

South East Regional Health Authority (SERHA)

EPIDEMIOLOGICAL

UPDATE: Oct-Dec 2024

The role of this bulletin

This bulletin is a product of the Surveillance Unit at the SERHA. It is produced quarterly with the intention of keeping health sector professionals and members of the general public aware of the latest epidemiological trends in Kingston & St. Andrew (KSA), St. Catherine (STC), and St. Thomas (STT).

Influenza

Seasonal influenza (flu) is a highly contagious respiratory infection caused by influenza viruses, prevalent worldwide. It spreads easily through respiratory droplets from coughing, sneezing and via contaminated hands or surfaces. There are four influenza virus subtypes (A–D); types A and B are responsible for seasonal epidemics and pose the greatest risk to public health.

Symptoms

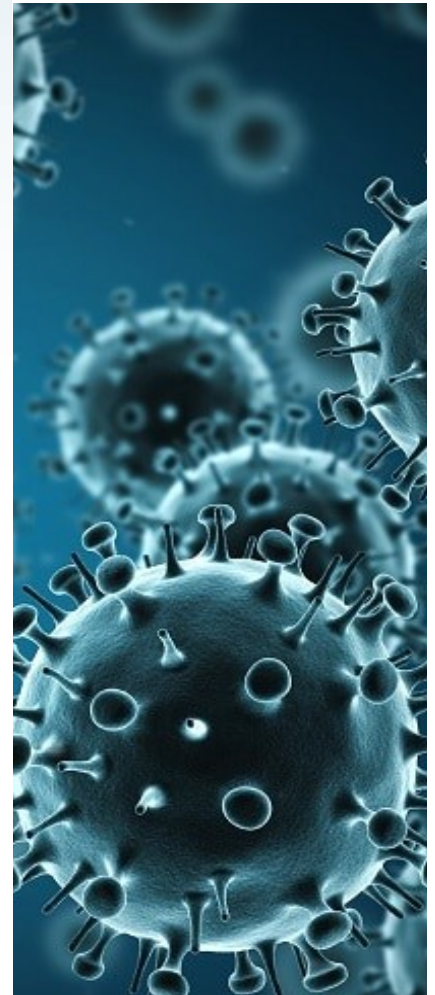
Symptoms typically appear within two days of infection and include sudden fever, dry cough, headache, muscle and joint pain, fatigue, sore throat, and runny nose. Although most cases are mild and resolve without treatment, severe illness can develop, especially in high-risk groups such as pregnant women, young children, the elderly, and individuals with chronic health conditions or weakened immune systems. In some instances, complications like pneumonia or secondary bacterial infections can occur, leading to hospitalization or even death.

Treatment

Most individuals recover at home with rest, adequate hydration, and over-the-counter medications to relieve symptoms. Antiviral medications, which are most effective when started within 48 hours of symptom onset, may be prescribed for severe cases or for those at high risk of complications. It is important to seek medical care promptly if symptoms become significant or worsen.

Prevention

Annual flu vaccination is the most effective way to prevent influenza, especially important for high-risk individuals and those in close contact with them, such as healthcare workers. Because influenza viruses frequently change, the vaccine is updated each year to match the circulating strains. Additional preventive measures include frequent handwashing, proper cough etiquette, avoiding face-touching, and minimizing close contact with infected individuals. Consider wearing masks in crowded or high-risk settings, particularly during peak flu season. Influenza can be contagious even before symptoms appear, so early preventive measures are important.



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RESPIRATORY SURVEILLANCE

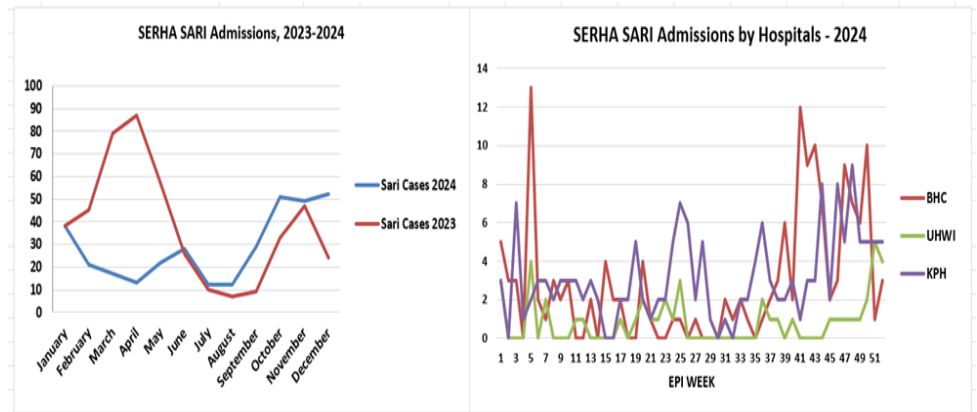
SEVERE ACUTE RESPIRATORY INFECTIONS (SARI)

Severe Acute Respiratory Infection (SARI) Case Definition:

- History of fever or measured fever of $\geq 38^{\circ}\text{C}$
- AND
- Cough with onset within the last ten days
- AND
- Severe enough to require hospital admission
- These are 3 official SARI sites across the region - KPH, UHWI and BHC.
- These SARI sites provide weekly reports to facilitate the monitoring of trends in the respiratory infections

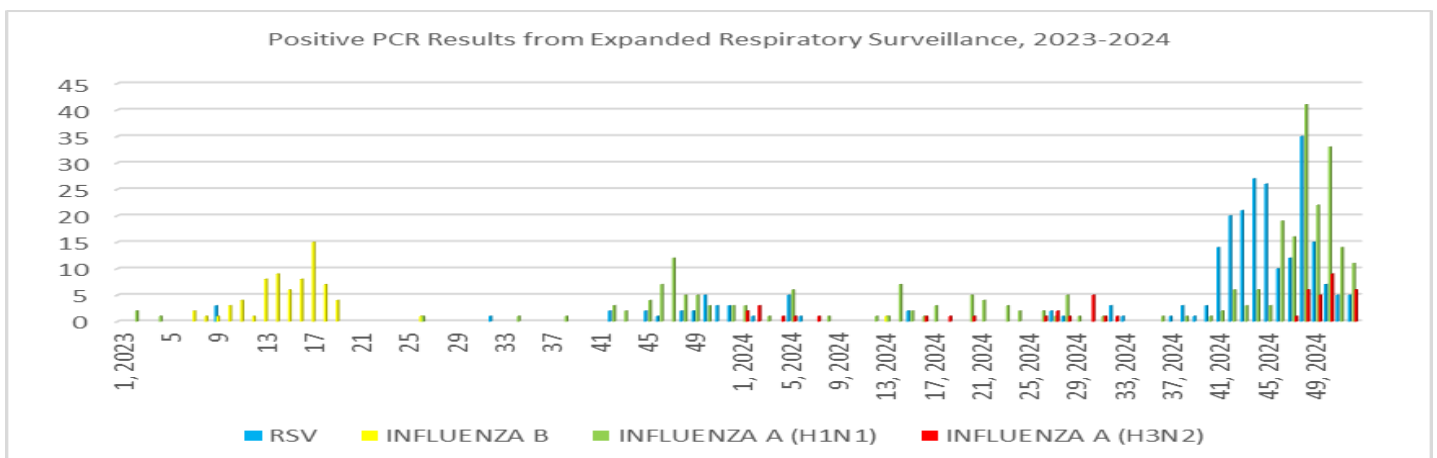
- SARI admissions increased during the quarter with a total of 160 cases admitted. This equated to 2.1% of all medical admissions.
- This represents a 202% increase (53 cases) when compared to Q2 and also a 54% increase (104 cases) when compared to the same period in 2023.
- The majority of SARI cases were seen at the public facilities, with BHC accounting for 51% of SARI admissions during the quarter. KPH accounted for 62 cases (39%) and UHWI, 17 cases (11%).
- SARI cases began to trend down since the start of 2025.

