HEALTH CLUSTER BULLETIN

CHOLERA AND POST-EARTHQUAKE RESPONSE IN HAITI – FRIDAY, MARCH 25, 2011 – #22

Highlights

- The number of nationwide cholera cases continues to decrease. The number of cases in Northeast, Port-au-Prince, North, Northwest, Artibonite, West, and Southeast departments are stable or decreasing, but cases in Centre, Nippes, South, and Grande Anse are increasing.
- During the last Health Cluster meeting, MSPP presented a strategy for the continuity of the response to cholera including criteria for closing cholera centers.
- The nutrition department of the MSPP indicates that the protocol for cholera case treatment should be reviewed to include zinc administration. It also recommends performing malnutrition surveillance through MUAC at cholera centres.
- The phasing out of health actors from cholera treatment facilities has raised concerns about local capacity to cope with a potential increase in cases. A gap analysis is underway to update needs, gaps and alternatives

Dear health partners,

Due to the decrease in cholera cases during the last month, certain partners have started phasing out their cholera response activities. However, heightened vigilance is of paramount importance to identify any localized outbreak which can emerge during the upcoming rainy season. It is therefore extremely important to further reinforce coordination among health actors active in the same department, to cope with the current situation and possibly new emergencies.

Health Cluster Coordination

A nurse weighs an infant at a clinic where staff salaries are sometimes underfunded.

The Ministère de la Santé Publique et de la Population (MSPP) and PAHO, the Regional Office of the World Health Organization (WHO) for the Americas, coordinate the Health Cluster. **MSPP Cluster Contacts:** Dr. Claude Surena; Dr. Jean Hugues Henrys; **PAHO/WHO Contacts:** Dr. Juan Carlos Gustavo Alonso; Dr. Josep Vargas

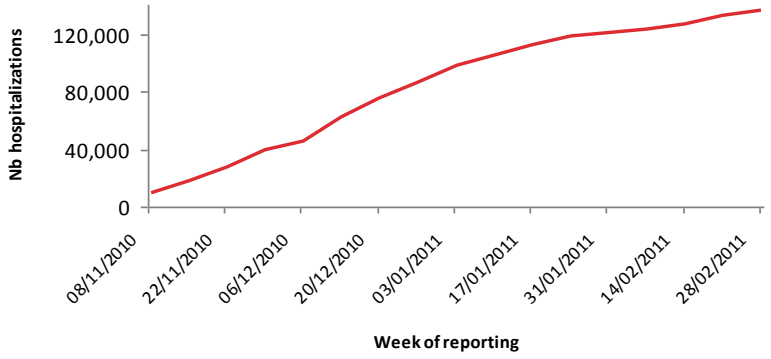
Health Cluster partners are asked to contribute to this bulletin with information on needs and activities as well as corrections to content, by emailing hai.clustersante@paho.org (subject heading: Health Cluster Bulletin). For useful information on meetings, guidelines, and CTC, CTU, and health facility locations, visit: http://haiti.humanitarianresponse.info.

Situation Overview

According to data sent by the MSPP, between 20 October 2010 and 28 February 2011, the cumulative number of reported cholera cases was 249,937, including 4,670 deaths. The cumulative number of cholera cases has stabilized (figure 1). The observed cumulative incidence of cholera cases since the beginning of the outbreak is of 24 per 1,000 inhabitants, ranging from 4 per 1,000 in the Department of South-East to 42 per 1,000 in the Department of North East (Figure 2).

Figure 1

Cumulative number of cholera cases hospitalised by week of reporting (N=135,891) Haiti, 8 Nov 2010 to 28 Feb 2011



- To respond adequately to the cholera outbreak, NGOs have set up a significant number of cholera treatment facilities and provided them with medical supplies, sanitation facilities, water supplies, and salaries and training for local medical staff. In view of the downward trends in cholera cases, some NGOs are now leaving these facilities. The departure has raised concerns about the capacity of local health structures and staff to cope with a possible increase in the number of cholera cases, especially in the imminent rainy season. NGOs have stated that they continue to monitor the situation and are ready to return to support an appropriate response. However, local staff salary problems and threats of strikes are already affecting the normal service to patients looking for medical care. Certain departments hope to receive funding from the World Bank and are looking for partners to bridge the gap.
- Due to the likely suspension of humanitarian activities related to cholera response by NGOs, several clusters have undertaken gap analysis to identify main trends and implications of cholera response. The results of this analysis will be available shortly.
- During the MSPP presentation on the finalized strategy for continuation of cholera response, MSPP has provided the criteria for closing cholera centers that have no more than 3 cases per day for 14 consecutive days.
- New and pending issues in the WASH sector include limited financing for drinking water distribution and excrement removal from latrines and septic tanks as well as the pending solution to long-term excrement management. Additional problems pose serious concerns with regard to adequate environmental public health.

Cholera health structures:

