

WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

EPI WEEK 06

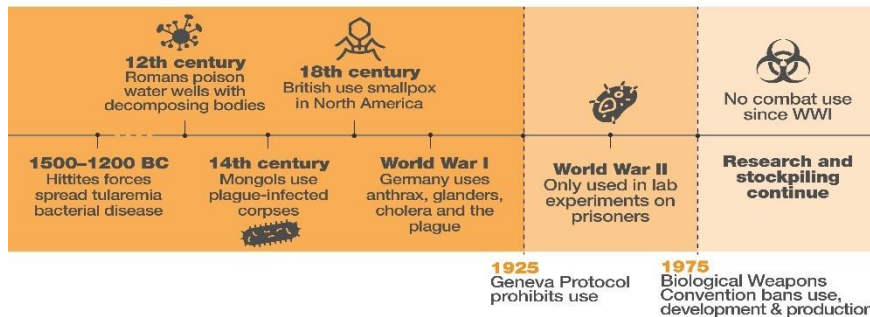
Biological weapons: Series Introduction

Overview: Biological weapons are microorganisms like virus, bacteria, fungi, or other toxins that are produced and released deliberately to cause disease and death in humans, animals or plants. Biological agents, like anthrax, botulinum toxin and plague can pose a difficult public health challenge causing large numbers of deaths in a short amount of time while being difficult to contain. Bioterrorism attacks could also result in an epidemic, for example if Ebola or Lassa viruses were used as the biological agents. Biological weapons is a subset of a larger class of weapons referred to as weapons of mass destruction, which also includes chemical, nuclear and radiological weapons. The use of biological agents is a serious problem, and the risk of using these agents in a bioterrorist attack is increasing.

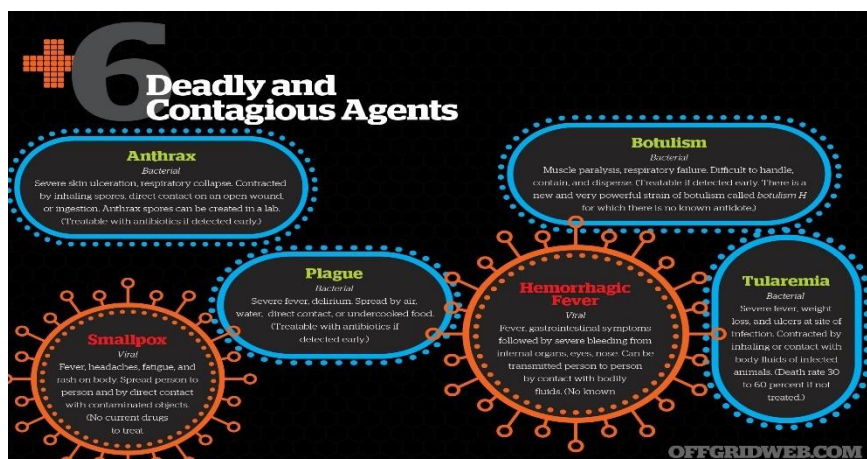
WHO response: WHO focuses on the possible public health consequences of an incident, regardless of whether it is characterized as a deliberate act or a naturally occurring event. When a Member State is concerned and wants to be prepared, WHO advises strengthening public health surveillance and response activities, with an emphasis on: **1.** more effective national surveillance of outbreaks of illness, including alert and response systems at all levels that can detect diseases that may be deliberately caused; **2.** better communication between multiple sectors, including public health, water supply, food safety, nuclear safety and poison-control; **3.** improved assessments of vulnerability, and effective communication about risks to both professionals and the public; **4.** preparation for handling the psychosocial consequences of the deliberate use of pathogens and chemicals to cause harm; and **5.** contingency plans for an enhanced response capacity by all sectors.

Biological weapons

Biological toxins were historically employed in warfare until their use was banned.