Trends in SERHA 2023-2024 SARI Cases



Circulating Respiratory Viruses

- A total of 1028 PCR results were received for the expanded panel of respiratory viruses between October to December 2024. Of these, 200 were positive for RSV, 177 for H1N1 and 27 for H3N2.
- RSV and H1N1 were the predominant virus circulating during the quarter. Positivity rates peaked at 23% and 22% in November for RSV and H1N1 respectively.



RESPIRATORY SURVEILLANCE

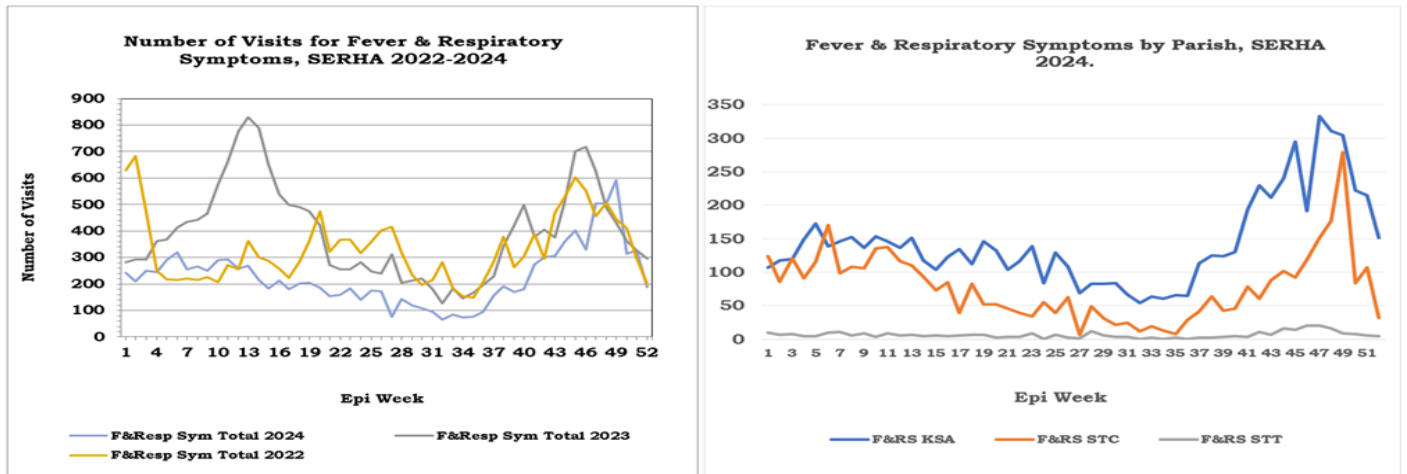
Fever and Respiratory /ILI (Syndromic Surveillance)

Fever and Respiratory / Influenza Like Illness (ILI)

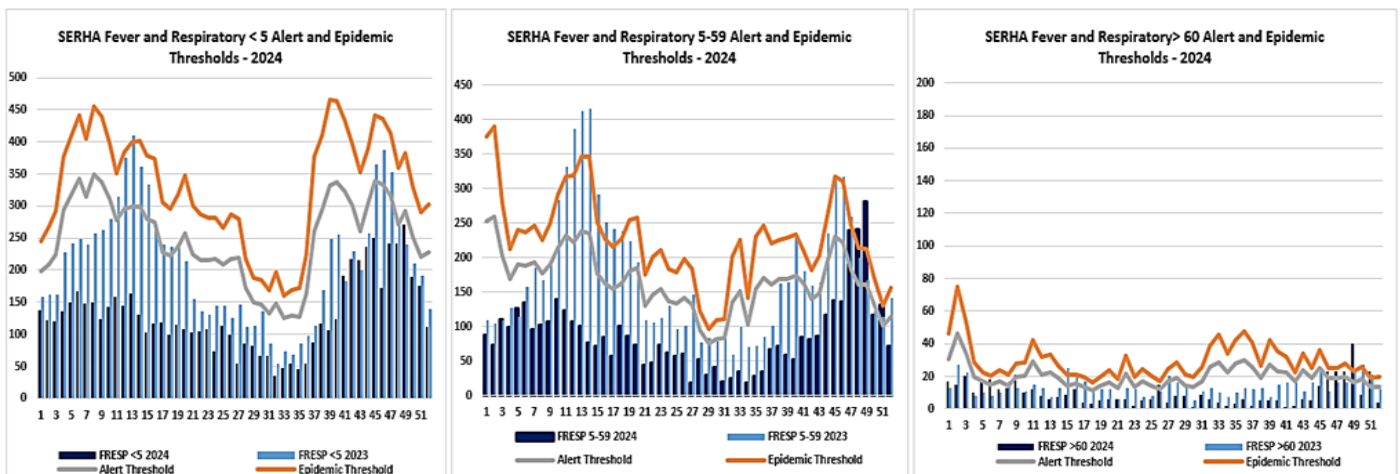
- Defined as a temperature of $\geq 38^{\circ}\text{C}/100.4^{\circ}\text{F}$ (or recent history of fever) in a person with an acute respiratory infection, presenting with a cough and an onset within 10 days.
- Syndromic data captures fever and respiratory/ILI cases seen at the 21 designated sentinel sites throughout the region.

- Syndromic Fever & Respiratory visits peaked and subsequently decreased during the October-December 2024 quarter. A total of 4580 visits were reported which equated to a 215% increase (1452 case) compared to Q2 but a 25% decrease (6113) compared to the same period in 2023.
- The under 5 cohort accounted for 2635 visits (58%), 5-59 years 1767 (39%), and the over 60 years age group represented 178 (3.8%) of all visits.
- Cases in the 5-59 age group transiently exceeded Epidemic Threshold in EWs 46-48.

