HEALTH CLUSTER BULLETIN

CHOLERA AND POST-EARTHQUAKE RESPONSE IN HAITI – MONDAY, JULY 25, 2011 – #26

Highlights

- The cholera epidemic reached a second peak in late May/early June due to severe rains throughout the country.
- The alerts and corresponding responses were reported on in separate SitReps (http://haiti.humanitarianresponse.info/Default.aspx?tabid=77).
- There are currently 48 NGOs actively working in cholera response.
- There are currently 34 CTCs, 189 CTUs, and 858 ORPs functioning in-country.
- The cholera epidemic is behaving as expected, having presented earlier in areas with larger populations and currently spreading to smaller rural areas throughout the country.
- There was a 25% decline in the number of potential new cholera cases at ORPs during the five weeks prior to June 28. International organizations and NGOs continue to respond to localized spikes in new cholera cases with WASH services, such as public health awareness campaigns and distribution of cholera-related WASH commodities.
- Following torrential rains on 6 and 7 June and subsequent cholera outbreaks, the total bed capacity in the metropolitan area was scaled up from 1, 400 in the beginning of May to 2,500 in June 2011. Since the peak, this number is now down to 1309 as of 13 July.
- Despite a resurgence of cholera cases due to abundant rains, mortality rates have been declining steadily in all departments.
- The Department reporting the highest mortality rate is Grande Anse with 203 deaths per 100,000 inhabitants. According to MSF-Epicentre data, recent mortality surveys carried out in 2 rural areas (North and Gaspard) and 2 urban areas (Cap-Haitien and Gonaives), demonstrate that densely populated areas and out-of-reach areas have the highest incidence and mortality rates, as these areas have less access to health care than the rest. The case fatality rate remains highest among children and the elderly.
- Considering the current attack rate of 3.65%, epidemiologic predictions place the number of cases through the end of October at 23,000, of which 12,000 would be hospitalized. The worst case scenario takes into account an attack rate of 5%, and puts the number of expected cases at 130,000 with 69,000 needing hospitalization.

Pan American Health Organization
Regional Office of the World Health Organization

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; Esther van der Woerdt

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.

Dear health partners,

After a second peak of cholera cases requiring effective use of surge capacity in Port-au-Prince, the average number of new cases per week is now decreasing again. We thank all our partners, other health actors and WASH partners for their swift and adequate response during this second peak.

Health Cluster Coordination

SITUATION OVERVIEW

- The cholera epidemic reached a second peak in early June with a significant increase in severe cases, particularly in Port-au-Prince metropolitan area and other parts of the country, including West, South East, South, Grand Anse, Artibonite and Center departments. Some areas of the North department saw a two-fold increase in the number of new patients over a two week period.
- Despite a resurgence of cholera cases due to abundant rains, mortality rates have been declining steadily in all departments.
- From a peak of 1,938 on 9 June, the number of occupied beds in the seven communes of Port-au-Prince metropolitan area decreased gradually to reach 1,365 on 28 June.
- Health Partners at departmental levels are preparing for the Cyclonic season by coordinating the contingency plans in different ways depending on the presence of partners and the weight of the DPC and the MSPP. In general, the health cluster partners have or are in the process of identifying the resources available at departmental and community levels and the emergency focal points. In some departments, high risk areas have been identified and an emergency stock has been pre-positioned in those areas. All clusters have been working on finalizing the contingency stock and ensuring that the stock is part of the national contingency plan.
- The Consolidated Appeals Process (CAP), a tool for coordination, strategic planning, and programming, was presented to the international community and donors. The CAP's mid-year review has now been completed, including revised funding needs based on the changing context. The Health cluster's unmet requirements have been estimated at $27,394,526 USD.
- A study commissioned by PAHO/WHO in April, concluded that the conditions that led to the spread of the epidemic are largely unchanged apart from the knowledge of the disease and stock availability. If coordination strengthened the role of the MSPP, the health infrastructure in the country has seen little to no benefit from cholera response. Coordination at the community or departmental level allowed for the activation of partner resources and communication that should be used for the control of diarrheal diseases in the long term.
- Remaining challenges include:
    - Lack of integration of cholera management activities into basic health services.

- The lack of emergency WASH partners and activities responding to cholera in communities and in camps.
- The withdrawal of NGOs from the field due to expiration of funds; the ideal coverage predetermined by the MSPP and PAHO/WHO recommends a minimum of 2 NGOs active in each department.
- MSPP encounters difficulties to respond appropriately not only to the cholera epidemic, but also in more general terms such as advocacy, financing, human resources, and departmental coordination.
- Irregular payment of salaries of local health staff in MSPP-run cholera centers continues to represent major risks that can jeopardize the response capacity at local and departmental levels when sudden increases in the number of cholera cases or any other major outbreaks occur. The departments of Nippes, South, South-East, and Grand Anse have outstanding balances for staff working in cholera facilities. Many of them have not been paid for months and threaten to go on strike. A solution is being sought in collaboration with the MSPP.

Table 1: Functional Cholera health structures:

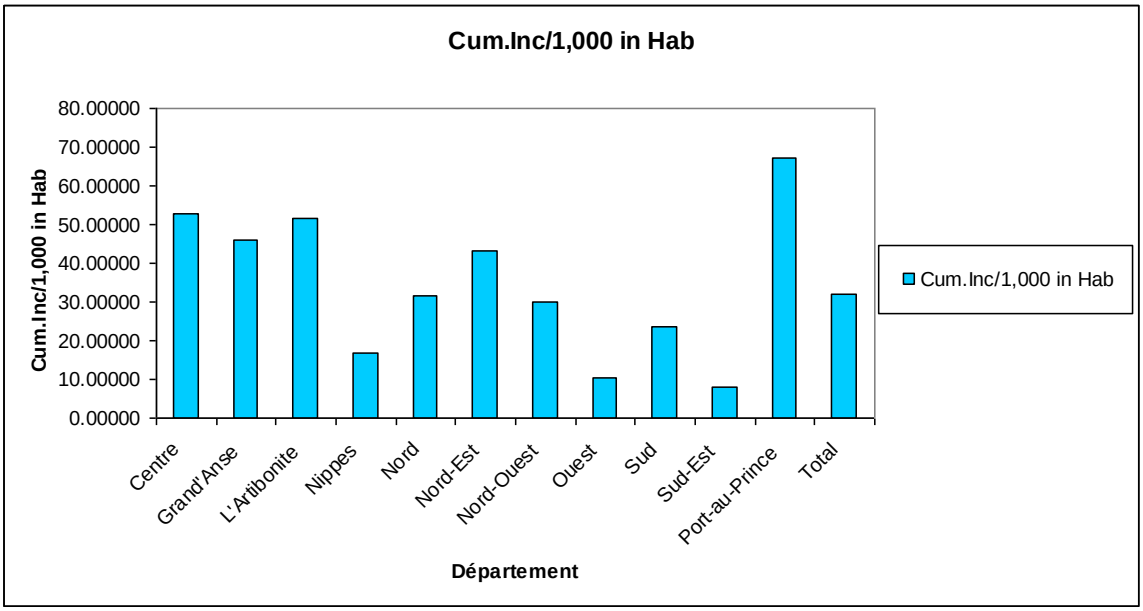
	16 Jan	23 Jan	30 Jan	6 Feb	13 Feb	16 Mar	26April	16 May	18 July
Operational CTC	85	101	101	100	98	98	56	48	38
Operational CTU	129	165	185	188	215	214	226	210	191
ORC	298	786	778	774	642	692	760	810	863

