WEEKLY EPIDEMIOLOGY BULLETIN
NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH, JAMAICA

Weekly Spotlight

New antibiotics needed for 12 families of bacteria

WHO's list of antibiotic-resistant "priority pathogens" include bacteria that pose the greatest threat to human health. The list is intended to guide and promote research and development of new antibiotics in an effort to address growing global resistance to antimicrobial medicines.

The list highlights in particular the threat of gram-negative bacteria that are resistant to multiple antibiotics. These bacteria have built-in abilities to find new ways to resist treatment and can pass along genetic material that allows other bacteria to become drug-resistant as well.

The WHO list is divided into three categories according to the urgency of need for new antibiotics: critical, high and medium priority.

The most critical group of all includes multidrug resistant bacteria that pose a particular threat in hospitals, nursing homes, and among patients, whose care requires devices such as ventilators and blood catheters. They can cause severe and often deadly infections such as bloodstream infections and pneumonia.

The second and third tiers in the list – the high and medium priority categories – contain other increasingly drug-resistant bacteria that cause more common diseases such as gonorrhoea and food poisoning caused by *salmonella*.

The list is intended to spur governments to put in place policies that incentivize basic science and advanced R&D by both publicly funded agencies and the private sector investing in new antibiotic discovery. It will provide guidance to new R&D initiatives such as the WHO/Drugs for Neglected Diseases initiative (DNDi) Global Antibiotic R&D Partnership that is engaging in not-for-profit development of new antibiotics.

Tuberculosis – whose resistance to traditional treatment has been growing in recent years – was not included in the list because it is targeted by other, dedicated programmes. Other bacteria that were not included, such as *streptococcus* A and B and chlamydia, have low levels of resistance to existing treatments and do not currently pose a significant public health threat.

While more R&D is vital, alone, it cannot solve the problem. To address resistance, there must also be better prevention of infections and appropriate use of existing antibiotics in humans and animals, as well as rational use of any new antibiotics that are developed in future.
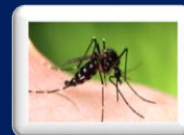
EPI WEEK 8

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

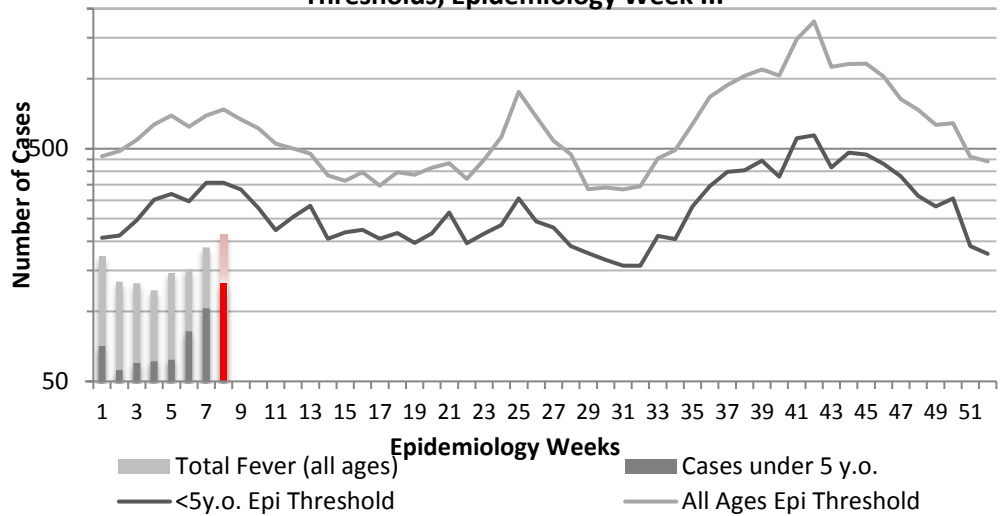Temperature of $>38^0C$ /100.4^0F (or recent history of fever) with or without an obvious diagnosis or focus of infection.

KEY

RED CURRENT WEEK

Fever in under 5y.o. and Total Population 2017 vs Epidemic Thresholds, Epidemiology Week ...


