

University of Washington

DEPARTMENT OF GLOBAL HEALTH



GHCE

Global Health Clinical Elective



2018



GUIDE TO YOUR CLINICAL ELECTIVE IN

MALAWI

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Disclaimer:

This booklet is provided as a service to UW students going to Malawi, based on feedback from previous students. The Global Health Resource Center is not responsible for any inaccuracies or errors in the booklet's contents. Students should use their own common sense and good judgment when traveling, and obtain information from a variety of reliable sources.

CONTACT INFORMATION

Malawi:

	Name	Address	Telephone	Email or Website
Mission Director/ Priest in charge	Father Phillip Meraba	MUA Mission P.O. Box 41 Mtakataka, Malawi	+265-9947-66115	philipjoe2000@gmail.com
Principal Hospital Administrator	Emmanuel Msukwa	MUA Mission P.O. Box 41 Mtakataka, Malawi	+265999659435 +265888896730	muahospital@yahoo.co.uk
Principal Medical Officer in charge	Dr Shalwyn Mkuziwaduka	MUA Mission P.O. Box 41 Mtakataka, Malawi	+265 999 624 354	principalmedical officer.mch@gmail.com
UW Faculty Liaison	Dr. Tom Nighswander, WWAMI AK Clinical Dean	Alaska WWAMI	Cell: 907 244 7290	tnighswa@anthc.org
Police			990	
Fire			999	
Ambulance			998	
US Embassy	American Embassy	Area 40 Plot 24 Kenyatta Drive Box 30016 Lilongwe 3	+256-1-773-166 +256-1-773-342 +256-1-773-367 (landlines) +265-999-591-024 or +265-888-734-826 (mobile) +256-774-976 (fax)	http://lilongwe.usembassy.gov/index.html consularlilong@state.gov
Malawian Medical Council		P.O. Box 30787 Paul Kagame Road Lilongwe 3 (across from Lingadzi Inn)	+265-01-727-255	medcom@malawi.net

Former students have recommended **Sister Josepha** for Chichewa lessons. "Sister Josepha is a retired Catholic Nun who lives in a nearby village the now makes her living by teaching Chichewa. She is an exceptional teacher and is very happy to help you learn some basics over a couple lessons. We asked for two lessons, which can be done at the mission, and she was able to tailor them to helping us functioning in the hospital. She will probably not ask for payment but we paid 1000 MK per lesson per person."

U.S. CONTACTS

	Name	Address	Telephone	Email or Website
UW International Emergency #	-	-	+1-206-632-0153	www.washington.edu/globalaffairs/emergency/
GHCE Director	Dr. Scott McClelland	Harris Hydraulics Building, Room #315 1510 San Juan Road Seattle, WA 98195	+206-473-0392 (cell) 001-254-731-490115 (Kenya)	mcclell@uw.edu
GHRC Program Manager	Rachel Lazzar, MSW	Harris Hydraulics Building, Room #315 UW Box 357965	+1-206 685-7418 (office) +1-206 685-8519 (fax)	rlazzar@uw.edu ghrc@uw.edu
Insurance	OnCall International		call +1.603.328.1358	http://student.uwsearchlightportal.com studentclaims@oncallinternational.com
Hall Health Travel Clinic	Anne Terry, MN, ARNP	315 E. Stevens Circle Box 354410 Seattle, WA 98195	+1-206-543-8915 +1-206-685-1011	travel@uw.edu
Post-Exposure Prophylaxis	Harborview Madison Clinic	325 Ninth Ave Box 359930 Seattle, WA 98104	1-888-448-4911 (CDC hotline) +1-206-744-5100 (clinic)	http://depts.washington.edu/madclin/providers/guidelines/pep_occ.html

Contact Prior Students: Please feel free to contact 2017 student Kirsten Jorgensen 907-321-4448 / kjorgensen12@gmail.com or others who would be happy to share more advice and info about Mua and Malawi!

ENTRY REQUIREMENTS



- **U.S. citizens are now required to have a Visas to enter the country.**
- You can obtain a visa on arrival at the airport for \$50. It is easier to do that than to send all of the information to the Malawi Embassy in Washington, DC, and it is cheaper (\$50 vs. \$100).
- To obtain the application from the the Malawi Embassy site: <http://www.malawiembassy-dc.org/index.php?page=application-requirements> . It will cost \$100. You will also be required to have a letter of invite from the MUA Mission. Contact Phillip Meraba whose email is listed on the contact page. If you do not hear back from him, please email Dr Nighswander. **Start early on this application. This is Africa and the bureaucracy is exceedingly slow.**
- You will need to have a **passport *valid for at least 6 months*** past your anticipated travel dates, and you may need proof of a return flight. Your passport will be stamped with a 30-day approval at the airport.
- ***For stays longer than 30 days, you will need to apply for an extension at a Visa Services Center.*** There are centers located in Lilongwe, Mangochi, and Blantyre. Visitors may apply for up to 2 extensions, and a letter of support from the hospital is required. ***Each 30 day extension costs an additional 5,000 kwacha and you need to make sure you extend the visa before the initial 30 days are up, otherwise there will be a fine and more difficulty. You must buy the \$100 90-day visa at the beginning (either before you

leave or at the airport) but this only gets you into the country, you then need to extend the visa before your first 30 days are up.

- All students who will be doing medical work must **register with the Medical Council of Malawi** and pay a one-time fee of \$150. This can be done in Lilongwe across from the Lingodzi Inn (a short taxi ride from Old Town), or in Blantyre. *This cannot be done in Mua Mission, so you should be sure to do it before you leave Lilongwe!* When you go to register, you will need a letter of good standing from the Department of Global Health, your medical student ID, your passport, \$150 this must be in bills printed AFTER 2010 if possible and nothing prior to 2006 will be accepted, 100s or 20s are fine, two passport-sized photos, and a lot of patience. The process can be “quick” and take an hour or may take several hours. Don’t go during lunch hours (12-2pm) because you are likely to find everyone gone for lunch.

- **Yellow Fever:** Malawi is outside of Africa’s yellow fever zone, and the CDC does not recommend vaccination for visitors to the country. However, the government *requires travelers to have proof of yellow fever vaccination if arriving from a country where yellow fever is endemic*. You may need yellow fever immunization, therefore, if you are planning on traveling to or having a layover in a country within the yellow fever zone. For the latest information go to CDC Information for travelers.

ABOUT YOUR ROTATION

Malawi has some of the worst health statistics in the world. The life expectancy for the people of Malawi is around 60 years of age, while 120 out of every 1000 children die before the age of five. It has a large HIV burden: about 12% of the population aged 14-49 is infected with the virus, and shows no signs of leveling off. Approximately 80,000 people in Malawi die from HIV/AIDs annually, and there are approximately 600,000 AIDS orphans. The HIV epidemic has also fueled a dramatic increase in tuberculosis infections in the country, with current estimates putting the incidence at 377 cases per 100,000. Malaria is also a major problem, and is responsible for about 40% of hospitalizations of children and 40% of all hospital deaths. This can increase to 80 or 90% of hospitalizations in the wet season. Malawi also suffers from a huge shortage of healthcare workers: there are only two physicians and 59 nurses for every 100,000 people, the worst statistics in all of sub-Saharan Africa. There are only around 260 physicians for the entire country. Part of this is due to “brain drain;” in 2000 about 60% of Malawi-born physicians practiced outside of the country, and there are more Malawian physicians in the city of Manchester than in all of Malawi.

- The healthcare system in Malawi is a mix of public and private institutions. Dedza hospital, the referral hospital from Mua, is a public hospital, and therefore all healthcare at Dedza is free. This is important to know because the transportation cost

for patients can be prohibitive, and sometimes it helps if they know the healthcare is free on the other side.

Care in the public system, including medications, is free to all citizens. However, the public health centers are often underfunded, understaffed, and undersupplied. The public system is divided into three tiers: the bottom tier consists of the many rural health centers throughout the country. These centers are often the only western medical facilities that most Malawians ever encounter. Unfortunately, there are virtually no doctors and very few nurses at the rural hospitals, medications are in short supply, and what equipment is available is often antiquated, broken, or fallen into disuse. The middle tier consists of the 27 district hospitals, intended as regional referral hospitals, but things here are not much better. The top tier consists of the urban tertiary care centers, but even these are poorly able to handle the growing influx of HIV/AIDS, tuberculosis, malaria, childbirth, accident cases and multitude of other medical needs.

