WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Hepatitis D (Series 4 of 5)

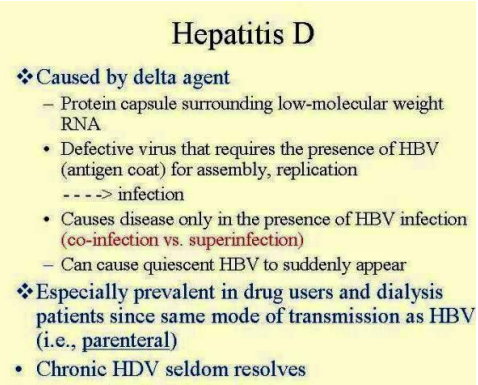
Key facts

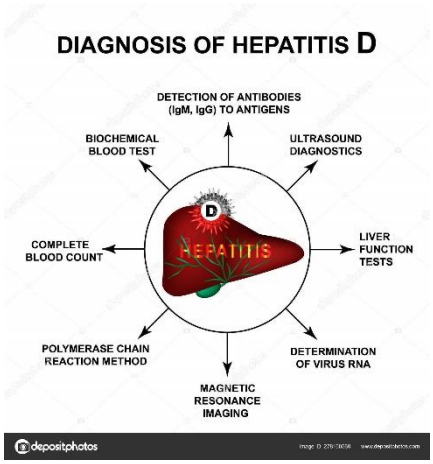
- Hepatitis D virus (HDV) is a virus that requires hepatitis B virus (HBV) for its replication. HDV infection occurs only simultaneously or as super-infection with HBV.
- The virus is most commonly transmitted from mother to child during birth and delivery, as well as through contact with blood or other body fluids.
- Vertical transmission from mother to child is rare.
- At least 5% of people with chronic HBV infection are co-infected with HDV, resulting in a total of 15 – 20 million persons infected with HDV worldwide. However, this is a broad global estimation since many countries do not report the prevalence of HDV.
- Worldwide, the overall number of HDV infection has decreased since 1980s. This trend is mainly due to a successful global HBV vaccination programme.
- HDV-HBV co-infection is considered the most severe form of chronic viral hepatitis due to more rapid progression towards liver-related death and hepatocellular carcinoma.
- Currently, treatment success rates are generally low.
- Hepatitis D infection can be prevented by hepatitis B immunization.

Transmission

The routes of HDV transmission are the same as for HBV: percutaneously or sexually through contact with infected blood or blood products. Vertical transmission is possible but rare. Vaccination against HBV prevents HDV coinfection, and hence expansion of childhood HBV immunization programmes has resulted in a decline in hepatitis D incidence worldwide.

Symptoms





Who is at risk?

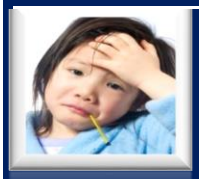
- Chronic HBV carriers are at risk for infection with HDV.
- People who are not immune to HBV (either by natural disease or immunization with the hepatitis B vaccine) are at risk of infection with HBV which puts them at risk of HDV infection.
- High prevalence in persons who inject drugs (PWID) suggest that injecting drug use is an important risk factor for HDV co-infection.
- High-risk sexual activity (e.g. sex worker) is also an increased risk for HDV infection.
- Migration from high HDV prevalence countries to lower prevalence areas might have an effect on the epidemiology of the host country.

Prevention

Prevention and control of HDV infection requires prevention of HBV transmission through hepatitis B immunization, blood safety, injection safety, and harm reduction services. Hepatitis B immunization does not provide protection against HDV for those already HBV infected.

For more information on Hepatitis D please visit: https://www.who.int/news-room/fact-sheets/detail/hepatitis-d

EPI WEEK 4


SYNDROMES PAGE 2


CLASS 1 DISEASES PAGE 4


INFLUENZA PAGE 5


DENGUE FEVER PAGE 6


GASTROENTERITIS PAGE 7


RESEARCH PAPER PAGE 8

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SENTINEL SYNDROMIC SURVEILLANCE

