WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Chronic obstructive pulmonary disease (COPD)

Key facts

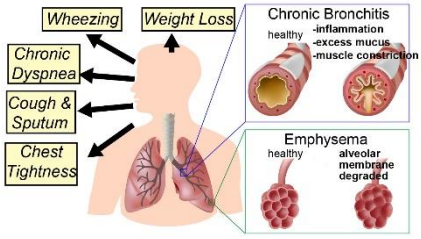
- Chronic obstructive pulmonary disease (COPD) is a progressive lifethreatening lung disease that causes breathlessness (initially with exertion) and predisposes to exacerbations and serious illness.
- The Global Burden of Disease Study reports a prevalence of 251 million cases of COPD globally in 2016.
- Globally, it is estimated that 3.17 million deaths were caused by the disease in 2015 (that is, 5% of all deaths globally in that year).
- More than 90% of COPD deaths occur in low and middleincome countries.
- The primary cause of COPD is exposure to tobacco smoke (either active smoking or secondhand smoke).
- Other risk factors include exposure to indoor and outdoor air pollution and occupational dusts and fumes.
- Exposure to indoor air pollution can affect the unborn child and represent a risk factor for developing COPD later in life.
- Some cases of COPD are due to long-term asthma.
- COPD is likely to increase in coming years due to higher smoking prevalence and aging populations in many countries.
- Many cases of COPD are preventable by avoidance or early cessation of smoking. Hence, it is important that countries adopt the WHO Framework Convention on Tobacco Control (WHO-FCTC) and implement the MPOWER package of measures so that non-smoking becomes the norm globally.
- COPD is not curable, but treatment can relieve symptoms, improve quality of life and reduce the risk of death.

Risk factors

The primary cause of COPD is tobacco smoke (including secondhand or passive exposure). Other risk factors may include:

- indoor air pollution (such as solid fuel used for cooking and heating)
- outdoor air pollution
- occupational dusts and chemicals (such as vapours, irritants, and fumes)
- frequent lower respiratory infections during childhood.

Chronic Obstructive Pulmonary Disease



Symptoms

Chronic obstructive pulmonary disease develops slowly and usually becomes apparent after 40 or 50 years of age. The most common symptoms of COPD are breathlessness (or a "need for air"), chronic cough, and sputum (mucous) production. Daily activities, such as walking up a short flight of stairs or carrying a suitcase, and even daily routine activities can become very difficult as the condition gradually worsens. Sufferers also frequently experience exacerbations, that is, serious episodes of increased breathlessness, cough and sputum production that last from several days to a few weeks. These episodes can be seriously disabling and result in need for urgent medical care (including hospitalization) and sometimes death.

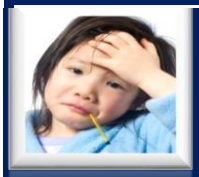
Who is at risk?

Previously COPD was more common in men, but because of comparably high levels of tobacco smoking among women in high-income countries, and the higher risk of exposure to indoor air pollution (such as solid fuel used for cooking and heating) for women in low-income countries, the disease now affects men and women almost equally.

More than 90% of COPD deaths occur in low and middleincome countries, where effective strategies for prevention and control are not always implemented or accessible.

For more information on COPD please visit: https://www.who.int/news-room/fact-sheets/detail/chronic-obstructive-pulmonary-disease-(copd)

EPI WEEK 6



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SENTINEL SYNDROMIC SURVEILLANCE