EPIDEMIOLOGICAL SURVEILLANCE

Indicator-based component

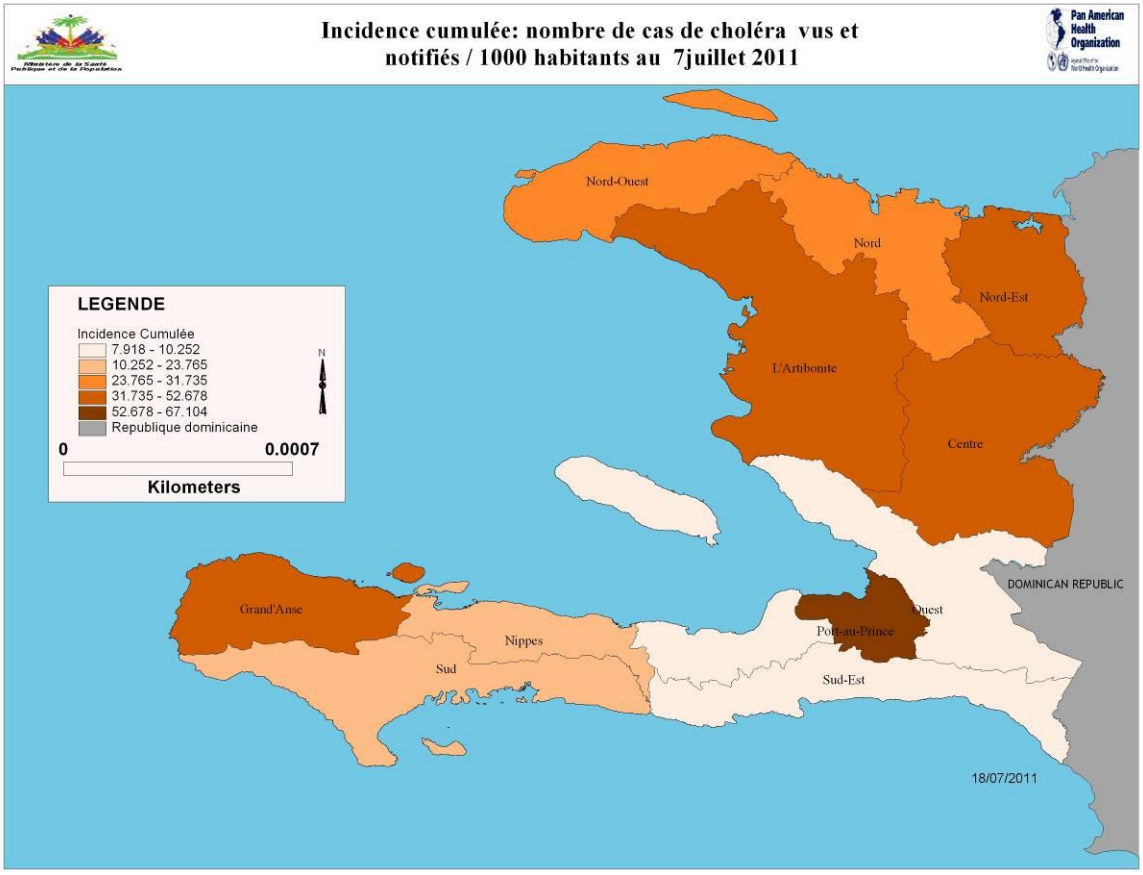
- As of 7 July 2011, the cumulative number of reported cholera cases was 386,428 of which 205,469 were hospitalized and 5,885 died. The case fatality rate is at 1.5%.
- The global attack rate is 3.65% per 100 inhabitants, ranging from 6.7 per 100 in the Port-au-Prince metropolitan area to 0.8 per 100 in South-East.
- Overall mortality rate for Haiti is 54.2 per 100,000 inhabitants.

FIGURES 1 AND 2: Cumulative incidence of reported cholera cases (number of cases per 1,000 inhabitants), by Department, 20 October 2010 – 7 July 2011



Department	Cumulative Incidence from 20 October 2010 to 7 July 2011
Center	52.67760833
Grand Anse	45.81013751
Artibonite	51.63872752
Nippes	16.92310423
North	31.73522052
North-East	43.23638991
North-West	29.86442449
West	10.25171132
South	23.76488665
South-East	7.917823015
Port-au-Prince	67.10417436
Total	32.12182616

Figure 3: Cumulative incidence of reported cholera cases (number of cases per 1,000 inhabitants), by Department, 20 October 2010 – 7 July 2011



The highest cumulative incidence has been reported in Port-au-Prince metropolitan area followed by the Departments of Artibonite and Center. The Department of South-East reports the lowest cumulative incidence

Figure 4: Cumulative number of hospitalized cholera cases by week of reporting Haiti, 8 November 2010 to 4 July 2011.

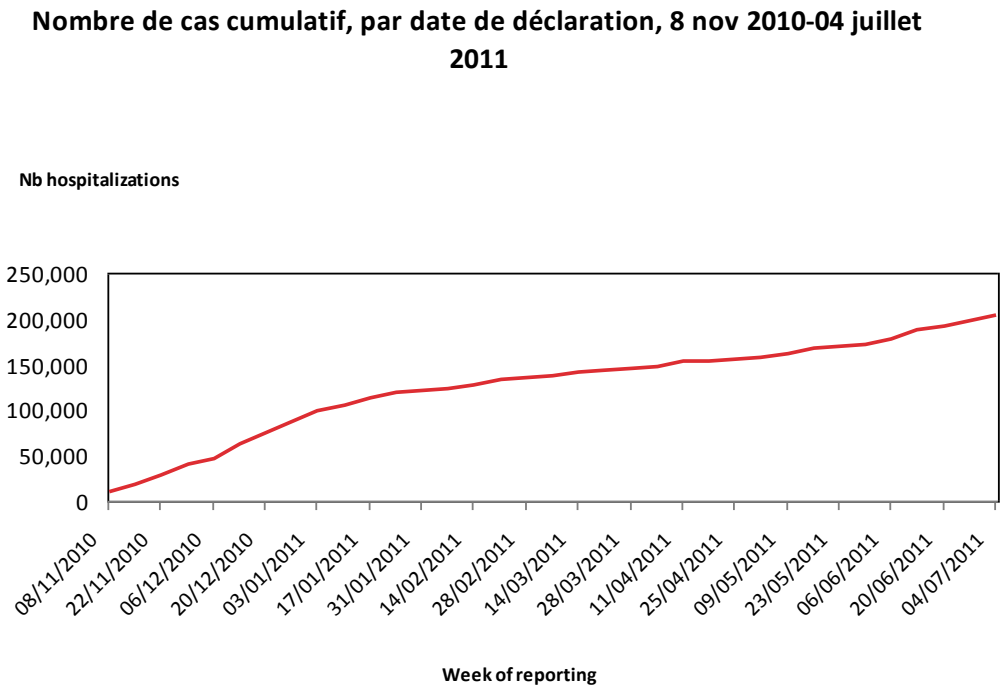
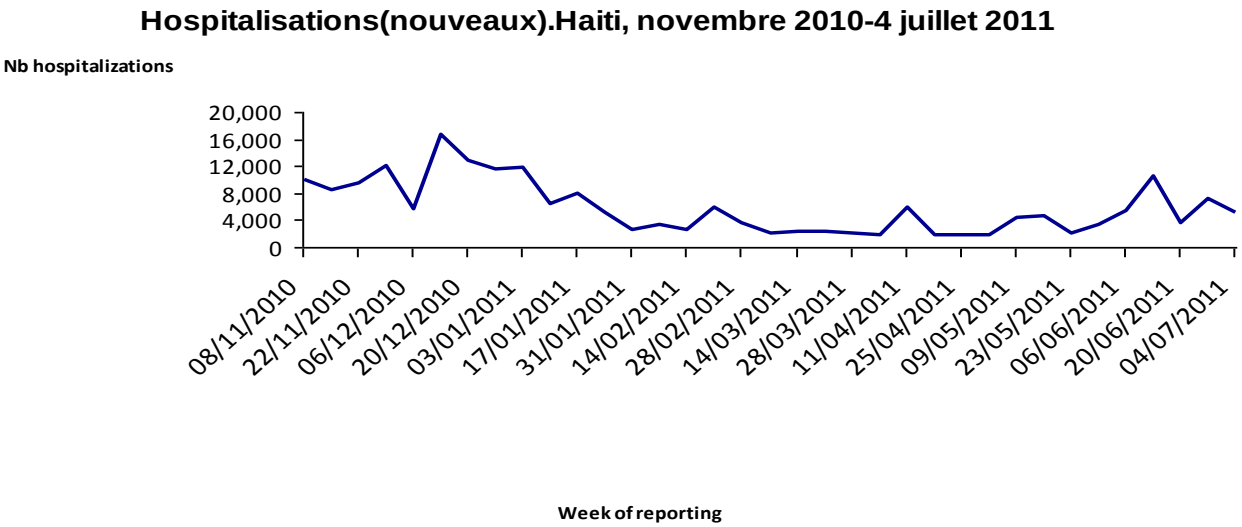


