

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## EPI WEEK 44

### Zoonotic Diseases Series 3: Anthrax

**What is Anthrax?** Anthrax is a serious infectious disease caused by gram-positive, rod-shaped bacteria known as *Bacillus anthracis*. Anthrax can be found naturally in soil and commonly affects domestic and wild animals around the world. Although it is rare in the United States, people can get sick with anthrax if they come in contact with infected animals or contaminated animal products. Contact with anthrax can cause severe illness in both humans and animals. Anthrax is **not** contagious, which means you can't catch it like the cold or flu.

**How do animals get infected with anthrax?** Domestic and wild animals such as cattle, sheep, goats, antelope, and deer can become infected when they breathe in or ingest spores in contaminated soil, plants, or water. In areas where domestic animals have had anthrax in the past, routine vaccination can help prevent outbreaks.

**How do people get infected with anthrax?** People get infected with anthrax when spores get into the body. When anthrax spores get inside the body, they can be "activated." When they become active, the bacteria can multiply, spread out in the body, produce toxins (poisons), and cause severe illness. This can happen when people breathe in spores, eat food or drink water that is contaminated with spores, or get spores in a cut or scrape in the skin. It is very uncommon for people in the United States to get infected with anthrax. Certain activities can also increase a person's chances of getting infected.

**Where is anthrax found?** Anthrax is most common in agricultural regions of Central and South America, sub-Saharan Africa, central and southwestern Asia, southern and eastern Europe, and the Caribbean. Anthrax is rare in the United States, but sporadic outbreaks do occur in wild and domestic grazing animals such as cattle or deer. Anthrax is more common in developing countries and countries that do not have veterinary public health programs that routinely vaccinate animals against anthrax. In the United States, yearly vaccination of livestock is recommended in areas where animals have had anthrax in the past.

**BarriusCrowell and SeanBrinksneider**  
**Anthrax**  
 All you need to know

**What is anthrax?**  
 Anthrax is a disease caused by the bacteria *Bacillus anthracis* found in soil, and both wild and domestic animals, and spread through the introduction of spores to the body.

**Prevention**  
 Stay clear from Wild or domesticated animals, be careful during high terror alerts.

**Diagnosis and Treatment**  
 Anthrax is diagnosed through Blood and Skin tests, Stool samples, Spinal taps, and X-ray/CT scans.  
 Treatment requires: IMMEDIATE care with IV Antibiotics and various antitoxins

**Symptoms:**

Cutaneous	Inhalation	Gastrointestinal	Injection
• Blisters and Bumps	• Fever/Chills	• Fever/Chills	• Fever/Chills
• Swelling	• Chest discomfort	• Swelling of neck	• Itches at site
• Painless black ulcer	• Shortness of breath	• Sore throat	• Skin sore with black center
	• Confusion or Dizziness	• Bloody Vomiting	• Swelling
	• Cough	• Bloody Diarrhea	• Swelling
	• Nausea/Vomiting	• Reddened/Itchy	• Abscess deep under skin (site of injection)
	• Drooling Saliva	• Fatigue	

**History**

- 1250 BCE: Originated in Ancient Greece
- 1881: Louis Pasteur Creates First Vaccine
- 1897: Anthrax Vaccine for animals reduces cases in humans
- 1944: Penicillin is used in treatment
- 1950: First Vaccine for humans is created
- 1979: Outbreak in Sverdlovsk, USSR
- 2001: Sep 2001 US anthrax attack

**The Anthrax Cycle**

**Anthrax infects a Microphage**

MP sends out warning signal  
 MP's learn of threat and gain single antibodies  
 Anthrax antibodies start  
 My defense system is strong

Anthrax is extremely lethal at 20% survival. It kills by invading micro phages in the immune system and paralyzing biochemical pathways, resulting in rapid cell death.

