WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

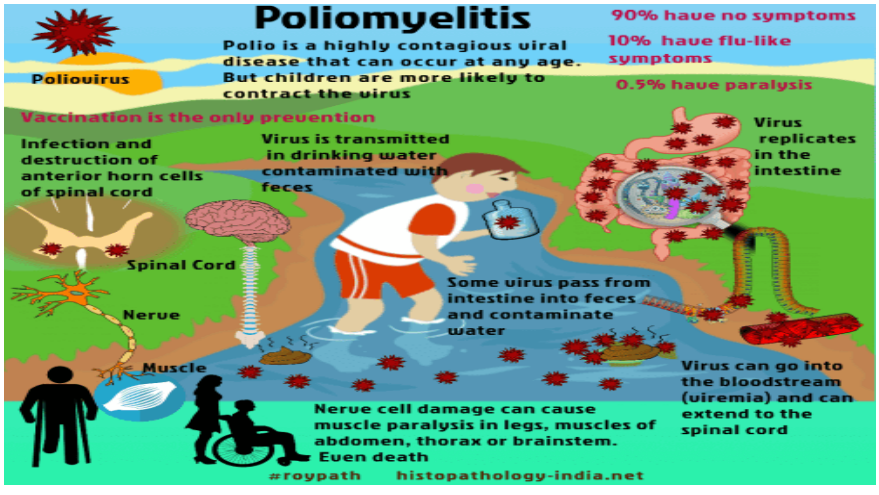
Poliomyelitis (polio)

Overveiw: Poliomyelitis (polio) is a highly infectious viral disease that largely affects children under 5 years of age. The virus is transmitted by person-to-person spread mainly through the faecal-oral route or, less frequently, by a common vehicle (e.g. contaminated water or food) and multiplies in the intestine, from where it can invade the nervous system and cause paralysis. In 1988, the World Health Assembly adopted a resolution for the worldwide eradication of polio, marking the launch of the Global Polio Eradication Initiative, spearheaded by national governments, WHO, Rotary International, the US Centers for Disease Control and Prevention (CDC), UNICEF, and later joined by the Bill & Melinda Gates Foundation and Gavi, the Vaccine Alliance. Wild poliovirus cases have decreased by over 99% since 1988, from an estimated 350 000 cases in more than 125 endemic countries then to 175reported cases in 2019. Of the 3 strains of wild poliovirus (type 1, type 2 and type 3), wild poliovirus type 2 was eradicated in 1999 and no case of wild poliovirus type 3 has been found since the last reported case in Nigeria in November 2012. Both strains have officially been certified as globally eradicated. As at 2020, wild poliovirus type 1 affects two countries: Pakistan and Afghanistan. The strategies for polio eradication work when they are fully implemented. This is clearly demonstrated by India's success in stopping polio in January 2011, in arguably the most technically challenging place, and polio-free certification of the entire WHO Southeast Asia Region in March 2014.

Symptoms: Poliovirus is highly infectious. The incubation period is usually 7–10 days but can range from 4–35 days. The virus enters the body through the mouth and multiplies in the intestine. It then invades the nervous system. Up to 90% of those infected experience no or mild symptoms and the disease usually goes unrecognized. In others, initial symptoms include fever, fatigue, headache, vomiting, stiffness in the neck, and pain in the limbs. These symptoms usually last for 2–10 days and most recovery is complete in almost all cases. However, in the remaining proportion of cases the virus causes paralysis, usually of the legs, which is most often permanent. Paralysis can occur as rapidly as within a few hours of infection. Of those paralysed, 5-10% die when their breathing muscles become immobilized. The virus is shed by infected people (usually children) through faeces, where it can spread quickly, especially in areas with poor hygiene and sanitation systems.

Treatment: There is no cure for polio; it can only be prevented by immunization. The polio vaccine, given multiple times, can protect a child for life. More than 18 million people are able to walk today who would otherwise have been paralysed, since 1988, when the Global Polio Eradication Initiative was launched. An estimated 1.5 million childhood deaths have been prevented through the systematic administration of vitamin A during polio immunization activities. Treatments for polio focus on limiting and alleviating symptoms. Heat and physical therapy can be used to stimulate the muscles and antispasmodic drugs are used to relax the effected muscles. This can improve mobility but does not reverse permanent polio paralysis. Vaccination is crucial in the fight against polio. Failure to implement strategic approaches leads to ongoing transmission of the virus. Endemic transmission of wild poliovirus is continuing to cause cases in border areas of Afghanistan and Pakistan. Failure to stop polio in these last remaining areas could result in as many as 200 000 new cases every year within 10 years, all over the world. That is why it is critical to ensure polio is eradicated completely, once and for all.

