# Water, Sanitation, and Hygiene in Healthcare Facilities in the COVID-19 Pandemic: The Case of Water Mission Mexico

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# **ABSTRACT**

Water, sanitation, and hygiene (WASH) services in healthcare facilities (HCFs) are critical for infection prevention and control, however, these services are often lacking in hospitals and clinics around the world. Water Mission is a nonprofit that designs, builds, and implements safe water, sanitation, and hygiene solutions in various contexts, including healthcare facilities. Two staff members from the Water Mission headquarters in Charleston, SC interviewed the Water Mission Mexico country director, Johnny Bermudez, to share about the role of WASH in HCFs in Mexico and speak on Water Mission's response to the COVID-19 pandemic.

## 1 INTRODUCTION

A lack of water, sanitation, and hygiene (WASH) services in healthcare facilities (HCFs) limits the capacity for infection prevention and control, a reality which was exacerbated by the novel coronavirus (COVID-19). However, WASH in healthcare facilities has long been a gap in WASH service provision, an issue stressed by the global health and development community in 2018.

An estimated 896 million people use healthcare facilities with no water service and 1.5 billion use facilities with no sanitation services. WASH services in HCFs are foundational to delivering quality health services for all. Nevertheless, the absence of WASH services in healthcare facilities creates a disproportionate burden on women as the main users of health services and family caregivers in many countries around the world.

As an engineering non-profit organization, Water Mission designs, builds, and implements safe water, sanitation, and

hygiene (WASH) solutions for people in low-middle-income countries and disaster areas. Since 2001, Water Mission has used innovative technology and engineering expertise to provide access to safe water for more than five million people in 56 countries.

WASH in healthcare facilities is a growing area of focus for Water Mission. Over the years, Water Mission has mobilized solar-powered safe water solutions in over 90 healthcare facilities around the world, responded to emergency WASH in healthcare facility needs during disease outbreaks (Ebola in Libera and Cholera in Haiti), and engaged in systems strengthening activities, to connect WASH and healthcare sectors. Water Mission deploys several solar-powered water treatment system technologies which use filtration, coagulation, flocculation, sedimentation, and chlorine disinfection processes. In addition to infrastructure improvement, Water Mission works with staff within these facilities to provide basic training for routine testing and monitoring water quality, and carries out remote monitoring to provide ongoing insights into system performance.

Recognizing the importance of hand hygiene as a method for infection and prevention control, Water Mission expanded its efforts in HCFs to include installations of emergency handwashing facilities in response to COVID-19. To date Water Mission has installed over 7,500 handwashing stations, of which 955 (12.6 percent) are installed in healthcare facilities. A critical component of the organization's COVID-19 response includes partnering with local health actors to identify needs and mobilize resources quickly. A key example of this work can be found in Water Mission's Mexico country program.



Two women use an emergency handwashing station installed at health-care facility in Mexico.

The Water Mission program in Mexico was established in 2007 and is based out of the state of Chiapas. From its beginning, the Mexico program has focused on serving people groups in rural areas outside of several cities in Chiapas — including San Cristobal, Ocosingo, Chilon, and Palenque. Below is an interview with Johnny Bermudez, Country Director, in which he shares about the team's experience in bridging the gap in WASH services in HCFs, in light of COVID-19.

**KD** + **JS**<sup>1</sup>: Can you share some background context on the situation related to safe water, sanitation, and hygiene in Water Mission Mexico service areas?

JB<sup>2</sup>: Water Mission Mexico is in Chiapas, in the far south of Mexico, and we have worked all across this region to implement safe water projects in communities. Chiapas is considered one of the poorest states in Mexico. Many people do not live very well. They are used to consuming contaminated water, and they don't recognize that drinking contaminated water causes disease. They think that if water is clear, then it is good for drinking. There are even common supersti-

tious beliefs that attribute babies getting sick with someone staring at the baby... they call this evil eye, or "mal de ojo" and go to folk doctors for treatment. So, they have these superstitious beliefs about the cause of the baby getting diarrhea, even though it is really a waterborne disease causing the diarrhea.

