

CLEAN WATER PROGRAM IN MEDOR

Potable **w**ater, along with proper **s**anitation and **h**ygien**e** (WASH) practices, can significantly improve health outcomes in developing communities. Medor, Haiti is no exception. Residents use open water sources (e.g., streams, rivers, capped springs) for bathing, washing clothes, cooking, and drinking. Animals also contribute to pollution by walking unrestrained in these sources. The open water sources are contaminated with harmful fecal bacteria that cause severe, even life-threatening, illnesses, including cholera, which results in rapid loss of bodily fluids and is highly infectious. Bacteria increase when severe weather brings runoff carrying fecal matter from eroded hillsides, where open defecation is common. Medor experienced outbreaks of cholera after the severe earthquake in 2010, after Hurricane Matthew in 2016, and on a recurring basis after heavy rains. However, the incidence of illness is decreasing due to the sanitation and education programs described here.

Meeting the basic need for potable water (water that is clean and safe for drinking, cooking, and hand washing) is essential for sustainable development. Water affects the health of Medor's people, as well as the economy. When farmers get sick, the whole community suffers. Children who are sick fall behind in school, as is the case of the child, Rebecca, pictured below, who missed five weeks of class after contracting cholera.

History. The clean water program in Medor began in 2006, when OLQP arranged for a volunteer hydrologist to assess the water in Medor's open water sources. Representatives were elected from each of the twelve chapel areas to form the Water Committee. The committee members assisted with the surveys and helped identify all sources of water collection (springs and streams) in Medor. Results revealed that all of the 30+ water sources within St. Joseph parish's 74 square miles contained some level of fecal bacteria. Water collection was also difficult in some areas. One chapel area, Zorange, had no water source at all. Women had to walk to a distant spring over dangerous paths, balancing buckets on their head.

OLQP and St Joseph capped several natural springs in the parish with UNICEF funding. These efforts made the process of water collection easier. However, the water collected at all of these sources was still contaminated, so the focus of the OLQP clean water program, like that of other organizations in Haiti, shifted to household water treatment.

An international non-profit (with experience in Haiti) attempted unsuccessfully to drill a well in Zorange. In response, OLQP obtained a grant to build two rainwater harvesting cisterns in Zorange. These cisterns provide water to families, except in times of extended drought.

Strategy. The recommended safe water practice encompasses three steps: household water treatment, safe storage of treated water, and behavior change communication. Through the parish

twinning program, OLQP learned about the Klorfasil Clean Water Program (www.klorfasil.org/) used by other twin parishes. OLQP presented it to the pastor of St. Joseph and the Water Committee, who supported it by holding multiple educational sessions for residents.

Families who participate in the program receive a five-gallon bucket with a spigot, lid, and a small sign identifying their household as a Clean Water Program participant. They purchase a bottle of bleach powder, called Klorfasil. One twist of the cap dispenses a small, measured amount to purify the full five gallons of water in the bucket. Thirty minutes after adding the bleach powder, the water is free of harmful bacteria and safe for drinking and cooking. Each family pays a small amount for the bleach dispenser (about \$2 US), and OLQP provides the bucket purification system (\$10 US). A single dispenser is able to purify drinking water for a family of five for fourteen months (if water is clear) or seven months (if water is cloudy). This program, with families purchasing their own Klorfasil dispensers, is designed to be scalable, economically viable, and sustainable.

A critical component of the program is teaching families about the importance of clean water and the need to treat water according to the instructions. Continuing consciousness-raising is needed to encourage participants to purchase dispensers after the first one is emptied.

Results. In 2017, nearly 400 families participated in a household survey and almost all said they were using the water purification system. Results indicated that community members understand that using clean water “prevents many diseases and helps people live better and stay healthy.” The survey did not include water testing in the households, but Medor’s incidence of cholera has followed the declining trend in Haiti, a testament to the improvements that the clean water program has made in the community.

New directions. The training and consciousness raising components of both sanitation programs, clean water and latrines (arbor-loos), complement each other. The arbor-loo program leader recognized that “It made no sense to install a latrine if the people were drinking contaminated water.” So, the coordinators of both programs began to work together. In 2017, and again in 2018, each of the 100+ households that installed an arbor-loo but did not already treat their drinking water received a Klorfasil bucket and training. The goals of this partnership were to bring the Klorfasil program to new communities and to increase the number of users.

In 2019, emphasis will be on follow up visits to households that received buckets in the past, testing the water to see that it is treated correctly, and encouraging users to buy Klorfasil dispensers when needed. More than 3,000 Klorfasil buckets have been distributed in the parish since the beginning of the program, but few people have purchased dispensers to replace empty ones. The government distributes Aquatabs at no charge after upsurges in cholera, which affects sales of Klorfasil dispensers. (Aquatabs also contain bleach and purify the water). Follow up

visits are a priority to ensure that people are treating their water properly using either source of bleach.

Fear of cholera helped overcome resistance both to treating water and to paying for water treatment. The positive results demonstrate the receptiveness of the Medor community to take action and implement life-saving water purification techniques.



Water committee members in Medor learn about water test results, which showed that all water sources contained levels of harmful bacteria.

A man in Medor demonstrates how to use the water purification system.



A Klorfasil dispenser contains enough bleach powder to purify clear water for a family of five for fourteen months or cloudy water for seven months. This is an estimated expense of \$2 US a year for most families.



Rebecca, a young Haitian girl, missed five weeks of school after contracting cholera.