

MoH / WHO Kenya

**Cholera outbreak investigation
in Nyanza Province report**

From 14th to 20th April 2008

CHOLERA OUTBREAK IN NYANZA REPORT

A. INTRODUCTION

A Ministry of Health, Nyanza Provincial Health Management team and WHO have conducted cholera response mission to the Nyanza province from the 14th to the 20th of April 2008.

The Province reported 36 new cases within the period (14th to 20th April 2008) according to reports from the districts. 6 districts were still reporting cases. 2 case fatalities were reported by Kisumu East and Suba districts (1 death each). The total number of cases attended since the outbreak then was 832 with 46 deaths (case fatality rate 5.5%).

Background information

- Since January 2008, Cholera outbreaks have been reported in 10 districts in Nyanza Province.
- The affected districts are : Suba, Migori , Homa Bay, Rongo, Nyando, Kisumu East, Kisumu West, Bondo, Kisii South, Siaya
- Initial rapid assessment and outbreak investigations identified several risk factors that are contributing to the transmission.
- Contamination of drinking water, low latrine coverage and social cultural practices that favour poor personal and food hygiene are just a few.
- Weak coordination of stakeholders has been identified as health system issue.



Patient on admission in the cholera ward in Nyando district hospital

The objectives of the visit

- To support PHMT/DHMT conduct situation assessment of risk factors, which are maintaining cholera transmission in affected districts in Nyanza
- To assess the cholera response activities and progress
- Identify gaps in the current response and identify appropriate gap filling activities

The methodology

- The team met the key stakeholders which included the, PHMT, DHMTs, a councillor, fishermen (Beach Management Unit), facility staff, and patients.
- Conducted key informant interviews, group discussions, held a baraza with the fishermen at Sori Township,
- Provided technical support and essential supplies



The Councillor of Sori addressing the fishermen

B. MAIN FINDINGS

1.0 KEMSA (Kisumu)

- Stocks were available but not adequate to meet the demand for the province. The available stocks had arrived later than expected. However all the districts had been given some ration of the stocks. The team was informed more stocks are expected during this outbreak
- KEMSA is not in a position to distribute promptly: Some districts are not happy with the present arrangement where districts come to KEMSA only to receive very few and inadequate items

2.0 Kisumu East district: Rabuor Health Centre

- The team met the officer in charge Lilian Akinyi.
- The cholera ward was empty and the last cholera case was seen on 11/4/2008
- The centre was well stocked in readiness for the epidemic
- Health education was ongoing in the community and food outlets at Rabuor Centre had been closed.

3.0 Nyando district

- The district had been cholera free for over two weeks
- There was a case in the ward admitted the previous day on 14/4/08
- The DHMT demonstrated their preparedness in handling cholera cases
- Kamahawa village at Ahero had 14 cases line listed
- Had 15 cases and 1 death
- The district had done sampling of 5 wells but only one well was safe. (80% contamination)
- The district needs training on water quality surveillance and testing
- Had instituted interventions of handling the epidemic; both case management and control efforts in the community.
- The district was stocked in terms of drugs for the management of cholera
- The district is supported by partners such as UNICEF, PSI and MSF



WHO Technical officer demonstrating Petri-film method

4.0 Rongo district

- Rongo district is one of the newly created ones and has a well constituted DHMT
- Met part of the DHMT, other members were out on supervision
- The DHMT managed to identify the sources of contamination and taken action: This includes water sources, poor sanitation, contacts with the workers from the jaggeries, fish sellers and fishermen
- Sanitation coverage is very low at 46 %
- Needs support to conduct the water quality surveillance. The cost of taking water samples is high
- Have set three committees at division, facility and district levels
- Received support from partners, AFYA II, MSF, AMREF, UNICEF
- Have conducted training on cholera management
- Initially lacked cholera treatment guidelines and supplies to respond to the epidemic
- The cumulative cases are 127 with 6 deaths
- There is no lab facility at the district

