



# Epidemiological Alert: Update on the Cholera situation in Haiti and Dominican Republic

(Published on 20 May 2011)

The objective of this alert is to provide an update of the epidemiological situation of cholera in Haiti and the Dominican Republic, including the actions implemented by both countries in response to the situation. Also included are the Pan American Health Organization (PAHO) recommendations to Member States in relation to this theme.

The information provided in this epidemiological alert was provided by the Haitian Ministry of Public Health and Population (MSPP) and by the Dominican Republic's Ministry of Health.

## Haiti

Since the beginning of the cholera outbreak, starting epidemiological week (EW) 42<sup>1</sup> in 2010, until May 10<sup>th</sup>, 2011, the MSPP registered a total of 302,401 cholera cases of which 53.8% (162,651) required hospitalization<sup>2</sup> and 5,234 died (global case-fatality rate 1.7%).

Since EW 19 an increase in the number of new hospitalizations is observed in comparison with previous weeks, especially in the South-East and North-West departments and in the capital city, Port-au-Prince. Additionally, Artibonite and Centre continue to report new cases.

Likewise, the alert and response system of MSPP-PAHO has found an increase of cholera cases, including in the border zone and in the southeast of the country.

## Summary

### Haiti

Since the beginning of the cholera outbreak, starting epidemiological week (EW) 42 in 2010, until May 10<sup>th</sup>, 2011, the MSPP registered a total of 302,401 cholera cases of which 53.8% (162,651) required hospitalization and 1.7% (5,234) died (global case-fatality rate).

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### Dominican Republic

Since epidemiological week (EW) 16 the Dominican Republic's surveillance system is registering an increase in the number of suspected cases of cholera, principally in the peripheral area of Santo Domingo, near the river Ozama and Isabela. The increase of cases in Santo Domingo concurs with a raise in the temperature and frequency of rains, which originated flooding in different areas of Santo Domingo.

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

<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 exists. Hospitalized cases are when a patient is admitted to a health establishment (either a hospital or cholera treatment site) for at least one night. A death attributed to cholera is the death of a person which satisfies the definition of a cholera case. Any death due to cholera which occurs in a health establishment, regardless of the whether the patient was admitted during the night or in the morning, is considered a hospital death due to cholera.

The start of the rainy season and the decreasing presence of response partners could have a negative impact on the evolution of the epidemic in the following weeks.

The Haitian MSPP, with the support of PAHO and other strategic partners, promote the verification, investigation, the risks assessment and early response in the affected areas. The control activities are especially focused on ensuring access to health services and the management of cases in order to reduce fatalities. Similarly, actions taken to ensure water is safe to drink and disinfection are the methods considered to have the greatest impact in preventing the controlling the outbreak.

## **Dominican Republic**

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As of epidemiological week (EW) 16, the Dominican Republic's surveillance system registered an increase in the number of suspected cholera cases, principally in the peripheral area of Santo Domingo, near the Ozama and Isabela rivers.

The increase of cases in Santo Domingo coincides with the rise in temperature and the increase in rain which has caused floods in various areas of Santo Domingo.

Few cholera cases continue to be recorded in the rest of the country, with provinces maintaining the same trend as from the beginning of the outbreak.

As of May 18<sup>th</sup>, the Dominican Republic's Ministry of Health reported a total of 1,085 laboratory confirmed cholera cases, including 13 deaths.

Since the beginning of the outbreak, 26 of the 31 provinces registered cases and hospitalizations due to cholera. To date, the provinces of Peravia, Hermanas Mirabal, Samaná, Hato Mayor and San José de Ochoa have not reported cases. Most of the outbreaks detected were controlled through actions implemented at the regional and local levels, under the leadership of the central level and without exceeding their respective response capacities.

### **Actions implemented by the health authorities**

Prior to this situation, the health authorities of the Dominican Republic declared a cholera alert in the National District and the Province of Santo Domingo. Strict surveillance and the monitoring of cases at a national level continue and the cholera attention centers are strengthened and health services in those affected zones where there are increases in suspected cases.

Additionally they have conducted educational development activities regarding methods of prevention and distributed chlorine in communities with active outbreaks.

## Recommendations

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The Pan American Health Organization reminds Member States through the statement below of the recommendations made in the previous Epidemiological Alerts:

### 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 and –according to it– should be notified the World Health Organization (WHO) Focal Point per the IHR (2005).

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

In countries that presently have no reported cholera cases, the following is recommended:

- Monitoring the trend of acute diarrhea sickness, emphasizing adults.
- Immediate notification of all suspected cases from the local level to the peripheral and central levels.
- Investigation of all suspected cases and clusters.

In an outbreak situation the following measures are recommended:

- Intensified surveillance including actively seeking cases.
- Laboratory confirmation of cases in order to monitor the geographic dissemination and any antimicrobial resistance.
- Weekly analysis of the number of cases and deaths by age, sex, geographical location and hospital admission.

### Laboratory Diagnosis

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

## Treatment

Cholera is a disease that has a satisfactory response 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.

It is not recommended to provide massive administration of antibiotics 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 to reduce the transmission of fecal-oral infection of cholera in the health care environment:

- Wash hands with soap and water or glycerine 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 key in the fight against cholera. Generally, the response to cholera outbreaks tends to be reactive and takes 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 the poorest populations in the 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.

## 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 selection of technical guides and recommendations about the handling of cases, procedures for the identification of cases by laboratory and measures for the control of outbreaks in emergencies is available at PAHO's website. They can also be accessed through the following links:

In English:

[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)

In Spanish:

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

In French:

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