Dermatology Residents'
International Grant Handbook

Education and Volunteers Abroad Committee (EVAC)
American Academy of Dermatology
Program Directors
Carrie Kovarik, MD
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GENERAL INFORMATION

Congratulations on receiving the AAD Residents' International Grant (RIG). In an effort to promote international educational opportunities, the American Academy of Dermatology, through the Education and Volunteers Abroad Committee (EVAC) is pleased to provide funding for fifteen U.S. and Canadian senior dermatology residents to participate in a 4 to 6-week elective in a developing country where the Committee is establishing dermatology support programs and teledermatology consult services.

The RIG is now in its 10th year, having sent over 90 US residents to Botswana. These residents have provided a continuous and reliable source of quality dermatologic care to thousands of patients in Botswana. The residents have also been invaluable educational resources for the Batswana medical students, medicine and pediatrics residents, and faculty. The program has been and continues to be a key partner with the Botswana Ministry of Health in our joint mission to create a self-sufficient infrastructure for dermatologic care in Botswana.

The 4 to 6-week rotation period based on your preferences in the application process. Our goal is to have at least a one week overlap of the rotations between residents so that the rotation can be successfully passed from one person to the next.

Grant recipients will receive a $1700 stipend for room and board, evacuation insurance, outreach travel expenses ($250 have been added to help expenses and promote outreach visits), and other needs. This is in addition to airfare, which will be booked through the AAD Travel Desk and paid for directly by the AAD. Recipients will be required to purchase evacuation insurance, as detailed later in this handbook.

You will have an orientation with Liza Rissik on the first Monday of your rotation. The payment for your housing ($25/day) can be paid by debit or credit card on site to Liza that morning (UNLESS YOU ARE A PENN RESIDENT – it will be direct billed to Dr. Kovarik's BUP account, and you will receive this amount less in your stipend) . On the first Wednesday afternoon of the rotation, you will have an interview with the Health Professions Council of Botswana, in order to have practicing privileges in Botswana. See checklist below for details about the items you need to bring to the Monday morning meeting with Liza in order to ensure your application is complete and ready for the interview on Wednesday.

Your trip will be completely coordinated by Carrie Kovarik, MD, Associate Professor of Dermatology and Infectious Diseases at the University of Pennsylvania (carrie.kovarik@uphs.upenn.edu), Dr. Adam Lipworth, Associate Physician at Brigham and Women's Hospital (alipworth@gmail.com) and Dr. Victoria (Tori) Williams Dermatology Specialist at the Ministry of Health of Botswana and Clinical Associate of the University of Pennsylvania Department of Dermatology (tori22@gmail.com). They are assisted by Breon Smith, (bsmith@aad.org, International Affairs Specialist with the AAD). Further details on travel arrangements, daily schedule, and the consultation service are explained below.

The rotation will involve teaching in addition to clinical responsibilities. You will be required to give a PowerPoint lecture in at least one of the following settings. The topic of your lecture will be assigned ahead of time to avoid overlap between residents. It is your responsibility to determine when your lectures will be by coordinating with Dr. Mosojane or other contacts listed below the first week of your rotation:

- One or more of the outreach district hospitals. These talks are much appreciated by the local clinicians. Outreach site contact details are listed in the appendix.
- Princess Marina Hospital Medicine intern didactics: Mma Mosweu omphemetse.mosweu@mopipi.ub.bw
- Princess Marina Hospital Pediatrics morning didactics: Dr. Williams will coordinate with Peds chief resident

Your presentation(s) should be focused on basic clinically relevant information that would be pertinent to a primary care physician or healthcare worker. All efforts should be made to include photos of patients with dark skin – you can use pictures from your rotation or Visual Dx is an excellent resource (you can now filter images to photos of dark skin). Lectures should be timed for about 45 minutes at most. **You are required to upload your presentations to the BUP Google drive** under the Lectures tab or emailed to Dr. Williams at the end of your rotation.

Other grant requirements (all covered in more detail later in this handbook):

- Rotation summary/report: At the end of your rotation, email a one-page report of your rotation to Carrie Kovarik, Adam Lipworth, and Breon Smith. The report should include a general summary of your activities and a description of what you gained from the experience. **You must include one meaningful patient encounter experience and one photo of you during your rotation.** Please do not include photos with identifiable patients. Please also include suggestions for improvement of the program, handbook, and orientation process.
- AAD Patient log: Submit your excel clinic log of all the patients you saw during your rotation to Breon Smith for AAD documentation.

- Updated online copy of the patient/biopsy log.
- Upload the lectures you have given to the Google drive.

We are pleased that you have decided to be a part of this wonderful experience! Below, you will find more detailed information for your rotation. First you will find a summarized checklist of important items for your trip. Then, you will find some general information that will assist you in adjusting to life in Botswana - please at least read through this once and refer to it as needed. Then you will find detailed information and instructions to assist you with your clinical work. **YOU MUST READ THIS SECTION AND KNOW IT WELL. THIS INFORMATION IS VITAL TO PATIENT CARE AND ESSENTIAL FOR YOU TO BE A SUCCESSFUL MEMBER OF THE DERMATOLOGY CARE TEAM IN BOTSWANA.**

RESIDENT CHECKLIST FOR TRAVEL TO BOTSWANA

PRE-TRAVEL

- The most recent version of the **Dermatology Residents' International Grant Handbook** will be emailed to you, but will also be available for download from the AAD website: https://assets.ctfassets.net/1ny4yoiyrqia/5ahw9MAILw1rb1Lu40w9Gn/5e018bb826744014eb8b6d983eb80fe3/Derm-Rotation-Handbook.pdf. **Read it ALL** as soon as possible, since all details of the trip are explained.

- You will also be **supplied with the following documents through email**: Outreach schedule, example of the patient/biopsy log that you will be keeping, as well as names and emails of residents that will overlap with you. Please familiarize yourself with these documents.

