



SURVEILLANCE SUMMARY REPORT

EPIDEMIOLOGICAL WEEK 35: 28 AUGUST – 3 SEPTEMBER 2022

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](#) (including Influenza and Severe Acute Respiratory Infection (SARI))
2. [Routine Communicable Disease Surveillance](#)
3. [COVID-19 Surveillance](#)

REPORT BASED ON DATA RECEIVED IN THE EPIDEMIOLOGY AND SURVEILLANCE UNIT BY 7 SEPTEMBER 2022

Epidemiology and Surveillance Unit
Office of the Chief Medical Officer
Continental Building, 25 Church Street, Hamilton HM 12
P.O. Box HM 1195, Hamilton HM EX, Bermuda
Phone: (+1 441) 278-4900
Fax: (+1 441) 296-3283
E-mail: epidemiology@gov.bm

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°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°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°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°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 ($> 38\text{C}$ or 100.4F) 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°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 35

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	0	LOW
Fever and Respiratory Symptoms (under 5 years)	0	LOW
Fever and Respiratory Symptoms (5 years and older)	6	LOW
Gastroenteritis (under 5 years)	0	LOW
Gastroenteritis (5 years and older)	5	LOW
Undifferentiated Fever (under 5 years)	0	LOW
Undifferentiated Fever (5 years and older)	0	LOW
% of sentinel sites reporting		88.00%

The data presented in this section of the report reflects information reported into the Epidemiology and Surveillance Unit through Bermuda's sentinel surveillance system. Routine reporting from sentinel sites decreased from EW 13 (2020) as measures were implemented to minimize COVID-19 exposure in healthcare settings.

During EW 35, there were no syndromic surveillance alerts.

Syndromes reported in EW 35 included Fever and Respiratory Symptoms (COVID-19/SARS-CoV-2, strep throat, adenovirus) and Gastroenteritis (Salmonella, Cryptosporidium, Campylobacter, Yersinia enterocolitica).

All cases of SARS-CoV-2 (COVID-19) may not be reflected in this syndromic surveillance data as the disease presentation does not always fit within a specific syndrome. COVID-19 data is presented in another section of this report.

Epidemiological Week 35

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	0	LOW
Fever and Rash	0	1	2	4	LOW
Fever and Respiratory Symptoms (under 5 years)	0	4	11	23	LOW
Fever and Respiratory Symptoms (5 years and older)	6	35	69	139	LOW
Gastroenteritis (under 5 years)	0	1	1	3	LOW
Gastroenteritis (5 years and older)	5	7	11	20	LOW
Undifferentiated Fever (under 5 years)	0	0	0	1	LOW
Undifferentiated Fever (5 years and older)	0	0	0	1	LOW
% of sentinel sites reporting					88.00%

