

## Article for ASCLS Today 2003

- **Faith-Based Service: Laboratory Development at Bethesda Medical Clinic in Vaudreuil, Haiti**
- It happened to me too!!! God called, I went, and a piece of me was left behind. That piece was my heart, which I will never fully own again, and can only be partially recovered through a deeper investment in God's call. Through this article I have been asked to share my story and experiences regarding the development and growth of my medical mission ministry in Haiti.
- Haiti is a small Caribbean country that occupies the western one-third of the island of Hispanola with the Dominican Republic. It is shaped like a backwards letter "C" and is positioned North of the Caribbean Sea and south of the North Atlantic Ocean. The country measures 27,750 square kilometers in total area, which is slightly smaller than the state of Maryland. Haiti enjoys a tropical climate and a terrain that is mostly rough and mountainous. The difference in elevation is 2,680 meters (8,790 feet) ranging from the lowest point along the coastline (sea level) to the highest point at Mount "Chaine de la Selle. Total population is approximately 7 million with over 2.1 million occupying the 10 largest cities. The population of the capitol city, Port-au-Prince, and its suburbs is approximately 1.7 million.
- Haiti was discovered by Christopher Columbus in 1492 during his first voyage to the new world. As a result of the Spanish colonization, the over 1 million native, Indian inhabitants, called Taino, were reduced to only 150 by the year 1550. Forced labor, abuse, diseases against which the natives had no immunity, and the growth of the mestizo (mixed European and Indian) population all contributed to the elimination of the Taino and their culture. Through internal conflict, the Spanish stronghold diminished over the subsequent 100 years. During this time the island was visited by many seafarers from Britain, France and the Netherlands. French Huguenots had begun to settle on the north coast of Hispanola by the early 1600s but the first permanent settlement was established in 1659 under the commission of King Louis XIV. In 1670 the French established their first major community, Cap François (later Cap Français, now Cap-Haïtien) until the Spanish relinquished sovereignty over the area to France in the Treaty of Ryswick in 1697. Shortly thereafter, the French began the import of African slaves to work the thriving tobacco and coffee plantations. By 1791, the population of enslaved African people reached approximately 700,000. This set up a caste system composed of three groups, the elite white colonists, the mixed race mulattoes and the African blacks. The extremely cruel treatment of the African slaves by the slave masters eventually led to the Haitian Revolt of 1804 where the Haitian people won their independence.
- The people of Haiti are 95% black from African ancestry with the remaining 5% representing the mulatto and white populations. The two official languages are Creole (a combination of 75% French and 25% African) and French. About 80% live in abject poverty with the unemployment rate exceeding 66% and the literacy rate estimated at approximately 45%. The average life expectancy is calculated at 49.38 years with an infant mortality rates approaching 10%. Most medical deaths are due to treatable illnesses and approximately 6% of the people (225,000) are living with HIV/AIDS.
- Over the past decade I have heard God's call to expand the territory of His

ministry through me to areas outside the boundaries of my home country. In January of 2000 I visited Haiti for the first time as a temporary missionary commissioned to help build a school in a remote mountain village. Later that year a pastor friend connected me with a clinic (Bethesda Medical Center) on a prominent missionary compound that he perceived was in need of medical assistance. In March of 2001, I spent nearly two weeks at Bethesda Medical Center in Vaudreuil, Haiti, just outside of Cap-Hatien. This has become a permanent ministry. By Haitian standards Bethesda is a very nice clinic that serves an essential and life-saving function in the local community. As a professor of Clinical Laboratory Science, I felt called to support, upgrade and expand the laboratory, and to improve utilization of laboratory services by the nursing staff. The clinic treats between 100 and 200 patients per day for ailments ranging from severe infections to genetic diseases. Patients begin to gather at the clinic before dawn, usually around 4:30am, and the gates open at 7:00am. Patients are triaged and assigned a number based on the severity of their symptoms. At 8:00 the gates are closed and both the accepted patients and the entire medical staff gather for separate Christian worship services, that conclude around 8:45am. At 9:00am clinic duties commence and patients are examined in the order of their pre-assigned triage number. The clinical staff, composed mostly of Haitian trained nurses, examines the patients, orders laboratory tests and prescribes medications. Patients requiring laboratory tests form another line at the laboratory to have specimens collected and analyzed. Those who require prescriptions report to the pharmacy for distribution of medications. The clinic charges a modest fee for these services, approximately the equivalent of one American Dollar, in order to limit clients to only those with urgent needs, to improve compliance with treatment regimens, and to defray some costs of operation. The clinic remains open until all accepted patients have been examined, which is usually between 3:00 and 5:00pm.