SERHA Fever and Respiratory Visits by Parish, 2022-2024



SERHA Fever and Respiratory Visits by Age Category, 2023-2024



RESPIRATORY SURVEILLANCE

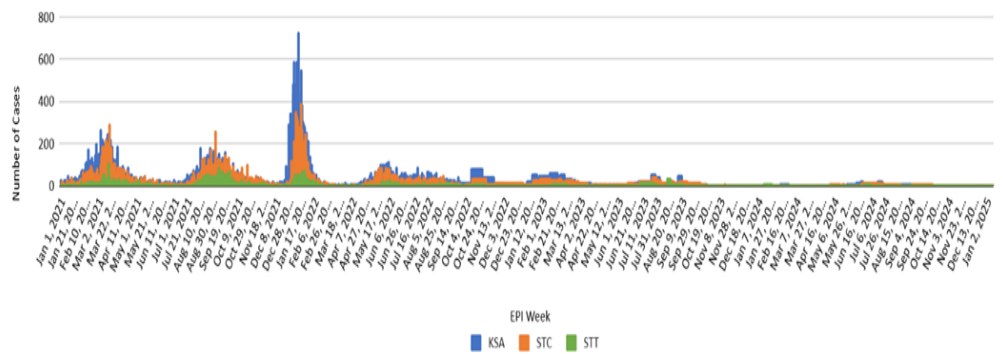
COVID-19 Update

- 58 new COVID19 cases were confirmed between October-December 2024. As immunity increases in the population, total infections continue to decrease year on year.
- As of 31st of December 2024, SERHA parishes had recorded a cumulative total of 75,152 COVID19 cases from the start of the pandemic in 2020.
- KSA accounted for the majority of cases (53%, 39,759), STC 39% (29,284), and STT 8% (6,109) of all cumulative cases.

Public health parameters indicate a transition to endemicity of COVID19 in SERHA with surges occurring biannually at the start and middle of the year.

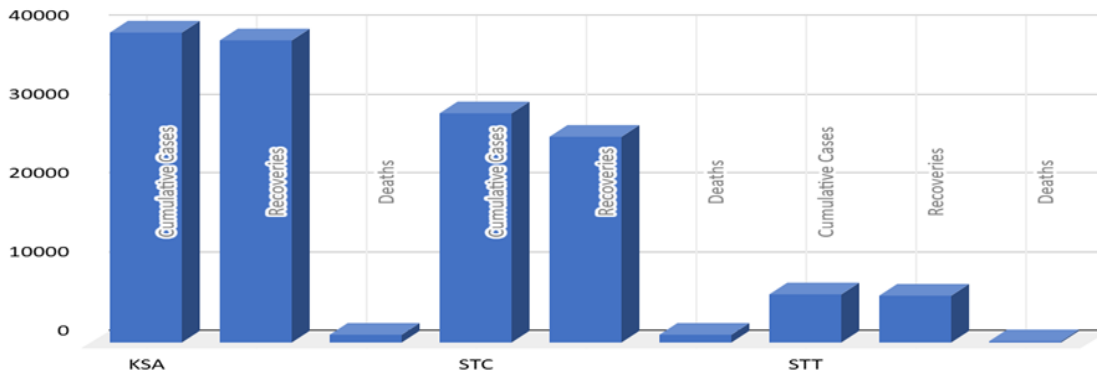
Covid 19 Epidemiology Curve,2020-2024

Epi Curves, KSA, STC, STT, Jan 2021 to present



The number of new and active COVID-19 cases remained low in 2023 & 2024. Recoveries across the region remained high at 94.7% of all confirmed cases

Cumulative Covid 19 Case & Outcome by Parish,2020-2024



Syndromic Surveillance

- There are 21 designated sentinel sites in both primary & secondary care facilities across the region.
- Data on specific, predefined conditions are reported from these designated sentinel sites and are used to monitor trends.
- Monitoring trends on these specific, predefined syndromes allows for early detection of and timely response to public health threats.

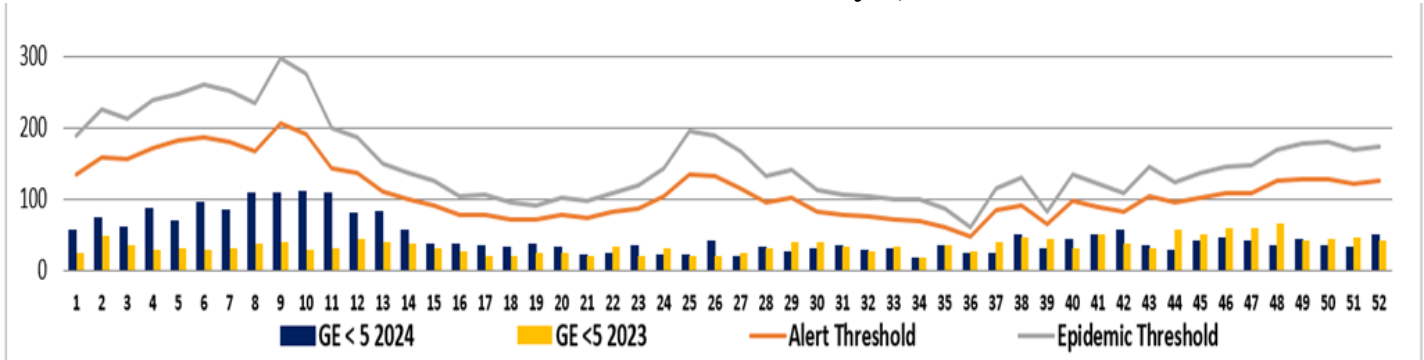
GASTROENTERITIS

Gastroenteritis (GE)

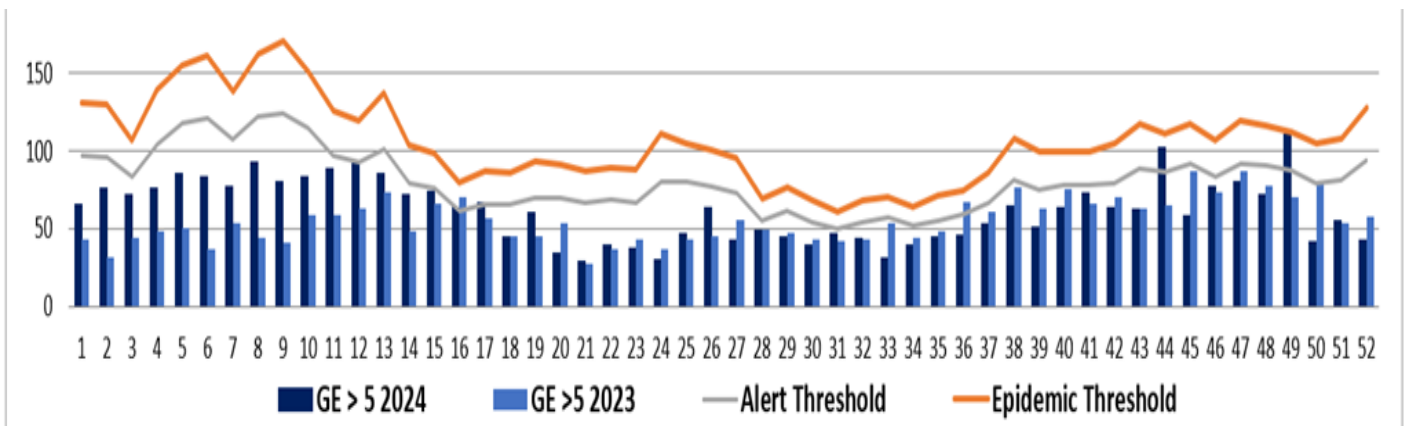
Gastroenteritis is defined as the acute onset of diarrhoea, presenting with three (3) or more loose/watery stools in a 24-hour period, with or without a fever, dehydration, vomiting, and/or visible blood.