Private hospitals are often better equipped, but charge fee for service. Mua Mission Hospital is one of a network of hospitals known as the **Christian Health Association of Malawi (CHAM)**. These function basically as private hospitals with some support from the government. The government provides some staff salary support and money for maternal care, but the remainder of the financing comes from fee-for-service payments along with international donations. Financing is usually quite tight as the hospital tries to balance its sources of income, which are often inconsistent. In the past, Mua had expatriate staff, administration, and funding. Over the past decades, Mua has transitioned to a mostly Malawi staff and administration and now physician. Despite the changes and challenges, the hospital has survived—sometimes thriving, sometimes struggling.

Traditional healers are very popular and are commonly used by the community. Treatments often consist of herbal remedies and/or tattooing. They are available in most villages and they often get the first crack at treating health conditions. **It is important when caring for patients to recognize how their belief system informs the decisions they make while in the hospital.**

The major workhorse of the formal health care system is the **Clinical Officer**. Their training and role is a bit similar to that of a Physician Assistant in the United States. They see patients, write prescriptions, and sometimes do basic surgical procedures. Their training requires 3 years of education followed by one year of internship, after which they are granted a “Diploma in Clinical Medicine.” **Medical assistants** receive 2 years of formal training, earning a Certificate in Clinical Medicine. Unlike clinical officers, medical assistants have no internship requirements and are not expected to perform surgical procedures such as Cesarean deliveries. In Malawi, a medical doctor receives 5 years of training; it is considered an undergraduate degree -MBBS (Bachelor of

Medicine, Bachelor of Surgery). An **MMED** (Masters of Medicine) is similar to a person who has completed a residency. Malawi has had its own medical school since 1991.



Mua Hospital was founded in 1911. It is the regional hospital for the 130,000 people living in the surrounding areas. The vast majority are quite poor and survive by subsistence farming: raising maize, pumpkins, tomatoes, chickens, goats, etc. There are large numbers of children in the community. As in the rest of Malawi, HIV/AIDS, TB, and other infectious diseases are common. The hospital is located on the beginning of the Dedza escarpment and attached to one of the oldest and well-known Catholic Missions in Malawi, which was established in the late 1800's. It has maternity, pediatrics, general medicine, and tuberculosis wards. They have a single operating theater, a minor procedure room, and a dental clinic. There is an urgent care clinic known as "OPD" as well as outpatient clinics offering antenatal care and HIV treatment, testing, and counseling. Diagnostic imaging consists of an X-ray machine and an ultrasound machine. If you order these tests, you will be expected to read the Xray films yourself, although they have an ultrasound technician. There is a small laboratory capable of doing hemoglobin measurements, HIV testing, VDRL, blood typing and cross-matching, and hepatitis B screening (surface antigen only) ***but reagents are sometimes out of stock. Microscopy is available for looking at urine sediment, doing malaria blood films, AFB stains, and peripheral smears***but reagents are sometimes out of stock. Special peripheral blood smears can be useful for evaluating for sickle cell disease. WBC, platelet counts, and gram stains are typically *not* available due to lack of reagents. Urine dipsticks are sometimes available, and the lab can look for ova/parasites in the urine (schistosomiasis). The pharmacy and its supplies vary day to day, but when fully supplied usually has at least something available to treat most conditions, although it might not be the first line (or second line) choice.

The medical staffing is in constant flux, but most recently consists of Dr. Mkuziwaduka, 3 clinical officers (Nkhoma who is primarily general ward, Chanza who is primarily in charge of Maternity and Sinyiza who is primarily in pediatrics but they all work on each ward), 1 nurse anesthetist, 3 MA's, several nurses and ward attendants. The clinical officers vary in expertise and ability but basically manage everything on the wards and handle most procedures. The medical assistants are involved in outpatient treatment, diagnostics, and triage. The midwives and nurses handle the normal and uncomplicated deliveries, and alert the clinical officers if they need assistance. Nurses also handle night triage and hospital admissions with on call clinician support. The staffing is stretched pretty thin relative to what is needed and medical students will be expected to help with the workload.

Students will be helping to care for hospitalized patients, including participating in ward rounds, writing orders, and doing procedures. They have the opportunity to see patients presenting to the HIV clinic (be sure to review clinical staging, immune reconstitution syndrome, etc.) Students should attend weekly staff meetings, and can attend other conferences or village visits if they pre-arrange. Note, if you go to a village it means you aren't there at the hospital, which may already be short-staffed. Generally, students are engaged in clinical duties Monday through Friday, as well as half a day on Saturday. They may take overnight call at their discretion (there is little service at the Parish meaning it is difficult to be called back to the hospital at night).

Daily Life at Mua Hospital

Morning report is at 7:45am following a morning prayer at 7:30 *** except for Thursday when there is a full mass from 7:30-8:15am and morning report is immediately after. Nurses will report on the patients admitted overnight. Usually the Clinical Officers will do morning rounds in their assigned wards every other day; former students have preferred to do daily rounds when feasible. The hospital closes for lunch from 12-2pm (including lab and pharmacy). As a student, you set your own schedule. Previous students have spent 2-3 weeks in each ward (General, Maternity, Peds) and helped out in the outpatient department (OPD) when things were slow. There is also a small Private Wing for VIP patients who pay extra (this often doubles as the staff temporary housing area).

The OPD is great place to spend a few mornings during your first week—you'll get a crash course in the most common diseases, especially malaria. Students can also help staff the minor theatre for basic procedures (suturing, I&D). Students can choose to visit some of the specialty clinics including Hope Clinic (HIV/AIDS) on Tues/Th mornings and Antenatal on Friday mornings. It may be possible to visit some outreach clinics, depending on the status of the fuel shortage and your own interest in arranging that.

The hospital is "open" from 730-5pm on weekdays, and 730-12 on Saturdays. On nights and Sundays, the nurses in Peds, Maternity, or General Ward will triage the patient and

admit if necessary. If the nurse needs further assistance with the patient, he or she will send for the On-Call medical assistant or clinical officer to come and assess the patient.

Mua remains a Catholic hospital. General assembly, an optional morning prayer session starts around 7:30 am. Abortion is not culturally acceptable in Malawi, but regardless, you will see women admitted after complications from “herbal” abortions.

Health & Healing at Mua

Healing is approached in an entirely different manner by traditional healers, the preferred first line for most patients. The first question asked when a patient is ill is not “What made him sick?” but rather, “*Who* made him sick?” Traditional healers will divine the person or spirit to blame, as well as the motivations for wishing one harm. Oftentimes, a jealous neighbor or an upset ancestor might be to blame. Herbs, protective charms, tattoos, and other implements are used to combat this witchcraft. “Preventative medicine” has a big role in Malawi healing, but it’s not necessary preventing disease—it’s preventing evil magic. Shamans will combat witchcraft with pre-emptive strikes against evil doers. Vaccines do fit nicely into this worldview however, especially since it is an injection placed in bloodstream of the always vulnerable child, one favorite target of witches.

Malawi patients would not talk to their Western physician about such matters. Usually, when medical providers ask when an illness began, they will hear the polite lie, “*Dzulo*” or yesterday. Many (if not most) patients bear tattoos and other signs of traditional attempts made before the patient or their family decided to try Western medicine.

While a Malawi traditional healer instinctively divines the illness and its cause, the Western doctor asks a hundred questions and orders tests. The Malawi healer understands the family and village politics and implements his cure not just for the patient but for the underlying problem in the family and community that caused the illness; the Western doctor gives inert looking tablets. All in all, the Western approach must be supremely unsatisfying to the Malawi patient. That said, from the sometimes dramatic recoveries that occur in the wards, most Malawians take a sensible approach and cover their bases, taking the advice of both healers without any sense of complication or feeling of contradiction.

Some families would decline interventions such as nasal O2 for the patient. I was told this is because they know O2 is only given to very sick patients. A few possible reasons for this choice: they don’t believe the O2 will help, they are in denial about how sick the patient is, or this is their end-of-life decision. I was told patients’ families tend to defer to the doctor’s/CO’s opinion, partly to avoid taking any responsibility in the case of a poor outcome. As a result, end-of-life conversations can be difficult to maneuver. Also, it is common for family and friends to wail loudly when a patient dies. If a family member or friend doesn’t outwardly and explicitly express their grief, others may see and think they contributed to the patient’s death in some way.



COUNTRY OVERVIEW

Malawi, a small, landlocked country in southern Africa, is known as the “warm heart of Africa.” It is one of the most densely populated countries, but outside the two major cities, Blantyre and Lilongwe, it is a rural country and spread out. It is one of the poorest nations in Africa, with most of the population working as subsistence farmers. Malawi ranks 171 out of 187 countries on the UN’s human development index. Things have been made worse in the past two years when international donors, who used to contribute towards 40% of the national budget, severely curtailed aid citing concerns over mishandling of the economy and human rights abuses. As a result, foreign currency and fuel are in very short supply, further crippling the economy. People have taken to trying to store barrels of fuel in their homes, and will queue up overnight in hope of purchasing a bit of petrol. In 2012, President Bingu Mutharika died from cardiac disease, allowing his political rival and vice president Joyce Banda to peacefully assume power. She has worked to re-establish ties with international donors. Within weeks of becoming president, she devalued the kwacha, resulting in a better flow of forex into the country and reduction in the nation-wide fuel shortage. However her presidency was riddled with scandal because of “cashgate” when it was discovered that many of the Malawian Ministries were found to be siphoning donated funds for personal gain.

