

WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

WHO Guidelines on Ethical Issues in Public Health Surveillance

Key facts

- Measles is one of the leading causes of death among young children even though a safe and cost-effective vaccine is available.
- In 2015, there were 134 200 measles deaths globally – about 367 deaths every day or 15 deaths every hour.



- Measles vaccination resulted in a 79% drop in measles deaths between 2000 and 2015 worldwide.

In 2015, about 85% of the world's children received one dose of measles vaccine by their first birthday:



EPI WEEK 27



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.

Table showcasing the Timeliness of Weekly Sentinel Surveillance Parish Reports for the Four Most Recent Epidemiological Weeks - 24 to 27 of 2022

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

KEY:

Yellow - late submission on Tuesday

Red - late submission after Tuesday

Epi week	Kingston and Saint Andrew	Saint Thomas	Saint Catherine	Portland	Saint Mary	Saint Ann	Trelawny	Saint James	Hanover	Westmoreland	Saint Elizabeth	Manchester	Clarendon
2022													
24	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
25	On Time	Late (T)	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
26	Late (T)	On Time	Late (W)	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
27	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	Late (W)	On Time

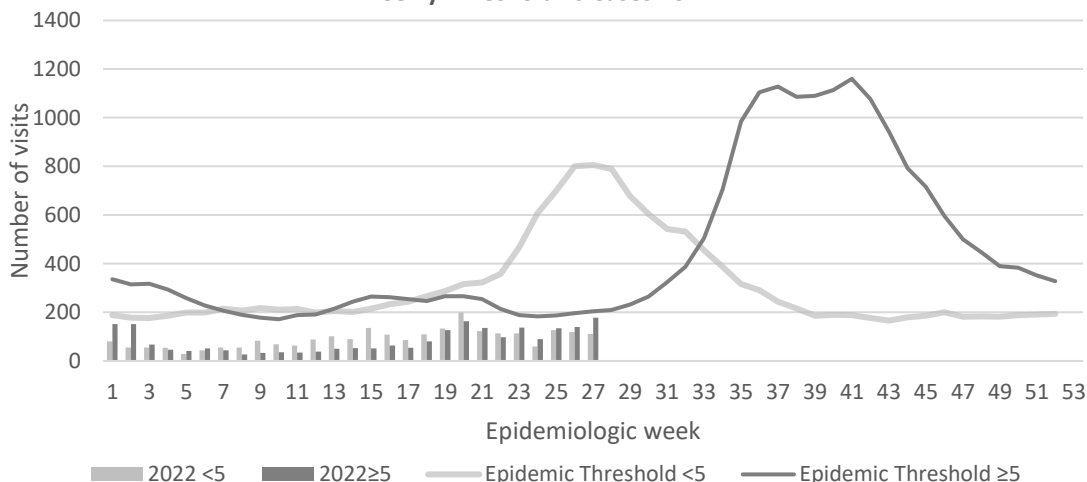
REPORTS FOR SYNDROMIC SURVEILLANCE

UNDIFFERENTIATED FEVER

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



Weekly Visits to Sentinel Sites for Undifferentiated Fever All ages: Jamaica, Weekly Threshold vs Cases 2022



