# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH, JAMAICA

# Poliomyelitis

Polio (poliomyelitis) mainly affects children under 5 years of age. 1 in 200 infections leads to irreversible paralysis. Among those paralysed, 5% to 10% die when their breathing muscles become immobilized.

Cases due to wild poliovirus have decreased by over 99% since 1988, from an estimated 350 000 cases then, to 33 (1) reported cases in 2018.

As long as a single child remains infected, children in all countries are at risk of contracting polio. Failure to eradicate polio from these last remaining strongholds could result in as many as 200 000 new

cases every year, within 10 years, all over the world. In most countries, the global effort has expanded capacities to tackle other infectious diseases by building effective surveillance and immunization systems.



### **Symptoms**

Polio is a highly infectious disease caused by a virus. It invades the nervous system, and can cause total paralysis in a matter of hours. The virus is transmitted by person-to-person spread mainly through the faecal-oral route or, less frequently, by a common vehicle (for example, contaminated water or food) and multiplies in the intestine. Initial symptoms are fever, fatigue, headache, vomiting, stiffness of the neck and pain in the limbs. 1 in 200 infections leads to irreversible paralysis (usually in the legs). Among those paralysed, 5% to 10% die when their breathing muscles become immobilized.

### People most at risk

Polio mainly affects children under 5 years of age.

### **Prevention**

There is no cure for polio, it can only be prevented. Polio vaccine, given multiple times, can protect a child for life.

### Global caseload

Wild poliovirus cases have decreased by over 99% since 1988, from an estimated 350 000 cases in more than 125 endemic countries then, to 33 (1) reported cases in 2018.

Of the 3 strains of wild poliovirus (type 1, type 2, and type 3), wild poliovirus type 2 was eradicated in 1999 and no case of wild poliovirus type 3 has been found since the last reported case in Nigeria in November 2012.

Reference: Reported to WHO as of March 1 2019

Downloaded from: https://www.who.int/news-room/fact-sheets/detail/poliomyelitis

# EPI WEEK 16



**SYNDROMES** 

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CLASS 1 DISEASES

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**INFLUENZA** 

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**DENGUE FEVER** 

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**GASTROENTERITIS** 

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RESEARCH PAPER

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# REPORTS FOR SYNDROMIC SURVEILLANCE

### **FEVER**

Temperature of >38°C  $/100.4^{0}F$  (or recent history of fever) with or without an obvious diagnosis or focus of infection.



### RED CURRENT WEEK

### **FEVER AND NEUROLOGICAL**

Temperature of >38°C  $/100.4^{\circ}$ 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).

### **企**曲 **FEVER AND HAEMORRHAGIC**

Temperature of  $>38^{\circ}C$ /100.40F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



### NOTIFICATIONS-All clinical sites



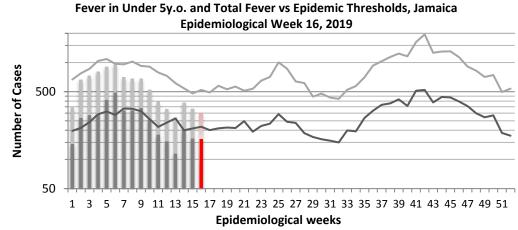
INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



**HOSPITAL ACTIVE** SURVEILLANCE-30 sites. Actively pursued



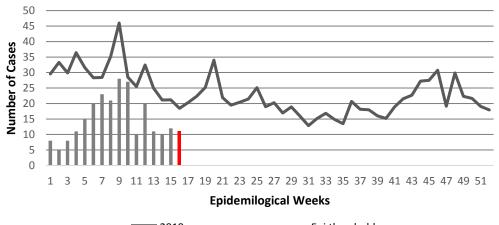
REPORT- 79 sites. Automatic reporting



Total Fever (all ages) -<5y.o. Epi Threshold</p>

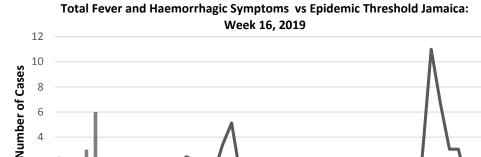
Cases under 5 y.o. - All Ages Epi Threshold