Sentinel Surveillance in Jamaica

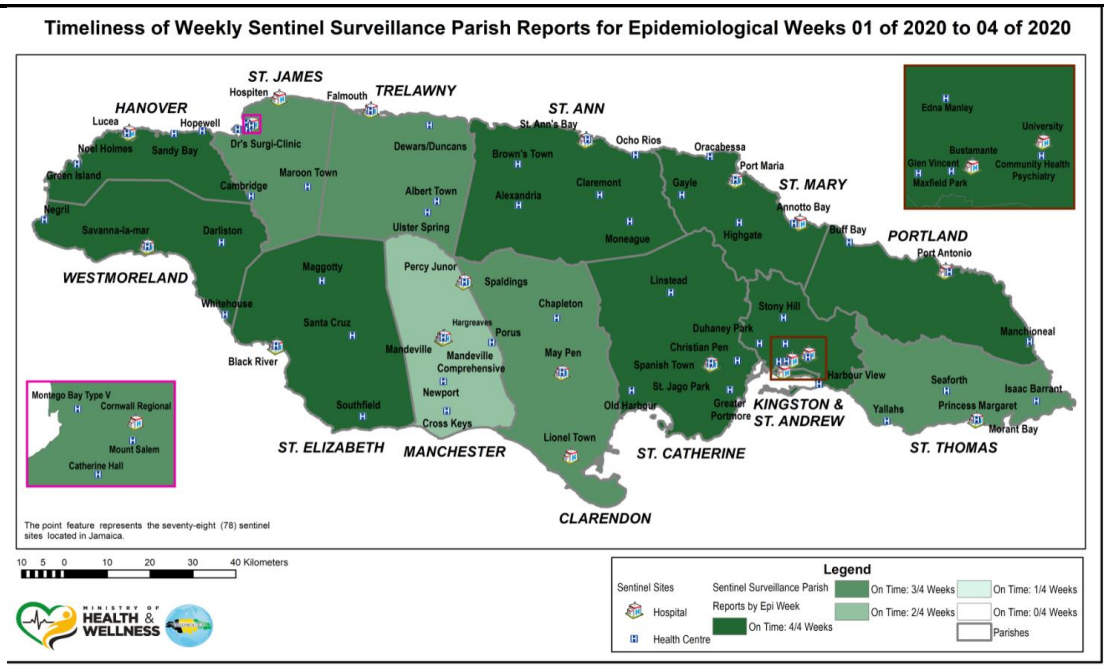
A syndromic surveillance system is good for early detection of and response to public health events.