Figure 5: Number of new cholera cases hospitalized by week of reporting. 8 Nov 2010 to 4 July 2011



After a period of stabilization in the number of weekly hospitalizations at the end of April, two peaks were observed, one mid-May and the other during the first two weeks of June. The peak in mid-May was due to increasing case numbers in North-West, Artibonite and West (particularly Port-au-Prince) and the second in June was due to Artibonite, Center and West, including a large outbreak in Port-au-Prince.

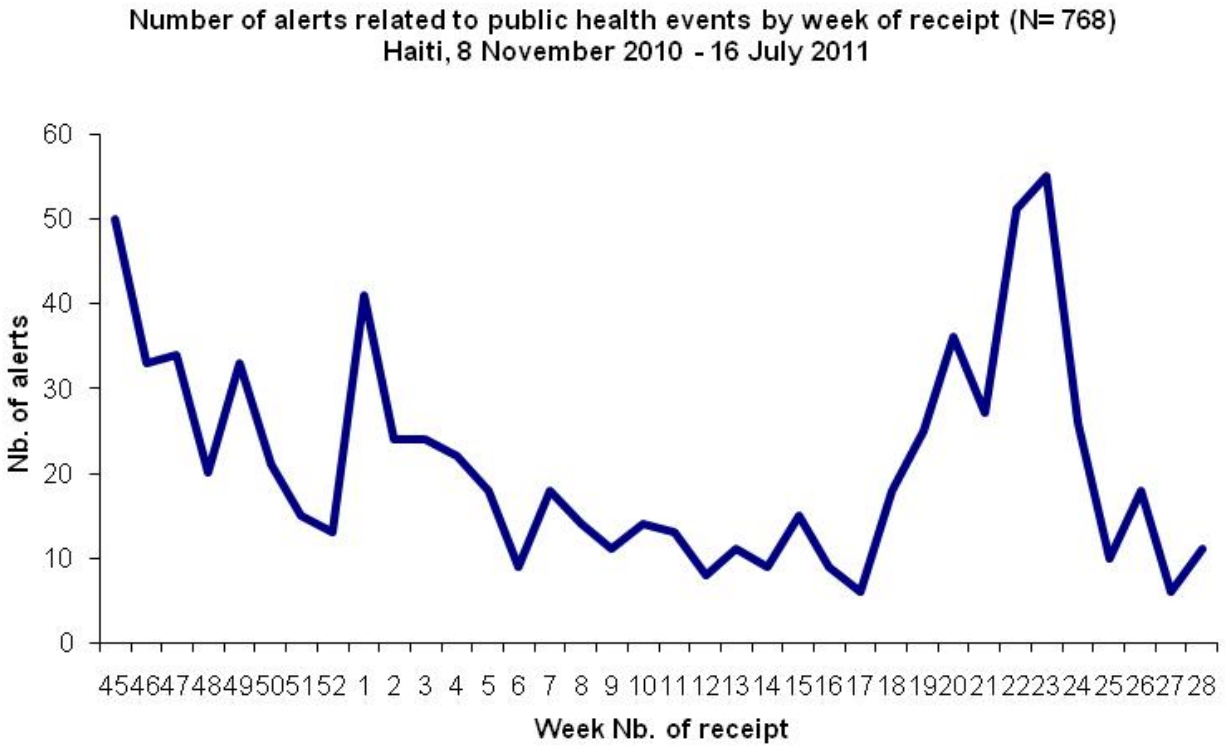
EVENT-BASED COMPONENT (ALERTS)

From November 8th 2010 to June 30th 2011, over 600 alerts were received by PAHO/WHO and the MSPP Alert and Response System. The alerts, reported mainly from NGOs in the field, are related to an increase in cases or patient load, deaths, lack of supplies (medical and/or WASH), lack of human resources, and/or prevention activities. The alerts also reflect hazards other than cholera (riots, strikes, etc), phasing out of CTCs and CTUs, and existence of other health threats (rabies, acute flaccid paralysis, etc). It also includes calls by health authorities and partners involved in surveillance activities for heightened attention at the health care facility and community level.

Heavy rains in early June led to water contamination and an increase in the number of cholera cases, mostly in the metropolitan area. This increase can be seen in weeks 20-23 with a peak in the number of alerts. The Department that continues to report the most alerts is the West Department. However, last week (7 July 2011), there was a 30% increase in new cholera case reporting in the North Department as well as in some rural areas of the Grande Anse Department and the Center Department.

Note: Figures include non-cholera alerts (though very few yet)

Figure 6: Number of Alerts of Public Health Events



WASH (ENVIRONMENTAL HEALTH)

- The municipal coordination mechanism, including the Communal Health offices of the MSPP, the CASEC, the ASEC and DINEPA, has resumed its activities in the communes and districts of the metropolitan area. In the past, this mechanism has proven to be a very effective tool in the response to cholera.
- There are several methods to make potable water: aquatabs, bleach, HTH. Among these products, there are some that are not safe for consumption. Several NGOs question dependence on aquatabs, so locally produced chlorine or other methods such as ACF with electrolysis have been proposed. The WASH Cluster has requested PAHO/WHO's support to assess these methods and products in order to determine which products are consumable and valid.
- PAHO/WHO supports a network of 22 hospitals whose water quality is analyzed by the Tamarinier laboratory. The analysis of residual chlorine will be sent to DINEPA's SYSKLOR project so that it can monitor the water quality in these centers as well.
- PAHO/WHO is coordinating with the WASH and CCCM clusters to follow-up on sanitary conditions primarily in camps recognized as "difficult disengagement sites". Along with the WASH cluster, PAHO/WHO will participate in the development of guidelines to promote methods of purifying water at home.
- PAHO/WHO and DINEPA have repaired the water system at Maissade locality, thus restoring a major source of drinking water.
- Carrefour, a commune that was hit hard by cholera previously, demonstrated satisfactory results of a home water study, with 92% of homes having chlorinated water.
- A new water quality study done in water distribution points within the metropolitan region where there are no WASH actors shows that 25% of these distribution points do not have residual chlorine in them compared to 26-27% the previous two weeks. Although this number is lower compared to previous weeks, the risks related to not having residual chlorine in water distributed at these sites are great (cholera, bacteria, etc). At the same time, high levels of residual chlorine might be cancerous.
- In collaboration between the MSPP, DINEPA, and PAHO/WHO, water quality standards that include aspects related to cholera are being drafted.

