



WHO Somalia

2 November 2007

Update on Acute Watery Diarrhoea in Somaliland

Situation analysis

Following reports of an increased number of Acute Watery Diarrhoea (AWD) cases in Berbera Town, the Capital of Sahil Region, Somaliland, the Ministry of Health and Labour established a Cholera task force on 8 October 2007 in Berbera. Cases admitted to the hospital were reported from 2 villages (Buro El Sheik and Jamalaha). To rapidly contain the outbreak, specific tasks were divided between the Ministry of Health, WHO and local NGOs for case management and cholera supplies; and UNICEF for chlorination and water and sanitation. A team composed of the same agencies was mobilized the following day to conduct case investigation and to set up surveillance of all health problems related to the AWD outbreak.

On 27 October, WHO sent an additional investigation team (Senior Medical Epidemiologist, communication officer, pharmacist and logistic officers). The main objectives of the mission were to equip the medical staff, community health workers/promoters and community leaders with the necessary knowledge and skills in cholera preparedness and response.

Specific objectives were:

- Cholera case presentation, means of transmission, and risk factors
- Surveillance of cholera and other diarrhoeal diseases including active case finding (early detection, reporting of cases, verification, prompt response)
- Laboratory confirmation of suspected cases. procedures for specimen collection, handling and transportation
- Case management/treatment of cholera cases
- Preventive measures (Environmental sanitation)

Activities

The investigation team had a meeting with the Berbera health sector committee, chaired by the governor, and the AWD task force, and visited Berbera General Hospital, main water supply sources, and the two affected villages.

Berbera General Hospital

The **hospital laboratory** has 3 technicians, who work between 730 and 12 am. The laboratory only does basic laboratory testing, including stool and urine analysis, and some additional serological testing such as hepatitis B, C and HIV rapid diagnostics testing.



Visit to the main Berbera water source



Berbera hospital laboratory

Although the Cary Blair media for transportation of stool samples was available in the laboratory, the samples taken on 8 October 2007 were found to be contaminated and as a result, Hargeisa hospital laboratory was unable to identify any organism in the samples. WHO team collected 4 samples from newly admitted suspected cholera cases on 27 October, which were sent to Hargeisa laboratory for confirmation.

Reviewing of the Berbera **hospital records** revealed that between 8 and 27 October 2007, 537 suspected cholera cases were admitted including 1 related death (Case Fatality Rate (CFR) of 0.19%). Six stool samples were collected on 8 October but *Vibrio cholerae* could not be confirmed.

The daily distribution of AWD cases by age groups in Berbera is shown in Figure 1.

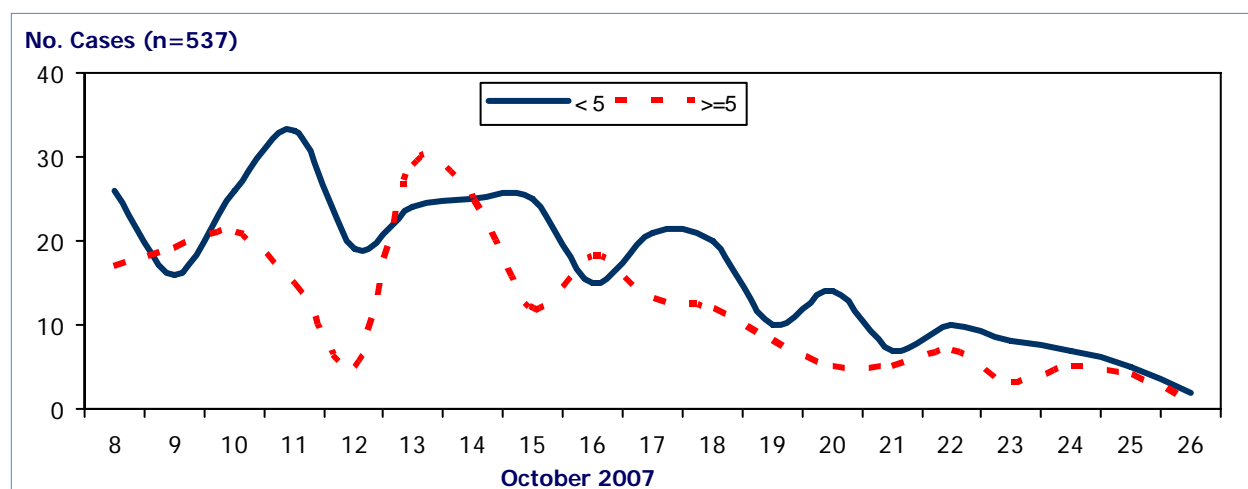


Figure 1: Distribution of AWD cases by Age Group, Berbera Town, Sahil Region, Somaliland, 8-26 October, 2007