- **Determine exact dates of travel**. The dates of the rotation will be assigned by **Carrie Kovarik** based on your preferences. You should finalize the exact dates of travel with her in order to arrive for the rotation at the appropriate time. If you plan to extend your stay in Africa in order to travel, **all extended travel must be done AFTER the rotation is complete.**

- **Make sure your passport is valid** and does not expire for at least six months following your intended return and has **at least three blank pages**. Note, if you are not a US citizen, you may need to obtain a visa before traveling to Botswana. Check the Botswana Embassy website for details (http://www.botswanaembassy.org/).

- **Book flights** through the AAD travel agency, with approval from Carrie Kovarik and Breon Smith.

- Schedule an **orientation call** with Dr. Adam Lipworth (alipworth@gmail.com, alipworth@partners.org) in the month prior to departure. Dr. Carrie Kovarik (carrie.kovarik@uphs.upenn.edu) will sometimes do the orientation calls (e.g. for UPenn residents)

- Complete and return **release to** Breon Smith (Bsmith@aad.org)

- Purchasing medical evacuation insurance, such as International SOS ($130 per trip) or Medjet Assist ($235 through the AAD for a 1 year registration, https://medjetassist.com/?utm_source=aad&utm_medium=partners&utm_campaign=partner%20pages) unless your school provides evacuation insurance to its students free of charge (i.e., Penn):

- Get **immunizations**/medications
    - Rec: Hep A and B, Typhoid, update Td
    - Malaria prophylaxis (if traveling to a malaria area outside of Gaborone. Malarone suggested for short term prophylaxis), other medications such as post-exposure prophylaxis for needle sticks (see handbook, these are available to you in Botswana if needed)
    - Get tuberculin skin test within a year of departure.

- Inform Liza Rissik (rissikl@bup.org.bw) our administrator in Botswana, of your itinerary. A driver from the Botswana-UPenn Partnership will pick you up at the airport, so it is critical that this be done. The driver will have the keys to the flat where you will be staying. Copy the itinerary to Carrie Kovarik (carrie.kovarik@uphs.upenn.edu) so she can be sure it has gone out to Liza. Please do this at least 3 months ahead of time so that she can have time to make the arrangements.

- Megan Doherty (megand@mail.med.upenn.edu) the Administrative Director of the UPenn Center for Global Health may contact you with further information and/or instructions.

- See http://upenn.edu/Botswana/visitorsinfo/html for a slideshow on Botswana and more info. There is also a useful packing list on this site.

- Register your travel plans online with the **Department of State**: https://step.state.gov/

- Email the resident that will be handing the service off to you, at least 2 weeks prior to departure, in order to inquire about **supplies** that may be useful for you to bring. When you are there, make sure you email the incoming resident with a list of useful supplies as soon as possible.

- Gather materials that will be helpful to bring for the trip to replenish biopsy supplies and other commonly used clinic supplies: disposable suture removal kits, 1-3ml syringes, 30 gauge needles, 3mm punches, gelfoam, lidocaine with epinephrine, disposable currettes, kenalog, gauze, Vaseline, hypafix tape or tegaderms

- Bring protective **eyewear and an N95** mask (although there is usually plenty available in the derm closet in Pilane)

- Credentialing: Any resident or faculty (NOT students) who plan to practice medicine in Botswana MUST submit documentation and complete an application for exemption from registration with the Botswana Health Professions Council (BHPC):

- At your orientation on the first day of your rotation, you will be given a copy of the Botswana Health Professions Council Application form and you will fill it out with the assistance of BUP staff.
- https://www.med.upenn.edu/globalhealth/documents/BHPCApplicationformforPenn.pdf
- Complete the form and include the following with your application:
    - 4 x Passport Photos
    - Notarized copy of passport
    - Notarized copy of medical school diploma (NOTE: If your diploma is written in Latin, it should be translated to English and then notarized.)
    - Notarized copy of your state license
        - If your state does not provide a formal license to residents, please provide whatever documentation you have been issued, and a letter from a ranking administrator (eg program director, chair of the department, hospital lead admin, etc) on letterhead, confirming that you are indeed a licensed resident physician in a state that does not issue license cards.
    - Copy of your resume / CV
    - All else on the form will be N/A
    - Letter of recommendation (original) that will be sent to you from Carrie Kovarik. Please be sure to email Carrie with your home address at least 1 month prior to the trip. **Please scan or make a copy of this letter in addition to all your other documents for credentialing.**
    - Original signed copy of the letter of recommendation from your program director that was used for the AAD grant application.
    - **BOTH LETTERS MUST BE DATED WITHIN 3 MONTHS OF YOUR TRIP AND BE ORIGINAL SIGNED COPIES**
- The completed application and all of the above documents should be hand-carried with you to Botswana. Please hand carry copies of everything as well.
- Forms are delivered to the BHPC on Monday (or Tuesday when Mon is a holiday). Bring 30 pula in cash with you drop off the forms. *It is essential you arrive in Gaborone at least 1 day prior to this "delivery" date, which usually means arriving on Sunday or earlier.*
- Return to the Botswana Health Professions Council on Wed PM for swearing in. If you did not pay on Monday, bring 30 pula on Wednesday. This is done in person.
- The physical license is available for pickup on Thursday afternoon.

IMMIGRATION IN BOTSWANA

- When you land in Gaborone you are required to complete an **immigration form**. You must put down as the physical address where you will be staying as: Pilane Court, Plot 154/155, Ext 9, Gaborone
- **Check the box that states you are there as a tourist/holiday – NOT THAT YOU ARE WORKING**

- Ask for the amount of days you will be in the country for. i.e. 60 days. You are allowed 90 days per year.

DURING TRIP

- You must keep a **log of all biopsies** performed in an excel spreadsheet which needs to be backed up on our Google Drive account (BUPDerm, password "botswana"). You will review all path results and formulate a preliminary plan which you will review with Dr. Williams and Dr. Mosojane. You must follow up results carefully. When patients return, the path results should be written or printed out for their paper chart record. You will train the incoming resident on how to use the biopsy log and pass on the most up to date version.

- You must keep a **log of ALL patients** you see in Botswana including outpatient clinics, outreach clinics, and inpatient consults. These will be logged in the same excel spreadsheet as the biopsy log and regularly back up in the GoogleDrive account. At the end of your rotation you will submit a copy to Breon Smith (AAD).