Sources: Al Jazeera, UNODA | Icons: Vanessa Choi, Ben Davis, BomSymbols - The Noun Project



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



SYNDROMES

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CLASS 1 DISEASES

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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



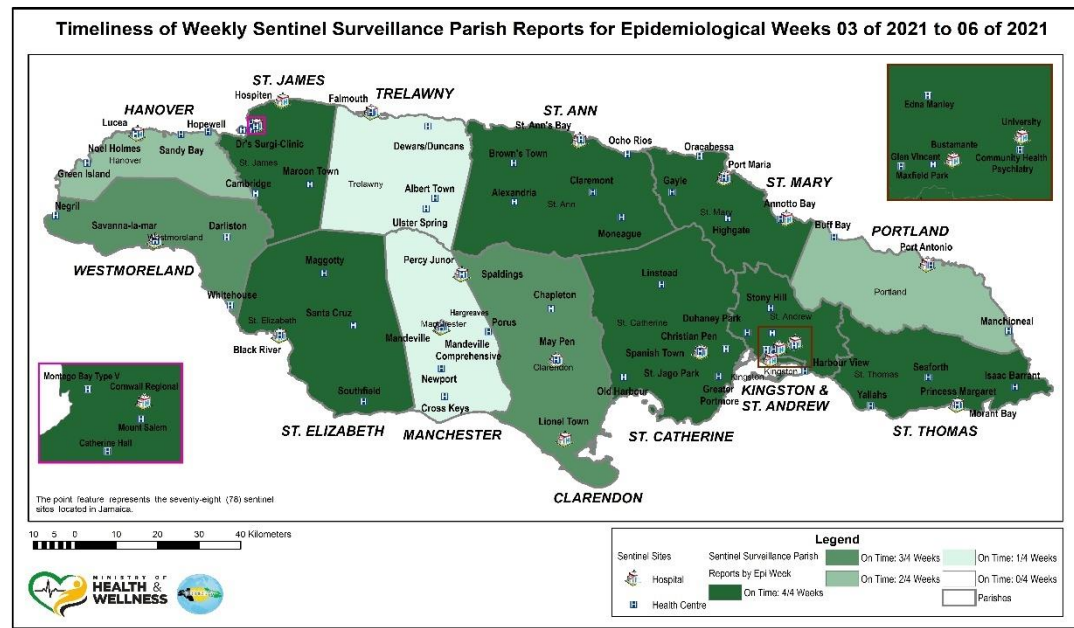
A syndromic surveillance system is good for early detection of and response to public health events.

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 - 3 2021 to 6 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

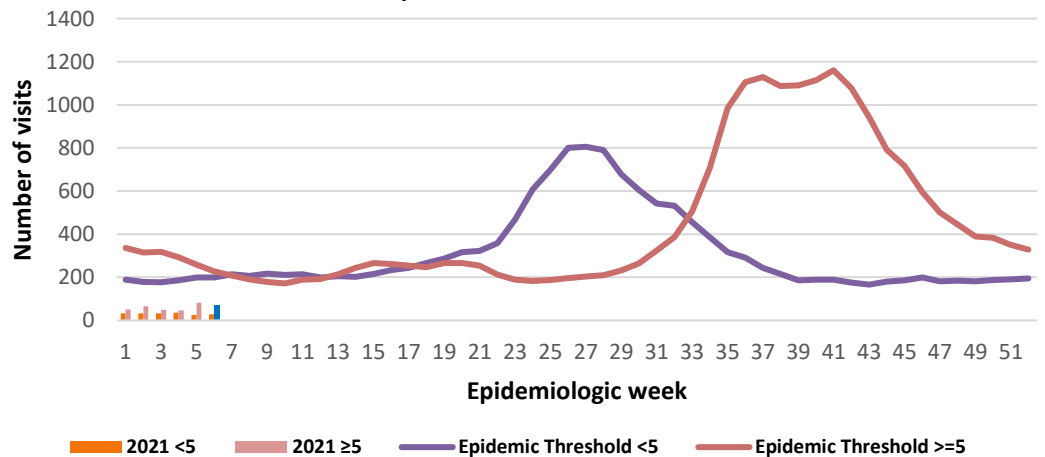
Temperature of $>38^{\circ}C$ / $100.4^{\circ}F$ (or recent history of fever) with or without an obvious diagnosis or focus of infection.