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 1 to 4 of 2020

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



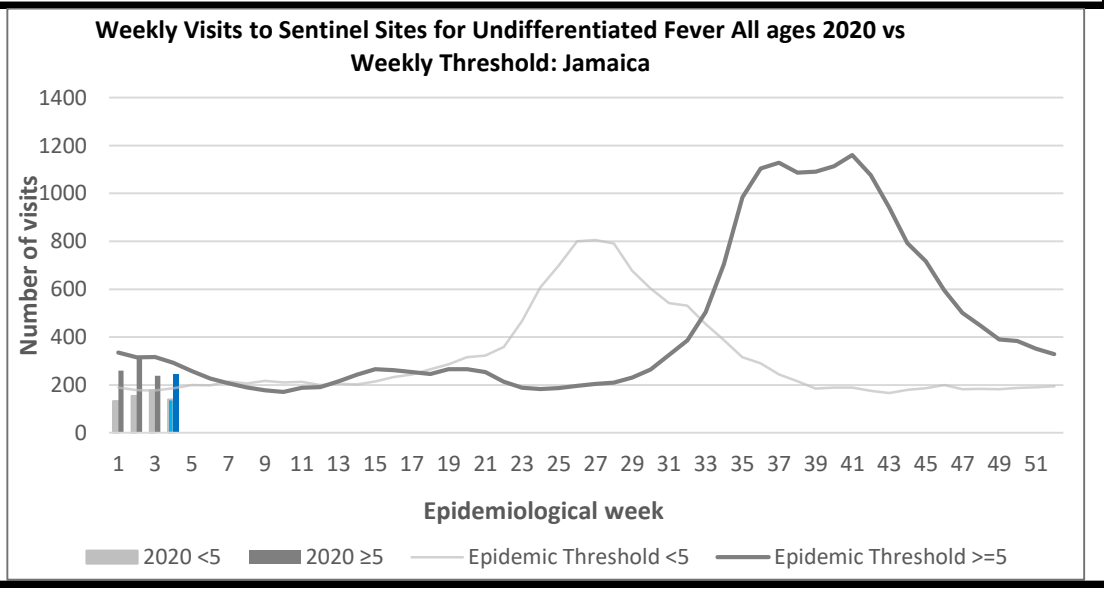
REPORTS FOR SYNDROMIC SURVEILLANCE

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



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

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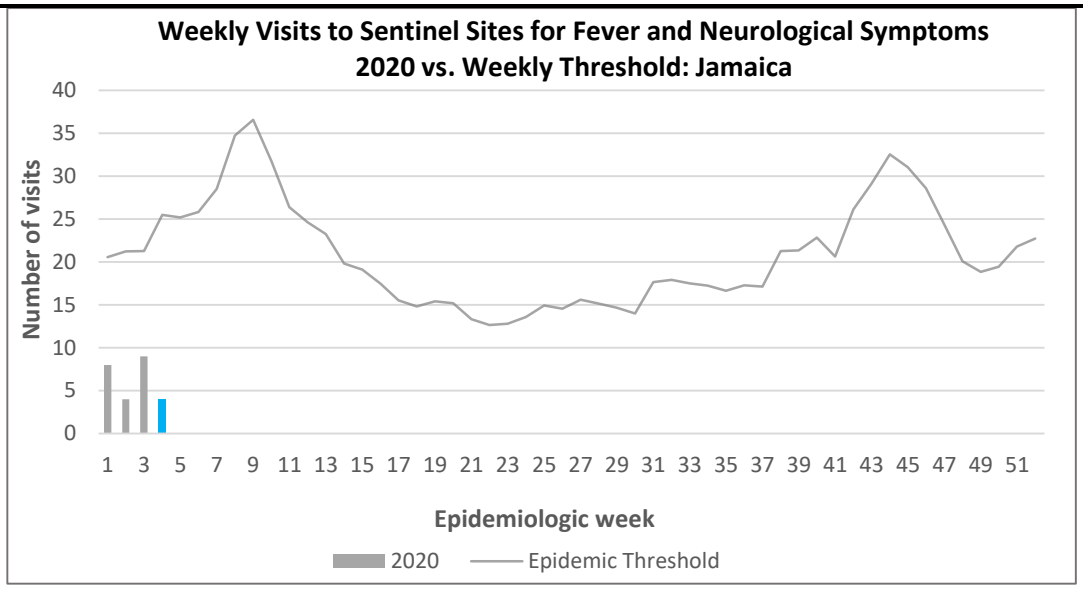
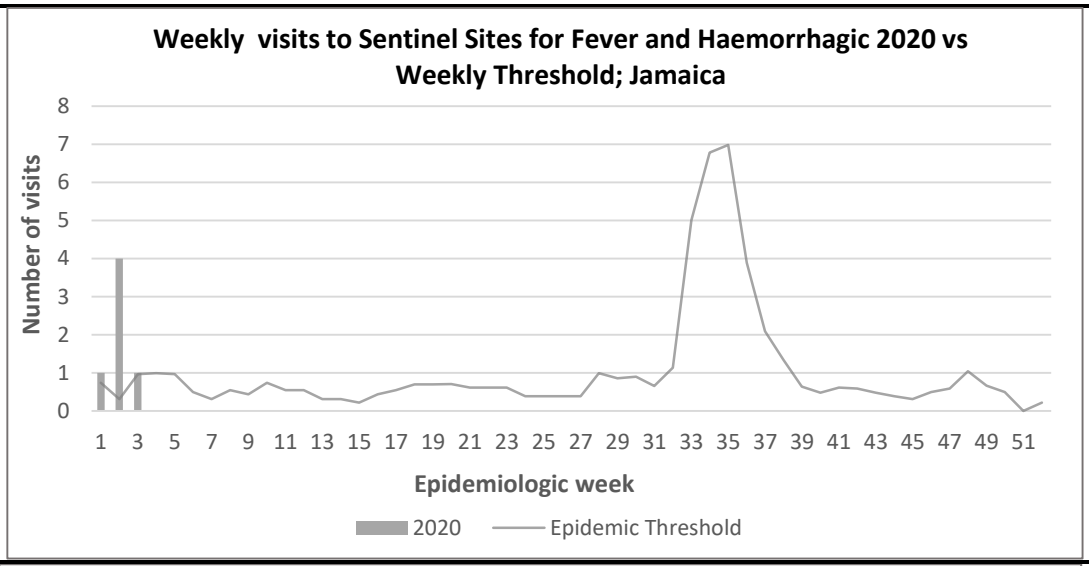
FEVER AND NEUROLOGICAL
Temperature of >38⁰C /100.4⁰F (or recent history of fever) in a previously healthy person with or without headache and vomiting. The person must also have meningeal irritation, convulsions, altered consciousness, altered sensory manifestations or paralysis (except AFP).