*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

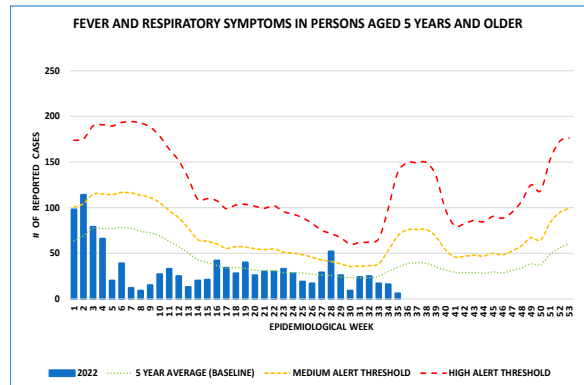
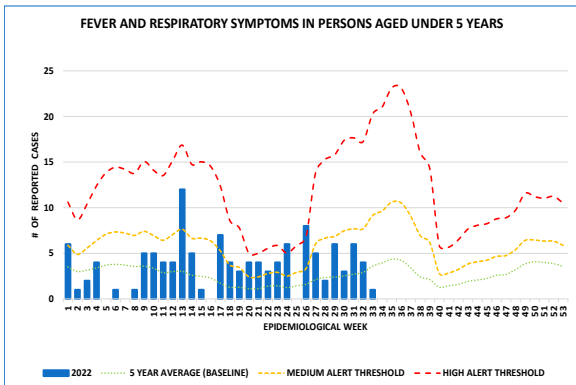
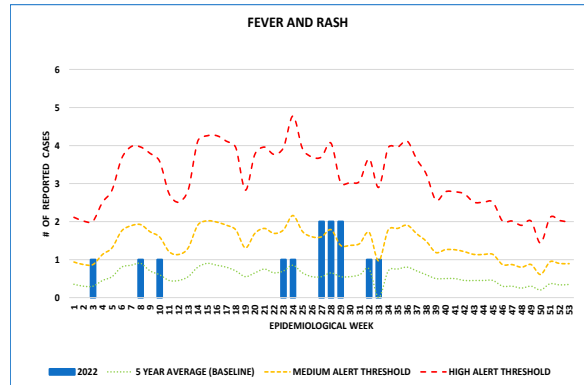
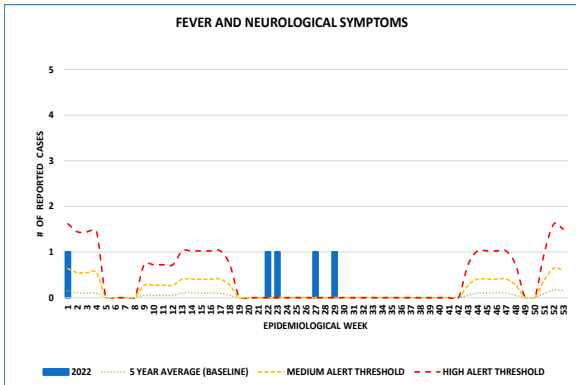
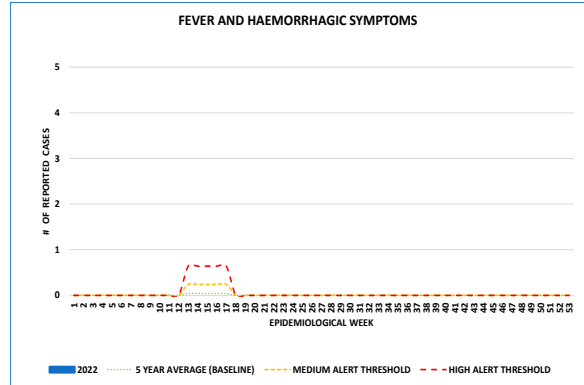
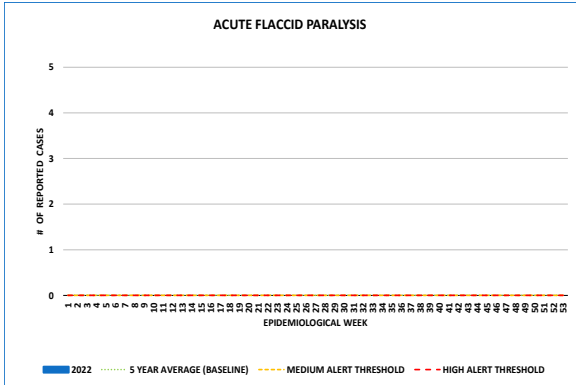
*** High Alert Threshold is set at 3 standard deviations above 5-year average