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



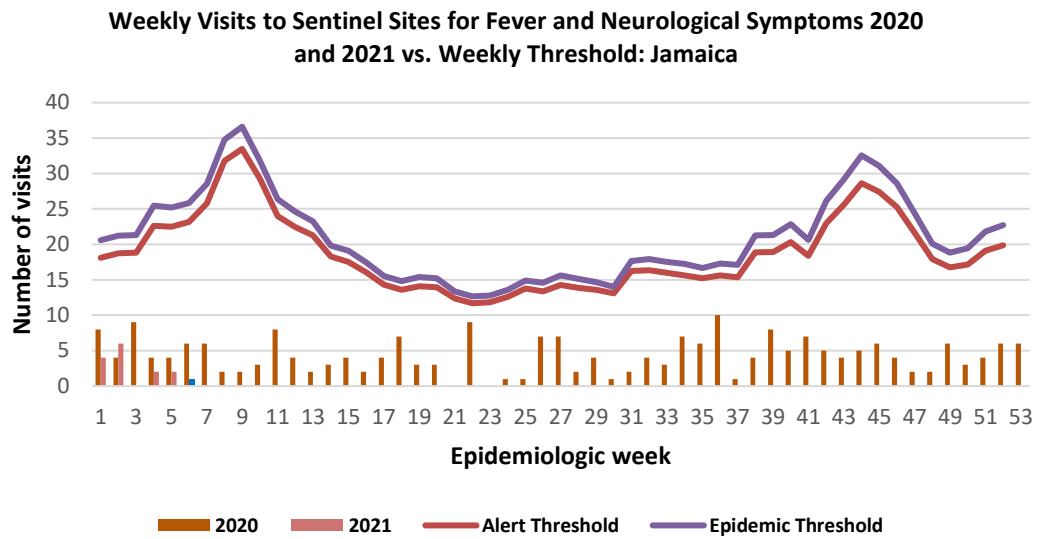
HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



SENTINEL REPORT- 78 sites. Automatic reporting

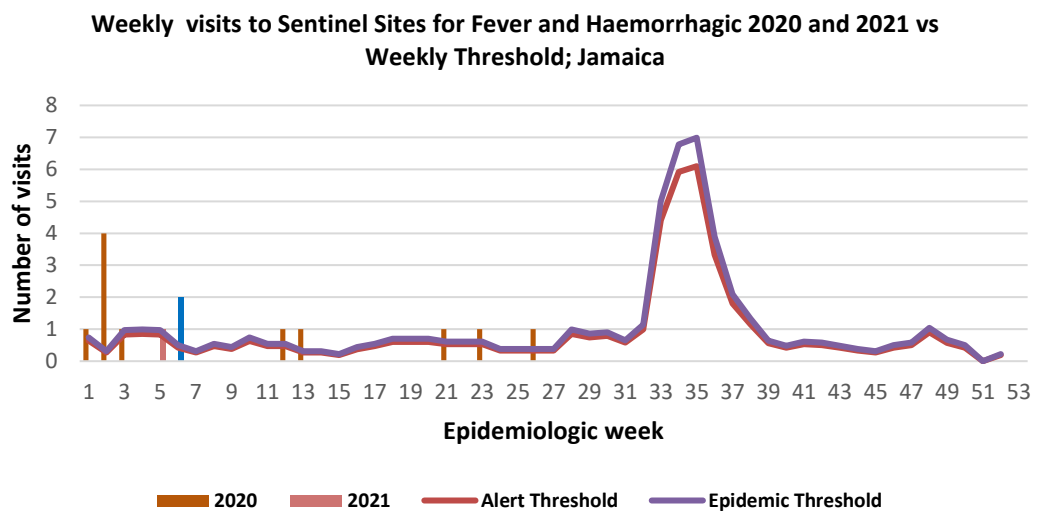
FEVER AND NEUROLOGICAL

Temperature of $>38^{\circ}\text{C}$ / 100.4°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

