

MEDICINE WITHOUT BORDERS

For some Upstate students, medical education extends far beyond Weiskotten Hall and University Hospital. Two second-year students share their very different summer experiences and new perspectives on global healthcare.



Burmese refugees cross into Thailand on inner tubes to seek medical care.

JOSH AUERBACH '08

This past summer I traveled to western Thailand to join the proud tradition of Upstate physicians in providing desperately needed healthcare to the refugee population from eastern Burma. The group included my classmate, Ben Han '08, and my father, Fred Auerbach, MD '70, a California emergency medicine physician. For me, this summer was a continuation of a 2003 trip to Mae Sot to help my father instruct the semi-annual trauma workshop for the backpack medics. I was quickly infected by the passion for humanistic medicine shared among the physician volunteers I met. With part of an Upstate medical education under my belt, including an elective course in Global Health and Ethics, this was the perfect opportunity to experience an even more meaningful experience with the eastern Burmese medics and refugees. In total I spent six weeks working near the Thai-Burma border.

It is important to note that the history of Burma since World War II has been dominated by endemic civil war, subjugation of ethnic minorities, and a sharp decline in healthcare quality and availability. In 1988, a coup d'etat put a group of military generals, euphemistically named the State Peace and Development Council (SPDC), in charge of the nation (which they soon renamed Myanmar). More than 100 languages are spoken among Burma's 12 major ethnic groups but the ethnic "Burman" generals who sit on the SPDC governing board show no penchant for peaceful coexistence. They have built up and armed the military "junta" to a frightening level—spending over 30 percent of GDP on the military—and use terror tactics to maintain absolute control over ethnic minority Karen, Shan, and Karenni people. Compounding the hostile political situation was a sharp decline in healthcare quality and availability to native Burmese. The SPDC shifted funds away from Burma's once innovative and rigorous medical education and public health systems. Today, there are extremely few medical facilities and healthcare workers outside major cities. Tens of thousands of ethnic minority Burmese have no choice but to leave their country illegally—to escape the brutal junta and seek medical care.



Refugee children

One haven for these internally displaced persons (IDPs) is the Mae Tao Clinic in the small border town of Mae Sot, Thailand. The clinic was founded in 1988 by Dr. Cynthia Muang, a Burma native and medical graduate, to serve the primary healthcare needs of the growing number of ethnic Karen IDPs flowing over from nearby Mya'waddy, Burma. To reach the clinic, IDPs must cross into Thailand at either the Friendship Bridge or, quite commonly, by floating across the muddy Moei River on worn-out inner tubes. The number of refugees has been steadily increasing and Dr. Muang has expanded her one room clinic into a multi-department complex to accommodate them. The clinic now resembles a small village, complete with separate adult and pediatric departments, a small laboratory, blood bank, as well as settlement housing and a school for migrant children. Dr. Muang's longtime renown within public health circles has recently grown due to *Time* magazine naming her one of "18 Heroes of Global Health."

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Alongside Upstate classmate Ben Han '08, I rotated through the Mae Tao Clinic helping provide care to refugees with a diversity of medical needs. In the outpatient setting, I soon came to appreciate the value of simplicity and efficiency in the practice of medicine. Advanced technological diagnostics and treatments available in the United States are unheard of in underprivileged settings like the Mae Tao clinic. With the presentation of malaria, for example, I was challenged to step away from reliance on diagnostic tests and focus on listening to what the patient was telling me.

One typical case was an eight-year-old boy who said he often played next to the rice paddy where his father worked until dusk, when the air became heavy with mosquitoes. For a couple nights he spiked a fever of 104 F and would sweat so much in his bed that his mother had to change his shorts several times. The boy was also panicked by his black urine, a dramatic symptom indicative of hemolysis (red blood cell destruction) and associated specifically with a *P. falciparum* malaria infection. This was all the information necessary to start treating this boy for the most serious malaria parasite.



Fred Auerbach, MD '70, teaches amputation techniques to backpack medics using pigs.