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).

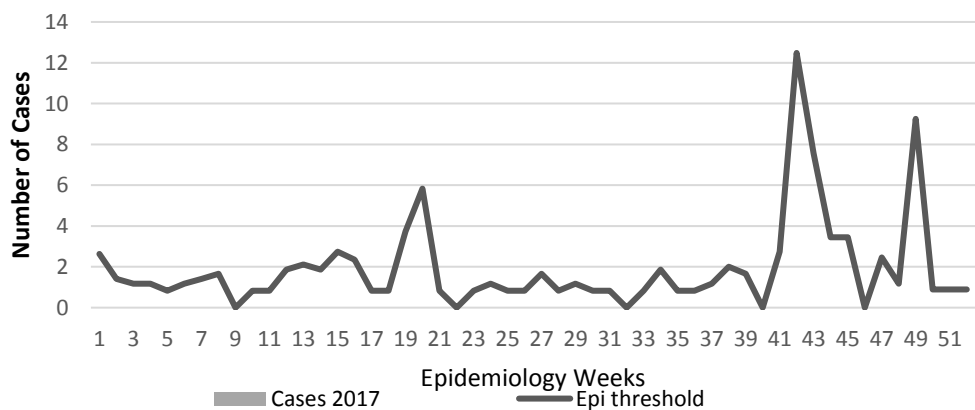**Fever and Neurological Symptoms Weekly Threshold vs Cases 2017, Epidemiology Week 8**
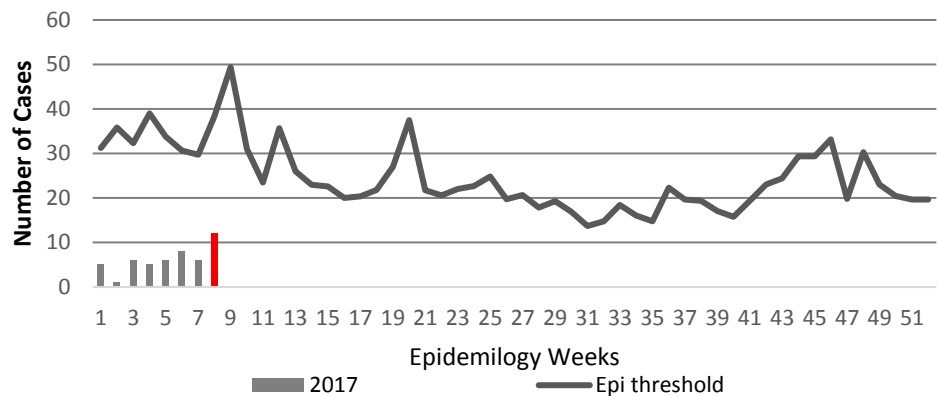
FEVER AND HAEMORRHAGIC

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 Haem Weekly Threshold vs Cases 2017, Epidemiology Week 8

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FEVER AND JAUNDICE

Temperature of >38^0C /100.4^0F (or recent history of fever) in a previously healthy person presenting with jaundice.

