The Sao Lucas Clinic, Mozambique Africa

Structure: Sao Lucas is a general health center adjacent to the UCM medical school. It is a mixed private/public clinic – the majority of staff are department of health employees and the doctors except for one are all UCM employees or students. The clinic sees a wide variety of pediatrics, adult medicine and obstetrics including a busy HIV and at-risk children’s clinic. Sao Lucas does not currently treat TB, though it is diagnosed frequently, they are actively working to obtain government funding for TB treatment as they have many patients inconvenienced by following up at Sao Lucas for HIV care and then requiring another health center for TB treatment. Typically they see between 100 and 150 patients per day. Patients arrive early in the morning to wait in line and pay 5 metical’s (about 10 cents) to be seen, there and no further charges for imaging or medications. However if they are sent to the hospital to get testing or prescribe a medication not available at the clinic they may be charged. Clinic lasts from 8:30 to between 3 and 5pm. However new patients are accepted only until around 1pm. In the mornings there are two doctors and in the afternoon one doctor in addition to the student clinic. There are also HIV counselors who see patients and nurses who manage at risk/malnourished children. The Sao Lucas lab is able to do a handful of rapid tests: HIV, malaria, hemoglobin, urine dipstick and glucose. Other common labs (CD4, creatinine, liver function tests, CBC, sputum for TB) and tests (x-rays, cultures) must be referred to the hospital but generally get done in 2-5 days. There is an onsite pulse ox, ECG, and ultrasound machine as well as equipment for minor surgery (most I&D suturing injuries, and circumcisions). We also regularly do speculum exams and fluid aspirations and have microscopy for basic imaging though minimal staining abilities.

Medical student experience: Fifth and 6th medical students rotate through Sao Lucas. The sixth years are at the training levels of interns and spend 4 to 8 weeks at Sao Lucas. They see patients individually and basically have the same role as Pitt residents in GIMO clinic – they see patients and then staff them with a doctor. They write prescriptions and analyze tests with the help of the doctors. Two fantastic sixth years (Paulo and Santos) are pictured on the left teaching with one of the visiting German medical students. Fifth year students spend 2 weeks in Sao Lucas, they are generally paired with a 6th year and are at the level of 3rd and 4th year medical students in the US. They take histories, practice physical exams and come up with differentials – they are just learning treatments.
**The Resident’s role** is to serve as a preceptor to the students. Sometimes you sit in on a whole patient encounter but most frequently the students discuss cases with the resident after they see patients and then the resident discusses aspects of the physical exam, tests, diagnosis and treatments. Residents teach the students how to do/interpret ECGs and basic ultrasound tests. When there are questions residents ask Dr. Elpido, the clinic director (on right) or one of the other physicians nearby. This “shared clinical experience” is really a great experience that allows residents to see 20 patients a day and focus on the interesting or educational patients. You get to teach things that you are well versed in (HTN, diabetes, MSK and GI complaints, basic HIV management) while also seeing incredible dermatology, pulmonary and ID syndromes which you would never see in the states. Your physical exam skills will develop tremendously both due to pathology and the in-clinic ultrasound that you are able to use to confirm everything from hepatomegaly to lung pathology to abscesses. There is a fair amount of pediatrics at Sao Lucas which you are able to avoid or see at our interest level. In general the approach has been to see the teenage/older children or if there is a very interesting case but always run peds cases by Dr. Elpido.

**Beira Central Hospital**

The hospital structure: Beira’s Hospital Central is one of the three referral hospitals in the country –cases come in from all over the central provinces. As a result it has quite a number of resources: a blood bank, a large laboratory, surgeries, and numerous staff. With those resources present, it remains in a sad state of disrepair and confusing management. In the main hospital building the medical floors occupy the 3rd and 4th floors with pediatrics on the 2nd floor, surgeries, ED and the ICU on the first. As with many African hospitals most physicians have 1 to 2 other jobs in addition to working in the hospital, often private practice which they receive most of their incomes, thus attending doctors are only around intermittently from 7am to 11am.
The medical student experience: 5th and 6th year students rotate through medicine for 8 and 10 weeks respectively. There are about 12 on rotation for 4 medical wards. Each student see somewhere between 4 and 8 patients. There is not a junior/senior team structure as in the US. Each student is on their own and works with the nurses and attending clinical doctor. Some attendings show up early and write a note, the student is then left to do whatever they decide. Others talk with the students when the students are seeing patients. There are ex-pat doctors at the hospital for the specific role to teach the UCM medical students.