2 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



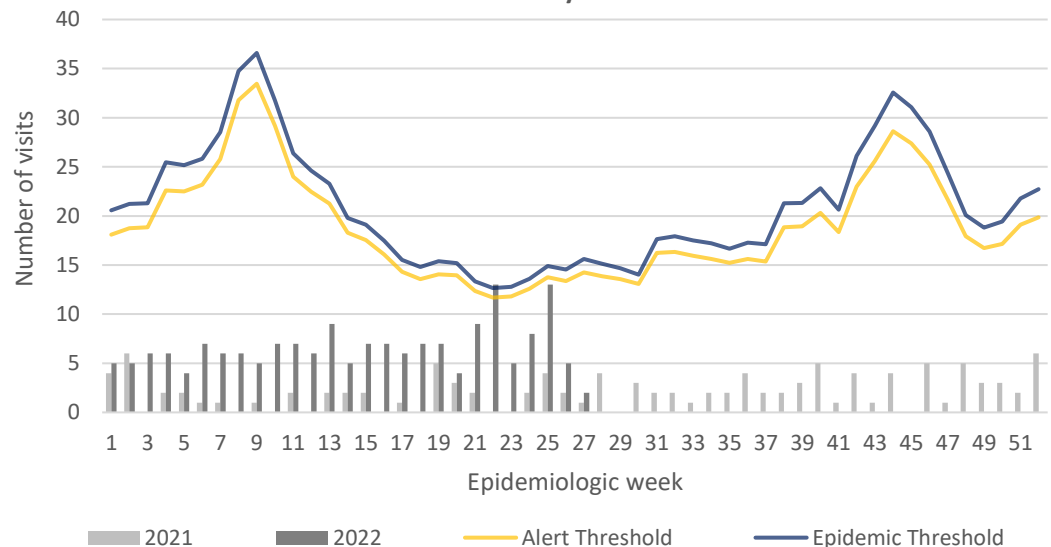
SENTINEL REPORT- 78 sites. Automatic reporting

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).



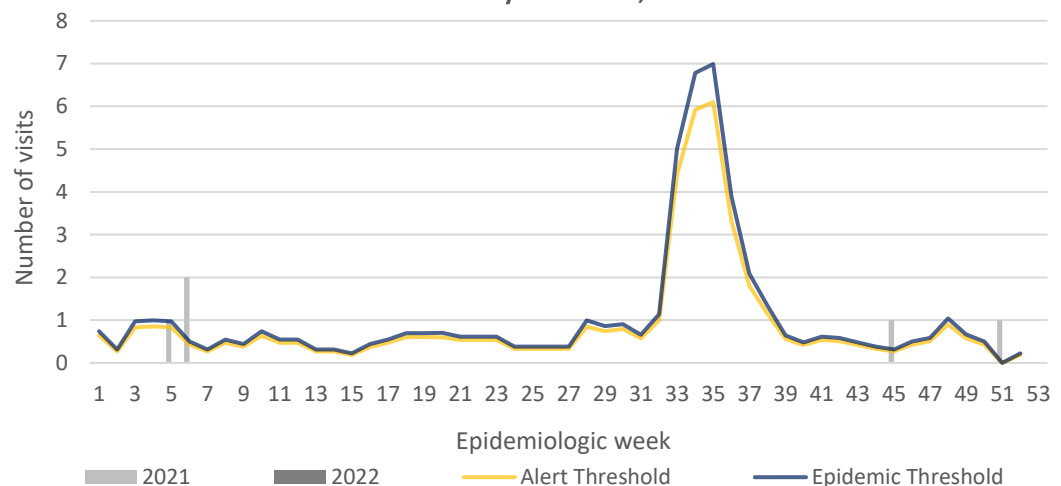
**Weekly Visits to Sentinel Sites for Fever and Neurological Symptoms
2021 and 2022 vs. Weekly Threshold: Jamaica**

**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.



Weekly visits to Sentinel Sites for Fever and Haemorrhagic 2021 and 2022 vs Weekly Threshold; Jamaica

