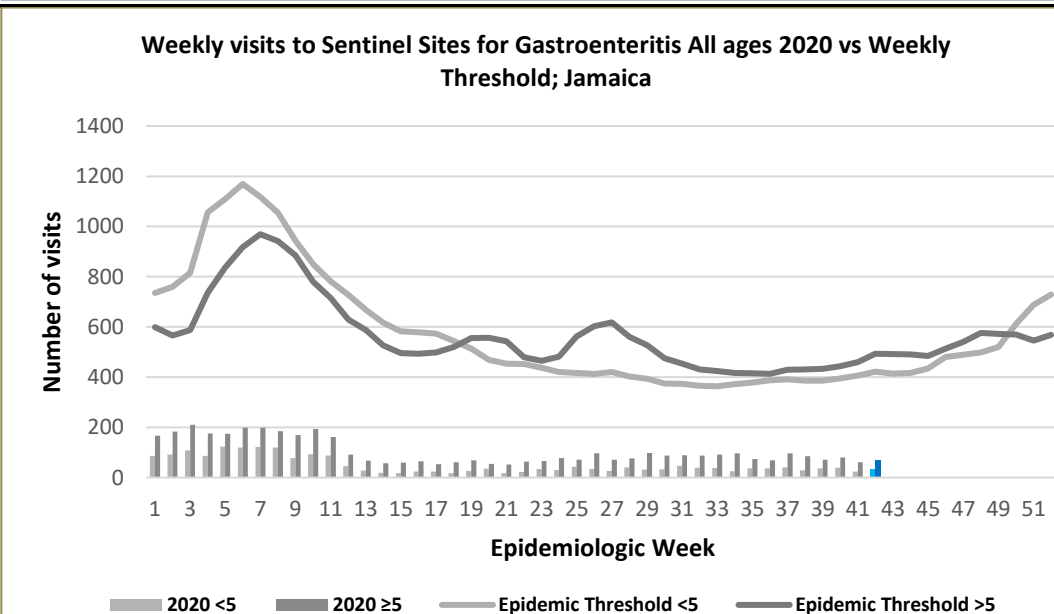
**VARIATIONS OF BLUE SHOW CURRENT WEEK**

**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



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

-	CLASS ONE NOTIFIABLE EVENTS				Comments
			Confirmed YTD		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.
	CLASS 1 EVENTS		CURRENT YEAR 2020	PREVIOUS YEAR 2019	
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		25	60	
	Cholera		0	0	
	Dengue Hemorrhagic Fever*		NA	NA	
	Hansen’s Disease (Leprosy)		0	0	
	Hepatitis B		3	16	
	Hepatitis C		0	2	
	HIV/AIDS		NA	NA	
	Malaria (Imported)		0	0	
	Meningitis (Clinically confirmed)		1	20	
EXOTIC/ UNUSUAL	Plague		0	0	* Dengue Hemorrhagic Fever data include Dengue related deaths;  ** Figures include all deaths associated with pregnancy reported for the period. * 2019 YTD figure was updated.
HIGH MORBIDIT/ MORTALITY	Meningococcal Meningitis		0	0	
	Neonatal Tetanus		0	0	
	Typhoid Fever		0	0	
	Meningitis H/Flu		0	0	
SPECIAL PROGRAMMES	AFP/Polio		0	0	*** CHIKV IgM positive cases  **** Zika PCR positive cases
	Congenital Rubella Syndrome		0	0	
	Congenital Syphilis		0	0	
	Fever and Rash	Measles	0	0	
		Rubella	0	0	
	Maternal Deaths**		37	55	
	Ophthalmia Neonatorum		23	161	
	Pertussis-like syndrome		0	0	
	Rheumatic Fever		0	0	
	Tetanus		0	0	
	Tuberculosis		29	48	
	Yellow Fever		0	0	
	Chikungunya***		0	2	
	Zika Virus****		0	0	NA- Not Available



5 NOTIFICATIONS-  
All clinical sites



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# NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