**2001-US anthrax attack letters**  
*Bacillus anthracis*  
 Cutaneous Anthrax



SYNDROMES  
PAGE 2



CLASS 1 DISEASES  
PAGE 4



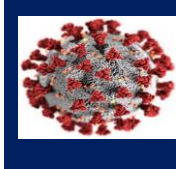
INFLUENZA  
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DENGUE FEVER  
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GASTROENTERITIS  
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RESEARCH PAPER  
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SENTINEL SYNDROMIC SURVEILLANCE

Sentinel Surveillance in Jamaica



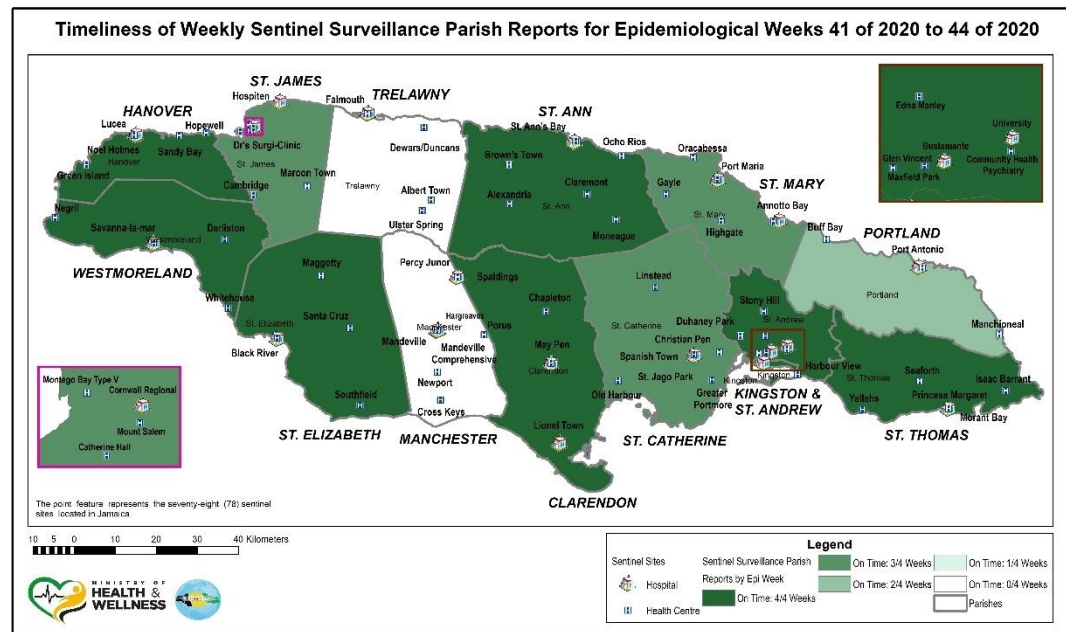
A syndromic surveillance system is good for early detection of and response to public health events.

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 - 41 to 44 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