In May 2014 she lost her presidency to Peter Mutharika, the brother of the second president.

Malawi is a new democracy and as many new democracies in Africa has yet to smoothly adapt to this new form of government.

People

Malawi is known as the “Warm Heart of Africa”. The people of Malawi belong mainly to various central Bantu groups. The three main tribes are Chewa, Ngongwi, and the Yao. The tribes intermarry freely and have not shown evidence of inter-tribal violence or intolerance that has plagued other sub-Saharan African nations. Chewa and Ngoni tend to be Christian, and the Yao tend to be Muslim.

Additionally, there is a group of Lomwe, who live south of Lake Chilwa. Other indigenous Malawians include the Tumbuko and Tonga, who are predominant in the north, and the Ngonde.

In the 19th century, the Ngoni (an offshoot of the Zulus) arrived from South Africa with the famous march of Shaka Zulu, and the Yao arrived from Mozambique, bringing with them the Muslim religion and the Portuguese slave trade. (This history of tribal migrations, along with the arrival of Dr. Livingstone and other missionaries, is central to Malawi's formation and worth reading!)

There are a few thousand Europeans, mainly of British origin, including descendants of Scottish missionaries. There are also small numbers of Portuguese, Asians, and persons of mixed ancestry. Indians run many businesses and form much of Malawi's middle class. At present, 55% of the population is Protestant, 20% is Roman Catholic, 20% is Muslim and 3% of the population follows indigenous beliefs.

History

Malawi was known as Nyasaland under the British Federation until it achieved independence as Malawi in 1964. Hastings Banda, who had returned from a successful medical practice in London to fight against colonialism and help lead the country to independence, became Malawi's first president. In 1971, he declared himself President for Life, but over time he became increasingly unpopular among the people of Malawi. His regime collapsed in the face of mounting internal and international pressure in 1993. The former President is Bingu wa Mutharika, who gained the presidency in 2004 in a disputed election, and was re-elected in 2009 in an election with high voter turnout that was generally regarded as free and fair. Recently local people are become increasingly dissatisfied with the president as food and fuel prices escalate. This led to riots breaking out in several cities in July of 2011. Bingu died in 2012 from cardiac disease. VP Joyce Banda, who formed her own political party apart from the president's, assumed power peacefully and has set about repairing damage wrought by the former administration.

She lasted in office for one year because of the national scandal called "Cashgate" that involved millions of *kwacha* missing for several of the ministries. She was replaced by Peter Mutharika, the current president, who is the brother of the deceased former president Bingu.

Malawi received support from the West during the Cold War, and maintains good diplomatic relations with principal Western countries. Its close relations with South Africa throughout the apartheid era strained its relationship with other African nations, but these have improved since the fall of apartheid. Malawi continues to have strong ties to South Africa. Between 1985 and 1995, Malawi accommodated more than a million refugees from Mozambique. This crisis placed a substantial strain on Malawi's economy, but also drew significant inflows of international assistance. In 1996, Malawi also received a number of Rwandan and Congolese refugees seeking asylum; unfortunately these refugees have limited rights within the country and are generally confined to refugee camps.

CLIMATE & GEOGRAPHY

Malawi is located in southern Africa, east of Zambia, west of Tanzania, and north of Mozambique. It is part of Africa's Great Rift Valley, and covers nearly 118,500 square km (roughly the size of Pennsylvania). The country is dominated by Lake Malawi, the third largest lake in Africa, which runs nearly the entire length of Malawi and occupies nearly 20% of the country. The Shire River flows out of Lake Malawi at the southern end, running in to Lakes Malombe and Chirwa and finally emptying in to the great Zambezi River in Mozambique. West and south of the lake are elongated plateaus with rolling plains, rounded hills, and some mountain peaks. As Malawi looks to the future it faces issues of deforestation, land degradation, and water pollution.

Variations in altitude in Malawi lead to wide differences in climate. In general, the seasons may be divided into cool (May to mid-August), hot (mid-August to November) and rainy (November to April). The areas near the lake have long hot seasons and high humidity, with a mean annual temperature of 75° F. Lilongwe, in central Malawi, has somewhat more moderate temperatures due to its higher elevation of at 3,415 ft. Precipitation is heaviest along the northern coast of Lake Malawi, and overall the country averages about 30–40 in. annually, about the same as Seattle.

Climate change is wreaking havoc on Malawi. The lack of adequate rainfall in the last two rainy seasons has decimated the subsistent maize and cassava crop which the villagers eat twice a day, every day. Food security is a critical issue.

Currently the water level in Lake Malawi, the 10th largest lake in the world (365 miles long) has dropped so significantly that the flow in the outlet river, the Shire, that has the hydroelectric generating capacity for the country, has dropped 50% and is expected to go higher. It supplies 97% of the power for the country.

LANGUAGES

Official languages are **Nyanja (Chichewa), Tumbuka, and English**. Books on basic Chichewa are available on Amazon.com. The 2015 students left a Chichewa book on site; there are still some books there as well! Most people with higher education will be able to speak some English.

Additional languages spoken in Malawi include Bemba, Bengali, Fipa, Greek, Gujarati, Portuguese, Shona, and Urdu, reflecting immigrant groups from a variety of countries.

Basic Chichewa

GREETINGS:

When you meet someone, they will probably say:

“Muli bwanji?” (how are you)

You reply:

“Ndili bwino” (I’m fine.)

Then, in order to be polite, you must say:

“Kaya inu?” (and you?)

and they’ll say “Ndili bwino” also.

After the greeting, one or both of you will often say:

“Zikomo (kwambiri).” (Thank you (very much))

(People you will work with are usually very happy to teach you the greetings (as well as any other words or phrases you’d like to learn), and since greetings are highly valued you will have multiple opportunities each day to work on perfecting them.)

OTHER USEFUL WORDS/PHRASES:

See you later — Tionana

See you tomorrow — Tionana mawa

I am happy — Ndakondwa

I am sick — Ndikudwala

I have arrived— Ndafika

I have departed — Ndanyamuka

I am tired — Ndatopa

Food — chakudya

Water — madzi

Toilet — chimbudzi

Where is the toilet? — Chimbudzi chili kuti



PACKING TIPS

General:

Err on the side of packing light. Don't bring anything that you would be heartbroken if it were lost, stolen, or ruined. Take fewer clothes than you think you will need: you can usually purchase clothing locally: this helps make sure that they are more appropriate to local conditions, and help out the local economy. *Shoprite* is a large shopping center in Lilongwe and will have anything that you may need as a "Western" convenience, such as toiletries. Throughout the country you can find food and other supplies at stores like *Peoples*, *Metro*, and *Cash and Carry*. Prices are surprisingly high, however.

Documents and other Essentials:

Make copies of important documents and leave them with someone you trust. This includes the front and back of your credit cards. You may also wish to make scanned copies and email them to yourself. Consider bringing an extra set of passport photos with you: they can be handy if you need to replace your passport or get other types of documentation. A laminated, color copy of the first page of your passport, or a passport card can also come in handy. Passport pictures are required for the Medical Council of Malawi.

Be sure to bring:

- Passport, valid for at least 6 months
- A letter of support from the UW and a copy of your student ID
- Travel itinerary, receipt, and copy of e-tickets
- Travel insurance documents
- Credit cards, including the one you used to purchase your airplane ticket (Please note that credit cards are not accepted in most places, even in Lilongwe. Plan to use cash. Beware that there are no ATMs in Mua and withdrawing money can be problematic. Consider travelers' checks for paying for room and board. The 2017 students paid \$20 per day to stay at the Mua parish with the priests.

- Personal medications (see below)
- GHCE Syllabus and medical textbooks
- Stethoscope and other medical supplies (see below)
- Back-up pair of glasses, if needed
- Sunscreen and mosquito repellent
- Power adapters (Malawi uses the British-type plug)
- *** Portable charger for cell phone given frequent power outages
- Flash drive
- Swimsuit
- Hat (for protection from sun and rain)
- Flip-flops or Crocs
- Sturdy, comfortable shoes that look nice enough for the hospital
- Hand sanitizer – several, including one for you to carry in white coat pocket.



