

WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL SURVEILLANCE UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

Floods



Floods are the most frequent type of natural disaster and occur when an overflow of water submerges land that is usually dry. Floods are often caused by heavy rainfall, rapid snowmelt or a storm surge from a tropical cyclone or tsunami in coastal areas. Floods can cause widespread devastation, resulting in loss of life and damages to personal property and critical public health

infrastructure. Between 1998-2017, floods affected more than 2 billion people worldwide. People who live in floodplains or non-resistant buildings, or lack warning systems and awareness of flooding hazard, are most vulnerable to floods. There are 3 common types of floods:

- Flash floods are caused by rapid and excessive rainfall that raises water heights quickly, and rivers, streams, channels or roads may be overtaken.
- River floods are caused when consistent rain or snow melt forces a river to exceed capacity.
- Coastal floods are caused by storm surges associated with tropical cyclones and tsunamis.

Between 80-90% of all documented disasters from natural hazards during the past 10 years have resulted from floods, droughts, tropical cyclones, heat waves and severe storms. Floods are also increasing in frequency and intensity, and the frequency and intensity of extreme precipitation is expected to continue to increase due to climate change. Drowning accounts for 75% of deaths in flood disasters. Flood disasters are becoming more frequent and this trend is expected to continue. Drowning risks increase with floods particularly in low- and middle-income countries where people live in flood prone areas and the ability to warn, evacuate, or protect communities from floods is weak or only just developing.

Deaths also result from physical trauma, heart attacks, electrocution, carbon monoxide poisoning or fire associated with flooding. Often, only immediate traumatic deaths from flooding are recorded. Floods can also have medium- and long-term health impacts, including:

- water- and vector-borne diseases, such as cholera, typhoid or malaria
- injuries, such as lacerations or punctures from evacuations and disaster cleanup
- chemical hazards
- mental health effects associated with emergency situations
- disrupted health systems, facilities and services, leaving communities without access to health care
- damaged basic infrastructure, such as food and water supplies, and safe shelter.

Taken from WHO website on 10/ June /2024

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

https://www.who.int/health-topics/floods/#tab=tab_2

EPI WEEK 22



Syndromic Surveillance

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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.

Table showcasing the Timeliness of Weekly Sentinel Surveillance Parish Reports for the Four Most Recent Epidemiological Weeks – 19 to 22 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

| 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 | | | | | | | | | | | | |
| 19 | On Time | On Time | On Time | Late (W) | On Time | On Time | On Time | On Time | On Time | On Time | On Time | On Time | On Time |
| 20 | On Time | On Time | On Time | On Time | On Time | Late (T) | On Time | On Time | On Time | On Time | On Time | On Time | On Time |
| 21 | Late (T) | On Time | On Time | On Time | On Time | On Time | On Time | On Time | On Time | On Time | On Time | On Time | On Time |
| 22 | 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 |

