Disaster Relief Pediatrics in Haiti

by Dr. Lane Robson

For two weeks in March I was part of a physical medicine rehabilitation team in Haiti. Team Canada Healing Hands for Haiti (TCHHH) is a Haitian-approved Non Governmental Organization (NGO) and a registered charitable organization in Canada.

My role was to provide medical support for the rehabilitation patients and otherwise to support local pediatric services. Over 90% of my time was spent supporting local pediatric services; for the first 10 days I served as the pediatrician for the outpatient department at St. Michelle, a Jacmel hospital that sort of survived the earthquake; for the last two days I served as an inpatient pediatrician at the Project Medishare tent in Port-au-Prince.

Jacmel is major city on the south coast of Haiti. Port-au-Prince, Jacmel, and the 80 km of mountainous land between these two cities suffered severe damage during the January earthquake. There were wide cracks and upheavals in the paved road to Jacmel. Apart from a two story-sized boulder that blocked one lane near the top of the pass, the rubble had been cleared over the two months since the earthquake. The trip to Jacmel from the capital takes 3 or 4 hours depending on the time of day and weather. Most everything but disaster and disease moves slowly in Haiti.

Soon after dawn, the families and individuals who live in the Jacmel area and who desire medical care turn up at the St. Michelle site and they wait patiently to be seen by a physician. Some wait the entire day. During my time at St. Michelle there was usually a Haitian physician in the ER and a foreign disaster relief physician in the outpatient area. Médecins Sans Frontières (MSF) ran an inpatient service in tents on the site.

Once I arrived in Jacmel I took over the pediatric outpatient care, which we provided in a United Nations tent next to the ER.

Every morning there were several hundred people waiting to be assessed and about a third were children. At the start I was rusty and inefficient and we did not manage to see all the children the same day. We gave them numbers so they would be seen first the next day. Within a few days my historical questions were more focused, my notes were much shorter, and we managed to see them all. I still routinely performed a complete physical exam. I always had an interpreter and for the last half of my stay there was a Creole-fluent first-year Canadian medical student who worked with me. After two days of listening to my routine instructions for hydration, fever, impetigo, and other common problems, we set up a second exam table on an old desk, the medical student started to assess the less sick-looking children, and I performed a focused exam on each child before they left.

The local Creole interpreters varied considerably in their talent and motivation. Until the Canadian medical student joined me, I was never really comfortable that my questions were answered or that my treatment instructions were adequately translated.

The Canadian medical student brought a portable printer. I designed a patient history, exam, diagnosis, and treatment form, which made a big difference in assessment and documentation.

Lab and diagnostic imaging services were not available unless a family could pay for these services and this was never the case. In the case of x-rays this was a moot point because there was no film available for the first week even if the patient could pay and in the second week the limited film available was reserved for inpatients. Lab was available for the MSF inpatients but not for outpatients.

I had brought a duffle bag full of medications, mostly antibiotics, and we used this up very quickly. Thereafter I became good at scrounging medications and supplies. There were cupboards with medications in the ER and adult outpatient area and after the security and health care staff came to know me I was allowed to take whatever supplies I could find. It was not common to have a first line drug available, pediatric and liquid formulations were very hard to come by, and some of the bottles had 2009 expiry dates, but I was happy for anything that might work or that could be made to work. As necessary we made suspensions by pulverizing tablets and mixing the powder in bottled water. I found a supply of 100 ml bottles of sterile normal saline; we emptied out the saline and used these containers for our formulations. We put duct tape on the bottles and wrote how much and how often to take the medication. We gave out 10 ml syringes and put duct tape at the correct volume level to help the mothers to give the correct dose. One evening we met a pharmacist with an American Catholic Church clinic outside of Jacmel; he offered to donate supplies and this allowed me to stock up on liquid acetaminophen, oral rehydration solution (ORS), and a topical anti-fungal.

The “sterile” work field in the tent was a single role of exam table paper, which we made last as long as possible by using only a two foot length with each new patient. Every time the table was “really” compromised with bodily fluids I wiped the whole surface down with an alcohol solution. There were no paper towels but there was lots of toilet paper and I used this to wipe down the table. The exam paper lasted for the first week. During the second week I was excited to find some sterile surgical drape packs and we used one of the large drapes to cover each table at the start of the day and we used the smaller drapes between patients. There were no garbage containers per se and we scrounged cardboard boxes, which by mid-day attracted a lot of flies. The tent was swept at the start of each day. Sterile in Haiti is a relative term.

The tent was so hot that I was literally sopping wet with perspiration. I had to wipe my brow several times with each patient so that I didn’t drip on the child when I leaned over to listen to the chest or check the ears. Each day mopping my brow soaked through four cotton terry-towels and I drank 3 liters of water without the need to void!

When we ran out of ear specula we started to clean the last few with alcohol swabs between patients. I cleaned my stethoscope, otoscope and pen with alcohol between patients. I went through many boxes of alcohol swabs. I wore gloves and regularly cleaned my hands and arms with alcohol hand sanitizer; I rarely used masks but I should have; TB is very common.