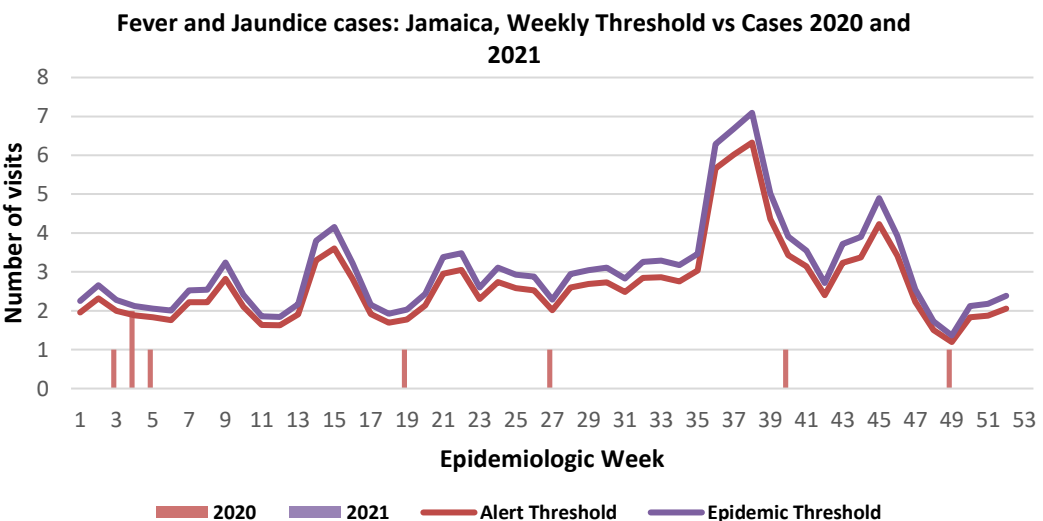
Temperature of $>38^{\circ}\text{C}$ / 100.4°F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



FEVER AND JAUNDICE

Temperature of $>38^{\circ}\text{C}$ / 100.4°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



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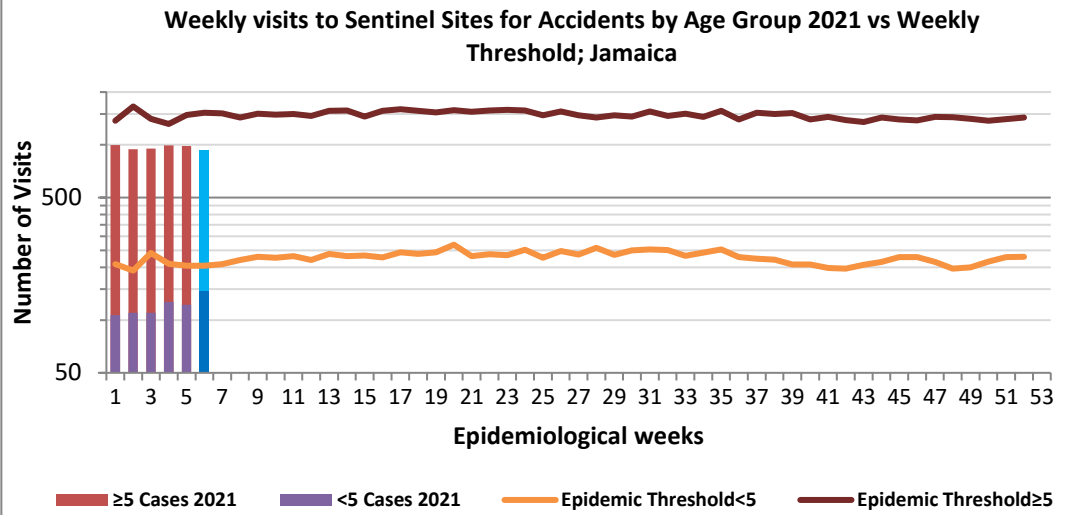
SENTINEL REPORT- 78 sites. Automatic reporting