Fever and Jaundice Weekly Threshold vs Cases 2017, Epidemiology Week 8

ACCIDENTS

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

Accidents Weekly Threshold vs Cases 2017

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.
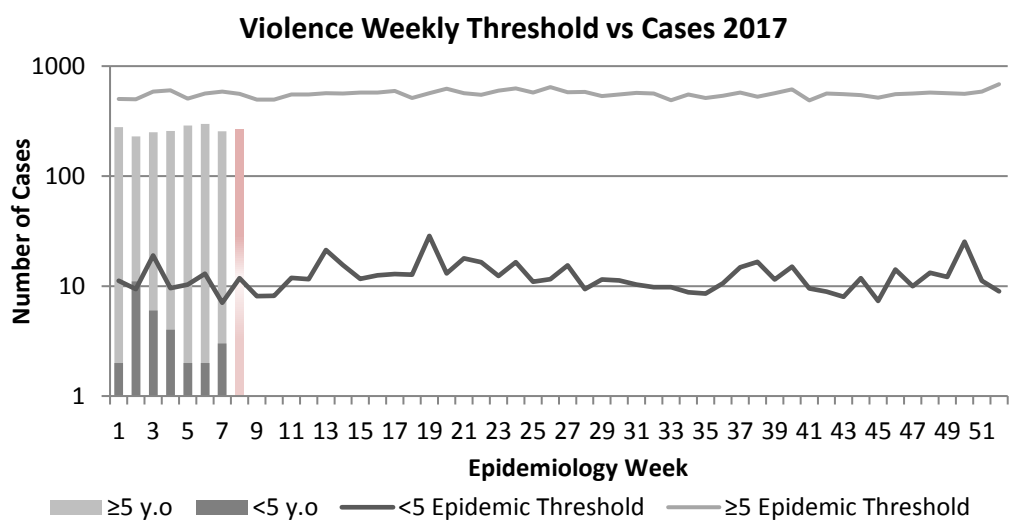
Violence Weekly Threshold vs Cases 2017

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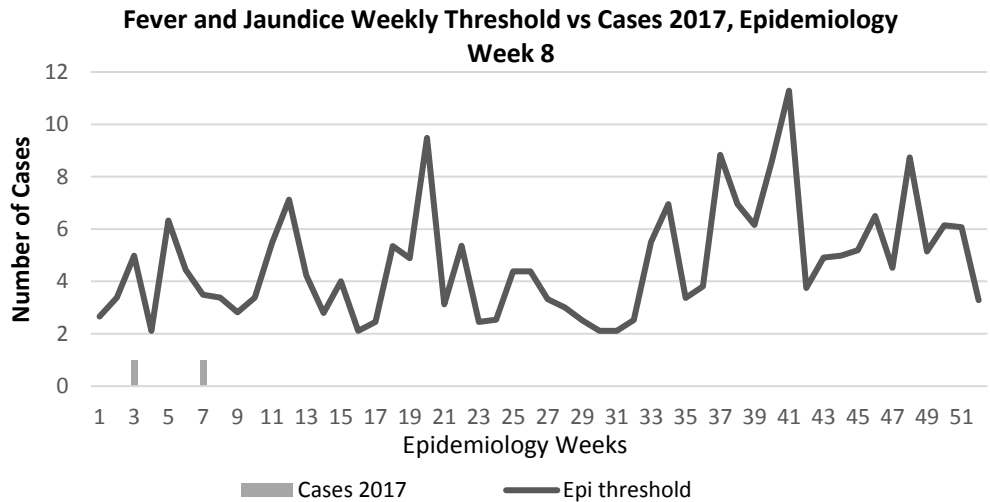
HOSPITAL ACTIVE SURVEILLANCE-30 sites*. Actively pursued

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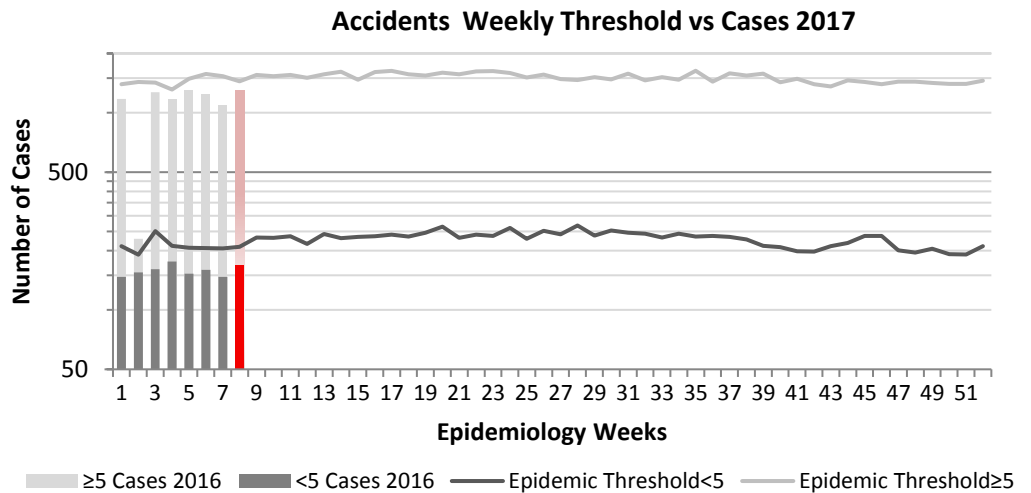
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CLASS ONE NOTIFIABLE EVENTS   Comments