HEALTH PROMOTION

The Hygiene Promotion sub-cluster started dissemination of two documents: "The Hygiene Promotion Action Plan for the Rainy and Hurricane Season" and a working document entitled "Framework for Sanitation and Hygiene Promotion: Minimum Standards and Technical/Practical Recommendations (Ways of Working= WOW)". An electronic version has been distributed to national and international partners.

The NGO Haiti Participative received support from PAHO/WHO for the "Project Caravane Zero-Cholera" in Carrefour (West Department). The project is ready to be utilized by the Hygiene Promotion Sub-Cluster and the Health Promotion Sector of PAHO/WHO where the need for prevention arises.

CDAC Haiti, whose main objective is to: "Support the lead role of the Haitian Government in coordinating and disseminating, with all humanitarian actors in Haiti, a large-scale emergency public information campaign vital to the containment, prevention and early treatment of cholera," has signed a letter of agreement with PAHO/WHO for funding allowing it to continue its activities until it receives funds from the Emergency Relief Response Fund.

REPRODUCTIVE HEALTH

The project "Increasing Access to Health Services through Performance-Based Contracting for women, children and those displaced by the January 12, 2010 earthquake living in camps" will now be called "Manman ak timoun an sante". This project benefits from lessons learned from both SOG (free obstetric care) & SIG (free child healthcare) projects. Its aim is to ensure free of charge access to a package of health services for pregnant women, children 0-5 years old and people living in the displaced camps. Thus, it is expected that the project:

- Merges SOG & SIG interventions into a single package and establishes the basis for the development of a progressive social protection in health scheme that contributes to build up a new citizenship for all Haitians.
- Strengthens the role of the Health authority both at central and at Health Departments' level with a major role given to the latter due to the project's decentralized operation.
- Offers a set of interventions including health promotion and preventive as well as curative services that will be available through coordinated networks of health providers based on Primary Health Care in order to adequately structure services, set up referrals and counter-referrals and better respond to the needs of the patients.

The beneficiaries of the project will be some 3,000,000 people, of whom around 70% will be pregnant women, newborns and children 0-5 years old.

On July 12 and 13, the project team of "manman ak timoun an santé" had an internal retreat to develop and finalize the launch of the project funded by the Canadian Cooperation. This project is based on lessons learned from the SOG program (started in 2008 and continues currently), from the SIG program (started in 2010), and from the need to expand free, quality health services (at the point of distribution) to the targeted population (pregnant women and children less than 5 years old). The project is set to begin in September.

SITUATION BY DEPARTMENT

In the section Situation by Department, the following information is presented: (i) trends of the cholera epidemic (number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 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 25 of the Health Cluster Bulletin, published on 27 May 2011.

In many departments, the number of partners has decreased dramatically. Many health partners who were managing cholera facilities handed them over to the MSPP, following MSPP's continuity strategy. However the MSPP lacks capacity to support the facilities financially.

Table 2: Distribution of Alerts 8 Nov 2010 to 30 June 2011:

Distribution d'alertes 8 nov 2010-30 juin 2011

Departement	Nombre d'alertes	%
artibonite	71	12
centre	40	7
grande anse	93	16
nippes	11	2
nord	35	6
nord-est	18	3
nord-ouest	23	4
Ouest (sans PaP)	106	18
zone metropolitaine	69	12
sud	65	11
sud-est	57	10
Total	**588**	**100**

Figure 7: vulnerability analysis compared to outbreaks 24 April – 20 May

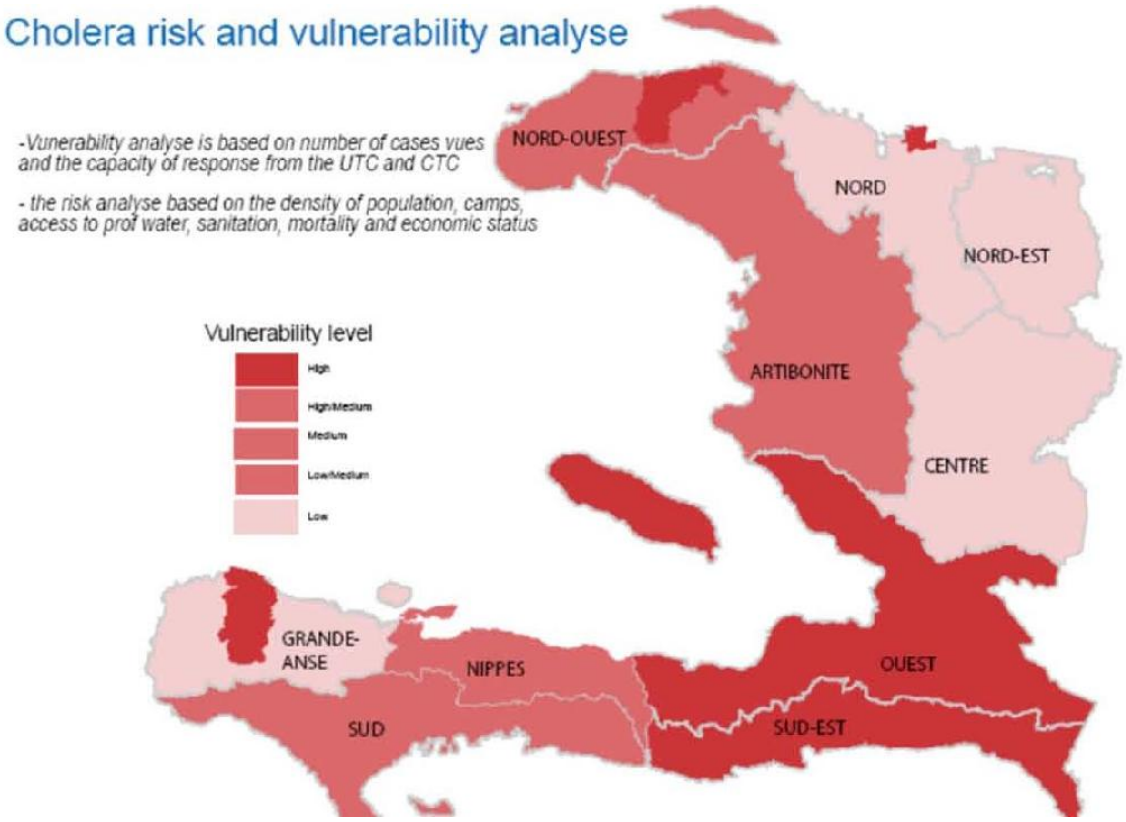
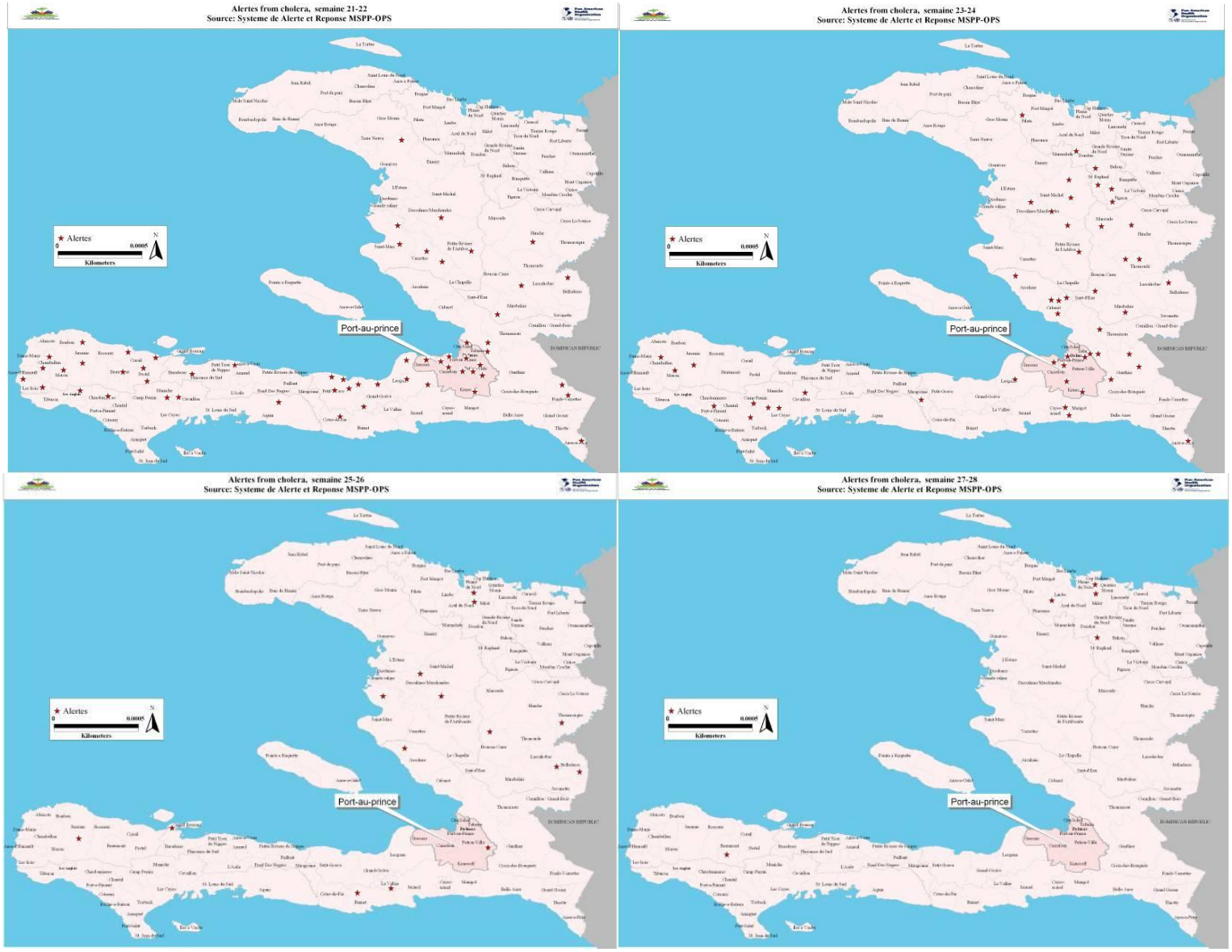