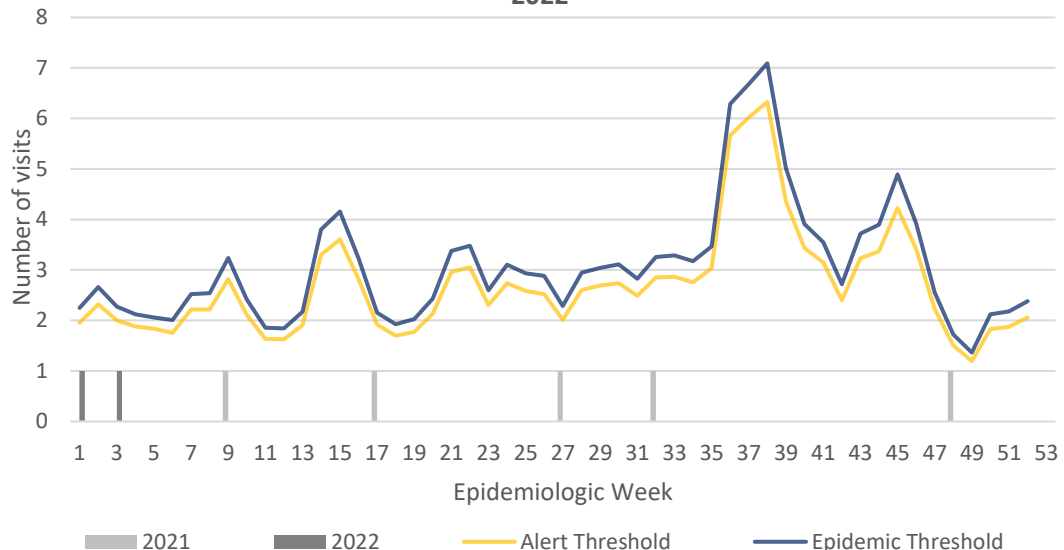
**FEVER AND JAUNDICE**

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.



Fever and Jaundice cases: Jamaica, Weekly Threshold vs Cases 2021 and 2022



3 NOTIFICATIONS-
All clinical
sites



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



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ACTIVE
SURVEILLANCE-**
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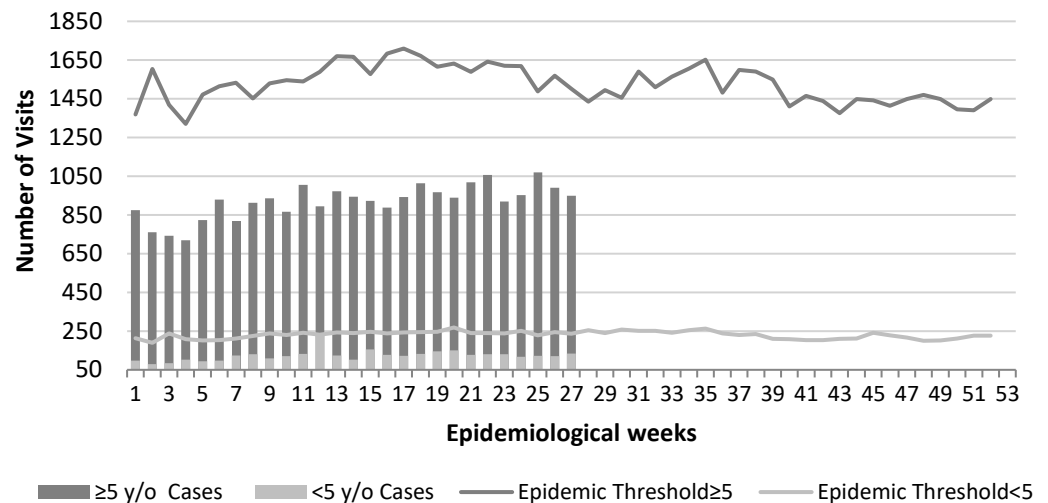
**SENTINEL
REPORT-** 78 sites.
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ACCIDENTS

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



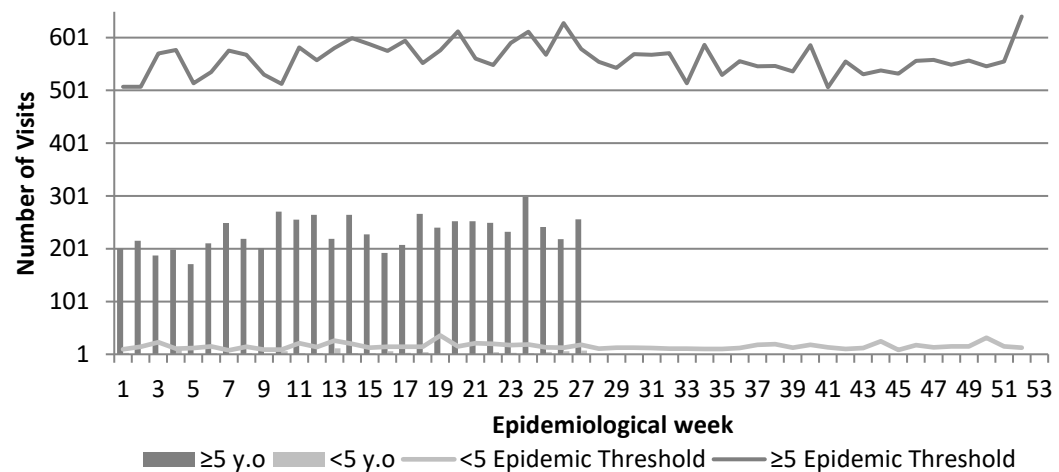
Weekly visits to Sentinel Sites for Accidents by Age Group 2022 vs Weekly Threshold; Jamaica