	CLASS 1 EVENTS	CONFIRMED YTD	
		CURRENT YEAR	PREVIOUS YEAR
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning	8	27
	Cholera	0	0
	Dengue Hemorrhagic Fever[1]	0	0
	Hansen's Disease (Leprosy)	0	0
	Hepatitis B	2	1
	Hepatitis C	0	0
	HIV/AIDS - See HIV/AIDS National Programme Report		
	Malaria (Imported)	0	0
	Meningitis (Clinically confirmed)	2	9
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[2]	6	5
	Ophthalmia Neonatorum	30	64
	Pertussis-like syndrome	0	0
	Rheumatic Fever	1	1
	Tetanus	0	0
	Tuberculosis	0	0
	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.

_____

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.

*Data not available
_____

1 Dengue Hemorrhagic Fever data include Dengue related deaths;

2 Maternal Deaths include early and late deaths.

|			
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NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 8

Feb 19-25, 2017 — Epidemiology Week 8

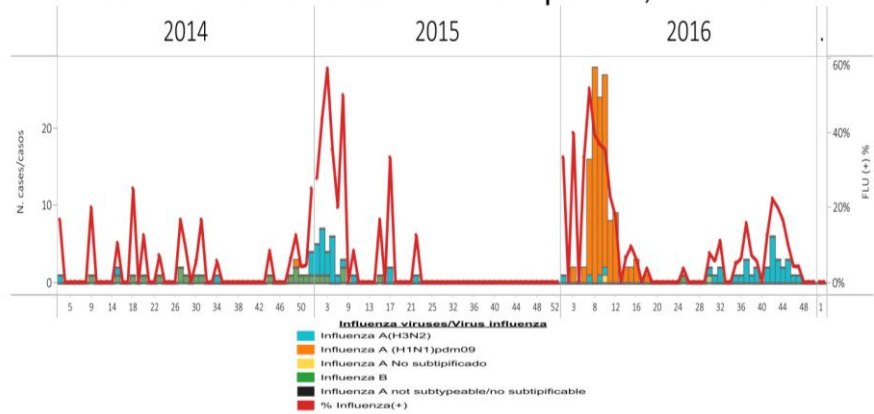| January 2017	EW 8	YTD
SARI cases	13	90
Total Influenza positive Samples	0	1
Influenza A	0	0
H3N2	0	0
H1N1pdm09	0	0
Not subtyped	0	0
Influenza B	0	1
Other	0	0
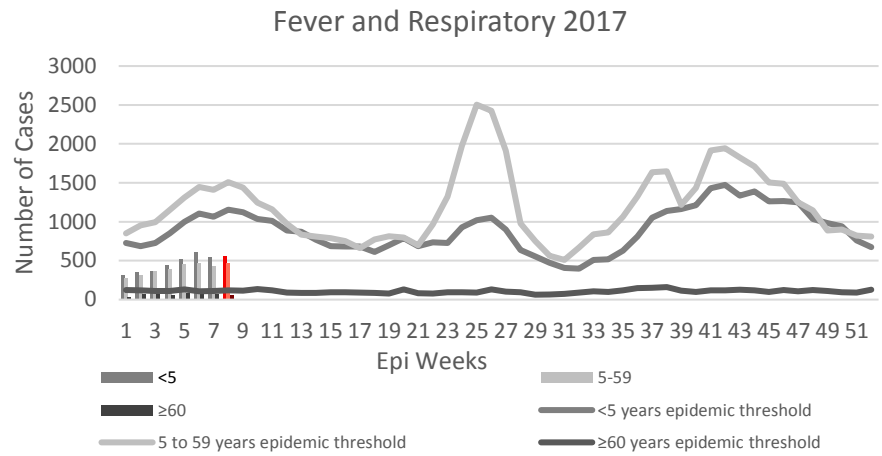
Comments:
During EW 8, SARI activity increased, but remained below the alert threshold.
During EW 8, SARI cases were most frequently reported among adults aged from 15 to 49 years of age.
During EW 8, pneumonia case-counts decreased (75-87 cases in EW 8), and were at same levels observed in 2016 and 2015, with the highest proportion in Kingston and Saint Andrew.
During EW 8, no influenza activity was reported.