5.0 Migori district

- The DHMT managed to identify the sources of contamination :
- The spreading of Omena fish on the ground without adequate sanitation
- Water supplies not functional at Migori town for sometime during the onset of the outbreak
- Low access to sanitation
- Have a Paqualab to conduct the water quality surveillance
- Sanitation coverage is very low at 10 % at the beaches

Processing the finger-like fishes at the filthy beach



- DHMT and community trained to construct emergency toilets
- Met the Members of the Beach Management Unit and trained them on clean environment and emergency toilet.
- Have not conducted a refreshes course on cholera management for facility health workers
- Initially lacked cholera treatment guidelines
- The cumulative cases are 189 with 11 deaths
- Have some stocks to handle new cases
- Had witnessed hostility from the community when enforcing the law especially on closing the food outlets; The DPHO was assaulted when implementing the law

6.0 St Camillus Hospital at Karungu

- Met the hospital administration
- The hospital ,a mission hospital is very clean with a bed capacity of 200
- Sanitation coverage in the surrounding areas is very low estimated at 10 %
- Community has been trained to construct emergency toilets
- Had admitted 24 cases and 1 death
- The hospital needs supplies to support new patients
- The facility had few staff to embark on community mobilization

7.0 Suba district

- Met the DHMT; The district team is ready to contain the situation
- A public health officer has been posted to Kisegi sub district hospital recently to oversee the sanitation activities. The area is remote and the hospital lacked PH staff to oversee the activities in the community
- Have managed to identify the sources of contamination :
 - the spreading of Omena fish on the ground without adequate sanitation
 - The beaches are some of the sources of contamination
- Sanitation coverage is very low at 46% and water coverage is 42 %
- Trained to construct emergency toilets
- Initially did not have enough cholera treatment guidelines
- The cumulative cases are 158 with 10 deaths
- One case died at Kisegi sub district hospital but had to be transported by boat to Bita for burial after 36 hours
- Logistics is a big challenge.
- Needs IDSR training

C. ACTIONS

- In addition to providing technical support on the job, the team also carried out the following:
- WHO delivered three 45 Kg containers of calcium hypochlorite to KEMSA which will be distributed according to the demand
- The team also picked and supplied contingency drugs, disinfectants and consumables for the facilities in dire need.
- Visited Kamahawa and sampled water from a shallow protected well and the results were negative for E-Coli.
- Conducted on site training on Petri-film method

D. RECOMMENDATIONS

- The epidemic is still a challenge in the affected province and districts.
- All the districts have been sensitized and are a technically prepared but could only respond with support from partners.
- There is partner lethargy on cholera control and most support is going to IDPs than to cholera epidemic
- All districts believe the cases are coming from the nearby districts and not theirs

1.0 Supplies and logistics

The team noted that the supplies are not inadequate and recommended that:

- The districts need to have a timely replenishment of emergency supplies from KEMSA
- Most of the districts need support in terms of financial and logistics e.g. fuel, communication, transport. Partners are encouraged to support the districts

2.0 Strengthening District Health teams capacities

- There are challenges of trained staff as the districts have been sub-divided and staff had moved away. Immediate redeployment or short term recruitment of essential staff will be required.
- Strengthen supervision and monitoring by DHMT capacity.
- Support IDSR and Emergency preparedness and response training in the province and districts.
- Advocacy by DHMT for the DC to convene the disaster management meetings as the response is beyond the health sector
- The DHMTs staff should not be implementers (e.g. taking the swabs) but build capacity for the health facility level staff

3.0 Health Promotion

- Enhanced health promotion activities especially for the fishing community
- More standardized IEC materials be must be provided by MoH and Partners
- Beach health for the improvement of the beaches must be enforced
- Strengthen the dissemination of health messages in collaboration with other sectors e.g. Lake Victoria basin

4.0 Outbreak Information Management Reporting

- Prompt daily line listing, development of epidemic curve and weekly reporting of the trends must be emphasized.
- Quarterly reporting on water quality surveillance

5.0 Training of staff on case management

- Strengthen case management of health facility staffs through refresher training.
- Provincial and district level training on emergency preparedness and response and; disease surveillance outbreak and response
- DHMTs and facilities should be encouraged to establish small libraries in every health facility and equip them with guidelines and protocols