While a majority of the acutely ill patients that come to the Mae Tao Clinic showed symptoms of either malaria or infection, mixed in were dramatic cases of the vulnerability and peril the Burmese people face daily. One memorable morning, our examination was interrupted by frantic shouts from outside the clinic's central courtyard. A young man, looking weary and showing sizeable dried blood stains on his trousers, was hurriedly carried down the clinic's driveway by two Burmese medics. We rushed to help the trio into the nearby surgical department. In broken English, the two backpack medics told the story of this unfortunate Karen villager who had stepped on a landmine two days before.

Josh, left, and younger brother Brandon, right, with a refugee family. Brandon will enter public health school next year.



Fred Auerbach, MD '70, demonstrates proper surgical technique to backpack medics, using donated Leatherman knives.

Leatherman tool. Shortly thereafter they began the dangerous journey out of the jungle to the Mae Tao Clinic knowing the man could receive a blood transfusion, hope to recover, and eventually procure a prosthetic leg from the clinic's workshop.

Although we didn't have the opportunity to work with him on this trip, the contribution of Keith Dahlberg, MD '54, must be mentioned. Almost half a century ago, Dr. Dahlberg chose to forgo practicing medicine in the United States because he felt the desire to offer his first-world knowledge and expertise to the burgeoning ethnic minority-refugee population of eastern Burma. He spent much of his career treating IDPs who came to the Kwai River Christian Hospital, also along the Thai-Burma border, near the infamous bridge constructed by allied POW's during World War II. As one of the hospital physicians, he treated their wounds, cured their illnesses, delivered their babies, and ministered to them in a part of the world far beyond our vision or comprehension.

After a day of visiting the Kwai River Christian Hospital, I came down with Dengue Fever. Also known as "breakbone fever," Dengue is a common infection worldwide with 1 million cases annually, mainly in the third world. It came on as a sudden, flu-like malaise that progressed to fever, muscle and joint pain, profuse sweating and an almost unbearable headache, all very similar to malaria, which I feared I had. The next morning, my exhaustion was so complete that to whisper four or five words in a row left me breathless. While I was bedridden for only seven days, it took three months to regain my usual energy. No vaccine for Dengue exists and it is one of many infectious diseases that pose a clear risk to medical volunteers in tropical areas. But after my experience, I think

it is important to remember that the poor who live in endemic areas face the risk of such disease everyday.

By the end of our summer experience, Ben and I began to truly understand what it means to assert that "healthcare is a basic human right" and visualize medical practice as global. As Sir Isaac Newton once said, "If I have seen further it is by standing upon the shoulders of giants." For me that includes Dr. Cynthia Muang and the backpack medics of Burma, as well as our esteemed Upstate alumni.

JACQUELINE RUKANSHAGIZA-BUSINGYE '08

This summer, I spent six weeks in Uganda through Doctors for Global Health. Although the organization typically only sends physicians abroad, I was able to lobby the organization to allow me to go with the potential for developing some sort of collab-