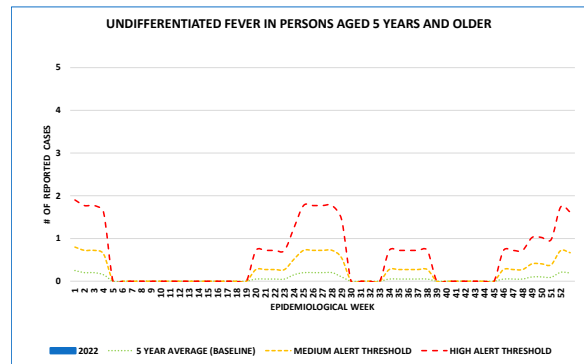
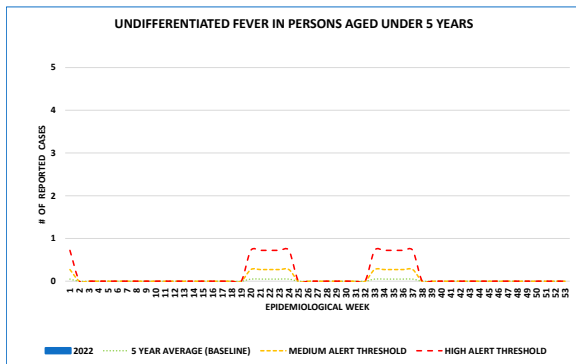
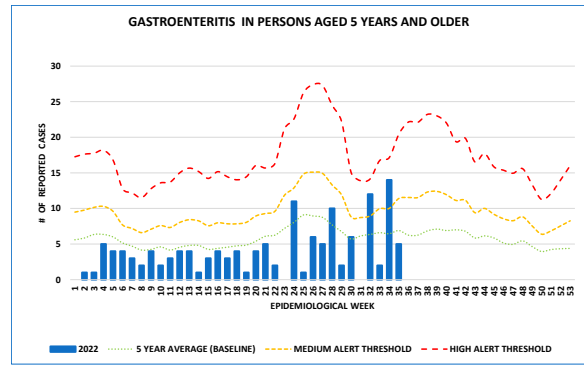
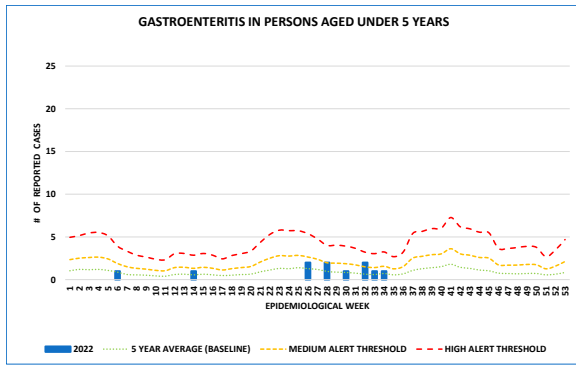
4-Week Summary: Epidemiological Weeks 32-35

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	0	LOW
Fever and Rash	2	2	6	14	LOW
Fever and Respiratory Symptoms (under 5 years)	8	15	37	82	LOW
Fever and Respiratory Symptoms (5 years and older)	64	113	197	366	LOW
Gastroenteritis (under 5 years)	4	3	6	12	LOW
Gastroenteritis (5 years and older)	33	26	40	68	LOW
Undifferentiated Fever (under 5 years)	0	0	1	2	LOW
Undifferentiated Fever (5 years and older)	0	0	1	1	LOW

Cumulative Summary: Epidemiological Weeks 1-35

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	1	3	LOW
Fever and Neurological Symptoms	5	1	6	15	LOW
Fever and Rash	13	22	55	121	LOW
Fever and Respiratory Symptoms (under 5 years)	124	92	210	447	LOW
Fever and Respiratory Symptoms (5 years and older)	1122	1571	2485	4311	LOW
Gastroenteritis (under 5 years)	11	29	64	135	LOW
Gastroenteritis (5 years and older)	138	207	337	599	LOW
Undifferentiated Fever (under 5 years)	0	0	2	6	LOW
Undifferentiated Fever (5 years and older)	0	2	8	21	LOW





Influenza and Severe Acute Respiratory Infection (SARI)

Surveillance case definitions included here are as follows:

Influenza:

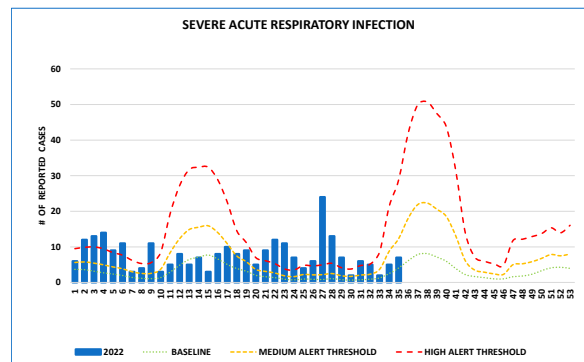
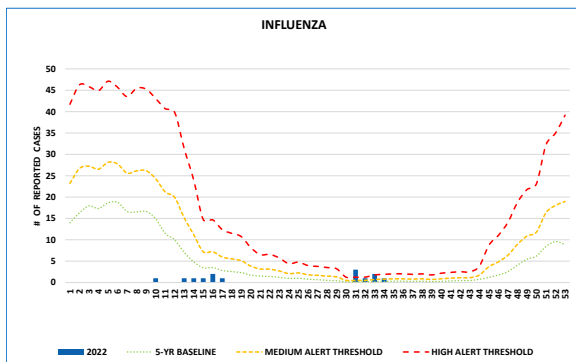
Clinical (or suspect): A person with fever, headache, myalgia, and cough

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

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.

