# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA


## Lassa Fever

**Overview**

Lassa fever is an acute viral haemorrhagic illness caused by Lassa virus, a member of the arenavirus family of viruses. Humans usually become infected with Lassa virus through exposure to food or household items contaminated with urine or faeces of infected Mastomys rats. The disease is endemic in the rodent population in parts of West Africa. Lassa fever is known to be endemic in Benin, Ghana, Guinea, Liberia, Mali, Sierra Leone, Togo and Nigeria, but probably exists in other West African countries as well. Person-to-person infections and laboratory transmission can also occur, particularly in health care settings in the absence of adequate infection prevention and control measures.

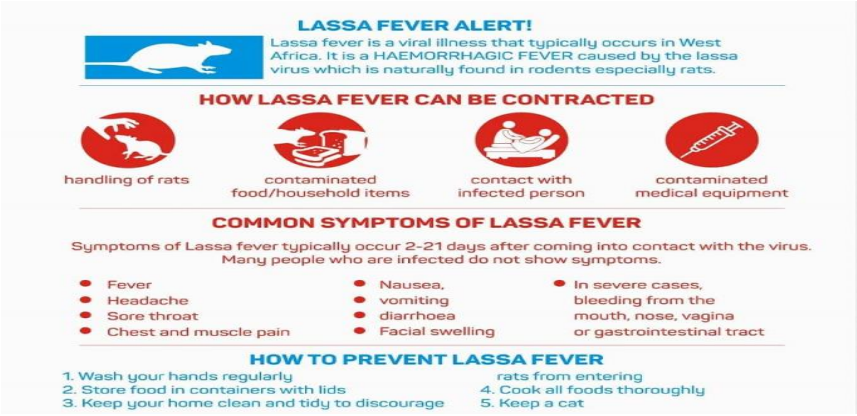
Diagnosis and prompt treatment are essential. The overall case-fatality rate is 1%. Among patients who are hospitalized with severe clinical presentation of Lassa fever, case-fatality is estimated at around 15%. Early supportive care with rehydration and symptomatic treatment improves survival. About 80% of people who become infected with Lassa virus have no symptoms. 1 in 5 infections result in severe disease, where the virus affects several organs such as the liver, spleen and kidneys.

**Symptoms**

The incubation period of Lassa fever ranges from 2–21 days. The onset, when it is symptomatic, is usually gradual, starting with fever, general weakness and malaise. After a few days, headache, sore throat, muscle pain, chest pain, nausea, vomiting, diarrhoea, cough, and abdominal pain may follow. In severe cases facial swelling, fluid in the lung cavity, bleeding from the mouth, nose, vagina or gastrointestinal tract and low blood pressure may develop. Protein may be noted in the urine. Shock, seizures, tremor, disorientation and coma may be seen in the later stages. Deafness occurs in 25% of recovered patients. In half of these cases, hearing returns partially after 1–3 months. Transient hair loss and gait disturbance may occur during recovery. Death usually occurs within 14 days in fatal cases. The disease is severe late in pregnancy, with maternal death and/or foetal loss in more than 80% of cases during the third trimester. Because the symptoms of Lassa fever are so varied and non-specific, clinical diagnosis is often difficult, especially early in the course of the disease. Lassa fever is difficult to distinguish from other viral haemorrhagic fevers such as Ebola virus disease, malaria, shigellosis, typhoid fever and yellow fever.

**Treatment**

There is currently no licensed vaccine for Lassa fever, but several potential vaccines are in development. Despite not being licensed as a treatment for Lassa fever the antiviral drug ribavirin has been used in several countries as a therapeutic agent. However, there is still a need for a safe treatment with proven efficacy, and a range of potential treatments including immune therapies and drug therapies are currently being evaluated. No evidence supports the role of ribavirin as a treatment for Lassa fever.