Clothing Suggestions:

- Dress is more conservative. Women should generally wear longer skirts that cover the knees. That said, if going to Lake Malawi or more touristy areas, it is appropriate to wear shorts. Although some of our students have said they would not have felt comfortable wearing shorts, even at the lake. Tank tops may be alright as well, just try to get a sense of how you can fit in.
- Simple dress clothes are best for students. ***Scrubs are appropriate for work while at the hospital.
- The clinical officers and doctor wear white coats in the hospital
- Shoes should be comfortable, closed-toe, appropriate for the climate and formal enough for the hospital.
- A pair of flip flops is useful for around the house, in showers, etc.
- A rain jacket and umbrella can be useful for the rainy season.

Toiletries:

Most basic items will be available for purchase in the larger cities, although they can be a bit expensive. Wet wipes can come in handy. A small roll of toilet paper or some Kleenex can be a wise investment. DON'T bring an electric razor, hair dryer, or curling iron unless you bring a transformer, or they will burn out. It may be better to get these locally if needed.

Suggested Personal Medical Supplies

Thermometer

Sunscreen (SPF 30 or higher)

Insect Repellent (at least 25% DEET or 20% Picardin)

Malaria prophylaxis

HIV post-exposure prophylaxis

Stand-by treatment for diarrhea

Any medications you normally take

Band-Aids

Cold Medications (cough drops)

Pepto Bismol, antacids (Tums)

Tweezers

Acetaminophen (Tylenol)

Ibuprofen or Naproxen (Aleve)

Diphenhydramine (Benadryl)

Pseudoephedrine or phenylephrine (Sudafed)

Hydrocortisone cream

Antifungal cream

Antibiotic ointment

Supplies for the medical wards: *Plan on leaving behind any supplies or equipment you bring*

White coat

Penlight/flashlight

Stethoscope – 2017 students did not leave these behind.

Sterile surgical gloves in your size (hosp has limited 7.5s only)

Otoscope – only if you plan to leave it

Inexpensive watch for taking vitals

Hand sanitizer (handwashing is an issue and hand sanitizer is not available. COSTCO!)* **

A pair of safety glasses(very important – no one else will have them!)

N-95 Masks

Latex/nitrile gloves –recommend latex for the powdered interior as nitrile can be hard to put on when your hands are hot/sweaty

Glucose strips and glucometer *** they often run out of these!! (optionally, could consider bringing money for the supply people to buy them there. I don't remember the kind of glucometers they use. I brought some test strips and spare AccuCheck glucometers from my family members, but when that style of strips runs out the meters will likely be useless there)

Urine dipsticks for protein and glucose

ECG sticker pads

Pens & paper

Portable Pulse oximeter -- suggest bringing one pediatric and one adult with you to leave with many spare batteries. Amazon has portable ones for about \$20 each and given how often they break/go missing, it is very nice to bring a couple.

Would also recommend bringing a manual BP cuff—including a pediatric one—there was no pediatric BP cuff as of spring 2017. They use automatic ones that often break or run out of batteries so having a manual to use as backup was very useful.

Other Suggestions:

- Earplugs – it's surprisingly noisy at night -It is surprising how loud it is at night between dogs barking/howling, chickens/roosters, goats, people singing (for real).
- Water bottle for boiled water (The priests at Mua Mission have clean, filtered water on hand). Your own water filter is ideal, so you can refill on your own.
- A small laptop is recommended, though guard against theft and viruses. There is no internet, so you will have to purchase a "dongle" for internet, but service is still spotty. If you can unlock your phone, you can purchase a Malawi sim card. You can also use whatsapp. You can consider using smart phone as a hotspot for your computer, but service is so poor at Mua this may only work on occasion
- An iPad with a keyboard, or an iPhone works well. There is a desktop computer at the mission that you can use, but it has no internet. If you have an iPad with cellular service this might be more convenient than a computer, especially for accessing internet (plus it's small). I brought my computer (used mainly for doing write-ups) and an iphone (which was the only way I could get online the whole time I was there).
- Flash drive

- Digital camera and charger
- Small notebooks
- Headlamp and small flashlight (electricity is unreliable)
- MP3 music player and/or a small shortwave radio
- Extra batteries
- Extra food (energy bars, dried fruit, etc.)
 - Reading material – some reading materials & DVDs available at the mission
 - A Chichewa-English dictionary
 - A map of Malawi
 - Plan on bringing an unlocked cell phone or purchasing one locally

READING SUGGESTIONS



- *Brandt Travel Guide, Malawi or Lonely Planet* (seems to have more accurate phone numbers)
- *Tiyeni!: Chichewa Language Course for Newcomers to Malawi*, by Celia Swann
- *The Boy who Harnessed the Wind*, by William Kamkwamba
- *Dark Star Safari*, by Paul Theroux
- *Anything by DD Phiri, a Malawi author and historian*

MEDICAL BOOKS:

-Oxford handbook of Tropical Medicine

-Pocketbook of Hospital care for Children: Guidelines for the management of common illnesses with limited resources by WHO ***THIS BOOK IS A MUST FOR PEDIATRIC WARD!!!

-Comprehensive Handbook Obstetrics and Gynecology by Thomas Zheng (red book)

-OnCall : Principles and Protocols by Marshall and Ruedy

-A basic book on how to ultrasound for common things—you may find that you want to work with the ultrasound tech as at times you may not always get the scan the way you'd like it done.

Have your PDFS of med school classes accessible if you kept them on your computer—it was great review!

-Purple internal medicine book... it is less applicable to Mua as you can do very little diagnostics (labs/etc)

MONEY



- The **Kwacha** (MWK) has been the Malawian currency since 1971. It is divided into 100 **tamabla**. Common bills are 20, 100, 500, 1000 and 2000.
 - As of December 2017, **\$1 = 717.83 Kwacha**.
 - Money can be changed in Salima, Lilongwe, Blantyre, and sometimes Mangochi. Forex bureaus tend to offer better rates than banks. (There is one across the street from the Nico center in Old Town just a few blocks from Mufasa's). Be sure to exchange an adequate amount of money before traveling to rural areas. It is best to bring clean, newer issue U.S. bills (printed after 2007) in \$20.00 or \$100.00. Older and marked bills may not be accepted. Both airports also have Forex Bureaus.
- ATMs will allow you to draw local currency of a VISA card. Using your Visa is probably better than taking a large amount of US Dollars. As of Spring, 2016, there was a 40,000 Kwacha limit per transaction, and 120,000 Kwacha per day. Plan ahead to pay room and board, as well as the hospital fee and Malawi Medical Council license. Be sure to contact the bank that issued your Visa card to alert them that you will be in Malawi, or they will probably freeze your account suspecting fraud. Banks

tend to charge different foreign currency conversion fees, so you may want to check ahead of time.

- According to Malawi Law, travelers must declare all foreign currency when entering Malawi, regardless of its purpose or amount. Travelers should only exchange foreign currency at the bank or approved Foreign Exchange bureaus. Any currency declared at entry may be expatriated without further authorization. With bank approval, an individual may export up to \$2000 per trip. Otherwise an individual is not permitted to expropriate currency and it will be confiscated at the point of departure.
- **Other tips:**
 - Write down your bank card's 1-800 number for emergency cancellation on a separate, safe piece of paper in case of theft.
 - In small towns, avoid traveling with large denomination bills– it's much easier for the seller to raise the price than to find a way to give you change.
 - Bring U.S. dollars for rent and administrative fees. US Dollars are best. ****Bring dollars printed after 2010, as anything before 2006 will not be accepted.
 - The Kwacha cannot be exchanged in any other country so be sure to use them all before you leave the country.
- **Tipping etiquette:**
 - Tipping is common in Malawi, though less so than in the US. Tip about 10% for waiters/other service workers. Often Malawians will offer to help carry luggage or give directions for a 'tip' (around 50 kwacha will suffice).
- **Typical costs of basic items when the Kwacha was worth Mk 220= \$1**
 - Shampoo: 900 kwacha (\$2.00)
 - 1L water=500 kwacha
 - 1 beer aka "a Green" for Carlsberg, the main beer in Malawi = 500 kwacha
 - Loaf of bread=250 kwacha

TRANSPORTATION

GETTING THERE

The most direct and often cheapest way to travel to Malawi is via Johannesburg. Although check out flying Seattle>DC>Addis Ababa>Lilongwe. Most international flights land at **Lilongwe**, Malawi's capital, but several flights, especially those from Johannesburg and Harare, land at the business centre of **Blantyre** in the south. You can fly to Johannesburg via New York or London, and then directly on to either Lilongwe or Blantyre via South Africa Airlines. It may help to stay overnight in Johannesburg and fly out the next day. Former students have been told to avoid Malawi Air.

