

Cholera Outbreak

OCG E-Cell response in Haiti, 2010-2011

General strategy: curative and preventive

Water and its metamorphoses constitute the main obstacle to an intuitive understanding of the disease. Water is vector, symptom and cure of Cholera.

Source: Veran, Jean-Francois: Cholera in Haiti: an epidemic in terra incognita (TAG 30, April-June 2011)

Context

The MSF response to cholera in Haiti was of extraordinary scope and happened under extremely difficult circumstances. Cholera re-appeared for the first time after 100 years, which is why the understanding of the disease and its transmission routes by the population were insufficient. The health system was inexperienced in cholera concerning case management, prevention and preparedness in terms of stock. The humanitarian situation in the country was already bad before but even deteriorated after the earthquake in January 2010. There was political unrest and no particular preparation for an outbreak.

The capital Port-au-Prince is composed of two million people. Sixty per cent of the Haitian population lives in rural areas. Life expectancy at birth is currently 52 years. The country is divided into ten departments (Figure 1), which again are made up of communes and communal sections (the organization of health services has the same structure). Nord department (Cap-Haitien) has a population of 711 294 people and West department (Leogane) 214 861 people.

Geographically, three zones with different characteristics are distinguished: a coastal area with high level of flood waters, a mountainous area prone to erosion with many natural resources and drier lowland areas. Haiti is located on the western part of the island of Hispaniola, shared with the Dominican Republic. Haiti covers a total area of approx. 27 700 km². The estimated population was about 10 million in 2009, with 42% under 14 years old.

Source: Haitian Institute of Statistics and Informatics, total population, population aged 18 and over households and densities estimated in 2009, March 2009



Figure 1: Map of departments in Haiti and OCG interventions

Epidemiological overview

31 558 cholera cases (15% of all cases) treated by OCG within five months

OCG Cholera treatment structures [North and West (Leogane) department] treated a total of 31 558 cholera cases. These treated cases represent 15% of all cases reported in the country by MoH (Oct 2010 – Feb 2011).

1.5% case fatality rate (CFR)

A bit higher than the average CFR in MSF all sections (1.1%) during the cholera outbreak for the reason that OCG covered a lot of remote rural areas with difficult access. The MSPP data reported a CFR of 1.9%.

4% attack rate

According to OCG data, the attack rate in the North Department was 4% and 1.4% in Leogane. National attack rate was 2.1%.

110 445 cholera cases treated by all MSF sections (28.6% by OCG)

All MSF sections (OCP, OCA, OCBA, OCG) treated 53% of all cases (209 034) reported by MoH (Oct 2010 – Feb 2011).

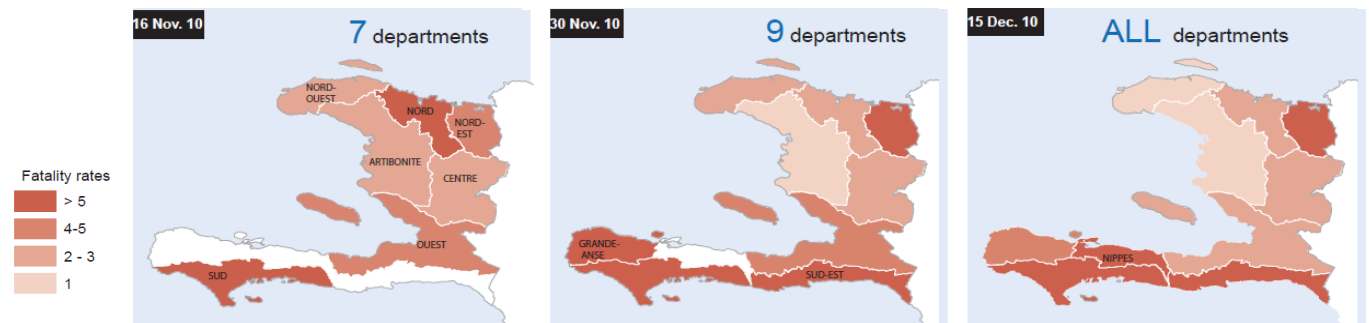


Figure 2: Cholera: cumulative cases and fatality rates since October 2010
Source: http://reliefweb.int/sites/reliefweb.int/files/resources/map_3009.pdf