ACCIDENTS

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

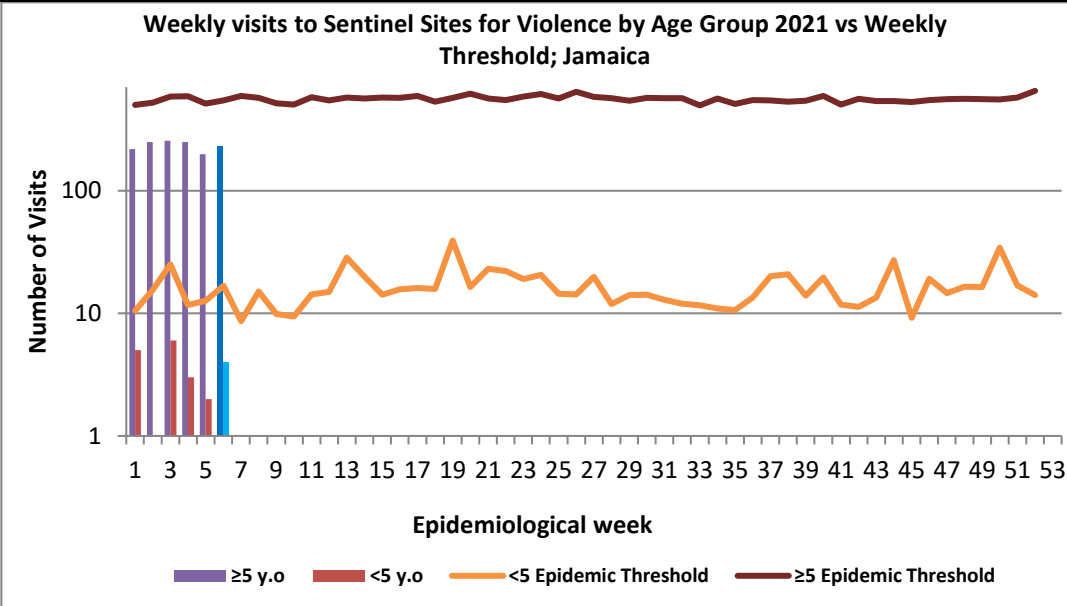
KEY

VARIATIONS OF BLUE SHOW CURRENT WEEK



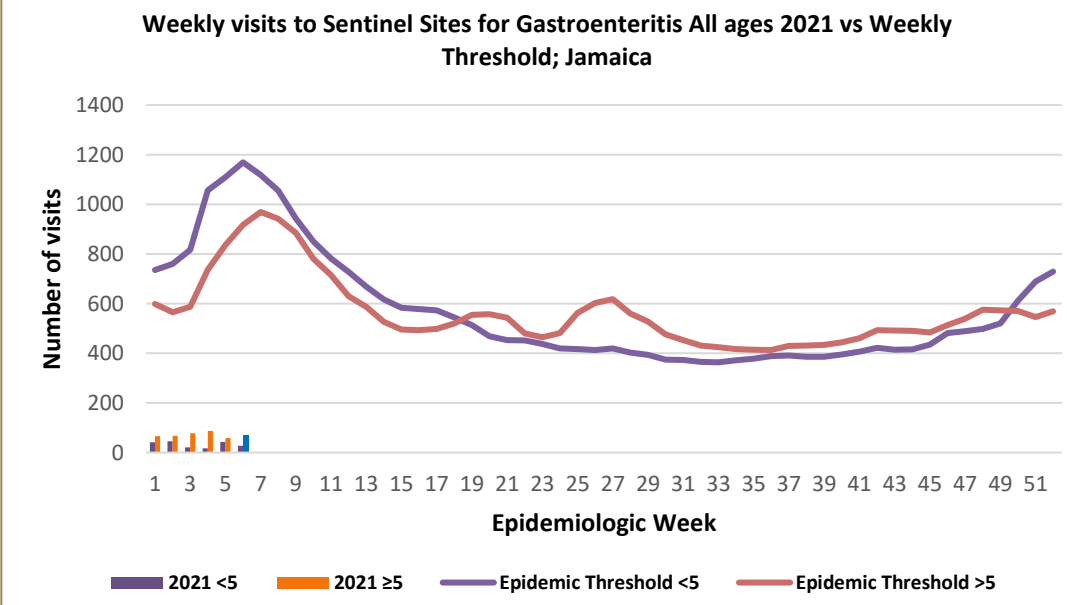
VIOLENCE

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



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- CLASS ONE NOTIFIABLE EVENTS		Comments		
	CLASS 1 EVENTS	Confirmed YTD ^α		
		CURRENT YEAR 2021	PREVIOUS YEAR 2020	
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning	0 ^β	5	
	Cholera	0	0	
	Dengue Hemorrhagic Fever ^γ	See Dengue page below	See Dengue page below	
	Hansen's Disease (Leprosy)	0	0	
	Hepatitis B	0	0	
	Hepatitis C	0	0	
	HIV/AIDS	NA	NA	
	Malaria (Imported)	0	0	
	Meningitis (Clinically confirmed)	0	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 ^δ	0	3	
	Ophthalmia Neonatorum	0	8	
	Pertussis-like syndrome	0	0	
	Rheumatic Fever	0	0	
	Tetanus	0	0	
	Tuberculosis	0	0	
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