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

## EPI WEEK 27

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SENTINEL SYNDROMIC SURVEILLANCE

## Sentinel Surveillance in Jamaica

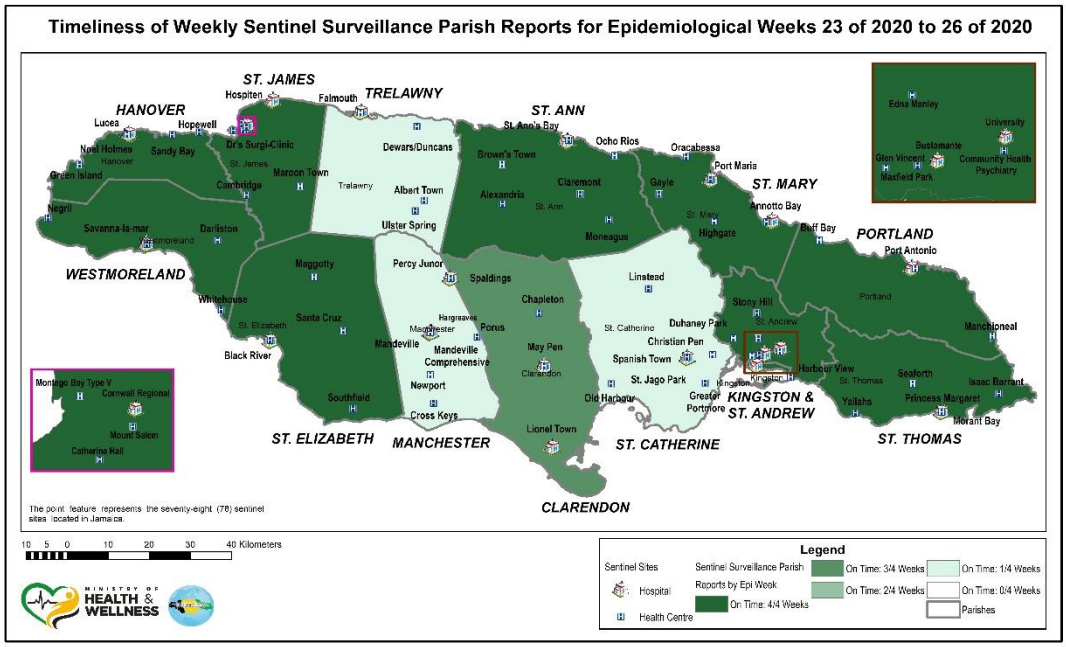
A syndromic surveillance system is good for early detection of and response to public health events.

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 – 23 to 26 of 2020**

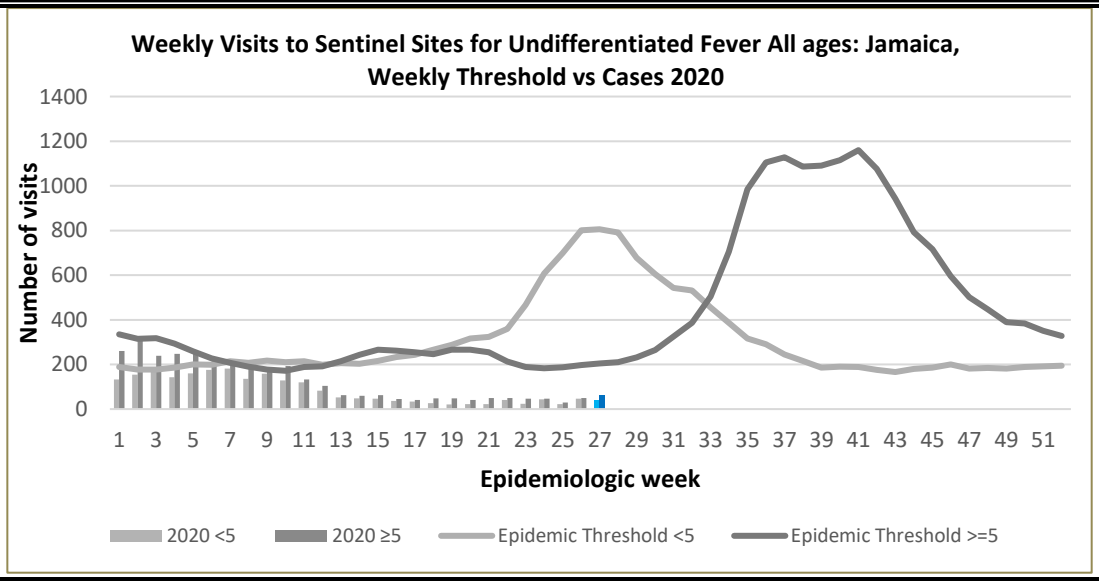
**Parish health departments submit reports weekly by 3 p.m. on Tuesdays. Reports submitted after 3 p.m. are considered late.**




