

Week ending December 24, 2016

Epidemiology Week 51

WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH, JAMAICA

Weekly Spotlight

Can bacteria help stop the spread of disease?

Mosquitoes kill an estimated 700 000 people a year. If infected with viruses that cause diseases such as chikungunya, dengue and Zika, mosquitoes can transmit them to humans in one bite.



Researchers have now pilot-deployed a new technique to control diseases transmitted by mosquitoes by making use of nature. It is one of the new tools **WHO** recommends for pilot deployment as a response to Zika virus.

Researchers at Monash University in Australia have discovered that mosquitoes artificially infected with a bacterium called *Wolbachia* do not transmit dengue, chikungunya and Zika as easily. *Wolbachia* bacteria exist naturally in 60% of common insects.

This innovative approach to control mosquito-transmitted diseases was brought to Brazil by Fiocruz in 2012. Initially a dengue control project, it began in a small community close to the international airport in 2014. In the current phase of the project, researchers are breeding and releasing mosquitoes with *Wolbachia* bacteria. They aim to see how well these mosquitoes, mated with wild mosquitoes, can pass the bacteria on to the next generation of mosquitoes, thus eliminating populations of mosquitoes that transmit deadly viruses.



WHO is encouraging research into this new method of mosquito control. In March 2016, the WHO Vector Control Advisory Group recommended the pilot deployment of *Wolbachia* - carrying mosquitoes to test the method's effectiveness, to be

followed by independent robust monitoring and evaluation.

Downloaded from: <http://www.who.int/features/2016/can-bacteria-stop-disease/en/>

* *Wolbachia* - It is one of the world's most common parasitic microbes and is possibly the most common reproductive parasite in the biosphere.

EPI WEEK 51



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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NOTIFICATIONS-
All clinical sites



INVESTIGATION
REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE
SURVEILLANCE-30 sites*. Actively pursued



SENTINEL
REPORT- 79 sites*. Automatic reporting

*Incidence/Prevalence cannot be calculated

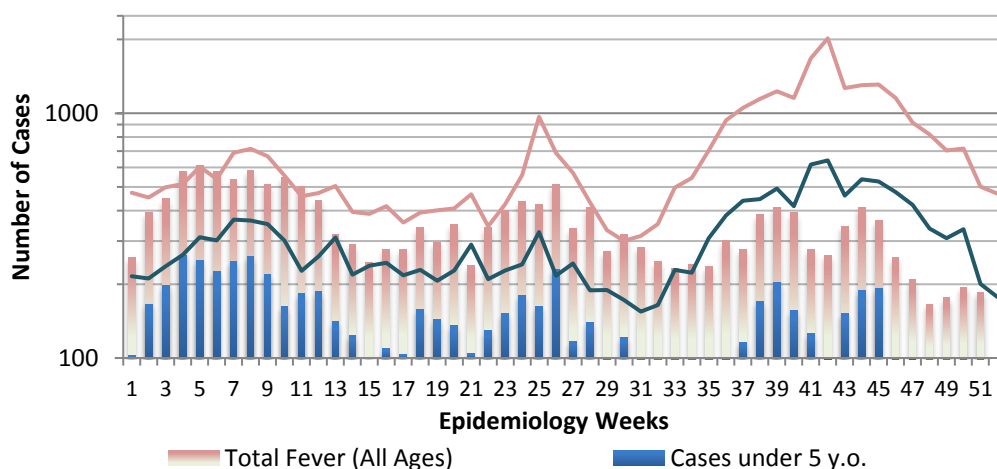
REPORTS FOR SYNDROMIC SURVEILLANCE

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.