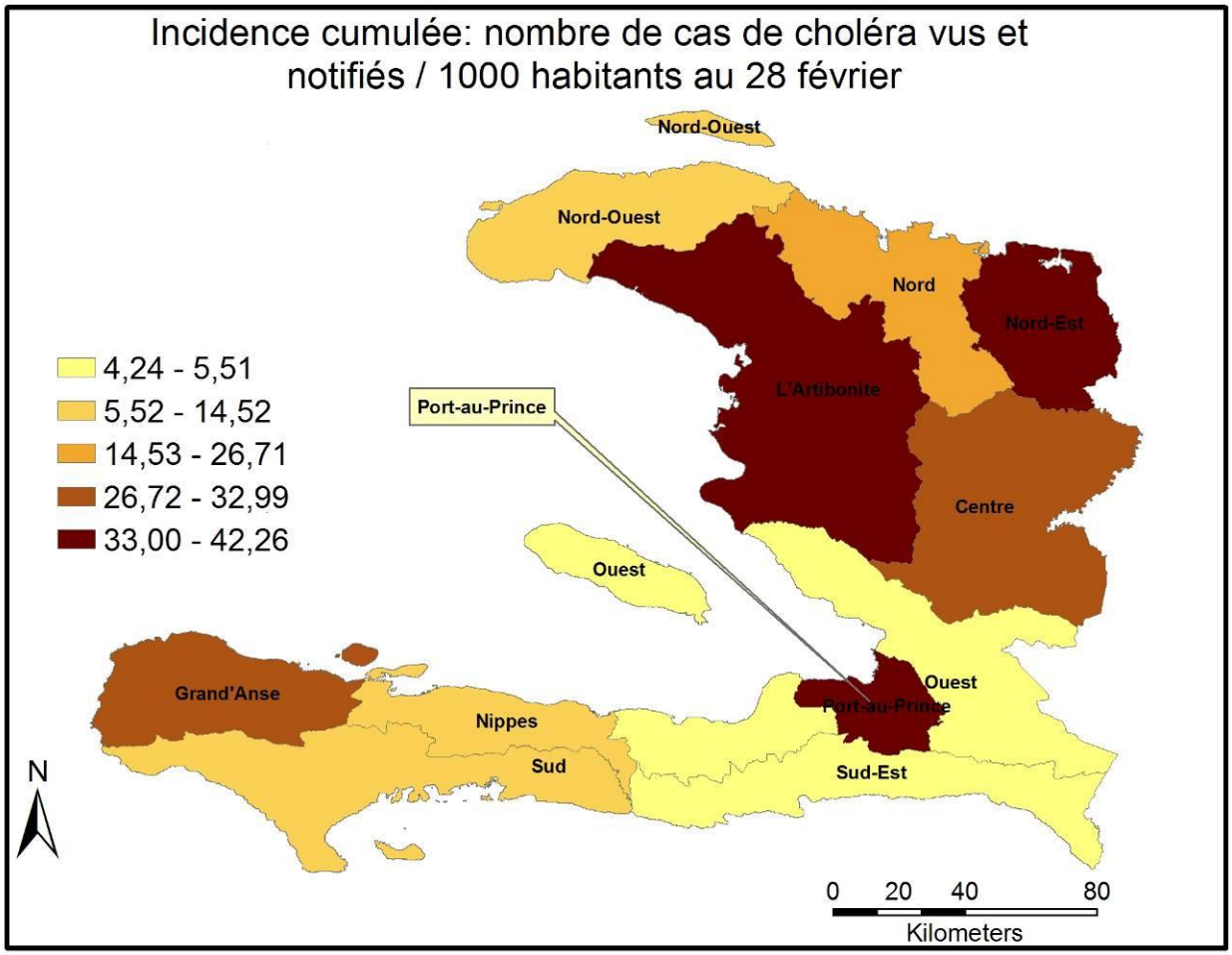
	10 Jan	16 Jan	23 Jan	30 Jan	6 Feb	13 Feb	16 Mar
Operational CTC	81	85	101	101	100	98	98
Operational UTC	156	129	165	185	188	215	214
ORC	s/o	298	786	778	774	642	692

Epidemiological Surveillance

Indicator-based component

Between 20 October 2010 and 28 February 2011 the cumulative number of reported cholera cases was 249,937, including 4,670 deaths. The observed cumulative incidence of cholera cases since the beginning of the outbreak is of 24 per 1,000 inhabitants, ranging from 4 per 1,000 in the Department of South-East to 42 per 1,000 in the Department of North East (Figure 2).

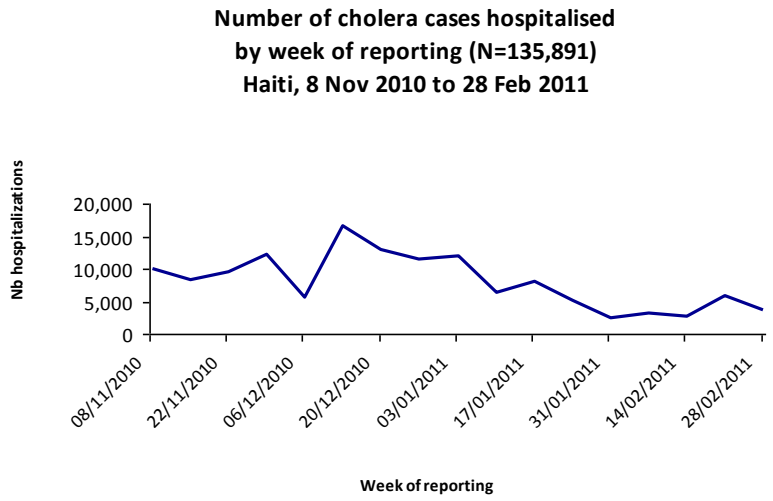
Figure 2: Cumulative incidence of reported cholera cases (number of cases per 1,000 inhabitants), by Department, 20 October 2010 - 28 February 2011



The overall observed case fatality ratio was 1.9%, ranging from 0.9% in Port-au-Prince to 8.9% in the North East Department. Since the beginning of the outbreak, at least 92% of the reported cases were observed among individuals aged 5 years or more (223,239 out of 243,197 individuals for whom the age is known), with the proportion of cases observed in children under 5 years ranging from 5.3% in the Department of North to 13.9% in the Department of Artibonite.

Of the total number of reported cholera cases, 54% (135,891) has been hospitalized since the beginning of the outbreak (Figure 3). Despite the observed overall downward trend of the cholera outbreak since the beginning of the year, the number of hospitalized cholera cases (3,659) reported during week 22-28 February 2011 was the second highest since week ending on 31 January 2011 (Figure 4). Port-au-Prince accounts for 26% of the reported hospitalized cases during week 22-28 February 2011. With respect to the previous week, increases in the number of hospitalized cholera cases were registered in the Departments of Centre, Grande Anse, Nippes, and South East.