The alerts for SARI are related to hospitalizations for COVID-19.



Routine Communicable Disease Surveillance (EWs 29-32, 2021)

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.

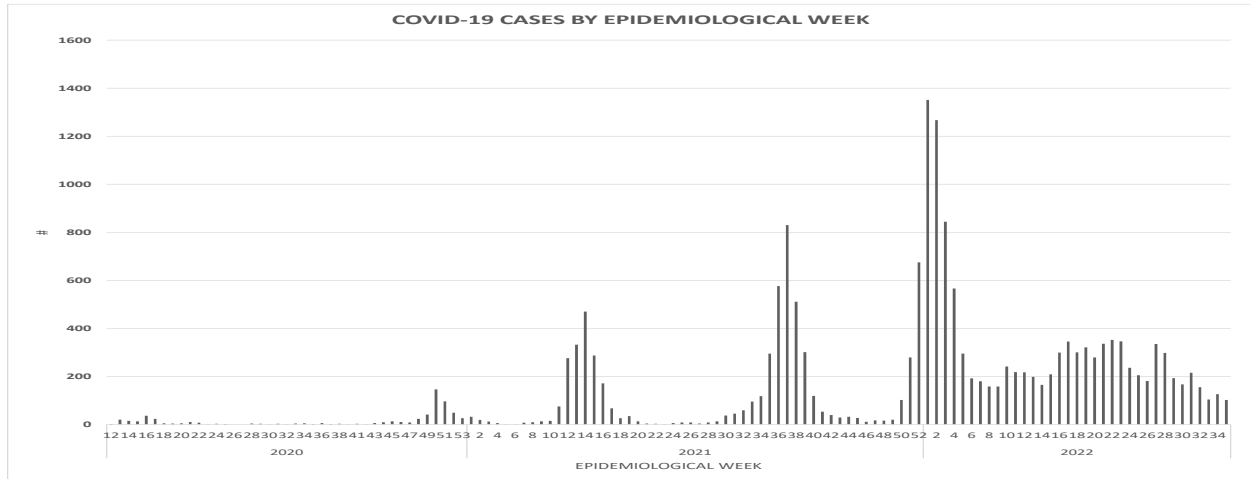
In instances where the relative level is above normal (indicated in red), further epidemiological investigation may be conducted to determine if there are clusters of illness or outbreaks occurring. This is dependent on many factors, including the severity of the illness, the potential for spread, the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

