



GOVERNMENT OF BERMUDA  
Ministry of Health

# SURVEILLANCE SUMMARY REPORT

## EPIDEMIOLOGICAL WEEK 1: 31 DECEMBER 2023 – 6 JANUARY 2024

*The Surveillance Summary Report contains information on syndromes and communicable diseases reported into the Epidemiology and Surveillance Unit by Epidemiological Week (or as otherwise indicated). The Report currently contains 3 sections:*

1. [Syndromic Surveillance](#)
2. [Conditions of interest](#) – Influenza, COVID-19, and SARI (Severe Acute Respiratory Infection)
3. [Routine Communicable Disease Surveillance](#)

REPORT BASED ON DATA RECEIVED IN THE EPIDEMIOLOGY AND SURVEILLANCE UNIT BY 10 JANUARY 2024

## Syndromic Surveillance

Public health surveillance is, according to the World Health Organization (WHO), "the continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation, and evaluation of public health practice." Public health surveillance may be used to serve as an early warning system for impending public health emergencies, monitor and clarify the epidemiology of health problems, allow priorities to be set, and inform public health policy and strategies.

Syndromic surveillance is the analysis of data to detect or anticipate disease outbreaks. According to a CDC definition, "the term 'syndromic surveillance' applies to surveillance using health-related data that precede diagnosis and signal a sufficient probability of a case or an outbreak to warrant further public health response." This is important as the first indications of disease outbreak may not be the definitive diagnosis of a physician or a lab. Action on an increase or alert in the reported syndromes under surveillance could potentially stop or slow the spread of the outbreak. The syndromes under surveillance are as follows:

**Acute Flaccid Paralysis (AFP):** Acute (sudden) onset of flaccid paralysis in the absence of trauma. Any patient in whom a healthcare worker suspects acute flaccid paralysis is considered to be a suspected case of poliomyelitis.

**Fever and Haemorrhagic symptoms:** Acute (sudden) onset of fever ( $> 38.0^{\circ}\text{C}$  or  $100.4^{\circ}\text{F}$ ) in a previously healthy person, presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice (e.g. purpura, epistaxis, haemoptysis, melena).

**Fever and Neurological symptoms** (except AFP): Acute (sudden) onset of fever ( $> 38.0^{\circ}\text{C}$  or  $100.4^{\circ}\text{F}$ ) with or without headache and vomiting in a previously healthy person presenting with at least one of the following signs: meningeal irritation, convulsions, altered consciousness, altered sensory manifestations, paralysis except AFP.

**Fever and Rash:** Acute (sudden) febrile illness ( $>38.0^{\circ}\text{C}$  or  $100.4^{\circ}\text{F}$ ) in a previously healthy person, presenting generalized rash. Any patient in whom a healthcare worker suspects measles or rubella infection is considered to be a suspected measles/rubella case. These patients generally have fever and generalized rash illnesses.

**Fever and Respiratory Symptoms (Acute Respiratory Infection):** Acute (sudden) febrile illness ( $> 38.0^{\circ}\text{C}$  or  $100.4^{\circ}\text{F}$ ) in a previously healthy person, presenting with cough or sore throat with or without respiratory distress.

**Gastroenteritis:** Acute (sudden) onset of diarrhoea, with or without fever ( $> 38^{\circ}\text{C}$  or  $100.4^{\circ}\text{F}$ ) and presenting with 3 or more loose or watery stools in the past 24 hours, with or without dehydration, vomiting and/or visible blood.

**Undifferentiated Fever:** An acute (sudden) febrile illness ( $> 38.0^{\circ}\text{C}$  or  $100.4^{\circ}\text{F}$ ) in a previously healthy person of less than 7 days duration with two or more of the following manifestations: headache, retro-orbital pain, myalgia, arthralgia, nausea, vomiting, jaundice – AND without any particular symptoms fitting another syndrome definition.

### Alert Levels:

Alert levels are used to identify potential public health risks. A risk assessment will determine the need for any public health action.

Epidemiological Week 1

Syndrome	# of Reported Cases	Alert Level
Acute Flaccid Paralysis	0	LOW
Fever and Haemorrhagic Symptoms	0	LOW
Fever and Neurological Symptoms	0	LOW
Fever and Rash	1	LOW
Fever and Respiratory Symptoms (under 5 years)	3	LOW
Fever and Respiratory Symptoms (5 years and older)	84	LOW
Gastroenteritis (under 5 years)	1	LOW
Gastroenteritis (5 years and older)	3	LOW
Undifferentiated Fever (under 5 years)	0	LOW
Undifferentiated Fever (5 years and older)	0	LOW
% of sentinel sites reporting		80.49%

The data presented in this section of the report reflects information reported into the Epidemiology and Surveillance Unit through Bermuda's sentinel surveillance system.

During EW I, there were no syndromic surveillance alerts.

Syndromes reported in EW I included Fever and Rash (chicken pox), Fever and Respiratory Symptoms (adenovirus, human metapneumovirus, human rhinovirus/enterovirus, influenza, mycoplasma pneumoniae, parainfluenza, RSV, SARS-CoV-2/COVID-19, strep throat), and Gastroenteritis (salmonella, campylobacter, cryptosporidium).

#### Epidemiological Week 1

Syndrome	# of Reported Cases	5-Yr Average*	Medium Alert Threshold**	High Alert Threshold***	Alert Level
Acute Flaccid Paralysis	0	0	0	0	LOW
Fever and Haemorrhagic Symptoms	0	0	0	0	LOW
Fever and Neurological Symptoms	0	0	0	1	LOW
Fever and Rash	1	0	1	3	LOW
Fever and Respiratory Symptoms (under 5 years)	3	4	7	14	LOW
Fever and Respiratory Symptoms (5 years and older)	84	53	90	166	LOW
Gastroenteritis (under 5 years)	1	1	1	3	LOW
Gastroenteritis (5 years and older)	3	4	8	16	LOW
Undifferentiated Fever (under 5 years)	0	0	0	1	LOW
Undifferentiated Fever (5 years and older)	0	0	1	2	LOW
<b>% of sentinel sites reporting</b>					<b>80.49%</b>

\*5-Yr Average calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years.