Fever in under 5y.o. and Total Population 2016 vs Epidemic Thresholds, Epidemiology Week 51

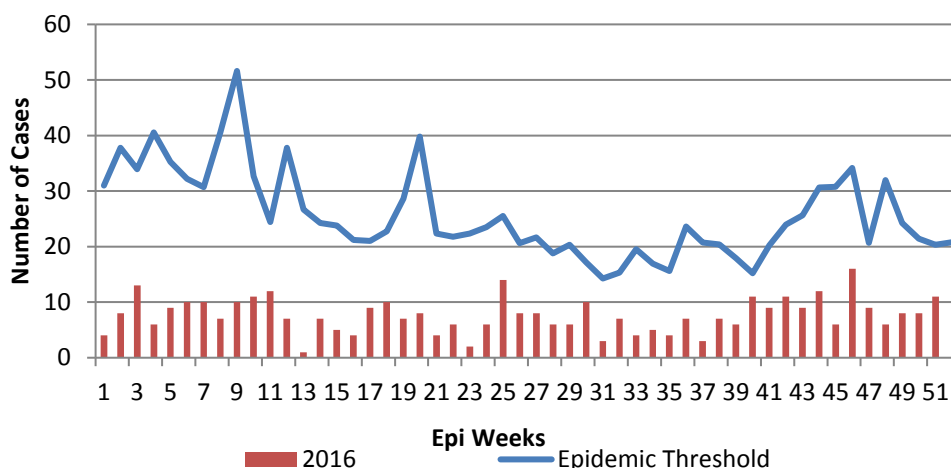


FEVER AND NEUROLOGICAL

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 Neurological Symptoms Weekly Threshold vs Cases 2016, Epidemiology Week 51

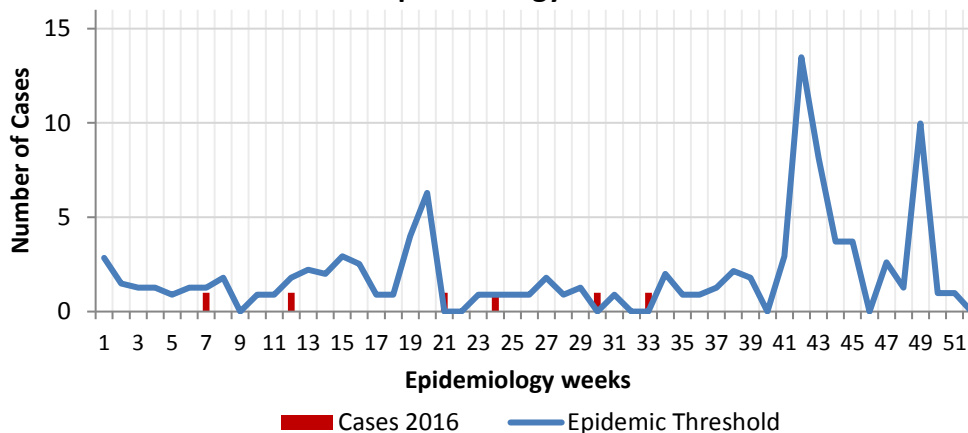


FEVER AND HAEMORRHAGIC

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 Haem Weekly Threshold vs Cases 2016, Epidemiology Week 51



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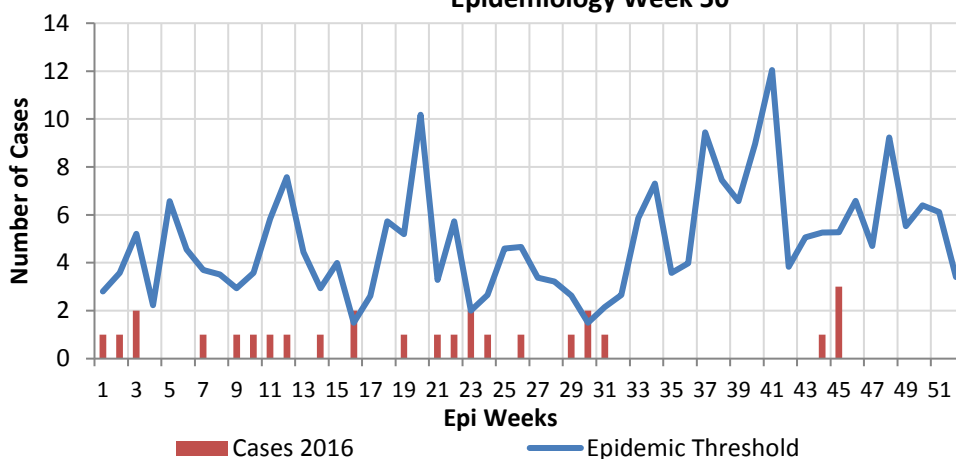
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FEVER AND JAUNDICE

Temperature of $>38^{\circ}\text{C}$ / 100.4°F (or recent history of fever) in a previously healthy person presenting with jaundice.