- Submit **path biopsy slides for consultation** that are either not straightforward or are requested by the local pathologist for a second opinion through the slide scanner software. **Send Carrie Kovarik and Kari Wanat (kwanat@gmail.com)** an email notification detailing which slides are being shared including a brief history, differential diagnosis and clinical photos (through a prepared PPT on google drive, detailed below). A template for how to format your emails for consultation can be found under the "References for Clinical Duties" folder on the google drive. Carrie or Kari will review the slides and send via email/Google Drive a histologic description, histology photos, as well as a differential diagnosis.

- **Outreach clinics** are conducted every Thursday. There is a master schedule of outreach visits that will be provided to you. You will need to determine if lectures are being requested at your outreach sites by discussing with Dr. Mosojane or contacting the sites yourself during your first week. You will also need to coordinate a ride to the sites by turning in a transport request form to the PMH Transport office each Monday.

- The **dermatology consult phones** (dermphone 1 and 2) should be carried with you M-F from 8AM to 5PM for consultations. One phone is an iPhone and the other is a small nokia. The nokia is also a speedial which allows physicians in the hospital to call it free of charge (2331).

- Give a **PowerPoint lecture** to local clinicians on the topic you are assigned by Dr. Williams. You will give your lecture at outreach sites if they can accommodate it during your rotation. You may also give a lecture to interns, pediatric residents at PMH or physicians at the Baylor COE. Upload these lectures to the Google Drive before you leave.

- The dermatology consult phones (numbers 77583003 and 73282498) should either be handed off to the next resident or returned to **Liza** upon completion of the rotation.

- **In addition to training the incoming resident, you are expected to provide them with a sign out detailing any sick patients, urgent results or other urgent issues that need to be closely followed up after you leave.**

UPON RETURN

- **Send your patient log and updated biopsy log** by email to Carrie Kovarik upon completion of your rotation (Sending via secure email would be best for the log). **Make sure all your lectures have been uploaded to the google drive folder entitled Lectures.**

- **Submit your one-page trip report/rotation summary** to Carrie Kovarik upon completion of your rotation including a specific patient encounter experience, a description of what you gained from the experience and a photo of you during your rotation. Please also include any suggestions for improvement of the program.

- Post-trip tuberculin skin test is recommended (8 weeks after returning)

- Update the handbook with suggestions (using tracked changes) based on your experiences-- send updates to Dr. Tori Williams (tori22@gmail.com), Adam Lipworth (alipworth@gmail.com) and Carrie Kovarik (Carrie.Kovarik@uphs.upenn.edu).

INTRODUCTION AND CODE OF CONDUCT

Dumela! (Hello) Welcome to your dermatology elective at Princess Marina Hospital in Gaborone, Botswana. This is a part of the Botswana-UPenn Partnership. This handbook will help you get ready for the trip, help you get settled once you arrive,

introduce you to the hospital and the system where you will be working. It provides you with essential information to allow you to be an effective clinician in Botswana. It will also help you have fun when you are there. IT IS ESSENTIAL THAT YOU READ THE ENTIRE HANDBOOK AND KNOW HOW TO USE IT AS A REFERENCE.

While in Botswana you will be representing not only yourself but also the University of Pennsylvania and the American Academy of Dermatology. It is critical that you remember this at all times. Public errors in judgment or conduct in Botswana are likely to not only be a problem for you but could result in compromising the entire program. You are all adults and cannot (will not) be monitored. It is up to you to think carefully about the potential negative implications of questionable behavior.

In addition to being aware of our public appearance, there are potential problems that could occur in the privacy of our flats. The communal living could put some unusual stresses on the expected level of conduct. One of the true benefits of this elective is the opportunity for faculty, fellows, residents, and students to interact in an extremely informal way. Our intention is to promote this part of the experience. Please be considerate and flexible when it comes to living arrangements.

So, have fun but please don't do anything dangerous or dumb.

Things to remember:

1) You represent the American Academy of Dermatology, the University of Pennsylvania, the Botswana-UPenn Partnership, and Baylor College of Medicine (for more information on these partner programs, see the section on *About Princess Marina Hospital* below). Your actions, positive or negative, intentional or unintentional, have implications for the entire program
2) You live communally. Be mindful of the "rules of the flats" (see section below)
3) Being nasty or pitching a fit in nearly any setting in Botswana is unlikely to further your cause and may result in your being sent home early.
4) If you travel outside of Gaborone or Francistown, it is important that BUP staff (Liza or Dr. Williams) knows your itinerary. This is so that we know where you are in case there is an emergency and you need assistance. (This HAS happened in the past.)
5) You are living in A DEVELOPING COUNTRY IN AFRICA. All of the luxuries of life available to you in the United States may not be available to you in Botswana. Please be flexible, adaptable, and accommodating. You will be living at a standard higher than most people in Botswana, and the accommodations provided are more than comfortable.

INFORMATION TO HELP YOU ADJUST TO LIVING IN BOTSWANA

ABOUT BOTSWANA

Background

Botswana was formerly a British protectorate known as the Bechuanaland Protectorate. It received its independence in 1966, and at that time, the name was changed to Botswana. Botswana is now a parliamentary republic, whose current fourth president, Ian Khama, is the son of the first president, Seretse Khama. Education and healthcare are free; and the national literacy rate is above 80%. Since 1966 the country has continued to grow, thanks to its flourishing diamond economy, beef exports and good balance of payments. In addition, tourism is a growing sector thanks to the large nature preserves and good country conservation practices.

Location

Botswana is a land-locked country, slightly smaller than Texas, in the center of Southern Africa. The Tropic of Capricorn runs through it. It is bordered by South Africa on the south and east, Namibia to the West, Zambia and Angola to north, and Zimbabwe on the northeast. It encompasses 600,370 square kilometers, of which, only 15,000 square kilometers has water. It is predominantly flat to gently rolling tableland, with the Kalahari Desert to the southwest, occupying 87% of the territory.

Gaborone

Gaborone (pronounced "Ha-bor-ron-ee" …g's are pronounced as h's in Botswana, e's are not silent) is located in the southeastern corner of Botswana on the Notwane River, a mere 9 miles (15 km) from the South African border. Also called "Gabs" by expatriates (with the g pronounced), it is the capitol city. It combines feelings of both rural Africa with tin roofed houses and high-rise office buildings. There are modern malls but few sidewalks and street lighting. The Princess Marina Hospital (PMH) opened in 1966 at the time of independence and is in the center of Gaborone. The University of Botswana is also near the hospital.