## EW 42

October 11, 2020 -October 17, 2020 Epidemiological Week 42

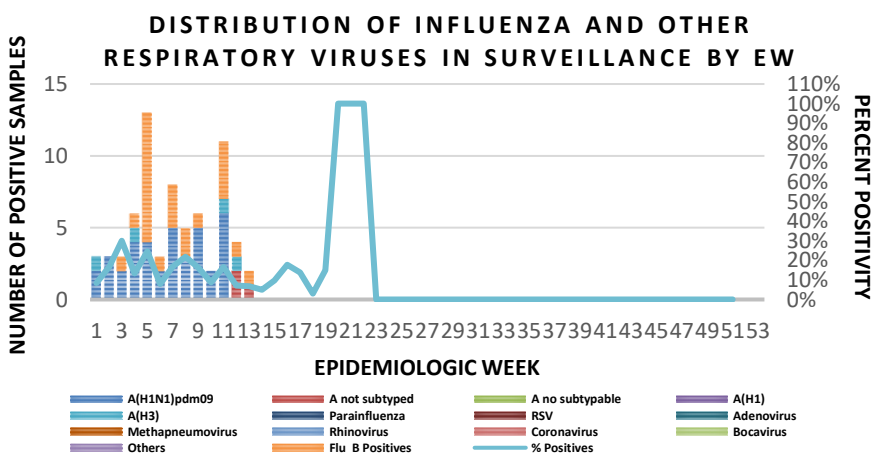
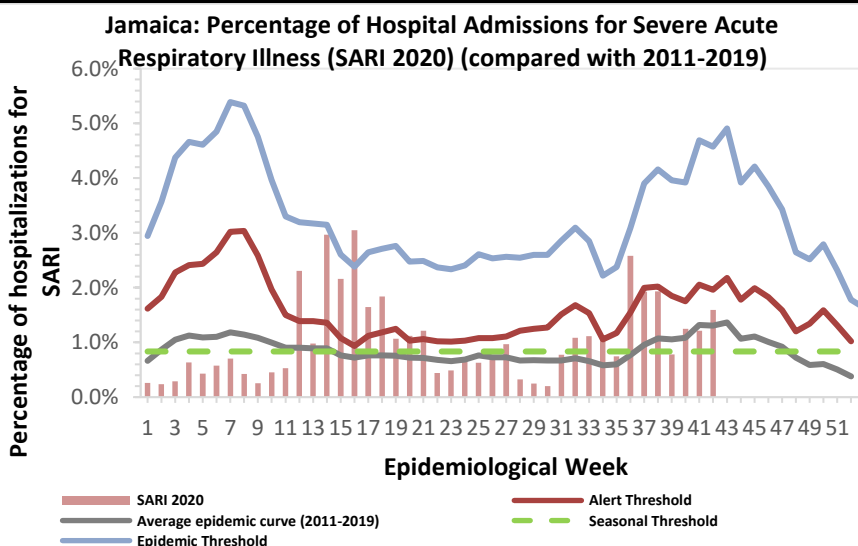
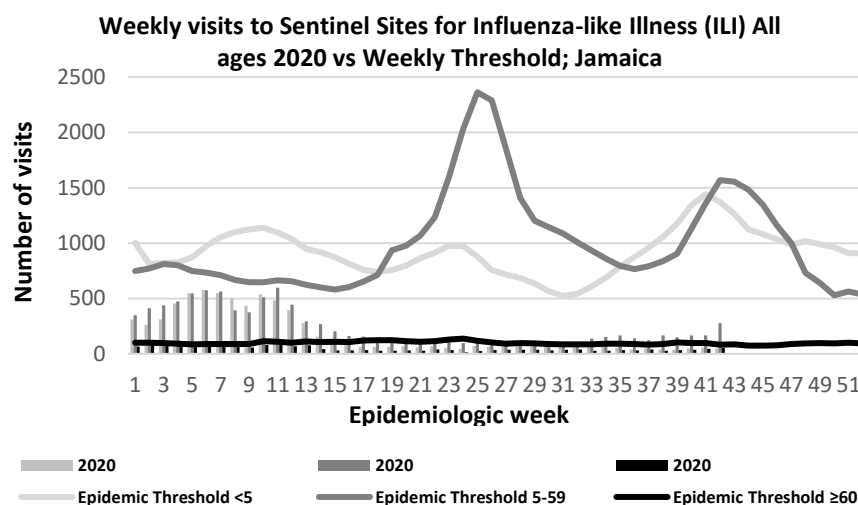
	EW 42	YTD
SARI cases	24	581
Total Influenza positive Samples	0	69
Influenza A	0	45
H3N2	0	4
H1N1pdm09	0	38
Not subtyped	0	3
Influenza B	0	24
Parainfluenza	0	0