# 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**



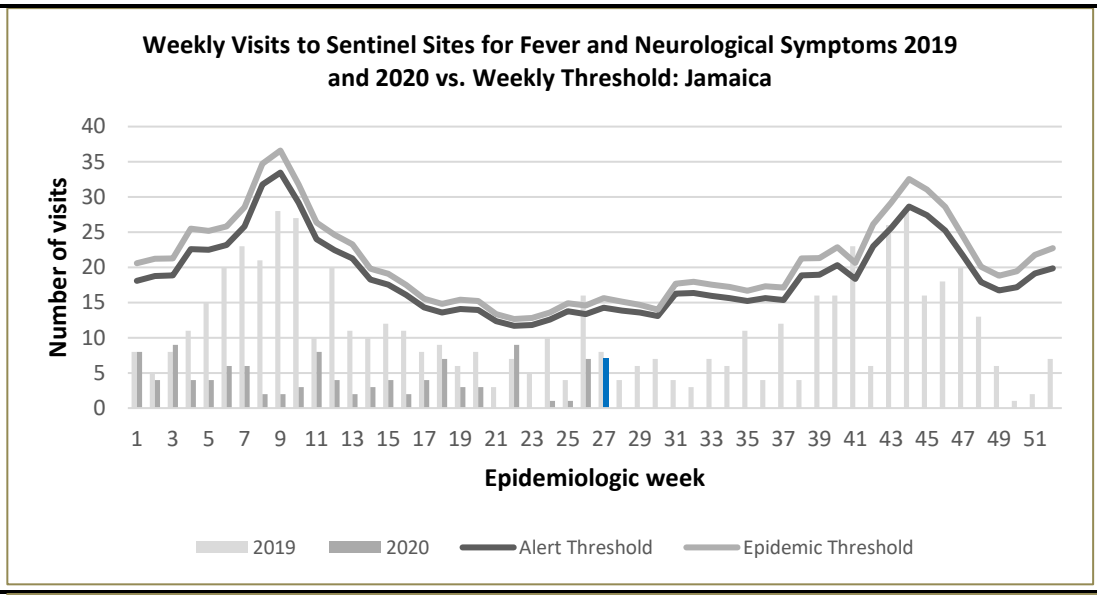

2 NOTIFICATIONS- All clinical sites

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

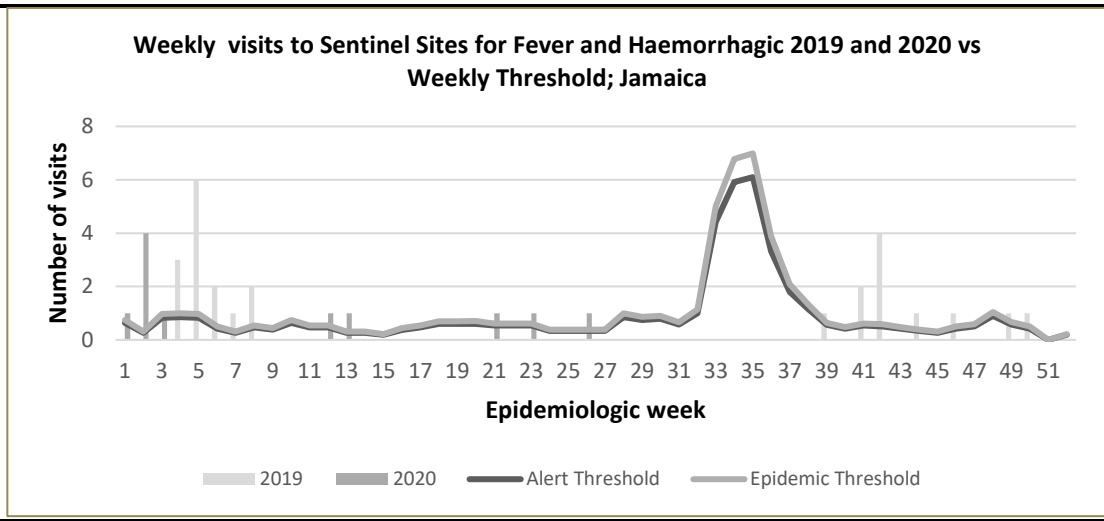
HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

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).

