

11 November 2025

## Public Health Situation Analysis for Hurricane Melissa in Jamaica, Cuba, Haiti, the Dominican Republic, the Bahamas, and Bermuda

### Type of Emergency



Hurricane

### Main Health Threats

- ✓ Water and foodborne diseases
- ✓ Leptospirosis
- ✓ Trauma and injury
- ✓ Psychosocial conditions
- ✓ Respiratory diseases
- ✓ Vector-borne diseases
- ✓ Immunization and vaccine-preventable diseases
- ✓ Maternal and neonatal health
- ✓ Non-communicable diseases

### CONTEXT

Hurricane Melissa formed over the Caribbean Sea on 21 October 2025 and underwent rapid intensification, reaching Category 5 strength by 27 October 2025 (1). Its slow movement and broad circulation brought prolonged hurricane-force winds and torrential rainfall to several countries even before reaching land, including **Haiti** and **the Dominican Republic**, which triggered widespread flooding, landslides, and storm-surge inundation. The system made landfall in southwestern **Jamaica** on 28 October 2025 with maximum sustained winds of 185 mph (295 km/h), then continued across the Caribbean, causing severe effects in eastern **Cuba** before curving towards **the Bahamas** and passing near **Bermuda** as a Category 2 hurricane on 31 October 2025 (1,2).

The strength of Hurricane Melissa brought devastating winds, torrential rainfall, and powerful storm surges that ravaged large parts of the Caribbean. Across the most affected countries, the hurricane has caused 77 deaths and 150 injuries, while forcing nearly 124,694 people into shelters and displacing an estimated 738,779. The widespread destruction of infrastructure, coupled with prolonged power outages and flooding, severely disrupted health services, with a total of 758 healthcare facilities reported damaged. Water and sanitation systems, and critical public health operations, were also heavily affected, placing immense strain on health systems and increasing the risk of disease outbreaks in the aftermath (3,4).

**Key figures. Cumulative data from Jamaica, Cuba, Haiti, the Dominican Republic, the Bahamas, and Bermuda, as of 5 November 2025** (3) *\*Please note that the damaged healthcare facility data reflects the situation as of 11 November 2025* (4)



77

DEATHS



150

INJURIES



124,694

SHELTERED



738,779

DISPLACED



758

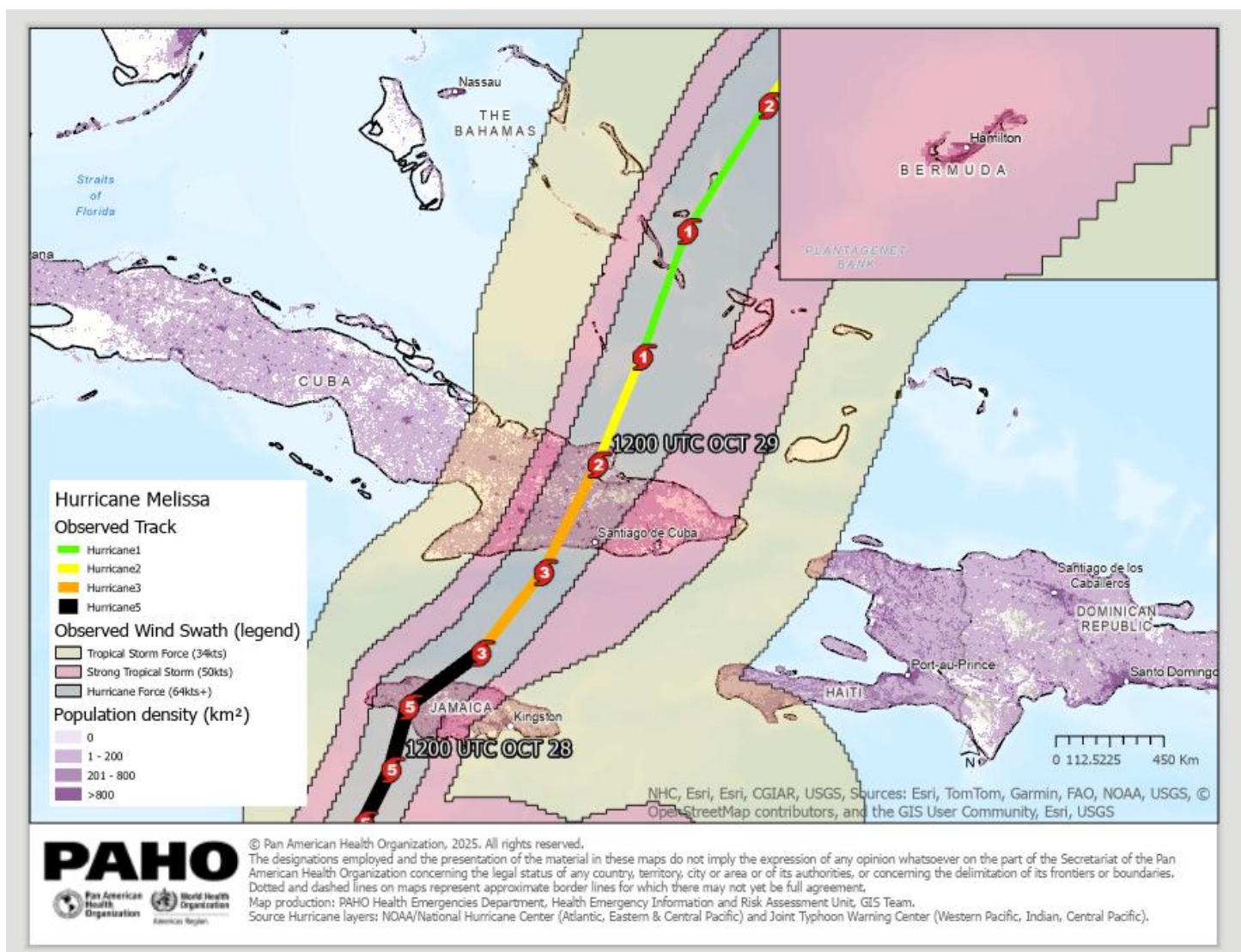
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**Map 1. Observed track of Hurricane Melissa over the Caribbean**



## Jamaica

Hurricane Melissa made landfall in southwestern Jamaica on 28 October 2025 as a Category 5 hurricane, unleashing winds of up to 185 mph (295 km/h), 15–30 inches of rainfall, and storm surges up to 13 feet (5–8). The southern and western parishes (including St. Elizabeth, Westmoreland, Hanover, St. James, and Trelawny) were the hardest impacted, experiencing catastrophic flooding, wind damage, and coastal inundation. As of 3 November 2025, more than 450,000 people remained without electricity, primarily in the western and southern parishes (9).

As of 3 November 2025, the entire population of 2.8 million was exposed to the hurricane, and over 1.5 million people were directly affected by damage to homes, water and power outages, and loss of livelihoods (10). There have been 32 deaths and

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96 injuries reported, including several related to preparedness activities. As of 2 November 2025, 2,868 people were still sheltering in 206 active shelters across the country; at the peak on 29 October, 513 shelters had been activated housing 7,208 persons (7,8). Infrastructure damage has been severe, with more than 130 major roads blocked by flooding, landslides, or debris, isolating several rural communities and hampering relief efforts. Power failures have also disrupted water and telecommunications systems: 16 National Water Commission facilities across five parishes were affected by outages and turbidity, leaving communities including 78 in Kingston and St. Andrew without safe water. Preliminary assessments estimate that between 98,000 and 359,000 people may require food assistance (8). Mental health has emerged as a critical priority, with increasing psychosocial needs reported among children, displaced families, and healthcare workers (9). Disease surveillance is being conducted across all health facilities and shelters to rapidly detect and respond to potential outbreaks (7).

## Cuba

Hurricane Melissa made landfall in southeastern Cuba on 29 October 2025, striking Guamá (Santiago de Cuba) as a Category 3 hurricane before crossing the island and exiting through Banes (Holguín) (11,12). The storm brought winds over 195 km/h and rainfall above 400 mm in several parts of the country, causing severe flooding, river overflows, and infrastructure collapse across Santiago de Cuba, Granma, Holguín, and Guantánamo. Flooding in the Cauto River Basin triggered large-scale evacuations across Holguín, Granma, and Santiago de Cuba, while dam overflows in Guisa and Bartolomé Masó and the collapse of the Uvero bridge isolated entire communities (3,13–16). The overflow of La Yaya dam cut off access between Santiago de Cuba and Guantánamo, leaving more than 478,000 residents stranded (13).

Preliminary estimates indicate that over 60,000 homes were damaged (many completely destroyed) and 78,000 hectares of crops were lost. Granma province alone reported the loss of over 28,000 cattle, hundreds of small livestock, and 110,000 liters of milk, while national authorities estimate that 40% of Cuba's vegetable production has been wiped out. Damage to boats, fish storage facilities, and collection centers has heavily impacted on the fishing sector (15,17). Telecommunications and power infrastructure sustained widespread disruption (12). As of 5 November 2025, only 3% of electrical circuits in Santiago de Cuba were connected, and just 18% of radio base stations and 3% of landline phones were operational (17). Approximately 1,000 utility poles, 400 telephone cables, 60 fiber optic lines, and 6 towers were damaged (17).

Authorities evacuated 735,000 people before landfall, including 61,718 elderly individuals, 49,213 children, 5,693 people with disabilities, and 2,941 pregnant women (12,18). Over 3 million people were exposed to hurricane conditions, and approximately 120,000 people remained sheltered as of 5 November 2025 (17). Schools were closed across the provinces of Santiago de Cuba, Guantánamo, Granma, Holguín, and Las Tunas, disrupting education for 670,000 students (15). Nearly 1,552 of the 5,177 educational institutions serving these provinces have sustained damage (17).

## Haiti

On 28 October 2025, as Hurricane Melissa made landfall in Jamaica as a Category 5 hurricane, its outer rainbands continued to batter Haiti's southern peninsula and Ouest Department with torrential rain and strong winds (19). The storm had already impacted Haiti as a tropical storm since 23 October 2025, causing severe flooding, landslides, and river overflows across several departments. Between 28–29 October 2025, continuous rains triggered catastrophic flooding in Petit-Goâve (Ouest Department), where the La Digue River overflowed, killing 22 people (including 10 children) and injuring 10 others, while damaging hundreds of homes, roads, and cropland. In the Grand'Anse department, all four rivers overflowed, flooding six communes and damaging housing, infrastructure, and farmland. In Nippes, flooding across ten communes disrupted road access and increased the risk of landslides, while in the Sud department, flooding from four rivers caused major damage to agricultural land and roads, cutting off several communities. In the Sud-Est department, floodwater damaged the main access road to Jacmel, isolating surrounding communities and hampering humanitarian access. Several internally displaced persons (IDP) sites in Port-au-Prince were also inundated, worsening health risks among displaced populations (19–21).

Nationwide, authorities reported 43 deaths, 21 injuries, and 13 missing persons, with fatalities mainly in Petit-Goâve (22 deaths, including 10 children, and 10 people injured) (22). Preliminary assessments indicate 11,952 houses flooded, 4,257 were damaged, and 176 were destroyed (23). Approximately 1,749 people are sheltered in evacuation centers in five departments as of 3 November 2025 (22). Widespread damage to water systems has increased the risk of waterborne disease outbreaks in shelters and affected communities (21).

## Dominican Republic (the)

Hurricane Melissa brushed the southern coast of the Dominican Republic on 28 October 2025 as a Category 4 hurricane, bringing torrential rain, flooding, and landslides across southern and central provinces. The Emergency Operations Center (EOC) issued widespread alerts, triggering preventive evacuations and the suspension of classes and public activities (24). The storm caused two deaths and extensive flooding in Santo Domingo, San Cristóbal, San Juan, and San Pedro de Macorís, with additional landslides reported in Santo Domingo, San Juan, San Cristóbal, Monseñor Nouel, and San Pedro de Macorís (25,26). Nationwide, 32 water systems were disrupted by turbidity, river overflows, and preventive shutdowns, cutting off safe water access for about 502,000 people (25).

Preliminary assessments indicate that approximately 3,785 people were displaced by flooding and landslides, of whom 77 were housed in official shelters in San Juan, San Cristóbal, and the Distrito Nacional. Damage to homes was concentrated in low-lying and riverbank areas, where over 750 houses were affected (735 flooded, 17 partially damaged, and one destroyed) while 48 communities were temporarily isolated due to damaged roads and bridges (25).

## Bahamas (the)

In The Bahamas, Hurricane Melissa passed over the archipelago on 30 October 2025 as a Category 1 hurricane, bringing 5–10 inches of rainfall, storm surges of 4–7 feet, and strong winds across the southeastern and central islands (27). A hurricane warning was issued on 29 October, with authorities advising residents in these islands to remain sheltered (28). The storm caused localized flooding, minor coastal damage, and temporary power outages in several communities, though no fatalities or major injuries were reported. Approximately 1,400 people were evacuated to Nassau, and 100 individuals sought refuge across three shelters (28). The “All Clear” was issued by national authorities on 31 October (29).

## Bermuda

Hurricane Melissa passed across eastern Bermuda on 31 October 2025 as a Category 2 storm, bringing strong winds and localized damage. In anticipation, authorities suspended ferry services, closed schools and government offices, and distributed public safety guidance. The Bermuda Emergency Measures Organisation (EMO) issued an “all clear” at midday on 31 October, with government operations and transport resuming that afternoon, and schools reopening on 3 November 2025 (30,31).

The hurricane caused widespread wind damage and power outages affecting 18,839 customers at the storm’s peak. Restoration began the same day, and by 3 November, nearly all power had been restored, with only 12 customers still without electricity. Minor road blockages and infrastructure damage were reported, but all main routes are now passable, and airport communications disruptions have been fully resolved (32,33).



## HEALTH STATUS AND PRIORITY THREATS

### Population mortality

In 2021, the leading causes of death across the Caribbean and Latin American subregions were dominated by non-communicable diseases and the COVID-19 pandemic. In the Non-Latin Caribbean (including **Jamaica**, **the Bahamas**, and similar island states), the top five causes of death were COVID-19 (147.9 deaths per 100,000 population), stroke (89.7), ischemic heart disease (82.2), diabetes mellitus (77.1), and other COVID-19–related outcomes (40.9). In Central America, Mexico, and the Latin Caribbean (including **Cuba**, **Haiti**, and **the Dominican Republic**), the five leading causes were COVID-19 (223.4), ischemic heart disease (104.9), diabetes mellitus (54.1), stroke (34.1), and interpersonal violence (29.3). While both subregions share high mortality from cardiovascular and metabolic conditions, COVID-19 mortality was markedly higher in the Latin Caribbean, and violence remains a significant contributor to premature death in this subregion (34). An overview of mortality indicators is shown in *Table 1* below.

**Table 1. Key Mortality and Life Expectancy Indicators in Jamaica, Cuba, Haiti, the Dominican Republic, the Bahamas, and Bermuda.**

Mortality Indicators (35)	Jamaica	Cuba	Haiti	Dominican Republic (the)	Bahamas (the)	Bermuda	Year	Source
Life expectancy at birth	71.6	78.3	65.1	73.9	74.7	82.5	2024	PAHO
Crude mortality rate (per 1000 people)	8.2	10.4	7.8	6.2	8.8	9	2024	PAHO
Infant mortality rate (deaths < 1 year per 1000 births)	18.6	7.1	-	19.1	22.7	2.3	2023	PAHO
Child mortality rate (deaths < 5 years per 1000 births)	20.3	8.8	-	23.6	-	2.3	2023	PAHO
Maternal mortality ratio (MMR)	136.9	38.7	-	126.3	191.6	-	2023	PAHO

## HEALTH RISKS IN THE CONTEXT OF HURRICANE MELISSA OVER THE NEXT 3 MONTHS

Jamaica				
Public Health Threat	Likelihood	Public Health Consequences	Level of Risk	Rationale
Water and foodborne diseases	Highly likely	Major	Very High	In 2025, Jamaica reported an outbreak of <i>E. coli</i> in their national water system due to environmental conditions (36). Storm-driven flooding can further contaminate water and food (37). The resulting lack of potable water and damaged infrastructure may lead to poor hygiene and sanitation and affect the ability of health facilities to provide care. Floodwater may also contain animal carcasses as a result of the storm. Additionally, only 16% of the population is connected to a sewer system. In response to Hurricane Melissa, Jamaica's Ministry of Health and Wellness (MoHW) has announced they will deploy 400 inspectors to ensure food safety and intensify water-quality testing (38).
Leptospirosis	Highly likely	Major	Very High	Jamaica is endemic for leptospirosis and reports an estimated 153 incident cases every year (39). The infection is spread through contact with contaminated water or soil and can be exacerbated by the occurrence of natural disasters, such as floods and hurricanes. The 2024 Hurricane Beryl, alongside significant rainfall and landslides, have already caused widespread flooding and infrastructure damage in Jamaica in the past year, which can lead to contaminated fresh water, including flood sources and rainwater containing animal urine, and posing a risk when used for drinking or bathing (40). Overcrowding can also pose a risk as 900 shelters have been set up in Jamaica to accommodate 20,000 people following Hurricane Melissa (41). The high case-fatality rate of the infection requires timely treatment, which could be difficult when routine health services face disruption (42).
Trauma and injury	Highly likely	Major	Very high	As of 3 November 2025, authorities have confirmed 32 fatalities and 96 injuries linked to the impacts of Hurricane Melissa in Jamaica (8). The most reported hurricane-related traumatic events are tree-related injuries, falls, motor vehicle crashes, and injuries due to power outages (43). The most reported causes of death during a hurricane are electrocution, drowning, and falls, and occur within a few days of landfall. The largest proportion of reported injuries occur during recovery and rebuilding (44).
Psychosocial conditions	Highly likely	Moderate	High	The combined impacts of storms, droughts, and flooding have heightened risks of anxiety, depression, and post-traumatic stress, particularly among vulnerable groups such as children, women, and the elderly (44). In 2021, the total burden of mental disorders in Jamaica was estimated at 2,035.19 Disability-Adjusted Life Years (DALYs) per 100,000 population, all of which were attributable to Years Lived with Disability (YLDs) (45). Recurrent disasters, most recently Hurricane Melissa preceded by Hurricane Beryl in 2024, have intensified psychosocial distress through loss of homes, livelihoods, and service disruptions (46). Mental health has emerged as a critical priority, with increasing psychosocial needs reported among children, displaced families, and healthcare workers (9).
Respiratory diseases	Highly likely	Moderate	High	In Jamaica, influenza-like illness (ILI) consultations and severe acute respiratory infection (SARI) admissions have increased compared to the 2011–2024 baseline, indicating early seasonal activity (47). As of epidemiological week (EW) 42 of 2025, influenza activity has increased in recent weeks, surpassing the epidemic threshold, with influenza A(H1N1) pdm09 as the only subtype detected. The