**VIOLENCE**

Any injury for which the cause is intentional, e.g. gunshot wounds, stab wounds, etc.



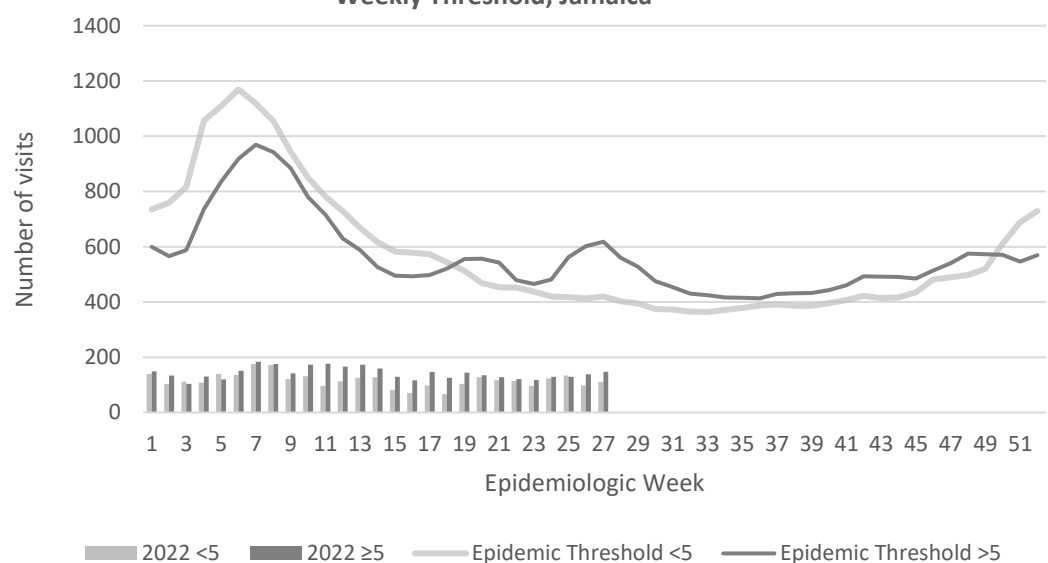
Weekly visits to Sentinel Sites for Violence by Age Group 2022 vs Weekly Threshold; Jamaica

**GASTROENTERITIS**

Inflammation of the stomach and intestines, typically resulting from bacterial toxins or viral infection and causing vomiting and diarrhoea.



Weekly visits to Sentinel Sites for Gastroenteritis All ages 2022 vs Weekly Threshold; Jamaica



4 NOTIFICATIONS-
All clinical sites



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CLASS ONE NOTIFIABLE EVENTS				Comments	
			Confirmed YTD ^α	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;	
	CLASS 1 EVENTS		CURRENT YEAR 2022		PREVIOUS YEAR 2021
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		109 ^β		90 ^β
	Cholera		0		0
	Dengue Hemorrhagic Fever ^γ		See Dengue page below		See Dengue page below
	COVID-19 (SARS-CoV-2)		47084		37535
	Hansen’s Disease (Leprosy)		0		0
	Hepatitis B		8		6
	Hepatitis C		2		4
	HIV/AIDS		NA		NA
	Malaria (Imported)		0		0
	Meningitis (Clinically confirmed)		10	14	
EXOTIC/ UNUSUAL	Plague		0	0	
HIGH MORBIDITY/ MORTALITY	Meningococcal Meningitis		0	0	^δ Figures include all deaths associated with pregnancy reported for the period.
	Neonatal Tetanus		0	0	
	Typhoid Fever		0	0	
	Meningitis H/Flu		0	0	
SPECIAL PROGRAMMES	AFP/Polio		0	0	^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.
	Congenital Rubella Syndrome		0	0	
	Congenital Syphilis		0	0	
	Fever and Rash	Measles	0	0	
		Rubella	0	0	
	Maternal Deaths ^δ		35	30	
	Ophthalmia Neonatorum		48	40	
	Pertussis-like syndrome		0	0	
	Rheumatic Fever		0	0	
	Tetanus		0	0	
	Tuberculosis		13	19	
Yellow Fever		0	0		
	Chikungunya ^ε		0	0	
	Zika Virus ^θ		0	0	NA- Not Available



