



# Epidemiological Alert:

## Weekly update on the Cholera situation

### EW 3 (January 16 to January 22 2011)

(Published on 31 January 2011)

The purpose of this alert is to present the current epidemiological situation of the cholera outbreak in Haiti and the Dominican Republic updated as of epidemiological week (EW) 1, 2011. The information that is presented has been provided by the Ministère de la Santé Publique et de la Population (MSPP) of Haiti which compiles the data obtained by the different partners of the Health Cluster and the Ministry of Public Health of the Dominican Republic, respectively.

## Haiti

Since the beginning of the cholera outbreak in the EW 42<sup>1</sup> (2010) as to EW 1 (2011) the MSPP registered a total of 207,613 cholera cases of which 56.4% (117,104) were hospitalized<sup>2</sup> and 1.9% died (global case-fatality rate).

### New cases per week

During the EW 3 of 2011, there were 14,334 new registered cases including 133 fatal cases. The weekly incidence rate for this week was 13.6 cases per 10,000 inhabitants which is an increase of 6.9% compared with registered in the previous week.

All the departments registered new cholera cases. However, there was an increase in the weekly incidence rate in six of the departments when compared to the previous week (Centre, Ouest, Nippes, Sud Est, Nord-Est and Nord-Ouest) and a decrease in four departments (Artibonite, Grand Anse, Nord and Sud).

## Summary

### Haiti

During the third EW of 2011 Haiti registered an increase in the weekly incidence rate at the national level, which went from 10.1 cholera cases per 10,000 inhabitants in EW 2 to 13.6 cases per 10,000 inhabitants in EW 3, which is an increase of 6.9% in the new case registered when compared to the previous week.

Of all the departments, six, increased their weekly incidence rate (Centre, Ouest, Nippes, Sud Est, Nord-Est, and Nord-Ouest) and four showed a decrease (Artibonite, Grande Anse, Nord and Sud).

The hospitalization case fatality rate at the national level in EW 3 of 2011 was 1.5%, two decimals above the previous week.

### Dominican Republic

The Ministry of Public Health informed that since the beginning of the outbreak in EW 45 of 2010 to EW 2 of 2011, there were 263 cases confirmed by laboratory and one death that happened in EW 2.

<sup>1</sup> On October 20, 2010 the first cases of cholera (*V. cholerae* O: 1 serotype Ogawa) are confirmed by via laboratory testing in patients hospitalized in the department of Artibonite.

<sup>2</sup> A case of cholera is defined as a patient with profuse, acute, watery diarrhea, in a resident of a department in which at least one laboratory confirmed case of cholera has been confirmed by laboratory. Hospitalized cases are when a patient is admitted to a health facility (a hospital or cholera treatment center) during at least one night. A death due to cholera is the death of patient with the cholera disease that satisfied the definition of cholera cases. Any death that occurs due to cholera that occurs in a health facility, even if this person was admitted overnight or in the morning is considered a cholera hospital death.

## Hospitalization trends and in-hospital case fatality rate

At the national level, there was also a registered increase in the number of new hospitalizations of 7.4% when compared to what was registered the previous week. All departments, in EW 3 of 2011 registered new hospitalizations, with an increase between 3.1% and 17.4%. The departments that presented the largest increase in the number of hospitalizations when compared to the previous week were: Centre, Nippes and Nord Est. Port au Prince also presented an increase in the number of new hospitalization this week.

The in-hospital case fatality rate at the national level (proportion of deaths by cholera among hospitalized patients) reached 1.5%, an increase of two decimal points when compared to EW 2 which was of 1.3%. In the week 3 Nippes once again registered the highest hospital case fatality rate of 4.3% when compared to the national average. Yet Grand Anse and Sud significantly reduced their case fatality rate, the former went from 1.9% in EW 2 to 0.8% in EW 3 and the later from 2.8% to 0.3%.

## Global case fatality rate

The global case fatality rate of the cholera epidemic which is the total number of deaths registered divided by the total number of registered cases is 1.9% (with a range that goes from 0.8% in Port-au-Prince to 9.5% in the department of Sud Est).

## Dominican Republic

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The Ministry of Public Health reported that up to EW 3 of 2011 there were 263 cholera cases confirmed by laboratory (191 in 2010 and 72 in the first three weeks of 2011), with one fatal case.

