UN Haiti Cholera Response Multi-Partner Trust Fund
PROJECT NARRATIVE REPORT
Year: 2017

Project Number and Title: #1 – Haiti Cholera Medical Response	**PROJECT START DATE[1]:** 01-Jun-2017	**AMOUNT ALLOCATED by MPTF** $1,500,000 **Other Sources:** Government of Canada $190,000 **Government Input:** Throughout the MSPP and PAHO/WHO, the World Bank will contribute to the procurement of supplies and cover a part of the cost for coordination and quality of care	**RECIPIENT ORGANIZATION** PAHO/WHO
Project ID: 00105773 (Gateway ID)			
Project Focal Point: Name: Dr. Luis Codina E-mail: codinalu2@paho.org	**EXTENSION DATE:** n/a		
Proposal Location (Departments): Haiti (whole country)	**PROJECTED END DATE:** 31-March-2018	**EXPENDITURES**	**IMPLEMENTING PARTNER(S):** French Red Cross

Strategic Objective TRACKS

☒	**TRACK 1a:** Intensifying efforts to cut transmission of cholera and improve access to care and treatment
☐	**TRACK 1b:** Addressing the medium/longer term issues of water, sanitation and health systems
☐	**TRACK 2:** Assistance and Support

Beneficiaries: *Please, indicate the number of beneficiaries and provide disaggregated data, if available*

No. of Beneficiaries	
Communities	
Total	

No. of Beneficiaries	
Women	
Girls	
Men	
Boys	
Total expected cases	**30,000**

Report Submitted by:	**Report Cleared by:**
○ Name: ○ Title: ○ Date of Submission ○ Participating Organization (Lead): ○ Email address	○ Name: (Head of Agency) ○ Date of Submission ○ Participating Organization (Lead): ○ Email address

OUTPUT INDICATORS

Indicator	**Geographic Area**	**Projected Target (as per results matrix)**	**Quantitative results for this current reporting period**	**Cumulative results since project commencement (quantitative)**	**Delivery Rate (cumulative % of projected total) as of date**
Description of the quantifiable indicator as set out in the approved project proposal					
Percentage of evaluated cholera treatment facilities that score over 75% in terms of quality	Entire Country with focus on the 4 priority dpt of	80% Cholera Treatment		26% of evaluated centers in 2017 scored above 75%	

[1] The date project funds were first transferred.

assurance (green)	Artibonite, Center, North and West of Haiti	Facilities			
Percentage of cholera alert that receives a coordinated rapid response from MSPP, PAHO, and Partners	Entire Country with focus on the 4 priority dpt of Artibonite, Center, North and West of Haiti	90% Cholera Alerts		100% of the 228 cholera alerts notified between July 2017 and March 2018 (EW 13) received a coordinated response from MSPP, PAHO and/or partners	
EFFECT INDICATORS (if available for the reporting period)					

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EXECUTIVE SUMMARY

In ½ to 1 page, summarize the key achievements of programme in terms of outcomes and outputs. Please, list the main activities implemented for the project, and describe the progress made during the current reporting period. Explain how the outcome(s) indicated in the Matrix have contributed to the project objective(s) through the TRACKs for the Response according to the UN new approach to Cholera in Haiti

ANNUAL PROGRAMME REPORT FORMAT

Current Situation and Trend (*please provide a brief introduction to the project and the related outcomes in relation to implementation of the project (1-2 paragraphs)*)

This project focuses on supporting the Ministry of Public Health and Population (MSPP) efforts to eliminate cholera in Haiti. The outcomes of this project focus on two components: (1) ensuring quality medical case management to adequately treat suspected cholera cases at institutional level and; (2) supporting the epidemiological system to better respond rapidly to cholera alerts and notifications with the aim of reducing the overall institutional mortality rate du to cholera.

In 2017, a total of 13,681 suspected cases of cholera were reported, which represents the lowest annual number of cases since the beginning of the outbreak in 2010 (Figure 1). During the UN MPTF funding period between June and December, a total of 6,832 suspected cases were reported. In the first week of June, 159 suspected cases of cholera were reported nationally. By the first week of September, the number of cases had increased to 352 cases, followed by a decrease to 133 cases by the last week of 2017. Between June and December, cases were primarily reported in the four priority departments of Artibonite (3,129), Center (1,530), West (1,209), and North (319). However, the incidence was highest in Center (419 cases per 100,000 inhabitants) followed by North (293), Artibonite (181), and West (78). Between June and December, the institutional case fatality rate fluctuated between 0.17 and 1.93%.

