



Epidemiological Alert

Cholera
9 July 2012

The Pan American Health Organization / World Health Organization (PAHO / WHO) reminds Member States that measures such as restrictions on movement of persons and seizure of goods produced under good manufacturing practices are unnecessary and ineffective to control the spread of cholera. Member States are encouraged to continue surveillance activities and to implement the recommended actions that reduce cholera spreading determinants.

Current status of cholera in the Region

In **Haiti**¹, from the beginning of the epidemic to 3 July 2012, the total of cholera cases reached 577,509, of which 312,155 (54%) were hospitalized and 7,410 died. The global case-fatality rate is 1.3% and the hospitalized case-fatality rate is 1.5%. From epidemiological week (EW) 15 of 2012, an increase of cases was principally recorded in the departments of Centre, Nord, Nord-Est and Ouest. The increase is related to the early onset of the rainy season. In the past three weeks the number of cases and hospitalizations has shown a decreasing trend.

In the **Dominican Republic**², the total of suspected cases reported since the beginning of the epidemic through epidemiological week (EW) 25 of 2012 is 25,062, of which 19,210 (76.6%) were hospitalized and 401 died. The fatality rate recorded from EW 1 to EW 25 of 2012 is 0.8%. From EW 15 of 2012 to date, an increase in cases has been recorded primarily in the provinces of Puerto Plata, San Juan and Santiago. Santiago has registered the greatest increase in cases as a result of an outbreak in the municipality of Tamboril. The Tamboril outbreak is associated to damage in the main aqueducts system and the authorities of the Dominican Republic continue implementing actions to control the situation.

In **Cuba**³, on 3 July 2012, the Ministry of Public Health reported that in recent weeks the surveillance system in Cuba registered an increase in the number of acute diarrheal diseases associated with consumption of water from local contaminated wells. This increase was recorded mainly in the province of Granma. As part of the outbreak investigation, approximately 1,000 patients were attended to. Out of the patients attended to, different microorganisms were identified, 53 cases of infection by *Vibrio cholerae* were detected, of which three died. The three deceased were elderly with a history of chronic diseases.

The prevention and control measures implemented by national authorities include taking samples of public and private water wells, closure of contaminated wells, chlorination of water in affected areas, the removal of water leaks, septic tank cleaning and sanitation and health awareness campaigns directed to the population.

Updates will be made regarding this event as more information becomes available.

Recommendations

The PAHO/WHO recalls that the following recommendations continue to be applicable.

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 with the inclusion of active case finding.
- Laboratory confirmation to monitor the geographic spread and the resistance pattern.
- 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.

It is important that public health laboratories in the Region are prepared to identify the two serotypes, Ogawa and Inaba. In annex is a flowchart for the identification of serotypes (Annex 1).

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 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. Following the replacement of the initial liquid

lost, 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 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.

Prevention Measures

Prevention in the health care setting

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 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.

Preparedness and Response

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 waterborne 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.