Main intervention

Medical case management	<p>Medical case management by OCG was appropriate and followed agreed standards (average CFR <2% in MSF-supported health structures). However, issues that affected the quality of case management include the following:</p> <ul style="list-style-type: none"> • An over-use of IV fluids was identified through analysis of epidemiological data and through interviews. • Zinc was added to the treatment protocol for children but with some delay. • Cholera kits were not updated and therefore not adapted to the needs (e.g. no zinc, no paediatric drips and no erythromycin). • Misunderstandings were observed among medical staff (and between different MSF sections) regarding the level of dehydration, administration mode (IV or oral) and treatment plan. This questioned the usefulness of the classification system (plans A, B and C). • Rural case management together with decentralised social mobilisation at some sites led to delay in terms of treatment. 	+ -
	<p>Balance between preventive and curative activities was reasonable. Efforts could have been timelier with a more rapid deployment and more resources for the preventive side, with separate teams responsible for curative and preventive action.</p>	++
	<p>Epidemiological data collection on field level was appropriate in terms of data from OCG-supported health facilities only. It did not include surveillance of the general population. Data were effectively used to map cases, plan and orientate activities.</p>	+ -
	<p>Cholera vaccination was not implemented as a preventive activity, principally because no pre-qualified vaccines existed at the start of the outbreak, manufacturer's stock of vaccines was not big enough to cover the needs and vaccine use would have required a lot of effort in terms of health education and resources, with an efficiency of only 60-70%. Haitian population could easily have lost trust in MSF's capacity to respond.</p>	+ -
	<p style="text-align: center;">INNOVATIVE PRACTICES</p> <p>Management of pregnant women was innovative and led to good outcomes. The protocol developed was judged simple, feasible in an emergency context and cost-efficient, especially in terms of lives saved. All women received intravenous access at admission (regardless hydration status) and continuous IV fluids during their stay - antibiotic treatment (erythromycin) - glucose systematically intravenous - foetal status monitored during hospitalisation (clinically or ultrasound).</p> <p>Intra-osseous infusion system as complete solution for immediate vascular access was offered to test during the outbreak. Unfortunately, lack of experience and lack of time for training resulted in under-use of the product.</p> <p>Zinc was added to the treatment protocol for children but lack of hindsight and training of the medical team as well as absence of zinc or outdated zinc in the MSF medical kit were a problem.</p>	++ + - + -
Health promotion/prevention	<p>Social mobilisation – health promotion (IEC) was crucial for an effective, rapid intervention and for scale-up:</p> <ul style="list-style-type: none"> • Close alignment between health promotion and communication with proactive approach and appropriate communication efforts concentrated on local media helped gain acceptance and increase utilisation of services. • Encouraged by community health workers, information centres were opened in major cities to provide prevention messages and information about cholera. • The idea that patients returning home healthy were the best 'health ambassadors' was leading the strategy of health promotion (IEC) by focusing on patients in treatment centres rather than in the general community at early stage of the emergency. In a second step, an important number of community health workers were trained to teach and train others and were sent to new villages. • During the first stage of the emergency, social mobilisation in the general community was weak at most sites as the investment for these activities was overly focused on treatment centres. • In the rural areas, mixed health promotion and WatSan teams were established to work jointly. • Outreach teams (medical/WatSan/health promoter) were established to reach remote affected areas to follow the ORPs and CTUs, conduct IEC and collect data. 	+ -
	<p style="text-align: center;">INNOVATIVE PRACTICES</p> <p>Communication and multidisciplinary teams as synergy between the teams of health promotion and communication were essential. Communication activities expanded as part of a wide-ranging media campaign. Information was broadly distributed through local media. Educational and prevention spots about cholera with educational material from health promotion were continually updated to truly reflect the population's concerns.</p>	++
WatSan	<p>Outreach WatSan strategy for community outreach was lacking, despite water and sanitation activities carried out around cholera treatment facilities and bucket chlorination were done at community level in some places.</p>	--
	<p style="text-align: center;">INNOVATIVE PRACTICES</p> <p>Faeces and excreta disposal as innovative process using physiochemical treatment with hydrated lime (piloted by OCA in Haiti in collaboration with Brighton University) was applied where safe pits could not be provided.</p>	++
Rural/urban strategies	<p>Centralised urban strategy Leogane: existing health promotion (IEC) capacities were already implemented since many months and expertise was quickly made available. Cap Haitien: in the North department, the initial situation was a disaster (cholera inexperience, no structures, no stocks, etc.). Gymnasium was run quickly to become a major CTC in the heart of the city.</p>	++
	<p style="text-align: center;">INNOVATIVE PRACTICES</p> <p>Decentralised rural strategy North Department: decentralised rural strategy was implemented effectively and with good results, but with some delay (lack of HR). In the community, a network of CTCs, CTUs and ORPs established by multidisciplinary teams composed of medical, WatSan and health promoter was implemented. CTCs and CTUs were transformed before closing down to adjust to the decreasing number of cases and scaled down to become <i>centres de stabilisation</i> (CS) and ORPs. Lack of common consensus between all OCG sites related to decentralisation of rural strategy.</p>	+ -
Others	<p>Risk assessment and preparedness were insufficient in Haiti. The risk of a diarrheal epidemic in this context was downplayed too much given the sanitary situation that worsened after the earthquake.</p>	--
	<p>Exit strategy in the North department was clear, with timely and successful efforts to train, involve and communicate with other partners, primarily the Ministry of Public Health and Population of Haiti (MSPP).</p>	++
	<p>Technical and psychological briefings and debriefings of expatriate staff did not happen systematically before departure. High proportion of expatriates on first mission increased the burden in the field. The deployment of a 'flying training team' for various upcoming CTUs and CTCs was useful but not strategically relevant regarding this emergency situation. Debriefings of expatriate staff were not systematic, especially on the psychological side during and after the field mission.</p>	--