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				<p>proportion of positive samples is approaching moderate levels, while SARS-CoV-2 remains at low circulation and respiratory syncytial virus (RSV) shows minimal activity. No unusual trends have been reported for other respiratory viruses (48). Overcrowding in shelters can increase the spread of pathogens responsible for these diseases. Additionally, infrastructure damage, reduced hand hygiene, and displacement can increase vulnerability to viral respiratory infections (49). Furthermore, increased allergens and air pollutants during debris cleaning may increase the severity of respiratory diseases (50). Exposure to damp areas and the demands of reconstruction work are also significant risk factors for respiratory diseases (51).</p>
Vaccine-preventable diseases	Likely	Moderate	High	<p>Between 2024-2025, Jamaica reported 28 cases of meningitis (47). The last suspected measles case in Jamaica was in 2025 (52). Following storms, there is a heightened risk of facilitated transmission of diseases such as meningitis and measles, particularly in shelters and displaced populations due to overcrowding (53). There have been 900 shelters set up in Jamaica to accommodate 20,000 people following Hurricane Melissa, causing overcrowding (41). Disruptions to health services and routine immunization services exacerbate this risk, particularly in rural and outlying parishes. During Hurricane Melissa, several healthcare facilities saw disruptions in immunizations services (8).</p>
Non-communicable diseases (NCDs)	Highly Likely	Moderate	High	<p>Jamaica bears one of the highest NCD burdens in the Caribbean, with 72.6% of all deaths attributed to chronic conditions (35). The leading causes of death are stroke, diabetes mellitus, and COVID-19 (34). The country's NCD morbidity rate of 22,528 DALYs per 100,000 population places it in the second-highest quantile in the Americas (54). Nearly 46.3% of adults are hypertensive, 33.8% are obese (BMI <math>\geq 30</math> kg/m<sup>2</sup>), and adolescent tobacco use (15.6%) exceeds the regional average (55–57). However, 51.4% of hypertensive adults receive treatment (55). During Hurricane Melissa, Jamaica's health system was forced to concentrate on life-saving emergency services, leading to the suspension of outpatient and chronic-care visits. Power outages, flooding, and generator failures at major hospitals (including Black River, Cornwall Regional, and Noel Holmes) further disrupted access to essential medicines and treatments (3,8).</p>
Human immunodeficiency virus (HIV), tuberculosis (TB), and other chronic infections	Likely	Moderate	High	<p>Jamaica's TB estimations in 2023 indicated an incidence of 3.2 per 100,000 population (approximately 90 people living with TB), with 10 TB deaths, and a 92% treatment coverage for the reporting year (35,58). Around 26,000 people live with HIV, 56% on antiretroviral therapy (ART), 20 new diagnoses per 100,000, and 740 HIV-related deaths (35,59). Gaps cluster around testing uptake, timely linkage, and sustained viral suppression (60). Disruptions in health services, the availability of routine medical supplies, and damage to health structures can aggravate the condition of vulnerable populations, leading to an exacerbated increase in transmission, morbidity and mortality (61).</p>
Neonatal and maternal diseases	Highly likely	Moderate	High	<p>In Jamaica, the maternal mortality ratio (MMR) was estimated at 130 deaths per 100,000 live births in 2023, one of the highest among English-speaking Caribbean countries (35). Neonatal mortality reached 11.7 per 1,000 live births, and infant mortality was 18 per 1,000, showing limited progress compared with 2018 levels (62). National health data from 2023 indicate that approximately 13% of infants are born with low birthweight, and nearly one-third of neonatal deaths occur within 24 hours of birth (63). Pregnant women are particularly vulnerable during disasters. Adverse conditions and limited access to medical treatment can lead to obstetric complications, increasing the risk of neonatal and</p>

				<p>infant mortality (64). Additionally, maternal stress resulting from exposure to natural disasters can elevate the risk of perinatal complications (65). During Hurricane Melissa, disruptions in neonatal and maternal services were notified in initial reports (8).</p>
Vector-borne diseases	Likely	Moderate	High	<p>As of EW 39 of 2025, Jamaica has reported 379 suspected dengue cases, an 80% reduction compared with the same period in 2024 (47). DENV-2 remains the circulating serotype identified in the subregion (66). Malaria transmission remains absent, with only sporadic imported cases detected and investigated through the national Border Health programme (47). No chikungunya activity has been reported in 2025, but the presence of <i>Aedes aegypti</i> vectors requires continued control activities (67). After the occurrence of a natural disaster such as hurricanes, floods, or earthquakes, various risk factors for disease transmission could arise, such as changes in the habitat of vectors, increased reproduction of these vectors and increased exposure to them, displacement of animals, and changes in water storage practices (68,69).</p>
Violence (including gender-based violence)	Likely	Moderate	High	<p>The homicide mortality rate in 2020 was 49.9 per 100,000 population, while the burden of non-fatal interpersonal violence reached 2,508 DALYs per 100,000 population (70,71). In 2018, 24% of ever-partnered women and girls aged 15–49 years reported having experienced physical and/or sexual violence by a current or former intimate partner (71). Although murders and shootings showed a decline in 2024, crime and violence remained a major concern in the country (72). The limited access to basic services and the scarcity of essential goods, including food and potable water, can heighten stress and tension within communities (73). During such periods of instability, incidents of gender-based violence tend to rise, as women often bear the primary responsibility for providing food and water for their families (74). In 2024, following Hurricane Beryl, Jamaica reported increased rates of gender-based violence, particularly in shelters and in damaged communities (41).</p>
Venomous animals	Unlikely	Moderate	Moderate	<p>There is a risk of an increase in the number of accidents involving venomous animals following natural disasters (75). In the context of Hurricane Melissa, flooding and debris accumulation increase the likelihood of encounters with displaced scorpions, centipedes, and crocodiles (76), particularly in rural communities and shelters. Although Jamaica has no venomous snakes of medical importance, national advisories highlight the risk of marine envenomation from lionfish (<i>Pterois</i> spp.) and Portuguese man-of-war (<i>Physalia physalis</i>), both frequently observed after storms (76).</p>
Malnutrition	Unlikely	Minor	Low	<p>Repeated exposure to natural disasters can progressively erode dietary quality and access to essential nutrients, increasing the risk of acute and chronic forms of malnutrition, particularly amongst vulnerable groups. Between 2021 and 2023, an estimated 55.1% of Jamaica's population experienced moderate to severe food insecurity, and 22.1% were unable to afford a healthy diet in 2022. The prevalence of low birthweight was 13% in 2020 (77). According to the 2025 Caribbean Food Security and Livelihoods Survey, food prices in Jamaica rose by 7.4% year-on-year, one of the steepest increases in the region. Nearly one-third of households reported having no food stocks at home (78). Preliminary assessments estimate that between 98,000 and 359,000 people may require food assistance (8).</p>



**Red:** Very high risk. Could result in high levels of excess mortality/morbidity.  
**Orange:** High risk. Could result in considerable levels of excess mortality/morbidity.  
**Yellow:** Moderate risk. Could make a minor contribution to excess mortality/morbidity.  
**Green:** Low risk. Unlikely to make a contribution to excess mortality/morbidity.  
**Grey:** No plausible assessment can be made at this time.

Cuba				
Public Health Threat	Likelihood	Public Health Consequences	Level of Risk	Rationale
Water and foodborne diseases	Highly likely	Major	Very High	In 2024, Cuba reported an outbreak of Hepatitis A in 1,080 individuals, due to water source contamination (79). Additionally, diarrheal disease in the country has risen by 86% compared to the previous year (80). Storm-driven flooding can further contaminate water and food (37). Floodwater may also contain animal carcasses as a result of the storm. The resulting lack of potable water and damaged infrastructure due to hurricanes may lead to poor hygiene and sanitation and affect the ability of health facilities to provide care. Severe damage persists in electricity, safe water access, and infrastructure. Overall, 42,000 chlorine tablets as well as water tanks have been airlifted to the country (3).
Leptospirosis	Highly likely	Major	Very high	Leptospirosis is endemic in Cuba. The country reported a total of 142 cases of leptospirosis in 2024 (81). The 2024 hurricanes Oscar and Rafael, alongside several earthquakes this year, caused widespread flooding and infrastructure damage in Cuba which can lead to contaminated fresh water, including flood sources and rainwater containing animal urine, posing a risk when used for drinking or bathing (40). Cuba has experienced significant flooding from Hurricane Melissa, as compared to other affected countries. The high case-fatality rate of the infection requires timely treatment, which could be difficult when routine health services face disruption (42,81).
Vector-borne diseases	Highly likely	Major	Very high	Cuba maintains active dengue transmission, mainly associated with DENV-3 and DENV-4 (66). Entomological surveillance confirms <i>Aedes aegypti</i> persistence in all provinces, sustaining risk for dengue and chikungunya transmission. In 2025, Cuba reported a sharp rise in chikungunya notifications following several years of no reports of this disease. As of EW44 of 2025, 20,062 cases were notified to PAHO, identified in 14 provinces (67). Oropouche virus disease (OROV) has recently emerged as a new public health concern in Cuba, marking a marked change in its usual transmission range in the Amazon basin. Since mid-2024, national authorities have reported a progressive increase in laboratory-confirmed cases, peaking in 2024, with circulation expanding from eastern to central provinces (82). No locally-acquired malaria has been detected in recent years, and the disease remains under continuous syndromic and laboratory surveillance (83). The arrival of Hurricane Melissa coincides with an increase arbovirus transmission across the country. Flooding and landslides may complicate this epidemiological situation.
Psychosocial conditions	Highly likely	Moderate	High	In 2021, the total burden of mental disorders in Cuba was estimated at 2,250.66 DALYs per 100,000 population, with 2,230.57 YLDs per 100,000 (84). In 2020, the age-standardized suicide mortality rate was 9.9 per 100,000 population, ranking as the seventh highest in the Region of the Americas (45). Recurrent emergencies, including

				<p>Hurricanes Oscar (October 2024), Rafael (November 2024), and Melissa (October 2025), as well as earthquakes and severe flooding, have caused extensive destruction, displacement, and livelihood losses (81). These events exacerbate stress, anxiety, depression, and post-traumatic stress disorder (PTSD), particularly in communities already affected by food insecurity, disrupted healthcare services, and deteriorating living conditions (44). In Cuba, mental health stigma remains widespread at the community level, often discouraging individuals from seeking professional support (85).</p>
Respiratory diseases	Highly likely	Moderate	High	<p>In Cuba, according to the national bulletin, acute respiratory infections remain among the leading reported syndromes, with expected increases linked to seasonal climatic variations and population mobility (86). As of EW 42, influenza activity has shown a decreasing trend in recent weeks after reaching moderate levels earlier in the season. Influenza A(H1N1) pdm09 remains the predominant subtype, accounting for the majority of detections. SARS-CoV-2 and RSV circulation continue at low levels, and no significant activity has been reported for other respiratory viruses. Overall respiratory virus trends remain within expected seasonal ranges (48). Overcrowding in shelters can increase the spread of pathogens responsible for these diseases. Additionally, infrastructure damage, reduced hand hygiene, and displacement can increase vulnerability to viral respiratory infections (49). Furthermore, increased allergens and air pollutants during debris cleaning may increase severity of respiratory diseases (50).</p>
Vaccine-preventable diseases	Likely	Moderate	High	<p>The last confirmed case of measles in Cuba occurred in 2019. In 2017, Cuba reported 17 cases of meningitis (87). Following storms, there is a heightened risk of facilitated transmission of diseases such as meningitis and measles, particularly in shelters and displaced populations due to overcrowding (53). Disruptions to health services and routine immunization services may exacerbate this risk. Preliminary reports indicate that 461 healthcare facilities sustained damage from Hurricane Melissa, further straining service delivery across affected provinces (17).</p>
Non-communicable diseases (NCDs)	Likely	Moderate	High	<p>In 2021, NCDs accounted for 61.1% of all deaths in Cuba, with COVID-19, ischemic heart disease, and stroke representing the leading causes of death in the country (34,35). NCD's morbidity rate is 19,628 DALYs per 100,000 population, reflecting a substantial chronic-disease burden within an aging population (54). Hypertension affects 39.9% of adults, and treatment coverage (60.6%) ranks among the best in the Region of the Americas (55). Obesity (BMI <math>\geq 30</math> kg/m<sup>2</sup>) affects 21.8% of adults, while adolescent tobacco use (11.5%) remains moderate (56,57). During the hurricane, areas such as Santiago de Cuba and Granma experienced widespread blackouts, hospital damage, and fuel shortages, disrupting treatment access, cold-chain operations, and chronic-care continuity (12–14).</p>
Human immunodeficiency virus (HIV), tuberculosis (TB), and other chronic infections	Likely	Moderate	High	<p>Cuba's TB estimations in 2023 indicated an incidence of 6.8 per 100,000 population (with approximately 870 people living with TB), with 52 TB deaths, and a 87% treatment coverage for the reporting year (35,58). It is estimated that 44,000 are living with HIV in the country, 65% ART coverage, 17.8 new diagnoses per 100,000, and &lt;500 deaths (35,59). Disruptions in health services, the availability of routine medical supplies, and damage to health structures can aggravate the condition of vulnerable populations, leading to an exacerbated increase in transmission, morbidity and mortality (61).</p>
Neonatal and maternal diseases	Highly likely	Moderate	High	<p>Cuba maintains one of the lowest maternal and neonatal mortality rates in the Caribbean. The maternal mortality ratio was 35 deaths per 100,000 live births in 2023, showing a slight reduction compared with 2020 (35). The infant mortality rate was 7.2 per 1,000 live births,</p>

				and neonatal mortality reached 4.5 per 1,000 (63). The Anuario Estadístico de Salud 2024 reports that most maternal deaths were associated with hypertensive disorders, obstetric hemorrhage, and sepsis, mainly in the provinces of Havana, Mayabeque, and Artemisa (86).
Trauma and injury	Highly likely	Moderate	High	As of 2 November 2025, authorities have confirmed 17 injuries linked to the impacts of Hurricane Melissa in Cuba (3). Hurricane-related traumatic events most reported are tree-related injuries, falls, motor vehicle crashes, and injuries due to power outages (43). The most reported causes of death during a hurricane are electrocution, drowning, and falls, and occur within a few days of landfall. The largest proportion of reported injuries occur during recovery and rebuilding (44).
Violence (including gender-based violence)	Likely	Moderate	High	The homicide mortality rate in 2020 was 4.8 per 100,000 population, while the burden of non-fatal interpersonal violence reached 307.3 DALYs per 100,000 population (70,71). In 2018, 14% of ever-partnered women and girls aged 15–49 years reported having experienced physical and/or sexual violence by a current or former intimate partner (71). A 2019 national survey found that 26.6% of women in Cuba had experienced abuse by their partners, yet only 3.7% sought help (88). 2025 brought record levels of civic unrest driven by blackouts, shortages, and service collapse (89). The limited availability of essential goods and services, including food and safe water, continues to exacerbate stress and social tensions within communities (73). During such periods of hardship, incidents of gender-based and domestic violence tend to increase, as women often bear the main responsibility for securing food and water for their families (74).
Venomous animals	Unlikely	Moderate	Moderate	Cuba does not have terrestrial venomous species of medical relevance. The Anuario Estadístico de Salud 2024 (86) only isolated cases of accidental bites and stings classified as “exposure to venomous animals,” with no associated mortality. The principal venomous hazard remains marine, particularly from the lionfish ( <i>Pterois volitans</i> ) (90). After Hurricane Melissa, reef disturbance and coastal debris may increase exposure among coastal populations.
Malnutrition	Unlikely	Minor	Low	For the second consecutive year, Cuba’s agriculture has been severely affected by major hurricanes, with Hurricane Melissa (2025) and Hurricane Oscar (2024) causing widespread losses of crops, livestock, and fishing assets. These repeated disasters have disrupted food production and livelihoods, weakening dietary diversity and access to nutritious foods (10,81). Initial reports after landfall of Hurricane Melissa confirm that more than 40% of vegetable production has been damaged, limiting both the availability and access to food (15). Repeated exposure to natural disasters can progressively erode dietary quality and access to essential nutrients, increasing the risk of acute and chronic forms of malnutrition, particularly among vulnerable groups.

**Red: Very high risk.** Could result in high levels of excess mortality/morbidity.

**Orange: High risk.** Could result in considerable levels of excess mortality/morbidity.

**Yellow: Moderate risk.** Could make a minor contribution to excess mortality/morbidity.

**Green: Low risk.** Unlikely to make a contribution to excess mortality/morbidity.

**Grey:** No plausible assessment can be made at this time.

## Haiti

Public Health Threat	Likelihood	Public Health Consequences	Level of Risk	Rationale
Water and foodborne diseases	Highly likely	Major	Very High	Storm-driven flooding can contaminate water and food. The resulting lack of potable water and damaged infrastructure may lead to poor hygiene and sanitation and affect the ability of health facilities to provide care (37). Flooding and landslides, particularly in Petit-Goave, bring an increased risk of waterborne disease. In 2021 following an earthquake, Haiti experienced an increased risk of waterborne disease re-emergence amid lack of access to safe water (91). Combined with overcrowding in Haiti's displacement camps and storm shelters, the conditions following Hurricane Melissa can exacerbate the occurrence of water- and foodborne diseases.
Cholera	Almost certain	Major	Very High	In Haiti, as of EW 27 of 2025, 30 suspected cholera cases have been reported across 13 communes in five departments, including 17 in the Ouest Department. One case was confirmed by culture in Pétiön-Ville after 12 weeks without confirmation. Between 29 December 2024 and 13 September 2025, a total of 3,077 suspected and 92 culture-confirmed cases were recorded, including 37 deaths (case-fatality rate 1.21%) (92). The situation remains of concern in IDP sites with limited access to safe water, sanitation, and hygiene services, increasing the risk of post-hurricane outbreaks. In EW 40 of 2025, Haiti's MSPP reported 112 suspected cholera cases (10 confirmed) and 43 hospitalizations. Cumulatively, 114 confirmed and 2,787 suspected cases have been recorded, with reinforced surveillance amid risks linked to extreme weather and infrastructure damage (93).
Leptospirosis	Highly likely	Major	Very high	Leptospirosis is endemic in Haiti (94). According to the most recent data available, 284 cases are reported every year on average. Hurricane Beryl in 2024, along with severe flooding and landslides, have already recently caused widespread infrastructure damage in Haiti which can lead to contaminated fresh water, including flood sources and rainwater containing animal urine, posing a risk when used for drinking or bathing (40,95). This is further exacerbated by the country's political instability, as 1.4 million Haitians have been displaced from their homes due to violence and have relocated to displacement camps (96). Overcrowding and poor sanitation can promote contact with contaminated soil and water, furthering the spread of leptospirosis. The high case-fatality rate of the infection requires timely treatment, which could be difficult when routine health services face disruption (42).
Violence (including gender-based violence)	Almost certain	Major	Very high	Haiti's crisis has deepened amid the rapid deterioration of its political, security, and socio-economic conditions, resulting in widespread violence and escalating humanitarian needs in the last years (94). The country remains at extremely high risk of violence as political instability persists, and armed groups expand their territorial control. As of October 2025, an estimated 16,000 people have been killed and 7,000 injured in armed violence since January 2022 (97). In 2025 alone, over 1.4 million people have been displaced due to insecurity and instability, the highest figure ever recorded, representing a 36% increase compared to the end of 2024 (98). Following Hurricane Melissa, the country expects increased violence impacted by further displacement of peoples, reduced goods and services, and cross-border movement between Haiti and the Dominican Republic. Violence has impacted on humanitarian aid capacity in the country (95).