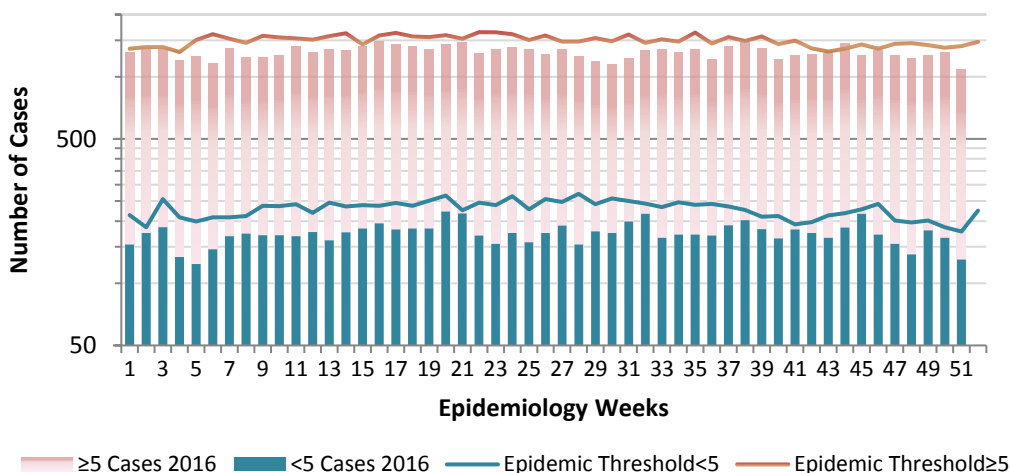
Fever and Jaundice Weekly Threshold vs Cases 2016, Epidemiology Week 50

**ACCIDENTS**

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



Accidents Weekly Threshold vs Cases 2016

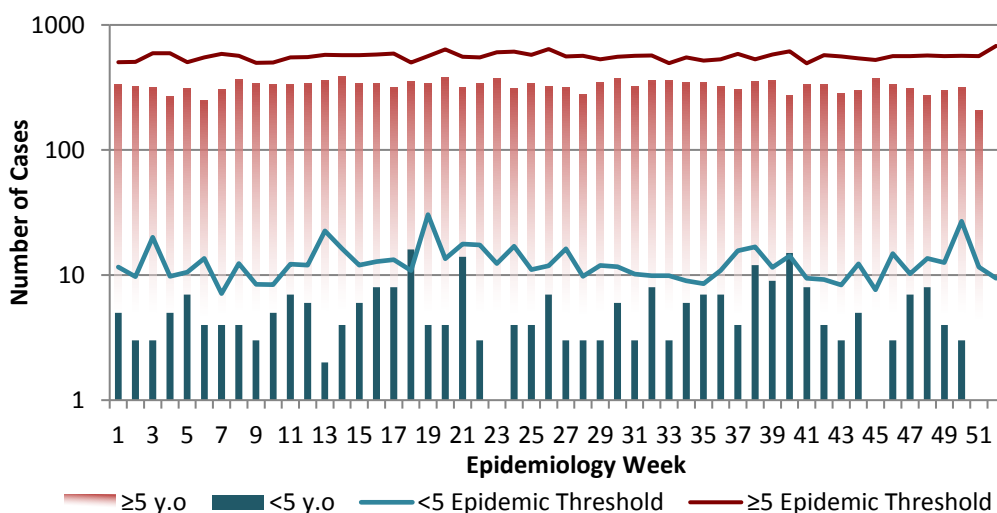
**VIOLENCE**

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

The epidemic threshold is used to confirm the emergence of an epidemic so as to step-up appropriate control measures.