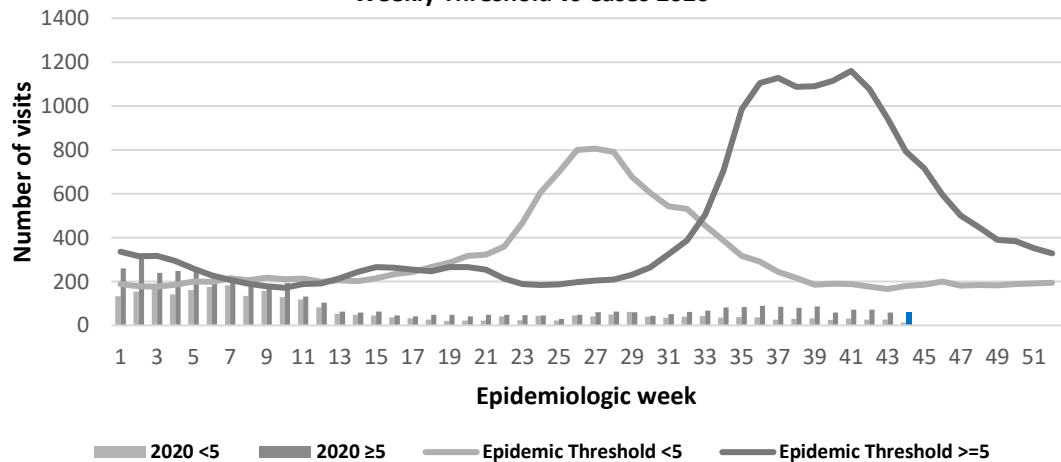
FEVER

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



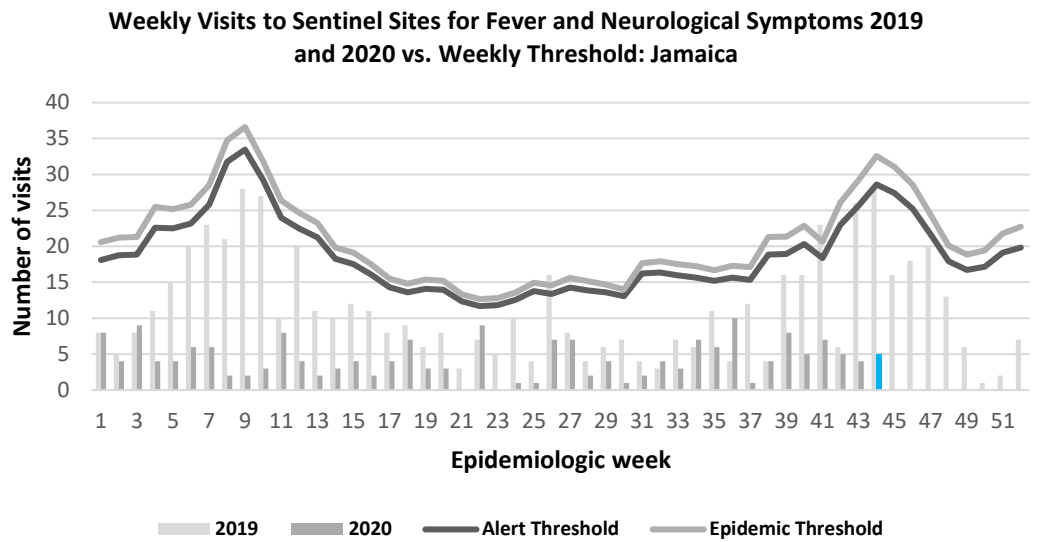
HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



SENTINEL REPORT- 78 sites. Automatic reporting

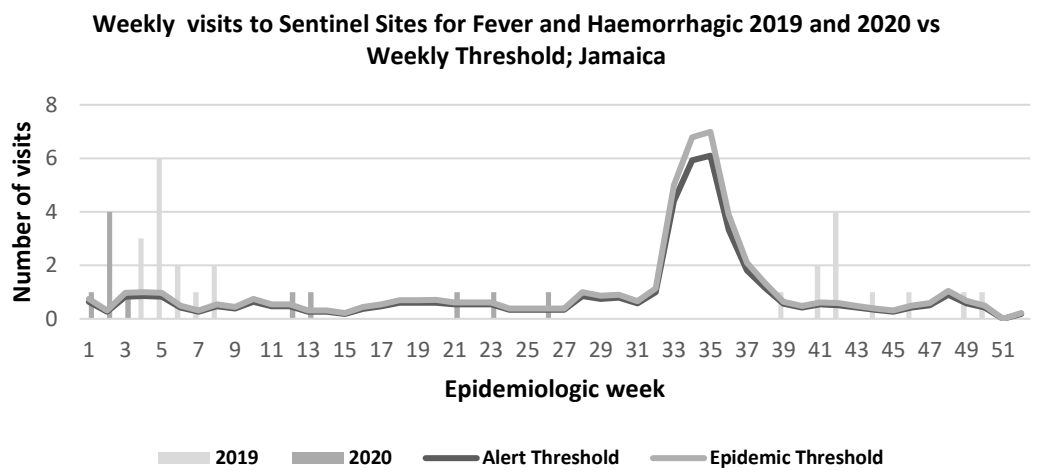
**FEVER AND NEUROLOGICAL**

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).



**FEVER AND HAEMORRHAGIC**

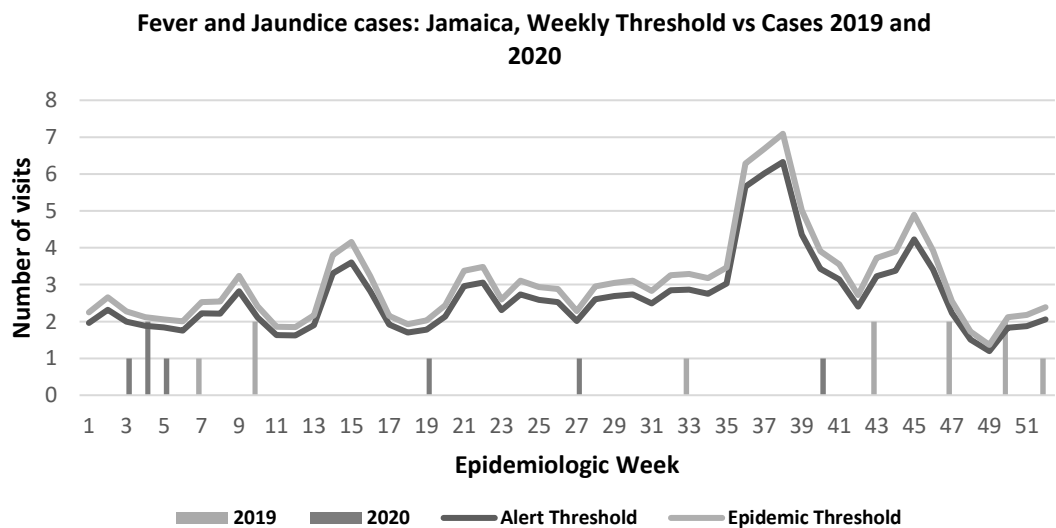
Temperature of  $>38^{\circ}\text{C}$  /  $100.4^{\circ}\text{F}$  (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