https://www.who.int/health-topics/poliomyelitis#tab=tab_1



EPI WEEK 31

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Sentinel Surveillance in Jamaica

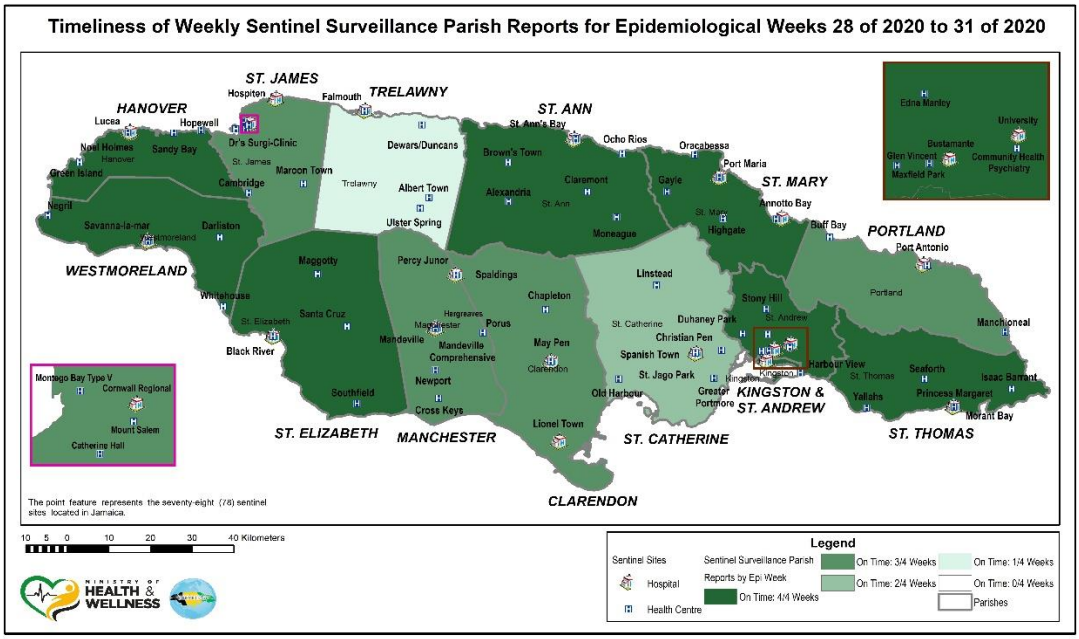
A syndromic surveillance system is good for early detection of and response to public health events.

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.

Map representing the Timeliness of Weekly Sentinel Surveillance Parish Reports for the Four Most Recent Epidemiological Weeks – 28 to 31 of 2020

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

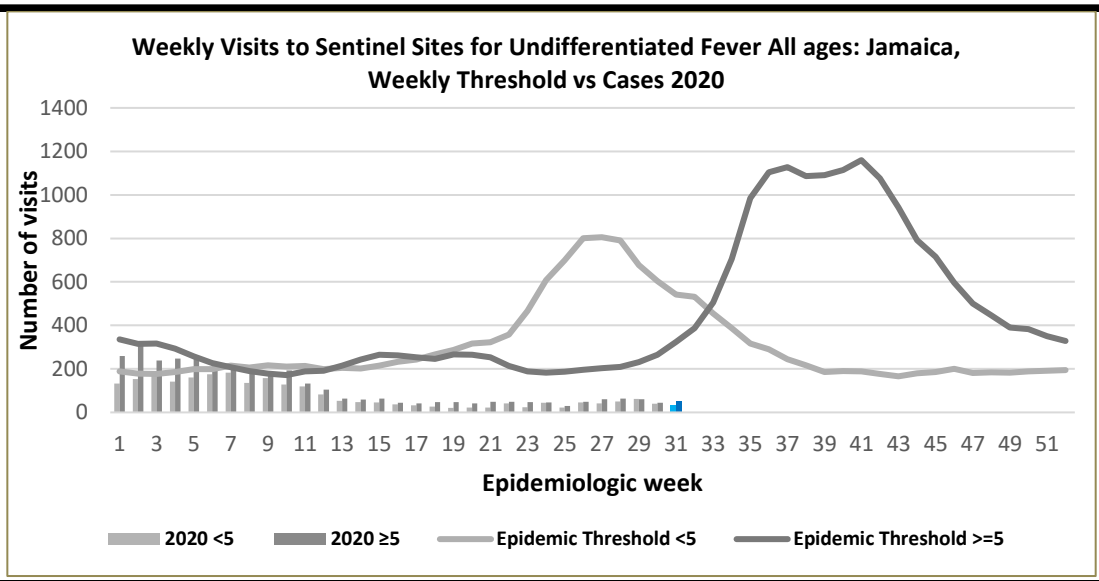


REPORTS FOR SYNDROMIC SURVEILLANCE

FEVER
Temperature of >38^0C /100.4^0F (or recent history of fever) with or without an obvious diagnosis or focus of infection.