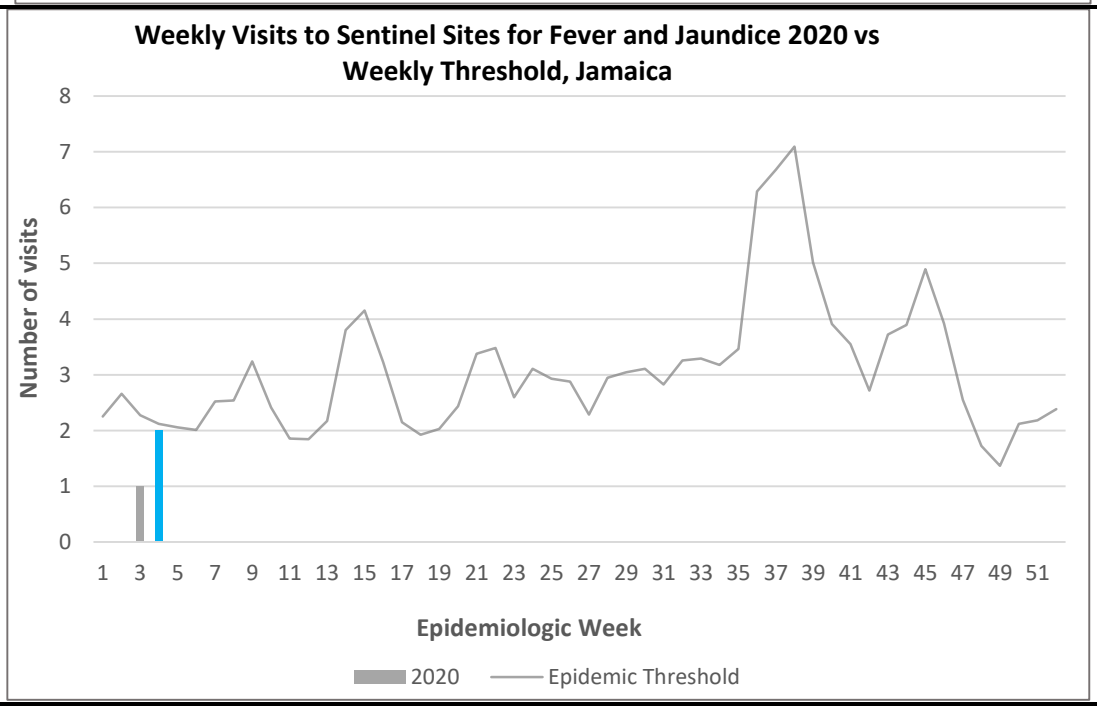


FEVER AND HAEMORRHAGIC
Temperature of >38⁰C /100.4⁰F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



FEVER AND JAUNDICE
Temperature of >38⁰C /100.4⁰F (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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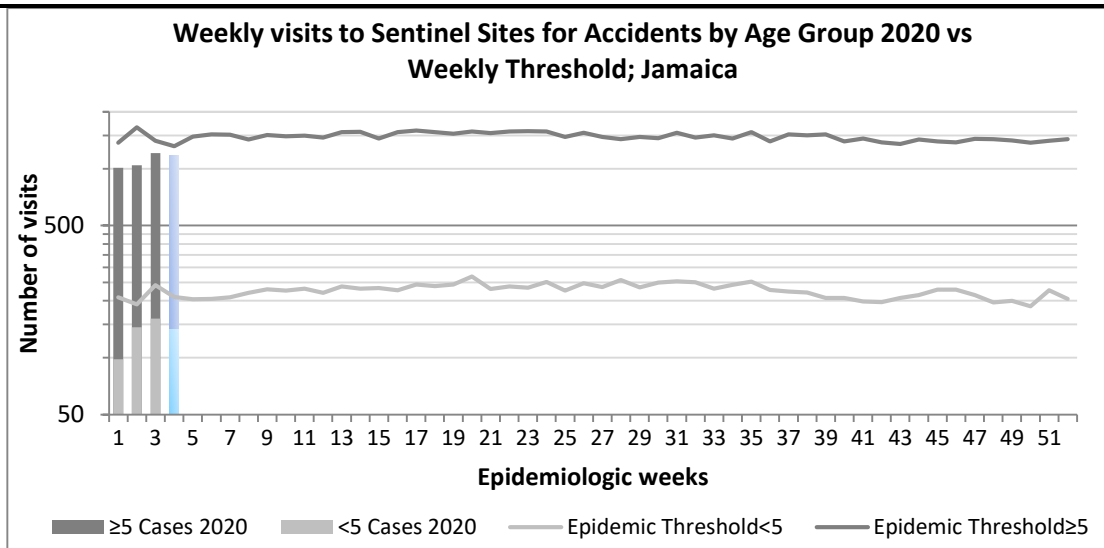
ACCIDENTS