In 2018, the decreasing incidence in cases continued to 72 cases in the third week of February (Figure 2). 2018 marked the first time since the beginning of the outbreak when, for multiple consecutive weeks, less than 100 cases were reported weekly. The cases continue to be primarily reported from the priority departments.

Given that the incidence of cholera has been decreasing from late 2017 into 2018, continued support for these activities is vital to continue the downward trend in the number of reported cases, to avoid new outbreaks, and to aim for cholera elimination in the near future.

Narrative section *(About 500 words)***:**

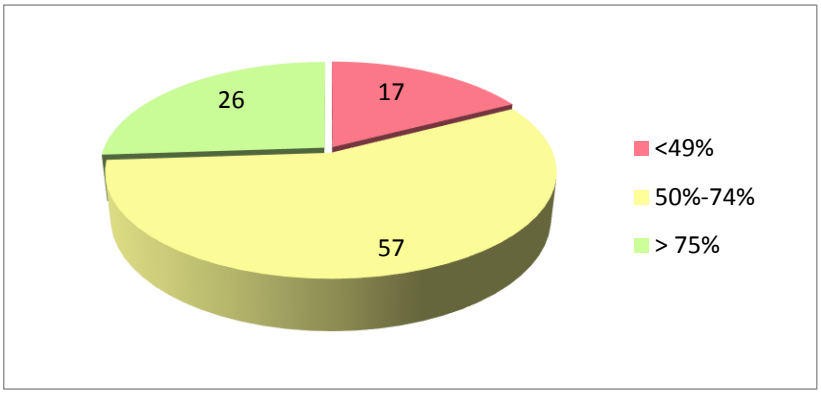
- **Key Achievements:**

Improvement of quality of care in CTDAs (Acute Diarrhea Treatment Centers)

- Evaluation of all CTDAs in ten (10) departments of Haiti. In total, 91 functional CTDAs were

evaluated between June and December 2017 using an evaluation tool that considers all case management and WaSH aspects of a CTDA (However, 67 CTDAs more where evaluated through previous projects funded by USAID/OFDA and Canada, and an Inventory[2] of CTDAs was elaborated).

- As shown in this graphic, most evaluated CTDAs (57%) present an average score between 50 and 74%; 26% have a score equal or above 75%; and 17% have a score equal or inferior to 49%. Most CTDAs with a score equal or inferior to 49% are located in departments that did not notify many cases of cholera during 2017, such as the North-East (7 CTDAs), Nippes (6), and Grand' Anse (1); the remaining CTDAs presenting such score are located mainly in remote and areas difficult to access of the following departments: Center (3), West (2), North (1).



- During this period, and thanks to a Letter of Agreement signed with the French Red Cross, PAHO/WHO was able to respond to 17 outbreaks in the following departments: Artibonite (9), Center (4), and West (3). In each of the sites, the response was adapted to the needs: installation of new temporary sites (West (3), Artibonite (2), Center (1)), reinforcement of human resources, small rehabilitations works to bring CTDAs up to standards, provision of medical and WaSH (Water and Sanitation) supplies and materials, as well as trainings on cholera case management and Infection Prevention and Control (IPC) norms.
- Small rehabilitation and standardization works were done mainly in the CTDAs which had patients during the evaluation. A total of 43 CTDAs benefited from these rehabilitations. During outbreaks, new evaluations were undertaken in sites affected by the outbreak, and rehabilitations were carried out, leading to improve quality of services as reflected in increased scores above 70% in 6 sites (Artibonite: St Michel de l'Attalaye: 56%-81%; Providence of Gonaives: 56%-82%; Charles Colimont (Petite Rivière): 51%-80%; Medor (Petite Rivière) 42%-78%. Center: Baille Tourible (Thomonde commune): 49%-72%; Hinche: 68%-71%, Boucan Carré: 62%-71%).