INDICATORS

Burden
Year to date, respiratory syndromes account for 3.3% 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.

Fever and Respiratory 2017

Legend: <5 ; 5-59 ; ≥60 ; <5 years epidemic threshold ; 5 to 59 years epidemic threshold ; ≥60 years epidemic threshold

Jamaica: Influenza virus distribution by EW, 2014-17
Distribución de virus influenza por SE, 2014-16

Influenza viruses/Virus influenza
Influenza A(H3N2)
Influenza A (H1N1)pdm09
Influenza A No subtipificado
Influenza B
Influenza A not subtypeable/no subtipificable
% Influenza(+)

Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2017) (compared with 2011-2016)
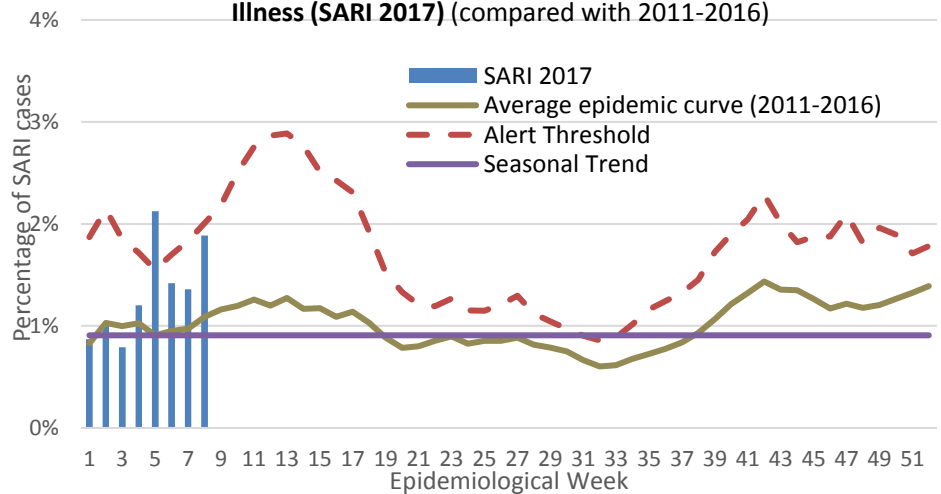
Legend: SARI 2017 ; Average epidemic curve (2011-2016) ; Alert Threshold ; Seasonal Trend

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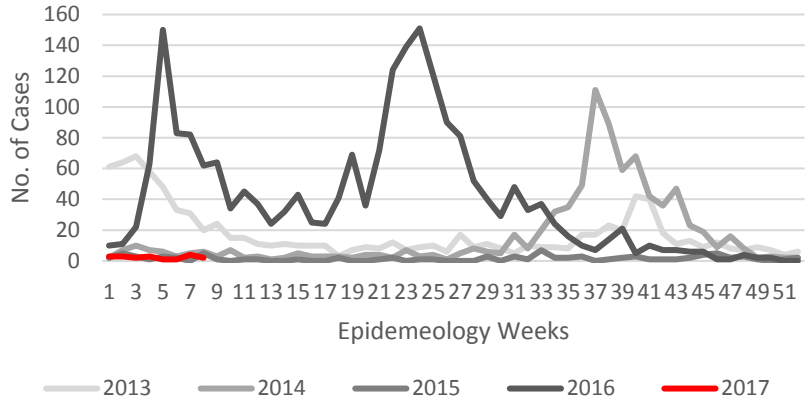# Dengue Bulletin