KEY

VARIATIONS OF BLUE SHOW CURRENT WEEK



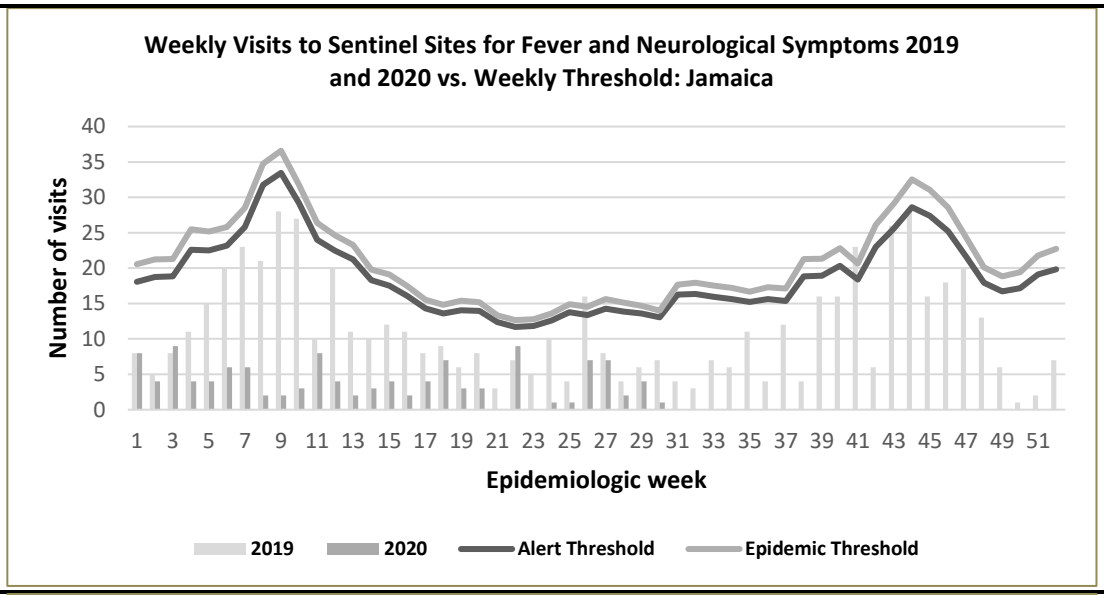
2 NOTIFICATIONS- All clinical sites

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

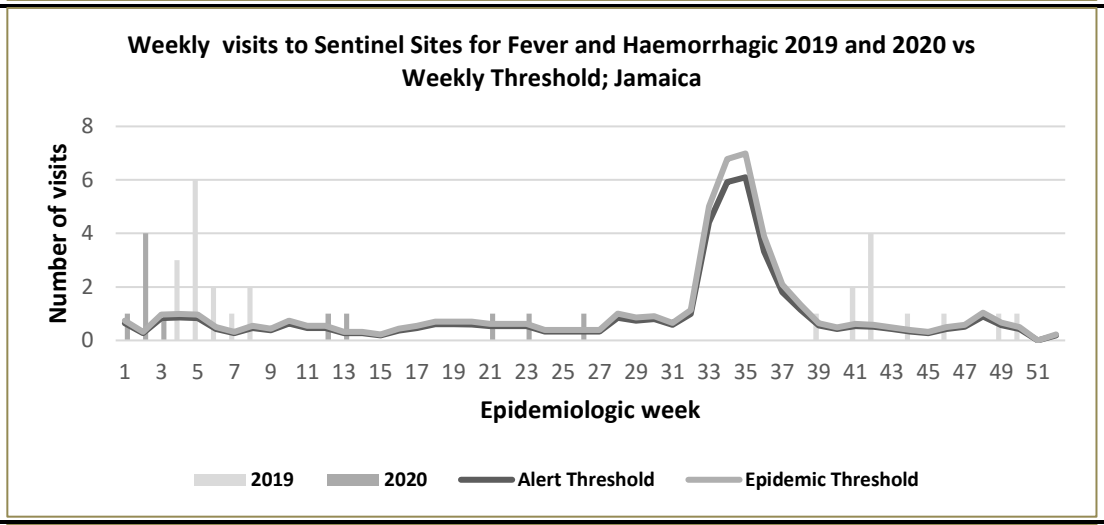
HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

SENTINEL REPORT- 78 sites. Automatic reporting

FEVER AND NEUROLOGICAL
Temperature of >38^{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).