Johannesburg -- If you have to stay overnight, prior students stayed at Shoestrings Airport Hostel. "The owner was very friendly, it is frequented by Peace Corp Volunteers en route to various places in Africa. The owner picks you up and drops you off at the airport for free." Contact Philip about staying at the Catholic missions. They are everywhere, cheap, clean, and friendly to U.S. travelers.

Lilongwe -- Once you arrive in Lilongwe International Airport, you will need to take a taxi to the city. The airport is about 30 minutes from the city itself and a marked cab cost you about 17,000 Kwacha. There is also a set \$35 USD fee so it is better to pay kwacha and negotiate. There are small money exchange booths in the airport, just after you collect your luggage. You will need to exchange at least a small amount of money in the airport to pay for a cab. Public transportation from the airport is also an option, but would be very difficult with several weeks' worth of luggage. There are several porters who will request to carry your baggage for a tip--an appropriate tip is 50-100 kwacha.

Prior students report good luck staying at Mufasa's Backpackers Lodge or Kiboko Lodge in Lilongwe. "They are in the center of old town, very clean, nice showers, lots of Peace Corps Volunteers, is secure, and has several stores and restaurants within walking distance. They offer rides to the airport and main bus station for good prices." They will be moving soon to a new location, which is still walkable to old town. You can book online. Korea Gardens is another good option in Old Town Lilongwe. Clean, cheap, good food, and internet.

Mabuya Camp is also another popular place to stay amongst international backpackers. It's centrally located and has dorms with shared bathrooms. Has a decent menu of western items.

GETTING AROUND MALAWI

Malawi's principal highways are generally in good condition, although safety hazards include the lack of road shoulders, frequent potholes, pedestrians, bicyclists, and livestock. Secondary roads are in poor repair and may be impassable to all but four-wheel drive vehicles during the rainy season (November-April).

Public transportation primarily consists of **minibuses** which can be unreliable and accidents are common. Modern **coach buses** are increasingly common on the main cross-country routes. Minibuses run all the way between Dar es Salaam and Lilongwe with stops in the Songwe border crossing, Kyela, Mzuzu and Karonga. From Zambia there are both direct buses and minibuses between Lusaka and Lilongwe with additional stops in Chipata and the Mchinji border.



From Mozambique in Quelimane and Nampula you can get minibuses to the Milange-Mulanje border. From there you can reach Blantyre.

- **Axa Buses:** “Best travel method in Malawi.” Makes scheduled stops only, so usually fewer stops. About the same price as minibuses but travel less often. Ask the locals for a rough schedule. However, these also wait until they are full to depart, which can take much longer than the minibus (several hours!), since they are much larger.
- **MiniBuses (Matolas):** By far the easiest way to travel but not always comfortable. These can be cramped, smelly rides but are frequent and easy to catch. If a minibus is not available, a lorry (pickup truck) is often available to carry patrons in the back. These are less safe and should generally be avoided.
- The main bus station in Lilongwe is easy to find and most taxis will give you a lift to the front gate. From the main bus station, you can catch an AXA bus (the main bus system) or minibuses.
- Operators will try to charge ‘mzungu’ prices so try to barter a lower price. As of 2017, a minibus from Lilongwe to Salima (2000 kwacha) and then Salima to Mua (about 1000-1500 kwacha), Mua to Golomoti is 400 kwacha and Golomoti to Dedza is about 1000-1500.
- Don’t travel at night. The roads are particularly dangerous at night.
- **Bicycling** is the main means of transportation in Malawi. Cheap Chinese bicycles are everywhere in the country.
- Bicycle Taxis are also an easy and pleasant way to get around within cities or when traveling short distances

GETTING TO MUA

Contact Mua Mission beforehand. The priests make frequent trips to and from Lilongwe, where they also have a missionary house. Past students offered ~4,000 Kwacha for gas money but it was not expected. This is probably the most challenging part of your trip but is really not much of a problem if you get on the right bus. The buses leave once they are

full, there is really no set schedule. The first buses Mua leave around 6:30-7:00 AM and there are a couple different options that will get you to Mua.

(1) Get to the Main Bus Station in Lilongwe - If you stay at Mufasa's, ask for a ride to the main bus station. The main bus station is the central hub for the AXA buses and minibuses in Lilongwe. There is also a busy market and commercial area nearby and things get quite congested.

(2) Find the AXA bus area - Once you arrive, ask or look for the large "AXA" buses. People may try and get you to use a minibus or "matola", just remember it is their job to recruit riders, and say you just want to take an AXA bus. Malawians are in general very nice and helpful.

(3) Find a AXA bus that will pass by Mua - Once in the AXA bus area, ask or look for a bus heading to either Mangochi, Balaka, or Blantyre via Salima. These buses will go directly to Mua and will let you off. Before you board ask the driver if he will stop at Mua, they generally will if they know someone need to get off. **Alternatively, Find a Minibus to Mua** - If one of these buses cannot be found, take a bus to Salima and get off at the Salima bus depot. Then transfer to a minibus heading for Balaka or Mangochi or Blantyre, they will also stop at Mua on the way. People are more than willing to help. You'll find people who'll automatically transfer you and your bags to the right bus with minimal thinking on your part.

(4) Estimated Cost for travel to Mua - Payment of transport occurs after you get on the bus or minibus. It is probably a good idea to ask how much it will cost to get where you are going, just to prevent any problems. Most things in Malawi have a "mzungu" price and a Malawian price, but don't let them get away with anything and everything but remember that the difference between 500 MK and 1000 MK is about 1 USD. The AXA buses have set fees, but minibuses are a bit different. It should cost about 11500 MK to get from Lilongwe to Salima and then 1000 from Salima to Mua on a minibus. This can take 4-5 hours up to all day depending on circumstances.

(5) Arrive at Mua, Head up the Hill - Once you get to Mua, start heading up the hill. It is about a kilometer or so to the mission and the path is well traveled. If you have lots of luggage and don't want to carry it, there are bicycle taxi's or about anyone will happily help for a couple hundred MK. The people in Mua are very friendly, but they are villagers and the percentage that speak English really drops off compared to Lilongwe. The way up to Mua Mission is pretty straight forward. You go past the market and some houses, start up the hill, stay right at the first "Y", continue past the some houses, the hospital, and the **church**, and you will see the Mission on your left. There are decent signs and directions to the hospital and you can ask people if you feel you are lost. You can call the priests too, and they can come collect you from the bus depot if they're nearby.

LEAVING MALAWI

There is **no** departure tax. Make sure you have ensured your visa covers your entire time in Malawi. If not, you will have to pay a 5000 kwacha fee upon departure at the airport.

LODGING

MUA:

MUA Catholic Parish

"Staying at the Mission, you will be very comfortable considering what living conditions are in the village. They are simple rooms but comfortable and safe, and include bathrooms. They have mosquito nets and boiled water available, and electricity/running water most of the time. Meals are taken together with the Fathers. They share a hired cook who is a local lady. We never had any significant complaints about the food. There is also a security guard and a cook. If you have additional guests or visitors over a weekend or something, there is also a Hostel affiliated with the cultural center in Mua that is run by German volunteers.

***\$20 per day to stay at the Parish

The priests are great! The room is quite nice with a balcony area to sit on and relax or study. There is warm running water. In addition to security guard and cook there is a person that does laundry, though we encourage you to do your own. There is a wash machine and then you hang dry. They also have TV with satellite, so if you're homesick for your favorite shows. *** I would absolutely recommend staying with the priests. They are wonderful, the accommodations are clean, nice, warm showers and the food is good!

MUA Hospital Fees

- \$200 per student but please verify cost with Mua contacts before traveling (all 2017 students paid \$200 each).

COMMUNICATION:

CELL PHONE USE

There are more than 1.4 million cellular phone users in the country. The service is widespread, efficient, and fairly affordable. The two main suppliers are **Airtell** and **TMN**. There is coverage around and between the main cities: Lilongwe, Blantyre, Zomba and Mzuzu, but coverage may be sparse in other parts of the country.

- There are a number of vendors of cell phone and SIM cards around Old Town. Prior students used Airtel and felt that the service seemed pretty good everywhere they went

EXCEPT at the parish, where service can only be found on the front steps. If you have an unlocked cell phone, you will only need to purchase a SIM card, which can be done cheaply at the airport. You then buy pre-paid minutes as you go. 100 units cost 100 MWK. It is about 200 units per minute to call the US and about 50 units per text to the US. Local calls take 50K per minute and local texts are 10k per text. All incoming calls are free, so your family can call you on Skype and it will not cost you. It will cost them about 16 cents per minute. If traveling outside of a city, buy lots of minutes before you go, as recharges can be harder to find in more rural areas. Units are available in Mua however. You can buy a new phone at the airport for under \$20. You can purchase minutes and then exchange the for “data” in Mb/GBs which can allow you to download emails and send WhatsApp messages. For 2017 students, 3000 kwacha bought a month-long subscription worth 500mb. We re-upped this at least once per person. Note, you have to buy minutes outside of Mua.