5 NOTIFICATIONS- All clinical sites



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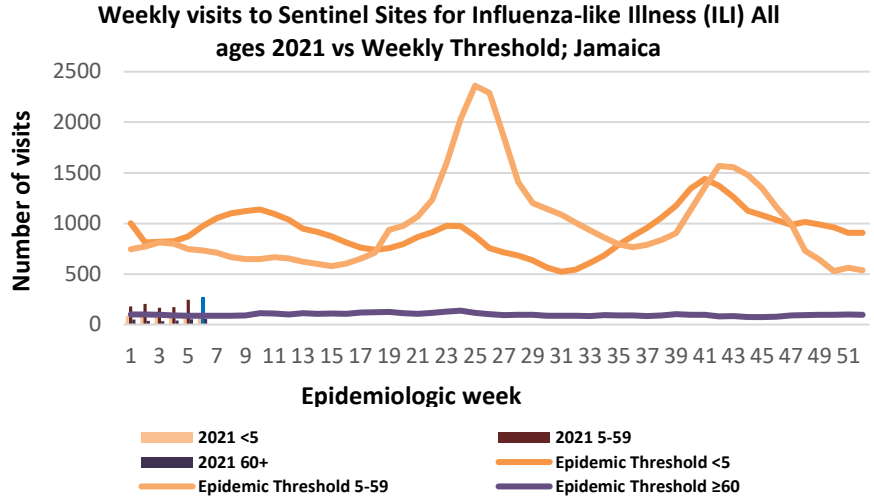
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NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 6

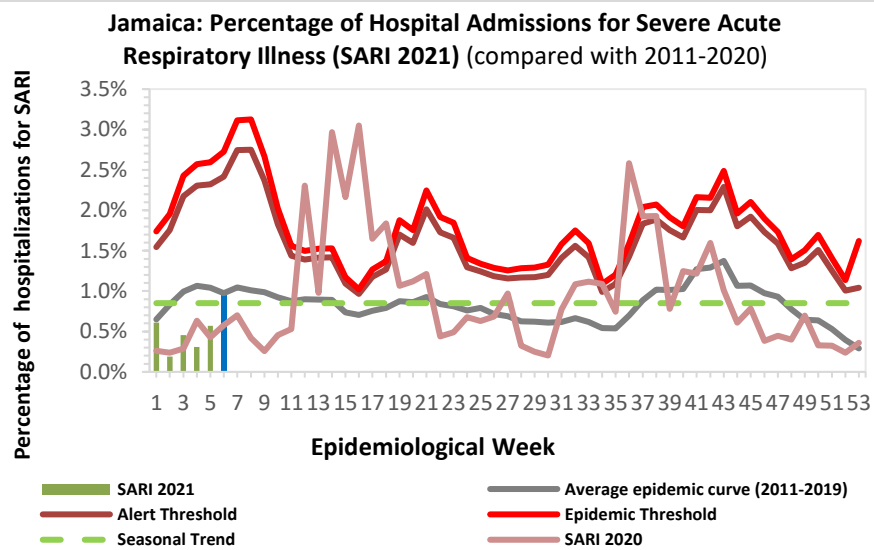
February 07, 2021 – February 13, 2021 Epidemiological Week 06