\*\* Medium Alert Threshold is set at 1 standard deviation above 5-yr average

\*\*\* High Alert Threshold is set at 3 standard deviations above 5-year average

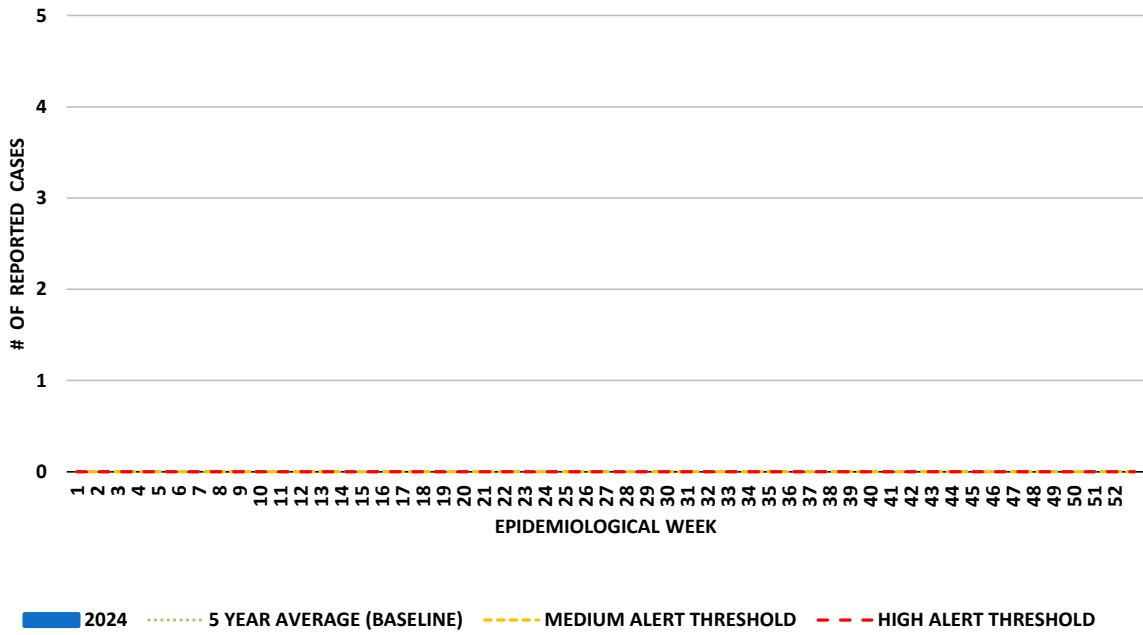
#### 4-Week Summary: Epidemiological Weeks 50-52, 2023 - 1, 2024

Syndrome	# of Reported Cases	5-Yr Average	Medium Alert Threshold**	High Alert Threshold***	Alert Level
Acute Flaccid Paralysis	0	0	0	0	LOW
Fever and Haemorrhagic Symptoms	0	0	0	0	LOW
Fever and Neurological Symptoms	0	0	0	1	LOW
Fever and Rash	1	0	2	5	LOW
Fever and Respiratory Symptoms (under 5 years)	16	4	22	39	LOW
Fever and Respiratory Symptoms (5 years and older)	306	53	217	372	MEDIUM
Gastroenteritis (under 5 years)	2	1	3	7	LOW
Gastroenteritis (5 years and older)	8	4	16	33	LOW
Undifferentiated Fever (under 5 years)	0	0	0	1	LOW
Undifferentiated Fever (5 years and older)	0	0	1	3	LOW

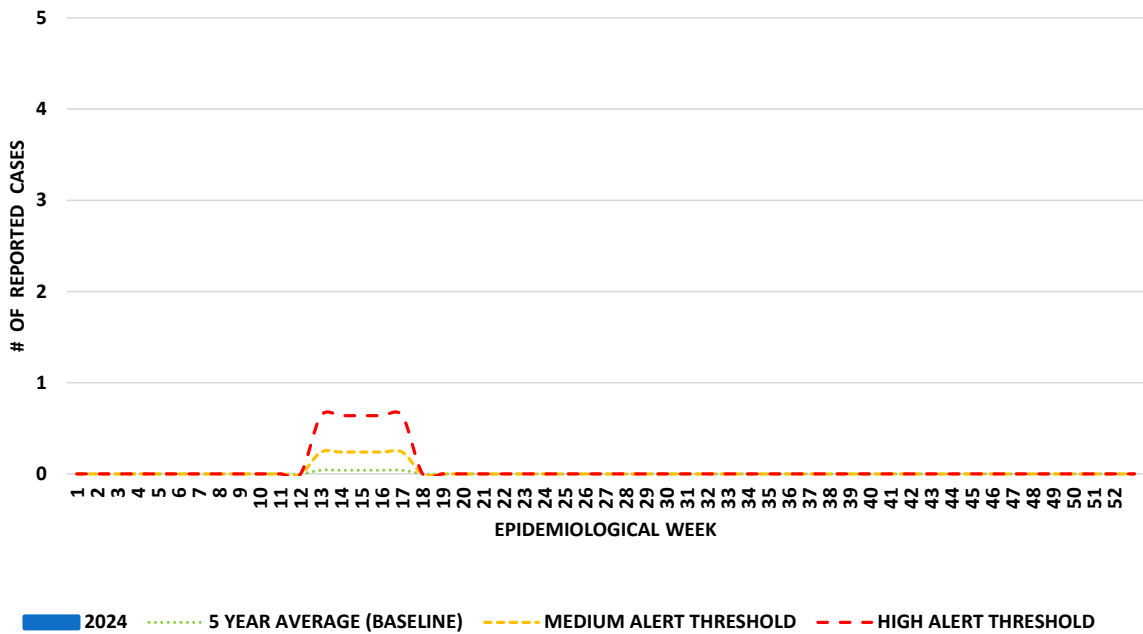
#### Cumulative Summary: Epidemiological Week 1

