Epidemiological Alert:
Weekly update on the Cholera situation
EW 8 (February 20 to 26, 2011)

(Published on 17 March 2011)

Summary

Haiti

During Epidemiological Week 8 of 2011, at the national level, Haiti registered a decrease in the weekly incidence rate, which decreased from 10.2 cholera cases per 10,000 inhabitants in EW 7 to 7.6 cases per 10,000 inhabitants in EW 8. This was linked to an increase of 3.1% in the new cases registered as compared to the previous week.

At the sub-national level, five departments (Grand Anse, Nord Est, Nord Ouest, Sud Este y Nord) registered an increase in their weekly incidence rate.

The in-hospital case-fatality rate at the national level was 1.1% for EW 8, while the overall case-fatality rate as of EW 8 was 1.9%.

Dominican Republic

The Ministry of Health of Dominican Republic reported a total of 568 laboratory-confirmed cases of cholera, including six fatal cases since the beginning of the outbreak up to EW 9.

The objective of this alert is to present the current epidemiological situation of the cholera outbreak in Haiti updated as of Epidemiological Week (EW) 8, 2011 and the Dominican Republic updated as of EW 9. The information that is presented in this alert has been provided by the Ministère de la Sante Publique et de la Population (MSPP) of Haiti and by the Dominican Republic Ministry of Health.

Haiti

Since the beginning of the cholera outbreak[1] as of EW 8 2011, the MSPP registered a total of 251,043 cholera cases of which 53.9% (135,432) required hospitalization[2] and 1.9% (4,664) were fatalities (global case-fatality rate).

New cases per week

During EW 8, Haiti registered 7,664 new cases and 52 new deaths. At the national level, during EW 8, a decrease in the weekly incidence rate with respect to the previous week was observed, from 10.2 to 7.6 per 10,000 inhabitants.

All departments recorded new cholera cases with five (Grand Anse, Nord Est, Nord Ouest, Sud Este y Nord) reporting an increase in the weekly incidence rate. In the other five departments a decrease in the weekly incidence rate was observed.

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[1] On October 20, 2010 the first cases of cholera (*V. cholerae* O: 1 serotype Ogawa) were confirmed by laboratory testing of patients hospitalized in the department of Artibone.

[2] A case of cholera is defined as a patient with profuse, acute, watery diarrhea, who is a resident in a department in which at least one laboratory-confirmed case of cholera exists. Hospitalized cases are considered when a patient is admitted to a healthcare establishment (a hospital or cholera treatment center) for at least one night. A death due to cholera refers to the death of a person with the cholera disease that has satisfied the definition of a cholera case. Any death that occurs due to cholera in a healthcare establishment—regardless of whether this person was admitted at night or in the morning—is considered a hospital death due to cholera.

Hospitalization trends and in-hospital case fatality rate

During EW 8 the number of new hospitalizations presented a decrease (34.5%) in comparison to the previous week. All departments registered new hospitalizations due to cholera during EW 8. Artibonite, Centre, Nippes, Nord Ouest y Sud registered the greatest increases in hospitalizations during EW 8 compared to the previous week. In contrast, Grand Anse, Nord Est, Ouest, Sud Est, y Port au Prince saw a reduction in the number of new hospitalizations due to cholera.