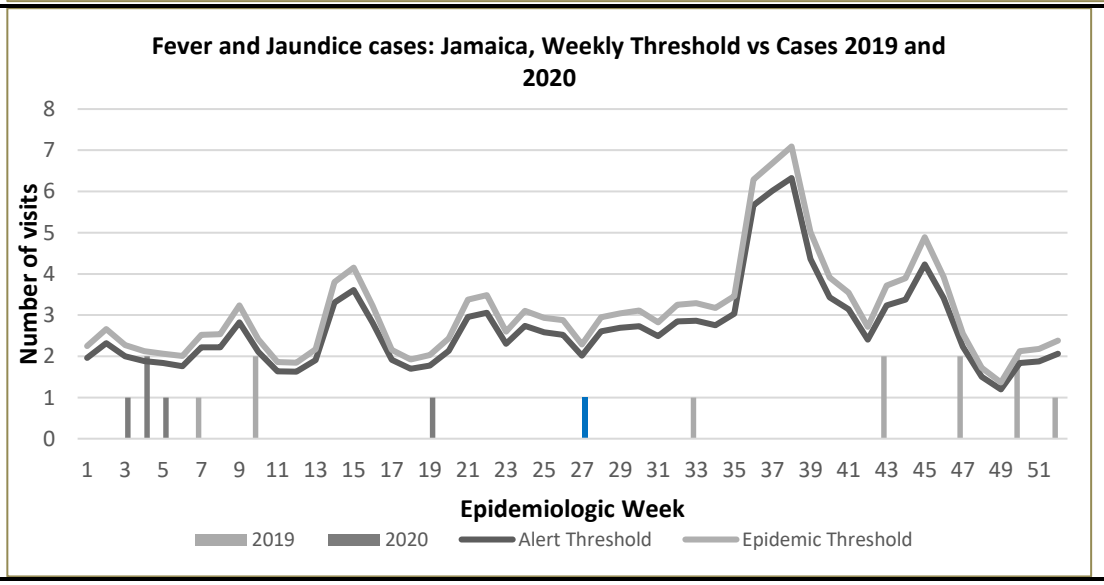



**FEVER AND HAEMORRHAGIC**
Temperature of >38$^0C$ /100.4$^0F$ (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.