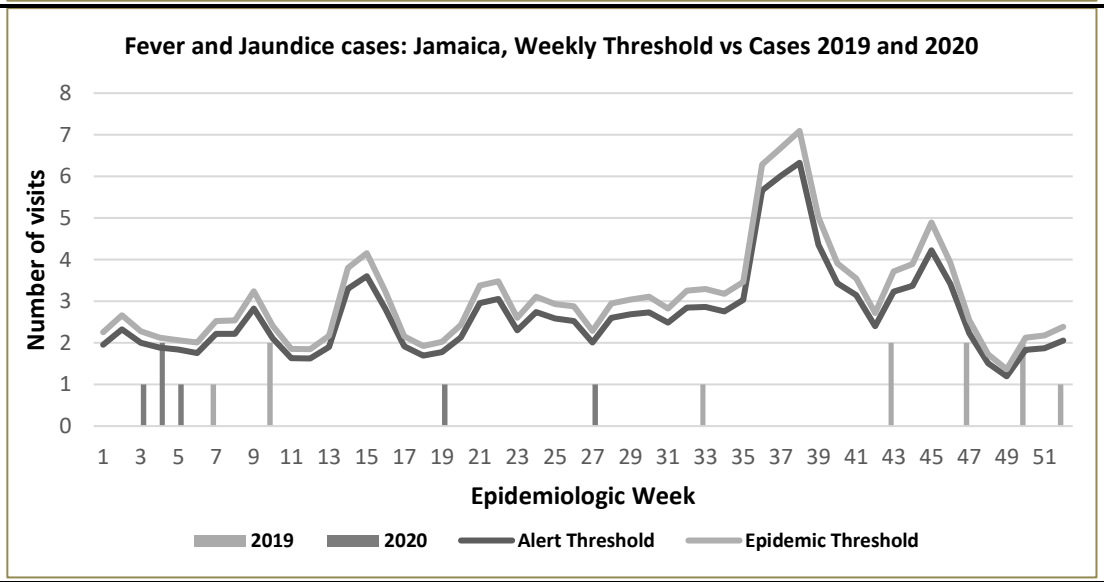


FEVER AND HAEMORRHAGIC
Temperature of >38^0C /100.4^0F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



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.