- Five constantly growing networks of individuals are at the heart of this ministry. These individuals support the ministry by sharing the vision and by contributing finances, laboratory supplies, time and expertise. The first network consists of friends of the ministry who make a small annual contribution to fund my trip. Funds collected in excess of my expenses are used to purchase laboratory materials not received through donations and to cover the shipping cost of all laboratory materials sent to the clinic. The second network involves laboratory friends who are asked to evaluate their inventory with an eye to this ministry. Outdated, near dated or overstocked items can be shipped to my home where they will be inventoried, consolidated and shipped to Bethesda Medical Center as needed. The third network includes laboratory supply companies willing to donate fresh materials and test kits that the laboratory currently uses. The fourth group is composed of health care professionals who have shown an interest in participating in a medical mission trip to Haiti. The last group consists of health care professionals who have volunteered to participate in an "expert panel" to address health care questions from the field and offer advise.
- These networks provide the infrastructure needed to execute the annual medical mission trips and support the clinic throughout the year. During the first medical mission trip to Bethesda Medical Center in 2001, I had 60 contributors, 35 laboratorians and no vendors, expert panelists or additional team members. That year I was able to provide 200 pounds of laboratory supplies, upgrade several testing methods, introduce four new laboratory tests and assist the nursing and laboratory staff in utilizing the laboratory services more efficiently through a series of in-service sessions. Over the

twelve-month cycle following my first visit to the clinic I sent two additional shipments of laboratory supplies.

- In 2002, the medical mission trip occurred in May. The ministry was able to deliver 31 cartons of laboratory supplies weighing over 400 pounds with an additional 5 cartons of materials shipped the following September. Two new tests were introduced and I was able to evaluate the success of the tests incorporated in 2001. A quality control program was developed using positive patient samples as control material. Over 60 patients were screened for sickle cell and HIV, free of charge, above and beyond what the clinic was able to provide. I brought home a broken microscope for repairs and plan to rewrite the entire procedure manual to include the new tests and the QC program. Three hours of in-service was provided to the nursing and laboratory staff. In addition, I began the process of assembling a panel of experts to field questions from the clinic. The clinic can email me any medical question. I will disseminate the question to my panel of experts (doctors, nurses, physician assistants, laboratorians, therapists, radiologists, pharmacists and nutritionists) who will offer their suggestions to me. I will then formulate a single response and email the clinic, hopefully within three days.
- The successes of the 2003 mission trip were even more miraculous. The miracles began when the senior class of the Department of Clinical Laboratory Science accepted as their Senior Capstone project my proposal to research laboratory tests and develop materials to be used in the 2003 medical mission trip. The capstone project engendered so much interest that two seniors volunteered to join the team for the upcoming trip. These students, now graduates, also agreed to share their experiences in Clinical laboratory Science sponsored student club meetings and at a faith-based reflection group that I agreed to host funded by a SLU VOICES grant. In addition, during the process of attempting to identify a particular laboratory test to diagnose a parasitic disease called Lymphatic Filariasis, I was transferred to a number of individuals before connecting with the Director of Parasitic Disease at the CDC, Dr. Davis Addiss. Through conversations with Dr. Addiss and a meeting in country with the administrator of a disease elimination program for northern Haiti, Dr. Rand Carpenter, Bethesda Medical Center is now a satellite clinic in a worldwide elimination program for Lymphatic Filariasis. While in the process of treating an ill missionary I met a physician, Dr. Bibiana MacLeod, who is very experienced in tropical medicine and in particular, Haitian medicine. I am providing laboratory support to her clinic in exchange for clinical advice. Physicians experienced in tropical medicine have been difficult to find so I consider this one of the greatest blessings. During the 2003 medical mission trip we were able to deliver 27 boxes of laboratory materials weighing over 300 pounds. We evaluated the tests introduced last year, incorporated two new tests, delivered a totally revised laboratory procedure manual, introduced an infection control procedure and a glassware washing protocol. In addition, we screened 70 patients for sickle cell and HIV without charge. The greatest physical blessing came from the sponsoring missionary organization, OMS, who has just completed construction of a new lab at Bethesda Medical Clinic. The new facility is 5 times larger than the original lab, measuring 16 feet by 30 feet, which allows us plenty room for growth. We are entertaining the idea of purchasing an HIV testing instrument to become the primary clinic able to offer HIV screening to the community. The 2003 medical mission trip was supported by continually growing networks of loyal individuals. The contributor network has grown from 60 to 160, the laboratory network has increased from 35 to 65, five vendors have joined the vendor network and

the expert panel has been assembled. In addition, two laboratorians and two nurses have shown an interest in joining the team.

I would like to extend an invitation to everyone reading this article to consider a partnership in this ministry. As the networks grow, the relative contribution of each donor remains small. But together as a team, we can make an enormous impact on the health of people stricken by poverty and disease. My vision is to eventually supply all the testing needs of Bethesda's laboratory and expand to include a second laboratory at the clinic established by Bibiana MacLeod. If you are interested in sharing in this ministry by donating laboratory materials, by being on my annual contribution mailing list, or by joining the medical mission team, please contact me at the following address:

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