For EW 8 the hospital case-fatality rate at the national level—that is, the proportion between the number of cholera deaths and patients hospitalized for cholera—was 1.1%, without changes in the case-fatality rate in regard to the previous week.
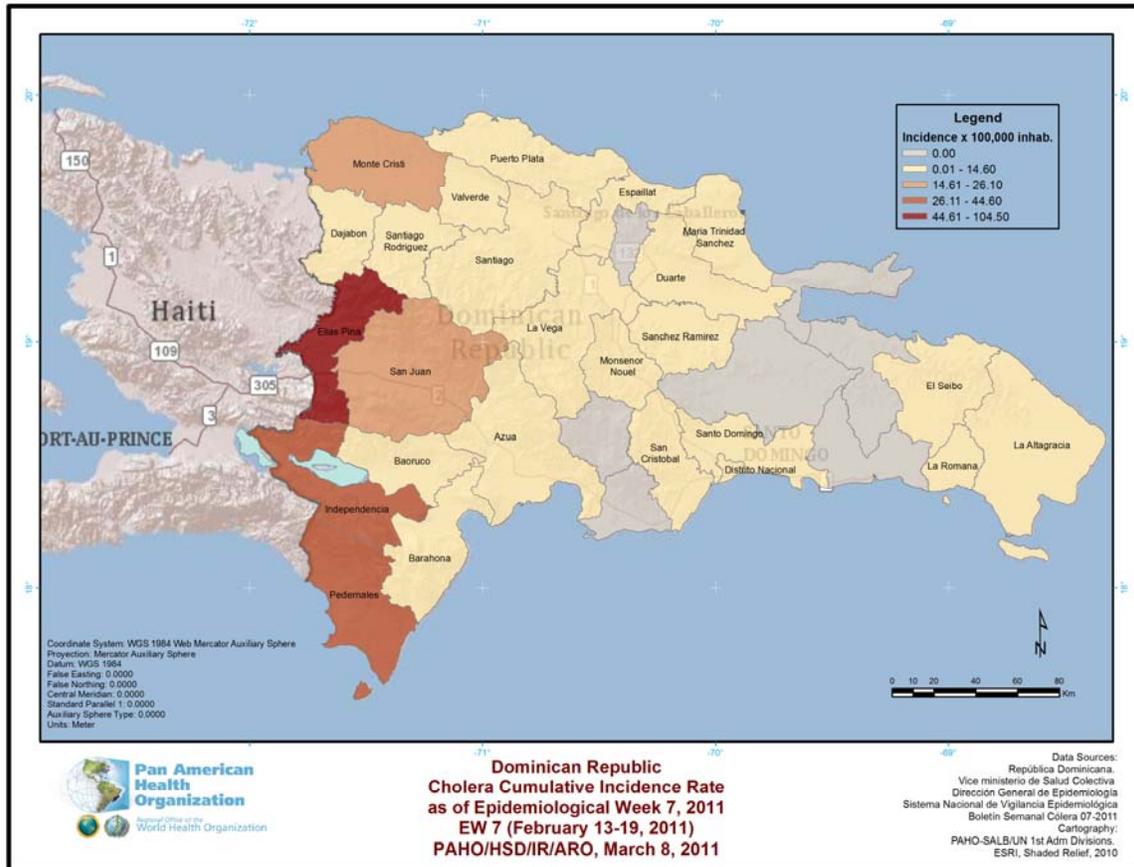
Global case fatality rate

As of EW 8 the global case fatality rate of the cholera epidemic, which is the total number of deaths registered in the country divided by the total number of cases registered, was 1.9% (ranging from 0.9% in Port au Prince to 8.5% in the department of Sud Est).

Dominican Republic

The Ministry of Public Health reported that as of EW 9 the total number of laboratory-confirmed cholera cases had risen to 568 (191 in 2010 and 377 in 2011) with six fatalities.

Since the beginning of the outbreak, there have been cholera-related cases and hospitalizations registered in 25 out of the 31 provinces of the country. The provinces that reported cases during the previous two weeks were San Cristóbal, Santiago, Santo Domingo y el Distrito Nacional.

The accumulative incidence rate at the national level was 5.7 per 100,000 inhabitants. The province of Elías Piña registered the highest incidence rate with 107.2 cases per 100,000 inhabitants followed by Independencia with 48.2 cases per 100,000 inhabitants and Pedernales with 42.5 cases per 100,000 inhabitants.

**Dominican Republic
Cholera Cumulative Incidence Rate
as of Epidemiological Week 7, 2011
EW 7 (February 13-19, 2011)
PAHO/HSD/IR/ARO, March 8, 2011**

Recommendations

The Pan American Health Organization reiterates to its Member States that they should reinforce the following recommendations stated in the Epidemiological Alerts from 24 October 2010 and January 2011:

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—in accordance with it—the WHO Contact Point for IHR should be 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 an emphasis on adults.
- Immediate notification of all suspected cases from the local to the central and peripheral level.
- Investigation of all suspected cases and clusters.
- Laboratory confirmation of all suspected cases.

In an outbreak situation the following measures are recommended:

- Intensified surveillance including active case finding.
- Laboratory confirmation of cases to monitor the geographic reach and antibiotic resistance.
- Weekly analysis of the number of cases and deaths by age, sex, geographical location and hospital admission.

Laboratory Diagnosis

Laboratory confirmation 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 due to diarrhea and vomiting. Up to 80% of cases can be treated through 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 halthing the spread of cholera and contributes to the production of 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 at strategic points to maximize the number of affected individuals that can be treated outside of a hospital setting and based on management protocols defined by and agreed to by all parties.

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

Infection Prevention Measures

The following recommendations are aimed to reduce the transmission of fecal-oral infection of cholera in healthcare environments:

- 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 with other patients with the same diagnosis.
- 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 themselves.

A coordinated multidisciplinary approach, 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 water-borne epidemic diarrheal diseases. However, this approach may be unrealistic for those poorest populations 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, 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 or imposing restrictions on imported food produced by good manufacturing practices based solely on the fact that there is a cholera 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 at the following link:
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

A complete selection of technical guides and recommendations about the handling of cases, procedures for the identification of cases by laboratories, and measures for the control of outbreaks in emergencies is available at PAHO's website. These guides 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

In Spanish:
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