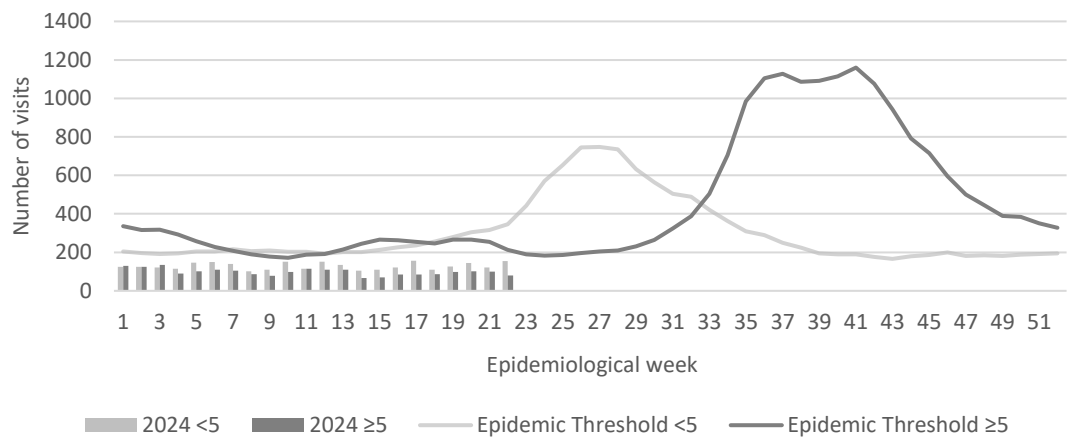
REPORTS FOR SYNDROMIC SURVEILLANCE

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 2024



2 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



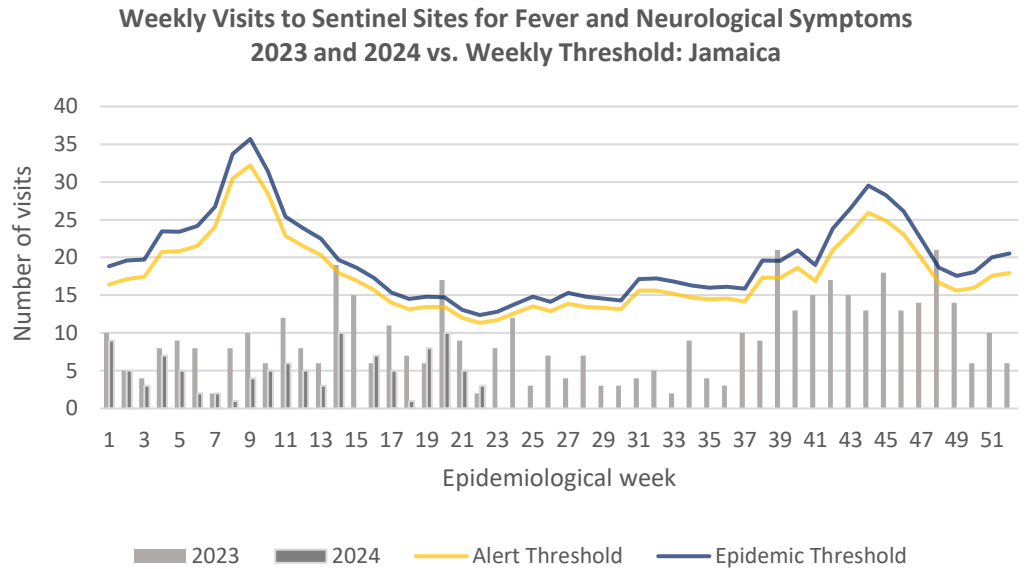
HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



SENTINEL REPORT- 78 sites. Automatic reporting

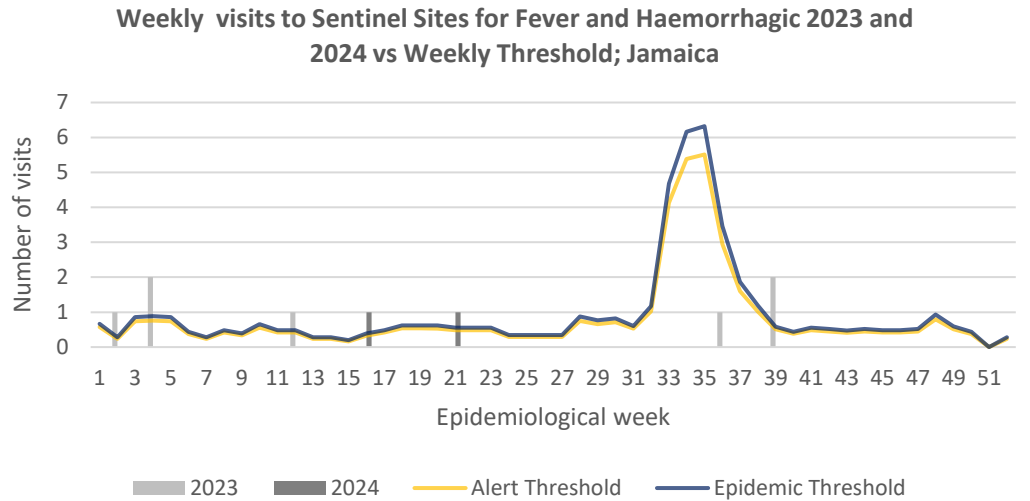
FEVER AND NEUROLOGICAL

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

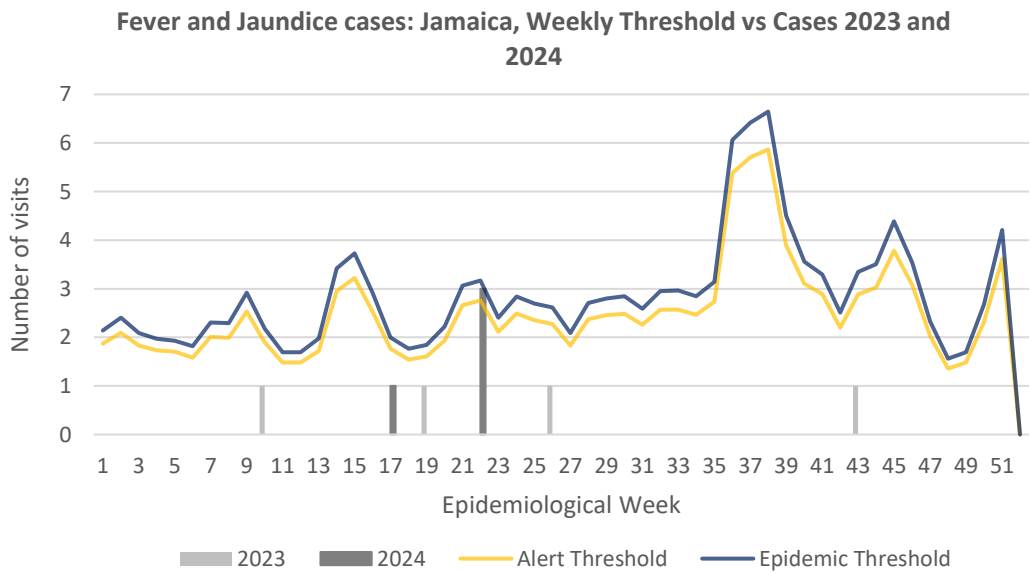
Temperature of $>38^{\circ}\text{C}$ / 100.4°F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