KEY

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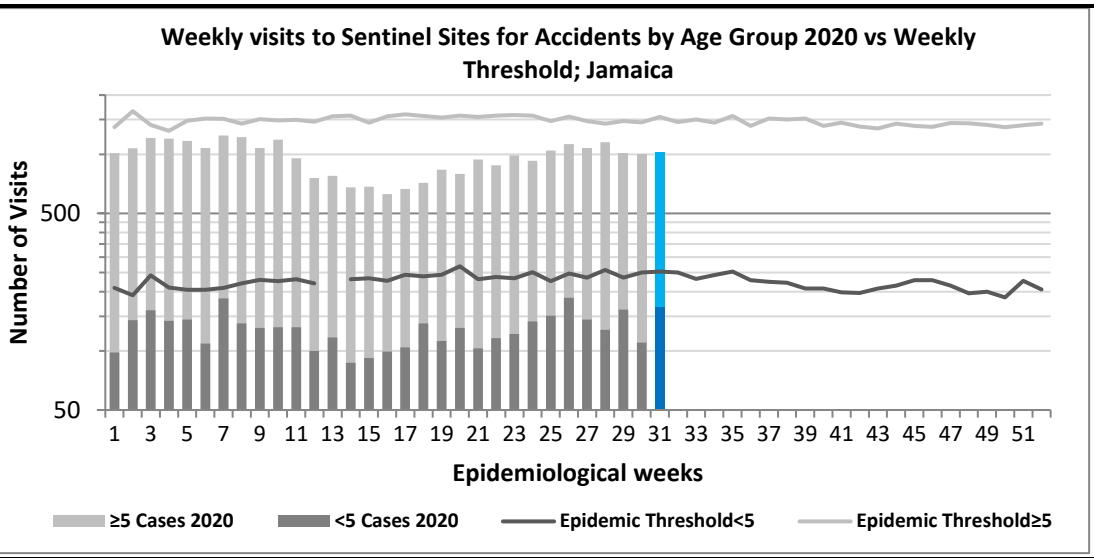
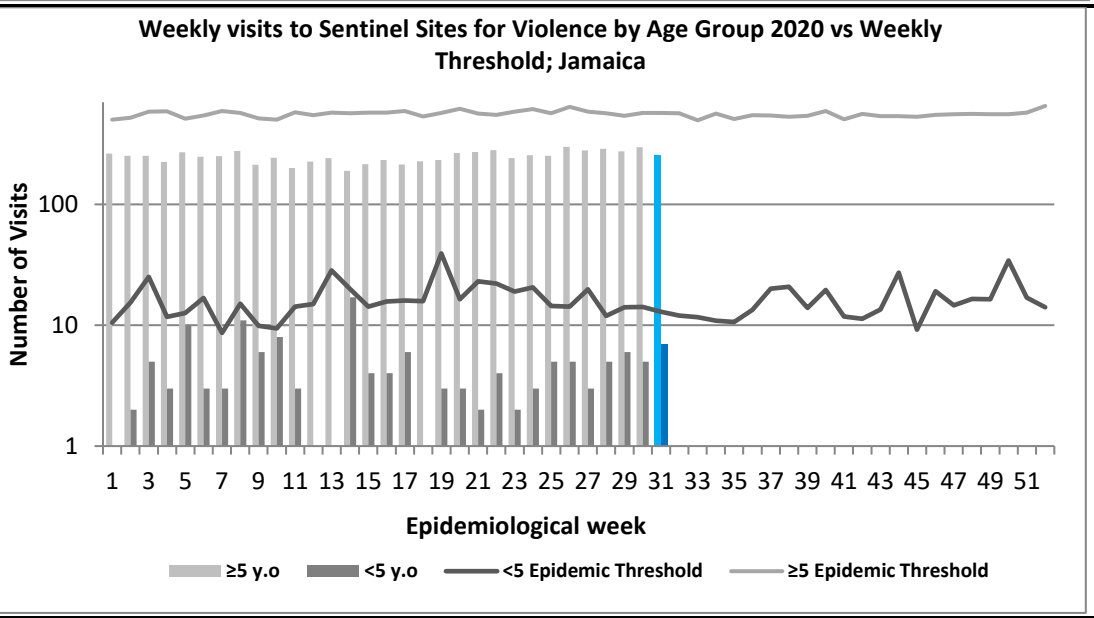