**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.



**3 NOTIFICATIONS-**  
All clinical sites



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



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



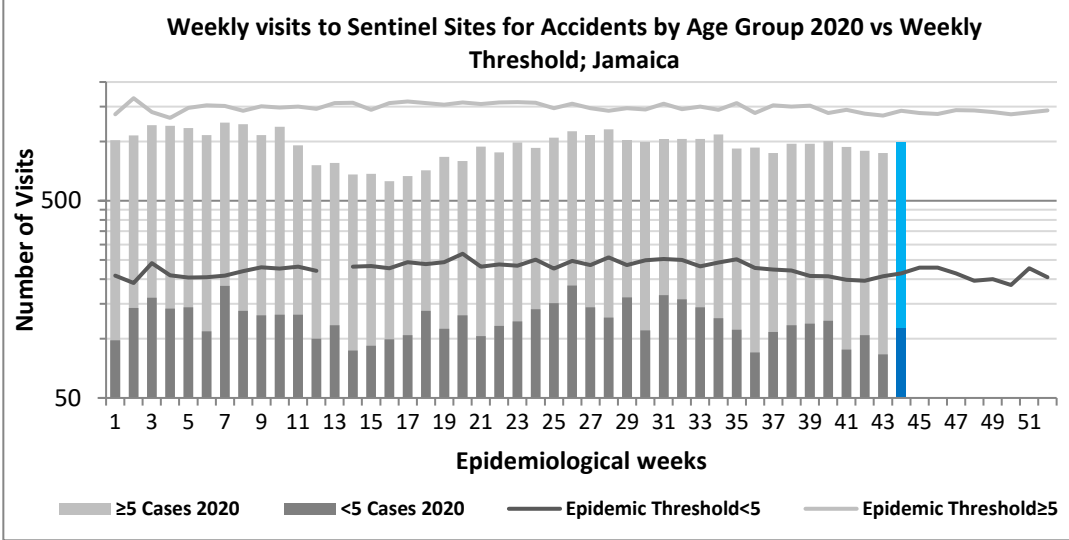
**SENTINEL REPORT-** 78 sites. Automatic reporting

