

Medical Student Rotation in Haiti, West Indies
Office of International Health
Case Western Reserve University SOM
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Overview:

Background- see Proposal for Elective Rotation at Grace Children's Hospital (GCH)/International Child Care (ICC), Appendix I.

WHO data from the year 2001 cite TB prevalence of 10,224 (pop. 8,270,000) in Haiti, compared to a prevalence of 15,980 (pop. 285,926,000) in the U.S. Prevalence rates are 124 versus 6 in Haiti and the U.S., respectively.

Haiti is divided into nine geographic departments, and ICC/GCH is responsible for tuberculosis control in five of these. Three of the others are covered by the relief group CARE, and the last by a Canadian group called CDS. In addition there are over 200 groups organized to fight TB in Haiti, joined by private physicians as well. I was told that the prevalence of TB in PAP is 352/100,000 with the majority of cases in 15-45 year-old patients. Resistant cases are referred out by ICC, some at least to Partners in Health in Cange. Outpost facilities are deemed either a Centre Diagnostique de Tuberculose (CDT) or Centre de Traitement (CT). Most treatment clinics are DOTS, but apparently there are some non-DOTS centers as well. Travel to centers in the countryside as a visiting student was not an option in January 2004 due to political unrest.

Facilities- GCH is a busy well-kept collection of buildings surrounding a quiet green courtyard on Delmas 31 in Port-au-Prince (PAP). The inpatient hospital resides in two large rooms on the second floor of the one of the central concrete buildings, alongside administrative offices and community health work areas. The grounds below contain the pharmacy, eye clinic, adult ambulatory clinic, TB clinic, radiology area, mycobacterial laboratory and general laboratory. Across the street lies an unfinished building currently housing the outpatient pediatric clinic.

Administrative personnel- As clinical director of GCH, Dr. Marie-Renée Lubin accepted and supervised my rotation there. Dr. Lubin's hospitality was exceptional; she was very receptive to my ideas on how to spend the month at the hospital so that I was completely independent on a daily basis. She suggested appropriate times to visit various services, and furnished me with notes of introduction. I felt comfortable stopping in to Dr. Lubin's office to check in from time to time, or to share feedback on my experience. Having been with GCH for many years, as well as having served as the president of the Haitian Pediatric Association and founding president of the Haitian Tuberculosis Association, Dr. Lubin is a remarkable woman and a great resource for learning about many pediatric health and social issues. She was also a gracious hostess to me, sharing an afternoon of good conversation and Sunday dinner at her home in Port-au-Prince.

Dr. Nicolas, technical director at GCH, has studied epidemiology in Medellín, Columbia, and also has attended training sessions in Oklahoma and Connecticut. A conversation with Dr. Nicolas over lunch can be pleasant and at the same time very educational. He is well-informed regarding the public health data in Haiti. In our discussions, Dr. Nicolas called to my attention a local estimated tuberculosis detection rate of approximately 40%. This is a figure which workers would like to improve upon, especially in the impoverished Cité Soleil of PAP.

Dr. Gefford is the general director of Grace Children's Hospital. I met with him at the beginning of my rotation to chat and discuss hospital operations a bit. I did not speak with Dr. Gefford frequently, but he was gracious and seemed to be accessible if I ever had a problem or wanted to meet with him. From him I learned a lot about the overall organization of anti-tuberculosis health services in Haiti briefly described above.

Madame Nicole Carré, who works as the Human Resources and Public Relations administrator at GCH, was an indispensable support and friend during my rotation in PAP. She met me at the airport and helped me to settle in the vacant apartment I rented from one of her relatives. I saw Mme Carré daily at GCH, and was pleased to meet her family as well. She is a genuinely warm, kind person, in addition to being a great source of advice on practical day-to-day matters, transportation, hospital business. She made sure to connect me with a visiting mission group so that I could join them on a couple of visits to GCH community projects and to tour a mission hospital just outside of PAP. Mme Carré was truly hospitable beyond the call of duty.

Clinical rotations:

Inpatient TB ward- GCH is the only TB specialty hospital in PAP. It treats pediatric TB cases with two months of inpatient care, followed by six months of outpatient therapy. The TB ward is a large airy room with concrete floors and metal-framed beds, with the capacity to accept up to 60 children. During my stay, the census was approximately 25 children from infancy to early teens, which is a typical patient load. Because the children have such an extended stay, during most of which they are active and feeling good, they receive some schooling in the afternoons. The teacher, Margaret, has a small classroom set up near the TB ward and does a great job with activities for the various ages. This is wonderful for the kids, as they have to spend much of their time entertaining themselves and playing together within the confines of the TB ward.