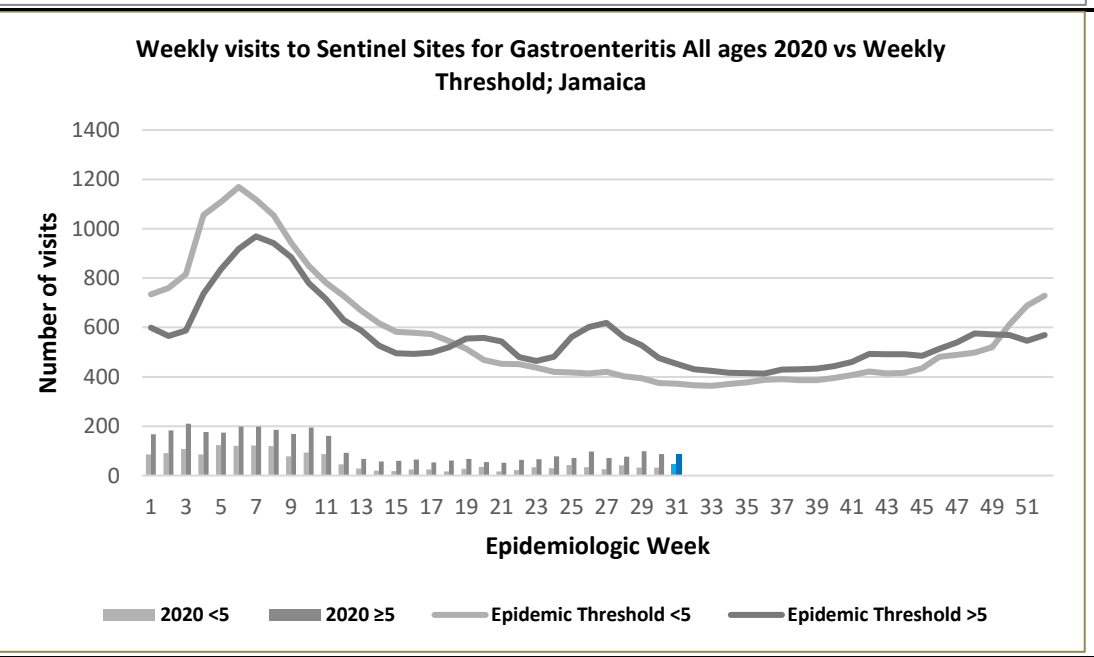
VIOLENCE

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 CURRENT YEAR 2020	Confirmed YTD PREVIOUS YEAR 2019
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		5	28
	Cholera		0	0
	Dengue Hemorrhagic Fever*		NA	NA
	Hansen's Disease (Leprosy)		0	0
	Hepatitis B		0	11
	Hepatitis C		0	2
	HIV/AIDS		NA	NA
	Malaria (Imported)		0	0
	Meningitis (Clinically confirmed)		1	13
EXOTIC/ UNUSUAL	Plague		0	0
H IGH MORBIDIT/ MORTALIY	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**		23	36
	Ophthalmia Neonatorum		23	116
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		0	0
	Tuberculosis		6	27
	Yellow Fever		0	0
	Chikungunya***		0	0
	Zika Virus****		0	0

Comments

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.

* Dengue Hemorrhagic Fever data include Dengue related deaths;

** Figures include all deaths associated with pregnancy reported for the period. * 2019 YTD figure was updated.

*** CHIKV IgM positive cases

**** Zika PCR positive cases

NA- Not Available

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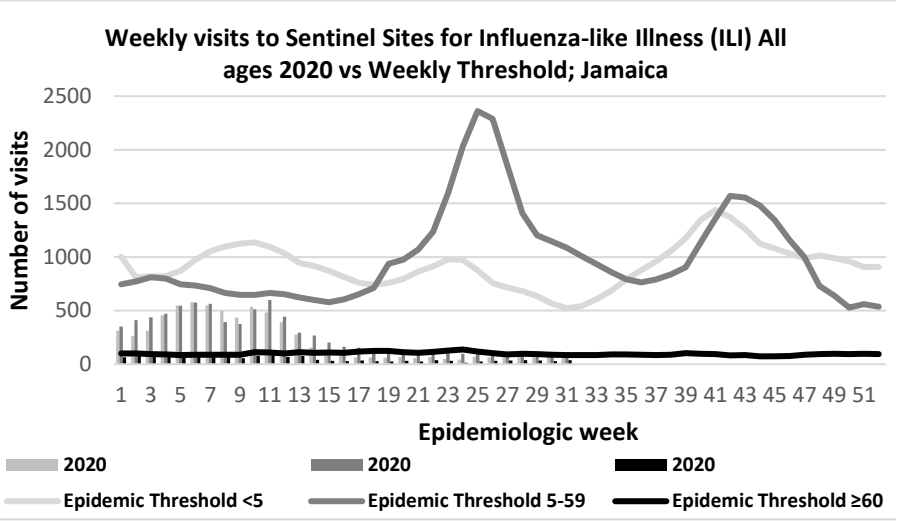
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 31

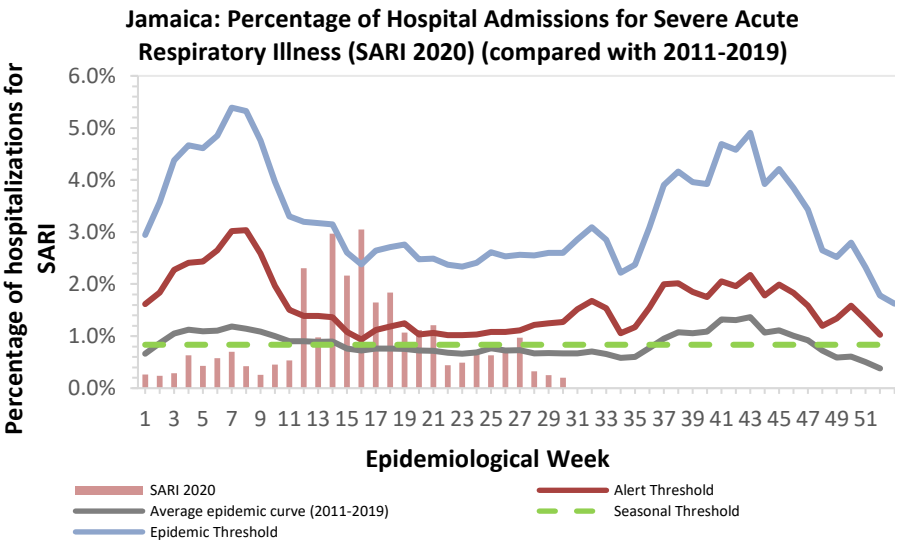
July 26, 2020-August 01, 2020 Epidemiological Week 31

