



# Haiti 4 Octobre 2024

#### Type of emergency



Conflict



Displacement



Food security



**Epidemics** 



Water, Sanitation and Hygiene (WASH)

#### Main health threats

- Violence and Gender-based Violence
- Food insecurity and malnutrition
- Water, Sanitation and Hygiene
- Mental health and psychosocial support
- Cholera
- Vaccination Coverage
- Influenza and COVID-19
- HIV and TB
- NCDs and cancer
- Anthrax
- Diphtheria
- Human rabies transmitted by dogs
- Environmental Determinants: climate change and health

### Internal PAHO/WHO Grading under Emergency Response Framework (ERF)

Haiti Humanitarian Crisis – Grade 3

Haiti Cholera Outbreak – Grade 3

# 1. Situation Summary

Since the beginning of 2023, the humanitarian crisis in Haiti has escalated significantly, with the situation further deteriorating in 2024 due to intensified gang violence and the near collapse of state institutions (1–4). On 27 September 2024, the Office of the United Nations High Commissioner for Human Rights (OHCHR) warned that at least 3,661 people were killed since January 2024 in Haiti, pointing to the lack of equipment and personnel in the multinational police mission. These are "the highest levels of violence observed since 2023," emphasized the United Nations (UN) High Commissioner for Human Rights, Volker Türk (5). The overall situation remains critical, with substantial damage to social infrastructure in Port-au-Prince including the vandalism or looting of approximately 450 public buildings, homes, and businesses (6).

The violence has also led to widespread displacement, according to Round 8 of Displacement Tracking Matrix (DTM), which took place from 1 August to 4 September 2024, there are nearly 702,973 internally displaced persons (IDPs) in Haiti, almost 22% more than in Round 7. The armed attacks in the municipality of Gressier and Ganthier (Ouest department) are the main reason for this increase (7).

Furthermore, there has been a significant and continuous increase in reported gender-based violence (GBV) cases throughout the country (8,9). Between January and May 2024, 3,949 incidents of GBV were reported in Haiti, with 72% involving sexual violence, according to the GBV Sub-Cluster. Most reported incidents occurred in the Ouest (70%) and Artibonite (26%) departments, with survivors being women (75%) and girls (20%). A large portion of survivors (61%) are IDPs, and 66% of these acts were committed by armed gang members (8).

The ongoing security crisis and displacements of population have severely compromised access to healthcare (10–12). According to the UN, two out of every five Haitians urgently need medical care. Many health facilities are either closed or operating at reduced capacity due to shortages of medicine and supplies. Some structures have been looted. In the Ouest department, 40% of healthcare institutions are closed, 33% are partially operational, and only 42% are functioning normally (13).

Despite the many challenges, PAHO and its partners continue to support the Ministry of Public Health and Population (MSPP) to face the ongoing crisis affecting the health sector.

### 2. Situation in Numbers - 1 January - 30 June 2024 (18)

Deaths

**†X** 2,652

Injured



Kidnapped



### 3. Violence

Haiti's complex crisis has been exacerbated by the rapid deterioration of the geopolitical and socio-economic context, which has resulted in widespread violence and increased humanitarian needs (14).

#### **Gang Violence in Port-au-Prince**

The Metropolitan Area of Port-au-Prince (MAPAP) has been one of the most affected areas by gang violence, with almost half of the country's 300 gangs concentrated in this region (**Map 1**) (1,6). According to a UN Security Council briefing by the Head of the UN Integrated Office in Haiti, 80% of Port-Au-Prince is controlled by gangs whose violence is expanding into the Artibonite department (15). The security situation in this area has resulted in civil unrest, kidnappings, sexual violence, restriction of movement, destruction of property, shootings, and armed clashes between rival gangs and Haitian National Police. Some neighbourhoods that are clashing points for gangs, such as Cité Soleil, Tabarre and Carrefour-Feuilles, have been particularly affected (14,16,17).



Map 1: Map of zones of gang violence in Haiti, 2024

Source: United Nations Department of Safety and Security. Geneva: UNDSS; 2024. Unpublished.

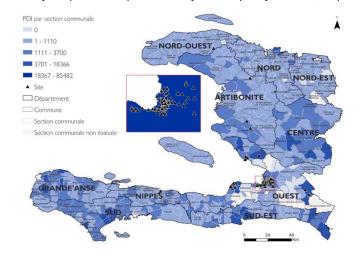
According to an OHCHR report published on 27 September 2024, between 1 January and 30 June 2024, gang violence in Haiti resulted in at least 2,652 deaths (2,221 men, 363 women, 52 boys and 16 girls) and 1,280 injuries (920 men, 295 women, 47 boys and 16 girls). Moreover, at least 893 individuals (508 men, 360 women, 13 boys and 12 girls) had been kidnapped and held for ransom by gangs. Over 91% of the killings and injuries were reported in the Ouest department, and almost 6% in the Artibonite department, while 35% of kidnappings took place in the Ouest department and 65% in the Artibonite department (18).

Latest figures, indicate that the number of people killed has risen to at least 3,661 people in 2024, representing the highest level of violence observed since 2023 (5).

Gang controlled areas trapped in violence have experienced severe deprivation of necessities such as drinking water, food, first aid and education (14). According to the International Organization for Migration (IOM), by September 2024 this situation displaced approximately 702,973 people, with 98% of displacements attributed to violence (**Map 1**). This marks a nearly 22% increase since June 2024 mainly due to the deterioration of the security situation observed in MAPAP between the end of February and August 2024. Many fled the capital to seek refuge in provinces, with the Grand Sud (Nippes, Sud, Sud-Est and Grand' Anse) experiencing the largest increase with a 130% rise in IDPs compared to March 2024. While 80% of IDPs nationally are hosted by families, 63% of those in MAPAP live in sites (7,19).

In addition, despite the deteriorating security situation, nearly 17,300 Haitian migrants were forcibly returned from neighbouring countries in July 2024 (20). At the same time, legal emigration out of Haiti via humanitarian visas and programs is made extremely difficult by the complicated process of obtaining a passport which can take from months to a year (4).

According to the DTM Round 8 (**Map 2**), the municipality of Ganthier has been increasingly affected by armed attacks in recent weeks, the most significant in July and August 2024, leading to the displacement of nearly 6,000 people who took refuge in the same 3rd communal section of Fonds Parisien which has become an important host location for persons displaced in the municipality of Ganthier (7).



Map 2: Internally Displaced Populations by municipality section, September 2024

**Source:** International Organization for Migration. Displacement situation in Haiti – Round 8. September 2024. Geneva: IOM; 2024. Available from: <a href="https://dtm.iom.int/reports/haiti-report-internal-displacement-situation-haiti-round-8-september-2024?close=true">https://dtm.iom.int/reports/haiti-report-internal-displacement-situation-haiti-round-8-september-2024?close=true</a>

**Vulnerable Groups and Gender-Based Violence (GBV).** Women, children, and other vulnerable groups are disproportionately affected by the ongoing violence. Many have limited access to health and water, sanitation, and hygiene (WASH) services. Pregnant women often give birth in unsafe conditions in makeshift displacement sites, and children under age 15 make up many of the cholera cases reported (1,14). Additionally, adolescents and young people have become frequent targets for gang recruitment, where they are coerced into serving as lookouts or spies and are used to facilitate kidnappings and robberies. Those who attempt to leave the gangs often face retaliation, either from the gangs or from their communities, reducing any chances of rehabilitation (2).

Women and children also make up a large portion of Haiti's internally displaced population, with over 54% of IDPs being women (both adults and minors), and 52% being children by June 2024. Among those living in displacement camps, children account for 38%, highlighting their vulnerability in these precarious living conditions (19).

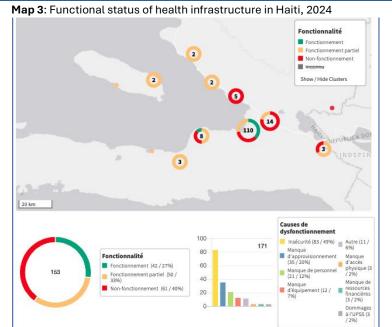
GBV has reached alarming levels, with rape used in some areas as a weapon of war to terrorize and control communities (21). A report by OHCHR and the United Nations Integrated Office in Haiti (BINUH), documented how gangs have used rape and other forms of sexual violence in their quest for power and to sow fear in communities (1,14,22). A study conducted by Global Initiative Against Transnational Organized Crime and UN WOMEN in Cité Soleil, found that 80% of women and girls in Cité Soleil have experienced some form of GBV, and 43% reported sexual violence by one or more perpetrators (23). In 2024, protection services for survivors have been limited, with many organizations reducing operations or closing due to insecurity (24). From January to May 2024, 3,949 GBV incidents were reported, 72% involving sexual violence. Reports of GBV increased fivefold in March 2024 compared to earlier in the year and continued to rise by 40% through May. Most incidents occurred in the Ouest (70%) and Artibonite (26%) departments, with 66% of the perpetrators identified as armed gang members. Most survivors are women (75%) and girls (20%), with 61% being IDPs (8,25).

Quantifying the extent of GBV in Haiti is extremely difficult, with reported figures likely being significant underestimates. Survivors are often forced into silence due to fear of stigma from the police and society, impunity for perpetrators, and fear of retaliation. The absence of a standardized system for documenting GBV cases, coupled with widespread underreporting, renders available data incomplete and unreliable. Access to GBV services in gang-controlled areas remains a major challenge, with humanitarian organizations facing difficulties in reaching affected communities. Many local and international groups have had to reduce operations, close facilities, or deal with disrupted access, thus worsening the situation for survivors in need of support (12,26).

### 4. Local health system disruptions

The already limited access to healthcare in Haiti has worsened due to the rise in violence linked to gang activities. By April 2023, the Haitian Ministry of Public Health and Population (MSPP as per its acronym in French) reported that 21% of communal sections did not have any healthcare facilities and nearly half of the hospitals in the Metropolitan Area of Port-au-Prince (MAPAP) were in areas under gang control or influence which put both medical staff and patients at great risk (12).

With a national ratio of 6.4 health professionals (doctors, nurses, and midwives) per 10,000 population, very far from the threshold of 44.5 per 10,000 required to achieve the Sustainable Development Goals, it can be argued that this number is underestimated considering the important brain drain affecting the health sector (12). By the end of 2023, nearly 40% of medical staff were estimated to have left Haiti due to insecurity (2).



**Source:** Pan American Health Organization / World Health Organization Haiti Country Office. 27 September 2024. Port-au-Prince; 2024. Unpublished

In early 2024, gang violence intensified, leading to frequent and violent attacks on health facilities. Many were stripped of essential equipment, medicine and even ambulances. By 27 September 2024, most hospitals or health centres (73%) in the Ouest department either ceased operations or provided only basic and limited services (Map 3) (27,28).

By September 2024, 27% of facilities providing beds remain shut down (29). Despite these challenges, the

healthcare system continued to function at a reduced capacity, with facilities like the Hôpital Universitaire la Paix in Port-au-Prince still providing critical emergency care with PAHO/WHO support. The resumption of airport operations has been a positive step in restocking essential medicines and medical supplies (11).

Until September 2024, nine out of 40 HIV and tuberculosis treatment sites in six communes of Port-au-Prince, (Maternité Isaie Jeanty, Hôpital Universitaire de Pneumologie, Sanatorium de Port-au-Prince, and Nos Petits Frères et Sœurs Paediatric Hospital in Tabarre) remain closed. Among the remaining operational HIV/TB sites, two have run out of anti-tuberculosis drugs, one is out of HIV tests, and six are out of HIV self-tests. Only one site is nearing a critical shortage of HIV treatment drugs. More than 35,000 patients receiving antiretroviral treatment for HIV live in the affected areas (6).

Operational health facilities, both public and private, are struggling to remain open due to the departure of qualified staff and the rising of operational costs linked to the increase in the prices of fuel and other essential supplies (30,31). The lack of access to healthcare, combined with the increasing violence, is aggravating the humanitarian crisis in Haiti, putting the most vulnerable members of the population at greater risk.

### 5. Health Status and Threats

#### Legend

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.

Public Health Threat	Likelihood	Public Health Consequences	Level of Risk	Rationale
Violence	Almost certain	Major	Very High	Haiti's crisis has worsened due to the rapid deterioration of its geopolitical and socio-economic conditions, leading to widespread violence and heightened humanitarian needs (32). Gang violence is particularly concentrated in MAPAP, with almost half of the country's 300 gangs concentrated in this region (33,34). Between January and June 2024, gang violence in Haiti resulted in at least 2,652 deaths and 1,280 injuries. Moreover, at least 893 individuals had been kidnapped and held for ransom by gangs (18). Latest figures, indicate that the number of people killed has risen to at least 3,661 people in 2024, representing the highest level of violence observed since 2023 (5). According to IOM, by September 2024 this situation displaced approximately 702,973 people, with 98% of displacements attributed to violence. This marks a nearly 22% increase since June 2024 mainly due to the deterioration of the security situation observed in MAPAP between the end of February and August 2024 (7).