### Epi Week Summary

During EW 42, 24 (twenty four) SARI admissions were reported.

### Caribbean Update EW 42

Caribbean: Influenza and other respiratory virus activity remained low in the subregion. In Haiti, SARI activity increased above epidemic levels.



6 NOTIFICATIONS-  
All clinical  
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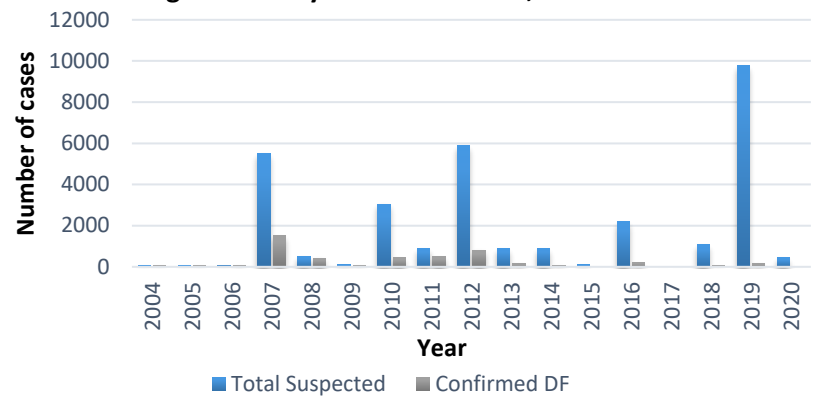
# Dengue Bulletin

October 11, 2020 – October 17, 2020 Epidemiological Week 42

Epidemiological Week 42



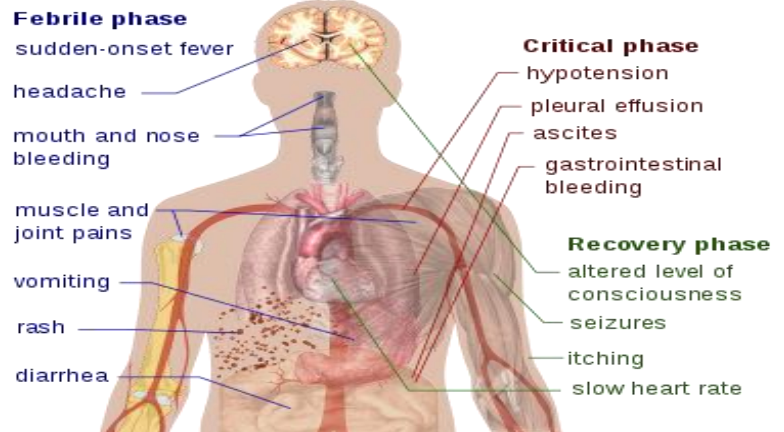
Dengue Cases by Year: 2004-2020, Jamaica



## Reported suspected and confirmed dengue with symptom onset in week 42 of 2020

	2020	
	EW 42	YTD
Total Suspected Dengue Cases	0**	749**
Lab Confirmed Dengue cases	0**	1**
CONFIRMED Dengue Related Deaths	0**	1**