- If you have an iPhone you will need to cut the sim card you purchase into a nano one. This can be done within a few minutes and with just a pair of scissors (the guy selling SIM cards at the airport helped us do it).
- Phone calls to the U.S. are expensive. Have family back home call you on Skype or using calling cards.
- Calls to Malawi start with 011-265 or +265.
- So many people use whatsapp and you will find that most of the nurses at Mua as well as the Priests all have smartphones. They are most easily reachable via text on whatsapp. Often, the network signal wasn't strong enough at the parish or hospital to receive phone calls via whatsapp, however the calls should work via regular calling. The priests are always traveling around the area and so they will be very responsive to emails and whatsapp texts... generally within 12 hours I heard a response

TIME DIFFERENCE: Malawi is 10 hours ahead of Seattle. 9 hours ahead during daylight saving time.

INTERNET

- Internet cafes are common in urban areas (not Mua) and access costs around 5-7K/minute.
- Internet can be painfully slow, best used in the early mornings or late at night. To save time, write your e-mails in word and paste into your e-mail message later. Be careful, however, as computer viruses thrive in Africa. You can download virus protection software from the UW for free. Also, always sign out of your email account completely before you leave, to prevent fraud.

- The phone companies offer WiFi cards (“dongles”) that plug into your USB port and allow you to have internet access anywhere there is a cell phone signal. The connection is very slow, however. Dongles cost around \$30. Unfortunately, the coverage is poor in the Mua area.
- Apparently data packages for smart phones are quite reasonable in Malawi! If you have an unlocked smart phone, this might be a good option to check email. Data packages of 500 MB, were available from Airtel for ~\$3,000 Kwacha, and are available in Lilongwe
- When you buy units you can convert them into usable data. A month subscription to whatsapp costs 500 kwacha and 1GB of data is approximately 1600 kwacha for one week, or 3000 kwacha for 1 month of 500mb of data. This is the most cost effective means of communicating with home. The network at the parish and at the hospital is somewhat poor but I found I could receive and send emails, although downloading documents was difficult. I could also send and receive messages via whatsapp. I received phone calls best by sitting on the steps to the Parish. The Latitude volunteers who live near the hospital employee housing were able to access the internet much better including social media as well as make phone calls through Facebook to their friends and family. It is nearly impossible to complete residency documentation requirements while in Malawi, but if need be can be done in Lilongwe. Don't plan to be at Mua during match week.

FOOD



- Malawi offers a wide variety of food and drink. The local staple diet is maize, which is ground down into maize flour. The maize flour is then mixed with water and boiled down into a pulp; this is known as **Nsima**, eaten with vegetables, chicken, fish, meat which again are cooked in different ways and eaten with your right hand. Not so much availability of variety in Mua.

In cities:

- Most restaurants offer the local delicacies, however if you're looking for International food chains you may find them in the big cities. In the cities, western-style restaurants (pizza, Chinese, Italian, Indian, etc) serve meals at slightly less than US prices. Recommended

places to eat are **Nobel Chinese** and **Mama Mia's** for nicer meals, **Sana** (right across from Mufasa's) is cheaper and adequate, there is also a chicken and pizza place next to the shopping center that houses "Game," across from Shoprite.

- Street food is abundant in Malawi (especially British style chips), but can be hazardous. Fried dough is available for 50 kwacha—very tasty!
- Staples such as flour, sugar, salt and oil are available locally, though shortages do occur at times. Imported supplies of these items are normally available, but expensive. Meat, poultry, eggs, vegetables and fruits are usually available and of excellent quality but subject to seasonal fluctuations. Good quality fish from Lake Malawi, including Chambo (tilapia) are available except during October-March when fishing restrictions apply.
- Western-style grocery stores are located in Lilongwe, Mangochi, or Salima, where you can find a limited variety of groceries.
- Fresh food is also available in the market on a seasonal basis; this is limited during GHCE quarters.
- Three meals per day are included with room and board at Mua Mission. The food is based on seasonally availability. The cook for the MUA mission makes a combination of local and international cuisine.
- If you wish to make your own food: The closest western-style grocery store is located in Lilongwe, Mangochi, or Salima, where you can find a limited variety of groceries.
- Fresh fruit and vegetables can be found on Wednesday and Saturday at the local market

Sample Breakfast – porridge, toast w/ jam and peanut butter, corn flakes, bananas, coffee, tea

Sample Lunch/Dinner -- Rice/Potatoes/nsima, Vegetables (seasonal → squash, greens, beans, salad, corn, tomatoes), Meat (pork, goat, beef, chicken, fish, or rabbit), Beans, Fresh Fruit (seasonal mango, papaya, banana, guava, passion fruit).

SAFETY

Information below adapted from U.S. State Department's website.

- Spontaneous civil disturbances have become more common in recent years. Avoid crowds, political rallies, and street demonstrations and maintain security awareness at all times.
- Even though Malawi is known as "the warm heart of Africa," crime is common in larger cities (Lilongwe, Blantyre, and Mzuzu). Rural areas are much safer. Most crimes against U.S. citizens involve property. Residential break-ins are prevalent throughout Malawi and perpetrators of these crimes are usually well-armed and may resort to violence with little provocation. Petty street crime (robbery and pick-

pocketing) is common, and break-ins have also occurred in hotels/lodges throughout the country.

- U.S. citizens are urged to avoid traveling on foot at night, especially in urban areas, as armed muggings and assaults have increased, esp. in Lilongwe.
- However some of recent students have said they never felt safer while traveling in a Developing Country. They never felt threatened and people were universally nice. Be street wise in the two largest cities.
- While in Malawi, you are subject to all local laws. Always carry at least 5000 kwacha because this is the amount a police officer will fine you for any “offense”. You may be able to talk your way out of these petty offenses (like a “dirty car”), but you will have to pay if they insist or else you will be arrested.
- Don’t buy counterfeit and pirated goods, even if they are widely available. Bootlegs are illegal in the United States, and you may be breaking local law too.

HEALTH INFORMATION:

- Traveler’s diarrhea is likely to occur. Use common-sense precautions regarding food and water, and have stand-by antibacterial treatment available.
- Malaria is endemic in Malawi, and can be rapidly fatal. Use antimalarial medications, DEET at night, and sleep under an insecticide-treated mosquito net.
- HIV and TB are common among hospitalized patients: take measures to protect yourself.
- Lake Malawi is full of schistosomiasis. It is recommended that you avoid swimming in the lake. If you do swim in Lake Malawi, be sure to tell your physician when you return home. You can get empiric therapy (praziquantel 20 mg/kg x 2 doses) at the Mua pharmacy (take 6 weeks after last exposure).
- Cash payment is often required before receiving medical treatment.

EXCURSIONS

MUA and vicinity:

- “Mua” is basically a fairly small village that has grown around the Catholic Mission and associated Hospital and cultural center. There is not much to do but there are a couple highlights that are worthwhile. While around the hospital and mission, things are very safe, but I would probably not feel very comfortable exploring the surrounding villages alone.

The only real danger is intoxicated men, who are definitely present, particularly on market days or holidays."

- Kungoni Museum and Cultural Performance – "The museum is found in most of the guide books and most visitors say it is one of the best museums and art galleries in Malawi. The tour is easily arranged and you should take advantage of seeing a cultural performance if possible. If there aren't any performances, you will be welcome to watch (and participate) practices during the week."
- Weekend Football Matches – There are two local traveling football teams and the games are very popular. The field is near the deaf school, just a short walk from the mission.
- Wednesday and Saturday Market – The market is located by the main road, down the hill from the mission. "They have pretty much everything that is essential for the everyday Malawian. There are vendors selling various food items, cloth, second hand and new clothes and shoes, and bike parts. There are also stands for traditional medicine which are interesting."
- Bembeke – The hike to Bembeke and back has been recommended by a number of visitors, though it is fairly strenuous. It is up the mountainside behind Mua, so highly recommend it to get a great view of Mua, Lake Malawi, etc!
- Even if you're not religious, consider going to mass with the priests – especially in the village. Most Malawians are religious, and you may be interested to see how organized religion and traditional beliefs have blended. A great way to practice your Chichewa too.

