



# Cholera Outbreak Report

20 September 2011 - 29 February 2012

Dagahaley

Kenya

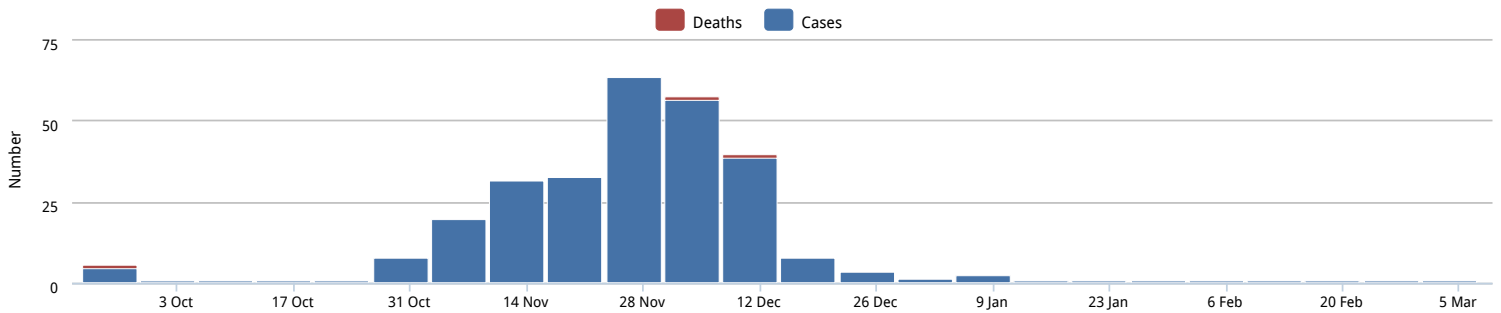


## Outbreak details

Status: **Closed**

Reported by		Key indicators	
Name:	Edna Moturi	Cumulative total cases:	263
Title:	Associate Public Health Officer	Cumulative total deaths:	3
Organisation:	UNHCR	Total population:	-
Start date:	20 September 2011	Attack rate:	-
Closed By:	Edna Moturi	Case fatality rate (CFR):	1%
End date:	29 February 2012	Laboratory confirmed:	Yes

## Epidemic curve



## Summary statistics

	Epidemic Week																					Total
	38 - 41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	
<b>New cases</b>	4	-	7	19	31	32	63	56	38	7	3	1	2	0	0	0	0	0	0	0	0	<b>263</b>
<b>Cum cases</b>	4	4	11	30	61	93	156	212	250	257	260	261	263	263	263	263	263	263	263	263	263	<b>263</b>
<b>New deaths</b>	1	-	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	<b>3</b>
<b>Cum deaths</b>	1	1	1	1	1	1	1	2	3	3	3	3	3	3	3	3	3	3	3	3	3	<b>3</b>
<b>CFR(%)</b>	25%	25%	9%	3%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	<b>1%</b>