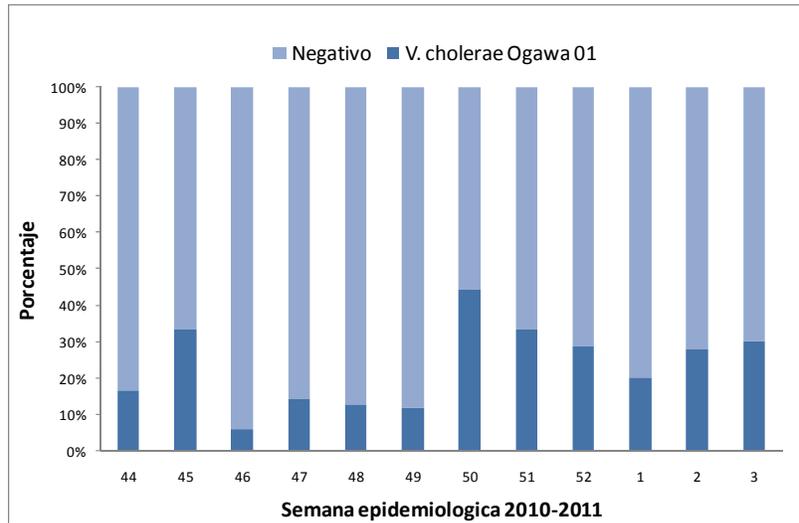
There have been registered cases and hospitalizations due to cholera in 15 of the 31 provinces of the country. The provinces where cases have been detected during the previous two weeks are Azua, Elías Piña, La Altagracia, Monte Cristi, Pedernales, San Juan, Sanchez Ramirez, Santiago, Santiago Rodriguez, Valverde, Santo Domingo and Distrito Nacional.

On the other hand, since the 25<sup>th</sup> of January, an outbreak among attendees at a social reunion which took place in the province of La Romana is being investigated. The majority of attendees were Venezuelan citizens, who when returning to their country presented symptoms compatible with cholera. Until the 30<sup>th</sup> of January, in Venezuela, a total 67 syntomatics have been identified, 27 of the cases required hospitalization and the rest were taken care of on an ambulatory basis. Among the tests performed, 10 samples of feces were processed and 7 have given positive results for *V. cholerae 01, Serotype Ogawa*. No deaths have been reported.

With respect to this same event, the Dominican Republic has investigated 12 suspected cases, confirming the presence of *V. cholerae* in 9 of the 11 samples that were analyzed. The identified cases in the Dominican Republic began showing symptoms within the first 8 to 48 hours after the social gathering. Around 67% (8/12) of the identified cases up to this moment are male and 59% (7) are of 50 of age or older.

The preliminary results of the outbreak investigation indicate that the cholera outbreak was possibly caused by the consumption of contaminated foods during the cooking and/or preparation process and that were distributed to the guests of the gathering.

Figure 1. Positive results of the samples investigated by laboratory. The Dominican Republic, updated as of 27th of January of 2011.



Source: Vice Minister of Collective Health. General Directive of Epidemiology.

The following reiterates the recommendations formulated in the Epidemiological Alert for the 24th of October of 2010:

## Surveillance

Under the International Health Regulations (2005) public health events that involve the risk of cholera cases should be evaluated on the basis of Annex 2 of the IHR, and the WHO Contact Point for IHR notified.

The surveillance of cholera should be part of an integrated surveillance system of a country and should include timely feedback to information at both local and global levels. It is recommended to use the WHO standardized case definition to obtain a more precise estimation of the cholera burden at the global level in order to define more sustainable support strategies.

In countries where no cholera cases have been reported, the following is recommended:

- Monitor the trend of acute diarrhea diseases with emphasis in adults.
- Immediate notification of all suspected cases from the local to the central and peripheral level.
- Investigation of all suspected cases and clusters.

### Recommended case definition:

#### Clinical case definition:

(i) In areas where the disease is not yet present, severe dehydration or death from acute watery diarrhea in patients aged 5 years of more\* or

(ii) In areas where there is a cholera epidemic, acute watery diarrhea, with or without vomiting in patients aged 5 years or more\*.

#### Case classification:

**Suspected case:** Clinically compatible disease.

**Confirmed case:** Suspected case confirmed by laboratory.

In an outbreak situation the following is recommended:

- Intensified surveillance with the inclusion of active case finding.
- Laboratory confirmation as soon as possible.
- Weekly analysis of the number of cases and deaths by age, sex, geographical location and hospital admission.

## Laboratory Diagnosis

The diagnosis of cholera is established by the isolation of *V. cholerae* or by serological evidence of recent infection.

## Treatment

Cholera is a disease that responds satisfactorily to medical treatment. The first treatment goal is to replace fluids that have been lost by diarrhea and vomiting. Up to 80% of cases can be treated through the early administration of oral rehydration salts (WHO/UNICEF oral rehydration salts standard sachet).