Sentinel Surveillance in Jamaica

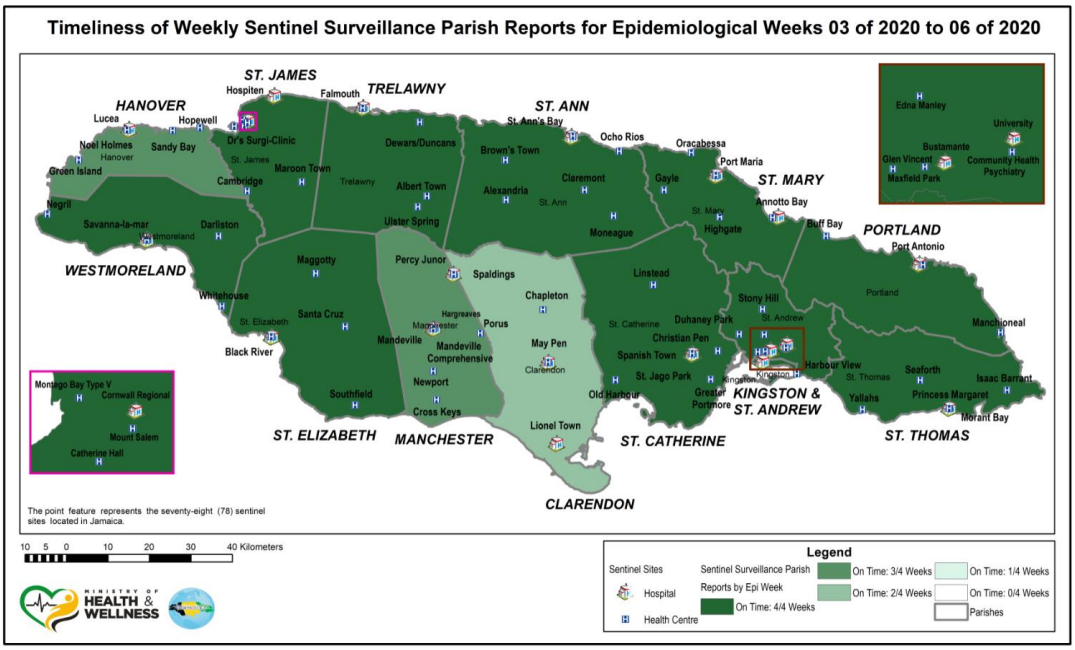
A syndromic surveillance system is good for early detection of and response to public health events.

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 - Weeks 3 to 6 of 2020

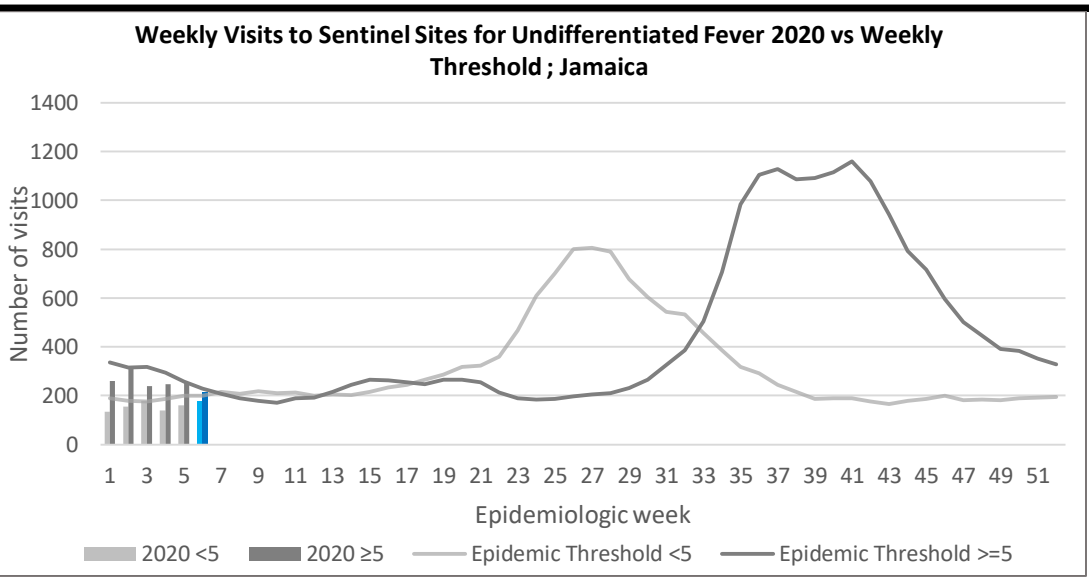
Parish health departments submit reports weekly by 3 p.m. on Tuesdays. Reports submitted after 3 p.m. are considered late.