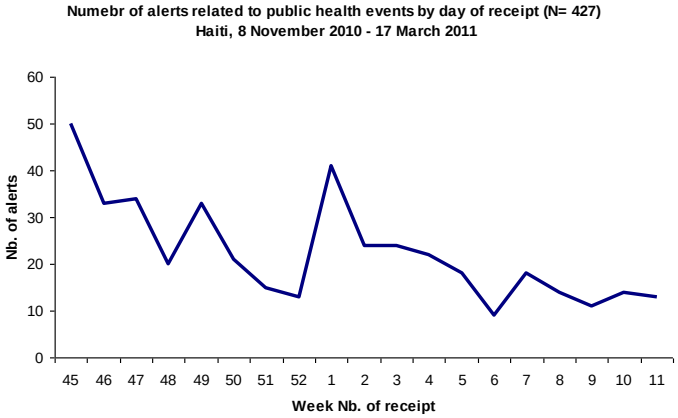
Figure 3



Event-based component (alerts)

The number of alerts received daily from partners in the field is leveling off. The alerts are increasingly reflecting hazards other than cholera and cholera hotspots (such as anthrax) in remote areas (Figure 5). The rainy season, elections, as well as NGOs phasing out from cholera treatment centers and units call for heightened attention by health authorities and partners involved in surveillance activities at the health care facility level and the community level. An accurate and timely monitoring of the evolution of the cholera outbreak that allows prompt control intervention requires integration and triangulation of all sources of information: formal and informal, quantitative and qualitative, health care facility based and community based. In particular, the contribution of the alert-event based component introduced and systemized during the cholera outbreak has proven increasingly valuable in ensuring the early warning function with respect to other public health events. Therefore, efforts should be made by health authorities and partners to support the process to the integrate all information sources that would allow a more effective information management process.

Figure 5



Wash (Environmental Health)

The financial resources of numerous NGOs that ensure drinking water distribution and removal of excrement from latrines and septic tanks in Port-au-Prince are running out or already exhausted. Transition strategies offer only a limited solution, and serious concerns exist with regard to access to drinking water and adequate public health conditions.

The issue of long-term excrement management has not yet been resolved, contributing to the challenges in the fight against cholera. The construction work at the Titanyen disposal site that was interrupted in December have not yet resumed. Several other sites have been identified, but there are difficulties and a final decision has not yet been made. The health and environmental risks are clear, given the limited reception capacity of the tank and the lack of adequate excrement treatment. The disposal site is not a wastewater treatment plant, but it is a reception area without any treatment procedure in place.

Despite this situation, DINEPA and SMCRS resumed the Truitier user agreement. With an increased amount of trucks, the emptying of septic tanks is ensured temporarily.

PAHO/WHO continues to support health centers linked to cholera treatment by providing them with necessary equipment and disinfectant products necessary in anticipation of a possible negative evolution of the epidemic during the rainy season.

PAHO/WHO also supports the MSPP in identifying needs and health priorities of the health centers in several departments. Environmental health is an essential to prevent the spread of cholera and other diseases related to water and sanitation management.

Health Promotion

PAHO/WHO, MSPP, UNICEF and partners participated in a meeting on lessons learned from 2010 in hygiene promotion. The aim of the meeting was to develop a "Way of Working" document to guide future interventions for hygiene promotion, including minimum standards that should be respected. This workshop was essential in bringing together many experiences from the NGO community.

World Water Day 2011 on 22 March was celebrated in Port-Au-Prince at a ceremony organized by DINEPA. The theme of this year's celebration is "Water for Cities: responding to the Urban Challenge", which ties in closely with the last World Health Day, whose theme was "Urbanism and Healthy Living". This opportunity will be used to distribute hygiene promotion materials developed following the cholera crisis.

Situation by Department

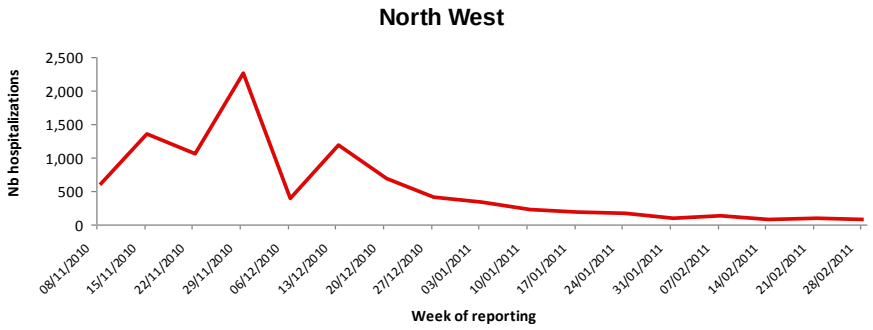
In the sections dedicated to the description of the situation in each of the departments, the following is presented: **(i)** trends of the cholera epidemic (number of reported hospitalized cholera cases

by week), from 8 November 2010 to 28 February 2011 (source: MSPP http://mspp.gouv.ht/site/index.php) **(ii)** trends and figures provided by the PAHO/WHO Teams at Departmental level; **(iii)** alerts regarding public health events received since the publication of Issue 21 of the Health Cluster Bulletin, published on 4th March 2011.[1]

Northwest

The overall trend of cholera is stable. **Hotspots** in the department include: increase in the number of cases seen at a facility reported on 13 March, 2011. During the first week of March 2011, the Beraca hospital, which was receiving an average of 2 to 3 cases per day, admitted 16 cases to the hospital on 11 March, 2011. 14 patients came from a locality called Guichard and the rest came from a locality within few miles from there.

Figure 7: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 28 February 2011)



Last week, the meager funds available to the department have dried up. As a consequence, the community component of the response has almost come to a halt since the Brigadiers are not paid. Therefore, there are no more awareness campaigns, distribution of ORS and Aquatabs, and other efforts at the community level. The response to cholera in the department in recent weeks is provided only by MSPP staff with the exception of the towns of Jean Rabel and Bombardopolis, where BMI is still active declining due to insufficient funds.

North

The overall trend of cholera incidence is stable. The weekly average of cholera cases reported daily is presented in Table 1. The transmission of surveillance data remains problematic and cholera cases seen at ORC are underreported.

Table 1

Week 6	Week 7	Week 8	Week 9	Week 10
61	58	73	74	46

[1] *Source routine surveillance data: Ministère de la Sante Publique et de la Population (MSPP), http://www.mspp.gouv.ht/site/index.php#, as of 28 February 2011. Note: Data presented should be interpreted cautiously as these are continuously corrected and updated (e.g. for some weeks, the cumulative number of cases may be lower than in the previous week; incomplete reports in some departments). Also there might be discrepancies between data presented in this section and those provided by partners and PAHO-WHO Teams deployed at Departmental levels and presented in the dedicated section.*
Data provided by the Directions Departmental de Sante and partners to the PAHO/WHO Teams in the field.