		I		
Gender-based violence	Almost certain	Major	Very High	GBV in Haiti has reached alarming levels, with rape used by gangs to terrorize and control communities (21). A study in Cité Soleil found that 80% of women and girls there experienced some form of GBV, with 43% reporting sexual violence by one or more perpetrators (23). From January to May 2024, 3,949 GBV incidents were reported, 72% involving sexual violence. Reports of GBV increased fivefold in March 2024 compared to earlier in the year and continued to rise by 40% through May. Most incidents occurred in the Ouest (70%) and Artibonite (26%) departments, with 66% of the perpetrators identified as armed gang members. Most survivors are women (75%) and girls (20%), with 61% being IDPs (8,25).
Water, Sanitation, and Hygiene	Almost certain	Major	Very High	In terms of water and sanitation infrastructure, Haiti is the most underserved country in the Americas (35). The situation became even more critical after the 2010 earthquake destroyed much of the existing infrastructure. In 2022, 67% of the total population had access to basic water supply service, but there is no evidence that it is of good quality. 61% do not have access to improved latrines (36). Access to safe water remains a challenge and a major cause of the spread of cholera.
Food Insecurity and Malnutrition	Almost certain	Major	Very High	Nearly half of the population (48 %) are facing high levels of acute food insecurity, classified in crisis or worse conditions (IPC Phase 3 or above) between August 2024 and February 2025. This includes, 6,000 people experiencing catastrophic levels of hunger and a collapse of their livelihoods, classified in IPC Phase 5 (Catastrophe). In addition, 2 million people (18 percent of the population analysed) are facing critical levels of acute food insecurity classified as IPC phase 4 (Emergency), in the meantime 3.4 million people face crisis levels of acute food insecurity, classified as IPC Phase 3 (Crisis) (37). Malnutrition among children younger than 5 years is worsening, with the prevalence of acute malnutrition rising to 7% nationally and 9% in conflict-affected areas since 2020. The national prevalence of stunting (or chronic malnutrition) has remained stable around 23% (38). Child health has also deteriorated, with malnourished children under five admitted to treatment increasing fourfold from 2020 to 2022 (26). In 2024, mobile clinics in IDP sites continue to identify severe and moderate malnutrition cases (39).

Mental health and psychosocial support	Almost certain	Major	Very High	There is very little available information on the impact on mental health of the current violence suffered by the country. Past crises such as the COVID-19 pandemic, food insecurity, and the past earthquake could be potential factors for an increase in the prevalence of mental conditions. According to a recent assessment done by the International Organization for Migration (IOM), of the suicidal behavior among internally displaced persons (IDPs), situations causing the forced migration to IDP sites by large sections of the population are only the initial causes of anxiety and trauma. Continued life in these sites is also a contributing factor to these stresses, in the form of loneliness, remoteness, lack of basic needs, a loss of dignity, and a complex grieving process for the loss of loved ones during the displacement (40). Haiti has limited personnel working in mental health, with a total of 14 general practitioners, 14 psychiatrists, 2 child psychiatrists, 2 nurses, 160 psychologists, 55 social workers, 3 occupational therapists, and 1 neurologist in the country, with a total of 234 mental health professionals. Haiti has two functioning psychiatric hospitals (41,42).
Cholera	Likely	Moderate	High	Since the resurgence of cholera in Haiti between 2 October 2022 to 31 August 2024, the Haitian MSPP, reported 86,997 suspected cases in all 10 departments of the country, including 4,858 confirmed cases, 84,5325 hospitalized cases, and 1,304 registered deaths. To date, the case fatality rate among suspected cases is 1.5% (43). Since January 2024 the country has reported a decrease in cases in all departments, which suggest that circulation of <i>Vibrio cholerae</i> is falling in all parts of the country (44). Response efforts must be maintained and even stepped up, as the active circulation of the germ and poor WASH conditions mean that new outbreaks could occur at any time, with an increase in the number of cases and deaths. This would take us from "high risk" to "very high risk".
Vaccination	Likely	Moderate	High	Haiti's routine vaccination coverage against vaccine-preventable diseases from January to August 2024 remains subpar – The intensification of the security crisis since the beginning of the year impacted negatively the performance of the routine vaccination program. From January to August 2024, the third dose of the vaccine against diphtheria, tetanus and pertussis (DTP3) decreased from 96% to 83.46%, while coverage with the first dose of the vaccine against measles and rubella decreased also from 94% to 80.59% (45). For both tracker antigens, the recommended target is 95% coverage rate. On the other hand, the surveillance capacity of the polio outbreak remains low with AFP detection rate reported at 0.26 which remains below the threshold of 1 AFP case per 100,000 children younger than 15 years. Haiti did not introduce the second dose of IPV vaccine to extend the protection against all 3 types of polioviruses and the country did not update its polio outbreak preparedness and response plan. Haiti remains at very high risk of an outbreak in the event of an importation of wild poliovirus 1 (WPV1) or circulating vaccine-derived poliovirus (cVDPV) (46).

NCDs and cancer	Likely	Moderate	High	The most prevalent conditions are cardiovascular diseases, diabetes, and chronic respiratory diseases (47,48). In the region of the Americas, Haiti is the country with the highest age-standardized death rate by non-communicable diseases, as well as the highest disability-adjusted life years (DALYs) and years of life lost (YLLs) due to premature mortality caused by this type of diseases (48).
HIV, tuberculosis, and other chronic infections	Likely	Moderate	High	In 2023, Haiti alone accounted for more than one third (38%) of new HIV infections in the region (49). According to UNAIDS data, in 2022, there were an estimated 140,000 people living with HIV in Haiti (ranging from 130,000 to 160,000). Children represented about 17% of all new infections (50). Haiti has one of the highest incidences of tuberculosis in the Region, the transmission of which continues to be facilitated by housing conditions and overcrowding. In 2022, the overall mortality rate due to tuberculosis (adjusted for age and per 100,000 population) was 9.2 (51).
Human rabies transmitted by dogs and canine rabies	Likely	Moderate	High	In 2022, Haiti presented 12 cases of human rabies caused by dogs, 2 cases in 2023, and 3 cases up to September 2024. 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 (52).
Influenza	Likely	Moderate	Moderate	There has been a rise in reported influenza cases in the last few months, corresponding with the cyclical pattern observed in 2022 and 2023. The number of cases reported each EW remained above epidemic thresholds, with the possible start of another peak at the end of August 2024 (53).
COVID-19	Likely	Moderate	Moderate	Transmission continues in Haiti with daily trends difficult to interpret due to sporadic reporting. As of 29 June 2024, a total of 34,896 cases of COVID-19 have been officially reported in Haiti since the beginning of the epidemic in March 2020. This amounts to 224 new cases for the year 2024. No new COVID-19-related death was reported during this period (54).
Anthrax	Likely	Minor	Moderate	Till end September 2024, 46 probable human cases of anthrax have been reported in the Fort Royal commune of Petit-Goave, Ouest department. 5 cases tested positive for the disease and 3 of them died (29). Previously, the most recent outbreak was reported in 2022, when 192 cases were reported nationwide, with 67 in Grand'Anse (55). The transmission to humans is mostly due to consumption and manipulation of dead animals and is related to food insecurity.
Diphtheria	Likely	Minor	Moderate	The diphtheria outbreak, which began in 2014 due to low vaccination coverage in recent decades, is still ongoing. A total of 1,738 suspected cases, including 461 confirmed and 170 deaths (20% CFR among confirmed cases) have been reported between 2014 and 2023 (56).

The current conditions in Haiti must be considered when analysing the epidemiological situation of each health issue and threat using the available official data. Epidemiological surveillance is hindered due to the complex humanitarian and security crisis, resulting in difficult access to health services and laboratories. Moreover, most of the population in the country is in a highly vulnerable situation related to the limited conditions of generalized access to drinking water, sanitation, and hygiene (WASH).

### 5.1. Food Insecurity

Haiti is facing a worsening humanitarian crisis, with alarming rates of armed gang violence forcing the population to flee their homes in some areas and exposing them to an acute food insecurity. In fact, nearly half of the population (48 %) are facing high levels of acute food insecurity, classified in crisis or worse conditions (IPC Phase 3 or above) between August 2024 and February 2025. This includes, 6,000 people experiencing catastrophic levels of hunger and a collapse of their livelihoods, classified in IPC Phase 5 (Catastrophe). In addition, 2 million people (18% of the population analysed) are facing critical levels of acute food insecurity classified as IPC phase 4 (Emergency), in the meantime 3.4 million people face crisis levels of acute food insecurity, classified as IPC Phase 3 (Crisis) (37).

Figure 1: Current situation of food insecurity in Haiti, 2024

SITUATION ACTUELLE (AOÛT 2024- FÉVRIER 2025)				
	Phase 5	6 000 Catastrophe		
5,41M 48% de la population	Phase 4	<b>2 002 000</b> Urgence		
analysée	Phase 3	3 400 000 Crise		
Personnes en situation d' insécurité alimentaire aiguë élevée (Phase IPC 3 ou +)	Phase 2	3 057 000 Stress		
AYANT BESOIN D'UNE ACTION URGENTE	Phase 1	2 750 000 Sécurité alimentaire		

SITUATION PROJETÉE (MARS - JUIN 2025)				
	Phase 5	6 000 Catastrophe		
5,54M 49% de la population	Phase 4	<b>1 995 000</b> Urgence		
analysée	Phase 3	<b>3 534 000</b> Crise		
Personnes en situation d' insécurité alimentaire aiguë élevée (Phase IPC 3 ou +)	Phase 2	<b>2 974 000</b> Stress		
AYANT BESOIN D'UNE ACTION URGENTE	Phase 1	2 750 000 Sécurité alimentaire		

**Source:** Integrated Food Security Phase Classification. Analyse IPD de l'insécurité alimentaire aigue aout 2024 – juin 2025. Viale delle Terme di Caracalla: IPC; 2024. Available in French from: https://www.ipcinfo.org/fileadmin/user\_upload/ipcinfo/docs/IPC\_Haiti\_Acute\_Food\_Insecurity\_Aug2024\_Jun202\_5\_Report\_French.pdf

According to the above-mentioned data, the situation is not expected to improve from March 2024 to June 2025 as the needs of population will continue to increase. The food insecurity will continue to affect the supply chain and intensifying population displacement. Nearly 2 million people, 17% of the population analysed are projected to be in Phase 4 (37).

The impact of the worsening violence by armed groups on the food distribution/supply chains is largely responsible for the current food insecurity situation. The escalation of violence in Gressier in June 2024, until the IPC classification was achieved in August 2024, with a systematic halt to crossings in certain communes (37).

Key for the Map IPC Acute Food Insecurity Phase Classification (mapped Phase represents highest severity affecting at least 20% of the population) Vord-Ouest HT02 ord-Ouest HT01 2 - Stress Nord-Est HT02 3 - Crisis Nord HT03 Haut Plateau HT03 Zone métropolitaine Artibonite HT01 Ouest\_HT01-La Gor Bas Plateau HT03 -Zone métropolitaine Nippes HT01 **HT07** Nippes-HT07 Sud HT08 Ville des Cayes Est HT01

Map 4: Projection update: acute food insecurity situation. March – June 2024, Haiti

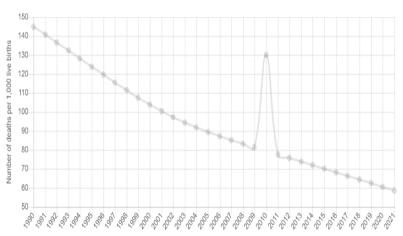
**Source:** The Integrated Food Security Phase Classification. Haiti: IPC Acute Food Insecurity Snapshot. 22 March 2024. Rome: IPC; 2024. Available from:

https://www.ipcinfo.org/fileadmin/user\_upload/ipcinfo/docs/IPC\_Haiti\_Acute\_Food\_Insecurity\_Projection Update Mar Jun2024 Snapshot English.pdf

#### 5.2. Malnutrition and Child Health

Poor nutritional status among children reflects the severity of food insecurity in Haiti. According to the Standardized Monitoring and Assessment of Relief and Transitions (SMART) survey in 2023, there is an upward trend in the prevalence of Global Acute Malnutrition (GAM) in children under 5 years between 2020 and 2023. In 2020, Haiti was identified as the sole priority country in this region, under the Global Action Plan (GAP) on Wasting, a collaborative effort spearheaded by WHO, in partnership with FAO, UNHCR, UNICEF and WFP, aimed at implementing priority action for the prevention and treatment of child wasting. However, the prevalence of acute malnutrition in this age group has increased since 2020 reaching 7%

Figure 2: Trends in under five-year old mortality rate in Haiti



**Source:** United Nations Children's Fund. UNICEF Data: Monitoring the situation of children and women. New York: UNICEF; [unknown date] [cited 8 September 2024]. Available from: https://data.unicef.org/country/hti/

overall, and 9% in conflict-affected areas. The Ouest Department, the district most severely impacted by conflict, has two points higher than the national average. The national prevalence of stunting (or chronic malnutrition) has remained stagnant around 23% (38). Exclusive breastfeeding rates increased from 23% to 40% between 2000 and 2017, the last year for which data is available (46).

According to the July 2024 report by the United Nations Children's Fund (UNICEF), 31,699 children under five years of age were screened for wasting, with 2,589 identified as having severe wasting and 2,753 as having moderate wasting within IDP sites. In Croix-des-Bouquets, 1,045 children were screened, with 44 cases of severe acute malnutrition (SAM) and 64 cases of moderate acute malnutrition (MAM) identified (39). In addition, Médecins du Monde and the Organization of Citizens for Human Rights in Haiti (OCEDH) conducted mobile clinics at various IDP sites in Port-au-Prince, screening 1,150 children under five years old, identifying 13 SAM and 34 MAM cases (57). In Léogâne, 272 children were examined, with 41 found to have SAM (6).

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

Haiti is the most underserved country in the Americas in terms of water and sanitation infrastructure (35). The situation became even more critical after the 2010 earthquake destroyed much of the existing infrastructure. By 2021, 67.4% of the population had access to basic water services, though there is no confirmation of the water's quality. Only 18.9% of the population accessed water through the public network, while others relied on carrying water from other types of improved sources. In rural areas, access to basic water services drops to 42.8% compared to 84.6% in urban areas (36).

Haiti is one of the countries with the least access to sanitation services in the region, with 37.48% of its population having basic sanitation, and 31.46% in rural areas practicing open defecation. Sewage access is almost non- existent, with only 0.6% of the population connected to sewage systems, leaving most relying on improved latrines and septic tanks. Hygiene services are similarly lacking, as only 22.6% have access to basic hygiene service, meaning handwashing facility in the home with soap and water, while 68.8% have a limited hygiene service, meaning they have a handwashing facility without soap or water (36).