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



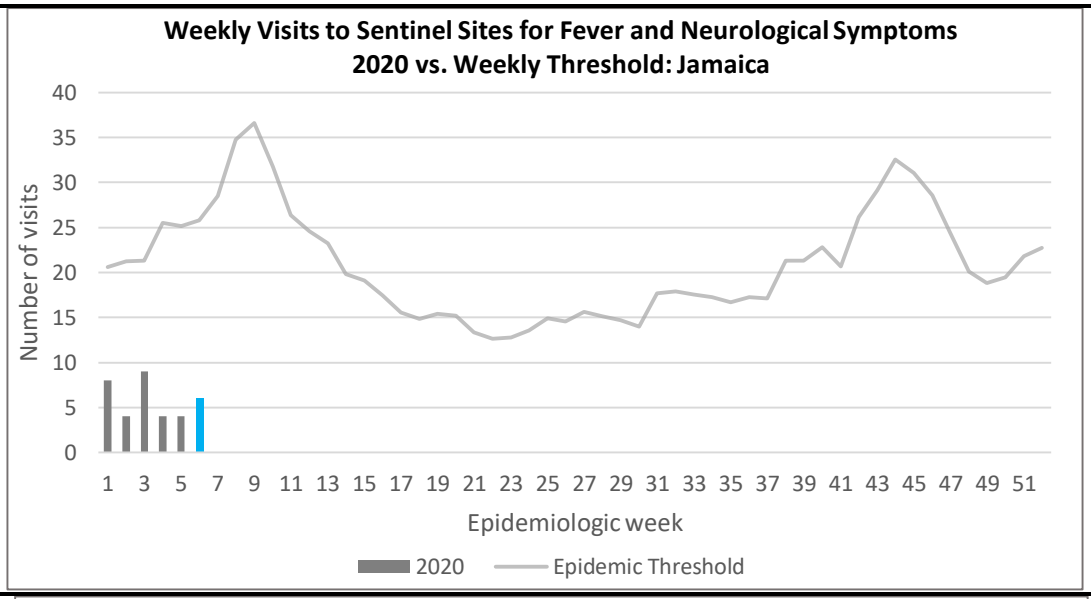
2 NOTIFICATIONS- All clinical sites

INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

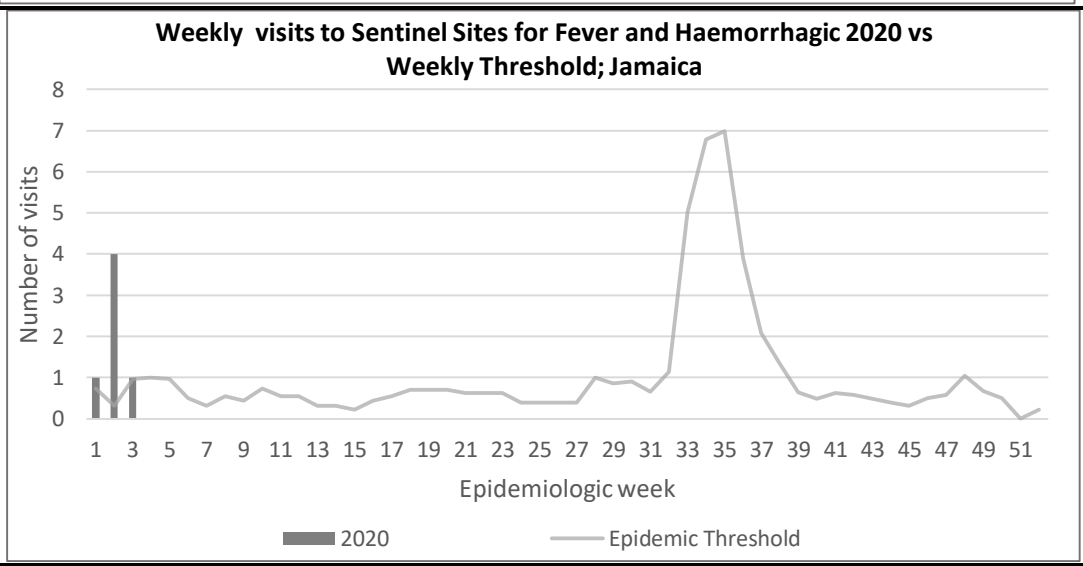
HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

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).