Figure 2: Rehabilitation of showers, Deschapelles CTDA (before)

Figure 1: After rehabilitation works by the French Red Cross

- By demand of the MSPP, Mobile Rapid Response Teams (EMIRA) from 9 departments, Polyvalent Community Health Agents (ASCP), and healthcare personnel of CTDAs received refresher training on cholera case management protocol; this was done through on site trainings

[2] See Annex : *CTDA Centres de Traitements des Diarrhées Aiguës, Haiti, Inventaire 2017*

and group trainings, depending on the needs. In total, 452 people were trained. The agreement signed with the French Red Cross also made it possible to comply with the cholera case management protocol at institutional level by providing CTDAs in need the necessary human resources during outbreaks in the following departments: Artibonite (8), Center (2), and West (3). In total, 38 nurses, 47 hygienists, 4 WaSH supervisors, and 4 auxiliaries were deployed to the aforementioned sites. This human resource reinforcement allowed to improve cholera case management in 20 of the CTDAs reevaluated. It must be noted that these human resources were deployed after needs assessment and validation from Departmental Health Directorates.

Support to epidemiological surveillance and laboratory

- In September 2017, PAHO/WHO put in place epidemiologists in 5 of the 10 Departmental Health Directorates (Artibonite, Centre, West, South, and Grand' Anse) to support epidemiological surveillance. It was proposed that the epidemiologists be integrated members of the work structure of the Departmental Health Directorates (DHD) in order to improve coordination and collaboration within the DHD and between PAHO/WHO and the DHD. The epidemiologists supported field investigations of localized cholera outbreaks and deaths in CTDAs and in the community. Additionally, epidemiologists from the PAHO/WHO office in Port-au-Prince were deployed to the field to support investigations. The epidemiologists in the DHD supported the evaluation of epidemiological surveillance tools, primarily the cholera registry in CTDAs, by verifying that clinical diagnosis was appropriate according to the reported symptomology in patient files. The cholera registry is a case record registry in each CTDA where information is entered for each patient according to predetermined variables (place of residence, treatment plan, etc.). In addition, the epidemiologists ensured that there was no missing information in the cholera registry. If lack of data or incorrect use of the cholera registry was observed, the epidemiologists led training sessions to strengthen understanding of standardized procedures related to cholera surveillance. The epidemiologists also supported the DHD to analyze epidemiological data in order to inform decision making.
- In certain DHD, PAHO/WHO supported the Directorate of Epidemiology, Laboratory, and Research (DELR) of the Ministry of Public Health and Population (MSPP) in numerous missions to strengthen the use of the cholera line lists and to verify data. The cholera line list is a database with individual level data from the cholera registry, which allows for more accurate and reliable data analysis to inform decision making and to orient interventions. However, in some departments, the line lists were not being used systematically and often aggregated data was used, which provide only a general understanding of the epidemic. In the departments of West, Artibonite and North, multiple-day missions took place to recover cholera registries from CTDAs, verify data in the registry (e.g. verify if the clinical diagnosis is coherent with the treatment plan and duration of illness), and enter the data into the database. In the department of South-East, a mission was undertaken to address the large discrepancy in data between the cholera registry and the line listing. Therefore, data verification in the existing line list was performed.
- In 2017, the rate of sampling for laboratory testing among suspected cases of cholera was low, often due to stock shortages in Cary Blair, the transport medium for cholera samples. Additionally, some cholera samples were not being systematically transported to the laboratory.

Laboratory testing informs decision making by health care workers in regard to the appropriate treatment plan for the case, equips epidemiologists with more accurate information on the evolution of the outbreak and allows to assess the capacity of health personnel in certain CTDAs to be able to clinically diagnose a case.

- In order to address the stock shortages of Cary Blair and low sampling rate, 12,000 Cary Blair were purchased, received and transferred to the DELR. Additionally, four lab-moto nurses were put in place in three priority departments (Artibonite, Center, and West) to ensure that there was a sufficient supply of Cary Blair in every CTDA, every suspected case of cholera is sampled, and every sample is transported to a laboratory in a timely manner. In addition, tools were developed for the DELR and the DHDs to efficiently monitor the stock of Cary Blair at the national, departmental and CTDA level to foresee stock shortages and to monitor transfer of Cary Blair between different levels.
- Environmental sampling and testing of water quality was introduced into field investigations by testing water sources using the DelAgua kits
- Rapid diagnostic tests (RDTs), specifically SMARTTM tests, were reintroduced into case investigations to be used complementarily to Cary Blair sampling. These rapid tests were used to determine if an outbreak of cholera was occurring in a community while awaiting the test results by culture from the laboratory.
- Although this project did not include a vaccination component, due to urgent outbreaks, some reactive cholera vaccination activities were undertaken supported, in part, by this project. Between June and December 2017, three oral cholera vaccine (OCV) vaccination campaigns took place: two in the commune of Mirebalais in the Center department (Nov. - Dec. 2017) and one in the national prison (Aug. 2017). During the vaccination campaign in Mirebalais, 88,378 people were vaccinated during the first campaign and 85,112 people in the second campaign. In total, 69,905 people were vaccinated with two doses. In the national prison, 3,973 prisoners were vaccinated, representing vaccination coverage of 83.4%. In addition, a study on the OCV vaccination coverage in the departments of South and Grand' Anse is currently in progress, after the vaccination campaigns that occurred in Nov. 2016 after Hurricane Matthew.