The **Cholera Treatment Centre** (CTC) was established inside the hospital premises. Due to proper case management the Case Fatality Rate was low. Although the treatment of patients is going according to WHO protocol, some patients were given Ciprofloxacin instead of Doxycycline. Also, 58% of the cases (313/537) were less than 5 years of age, which could indicate use of incorrect case definition of cholera. The average rate of using IV fluids was acceptable. There was evidence of use of Oral Rehydration Salts (ORS), although no specific ORS corner was set up in the CTC.



The number of family members moving in and out the CTC is posing a serious risk of transmitting infection. No evident infection control measures were put in place and few reports of co-patients becoming infected of cholera after spending some time in the hospital.

Assessment of the **pharmacy** showed there were sufficient drugs for treatment of cholera patients available in the hospital. The pharmacy dispenses drugs and IV fluids through daily distribution to the health staff in the hospital and directly to patients, without properly documenting this. Although sufficient quantities of Doxycycline (the antibiotics of choice for treatment of cholera) were present in the pharmacy, Ciprofloxacin had been prescribed instead, according to the pharmacist.



Visit to main water supply treatment centre

The main water supply sources in Berbera originate from 2 sources: one deep well at 25 km from the town and one spring at 10 km. The municipality is responsible for the distribution and chlorination of the drinking water. Although all measures are taken to chlorinate the water in several points, the low pressure of the water is not enough to ensure the chlorinated drinking water reaches the population in the affected areas. Due to the lack of sufficient quantities of safe drinking water, people are using water from unsafe water collection points. Testing of the chlorine level in these points showed low or no levels of chlorine. The use of donkey carts furthermore increases the risk of infection of diarrhoeal diseases.

Recommendations

1. Refreshment training for hospital staff to ensure use of proper case definitions for diseases such as cholera
2. Continuing of chlorination of water sources by the municipality and increase of water pressure to ensure chlorinated water reaches the entire population of Berbera, including the affected villages
3. Conduct environmental engineering assessment for covering of unsafe unprotected water wells in affected villages, (number, cost, etc.) **(ongoing)**
4. Distribution of household chlorine in the affected areas **(ongoing)**
5. WHO labelling for all donated items to facilitate monitoring and tracking
6. Train personnel on drug management and set up a statistical system that shows consumption, improve the rational use of pharmaceuticals and medical supplies in the hospital.

AWD cases in Gabiley

As of 29 October, 32 Acute Watery Diarrhoea (suspected cholera) cases were admitted in Gabiley District Hospital; 21 of them were children under 5 years. Most of them arrived at the hospital with severe dehydration. No related deaths have been reported. Gabiley district is located 54 km west of Hargeisa in Dhul-beereed Region.

Two separate wards were prepared for AWD patients: one for children under 5 and the other for adults. WHO and the Ministry of Health delivered cholera supplies to the hospital, including 60 litres of Ringers Lactate and Oral Rehydration Salts. Seven stool samples were collected and sent to the Hargeisa Hospital for laboratory confirmation.

Immediate action to chlorinate the water supply in the hospital was undertaken. To ensure safe drinking water for the affected communities, chlorination of community water sources needs to be conducted as soon as possible. Furthermore, social mobilization and hygiene promotion to raise awareness about how to prevent cholera to the community including garbage disposal will be organized. WHO will be supplying a buffer stock with medication as a preparedness measure for future cholera outbreaks.

Turkish spring: one of two sources for Berbera drinking water supply



The Junction: chlorination of Berbera drinking water through a gravity doser



Water well in Bur el Sheikh village: level of chlorination 0.2, is below the required



Water well in Jamalaha, the 2nd affected village: level of chlorination 0