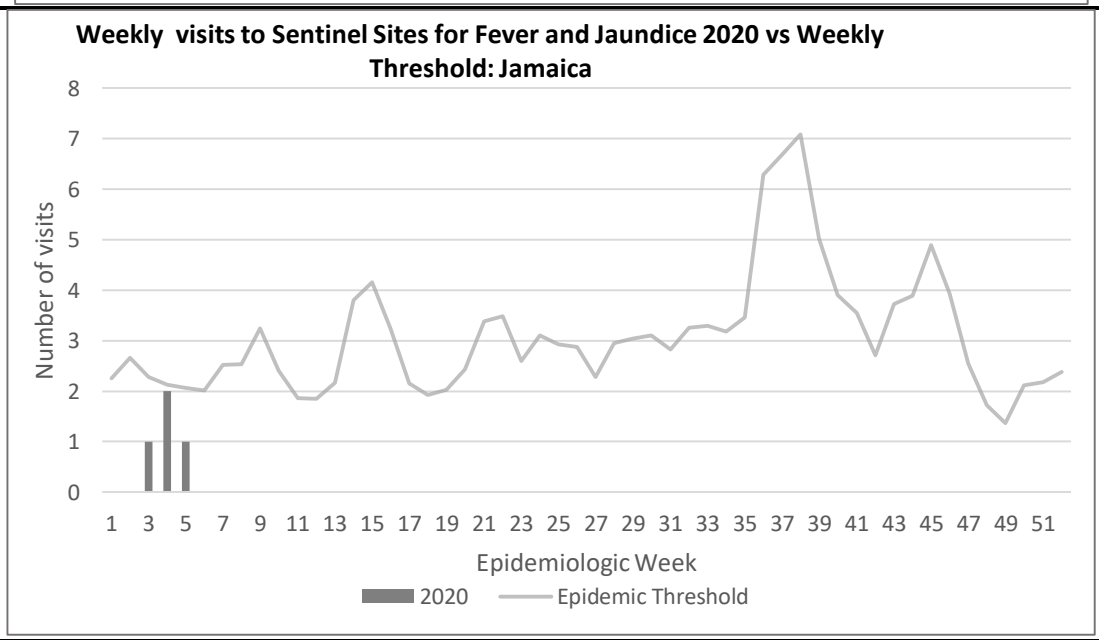


FEVER AND HAEMORRHAGIC
Temperature of >38^0C /100.4^0F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



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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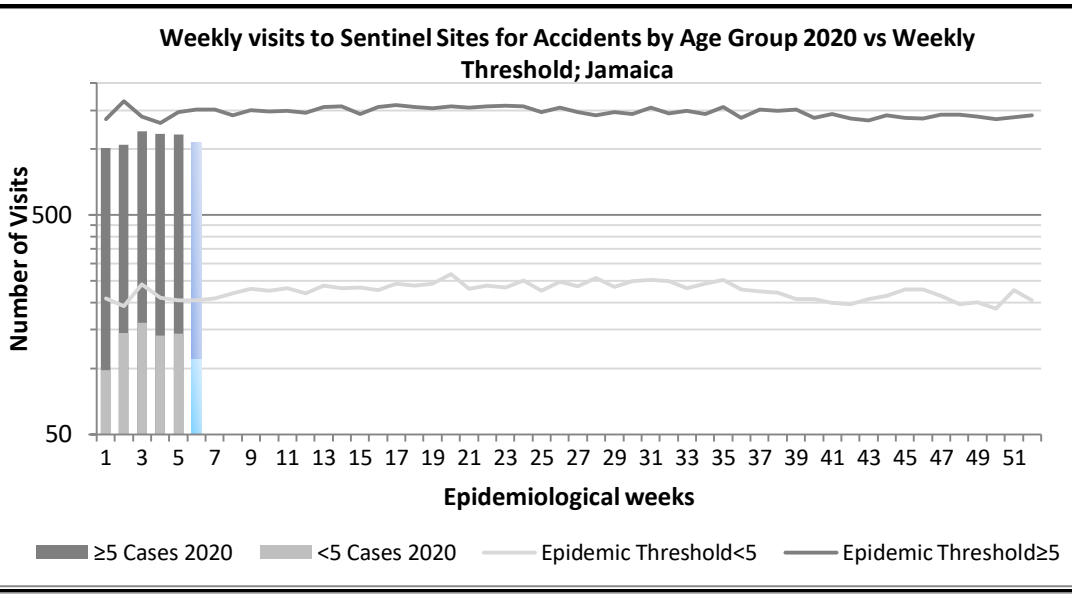
ACCIDENTS