At least 10 percent of the children would have been admitted in a North American hospital but there was hardly ever a bed available in the MSF pediatric tent. Over the 10 days I only admitted three patients, a 12 month-old girl with severe, likely hypertonic dehydration, a two year-old boy with a septic right hip, and a 12 year-old girl with probable HIV and tuberculosis. I did not make the diagnosis in the third patient; all I knew was that she was critically ill. She was carried in on the shoulder of a relative and her entrance brought to mind movies where a wounded soldier who is grimacing with pain is dragged and pulled to the hopeful sanctuary of a helicopter or truck. I realized that we were the hopeful sanctuary. The girl was emaciated and so weak that she could not sit. Her level of consciousness fluctuated. She had a pleural effusion on one side, her abdomen was mildly and diffusely tender, and she had numerous shallow 3/4 cm ulcers with a green film on her labia majora. Every admission had to be approved by the MSF physician; after I described the clinical situation the experienced MSF doc immediately replied, “She likely has HIV and TB.” I asked her how she could jump to that diagnosis so quickly and she replied, “They all have genital ulcers and pleural effusions are common.” I was advised that there are no anti-HIV or anti-TB medications routinely available in Haiti.

Whenever I had to send home a child that would otherwise have qualified for admission, we asked them to come back in one or two days for follow-up and we gave them a note that allowed them to jump to the head of the line. About half of these children came back and fortunately most were getting better.

About 60% of the children were acutely ill and no different than the children any pediatrician might see in a busy urban outpatient service or ER. Once our presence became known we started to see more children with chronic illness or minor complaints and even a few that might be classified as a well-child check.

In addition to the acute problem, which was usually fever or diarrhea, there was almost always tinea, impetigo, scabies, and abdominal parasites, and often all four of these conditions. We gave out a lot of topical medications for the various bacteria, insect, and fungal pathogens and oral medications for parasites. Although I could not test for the various tropical infectious diseases we certainly saw children who fit with a diagnosis of malaria, dengue, and bacterial gastroenteritis. We had good supplies of chloroquine.

There was no subspecialty care available to follow up on seizures, nephrotic syndrome, congenital heart disease, and such. These children were given our best advice and as much medication as we could spare. For a few days we had access to a Spanish-speaking orthopod and on the last Saturday we had access to a Haitian ophthalmologist who helped us with a 9 year-old girl with proptosis. Her mother died in the earthquake. On the day of the earthquake she was frightened and running and she fell. She hit her

head. She was not knocked out and had immediate right eye discomfort. By the next morning her right eye was swollen, teary, and sensitive to light and these symptoms persisted. The vision, extra-ocular movements and conjunctiva were normal. There was no obvious tenderness, inflammation or evidence of any injury around the orbit. The ophthalmologist confirmed that she had normal vision, a normal retinal exam, a normal slit lamp exam and an elevated intra-ocular pressure. He suggested an ultrasound or CT scan to look for a blood clot behind the eye and a beta-blocker to help lower the intra-ocular pressure. We arranged the latter but diagnostic imaging was not available in Jacmel. I wrote a letter that outlined her medical situation and I asked her aunt to take the girl with the letter to the State Hospital in Port-au-Prince, where imaging and the necessary surgical intervention were apparently available.

I also saw adult patients who were assessed by the physiotherapists with the TCHHH rehab team. One patient was a grizzled man who looked a lot older than he was; this man hobbled in on crutches. He was barefoot and the soles of his feet confirmed that he didn't wear shoes. He had a wound on top of his foot where he was hit by a falling hammer. The therapist asked me to check the wound. The wound on top looked fine but on his sole he had a gangrenous lesion that I could have poked my gloved finger through. He had groin nodes and fever and chills and the MSF team found a bed for him.

The Project Medishare pediatric tent in Port-au-Prince had 40 beds, a three incubator NICU, a 3 bed PICU, and two isolation beds. By comparison to Jacmel, the services were wonderful. There was a lab with SMA-7, CBC, urinalysis, cell counts, and screening tests for malaria and HIV. There was x-ray in the adult tent next door. The pharmacy supplies were good. Surgical support included orthopedics, pediatric surgery, neurosurgery, and plastic surgery. Wound care teams, physiotherapists, respiratory technicians, nurses, and psychologists were available. The tent was air-conditioned. The children slept in military style cots, which were side-by-side. Up to two family members were allowed at the bedside. The 50 by 100 foot tent was very crowded and incredibly noisy.

I was assigned to the inpatient beds. On the first day I overlapped with an American team that included an internal medicine/pediatric physician, a professor of pediatrics, a forth-year pediatric resident and a final-year medical student. The care provided by this team was comparable to the majority of pediatric hospitals in North America.

About a third of the patients had either burn or trauma injuries; another third were infectious disease, and the final third were orphans with malnutrition or a variety of medical problems such as idiopathic paralysis, dilated cardiomyopathy, psychosis, and cystic hygroma with airway obstruction. All health care providers worked 12-hour shifts starting at 7 AM. We examined our patients, rounded together, kept up with new problems as they arose, admitted and discharged patients, and had change-over rounds at the end of the day; not really any different compared to home.

Electrical burns are commonplace in Haiti. There is no "electrical code" that insures safe practice. Four severe electrical burns were admitted during the week prior to my arrival

at the Project Medishare tent. In two separate incidents, power transformers “exploded,” and in each case two children sustained burns on more than 75% of their skin surface. The children from the first incident died prior to my arrival, one of two adolescent sisters from the second incident died on my last day of work, and her sibling was not expected to survive through the night. The tent was filled with the screams and the wails of the distraught mother. No one could console her. I offered sedation, which she accepted, and eventually she cried herself to sleep.

I left Haiti with very mixed emotions. I had done my best. My mind is filled with too many images of misery, helplessness, and poverty. Two weeks in Haiti is a long time. I’m not yet certain whether I would like to go back but if I do, next time I need to be better prepared.