5 NOTIFICATIONS-
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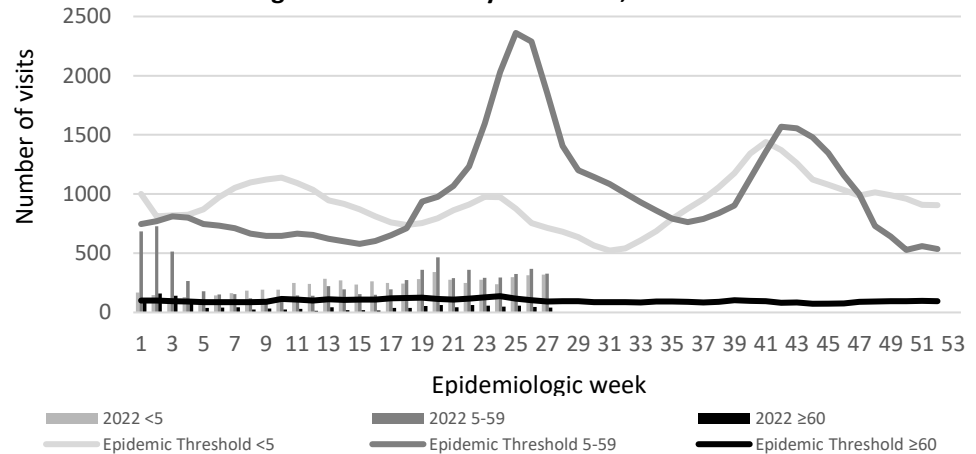
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 27

July 3 – July 9, 2022 Epidemiological Week 27

	EW 27	YTD
SARI cases	7	244
Total Influenza positive Samples	0	5
Influenza A	0	5
H3N2	0	4
H1N1pdm09	0	0
Not subtyped	0	1
Influenza B	0	0
Parainfluenza	0	0

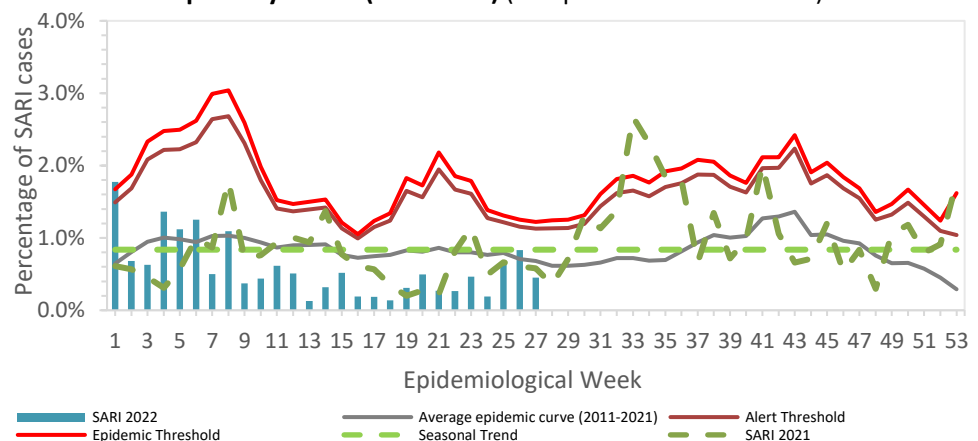
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2022 vs Weekly Threshold; Jamaica



Epi Week Summary

During EW 27, seven (7) SARI admissions were reported.