Figure 8: Alert and Response System from weeks 21-28



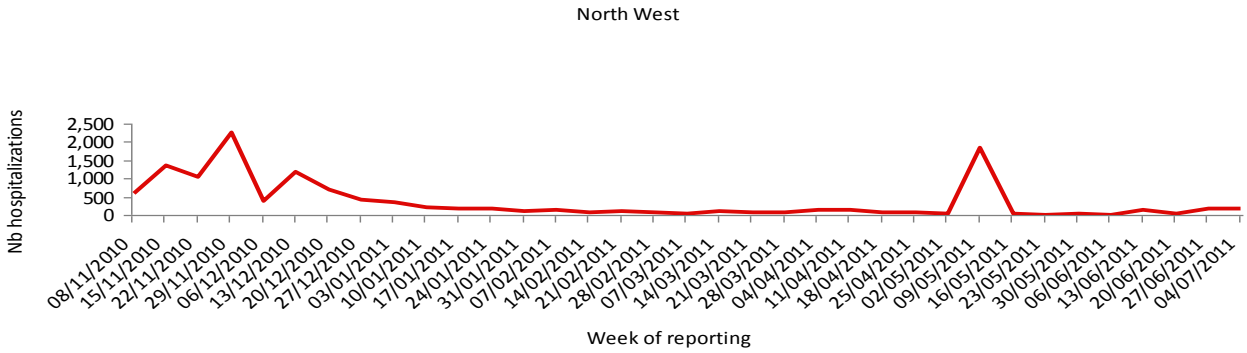
Northwest

The overall trend of cholera activity is stable.

As of July 13, 2011, there are no functional CTCs in the Department. However, there are 14 CTUs and 9 ORPs. The overall trend of cholera activity is stable. Some health partners in the area include MSPP, the Cuban Medical Brigades, IMC, and UNICEF.

No hotspots have been reported in the department.

Figure 9: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 2011

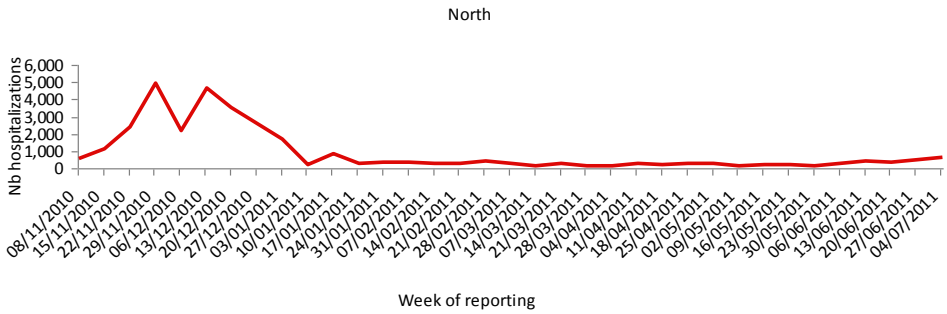


North

Despite an overall reduction in number of cases, the Department is experiencing a 30% increase since last week (week of 4 July). There have been a total of 9 deaths within the Department and approximately 598 cases, with 445 reported the week prior (week of June 27)-however there are gaps in data reporting for this Department. Some partners in the Department include Oxfam, MSF, Cuban Medical Brigades, and CHF International. As of this week (July 15), there is 1 functional CTC, 23 CTUs, and 107 ORPs functioning.

UNICEF is continuing to support the MSPP in its implementation of their community mobilization strategy to cover the department. In addition, they are assisting with the reopening of an ORP and reinforcing coordination efforts. They have hired several consultants to help with awareness projects. Furthermore, they are coordinating the stocking of the central pharmacy.

Figure 10: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 2011



Hotspots in the department include:

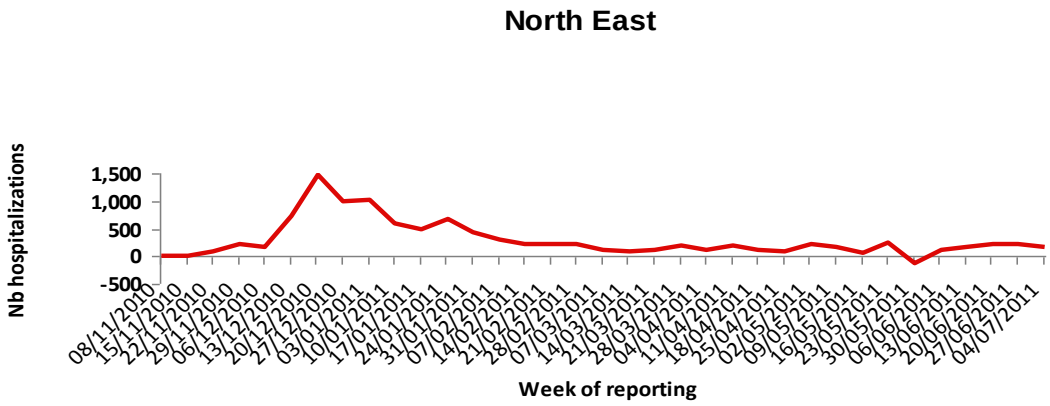
- The communes most affected are Saint-Raphael, Cap-Haïtien and Limbe, with 103 cases, 148 cases and 70 cases reported respectively just last week (7 July).
- Most cases come from the commune of St. Raphael and the section of San Miago.