Violence Weekly Threshold vs Cases 2016



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INVESTIGATION REPORTS- Detailed Follow up for all Class One Events





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CLASS ONE NOTIFIABLE EVENTS

Comments

			CONFIRMED YTD		
	CLASS 1 EVENTS		CURRENT YEAR	PREVIOUS YEAR	
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		107	130	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.
	Cholera		0	0	
	Dengue Hemorrhagic Fever ¹		2	0	
	Hansen's Disease (Leprosy)		1	0	
	Hepatitis B		27	33	
	Hepatitis C		4	10	
	HIV/AIDS - See HIV/AIDS National Programme Report				
	Malaria (Imported)		2	0	
	Meningitis (Clinically confirmed)		48	67	
EXOTIC/ UNUSUAL	Plague		0	0	Pertussis-like syndrome and Tetanus are clinically confirmed classifications.
HIGH MORBIDITY/ MORTALITY	Meningococcal Meningitis		0	0	
	Neonatal Tetanus		0	0	The TB case detection rate established by PAHO for Jamaica is at least 70% of their calculated estimate of cases in the island, this is 180 (of 200) cases per year.
	Typhoid Fever		1	3	
	Meningitis H/Flu		0	0	
	AFP/Polio		0	0	
SPECIAL PROGRAMMES	Congenital Rubella Syndrome		0	0	*Data not available
	Congenital Syphilis		0	0	
	Fever and Rash	Measles	0	0	
		Rubella	0	0	
	Maternal Deaths ²		51	59	
	Ophthalmia Neonatorum		417	280	
	Pertussis-like syndrome		0	0	
	Rheumatic Fever		8	13	
	Tetanus		0	1	
	Tuberculosis		*Figure being validated	99	
	Yellow Fever		0	0	
	Chikungunya		0	1	<div>   </div>
	Zika Virus		203	0	



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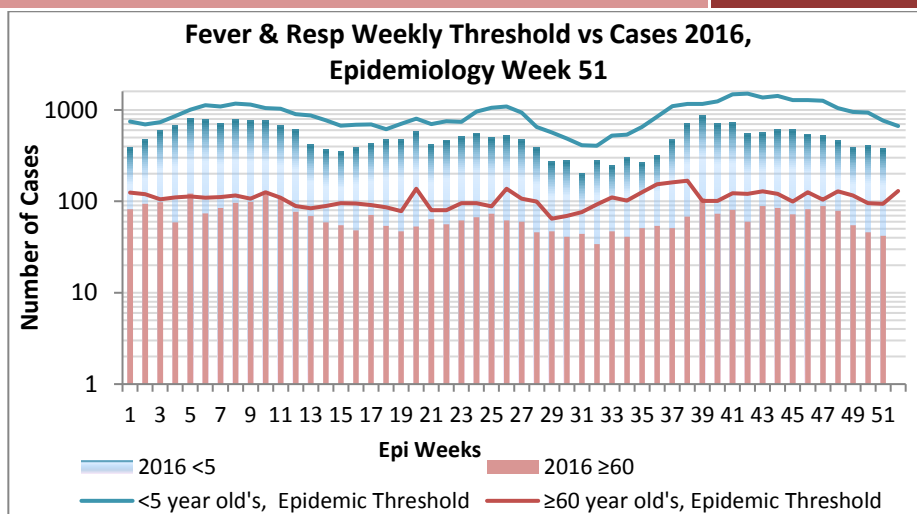
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 51

