



Epidemiological Alert: Cholera

(24 October 2010)

Introduction

During 2009, the number of globally reported cholera cases increased by 16% compared to those reported in 2008. A total of 221,226 cases, including 4,946 deaths, were reported in 45 countries with a fatality rate of 2.24%.

In the Region of the Americas, cases were reported in Canada, Paraguay and the United States. In Paraguay, autochthonous transmission of *Vibrio cholera* O:1 was reported, with 5 cases notified and no deaths. The outbreak was related to a contaminated water source. Canada and the United States reported 12 cases in total.

During the last 20 years, after the reemergence of cholera in the Americas, the highest incidence of cholera cases occurs in Africa.

In 2010, there have been various cholera outbreaks in Angola, Ethiopia, Somalia, Sudan the north of Vietnam and Zimbabwe. The majority of affected countries reported a fatality rate of less than 5%, but in some cases the fatality rate reached around 50% in those outbreaks that primarily affected vulnerable populations.

From Epidemiological Week (EW) 41, in Haiti an increase in acute diarrheal disease was reported in the Departments of Artibonite and Central. In EW 42, the isolation of *V. cholerae* O:1 serotype Ogawa was confirmed in a sample of hospitalized patients.

As of 24 October 2010, the number of hospitalized patients due to cholera amounts to 3,015 with 253 deaths. The confirmed cases are reported in the Departments of Artibonite, Central and Ouest (including Port of Prince). Suspected cases are registered in two other departments, Nord and Soud.

In this situation, and given the risk of the reintroduction of cholera in the Region, the Pan American Health Organization recommends to its Member States to step up efforts in surveillance, update preparedness and response plans and to implement appropriate prevention and health promotion measures.

The following details some key recommendations related to surveillance, including laboratory diagnosis; treatment, infection control, prevention and control actions.

Cholera (ICD-10 A00)

Cholera is an acute diarrheal infection caused by the consumption of food or water infected with bacillus *Vibrio cholerae*. Person-to-person transmission is not common.

It affects children and adults, and can be fatal in a matter of hours. It has a short incubation period, ranging from 2 hours to 5 days.

In 80% of people symptoms are low to moderate; 20% present acute watery diarrhea with severe dehydration. If treatment is not provided, death may occur.

Persons with reduced immunity, such as malnourished children and people with AIDS, have a higher risk of dying if infected by the disease..

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 adult.
- 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 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.

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.

Recommended case definition:

Clinical case definition: (i) In areas where the disease is not yet present, severe dehydration of death from acute watery diarrhea in patients aged 5 years or 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.

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 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 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>