Trauma and injury	Highly likely	Major	Very high	As of 30 October 2025, 43 deaths and 21 injuries were reported in Haiti due to Hurricane Melissa. The Ouest Department accounted for the majority of fatalities, with 22 deaths and 10 injuries mainly in Petit-Goâve, following the overflow of the La Digue River. Grand'Anse reported 2 deaths and 1 person injured and, in the Sud-Est Department, 1 death occurred, and Artibonite confirmed 1 death and 15 wounded (20).
Psychosocial conditions	Almost certain	Major	Very High	Haiti faces a severe and multidimensional mental health crisis, driven by overlapping sociopolitical instability, chronic poverty, gang violence, and recurrent natural disasters (99). In 2021, the total burden of mental disorders was 2,069.52 DALYs per 100,000 population, entirely attributable to YLDs (84). The suicide mortality rate was 9.5 per 100,000 population in 2020, ranking as the eighth highest in the Region of the Americas (45). The Haitian Well-Being Study highlights key issues including anxiety, depression, PTSD, limited access to care, hopelessness, and multi-generational trauma rooted in colonial and political histories (100). Recurrent crises and ongoing gang violence have deepened collective distress, while stigma and scarcity of mental health professionals hinder treatment.
Respiratory diseases	Highly likely	Moderate	High	In Haiti, as of EW 42, influenza activity remains above the epidemic threshold, mainly driven by influenza A(H1N1)pdm09, which accounts for most detections in recent weeks. The proportion of positive samples has decreased slightly but remains elevated compared to the average curve. SARS-CoV-2 and RSV circulation are low, while SARI cases continue near expected levels. Continued surveillance is recommended due to concurrent influenza activity and potential post-hurricane impacts on healthcare services (48). Overcrowding in shelters can increase the spread of pathogens responsible for these diseases. Additionally, infrastructure damage, reduced hand hygiene, and displacement can increase vulnerability to viral respiratory infections (49). Furthermore, increased allergens and air pollutants during debris cleaning may increase severity of respiratory diseases (50).
Vaccine-preventable diseases	Highly likely	Moderate	High	Diphtheria is a continued concern in Haiti, with 75 cases reported in 2024 (87). Following storms, there is a heightened risk of facilitated transmission of vaccine-preventable diseases, particularly in shelters and among displaced populations due to overcrowding (53), particularly in Mirebalais city where 51,400 individuals have been newly displaced (95). Resulting disruptions to health services and routine immunization services exacerbate this risk. Due to the current political instability and ongoing conflict in Haiti, available data on vaccine-preventable disease and coverages rates are likely underreported.
Vector-borne diseases	Highly likely	Moderate	High	Haiti remains the main malaria focus on Hispaniola, with 25,730 confirmed cases between EW 1–44 of 2025 (101). Dengue surveillance data is scarce, but transmission is believed to be endemic and stable (66).
Non-communicable diseases (NCDs)	Likely	Moderate	High	Haiti faces one of the most severe NCDs burdens in the Americas. NCDs account for 57% of all deaths, and the country registers the highest NCD morbidity rate in the Region (32,871 DALYs per 100,000 population) (54). The leading causes of death include ischaemic heart disease and stroke, alongside the lingering health effects of COVID-19 (34). Hypertension affects 42.9% of adults, one of the highest rates in the Caribbean, yet only 28.2% of those affected receive treatment, representing the lowest treatment coverage in the Americas (55). Adolescent tobacco use is strikingly high (19.7%), while obesity prevalence (BMI $\geq 30$ kg/m <sup>2</sup> ) is the lowest in the Region (10.7%), illustrating the coexistence of undernutrition and metabolic risk (56,57). During Hurricane Melissa, widespread power cuts, flooding, and road blockages disrupted cold-chain operations,



				access to medications, and continuity of care, isolating health facilities and exacerbating treatment interruptions for chronic patients (20).
Human immunodeficiency virus (HIV), tuberculosis (TB), and other chronic infections	Likely	Moderate	High	Haiti's TB estimates in 2023 indicated an incidence of 101 per 100,000 population (approximately 17,000 people living with TB), with 2,000 TB deaths and a 69% treatment coverage for the reporting year (35,58). The HIV epidemic remains substantial with an estimate of 140,000 people living with HIV, 84% on ART, and approximately 1,500 HIV-related deaths (35,59). Notably, 38% of all new HIV infections in the Caribbean in 2023 occurred in Haiti (102). Current cuts of funding have had an important effect on the national HIV response (60). Disruptions in health services, the availability of routine medical supplies and damage to health structures can aggravate the condition of vulnerable populations, leading to an exacerbated increase in transmission, morbidity and mortality (61).
Neonatal and maternal diseases	Highly likely	Moderate	High	Haiti continues to report one of the highest maternal mortality ratios in the Americas, estimated at 328 deaths per 100,000 live births in 2023 and 350 per 100,000 in 2020 (35). Infant mortality remains very high, with around 59 deaths per 1,000 live births, and neonatal mortality comprising a large share of those deaths (63). Ongoing insecurity weakened health infrastructure and limited access to skilled birth attendance further exacerbate risks for pregnant women and newborns. With substantial displacement and service disruptions, maintaining timely obstetric and neonatal care is a critical priority (62).
Malnutrition	Likely	Major	High	Before Hurricane Melissa, Haiti was already experiencing one of the worst food crises in the Western Hemisphere. The IPC Acute Food Insecurity Analysis (Sept 2025–June 2026) estimated that 51% of the population were in Crisis or worse (IPC Phase 3 or above), including 1.9 million in Emergency (Phase 4) (103). For the 2021–2023 period, 50.4% of Haitians were undernourished, marking the highest increase in the region compared to the previous period, and 83.6% of the population could not afford a healthy diet in 2022 (77). Additionally, 1.3 million IDPs face restricted access to food. Hurricane Melissa exacerbated this fragile situation, destroying crops, livestock, and infrastructure in the southern departments and disrupting transport routes essential for food distribution. Initial reports indicate severe agricultural losses in Grand'Anse and Sud, including banana plantations, fruit trees, and staple crops (10,20).
Anthrax	Likely	Moderate	High	As of July 2024, 37 probable human cases of anthrax and 100 animal deaths were reported in the Fort Royal commune of Petit-Goave, Ouest Department. Five cases tested positive for the disease, including 2 deaths (104). Transmission to humans is mostly through consumption and manipulation of dead animals and is related to food insecurity. As a result of Hurricane Melissa, hospitals throughout the country have been damaged, and water and power outages persist, reducing access to medical goods and services. Timely treatment would be difficult when routine health services face disruption. Without treatment, case-fatality rates of anthrax could be as high as 20% (105).
Venomous animals	Unlikely	Moderate	Moderate	The Haiti Ministry of Public Health and Population (MSPP, per its acronym in French) indicates that most animal-related injuries reported nationally involve scorpion stings, which increase seasonally after heavy rainfall and flooding (106).
Rabies	Unlikely	Moderate	Moderate	In 2022, Haiti reported 12 cases of human rabies caused by dogs, 2 cases in 2023, 3 cases in 2024, and 7 cases as of October 2025. As observed for other diseases, the country struggles to maintain surveillance. Social aspects and vaccination capacity impacts in the execution of canine mass vaccination campaigns against rabies, which is one of the main measures to prevent human rabies.

Additionally, there are difficulties in the availability of post-exposure prophylaxis for people potentially exposed to suspected rabid domestic and wildlife animals (107).

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## Dominican Republic (the)

Public Health Threat	Likelihood	Public Health Consequences	Level of Risk	Rationale
Water and foodborne diseases	Highly likely	Major	Very High	Between 2013 and 2018, the Dominican Republic reported approximately 23,000 cases of foodborne disease and 80,000 cases of waterborne disease every year (108). Country-wide quality of water and sanitation services are an ongoing concern. Storm-driven flooding can further contaminate water and food. Floodwater may also contain animal carcasses as a result of the storm. The resulting lack of potable water and damaged infrastructure due to hurricanes may affect the ability of health facilities to provide care (37). During hurricane Melissa, 32 water systems were disrupted by turbidity, river overflows, and preventive shutdowns, cutting off safe water access for about 502,000 people (25).
Leptospirosis	Highly likely	Major	Very High	Leptospirosis is endemic in the Dominican Republic. As of EW 26 of 2024, 305 total cases were reported in the country. An additional 22 cases have occurred this year, according to the most recently available data (109). The 2024 Hurricane Beryl, along with severe flooding and landslides, have caused widespread infrastructure damage in the past year and the displacement of 1,380 people in 2025 within the Dominican Republic (110). This situation can lead to contaminated fresh water, including flood sources and rainwater containing animal urine, posing a risk when used for drinking or bathing (40). Additionally, as the country shares a border with Haiti, the Dominican Republic is currently hosting many Haitian refugees amid rising violence and instability in the country. The movement of people, particularly during crisis, is a risk factor for leptospirosis transmission, especially as both countries are endemic for the infection. The high case-fatality rate of the infection requires timely treatment, which could be difficult when routine health services face disruption (42).
Psychosocial conditions	Likely	Moderate	High	In 2021, the total burden of mental disorders in the Dominican Republic was estimated at 2,154.47 DALYs per 100,000 population, all attributable to YLDs (84). The recurrent impacts of storms, droughts, and flooding have heightened risks of anxiety, depression, and post-traumatic stress, particularly among vulnerable groups (44). Natural hazards, like Hurricane Melissa, can exacerbate stress, anxiety, depression, and PTSD, particularly in communities already affected by food insecurity, disrupted healthcare services, and deteriorating living conditions (44).
Respiratory diseases	Highly likely	Moderate	High	In the Dominican Republic, between EW 39 and 42 of 2025, respiratory virus surveillance data show continuous circulation of RSV, influenza B Victoria, and SARS-CoV-2, with increased

				<p>detections compared to the previous two years. The national sentinel system also reports a 19% rise in SARI cases compared with 2024, mainly in Distrito Nacional and Santiago (111). Influenza activity has increased in recent weeks, remaining above the epidemic threshold. Influenza B/Victoria predominates, followed by influenza A(H3N2). SARS-CoV-2 circulation is low and stable, while RSV activity remains elevated. SARI case trends are within expected levels. Continued vigilance is advised due to concurrent influenza and RSV activity during the current season (48). Overcrowding in shelters can increase the spread of pathogens responsible for these diseases. Additionally, infrastructure damage, reduced hand hygiene, and displacement can increase vulnerability to viral respiratory infections (49). Furthermore, increased allergens and air pollutants during debris cleaning may increase severity of respiratory diseases (50).</p>
Vaccine-preventable diseases	Likely	Moderate	High	<p>In 2024, 23 cases of pertussis and 10 cases of diphtheria were reported in the Dominican Republic (87). Following storms, there is a heightened risk of facilitated transmission of vaccine-preventable diseases, particularly in shelters and among displaced populations due to overcrowding (53). Resulting disruptions to health services and routine immunization services exacerbate this risk.</p>
Vector-borne diseases	Highly likely	Moderate	High	<p>As of EW 42 of 2025, the Dominican Republic reported 240 dengue cases, an 81% decrease compared with 2024; despite the fact that there is a decrease compared to 2024. Entomological surveillance confirms the presence of <i>Aedes aegypti</i> in the country at levels that maintain the risk of transmission of arboviruses transmitted by <i>Aedes</i> (111). Malaria transmission remains concentrated in Azua and San Juan, which together account for more than 70% of the 779 confirmed cases nationwide (~15% vs 2024), no malaria-related deaths have been reported (111). No chikungunya or OROV cases have been confirmed in 2025, but favorable climatic conditions and cross-border mobility with Haiti maintain potential risk (82).</p>
Non-communicable diseases (NCDs)	Likely	Moderate	High	<p>NCDs account for 66% of all deaths in the Dominican Republic, with ischemic heart disease, stroke, and diabetes as the leading causes of death in the country (34,54). NCD's morbidity burden stands at 21,459 DALYs per 100,000 population (54). This burden is compounded by high prevalence of risk factors: 49.1% of adults have hypertension, 29.3% are obese (BMI <math>\geq 30</math> kg/m<sup>2</sup>), and 7.4% of adolescents use tobacco (55–57). Although 53.4% of hypertensive adults receive treatment (55). Extensive flooding and damage to aqueduct systems during the hurricane could jeopardize continuity of medication for hypertension, diabetes, and cardiovascular disease, particularly for those reliant on regular refills and monitoring (24).</p>
Human immunodeficiency virus (HIV), tuberculosis (TB), and other chronic infections	Likely	Moderate	High	<p>The Dominican Republic's TB estimations in 2023 shows moderate TB incidence (39 per 100,000 population) with approximately 4,700 people living with TB, 460 TB deaths, and a 93% TB treatment coverage for the reporting year (35,58). HIV remains a major challenge with around 84,000 people living with HIV, 62% ART coverage, 57.5 new diagnoses per 100,000, and 1,400 HIV-related deaths (35,59). Urban-rural gradients, mobility across the Hispaniola corridor, and stigma constrain diagnosis and adherence.</p>
Neonatal and maternal diseases	Highly likely	Moderate	High	<p>In the Dominican Republic, the maternal mortality ratio was estimated at 124 deaths per 100,000 live births in 2023, showing a moderate decline compared with 2020 (35). Neonatal mortality stands at 17.5 per 1,000 live births, while infant mortality remains around 28 per 1,000, among the highest in the Latin Caribbean subregion (62,63). According to the national epidemiological bulletin, hypertensive disorders, postpartum hemorrhage, and sepsis continue to be the leading direct causes of maternal death, with the</p>

				highest concentration in the provinces of Santo Domingo, Santiago, and San Cristóbal (111). Despite high institutional delivery coverage, inequalities in access to emergency obstetric and neonatal care persist, especially in peri-urban and rural areas.
Trauma and injury	Likely	Moderate	High	Hurricane Melissa brought intense rainfall, flooding and landslides across southern and central provinces in the Dominican Republic. As of 5 November 2025, authorities have confirmed 2 deaths and 16 injuries linked to the impacts of Hurricane Melissa in the country (3). While recovery continues, injuries are expected to continue occurring (44).
Venomous animals	Likely	Moderate	Moderate	Following Hurricane Melissa, reef disruption and increased marine debris heighten the potential for envenomation incidents. On land, sporadic scorpion and centipede stings have been reported by the Ministry of Health, mainly in the southern provinces of Barahona and San Cristóbal (111).
Violence (including gender-based violence)	Likely	Minor	Moderate	The homicide mortality rate in 2020 was 19 per 100,000 population, while the burden of non-fatal interpersonal violence reached 1,129.2 DALYs per 100,000 population (70,71). In 2018, 19% of ever-partnered women and girls aged 15–49 years reported having experienced physical and/or sexual violence by a current or former intimate partner (71). The limited access to essential goods and basic services, including food and potable water, can heighten stress and social tensions within communities (73). During such periods of hardship, incidents of gender-based and domestic violence tend to increase, as women, often responsible for securing food and water for their families, bear a disproportionate burden of resource scarcity (74).
Malnutrition	Likely	Minor	Moderate	The IPC Acute Food Insecurity Analysis (Oct 2024–Sep 2025) estimated that around 925,000 people (9% of the population) were facing Crisis or worse (IPC Phase 3 or above) conditions, mainly due to low household incomes, high food prices, and climatic impacts associated with La Niña. During Hurricane Melissa, initial reports indicated that more than 1.27 million people lost access to piped water due to widespread aqueduct damage, and 37 communities were left isolated, heightening the risk of food security and malnutrition, particularly among vulnerable households (110).

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**Grey:** No plausible assessment can be made at this time.

## Bahamas (the)

Public Health Threat	Likelihood	Public Health Consequences	Level of Risk	Rationale
Water and foodborne diseases	Likely	Major	High	According to the most recent available data, the last case of cholera in the Bahamas was in 2022 (112). Storm-driven flooding can further contaminate water and food. Floodwater may also contain animal carcasses as a result of the storm. The resulting lack of potable water and damaged infrastructure due to hurricanes may affect the ability of health facilities to provide care (37). Historically, water shortages are known to occur in the Bahamas following hurricanes (113).

Psychosocial conditions	Likely	Minor	Moderate	In 2021, the total burden of mental disorders in the Bahamas was estimated at 2,063.83 DALYs per 100,000 population, entirely attributable to YLDs (84). The country remains highly vulnerable to recurrent climate-related disasters, such as Hurricane Dorian (2019) and Hurricane Melissa (2025), which can cause displacement, loss of livelihoods, and infrastructure damage, factors linked to anxiety, depression, and PTSD (44). Initial reports indicate minor impacts from the hurricane and the return of most evacuees to their homes (10).
Leptospirosis	Unlikely	Moderate	Moderate	Although leptospirosis is not a disease found exclusively in regions with a tropical climate, its prevalence is higher in these areas. While the last reported case of leptospirosis in the Bahamas occurred in 2014, the recent storms can increase the risk of transmission (114).
Vaccine-preventable diseases	Unlikely	Moderate	Moderate	In 2019, the Bahamas reported 3 confirmed cases of measles (87). Following storms, there is a heightened risk of facilitated transmission of diseases such as meningitis and measles, particularly in shelters and displaced populations due to overcrowding. Disruptions to health services and routine immunization services exacerbate this risk (53). Initial reports do not indicate extensive disruptions to health services due to Hurricane Melissa (3).
Non-communicable diseases (NCDs)	Likely	Minor	Moderate	The prevalence of NCD risk factors in the Bahamas is among the highest in the Americas. Obesity (BMI $\geq 30$ kg/m <sup>2</sup> ) affects 47.3% of adults, the highest rate in the Region, while hypertension prevalence (44.5%) places the country in the second-highest regional quantile (55,56). Although approximately half of hypertensive adults (53%) (55). Adolescent tobacco use (12.6%) is moderate, though markedly higher among males (16.1%) than females (8.4%) (57). Overall, 63.9% of deaths in the Bahamas are attributable to NCDs, with a morbidity rate of 23,212.6 DALYs per 100,000 population (35,54). During hurricane Melissa, flooding, strong winds, and inter-island transport disruptions caused temporary clinic closures and short-term medicine shortages, particularly in southern and central islands. Most health facilities have resumed operations (23).
Neonatal and maternal diseases	Likely	Minor	Moderate	The Bahamas reports a maternal mortality ratio of 76 deaths per 100,000 live births (2023), showing slight improvement compared with 2020 (35). The infant mortality rate stands at 12.3 per 1,000 live births, and neonatal mortality at 8.2 per 1,000, stable over the last five years (62). Most maternal deaths are related to hypertensive complications and obstetric hemorrhage, with higher risk among women under 20 and those with limited prenatal follow-up. Although 99% of births occur in health facilities, gaps persist in neonatal intensive care coverage on the Family Islands. Post-hurricane service disruptions and inter-island evacuation delays may further increase risks for maternal and newborn outcomes.
Trauma and injury	Likely	Minor	Moderate	As of 5 November 2025, no deaths or injuries linked to the impacts of Hurricane Melissa were reported (3). On 31 October 2025, Bahamian authorities gave the “All Clear”. Minimal impacts from the hurricane were reported.
Respiratory diseases	Unlikely	Minor	Low	Overcrowding in shelters can increase the spread of pathogens responsible for these diseases. Additionally, infrastructure damage, reduced hand hygiene, and displacement can increase vulnerability to viral respiratory infections (49). Furthermore, increased allergens and air pollutants during debris cleaning may increase severity of respiratory diseases (50). Initial reports do not indicate large number of people in shelters for prolonged periods of time (3).
Vector-borne diseases	Unlikely	Minor	Low	In 2025, the Bahamas has reported no confirmed local outbreaks of dengue, malaria, or chikungunya, and overall, vector-borne disease activity remains below historical averages (67,83). The country has



				not recorded autochthonous malaria transmission since 2008, with only isolated imported cases detected through active surveillance (83).
Human immunodeficiency virus (HIV), tuberculosis (TB), and other chronic infections	Unlikely	Minor	Low	The Bahamas's TB estimations in 2023 indicated an incidence of 6.8 per 100,000 population (35). HIV incidence is comparatively high for the subregion with approximately 38.9 new diagnoses per 100,000 population (35). Geographic dispersion and transport dependencies complicate continuous access to ART, labs, and prophylaxis during a hurricane leading to an exacerbated increase in symptoms (61).
Venomous animals	Unlikely	Minor	Low	The natural tendency of terrestrial animals to seek dry and high ground during floods or when returning home increases people's exposure to venomous animals. There is a risk of an increase in the number of accidents involving venomous animals following natural disasters (115).
Violence (including gender-based violence)	Unlikely	Minor	Low	The homicide mortality rate in 2020 was 37.4 per 100,000 population, while the burden of non-fatal interpersonal violence reached 2,078.3 DALYs per 100,000 population (70,71). In 2025, the Bahamas saw a 14% decrease in overall crime compared to 2024 (116,117). The lack of access to services and the scarcity of essential goods, including food and potable water, can increase stress and tensions within communities (73). During such periods of hardship, violence against women tends to rise, as women, often responsible for ensuring food and water for their families, bear a disproportionate burden (74). Initial reports do not indicate major impacts of Hurricane Melissa (3).
Malnutrition	Very unlikely	Minimal	Low	Between 2021 and 2023, an estimated 17.2% of the population experienced moderate or severe food insecurity, while the prevalence of low birthweight reached 15.4% in 2020. The National Food and Nutrition Security Policy and Action Plan (2017–2021) identified climate variability and extreme weather events as key drivers of vulnerability to food insecurity (118). Initial reports do not indicate major impacts of Hurricane Melissa (3).