	EW 6	YTD
SARI cases	16	56
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



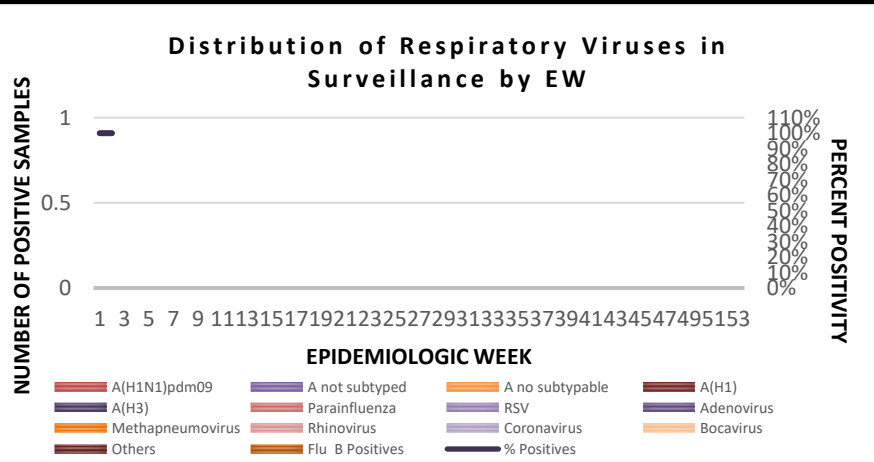
Epi Week Summary

During EW 06, 16 (sixteen) SARI admissions were reported.



Caribbean Update EW 06

Caribbean: Influenza and other respiratory virus activity remained low. In Belize, SARS-CoV-2 activity was reported at elevated levels and increasing. In Haiti, SARS-CoV-2 activity continued at moderate levels but increasing. In Jamaica, SARSCoV-2 activity was reported at elevated levels and increasing. In Saint Lucia, ILI activity was above expected levels for this time and SARS-CoV-2 detections and activity continued to increase.



6 NOTIFICATIONS-
All clinical sites



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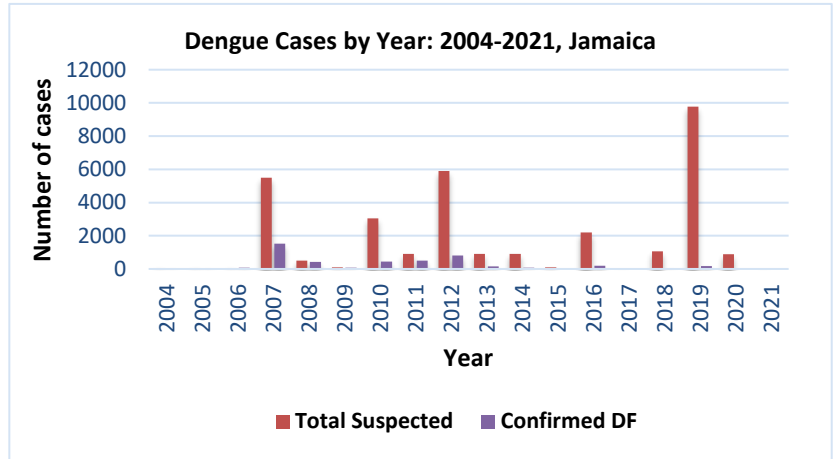


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Dengue Bulletin

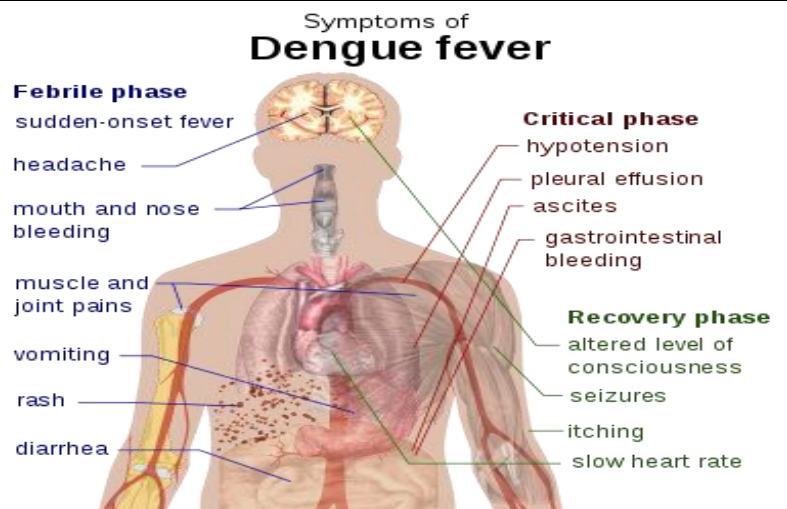
February 07, 2020 – February 13, 2021 Epidemiological Week 06