Source event based information: alert scheme currently maintained by the Pan-American Health Organization / World Health Organization in Haiti.

Several CTCs and CTUs are closing down or are being progressively transformed. Nonetheless, health partners in the area stay alert in the event of new outbreaks.

Water analysis performed by MSF-CH revealed that 80% of the analyzed samples contain fecal matter, an indication of contamination source.

Hotspots in the department:

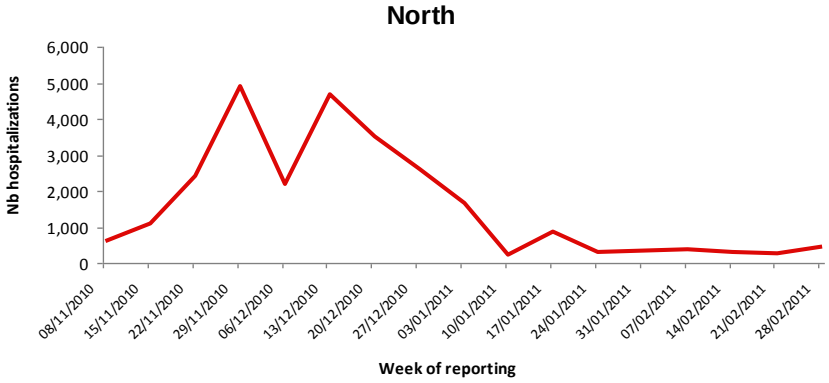
Hotspots in the department include: Quartier Morin, Pignon (six community deaths among members of the same household reported a week later), Cap-Haïtien, and Grande Rivière.

The increase in cases observed in the commune of Pignon seems to be originated from Crébapié and Bas Pont regions, where a strong network of health agents is present. In order to direct the activities of the community agents better, information is gathered in order to assess the origin of cases and patients, and the nature of their drinking water source. With the support of MSF-CH, a new CTU is established at the Saint-Raphael health center to replace the one established by MSF-FR at the Evangelist hospital. In view of aforementioned increase of cases, reception capacity of the Pignon CTU has been increased.

The CTCs in Vertiere and Plaine du Nord have been closed, and the CTC in Fort St. Michel is transformed to an ORC and stabilization center since Bravo CTC currently has enough capacity for adequate case treatment. Sans Souci CTC will close shortly if no new cases are reported.

CESVI is planning to establish 10 new ORCs at Saint Raphael in collaboration with the MSPP. CESVI and FIP are coordinating their activities with MSF-CH for awareness raising activities in schools and for the donation of health center items.

Figure 8: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 28 February 2011



Northeast

The overall trend of cholera cases is decreasing. The weekly average of cholera cases reported daily is presented in Table 2. Agreements have been made to hold weekly surveillance meetings between the Cuban Medical Brigades and the Direction Departmental de Santé. Community brigades are being organized and are contributing more to surveillance activities. Vallière remains a silent spot for reporting and cholera cases seen at ORCs are underreported. A sampling scheme on cases presenting diarrheal illness is being established in order to monitor the distribution of etiologies as well as the antimicrobial sensitivity pattern of Vibrio cholera.

The CTC in Sense is closing and several health centers supported by Merlin (Fort Liberté, Ouananminthe, Trou du Nord hospitals) are considerably reducing the number of personnel. Merlin will remain active in smaller CTCs and CTUs in the area.

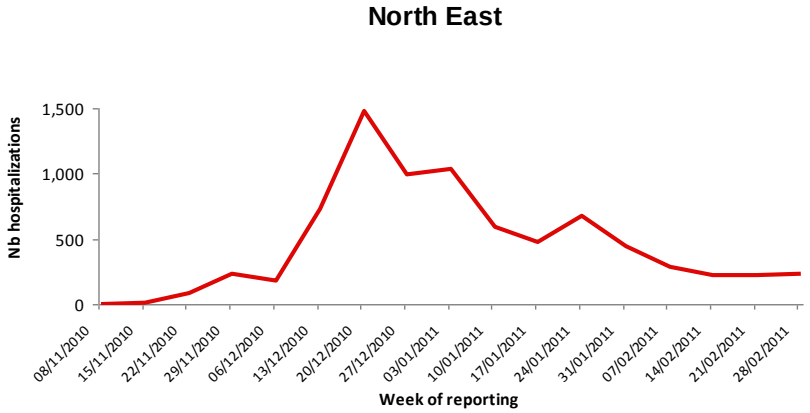
Preparations are made to install latrines, showers and washing areas in the hospitals of Ouanaminte and Fort Liberté.

Table 2

Week 6	Week 7	Week 8	Week 9	Week10
77	60	39	24	22

Hotspots in the department include: Ouanaminthe (102 cases during week 9 and 10), Fort-Liberté (28 cases during week 9), et Trou du Nord (37 cases during week 9 and 10).

Figure 9: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 28 February 2011

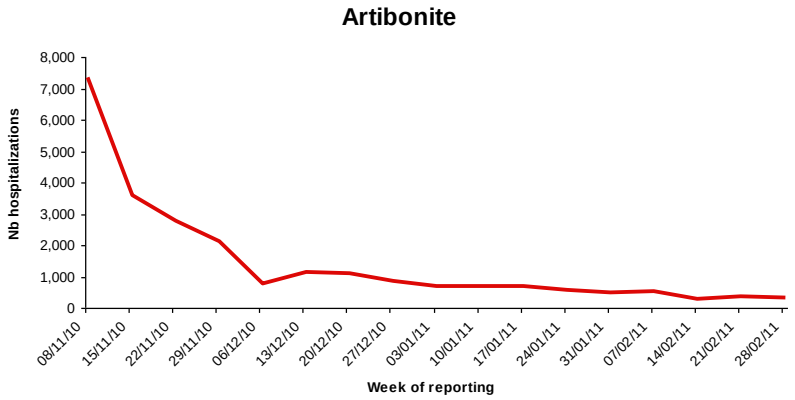


Merlin, Haiti Plan, CDS and several small NGOs continue their suport to ORPs and Community brigades

ARTIBONITE

The overall trend of cholera incidence is stable. No hotspots in the department reported. A new CTC is being finalized by MSF-France in Dessalines and will open mid March.