Most of the TB patients have been diagnosed with pulmonary tuberculosis. Chest films are readily available at GCH for diagnostic purposes. Since the majority of children with pulmonary TB are sputum negative, they are not monitored by sputum smear unless they are older than eight to ten or so. Tuberculin skin testing is not useful for most of the population in Haiti, where the rate of exposure is so high. Unvaccinated children less than 5 years old, however, are given INH prophylaxis for six months if they have a skin reaction to PPD of greater than 10mm. At GCH, it has been noted that "the Mantoux test is positive in around 70% of children undergoing outpatient treatment for TB, and in 50% of children with advanced tuberculosis undergoing intensive-phase inpatient TB

treatment” (Lubin 1994, p. 159). Routine HIV testing is not currently performed on pediatric TB patients at GCH.

Intensive phase treatment for active TB consists of a two-month inpatient course of INH, ethambutol, pyrazinamide, and rifampin. Therapy with INH and ethambutol continues for 6 months on an outpatient basis. Ethambutol is, however, eliminated from the regimen for children under 6 months of age due to potential visual side effects which cannot be monitored in infants. If the child is old enough, sputum monitoring is performed periodically as for adults.

Although pulmonary tuberculosis is the most common form of the disease, extra-pulmonary manifestations are also found in PAP. During January 2004, the inpatient service at GCH included one eight-year-old male inpatient with a severe thoracic kaiphosis and mild gait abnormality due to osseous TB—“mal de Pott.” Another inpatient, a six-year-old female, had grossly obvious cervical lymphadenopathy due to “la tuberculose ganglionnaire.” Tissue biopsy is often used to identify such lymphatic tuberculosis. Patients with extra-pulmonary TB receive the same therapy as those with pulmonary TB.

Inpatient acute ward- Three beds and 8-10 cribs are set up in the acute care ward to receive infants and children needing inpatient care, typically for respiratory or diarrheal illnesses or sickle crises. Cases are often complicated by various degrees of malnutrition, and the hospital stays are more extended than is typical in US hospitals. Two illustrative cases are detailed in appendix II. Dr. Jeannot and Dr. LeGros cared for all of the patients on the inpatient service, TB ward as well as acute ward. The greater majority of their time, however, was devoted solely to the cases in the acute care beds, as the TB inpatients were generally stable and receiving standardized treatment. These two women were both approachable, and they were unfailingly willing to answer questions and discuss physical findings or treatment plans with me. I spent my time on the inpatient ward examining patients and reading their charts. Since days might pass without a new admission to this ward, my time spent there allowed for some more in-depth reading on relevant topics as well.

Acute ward staff has the capability to administer IV fluids/ medications, inhaled meds and supplemental oxygen, perform lumbar punctures, and manage oral nutritional intake for patients. Typed and cross-matched blood for transfusions is available from the Red Cross for a fee, but a relative or friend of the patient must provide a donation of the same type blood in exchange.

Outpatient peds- GCH outpatient pediatric clinic is situated across the street from the main hospital in a spare concrete-floored building which houses a bench-filled waiting area and four or five exam rooms. Two pediatricians come in five days per week, and on certain Wednesdays a local dermatologist volunteers his time to see pediatric patients. Volume is typically quite high, on the order of 20 patients seen by one pediatrician working from 8:30am –12:00pm.

Dr. Dorismonde, a pediatrician who shared her patient visits with me on many occasions, is a gracious teacher and experienced clinician. We often shifted fluidly between languages, as her English is excellent. Her expressiveness also made patient consultations in Creole very useful to me, as I could generally follow the discussions and pick up many useful phrases in this way. We saw respiratory illnesses, sickle crises, laryngotracheitis, scabies, diarrhea, fevers, rheumatic fever, otitis media, parasitosis, jaundice, and well-child visits. Dr. Dorismonde relished delivering nutritional information, and took every opportunity to strongly encourage exclusive breastfeeding for at least the first six months of life. She confidently disputed local customs which did not promote the children's health; new mothers, for example, may be told by older relatives to vigorously press at a newborn infant's breast buds and clitoris in attempts to reduce swelling. Dr. Dorismonde sometimes remarked upon the young age of the mothers, many of whom were teenaged.