**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.

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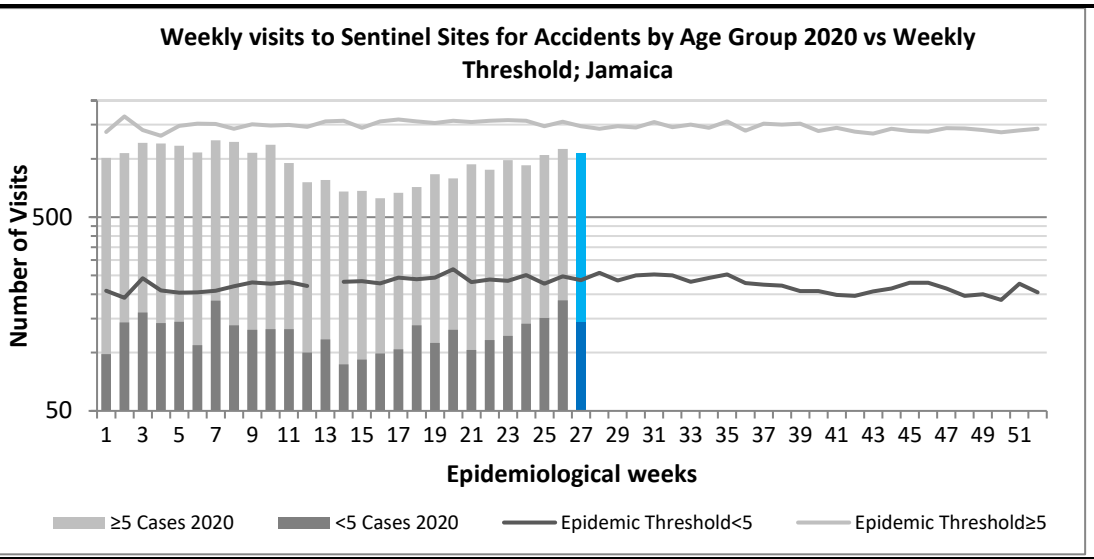
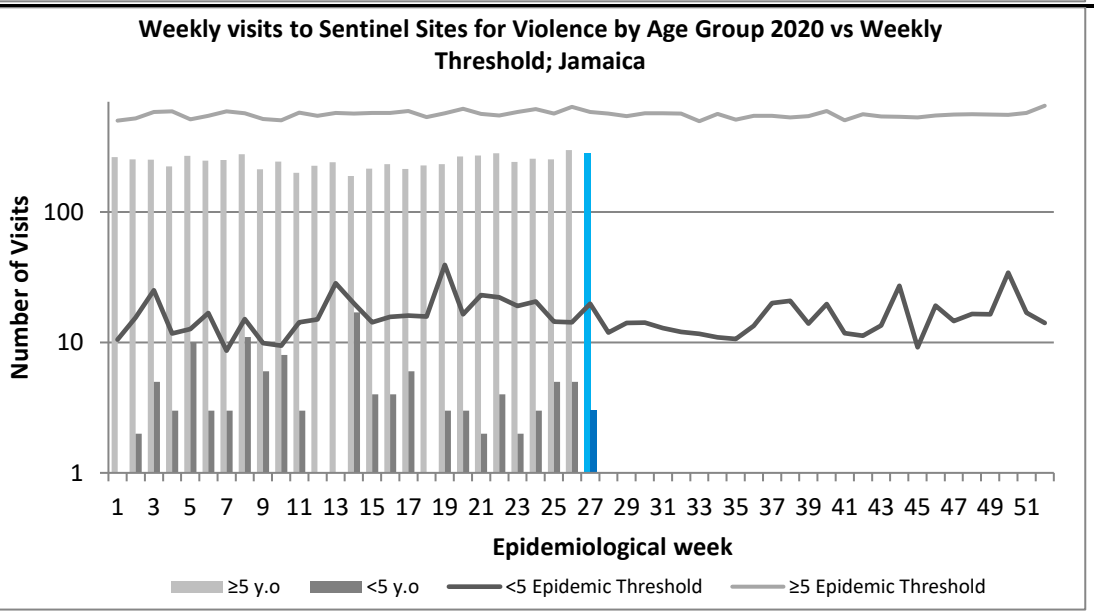