**ACCIDENTS**

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

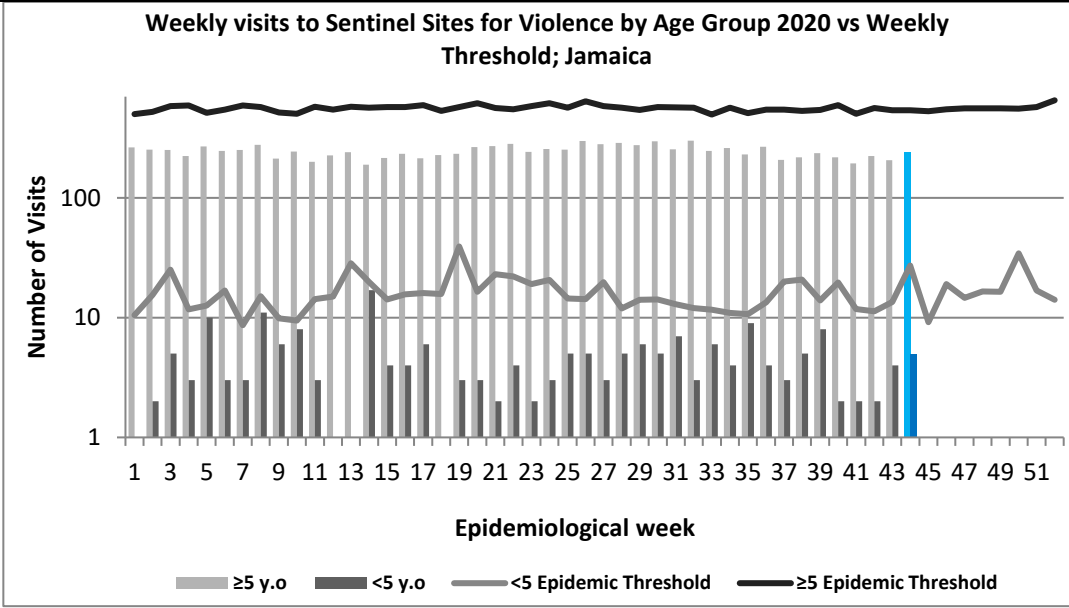
**KEY**

VARIATIONS OF BLUE SHOW CURRENT WEEK



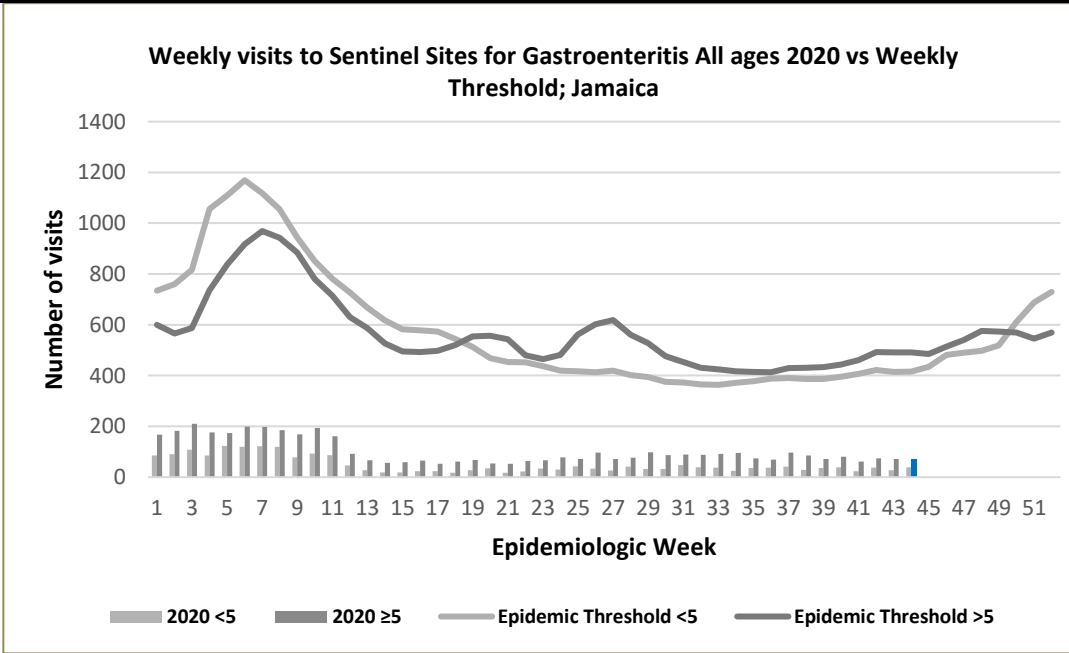
**VIOLENCE**

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		Confirmed YTD		Comments	
	CLASS 1 EVENTS	CURRENT YEAR 2020	PREVIOUS YEAR 2019		
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning	56	60	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.	
	Cholera	0	0		
	Dengue Hemorrhagic Fever*	NA	NA		
	Hansen’s Disease (Leprosy)	0	0		
	Hepatitis B	3	23		
	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;	
HIGH MORBIDITY/ MORTALITY	Meningococcal Meningitis	0	0	** Figures include all deaths associated with pregnancy reported for the period. * 2019 YTD figure was updated.	
	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 Rubella	0 0		0 0
	Maternal Deaths**		37		57
	Ophthalmia Neonatorum		23		190
	Pertussis-like syndrome		0		0
	Rheumatic Fever		0		0
	Tetanus		0		0
	Tuberculosis		29		51
	Yellow Fever		0		0
	Chikungunya***	0	7		
	Zika Virus****	0	0	NA- Not Available	