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## Bermuda

Public Health Threat	Likelihood	Public Health Consequences	Level of Risk	Rationale
Water and foodborne diseases	Likely	Major	High	In 2024, Bermuda reported 32 cases of salmonellosis and 24 cases of <i>Campylobacter</i> (119). Storm-driven flooding can further contaminate water and food. Floodwater may also contain animal carcasses as a result of the storm. The resulting lack of potable water and damaged infrastructure due to hurricanes may affect the ability of health facilities to provide care (37).
Psychosocial conditions	Likely	Minor	Moderate	Bermuda can be exposed to hurricanes and economic fluctuations, exposing the population to psychosocial stressors related to isolation, high cost of living, and disaster-related disruptions. These factors are associated with increased risk of anxiety, depression, and PTSD (44).
Vaccine-preventable	Unlikely	Moderate	Moderate	Between 2020–2024, Bermuda reported 12 cases of pertussis (87). Following storms, there is a heightened risk of facilitated

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diseases				transmission of vaccine-preventable diseases, particularly in shelters and among displaced populations due to overcrowding (53). Resulting disruptions to health services and routine immunization services exacerbate this risk.
Non-communicable diseases (NCDs)	Likely	Minor	Moderate	Available data on NCDs in Bermuda remains limited, but existing indicators point to a growing chronic disease burden. Obesity (BMI $\geq 30$ kg/m <sup>2</sup> ) affects approximately 33% of adults, reflecting a significant metabolic risk for cardiovascular disease, diabetes, and hypertension (56). The island has a heavy reliance on imported pharmaceuticals and a centralized hospital system. When Hurricane Melissa impacted Bermuda, airport and outpatient service closures, combined with temporary power interruptions, restricted access to medicines and delayed routine follow-ups for chronic patients (120).
Trauma and injury	Likely	Minor	Moderate	As of 5 November 2025, no deaths or injuries were reported linked to the impacts of Hurricane Melissa (3). On 31 October 2025, the Bermuda EMO gave the "All Clear". Minimal impacts from the hurricane were reported (30,31).
Respiratory diseases	Unlikely	Minor	Low	In Bermuda, between EW 37 and EW 40 of 2025, influenza activity was low, consistent with off-season expectations. COVID-19 cases showed minor fluctuations, with low-level community circulation. SARI hospitalizations remained very low, with only isolated cases reported throughout the period. Overall, respiratory virus activity remains low and within expected seasonal patterns (121). Overcrowding in shelters can increase the spread of pathogens responsible for these diseases. Additionally, infrastructure damage, reduced hand hygiene, and displacement can increase vulnerability to viral respiratory infections (49). Furthermore, increased allergens and air pollutants during debris cleaning may increase severity of respiratory diseases (50).
Leptospirosis	Unlikely	Minor	Low	Although leptospirosis is not a disease found exclusively in regions with a tropical climate, its prevalence is higher in these areas. While no recent cases have been recorded in Bermuda, recent storms and flooding can increase the risk of transmission among peoples.
Vector-borne diseases	Unlikely	Minor	Low	Between EW 37 and EW 40 of 2025, no locally acquired dengue, malaria, or chikungunya cases have been detected in Bermuda, and vector-borne disease activity remains at baseline levels (121). Entomological surveillance confirms the absence of <i>Aedes aegypti</i> populations on the island, limiting risk for arbovirus transmission. Regionally, the Caribbean subregion reports a 50% decrease in dengue cases compared with 2024, and only sporadic chikungunya detections (66,67).
HIV, tuberculosis, and other chronic infections	Unlikely	Minor	Low	Bermuda maintains very low TB incidence (3.1 per 100,000 population) (35). New HIV diagnosis rate is 12.4 per 100,000 population (35). Disruptions in health services, the availability of routine medical supplies and damage to health structures can aggravate the condition of vulnerable populations, leading to an exacerbated increase in transmission, morbidity and mortality (61).
Neonatal and maternal diseases	Unlikely	Minor	Low	Bermuda maintains one of the lowest maternal and infant mortality rates in the Caribbean. The maternal mortality ratio is estimated at <10 deaths per 100,000 live births, with infant mortality around 2 per 1,000 live births (35). Nearly all births are attended by skilled personnel, and comprehensive prenatal and postnatal care coverage exceeds 98% (63). No significant increases in neonatal complications or maternal deaths have been reported in 2024–2025 (121). Most health facilities have resumed operations (29).
Venomous animals	Unlikely	Minor	Low	The natural tendency of terrestrial animals to seek dry and high ground during floods or when returning home increases people's exposure to venomous animals. There is a risk of an increase in the number of accidents involving venomous animals following natural disasters (115).

Violence (including gender-based violence)	Unlikely	Minor	Low	In 2023, Bermuda recorded 3,065 offenses, representing a 5.6% increase compared to 2022, yet still ranking among the lowest annual totals since 2000. Offenses rose across all major categories (crimes against persons, property, and the community), while motor vehicle thefts declined (122). Although the overall burden of interpersonal violence remains low, these incidents can have a significant social impact on the island's small population. Periods of limited access to services and shortages of essential goods, particularly during natural hazards, can heighten household stress and increase the risk of interpersonal and gender-based violence (73,74).
Malnutrition	Very unlikely	Minimal	Low	In Bermuda, food security depends heavily on imports, making the island vulnerable to supply disruptions during storms. While no acute food insecurity has been reported, Hurricane Melissa prompted precautionary closures of ports and transport by the Bermudy EMO, highlighting the island's sensitivity to logistical interruptions and the need to strengthen local food storage and emergency preparedness (31).

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**Orange: High risk.** Could result in considerable levels of excess mortality/morbidity.

**Yellow: Moderate risk.** Could make a minor contribution to excess mortality/morbidity.

**Green: Low risk.** Unlikely to make a contribution to excess mortality/morbidity.

**Grey:** No plausible assessment can be made at this time.

## DISEASE SUMMARIES

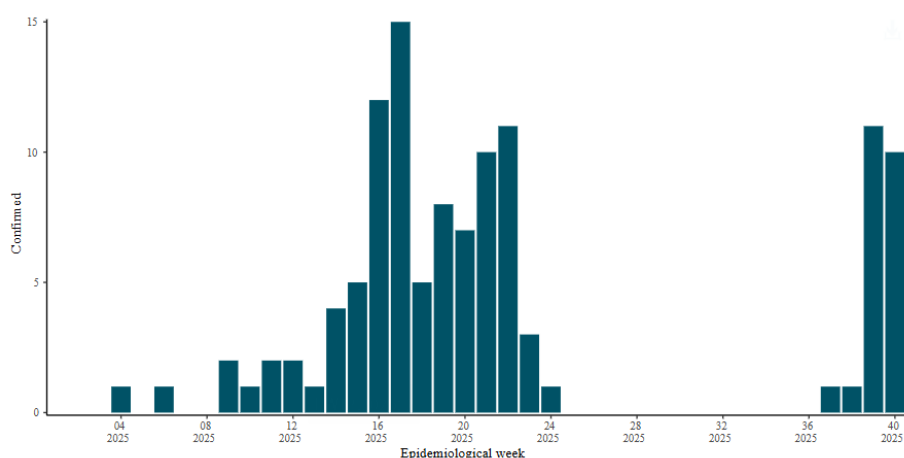
### Water and foodborne diseases

Heavy rainfall and flooding associated with hurricanes can compromise sanitation and hygiene services, increasing human contact with contaminated water and amplifying the risk of waterborne, especially in overcrowded areas such as shelters or displacement camps (37). In addition to contamination of or damage to sanitation infrastructure, hurricane conditions may decrease community access to medical goods and services.

The impact of Hurricane Melissa has led to the loss of electricity and water supply in all affected countries; health systems have been heavily disrupted due to these outages as well as infrastructure damaged to hospitals. Storm-driven flooding may also impact and contaminate existing clean water sources (39). Overcrowding in shelters, as well as a lack of clean water and sanitation services, have a high chance of leading to contamination of existing reserves of potable water and of causing outbreaks of water and foodborne diseases, commonly manifesting as diarrheal disease.

In **Haiti**, flooding and landslides increases the risk of waterborne disease and limits access to functioning health facilities (19,21). In EW 40 of 2025, Haiti's MSPP reported 112 suspected cholera cases (10 confirmed) and 43 hospitalizations. Cumulatively, 114 confirmed and 2,787 suspected cases have been recorded in 2025 (*Figure 1*). All confirmed cases were reported in the Ouest department, including 1 in Cité Soleil, 1 in Delmas, and 8 in Pétiön-Ville (93). While these communes were not among the areas most directly affected by Hurricane Melissa, ongoing rainfall, localized flooding, and disruptions to water and sanitation infrastructure may further increase the risk of cholera transmission, particularly in densely populated urban settings with limited access to safe water.

**Figure 1. Confirmed cholera cases by EW in Haiti in 2025, as of EW 40 of 2025**



Source: Pan American Health Organization. Cholera resurgence in Hispaniola. Washington, D.C.: PAHO; 2025  
Available from: <https://shiny.paho-phe.org/cholera/>

According to the most recently available data, 88% of **Cuba's** population have access to basic water services for consumption; 74% have access to safely managed sanitation; 18% to basic services; and 70% have access to basic hygiene services. Following the storm, **Cuba**, along with **the Dominican Republic** and **the Bahamas**, have also reported flooding, storm surge,

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and power disruption impacting residents access to safe water and sanitation services. Hundreds of families remain in shelters, requiring ongoing WASH, disease surveillance, and psychosocial support (1,11,12,26). The number of Disability-Adjusted Life Years (DALYs) due to diarrheal disease ranges from low in the Bahamas (138) to high in Jamaica (2,817), Cuba (13,527), the Dominican Republic (28,199), and Haiti (136,620) (124).

## Leptospirosis

The Caribbean and Atlantic Ocean Islands subregion has one of the highest incidences of leptospirosis (125). During extreme weather events, like hurricanes, there is an increase in leptospirosis and other infectious diseases, associated with periods of increased rain. Flooding often leads to the displacement of rodent populations, increasing human exposure to *Leptospira* bacteria, and facilitating its spread in the environment (126).

Overcrowding in shelters can further contribute to the spread of leptospirosis through close contact with bodily fluids of infected people and vector proliferation in densely populated areas. As of 5 November 2025, in Jamaica, 2,868 people were still sheltering in 206 active shelters (7,8); in Cuba, 120,000 people remain in shelters (17); in Haiti, approximately 1,749 people are sheltering in evacuation centers (22); and, in the Dominican Republic, 3,785 people were displaced due to environmental conditions, of which 77 have been relocated to shelters (23). Jamaica, Cuba, Haiti, and the Dominican Republic are endemic for leptospirosis and report incident cases of the infection every year. Environmental sanitation actions and the safe disposal of solid waste, especially in shelters and displacement camps, are fundamental to preventing the migration and proliferation of rodents in these areas, thus contributing to the reduction of the risk of leptospirosis transmission.

The adoption of measures including sealing possible access points, removal of debris, and proper waste management must be implemented. Additionally, it is essential to evaluate the need for integrated rodent control actions, such as the safe and monitored use of rodenticides, always prioritizing practices that do not pose risks to human health, the environment, and that are aligned with the environmental management guidelines recommended by national health authorities.

## Respiratory diseases (35,48)

In the Caribbean, seasonal respiratory virus trends continued to fluctuate across island nations during EW 40 of 2025. The subregion showed low to moderate overall respiratory virus activity, with variations between countries. Influenza circulation increased in several northern Caribbean islands, while RSV remained active in some territories and SARS-CoV-2 activity continued its gradual decline compared with earlier in the year.

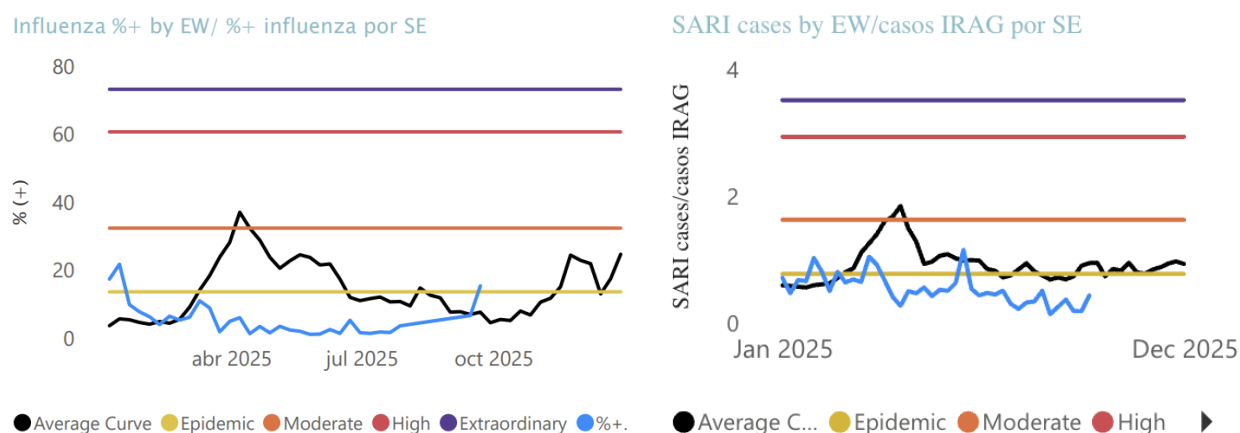
Influenza activity rose across parts of the northern Caribbean, reaching epidemic levels in **Haiti** and **the Dominican Republic**, driven mainly by influenza A(H1N1)pdm09. **Cuba** and **Jamaica** also reported increasing influenza detections, with positivity rates of 13.8% and 11.3%, respectively. In contrast, **the Bahamas** maintained low influenza activity (below 5%), and **Bermuda** reported only sporadic influenza cases.

RSV activity remained elevated in **the Dominican Republic** (28.3%), while **Cuba** showed a declining trend, and **Jamaica** and **the Bahamas** reported low RSV circulation. SARS-CoV-2 activity persisted at low to moderate levels across the subregion, declining in **Haiti** and **the Dominican Republic**, and stable at low levels in **Cuba**, **Jamaica**, and **the Bahamas**. **Bermuda** continued to register sporadic COVID-19 detections with no indication of increased community transmission.



**Jamaica** continues to report increased influenza activity during the most recent weeks. As of EW 40 of 2025, the percentage of positive influenza samples has risen above the epidemic threshold, with influenza A(H1N1)pdm09 being the only subtype detected in the last four weeks. SARS-CoV-2 activity remains present but at low levels, while RSV shows minimal circulation. The proportion of influenza-positive samples has surpassed the average seasonal curve and is approaching moderate thresholds (*Figure 1*). No extraordinary activity has been observed for other respiratory viruses (*Figure 2*).

**Figure 2. Influenza positivity and distribution of severe acute respiratory illness (SARI) by epidemiological week (EW), Jamaica, EW1 – EW 40 of 2025**



Source: Pan American Health Organization. Respiratory Viruses weekly report. Washington, D.C.: PAHO; 2025 Available from: <https://www.paho.org/en/influenza-situation-report>

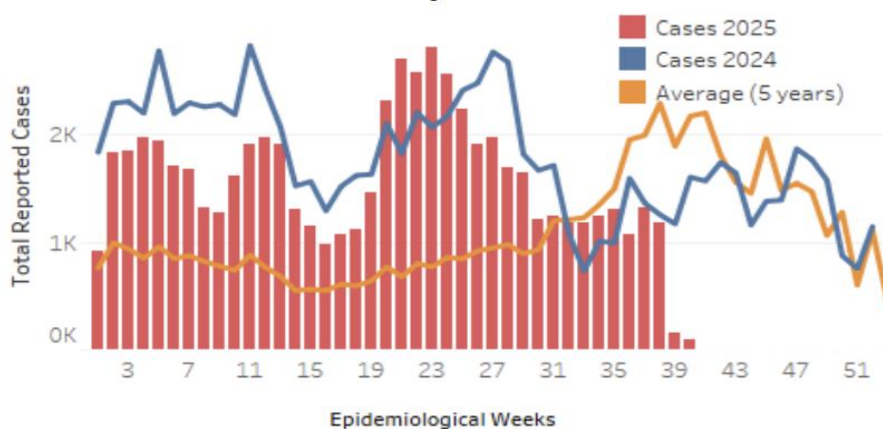
Due to the prioritization of emergency management efforts in countries, the surveillance of diseases caused by respiratory viruses can be compromised, resulting in gaps in monitoring epidemiological changes and viral circulation trends. This hinders the assessment of transmission patterns, clinical severity, and the impact on the health system, as well as making it difficult to identify risk groups susceptible to developing respiratory complications. Additionally, while there are measures in place to prevent the transmission of respiratory viruses, during an emergency many people may be housed in shelters, which hinders the ability for social isolation among symptomatic patients and amplifies the spread of disease.