Climate
The climate is semiarid with cool winters (June-August) and hot summers (December-February). The country suffers from periodic droughts given the desert climate. The rainy season in the summer is characterized by intense, brief, dramatic thundershowers. Average daily temperatures range in January from 22ºC/71ºF – 33ºC/91ºF and in July from 5ºC/41ºF – 19ºC/66ºF. Clearly the overall temperature range can be quite wide. Typically, there are long periods of bright sunshine daily throughout the year with clear skies and low humidity. Summer days can be quite scorching, particularly before the rains come. In the winter months a fleece or sweater is a must in the morning and at night. Most buildings do not have heating and there is little air conditioning.

Demographics
Botswana is a sparsely populated country of 1.8 million. Because of the uninhabitable Kalahari Desert, the population is heavily concentrated along the eastern corridor, from the capital city of Gaborone to Francistown. Of the population, 35% are 0-14 years old; 61% are 15-64 years old; and only 4% of the population is older than 65 years. Most people are Tswana (or Setswana), and the remaining are Kalanga (11%), Basarwa (formerly known as "San" or "bushmen" which is considered a derogatory term) (3%), and other (7%) which includes Kgalagadi and white.

Botswana has one of the highest HIV/AIDS infection rates is the world with approximately one quarter of the population infected. The effects of excess mortality due to HIV/AIDS, has caused life expectancy to drop to ~50 years, infant mortality to increase to 45 deaths/1,000 live births, and to lower population and growth rates. In addition, the socioeconomic impact is immense including loss of skilled laborers and teachers, loss of per-capita household income, and a high number of orphans.

Nationality
The people of Botswana are Batswana, and one person from Botswana is called a Motswana. Using the term "Botswanan" will identify you are an uninformed foreigner.

Religion
70% are Christian, 7% have indigenous beliefs, and 20% have no religion. Note too that many Batswana may also mix some African Traditional Religious or Badimo beliefs into their other religious practices (e.g. consulting medicine men for advice).

Language
English is the official language, but Setswana is the national language and is widely used (79%). Many older Batswana only speak Setswana. Young children are taught in Setswana until 4th grade so small children also may not speak English.

Economy
Since its independence in 1966, Botswana has maintained one of the highest rates of socio-economic and infrastructure growth. It was transformed from one of the poorest countries in the world to a middle-income country with a per capita GDP of $14,100 in 2008 but fell precipitously in the recent economic downturn. AIDS is threatening this remarkable economic growth. Diamond mining drives the economy, and accounts for >1/3 of the GDP and 75% of export earnings. Other important industries include tourism, financial services, subsistence farming, and cattle. Recently large amounts of gas have been found in the Kalahari. Despite this stability, poverty remains an important concern, as there is a large gap between rich and poor, unemployment is officially around 24% and unofficially close to 40%, and women head approximately half of households.

Greetings & Respect
It is very important in Batswana culture to greet everyone before you begin a conversation. People usually greet one another by saying hello (even strangers). "Dumela mma" (to a woman) or "Dumela rra" (to a man) is the minimum Setswana everyone should learn. Recognition is very important to Batswana and to ignore even a greeting is considered very rude. Also be aware that seniority and age carry a lot of weight in Botswana. Children are generally taught to obey their elders. Recognition and respect for elders carries through to business and government. If you are a student traveling to work in Botswana, please note that the characteristics that often make for a successful student in the United States (demonstrating knowledge, questioning the status quo, selfpromotion, etc.) can be construed as insulting and offensive to Batswana. You are in Botswana to work and to learn; you are not there to change the way things are done.

Cattle
Beef is a major export in Botswana and cattle are highly valued. Wealth is often measured by the number of cattle owned. Cattle posts are places where boreholes are drilled down to the level of groundwater. Generally, the cattle roam free ("free range beef") at the post and are not fenced (they don't wander too far from the water) but they are looked after by a Modisa (herder). It is considered rude to ask someone how many cattle they have; it would be like asking someone how much money they have
in the bank.

Kgotla
The kgotla is the traditional meeting place in villages where disputes are brought before chiefs and issues of public interest are discussed. Kgotla is both the name of the meeting place (a semicircular enclosure usually under the shade of a tree), and the name for the meeting, and serves as both the village council and the tribal court. Traditionally only men took part in these tribal meetings, but now women may attend. The kogtla is an
early example of democratic principles at work. Anyone who attends the kgotla may speak. (For this reason, some kogtlas may meet for a number of days.) Ultimately, however, the kgosi (chief) makes the final decision. Kgotlas still play an important part of decision making and government in the villages outside of Gaborone. If you are working in a village, it is important for you to visit the kgotla and introduce yourself to the local leaders.

Birth Dates
Many older or rural Batswana don't know the exact date of their birth. Births in rural areas are often linked to a season or a holiday or a memorable local event. Also, Batswana may give the year of their birth rather than their present age when asked how old they are.

Body Language
Like much of the world, Batswana do not have the same concept of personal space as Americans and may stand closer than people do with one another in the US. It is also not uncommon for men to hold hands. You may also encounter a slight variation on the traditional western handshake, in that Batswana will shake hands, grip thumbs (with the same hand), and then shake hands again. Note that not everyone in Botswana makes eye contact when communicating with strangers. In particular, it is customary for young women and girls, particularly in rural areas, to not make eye contact when speaking to strangers.

Botswana Time
Like much of the rest of the world people are not nearly as time driven as in the United States. So do not expect meetings, cabs, etc. to be precisely on time. Just relax and enjoy the saner lifestyle. But know too, if you are going for a short amount of time and have very specific but time dependent goals, you are less likely to be successful in meeting them. The Botswana time zone is CAT (Central Africa Time) and is either six (daylight savings) or seven hours ahead of Philadelphia/EST.