On the day I spent with the dermatologist, 41 patients were seen by noon. The cases included scabies, impetigo, kerion, insect bites, super-infected eczema, acne, molluscum contagiosum, herpes zoster, lichen planus, and more. The dermatologist prescribed medications such as steroid cream, benzyl benzoate, calamine lotion, oral antibiotics, and a few standard mixtures which the local pharmacies could prepare with common ingredients such as boric acid, salicylic acid, tartaric acid, alcohol, cocoa butter, glycerin, cod liver oil.

Outpatient adult- Dr. Pyram, internist and radiologist extraordinaire, masterfully precepted a small crowd of Haitian medical students each morning in clinic, and warmly welcomed me to join them. He enjoyed speaking English (he has spent some clinical time in Texas), especially when he wanted to emphasize a clinical point or make sure I was following the discussion regarding a chest film or another student's case. With six or so patients being seen in every available corner of Dr. Pyram's office or a nearby room at any given time, patient privacy was an impossibility. Common presenting complaints were fever, cough, diarrhea, abdominal pain, shortness of breath. Patients came for follow-up care of heart failure, hypertension, acid reflux, or sometimes acute ailments. In addition to history (almost always in Creole) and exam, the primary diagnostic measures available were chest films and labs such as CBC, stool exam, urinalysis, malaria smear, Widal test (typhoid fever), ASO titer, sputum smear. No cultures of any kind were performed. Patients were charged approximately US \$0.50 for a physician consultation, but I believe even this rate was flexible. We had to take a cash fee right in the office from the patient in order to do a fingerstick glucose check. Prescriptions could be filled at the GCH pharmacy, or a local pharmacy. On two occasions, I witnessed drug reps coming around to advertise to the doctors before clinic. I don't think they gave out any free drug samples. I wish I could recall which drugs were being pushed, but I didn't write this down. It would be interesting to find out more about the pharmaceutical business operations in Haiti; this is something I did not pursue.

TB clinic- Somewhere around 500 TB patients are treated per year at GCH; an estimated 20% of these are pediatric cases. All currently receive nutritional supplementation through a pilot project supported by a Canadian relief organization.

Adults and children followed at the outpatient TB clinic come in every fifteen days to meet with TB nurses for documentation and to pick up drug supplies and report side effects. Medications are free, provided by the government. On a daily basis, DOTS supervision is carried out at home by an “accompagnateur” for each patient: a parent, neighbor, or relative who has agreed to follow the patient’s medication regimen, and has attended a 3-day training session at GCH. Accompagnateurs also come to med pick-ups.

Adults, like children, receive two months of intensive therapy with ethambutol, rifampin, isoniazide, and Pyrazinamide. If an adult is sputum negative after completing the intensive phase, he/she then follows a six-month maintenance course of ethambutol and isoniazide. Otherwise, a third month of four-drug therapy is completed before transition to maintenance phase. Streptomycin injections are added to intensive-phase treatment of “rechute” cases—patients who have taken antitubercular therapy in the past and subsequently present with active TB.

As in the inpatient TB ward, there were children with Pott’s disease and lymphatic tuberculosis being followed in outpatient TB clinic during January 2004. The progression of Pott’s disease can be halted with antitubercular agents, and neurologic symptoms may improve over the course of treatment, but spinal deformation remains. Tubercular lymphadenopathy, unilateral or bilateral, seemed generally non-tender and always very grossly obvious—6-10cm cervical nodes standing out against the neck. I did see one acute presentation of this condition in which the lymph node was painful and tender.

Dr. Bien-Aimé and Dr. Blot—both internists--see newly-diagnosed adult TB cases about to begin DOTS therapy. The majority of patients I saw at TB clinic were late teens through forties with pulmonary TB; they came to for consultation carrying chest films in hand. Dr. Bien-Aimé saw twenty or more patients on a typical long morning in clinic, so this is a good place to see many impressive chest films. The physicians explained the diagnosis, and requested that all household contacts be brought in to be examined for new exposure or active TB. Patients also came during the course of therapy if they had complaints such as joint pain (commonly associated with pyrazinamide, and treated with pain relievers) or other concerns.

