WEEKLY EPIDEMIOLOGY BULLETIN NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

Cardiovascular Diseases – Symptoms of heart attacks and strokes



Often, there are no symptoms of the underlying disease of the blood vessels. A heart attack or stroke may be the first sign of underlying disease. Symptoms of a heart attack include:

- pain or discomfort in the centre of the chest; and/or
- pain or discomfort in the arms, the left shoulder, elbows, jaw, or back.

In addition the person may experience difficulty in breathing or shortness of breath; nausea or vomiting; light-headedness or faintness; a cold sweat; and turning pale. Women are more likely than men to have shortness of breath, nausea, vomiting, and back or jaw pain. The most common symptom of a stroke is sudden weakness of the face, arm, or leg, most often on one side of the body. Other symptoms include sudden onset of:

- numbness of the face, arm, or leg, especially on one side of the body;
- confusion, difficulty speaking or understanding speech;
- difficulty seeing with one or both eyes;
- difficulty walking, dizziness and/or loss of balance or coordination;
- severe headache with no known cause; and/or
- fainting or unconsciousness.

People experiencing these symptoms should seek medical care immediately. The key to cardiovascular disease reduction lies in the inclusion of cardiovascular disease management interventions in universal health coverage packages, although in a high number of countries health systems require significant investment and reorientation to effectively manage CVDs.

Evidence from 18 countries has shown that hypertension programmes can be implemented efficiently and cost-effectively at the primary care level which will ultimately result in reduced coronary heart disease and stroke. Patients with cardiovascular disease should have access to appropriate technology and medication.



Accidents

WEEK 04

Syndromic Surveillance

Violence

Pages 2-4



Health

EPI

Events Page 5

Class 1 Notifiable



COVID-19

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Influenza

Dengue Fever

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Research Paper

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Sentinel Surveillance in Jamaica



Table showcasing the Timeliness of Weekly Sentinel Surveillance Parish Reports for the Four Most Recent Epidemiological Weeks – 1 to 4 of 2024

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 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.

Epi week	Kingston and Saint Andrew	Saint Thomas	Saint Catherine	Portland	Saint Mary	Saint Ann	Trelawny	Saint James	Hanover	Westmoreland	Saint Elizabeth	Manchester	Clarendon
2024													
1	On	On	On	On	On	On	On	On	On	On	On	On	On
	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time
2	On	On	On	On	On	On	On	On	On	On	On	On	On
	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time
3	On	On	Late	On	On	On	On	On	On	On	On	On	On
	Time	Time	(T)	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time
4	On	On	On	On	On	Late	On	On	On	On	On	On	On
	Time	Time	Time	Time	Time	(T)	Time	Time	Time	Time	Time	Time	Time

REPORTS FOR SYNDROMIC SURVEILLANCE

UNDIFFERENTIATED FEVER

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





2 NOTIFICATIONS-All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE-30 sites. Actively pursued





February 09, 2024

FEVER AND NEUROLOGICAL

Temperature of >38°C /100.4^oF (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).



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11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51

- Epidemic Threshold

Epidemiologic week

- Alert Threshold

Fever and Jaundice cases: Jamaica, Weekly Threshold vs Cases 2023 and 2024



FEVER AND HAEMORRHAGIC

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

7

6

5

4

3

2

1 0

7

6

5

4

3

0

Number of visits

3

5

2023

1

9

2024

Number of visits



FEVER AND JAUNDICE

Temperature of $>38^{\circ}C/100.4^{\circ}F$ (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.



NOTIFICATIONS-3 All clinical sites

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

3 5

2023



2024

ACTIVE SURVEILLANCE-30 sites. Actively pursued



9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51

Epidemiologic Week

- Alert Threshold



- Epidemic Threshold





4 NOTIFICATIONS-All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



ACTIVE SURVEILLANCE-30 sites. Actively pursued





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CLASS ONE NOTIFIABLE EVENTS

Comments

			Confirm	ed YTD ^{α}	AFP Field Guides from WHO indicate that for an effective surveillance system, detection rates for		
	CLASS 1 EV	VENTS	CURRENT YEAR 2024	PREVIOUS YEAR 2023			
	Accidental Po	bisoning	22 ^β	27 ^β	AFP should be 1/100,000 population under 15 years old (6 to 7) cases annually.		
٩L	Cholera		0	0			
NO/NO	Dengue Hemo	orrhagic Fever ⁹	See Dengue page below	See Dengue page below			
ATI	COVID-19 (S	SARS-CoV-2)	65	813	Pertussis-like syndrome		
EST	Hansen's Dise	ease (Leprosy)	0	0	and Tetanus are clinically		
(NTI) TER	Hepatitis B		0	0	confirmed classifications.		
AL A	Hepatitis C		0	0	γ Dengue Hemorrhagic		
NO	HIV/AIDS		NA	NA	Fever data include Dengue		
ATI	Malaria (Imp	orted)	0	0	related deaths;		
Z	Meningitis		0	4	δ Figures include all deaths		
	Monkeypox		0	0	associated with pregnancy		
EXOTIC/ UNUSUAL	Plague		0	0	reported for the period.		
TY/	Meningococc	al Meningitis	0	0	^e CHIKV IgM positive		
GH IDIT ALL	Neonatal Teta	nus	0	0	θ 7:1-2 DCD θ		
H I DRB DRT	Typhoid Feve	er	0	0	BILLI CK positive cases		
MC	Meningitis H/	/Flu	0	0	^P Updates made to prior weeks.		
	AFP/Polio		0	0	α Figures are cumulative		
	Congenital Ru	ubella Syndrome	0	0	totals for all		
	Congenital Sy	/philis	0	0	epidemiological weeks yea		
MES	Fever and	Measles	0	0			
RAMI	Rash	Rubella	0	0			
SOG	Maternal Dea	ths ^δ	4	3			
L PR	Ophthalmia N	leonatorum	10	9	_		
CIA	Pertussis-like	syndrome	0	0	-		
SPE	Rheumatic Fe	ever	0	0	-		
	Tetanus		0	0	_		
	Tuberculosis		0	0	-		
	Yellow Fever		0	0			
	Chikungunya	÷	0	0			
	Zika Virus ^e		0	0	NA- Not Available		