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

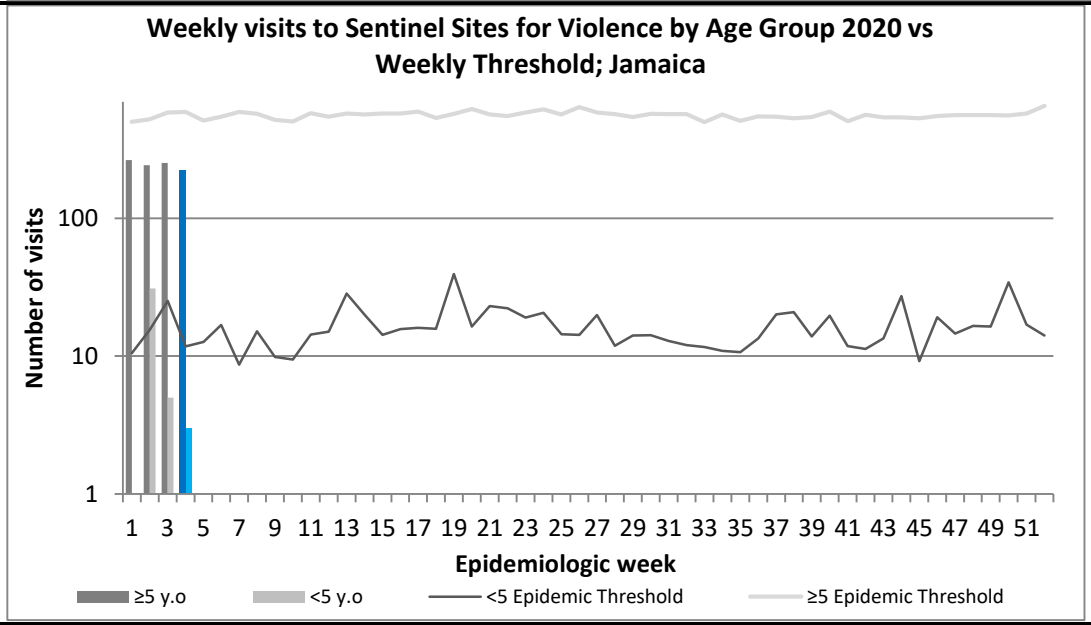
KEY

VARIATIONS Of BLUE SHOW CURRENT WEEK



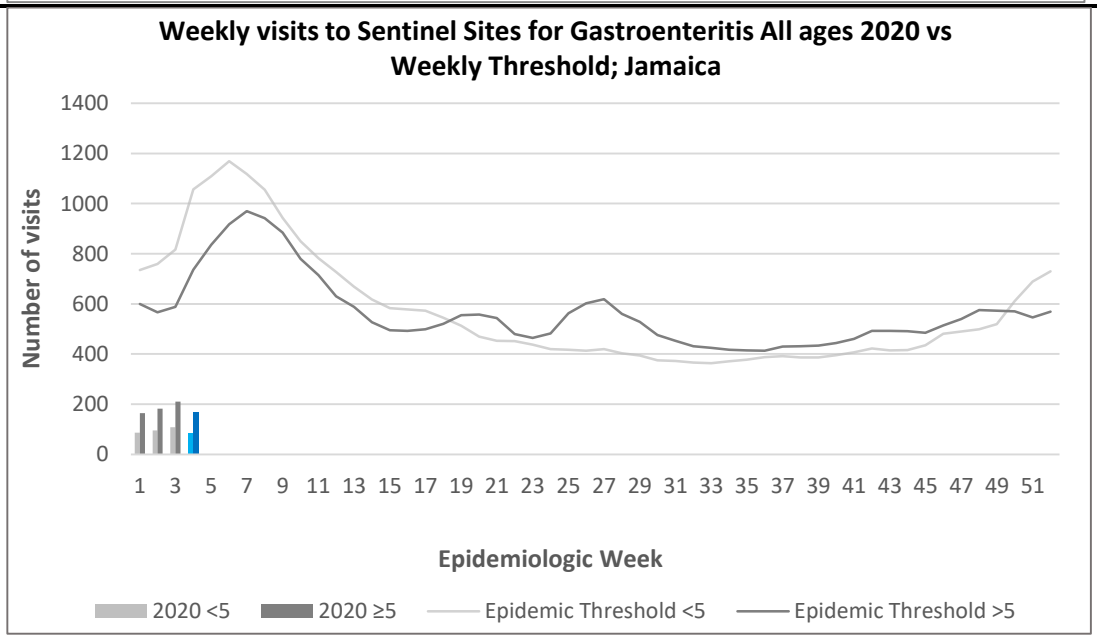
VIOLENCE

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	3	6
	Cholera	0	0
	Dengue Hemorrhagic Fever*	NA	NA
	Hansen's Disease (Leprosy)	0	0
	Hepatitis B	0	0
	Hepatitis C	0	0
	HIV/AIDS	NA	NA
	Malaria (Imported)	0	0
	Meningitis (Clinically confirmed)	0	1
EXOTIC/ UNUSUAL	Plague	0	0
HIGH 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
	Fever and Rash – Rubella	0	0
	Maternal Deaths**	1	3
	Ophthalmia Neonatorum	0	12