Epidemiological Week 06



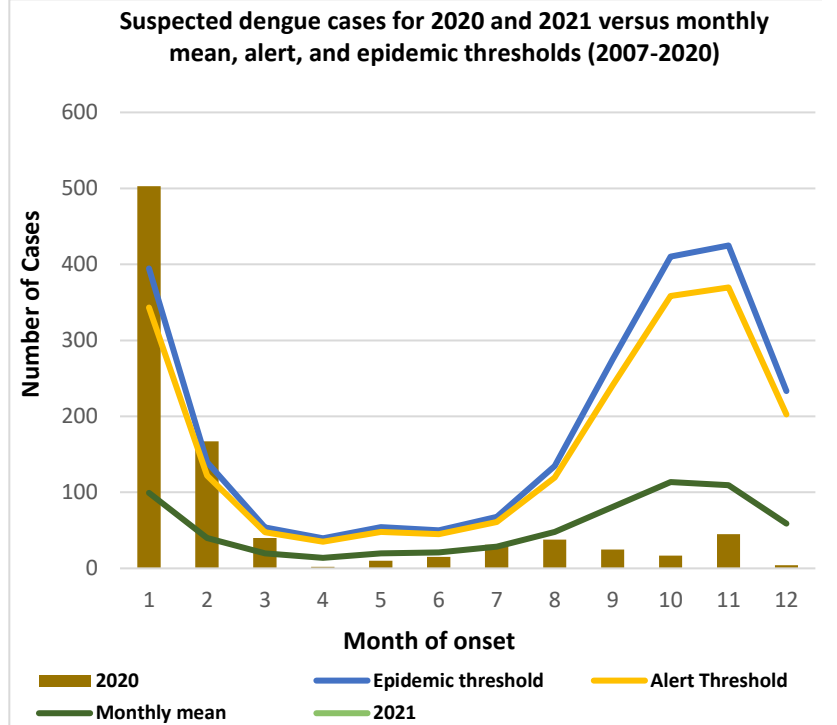
Reported suspected and confirmed dengue with symptom onset in week 06 of 2021

	2021*	
	EW 06	YTD
Total Suspected Dengue Cases	5	5
Lab Confirmed Dengue cases	0	0
CONFIRMED Dengue Related Deaths	0	0



Points to note:

- * figure as at February 16, 2021
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.



7 NOTIFICATIONS-
All clinical sites

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

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SENTINEL REPORT- 78 sites. Automatic reporting

RESEARCH PAPER

ABSTRACT

Measles Rapid Coverage Survey in Jamaican Schools 2015

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¹Ministry of Health, Kingston, Jamaica

Presenting Author e-mail: ChinD@moh.gov.jm

Objective: The aim of the survey was to determine the success of the Measles Prevention Campaign 2015.

Design and Methods: A school-based survey was conducted targeting children aged 1-6 years. The study employed a two stage design in which Early Childhood Institutions (ECI) and Primary / Preparatory / All-Age (PPA) schools were randomly selected within each parish, after which ten students were randomly selected from each institution. Seven hundred and fifty (750) students from seventy-five schools were targeted. Immunization teams located within parishes visited schools to obtain dates of MMR1 and MMR2 vaccinations for each child using a standard survey tool. Coverage was calculated after adjusting for “card not seen” and migration out of parish.

Results: Data on 741 students from 75 schools were used for analysis. Jamaica’s MMR1 coverage moved from 99% to 100% while MMR2 coverage increased by 40% from 58% to 98% during the campaign and in mop-up activities.

Conclusion: The campaign was successful. Jamaica’s MMR1 coverage increased from 99% to 100% and MMR2 coverage increased by 40% from 58% to 98%. The improvement in MMR2 coverage was a result of both the campaign and mop-up exercise. Consequently, the post campaign MMR2 coverage rate could be 94% (not considering mop-up) to 98%.



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8 NOTIFICATIONS-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
up for all Class One Events



HOSPITAL
ACTIVE
SURVEILLANCE-
30 sites. Actively
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