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

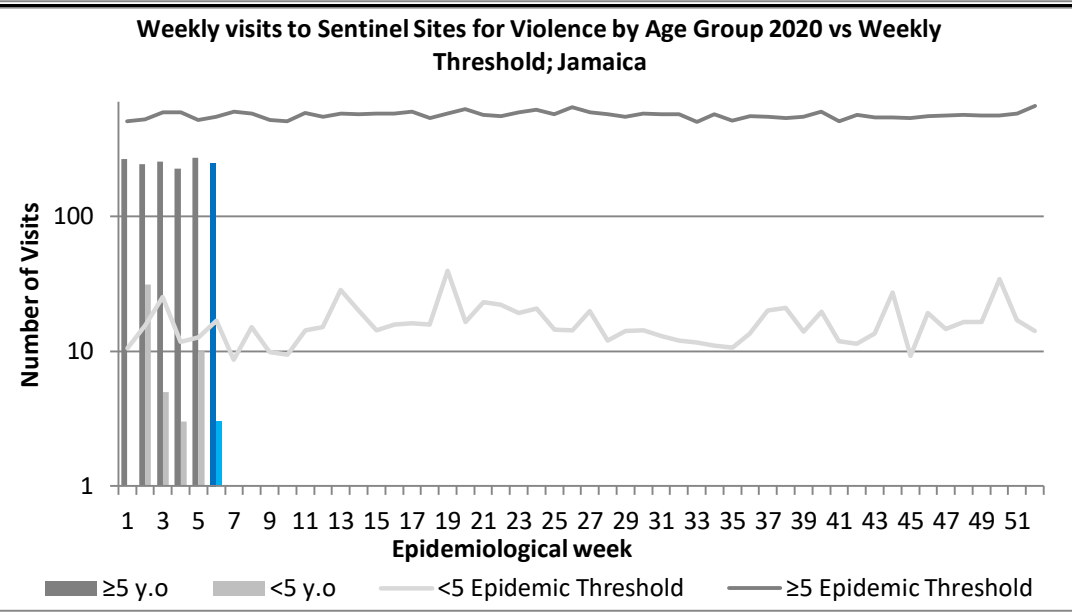
KEY

VARIATIONS Of BLUE SHOW CURRENT WEEK



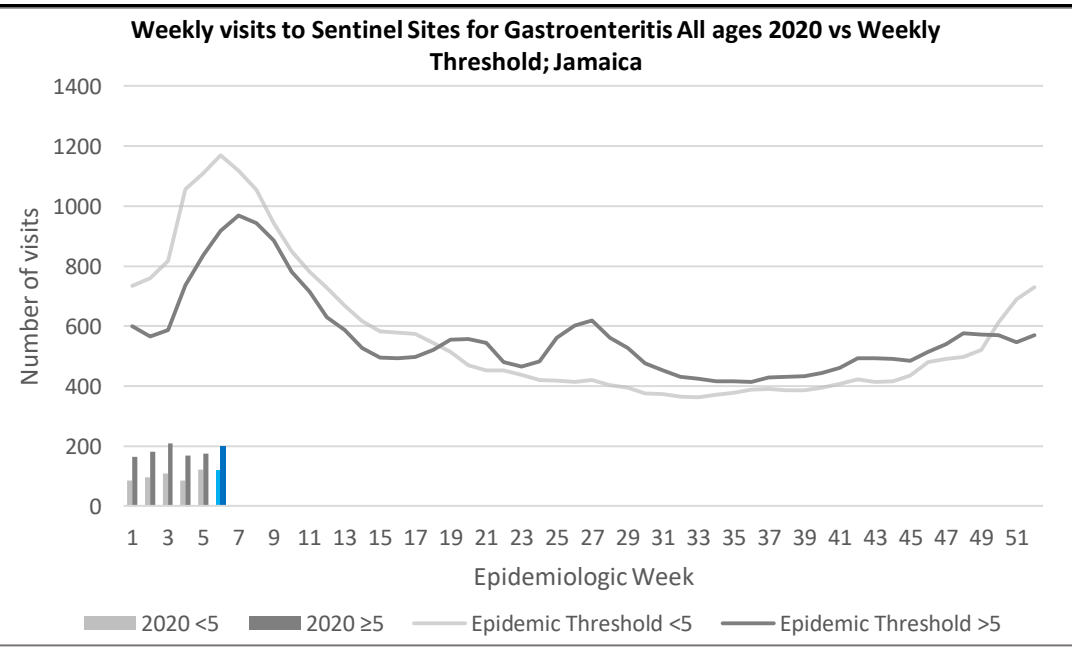
VIOLENCE

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.