	Pertussis-like syndrome	0	0
	Rheumatic Fever	0	0
	Tetanus	0	0
	Tuberculosis	0	3
	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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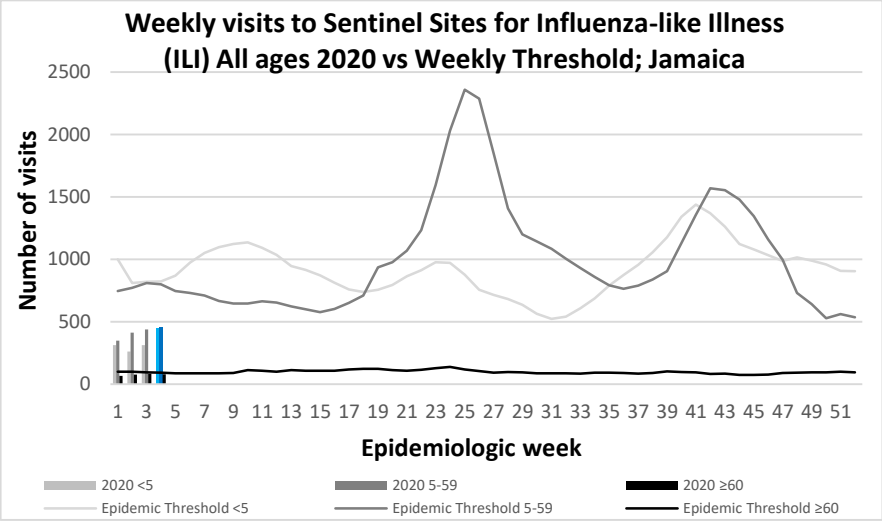
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 04

January 19, 2020 – January 25, 2020 Epidemiological Week 04

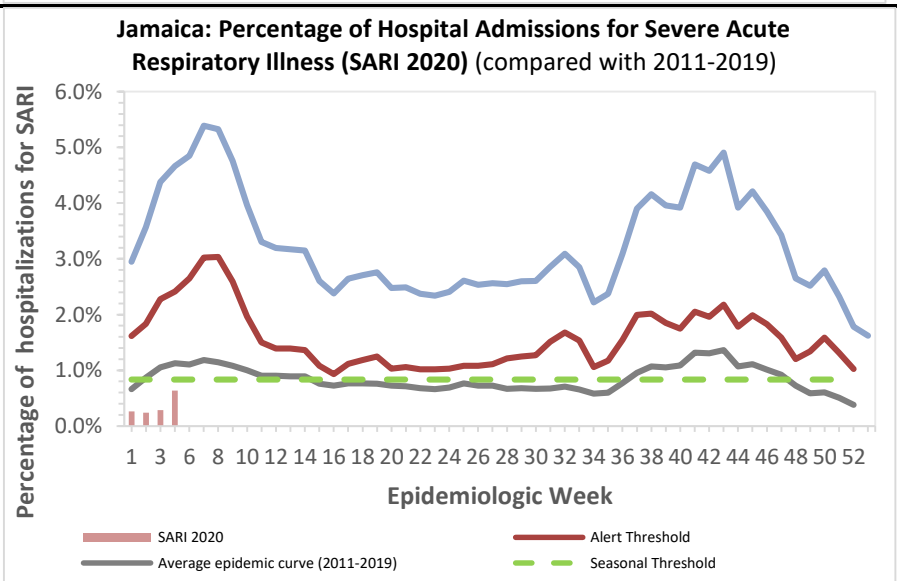
	EW 04	*YTD*
SARI cases	*11*	*24*
Total Influenza positive Samples	*1*	*10*
Influenza A	*1*	*9*
H3N2	*0*	*1*
H1N1pdm09	*0*	*6*
Not subtyped	*1*	*2*
Influenza B	*0*	*1*
Parainfluenza	*0*	*0*