Further Afield:

- Lake Malawi – There are numerous options; the most beautiful and lively is probably Cape Maclear, but this is the hardest to get to. From Mangochi, there are numerous places for beach access.
- Dedza Pottery – A trip to Dedza is worthwhile for two reasons. First the drive is extremely scenic. Second, Dedza pottery is a famous place for pottery and its restaurant ("get the cheesecake"), also there is ancient rock art nearby. Nkhotakota pottery lodge is on Lake Malawi, but gets the clay from Dedza. You can stay here for \$40/night, have great food, and make pots in the shade on the beach (private lessons for \$2.40/hour....really affordable). Really worth the trip.
- Zomba Plateau – Catch a minibus to Balaka (800MK), then another to Zomba (800MK). At Zomba, you can either hike up the plateau (7-10 miles from the bus station, plus a lot of uphill) or take a taxi. Because I didn't have a lot of time, I took a taxi up the plateau and paid 5000MK for a round trip fare (make sure you bargain hard). On the Plateau, you can stay at the Trout Farm's rustic cabins or camp on their lovely grounds. Bring your own food; you can buy strawberries, gooseberries, and raspberries but little else. You can hike on the round to Williams Falls, Emperor's View, and Queen's View. I got a walking guide (2000MK) for four hours and enjoyed hearing the local tales about the area, but it's certainly possible to hike around without employing a guide. On top of the Plateau, you'll see lovely views of

the Great Rift Valley, mountains, and Lake Chilwe. There's a different biome atop the plateau, plus lots of pine plantations. It's worth visiting the lovely KuChawa Inn and having a coffee or beer in their stellar gardens

- Senga Bay – An easy day or weekend trip from Mua. Take a minibus to Salima then catch a matola to Senga Bay (20km away) from Salima's bus depot. You can spend the day at the Livingstonia Hotel, which has a very nice beach (and good Indian and Chinese food, especially the Thai chicken). If you want to spend the night, try further down the bay at Cool Runnings Hostel (which has superb but pricey food—try the fresh fish). Red Zebra and Wheelhouse are also rumored to be good. The croc farm and fish farm are probably not worth visiting.
- Cape Maclear – stunning scenery, but very touristy. Definitely caters to the backpacker/short-term volunteer crowd. Relatively inexpensive, full of expats, and has scuba/snorkeling available. To get there: take minibus or matola to Golomoti and then to Monkey Bay, then catch a matola (500MK) to Cape Maclear. Camp Malambe is a good, affordable place to stay. On the way back, ask at your hostel about the early morning AXA buses leaving from Monkey Bay that can drop you at Mua directly.
- Mount Mulanje- just outside of Blantyre. The tallest mountain in Malawi and it is beautiful! You can hike to the peak in about 3 hours or take 30 minutes and go to the famous waterfall that plunges into a 60 meter deep pool. A guide is necessary because there are so many small paths and the weather changes rapidly on top, so you need to be safe and come prepared.

TIPS FROM PREVIOUS STUDENTS:

- Take your anti-malarials faithfully because there really is a lot of falciparum in Malawi.
- There is a lot of TB in the hospitals: take an ample supply of masks if you are going to be observing. That said, no one else will be wearing a mask, even in the isolation ward. A well-ventilated room is key!
- No one “rushes” here: in fact, a recent UK study found Malawi to have the slowest walkers of all nations looked at.
- Be positive and hardworking. You will see a lot of unnecessary suffering compared to back home, but you will also see how much good can come from simple IV fluids, antibiotics, or a few stitches.
- Make sure to be kind to yourself and to allow yourself time to decompress in whatever way is most effective for you. Mua can be a challenging place to work, and it is helpful to take a little me time, or to talk over cases with your co-medical student if one is available.
- Very common first-line medications at Mua that you may be less familiar with: chloramphenicol, benzyl penicillin, pethidine (Demerol), paracetamol (acetaminophen), artesunate and quinine
- High yield review topics: pediatric seizure management, fluid management in adults and children, CXR interpretation, ultrasound basics, pronouncing death, pneumonia (children and

adults), heart failure, etiologies of ascites, hepatitis, constipation and diarrhea management. For minor procedures, many are done by the outpatient department like laceration repair, but you will be asked to do dressing changes and be prepared for determining whether a wound is infected or not. You may also be involved in abscess I&Ds in the minor theater. It is up to you if you are interested in being involved in inguinal hernia repair or c-sections.

- A note on surgery at Mua: if you do not feel comfortable with the steps of the operation beforehand, it may be best to not scrub in. They are fairly cavalier with their sharps and it seems they aren't used to working with assistants so anticipating where their next move will be is important for keeping yourself safe. Additionally, the techniques and experience of surgery here very different than what we are accustomed to in the US.
- You will rely on the books that you bring with you—if you have time to become familiar with them before you leave (ie on planes during residency interview season... that can be a great advantage, rather than scrambling in the moment.
- Be careful about translations. Learn some Chichewa yourself, and be patient. You may have to ask a question several ways before you get the real answer.
- You will have to set your own goals, objectives, limits, and priorities. The supervision varies quite a bit, especially if the doctor is not there. Don't be afraid to ask for help, but also don't be afraid to jump in and get your feet wet. People don't really understand what American medical students are capable of –you will be both over- and underestimated.
- You will be asked by patients, staff, and strangers for financial assistance. Don't be offended and prepare yourself for this in advance. In general, don't hand out money, but be compassionate and help others access resources that they don't know exist (ie emailing a list of NGOs that offer scholarships, networking, and so on). The average working Malawian earns less than \$900 per year.
- In 2017 a fund was set up by an expatriate nurse that worked at Mua to help fund ambulance referrals when families (particularly pediatric patients) couldn't pay. There is also hopefully going to be more changes during this year that may be established as good ways to contribute to ongoing efforts at Mua in a sustainable way.
- Men and women are not treated as equals in Malawi. Women are generally seen as inferior and less intelligent and are often paid less than men for the same work.
- Be flexible, as things often pan out differently than expected
- Consider buying these items in Lilongwe before you go to Mua: chocolate, cheese, batteries, shampoo, deodorant, etc. This might be the last chance. All of these places are within a couple blocks of Mufasa's.
- Malawi gin is famous and a good gift to bring back, if you have room. The coffee from Mzuzu is also excellent.
- Bring some extra money to buy carvings with at Kungoni Museum—they have some amazing pieces.

CULTURAL ADJUSTMENT

- Look for a cultural broker, someone who has an understanding of both U.S. culture and the local culture. An expatriate who has spent many years living in the host country, or a local who has lived in the U.S. can be invaluable in helping you negotiate and understand your host country. (Note: the priests at Mua are perfect “cultural brokers”)
- Learn as much as you can about your host country’s history, values, language, culture and norms.
- Resist the urge to assume that people are just “doing things wrong” in your host country, and that you know better. Try to understand the reasons why things might be handled differently.
- Remember that, in general, developing countries tend to be more formal than the U.S. and communication is more likely to be indirect. Value is placed on respecting social hierarchies, “saving face” and avoiding embarrassment.
- Be aware that needing to re-learn even simple routines in a foreign culture is stressful. Give yourself time to adapt, and don’t be afraid to make mistakes.

In her book, *Foreign to Familiar*, (2000, McDougal Publishing), Sarah Lanier discusses the differences between “Hot-Climate” and “Cold-Climate” cultures. Although this distinction is a vast oversimplification, they do represent spectrums of cultural norms that can provide a useful framework for understanding cultural differences. The chart below is loosely adapted from her work.

	“Cold-Climate” Cultures	“Hot-Climate” Cultures
Social Interactions	Efficiency is valued. It is acceptable to be businesslike with people you don’t know, and personal questions are to be avoided.	Relationships are valued more than efficiency. It is important to acknowledge people and not rush interactions. Getting to the point too quickly is rude, and personal questions are welcome.
Communication	Accurate, truthful information is valued. Communication is direct, words are to be taken at face value, and people say what they mean. “No” means “no,” and things are not meant to be taken personally.	Maintaining harmony is important, and disagreeing, complaining or causing offense or embarrassment is to be avoided. Indirect methods of communication are frequently used. It is impolite to directly say “no” or not give the answer a person expects to hear.
Individuality	Individuality, autonomy, personal initiative and self-reliance are valued. Individual likes and dislikes are important. People are expected to	Community cohesion and group identity are valued over individuality. (“I belong, therefore I am.”) The needs of the community are more important than