Northeast

The overall trend of cholera activity is stable.

Prior to week 23, the number of cases reported per week was approximately 170. The number almost doubled in the following 2 weeks. Week 23 reported 369 cases and week 25 there were 325 cases. There are 2 CTUs in this area that are managed by MSPP with the support of MSF. The CTUs in the entire Department reported being out of stock of necessary items for cholera response and were restocked with supplies via PROMESS. Some health partners in the Department include the Cuban Medical Brigade, Plan International, and Merlin. UNICEF continues to support the MSPP in its community mobilization efforts as well as helping to reopen an ORP. They are also assisting with coordination and in restocking of the central pharmacy.

Figure 11: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 2011



Hotspots in the department include:

- Week 26-27 (June 27-July10): 12 cases in Capotilles, 24 cases in Ouanaminthe, 10 cases in Fort Liberte.

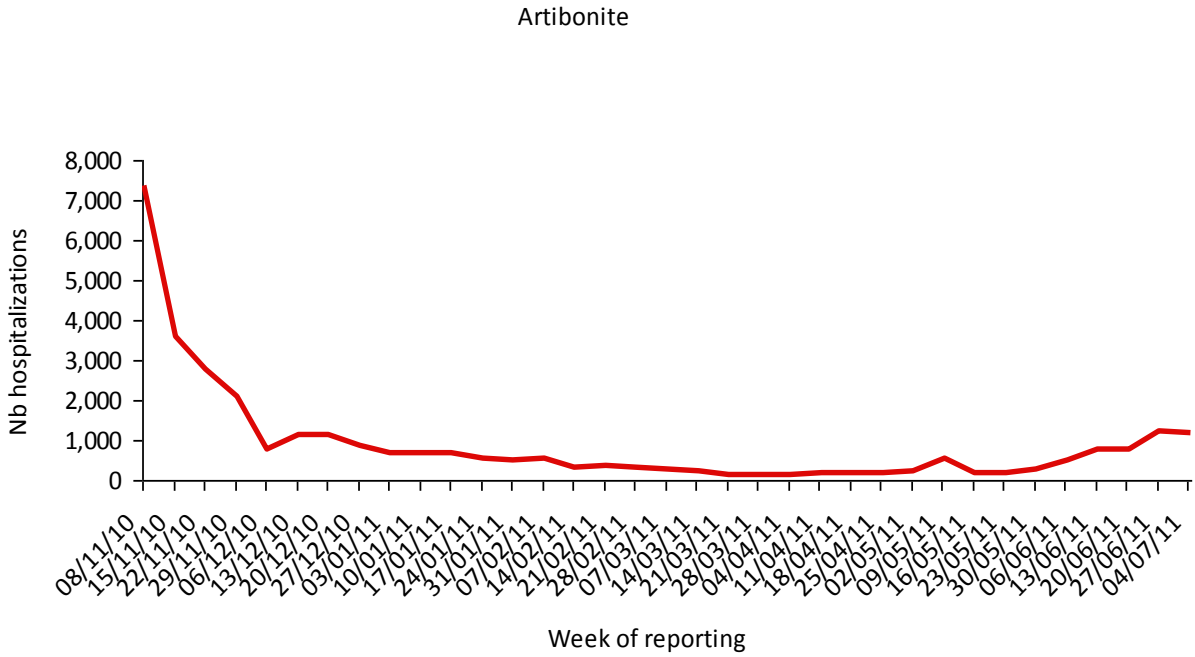
ARTIBONITE

Since week 21, Artibonite reports a steady increase in cholera cases throughout the Department. Due to the increase in cases, supply stocks have run low and PAHO/WHO has been providing much needed assistance with the restocking of supplies. Furthermore, various partners have stepped in where others have had to leave due to lack of funds. Some centers expanded their bed capacity and increased their staff in order to meet the needs of their locality. MSF –France has re-opened CTUs to respond to the increasing number of cases. However, there is still a gap in WASH partners in the department for cholera-related WASH activities in the community. The Department was previously identified as a zone highly vulnerable to cholera due to the risk of flooding and the presence of the Artibonite River. The Department has numerous health partners involved in cholera response, namely various MSF teams, Cuban Medical Brigade, UNICEF, and Save the Children.

Hotspots in the department included:

- In Gros Morne, Mapou, Marmont, Ennery, and Savanne Carre, the number of cases have increased between 44% and 168% from week 26 (June 26-July3) to week 27 (July 4-July 10).

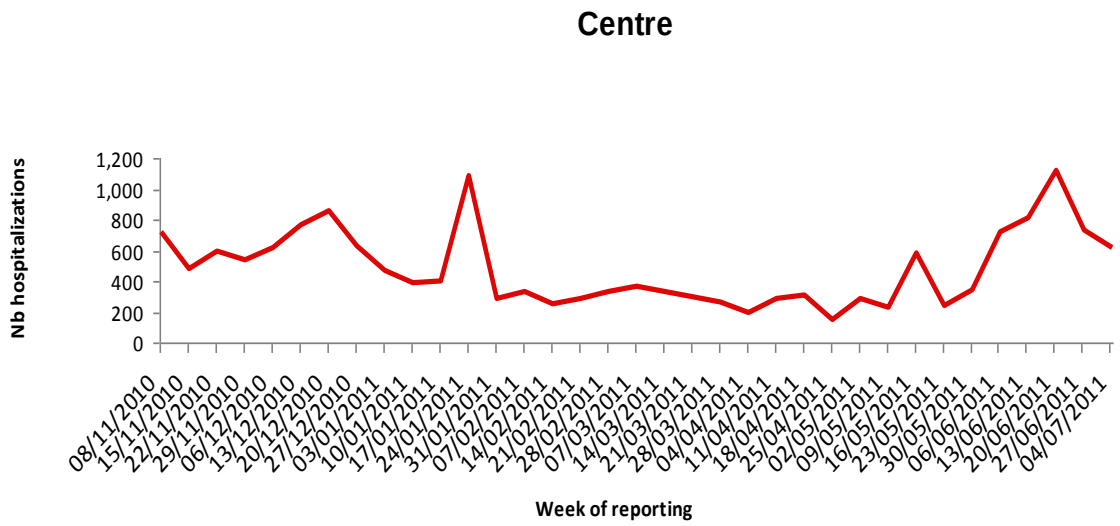
Figure 12: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 2011



Center

The number of cases was steadily increasing since week 21; however as of week 25 case numbers are decreasing. A meeting was held with the director of the DSC regarding the actual needs of the Center Department. Apart from PEPFAR funding for 168 brigadiers in the department, the DSC does not have a budget for the Cholera program. However with the increase in cases and the retreat of numerous partners, the DSC is facing a human resources problem. It has asked PAHO/WHO for financial support to help respond to the cholera cases.