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



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



SENTINEL REPORT- 78 sites. Automatic reporting

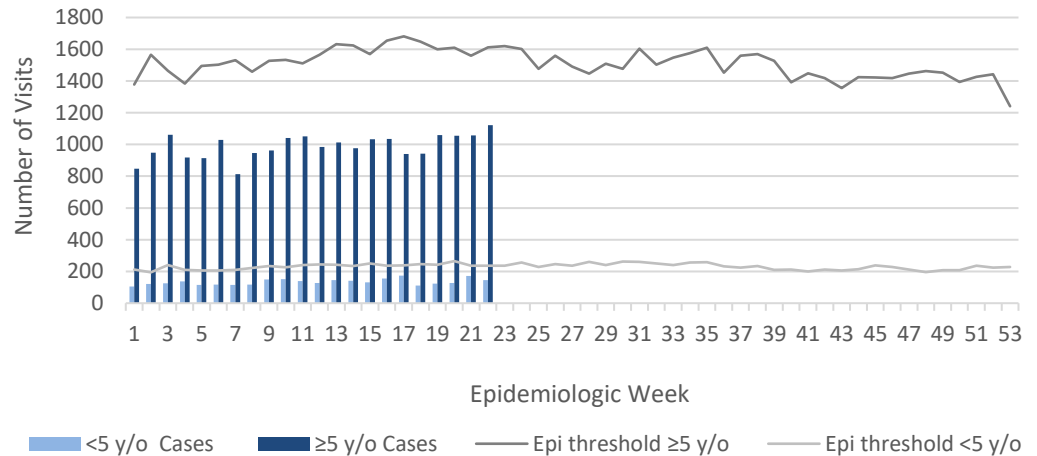


ACCIDENTS

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



Weekly Visits to Sentinel Sites for Accident by Age Group 2024 vs. Weekly Threshold

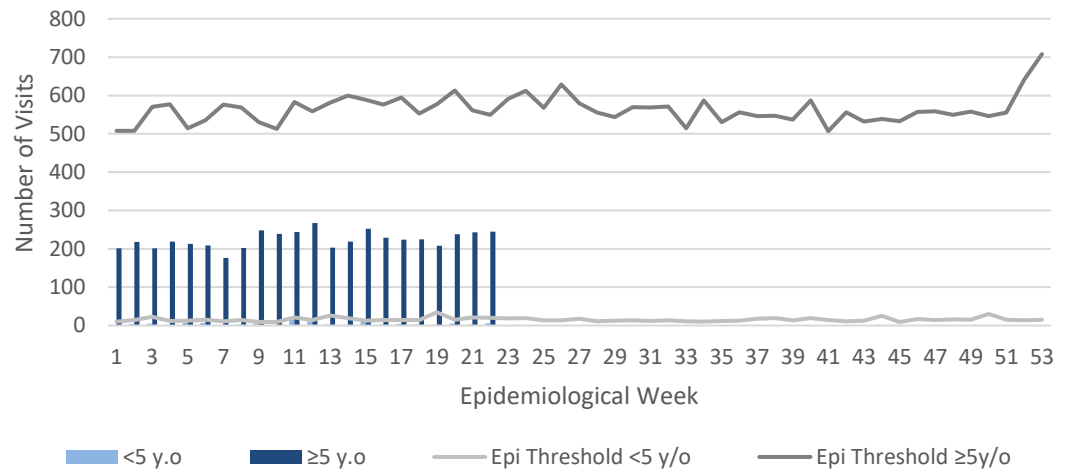


VIOLENCE

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



Weekly Visits to Sentinel Sites for Violence by Age Groups 2024 vs. Weekly Threshold