	EW 31	*YTD*
SARI cases	*12*	*359*
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*



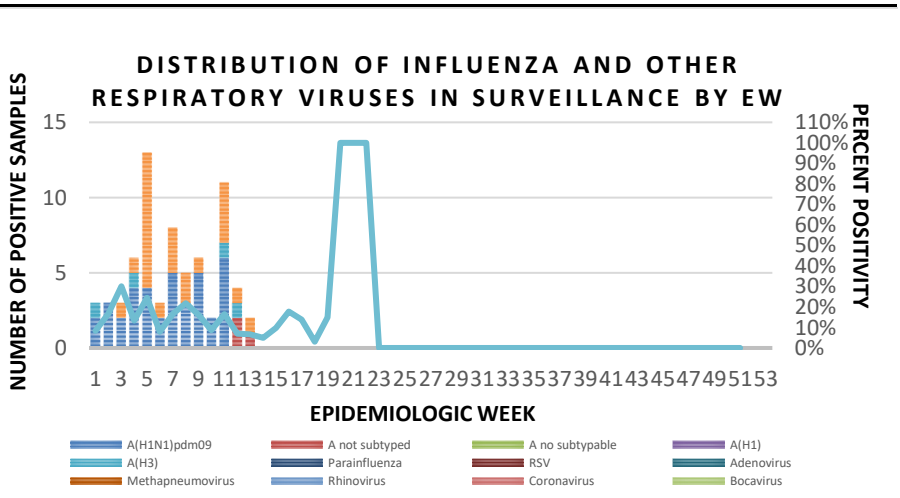
Epi Week Summary

During EW 31, 12 (twelve) SARI admissions were reported.



Caribbean Update EW 31

Caribbean: Influenza and other respiratory virus activity remained low in the subregion. In Haiti and Suriname, detections of SARS-CoV-2 continue elevated and increasing..



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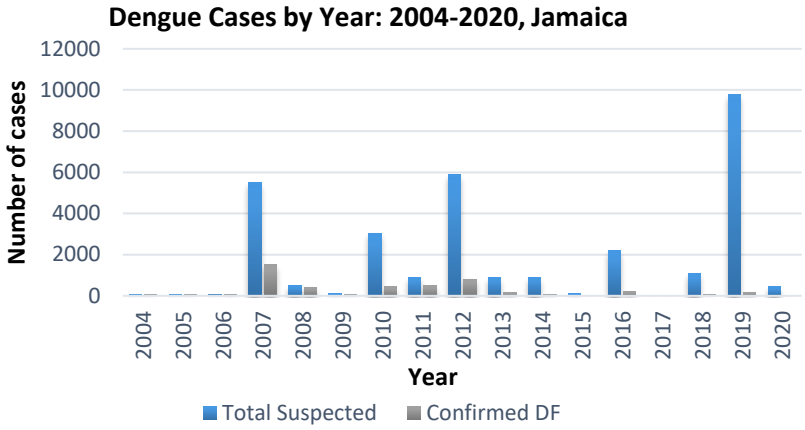
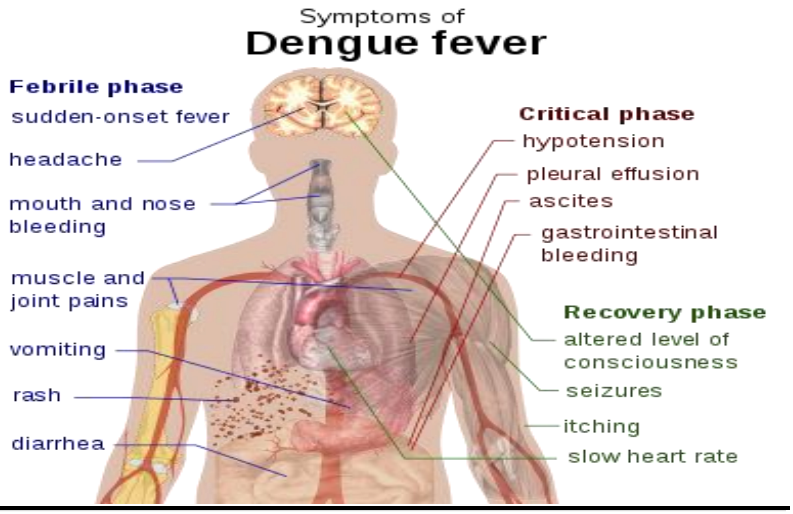
Dengue Bulletin