Medical Licensure
No physician can work in PMH without registering first with the Botswana Health
Professions Council (BHPC). Registrations are processed only on Mondays and Tuesdays. If you arrive the day after the registrations are processed, you will have to wait another week before you can obtain permission to work in the hospital.

LGBT
Officially, both female and male same-sex sexual acts are illegal in Botswana, but prosecution is rare. Same sex couples have no legal recognition. Certainly, there is a lesbian and gay community in Botswana, but in general homosexuality is not publicly accepted. Note that it is common for heterosexual men in Botswana to hold hands publicly, so do not assume that two men who are holding hands are a romantic couple.

Holiday

Date	**English name**	**Local name**
1 January	New Year's Day	Ngwaga o mosha
2 January	Public Holiday	
Varies	Good Friday	Labotlhano yo o molemo
Varies	Easter Monday	
Varies	Ascension Day	Tlhatlogo
1 May	May Labour Day	
1 July	Sir Seretse Khama Day	
19 July	President's Day	
20 July	Public Holiday	
30 September	Independence Day	Boipuso
1 October		
25 December	Christmas	Keresemose
26 December	Boxing Day	
27 December	Boxing Day	

The first Monday after Christmas is also a Public Holiday.

Language

In general, foreigners are not expected to know any Setswana, and therefore, even a few phrases of Setswana will be very well received and appreciated. Speaking Setswana will show your desire to learn about Botswana, and it will definitely help you in the hospital, as many patients only speak Setswana.

GETTING READY
Please start with the checklist at the start of this handbook. The following pages will expand upon it.

You must email Liza Rissik at rissikl@bup.org.bw with your itinerary at least 2-3 months prior to traveling since there is NO PUBLIC TRANSPORTATION from the airport into Gabs. Copy this email to Carrie Kovarik (carrie.kovarik@uphs.upenn.edu).

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Travel to Botswana:
If you are going as a recipient of the AAD Resident's International Grant, the travel arrangements will be made through the American Academy of Dermatology Travel Agency. Breon Smith (Bsmith@aad.org , International Affairs Specialist with the AAD) will provide the names of the successful recipients of the International Grant to the travel agency through the AAD Meetings Department (along with the budget code and window of the travel period). She will also provide the travel agency contact information to the recipients, and then the recipient and agency will decide on the exact dates/times.

Most all flights to Gaborone connect through the Johannesburg airport. When you arrive in Johannesburg airport:
Follow the signs for international transfers, and have all of your travel documents (passport, itinerary, baggage claim forms) on you in case you need to show Gaborone as the final destination for you or your bags. If you do not have your boarding pass, there is a counter with the airline name on a small TV above an airport attendant. Once you get your boarding pass you will need to go through security. The gates are going to be down a large escalator and a bus will take you to your plane on the tarmac.You should leave AT LEAST a two hour layover in Jo'burg to improve the odds of having your luggage arrive when you do. Also, a TSA approved luggage lock is well worth the investment to prevent pillaging of your luggage during layovers in Africa.

Arrival at Botswana airport:
Immigration

- You will fill out a customs form upon landing and provide it with your passport to the immigrations official.
  - You will need the address for Pilane court for the form: Pilane Court, Plot 154/155, Ext 9, Gaborone.
  - Check **"holiday" in the reason for arriving box**. If you mention working, it will create problems with obtaining a visa.
- Be prepared to answer questions at the passport control counter about how you know Liza Rissik and the purpose for your trip (without mentioning working).
- Starting at some point in 2018, US citizens will now be required to pay a visa fee of $30 upon arrival.
- If you are not a US citizen, check immediately with the Botswana embassy (http://www.botswanaembassy.org/) to determine whether you need a visa, as the process can take some time.

Baggage claim and customs: Proceed to the baggage claim area and retrieve your bags. Once you have your bags there will be a counter for 'items to claim' and 'no items to claim'. If you do not have anything to declare, you do not need to fill out a customs form. If you have gifts, they will ask you for a receipt. If you have gifts worth over a certain amount, then you may have to pay VAT (taxes). Your bags may or may not be searched at this time. It is best to say you are not carrying any "gifts" or "new items."

Heading to the flats: After you clear customs there will be a Botswana-UPenn affiliated driver waiting for you holding up a Botswana-UPenn partnership sign

- The Penn driver will likely be Khunong – Cell 71481155, or David—Cell 74146934. There is no charge for the transportation and a tip is not expected; however, if you feel your service is beyond expectations, you can leave a tip if you like.
- There is a currency exchange office and an ATM at the airport. ATM's are generally the cheapest way to get Pula, and the driver can take you to a reliable one in the city on the way from the airport if the airport one has high fees; you can withdraw up to 8000 Pula. If you have a Bank of America debit card, you can use the Barclays ATMs without paying a transaction fee.
- Please call/text Liza Rissik for any delays you encounter: (+267)72214170 or 00-267-355-4855. If you do get stuck at the airport in Gabs, try to call Khunong or David (phone numbers above), or take a van to the Crest President Hotel or Avani, which is near the flats, and try to get in touch with Liza Rissik, Khunong, or David from there.
- Get your key to Pilane Court from the BUP driver when he drops you off.

Medical Evacuation Insurance
Recipients will be required to purchase medical evacuation insurance, such as International SOS ($130 per trip) or Medjet Assist ($235 per year if bought through the AAD). This will be paid by you out of the AAD stipend. If your medical school provides medical evacuation insurance free of charge to students (ie Penn), you do not need to purchase this; however, you must show proof of coverage to the AAD.

Visa
If you are traveling on a US Passport, you have typically not needed a visa if you are staying in Botswana for 90 days or less, however there is talk of changing the regulations in 2018 so please check prior to your travel. If you are traveling on a non-US passport, you may need a visa. Please check the up to date guidelines at http://www.botswanaembassy.org/

Immunizations, etc
You should be immunized against hepatitis A, hepatitis B, and typhoid (IM or oral). If you plan to travel to the Delta, Chobe or any other place up north, you will need to bring malaria prophylaxis. Gaborone and Francistown are free of malaria. You should have a tuberculin skin test before and 6 – 8 weeks after the trip. The water and food are generally safe to consume in Gabs and Francistown, except when droughts are severe.