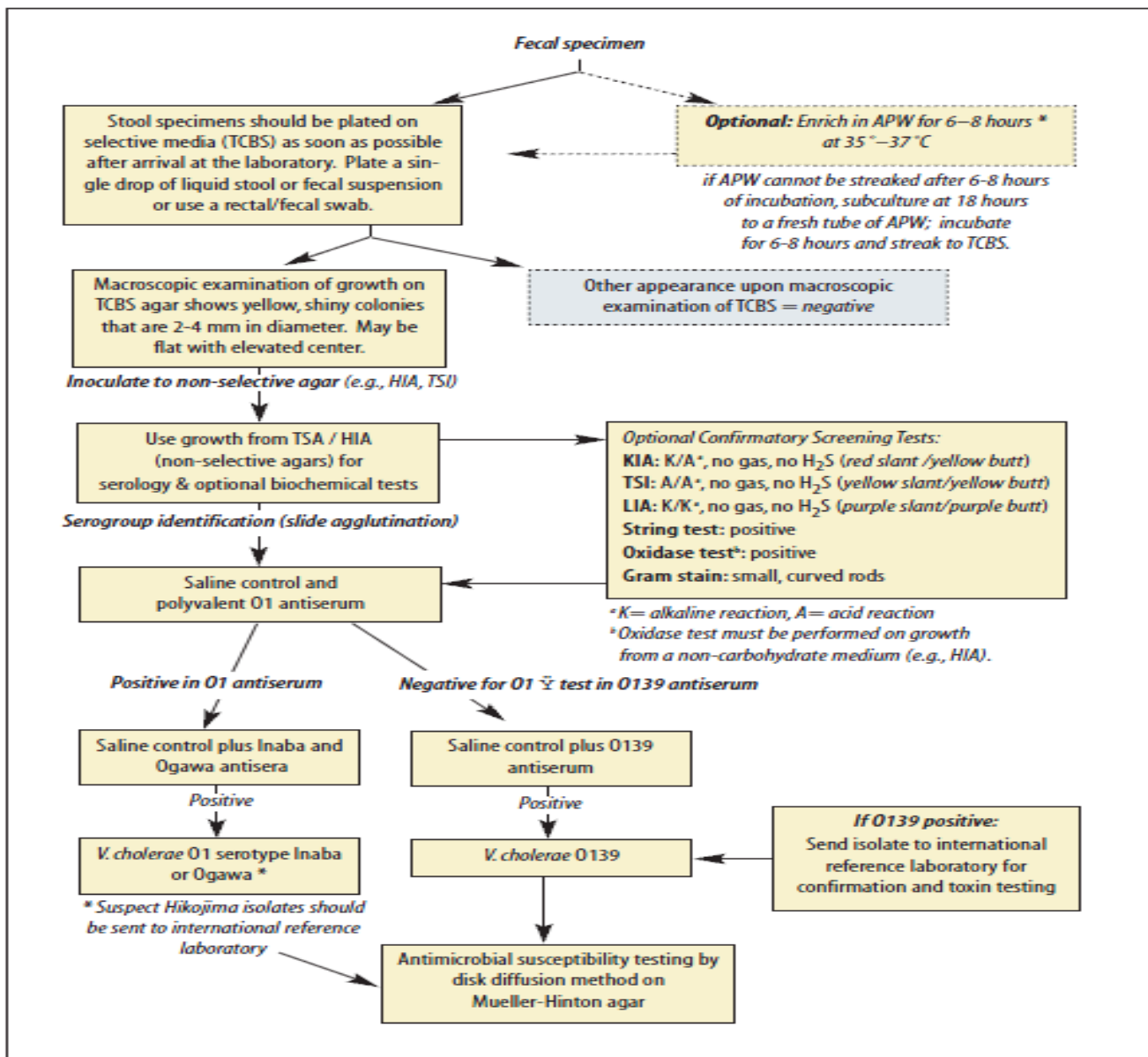
Travel and international trade

Experience has shown that measures such as quarantine—to limit movement of people--and the seizure of goods are unnecessary and ineffective 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.

References

1. Haiti Ministry of Public Health and Population: Daily Reports of MSPP on the Evolution of Cholera in Haiti (Rapports journaliers du MSPP sur l'evolution du cholera en Haiti). Port-au-Prince, Haiti; 2012. Available in French at: <http://www.mspp.gouv.ht/site/index.php>
2. The Dominican Republic Epidemiological Bulletin. Epidemiological Week 25, 2012. Available in Spanish at: <http://www.sespasdigepi.gob.do/>
3. Cuba Ministry of Public Health Note. Granma Daily. Year 16; number 182. Published 3 July 2012. Available in Spanish at: <http://www.granma.cubaweb.cu/2012/07/03/nacional/artic09.html>

Annex 1- Flowchart for isolation and identification of *Vibrio cholerae*



Agglutination reactions in absorbed antiserum of serotypes of *Vibrio cholerae* serogroup O1

<i>V. cholerae</i> O1 serotype	Ogawa antiserum	Inaba antiserum
Ogawa	+ ^a	– ^b
Inaba	–	+
Hikojima ^c	+	+

^a + indicates a positive agglutination reaction in the absorbed antiserum.

^b – indicates a negative agglutination reaction in the absorbed antiserum.

^c If there is a positive reaction in both Ogawa and Inaba antisera and the Hikojima serotype is suspected, send the isolate to an international reference laboratory, following packing regulations as presented in Appendix 12.