Waterborne illnesses are very common in communities, and since they have been living with these illnesses and sicknesses for their whole lives, and they consider this normal. They don't know that there is a way to live differently. Many communities have wells, but they don't have sewage systems, and often contaminate their wells with their own waste. In this way, if one person gets a disease, it can spread to others through their water system.

**KD** + **JS**: What about the status of WASH in healthcare facilities in the area?

**JB:** The state government has put a big emphasis on community health and have built small clinics in rural areas. Many communities must still use transportation to get these clinics and sometimes have to travel up to 50km to reach the nearest clinic, but there is better access to healthcare because of these small clinics than in the past. These clinics normally use water from the public system. It is treated, but not safe to drink. They buy bottled water for drinking.

**KD** + **JS**: Had Water Mission Mexico worked with healthcare facilities in the area prior to the COVID-19 pandemic?

**JB:** Prior to the COVID-19 pandemic, we had coordinated community health activities alongside the small clinics. These clinics have a big influence on community health, so we would invite them to give talks, carry out activities in the communities while we were implementing the safe water system. We would make agreements for the clinics to have free access to safe water from the community water systems we installed.

**KD** + **JS**: How did the COVID-19 pandemic impact your strategies for community work?

JB: In March 2020, before the pandemic had been declared and impacted Mexico widely, we began a shift in our strategy and began a COVID-19 awareness campaign, and from that point on, we began a large focus on COVID-19 prevention. We went back to all the communities in Chiapas where we had worked in the past, and we trained them on COVID-19 prevention, distributed mate-

<sup>1</sup> Kausha Dierker (Community Development Specialist) and Julia Sherry (Program Evaluation Specialist), Water Mission Charleston

<sup>2</sup> Johnny Bermudez (Mexico Country Director), Water Mission Mexico

rials, and tried to raise awareness about the role of WASH in preventing COVID-19 even before there were any cases in the area. There was an urgent need for more places for people to wash their hands, both in communities and in clinics. We began providing handwashing stations in communities where we had installed water systems in the past. In many communities we put one handwashing station at the water system, and another in the market/ public area.

**KD** + **JS**: What was the need in clinics regarding WASH during the pandemic?

**JB:** As time went on, cases of COVID-19 began increasing in the area. People would go to clinics for treatment for their potential COVID-19 symptoms, and without places to wash their hands, there was fear that COVID-19 could be spread by sick patients at clinics. Some doctors even contracted COVID-19 at this time. Doctors reached out to us asking for help, and soon after, the municipal governments also reached out to ask for our support in handwashing. To meet this urgent need, we got connected to a network of rural clinics and began installing handwashing stations in these clinics. In addition to handwashing stations, we also provided clinics with other critical items, like masks, sanitizer gel, disinfection spray for surfaces, scrub brushes for surface cleaning, etc. We provided personal hygiene kits to many businesses and churches that were trying to start operations, with items like soap, masks, and sanitizer.

**KD** + **JS**: An April, 2020 United Nations report on the impact of COVID-19 on women states, "women are at the forefront of the COVID-19 response as the default unpaid family caregivers and the majority of unpaid or poorly paid community health workers." How would you respond to this statement, based on your experience?

JB: This is very true in Mexico. The machista culture is very common in this region- women are caregivers and men are the household provider. Most communities have this culture. Men bring money to the house, but women take care of the children and are housewives and clean the house. This can make it difficult even for women on staff with Water Mission to be listened to in communities, because some men don't want to listen to a woman teach.

**KD** + **JS**: What are the next steps for Water Mission Mexico?

**JB:** We will continue with our routine work in WASH because we know that healthy WASH

practices are always needed to prevent disease. This is something that we always need to practice in our lives, so we will continue our work in WASH in the Chiapas region.

## 2 CLOSING

WASH in healthcare facilities is critical to providing quality healthcare. The COVID-19 global pandemic serves a reminder of the urgency and necessity for WASH and health actors to respond to gaps in water sanitation and hygiene services in healthcare facilities. Moving forward, the sector has an opportunity to improve access to WASH in healthcare settings — designed with gender considerations — and support equitable and dignified service provision, as well as empowerment outcomes for women and their families.

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