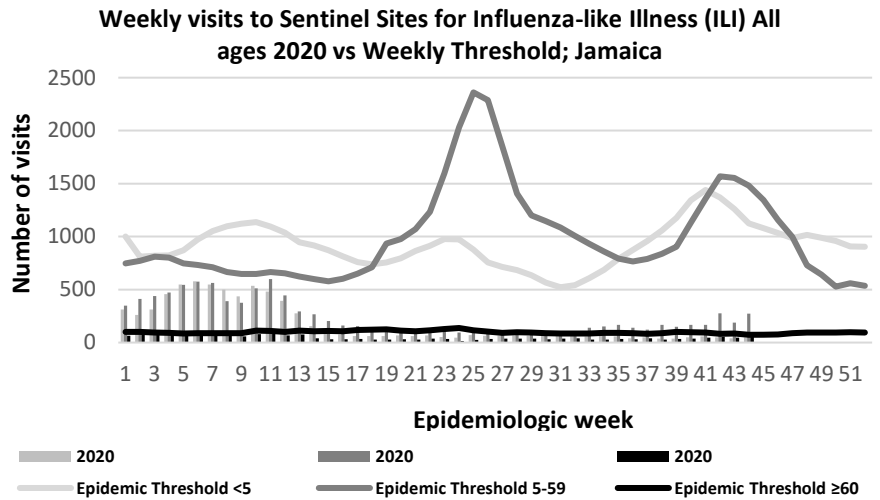
 <p><b>5 NOTIFICATIONS-</b> All clinical sites</p>	 <p><b>INVESTIGATION REPORTS-</b> Detailed Follow up for all Class One Events</p>	 <p><b>HOSPITAL ACTIVE SURVEILLANCE-</b> 30 sites. Actively pursued</p>	 <p><b>SENTINEL REPORT-</b> 78 sites. Automatic reporting</p>
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#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

## EW 44

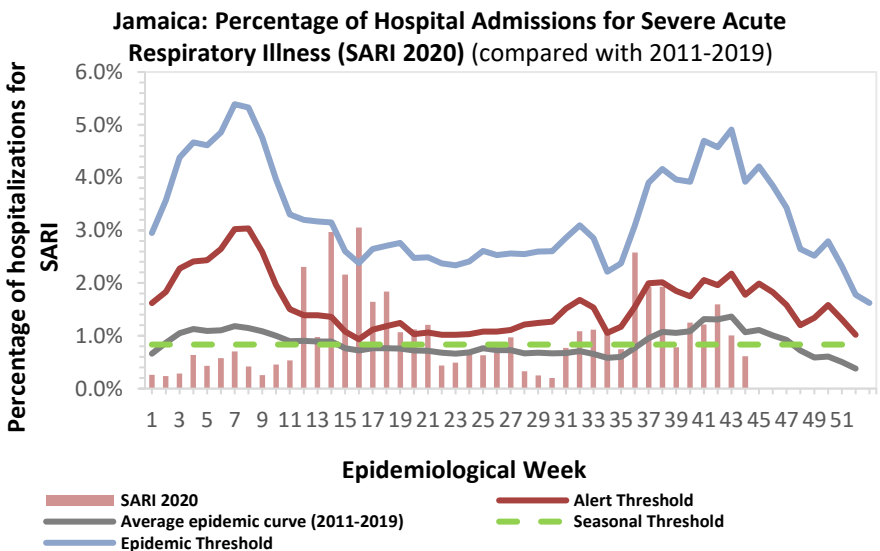
October 25, 2020 -October 31, 2020 Epidemiological Week 44

	EW 44	YTD
SARI cases	9	603
<b>Total Influenza positive Samples</b>	<b>0</b>	<b>69</b>
<b>Influenza A</b>	<b>0</b>	<b>45</b>
H3N2	0	4
H1N1pdm09	0	38
Not subtyped	0	3
<b>Influenza B</b>	<b>0</b>	<b>24</b>
<b>Parainfluenza</b>	<b>0</b>	<b>0</b>