6.0 Water quality surveillance

- Districts need to quantify their requirements of chlorine products and other essential drugs
- Strengthen the water quality surveillance and institutionalise it
- Advocate for other sectors to consider sinking a deeper borehole at Kamahawa village and other similar communities
- Kisumu municipality to provide chlorine pots for chlorinating the shallow wells

7.0 Access to adequate Sanitation:

- Advocate for raising the sanitation coverage especially in the beaches and if possible introduce emergency latrines
- Intensify health education on proper sanitation
- Introduce hand washing in schools and community: Leaking tin method
- Provide demonstrations of emergency latrines construction in places with loose soils
- Introduce sanitation weeks to promote sanitation coverage at all levels including the beaches
- Newly constructed houses should have toilets especially in towns.
- Continuous reinforcement of the law in collaboration with the provincial administration

8.0 District laboratories inadequate

- Request partners who are willing to support
- Strengthen the districts in terms of budgeting for the laboratory support
- Incubators and autoclaves are essential equipments at the district laboratories and other items
- Advocate for incremental improvement of the laboratories and the supplies

9.0 Migration of fishermen

- If possible restrict the movements to the fishermen to other beaches.
- The beach community to implement this proposal

10.0 Human resources

- Improve staffing as there are serious staff shortages.
- Over 70 nurses have not reported after the post election crises

11.0 Vaccines

It was also observed Vaccines are out of stock: Pentavalent, OPV are at the worst stock levels

E. CONCLUSION

- The cholera outbreak is not yet controlled in the Nyanza province. There is an ongoing transmission of the disease and outbreak.
- The province and the districts have been sensitized and have technical capacities to respond to the outbreak but will require injection of financial, human and logistical support for effective containment and control of the cholera outbreak.
- There is the urgent need for studies in specific areas to be conducted in areas the cases keep coming from for focussed interventions. A good example is to establish the roles of the processing of the finger-like fishes (omena) on the filthy beaches and the shallow domestic wells and citing of toilets in the communities in the transmission of cholera and other diarrhoea diseases.
- The MoH, Partners and sectors should consider instituting long term plans to handle cholera in the province.

F. ACKNOWLEDGEMENT

The team appreciated the cooperative role of the Provincial medical Officer of health and his team and the District health personnel.

Team Members

- Dr. James Teprey -WHO
- Dr. John Ogange -WHO
- Eng. Wilfred M Ndegwa- WHO
- Mr Elly Nyambok -MOH
- Pius Githome-WHO

Places visited

- PMO office
- KEMSA
- KISUMU East district
- Nyando district
- Rongo district
- Migori district
- Suba district

Summary of cases by surveillance week since outbreak was reported

Dates (2008)	Week	Suba	Siaya	Kisumu East	Kisumu West	H/Bay	Migori	Rongo	Nyando	Kisii South	Rachuonyo	Bondo	Province
Missing		0	4			0	2		0	0	0		6
1-6 Jan	1	28	0	0		0	0		0	0	0		28
7-13 Jan	2	16	0	0		0	0		0	0	0		16
14-20 Jan	3	0	0	0		0	0		0	0	0		0
21 -27 Jan	4	0	0	0		0	1		0	0	0		1
28 -3 Feb	5	2	4	0		0	1		0	0	0		7
4 -10 Feb	6	0	0	0		0	0		0	0	0		0
11-17 Feb	7	9	1	0		0	2		0	0	0		12
18-24 Feb	8	32	4	0		0	8		0	0	0		47
25-2 March	9	1	5	0		3	41		0	0	0		50
3-9 March	10	18	3	2		3	78		0	0	0		101
10- 16 March	11	17	4	74		0	27		0	4	0		126
17 -23 March	12	12	2	46		0	7		3	0	0		70
24 -30 March	13	11	3	26		0	4		11	0	0		55
31 -6 April	14	2	1	25		0	7		1	0			36
7-13 April	15	7	2	22		0	9		0	0	1		41
14 -20 th April	16	1	1	18			14		2	0			36
	Total	156	34	213	37	6	193	157	17	4	1	6	832