

Cholera Outbreak in an Orphanage in Delmas - Haiti, August 2015

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Background

- Cholera epidemic is ongoing in Haiti since October, 2010 [1]
- By the end of July 2015, 744,698 cases were recorded with 8,826 deaths [2]
- From the Epi week (EW) 31, an augmentation of cases was observed especially in Port-au-Prince area including Delmas [1]
- During EW 33, an orphanage of Delmas provided cases, among which 3 were tested positive for cholera by rapid diagnostics test (RDT)
- An investigation was conducted in this orphanage

Figure 1: Map of Haiti, Geographic location in Americas



Objectives

- Identify new suspected cases
- Confirm the cholera outbreak
- Identify contamination source(s)
- Implement control measures and prevention

Methods

- Series cases was conducted
- Interview with orphanage staff to detect suspected cases: diarrhea, with/or vomiting, with/or dehydration
- Investigation form was applied to collect demographic, clinic and risk factors
- Stool sample collected for *Vibrio Cholerae* culture

- Water chlorine content was determined using ortholdine method
- Food, water and sanitation assessment for contamination source identifying
- Mean, frequencies and proportions were calculated with Microsoft excel 2010 and Epi info 3.5

Results

Cases

- 13 new suspected cases identified on 78 persons in the orphanage,
- Attack rate: 20,5%
- None was dead

Table 1. Demographic profile of cholera cases, Orphanage, Delmas-Haiti, August 2015

Variables	N=16 Cases (%)
Age Group (year)	Average : 2.36 (0-4)
Less than 1	0 (0)
1 to 4	16 (100)
Sex	
Male	12 (75)
Female	4 (25)

Figure 2. Epi curve of cholera cases, Orphanage, Delmas -Haiti, August 2015

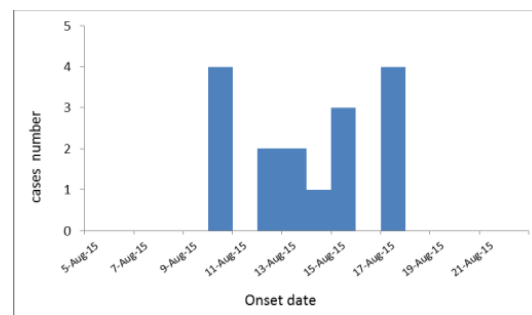
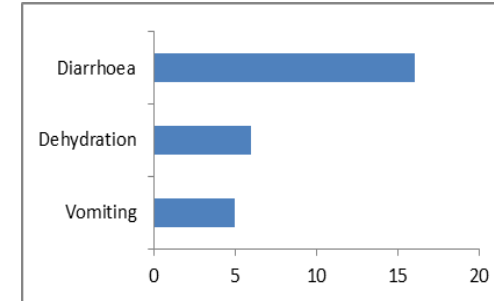


Figure 3 : Distribution of symptoms, cholera cases, orphanage, Delmas - Haiti August, 2015



Laboratory

- Six (75%) of eight stools collected were positive
- Water chlorine content was 0 %

Contamination sources

- Drinking water locally filtered with a non-standardized system and close to a draining used water
- Main usage water bought from commercial untreated distribution
- Weak sanitation accommodations

Discussion and Conclusion

- Children under five years are more vulnerable
- Cholera outbreak confirmed by culture
- As other studies, Epi curve similar to human transmission
- Predominance of diarrhoea according to the case definition
- Cases were probably linked to the poor condition of sanitation in the orphanage
- Unlike other studies, no death registered, because control measure were effective.

Limitations

- No food sample available
- No bacteriological exams on water

Actions taken

- Cases were oriented immediately to hospital
- Adults and children over five years briefed on cholera prevention and control
- Water chlorination
- Donation of hygiene materials and medicines

Recommendations

- Improve sanitary condition at the institution
- Promote health and prevent disease in the orphanage
- Supervise regularly orphanage on health improvement.

References

- MSPP, DELR, Profil statistique choléra 31 SE 2015, Port-au-Prince, Haïti, MSPP, DELR, Réseau National de Surveillance Sites Cholera, 2015. www.mspp.gouv.ht
- Prevención y control de los brotes de cólera: política y recomendaciones de la OMS. Organización Mundial de la salud. [Online] 2015. [Cited: 14 Aout 2015]

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