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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	6
	Cholera		0	0
	Dengue Hemorrhagic Fever*		NA	NA
	Hansen's Disease (Leprosy)		0	0
	Hepatitis B		0	1
	Hepatitis C		0	1
	HIV/AIDS		NA	NA
	Malaria (Imported)		0	0
	Meningitis (Clinically confirmed)		1	1
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**		3	6
	Ophthalmia Neonatorum		8	15
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		0	0
	Tuberculosis		0	5
	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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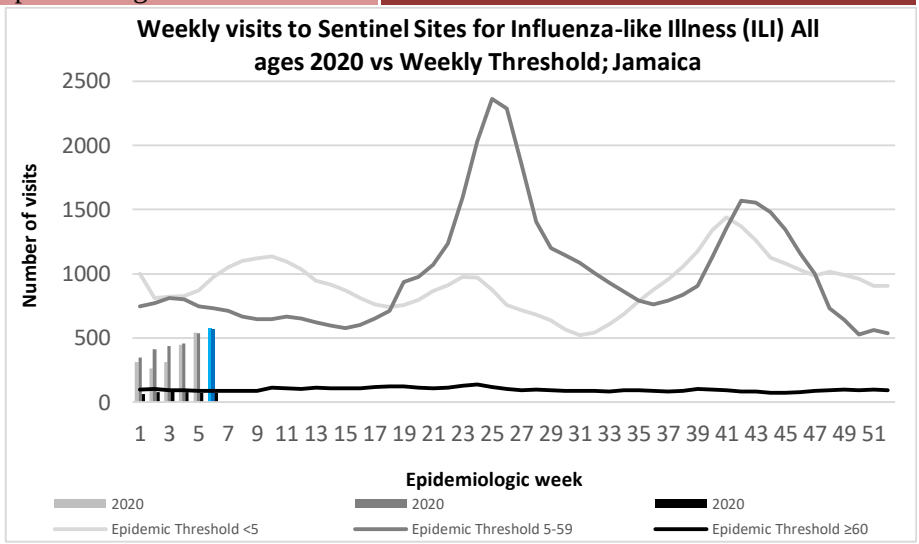
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 06

February 2, 2020– February 8, 2020 Epidemiological Week 06

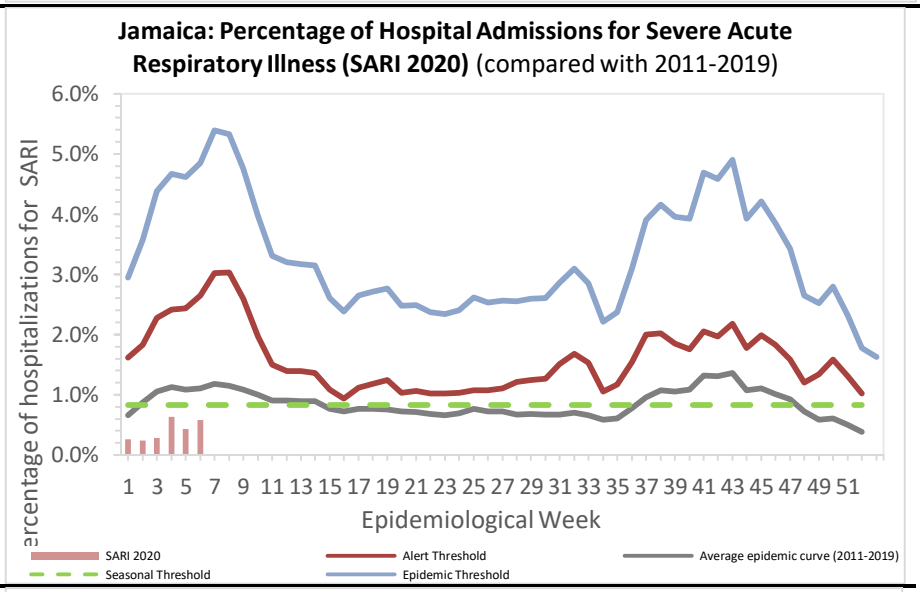
	EW 06	*YTD*
SARI cases	*10*	*41*
Total Influenza positive Samples	*2*	*30*
Influenza A	*1*	*18*
H3N2	*0*	*2*
H1N1pdm09	*0*	*15*
Not subtyped	*1*	*1*
Influenza B	*1*	*12*
Parainfluenza	*0*	*0*