Waste management is poorly regulated in Haiti. Waste is managed in some municipalities individually, in a heterogeneous and uncontrolled manner. In urban areas not covered by the National Solid Waste Management Service (SNGRS per its acronym in French) and the municipalities, the garbage collection service is largely provided by informal collectors offering a low-cost service or by organized neighborhoods, in some cases supported by international cooperation. About three-quarters of the municipal waste is formally collected in Port-au-Prince and almost all waste is sent to illegal dumps (rivers, drainage channels) and even near the sea, which generates contamination with plastic and biological waste in surface and subway water sources and the ocean. The increase in garbage is associated with vector-borne diseases and accidents caused by poisoning animals (58).

The persisting practice of open burning of urban solid waste contributes to environmental pollution (air, soil, surface, and groundwater) with PM 2.5, dioxins, furans, microplastics, polyaromatic hydrocarbons, and other toxins (59).

In the absence of adequate response, these conditions could result in severe, life-threatening consequences for the population, with the onset and/or worsening of diseases related to poor water, sanitation, and hygiene, including cholera. The situation is further compounded by displacements due to violence, which are putting at risk the already precarious water, sanitation, and hygiene conditions of IDPs.

#### 5.4. Mental health and psychosocial support

Conflicts, epidemics, socio-environmental disasters and migratory contexts cause severe psychological and social suffering in the short, medium and long term among affected populations. These effects can threaten peace, human rights and development (60). According to the latest WHO World Report on Mental Health, the prevalence of mental disorders in emergency situations is tending to double. Between 15% and 20% of the population will develop mild to moderate mental disorders (e.g. mild to moderate depression and anxiety disorders), compared with a prevalence of 10% before the emergency (61). At the same time, healthcare

systems are weak and ill-prepared to cope with potentially traumatic events; resources are very limited, primary care has a poor problem-solving capacity, and the mental health component is not integrated into the health services network (61).

The 2019 age-standardized suicide mortality rate in Haiti was 11.2 per 100,000 inhabitants, the fifth highest in the region (62). Although many factors contribute to suicide, poor mental health, limited access to and availability of mental health services, and high stigma are the main factors in Haiti.

Statistics from Tél Bleu, a free psychological helpline, indicate an increase in the number of callers in psychological distress in the first half of 2024, from a monthly average of 60 to 200, including internally displaced persons from Port-au-Prince. By September 2024, the psychosocial support provided to displaced persons in Port au Prince by the MSPP, with the support of PAHO, in 10 sites for displaced persons, revealed stress, anxiety and depression in 70% of cases. It should be noted, however, that the country's 2 psychiatric hospitals, based in Port-au-Prince, for the management of complex mental health cases, are in areas that are controlled by gangs (29).

According to a recent assessment by the IOM of suicidal behaviour among IDPs, the situations provoking forced migration to IDP sites by large sections of the population are only the initial causes of anxiety and trauma. Continued life in these sites is also a contributing factor to these stresses, in the form of loneliness, remoteness, lack of basic needs, loss of dignity and a complex mourning process for the loss of loved ones during displacement. In addition, the interactions and behaviours of host communities also affect their quality of life. The report also focuses on the mental health of frontline workers, who are exposed to the distress and uncertainty faced by the populations they serve. The study provides some recommendations for strengthening the capacity of organizations and improving the mental health and psychosocial well-being of people in IDP sites, to reduce the high burden of suicide in these populations (63).

On the other hand, the cholera epidemic (which caused a significant number of illnesses and deaths) aggravated the situation of insecurity and social instability and affected the normal functioning of the community. In such cases, a psychosocial disturbance is often generated, which may exceed the coping capacity of the affected population. The effects on mental health are generally more pronounced in populations living in precarious conditions, with few resources and limited access to health and social services (64).

The increase in gender-based violence is also a contributing factor to the mental health problems experienced by community members. A study carried out in 2022 shows a strong association between sexual violence, mental health problems and substance abuse. In fact, victims of sexual violence were 2.32 times more likely to meet the criteria for post-traumatic stress disorder (PTSD), 2.02 times more likely to suffer from depression and psychological distress, and 1.57 times more likely to abuse substances. The risks were found to be higher among adolescents and young men, perhaps due to the taboo nature of sexual violence experienced by men in the community (65).

Haiti has a limited mental health workforce, with a total of 14 general practitioners, 14 psychiatrists, 2 child psychiatrists, 2 nurses, 160 psychologists, 55 social workers, 3 occupational therapists and 1 neurologist in the country, for a total of 234 mental health professionals. Haiti has two functional psychiatric hospitals (66,67). It should be noted that many of these staff are no longer available.

#### **5.5. Cholera** (43)

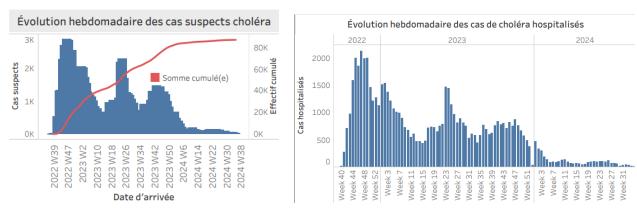
Between October 2010 and February 2019, over 820,000 cases of cholera, including nearly 10,000 deaths, were reported in Haiti. After more than three years with no reported cases of cholera, on 2 October 2022 the national authorities reported two confirmed cases of *Vibrio cholerae* O1 in the greater Port-au-Prince area. The reporting of cholera outbreaks in multiple countries across the world has led the WHO to classify the global resurgence of cholera as a grade 3 emergency (68).

As of 31 August 2024, the Haiti MSPP reported a total of 86,997 suspected cases (**Figure 3**) in all 10 departments of the country, including 4,858 confirmed cases, 84,545 hospitalizations and 1,304 registered deaths. The

Ouest Department continues to report the highest number of cases, with 33.3% of all suspected cases recorded. The municipalities of Port-au-Prince, Cité Soleil, and Carrefour account for 51.7% (n=14,948) of all suspected cases reported in the Ouest Department.

Up to EW 35 of 2024, of the 15,876 samples analyzed by the National Public Health Laboratory (LNSP per its acronym in French), 4,858 were confirmed by culture (30.57% positivity rate). To date, the case fatality rate (CFR) among suspected cases is 1.5% (fatality rate in hospitalized cases is 1.17%).

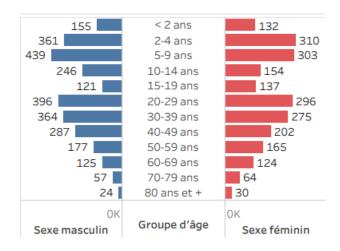
**Figure 3:** Distribution of suspected cases of cholera and the corresponding cholera hospitalizations from 29 September 2022 to 31 August 2024



**Source:** Adapted from Ministère de la Santé Publique et de la Population, Haiti SITREP du choléra pour la 35 eme SE. Haiti. Port-au-Prince: MSPP/DELR: 2024.

Of the total number of confirmed cases, 55.6% are males and about 40% correspond to persons aged 19 years or younger. The most affected age group is 2 to 4 years, followed by 5 to 9 years, and 20 to 29 years (**Figure 4**).

Figure 4: Distribution of confirmed cholera cases by age group and sex between 29 September 2022 and 31 August 2024, Haiti



**Source:** Adapted from Ministère de la Santé Publique et de la Population, Haiti SITREP du choléra pour la 35 eme SE, Haiti. Port-au-Prince: MSPP; 2024.

There has been a significant decrease in the number of suspected and confirmed cholera cases in 2024 (**Figure 3**). While a part of this decrease could be attributed to the deterioration in the health system, with the reduction in the number of functioning hospitals, shortage of health personnel and interruptions to the supply chain, continued reports of low numbers of cases over the last 6 months in all parts of the country suggest that the circulation of *Vibrio cholerae* could be decreasing.

Map 5: New suspected cholera cases reported in epidemiological week (EW) 33 and EW 35 of 2024, Haiti

**Source:** Adapted from Ministère de la Santé Publique et de la Population, Haiti SITREP du choléra pour la 35 eme SE, Haiti. Port-au-Prince: MSPP; 2024.

**Vaccination**: In support of the national efforts, an immediate response was put in place in coordination with partners to slow down transmission in the context of a fragile security situation. With the support of the Global Task Force on Cholera Control and the International Coordination Group, Haiti received Oral Cholera Vaccine (OCV) doses in two tranches. For the first phase, 1,170,800 doses were used in the Centre department, the Ouest department, and prisons (Carrefour prison, Port au Prince prison, and Mirebalais prison). For the second phase, 1,034,751 people received a vaccine dose; 15 communes were targeted in four Health Directorates (Ouest, Artibonite, Centre, and Nord-Ouest). Additionally, 4,253 prisoners were vaccinated in nine penitentiary centers, as well as 10,150 IDPs in camps in the metropolitan area of the Ouest department (67).

### **5.6. Vaccination coverage** (70)

Haiti's routine vaccination coverage against vaccine-preventable diseases from January to December 2023 remains subpar – although the country has reported important improvements in its coverage rates compared to 2022 (**Figure 5**). As reported in the 2023 WHO/UNICEF electronic Joint Reporting Form (eJRF) (71), coverage rate with the third dose of the vaccine against diphtheria, tetanus and pertussis (DTP3) reached 96%, while coverage with the first dose of the vaccine against measles and rubella reached 94%. For both tracker antigens, the recommended target is 95% coverage rate. Haiti remains at very high risk of an outbreak in the event of an importation of wild poliovirus 1 (WPV1) or circulating vaccine-derived poliovirus (cVDPV) (46).

DTP-containing vaccine

Polio

Polio

Measles-containing vaccine

Measles-containing vaccine

Figure 5: Vaccination coverage (%) for vaccine-preventable diseases. Haiti. 2016-2023

**Source:** Pan American Health Organization/ World Health Organization. Immunization throughout the life course in the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 8 September 2024]. Available from: pahocim.shinyapps.io/immunization-dashboard/#

### **5.7.** Influenza and other respiratory virus (53)

Influenza virus infection continues to be the major contributing factor to cases reported under the Severe Acute Respiratory Illness surveillance in Haiti. In 2024, we observe the continued cyclical transmission of the virus among humans during the beginning of the year, followed by a spike in cases starting in April 2024, and subsiding in June 2024. A small percentage of reported cases during the same period are due to SARS-CoV-2 infection.

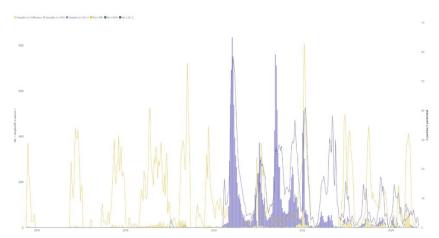


Figure 6: Distribution of influenza virus and other respiratory viruses under surveillance by EW, 2024, Haiti

**Source:** Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 8 September 2024]. Available from: <a href="https://www.paho.org/en/influenza-situation-report">https://www.paho.org/en/influenza-situation-report</a>

The average number of influenza cases reported by EW in Haiti crossed the epidemic threshold in January 2024, with a sustained increase in cases reported. The epidemic curve peaked in March 2024, with a declining trend in the moving average values observed from May to June 2024. While the average number of cases seems to be decreasing, another spike in the weekly number of cases in June 2024 would suggest a rising trend in the coming weeks.

700 Total resource of the control of

Figure 7: Severe Acute Respiratory Illness (SARI) cases reported by EW, Haiti, 2024

**Source:** Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 8 September 2024]. Available from: <a href="https://www.paho.org/en/influenza-situation-report">https://www.paho.org/en/influenza-situation-report</a>

### **5.8. COVID-19** (54)

As of 29 June 2024, a total of 34,896 cases of COVID-19 have been officially reported in Haiti since the beginning of the epidemic in March 2020, among which 224 new cases for the year 2024. No new COVID-19-related death was reported during this period. The Ouest department continues to be the geographical department with the most reported cases with 55 new cases, representing nearly 25% of the case burden. The positivity rate is estimated at 14.2%, varying from 11% to 20.4% among the various departments. **Figure 8** shows the Haitian MSPP epidemiological curve of the COVID-19 cases in the country. The disease appears to spread in successive waves, but the number of cases has been diminishing over the past years.

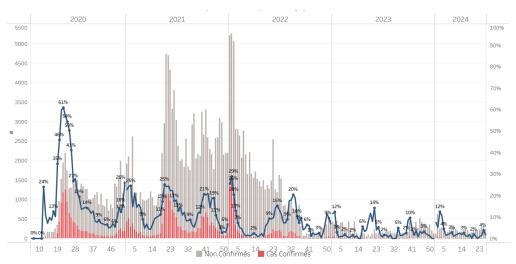


Figure 8. Epidemiological curve of COVID-19 cases, January 2020 – June 2024, Haiti.

**Source:** Ministry of Public Health and Population. Epidemiological Situation of COVID-19 as of EW 26 2024, Haiti. Port-au-Prince: MSPP; 2024 [cited 8 September 2024]. Available in French from: <a href="https://mspp.gouv.ht/site/downloads/Sitrep%20COVID-19">https://mspp.gouv.ht/site/downloads/Sitrep%20COVID-19</a> SE-26%20de%202024.pdf

Disease severity appears to decrease in 2024. The overall case-fatality rate (CFR) for the epidemic is also stable at around 2.5%. Case fatality rate varies significantly by department; Centre has the highest rate at 5.22% whereas the lowest rate is in Nord-Est Department at 1.16%.

Given the low number of cases and deaths in 2024, the overall demographic distribution has not changed compared to previous years. Indeed, the age ranges with most cases are the adult populations 20-29, 30-39, and 40-49 years whereas the deaths are mostly prevalent in the elderly population above 60 years old.

**Vaccination**: A total of 366,339, persons have been fully vaccinated against COVID-19 as of 31 December 2023: 116,105 with Moderna, 228,829 with Janssen and 21,405 with Pfizer. The vaccination coverage rate now stands at 4% of the population. Haiti is the only country in the region where the COVID-19 vaccine is not routinely offered to persons younger than 18 years (72).