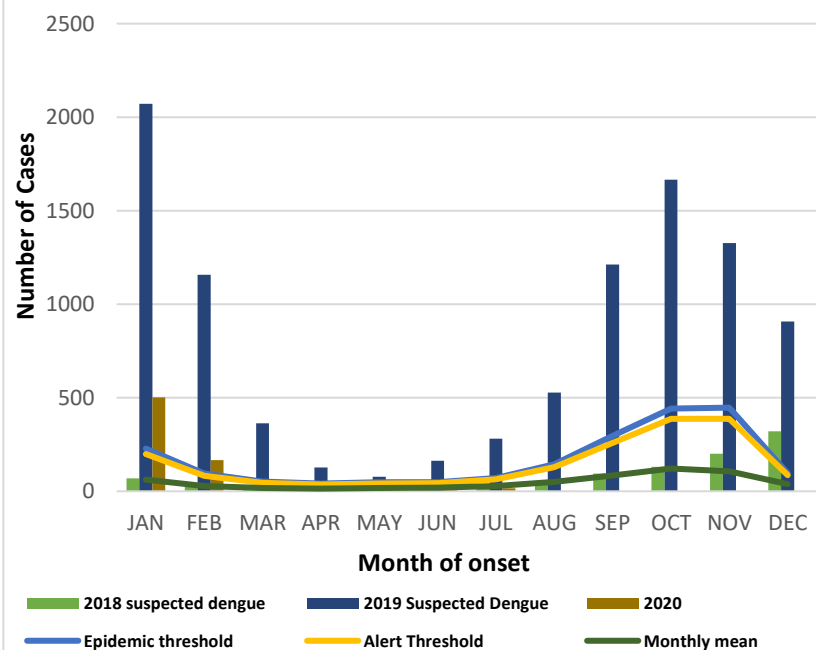
## Symptoms of Dengue fever



## Points to note:

- \*\* figure as at October 20, 2020
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

Suspected dengue cases for 2018 and 2019 versus monthly mean, alert, and epidemic thresholds



7 NOTIFICATIONS-  
All clinical  
sites



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# RESEARCH PAPER

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## ABSTRACT

### *Using the Beck Depression Inventory to Identify Depressive Symptoms in Jamaican Youths*

*Ms. Denise Simpson – Citizen Security and Justice Programme, Ministry of National Security*  
([dendenson@gmail.com](mailto:dendenson@gmail.com))

*Mr. Kenneth Barnes - Citizen Security and Justice Programme, Ministry of National Security*

**Objectives:** This study examined the prevalence of depressive symptoms in youths and seeks to find the symptoms that tend to occur most frequently within this sample. The assessments were done at a treatment site within the Central Region of the Citizen, Security and Justice Program (CSJP) under the Ministry of National Security (MNS).

**Methods:** Participants ages 18 to 30 years completed the Beck Depression Inventory II (BDI-II; Beck, Steer, & Brown, 1996), over the period January 2017 to December 2018. Other measures of socio-demographic background were also collected. Data gathered from the 21 categories of the BDI-II instrument were then entered into SPSS for analysis.

**Results:** An analysis of the data showed that of the cross section of at-risk youths from four (4) parishes in rural Jamaica who were sampled (n=154; 61% male, 39% females, approximately seven in every ten participant (71.4%) reported some symptoms of depression. Results showed that there were significant differences in gender in their prevalence of depressive symptoms where females were more likely to report depressive symptoms than males ( $p=.004$ ). Symptoms that were most prevalent in this sample included sadness (73.9%); punishment feelings (70.7%); and guilty feelings (67.5%)

**Conclusion:** Gender differences in depression scores are consistent with studies in other countries (Lowe, 2005). In comparison to previous studies (Beck 1967) this sample had a higher percentage of youths scoring in the “none to minimal” depressive range as well as in the severely depressed range.



The Ministry of Health and Wellness  
24-26 Grenada Crescent  
Kingston 5, Jamaica  
Tele: (876) 633-7924  
Email: [surveillance@moh.gov.jm](mailto:surveillance@moh.gov.jm)



8 NOTIFICATIONS-  
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