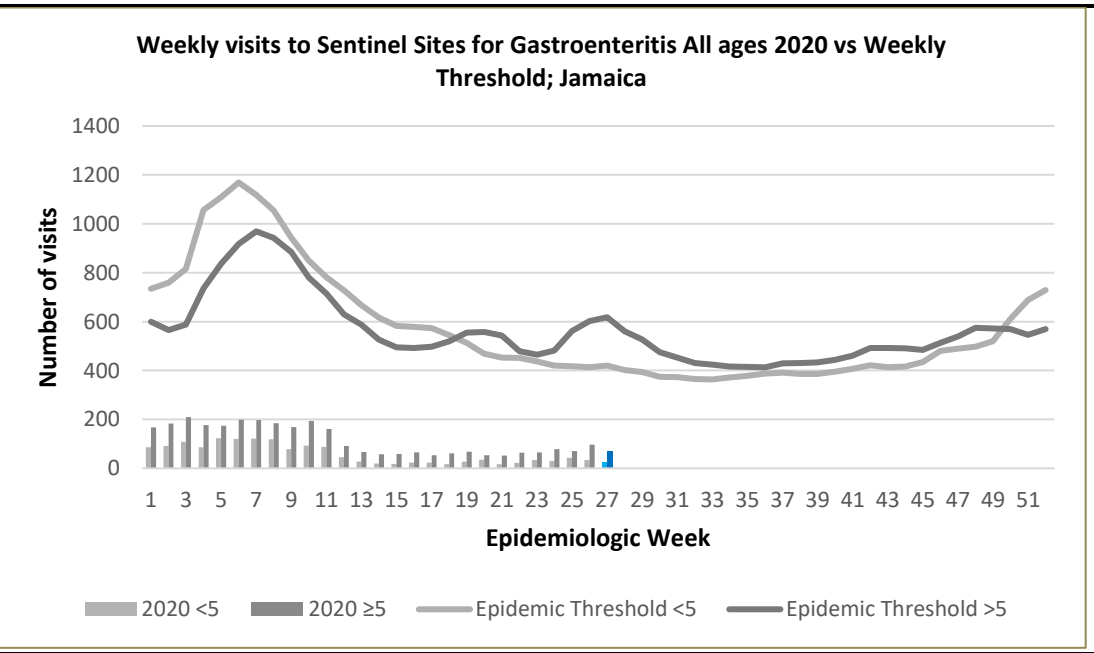

## VIOLENCE

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 | 21 |
| | 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 | 10 |
| 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** | | 21 | 31 |
| | Ophthalmia Neonatorum | | 23 | 105 |
| | Pertussis-like syndrome | | 0 | 0 |
| | Rheumatic Fever | | 0 | 0 |
| | Tetanus | | 0 | 0 |
| | Tuberculosis | | 5 | 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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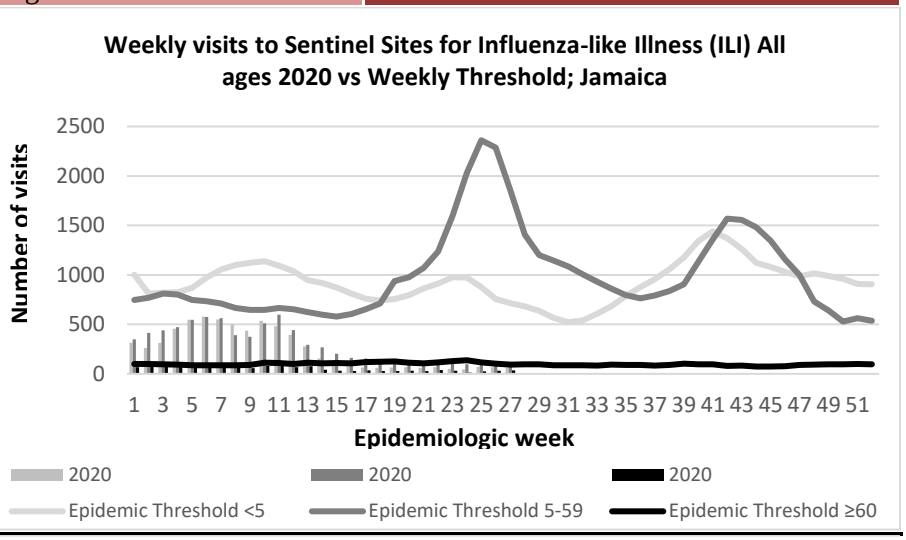
# NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

# *EW 27*

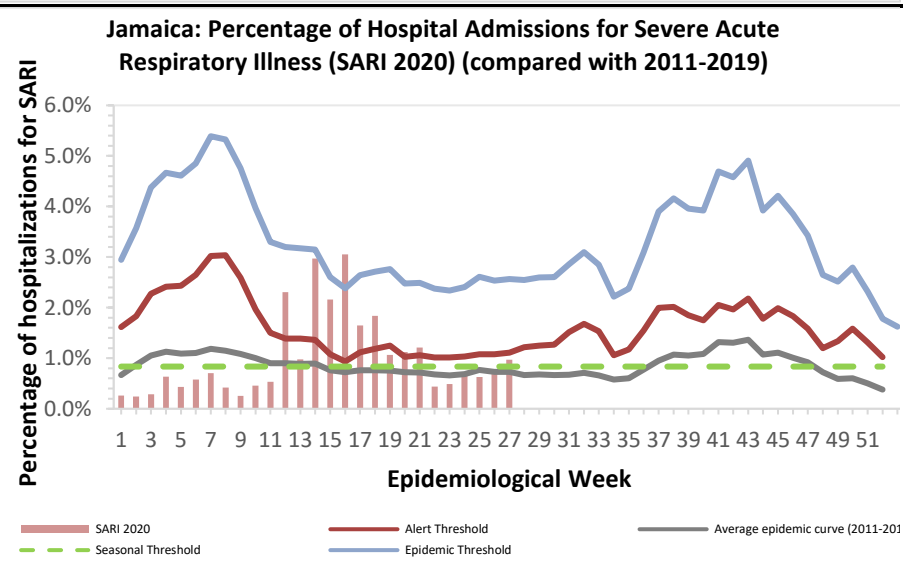
June 28, 2020-July 04, 2020 Epidemiological Week 27

| | *EW 27* | *YTD* |
|---|---|---|
| SARI cases | *14* | *335* |
| **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* |