### 5.9. Non-communicable diseases (NCDs)

Although Haiti has not yet conducted a national population-based survey of non-communicable diseases, data from prevalence studies conducted over the past two decades and annual statistical data from the MSPP indicate that the country faces a growing epidemic of non-communicable diseases.

For example, in 2006 a study conducted in the metropolitan area of Port au Prince revealed that the age-adjusted prevalence of diabetes was 4.8% in men and 8.9% in women. In the same study, the prevalence of hypertension was higher with a rate of 48.7% in men and 46.5% in women. Ten years later in 2015 and 2016, another study combining urban and rural populations estimated the prevalence rate of hypertension at 15.6% with a significant difference between men (11.9%) and women (20.2%). The prevalence of diabetes was slightly higher with a rate of 19.7% in total but also with a significant difference between men (18.6%) and women (20.8%). Data from the EMMUS-IV 2016-2017 confirmed an upward trend for hypertension with a prevalence of 49% in women and 37.9% in men, while the rate of diabetes seems to be more moderate with 14.1%. of women and 8.2% of men with this disease in the general population. In terms of mortality, the report of the Institute for Health Measurement and Evaluation (IHME) indicates that ischemic heart disease and stroke were the leading causes of death in Haiti in 2017. A WHO study based on cardiovascular event risk prediction tools corroborates this finding. Indeed, in 2016 it was estimated that in Haiti 9.2% of the population had > 20% risk of developing a cardiovascular event over a period of 10 years while 2.9% had > 40% risk for the same period (47,48).

A study being conducted by GHESKIO noted that cardiovascular disease (CVD) is now the leading cause of death in Haiti, having surpassed HIV over the past decade. Over 32% of all deaths in Haiti are due to CVD. These preliminary results demonstrate high rates of hypertension and cases of cardiovascular diseases like heart failure and myocardial infarction. The team hypothesizes that these results may be explained by social and environmental determinants like stress, social isolation, depression, food insecurity and lead exposure (73).

Cancer is also a significant health issue, with lung, breast, and gastric cancers being the most common types. In 2020, there were 7.1 lung cancer cases per 100,000 population, 28.9 breast cancer cases per 100,000 population, and 13.5 cases of gastric cancer cases per 100,000 population (74)

Cervical cancer is a leading cause of cancer deaths in Haiti. Estimates in the country vary widely, with women often dying without the cause of death being identified. According to the HPV Information Center, current estimates indicate that every year 588 women are diagnosed with cervical cancer and 439 die from the disease. Cervical cancer ranks as 2nd most frequent cancer among women between 15 and 44 years of age (75).

#### 5.10. Tuberculosis

Haiti has one of the highest tuberculosis incidence rates in the region, at 149 per 100,000 inhabitants in 2023. Transmission of the disease continues to be facilitated by housing conditions, overcrowding and the worsening humanitarian crisis. The fury of armed gangs has not spared health facilities. Several of them have been attacked and then looted and their staff physically assaulted. This has led to the abrupt closure of a large number of health facilities and the reduction in the number of tuberculosis treatment centers in the commune of Port-au-Prince. Hospital centers that treat severe cases of tuberculosis are also among this number. Health services based on primary health care, with a supply of essential medicines available to the population and active community awareness, will play a central role in the fight against tuberculosis (76).

In 2023, an estimated 17 000 (13 000–23 000) tuberculosis (TB) cases were reported, including 2 400 (1 700–3 100) among people living with HIV (PLHIV) and 730 cases of multidrug-resistant/rifampicin-resistant (MDR/RR) TB. The national incidence rate was estimated at 149 cases per 100 000 population, with case fatality rates of 10 (8–12) and 8 (5–12) per 100 000, respectively. 11 714 new and relapse cases were reported, representing 63% of treatment coverage; 46% of cases were diagnosed using WHO-recommended rapid molecular tests. The percentage of HIV-positive people (newly registered in care) initiating antiretroviral (ARV) therapy as part of tuberculosis preventive treatment (TPT) was 63%, and the percentage of household contacts with bacteriologically confirmed tuberculosis receiving this treatment was only 9.1% (8.9-9.3). The overall tuberculosis mortality rate (age-adjusted per 100 000 population) was 9.2 (7.9 for women and 10.5 for men) (77).

### 5.11. HIV and AIDS

In 2023, Haiti alone accounted for more than one third (38%) of new HIV infections in the region (49). According to UNAIDS data, in 2022, there were an estimated 140,000 people living with HIV in Haiti (ranging from 130,000 to 160,000), and approximately 6,600 new infections (ranging from 5,000 to 9,000), marking a decline of more than 20% over the past five years. Children represented about 17% of all new infections. The estimated HIV prevalence in Haiti among adults aged 15 to 49 is 1.7%, with higher rates among women (2.1%) compared to men (1.3%). Among youth aged 15 to 24, young girls are disproportionately affected, with a prevalence rate of 0.9%, compared to 0.4% for young boys (78).

By the end of 2022, the rate of mother-to-child transmission of HIV was estimated at 18%, quite far from significantly above the target of less than 5% for eliminating vertical transmission (50).

By the end of 2022, 132,291 patients had access to antiretroviral treatment (ART), representing 88% of ART coverage. Of these, 93% were receiving receive the WHO-recommended TLD regime (dolutegravir/lamivudine/tenofovir). Between 2022 and 2023, 13, 420 people were newly enrolled in pre-exposure prophylaxis (PrEP) (79). By March 2024, there were 86,000 active patients on ART with viral load results, and 74,200 of these were experiencing viral suppression (80).

In 2022, an estimated 1,600 people living with HIV (PLHIV) (ranging from 1,300 to 2,100) died from AIDS-related causes, averaging about 4 deaths per day. This results in a mortality rate of 14 per thousand PLHIV ranging from 11 to 18 per thousand), with a higher mortality rate observed among men (50,78).

To date, the sites that were vandalized and non-functional have all been relocated, along with their patients. This is the case for GHESKIO INLR, the Bon Repos Center, HUEH, the Sanatorium of Port-au-Prince, Beudet, etc. The sites whose main buildings are closed or non-operational continue to provide services through contingency mechanisms: community ARV distribution by agents and peers, the use of commercial buildings or socio-professional associations for ARV distribution, and ad-hoc service points (private clinics, fixed or satellite points managed by the sites, other sites within the same network or other networks). Forty sites are using intermediaries to provide their services. Stockout issues have been resolved (29).

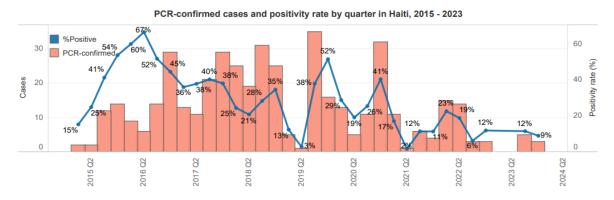
### **5.12. Anthrax (***Bacillus anthracis***)** (6,29,55)

Anthrax, a severe zoonotic disease primarily affecting cattle, poses a significant public health risk in Haiti. As of 30 September 2024, a total of 46 probable human cases of anthrax, a serious zoonotic disease primarily linked to infected cattle, have been reported in the Fort Royal commune of Petit-Goave, Ouest department. Out of 13 samples sent to the CDC, 5 tested positive for the disease and 3 of them passed away. Previously, the most recent outbreak was reported in 2022, when 192 cases were reported nationwide, with 67 in Grand'Anse. Humans can contract the disease through direct contact with infected animals or by consuming contaminated meat. Symptoms in humans may include skin lesions, respiratory distress, and gastrointestinal issues. To minimize the risk of infection, it is crucial to practice good hygiene when handling animals, ensure proper disposal of carcasses, and avoid consuming meat from animals that have died from unknown causes, and communication/awareness of the population on risks and prevention is essential. Vaccination of livestock is a preventive measure against the spread of anthrax. All parts of an infected animal must be disposed of safely. Joint intersectoral efforts from PAHO, MSPP, and MARNDR are underway to address the outbreak.

### **5.13. Diphtheria** (56)

Since 2014, the country has faced annual epidemic outbreaks of diphtheria against which local responses have been provided jointly by PAHO (PHE and PEV) and the MSPP surveillance teams. From 2014 to 2024, 1,944 probable cases were investigated, of which 491 (25%) were positive. 98 patients died among the positive cases for a case fatality ratio of 20%. Vaccination status is unknown, or cases have not received diphtheria vaccine (DTP or pentavalent) in more than 98% of patients testing positive for diphtheria. (**Figure 9**).

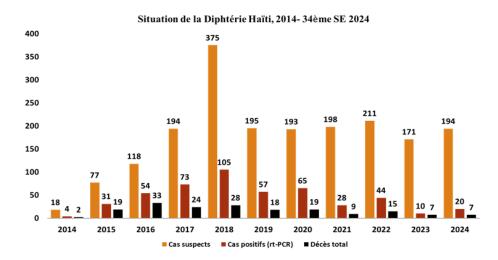
**Figure 9:** Diphtheria cases (Polymerase chain reaction (PCR) confirmed) and positivity rate (%) by quarter. Haiti. 2015-2023



**Source:** Pan American Health Organization / World Health Organization Haiti Country Office. Diphtheria Situation Report. 16 December 2023 internal memo. Port-au-Prince; 2023. Unpublished.

Majority of the diphtheria cases notified in Haiti between 2014 – 2023 were either not vaccinated or had unknown vaccination status. (**Figure 10**).

Figure 10: Situation of diphtheria in Haiti from 2014 to 34 EW 2024



**Source:** Directorate of Epidemiology Laboratories and Research/Ministry of Public Health and Population. Portau-Prince: DELR/MSPP; 2024. Unpublished.

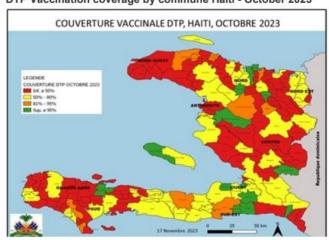
In 2023, Polymerase chain reaction (PCR) confirmed diphtheria cases have been reported in all ten departments of Haiti. During the same year, there were six deaths reported (eight confirmed by CR/Epi link, 50 under investigation, zero with no viable sample, 86 PCR-negative). The case fatality rate of confirmed cases is 20%.

Figure 11: DPT vaccination coverage by department. Haiti. 2022 – 2023 (December)

Departments	Pop (0-11 months	Pop (12-23 mont)	ns) Administered doses of Penta	of Administered doses of 1 Penta 3	
Artibonite	43,20	0 42,6	21 33,11	0 28,316	31,231
Centre	18,66	1 18,4	11 19,42	7 15,842	8,301
Grand-Anse	11,71	1 11,5	54 9,78	9,303	6,986
Nippes	8,56	5 8,4	51 6,55	5 6,660	4,819
Nord	26,68	26,687 26,329 19,847		7 20,638	20,631
Nord-Est	9,85	2 9,7	20 11,55	11,423	4,828
Nord-Ouest	18,22	5 17,9	81 14,66	66 14,219	12,353
Ouest	100,77	99,4	20 90,87	0 84,787	88,361
Sud	19,38	0 19.1	20 14.45	13,825	10,671
Sud-Est	15,81	9 15,6	07 13,03	11,847	13,360
NATIONAL	272,87	269,2	15 233,29	7 216,860	201,541
	Popula	tion vaccinated du	ring routine vaccination	on - Haiti 2022	
Departments	Pop (0-11 months)	Pop (12-23 months)	Administered doses of Penta 1	Administered doses of Penta 3	Administered doses of DTP
Artibonite	42,675	42,103	30,236	26,489	5,765
Centre	18,434	18,187	16,633	12,418	2,041
Grand-Anse	11,568	11,413	10,458	9,737	991
Nippes	8,461	8,348	6,842	6,476	1,511
Nord	26,362	26,009	23,202	22,278	10,429
Nord-Est	9,732	9,602	11,502	10,917	4,863
Nord-Ouest	18,004	17,763	15,031	13,071	8,682
Ouest	99,546	98,212	81,661	69,008	47,713
Sud	19,144	18,888	15,062	13,226	6,656
Sud-Est	15,627	15,418	11,792	11,243	6,203
NATIONAL	269,554	265,944	222,419	194,863	94,854

**Source:** Pan American Health Organization / World Health Organization Haiti Country Office. Diphtheria Situation Report. 16 December 2023 internal memo. Port-au-Prince; 2023. Unpublished.

Map 6: Vaccination coverage by antigen and by department for January-December 2023



DTP Vaccination coverage by commune Haiti - October 2023

**Source:** Pan American Health Organization / World Health Organization Haiti Country Office. Diphtheria Situation Report. 16 December 2023 internal memo. Port-au-Prince; 2023. Unpublished.

### 5.14. Sexual, reproductive and maternal health

Haiti's total fertility rate (TFR) was 2.7 births per woman, with 23% of women experiencing unmet need for family planning, according to the United Nations Population Fund (UNFPA). The estimated adolescent birth rate among girls aged 15 to 19 was 55 births per 1,000 (81).

Demographic and Health Survey (DHS) results indicated that injectables were the most used modern contraceptive method (21%), followed by male condom (4%) and 3% of women use implants. Long-acting reversible and permanent contraceptive methods are rarely used, and adolescent girls and young people have limited access to contraceptive methods (82).

The three leading causes of mortality among adolescents and young people in Haiti are linked to pregnancy, external causes including trauma and HIVAIDS. Haiti also has one of the highest maternal mortality ratios in the region, with 350 maternal deaths per 100,000 live births (81). Between 2016 and 2017, the main medical causes of maternal deaths included hypertensive disorders during pregnancy (21%), severe hemorrhages (21%), infections (20%) unsafe abortions (9%) and embolisms (9%). These deaths, which totaled 1,122 maternal deaths and 7,932 neonatal deaths in 2017, were largely preventable (82).