It is recommended to administer liquids intravenously to patients that have lost more than 10-20 ml/kg/h or patients with severe dehydration. The best guide for fluid therapy is to record losses and gains in fluids and to adjust administration as appropriate.

The administration of appropriate antibiotics, especially in severe cases, shortens the duration of diarrhea, reduces the volume of hydration fluids necessary and shortens the time *V. cholerae* is excreted.

The massive administration of antibiotics is not recommended because it has no effect on the spread of cholera and contributes to producing bacterial resistance. With appropriate treatment the fatality rate is less than 1%.

In order to provide timely access to treatment, cholera treatment centers should be established in affected populations. These centers should be located in strategic points to maximize the number of affected individuals that can be treated outside of the hospital setting and based on management protocols defined by and agreed to by all parties.

Response plans must provide for coordination between treatment centers and health centers and levels of care in the communities where they are located and should include the dissemination of hygiene and public health measures.

## Infection Prevention Measures

The following recommendations are aimed at reducing the transmission of fecal-oral infection of cholera in the health care environment:

- Wash hands with soap and water or glycerin alcohol before and after patient contact.
- Use of gloves and gowns for close contact with patients and contact with excretions or secretions.
- Isolation of patients in a single room or of cohorts.
- Separation of beds by more than one meter.

- Cleaning of debris and organic material with sodium hypochlorite (bleach) dilution (1:10).
- Cleaning of environment with sodium hypochlorite (bleach) dilution (1:100).
- Persons who care for children that use diapers or people with incontinence must strictly follow the same precautionary measures cited above, especially those related to hand hygiene (after changing diapers and contact with excretions). In addition, it is recommended to change soiled diapers frequently.

## Prevention

The implementation of prevention activities in the medium and long term is the key in the fight against cholera. Generally, the response to cholera outbreaks tends to be reactive and take the shape of an emergency response; this approach prevents many deaths, but not cholera cases.

A coordinated multidisciplinary approach, which must be supported by a timely and effective surveillance system, is recommended for prevention, preparedness, and response. Key sectors that should be involved are:

- Health care
- Water supply and sanitation
- Agriculture and Fisheries
- Education
- Professional associations, non governmental organizations and international partners in the country.

## Water supply and sanitation

The improvement of water supply and sanitation remains the most sustainable measure to protect people against cholera and other epidemic waterborne diarrheal diseases. However, this approach may be unrealistic for those poorest people in our region.

Cholera is usually transmitted by food or water contaminated with feces. Sporadic outbreaks can occur anywhere in the world, where water supply and sanitation, food safety, and hygiene are inadequate.

## Travel and international trade

Experience has shown that measures such as quarantine - to limit movement of people - and the seizure of goods, are ineffective and unnecessary in controlling the spread of cholera. Therefore, restricting the movement of people, as well as imposing restrictions on imported food produced under good manufacturing practices, based solely on the fact that cholera is epidemic or endemic in a country, is not justified.

## References

1. Cholera Updated 2009. Weekly Epidemiological Record. No 31, 2010, 85, 293-308. 30 July 2010.
2. Cholera vaccines: WHO position paper. Weekly Epidemiological Record. No 31, 2010, 85, 117-128.
3. WHO Recommended Surveillance Standards. WHO/EMC/DIS/97.1
4. Cholera. WHO Fact Sheet. Available at:  
<http://www.who.int/mediacentre/factsheets/fs107/en/index.html>

## Technical Information on Cholera

The daily updates with respect to the number of cases, hospitalizations and fatalities due to cholera are published through the Interactive Cholera Map which can be found through the following link:

[http://new.paho.org/hq/images/Atlas\\_IHR/CholeraHispaniola/atlas.htm](http://new.paho.org/hq/images/Atlas_IHR/CholeraHispaniola/atlas.htm)

The report concerning the actions taken by the Health Assistance Group, at the national and department level can be found through the following link:

[http://new.paho.org/hq/index.php?option=com\\_content&task=view&id=4404&Itemid=3487](http://new.paho.org/hq/index.php?option=com_content&task=view&id=4404&Itemid=3487)

A complete set of technical guidelines and recommendations on **case management**, procedures for **identification of *Vibrio cholerae*** in the microbiology laboratory, **control measures in complex emergencies** is available at PAHO website:

[http://new.paho.org/hq/index.php?option=com\\_content&task=blogcategory&id=3119&Itemid=3467&lang=en](http://new.paho.org/hq/index.php?option=com_content&task=blogcategory&id=3119&Itemid=3467&lang=en)