What to Pack
- Clothes
    - Dress in Gaborone is "westernized." Pretty much anything decent is acceptable socially, although some nicer clubs have dress codes.
    - Remember, in the US summer (Botswana winter), nights can get quite cold. Bring warm layers (fleece, sweater, jammies, beanie and scarf, etc.)
    - **The maids do laundry daily so there is no need to overpack clothes**, with the turnaround time usually being one day on weekdays. The clothes are ironed, and a heavy laundry detergent is used, so keep this in mind when choosing what clothing to bring.
    - Work clothes may be casual but neat. Some of the male physicians do wear a tie, most do not. Women wear slacks or skirts. You do not need a white coat. **Scrubs are not appropriate work attire in Gaborone.**
    - Note that rooms in the flats are generally shared so you are likely to have both roommates and flat mates. You may wish to pack a robe or sleepwear.
    - Many people deliberately pack clothes that they plan on leaving behind for the maids or for orphanages. This is much appreciated and gives you more room to bring back purchased souvenirs.
    - If you enjoy a night on the town, note that people dress up nicely at the clubs (so if you only have a fleece and khakis, you may feel underdressed). Residents often go out for nice dinners, so having clothes for this purpose is helpful.
- Electrical adaptors and equipment
    - Botswana voltage is 220 volts, not 110. Most elaborate equipment (computers, digital cameras, etc.) have internal converters that will work with both voltages, but small appliances like hair dryers and irons will not work in Botswana unless they can be switched to 220.
    - Adaptors (useful to bring with you since there is usually an insufficient supply in the flats and for travel):
        - The most common plug shape in Botswana is type G, which is found on most universal adaptors.
        - Type M plugs are used in South Africa and are also very common in Botswana so would recommend having this adaptor as well. These are usually NOT found in universal adaptors.
    - **You will need a laptop for this rotation for patient record keeping, your daily clinic activities and after work assignments**. If it is not possible for you to bring one to Botswana please contact Dr. Williams prior to your rotation. For presentations, the sites generally provide a projector with a VGA input. If your computer does not have an output for a VGA projector, you need to bring an adaptor for your presentations (VGA to whatever output your computer does have, such a HDMI, lightning, etc).
    - Digital camera for personal use (clinic iPhone is used for patient photos).
    - Flash drive or other means of storing and transferring data without internet
    - Your media of choice for entertainment

Other things to bring
- Medical equipment (see below):
    - Dermlight or other light for clinical examinations
    - Please note that non-latex gloves are not available within the hospital, so please be sure to bring a large supply for yourself should you have an allergy.

- Flashlight or camping headlamp
- Small notebook to write down patient information/to do lists
- Hat and sunscreen, of course!
- Also, helpful: energy bars or other quick snack to eat during clinic, eyedrops/nasal spray because of the dust, swimsuit and flipflops for the pool at Pilane if in the hot season

Do not despair if you forget a crucial item; nearly everything you may need can be found in Gaborone. (Women should note that sanitary napkins and tampons are easily purchased in Gaborone.) Don't overpack!

Checked Luggage

DO NOT PACK ANYTHING THAT YOU ABSOLUTELY CANNOT DO WITHOUT OR THAT IS OF VALUE (MEDICATIONS, CAMERA**, ETC.) IN YOUR CHECKED LUGGAGE.**

- It would also be wise to bring **at least one change of clothes on-board with you,** in your carryon bag, in the likelihood that your baggage may arrive days after you do.
- We suggest locking your checked bag with a TSA approved lock
    - You may also plastic wrap your bag on the return trip at the Gaborone airport, which deters theft effectively.
    - Make an inventory of items in checked baggage to aid in claims processing if theft does occur
- Bring a lock for your carry-on bag too, if possible, since it may be taken from you just before boarding the small plane to Gaborone from Joburg.
- Travelers are strongly encouraged to purchase travel insurance before going to Botswana.

STAYING CONNECTED

So you've arrived safely in Gaborone, been dropped off at Pilane Court, and you've settled into your room. The next thing you're going to want to do is contact home to let them know you've arrived safely. Unless you've unlocked your cell phone to work abroad, you're going to have to depend on the communication system in Botswana. This section will help you with staying connected.

Cellular Phones

Cellular service in Botswana is, for the most part, very affordable and reliable.

- You will be provided two Derm phones during your stay here. If you're lucky, the resident you are overlapping with will be at the flats when you arrive, and you can get the phone immediately.
- Major cellular providers in Botswana are BeMobile, Orange and Mascom. Prepaid airtime can be purchased for either network easily just about anywhere.
- Botswana's country code is +267. To dial the US, you must dial the US's country code ("001") + the number.
- There are two cell phones that are available for derm rotators, one is on the Orange network and one is on Be Mobile network. The numbers are:
    - Derm Phone 1 – (+267)73282498 (this line also functions as a speed dial from the hospital which is 2331)
    - Derm Phone 2 – (+267)77583003

These phones can be used for personal use, but if you wish to have your home phone in addition, make sure that you will be able to substitute a Botswana SIM card with your US cell phone vendor. Generally, this means having your phone "unlocked," which is free and easy to do with most US cell providers once the phone has been paid off. If you can do this, then you only need to purchase a Botswana SIM card when you arrive ($10) that will make your phone function in Botswana. An extra SIM card may be available in the derm supply closet or from the prior resident.

- Calls and texts *from* your phone cost Pula, calls and texts *in* do not.
- To recharge your phone, visit a reseller of airtime. You can find them literally anywhere there is foot traffic (check with anyone selling drinks on the sidewalk, etc). You buy a small scratch card (make sure it is for the company that provided your sim card, likely Orange) of whatever value you desire and then scratch off a panel to reveal a code.
- Follow instructions on the card to enter the code and add the airtime to your SIM card: scratch off the code on the card, enter *155*(14-digit code) #, press send, and the money will be added to your sim card. I would do this before leaving the vendor, to verify they did not sell you a fake card.
- Some vendors can now send minutes directly to your phone without a scratch code—you will get a text instantly from Orange confirming the transaction. Again, do this beefre leaving the vendor to ensure you are not getting ripped off.
- To check how much money, you have left on the phone, press *155# and send.
- To add data to the Resident iPhone dial *148# to access internet services, follow the prompts to add a data bundle to the phone.
- Phone calls during the day are about P1/minute
- Text messages can be sent for about 25 thebe.
- Land lines will often only call land lines because calls to cell phones are more expensive.