Figure 13: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 2011



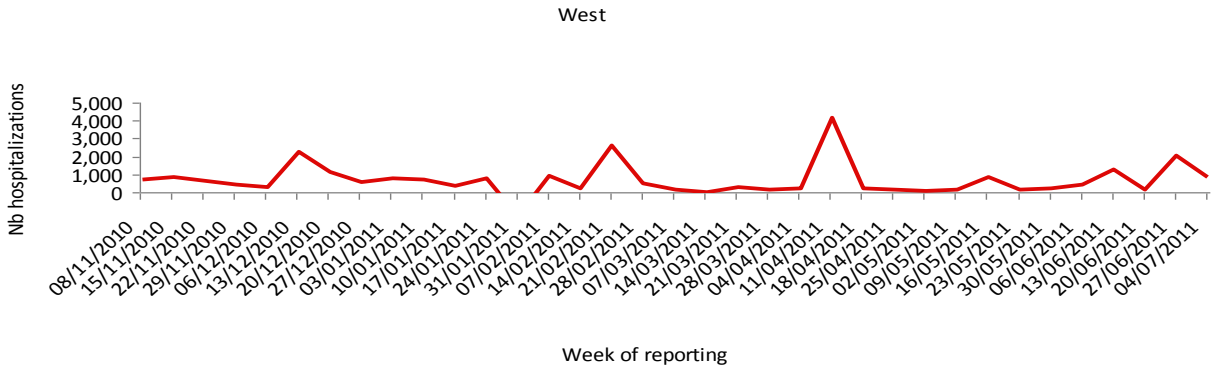
Hotspots in the department include:

- 12 June: Following the alert at Boucan Carré on 20 June, the PAHO/WHO field teams evaluated the site. Prior to 16 June, the CTU was receiving 10-15 cases per day. Since 16 June, it now receives about 39 cases per day, the majority of which come from Dafirmin, 1st sectional commune of Boucan Carré.

West

According to MSPP surveillance data, the overall trend of cholera activity is decreasing. This is highly correlative to the situation in the camps, where consistent access to safe water and emptying of latrines are a problem.

Figure 14: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 2011



Hotspots in the department include:

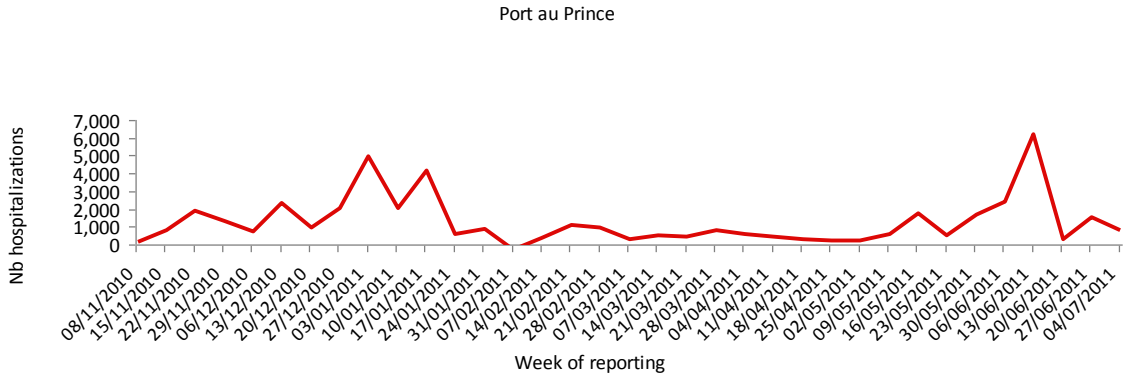
- 24 May: Increase of cases in Petit Goave and Grand Goave
- 10 June: Increase of cases in Kenscoff

- 9 June: Increase of cases in Leogane
- 12 June: Increase of cases in Cabaret
- 13 June: Increase of cases in Thomazeau, Bouci, Kenscoff
- 15 June: Increase of cases in Petion-Ville, Port-au-Prince,
- 16 June: Increase of cases in Dondon and Pignon,
  Action for all of these: Various NGO partners and the MSPP provided response.

Port-au-Prince

The overall trend of cholera activity is decreasing.

Figure 15: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 2011



Hotspots in the department include:

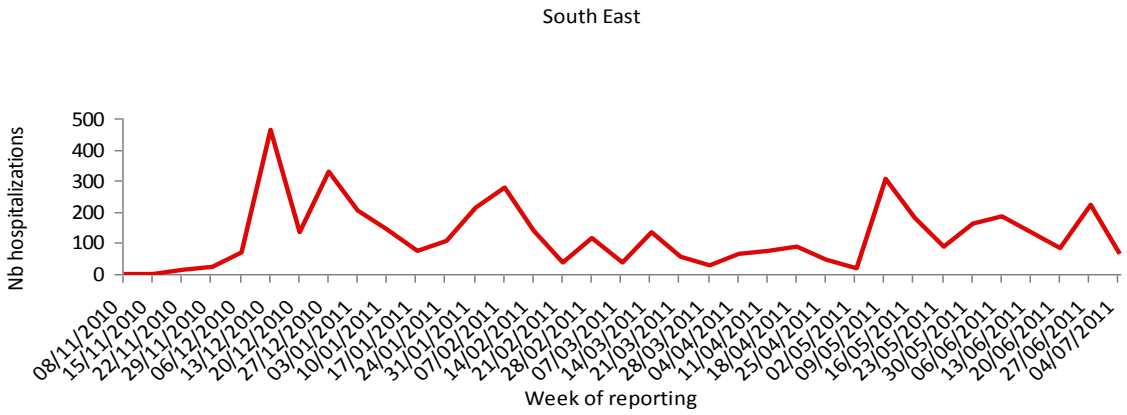
- 28 May: Increase of cases in Martissant, Commune de Carrefour
- 9 June: Increase of cases in Leogane and Port-au-Prince
- 16 June: Increase of cases in Dondon, Croix de Bouquets, Pignon,
- 18 June: Increase of cases in Delmas

- 31 May: Alima reported that all 4 of their CTUs are at full capacity (Bristou, HCH, Fermathe, Laferier). At the moment they are coping. They re-opened the Bristou center in Petionville at 6 pm with 20 beds and by 7 pm it was full.
- 6 June: MSF-Holland reported having 500 total patients in their CTC; 240 of which were receiving treatment properly in a bed, whereas the rest were being treated in chairs.
- 15 June: IOM reports an increase in cases at their OPRs in the following camps: Parc Managua and terrain Toto in Delmas, Camp CENOR and Lycée Jean Marie in Tabarre, CJS 14 in Tabarre, K43 (6 cases from the camp, 8 cases from the surrounding neighborhood), Patrice Garage in Cité Soleil, Parc Acra 1, Place de la Paix in Delmas, and Village Ted Boeuf.
- 22 June: There is a 45-bed CTC in the Rousseau Montrouis health center. There are about 145 patients per week using this facility.
- 14 July: A notable increase in the number of cases seen in Jacquot, 2nd communal section of Petionville (rural, mountainous, isolated zone) 29 cases seen in 3 days compared to 2 or 3 per week usually in the health center associated with the ORP. A 5-bed CTU was re-opened.

Southeast

The overall trend of cholera cases was decreasing for the past month, reached a slight peak in early June, then decreasing once again. The main problem in the area consists of salaries not being paid for several months. The international community is advocating for a swift solution to this problem.