The ex-pat role includes bedside teaching rounds, helping students with procedures, lectures and evaluations but they do not actually have responsibility for clinical care and are generally frustrated at the hospital at all times. The students switch wards every 2 weeks, apparently they would prefer 4 weeks for continuity but there are a few attending doctors who are so mean that they just yell at the students, so the teaching faculty do not want to students to be exposed to them for a whole month. From 7:30am - 8:00am a student gives a mini lecture on a prescheduled topic. From 8:00am - 11:30am they see their patients, make a plan, maybe discuss with an attending, do procedures as needed, and order tests.

The odds of tests getting done the next day are >50% for basic labs and <50% for everything else. The odds of medicines being given seems to be similar. Between 11:30am and 2:00pm, there is teaching. An hour is spent with the 5th and 6th years separate, with one student each doing a patient presentation in which the teaching attending goes in depth on a topic (similar to Pitt). After that 2 to 3 times a week a student gives an in-depth lecture on a topic or one of the teaching attendings teaches on specific skills (ECG or CXR reading etc.). They also have a problem-based learning small group 1 to 2 times a week that students direct and residents listen on.

The ICU: consists of a six bed SICU and six bed MICU, the main feature of the ICU is oxygen, there is also a staff member whose job it is to swat flies and mosquitos off the patients. The medical students tell me patients come here when unconscious or severely needing oxygen (O2 saturation <70%). A few patients have clearly had recent surgeries. All have Foley catheters and peripheral IVs which is a lot more intervention than the floors. One patient is intubated which consists of an oral airway and next to it oxygen tubing – no sort of wider ET tube, just direct oxygen tubing. Intubation here provides no ventilation only airway protection and slightly more direct oxygen – maximum oxygen flow is 5 liters/minute. There are ventilators but they are broken and unused. The ICU is attended by panoply of different foreign doctors. Cuban, Russian, Chinese, Mozambican, Dutch and American physicians are each pointed out to me. Their different roles are unclear except that the Chinese doctors are all apparently surgeons.
The ED: The students work an ED shift about once a week either 2:00pm-8pm after working the medicine floors or a full 12 hour shift on the weekends. The ED is pretty nice compared to the remainder of the hospital. There are four wards, pediatrics, obstetrics, male patients and female patients. There is an ED attending who is Portuguese who the students and staff work with, and just like the US you see orthopedic and general surgery and other consultants come by from time to time. For the most part the pathology in the ED is similar to the clinic except that there are many patients who come from far away, transferred by their local clinic, because Beira Central is the referral hospital. Resource wise, it’s possible to get people fluids, antibiotics and blood in a reasonably timely manner (under 2 hours). It is also quick to get x-rays, blood counts and malaria tests – though that’s about the limits of diagnostics on the medicine side. According to the students the larger difficulty is that once a patient is admitted they are given whatever treatments you order in the ED but then transferred to the hospital where they are left alone until morning – this sometimes leads to a dead patient in the morning. Apparently the students working in the ED from 2:00pm – 8:00pm are supposed to be on call in case of emergencies in the hospital, but they complain that the nurses never call them – in part because the nurses ignore the patients unless the roommates of a patient complain or let them know a patient has died. The students often check up on their own patients if they know they are sick or are curious to see results, but there is no version of sign out from the other students and I don’t think anyone works at night.

The Residents Role: You initially could be placed in a med student role, joined at the hip with one of the students. This will quickly get dull, as the students like our interns, spend a large majority of their time getting practical things done like finding procedural equipment and doing blood draws and begging a nurse to give medications. With the helpful urging of the Dutch docs that you could be much more useful, you should move to a more teaching role, similar to the teaching faculty, basically walk around and bug the students to present their new or confusing cases… read imaging and ECGs together. The students benefit as they are always eager to learn when they are not sure what to do and there are so many that they only get a few minutes of faculty time otherwise.

Catholic University of Mozambique: Medical School. UCM is the second medical school to graduate students in Mozambique. It is a private catholic school; tuition is about $2000 yearly though half of the students are on scholarship of some sort. The administration and teachers were initially primarily ex-pats – Dutch, German, Cuban, American, Mexican, Italian, British – all sorts – but as the school has graduated more students (7 classes have graduated thus far) more and more instructors are Mozambican students. The school is affiliated with central hospital where it sends faculty to teach but does not own a hospital of its own. Medical school in Mozambique is 6 years – starts after secondary school. The first 2 years are basic science and English (premed courses in the US system). Year’s 3 and 4 are more clinical and similar to the first 2 years of US medical school. Years 5 and 6 are mostly clinical and encapsulate the clinical years of US medical school but with more responsibilities as students write scripts and primarily manage inpatients similar to residents. There are minimal residencies in Mozambique; primarily in surgical specialties and almost all in the capitol and not Beira.