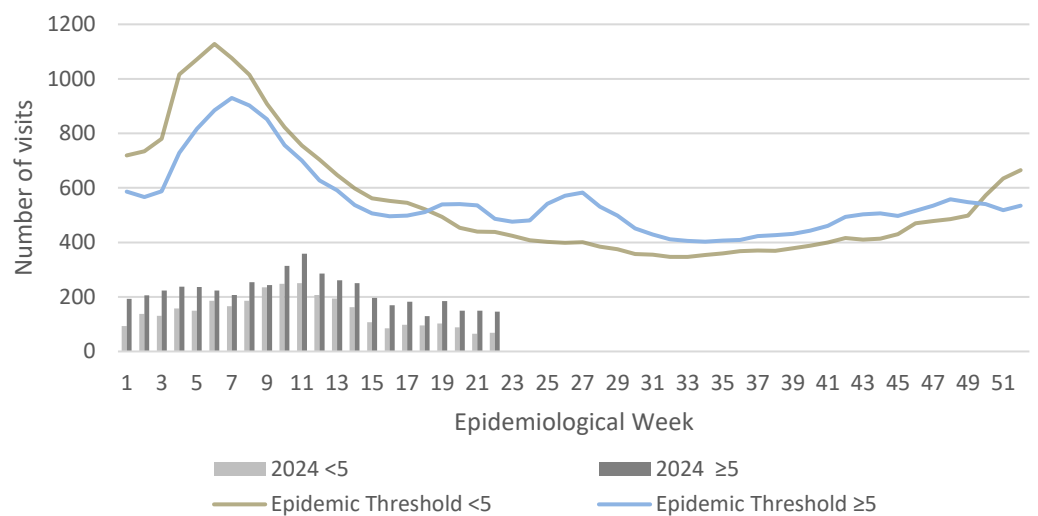


GASTROENTERITIS

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 2024 vs Weekly Threshold; Jamaica



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



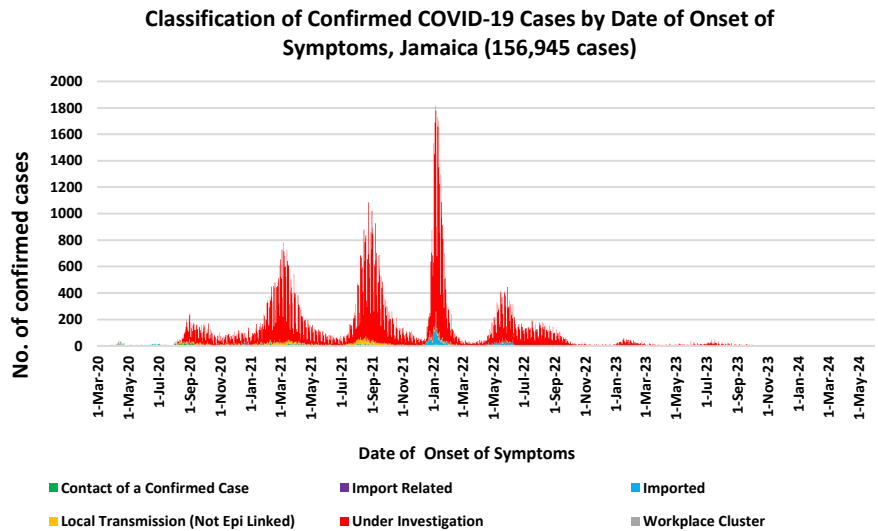
| CLASS ONE NOTIFIABLE EVENTS | | | | Comments | |
|----------------------------------|------------------------------|----------------------------|-----------------------|--|---|
| | CLASS 1 EVENTS | Confirmed YTD ^α | | AFP Field Guides from WHO indicate that for an effective surveillance system, detection rates for AFP should be 1/100,000 population under 15 years old (6 to 7) cases annually. | |
| | | CURRENT YEAR 2024 | PREVIOUS YEAR 2023 | | |
| NATIONAL /INTERNATIONAL INTEREST | Accidental Poisoning | 168 ^β | 165 ^β | 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. | |
| | Cholera | 0 | 0 | | |
| | Severe Dengue ^γ | See Dengue page below | See Dengue page below | | |
| | COVID-19 (SARS-CoV-2) | 211 | 2229 | | |
| | Hansen’s Disease (Leprosy) | 0 | 0 | | |
| | Hepatitis B | 9 | 41 | | |
| | Hepatitis C | 1 | 15 | | |
| | HIV/AIDS | NA | NA | | |
| | Malaria (Imported) | 0 | 0 | | |
| | Meningitis | 8 | 17 | | |
| | Monkeypox | 0 | 3 | | |
| EXOTIC/ UNUSUAL | Plague | 0 | 0 | ^ε CHIKV IgM positive cases ^θ Zika PCR positive cases ^β Updates made to prior weeks. ^α Figures are cumulative totals for all epidemiological weeks year to date. | |
| 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 | 26 | 21 | | |
| | Ophthalmia Neonatorum | 66 | 68 | | |
| | Pertussis-like syndrome | 0 | 0 | | |
| | Rheumatic Fever | 0 | 0 | | |
| | Tetanus | 0 | 0 | | |
| | Tuberculosis | 10 | 30 | | |
| | Yellow Fever | 0 | 0 | | |
| Chikungunya ^ε | 0 | 0 | | | |
| Zika Virus ^θ | 0 | 0 | | | |