Feb 19-25, 2017   Epidemiology Week 8
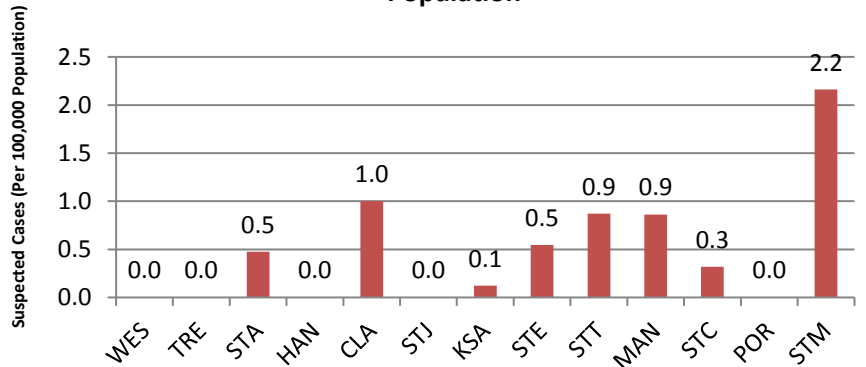
Dengue Cases by Epidemiology Weeks 2013-2017

— 2013   — 2014   — 2015   — 2016   — 2017

Year-to-Date Suspected Dengue Fever

	M	F	Un-known	Total	%
<1	0	0	0	0	0
1-4	0	0	0	0	0
5-14	4	2	0	6	31.5
15-24	2	2	0	4	21.2
25-44	3	2	1	6	31.5
45-64	2	1	0	3	15.8
≥65	0	0	0	0	0
Unknown	0	0	0	0	0
TOTAL	11	7	1	19	**100**

Suspected Dengue Fever Cases per 100,000 Parish Population

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

		2017		2016 YTD
		EW 8	YTD	
Total Suspected Dengue Cases		4	19	406
Lab Confirmed Dengue cases		0	0	43
CONFIRMED	DHF/DSS	0	0	1
	Dengue Related Deaths	0	0	0

Dengue Cases by Year: 2007-2017, Jamaica
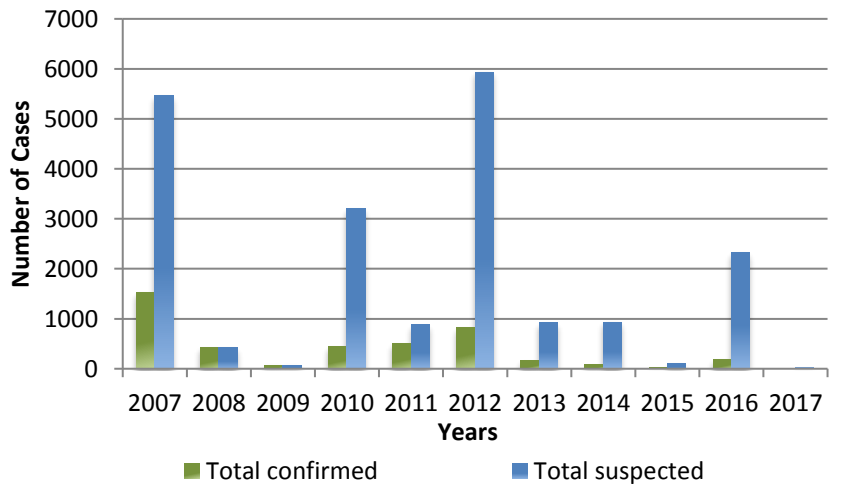
■ Total confirmed   ■ Total suspected