Epi Week Summary

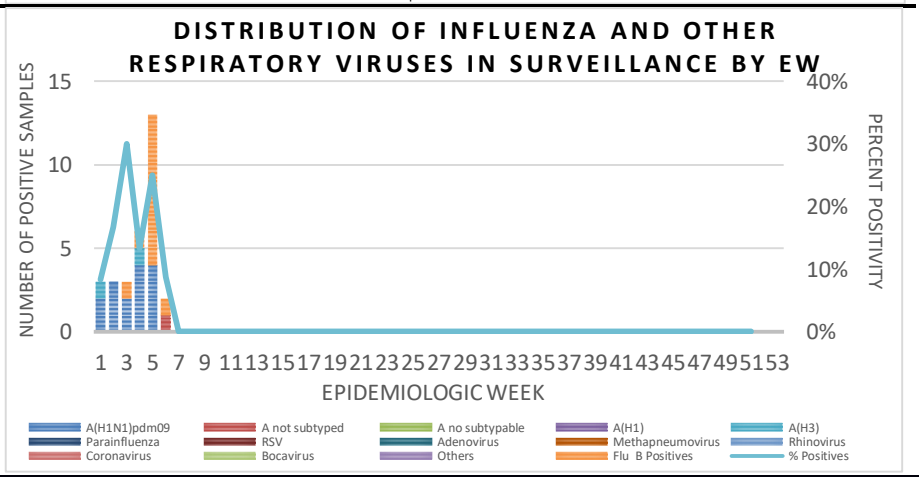
During EW 06, 10 (ten) SARI admissions were reported.

8.7% positivity for EW 06



Caribbean Update EW 06

Overall, influenza activity is moderate in the sub-region. Influenza activity increased slightly in the Dominican Republic with influenza A(H1N1)pdm09 predominance; SARI cases decreased at low levels. In French Guiana, influenza activity continues increasing with influenza A(H1N1)pdm09 predominance and no severe cases reported. In Jamaica, influenza activity increased with influenza B/Victoria predominance and influenza A(H1N1)pdm09 co-circulating, severity indicators remained low. In Puerto Rico, influenza-like illness (ILI) activity continued high with influenza A(H1N1)pdm09 predominance. In Suriname, influenza activity started to decrease with influenza A(H1N1)pdm09 circulating in recent weeks. Influenza-associated SARI cases continued at low levels.



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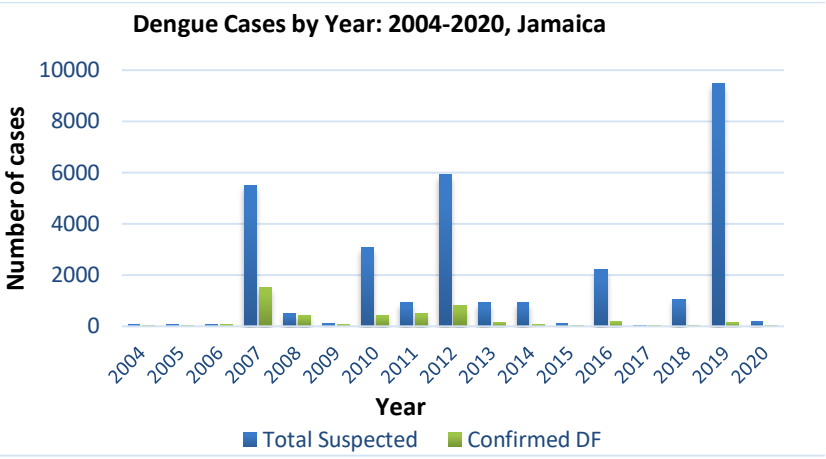
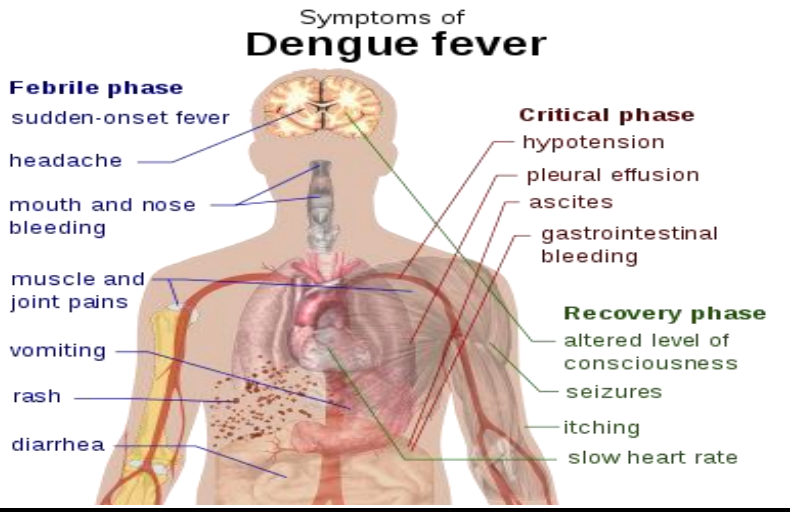
Dengue Bulletin