NA- Not Available

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

COVID-19 Surveillance Update

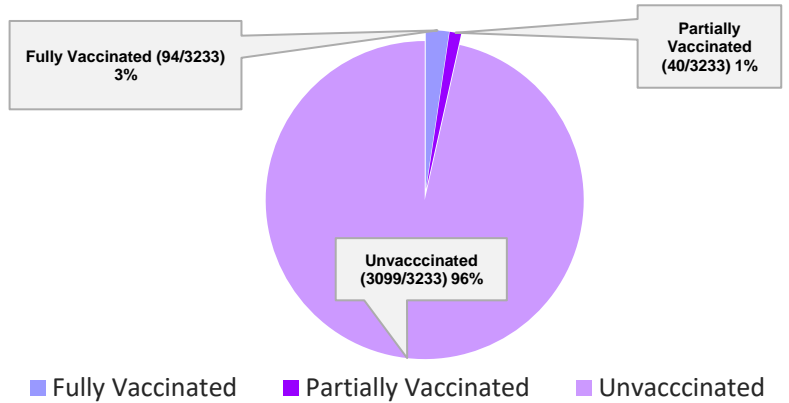
| CASES | EW 22 | Total |
|--|-------------------------|--------------------|
| Confirmed | 11 | 156945 |
| Females | 7 | 90444 |
| Males | 4 | 66498 |
| Age Range | 3 years to 98 years old | 1 day to 108 years |
| * 3 positive cases had no gender specification * PCR or Antigen tests are used to confirm cases * Total represents all cases confirmed from 10 Mar 2020 to the current Epi-Week. | | |



COVID-19 Outcomes

| Outcomes | EW 22 | Total |
|----------------------------|-------|--------|
| ACTIVE *2 weeks* | | 19 |
| DIED – COVID Related | 0 | 3802 |
| Died - NON COVID | 0 | 370 |
| Died - Under Investigation | 0 | 196 |
| Recovered and discharged | 0 | 103226 |
| Repatriated | 0 | 93 |
| Total | | 156945 |

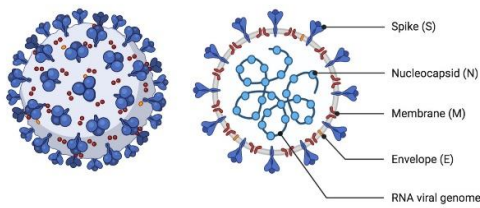
3233 COVID-19 Related Deaths since March 1, 2021 – YTD Vaccination Status among COVID-19 Deaths



COVID-19 Parish Distribution and Global Statistics

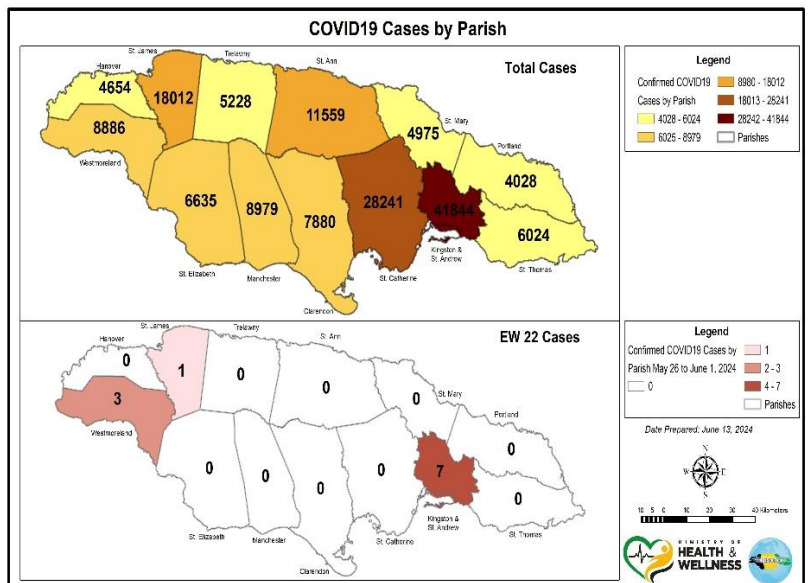
COVID-19 Virus Structure

SARS-CoV-2



COVID-19 WHO Global Statistics EW 19-22, 2024

| Epi Week | Confirmed Cases | Deaths |
|-----------------------|-----------------|-------------|
| 19 | 30 900 | 567 |
| 20 | 33 800 | 472 |
| 21 | 36 600 | 387 |
| 22 | 27 700 | 366 |
| Total (4weeks) | 129 000 | 1792 |