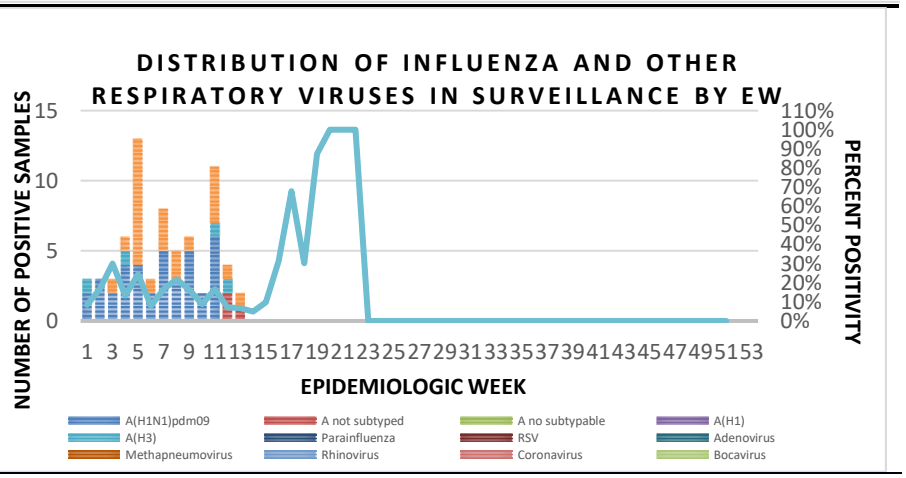

## Epi Week Summary

**During EW 27, 14 (fourteen) SARI admissions were reported.**




## Caribbean Update EW 27

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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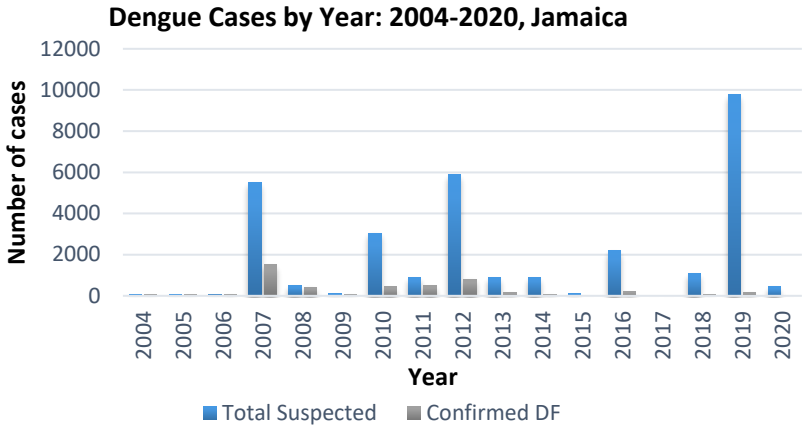
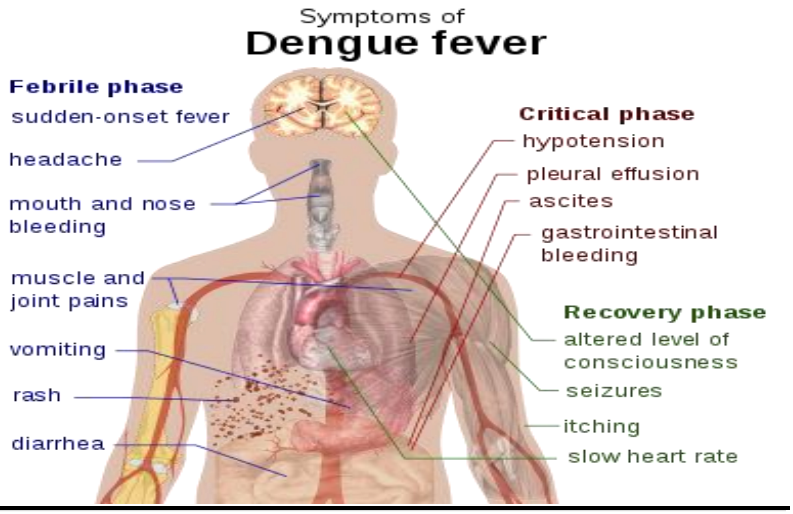
# Dengue Bulletin