Gastroenteritis Bulletin

EW 8

Feb 19-25, 2017

Epidemiology Week 8

Weekly Breakdown of Gastroenteritis cases

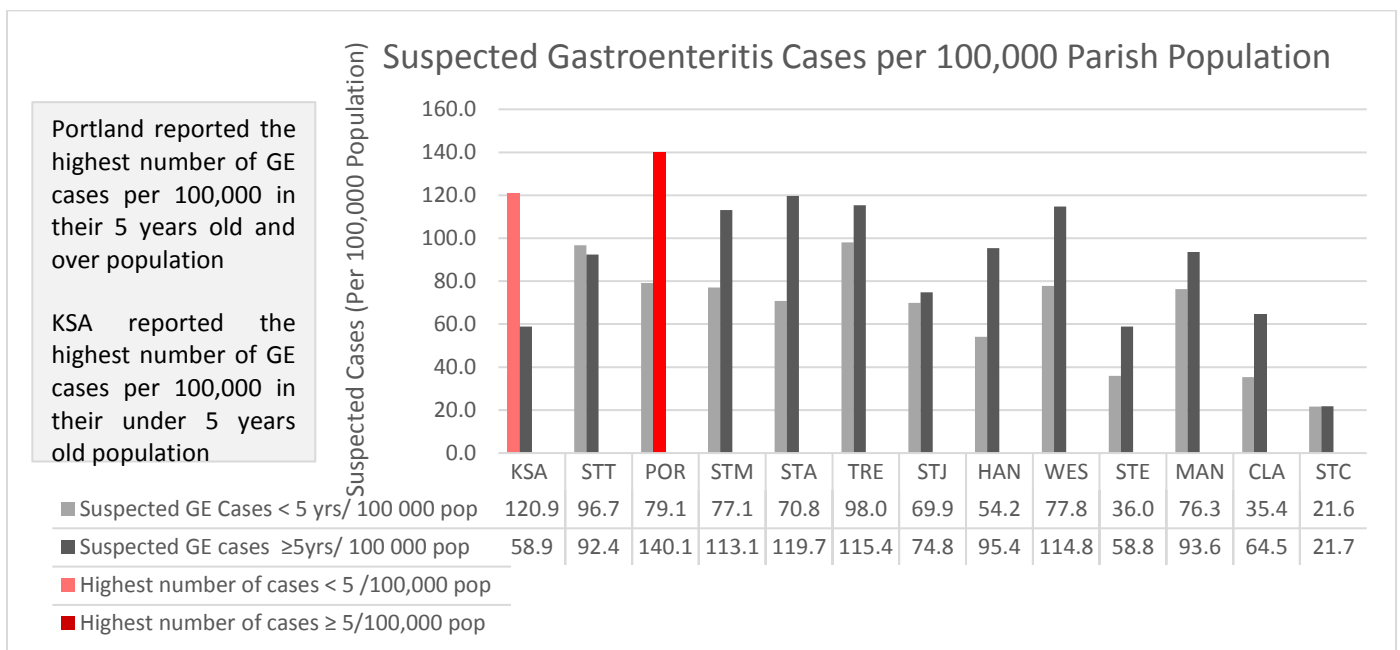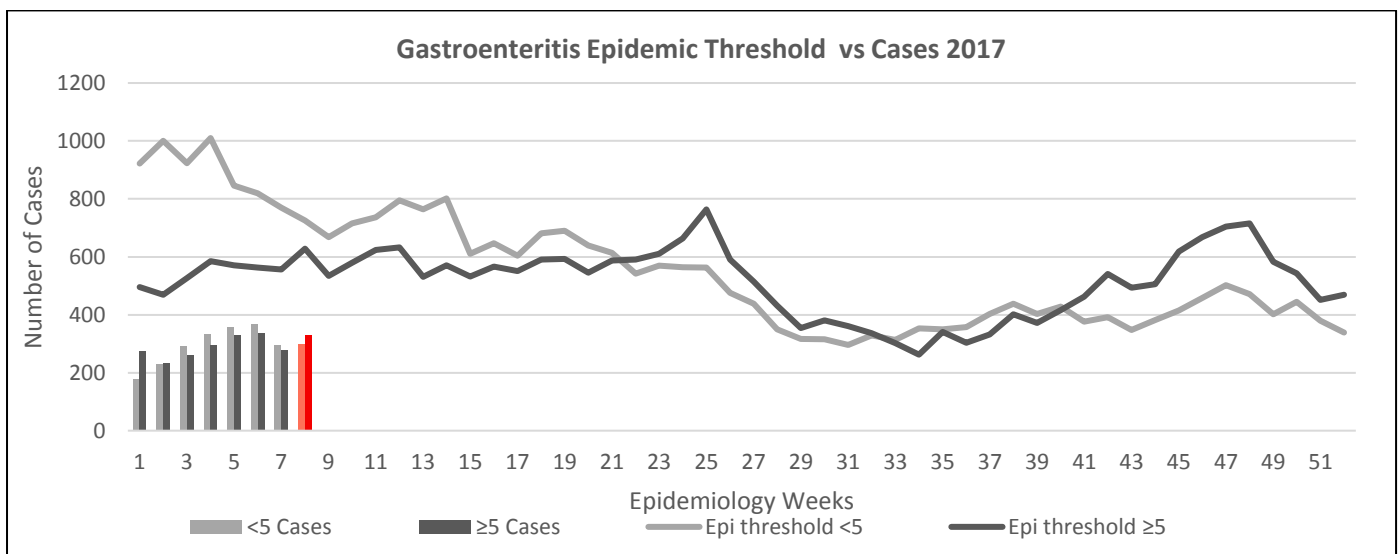| Year	EW 8			YTD		
	<5	≥5	Total	<5	≥5	Total
2017	299	331	630	2,620	2,629	5,249
2016	126	221	347	1,471	2,076	3,547