Syndrome	# of Reported Cases	5-Yr Average	Medium Alert Threshold**	High Alert Threshold***	Alert Level
Acute Flaccid Paralysis	0	0	0	0	LOW
Fever and Haemorrhagic Symptoms	0	0	0	0	LOW
Fever and Neurological Symptoms	0	0	0	1	LOW
Fever and Rash	1	0	1	3	LOW
Fever and Respiratory Symptoms (under 5 years)	3	4	7	14	LOW
Fever and Respiratory Symptoms (5 years and older)	84	53	90	166	LOW
Gastroenteritis (under 5 years)	1	1	1	3	LOW
Gastroenteritis (5 years and older)	3	4	8	16	LOW
Undifferentiated Fever (under 5 years)	0	0	0	1	LOW
Undifferentiated Fever (5 years and older)	0	0	1	2	LOW

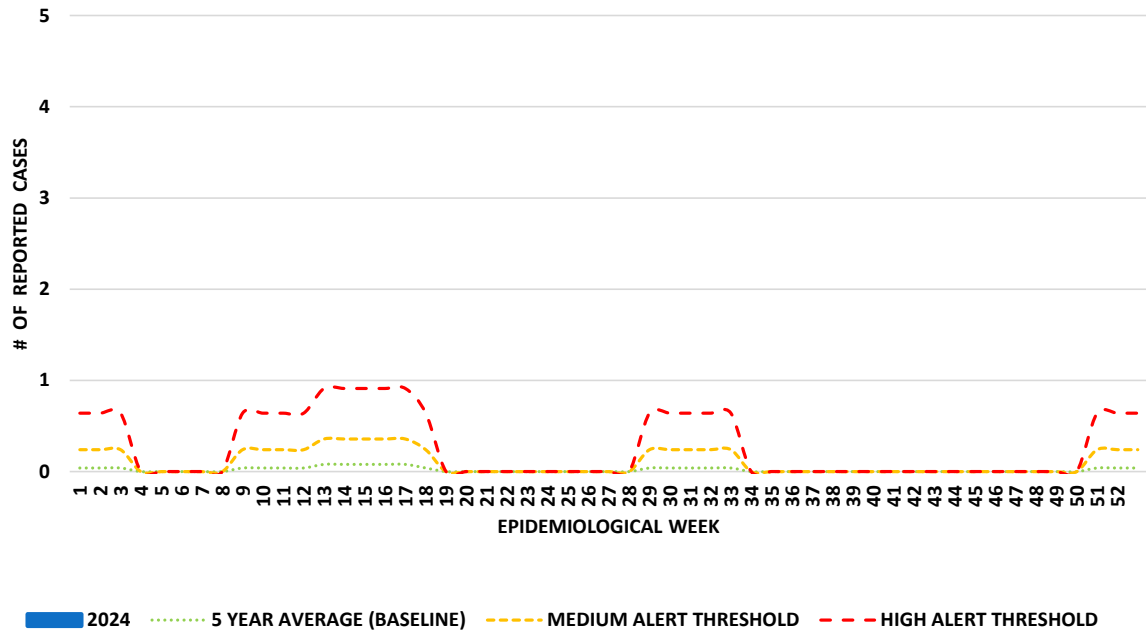
### ACUTE FLACCID PARALYSIS



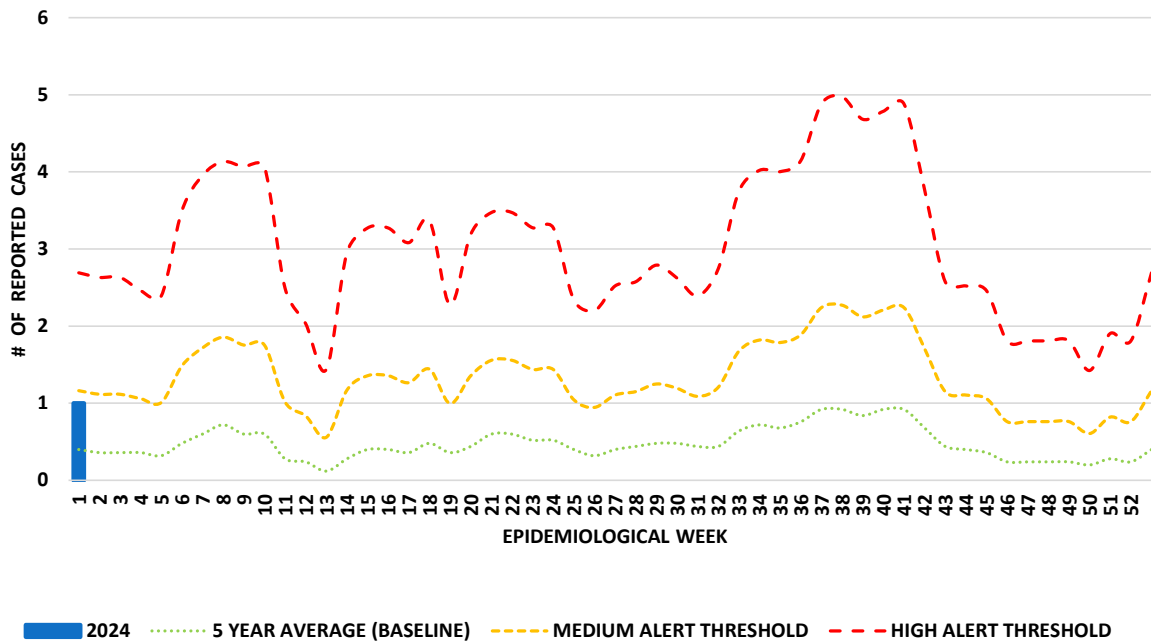
### FEVER AND HAEMORRHAGIC SYMPTOMS



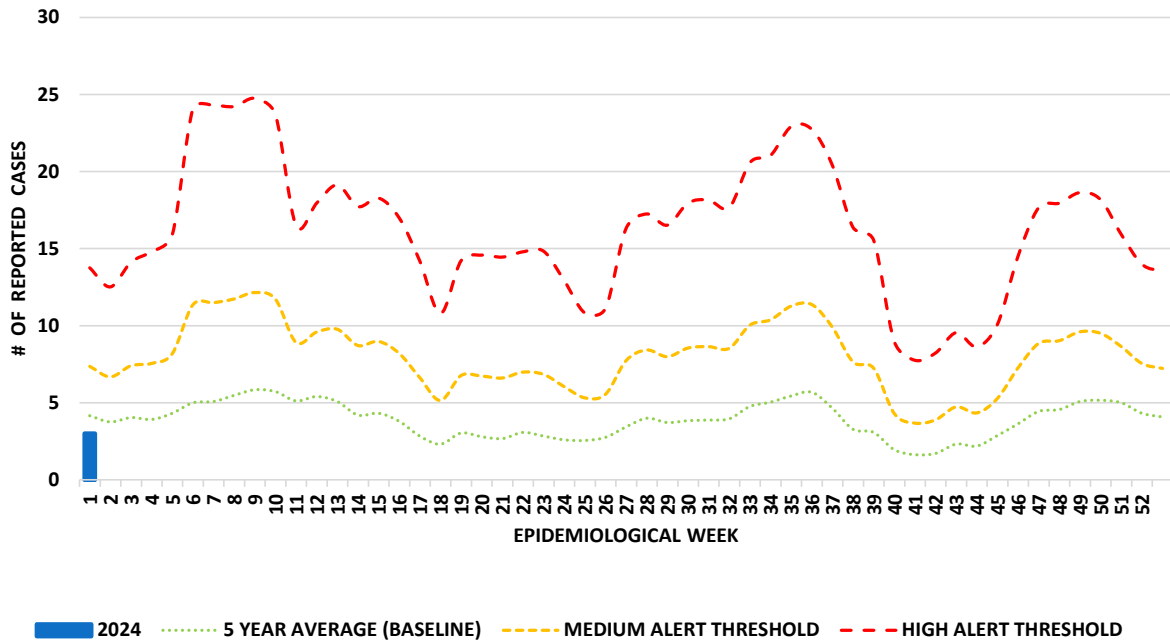
### FEVER AND NEUROLOGICAL SYMPTOMS



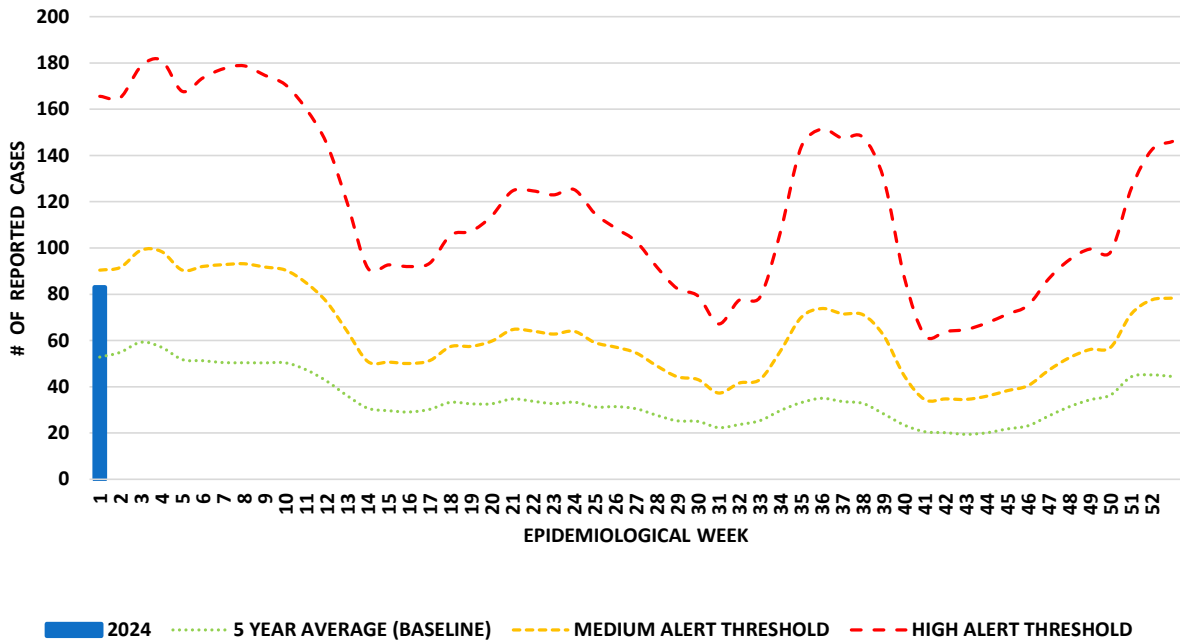
### FEVER AND RASH



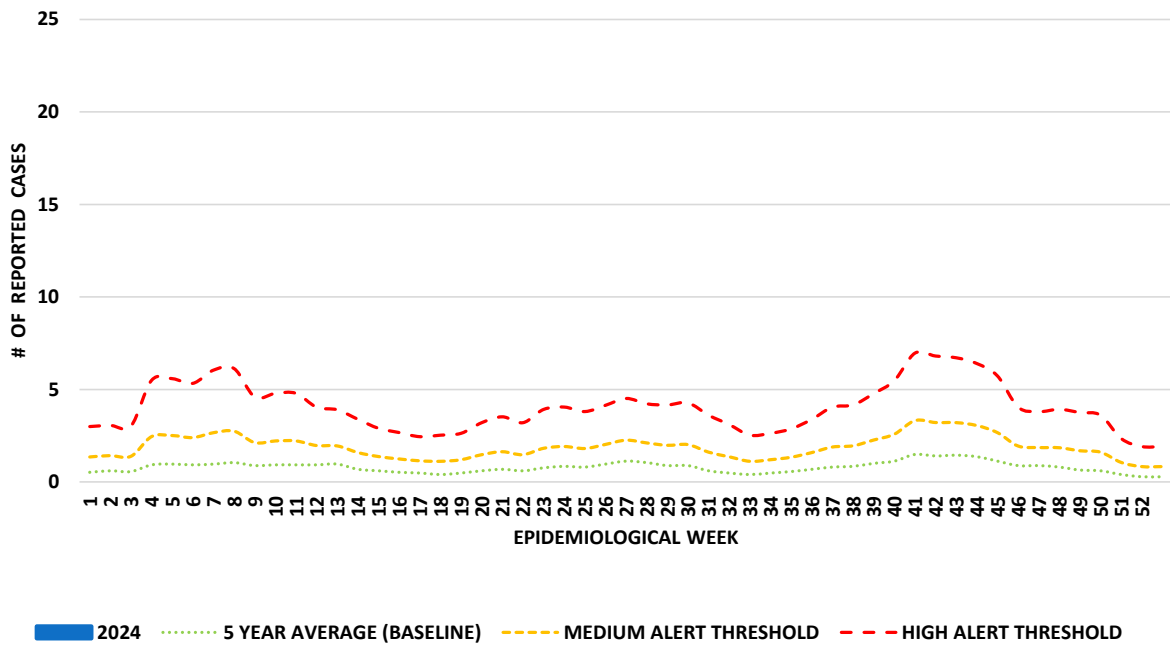
### FEVER AND RESPIRATORY SYMPTOMS IN PERSONS AGED UNDER 5 YEARS



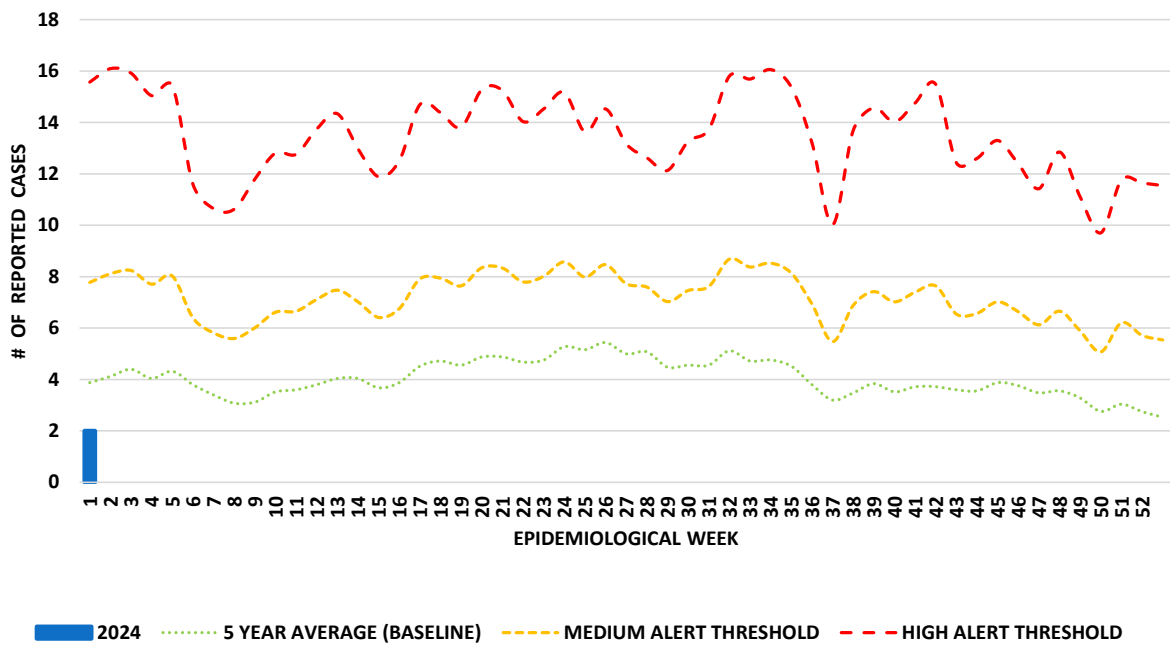