- * The total number of gastroenteritis cases reported between EWs 40-52 (October to December 2024) was 1405.
- * This is a 43% increase when compared to the July to September quarter, in keeping with seasonal trends. Despite this increase, cases remained below Epidemic Thresholds in both age groups.
- * The >5 age group accounted for the majority of cases (63%), while the <5 cohort represented 37% of the reported cases.
- * KSA accounted for 70% (988 cases), while St. Catherine represented 22% (307 cases) and St. Thomas represented 8% (110 cases).

SERHA Gastroenteritis Visits <5yrs, 2023-2024



SEHRA Gastroenteritis Visits >5 years, 2023 - 2024



Syndromic Surveillance

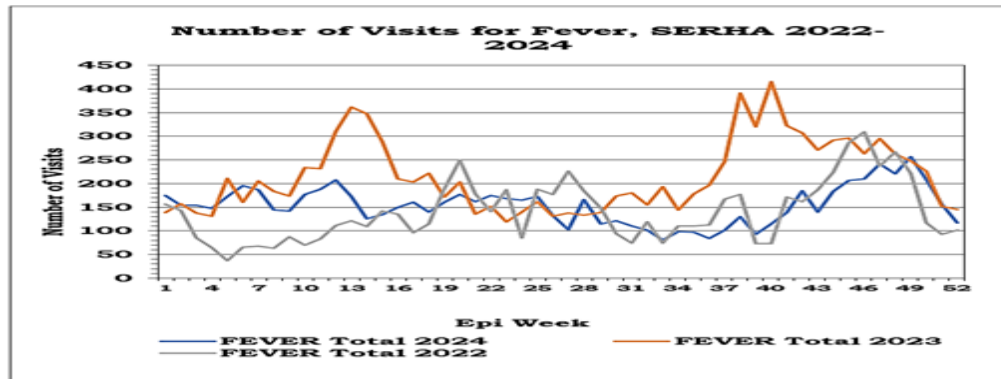
Undifferentiated Fever

Undifferentiated Fever

Defined as a temperature of $\geq 38^{\circ}\text{C}$ / 100.4°F (or recent history of fever) without an obvious diagnosis or focus of infection.

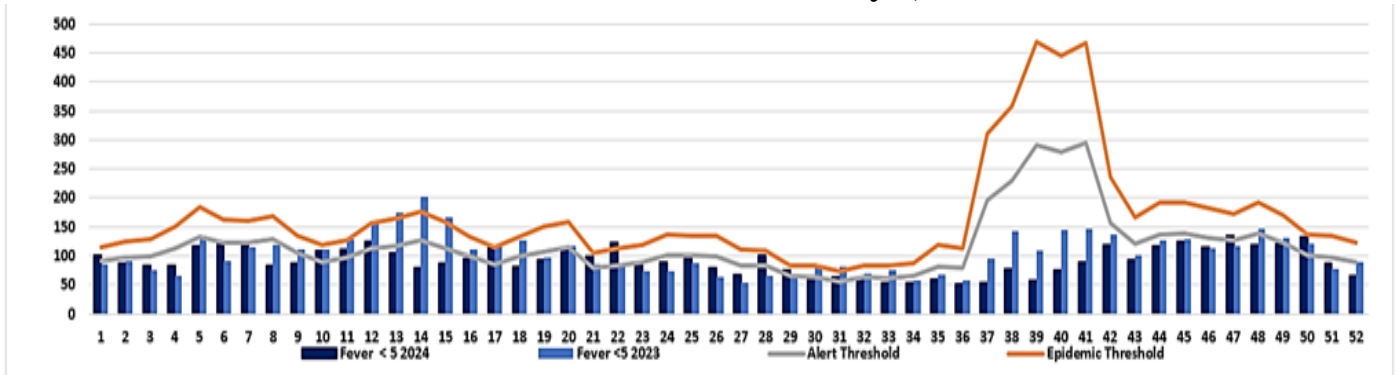
Undifferentiated fever is a proxy for possible Dengue Fever, Leptospirosis, Malaria or Influenza to name a few.

SERHA Undifferentiated Fever Visits, 2022-2024

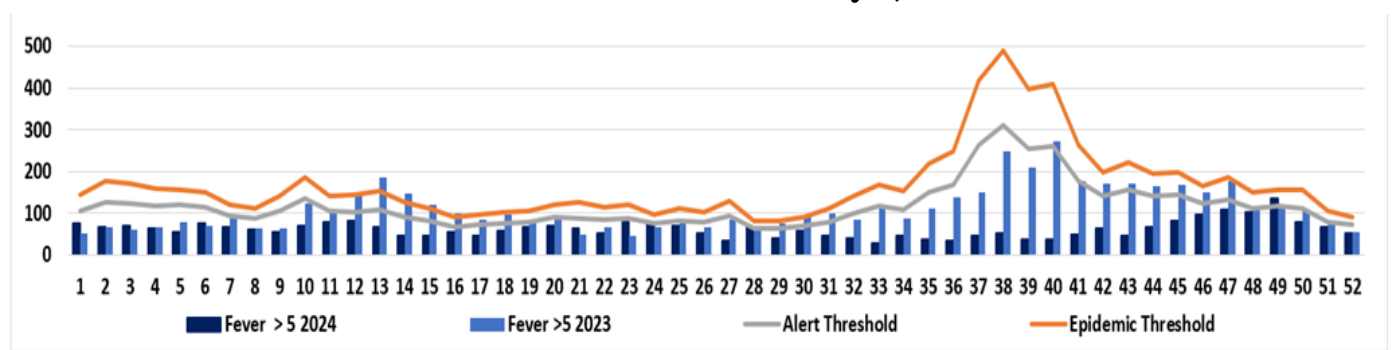


- In keeping with seasonal trends, the number of undifferentiated fever visits began increasing during the reporting quarter, peaking in EW49 before decreasing at the end of the quarter. A total of 2377 visits were reported which represents a 70% (1399) increase compared to Q2, but a 32% decrease when compared to the same period in 2023 (3494 cases).
- KSA accounted for 70% (1671) of the reported visits; STT 16% (376) and STC represented 14% (330 visits). Patients greater than 5 years accounted for the majority of visits (59%).
- Undifferentiated fever visits remained below Epidemic Threshold during the reporting quarter.

SERHA Undifferentiated Fever Visits <5 yrs, 2023-2024



SERHA Undifferentiated Fever Visits >5 yrs, 2023 - 2024



Syndromic Surveillance

Fever and Rash

Fever and Rash

Defined as an individual presenting with fever of $\geq 38^{\circ}\text{C}$ / 100.4°F , or recent history of fever, and rash where there is no obvious cause of one or both symptoms. Fever and Rash is a proxy for possible measles, rubella, and dengue cases.