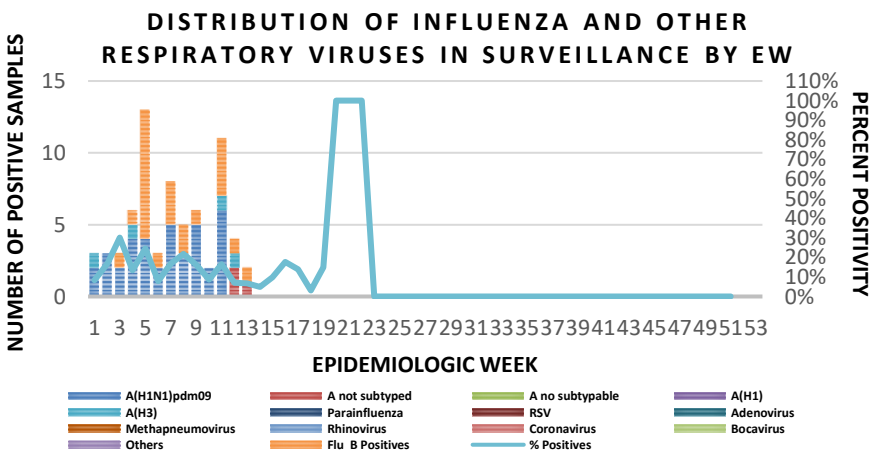
### Epi Week Summary

During EW 44, 9 (nine) SARI admissions were reported.



### Caribbean Update EW 44

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



**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

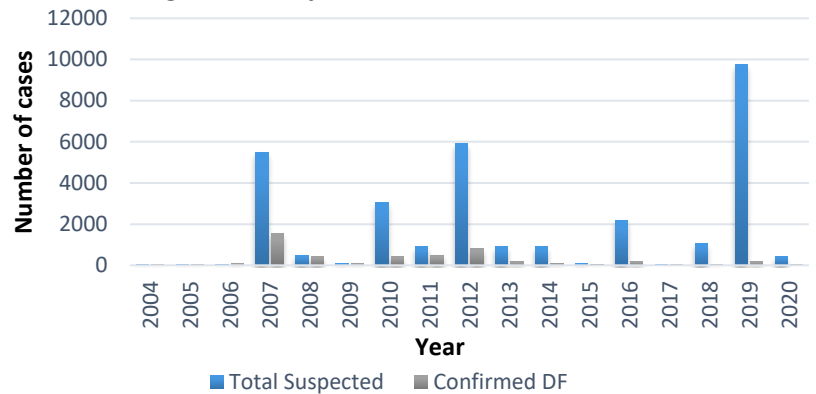
# Dengue Bulletin

October 25, 2020 – October 31, 2020 Epidemiological Week 44


Epidemiological Week 44



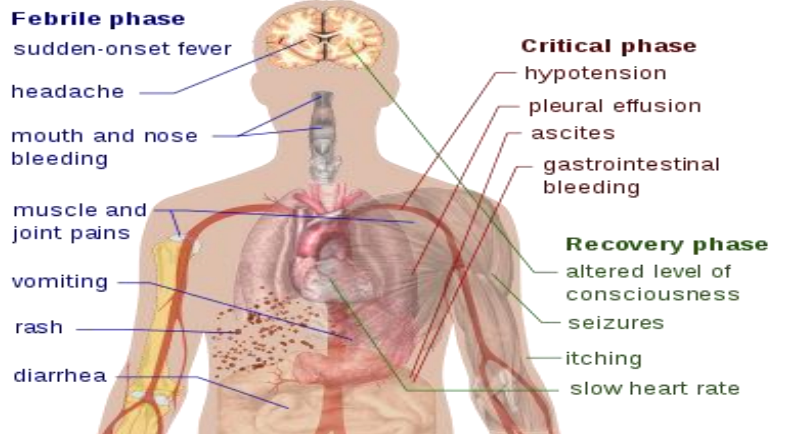
Dengue Cases by Year: 2004-2020, Jamaica



## Reported suspected and confirmed dengue with symptom onset in week 44 of 2020

	2020	
	EW 44	YTD
 Total Suspected Dengue Cases	0**	784**
Lab Confirmed Dengue cases	0**	1**
<b>CONFIRMED</b> Dengue Related Deaths	0**	1**