## Vector-borne diseases

In recent years, malaria has been sporadically reported in non-endemic countries in the Caribbean subregion, most recently in **Jamaica** where there have been imported cases of malaria, two cases in 2024, and one case in 2025 (as of EW 39). However, Jamaica's surveillance system, including the Border Health System at points of entry, monitors malaria-indicative syndromes and tracks high-risk travelers, which national authorities consider adequate for detection and containment. **The Dominican Republic** and **Haiti** continue to report autochthonous malaria cases each year; in **the Dominican Republic**, autochthonous cases are primarily concentrated in peri-urban and rural zones, and both countries reported important increase of cases in 2024 compared to the previous year. In **Cuba**, no locally-acquired malaria cases have been reported in recent years, and the disease remains under continuous laboratory and syndromic surveillance. In countries of the subregion with limited capacity for routine surveillance and vector control measures, there remains a risk of importation of malaria cases (83).

As EW 40 in 2025, the subregion exhibits a decrease of 50% compared to the same week in 2024 and 35% compared to the average of the last five years (Figure 3). **Cuba** continues to report sustained dengue circulation with moderate transmission intensity, predominantly associated with serotypes DENV-3 and DENV-4. **The Dominican Republic** has reported a marked decline in dengue activity in 2025, with an 81% reduction in the number of suspected cases compared to 2024, following a period of increased transmission during the second quarter of last year. In **Haiti**, dengue surveillance data is scarce, but transmission is believed to remain endemic with moderate but persistent transmission and no significant variations in trend compared to 2024. In **Jamaica**, the number of suspected cases has continued to decrease since the 2023 outbreak, with 379 cases reported as of EW 39 of 2025—80% less compared to 2024 (66).

**Figure 3. Total number of dengue suspected cases reported as of epidemiological week (EW) 40 in 2025, 2024, and the average of the last 5 years, respectively, in the Caribbean subregion**



Source: Pan American Health Organization. Dengue: Subregional analysis. Washington, D.C.: PAHO; 2025. Available from: <https://www.paho.org/en/arbo-portal/dengue-data-analysis/dengue-subregional-analysis>

Reports of *chikungunya* cases have been sporadic in the Caribbean in recent years; with limited activity in most islands. **Cuba** has reported a sharp increase in 2025, with 20,062 cases reported as of EW 44 in 14 provinces, following several years of no reports of this virus. While no recent cases have been registered in **Jamaica or the Dominican Republic**. The presence of *Aedes aegypti* mosquitoes and favorable post-hurricane environmental conditions may support continued low-level transmission in the subregion (67,82).

Recent outbreaks of Oropouche virus disease have been reported in several South American countries and, most recently, in Cuba. Between 2024 and 2025, **Cuba** reported its first detection of Oropouche virus in the country. The spread of this arbovirus in a new area with an environment conducive for rapid spread, as well as an immunologically naïve population, is a cause for concern (82).

The breakdown of routine vector surveillance and control measures in many of the severely affected areas, the temporary suspension of routine medical services in some parts of the countries, and environmental conditions suitable for the breeding of different vector species could facilitate outbreaks of various vector-borne diseases. This highlights the need for additional surveillance efforts, as well as for vector control measures to be prioritized.

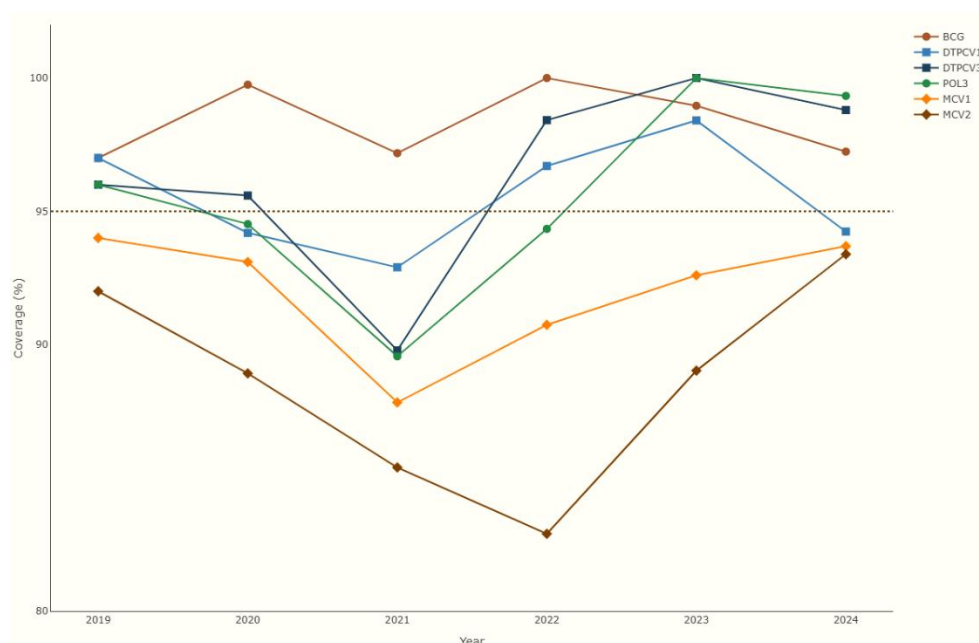
## Immunization and vaccine-preventable diseases (127)

Between 2019 and 2024, routine immunization coverage across the affected Caribbean and Atlantic islands has been heterogeneous, with several countries not consistently achieving the  $\geq 95\%$  threshold required for herd immunity against key vaccine-preventable diseases (VPDs).

In **Cuba**, administrative data indicate consistently high coverage across major antigens (DTP1, DTP3, POL3, MCV1, MCV2, BCG), generally around 98–100%, with only minor, temporary dips in 2020 followed by recovery. This profile suggests limited immunity gaps overall, although localized service and cold-chain disruptions following Hurricane Melissa could still affect continuity of vaccination in impacted areas.

In **Jamaica**, coverage for tracer vaccines (DTPCV1, DTPCV3, BCG) has remained  $\geq 95\%$ , including recovery after a decline in 2021; however, MCV1 and MCV2 have stayed below 95% for the past five years. This persistent shortfall, particularly in timely completion of the second dose, sustains pockets of susceptibility to measles and other VPDs, especially in districts with historically lower uptake. (Figure 4).

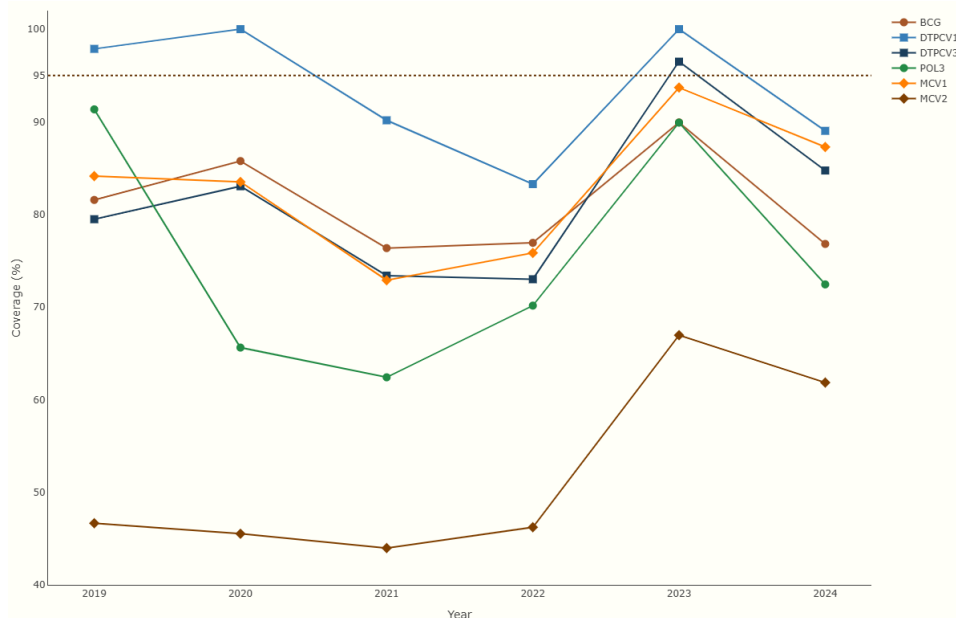
Figure 4. Coverage by year and vaccine in Jamaica, 2019–2024



Source: Pan American Health Organization. Immunization coverage throughout the life course in the Americas. Washington, D.C.: PAHO; 2025 [cited 5 November 2025]. Available from: <https://paho-cim.shinyapps.io/immunization-dashboard/>

In **Haiti**, coverage between 2019 and 2024 has been consistently below target for multiple antigens, with DTP and polio vaccines generally around 80–90%, MCV1 fluctuating between 73–93%, and MCV2 remaining under 67% (Figure 5). These patterns reflect structural barriers to access and completion of schedules and leave substantial cohorts insufficiently protected, even before the hurricane.

Figure 5. Coverage by year and vaccine in Haiti, 2019-2024



Source: Pan American Health Organization. Immunization coverage throughout the life course in the Americas. Washington, D.C.: PAHO; 2025 [cited 5 November 2025]. Available from: <https://paho-cim.shinvapps.io/immunization-dashboard/>

For the **Dominican Republic, the Bahamas, and Bermuda**, available data over the same period point to generally moderate coverage for primary-series vaccines alongside declining or persistently suboptimal MCV2. This results in incomplete measles and rubella protection in older cohorts, although overall gaps are smaller than those observed in Haiti and selected areas of Jamaica.

Table 2. Coverages rates for routine vaccinations in countries affected by Hurricane Melissa, data reported as of 2024

Vaccination Indicators (127)	Jamaica	Cuba	Haiti	Dominican Republic (the)	Bahamas (the)	Bermuda	Year	Source
DTP-containing vaccine, 1st dose	94.24%	99.71%	89.02%	97.15%	98.34%	98.36%	2024	PAHO
DTP-containing vaccine, 3rd dose	98.8%	99.57%	84.74%	87.2%	90.12%	90.16%	2024	PAHO
BCG	97.24%	99.98%	76.81%	100%	-	-	2024	PAHO
Measles-containing vaccine, 1st dose	93.69%	99.94%	87.28%	94.78%	86.34%	100%	2024	PAHO
Polio, 3 <sup>rd</sup> dose	99.33%	98.77%	72.44%	88.18%	90.12%	90.16%	2024	PAHO

In the context of **Hurricane Melissa**, these pre-existing immunity gaps intersect with new operational constraints: damage and closure of health facilities, power and water outages affecting cold-chain integrity, supply interruptions, and diversion of health staff to acute response. Overcrowded shelters and temporary accommodation, where children and adults from areas with suboptimal MCV2, DTP, and POL3 coverage mix in high-density settings with limited WASH conditions, create a high-risk environment for measles, diphtheria, pertussis, and other VPD transmission. Targeted, early catch-up vaccination activities, reinforced surveillance for rash-fever and other VPD syndromes, and rapid restoration of routine services and cold chain in the most affected areas of Jamaica, Haiti, and Cuba, as well as in shelter-hosting sites across the subregion, are critical to prevent post-disaster outbreaks.

## Maternal and neonatal health

Both maternal and neonatal mortality can be significantly affected in emergency situations. Compromised health infrastructures, population displacement, and the interruption of essential services can reduce the capacity to provide adequate obstetric and neonatal care. Even in areas where prenatal services were previously available, the rate of inadequate follow-up often increases during disasters, while physical and psychological stress contributes to higher obstetric complications and perinatal risk (128).

In the Caribbean subregion, maternal and neonatal health indicators remain highly variable. **Haiti** continues to report the highest maternal mortality ratio (328 per 100,000 live births), reflecting persistent gaps in emergency obstetric care and fragile referral networks (35). **Jamaica** and **the Dominican Republic** show intermediate levels (130 and 124, respectively), while **Cuba, the Bahamas, and Bermuda** maintain significantly lower ratios (35–76 per 100,000 live births) supported by near-universal skilled birth attendance. Neonatal mortality ranges from 4.5 per 1,000 live births in Cuba to 18 per 1,000 in Jamaica, remaining high in countries with limited neonatal intensive care capacity (62).

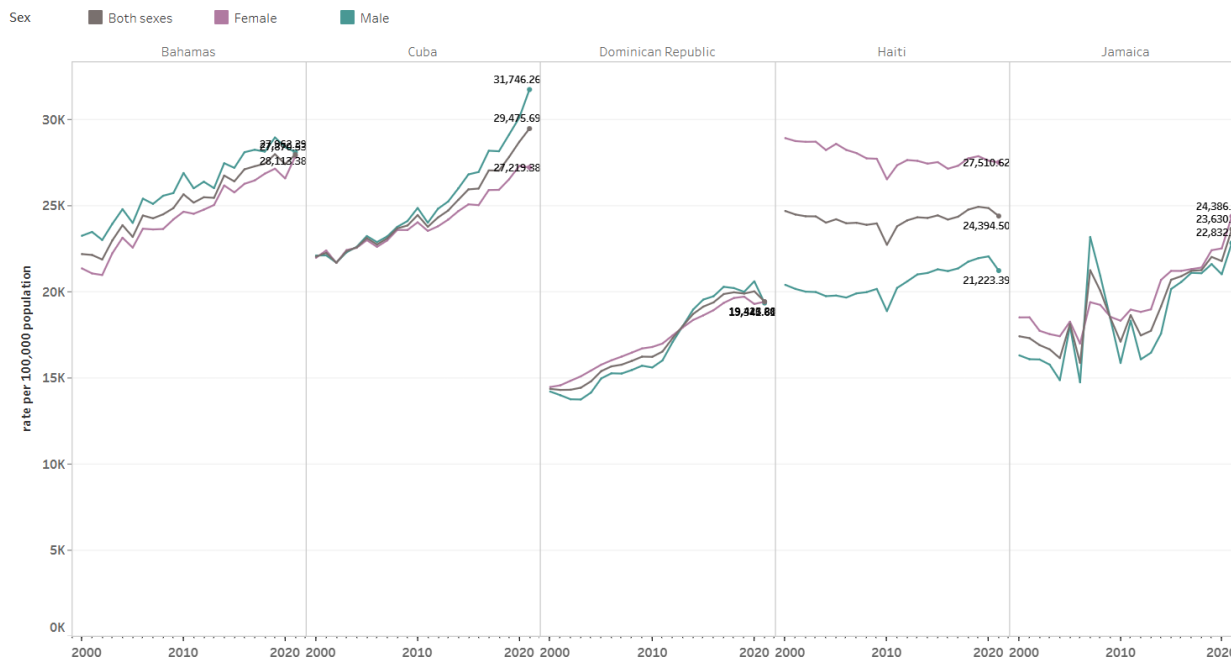
Although overall child mortality has declined, neonatal deaths still represent a major proportion of infant mortality across the Caribbean. Strengthening emergency obstetric and neonatal care, ensuring continuity of services during disasters, and addressing subnational inequalities remain key priorities for the region (63).

## Non-communicable diseases (NCDs)

Across the Caribbean sub-set of **Haiti, the Dominican Republic, Jamaica, Cuba, the Bahamas and Bermuda**, NCDs are the dominant driver of mortality and disability (*Figure 6*), mirroring the regional picture where NCDs account for roughly two-thirds of all deaths and most disease burden in the Americas. The leading contributors to DALYs are ischemic heart disease, diabetes, stroke, and chronic respiratory diseases, all of which demand continuous care and medication. consistently among the top causes of health loss region wide. This burden is fueled by entrenched metabolic risks (hypertension, obesity, and tobacco use) whose prevalence and control vary across countries but remain high enough to shape overall population health outcomes (34,54).



**Figure 6. Trend of Disability-Adjusted Life Years (DALYs) from 2000 to 2021 – Rates per 100,000 population by sex, in the Bahamas, Cuba, the Dominican Republic, Haiti and Jamaica**



Source: Adapted from World Health Organization. *Global Health Estimates 2019: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2021*. Geneva: WHO: 2020. Available from: <https://www.paho.org/en/enlace/burden-noncommunicable-diseases>

Hypertension lies at the core of cardiovascular risk in all six countries. Regionally, only about one-third of adults with hypertension have their condition controlled, with wide cross-country disparities (some exceeding 60%) (55). Overweight and obesity have reached epidemic proportions, driving cardiometabolic diseases and sustaining the high DALY load from ischemic heart disease and stroke (56). Tobacco use, including among adolescents, continues to accelerate cardiovascular, oncologic, and chronic lung diseases, compounding the NCD risk profile (57).

In hurricane-prone island and coastal settings, this chronic disease burden is also a challenge to resilience. Continuity of care for insulin-dependent diabetes, hypertension, renal failure, and oxygen-dependent conditions is particularly vulnerable to power outages, disrupted supply chains, and damaged health infrastructure. After a disaster, interruptions in medical services and shortages of essential drugs can rapidly worsen symptoms among people with NCDs, leading to avoidable surges in morbidity and mortality. Even brief gaps in treatment can result in severe, life-threatening complications.

The combination of a high NCD burden, widespread risk factors, and limited access to continuous treatment means that any disruption in medication supply or healthcare access (especially amid displacement, infrastructure damage, and psychological stress) can disproportionately elevate NCD morbidity and mortality in these Caribbean contexts.

## Mental Health and Psychosocial (MHPs) conditions

The impact of hurricanes on livelihoods, food security, forced displacement, violence, and other stressors can trigger acute distress and exacerbate pre-existing mental health conditions due to disrupted access to healthcare services. Symptoms of PTSD, anxiety, and depression are the most frequently reported mental health outcomes following major disasters (10). One in five people affected by emergencies may experience a mental health condition, ranging from mild anxiety or depression to severe disorders such as psychosis or PTSD. The psychological and social effects can be severe in the short term but can also deteriorate the mental health and psychosocial well-being of affected populations in the long term (11). There is a need of mental health and psychosocial support (MHPSS) prioritization not only in the immediate response (1-3 months) but also in the long term (1 year to several years of follow-up) (17).

Across the subregion, mental disorders contribute substantially to the overall NCD burden, roughly one-fifth of total DALYs (84). These findings emphasize the need to strengthen community-based MHPSS systems, particularly in the context of frequent hurricanes, displacement, and social instability. Integrating mental health into primary health care and disaster-response frameworks remain essential to reduce disability, support recovery, and promote long-term resilience.

In humanitarian settings, it is also important to differentiate between psychosocial support, often delivered through community-based and short-term interventions aimed at restoring social connectedness and coping capacities, and mental health care for moderate and severe conditions that require specialized clinical management by psychiatrists, psychologists, or other trained professionals within the national health system (129). Emergencies frequently expose and widen this gap between levels of care, underscoring the need to establish and strengthen referral pathways that ensure continuity of care. MHPSS interventions implemented during humanitarian response should therefore be effectively linked to existing national mental health systems to enable the identification, referral, and long-term follow-up of individuals with severe mental health conditions (130,131).

The passage of Hurricane Beryl in 2024, followed by the continuing vulnerability of Caribbean nations to major storms, has likely deepened the mental health burden. The widespread destruction, displacement, and loss of livelihoods triggered by Beryl and subsequent extreme weather events have heightened anxiety, depression, and post-traumatic stress, particularly among children, women, and older adults. In many affected areas, service disruptions and resource shortages have further limited access to mental health and psychosocial support. As communities work toward recovery, it is essential to integrate MHPSS into both emergency response and long-term reconstruction efforts. Strengthening community-based care networks, ensuring continuity of treatment, and supporting the psychosocial recovery of those most affected will be vital to enhance resilience and reduce long-term mental health impacts across the region.