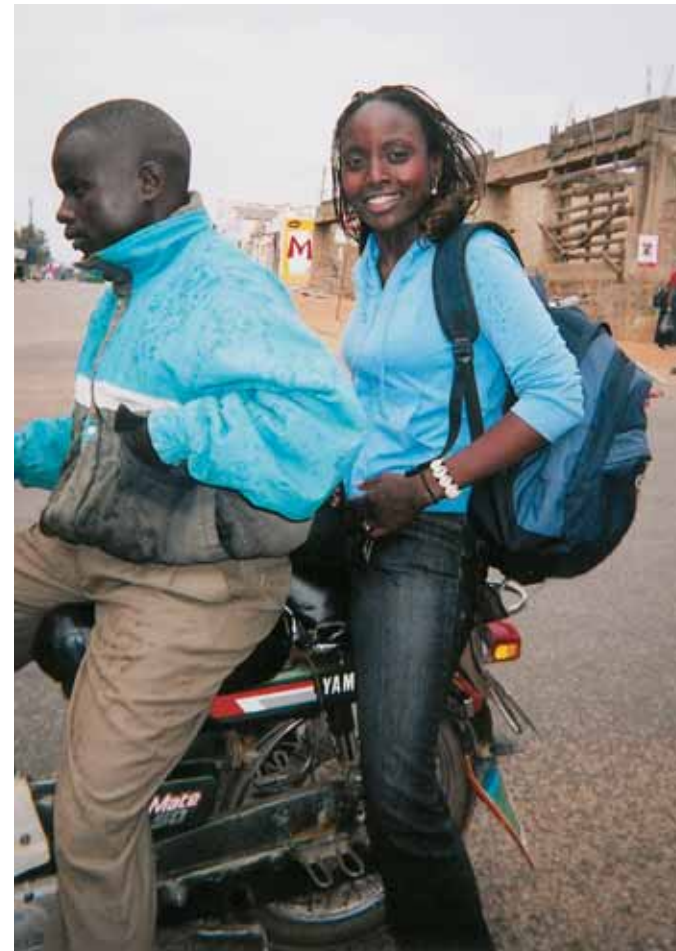
oration between Upstate and Mbarara University of Science and Technology (MUST).

For me, the experience was unique and filled with a wide range of emotions. I was born in Uganda but left in the mid 1980s at age six when Uganda was in the midst of an ongoing military coup. At the time, President Obote used violent means to hold onto his rule and the country suffered economic chaos and tribal massacre by a fractionalized, uncontrollable army.



Karen women washing clothing.

When they had found him they saw his right leg partially blown off and his wounds open; he was bleeding profusely. They applied a makeshift tourniquet and moved him to a nearby bamboo hut to examine the extent of his injuries. Fortunately, the two medics had recently participated in an emergency trauma workshop sponsored by the Global Health Access Program (GHAP), an NGO developed and administered by several California physicians, including my father, Frederic Auerbach, MD '70. In the clinics, Dr. Auerbach and others instructed the medics in proper amputation technique. The medics are able to practice on live pigs, using basic anesthetics and any available instruments, simulating their very real experiences of managing landmine victims in the jungle. Putting that training to use, these two medics performed a successful amputation of the man's right leg—under the glow of a portable flashlight, in a hut in the middle of the jungle, using a donated



Jacqueline taking a "bajadge," the local form of transportation.



Outside the hospital.

Most of my memories were filled with bombings, killings, and a lot of suffering. As we took off from JFK, I was conflicted by my fear of the past as well as my excitement for the future.

Upon my arrival at MUST, word quickly spread about me on campus and it was obvious that I was an amusement to the students. On one hand, I was accepted as a fellow student and Ugandan, but on the other, I still stood out as an American. Dorm life was nearly identical to that in Clark Tower, except men and women were separated into two different buildings and the overall facilities were less modern. Students cut classes, text messaged, talked, and copied notes off of each other in class, just like at Upstate.

Due to the shortage of clinicians and the large number of patients, the indoctrination of the third-years onto ward rounds is via full immersion. Doctors, interns, and nurses do not always have the time to teach students or watch over them. As such, third-years must

learn quickly, sometimes after only reading or seeing a procedure once or twice, and develop a sense of confidence in their abilities to handle medical situations in addition to knowing when to call a superior for help. This confidence is something that I think takes longer for students at Upstate, not for lack of talent, but rather because they are given more guidance and are taught in a more controlled learning environment. The pediatric, or Toto ward, was my first and most challenging clinical experience. The ward was severely overcrowded with patients and parents sleeping under cribs and beds. There were at least two children per crib and three per bed. Toto ward has an endless stream of parents with sick children who wait hours both inside and outside to see a clinician. It's not rare for a child to die in the waiting area before they even reach admitting, as happened to two children on my first day. Every child I saw had either burn marks or knife wounds from the traditional healer on their chests and abdomen. It was explained to me that in this semi-rural location most parents first consult the traditional healer before they come to the hospital.