AFTER YOU USE THE DERM PHONE, PLEASE MAKE SURE TO PASS IT TO THE NEXT PERSON **WITH MINUTES LOADED**. Passing off a phone with no minutes is poor form.

Hospital phone PIN
We received a pin to call out from the hospital phones so we don't have to use the derm phone airtime to call patients. The PIN is also listed in your clinic resources folder: **Dial ###512809#0 then phone number**

Internet
WiFi at the flats:

- There is WiFi available at the flats, and while it is not as reliable or fast as in the US, it has steadily improved over the years. You can find the passwords and log on instructions on the wall at Pilane.

Internet Access
There are a few internet cafes around town where you can pay to use more reliable internet. You can also print/fax/copy at these locations. **Most residents prefer to use the free wifi at The Daily Grind (M-F 7am – 7pm, shorter hours on the weekends) and Main Deck (open daily until 10p) – both located near Main Mall.**

NOTES ON LANGUAGE

While English is the official government language, Setswana is the language of the Batswana, both the ethnic group and most of the people of the country of Botswana. Due to the vagaries of international boundaries, large numbers of speakers of Setswana are also found in present-day Zimbabwe and South Africa (where the language and the people are called Tswana). Setswana belongs to the African Bantu language group, deriving from the same roots as Zulu in South Africa, Shona in Zimbabwe, and many other languages in the region. Setswana was first written down by Robert Moffat (ancestor to the Superintendant of Princess Marina) when he translated the Bible into Setswana in the 1830s. Since Setswana was first written by an English speaker, most of the language is phonetically spelled for English speakers, with a few notable exceptions (G is nearly always pronounced as H and TH as T). There are other languages spoken in Botswana, notably the language of the San of the Kalahari and Kalanga, spoken by a minority group from the north of the country.

After Botswana's prosperity started in the 1970s, newly independent Botswana invested heavily in primary schooling (just as it did in primary health care), so most of your patients under 30 will have had at least a few years of primary school and will be able to have a conversation with you in English, though they will be more comfortable in Setswana if (as is likely) it was spoken at home. The English fluency of Batswana over 30 varies tremendously, but age is a good guide, with the elderly least likely to be able to communicate in English, and many middle-aged Batswana able to understand only some English and then only when spoken in a Commonwealth/British accent. You may recognize some cognates to English, German, or Dutch, most of which entered Setswana during and after the Protectorate period, generally via South Africa's English and Boer settlers, but also through neighbors in the former English colony to the northeast, Rhodesia, now Zimbabwae, and the former German colony to the West, now Namibia.

Foreigners are not expected to know Setswana, but even a few words will help you break the ice, assist in building rapport with your patients, show respect for their culture, as well as making you self-sufficient in performing a physical exam (if not a history). Liza Rissik can also have a language instructor give a Setswana lesson at Pilane Court, if this is requested. The few words/phrases everyone will find of use are marked with two asterisks.

Essential Setswana

Hello ma'am/sir	Dumela mma/rra
How are you? (How's it?)	Le kae?
How are you? (more formal)	O tsogile (pronounced TSO-HEELE) jang?
I am fine/We are fine	Ke teng / Re teng (use of the plural shows respect)
I am fine (more formal). And you?	Ke tsogile sentle. Wena?
My name is …	Ke nna … Leina lame ke (your name)
Who are you? (also the name of the national identity card and number)	O mang?

I am from Philadelphia in America	Ke tswa Philadelphia ko America
Generic: Goodbye (also "all is well")	Go siame (HO- SA- YAME)
Saying goodbye as one departing ("Stay well")	Sala sentle
Saying goodbye as one staying ("Go well")	Tsamaya sentle
Yes	E
No	Nnyaa
Thank you	Ke a leboga / Re a leboga (pronounced LE-BO-HA) Tanki (borrowed from Africaans)
Excuse me	Sori
May I (please) have some water?	(**Ke kopa**) metsi

NOTES ON LIVING IN BOTSWANA

CARS DRIVE ON THE LEFT-HAND SIDE – WATCH OUT WHEN CROSSING THE STREET!!!!

Liza Rissik: Liza Rissik is our administrator in Botswana. She is organized, committed, and resourceful. She is very willing to be helpful, so do not hesitate to go to her with problems or questions. **However, remember that she is not your mother – be courteous. Thank her!**

Flats and Communal Living
Accommodation in Gaborone is located in a fairly safe and very comfortable complex. There is a swimming pool and several fruit trees. From Pilane Court, it is about a 10-minute walk from PMH and less than a 5 minute walk to the Main Mall and the BUP research office. The new BUP main office is on the UB campus, about 25-30 minutes from Pilane Court. It is also just a short walk to the rest of UB, the National stadium, the tennis courts, and the squash courts.

All of the accommodations have housekeepers. They keep the places clean and do the laundry and ironing. They are not there to pick up after you! It is communal living, so be respectful of other's space and try to be neat. We try very hard to house all Penn visitors – even if that means a bit of overcrowding on occasion. It is less expensive and potentially more fun so be prepared to "go with the flow". You may be asked to change rooms during you stay to better accommodate others based on gender and other considerations. Be prepared for this.

The cost of food is usually shared. This is done on an honor system basis so please remember to contribute. Penn rents the accommodation, so we are the tenants. As such – anything that goes wrong structurally is the landlord's responsibility. If you encounter any maintenance problems, please advise Liza Rissik as soon as possible. They will communicate with the maintenance people but note that they are not there to buy your toilet paper or light bulbs! Please look after the accommodation – it is nice, but only stays that way if everyone is responsible. If you break something, please replace it and let Liza Rissik know. Penn provides the cleaning materials for the maids to use BUT not personal items for you, such as toilet paper, laundry detergent, soap, or toothpaste. Please perform simple home "repairs" such as changing light bulbs or a fused plug.