## DETERMINANTS OF HEALTH

### Water, Sanitation, and Hygiene (WASH)

According to the most recent estimates, access to at least basic drinking water services is high across the Americas. **Cuba, the Bahamas, Bermuda, and the Dominican Republic** report coverage levels exceeding 90% of the population using improved water sources with a round-trip collection time of no more than 30 minutes. **Jamaica** shows coverage above 80%, while **Haiti** remains below the regional average, with around 70% of its population having access to basic drinking water services. Access to at least basic sanitation facilities, those improved and not shared between households, is similarly high in **Jamaica, Cuba, the Dominican Republic, Bermuda, and the Bahamas** all above 90%. However, Haiti continues to lag significantly behind, with only 29% of the population using basic sanitation services, reflecting one of the lowest levels of access in the Region (132,133). According to the 2022 Jamaica Multiple Indicator Cluster Survey (MICS), 93% of household members in the country had access to basic sanitation services, 82% had access to basic hygiene services, meaning the availability of a handwashing facility with soap and water present, and only 67% had water source that is available when needed (134).

The impact of the storm has led to the loss of electricity and water supply in all affected countries; health systems have been heavily disrupted due to these outages as well as infrastructure damaged to hospitals. Hurricane conditions can also damage piped water and existing sewage infrastructure.

In **Jamaica**, while most residents have access to basic drinking water, piped water supply is limited to 66% of the population and only 16% are connected to a sewer system. Prior to the storm, five parishes, Clarendon, St. Elizabeth, St. Mary, St. Thomas, and Trelawny, had been flagged as priority areas in need of improved access to water. As a result of Hurricane Melissa, Jamaica has reported damage to existing water and sewage services and water supply systems in Portland, Clarendon, and Manchester have been directly disrupted. Communities in Portland parish have lacked safe water for two to three days (135).

Before Hurricane Melissa, as 15 April 2025, **Haiti** reported 1,487 suspected cholera cases in the country (95). The country reports that the storm had a significant impact in the southern part of the country, including the southern portion of the Ouest department. The area affected by the cholera outbreak, particularly Pétion-Ville, was not severely impacted by the hurricane (136). However, the situation remains of concern in IDP sites with limited access to safe water, sanitation, and hygiene services, increasing the risk of post-hurricane outbreaks. Temporary or makeshift shelters are likely to be more exposed to diseases and the impact of the rainy season. This critical given the significant number of displaced individuals in the country.

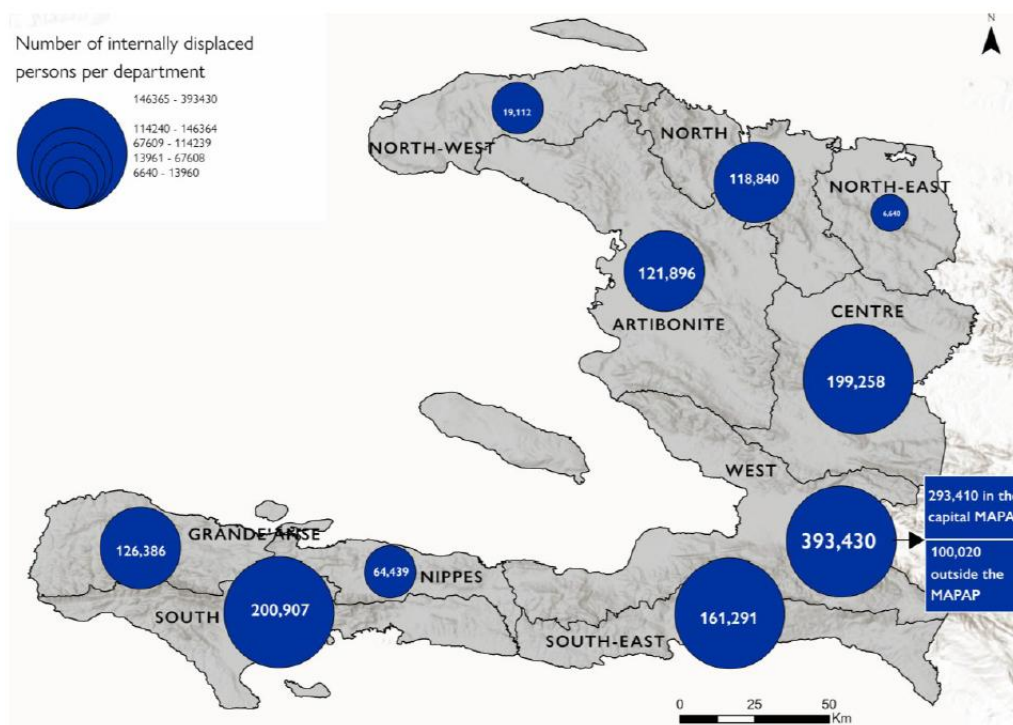
In **Cuba**, 60,000 homes were damaged by the hurricane, and entire towns have been submerged (137). The city of Santiago's 400,000 residents have been experiencing water shortages since this summer, expected to be further prolonged following the storm (138). Additionally, as of October 2025, Cuba declared a multi-virus arboviral outbreak of dengue, Oropouche, and chikungunya. Risk factors such as stagnant water accumulation during the rainy season, inadequate drainage and infrastructure leading to waterlogging, and limited vaccination coverage may lead to a surge in vector-borne disease infections. Rainfall brought by Hurricane Melissa is likely to increase cases of vector-borne diseases, further aggravated by the lack of reagents in laboratories required for diagnosis (139).

## Displacement

Displacement has direct and significant implications for public health. Overcrowded shelters and temporary living conditions increase the risk of waterborne and vector-borne diseases, particularly where sanitation is poor and clean water is limited. Disrupted healthcare access, interruptions to vaccination and chronic disease management, and heightened stress and trauma among displaced populations compound these risks.

Before Hurricane Melissa, **Haiti** was already facing one of the most severe internal displacement crises in the Americas. According to the latest Displacement Tracking Matrix, there were 1,412,199 IDPs across the country, equivalent to 12% of the national population. The sharp increase was driven by the deteriorating security situation, particularly in the Artibonite and Centre departments, which have seen the largest rises in displaced populations. Most displaced persons (around 79%) are hosted in provincial areas, compared to 21% in the Metropolitan Area of Port-au-Prince. The majority (85%) live outside formal sites, staying with host families and placing additional strain on already limited community resources. The number of displacement sites declined slightly from 246 to 238, with the number of people in sites falling marginally to 211,841 (-2%). Key needs reported by local informants remain consistent with previous assessments: food, livelihoods, WASH, shelter, and health services. This widespread pre-existing displacement has compounded Haiti's vulnerability to Hurricane Melissa's impacts (98).

**Map 2. Internally Displaced Persons (IDP) by department in Haiti, data as of September 2025**



Source: International Organization for Migration. 2025. Haiti – Information Sheet: Displacement Situation, Round 11 (September 2025). Available from: <https://dtm.iom.int/reports/haiti-information-sheet-displacement-situation-haiti-round-11-september-2025?close=true>

During Hurricane Melissa, displacement pressures intensified across several countries. In **Haiti**, torrential rains and widespread flooding severely affected the southern and western. By 28 October 2025, humanitarian partners reported over 13,900 people sheltering in 121 temporary sites, mainly across Sud, Nippes, and Grand'Anse (10). As of 3 November 2025, about 1,749 were reported to be in shelters (*Table 3*) (22). Flooding also impacted existing IDP sites, particularly in Port-au-Prince, where the Nouveau Lycée Marie Jeanne site, hosting an estimated 10,000 displaced people, is facing acute WASH challenges as overflowing latrines and stagnant wastewater have created major public-health risks (20). Communities in Moron (Grand'Anse), Marigot (Sud-Est), and Lascahobas (Centre) remain isolated by damaged roads and rising rivers.

**Table 3. Population in shelters by Department in Haiti, as of 3 November 2025**

Department	Number of shelters	Population in shelters
Ouest	2	120
Sud	3	1,334
Grand-Anse	1	20
Nippes	4	257
<b>Total</b>	<b>10</b>	<b>1,749</b>

Source: Haiti, Centre d'opérations d'urgence nacional. Ouragan Melissa, lunde 3 novembre 2025 – point de situation 11:00. Port-au-Prince: COUN; 2025. Unpublished.

In **the Dominican Republic**, days of heavy rain created displacement and cut off 37 communities due to damaged roads and bridges. Authorities activated five official shelters at the height of the storm. Preliminary assessments indicate that around 3,765 people were displaced by flooding and landslides, of whom 77 were housed in official shelters in San Juan, San Cristóbal, and the Distrito Nacional co(25). As of 29 October 2025, one shelter remained operational in the National District, hosting 32 people. The facility is under close sanitary supervision by the National Health Service and the Health Area Directorate, which are conducting epidemiological surveillance, water quality monitoring, solid waste management oversight, and hygiene promotion activities to prevent disease outbreaks among displaced populations (24).

In **Jamaica**, early evacuations helped reduce the overall impact of Hurricane Melissa, and many evacuees were able to return home shortly after the storm. Nevertheless, displacement remains significant. According to the International Organization for Migration (IOM), approximately 30,000 people were displaced, including those residing in informal or improvised shelters (10). As of 2 November 2025, 2,868 people were still sheltered in 206 active shelters across the country; at peak on 29 October 513 shelters had been activated housing 7,208 people (8).

**Cuba** experienced the largest population movement associated with Hurricane Melissa. Ahead of landfall, more than 735,000 people were preventively evacuated through Civil Defense coordination, the highest figure recorded in recent hurricane responses (10). The storm made landfall in eastern Cuba on 29 October, crossing the provinces of Santiago de Cuba, Granma, Holguín, Guantánamo, and Las Tunas with destructive winds and torrential rain that caused extensive housing destruction and infrastructure damage (140). Thousands of evacuees remain displaced, particularly in the Cauto River Basin, where continued flooding, dam discharges, and sea intrusion pose ongoing risks. Authorities report that the evacuees include approximately 49,000 children, 62,000 older persons, 6,000 people with disabilities, and 3,000 pregnant women (10). As of 5 November, approximately 120,000 people remained sheltered in evacuation centers (17).

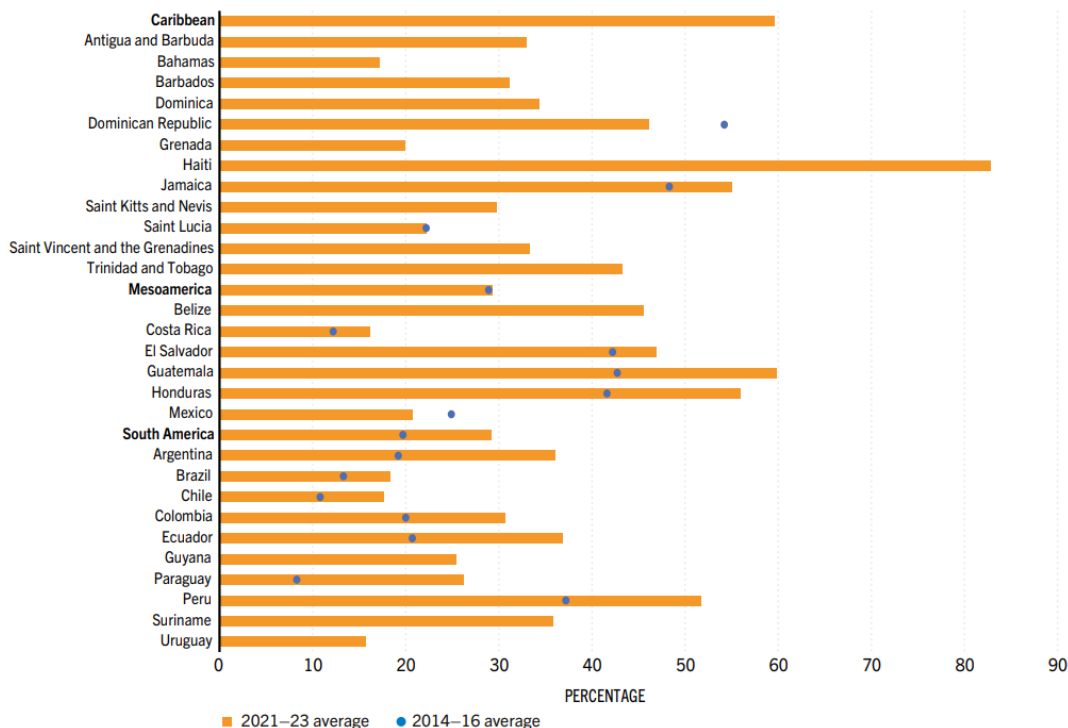


In **the Bahamas**, the Disaster Risk Management Authority (DRM) issued an all-clear on 31 October 2025, lifting all evacuation orders and storm warnings for the southeastern and central islands (140). Prior to this, approximately 1,400 persons had been evacuated to Nassau, while 100 individuals had sought refuge across three shelters. As weather conditions improved, DRM authorities began demobilizing shelters and coordinating the return of evacuees. Preliminary assessments indicate mostly minor impacts, including localized flooding and limited roof damage (28).

## Food insecurity

Food insecurity in the Caribbean is driven by a combination of structural import dependence, recurrent climate shocks, and rising living costs. In 2023, the subregion recorded a prevalence of moderate or severe food insecurity of 58.8%, well above the global average. For the 2021–2023 period, according to the Latin America and the Caribbean regional report, **Haiti** (82.8%), **Jamaica** (55.1%), and **the Dominican Republic** (46.1%) had some of the highest rates of moderate or severe food insecurity in the subregion (Figure 7) (77).

Figure 7. Prevalence of moderate or severe food insecurity in Latin America and the Caribbean by country and subregion



Source: Food and Agriculture Organization of the United Nations. *Latin America and the Caribbean Regional Overview of Food Security and Nutrition 2024*. Rome: FAO; 2025. Available from: <https://openknowledge.fao.org/items/c500cc9c-d1ab-4498-8c45-ca484fc12da3>

Factors associated with food insecurity in the context of a natural disaster include loss of crops and livestock, the damage and destruction of infrastructure and livelihoods, and the disruption of food supply chains. These factors not only reduce food safety and access but also exacerbate pre-existing nutritional deficiencies, particularly among children, infants, and vulnerable groups such as pregnant and lactating women (141).

The IPC Acute Food Insecurity Analysis (Sept 2025–June 2026) estimated that 5.7 million people in **Haiti** were in Crisis or worse (IPC Phase 3 or above), including 1.9 million (17%) in Emergency (Phase 4) with severe food shortages and high acute malnutrition. The crisis is driven by expanding gang control, economic decline, high inflation, and reduced agricultural production, which have severely limited people's ability to meet basic food needs. Many farmers are forced to negotiate access to land and share harvests with armed groups, while urban workers and small business owners have lost their livelihoods amid widespread insecurity. This combination of violence, economic paralysis, and mass displacement (affecting 1.3 million internally displaced Haitians) has created a deep humanitarian crisis. As the country enters the 2026 lean season, 5.9 million people (53%) are projected to face acute food insecurity, a situation likely to worsen as continued violence and flood-related damage from Hurricane Melissa further undermine access to food, water, and essential services (10,20,95,103).

**Map 3: Current Acute Food Insecurity Situation in Haiti, September 2025 – February 2026.**



**Key for the Map**

**IPC Acute Food Insecurity Phase Classification**

(mapped Phase represents highest severity affecting at least 20% of the population)

- 1 - Minimal
- 2 - Stressed
- 3 - Crisis
- 4 - Emergency
- 5 - Famine
- Areas not analysed
- Areas with inadequate evidence

**Map Symbols**

- Urban settlement classification
- Profound settlements classification
- Area receives significant humanitarian food assistance (accounted for in Phase classification)
- > 25% of households meet 25-50% of caloric needs through assistance
- > 25% of households meet > 50% of caloric needs through assistance

**Evidence Level**

\*\*\* High

**Map 4: Projection of the Acute Food Insecurity Situation in Haiti, March – June 2026.**



**Key for the Map**

**IPC Acute Food Insecurity Phase Classification**

(mapped Phase represents highest severity affecting at least 20% of the population)

- 1 - Minimal
- 2 - Stressed
- 3 - Crisis
- 4 - Emergency
- 5 - Famine
- Areas not analysed
- Areas with inadequate evidence

**Map Symbols**

- Urban settlement classification
- Profound settlements classification
- Area receives significant humanitarian food assistance (accounted for in Phase classification)
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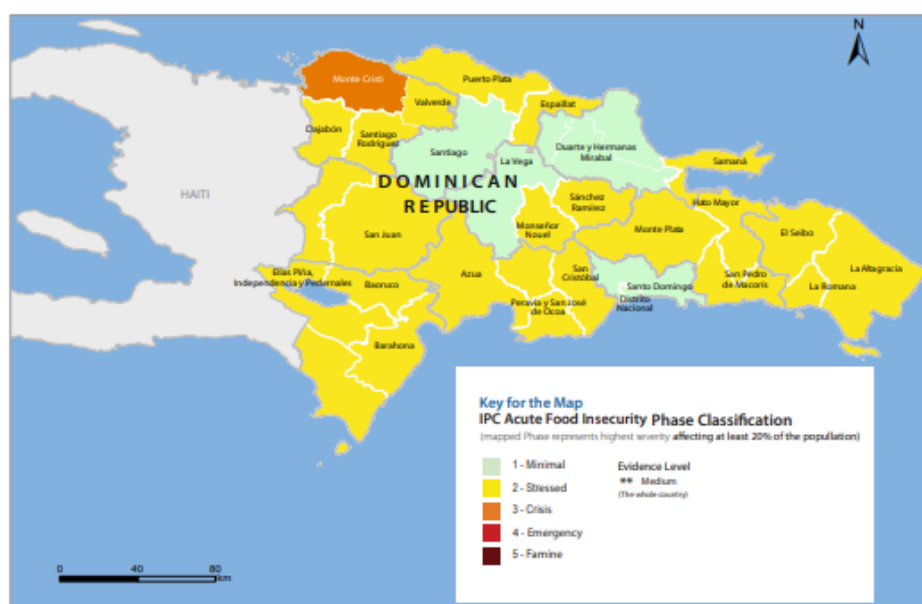
**Evidence Level**

\*\*\* High

Source: Integrated Food Security Phase Classification. 2025. Haiti: Acute Food Insecurity Situation for September 2025 – February 2026 and Projection for March – June 2026. Available from: <https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1159760/?iso3=HTI>

In **the Dominican Republic**, the IPC Acute Food Insecurity Analysis (Oct 2024–Sep 2025) estimated that around 925,000 people (9% of the population) were in Crisis or worse (IPC Phase 3 or above) and 1.9 million (18%) were Stressed (Phase 2), mainly due to high food prices, low household incomes, and climate impacts from La Niña. Food insecurity was expected to persist through mid-2025, as inflation, limited income opportunities, and declining remittances continued to erode purchasing power, while the seasonal slowdown in tourism and trade further affected livelihoods. By late 2025, a slight improvement was projected, though some areas like Monte Cristi were expected to deteriorate to Crisis levels. Although neutral climatic conditions could aid agricultural recovery, rising production costs and the temporary suspension of school feeding programmes were anticipated to increase household food expenses (142).