NOTIFICATIONS-5 All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE-30 sites. Actively pursued





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NOTIFICATIONS-6 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



February 09, 2024 ISSN 0799-3927 NATIONAL SURVEILLANCE UNIT **INFLUENZA REPORT** EW4January 21, 2023 – January 27, 2024 Epidemiological Week 04 EW 04 **YTD** Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All SARI cases 29 2 ages 2024 vs Weekly Threshold; Jamaica **Total Influenza** 3 16 2500 positive Samples 3 Influenza A 16 2000 Number of visits H3N2 2 7 1500 H1N1pdm09 1 9 Not subtyped 0 0 1000 Influenza B 0 0 500

Caribbean Update EW 4

B lineage not

Parainfluenza

Epi Week Summary

During EW 04, two (2) SARI

admissions were reported.

Adenovirus

RSV

determined

B Victoria

0

0

0

0

1

0

0

0

0

7

0

3.0%

2.5% 2.0% 1.5% 1.0% 0.5% 0.0%

14

12

8

4

2

0

1 3 5 7

es

Sample 10

Positive 6

Percentage of SARI cases

3 5 7

1

2024 <5

Epidemic Threshold <5

7

1 3 5

SARI 2024

Epidemic Threshold

Caribbean: ILI cases have shown an increase in the last four weeks associated with an increase in positive cases of influenza, while SARI cases have remained on the decline. Influenza activity has shown a decrease in the last four EWs, reaching intermediate levels of circulation. During the last four EWs, the predominant viruses have been type A (H1N1) pdm09, followed by A(H3N2) and, to a lesser extent, B/Victoria. RSV activity has remained at low levels.SARS-CoV-2 activity has increased in the last four EWs, reaching high levels.By country: Elevated influenza activity has been observed in the Dominican Republic , Jamiaca, Saint Lucia, the Cayman Islands, and Saint Vincent and the Grenadines. Elevated SARS- CoV-2 activity has been observed in Belize, the Dominican Republic, Dominica, Jamaica, Saint Lucia ,Barbados, the Cayman Islands, Guyana and Saint Vincent and the Grenadines

(adopted fron PAHO Respiratory viruses weekly report)

> NOTIFICATIONS-7 All clinical sites

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



Positive

SURVEILLANCE-30 sites. Actively pursued

Epi Week

🗖 A(H1N1)pdm09 🗖 A(H3N2) 🔳 SARS-CoV-2 📮 Parainfluenza 📕 A not subtyped 🔳 B lineage non-determined 💻 RSV 🔳 B Victoria 🔳 Adenovirus



9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51

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9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53

Epidemiological Week

Seasonal Trend

Distribution of Influenza and Other Respiratory Viruses Under Surveillance by EW, Jamaica - 2024

Average epidemic curve (2011-2021)

2024 ≥60

■Epidemic Threshold ≥60

Alert Threshold

- - - SARI 2023

Epidemiologic week

Epidemic Threshold 5-59 —

2024 5-59

Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2024) (compared with 2011-2023)



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Suspected dengue cases for 2022 - 2024 versus monthly mean, alert, and epidemic thresholds (2007-2022)



NOTIFICATIONS-8 All clinical sites

Points to note:



*Figure as at February 08, 2024

Only PCR positive dengue cases

IgM positive cases are classified

are reported as confirmed.

as presumed dengue.

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE-30 sites. Actively pursued





RESEARCH PAPER

Abstract

Molecular Analysis and Genomic Characterization of Opportunistic Pathogens from the Oral Cavity

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Aim: This study aimed at charactering oral opportunistic pathogens of the bacterial species using molecular analysis.

Method: Six oral opportunistic pathogens were isolated, identified and characterized from the oral cavity. They were: *Streptococcus mutans, Staphylococcus aureus,* Methicillin Resistant *Staphylococcus aureus, Klebsiella pneumoniae, Enterococcus spp. and Pseudomonas aeruginosa.* DNA was extracted from these pathogens and analyzed using 0.8% agarose gel electrophoresis for the presence of genomic DNA. The DNA samples were further analyzed using Polymerase Chain Reaction (PCR).

Results: The presence of unique virulent genes was seen in each of the DNA samples analyzed. Virulent genes were detected and amplified bacterial genome: *Klebsiella pneumoniae* Uge, Meg A, rmpA, Kfu, fimH. *Staphylococcus aureus* and *MRSA* TSST-1, entrotoxin A, entrotoxin B, Fem A and *Streptococcus mutans* gtfB, spaP. Amplification of virulent genes implicated the pathogenicity of these oral microbes. Genes encode for proteins that aid in biofilm formation and defense mechanism of the oral microbes.

Conclusion: The study concluded that successful characterization of opportunistic pathogens, inhabiting the oral cavity was significant in providing additional knowledge for efficient control strategies and treatment of oral infections. Further work is being done to identify and examine the possibility of creating antibodies that can focus on antigens in the oral cavity.

Key words: oral cavity, opportunistic pathogens, virulence genes, polymerase chain reaction.



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9 NOTIFICATIONS-All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE-30 sites. Actively pursued