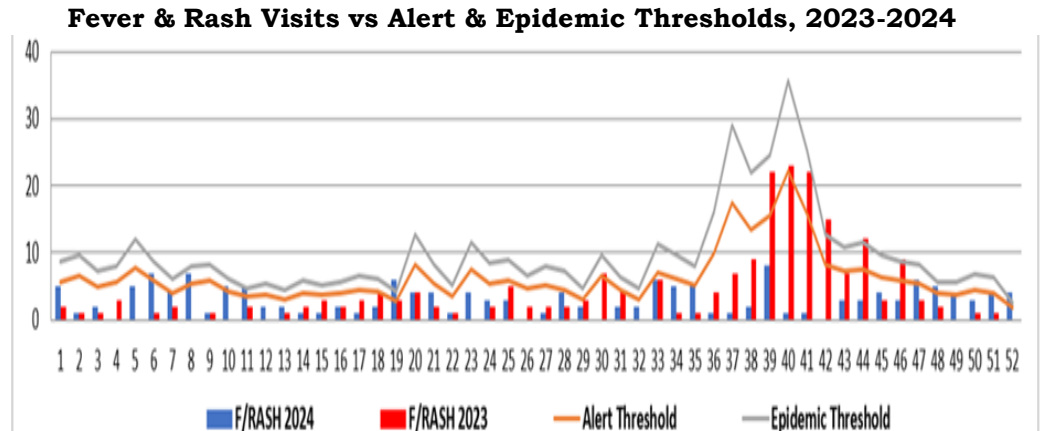
Fever and Rash surveillance is also a critical component of Vaccine Preventable Disease Surveillance for the identification of imported measles and rubella cases. Key Performance Indicators (KPIs) for VPD surveillance include:

- ◇ Fever & Rash cases notified (Class 1 Notifiable Disease: 100% fever & maculopapular rash cases to be notified)
- ◇ Fever & maculopapular rash cases investigated within 48hrs (Target 100%)
- ◇ Fever & maculopapular rash cases with adequate serum sample (red top) sent for 'measles/rubella' testing

Fever & Neurology

Defined as a fever (100.4°F / 38°C or greater) or recent history of fever in a person with evidence of meningeal irritation, convulsions, altered consciousness, altered sensory manifestations or paralysis.

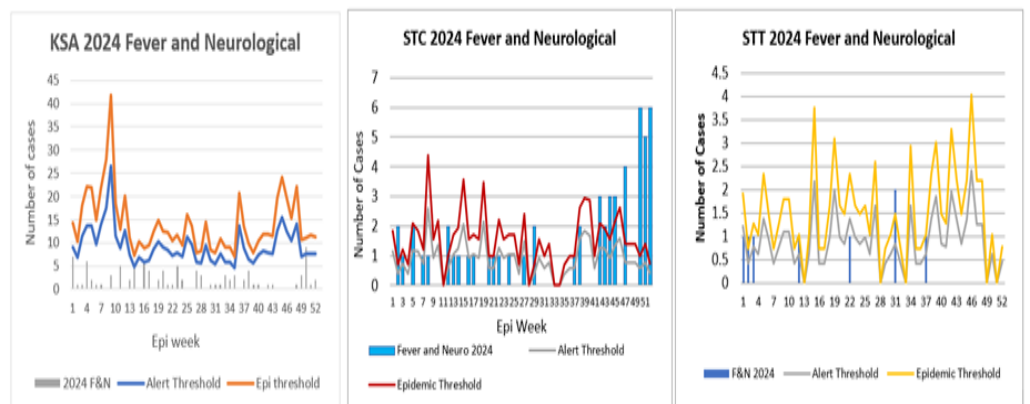
Fever is a symptom of several neurologic disorders as well as some systemic disorders that affect the nervous system. Neurologic complications of fever, such as febrile seizures and brain damage, are also considered.



- A total of 41 Fever and Rash visits were reported during Epi Weeks 40 –52 (October to December 2024). This represented a 42% decrease when compared to the same period in 2023 when visits exceeded thresholds due to the newly declared Dengue Fever outbreak.
- Although the majority of visits (24) were reported from KSA, STC visits increased above Epidemic Threshold (15) during the quarter due to an increase in Hand, Foot and Mouth cases seen in the parish. The parishes have been engaged to ensure robust Fever & Rash vaccine preventable (VPD) surveillance and investigation.

Fever and Neurology

SEHRA Fever and Neurology Visits by Parish, 2024



- There were 52 visits for fever and neurological disorders reported from sentinel sites during EWs 40-52, 2024. Although this was 52% less than the same period in 2023 (108 visits), it was 33% higher than the July-September quarter.
- The region exceeded Epidemic Threshold in EWs 50-52 due to a notable rise above threshold in cases reported from STC. Further investigation revealed that this was largely due to an increase in febrile seizures resulting from ILIs & URTIs.
- Of the 52 reported cases, 32 (61.5%) were from St. Catherine, 19 (36.5%) cases from Kingston & St. Andrew and 1 (2%) was from St. Thomas.

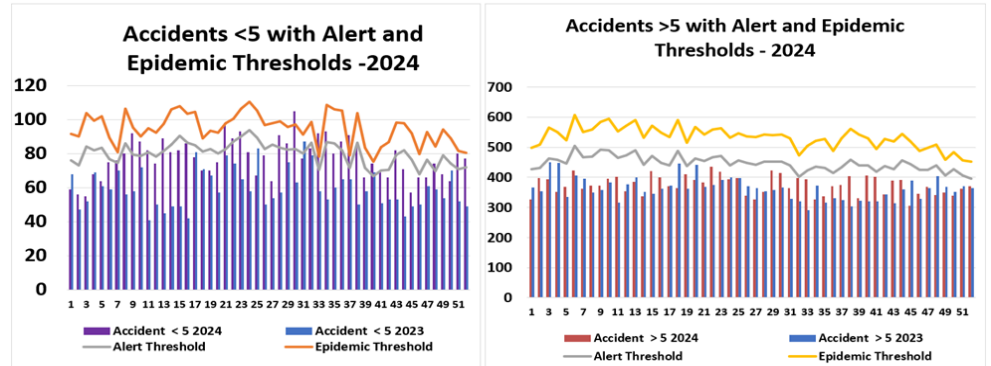
Violence and Injury Surveillance

Accidents

Accidents

Defined as an unfortunate incident that happens unexpectedly and unintentionally, typically resulting in damage or injury.