**Map 5. Acute Food Insecurity projection in the Dominican Republic, June – September 2025**



Source: *The Integrated Food Security Phase Classification. Dominican Republic: Acute Food Insecurity Situation October 2024 - January 2025 and Projection for February - May 2025 and June - September 2025.* Rome: IPC; 2025 [cited 5 November 2025]. Available from: <https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1159562/?iso3=DOM>

During Hurricane Melissa, food insecurity intensified across several countries as agricultural production, food supply chains, and livelihoods suffered extensive damage. In **Jamaica**, preliminary assessments estimate that between 98,000 and 359,000 people may require food assistance following the hurricane's passage (8).

In **Cuba**, the destruction of productive assets and food systems was severe. Preliminary assessments indicate that approximately 78,000 hectares of crops were lost, including key staples such as banana, corn, cassava, sweet potato, vegetables, and coffee. In Granma Province alone, over 28,000 cattle, hundreds of small livestock, and 110,000 liters of milk were lost. National authorities estimate that 40% of Cuba's vegetable production was wiped out. Damage to boats, fish storage facilities, and collection centers also disrupted the fishing sector, further constraining access to animal protein and livelihoods for coastal communities (15,17).

In **Haiti**, Hurricane Melissa's flooding and landslides damaged agricultural land across the south. In Petit-Goâve (Ouest department), the La Digue River overflow destroyed homes, roads, community infrastructure, and cropland. In Sud department, flooding from four rivers damaged agricultural fields and roads, causing access issues. In Grand'Anse department, overflow of all four rivers flooded six communes, damaging agricultural lands (19–21).

## HEALTH SYSTEM STATUS AND DISRUPTIONS

### Jamaica (143,144)

The health system has sustained significant disruption. Damage has been reported in 5 major hospitals and over 100 health centers across the country, with 47 health centers unable to offer services as of 9 November 2025 (*Table 4*). As of 6 November 2025, primary health services were resuming in multiple affected parishes, while over 50% of health facilities remain closed in Saint Elizabeth (1 of 23 health facilities open), Saint James (4 of 21 health centers open), Westmoreland (6 of 20 health centers open), and Trelawny (11 of 22 health centers open) (*Map 6*). Public hospitals have been operating in emergency mode across all Regional Health Authorities, with an average 93% staffing level nationally.

Restoration of electricity supply is ongoing, with connections resumed at Falmouth Hospital in Trelawny and most facilities in the South-Eastern Regional Health Authority, but most hospitals in the Western, Southern, and North-Eastern Health Authorities still depend on generators for power supply. Water reserves still have an ongoing issue, with all hospitals and health centers in Saint Elizabeth, and multiple health centers in Saint Catherine, Kingston & Saint Andrew, Saint Thomas, and Portland reporting no stable water connection. Most hospitals still function using water supplied from trucks.

Emergency services and routine care have resumed in most affected hospitals following relief efforts, supported by the setting up of Emergency Medical Teams (EMT) Type 2 facilities, and transfer of patients to functional hospitals. Kingston Public, Mandeville Regional, and Mary Pen Hospitals report being more than 100% over capacity.

Severe disruptions in communication systems persist in the Southern and Western regions, while in the South-East and North-East, services have resumed. Emergency radio systems are in use as a backup measure, while Starlink systems were deployed to the hardest hit areas, including Falmouth, Savanna-la-Mar, and Noel Holmes hospitals.

The National Laboratory Service is fully operational with adequate power and water supplies; however, the Western and Southern Health Authorities report disruptions to laboratory capacity with no further updates as of 11 November.

**Table 4. Preliminary health facility impact assessment in Jamaica, as of 11 November 2025**

Facility	Status	Key Impacts	Operational Notes
Black River Hospital (St Elizabeth)	Non-functional	Roof collapse, wall destruction, extensive flooding, operating theater unusable, laboratory destroyed	Only accident and emergency services are currently intact. EMT Type 2 is set up and operational
Falmouth Hospital (Trelawny)	Partially functional	Operating theater flooded, catastrophic damage to roof (60–70% loss), laboratory, dietary service areas	Emergency surgeries possible; lab partially functional. EMT Type 2 set up and operational
Cornwall Regional Hospital (St James)	Functional	Flooding; major damage to roof, lab equipment. Facility	Emergency surgeries, dialysis, and radiotherapy resumed

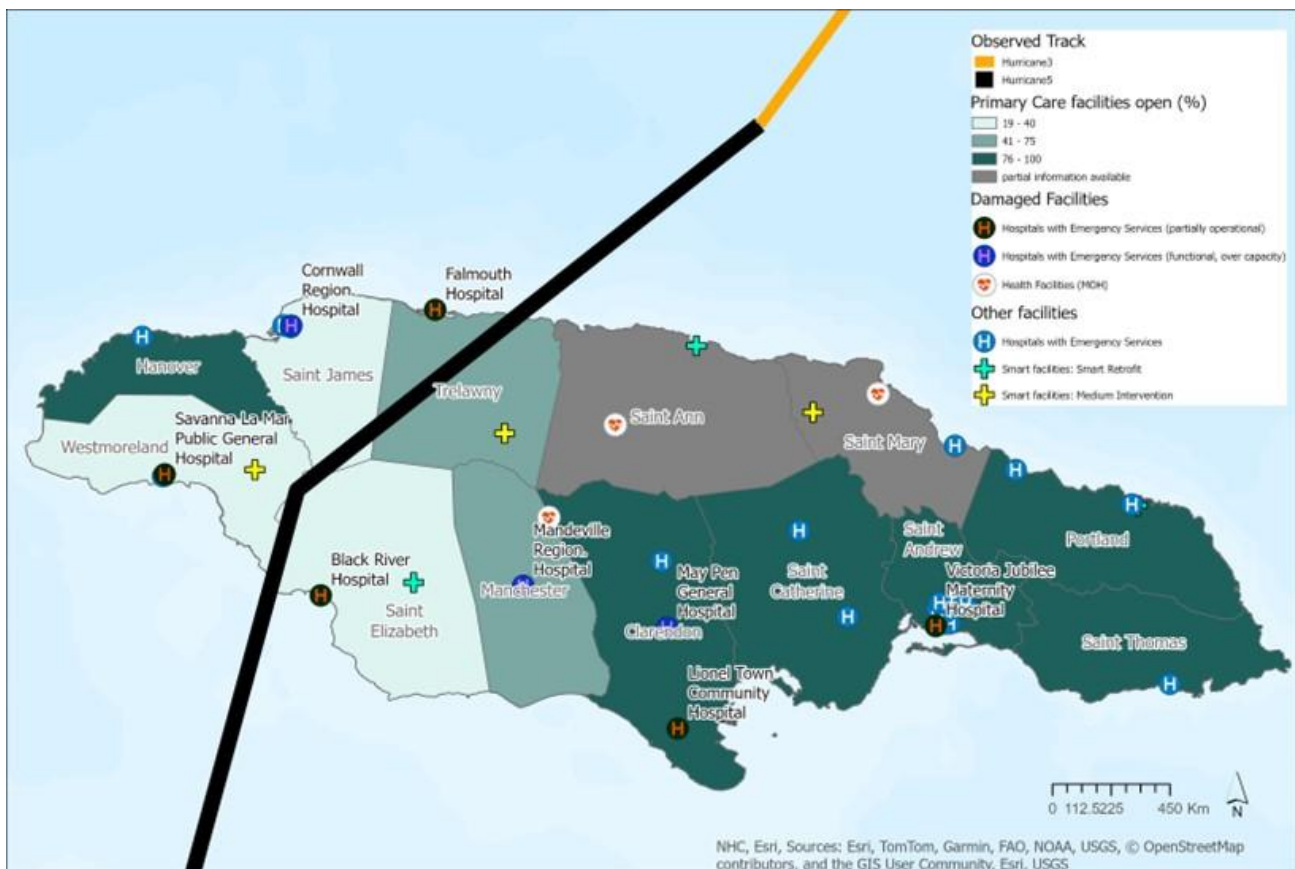


		operational but overcrowded.	
Noel Holmes Hospital (Hanover)	Functional	Flooding and wind damage to roof. Main generator failure, using small temporary ones.	Lab services resumed; pharmacy operational. Receiving referrals for lab services.
Savanna-la-Mar (Westmoreland)	Partially functional	Significant loss of medical equipment, water leaks, severe damage to staff housing.	Emergency and out-patient surgeries resumed; lab services outsourced to Noel Holmes Hospital

Note: Table reflects initial findings from available reports; comprehensive health-facility assessments are still underway.

Source: Pan American Health Organization. Hurricane Melissa – Jamaica, Situation Report #12, 7 November 2025. Kingston: PAHO; 2025. Available from: <https://www.paho.org/en/documents/situation-report-12-jamaica-hurricane-melissa-7-november-2025> and Pan American Health Organization. Hurricane Melissa – Jamaica, Situation Report #13, 11 November 2025. Kingston: PAHO; 2025. Available from: <https://www.paho.org/en/documents/situation-report-no-13-jamaica-hurricane-melissa-8-10-november-2025>

**Map 6: Damage to health facilities and emergency hospitals in Jamaica as of 11 November 2025.**

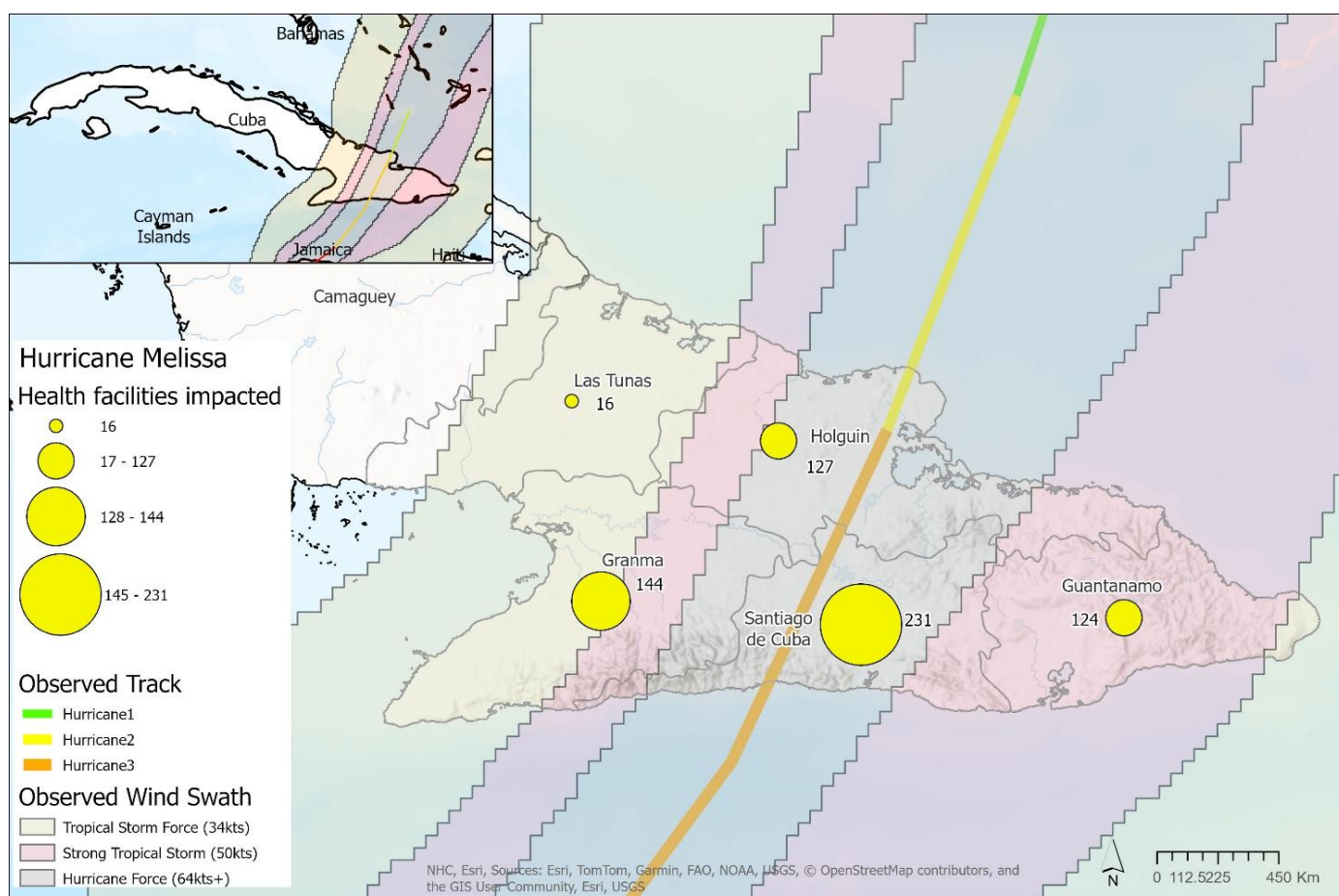




## Cuba (145,146)

A total of 642 healthcare facilities sustained damage from Hurricane Melissa (*Table 5*), in Santiago de Cuba (n= 231), Granma (n= 144), Holguín (n= 127), Guantánamo (n= 124), and Las Tunas (n= 16), including leaks, partial or total collapse of structures and access roads, loss of medical supplies, and damage to roofs, walls, windows, lights, telephone and electrical cables, hydraulic tanks and installations, and medical equipment. Among the affected facilities, the Juan Bruno Zayas Alfonso Hospital in Santiago de Cuba, responsible for providing critical maternal, emergency, and dialysis care, reported significant structural damage. As of 12 November, 152 of the 642 damaged healthcare facilities have been rehabilitated.

**Map 7. Damage to health facilities in Cuba by province, as of 11 November 2025**



The designations employed and the presentation of the material in these maps do not imply the expression of any opinion whatsoever on the part of the Secretariat of the Pan American Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Map production: PAHO Health Emergencies Department, Health Emergency Information and Risk Assessment Unit, GIS Team.

Sources: Hurricane historical track: NOAA, Facilities affected: Cuba MINSAP

**Table 5. Health Facility Damage from Hurricane Melissa in the Five Affected Provinces, as of 12 November 2025**

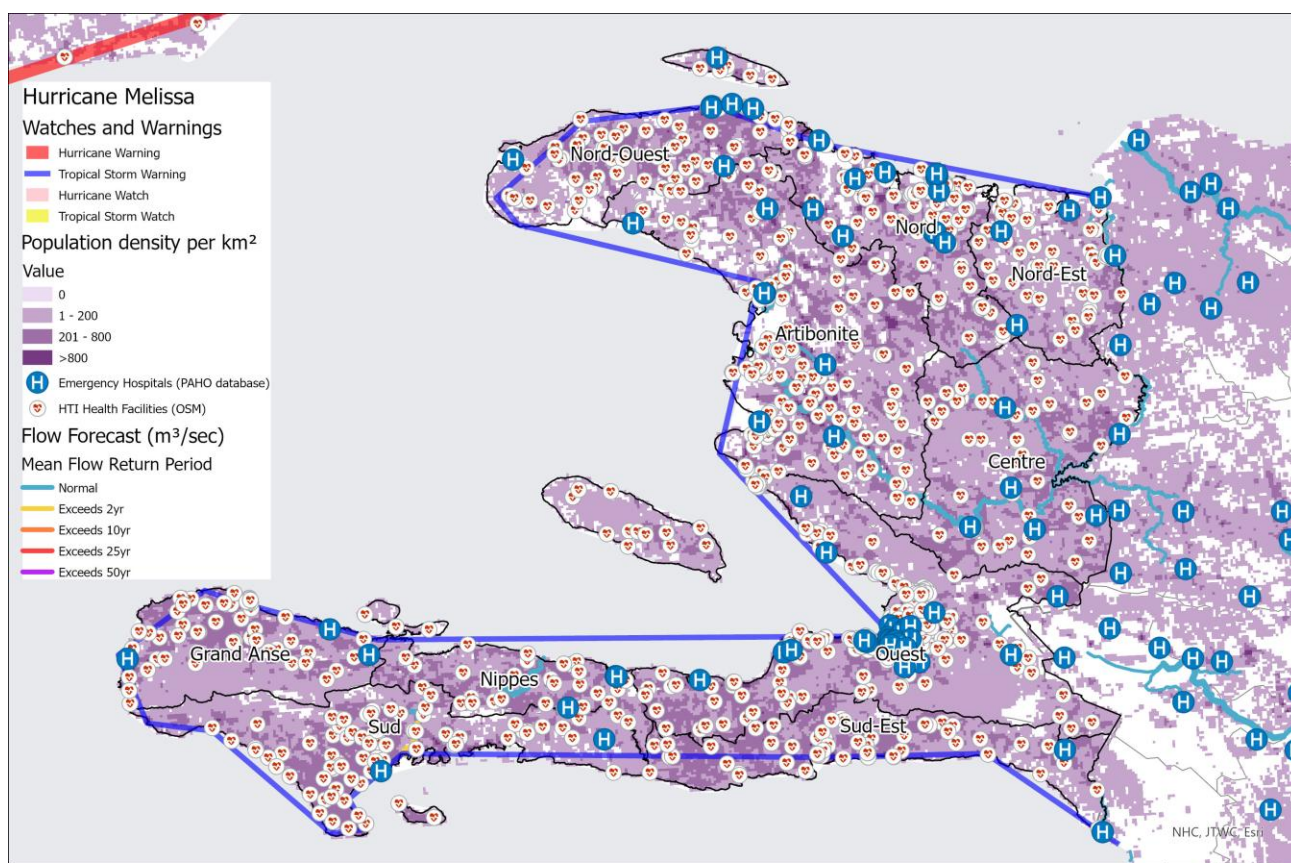
Health Facility	Las Tunas	Holguín	Granma	Santiago de Cuba	Guantánamo	Total
Hospitals	3	10	8	16	4	41
Polyclinics	1	23	16	31	8	79
Primary care offices	2	56	72	70	63	263
Pharmacies	7	7	13	44	14	85
Social services	1	13	12	29	12	67
Other	2	18	23	41	23	107
<b>Total</b>	<b>16</b>	<b>127</b>	<b>144</b>	<b>231</b>	<b>124</b>	<b>642</b>
<b>Rehabilitated</b>	<b>10</b>	<b>54</b>	<b>41</b>	<b>15</b>	<b>32</b>	<b>152</b>

Source: Pan American Health Organization. Hurricane Melissa, Regional IMST Meeting, 12 November 2025. Washington, DC: PAHO; 2025. Unpublished.

## Haiti (20,23)

As of 30 October 2025, 10 health facilities had been affected by heavy rains and flooding across Haiti. In the Sud department, 4 of the 28 health facilities contacted reported roof leaks and water infiltration, resulting in the loss of medicines and medical supplies. Minor damage was also reported at hospitals in Les Cayes in Sud department. In the Sud-Est department, 3 of the 28 facilities assessed by PAHO health teams reported minor ceiling damage, though without major structural impact. In Jérémie (Grand'Anse department) and Port-de-Paix (Nord-Ouest department), hospitals sustained minor damage as of 3 November. In the Artibonite department, ongoing insecurity and gang control continue to hamper assessment and access to several areas. No damage has been reported in Nippes department.