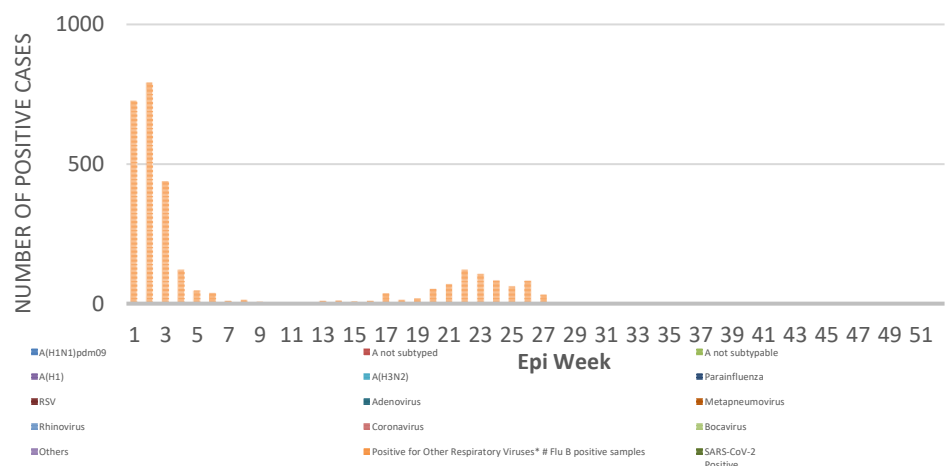
Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2022) (compared with 2011-2021)



Caribbean Update EW 27

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, JAMAICA, 2022



6 NOTIFICATIONS-
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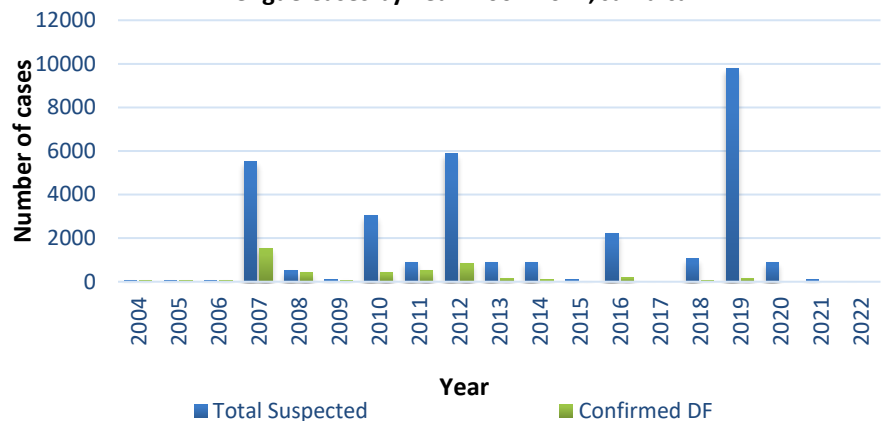
Dengue Bulletin

July 3 – July 9, 2022 Epidemiological Week 27

Epidemiological Week 27



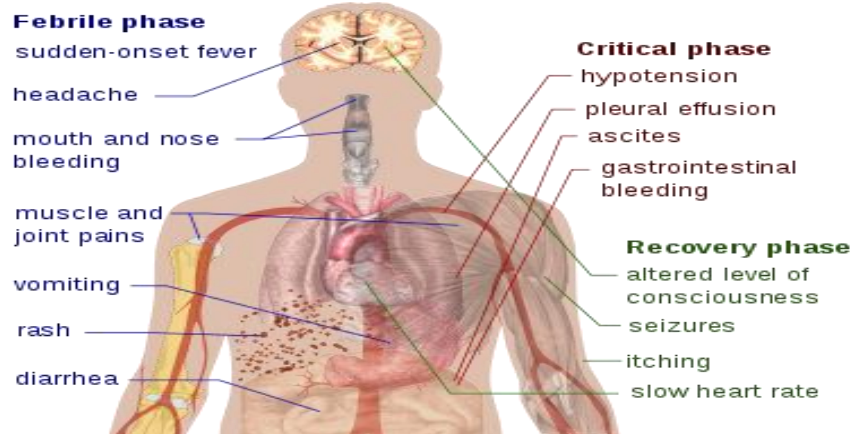
Dengue Cases by Year: 2004-2022, Jamaica