	<p> speak their opinions, and look after their own needs. People see themselves as “free to do as they please.” </p>	<p> personal desires. A person’s opinions should reflect those of the group. One’s actions should reflect well on the group. </p>
Hierarchy	<p> Society is fluid. People generally see themselves as equals, and authority is earned and can be openly questioned. What you know is more important than who you know, and the value of an idea depends on its utility, not its source. “Low-power distance” </p>	<p> Society is hierarchical. Class and social distinctions are maintained, acknowledged and deferred to. Authority is not to be questioned, and the value of one’s opinion increases with social rank. “High-power distance” </p>
Formality	<p> Interactions are casual. First names are used. Clothing choices reflect personal tastes and comfort. “Low context” </p>	<p> Interactions are formal, and it is important to follow protocols and demonstrate respect for elders and superiors. People are referred to by their titles. Greetings carry great importance, and clothing should reflect one’s place in society. “High context” </p>
Privacy	<p> People have a “right to privacy,” their own personal space and time to themselves. </p>	<p> People have a right to be included. Privacy is considered rude. Plans and conversations should include all. </p>
Emotions	<p> Logic, restraint and objectivity are valued, and displays of emotion are rare. </p>	<p> People are emotionally demonstrative. Subjective feelings and intuition are given credibility. </p>
Property	<p> Personal property is considered sacred. People pay their own way, are responsible for their own things, and there is no obligation or expectation to share. </p>	<p> Property is communal and belongs to the group. This is particularly true for food, which is expected to be shared by all. </p>
Planning	<p> Planning is expected, and schedules are adhered to except in extreme circumstances. </p>	<p> Spontaneity is preferred. Schedules are always subject to change. Flexibility and patience are valued. It is acceptable to show up unannounced or not follow through on plans. </p>
Hospitality	<p> Visitors are expected to make arrangements for their own food, housing and transportation, and payments are negotiated ahead of time. When people are invited out, it is expected that they will all pay their own way. Social events usually take place at public establishments. </p>	<p> Hospitality is important. Visitors need to be taken care of, and it is not appropriate to ask them to pay, although it is expected that they will leave gifts. When people are invited out, it is expected that the person who gave the invitation will pay. Social events usually take place in the home. </p>
Gender	<p> Gender differences are minimized. </p>	<p> Gender differences are important, and </p>

	Women are judged on the same criteria as men. Traditional roles are less respected.	women are expected to be submissive to men. Traditional roles are respected.
Time	Time is a linear phenomenon, measured by clocks. Punctuality and planning are valued. It is important to respect someone's time: Time is money. "Monochromic time"	Time is relative, and is measured by events. It is important to be living in the moment and to deal with things as they come up. Attending to people's needs is valued, regardless of how long it takes. "Polychromic time"

CULTURE SHOCK

"Culture shock" is real, and it is important to be prepared for it and to recognize when it is occurring. What people generally mean by culture shock is the stress that occurs from being away from familiar surroundings and continually having to struggle to understand what is going on around you. What begins as discomfort and confusion can subtly progress to frustration, anxiety, irritability, loneliness and withdrawal. More often than not, anger is the result, and it is not uncommon for this to lead to unprofessional behavior and lashing out at the local community. When you find your frustration mounting, be sure to take a step back and find productive and healthy ways to manage your stress. Remember, you are ultimately just a guest in their country. Above all, try and keep a sense of humor.

Be aware that you will likely have some reverse culture shock upon returning to the U.S.

Guidelines for the Management of Needlestick Injury and Body Fluid Exposure

Background:

When working in clinical environments, there exists the possibility for exposure to bloodborne pathogens, particularly in environments where universal precautions and sharps disposal practices may not be followed with the same rigor as in the US. Exposure to blood and other bodily fluids can transmit Hepatitis B, hepatitis C, and HIV, as well as other illnesses such as viral hemorrhagic fevers, including dengue. Transmission of malaria can also occur through needlestick, as can transmission of other parasitic diseases such as trypanosomiasis and visceral leishmaniasis.

Pre-departure advice:

PREVENTION: Obviously, the most important aspect of blood and body fluid exposure is prevention. Students should use gloves and other personal protective equipment if there exists the possibility of contact with a patient's blood. All students should bring with them a box of non-sterile gloves. You are also encouraged to bring some form of eye protection and face masks. If in a malarious area, tablets for malaria prophylaxis and attention to insect precautions can prevent this potentially fatal disease.

VACCINATION: Hepatitis B is highly transmissible through needlestick injuries (about 1 in 3 people exposed will seroconvert.) All students should have completed their hepatitis B vaccination series before leaving for their GHCE. You should be sure you are protected against measles, mumps, rubella, hepatitis A, tetanus, diphtheria, typhoid, and varicella, and polio. Depending on location, yellow fever and/or meningitis may be appropriate as well. Although there are as yet no efficacious vaccines for hepatitis C or HIV, in case of a needlestick it is helpful to know your baseline serostatus for these infections.

POST-EXPOSURE PROPHYLAXIS: You are required to purchase and bring with you two different HIV prophylactic medications. The exact number of pills will depend on where you are going. If you are in a country where we have identified someone who will be responsible for treating you in the event of an exposure, 1-2 days of medications may be enough. If you are in a remote area and would need to return to the U.S. to obtain treatment, then a 3-5 day supply may be prudent.

In the event of a needle-stick injury with a contaminated needle, or other significant exposure, you would generally begin taking treatment right away, while arranging for the patient to have HIV testing. If the patient is HIV positive, you should then need to complete a full 30 days of medications. This would involve obtaining an additional supply of medications and arranging for follow-up evaluation and monitoring. In many cases, it may be best to return to the U.S. to ensure proper care.

Specific prophylactic regimens should be discussed during your Travel Clinic visit, and you should ask for a prescription during your visit for a 1-5 day supply.

WHAT TO DO IN THE EVENT OF A BODY FLUID EXPOSURE:

1) Don't Panic.

The vast majority of exposures result in no harm. For example, the seroconversion rate of an untreated needlestick injury from an HIV positive patient is less than 0.3%, and from a mucosal exposure less than 0.09%. With prompt initiation of antiretroviral medications, this risk is further reduced 85% or more.

2) Wash the exposed area.

Remove all soiled clothing. Wash skin and wounds with soap and water. Irrigate wounds copiously with water. Flush eyes or mucous membranes with water or sterile saline.

3) Let someone know.

Inform your clinical supervisor that you had an exposure. Contact a medical provider with experience in post-exposure prophylaxis (CDC Post-Exposure Prophylaxis Hotline, Harborview Madison Clinic, Dr. McClelland, etc.)

4) Decide if you need to start medications.

This will depend on the severity of the exposure and the HIV status of the patient. If the patient is HIV positive or of unknown status in a high-prevalence area, *antiretroviral medications should be started as soon as possible* in the event of a needlestick injury, or if visibly bloody fluid is splashed into your eyes or mouth. (See the attached CDC algorithm for specifics). Do not wait for the source patient's blood testing to come back before starting meds. If the patient has suspicion for *P. falciparum*, consider taking a presumptive treatment of malaria if you are not on malaria prophylaxis.

5) Arrange for testing.

If possible, arrange for HIV testing of the source patient and a malaria smear (if in an endemic area). If serologies for hepatitis B surface antigen and hepatitis C antibody are readily available, send these too. If you do not know your own HIV, hepatitis C, or pregnancy status, these should be checked. It is helpful to get a CBC, chemistry panel, and hepatic panel if you are going to be starting medications. This will allow your physician to have baseline labs in the event you develop side effects from your antiretroviral medications.

6) Decide if you need to come home.

If the source patient tests **negative** for HIV, and you think it unlikely that the patient contracted HIV in the past few months, you can *stop treatment*. If the patient is HIV **positive**, cannot be tested, or is felt to be at high risk of HIV despite a negative test result, continue treatment. *It is generally recommended to arrange for medical evacuation back home* for proper evaluation and monitoring while on prophylaxis. However, many countries now have doctors and facilities that are expert in treating patients with antiretroviral medications. The decision to stay at your post or return home is a serious one that should be discussed with a qualified medical provider. The GHRC is happy to work with you on ways to deal with academic credit and financial aid issues in the event an evacuation is needed.

7) Get support.

Having a body fluid exposure is often a deeply unsettling experience. It is recommended that you talk it over with someone to help put things in perspective. Most people feel extremely frightened and vulnerable right after an exposure. The CDC's "PEpline" is an excellent resource. This is a national hotline that provides around-the-clock expert guidance in managing healthcare worker exposures to HIV and hepatitis B and C. Callers receive immediate post-exposure prophylaxis recommendations and counseling. The phone number is +1-888-448-4911. You may also call Dr. McClelland at +1-206-473-0392.

Preferred HIV PEP Regimen:

Raltegravir (Isentress; RAL) 400 mg PO twice daily

AND

Truvada, 1 PO once daily

(Tenofovir DF [Viread; TDF] 300 mg emtricitabine [Emtriva; FTC] 200 mg)

Also see Kuhar et al. JSTOR 2013; 37:875-93. This paper provides detailed information on the current US CDC guidelines for post-exposure prophylaxis, and is on Catalyst and in your site guide.

Note: Isentress and Truvada were not available in Malawi as of 2017. Available HIV meds included: Tenofovir disoproxil fumarate/lamivudine 300mg/300 and atazanavir/ritonavir 300/100.

MAP