Figure 10: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 28 February 2011



MSF-E is downsizing its support and other health actors will soon follow. IMC and MSF-F would like to integrate some of the CTC as smaller units in the existing health care structures. Out of the seven CTUs existing in the department, the commune of Dessalines, St. Michel de la Atalaye and Gross Morne are those which will require most help in case of a major emergency. Coordination and prepositioning of supplies and materials are the two aspects which need particular support due to the department's size and population.

Center

The overall trend of cholera cases is increasing in the department

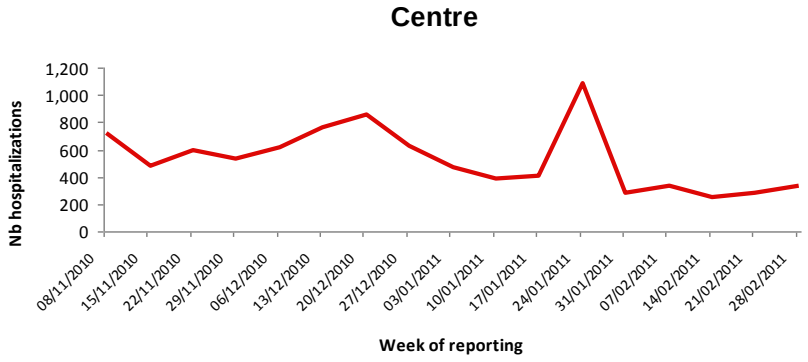
Hotspots in the department

On 3 March 2011, there was a significant increase in the number of cholera cases admitted at Belladere CTC: from 5 cases per day to 30 cases per day. This increase of cases is attributed to increased cholera in Totoy locality associated with unsafe burials. A total of over 70 cases, including 4 deaths were associated with the outbreak in Totoy. Community and water and sanitation interventions were carried out.

There is a low level of human resources (one doctor and one nurse) at CTU/Health center in Tilory. The CTU receives 5 to 6 cases per day and has an average of 10 admitted patients. Partners are working to identify a medium term solution.

- 9 March 2011: Lack of water supply over the previous four weeks reported in Mirebalais.
- 10 March 2011: Increase in the number of cholera cases admitted at Belladere CTC due to Croix de Fer locality (12 cases).
- 11 March 2011: Increase in number of cases, mainly in Maissade town for the past 2 weeks. The number of patients has increased from 2-3 per day to an average of 8-10 per day, with a peak of 14 in a single day. The public water reservoir in Maissade area has been having problems for about a month.

Figure 11: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 28 February 2011)



Most of the agencies (WorldVision, Save the Children, Zamni LaSante, Caritas, etc.) have long term projects in the department and therefore do not plan to leave soon. Preparedness and capacity to respond to cholera outbreak will most likely not be affected. However, some areas are insufficiently covered, such as the commune of Cerca la Source, which lacks healthcare personnel. The presence of PAHO/WHO providing help in coordination and logistics for preparedness and response will be essential in case of a major outbreak or any other disaster.

West

Leogane-Gressier

The overall trend of cholera cases is stable. From week 43-2010 to 8-2011, 3,481 hospitalized cholera cases have been reported by MSF-CH and Save the Children. The total number of institutional deaths is 40, corresponding to a CFR of 1.1% among hospitalized cases. In week 8, the proportion of hospitalized patients younger than 5 years was 13%.

Hotspots in the department include: Grande Rivière and Cormiers where the weekly incidence of cholera cases has increased in week 8, compared to the previous two weeks.

It is doubtful whether there are local capacities to cope with a cholera outbreak, as 90% of facilities in this area are private.

Figure 12

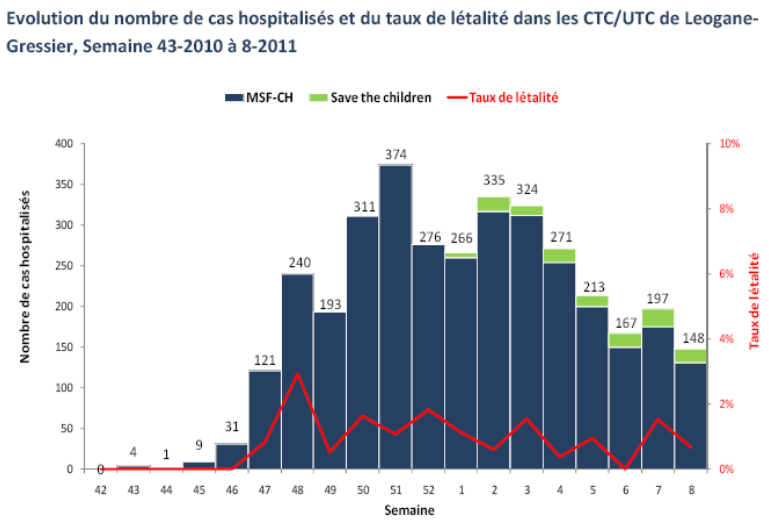
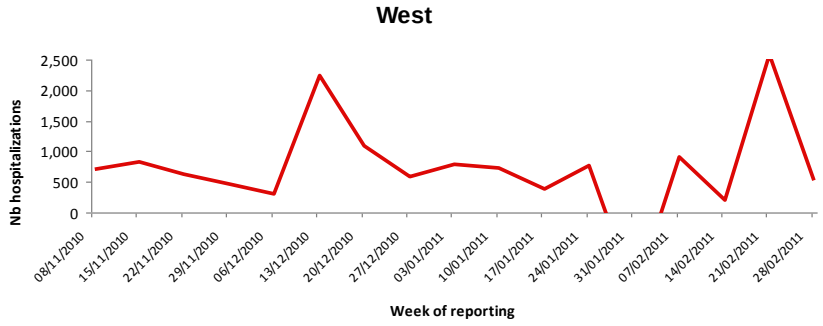


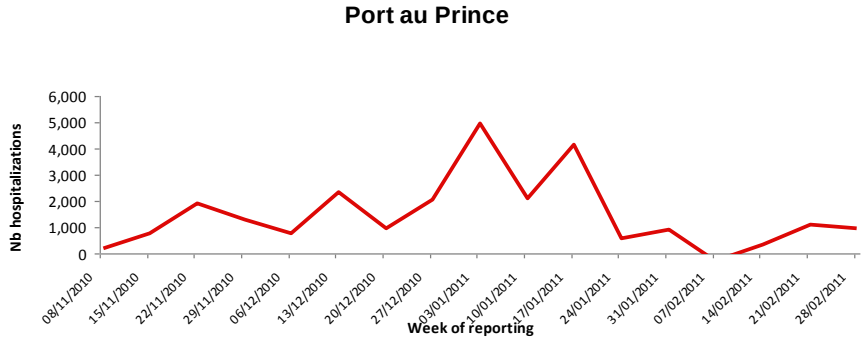
Figure 13: Number of reported hospitalized cholera cases by week of reporting from 8 November 2010 to 28 February 2011



Port-au-Prince

The overall trend of cholera incidence is decreasing.