Reported suspected and confirmed dengue with symptom onset in week 27 of 2022

	2022*	
	EW 27	YTD
Total Suspected Dengue Cases	1	37
Lab Confirmed Dengue cases	0	0
CONFIRMED Dengue Related Deaths	0	0

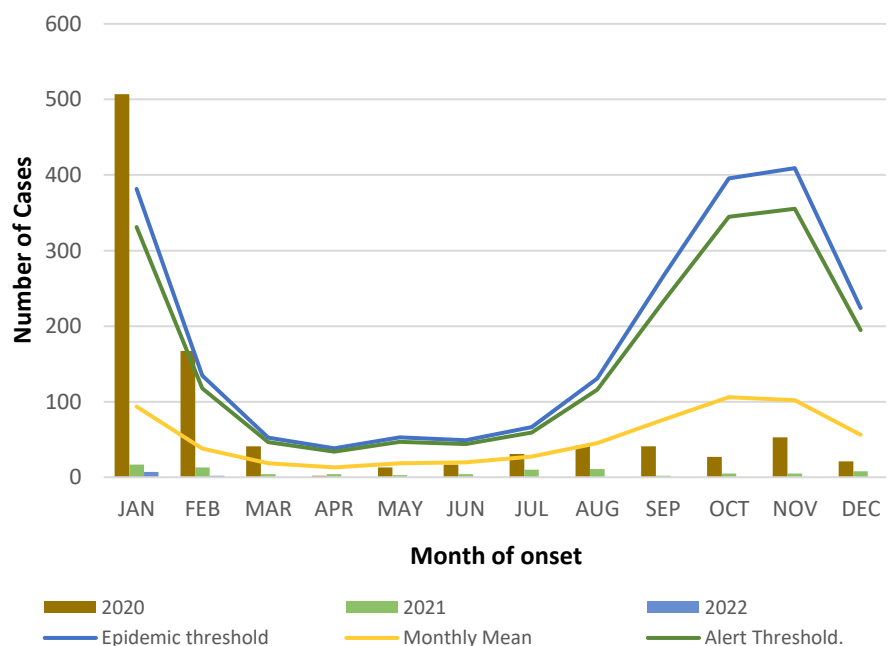
Symptoms of Dengue fever



Points to note:

- *Figure as at July 5, 2022
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

Suspected dengue cases for 2020, 2021 and 2022 versus monthly mean, alert, and epidemic thresholds (2007-2021)



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RESEARCH PAPER

Estimating Cost Effectiveness of HPV Vaccination or Pap Smear Expansion or VIA Screening Introduction By Using the CERVIVAC Model

J Barnett, K Lewis-Bell

Ministry of Health, Jamaica

Objective: To examine the potential costs, health benefits and value for money (e.g. cost per DALY saved primarily) of introducing the HPV vaccination for a cohort of girls entering high school; or expanding pap smear screening; or introduction of Visual Inspection with Acetic Acid (VIA) screening method.

Method: Analysis was conducted using a prospective cohort-based model (CERVIVAC) which incorporated meta-analysis to project the changes in the natural history of the disease based on the intervention's scale and scope. Information required related to demographics and system costs and structure for each intervention.

Results: The VIA programme produced the highest cost-effectiveness result i.e. lowest cost per DALY averted, from the government and society perspective, US\$75 and US\$4,212 respectively. Societal, the least cost effective was the expanded pap smear screening option US\$6,773.00 (US\$2,094.00 – government). Cost per DALY averted for the vaccination intervention were US\$5,360 and US\$5,313 respectively and it produced the highest number of DALYs averted. Notwithstanding, the results of an incremental cost effectiveness analysis between VIA and vaccination supports the clear dominance of the former.

Conclusion: Using the WHO classification as our proxy income threshold, VIA (US\$75 and US\$4,212) is less than the country's GDP per capita (US\$4,471), thus it is highly cost effective and a justifiable investment for the country. Therefore on the basis of technical efficiency alone, Jamaica should select the VIA option.



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8 NOTIFICATIONS-
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