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The majority of patients have malaria in addition to other diseases and thus most people, especially children, have enlarged spleens. When the children get sick, the traditional healer will cut around the abdomen and put herbs into the cuts to try and heal the child. If a baby has diarrhea and vomiting, a healer might try and take out his or her teeth. These traditional practices have detrimental effects on the child and lead to a delay in the treatment and possible cure of the child's affliction. I was surprised by how many children had been born at home without the help of a clinician or a midwife. A lot of the patients live in remote villages and have no



A view of the Ugandan hospital.

cars, so it is not easy to make a trip of four or more hours through dirt roads to get to the hospital when in labor. As one doctor explained, it may cost a poor farmer his land—and thus the family livelihood—to try and pay for the transportation to bring his wife several hours to the clinic at Mbarara. With that fact in mind, it's sometimes easier to just take your chances and deliver at home.

My next few days were spent on the obstetrics ward. During the day it seemed quiet, since most of the births occur at night and in the early morning. Patients started arriving around 10 p.m., some with postpartum pain or vaginal bleeding, and others having contractions. Patients were expected to buy their own plastic sheet/bags to cover the examination tables and delivery beds. Since there is still a systematic distribution of medical supplies, there was a shortage of fluids while I was there because they had not been delivered from the Ministry of Health. Thus, patients were expected to buy any fluids or medications they might need during the course of their treatment. This became a problem for one patient who came in close to midnight. Her husband was given a list of items, including dextrose, to get from the town pharmacy but it turned out to be closed. One of the midwives and I ended up going around trying to beg for fluids and a canella from the other wards, with no success. Finally we found a stash in the back of a closet on the Medicine ward and “stole” some fluids.

The clinical experience that perhaps made the biggest impact on me was the HIV clinic, now called the Immuno-



Jacqueline with a third-year MUST student on the obstetrics ward.

Before this experience I thought I was pretty educated about the HIV situation in Uganda, but there is so much that cannot be understood until you see it firsthand. Even though a lot of international money is coming into the country to fight the disease, a lot of it has conditions attached that limit the use of the funds. One might think the disease is being spread by promiscuous behavior but the reality is a lot more complicated. The economic disadvantages and the social status of women lend themselves to the continuous propagation and spread of the disease.

How can one expect a woman to abstain from sex when most of the time she is too poor to have any control over her body or even her life? How can she choose not to have sex when she has had no food for days and a man offers to buy her a warm meal if she will have unprotected sex with him? How can an 11-year-old girl fight off a 50-year-old man when her parents have sold her to him to pay off a loan? These are things you hear about, but when you see them in person you never forget. As a Ugandan-American woman, I take for granted that I can choose who I spend time with and don't have to



The Toto ward. Children routinely sleep two or three to a bed.

depend on any man for my livelihood, let alone my next meal. Although Uganda is a success story in that it is open and frank about HIV/AIDS and has reduced its infection rate to about six percent, it still has a long way to go.

My time in Mbarara showed me just how big health disparities can be. Though many patients die, even in the waiting room, many more are saved under conditions that are significantly substandard by clinicians who are just as dedicated and knowledgeable as their counterparts around the world. I learned so much from the Ugandan doctors, medical students, and other international doctors and hope that I can always carry the lessons learned with me as I become a physician.

Suppression Syndrome Clinic (ISS Clinic) to help eliminate some of the stigma associated with the disease. Every morning patients waited outside in the courtyard to be seen. If they were a first-time patient they were registered and tested. If positive, they were given physicals, which included a baseline CD4 count. Patients also underwent counseling about their prognosis, were asked to notify significant others, and were enrolled in several programs to receive Anti-Retroviral Drugs (ARVs). I performed physicals on patients with different stages of the disease and learned some good techniques for trying to figure out patients' disease stage. The clinic was staffed by clinicians from all over the world and prided itself on not turning anyone away.

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