### FEVER AND RESPIRATORY SYMPTOMS IN PERSONS AGED 5 YEARS AND OLDER



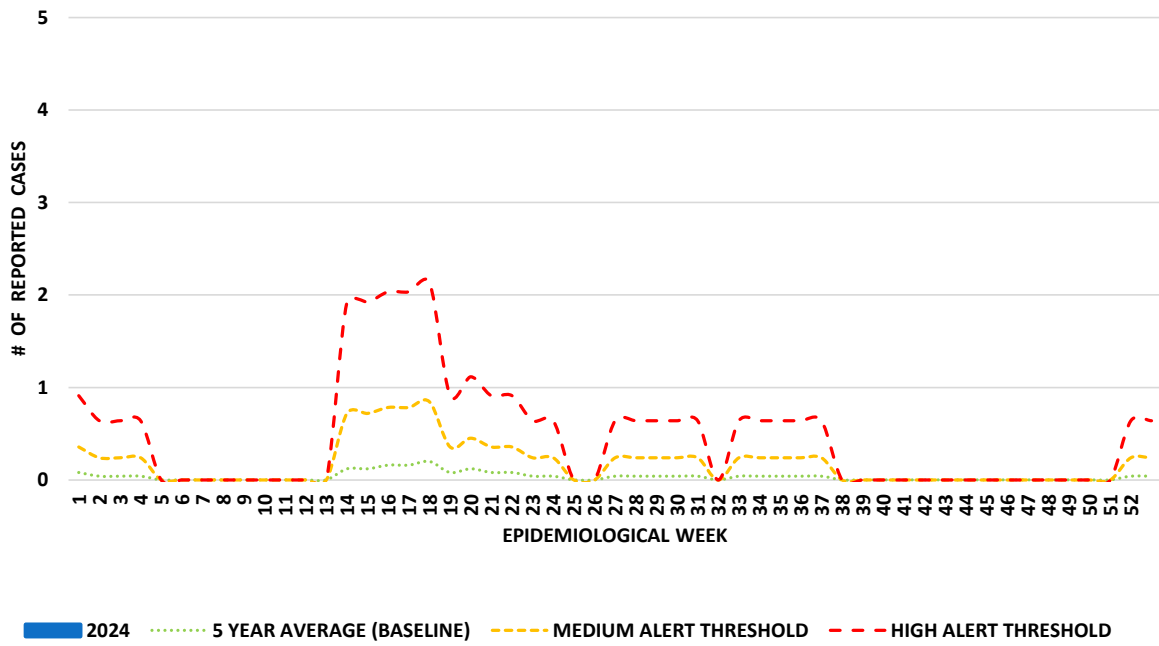
### GASTROENTERITIS IN PERSONS AGED UNDER 5 YEARS



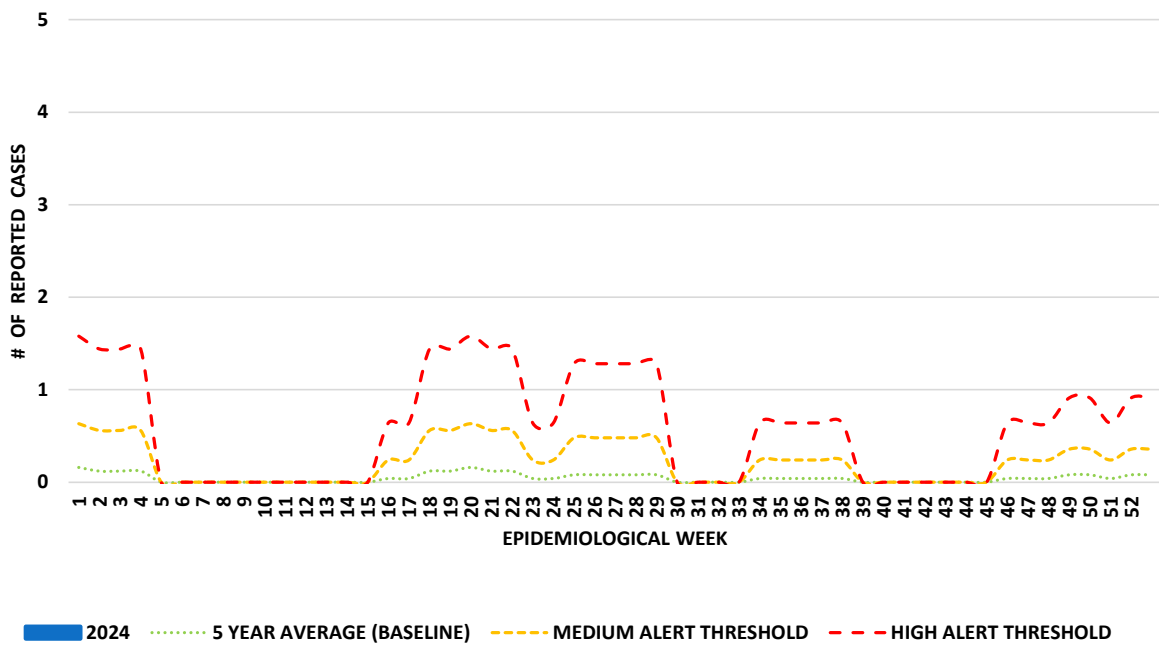
### GASTROENTERITIS IN PERSONS AGED 5 YEARS AND OLDER



### UNDIFFERENTIATED FEVER IN PERSONS AGED UNDER 5 YEARS



### UNDIFFERENTIATED FEVER IN PERSONS AGED 5 YEARS AND OLDER





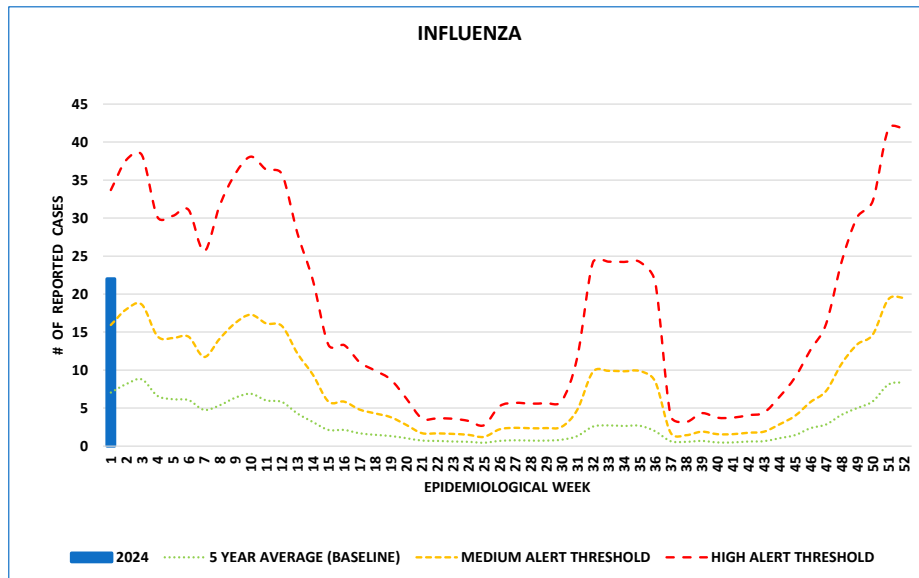
## Conditions of Interest: Influenza, COVID-19, and Severe Acute Respiratory Infection (SARI)

Surveillance case definitions included here are as follows:

### Influenza:

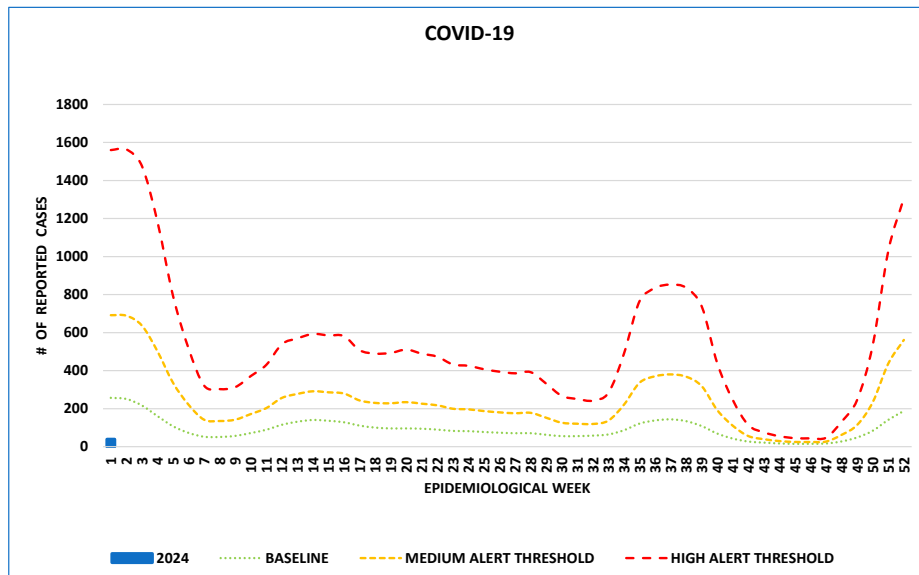
*Clinical (or suspect):* A person with fever, headache, myalgia, and cough

*Laboratory confirmed:* A clinical or suspect case with positive laboratory findings



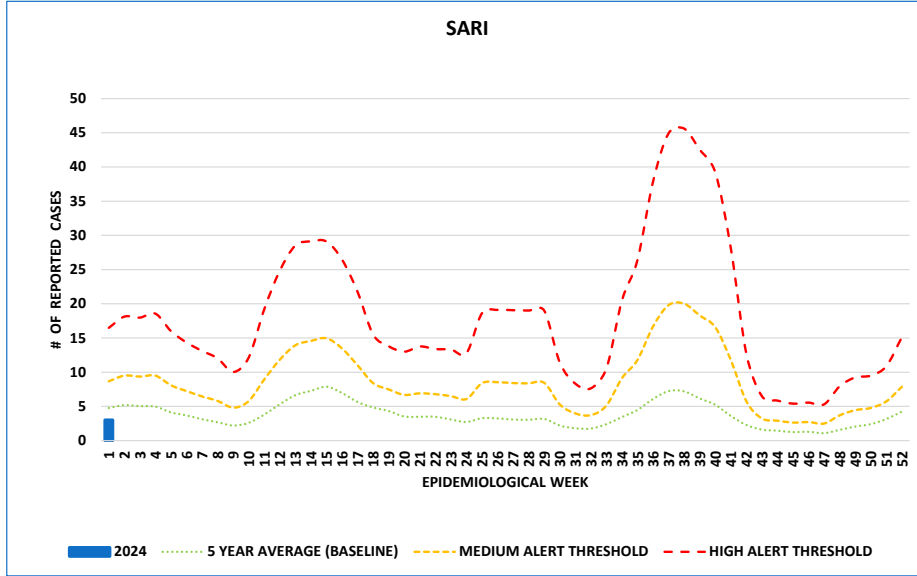
### COVID-19:

A person with laboratory or antigen test confirmation of COVID-19 infection, irrespective of clinical signs and symptoms



**Severe Acute Respiratory Infection (SARI):**

An acute respiratory infection with history of fever or measured fever of  $\geq 38^{\circ}\text{C}$  and cough, with onset within the last 10 days, and requiring hospitalization.



## Routine Communicable Disease Surveillance (EWs 45-48, 2023)

An increase in confirmed diseases may not necessarily indicate a true increase in disease incidence. Reporting and confirmatory testing may rise due to other causes such as increased testing capability and increased awareness of circulating diseases, locally and globally.