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

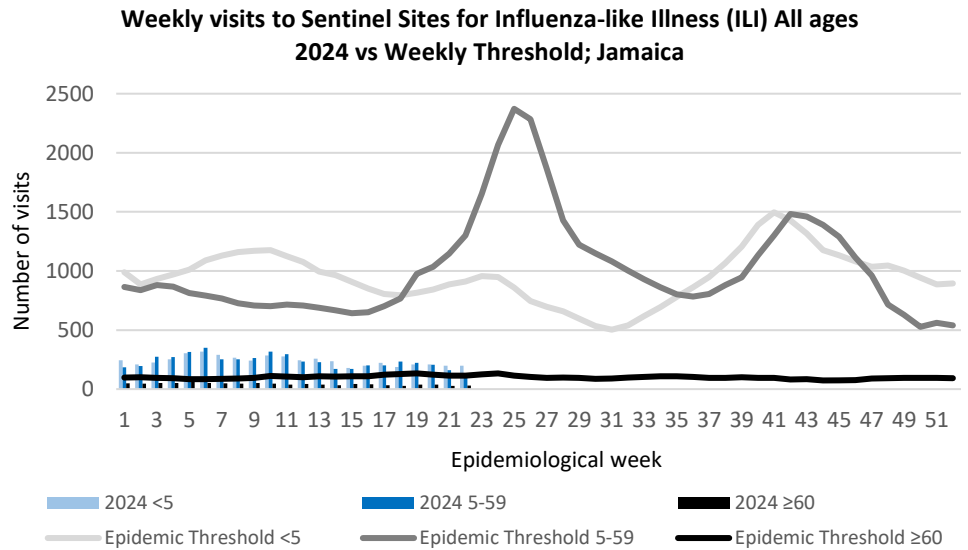


NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 22

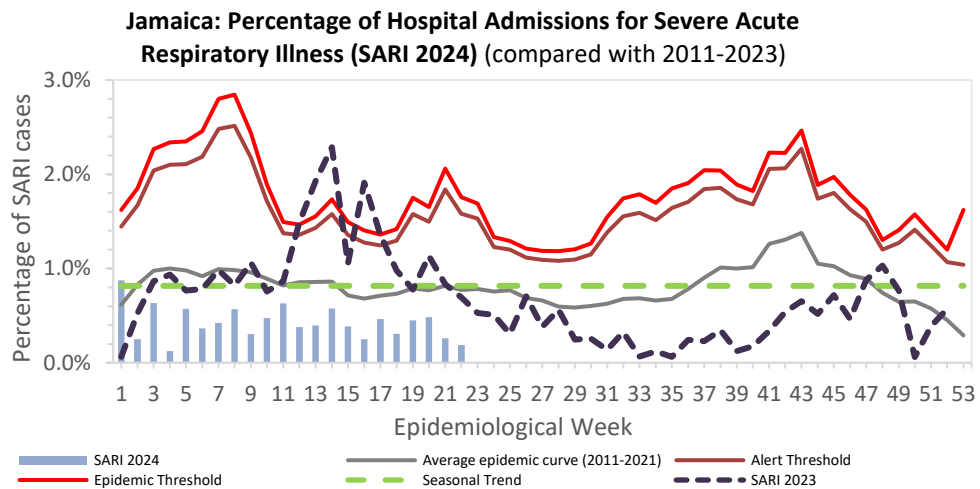
May 26, 2024 – June 1, 2024 Epidemiological Week 22

| | EW 22 | YTD |
|---|----------|-----------|
| SARI cases | 3 | 149 |
| Total Influenza positive Samples | 0 | 81 |
| Influenza A | 0 | 79 |
| H3N2 | 0 | 26 |
| H1N1pdm09 | 0 | 53 |
| Not subtyped | 0 | 0 |
| Influenza B | 0 | 2 |
| B lineage not determined | 0 | 0 |
| B Victoria | 0 | 2 |
| Parainfluenza | 0 | 0 |
| Adenovirus | 0 | 0 |
| RSV | 0 | 28 |



Epi Week Summary

During EW 22, three (3) SARI admissions were reported.