July 26, 2020-August 01, 2020 Epidemiological Week 31 | Epidemiological Week 31



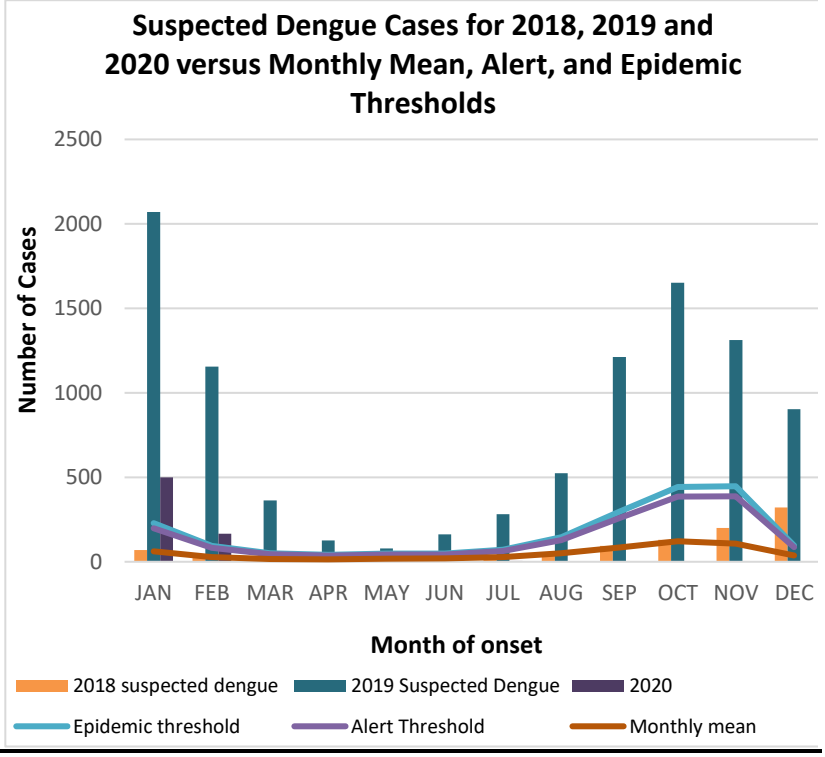
Reported suspected and confirmed dengue with symptom onset in week 31 of 2020

	2020	
	EW 31	YTD
Total Suspected Dengue Cases	0**	729**
Lab Confirmed Dengue cases	0**	1**
CONFIRMED Dengue Related Deaths	0**	1**



Points to note:

- ** figure as at July 31 , 2020
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.



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RESEARCH PAPER

Abstract

Knowledge, Attitudes, and Practices on the Control of the Dengue Vector in Selected Parishes in Jamaica

Tanya Barclay, Mickhail Benjamin, Najaee Brown, Janine Chattoo, Sabrina DaCosta, Tiffany Francis, Errol Gordon, Bryton Kinlock, Kameisha Maynard, Tyler Narsingh, Matthew Preston, Shemara Rhoden, Reneice Scott, Javon Smith, Shanelle Thomas, Dr. Norman Waldron, Deidre- Symone Wills,
University of the West Indies, Mona

INTRODUCTION: Dengue is an arboviral infection transmitted through female mosquito bites, contributing to morbidity and mortality globally, regionally, and locally. Dengue has re-emerged in Jamaica, totaling 339 suspected and confirmed cases including six deaths from January 1st to 21st 2019.

METHODS: A cross-sectional study of Jamaican adults registered at Healthcare Centres was done, employing a Systematic Random Sampling strategy to administer 150 Interviewer-Assisted Questionnaires.

RESULTS: A composite score ranging from 0-10 was used to measure the mean knowledge of Dengue transmission, where participants had a mean score of 7.2 (S.D=1.3). Statistical significance with regards to age (p=.030) and educational level (p=.004) was present. A composite score ranging from 5-25 was used to determine participants' attitude towards Dengue vector control and prevention. The mean attitude score was 21.7 (SD 3.0), with no statistically significant difference in socioeconomic and demographic characteristics. Most participants (89.3%) utilize Dengue vector prevention methods.

CONCLUSION: Despite the limitations encountered, the findings suggest that there is good knowledge of & attitude to the Dengue virus and transmission in Jamaica. Even though persons were not knowledgeable about the signs and symptoms of Dengue, majority utilized effective preventative and control methods. Certainly, these findings may serve as a template for further in-depth research as well as health promotion & education of the public to aid in the prevention of future Dengue outbreaks.

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