The shortage of qualified personnel, exaggerated by the recent migration of health professionals in recent years, as well as the unavailability of equipment and medicines, the lack of accessibility of healthcare facilities due to insecurity, and the lack of community health structures are all causes of this high mortality rate. In Haiti, 60% of births take place at home and barely 42% of women give birth under medical assistance (82). Displacement due to violence has worsened the situation, with pregnant women often forced to give birth in unsafe conditions in makeshift displacement sites (1,14).

With a maternal mortality ratio of 529 per 100,000 live births (EMMUS VI), Haiti has the highest maternal mortality ratio in the Americas. Inequalities are enormous, with the poorest economic quintiles performing worse than the richest. 61% of births take place at home, and only 42% of births are carried out by qualified personnel. The number of institutional deliveries per month has been falling sharply since September 2023 (graph). According to EMMUS VI, 66.6% of women attended 4 antenatal clinics during their pregnancy and a still too high percentage of women (33%) did not attend during the first trimester (83).

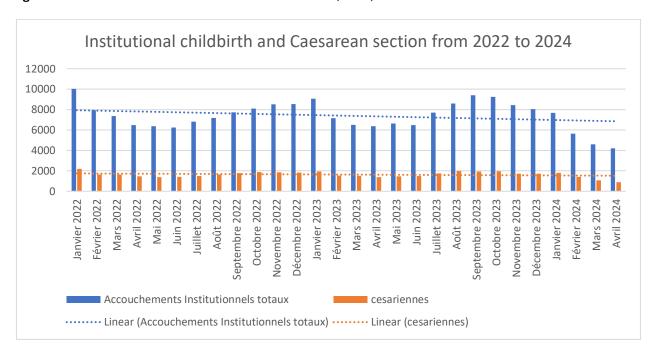


Figure 12: Institutional childbirth and Caesarean section, Haiti, 2022 to 2024

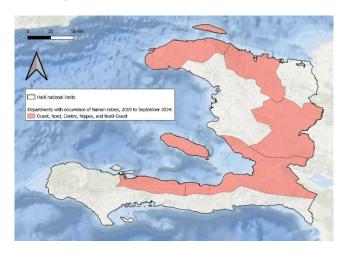
**Source:** Système d'Information Sanitaire National Unique/ Ministry of Public Health and Population. Port-au-Prince: SISNU/MSPP; 2024. Unpublished.

#### **5.15. Rabies**

Haiti is one of the countries with the highest burden of canine and human rabies cases in the Region of the Americas (52). In 2023, two cases of human rabies transmitted by dogs have been reported, and by September 2024, three human rabies cases (all died) have been reported, raising concerns about the current situation (52). Although more than one million dogs have been vaccinated between 2019 and 2021, vaccination coverage rates have not reached the 80% threshold necessary to effectively control rabies in dogs (84,85).

Additionally, there is a limited availability of human rabies vaccines in the country, making it difficult to administer post-exposure prophylaxis following bites from rabid or suspected animals. This shortage heightens the risk of human cases, especially in the event of bites from dogs, cats, or other carriers such as mongooses. It is critical to enhance public awareness around rabies prevention, safe handling of suspected rabid animals, and the management of animal bites to mitigate the impact of the disease. As of 30 September 2024, three human rabies cases have been identified (one confirmed by the CDC and two classified as probable), all of which resulted in death (29).

Map. 7: Departments (ADM1) of Haiti with occurrence of human rabies cases, between 2019 and September 2024, with 23 cases reported.



Source: Pan American Center for Foot-and-Mouth Disease and Veterinary Public Health, Pan American Health Organization. Regional Information System for the Epidemiological Surveillance of Rabies (SIRVERA). Duque de Caxias, RJ, Brazil: PAHO; 2024 [cited 8 Sep 2024]. Available from: https://sirvera.panaftosa.org.br/Site/Inicio/Index?idl=3

### 5.16. Acute Flaccid Paralysis (AFP) Surveillance

In 2023, Haiti reported ten acute flaccid paralysis (AFP) cases out of the 40 expected across the year. All ten cases were investigated. The departments of Nord, Nord Ouest, Sud, and Ouest (where the capital Port-au-Prince is located) reported zero AFP cases in 2023. In 2022, only 17 AFP cases had been reported in the national territory, while in 2021 the number was 11. The AFP rate for Haiti has remained well below the threshold of 1 AFP case per 100,000 children younger than 15 years since at least 2019 (Figure 13). While no confirmed polio cases have been detected in Haiti in 2023 (35), the risk assessment performed by the Regional Certification Commission (RCC) has identified that Haiti is at a very-high risk of polio outbreak after an importation of wild poliovirus type 1 (WPV1) or circulating vaccine-derived poliovirus (cVDPV) (46). This assessment was based on taking into consideration the weak performance of the AFP surveillance system, the low poliovirus type 3 vaccination coverage, the non-updated preparedness and response plan to a polio outbreak in addition to other health determinants.

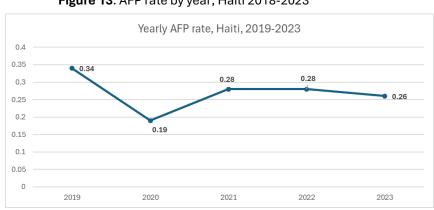


Figure 13: AFP rate by year, Haiti 2018-2023

Source: Directorate of Epidemiology Laboratories and Research/Ministry of Public Health and Population. Port-au-Prince: DELR/MSPP; 2023. Unpublished.

Active search activities of AFP cases have been negatively impacted by insecurity with limited access to areas affected by the crisis. In 2023, the West department remained didn't notify any AFP cases while the expected cases in this department account for 38% (15 expected AFP cases in the West out of 40 cases expected nationally) expected cases for the country. The detection rate of AFP cases remains below the standard of 1 case/100,000 children under 15 years of age during the last 5 years (29).

### 5.17. Leptospirosis

Leptospirosis is endemic in Haiti, with human infections occurring primarily through indirect contact between the bacteria and the skin, especially when damaged, or via mucous membranes. The incidence of leptospirosis is highest during the rainy season, and Haiti's frequent natural disasters, such as tropical storms and flooding, significantly elevate its risk for leptospirosis compared to other Caribbean nations. Many cases have been reported since the 2010 earthquake (86). Between 2018 to 2022, Haiti recorded an average of 284 cases annually, with 2019 seeing the highest number of reported cases, totaling 512 (87).

### 5.18. Malaria (88,89)

Malaria remains endemic in Haiti, with transmission rates peaking after the rainy seasons, typically from March through May and October through November. After a significant reduction in malaria cases in 2018, there was resurgence in early 2019, accompanied by an increase in the number of samples tested (**Figure 14**). Since then, while the number of samples tested declined, particularly since January 2020, the number of cases in the remaining months of 2020 were mostly higher than those in 2019 for the same period.

According to PNCM data and stratification 2023, since 2023 the number of malaria cases has continued to rise, reaching 14,090 cases in 2023 and 20,736 cases in September 2024. The 4 departments of the Grand Sud accounted for 97% of cases nationwide in 2024. The South reported 10,064 cases, the Grand'Anse 8,110 cases, Les Nippes 1,635 cases, the South-East 590 cases. Access to malaria diagnosis is limited: according to the PNCM, 665 out of 1033 health institutions have sent in a malaria report. The number of multi-purpose community agents providing malaria care is limited. There have been frequent shortages of malaria inputs in CDAIs and health institutions.

Insufficient resources to ensure investigation and response in strata 3 and strata 4, which is increasingly marked in 2024. Indeed, after the March 2024 response, the entire 2024 response budget for strata 3 and 4 was exhausted. As of September 2024, a total of 20,736 confirmed cases of malaria have been reported across all departments in Haiti.

Number of cases and Malaria incidence 28273 30000 2.5 25000 22457 21856 20736 )586 19858 17696 1758 2 20000 Incidence 1.99 Nombre de 1.9 13965 1409 1.5 15000 1.7 1.7 1.6 112 10000 1 1.16 1.16 0.83 0.8 0.5 5000 0.7 0 0 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 **SE34** 2024 incidence Nb cas

Figure 14: Number of cases and incidence of malaria from 2012 to September 2024

**Source:** Program National de la Contrôle de la Malaria (National Malaria Control Program in French; PNCM)//Ministry of Public Health and Population. Port-au-Prince: PNCM/MSPP; 2024. Unpublished.

### 5.19. Dengue (90)

As it is throughout the Caribbean, dengue is endemic to Haiti. There has been an increase in the number of confirmed cases of dengue fever in 2023 compared with the previous 5 years. From the 1st to the 35th epidemiological week, 503 cases were confirmed out of a total of 4,893 specimens analyzed, representing a positivity rate of around 10.25%. **Figures 15 and 16** show the situation by department and the comparison from 2018 to 2023. In 2024, no cases of dengue have been officially reported by the MSPP.

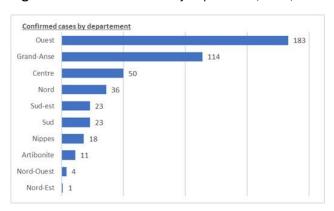
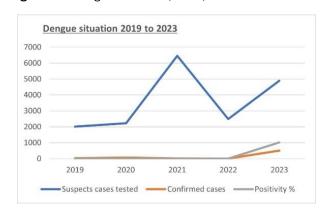


Figure 15: Confirmed cases by department, Haiti, 2023

**Source:** Directorate of Epidemiology Laboratories and Research/Ministry of Public Health and Population. Dengue update. Port-au-Prince: DELR/MSPP; 2023. Unpublished.

Figure 16: Dengue situation, Haiti, 2019 to 2023.



**Source:** Directorate of Epidemiology Laboratories and Research/Ministry of Public Health and Population. Dengue update. Port-au-Prince: DELR/MSPP; 2023. Unpublished.

### 5.20: Environmental Determinants: Climate Change and Health (29)

In Haiti, the nexus between environmental determinants and climate change poses serious challenges, as the country is highly susceptible to the adverse impacts of climate change. Rising temperatures, unpredictable rainfall, and extreme weather events such as heatwave, hurricanes, flash floods and droughts exacerbate public health risks.

The frequency of climate-sensitive diseases, including vector-borne diseases like malaria and dengue, has surged. Warmer temperatures and increased precipitation create optimal breeding conditions for vectors like the Aedes aegypti mosquito, responsible for dengue transmission, as well as rapid degradation of food and water qualities. The impacts of climate change are particularly concerning in regions such as Artibonite, Nord, and Grande-Anse, where the incidence of vector-borne diseases is significantly high. Additionally, changes in precipitation patterns contribute to the spread of food and waterborne diseases, such as food poisoning, dysentery, cholera, as flooding often leads to the contamination of water supplies, compounding existing vulnerabilities in the health system.

To effectively address the pressing environmental health challenges, it is imperative that we consider several adaptation and mitigation measures to strengthen the nation's resilience against climate-induced health risks. A crucial recommendation involves the enhancement of health surveillance and early warning systems. This will enable the timely detection and response to outbreaks of climate-sensitive diseases such as malaria, dengue, and diarrheal illnesses. These systems should incorporate advanced climate forecasting tools to accurately predict disease outbreaks based on climate data.

Furthermore, it is essential to improve food preservation, water, sanitation, and hygiene (WASH) infrastructure, particularly in vulnerable communities susceptible to flooding, to prevent the spread of food and waterborne diseases.

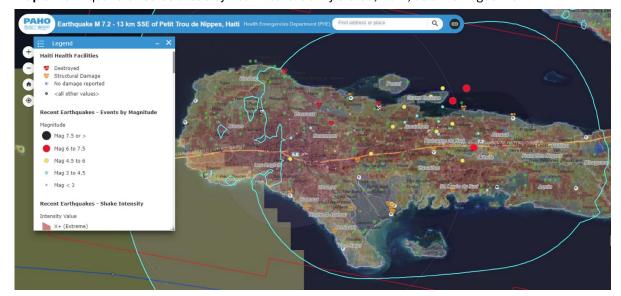
Additionally, we must emphasize the importance of reforestation and sustainable land management practices in combating environmental degradation, which has a direct impact on health. Public education campaigns play a vital role in raising awareness about the implications of climate change and promoting preventive measures.

Lastly, fostering intersectoral collaboration among health, agriculture, and environmental sectors is paramount to the effective implementation of these strategies, ensuring that Haiti's health system can adapt to and mitigate the impacts of a changing climate.

### 6. Natural Hazards

#### 6.1. Earthquakes

On 14 August 2021, an earthquake with a magnitude of 7.2 hit the southwestern region of Haiti and exposed more than 2 million people to intensities between 6 – 9 degrees on the Modified Mercalli Scale (MMI) (91). The epicentre was 8 km N of Petit Trou de Nippes in the department of Nippes which is one of the three most affected departments – the other two are Sud and Grand'Anse (Map 8). Preliminary information indicated that approximately 2,000 people from these departments have been confirmed dead, more 12,000 are injured, and at least 36 health facilities are destroyed (n=4) or damaged (n=32). Rapid assessments revealed that more 500,000 people – 40% of the total population in the affected departments – need emergency humanitarian assistance. Approximately 137,000 houses were either destroyed (n=60,000) or damaged (n=76,000) (91,92). The arrival of tropical storm Grace right after the earthquake had a moderate impact on Haiti, triggering flooding and landslides in Jacmel, Les Cayes and Marigot, which created additional safety risks for damaged homes and those left homeless by the quake (93).



Map 8: Earthquake-affected areas by health care facility status, Haiti, as of 18 August 2021

**Source:** Pan American Health Organization. Near real-time natural hazards in the Americas. Washington, D.C.: PAHO; 2022 [cited 8 September 2024]. Available from: <a href="https://arcg.is/1qzPOT">https://arcg.is/1qzPOT</a>

#### 6.2. Hurricanes

The hurricane season in the Atlantic Ocean usually lasts from early June to late November, threatening Caribbean Islands including Haiti each year. National Oceanic and Atmospheric Administration (NOAA) forecasts indicate an above-normal hurricane season this year given the current ocean and atmospheric conditions. Historically, hurricanes that enter Haiti's sphere of influence or make landfall often impact the departments of Sud-Est, Sud, and Nord-Ouest (94).