### **Total Fever and Neurological Symptoms vs Epidemic Threshold Jamaica:** Week 16, 2019



2019

Epi threshold



0 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 3 Epidemiological weeks

Cases 2019

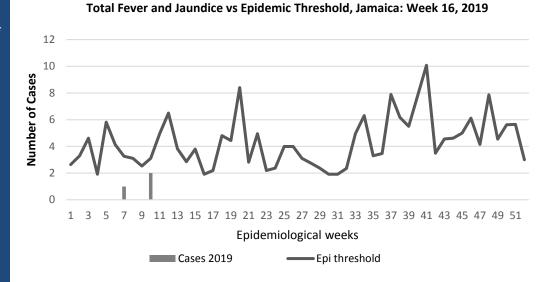
Epi threshold

**SENTINEL** 

### **FEVER AND JAUNDICE**

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





### **ACCIDENTS**

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



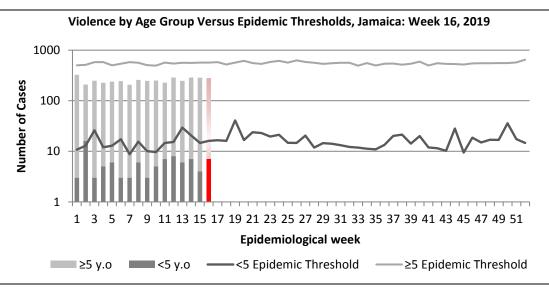


# Accidents by Age Group Versus Epidemic Thresholds, Jamaica: Week 16, 2019 500 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 Epidemiological weeks 25 Cases 2018 50 Epidemic Threshold<5 Epidemic Threshold<5 Epidemic Threshold<5

### **VIOLENCE**

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







3 NOTIFICATIONS-All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE-30 sites. Actively pursued



CLA	SS ONE NO	TIFIABLE EVEN	TS		Comments	
			CONFIR	AFP Field Guides		
	CLASS 1 E	VENTS	CURRENT YEAR	PREVIOUS YEAR	from WHO indicate that for an	
j	Accidental F	Poisoning <sup>1</sup>	6	53	effective surveillance	
NATIONAL /INTERNATIONAL INTEREST	Cholera		0	0	system, detection	
	Dengue Hen	norrhagic Fever <sup>2</sup>	0	0	rates for AFP should be	
3RN 3ST	Hansen's Di	sease (Leprosy)	0	0	1/100,000	
L /INTERN INTEREST	Hepatitis B		1	8	population under 15 years old (6 to	
L A	Hepatitis C		1	1	7) cases annually.	
∀NC	HIV/AIDS		NA	NA		
ATI	Malaria (Im	ported)	0	0	Pertussis-like syndrome and	
Ż	Meningitis (	Clinically confirmed)	5	22	Tetanus are	
EXOTIC/ UNUSUAL	Plague		0	0	clinically confirmed	
/ <u>T</u>	Meningococ	cal Meningitis	0	0	classifications.	
H IGH MORBIDIT, MORTALIY	Neonatal Te	tanus	0	0	Numbers in brackets	
H OR	Typhoid Fev	ver er	0	0	indicate combined suspected and confirmed	
ΣΣ	Meningitis H	H/Flu	0	0	Accidental Poisoning	
	AFP/Polio		0	0	cases <sup>2</sup> Dengue Hemorrhagic	
	Congenital F	Rubella Syndrome	0	0	Fever data include Dengue related deaths;	
S	Congenital S	Syphilis	0	0	- <sup>3</sup> Figures include all	
IMES	Fever and	Measles	0	0	deaths associated with pregnancy reported for	
3AM	Rash	Rubella	0	0	the period.	
SPECIAL PROGRAM	Maternal De	eaths <sup>3</sup>	15	33	<sup>4</sup> CHIKV IgM positive cases	
, PR	Ophthalmia	Neonatorum	55	99	<sup>5</sup> Zika PCR	
ZIAI	Pertussis-lik	e syndrome	0	0	positive cases	
PEC	Rheumatic F	ever	0	0		
	Tetanus		0	0		
	Tuberculosis	S	5	24		
	Yellow Feve	er	0	0		
	Chikunguny	a <sup>4</sup>	0	0		
	Zika Virus <sup>5</sup> FICATIONS-	INVESTIGATION	0 HOSP	0	NA- Not Available	

4 NOTIFICATIONS-All clinical sites



ACTIVE SURVEILLANCE-30 sites. Actively pursued

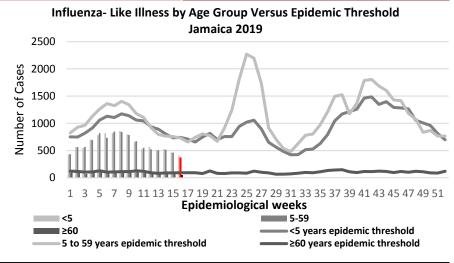


# NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 16

April 14-20, 2019 Epidemiological Week 16

April 2019								
	EW 16	YTD						
SARI cases	13	214						
Total Influenza positive Samples	3	272						
Influenza A	3	256						
H3N2	2	44						
H1N1pdm09	1	201						
Not subtyped	0	11						
Influenza B	0	16						
Parainfluenza	0	2						



### **Comments:**

Swine flu is a respiratory disease caused by the influenza virus (Influenza A H1N1 and H3N2) that infect the respiratory tract of pigs and result in a barking cough, decreased appetite, nasal secretions and listless behaviour. Occasionally, it may be transmitted to humans in very close contact. In 2009, the new Influenza A (H1N1) virus that emerged and led to a pandemic was designated as Influenza A (H1N1) pdm09 virus to distinguish it from the seasonal Influenza A (H1N1).