Epi Week Summary

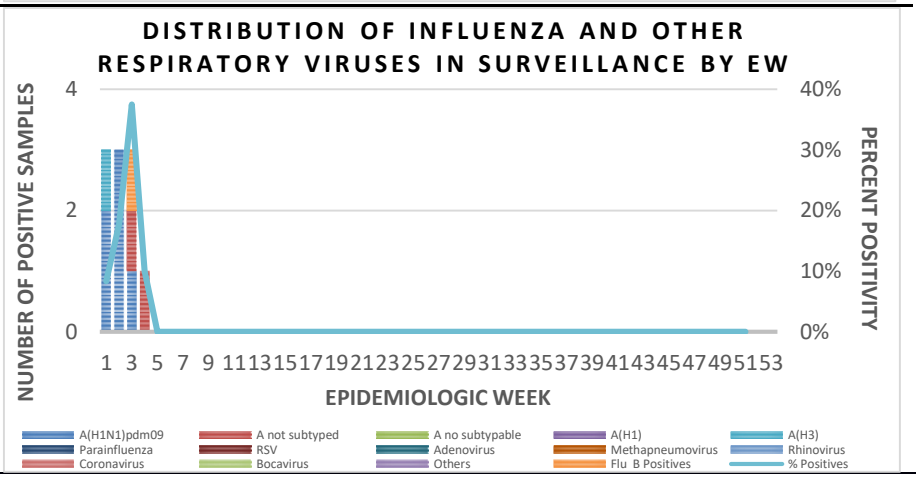
During EW 04, 11 (eleven) SARI admissions were reported.

***Ten percent (10%) positivity for EW 04.**
(*Figures at at January 30, 2020*)



Caribbean Update EW 04

Overall, influenza activity is moderate in the sub-region. In Haiti influenza activity increased but remained at a low level of transmissibility. In Puerto Rico, influenza-like illness (ILI) activity remained high. In Aruba, influenza activity continues elevated.



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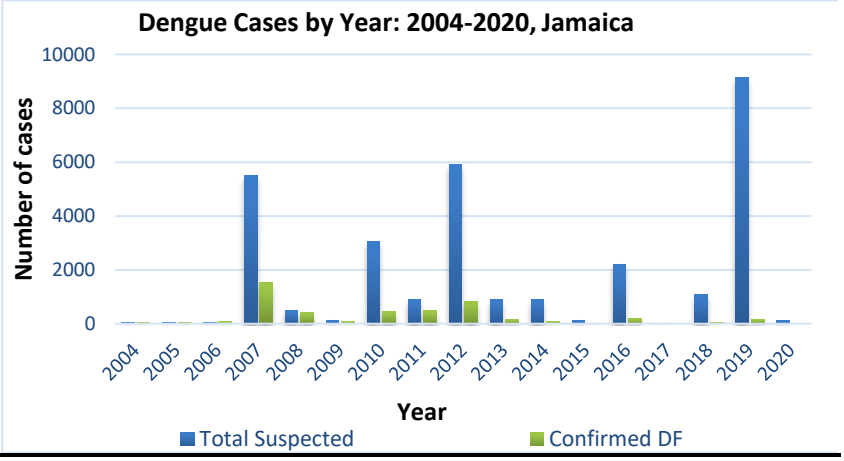
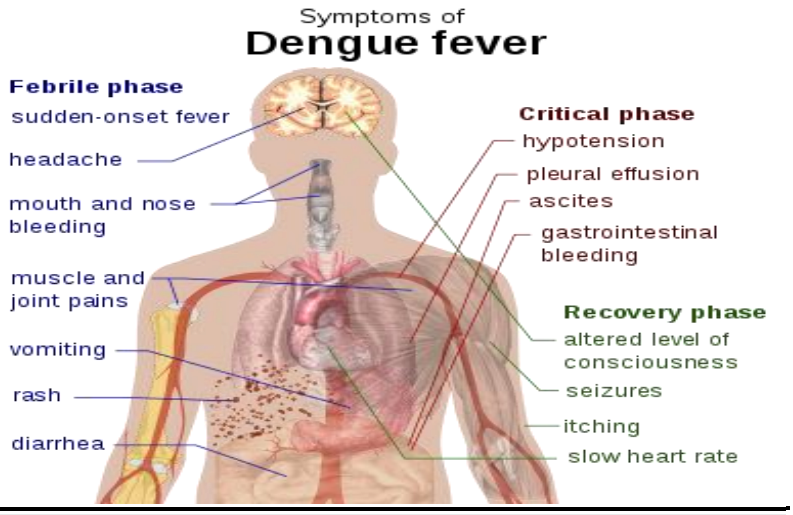
Dengue Bulletin