The most recent severe hurricanes to make landfall in or near Haiti were Fiona, which reached a wind speed of up to 194 km/h on 20 September 2022 at 5:00 pm local time near Saint-Louis du Nord and was 107 kilometers in diameter at the time, and Franklin, which eye was about 73 kilometers from Anse-à-Pitres (Sud-Est) on 23 August 2023 at 5:00 am local time reaching a wind speed of 78 km/h (95). While Hurricane Beryl did not make landfall, a tropical storm watch was in effect for the southern coast of Haiti, from 1 – 3 July 2024 (96). So far, Haiti has not been affected by any storm the current hurricane season.

### 7. Humanitarian Health Response (3/4Ws)

### 7.1. Health Response Coordination

For the health sector, the National Unit for the Management of Health Emergencies (UNGUS) of the MSPP, oversees coordinating the health response to disasters and emergencies, and to coordinate all preparedness activities as well. In Haiti, the director of UNGUS also represents the MSPP in DGPC led response coordinating mechanisms and participates in intersectoral meetings led by OCHA as the health sector lead (being PAHO/WHO the co-lead).

On the other hand, the Integrated Office of the Deputy Special Representative, Resident Coordinator and Humanitarian Coordinator is the operational structure that supports the coordination between the United Nations Country Team and BINUH, as well as the support to the Ministry of Planning and External Cooperation for the response to emergencies.

The UNCT, under the leadership of the Resident Coordinator, has the mission of coordinating the work of the UN Country Team and promoting the division of tasks according to the mandates of each agency. The Office of the Resident Coordinator is the main support structure for the activities of the Resident Coordinator and the Country Team, to strengthen the joint activities of the United Nations System in Haiti.

Additionally, UN Agencies jointly with national and international humanitarian partners participate in weekly and ad hoc intersectoral meetings led by OCHA in which 9 sectors work together to coordinate the response to emergencies (Shelter and Essential Household Items, WASH, Education, Logistics, Nutrition, Health, Food security, Protection, and Gender Based Violence). However, in April 2023, given the declining situation in the country, it was decided to scale-up the humanitarian response in Haiti and some of the clusters will be activated, notably the health cluster.

### 7.2. Health Response Actors

Although there are 11 health partners reporting to the Health Cluster, several of these actors are either small national NGOs seeking funds for their activities or actors that are not actually doing health interventions. Despite this challenge, the Health Cluster continues its efforts to better coordinate the health sector and map all actors intervening in health in the country, both for preparedness and response activities (97). A new Health cluster coordinator has been appointed and will be in Haiti soon, and an IMO by stand-by partner IMMAP, has also be appointed to support the health cluster in Haiti.

Health Cluster Lead: MSPP lead / PAHO/WHO co-lead

WASH: DINEPA lead / UNICEF co-lead

Coordination: MPCE / OCHA

### 8. PAHO/WHO Response

**PAHO / WHO** is working in close coordination with local and national health authorities (MSPP, National EOC of MSPP, Departmental health Directorates), other UN agencies, and health partners to:

- Distribute medical supplies to health facilities and other partners to treat patients wounded due to gang violence in the Ouest Department.
- Distribute medical supplies to health facilities around the country to ensure the continuation of essential and emergency health services, including in areas controlled by gangs like the Artibonite Department.
- Support the National Blood Safety Program with supplies and reagents to ensure availability of blood products in the current context of violence.
- Support the response to cholera through all the pillars and throughout the country (see cholera sitrep).
- Provide fuel to health facilities, the National Ambulance Center and other MSPP units to enable the continuation of activities.
- Support waste management activities for health facilities, in addition to hygiene promotion and sensitization activities and distribution of water purification tablets in IDP sites.
- Support the operations of the national Health EOC and the health cluster. An information manager
  and a health cluster coordinator are already based in Haiti to support the health cluster coordination.
   Three health clusters have been held jointly with the MSPP, and a Health Cluster Bulletin, a monthly

- sitrep have been elaborated and other information products, including a Health Cluster Dashboard are updated regularly and shared with stakeholders.
- Support the implementation of active surveillance and mobile clinics in the camps receiving displaced populations.
- Provision of medical supplies and fuel for health facilities receiving people transferred from IDP sites.
- Support the functioning of Nutritional Stabilization Units, strengthen the care and management of common causes of childhood illnesses and promote breastfeeding as a Lifesaving intervention.
- Strengthening the Integration of Mental Health into Primary health Care: using the in the framework
  of Mental Health Gap Action Programme (mhGAP), developing capacities of community health
  workers is delivering psychological first aid, strengthening the mental health hotlines, and developing
  national awareness and communication campaigns.
- Strengthening the medical care of victims and survivors of GBV, strengthening women's organizations
  that provide support to victims and survivors, and providing mental health services and developing
  national awareness and communication campaigns.
- Ensure continuity of routine immunization services in all departments through provision of vaccines, active case search of suspected cases of vaccine-preventable diseases, supportive supervision and trainings of health providers and field epidemiologists.
- In response to severe disruptions caused by political instability, gang violence, and power outages, PAHO/WHO secured emergency funding from CERF to deliver essential blood screening supplies to the National Blood Transfusion Center (CNTS). PAHO also provided solar power solutions, enabling regional Blood Transfusion Posts (PTS) to resume operations and ensure a safe blood supply.

### 9. Gaps and Challenges

### **Security & Access**

- Humanitarian access has been deteriorating due to the escalating insecurity since the beginning of 2021, both for people in need and for humanitarian organizations (97).
- Access continues to be increasingly difficult as main roads continue to be blocked and some areas continue to be inaccessible except for very few actors.
- The population continues to retaliate against the gangs to protect their areas and lynchings of alleged gang members have occurred. However, during one of these episodes, gang members captured members of this movement, and they were killed.

#### Health (including COVID-19), Protection, WASH

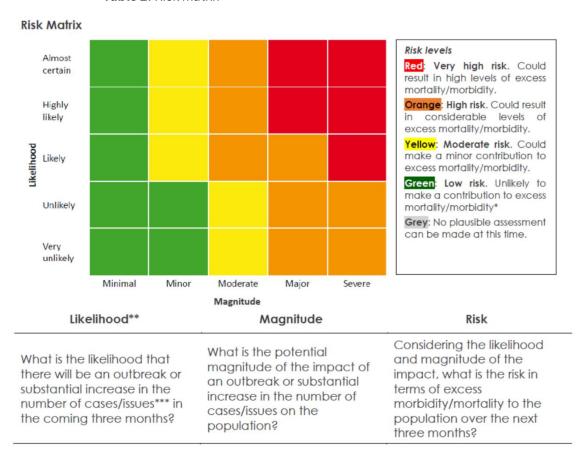
- Persistent gaps in the emergency health response stem from constraints in capacity for:
  - Medical personnel, including general practitioners and specialists, a situation that has aggravated in the past months due to the addition of Haiti to the US Parole Program which allows Haitians to be subsidized by relatives in the US and work legally for up to two years, causing a massive brain-drain.
  - Logistics support delivering supplies due to road blockages and the fuel crisis that has increased the cost of distributions exponentially.
  - The insecurity on land routes, and the closure of the border with the Dominican Republic, make managing the logistics chain a challenge. It increases operating costs and makes it difficult to regularly provide hospital, public, private, and civil society facilities. This generates a risk not only

for patients with acute pathologies but also for chronic patients and preventive actions such as vaccinations, laboratory surveillance, and handling of blood samples, among others.

# 10.Appendix

## 10.1. Risk Assessment Methodology

Table 2: Risk matrix



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

#### 11. References

- 1. Office for the Coordination of Humanitarian Affairs. Haiti: Humanitarian Response Overview, Situation Report July 2023. New York: OCHA; 2023. Available from: <a href="https://www.unocha.org/publications/report/haiti/haiti-humanitarian-response-overview-situation-report-july-2023">https://www.unocha.org/publications/report/haiti/haiti-humanitarian-response-overview-situation-report-july-2023</a>
- 2. Office of the High Commissioner for Human Rights. Situation of human rights in Haiti Report of the United Nations High Commissioner for Human Rights Advance unedited version [Document A/HRC/55/76]. 55th session of the Human Rights Council; 26 February–5 April 2024. Geneva: OHCHR; 2024.

  Available from:

https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/sessions-regular/session55/advance-versions/A\_HRC\_55\_76\_AdvanceUneditedVersion.pdf

- 3. United Nations Office for the Coordination of Humanitarian Affairs. Haiti Emergency Situation Report No. 3. 6 March 2024. New York: OCHA; 2024. Available from: <a href="https://www.unocha.org/publications/report/haiti/haiti-emergency-situation-report-no-3-6-march-2024">https://www.unocha.org/publications/report/haiti/haiti-emergency-situation-report-no-3-6-march-2024</a>
- 4. International Organization for Migration. Haitians Face Deepening Crisis as Siege in Port-au-Prince Stretches on. 4 April 2024. Geneva: IOM; 2024. Available from: <a href="https://www.iom.int/news/haitians-face-deepening-crisis-siege-port-au-prince-stretches">https://www.iom.int/news/haitians-face-deepening-crisis-siege-port-au-prince-stretches</a>
- 5. Office of the High Commissioner for Human Rights. Haiti: Tackling insecurity "utmost priority" UN report says, as hundreds killed by ongoing gang violence. 27 September 2024. Geneva: OHCHR; 2024. Available from: <a href="https://www.ohchr.org/en/press-releases/2024/09/haiti-tackling-insecurity-utmost-priority-un-report-says-hundreds-killed">https://www.ohchr.org/en/press-releases/2024/09/haiti-tackling-insecurity-utmost-priority-un-report-says-hundreds-killed</a>
- 6. United Nations Office for the Coordination of Humanitarian Affairs. Haiti Emergency Situation Report No. 30 (as of 2 August 2024). 6 August 2024. New York: OCHA; 2024. Available from: <a href="https://reliefweb.int/report/haiti/haiti-emergency-situation-report-no-30-2-august-2024">https://reliefweb.int/report/haiti/haiti-emergency-situation-report-no-30-2-august-2024</a>
- 7. International Organization for Migration (IOM). Haiti Report on the internal displacement situation in Haiti Round 8 (September 2024). 22 September 2024. Geneva: IOM; 2024. from: <a href="https://dtm.iom.int/reports/haiti-report-internal-displacement-situation-haiti-round-8-september-2024?close=true">https://dtm.iom.int/reports/haiti-report-internal-displacement-situation-haiti-round-8-september-2024?close=true</a>
- 8. United Nations Office for the Coordination of Humanitarian Affairs ReliefWeb. Haïti Snapshot sur les incidents Violences Basées sur le Genre (VBG) (janvier mai 2024). 25 July 2024. New York: OCHA; 2024. Available in French from: <a href="https://reliefweb.int/report/haiti/haiti-snapshot-sur-les-incidents-violences-basees-sur-le-genre-vbg-janvier-mai-2024">https://reliefweb.int/report/haiti/haiti-snapshot-sur-les-incidents-violences-basees-sur-le-genre-vbg-janvier-mai-2024</a>
- 9. United Nations Population Fund. Haiti Situation Report #6 19 August 2024. 20 August 2024. New York: UNFPA; 2024. Available from: <a href="https://reliefweb.int/report/haiti/haiti-situation-report-6-19-august-2024">https://reliefweb.int/report/haiti/haiti-situation-report-6-19-august-2024</a>
- 10. World Health Organization. Haiti: WHO Health Emergency Appeal 2024. 15 January 2024. Geneva: WHO; 2024. Available from: <a href="https://www.who.int/publications/m/item/haiti-who-health-emergency-appeal-2024">https://www.who.int/publications/m/item/haiti-who-health-emergency-appeal-2024</a>
- 11. United Nations News. Haitian capital's crippled health system 'on the brink'. 28 June 2024. Geneva: UN; 2024. Available from: <a href="https://news.un.org/en/story/2024/06/1151621">https://news.un.org/en/story/2024/06/1151621</a>
- 12. Office for the Coordination of Humanitarian Affairs ReliefWeb. Haiti: Humanitarian note Series New paradigm Issue 2: The impact of violence on access to health care. 23 April 2023. New York: OCHA; 2023. Available from: <a href="https://reliefweb.int/report/haiti/haiti-humanitarian-note-series-new-paradigm-issue-2-impact-violence-access-health-care-23-april-2023">https://reliefweb.int/report/haiti/haiti-humanitarian-note-series-new-paradigm-issue-2-impact-violence-access-health-care-23-april-2023</a>
- 13. United Nations News. Haitian capital's crippled health system 'on the brink'. 28 June 2024. Geneva: UN; 2024. Available from: <a href="https://news.un.org/en/story/2024/06/1151621">https://news.un.org/en/story/2024/06/1151621</a>

