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

(Published on 7 June 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 related to this theme.

The information presented was provided by the Haitian Ministry of Public Health and Population (MSPP) and by the Dominican Republic's Ministry of Health, respectively.

Haiti

Since the beginning of the cholera outbreak, starting epidemiological week (EW) 42[1] in 2010, until 31 May 2011 (EW 22), the MSPP registered a total of 324,299 cholera cases of which 53.2% (172,482) required hospitalization[2] and 5,342 died (1.6% global case-fatality rate).

According to the MSPP's surveillance system, since EW 19 an increase in the number of new hospitalizations has been observed in Port-au-Prince, the Centre department and Sud ESt. This increase coincides with the start of the rainy season in Haiti.

Likewise, the alert and response system of MSPP-PAHO has found that the Cholera Treatment Centers (CTC) and the patient transportation units found in Port-au-Prince are working at full capacity. In accordance with this system, there is an increase in registered cases in the Ouest, Gran-Anse, Sud and Sud-Est departments.

Summary

Haiti

The Haitian Ministry of Public Health and Population (MSPP) case surveillance system reported that as of EW 19 there was an increase in the number of hospitalized patients in Port-au-Prince and the Centre department. This increase coincides with the beginning of the rainy season in Haiti.

Dominican Republic

The Ministry of Public Health informs that since the beginning of the outbreak up to EW 20 of 2011 there were 1,329 laboratory confirmed cases (191 in 2010 and 1,138 in 2011), including 27 deaths.

The Distrito Nacional and the provinces of Santiago, San Pedro de Macorís, La Romano and the border provinces of Independencia and Elías Piña also registered an increase in cases with respect to the previous weeks.

[1] 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.

[2] 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 Haitian MSPP, with the support of PAHO and other strategic partners, continues its surveillance activities and is coordinating all prevention and response activities for mitigating the spread of this disease. A phone line has been activated to provide support to the corpse management services.

Dominican Republic

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. This 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.

In EW 20, the Distrito Nacional and the provinces of Santiago, San Pedro de Macorís, La Romana and the border provinces of Independencia and Elías Piña also registered an increase in cases compared to the previous weeks.

Since the beginning of the outbreak up to EW 20 of 2011, the Dominican Republic's Ministry of Health reported a total of 1,329 laboratory confirmed cholera cases (191 in 2010 and 1,138 in 2011), including 27 deaths. Thus far, 27 of the 31 provinces have registered cases and hospitalizations due to cholera. Only the provinces of Peravia, Hermanas Mirabal, Samaná and San José de Ochoa have not reported cases up to EW 20.

To date, most of the outbreaks detected have been controlled through actions implemented at the regional and local levels, without exceeding their respective response capacities, and under the leadership of the central level.

Actions implemented by the health authorities

Prior to this situation, the Dominican Republic health authorities had strengthened cholera attention centers and health services to respond to the demand in the affected zones where increases in suspected cases are seen.

Intermediate and local management levels continue participating in the ongoing tailored surveillance of the situation and monitoring of the intervention methods that have been used.

Laboratory Surveillance Results

Antimicrobial susceptibility testing of *V. cholerae* from the outbreak in Haiti and the Dominican Republic, conducted by the National Laboratory of Public Health and the Center for Disease Control and Prevention (CDC) of the United States (for samples from Haiti) and by the Dominican Republic Public Health laboratory confirm that the resistance profile continues to be the same as described in the 28 October 2010 alert. The results show resistance to trimethroprim-sulfamethoxazole, furazolidone, nalidixic acid, and streptomycin.

Recommendations

The Pan American Health Organization (PAHO/WHO) reminds Member States of the need to strengthen methods of cholera prevention and control. In this respect, PAHO/WHO recalls that 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.

Prevention Measures

A well informed population has greater capacity to react and act against the threatening health risks because they are better prepared to adopt prevention methods and are capable of detecting manifestations of the emergency and the signs of the threatening event.[3]

It is critical to ensure communities are familiar with basic hygiene methods, including the necessity of frequent hand washing with water and soap after fecal movement and before preparing food items to eat, as well as for the preparation and safekeeping of food items. Mass communication methods, such as the radio, television or newspapers must participate in diffusing sanitary education messages. In addition, local and religious leaders should be involved in the social movement campaign.

Strengthening surveillance and early response mechanisms also significantly increase the capacity to detect initial cases and establish methods of control at the local level.
In contrast, the routine treatment of community members through antibiotics, or massive chemoprophylaxis, do not effect the spread of cholera, but instead can cause harmful effects, by augmenting resistance to antibiotics and creating a false sense of security.[4]

Treatment Recommendations

Given that the resistance profile of the *V. cholerae* samples from the outbreak in Haiti and the Dominican Republic continue to be the same, the antibiotic treatment recommendations for patients with cholera continue as previously advised and as described herein.

It must be emphasized that **rehydration** is the key component of cholera treatment, as the objective is to replenish the water and electrolytes lost through diarrhea and vomiting.

[3] Guide for the development of Strategic Risk Communication. From theory to action. Editors Bryna Brennan and Vilma Gutierrez. Pan American Health Organization 2011.
[4] Prevention and control of cholera outbreaks: WHO policy and recommendations. Global Task Force on cholera. http://www.who.int/cholera/technical/prevention/control/en/index2.html

Antibiotic treatment

	Option 1	Option 2
Adults	Doxycycline, 300 mg po single dose	Ciprofloxacin, 1g po single dose **OR** Azithromycin, 1g po single dose.
Pregnant Women	Erythromycin, 500 mg/ 6 hours for 3 days **OR** Azithromycin, 1g po single dose	---
Children over 1 year, who can swallow tablets	Erythromycin 12.5 mg/kg/ 6 hours for 3 days **OR** Azithromycin, 20 mg/kg, in a single dose, without exceeding 1 g	Ciprofloxacin, suspension or tablets, 20 mg/kg, in a single dose **OR** doxycycline, suspension or tablets, 2-4 mg/kg po in single dose.
Children under 1 year, or infants who cannot swallow tablets	Erythromycin 12.5 mg/kg/ 6 hours for 3 days **OR** Azithromycin, 20 mg/kg, in a single dose	Ciprofloxacin, suspension, 20 mg/kg, in a single dose **OR** doxycycline, suspension, 2-4 mg/kg po in a single dose.

Recommendations for the clinical management of cholera are available in Spanish at:

http://new.paho.org/hq/index.php?option=com_docman&task=doc_download&gid=10815&Itemid=