- **Delays or Deviations** – *(Please indicate, if applicable, any reason that may have contributed to any delays or deviation, and describe the measures adopted to move forward to achieve the expected results)*

There were several challenges, that somewhat delayed or deviated the implementation of some of the project's activities in 2017:

- The constant turnover of nurses in CTDAs, the weak competencies of some human resources, the lack of follow up of human resources by DHD due to the lack of funds, especially in cases where more than one CTDA are affected by an outbreak constitutes an important weakness of the system. In the Artibonite department, this aspect was improved by the deployment of supervising nurses. Their role is to support the Health Directorate in the regular supervision of CTDAs with patients. The objective is to reinforce case management and WaSH capabilities of CTDA personnel depending on the needs identified. It should be noted that the recruitment process for these nurses was delayed due to a delay on selection procedures by the DHD.

- When the epidemiologists started working at the DHDs, there was some resistance from their staff, specifically in regards to data sharing and collaboration. The epidemiologists at the time were not seen as integrated members of the DHD. With time and effort, relations have improved between the epidemiologists and members of the DHDs, and the epidemiologists are now more integrated into the overall work structure.
- Challenges were encountered in regards to the use of the epidemiological surveillance tools (e.g. cholera registry). Some CTDAs were not recording cases in the registry and among those that were, errors were observed often. In particular, adherence to correct date format, the correct column for first and last name, inconsistent data with the patient's clinical file. In the cases where data was not systematically entered, missions were undertaken to enter data retrospectively into the cholera line listing.
- For the development of tools for monitoring the stock of Cary Blair, there were delays due to consultation with the numerous parties involved including the coordinators of infectious diseases (CMIs) of the DHDs, the DELR, and the Directorate for Support to Health Decentralization (UADS) to ensure consensus. This process was essential to ensure the feasibility of these tools and therefore, a coordination meeting was held with all the involved parties so that a consensus could be attained more rapidly.
- For the water quality testing of environmental samples, there was some apprehension from WaSH actors since the activity was seen as their responsibility and not the responsibility of PAHO/WHO. Ultimately, WaSH actors were incorporated into case investigations in the field.
- Additionally, there was some apprehension to the use of the SMARTTM tests since RDTs, such as Crystal VCTM, were used three years ago and proved to be unreliable. The actors involved had to be informed that this was a different RDT and that it was more reliable and useful to characterize if an ongoing outbreak was potentially due to cholera, while awaiting laboratory test results by culture.

- **Best Practice and Summary Evaluation** – *(Please indicate what are the best practice guidelines adopted and the impact on the implementation process)*

Many best practices have supported the impact on the implementation of this project. Mainly the following:

In situ training. Although it is also necessary to train a lot of staff on cholera case management, with constant turnover of healthcare personnel in CTDAs, in situ training proves to be more effective. Indeed, they allow to readjust according to strengths and weaknesses noted in cholera case management in each person working in the CTDA, and to have a more personalized and adapted approach. Therefore it is important to continue supporting DHD in the regular supervision (with in site training included) in all CTDAs with patients.

Regular CTDA evaluations. Constant evaluations to CTDAs with patients by CMIs should also be continued and even reinforced as they allow to have a global vision (integration, IPC, Human resources, stock of supplies, quality of the structure) on the case management capacities of a CTDA and to have concrete elements that will permit improving the quality, and if needed, adapt the response to an outbreak according to the weaknesses and strengths of the CTDA. These also allow the regular update of the CTDAs

data base.