++ well done and good practice + - appropriate but need of revision -- not really well done or implemented late

Recommendations

- **Decentralised rural strategy** of ORPs run by community volunteers (MSF provided logistics, supplies and training but no salary) with mobile MSF outreach team in charge of their supervision. The ORPs took care of Plan A cases, meaning they effectively relieved CTUs and CTCs of about 30% of cases.
- Ensure a balance between **preventive and curative strategies**.
- **Strengthen the epidemiological capacity** to monitor situation and orientate the response accordingly.
- **Health promotion strategies** must be tailored to context **at early stage of the emergency** with particular attention to prevailing beliefs. Implement **social mobilisation** for cholera response without delay and **include rural zones from the beginning**.
- **Develop guidelines and validated tools** for health promotion in the context of cholera response.
- **Ensure enough investment in order to implement a WatSan strategy** outside CTCs and CTUs and **ensure a synergy between teams** (WatSan with health promotion, communication, medical, etc.).
- Ensure enough investment in **systematic briefing and debriefing**.
- Ensure that **MSF cholera kits are up to date**, especially in regards to zinc.

References: (this document summarise the contents of the reports below)

- I. Bergeri, S. Kampmueller, (2011). OCG response to Cholera in Haiti, (Oct 2010 – March 2011) / Evaluation report (external)
- I. Bergeri, S. Kampmueller, (2011). OCG response to Cholera in Haiti, (Oct 2010 – March 2011) / Independent Review and Documentation (internal)
- Perrocheau, C. Clermont, D. Henrys, J. Novoa, P-Y. Oger, (2011). La réponse à l'épidémie de choléra en Haïti - Leçons Apprises (mars - avril 2011)