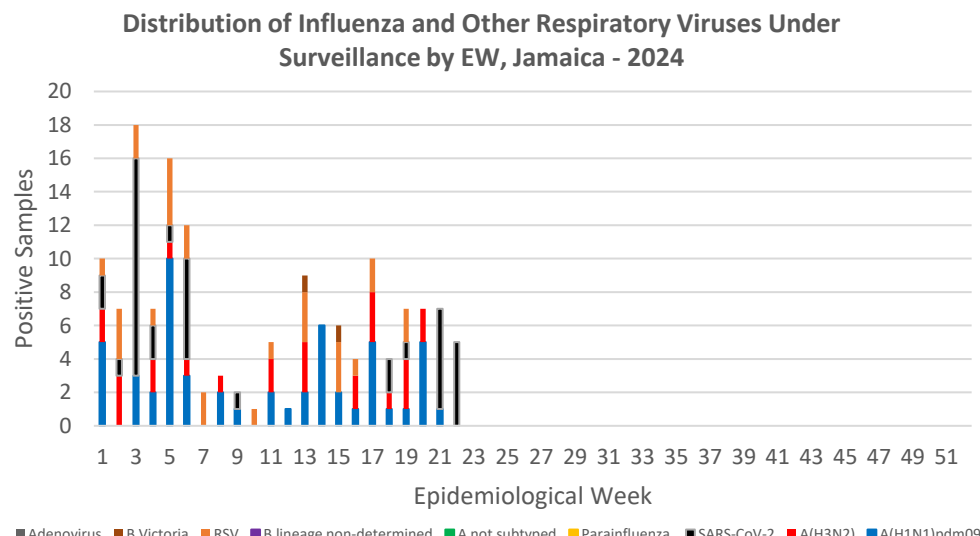


Caribbean Update EW 22

Caribbean: ILI and SARI cases have been declining over the past four weeks, with most positive cases attributable to influenza and SARS-CoV-2. Influenza activity has fluctuated at low levels during the last four EWs. During this period, the predominant viruses have been type A(H3N2), with concurrent circulation of influenza A(H1N1)pdm09 and, to a lesser extent, B/ Victoria. RSV activity has remained low. SARS-CoV-2 activity has shown a marked increase in the last two weeks, reaching elevated levels.

By country: Influenza activity has been observed over the last four EWs in the Dominican Republic, Guyana, and the Cayman Islands. SARS-CoV-2 activity was noted in Barbados, Guyana, and the Cayman Islands.

(taken from PAHO Respiratory viruses weekly report) <https://www.paho.org/en/influenza-situation-report>



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



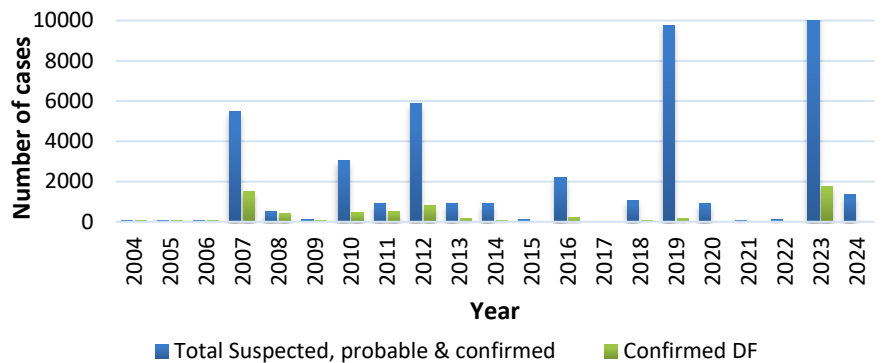
Dengue Bulletin

May 26, 2024 – June 1, 2024 Epidemiological Week 22


Epidemiological Week 22



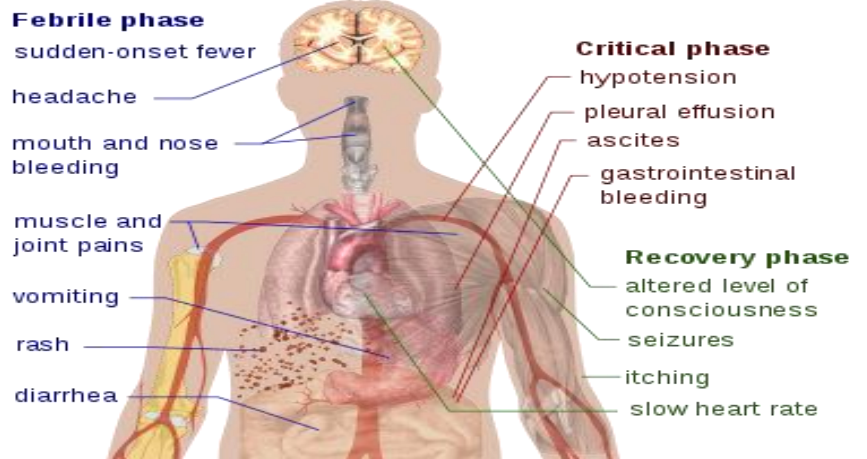
Dengue Cases by Year: 2004-2024, Jamaica



Reported suspected, probable and confirmed dengue with symptom onset in week 22 of 2024

| | 2024* | |
|---|-------|------|
| | EW 22 | YTD |
|  Total Suspected, Probable & Confirmed Dengue Cases | 5 | 1342 |
| Lab Confirmed Dengue cases | 0 | 5 |
| CONFIRMED Dengue Related Deaths | 0 | 0 |