## Narrative report

### Brief description of person, place and time

#### Cholera

Hagadera camp is one of the five refugee camps located in the Dadaab refugee complex, Kenya. The camp is located in Southeast Kenya, approximately 80km from the Somali border. In July, 2011 there was a large influx of refugees from neighboring Somalia to the camp mainly due to the Famine experienced in the Horn of Africa. Majority of the refugees were severely malnourished leading to an increase in the global acute malnutrition and high mortality rates. On August 25th, 2011, the first cholera case in Dadaab was confirmed at the Hagadera camp which has the reference laboratory for the camp. The case was a 30 year old male who was a new arrival to the camp. His stool sample tested positive on both rapid test and stool culture. Initial cases were in new arrivals who had most likely acquired cholera in Somalia or en route to the camp. The surveillance cholera case definition used at this time was any person aged 5 years and above presenting with acute watery diarrhoea with or without dehydration. Most of the initial cases were picked up in Hagadera due to the routine diarrhoeal surveillance program supported by CDC in the camp. As such some of the cases were children under the age of 2 years. Stool samples were taken from persons meeting this case definition for testing using rapid test kits. Any positive sample would then be cultured. Sporadic cholera cases were then reported in residents of the camp spreading to all the 5 camps. Local transmission was later confirmed in all camps leading to a declaration of a cholera outbreak in Dadaab. Stool samples collected cultured *Vibrio cholerae* O1, belonging to serotype Inaba and biotype El Tor. UNHCR instituted a sensitive cholera outbreak case definition: anyone aged 2 years or above presenting with acute watery diarrhoea with or without dehydration was to be line listed as a suspected cholera case. This led to an increase in the number of reported cases in the months of September and October. Between August, 2011 and March, 2012 a total of 263 suspected cholera cases were line listed from Hagadera camp. All 1265 cholera cases from all five camps were tested in the Hagadera laboratory. Of these, 126 (9.9%) stool samples were collected and tested at Hagadera laboratory. 51 (40.5%) samples tested positive for *Vibrio cholerae* Inaba. The insecurity situation experienced at the camp at the time limited movements within the camp thus affecting transportation of stools samples to Hagadera. Majority of the cholera patients had mild dehydration and were managed as outpatients. Three cholera deaths occurred during the outbreak all in Hagadera camp leading to an overall case fatality rate of 1.14 % (3/263). The first fatality was a 1 year old girl who was admitted to the CTC with associated malnutrition. The second fatality was a 3 year old male who was also died at the CTC. The third fatality was a two year old boy who presented with severe dehydration but passed away before tests samples could be collected. As such all fatalities occurred in children under the age of five years.

## Evaluation

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Of the 263 suspect cholera cases in Hagadera, 87 (33%) were in children aged below 5 years; and the majority 176 (66.9%) were above 15 years of age. However, it is recognized that given the sensitivity of the cholera case definition adopted; many of these cases would not be cholera but rather be due to other causes of acute watery diarrhoea. There was an associated increase in acute watery diarrhoea cases at the time of the cholera outbreak. Other pathogens identified by the CDC diarrhoeal surveillance team included *Salmonella* spp., *Shigella* spp., and *Campylobacter* spp.,. However, *Vibrio cholera inaba* remained the single most identified pathogen cultured by the reference laboratory. Analysis of data showed the outbreak to be caused by person to person transmission which relates to gaps in personal hygiene and sanitation. Camp monitoring visits found restaurants and markets having poor hygiene with flies present in the butcheries. During household visits, kitchen utensils were found to be placed on the floor increasing the likelihood of their contamination. It was noted that most IEC materials in use did not address the issue of hygiene measures in child feeding practices. Therefore, their needs to be concerted efforts made to increase the numbers of hygiene promoters working in the camp and standardizing their training to ensure that routine hygiene education occurring throughout the camp as a preventive measure. Areas with new arrivals should be targeted with the messaging. Due to the insecurity situation there was limited supervision of hygiene promoters and CHW work at block level

## Recommendations

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•Involve WASH and education partners in the health committees working in the camps•Increase the number of hygiene promoters to an acceptable level (1 per 700)•Scale up the training of all 507 CHW's on community management of diarrhoeal diseases. They should be provided with the CHW kit containing ORS and Zinc sulphate; and monitoring tools.•Ensure regular and adequate distribution of core relief items (CRI) especially jerry cans, and firewood. Look into ways of distributing 'dish racks' for household utensils.•Ensure soap distribution of 250 grams per month is general distribution and targeted distribution for special groups e.g., malnourished children, blocks with high incidence of watery diarrhoea e.t.c.•Improve surveillance for acute watery diarrhoea. Organize refresher trainings to health care staff on standard case definitions and epidemic preparedness and response•Improve sanitation levels in the camp to the expected latrine coverage standards. Conduct regular latrine monitoring assessments to enable replacing of filled up latrines.•Strengthen the role of the public health officers in the camp especially in ensuring that high hygiene standards are maintained in restaurants and markets.

## Outbreak response:

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