**Map 8. Health facilities, emergency hospitals, and population density in Haiti by department**

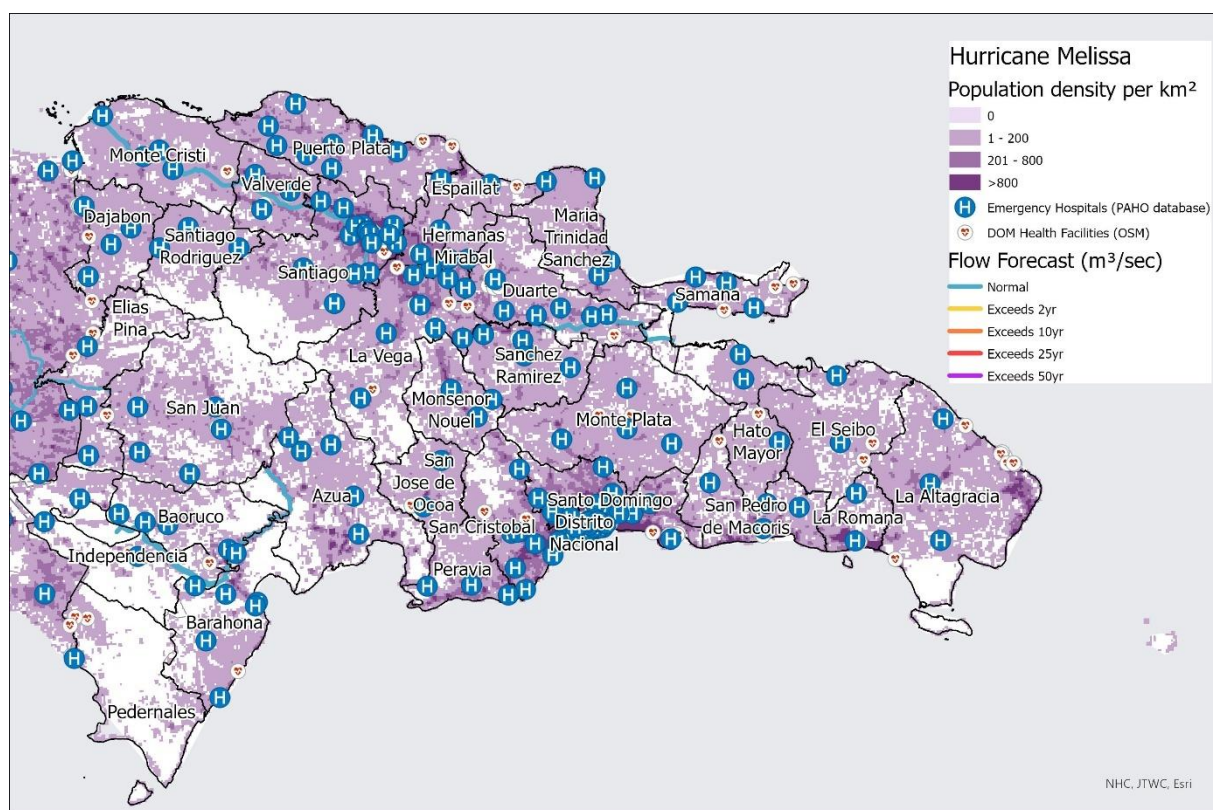




## Dominican Republic (the) (24)

As of 29 October 2025, a total of 13 health facilities across eight provinces and the National District reported minor damage caused by power outages, roof leaks, limited access, and partial flooding. Affected areas include Monte Plata, Santo Domingo, Barahona, San Pedro de Macorís, San José de Ocoa, Peravia, La Vega, and Elías Piña. The Hospital Municipal Dr. Pedro Antonio Céspedes in La Vega reported structural damage in the vaccination area, including the collapse of part of the ceiling and a lateral wall. Partial flooding and roof leaks were recorded at Hospital Municipal El Almirante (Santo Domingo Este), Hospital Regional Dr. Antonio Musa, and Hospital Dr. Jaime Oliver Pino (San Pedro de Macorís). In San José de Ocoa and Monte Plata, flooding and road obstructions temporarily disrupted access to Hospital Provincial San José de Ocoa and the CPN La Guásima, respectively.

**Map 9. Health facilities, emergency hospitals, and population density in the Dominican Republic by province**



## HEALTH RESPONSE

### Country Response

<b>Jamaica</b> (7)	<ul style="list-style-type: none"> <li>• The National Emergency Operations Center (NEOC) was activated on 25 October 2025 and remains at Level 3 status.</li> <li>• All government ministries, departments, and agencies have been deployed in the field to collect data and inform preparedness and upcoming response activities.</li> <li>• The Environmental Health Team is targeting 5 critical areas in response to threats from hurricane impact: food safety, general sanitation, water quality, shelter, and vector control.</li> <li>• The Mental Health team leads have submitted a needs assessment, and a technical working group has been planned to take place during the week. JAMPSYCH (Jamaica Psychologists) and the JPA (Jamaica Psychiatric Association) are approached to provide care to healthcare workers and provide specialist services.</li> <li>• Municipal Corporations and the National Works Agency have been mobilized to respond to impacted areas.</li> <li>• National Laboratory Services are fully operational, with the necessary staff, supplies, and power backup to provide uninterrupted lab services.</li> </ul>
<b>Haiti</b> (20,147–149)	<ul style="list-style-type: none"> <li>• The crisis cell of the Ministry of Public Health and Population (MSPP) was activated to coordinate the national health response.</li> <li>• A high-level emergency meeting was held on 29 October with members of the Government, the Transitional Presidential Council (CPT), the General Directorate of Civil Protection (DGPC), and the Haitian National Police (PNH) to strengthen inter-ministerial coordination and ensure a unified national response.</li> <li>• The National Committee for Risk and Disaster Management remains in permanent session, coordinating actions among ministries in collaboration with local authorities, the Haitian Red Cross, and humanitarian partners.</li> <li>• The Haiti Ministry of Public Health and Population (MSPP) has requested PAHO's support to preposition medical and WaSH supplies for the response to cholera in all departments affected by Hurricane Melissa in case of a resurgence of cases due to the floods.</li> <li>• The MSPP prepositioned kits of medicines and health supplies in the Ouest Department for immediate deployment to affected areas.</li> </ul>
<b>Cuba</b> (12–15)	<ul style="list-style-type: none"> <li>• The Minister of Public Health called for a detailed survey of the damage to healthcare infrastructure, services, and resources caused by Hurricane Melissa.</li> <li>• The MINSAP activated medical brigades and deployed teams to affected areas.</li> <li>• The MINSAP has established brigades of mental health experts to provide psychological support to affected families.</li> <li>• Damage assessments of affected areas being conducted by Provincial and National Defense Councils.</li> <li>• Specialized rescue teams carried out more than 400 rescue operations using helicopters, amphibious transporters, and tractor-trailers, rescuing approximately 4,000 people from isolated areas and flood zones.</li> <li>• National response efforts are focused on restoring access to water, electricity, and telecommunication services.</li> </ul>



- National authorities are procuring fuel for resource distribution and distributing food and hygiene kits to affected individuals.
- More than 2,500 brigades of electrical and telecommunication workers were deployed to affected areas and water pumping stations and micro power generation have been established to power hospitals and evacuation centers.
- The national transportation system is being leveraged to support recovery efforts by transporting brigades and resources.
- Cuba announced support for families whose homes were damaged by Hurricane Melissa, in the form of subsidies and bank loans for low-income households, and financing of 50% of the cost of materials for re-construction.

**Dominican  
Republic (the)**  
(24)

- Ministry of Public Health and Social Assistance pre-positioned health and hygiene kits, chlorine tablets, and infection-prevention supplies for potential deployment to the most affected provinces.
- The Emergency Operations Center (COE) coordinated with the Ministry of Public Health (MSP) to lead and coordinate the national emergency response, including activating provincial COE-Salud centers.
- Hospital emergency plans had been activated for health facilities located in provinces under alert.
- The Health Emergency and Damage Assessment Teams (EDAN-Salud) the Rapid Response Teams (ERR) were carrying out health evaluations and data collection in affected areas
- teams from the Servicio Nacional de Salud (SNS) had been deployed to five shelters to conduct medical evaluations, distribute hygiene kits, and chlorinate water.
- Water, Sanitation, and Hygiene (WASH) groups were coordinating water quality surveillance and chlorination in affected communities.
- The Provincial and Area Health Directorates (DPS/DAS) were conducting vector control, zoonosis, and waste-removal activities, and installing chlorinated water storage tanks at border crossings in Elías Piña to ensure safe access to water and reduce vector-borne disease risks.
- Epidemiological surveillance is ongoing nationwide, with a focus on waterborne, respiratory, and zoonotic diseases.
- The Ministry of Defense had deployed units to support evacuation and rescue operations.
- National and municipal brigades were working to clear debris and reestablish road access to isolated communities.
- National officials from INAPA, CAASD, and PROPEEP, and the Dominican Red Cross were distributing water, food, and hygiene supplies to affected families.

**Bahamas (the)**  
(29)

- Rapid Assessment teams have been continuing to carry out damage and sectoral assessments, which were anticipated to be completed by 4 November.
- As of 31 October, Utility companies were mobilized to restore power, water and telecommunications across the islands.
- As of 31 October, minor roof damage and ongoing distribution of tarpaulins and emergency supplies to affected households in the Acklins Islands, Inagua, Exuma, San Salvador, Ragged Island, Crooked Island and Rum Cays were taking place .

## PAHO/WHO Response (3)

### Coordination

<b>Jamaica</b>	<ul style="list-style-type: none"> <li>Activated the PAHO Jamaica Country Office EOC and Incident Management System on 26 October 2025 and remains active since.</li> <li>Providing technical guidance to the MoHW; maintaining dialogue with the HDC and technical support in critical areas including surveillance, vector control, and continuity of health services</li> <li>Co-lead of the Health Cluster with MoHW: Health sector coordination meeting was held with 48 persons in person and over 40 persons online. A Microsoft form was shared to collect information on the different partners, their capabilities and what support that is being offered. The 4W form was also shared and its currently being used to gather data.</li> <li>Deployment of PAHO's Regional Response Team Experts to the Jamaica Country Office to support areas, including health services, WASH, mental health and psychosocial support (MHPSS), structural engineering, EMT Coordination, Health Cluster and HEOC Coordination, Information Management, Logistics and Environmental Health.</li> <li>PAHO continues to support the MoHW with the deployment of Emergency Medical Teams (EMT): <ul style="list-style-type: none"> <li>MoH has established the CICOM within the EOC to support the request, offers and deployment of emergency medical teams.</li> <li>Samaritan's Purse (US) has deployed a Type 2 facility at Black River Hospital and providing surgical and inpatient care since November 5.</li> <li>Spanish Cooperation is also deploying an EMT Type 2 at Falmouth and is expected to be fully operational next November 8.</li> <li>As of now, 21 emergency medical teams from 14 organizations have confirmed their readiness and availability to support the response to Hurricane Melissa.</li> </ul> </li> <li>PAHO is represented at UN meetings, including the United Nations Emergency Technical Team (UNETT) which is held every other day.</li> <li>PAHO is represented at the Caribbean Development Partner Group – Disaster management meetings.</li> </ul>
<b>Haiti</b>	<ul style="list-style-type: none"> <li>PAHO/WHO remains in direct and constant contact with MSPP and health facilities across affected departments to monitor service continuity and infrastructure conditions.</li> <li>The health cluster was convened with key partners to organize the health response.</li> <li>Joint MSPP-PAHO completion of preparedness checklists prior to the storm ensured continuity of essential health services.</li> <li>A rapid assessment of internally displaced persons (IDP) sites in Ouest Department was done jointly by PAHO, Health Directorate of Ouest department (DSO), Directorate of Epidemiology, Laboratories and Research (DELR), and the International Organization for Migration (IOM).</li> </ul>
<b>Dominican Republic (the)</b>	<ul style="list-style-type: none"> <li>The PAHO/WHO Country Office in the Dominican Republic worked closely with the Ministry of Public Health (MSP) and the Emergency Operations Center (COE) to</li> </ul>

monitor the health situation and align the response with national emergency operations.

- PAHO/WHO continues to participate in the United Nations Emergency Technical Team (UNETE) and contributes to joint situation analysis and coordination with other UN agencies.
- PAHO/WHO Country Office continues to work closely with the Ministry of Public Health (MSP) and the Emergency Operations Center (COE) to monitor the impact of rain-producing weather front that keep affecting multiple areas of the country.
- Technical cooperation focuses on epidemiological surveillance, WASH interventions, and health facility readiness, with continuous support to the MSP in assessing water quality, disease surveillance, and risk communication and community outreach.

## Healthcare

### Jamaica

- Structural engineering support, assisting with rapid damage assessments of health facilities; plan of action for damage assessments islandwide is being prepared in collaboration with MoHW and will include health facilities.
- PAHO delivered 5.5 tons of supplies, including Interagency Emergency Health Kit (IEHK), Non-communicable disease Kit (NCDK) capable of reaching 20,000 people over 3 months, a trauma kit for 100 interventions, generators, and medical backpacks.
- In coordination with the Royal Netherlands Navy, the PAHO Subregional Office in Barbados was able to send additional support and supplies including, water analysis kits, first responder backpacks, and other key emergency response supplies.

### Haiti

- Field teams are visiting shelters to assess needs and conducting rapid assessments in health facilities in all departments.
- About 2 tons of medical supplies were delivered to the Health Directorate with the support of ECHO and IMANA to support health facilities in all departments.
- Prepositioned emergency kits at PROMESS (Tabarre), including two Interagency Emergency Health Kits (IEHK), one trauma kit, and one cyclone kit, capable of reaching 11,100 people.
- PAHO deployed kit of medicines and medical supplies to Notre Dame Hospital in Petit-Goâve (Ouest Department) to support response to people wounded.
- PAHO is replenishing the medical kits and other key supplies that have been essential to restore immediate medical services due to the sudden surge in demand.

### Cuba

- Airlifted 2.6 tons of medical supplies, including emergency health kits –with medicines, medical and surgical supplies, enough to treat 5,000 people for three months–, 42,000 chlorine tablets to purify ~ eight million liters of water, generators, emergency backpacks, and water tanks to Cuba.
- Technical support ongoing for situation analysis and identification of response priorities, including a technical mission assessment of clinical management, vector control, epidemiology, and laboratory services, as deemed necessary by MINSAP.

- Support in identifying a list of critical supplies for vector control (insecticides and fumigation equipment) and for the care of Chikungunya and dengue patients, focusing on the prevention of severe cases and deaths from these diseases (medicines for severely ill patients, sphygmomanometers, and others).
- Support for the development of a national proposal for the mobilization of resources for the response to arboviruses.

## Surveillance

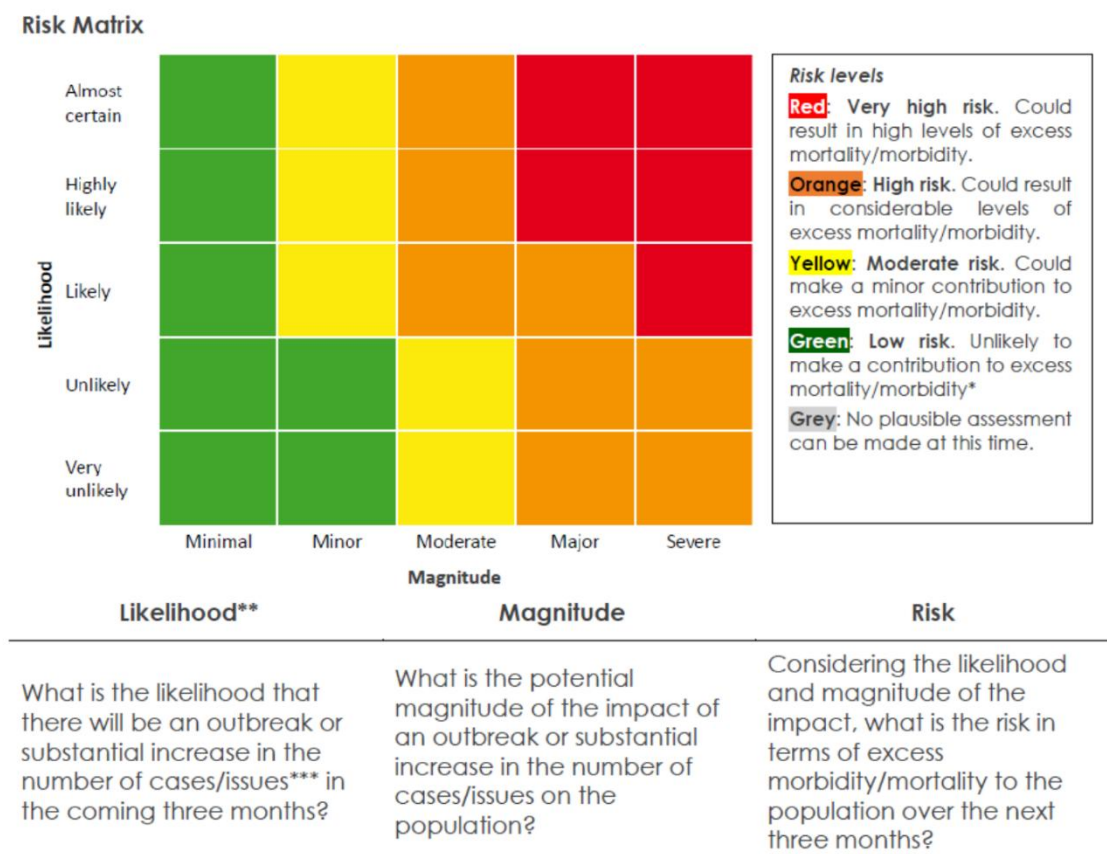
<i>Jamaica</i>	<ul style="list-style-type: none"> <li>• Critical laboratory supplies have been identified for purchase to support testing for waterborne diseases (including cholera), respiratory illnesses, and arboviral infections.</li> </ul>
<i>Haiti</i>	<ul style="list-style-type: none"> <li>• Surveillance is ongoing for waterborne diseases including cholera for populations in shelters and affected communities.</li> <li>• Coordination is ongoing to address health priorities in shelters, following reports of diarrhea cases in Grand'Anse.</li> <li>• Field assessment was conducted 28 October in four temporary shelters in Jeremie (Grand'Anse Department).</li> </ul>
<i>Cuba</i>	<ul style="list-style-type: none"> <li>• Indicator and event-based disease surveillance are ongoing.</li> </ul>

## WASH and communities

<i>Jamaica</i>	<ul style="list-style-type: none"> <li>• WASH assessments have been carried out at Falmouth Hospital, Cornwall Regional Hospital, Santa Cruz Heath Center and at Black River Hospitals to evaluate water availability, access, and the condition of water and sanitation infrastructure. The PAHO team is planning to conduct similar assessments in other healthcare facilities in the coming week, focusing on the most affected areas and the SMART Health Care Facilities.</li> </ul>
<i>Haiti</i>	<ul style="list-style-type: none"> <li>• Medical and WASH supplies for treatment of cholera are to be deployed to strengthen capacity in all departments</li> <li>• PAHO has water evacuation pumps ready to clear flooded health facilities if needed</li> <li>• IDPs are being sensitized for cholera awareness and prevention messages are being distributed</li> </ul>

## Appendix 1. Risk Assessment Methodology

Figure 5. Risk matrix for assessing the likelihood and potential magnitude of health impact



**Source:** World Health Organization. Public Health Information Services. Geneva: WHO; 2018. Available from: <https://healthcluster.who.int/publications/m/item/public-health-situation-analysis-standard-operating-procedures>



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