SERHA Accidental Injuries in < 5 and > 5 years, 2023-2024

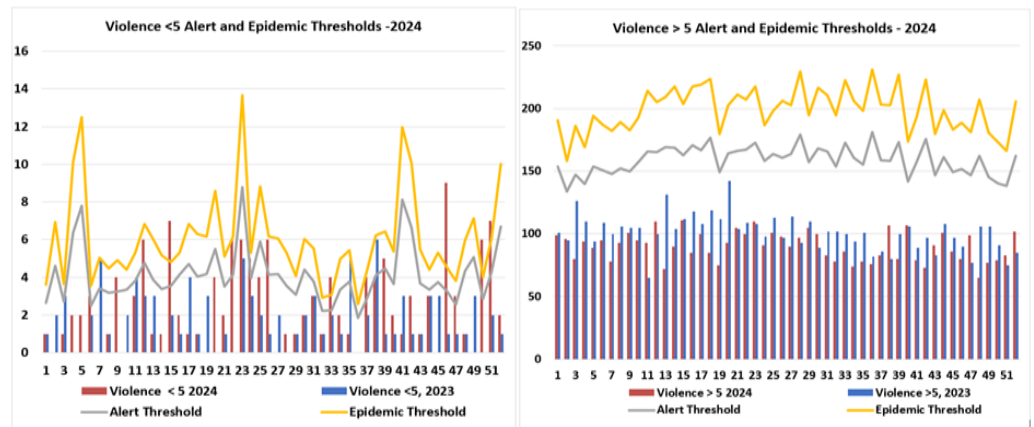


- A total of 5627 accidents were reported from SERHA Sentinel sites in EWs 40-52; this represents a 6% increase when compared to October–December 2023 (5308), but a 5% decrease (5914) when compared to Q2.
- Patients > 5 years and older accounted for 16% (914) of visits, while the < 5 cohort accounted for 84% (4713) of all accidental injuries reported. KSA accounted for the majority (52%, 2938).
- Accidental injuries remained below the Epidemic threshold in both age groups.

Violence

Violence

Defined as any injury for which the cause is intentional e.g. gunshot wounds, stab wounds, etc.



Violence-related injuries continue to affect children under 5 years old

- A total of 1160 cases of violence-related injuries were reported in EWs 40-52, 2024. This is equivalent to visits reported in quarter 2 (1165) but represents a 5.7% decrease when compared to the same period 2023 (1231).
- KSA accounted for 49.7% (577) of the total violence cases reported, while St. Catherine reported 38.5% (447) and St. Thomas 11.7% (136).
- Violence related injuries exceeded epidemic threshold levels in the < 5 group in epi weeks 49-50. Violent injuries in the paediatric population remains a concern in SERHA, primarily in the parish of STC.

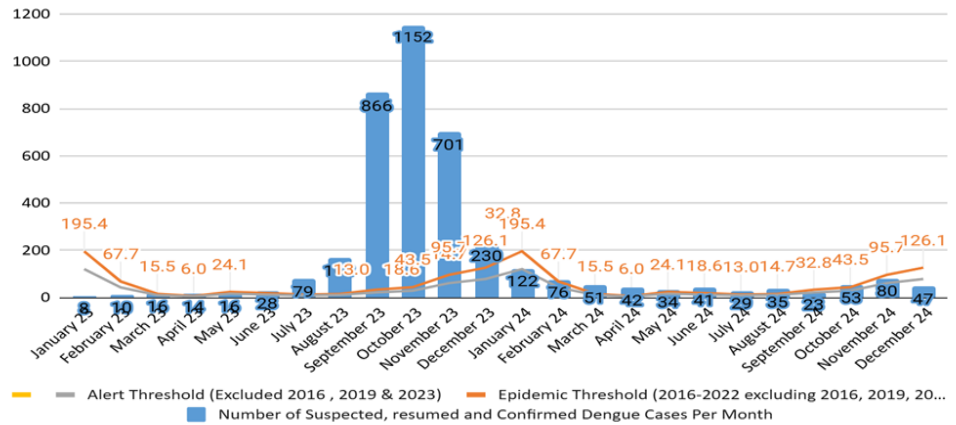
Dengue Fever

Key Terms and Facts

- Dengue Fever is an acute viral illness caused by the Dengue Virus which is transmitted by the bite of an infected *Aedes aegypti* mosquito.
- There are 4 known serotypes (Dengue Virus [DENV] types 1-4).
- Infection with a single serotype provides lifelong immunity; subsequent infections with other serotypes increase the risk of severe disease.
- Dengue Fever is endemic in Jamaica with outbreaks occurring every 3-5 years.
- The last national Dengue outbreak started in September 2023 with DENV Type 2.
- The Surveillance Case Definition for Dengue (No warning signs) includes: acute onset of fever plus any 2 or more of the following: headache/retro-orbital pain, myalgia/arthralgia, rash, haemorrhagic manifestations, nausea/vomiting and leucopenia
- Patients who have evidence of symptoms including severe abdominal pain or persistent vomiting, typically starting 1 week after onset of fever, should be assessed for more severe forms of illness (Dengue with warning signs).

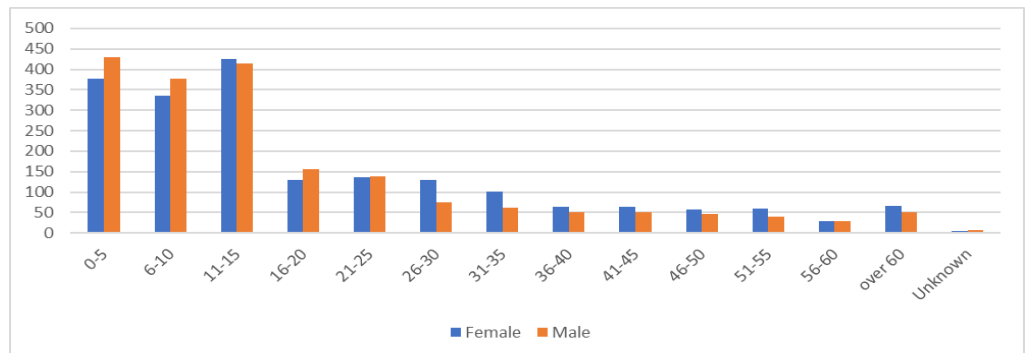
- As at January 8th 2025, SERHA had recorded 644 suspected or presumed Dengue Fever cases for the 2024 calendar. This is 80% less than the 3295 cases recorded in 2023, the start of the outbreak.
- DF cases fell below Epidemic Threshold in November and December 2024.

Suspected, Presumed, and Confirmed Dengue Cases vs. Alert and Epidemic Thresholds (Outbreak years excluded), 2023-2024



- The paediatric population remained the most affected. Gender distribution and parish distribution remained unchanged.

Age Distribution of Dengue Case by Gender, 2023-2024



- The majority of DF cases were mild; 18.4% were DWWS in 2024, a slight increase from the 15% DWWS in 2023.
- 44 potential Dengue-related Deaths (DRDs) have been reported since the start of the outbreak in 2023. 11 were reported in 2024, 5 of which occurred between October-December. Of these cases, the MOHW has classified 14 cases to be due directly to DF and discarded another 22. The remaining cases are pending classification from the MOHW.