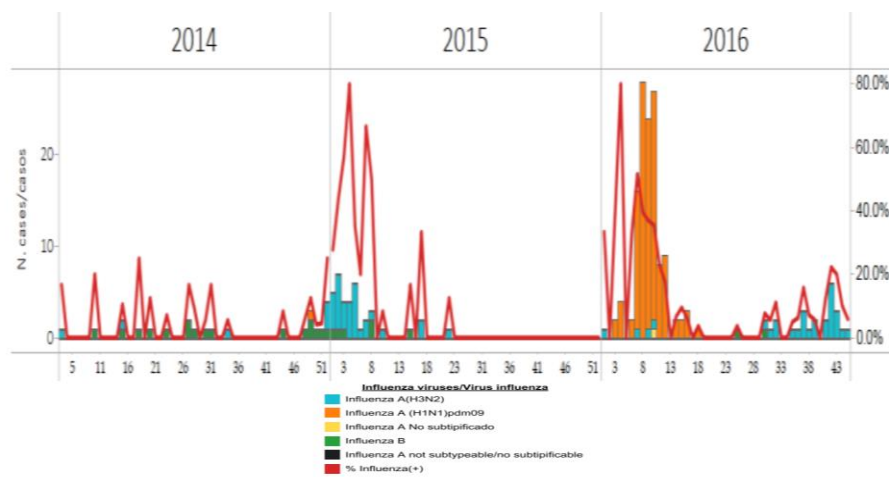
Dec 18-24, 2016

Epidemiology Week 51

September 2016		
	EW 51	YTD
SARI cases	10	1053
Total Influenza positive Samples	0	160
Influenza A	0	155
H3N2	0	20
H1N1pdm09	0	80
Not subtyped	0	55
Influenza B	0	4
Other	0	1

**Comments:**

During EW 46, SARI activity increased (2.7%) above the alert threshold. During EW 46, SARI cases were most frequently reported among adults aged from 15 to 49 years of age. During EW 46, pneumonia case-counts slightly decreased (91 cases in EW 46), with the highest proportion in Kingston and Saint Andrew. During EW 46, influenza activity decreased (5.9% positivity for influenza) with influenza A(H3N2) predominating; no other respiratory virus activity was reported.

**INDICATORS****Burden**

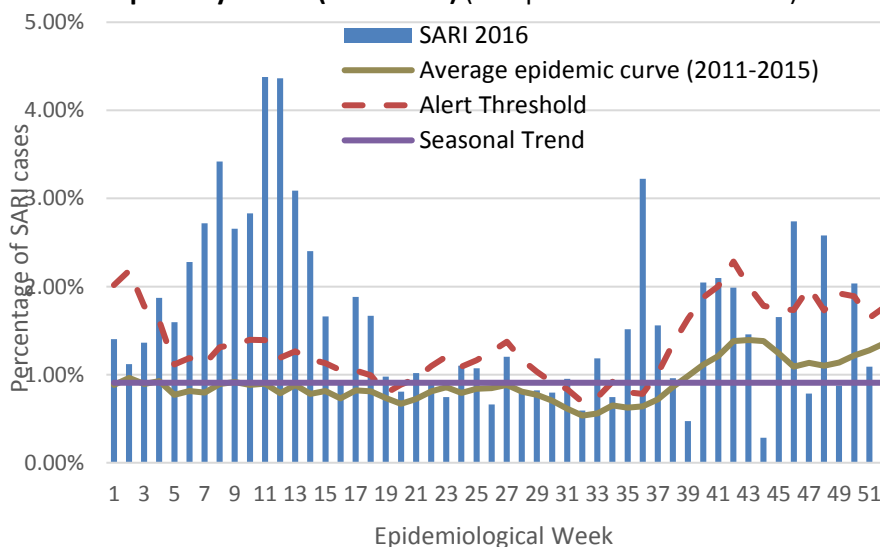
Year to date, respiratory syndromes account for 4.3% of visits to health facilities.

Incidence

Cannot be calculated, as data sources do not collect all cases of Respiratory illness.

**Prevalence**

Not applicable to acute respiratory conditions.

Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2016) (compared with 2011-2015)

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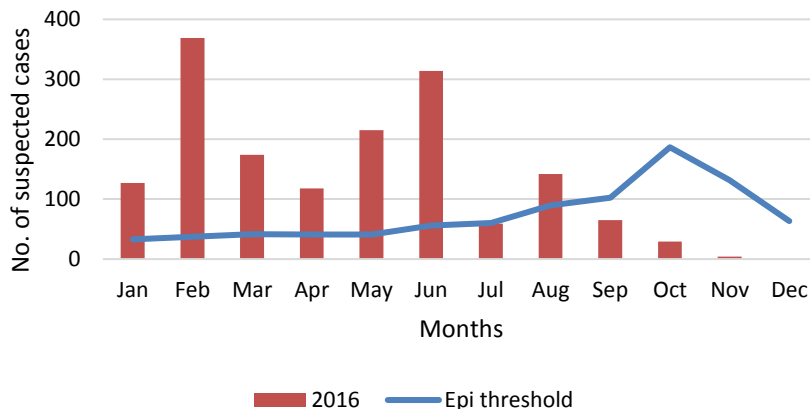
Dengue Bulletin

Dec. 18-24, 2016

Epidemiology Week 51



2016 Cases vs. Epidemic Threshold

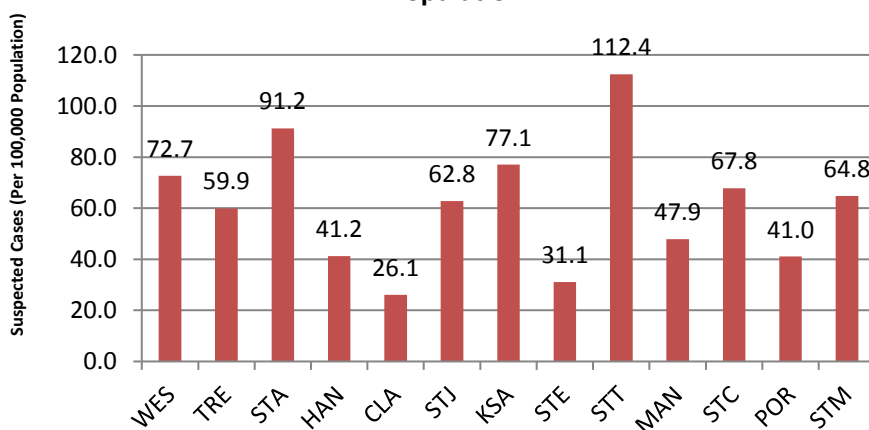


DISTRIBUTION

Year-to-Date Suspected Dengue Fever

	M	F	Un-kwn	Total	%
<1	4	10	0	14	1
1-4	24	25	0	45	5
5-14	126	135	3	229	19
15-24	101	180	4	245	20
25-44	151	373	6	451	29
45-64	62	184	2	209	10
≥65	9	18	0	25	2
Unknown	48	89	444	136	14
TOTAL	525	1014	730	2269	100

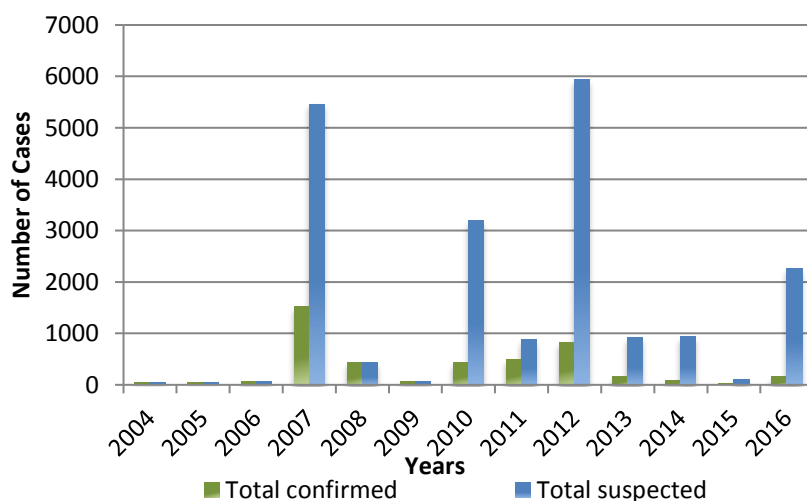
Suspected Dengue Fever Cases per 100,000 Parish Population