Figure 14: Number of reported hospitalized cholera cases by week of reporting from 8 November 2010 to 28 February 2011



While the trend of cholera activity in the metropolitan area is decreasing, trend in rural areas of the

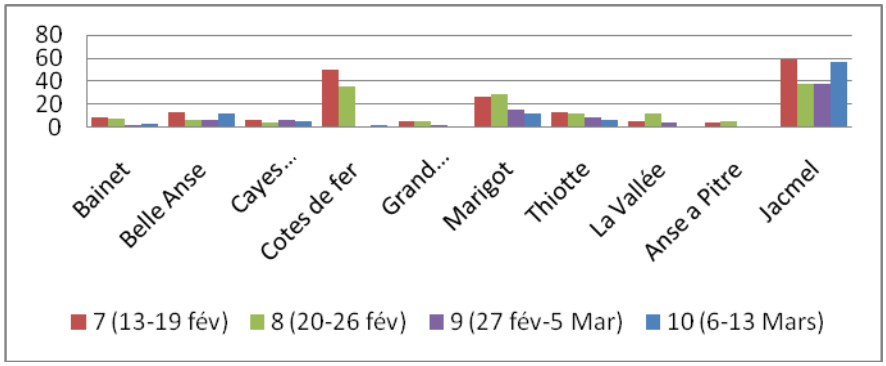
West department, where there are few health centers and limited access by road, is increasing. The DSO has started to set up cholera teams in those areas. As a preparation to cater cholera cases in an endemic situation, French Red Cross is taking over responsibility to train staff in the management of cholera in all health centers.

The DSO has sent teams (two nurses and 12 health agents for every communal section) to the mountains to undertake health education and cholera prevention, treat patients, and disinfect contaminated houses.

Southeast

A slight overall increase in weekly incidence of new cholera cases has been observed over the past few weeks (0.2 cases per 1,000 inhabitants). While in most communes the amount is decreasing, the total number of new cases increased between 5-11 March. (89 new cases, against 76 new cases the week before) There was an increase in the number of cases at the CTCs of Belle Anse and Jacmel, probably due to carnival.

Figure 15: Weekly incidence per 1,000 inhabitants by Commune, 13 February – 13 March 2011



The CTCs and CTUs in Jacmel, La Vallee, Marigot Perredo Marigot Seguin and Anse à Pitre have been handed over from MSF-E to the MSPP. The one in Bainet was handed over to Save the Children. PAHO/WHO along with other partners have been working to ensure the provision of supplies, but it seems that MSPP is not able to pay salaries to the staff. The situation is extremely worrisome, especially with regard to the CTU in St. Michel in Jacmel, where the majority of cases have been seen. Local staff is very competent and efficient; however, due to lack of salary payment, they are threatening to go to strike.

Main health actors in the department are: Save the Children, Red Cross (Canadian, Dutch, and Haitian), CCH, MHDR, Plan Haiti, Caritas, CISP and the Cuban Brigade.

As in most of the departments, there is a need for better access to preventative measures such as more latrines within the communities, especially in remote areas, and better access to sensitization tools that explain the mechanism of transmission, and better method of transporting patients to health services. This last issue continues to be one of the main difficulties in adequate response to the epidemic.

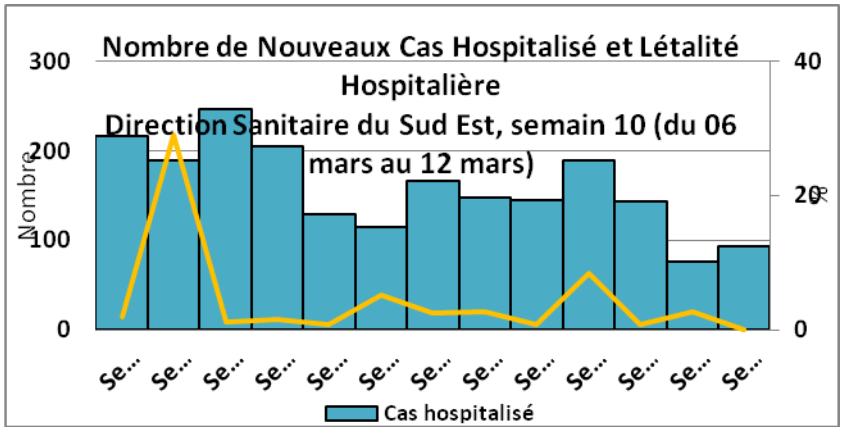
The SMS reporting system from the CTC/CTU is being piloted. The flow of data through community-based schemes is suboptimal.

Hotspots in the department include:

There is a significant and continuous increase in the number of cholera cases admitted at CTC St. Michel in Jacmel. On 10 March 2011, there were 15 cases >5, and on 11 March 2011 there was 1 case <5 and 19 cases >5. The increase happened following an unsafe burial among household and community members in Mont Carmel reported on 12 March 2011.