Adequate small rehabilitations. Due to a lack of funds to reconstruct most CTDAs in need, it is important to assure infection prevention and control measures in the structures as they are now. Well targeted rehabilitations (adequate concrete footbaths, availability of dejection pits and corpse treatment areas, and a well-defined decontamination circuit) can significantly increase the overall quality score of a CTDA.

Standardization of tools. For field investigations, it was noted that case investigation reports were not standardized between investigation teams and often important information was accidentally omitted. PAHO/WHO developed a standardized format for case investigation reports with all of the necessary information required for the Investigation Committee of the West Department (CIDO).

Accountability. During the implementation of the monitoring tools for the stock of Cary Blair, a system of accountability was put in place. When Cary Blair is transferred from one level (i.e. national) to another (i.e. departmental), a form needs to be completed with signatures from both the sender and the receiver to ensure official documentation of the transfer.

- **Lessons learned** – *(Please, share a couple of lessons learned that can be beneficial for future projects)*

The greatest weakness observed in CTDAs is the lack of respect for the hygiene protocol of the MSPP (no disinfection of vehicles carrying suspected cases of cholera, companions who dump patients' buckets in the dejection pits instead of hygienists, clothes and cups that are washed by family members, non-chlorination of footbaths, etc.). The number of hygienists is often insufficient or they lack the proper training. CTDAs are not well equipped to assure infection prevention and control measures (inadequate footbaths, non-respect of patient circuit, inadequate beds, etc.). All aspects related to WaSH are to be improved and supervised regularly in all CTDAs with patients. Furthermore, few NGOs support this essential aspect; their actions are focused on case management and delivery of supplies and small parts of their budget supports the standardization of structures and the strengthening of aspects related to institutional WASH. Within the context of this project, PAHO/WHO was able to support this aspect to complete an adequate response.

The capacities to respond to outbreaks and coordination by DHD are very divergent depending on the geographical characteristics of the zones and the number of health response actors present in the territory. In fact, currently only Medecins du Monde (MdM) and Zamni Lasanté (ZL) still support cholera case management in some departments (MdM: North-West, South, Grand' Anse, West and Lower Artibonite; ZL: Lower Center department). However, this support may continue to decline over the next year. Areas such as the Upper Artibonite, the Upper Center department or the North, which regularly register suspected cases, have no health actors operating in the area. Although cholera is declining and there is a trend toward control of the epidemic, the country is not immune to outbreaks. At present, departmental directorates do not have enough financial capacity to respond to outbreaks if necessary. It is therefore necessary to continue to fund partners who are able to support both rapid response and regular support to CTDAs in communes that register cases regularly.

Although there is a trend toward a significant decrease in suspected cases of cholera, it is important to continue to strengthen integration (CTDA inside the locals of a hospital or health center, in which human resources and medicines and supplies are the same than those from the hospital) and build standards-CTDAs in areas of persistence in order to be able to care for and isolate suspected cases of cholera at any time.

Continued evaluation and training of health personnel is necessary to ensure that understanding remains optimal and that standard operating procedures are correctly followed. Often, staff turnover and/or fatigue may lead to errors, which need to be identified and corrected through training as soon as possible. In addition, input from the personnel during the training session is important to ensure that these activities are feasible.

With the integration of epidemiologists in the DHD, there was better collaboration between PAHO/WHO and the MSPP in terms of identification of needs, provision of support and collaboration in activities such a case investigations and monitoring the stock of Cary Blair.

With the placement of labo-moto nurses, non-epidemiological data was collected (e.g. the supply of Cary Blair in each treatment center), which is important for the management of essential supplies to control the outbreak, in conjunction with epidemiological data.

The integration of laboratory data and epidemiological data is essential in order to efficiently and rapidly use laboratory results to inform decision making. For future outbreaks, it is important that unique identifiers are assigned to each patient and each lab sample so that the integration of data between the sources can be streamlined.

- **Story from the Communities** – *(Please, provide one story from the field that has contributed to the success of this project)*

In June 2016, there was a cholera outbreak in the commune of Lascahobas, in the Center department, which was increasing in the number of suspected cases. Multiple investigations were carried out previously, looking at the conditions of CTDAs, the households, and other locations in the community (e.g. food markets and schools). After all of these investigations, the source of infection was not known. In collaboration with the MSPP, DINEPA, UNICEF and MdM-Argentine, the supply system for drinking water (SAEP) was evaluated and it was found that the chlorination chamber was not working. Once this was functioning, the number of cases dramatically decreased in the area.