## Symptoms of Dengue fever



**7 NOTIFICATIONS-**  
All clinical sites



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



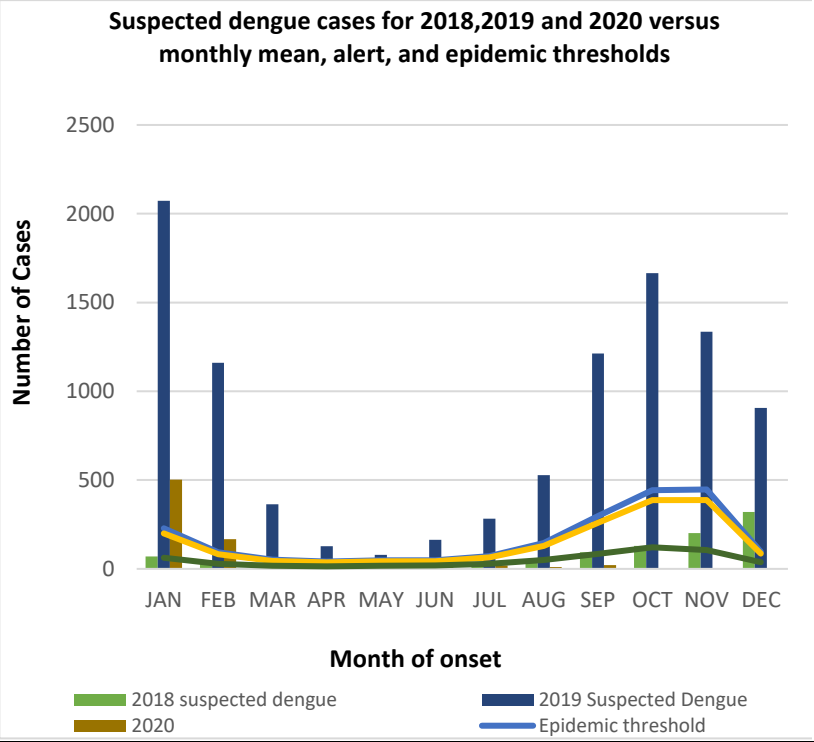
**HOSPITAL ACTIVE SURVEILLANCE-** 30 sites. Actively pursued



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

**Points to note:**

- \*\* figure as at November 6, 2020
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.



**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



# COVID-19 Dashboard

## EW 44

PARISH	NEW CASES	TOTAL CONFIRMED CASES	COVID-19 SUMMARY	
			COMMULATIVE	CASES
Clarendon	17	462	Confirmed Cases	9,131
Hanover	22	142	Persons Tested	96,535
KSA	104	3214	Active Cases	4,185
Manchester	6	373	Total Recovered	4617
Portland	9	310	Negative Results	87,339
St. Ann	26	409	Total COVID-19 Deaths	209
St. Catherine	64	2029	Female Cases	5,034
St. Elizabeth	3	263	Male Cases	4,086
St. James	84	886	Cases Under Investigation	11
St. Mary	21	243	Age Range	1day to 104
St. Thomas	4	400	Imported Cases	499
Trelawny	18	155		
Westmoreland	40	245		
Unknown		0		
<b>TOTAL</b>	<b>418</b>	<b>9131</b>		

### #WEAR YOUR MASK




**Email**   
[support-Jamcovid19@moh.gov.jm](mailto:support-Jamcovid19@moh.gov.jm)

### #WASH YOUR HANDS



**HOTLINE**  
 888-666-5683  
 888-754-7792  
 888-542-5998  
 888-542-6006

 **9 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

### *Training Teachers to Help Students to Cope with Post-Traumatic Stress*

**Authors:** Dr. Ganesh Shetty, Kingston & St. Andrew Health Department, Prof. Cynthia Onyefulu, University of Technology, Jamaica, Dr. Steve Weaver, University of the West Indies, Dr. Sandra Chambers, SE Regional Health Authority

**Introduction:** Exposure to trauma in children may result in mental health problems such as post-traumatic stress disorders (PTSD), anxiety disorder, depressive symptoms, dissociation, substance abuse, and delinquent and aggressive behaviors. The children who develop PTSD may later result in perpetrating violence on others. This study aimed to train a group of teachers in a primary school in Kingston, Jamaica with knowledge and skills to help students cope better with traumatic experiences. Research questions addressed were: What percentage of teachers know of the manifestations of and coping skills to manage PTSD prior to training? To what extent will there be a difference in the teachers' knowledge of symptoms and skills to cope with PTSD after training?

**Methods:** The mixed methods approach was used. All 20 (5 male & 15 female) teachers voluntarily participated in the study. The teachers were pre-tested to measure their knowledge of and ways of coping with PTSD in March 2019, and attended six training sessions, and were post-tested in June 2019.

**Results:** The results showed that the pre-test scores ( $M = 1.95$ ,  $SD = 2.19$ ) of 35% of the teachers knew some skills in managing PTSD before the training. The post-test scores ( $M = 4.00$ ,  $SD = 1.69$ ) of the 75% of the teachers learnt the skills after the training, while 50% retained their skills three months after the training. A feedback session was also conducted.

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1 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