DISEASES/PATHOGENS	Cumulative Total (Lab Conf. cases)	
	Curr. Yr	Last Yr.
Diseases Reportable under the International Health Regulations		
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
Air Borne Diseases		
Adenoviruses	32	3
COVID-19	10822	2063
Human Metapneumovirus [hMPV]	19	7
Influenza	18	2
Respiratory Syncytial Virus [RSV]	43	0
Tuberculosis - Extrapulmonary	1	0
Tuberculosis - Pulmonary	0	2
Vaccine Preventable Diseases under the Caribbean Expanded Programme on Immunization		
Chicken Pox [Varicella] (clinically confirmed)	6	5
Diphtheria	0	0
Measles	0	0
Meningitis [due to <i>Haemophilus influenzae</i>]	0	0
Meningitis [due to <i>Streptococcus pneumoniae</i>]	0	0
Meningococcal Infection [due to <i>Neisseria meningitidis</i>]	0	0
Mumps	0	0
Pertussis [Whooping Cough]	0	0
Pneumonia [due to <i>Haemophilus influenzae</i>]	0	0
Pneumonia [due to <i>Streptococcus pneumoniae</i>]	0	12
Rotavirus	5	1
Rubella [Congenital German Measles]	0	0
Rubella [German Measles]	0	0
Tetanus [excluding Neonatal]	1	0
Tetanus Neonatorum	0	0
Vector Borne Diseases		
Chagas Disease	0	0
Chikungunya	0	0
Dengue Fever	0	0
Dengue Haemorrhagic Fever/Shock Syndrome	0	0
Leptospirosis	0	0
Malaria	0	0
Zika	0	0
Food and Water Borne Pathogens		
<i>Campylobacter</i>	25	52
Ciguatera Poisoning (clinically confirmed)	0	1
<i>Cryptosporidium</i>	5	2
<i>E. Coli</i> (pathogenic)	27	21
<i>Giardia</i>	3	3
Hepatitis A	0	0
Listeria	0	0
Norovirus	7	3
Salmonella	20	26
Shigella	0	1
Staphylococcus (pathogenic)	0	2
Taxoplasma	0	0
Typhoid and Paratyphoid	0	0
Vibrio (excluding Cholera)	0	0
Other Diseases		
Viral Encephalitis/Meningitis	0	0
Hepatitis B	0	1
Hepatitis C	0	1
Leprosy (Hansens Disease)	0	0
Meningitis/Encephalitis (not specified)	0	0
Rabies (in Humans)	0	0
Specific Diseases under Country Surveillance		
Chlamydia	138	137
Gonorrhoea	11	9
Herpes	35	22
Syphilis	1	0

COVID-19 Surveillance

Bermuda's Current COVID-19 Status and Indicators

As of EW 35, Bermuda has reported 17,974 confirmed cases of COVID-19.



Indicator (Data subject to change upon reconciliation)	Target	At end of EW 32 13-Aug-22	At end of EW 33 20-Aug-22	At end of EW 34 27-Aug-22	At end of EW 35 3-Sep-22
New Cases	decreasing	155	104	126	102
% imported		41%	48%	56%	68%
% unlinked	decreasing	34%	40%	28%	16%
Country Transmission Classification					
Effective reproduction number					
Effective reproduction number (7 day moving average)	<1	0.55	0.40	0.50	0.37
Positivity rate (%)					
Positivity Rate (%) (7 day moving average)	<1%	4.3%	2.4%	3.0%	2.1%
Positivity Rate (%) (14 day moving average)	<1%	4.6%	3.3%	2.7%	2.5%
Incidence Rate					
Incidence Rate per 100,000 (7 day moving average)	<10	35	23	28	23
Incidence Rate per 100,000 (14 day moving average)	<10	41	29	26	25
Hospitalization rate: New admissions					
Hospitalization rate per 100,000 (7 day moving average)	<2.5	1.1	0.4	1.1	1.6
Hospitalization rate per 100,000 (14 day moving average)	<2.5	1.2	0.8	0.8	1.3
Hospitalization rate: Current admissions					
Hospitalization rate per 100,000 (7 day moving average)	<25	23.0	19.5	13.9	15.3
Hospitalization rate per 100,000 (14 day moving average)	<25	21.8	21.2	16.7	14.6
Mortality rate:					
Mortality rate per 100,000 (7 day moving average)	<0.5	0.0	0.0	0.0	0.0
Mortality rate per 100,000 (14 day moving average)	<0.5	0.2	0.0	0.0	0.0
CDC Community Levels					
New Cases per 100,000	<200	242	163	197	159
Hospitalization rate per 100,000 (7 day total)	<10	7.8	3.1	7.8	10.9
Inpatient beds occupied by COVID-19 patients (7-day average)	<10%	7%	7%	7%	7%
CDC Travel Health Notice Level					
Level 3					
Primary Criteria					
New non-imported cases (past 28 days)	<50	398	361	325	234
Secondary Criteria					
Population Testing Rate per 100,000 (past 28 days)	>1500	901	912	942	980
Test-to-Case Ratio (past 28 days)	>30	22	26	28	36
Interventions (Curfew/Shelter in Place)					

Key	
Significantly worse than target (CDC only)	🔴
Worse than target	🟡
Around target	🟢
Better than target	🟠
Worse than historical trends	🟡
Around historical trends	🟢
Better than historical trends	🟠

Epidemiological Weeks 2022

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