January 19– January 25, 2020 Epidemiological Week 04 | Epidemiological Week 04



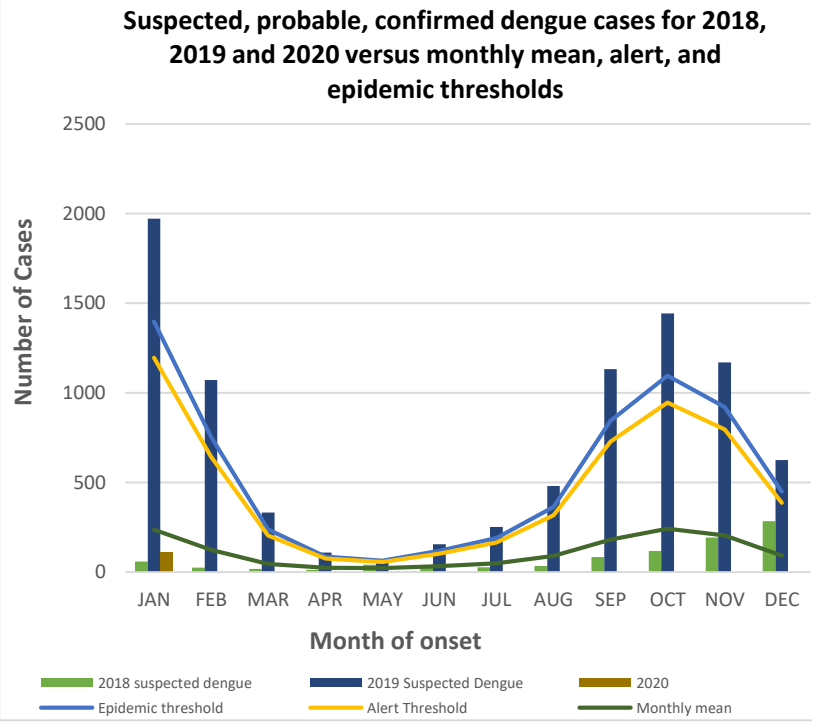
Reported suspected and confirmed dengue with symptom onset in week 4 of 2020

	2020	
	EW 4	YTD
Total Suspected Dengue Cases	3**	103**
Lab Confirmed Dengue cases	0**	1**
CONFIRMED Dengue Related Deaths	0**	1**



Points to note:

- ** figure as at January 30, 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

Breastfeeding experiences and asthma and allergy outcomes in Jamaican children aged 2-17 years

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Background: The literature suggests a link between breastfeeding experiences in childhood and asthma and allergy prevalence which has been increasing globally. Gender-specific pathogenesis of asthma and variation in childhood exposure to breastfeeding are possible explanations for this increase.

Objective: To investigate the relationship between the prevalence of asthma, allergy outcomes and exposure to breastfeeding among Jamaican children.
Method: Secondary analysis of data from an island-wide cross-sectional survey of 2,017 Jamaican children aged 2-17 years in 2007. Survey weighted cross-tabulation and logistic regression analyses quantified adjusted and unadjusted associations between breastfeeding history variables and asthma and allergy outcomes.

Results: The prevalence of current wheeze was, 19.6%, doctor-diagnosed asthma,16.7%, and eczema,17.3%. Almost twenty five percent (24.5%) of children had a history of rhinitis. While 95.5% of 2-17 year-old Jamaicans was breastfed, only 18.6% reported 6 months exclusive breastfeeding. Current wheeze was the only outcome associated with breastfeeding history. Exclusive breastfeeding for 0-5 months increased the odds of current wheeze among males (unadjusted OR [95%CI] =1.78[1.002, 3.15], $p<0.05$). In females a quadratic relationship ($p=0.048$) between exclusive breastfeeding duration and current wheeze occurrence showed prevalence of current wheeze increasing to 21.3% at 3.9 months and decreasing thereafter. These sex-specific associations between current wheeze prevalence and breastfeeding were lost in the presence of confounders.

Conclusion: Jamaican boys with less than optimum breastfeeding duration have increased odds of current wheeze. Jamaican girls may have lowered probability of current wheeze if exclusively breastfed for more than four months. These findings suggest possible gender-specific pathogenesis of asthma.

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