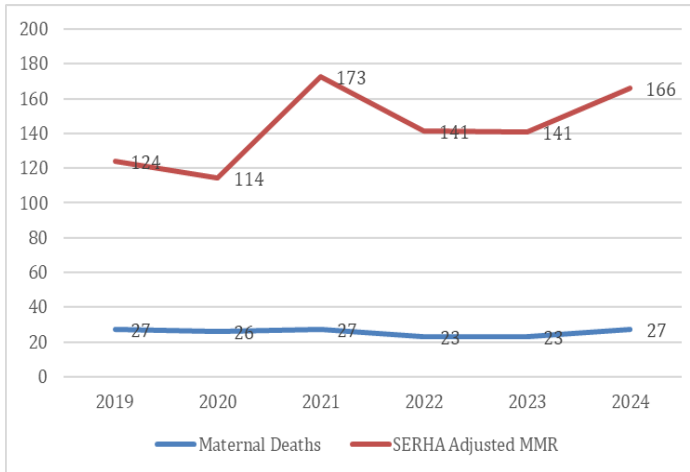
Table 4: MOHW Classification of Reported Dengue-Related Deaths, 2023-2024

Reported Dengue-Related Deaths	# Reported	MOHW Classification				PCR Positive
		# Confirmed	# Suspected	# Discarded	# Under Ix	
KSA	22	3	2	10	7	3
STC	11	0	4	7	0	0
STT	11	1	4	5	1	1
SERHA	44	4 (DENV-2)	10	22	8	4 (DENV-2)

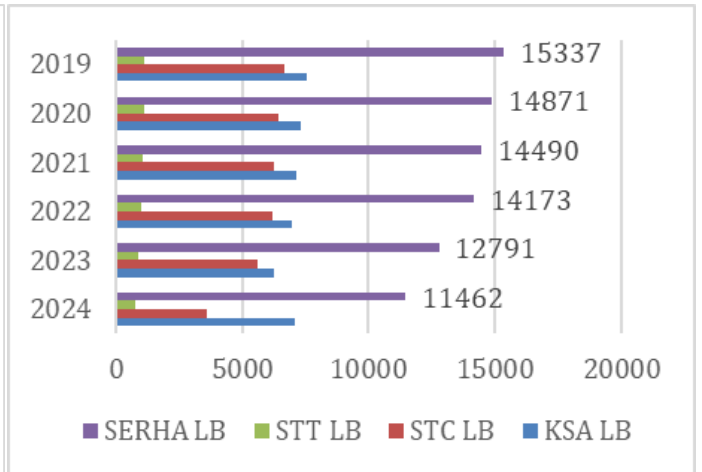
2024 Maternal Deaths

- SERHA recorded a total of 27 maternal deaths in 2024, excluding 2 coincidental deaths. This is an increase from the 23 deaths recorded in 2023 (excluding 1 coincidental). STC accounted for 56% of the 2024 cases.
- This brought the **preliminary** 2024 SERHA Maternal Mortality Ratio (MMR) to 166/100,000 live births, up from 141/100,000 LB in 2023, driven largely by a consistent decrease in the number of live births across the region.
- 10 of the SERHA deaths occurred at STH, 6 at VJH, 3 at UH-WI, 2 at PMH and 6 demised in community.
- The majority of SERHA early deaths occurred while pregnant or within 7 days of delivery, highlighting the need for stringent post-natal care and follow-up immediately post-partum.

SERHA Adjusted MMR (Preliminary) & Total Maternal Deaths, 2019-2024

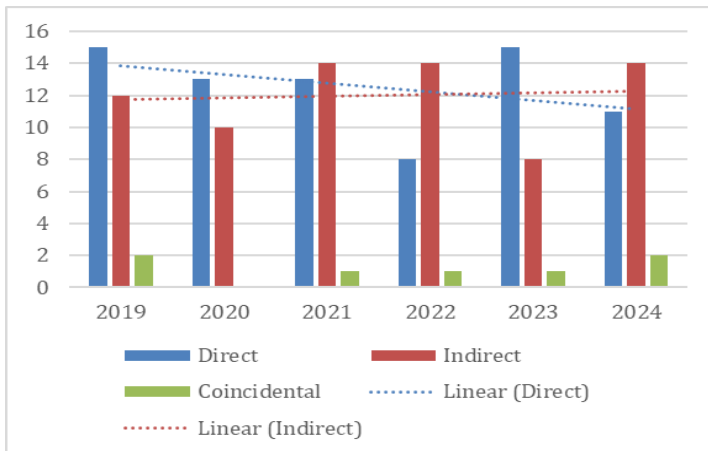


SERHA Preliminary Live Births by Parish, 2024

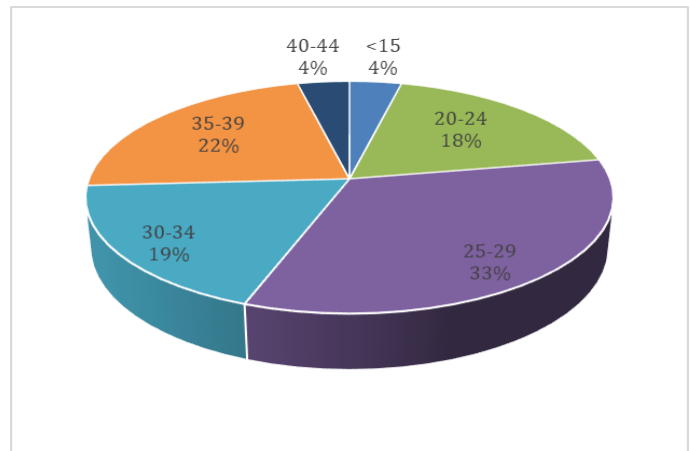


- The majority of deaths were early deaths with indirect causes predominating in 2024. Trend analysis shows a decrease in direct maternal deaths as compared to 2019.
- The average age of SERHA maternal deaths in 2024 was 29 years old, ranging from 14 to 41 years. The majority of mothers who demised were under 35 years old.

Classification of Maternal Deaths, 2019-2024



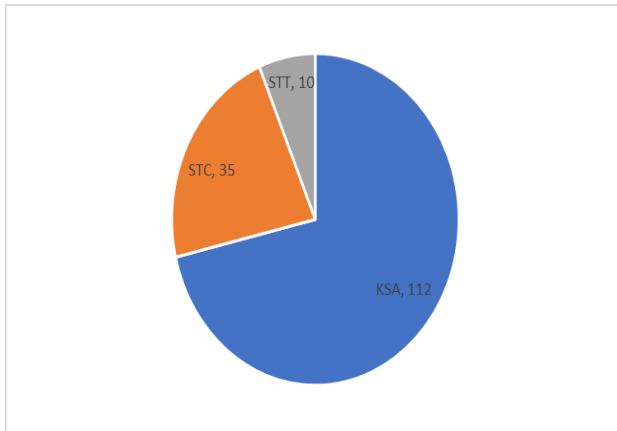
2024 SERHA Maternal Deaths by Age Category