In instances where the relative level is above normal (indicated in red), further epidemiological investigation may be conducted to determine if there are clusters of illness or outbreaks occurring. This is dependent on many factors, including the severity of the illness, the potential for spread, the availability of control measures, political considerations, public relations, and available resources.

DISEASES/PATHOGENS	Cumulative Total (Lab Conf. cases)	
	Curr. Yr.	Last Yr.
<b>Diseases Reportable under the International Health Regulations</b>		
Cholera	0	0
Human Influenza (new sub-type)	0	0
Pneumonic Plague	0	0
Poliomyelitis	0	0
Severe Acute Respiratory Syndrome (SARS)	0	0
Yellow Fever	0	0
<b>Air Borne Diseases</b>		
Adenoviruses	37	42
COVID-19	945	11712
Human Metapneumovirus [hMPV]	88	25
Influenza	185	48
Respiratory Syncytial Virus [RSV]	36	86
Tuberculosis - Extrapulmonary	0	1
Tuberculosis - Pulmonary	2	0
<b>Vaccine Preventable Diseases under the Caribbean Expanded Programme on Immunization</b>		
Chicken Pox [Varicella] (clinically confirmed)	7	9
Diphtheria	0	0
Measles	0	0
Meningitis [due to <i>Haemophilus influenzae</i> ]	2	0
Meningitis [due to <i>Streptococcus pneumoniae</i> ]	0	0
Meningococcal infection [due to <i>Neisseria meningitidis</i> ]	0	0
Mumps	1	0
Pertussis [Whooping Cough]	1	0
Pneumonia [due to <i>Haemophilus influenzae</i> ]	0	0
Pneumonia [due to <i>Streptococcus pneumoniae</i> ]	2	0
Rotavirus	4	7
Rubella [Congenital German Measles]	0	0
Rubella [German Measles]	0	0
Tetanus [excluding Neonatal]	0	1
Tetanus Neonatorum	0	0
<b>Vector Borne Diseases</b>		
Chagas Disease	0	0
Chikungunya	0	0
Dengue Fever	1	0
Dengue Haemorrhagic Fever/Shock Syndrome	0	0
Leptospirosis	1	0
Malaria	1	0
Zika	0	0
<b>Food and Water Borne Pathogens</b>		
<i>Campylobacter</i>	33	35
Ciguatera Poisoning (clinically confirmed)	3	0
<i>Cryptosporidium</i>	0	8
<i>E. Coli</i> (pathogenic)	54	46
<i>Giardia</i>	1	4
Hepatitis A	0	0
<i>Listeria</i>	0	1
Norovirus	10	9
<i>Salmonella</i>	32	40
<i>Shigella</i>	0	1
<i>Staphylococcus</i> (pathogenic)	1	0
<i>Toxoplasma</i>	0	0
Typhoid and Paratyphoid	0	0
<i>Vibrio</i> (excluding Cholera)	0	0
<b>Other Diseases</b>		
Viral Encephalitis/Meningitis	4	0
Hepatitis B	5	0
Hepatitis C	4	0
Leprosy (Hansens Disease)	0	0
Meningitis/Encephalitis (not specified)	0	0
Rabies (in Humans)	0	0
<b>Specific Diseases under Country Surveillance</b>		
Chlamydia	310	188
Gonorrhoea	10	15
Herpes	57	61
Syphilis	10	1

## Epidemiological Weeks 2024

---

### EPIDEMIOLOGICAL WEEKS 2024

WEEK	FROM	TO
1	31-Dec-24	6-Jan-24
2	7-Jan-25	13-Jan-24
3	14-Jan-25	20-Jan-24
4	21-Jan-25	27-Jan-24
5	28-Jan-25	3-Feb-24
6	4-Feb-25	10-Feb-24
7	11-Feb-25	17-Feb-24
8	18-Feb-25	24-Feb-24
9	25-Feb-25	2-Mar-24
10	4-Mar-25	9-Mar-24
11	11-Mar-25	16-Mar-24
12	18-Mar-25	23-Mar-24
13	25-Mar-25	30-Mar-24
14	1-Apr-25	6-Apr-24
15	8-Apr-25	13-Apr-24
16	15-Apr-25	20-Apr-24
17	22-Apr-25	27-Apr-24
18	29-Apr-25	4-May-24
19	6-May-25	11-May-24
20	13-May-25	18-May-24
21	20-May-25	25-May-24
22	27-May-25	1-Jun-24
23	3-Jun-25	8-Jun-24
24	10-Jun-25	15-Jun-24
25	17-Jun-25	22-Jun-24
26	24-Jun-25	29-Jun-24

WEEK	FROM	TO
27	1-Jul-25	6-Jul-24
28	8-Jul-25	13-Jul-24
29	15-Jul-25	20-Jul-24
30	22-Jul-25	27-Jul-24
31	29-Jul-25	3-Aug-24
32	5-Aug-25	10-Aug-24
33	12-Aug-25	17-Aug-24
34	19-Aug-25	24-Aug-24
35	26-Aug-25	31-Aug-24
36	2-Sep-25	7-Sep-24
37	9-Sep-25	14-Sep-24
38	16-Sep-25	21-Sep-24
39	23-Sep-25	28-Sep-24
40	30-Sep-25	5-Oct-24
41	7-Oct-25	12-Oct-24
42	14-Oct-25	19-Oct-24
43	21-Oct-25	26-Oct-24
44	28-Oct-25	2-Nov-24
45	4-Nov-25	9-Nov-24
46	11-Nov-25	16-Nov-24
47	18-Nov-25	23-Nov-24
48	25-Nov-25	30-Nov-24
49	2-Dec-25	7-Dec-24
50	9-Dec-25	14-Dec-24
51	16-Dec-25	21-Dec-24
52	23-Dec-25	28-Dec-24