February 2– February 8, 2020 Epidemiological Week 06 | Epidemiological Week 06



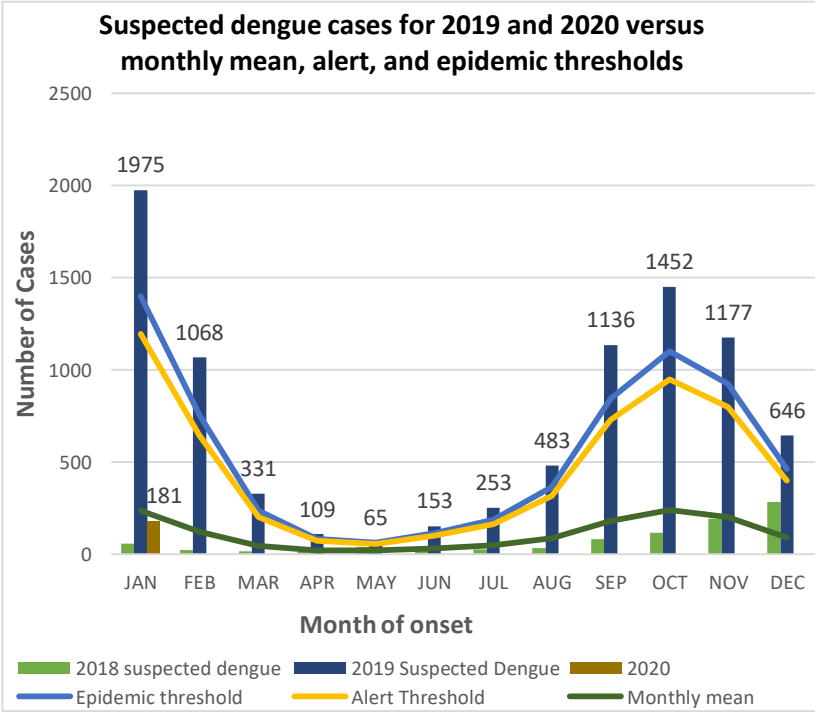
Reported suspected and confirmed dengue with symptom onset in week 6 of 2020

	2020	
	EW 6	YTD
Total Suspected Dengue Cases	0**	181**
Lab Confirmed Dengue cases	0**	1**
CONFIRMED Dengue Related Deaths	0**	1**



Points to note:

- ** figure as at February 13, 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

Effect of β-Hydroxy-β-Methyl Butyrate Supplementation with Resistance Exercise on Muscle Strength, Protein Metabolism and Body Composition in Underweight Adults with Sickle Cell Anaemia.

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Objective: Frequent wasting in sickle cell anaemia (SCA) correlates with poor health, despite normal dietary intake. We hypothesized that the anabolic agent, β-hydroxy-β-methyl-butyrate (HMB) with exercise will increase lean body mass (LBM) and muscle strength in association with reduced amino acids catabolism in adults with SCA (BMI < 18.5).

Method: The study design was a double-blinded, placebo-controlled intervention in two groups randomized to receive either 3 g/d of HMB (n = 12) or 3 g/d maltodextrin (n=12) as placebo. All participated in a standardized exercise programme. Measurements at pre- and post-intervention stages were: LBM using dual-energy x-ray absorption, muscle strength using 1-repetition maximum, L-[1-13C]-phenylalanine oxidation as a tracer for amino acids catabolism, blood chemistry and haematology tests. Data were analyzed using repeated linear measures mixed model.

Results: Seven participants did not complete the study (2 HMB, 5 placebo). LBM and strength were higher ($p < 0.05$) at post-intervention in both groups compared with pre-intervention. Although phenylalanine oxidation, was marginally higher in the HMB group at both stages compared to the maltodextrin group ($p = 0.07$), there was a tendency for an increase from stage 1 to 2 in the maltodextrin group, but no change in the HMB group. Blood cholesterol increased with HMB supplementation.

Conclusion: Resistance exercise improved LBM and strength, possibly augmented by a marginal synergistic effect of HMB through promoting protein synthesis and cholesterol for making LBM. The results support further investigation to explore the efficacy of the intervention as adjunctive treatment for SCA.

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