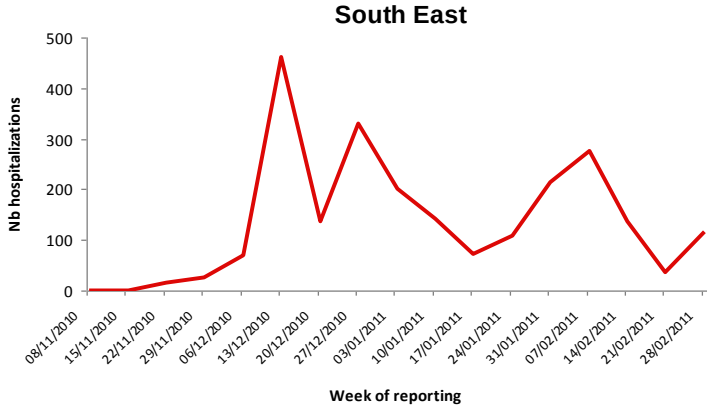
A slight increase in the number of cholera cases admitted at CTU Belle Anse was reported on 12 March 2011. This CTU has been receiving 0-2 cases consistently for the last couple weeks. On 10 March 2011, they received 5 cases >5 years of age. The increased number is attributed to carnival activities. Three community deaths were reported in Belle Anse on 16 March 2011.

Figure 16: Number of reported cholera cases and overall case fatality ratio
13 December 2010 – 13 March 2011



Note: The peak in week 7 is most likely attributable to faulty data entry.

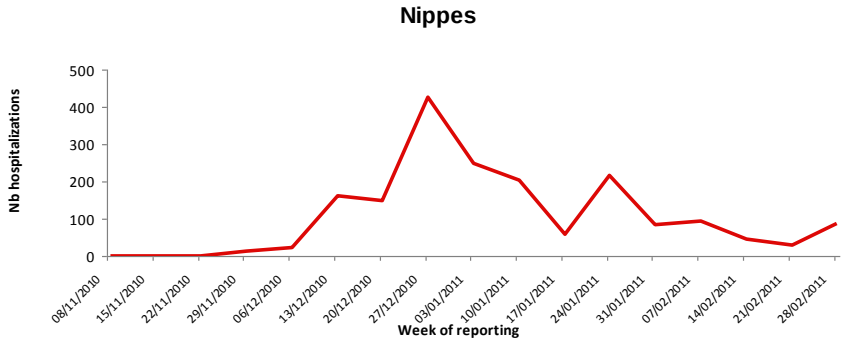
Figure 17: Number of reported hospitalized cholera cases by week of reporting
from 8 November 2010 to 28 February 2011



Nippes

The overall trend of cholera incidence is increasing. No hotspots in the department are reported.

Figure 18: Number of reported hospitalized cholera cases by week of reporting
from 8 November 2010 to 28 February 2011



South

The overall trend of cholera incidence is increasing. Weekly incidence of reported cholera cases increased from 0.6 cases per 1,000 inhabitants in week 9 to 0.8 cases per 1,000 inhabitants in week 10. The incidence increased across all communes, highest in Port au Piment and Aquin (1.8 cases per 1,000)

and Les Cayes (1.7 cases per 1,000). One death was reported during week 10. Proportions for cases from Aquin (17%), Les Cayes (15%), Camp Perrin (11%), Torbeck (12%), Chantal (8%) were the highest. Data emphasizes the areas that are underserviced by ORC plan and treatment centers (Torbeck and Chantal) or believed to have a low burden (Camp Perrin)

Data management at the Direction Departmental de Sante remains suboptimal. ORC reporting scheme will be refined and integrated with the work carried out by the community brigades.

PAHO/WHO, together with UNICEF is prepositioning medical inputs to prepare for the rainy season.

Hotspots in the department include:

- 2 March 2011: During the month of February consistently high proportion of cholera cases (~30%) from Roche à Bateau locality admitted at CTU Port à Piment.
- 12 March 2011: Approximately 60 cholera cases from Kanmi, near Cavaillon, seen at the CTC run by IMC and MSF in Les Cayes
- 13 March 2011: Rapid increase in cases seen and hospitalised in «Zanglais», neighbourhood of Aquin, 88 cases visited CTU Aquin since the night of 12 march 2011. On March 15, this number had increased to 350.
- 14 March 2011: starting from 12 March 2011, continuous increase of number of cholera cases coming from Conde, remote area of Coteaux, seen at CTU Port a Piment. This happened following the week long rains.
- 15 March 2011: Increased number of cholera cases reported in Bourdet and Maniches (near Les Cayes)
- 15 March 2011: Increased number of cholera cases reported in Port Salut
- 17 March 2011: Approximately 20 cholera cases reported in Randelles. No access to treatment and mobile CTU being deployed.

Figure 19: Weekly incidence of reported cholera cases per 1,000 inhabitants, by Commune, 13 February - 12 March 2011

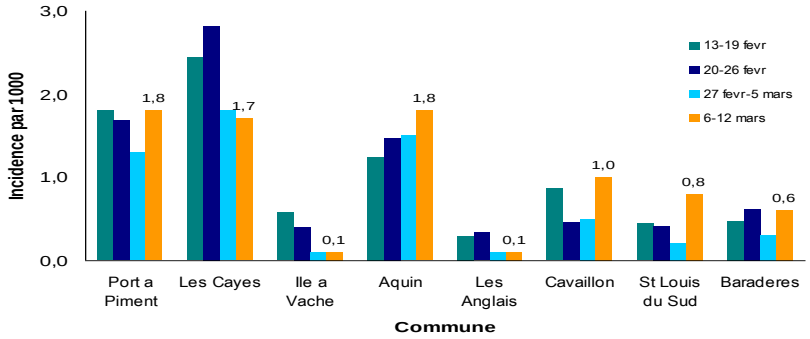


Figure 20: Number of reported cholera cases and community deaths, by week, 24 October 2010 – 12 March 2011