- 14. Office for the Coordination of Humanitarian Affairs ReliefWeb. Global Humanitarian Overview 2023. 1 December 2022. New York: OCHA; 2023. Available from: <a href="https://reliefweb.int/report/world/global-humanitarian-overview-2023-enaresfr">https://reliefweb.int/report/world/global-humanitarian-overview-2023-enaresfr</a>
- 15. United Nations Security Council. María Isabel Salvador (BINUH) on Haiti Security Council, 9535th meeting [25 January 2024]. New York: UNSC; 2024. Available from: <a href="https://webtv.un.org/en/asset/k17/k17s7v9kii">https://webtv.un.org/en/asset/k17/k17s7v9kii</a>
- 16. Office of the High Commission for Human Rights. The Population of Cite Soleil in the Grip of Gang Violence Investigative report on human rights abuses committed by gangs in the zone of Brooklyn from July to December 2022. 10 February 2023. Geneva: OHCHR; 2023. Available from: <a href="https://www.ohchr.org/en/documents/country-reports/population-cite-soleil-grip-gang-violence-investigative-report-human">https://www.ohchr.org/en/documents/country-reports/population-cite-soleil-grip-gang-violence-investigative-report-human</a>
- 17. United Nations Office for the Coordination of Humanitarian Affairs. Overview of Access Constraints in the Metropolitan Area of Port-au-Prince, 25 March 2024. 25 March 2024. New York: OCHA; 2024. Available from: <a href="https://www.unocha.org/publications/report/haiti/apercu-descontraintes-dacces-dans-la-zone-metropolitaine-de-port-au-prince-25-mars-2024">https://www.unocha.org/publications/report/haiti/apercu-descontraintes-dacces-dans-la-zone-metropolitaine-de-port-au-prince-25-mars-2024</a>
- 18. Office of the High Commissioner for Human Rights. A/HRC/57/41: Situation of human rights in Haiti Interim report of the United Nations High Commissioner for Human Rights Advance edited version. 26 September 2024. Geneva: OHCHR; 2024. Available from: <a href="https://www.ohchr.org/en/documents/country-reports/ahrc5741-situation-human-rights-haiti-interim-report-united-nations-high">https://www.ohchr.org/en/documents/country-reports/ahrc5741-situation-human-rights-haiti-interim-report-united-nations-high</a>
- 19. International Organization for Migration (IOM). Haiti Report on the internal displacement situation in Haiti Round 7 (June 2024). 9 June 2024. Geneva: IOM; 2024. Available from: https://dtm.iom.int/reports/haiti-report-internal-displacement-situation-haiti-round-7-june-2024
- 20. International Organization for Migration (IOM). Haiti Situation Report July 2024. July 2024. Geneva: IOM; 2024. Available from: <a href="https://haiti.iom.int/sites/g/files/tmzbdl1091/files/documents/2024-08/2024-07\_sitrep.pdf">https://haiti.iom.int/sites/g/files/tmzbdl1091/files/documents/2024-08/2024-07\_sitrep.pdf</a>
- 21. Office of the High Commissioner for Human Rights. Women and girls bear the brunt of crisis ravaging Haiti, say UN experts. 6 May 2024. Geneva: OHCHR; 2024. Available from: <a href="https://www.ohchr.org/en/press-releases/2024/05/women-and-girls-bear-brunt-crisis-ravaging-haiti-say-un-experts">https://www.ohchr.org/en/press-releases/2024/05/women-and-girls-bear-brunt-crisis-ravaging-haiti-say-un-experts</a>
- 22. Human Rights Watch. World Report 2023: Haiti, Events of 2022. New York: HRW; 2023. Available from: <a href="https://www.hrw.org/world-report/2023/country-chapters/haiti">https://www.hrw.org/world-report/2023/country-chapters/haiti</a>
- 23. Global Initiative Against Transnational Organized Crime. Gang control and security vacuums. Assessing gender-based violence in Cite Soleil, Haiti. Geneva: GlobalInitiative.Net; 2023. Available from: <a href="https://globalinitiative.net/wp-content/uploads/2023/05/Gang-control-and-security-vacuums.-Assessing-gender-based-violence-in-Cite%CC%81-Soleil-Haiti.-May2023.v2.pdf">https://globalinitiative.net/wp-content/uploads/2023/05/Gang-control-and-security-vacuums.-Assessing-gender-based-violence-in-Cite%CC%81-Soleil-Haiti.-May2023.v2.pdf</a>
- 24. Pan American Health Organization/ World Health Organization Haiti Country Office. Current Situation Presentation 13 March 2024. Port-au-Prince: PAHO; 2024. Unpublished.
- 25. United Nations Population Fund. Haiti Situation Report #1, 24 March 2024. New York: UNFPA; 2024. Available from: <a href="https://www.unfpa.org/resources/haiti-situation-report-1-22-march-2024">https://www.unfpa.org/resources/haiti-situation-report-1-22-march-2024</a>
- 26. Taylor L. Doctors targeted and hospitals close amid gang violence in Haiti. BMJ . 2022 May 31;377:o1366. Available from: <a href="https://www.bmj.com/content/377/bmj.o1366">https://www.bmj.com/content/377/bmj.o1366</a>
- 27. United Nations Population Fund. "Haïti must rise from her ashes": Health workers on the front lines of a spiralling crisis. New York: UNFPA; 2024. Available from: <a href="https://www.unfpa.org/news/%E2%80%9Cha%C3%AFti-must-rise-her-ashes%E2%80%9D-health-workers-front-lines-spiralling-crisis%C2%A0">https://www.unfpa.org/news/%E2%80%9Cha%C3%AFti-must-rise-her-ashes%E2%80%9D-health-workers-front-lines-spiralling-crisis%C2%A0</a>
- 28. Pan American Health Organization. PAHO Situation Report N.6. Haiti Humanitarian Situation. 3 May 2024. Washington, D.C.: PAHO; 2024. Available from:

- https://www.paho.org/en/documents/paho-situation-report-n6-haiti-humanitarian-situation-may-3-2024
- 29. Pan American Health Organization / World Health Organization Haiti Country Office. Internal Communication. 27 September 2024. Port-au-Prince; 2024. Unpublished.
- 30. Pan American Health Organization. PAHO Situation Report N.4. Haiti Humanitarian Situation. 1 April 2024. Washington, D.C.: PAHO; 2024. Available from: <a href="https://www.paho.org/en/documents/paho-situation-report-n4-haiti-humanitarian-situation-april-4-2024">https://www.paho.org/en/documents/paho-situation-report-n4-haiti-humanitarian-situation-april-4-2024</a>
- 31. Pan American Health Organization. PAHO Situation Report N.3. Haiti Humanitarian Situation. 15 March 2024. Washington, D.C: PAHO; 2024. Available from: https://www.paho.org/en/documents/paho-situation-report-n3-haiti-humanitarian-situation-15-march-2024
- 32. Office for the Coordination of Humanitarian Affairs ReliefWeb. Global Humanitarian Overview 2023. 1 December 2022. New York: OCHA; 2023; Available from: <a href="https://reliefweb.int/report/world/global-humanitarian-overview-2023-enaresfr">https://reliefweb.int/report/world/global-humanitarian-overview-2023-enaresfr</a>
- 33. Office for the Coordination of Humanitarian Affairs. Haiti: Humanitarian Response Overview, Situation Report July 2023. New York: OCHA; 2023. Available from: <a href="https://www.unocha.org/publications/report/haiti/haiti-humanitarian-response-overview-situation-report-july-2023">https://www.unocha.org/publications/report/haiti/haiti-humanitarian-response-overview-situation-report-july-2023</a>
- 34. United Nations Office for the Coordination of Humanitarian Affairs. Haiti Emergency Situation Report No. 30 (as of 2 August 2024). 6 August 2024. New York: OCHA; 2024. Available from: <a href="https://reliefweb.int/report/haiti/haiti-emergency-situation-report-no-30-2-august-2024">https://reliefweb.int/report/haiti/haiti-emergency-situation-report-no-30-2-august-2024</a>
- 35. World Bank. As Haiti Braces for the COVID-19 Pandemic, Water, Sanitation, and Hygiene Are More Important Than Ever, 29 May 2020. Washington, D.C.: WB; 2020; Available from: https://www.worldbank.org/en/news/feature/2020/05/29/as-haiti-braces-for-the-covid-19-pandemic-water-sanitation-and-hygiene-are-more-important-than-ever
- 36. World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply S and H. Progress on household drinking water, sanitation and hygiene 2000-2020: five years into the SDGs. Geneva: WHO and UNICEF; 2021. Available from: <a href="https://washdata.org/report/jmp-2021-wash-households">https://washdata.org/report/jmp-2021-wash-households</a>
- 37. The Integrated Food Security Phase Classification. Haiti: Acute Food Insecurity Situation for August 2024 February 2025 and Projection for March June 2025. Rome: IPC; 2024. Available from: <a href="https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1157971/">https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1157971/</a>
- 38. United States Agency for International Development. Presentation of the Standardized Monitoring and Assessment of Relief and Transitions (SMART) survey 2023, Haiti. Washington, D.C.: USAID; 2023. Available from: <a href="https://www.usaid.gov/haiti/news/may-12-2023-presentation-smart-survey-2023">https://www.usaid.gov/haiti/news/may-12-2023-presentation-smart-survey-2023</a>
- 39. United Nations Children's Fund. UNICEF Haiti Humanitarian Situation Report No. 6 July 2024. 27 August 2024. New York: UNICEF; 2024. Available from: <a href="https://reliefweb.int/report/haiti/unicef-haiti-humanitarian-situation-report-no-6-july-2024">https://reliefweb.int/report/haiti/unicef-haiti-humanitarian-situation-report-no-6-july-2024</a>
- 40. International Organization for Migration (IOM). Haiti Summary of results from assessment of suicidal behavior in the Metropolitan Area of Port-au-Prince and recommendations for suicide prevention (March 2024). 12 June 2024. Geneva: IOM; 2024. Available from: <a href="https://dtm.iom.int/reports/haiti-summary-results-assessment-suicidal-behavior-metropolitan-area-port-au-prince-and">https://dtm.iom.int/reports/haiti-summary-results-assessment-suicidal-behavior-metropolitan-area-port-au-prince-and</a>
- 41. Ministère de la Santé Publique et de la Population (MSPP). Rapport sur le système de santé mentale en Haïti. 2011. Port-au-Prince: MSPP; 2011. Available in French from: https://www.ecoi.net/en/file/local/1340817/1930\_1354792540\_who-aims-report-haiti-fr.pdf

- 42. World Health Organization. Mental Health Atlas 2020 Country Profile: Haiti. Geneva: WHO; 2022. [cited 3 October 2024]. Available from: <a href="https://www.who.int/publications/m/item/mental-health-atlas-hti-2020-country-profile">https://www.who.int/publications/m/item/mental-health-atlas-hti-2020-country-profile</a>
- 43. Ministère de la Santé Publique et de la Population (MSPP) Direction d'Épidémiologie des L et de la R (DELR). SITREP hebdomadaire du choléra pour la 35 eme SE, Haiti. Port-au-Prince: MSPP; 2024. Available in French from: https://mspp.gouv.ht/site/downloads/SITREP%20CHOLERA%20de%20la%2035%20SE.pdf
- 44. Ministère de la Santé Publique et de la Population (MSPP) Direction d'Épidémiologie des L et de la R (DELR). SITREP hebdomadaire du choléra pour la 35 eme SE, Haiti. Port-au-Prince: MSPP; 2024. Available in French from: https://mspp.gouv.ht/site/downloads/SITREP%20CHOLERA%20de%20la%2035%20SE.pdf
- 45. Ministère de la Santé Publique et de la Population (MSPP). Unité de coordination nationale du programme élargi de vaccination (UCNPV), DHIS-2, 2024. Port-au-Prince: MSPP; 2024. Unpublished.
- 46. Pan American Health Organization / World Health Organization. 14th meeting of the Regional Certification Commission (RCC) for the Polio Endgame in the Region of the Americas Meeting report.

  8 September 2022. Washington, D.C.: PAHO/WHO; 2022. Available from: <a href="https://www.paho.org/en/documents/14th-meeting-regional-certification-commission-rcc-polio-endgame-region-americas-meeting">https://www.paho.org/en/documents/14th-meeting-regional-certification-commission-rcc-polio-endgame-region-americas-meeting</a>
- 47. Pan American Health Organization / World Health Organization. ENLACE: Data on noncommunicable diseases, mental health, and external causes, data portal. 2024. Washington, D.C.: PAHO/WHO; 2024. Available from: <a href="https://www.paho.org/en/enlace">https://www.paho.org/en/enlace</a>
- 48. World Health Organization. The Global Health Observatory. Geneva: WHO; 2023. [cited 3 October 2024]. Available from: <a href="https://www.who.int/data/gho">https://www.who.int/data/gho</a>
- 49. Joint United Nations Programme on HIV/AIDS. The urgency of now: AIDS at a crossroads. Geneva: UNAIDS; 2024. [cited 2024 Sep 8]. Available from: https://www.unaids.org/sites/default/files/media\_asset/2024-unaids-global-aids-update\_en.pdf
- 50. World Health Organization. HIV Country profile 2023: Haiti. Geneva: WHO; 2023 . [cited 3 October 2024]. Available from: <a href="https://cfs.hivci.org/index.html">https://cfs.hivci.org/index.html</a>
- 51. World Health Organization. Global Tuberculosis Programme, Tuberculosis profile: Haiti. Geneva: WHO; 2024. [cited 3 October 2024]. Available from: <a href="https://worldhealthorg.shinyapps.io/tb">https://worldhealthorg.shinyapps.io/tb</a> profiles/? inputs & entity type=%22country%22&iso2=%22 HT%22&lan=%22EN%22
- Pan American Center for Foot-and-Mouth Disease and Veterinary Public Health PAHO. Regional Information System for the Epidemiological Surveillance of Rabies (SIRVERA). Duque de Caxias, RJ, Brazil: PAHO; 2024. [cited 3 October 2024]. Available from: <a href="https://sirvera.panaftosa.org.br/Site/Inicio/Index?idl=3">https://sirvera.panaftosa.org.br/Site/Inicio/Index?idl=3</a>
- 53. Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation Region of the Americas. Washington, D.C.; 2024. Available from: <a href="https://www.paho.org/en/influenza-situation-report">https://www.paho.org/en/influenza-situation-report</a>
- 54. Ministère de la Santé Publique et de la Population (MSPP). Epidemiological Situation of COVID-19 as of EW 26 2024, Haiti. Port-au-Prince: MSPP; 2024. Available from: <a href="https://mspp.gouv.ht/site/downloads/Sitrep%20COVID-19\_SE-26%20de%202024.pdf">https://mspp.gouv.ht/site/downloads/Sitrep%20COVID-19\_SE-26%20de%202024.pdf</a>
- 55. Pan American Health Organization / World Health Organization. Fievre Charbonneuse: l'OPS appui la campagne de vaccination des herbivores dans la Grand 'Anse. 28 April 2023. Washington DC: 2023; PAHO/WHO. Available in French from: <a href="https://www.paho.org/fr/nouvelles/28-4-2023-fievre-charbonneuse-lops-appui-campagne-vaccination-des-herbivores-dans-grand">https://www.paho.org/fr/nouvelles/28-4-2023-fievre-charbonneuse-lops-appui-campagne-vaccination-des-herbivores-dans-grand</a>
- 56. Pan American Health Organization / World Health Organization Haiti Country Office.