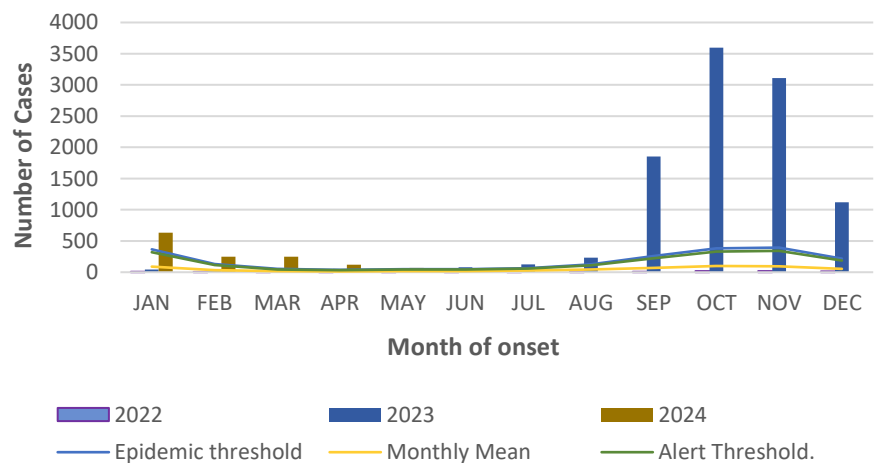
Symptoms of Dengue fever



Points to note:

- Dengue deaths are reported based on date of death.
- *Figure as at June 12, 2024
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

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



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



RESEARCH PAPER

Abstract

NHRC-23-002

Chronic Kidney Disease in Jamaica: Updated National Prevalence Estimates and Associated Factors using the CKD-EPI 2021 Formula

Fisher L-A^{1,2}, Ferguson TS², Rocke K³, Younger-Coleman N², Guthrie-Dixon N², Tulloch-Reid MK², McFarlane SR⁴, Bennett NR², Cunningham-Myrie C⁵, Aiken W⁶, Wiggan J⁷, Grant A⁷, Davidson T⁷, Webster-Kerr K⁷, Wilks RJ², and the Jamaica Health and Lifestyle Survey III Investigators*

¹Department of Medicine, The University of the West Indies, Mona, Jamaica, ²Epidemiology Research Unit, Caribbean Institute for Health Research, The University of the West Indies, Mona, Jamaica, ³George. Alleyne Chronic Disease Research Centre, Caribbean Institute for Health Research, The University of the West Indies, Cave Hill, Barbados, ⁴Tropical Metabolism Research Unit, Caribbean Institute for Health Research, The University of the West Indies, Mona, Jamaica, ⁵Department of Community Health & Psychiatry, The University of the West Indies, Mona, Jamaica, ⁶Department of Surgery, The University of the West Indies, Mona, Jamaica, ⁷Ministry of Health and Wellness, Jamaica, ⁸Chronic Disease and Injury Department, Surveillance, Disease Prevention & Control Division, Caribbean Public Health Agency

Objectives: Little is known of the prevalence of Chronic Kidney Disease (CKD) in Jamaica. We aimed to estimate the prevalence of CKD and explore associations with known risk factors in a nationally representative population based survey.

Methods: A cross-sectional analysis of 1189 Jamaican residents aged ≥ 15 years from the Jamaica Health and Lifestyle Survey 2016-2017, was performed. CKD was defined as an estimated glomerular filtration rate (eGFR) < 60 mL/min/1.73m², using the race-free CKD-EPI-2021 and Schwartz-Lyon equations. Associated factors included age, sex, socio-economic status, education level, smoking habits, body mass index (BMI), hypertension, diabetes mellitus, and self-reported sickle cell trait. Weighted prevalence estimates were determined and logistic regression models were used to evaluate associations.

Results: Of 1189 participants, 446 males and 743 females (mean[\pm SD] age was 49.1 \pm 18.3 years). Based on weighted estimates, the prevalence of CKD was 7.6% [95%CI 6.1%-9.6%]. The majority was CKD Stage 3a (6.0%), Stage 3b 1.0%, Stage 4 0.2%, and Stage 5 0.4%. Compared to persons with normal eGFR, CKD participants were older (mean age 65.6 versus 46.8 years, $p < 0.001$), with no significant male: female difference (7.3% vs 8.0%, $p = 0.667$), and had higher mean systolic blood pressure (142.0 versus 130.7 mmHg, $p < 0.001$). In a multivariable logistic regression model adjusting for a priori risk factors, age (OR[95CI] 1.07, [1.05-1.10]), sickle cell trait (OR[95CI] 4.87 [1.08-21.94]) and diabetes mellitus (OR[95CI] 1.85, [1.00-3.42]) but not hypertension (OR[95CI]: 1.0, 0.54-1.90) were associated with CKD.

Conclusion: Based on reduced eGFR, national CKD prevalence is approximately 8%. This may translate to increased health care burden on the Jamaican public system.



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9 NOTIFICATIONS-
All clinical
sites



INVESTIGATION
REPORTS- Detailed Follow
up for all Class One Events



HOSPITAL
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SURVEILLANCE-
30 sites. Actively
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SENTINEL
REPORT- 78 sites.
Automatic reporting