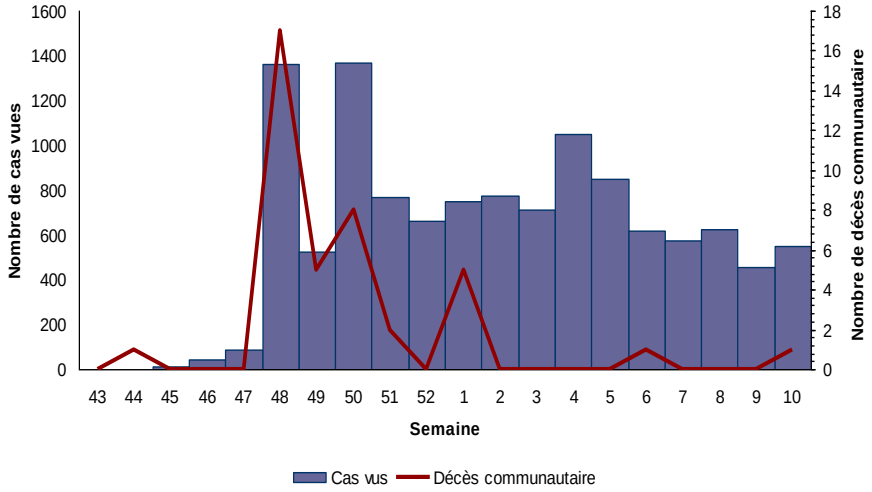
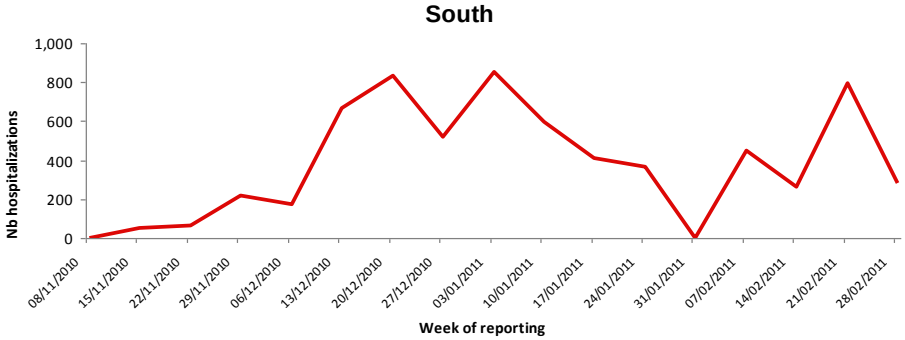


Figure 21: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 28 February 2011)



Grande Anse

The overall trend of cholera cases is increasing. An epidemiological alert unit has been created and procedures for verification, investigation, response, and information management has being established at the departmental level.

There was persistence of under reporting due to different reasons including silent CTC/CTU and lack of registries in the health care facilities. Weekly reporting of quantitative data is regarded as a key measure to improve the overall performance of the surveillance system.

Hotspots in the department include:

- 4 March 2011: Increased number of cholera cases reported at CTU Iles Blanche
- 8 March 2011: Increased number of cholera cases reported at CTU Mouline, commune of Corail, and attributed to several localities: Debarrière, Amiel, Tardieu, Fond d'Ycaque, Troubois, Miya, Carrier, Andre, Etandier.
- 12 March 2011: Increased number of cholera cases from Dériveaux locality admitted at CTU Pestel. Water supply at CTU Pestel continues to pose challenges. Arrangements made for 1,500 L water to be delivered at the beginning of the week starting 21 March 2011.
- 14 March 2011: Report of one case of cutaneous anthrax, in 8 month old baby, admitted at Jérémie hospital and resident in Didon, Ravine à Charles. The clinical evolution is favorable.

Verification in progress regarding the occurrence of similar cases in the family as well as animal deaths in the community.

- 15 March 2011: Veterinary Departmental authorities reports anthrax activity in the animal population in Commune de Corail. Further investigations have revealed that two cutaneous anthrax cases, in two children residents of Duquillon, had been seen at Corail Health Centre around 7 March 2011.
- 15 march 2011: Increased number of cholera cases reported in the Commune de Doco.

Figure 22: Number of cholera cases and Case fatality ratio among hospitalized cases by week, 17 November 2010 - 12 March 2011

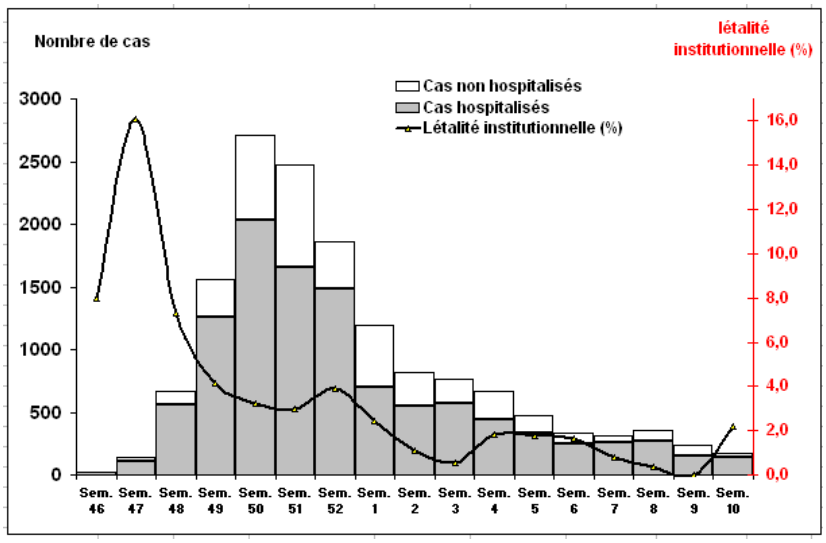
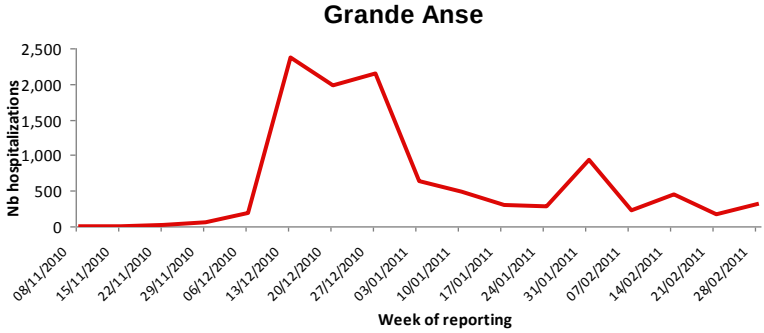


Figure 23: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 28 February 2011



A list of most frequently-used acronyms related to the response to cholera in Haiti is available at http://new.paho.org/hq/index.php?option=com_docman&task=doc_download&gid=11788&Itemid=