Gastroenteritis:
In Epidemiology Week 8, 2017, the total number of reported GE cases showed a 18% increase compared to EW 8 of the previous year.
The year to date figure showed an 14% increase in cases for the period.

Figure 1: Total Gastroenteritis Cases Reported 2016-2017

Portland reported the highest number of GE cases per 100,000 in their 5 years old and over population

KSA reported the highest number of GE cases per 100,000 in their under 5 years old population

	KSA	STT	POR	STM	STA	TRE	STJ	HAN	WES	STE	MAN	CLA	STC
Suspected GE Cases < 5 yrs/ 100 000 pop	120.9	96.7	79.1	77.1	70.8	98.0	69.9	54.2	77.8	36.0	76.3	35.4	21.6
Suspected GE cases ≥5yrs/ 100 000 pop	58.9	92.4	140.1	113.1	119.7	115.4	74.8	95.4	114.8	58.8	93.6	64.5	21.7

■ Suspected GE Cases < 5 yrs/ 100 000 pop
■ Suspected GE cases ≥5yrs/ 100 000 pop
■ Highest number of cases < 5 /100,000 pop
■ Highest number of cases ≥ 5/100,000 pop

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RESEARCH PAPER

HIV Case-Based Surveillance System Audit
S. Whitbourne, Z. Miller

Objectives: Evaluate the Public Health Surveillance System for HIV reporting, to help ensure that the data collected is accurate and useful for understanding epidemiological trends.

Background: Public health programmes focus on the monitoring, control and reduction in the incidence of target diseases, conditions or health events through various interventions and actions. The surveillance system is the primary mechanism through which specific disease information is collected and needs to be periodically assessed.

Methodology: In 2016, an audit was conducted of the HIV Case-Based Surveillance System in Jamaica. Laboratory records were reviewed from seven major health care facilities representing all four Regional Health Authorities. Cases with a positive HIV test in 2014 were noted and comparisons of positive cases were made with the cases that had been reported to the National Surveillance Unit. Qualitative data was also collected from key personnel in the form of questionnaires related to the processes involved in diagnosis, detection, investigation and reporting of HIV positive cases, but this paper will focus on the quantitative findings.

Findings: Preliminary data analysis reveals a high level of underreporting of HIV cases to the national level.

Conclusions: Audits and other forms of assessment need to be conducted on surveillance systems to ensure that the data supporting a public health programme is reliable and accurate, for effective delivery of services to target populations.

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