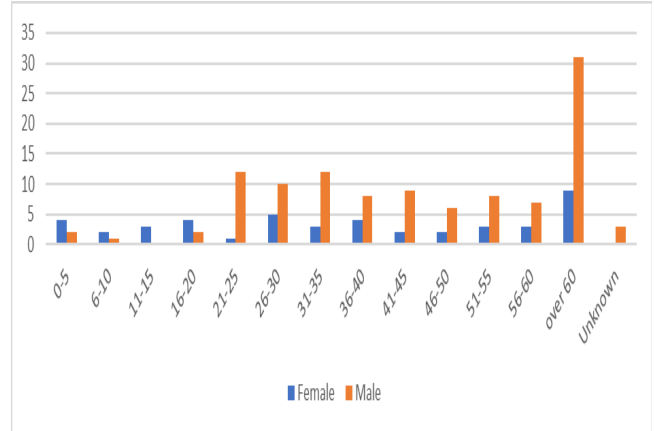
Tuberculosis

- As at December 31st, a total of 157 notifications were received for Tuberculosis from across the region, surpassing the 2023 annual total by 20%. KSA accounted for 71% of all Tb cases notified in the region.
- Of these notified cases, 33% (52 cases) have been confirmed and 30% (47 cases) discarded. The remainder are under investigation.
- 21 of the *notified* cases were linked to correctional facilities (Horizon, Tower Street Correctional, Hunt's Bay Police Station, Central Police Station & 100 Man Police Station). Eleven (11) of these cases have thus far been confirmed, including a cluster of 10 cases at the Hunt's Bay Lock up. Tb in correctional facilities absorb significant parish resources and further burden the limited resources of the KSA HD. This continues to impact the parish's ability to investigate other notified cases in a timely manner.
- Males >60 years continue to be the most affected cohort (69%).

Notified Tb Cases by Parish, 2024

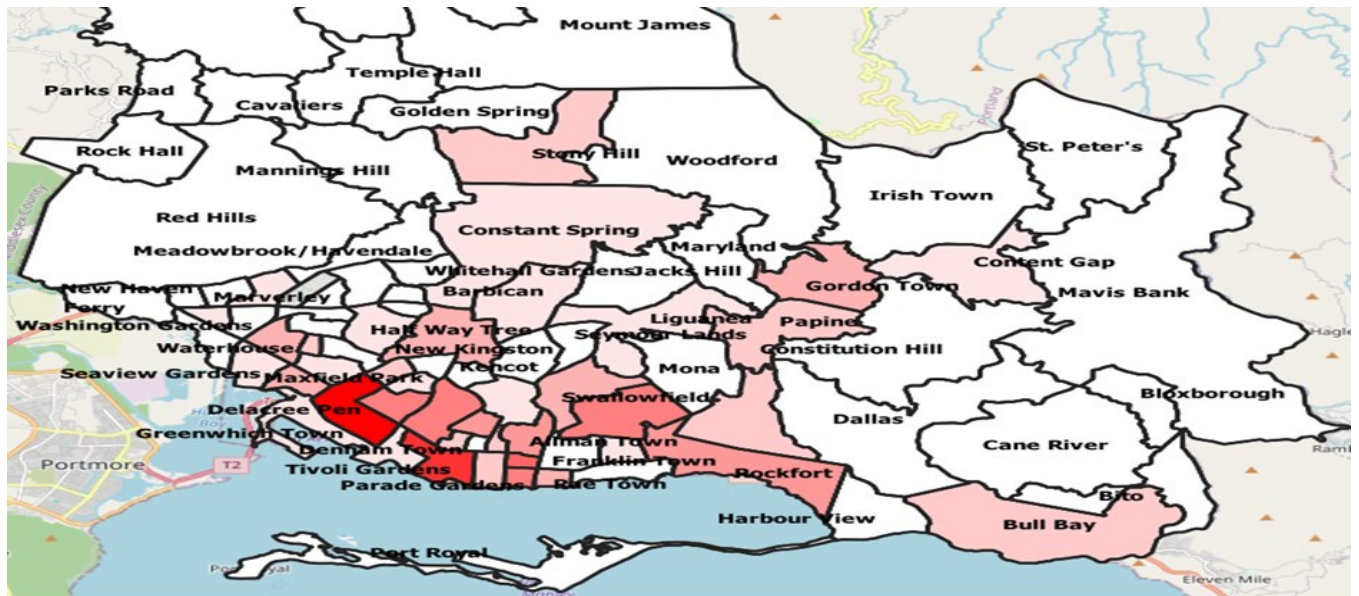


Age Categories of Notified Tb Cases, 2024



- Communities in central downtown Kingston remain the most affected. Of the 2024 notified cases in KSA, 9 were reported from Tivoli Gardens, Whitfield Town (5), Trench Town (5), Parade Gardens (5), and Mountain View/Vineyard Town (5).

Communities of Notified Tb Cases in KSA, 2024



Notified Class 1 Diseases & Health Events

Highlights

- Class 1 Diseases and Health Events are high priority communicable diseases or health events with a potential for high morbidity or mortality
- Notified class 1 events are reported *upon suspicion* and trigger a fulsome investigation by the parish health department to allow for further classification; if confirmed further action is immediately initiated by the health team to ensure adequate management and containment of any public health treat.
- Not all notified class 1 events are confirmed cases
- Notable Class 1 Events which occurred in the quarter included: 3 confirmed imported cases of malaria, Tb outbreak at the Hunts Bay Lock Up, and 1 case of confirmed congenital syphilis in a 2 month old infant.

Health Event	Jan-Dec 2022	Jan-Dec 2023	Jan-Mar 2024	Apr-Jun 2024	Jul-Sep 24	Oct-24	Nov-24	Dec-24	YTD
Accidental Poisoning	179	192	57	55	58	12	8	2	192
AFF/ Polio/GBS	3	9	2	0	4	1	0	1	8
Congenital Rubella	0	0	0	0	0	0	0	0	0
Dengue Fever	128	4177	356	160	143	85	117	68	927
Diphtheria	0	0	0	0	0	0	0	0	0
Encephalitis	5	1	0	0	0	0	0	0	0
ESAVI	73	28	12	6	10	0	0	1	29
Leprosy	1	2	0	0	0	0	0	0	0
Hepatitis	19	45	35	25	8	5	1	0	74
HIV/AIDS	168	242	84	85	22	8	1	0	200
HEI	2	163	4	5	1	0	0	0	10
Leptospirosis	53	86	19	20	33	12	10	8	102
Malaria	187 (5 POS)	22 (3 POS)	2	0	16	1	0	11	30 (5 POS)
Maternal Mortality	23	24	7	8	6	3	3	2	29
MDRO	102	359	48	60	30	11	5	4	158
Measles/ Fever & Rash	41	105	39	39	15	17	8	3	121
Meningitis	120	150	40	20	19	16	6	5	106
MIS-C	9	5	0	0	0	0	0	0	0
Needle Stick Injury	134	208	45	56	71	21	14	1	208
Ophthalmia Neonatorum	76	93	22	18	16	4	9	0	69
Parasuicide	15	0	0	0	0	0	0	0	0
Suicide	2	2	0	0	0	0	0	0	0
Pertussis-like Syndrome	0	1	0	0	0	1	0	0	1
Rheumatic Fever	7	1	0	1	1	0	0	0	2
Syphilis	127	144	60	44	1	2	1	0	108
SEI/ Congenital Syphilis	41	23	5	10	2	0		0	17
Tetanus	1 H/O	0	0	0	0	0	0	1	1
Tuberculosis	76	140	20	40	37	17	34	6	157
Typhoid Fever	13 (4 POS)	0	0	0	0	0	0	0	0
Monkeypox	35 (+11 POS)	24 (3 POS)	1	0	1	0	0	0	2