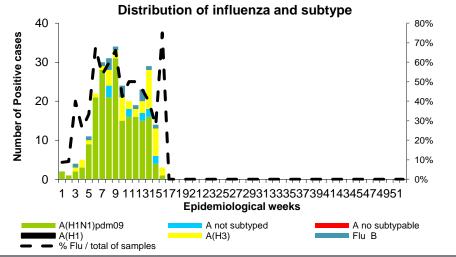
During EW 16 SARI activity remained below the seasonal threshold, similar to the previous seasons for the same period. Decreased influenza activity was reported; with influenza A(H1N1)pdm09 predominating in previous weeks

# Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2019) (compared with 2011-2018) 3.5% 2.5% 2.0% 1.5% 0.0% 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 Epidemiological Week SARI 2019 Alert Threshold

### GLOBAL AND REGIONAL <u>UPDATES</u>

**Worldwide:** Seasonal influenza subtype A accounted for the majority of influenza detections.

Caribbean: Influenza activity decreased and RSV activity was reported in most of the subregion. In Cuba and Haiti, the greatest activity of SARI was associated with influenza A (H1N1) pdm09



Average epidemic curve (2011-2017)



5 NOTIFICATIONS-All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events





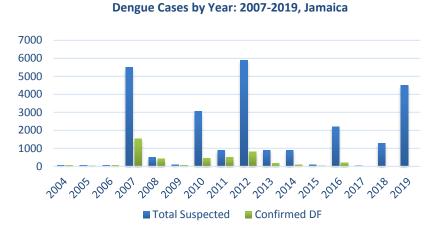
Seasonal Threshold

# Dengue Bulletin

April 14-20, 2019 Epidemiological Week 16

Epidemiological Week 16



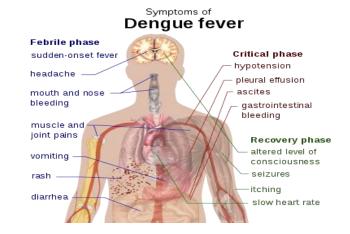


Reported suspected and confirmed dengue with symptom onset in weeks 1-16, 2019

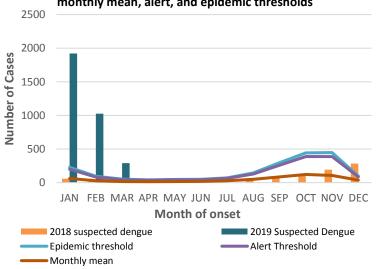
		20	2018		
		<b>EW</b> 16	YTD	YTD	
•	cted Dengue ises	0	4510	1292	
Lab Confirmed Dengue cases		0	16	0	
CONFIRMED	*DHF/DSS	0	0	0	
	Dengue Related Deaths	0	15	1	

\*DHF/DSS: Dengue Haemorrhagic Fever/ Dengue Shock Syndrome <u>Points to note</u>:

- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.



Suspected dengue cases for 2018 and 2019 versus monthly mean, alert, and epidemic thresholds





6 NOTIFICATIONS-All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE-30 sites. Actively pursued



# Gastroenteritis Bulletin

2,706

3,867

6,573

LVV

April 14-20, 2019 Epidemiological Week 15

83

2018

Epidemiological Week 16

16

Weekly Breakdown of Gastroenteritis cases										
Year		EW 16		YTD						
	<5	≥5	Total	<5	≥5	Total				
2019	234	253	487	6,326	6,743	13,069				

226

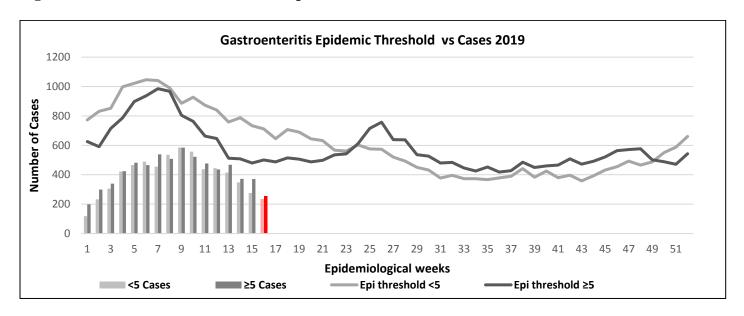
### **Gastroenteritis:**

In epidemiological week 16, 2019, the total number of reported GE cases showed a 115% increase compared to EW 16 of the previous year.

The year to date figures showed a 99% increase in cases for the period.

Figure 1: Total Gastroenteritis Cases Reported 2018-2019

143



## Total number of GE cases per parish up to Week 16, 2019

Parishes	KSA	STT	POR	STM	STA	TRE	STJ	HAN	WES	STE	MAN	CLA	STC
<5	2379	187	83	334	542	343	483	158	320	214	612	306	365
≥5	1606	319	135	501	765	374	486	199	337	289	748	537	447







## RESEARCH PAPER

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

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

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### **ABSTRACT**

Objective: To describe the 1918 influenza pandemic in Jamaica and explore the socio-political and healthcare 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.

sites