Mycobacterial lab- The technicians in the mycobacterial lab start off the day collecting sputum samples from outpatients in an outdoor pavilion area. It is a well-planned collection area, situated as it is in the open air of the hospital grounds, not enclosed and with plenty of UV sunlight bathing the immediate surroundings. Personnel wear lab coats and gloves. Some benches are set up for people to use while attempting to produce sputum into plastic specimen cups. Patients are instructed to collect another sample the next morning in a cleaned jar with a lid from home, and then return to GCH to produce a third sample on site. After all the day’s specimens are collected (typically on the order of 60-120 sputum samples per day), sputum smears are made on a table in this same outdoor area. They air-dry, then are placed in racks and brought into the lab for fixing, staining, and microscopic exam. Results are roughly graded by quantity of acid-fast bacilli seen in each field.

Community outreach

Twenty outreach workers give vaccines at various sites around PAP which are hosted and advertised by local community volunteers. Oral polio is given at birth. Children also receive BCG, measles, and Td vaccines, as well as vitamin A drops. Estimated cost for other vaccines, according to my informal survey of one of the pediatricians, would be very high: Hib \$250H, HepB \$150H, MMR \$50H, Varicella \$30H. According to the WHO data available on the internet, 2001 saw 7 diphtheria, 53 measles, 2 pertussis, 43 tetanus (most neonatal), 0 polio, and 0 yellow fever cases reported.

Logistics:

Transport- GCH is situated on Delmas 31, a side street off of the major cross-town street Delmas. I was fortunate enough to sublet an apartment right on Delmas at 57, a couple of miles west of Delmas 31. Plenty of tap-taps travel Delmas all day long, and they are very easy to use as long as you watch closely for your destination point. Major side streets like Delmas 31 also have tap-tap traffic. I enjoyed making the 30-minute walk from GCH to my apartment sometimes in the afternoons, and I felt safe on this route. As an obvious foreigner I did occasionally get some attention from passersby (Vous etes Canadienne?!) but no real hassles.

Housing- I arranged to sublet an apartment at \$250 for one month through Nicole....., the ICC administrative assistant. For shorter stays a guest house such as St. Joseph Home for Boys would be a nice option, though cost may run \$25 or so per night. My apartment was very safe, within view of all of the foot traffic on the busy Delmas. The building entry was locked with a deadbolted metal door, and my upper level apartment had secure locks as well. Electricity was intermittent, as was water. It is wise to store some basins or buckets of water for backup. This was not unique to my particular building; be prepared for erratic supply of water/electricity throughout PAP.

Money- Prices on commercial items are marked in Haitian dollars, though the currency is actually the gourde. Five gourds equal one Haitian dollar. At the time of my travel, the exchange for \$1 US was around 40 gourdes (eight Haitian dollars). It can be a bit confusing unless you have the conversions somewhat straight in your mind or on a cheat sheet before shopping. American dollars are accepted at larger food marts, change given in gourdes. Traveler's checks are not as versatile but can be changed downtown.

Food- Use purified water, as even if you boil or otherwise treat the tap water, it tastes terrible as I learned by experimentation. "Culligan" can be purchased in five gallon jugs, convenient if you have some help to transport it home. I had a gas burner to use, just needed to purchase a bonbon of gas for about eight dollars (also need help with transport for this). Don't forget to buy Clorox to treat some water for use disinfecting unpeeled vegetables and rinsing dishes and cooking utensils.

Shopping- Plenty of smaller shops along Delmas, and a huge Delimart grocery in a small plaza across from Delmas 33. There is also an office supply store in this plaza called

“Abeille” which has a good selection of French novels as well as writing supplies (and they are friendly—ask for Marie-Ange). There is a nice café in this plaza where GCH groups sometimes have lunch.

Communications- Midway between Delmas 31 and Delmas 57 there is a post office in the building with a big Universal gas sign. This is much more convenient than the main post office downtown. GCH may have a cell phone available for the student to borrow. It must be charged with a phone card bought at one of the local shops. I got a perfect connection for a call to the states, and it ended up being a great deal cheaper than the high price my family paid to call me on this cell phone from the US. I was also fortunate enough to have the use of a spare computer in the administrative office of Nicole ...for email and internet.

Reference books- The Lonely Planet Guide for Haiti and the Dominican Republic was a valuable aid for me as a first-time visitor to Haiti. It is a bit difficult to find in stock even at the major booksellers, so leave time to order it online if necessary. (....) contains some good basic Creole lessons and a useful glossary. French is fine for communicating with the physicians and nurses, but to exchange information with patients and to understand radio broadcasts, etc., Creole is necessary. Fortunately, much of Creole is so phonetically similar to French that with a bit of effort you can realistically expect to be crudely functional on public transport and with patients even during a short rotation.