Weekly Breakdown of suspected and confirmed cases of DF,DHF,DSS,DRD

		2016		2015 YTD
		EW 51	YTD	
Total Suspected Dengue Cases		3	2269	30
Lab Confirmed Dengue cases		0	154	2
CONFIRMED	DHF/DSS	0	3	0
	Dengue Related Deaths	0	0	0

Dengue Cases by Year: 2004-2016, Jamaica



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Gastroenteritis Bulletin

EW 51

Dec. 18-24, 2016

Epidemiology Week 51

Weekly Breakdown of Gastroenteritis cases

Year	EW 51			YTD		
	<5	≥5	Total	<5	≥5	Total
2016	151	214	365	6,886	10,829	17,715
2015	128	196	334	10,446	11,534	21,980

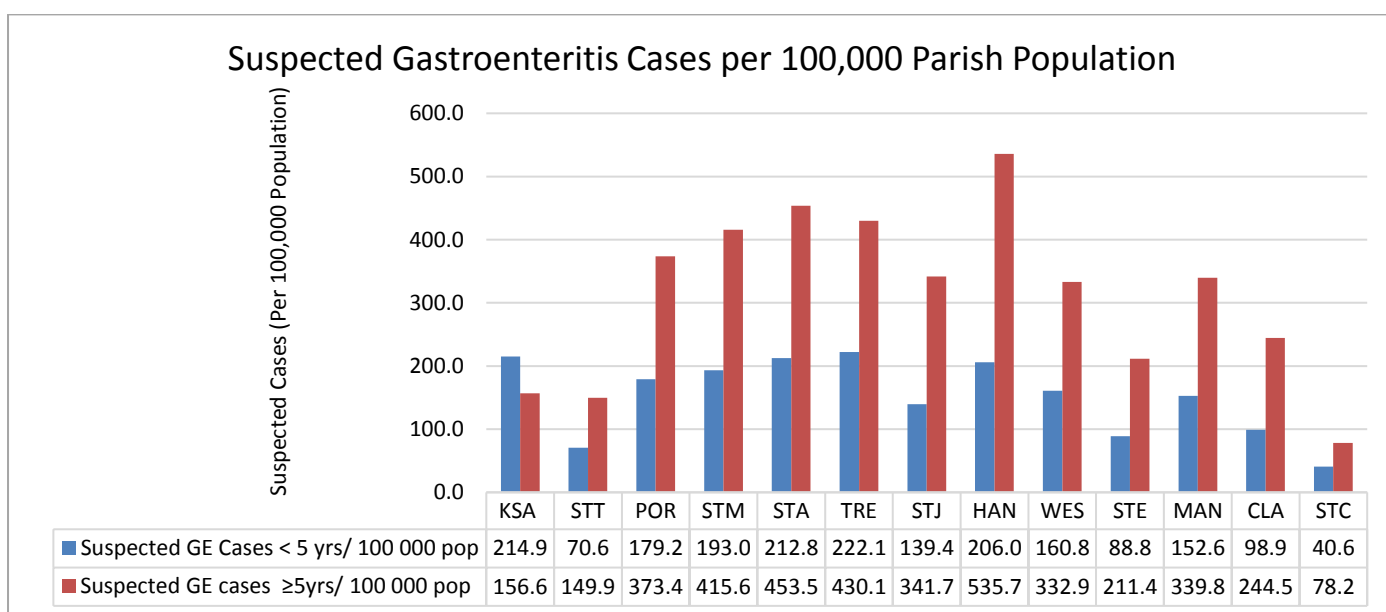
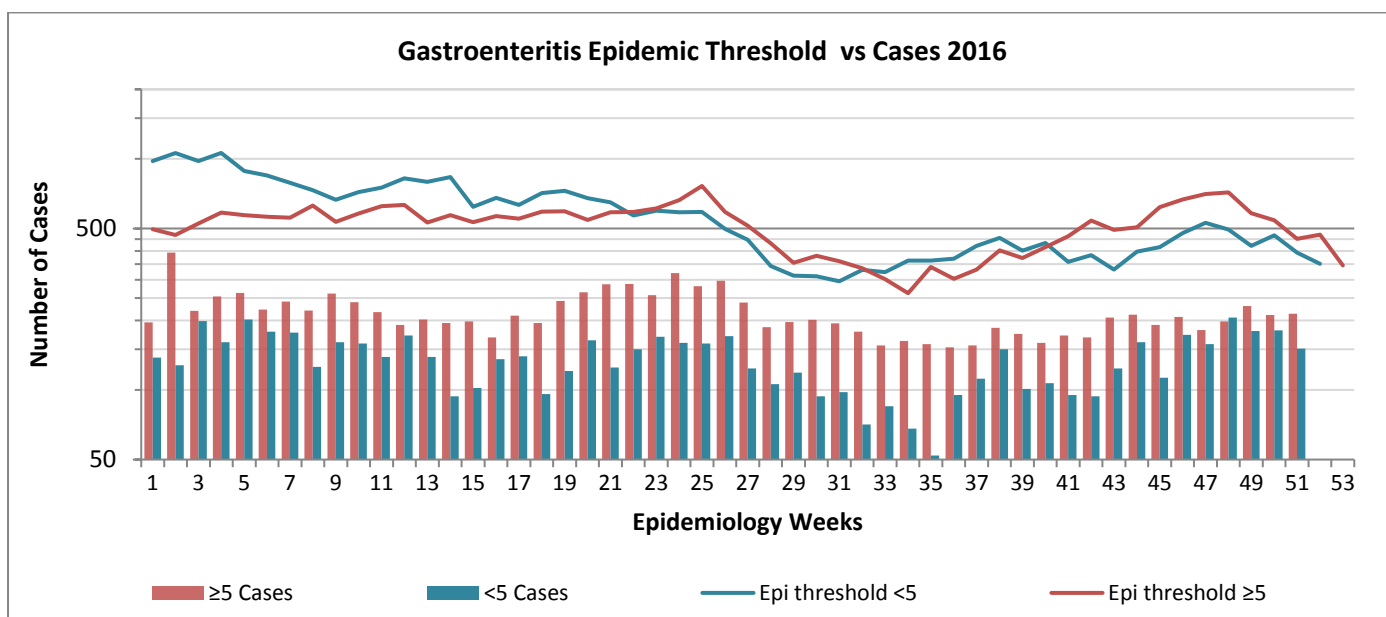
Gastroenteritis:

In Epidemiology Week 51, 2016, the total number of reported GE cases showed a 9.71% increase compared to EW 51 of the previous year.

The year to date figure showed a 17.21% decrease in cases for the period.



Figure 1: Total Gastroenteritis Cases Reported 2015-2016



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RESEARCH PAPER

A Need for Capacity Building in Faith-Based Response to HIV/AIDS in Jamaica

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Objective: To identify initiatives being conducted by faith-based organizations (FBOs) and explore their most urgent needs in addressing the HIV/AIDS epidemic.

Design and Methods: Focus group discussions (FGD) and in-depth interviews were conducted with members of FBOs, members of HIV/AIDS support groups and persons living with HIV/AIDS (PLWHA) over a 6 month period in three parishes. Twelve (12) FGD and 30 in-depth interviews were conducted. Data were analysed by descriptive and interpretive techniques following the completion of transcriptions of the interviews and focus groups.

Results: One hundred (100) persons participated in the study, 18 of which were PLWHA. Approximately 60% of FBOs who participated had initiatives to address stigma and discrimination which included education and counselling sessions with their congregants (60%) as well as providing psychological support to PLWHA (50%). One FBO also had media publication. More than 50% of the FBO leaders interviewed expressed their most urgent need to be strengthening of the leadership to address stigma and discrimination and treatment of PLWHA among their congregants.

Conclusions: Programs to address stigma and discrimination were the most common initiatives in the FBOs that participated in the study. Strengthening the capacity of FBO leaders to identify and address stigma and discrimination among their congregants and the wider community was identified as their most urgent need followed by the capacity to provide psychological support for PLWHA.



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