Figure 16: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 2011



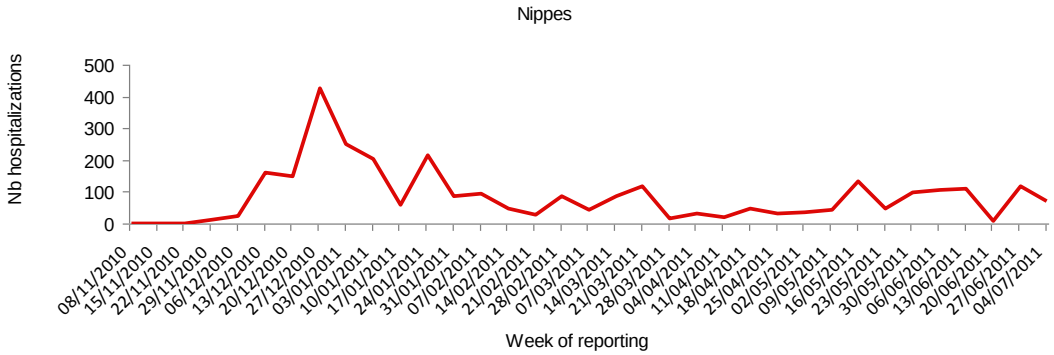
Hotspots in the department include:

- 28 May: Increase in cases at the CTC of MSF-Belgium for the last 2 weeks with a sharp increase during the weekend with 40 new cases on Sunday night and a total of 110 hospitalized cases as of the afternoon of May 23. Cases are mainly coming from the localities of Martissant, Boloise and Font Tamare.
- 11 July: 4 confirmed cholera cases in the Jacmel prison. The 4 cases were transferred to St. Michel. There is another non-confirmed case that was isolated from the rest of the prison populations. There are also about 25 suspected cases in the general prison populations with diarrhea, but who are not isolated.

Nippes

The number of cases reported has increased over the past few weeks, but is now on the decline. However, this does not necessarily mean that there are more cases than before because recently, additional ORPs have been established. Therefore, the increase in cases may be due to increased accessibility to ORPs and increased reporting. The Department recently obtained a new PAHO/WHO field cluster advisor to coordinate and ensure access to services and supplies. In the next few months however, several of the NGOs currently working in Nippes will be withdrawing from the area, leaving only MSPP, PAHO/WHO, and Medecins du Monde.

Figure 17: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 2011



Hotspots in the department included:

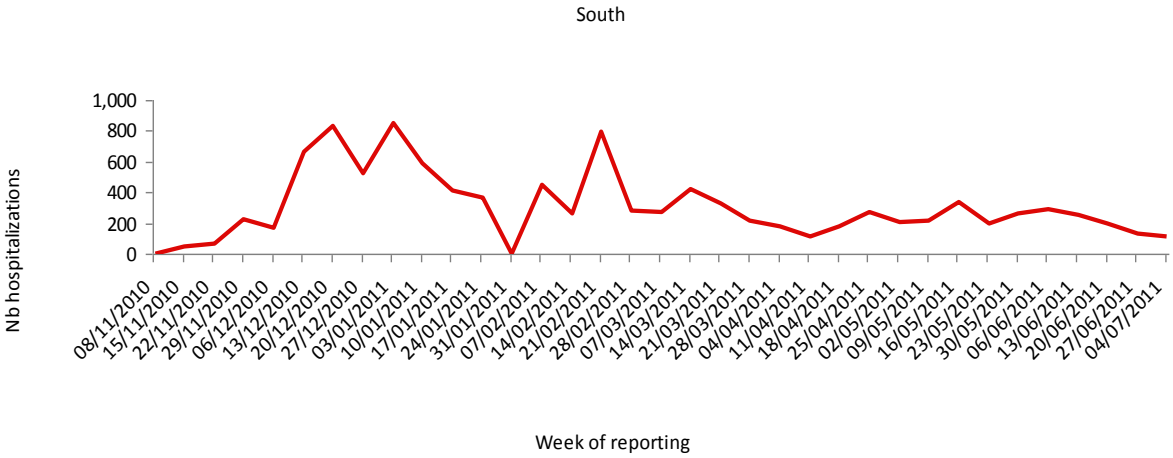
- 20 June: Karouk reports an increase in cases; number of cases not specified. There is a small, 5-bed CTU that reports 1 death.
- 24 June: Miragoane reports an outbreak; number of cases not specified.

South

The overall trend of cholera activity increased slightly during the end of May and beginning of June, but has since been trending downward.

Staff working in MSPP CTCs and CTUs has still not received their salaries and are threatening to strike. The international community is advocating for a swift solution to this problem.

Figure 18: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 2011



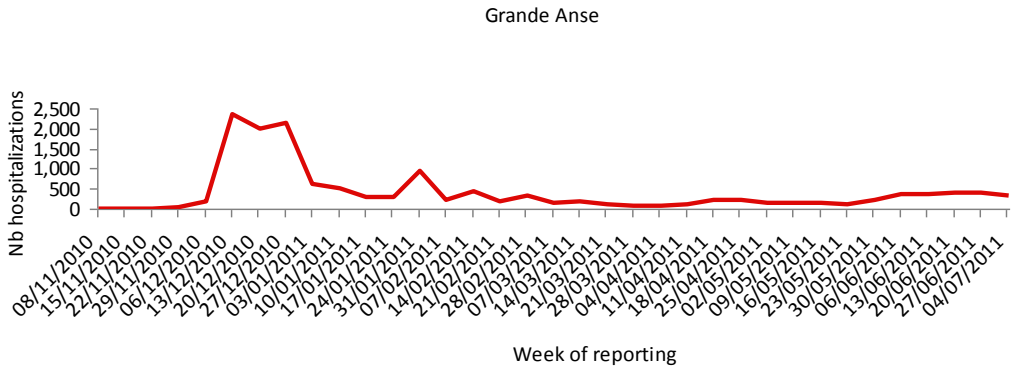
Hotspots in the department included:

- 7 June: Since May 28, there is an increase in cases reported in Les Cayes. Between May 29th and June 4, they reported seeing 297 cases, compared to 195 the week prior.
- 11 July: IOM reports an increase in cholera cases in Tiburon and les Anglais.

Grande Anse

The overall trend of cholera activity is slowly increasing over the past several weeks. The situation in the department is dire, with insufficient number of partners, lack of drinking water in health facilities, and poor sanitation. Additional partners are needed, mainly for WASH activities.

Figure 19: Number of reported hospitalized cholera cases by week of reporting, from 8 November 2010 to 7 July 2011



Hotspots in the department include:

- 6 June: Increase in cases for the past 3 days. Totals for week 22 are: 57 in Chambellan (the preceding weeks reported 20 cases/week); 34 in Prévilé (3 in week 21, 0 in week 20). In Moron, there were 41 hospitalized cases on 5 June (at the beginning of week 19, they reported 19 hospitalized cases). MdM states that the epidemic continues to spread, involving areas more remote from the river.
- 13 June: MSPP abandoned the CTU in Abricots.
- 13 June: In light of the situation in Grande Anse (increasing cases and partners retreating), MdM will support the CTCs in Moron and Jérémie for 6 months and the CTUs of Prévilé and Abricots for 3 months (with reevaluation as necessary). They will also mobilize a team of 6 agents (1 doctor, 3 RNs, 1 facilitator, 1driver/logistician) specifically for cholera to work with the numerous structures having difficulties within the department. This team's priority will be to support structures that are supported by MdM.
- 1 July: Increase in the number of cases at the CTU of Carrefour Charles; a large number of these cases come from Rénal. The staff at Carrefour Charles who also work in the dispensary and the CTU at the same time are exhausted. MSF-France sent a nurse to support the CTU.
- 2 July: An increase in cases (11 cases), with 1 death at the CTU in Beaumont. All the patients are from the zone of Larier. There is only 1 nurse in this CTU. MdM will send a nurse from the mobile unit to assist the CTU in the next 2-3 days.

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=