June 28, 2020-July 04, 2020 Epidemiological Week 27 | Epidemiological Week 27



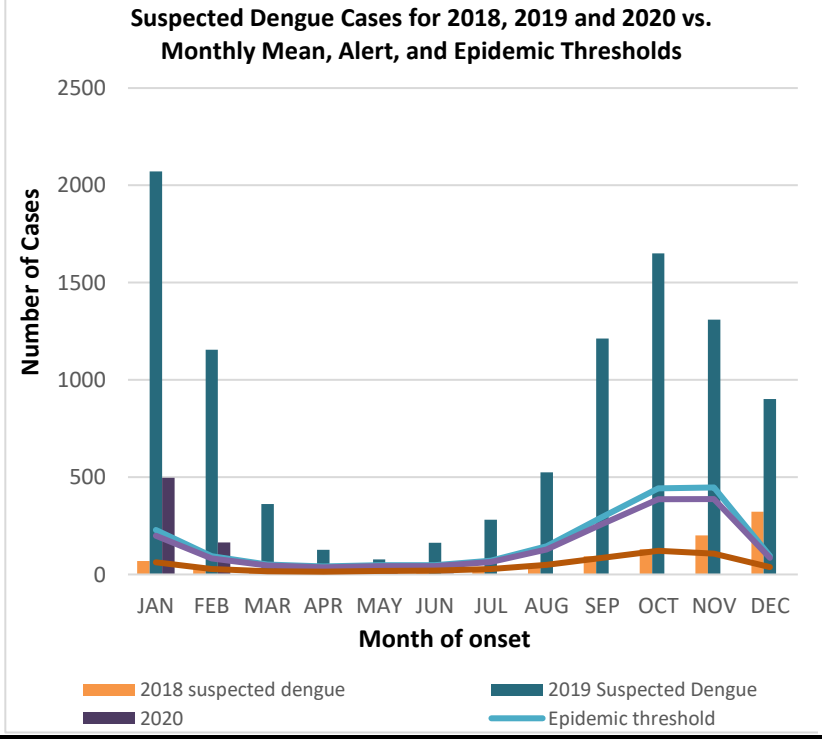

## Reported suspected and confirmed dengue with symptom onset in week 27 of 2020

| | 2020 | |
|---|---|---|
| | EW 27 | YTD |
| Total Suspected Dengue Cases | 0** | 717** |
| Lab Confirmed Dengue cases | 0** | 1** |
| CONFIRMED Dengue Related Deaths | 0** | 1** |




**Points to note:**

- ** figure as at July 14 , 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

**Title:** *A Review of the 1918 Influenza Pandemic - The Jamaica Experience*

*Iyanna Wellington, Ardene Harris, Nicolas Elias, Shara Williams, Kelly-Ann Gordon-Johnson, Nathlee McMorris, Neisha Vanhorne, Lesley-Ann James, Andriene Grant, Karen Webster-Kerr*

*National Epidemiology Unit, Ministry of Health, Jamaica*

**Objective:** To describe the 1918 influenza pandemic in Jamaica and explore the socio-political and health-care contexts of the event.

**Methods**: Reviewed documents to obtain data on demographic parameters, hospital admissions for influenza, social conditions, and health system response.

**Results**: The Jamaican population in 1918 was 809,005 (384,319 males and 424,686 females). Health care was delivered by a network of: private practices, hospitals, infirmaries, and dispensaries.
The 1918 influenza pandemic started in January; the first recorded case of pandemic influenza in Jamaica occurred around October 1918 and by December the pandemic in Jamaica waned. In 1918/19 the proportion of influenza hospitalizations was 157 times greater than the mean for the preceding 10 years (1,412/10,000 versus 9/10,000). The influenza-specific death rate in 1918/19 was 3,288/10,000 in hospitalized patients while the maximum annual influenza-specific death rate in non-outbreak years was 80/10,000. The crude death rate declined by 32% from 1918/19 to 1919/20.

The First World War, local riots, food shortages, and recent hurricanes may have challenged the local authorities' reaction to the emergence of the pandemic in Jamaica. The response to the outbreak included: school closures, bans on public gatherings, disinfection of public transport, local travel bans, hiring of additional sanitary workers, opening of emergency hospitals and soup kitchens, health education, and policy changes.

**Conclusion**: The 1918 influenza outbreak in Jamaica was sudden and severe. The response to the 1918 influenza outbreak was affected by the socio-political realities of the day, which should be kept in mind for future pandemic preparedness planning.

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