- Diphtheria Situation Report. 17 April 2023 internal memo. Port-au-Prince; 2023. Unpublished.
- 57. United Nations Office for the Coordination of Humanitarian Affairs. Urgence Haïti Rapport de situation n° 31 (3 au 16 août 2024). 27 August 2024. New York: OCHA; 2024. Available in French from: <a href="https://reliefweb.int/report/haiti/urgence-haiti-rapport-de-situation-ndeg-31-3-au-16-aout-2024">https://reliefweb.int/report/haiti/urgence-haiti-rapport-de-situation-ndeg-31-3-au-16-aout-2024</a>
- 58. International Trade Administration. Haiti-Country Commercial Guide. Washington, D.C.: International Trade Administration; 2024. Available from: <a href="https://www.trade.gov/country-commercial-guides/haiti-waste-management">https://www.trade.gov/country-commercial-guides/haiti-waste-management</a>
- 59. The Borgen Project. Effects of the Waste Problem in Haiti, 15 June 2014. Tacoma, WA: The Borgen Project; 2014. [cited 2024 Oct 3]. Available from: <a href="https://borgenproject.org/effects-of-the-waste-problem-in-haiti/">https://borgenproject.org/effects-of-the-waste-problem-in-haiti/</a>
- 60. Inter-Agency Standing Committee. IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings. Geneva: IASC; 2007. Available from: https://interagencystandingcommittee.org/iasc-task-force-mental-health-and-psychosocial-support-emergency-settings/iasc-guidelines-mental-health-and-psychosocial-support-emergency-settings-2007
- 61. World Health Organization. World mental health report: transforming mental health for all. Geneva: WHO; 2022. Available from: <a href="https://www.who.int/publications/i/item/9789240049338">https://www.who.int/publications/i/item/9789240049338</a>
- 62. Pan American Health Organization / World Health Organization. Burden of Suicide. Washington, D.C.: PAHO/WHO; 2024. [cited 2024 Oct 3]. Available from: <a href="https://www.paho.org/en/enlace/burden-suicide">https://www.paho.org/en/enlace/burden-suicide</a>
- 63. International Organization for Migration (IOM). Haiti Summary of results from assessment of suicidal behavior in the Metropolitan Area of Port-au-Prince and recommendations for suicide prevention (March 2024). 12 June 2024. Geneva: IOM; 2024. Available from: <a href="https://dtm.iom.int/reports/haiti-summary-results-assessment-suicidal-behavior-metropolitan-area-port-au-prince-and">https://dtm.iom.int/reports/haiti-summary-results-assessment-suicidal-behavior-metropolitan-area-port-au-prince-and</a>
- 64. World Health Organization. mhGAP Humanitarian Intervention Guide (mhGAP-HIG). Geneva: WHO; 2015. Available from: <a href="https://www.who.int/publications/i/item/9789241548922">https://www.who.int/publications/i/item/9789241548922</a>
- 65. Cénat JM, Dalexis RD, Clorméus LA, Lafontaine MF, Guerrier M, Michel G, et al. Lifetime and Child Sexual Violence, Risk Factors and Mental Health Correlates Among a Nationally Representative Sample of Adolescents and Young Adults in Haiti: A Public Health Emergency. 2022 May 16;38(3–4):2778–805. Available from: https://journals.sagepub.com/doi/10.1177/08862605221102484
- 66. Ministère de la Santé Publique et de la Population (MSPP). Rapport sur le système de santé mentale en Haïti. 2011. Port-au-Prince: MSPP; 2011. Available in French from: https://www.ecoi.net/en/file/local/1340817/1930\_1354792540\_who-aims-report-haiti-fr.pdf
- 67. World Health Organization. Mental Health Atlas 2020 Country Profile: Haiti. Geneva: WHO; 2022. Available from: <a href="https://www.who.int/publications/m/item/mental-health-atlas-hti-2020-country-profile">https://www.who.int/publications/m/item/mental-health-atlas-hti-2020-country-profile</a>
- 68. World Health Organization. Multi-country outbreak of cholera, External situation report #10 11 January 2024. Geneva: WHO; 2024. Available from: https://www.who.int/publications/m/item/multi-country-outbreak-of-cholera--external-situation-report--10---11-january-2024
- 69. Pan American Health Organization. Cholera Outbreak HAITI Situation Report 8 Haiti January and February, 13 March 2024. Washington, D.C.: PAHO; 2024. Available from: <a href="https://www.paho.org/en/file/141419/download?token=YfeZZ7tA">https://www.paho.org/en/file/141419/download?token=YfeZZ7tA</a>
- 70. Pan American Health Organization/ World Health Organization. Immunization throughout the life course in the Americas. Washington, D.C.: PAHO/WHO; 2024. [cited 2024 Oct 3]. Available from: https://paho-cim.shinyapps.io/immunization-dashboard/#

- 71. World Health Organization. WHO/UNICEF Joint Reporting Process. Geneva: WHO; 2021. Available from: <a href="https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/global-monitoring/who-unicef-joint-reporting-process">https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/global-monitoring/who-unicef-joint-reporting-process</a>
- 72. Pan American Health Organization / World Health Organization Haiti Country Office. 27 April 2023 email report. Port-au-Prince; 2023. Unpublished.
- 73. Lookens J, Tymejczyk O, Rouzier V, Smith C, Preval F, Joseph I, et al. The Haiti cardiovascular disease cohort: study protocol for a population-based longitudinal cohort. BMC Public Health. 2020 Dec 1;20(1). Available from: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7603639/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7603639/</a>
- 74. World Health Organization. Global Cancer Observatory. Geneva: WHO; 2024. [cited 2024 Oct 3]. Available from: <a href="https://gco.iarc.fr">https://gco.iarc.fr</a>
- 75. Bruni L, Albero G, Serrano B, Mena M, Collado JJ, Gómez D, et al. ICO/IARC Information Centre on HPV and Cancer (HPV Information Centre). Human Papillomavirus and Related Diseases in Haiti. Summary Report 10 March 2023. 10 March 2023. Barcelona: ICO/IARC HPV Information Centre; 2023. Available from: <a href="https://hpvcentre.net/statistics/reports/HTI.pdf?t=1728053400261">https://hpvcentre.net/statistics/reports/HTI.pdf?t=1728053400261</a>
- 76. Pan American Health Organization / World Health Organization. Health in the Americas+, Haiti Country Profile. Washington, D.C.: PAHO/WHO; 2021. [cited 2024 Oct 3]. Available from: <a href="https://hia.paho.org/en/pays-22/profil-haiti">https://hia.paho.org/en/pays-22/profil-haiti</a>
- 77. World Health Organization. Global Tuberculosis Programme, Tuberculosis profile: Haiti. Geneva: WHO; 2024. [cited 2024 Oct 3]. Available from: <a href="https://worldhealthorg.shinyapps.io/tb">https://worldhealthorg.shinyapps.io/tb</a> profiles/? inputs &entity type=%22country%22&iso2=%22 HT%22&lan=%22EN%22
- 78. Joint United Nations Programme on HIV/AIDS. UNAIDS data 2023. Geneva: UNAIDS; 2023. Available from: https://www.unaids.org/sites/default/files/media\_asset/data-book-2023\_en.pdf
- 79. Ministère de la Santé Publique et de la Population (MSPP). Monitoring Evaluation and Integrated Surveillance. Port-au-Prince: MSPP; 2019. Available in French from: <a href="https://mesi.ht/Rapport/Reports">https://mesi.ht/Rapport/Reports</a>
- 80. Ministère de la Santé Publique et de la Population (MSPP) Programme National de Lutte contre les IST/VIH/SIDA. Le VIH/Sida en haiti Statistiques de la Riposte: Octobre 2023 Mas 2024. Portau-Prince: MSPP; 2024. Available in French from: <a href="https://mspp.gouv.ht/site/downloads/feuillet%20info%20PNLS%20mars%202024.pdf">https://mspp.gouv.ht/site/downloads/feuillet%20info%20PNLS%20mars%202024.pdf</a>
- 81. United Nations Population Fund. World Population Dashboard, Haiti. New York: UNFPA; 2022. [cited 2024 Oct 3]. Available from: <a href="https://www.unfpa.org/data/world-population/HT">https://www.unfpa.org/data/world-population/HT</a>
- 82. Ministère de la Santé Publique et de la Population (MSPP). Haïti Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI 2016-2017). Port-au-Prince: MSPP; 2018. Available in French from: <a href="https://www.dhsprogram.com/pubs/pdf/FR326/FR326.pdf">https://www.dhsprogram.com/pubs/pdf/FR326/FR326.pdf</a>
- 83. Institut Haïtien de l'Enfance (IHE) et ICF. Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI 2016-2017). Pétion-Ville: IHE and ICF; 2018. Available in French from: <a href="https://www.dhsprogram.com/pubs/pdf/FR326/FR326.pdf">https://www.dhsprogram.com/pubs/pdf/FR326/FR326.pdf</a>
- 84. Pan American Health Organization / World Health Organization. Rabies Elimination in Haiti: Dog vaccination campaign launched. 16 December 2019. Washington, D.C.: PAHO/WHO; 2019. Available from: <a href="https://www.paho.org/en/news/16-12-2019-rabies-elimination-haiti-dog-vaccination-campaign-launched">https://www.paho.org/en/news/16-12-2019-rabies-elimination-haiti-dog-vaccination-campaign-launched</a>
- 85. Pan American Health Organization / World Health Organization. Lancement official de la deuxieme phase de la Campagne de Vaccination de chiens contre la rage en Haiti. 9 March 2021. Washington, D.C.: PAHO/WHO; 2021. Available in French from: <a href="https://www.paho.org/fr/nouvelles/9-3-2021-lancement-officiel-deuxieme-phase-campagne-vaccination-chiens-contre-rage-haiti">https://www.paho.org/fr/nouvelles/9-3-2021-lancement-officiel-deuxieme-phase-campagne-vaccination-chiens-contre-rage-haiti</a>
- 86. United States Centers for Disease Control and Prevention. Traveler's Health, Haiti. Atlanta:

- CDC; 2021. [cited 2024 Oct 2]. Available from: https://wwwnc.cdc.gov/travel/yellowbook/2024/itineraries/haiti#:~:text=The%20incidence%20of%2 Oleptospirosis%20is%20highest%20during%20the,cases%20have%20been%20reported%20since% 20the%202010%20earthquake
- 87. Pan American Health Organization. Core Indicators Dashboard. Washington, D.C.: PAHO; 2022. [cited 2024 Oct 3]. Available from: <a href="https://opendata.paho.org/en/core-indicators/core-indicators-dashboard">https://opendata.paho.org/en/core-indicators/core-indicators-dashboard</a>
- 88. World Health Organization. World Malaria Report 2022. Geneva: WHO; 2022. Available from: <a href="https://cdn.who.int/media/docs/default-source/malaria/world-malaria-reports/world-malaria-report-2022.pdf?sfvrsn=40bfc53a\_4#page=120">https://cdn.who.int/media/docs/default-source/malaria/world-malaria-reports/world-malaria-report-2022.pdf?sfvrsn=40bfc53a\_4#page=120</a>
- 89. Pan American Health Organization / World Health Organization. Malaria in the Americas: Preliminary report. 27 April 2023 internal communication. Port-au-Prince; 2021. Unpublished.
- 90. Ministère de la Santé Publique et de la Population (MSPP) Directorate of Epidemiology Laboratories and Research. Dengue update. Port-au-Prince: DELR/MSPP; 2023. Unpublished.
- 91. United States Geological Survey. M 7.2 Nippes, Haiti, 14 August 2021. Reston: USGS; 2021. Available from: <a href="https://on.doi.gov/4105Hk6">https://on.doi.gov/4105Hk6</a>
- 92. ACAPS. Haiti Earthquake, Briefing Note 16 August 2021. Geneva: ACAPS; 2021. Available from:
- https://www.acaps.org/fileadmin/Data\_Product/Main\_media/20210816\_acaps\_briefing\_note\_haiti\_earthquake\_0.pdf
- 93. World Data. Hurricanes in Haiti. Lake Orion: Washington, D.C.; World Data info; 2023. [cited 2024 Oct 3]. Available from: <a href="https://www.worlddata.info/america/haiti/hurricanes.php">https://www.worlddata.info/america/haiti/hurricanes.php</a>
- 94. National Oceanic and Atmospheric Administration. NOAA forecasters increase Atlantic hurricane season prediction to 'above normal'. Silver Spring, MD: NOAA; 2023. Available from: https://www.noaa.gov/news-release/noaa-forecasters-increase-atlantic-hurricane-season-prediction-to-above-normal
- 95. World Data. Hurricanes in Haiti. Lake Orion: Washington, D.C.; World Data info; 2023. [cited 2024 Oct 3]. Available from: <a href="https://www.worlddata.info/america/haiti/hurricanes.php">https://www.worlddata.info/america/haiti/hurricanes.php</a>
- 96. National Hurricane Center NO and AA. Hurricane Beryl Advisory Number 12. 1 July 2024. Silver Spring, MD: NOAA; 2024. Available from: <a href="https://www.nhc.noaa.gov/archive/2024/al02/al022024.public.012.shtml?">https://www.nhc.noaa.gov/archive/2024/al02/al022024.public.012.shtml?</a>
- 97. World Health Organization. Haiti Health Cluster:Navigating a Multifaced Humanitarian Crisis, 5 September 2023.Geneva: WHO; 2023. Available from: https://healthcluster.who.int/newsroom/news/item/05-09-2023-haiti-health-cluster-navigating-a-multifaceted-humanitarian-crisis