Gaborone is dependent on South Africa for most of its electricity, and infrastructure problems have led to severe power shortages. Power outages are common, and from time to time, lots are restricted to a daily electricity limit, after which the power goes out. Since the water heater was placed on a timer in mid-2015, this has been an issue for Pilane court flats. Please leave the water heater switches in the 'ON' position.

Gaborone has historically had problems with severe drought. At times, Pilane court has not had water for a day or two. Residents have been able to shower at Jack's Gym in Block 5 during those times (buy a day pass-- decent work out facilities too).

Rules of the Flats

1) **Try to be neat – there are a lot of people living in a fairly small place**
2) **All food is shared**
3) **Contribute to the purchase of food without being asked.**
4) **The phones are only for LOCAL CALLS, internet, or to receive international calls. You cannot make outgoing international calls on them.**
5) **At the end of your stay consider purchasing some item for the flat – either decorative or functional as a remembrance.**
6) **Make sure there is bread, jam, peanut butter, and tea for the maid in your flat for her to have daily. If you have leftovers she can have, please leave her a note to say so.**
7) **Internet Etiquette: there are a number of persons living in the flats, please be aware of the time you are using the internet.**
8) **Please remember new people arrive all the time so leave a few essentials for them to use on arrival.**
9) **When you leave the accommodations, it is customary to give a "Bone Sela" to the maid who has looked after you. The suggested rate is P100 per month pro rate, so for 6 weeks the Bon Sela is P150**

Safety
As noted in the checklist you should register with the US embassy on line before you travel to Botswana. https://step.state.gov/

You will generally feel safe in Botswana. The government is stable, and the Batswana are uniformly kind, friendly, and helpful. Reported crimes were almost exclusively robberies (usually cell phones), and car break-ins while parked at the foot of Kgale Hill. Crime is rarely against a person. There is a general feeling that robberies are on the increase. They are blamed on the influx of refugees from Zimbabwe and an increasing number of youth gangs. Remember your street smarts. Do not walk by yourself on the paths after dark, use the streets. BE CAREFUL WITH YOUR PHONE AT ALL TIME, ESPECIALLY AT THE HOSPITAL. DO NOT WALK WITH YOUR PHONE OUT. DO NOT WALK WITH YOUR PHONE VISIBLE IN YOUR POCKET. IT WILL GET SNATCHED. "Smash and grab" crime is the most common. If you have anything easily visible in a car while driving, thieves will smash the window and literally grab it off the seat or out of your hand even with the car in motion. Do not use your cell phone while in the car.

In August 2015 there was a break-in at Pilane Court, and an iPhone was stolen. There is now a security guard on site at night. Please be certain to lock the gate and flat doors when you come and go.

From the US Embassy: "Wild animals pose a danger to tourists. Tourists should bear in mind that, even in the most serene settings, the animals are wild and can pose a threat to life and safety. Tourists should use common sense when approaching wildlife, observe all local or park regulations, and heed all instructions given by tour guides. In addition, tourists are advised that potentially dangerous areas sometimes lack fences and warning signs. Exercise appropriate caution in unfamiliar surroundings".

AUTOMOBILE ACCIDENTS pose a particular risk to travelers in developing countries and Botswana is no exception. We strongly advise short-term travelers to **NOT DRIVE** themselves. In addition, it is not a good idea to be on intra-city roads after dark. Many experienced drivers have had accidents involving cattle (and other cars). Never take chances in a vehicle.

We recognize that you are all adults and generally used to making your own decisions. However, you must remember that while you are in Botswana you also represent the AAD, Baylor, and the University of Pennsylvania. Therefore, the consequences of your actions have the potential to have much greater impact than if it just reflected on you. One foolish act could result in the cancellation of the program. (Example: one student went camping in the Kalahari by himself. Though he might be fully capable, it is generally recommended by locals that one always take two cars on such trips – not to mention the lion issue). Don't be selfish enough to put the program at risk. Therefore, please ALWAYS be aware of the potential risks of what you are planning to do. If in doubt always check things out with Liza Rissik. Liza Rissik should always know your weekend plans if you are going to be out of Gabs.

Money Matters

Cost of living in Botswana
Living in Botswana is overall less expensive than in the United States. Some things cost more than they would in the US, but many things cost much less. Food tends to be about the same price as in the US. The unit of currency is the Pula and there are about 8-10 to the dollar. There are 100 thebe in a Pula.

Getting and/or Changing Money
- Notify all banks and credit card companies of your travel plans to that they are less likely to disable your cards because of suspected fraud when you use them in Botswana.

- ATMs: Withdrawing from an ATM machine is generally the cheapest way to get cash.
  - Check the back of your card to make sure that it is on the PLUS network. Cirrus, NYCE, and MAC cards are not generally usable in Gaborone.
  - When possible, make sure your pin numbers are 4 digits long, as some ATMs do not accept longer codes.
  - You can withdraw money from an ATM using your Mastercard or Visa credit cards, but you will be paying high interest on that withdrawal/loan.
  - If you are having trouble with ATM withdrawals, try the ATM machine at the Gaborone Sun hotel, which has been reliable.
- Credit Cards: Many places in Gaborone accept credit cards (hotels, supermarkets, etc.), but you will need cash for taxis and other services, and for most things outside of Gaborone. American express cards are almost **never accepted.** Consider getting a credit card that does not charge international fees (e.g. CapitalOne, BarclayCard, et al).
- Changing dollars to Pula can be done at banks or Travelex centers (or the American Express Center at Riverwalk), but is more complicated than it may seem. Your passport is usually required. The facilities usually close by 4pm. The fees and exchange rates are generally poor.
- **As a fallback you can always have money wired to the Main Mall Barclay's Bank.**

Transportation
Since the recent additions of the malls (Riverwalk, Game City), the center of action has moved away from the Main Mall to these new malls, which are located on the outskirts of Gaborone. Therefore, walking in Gaborone is less of an option than it once was. Francistown is more compact and a more "walkable" city. Public transportation can be identified by their BLUE license plates. Remember when giving directions, use easily identified places. Most do not know the official street names, but will use the destination as the road name, for example "the road to Gabane."

Taxis
Cabs are usually readily available. Most of us have numbers programmed into our cell phones and just call one when needed. There is a taxi stand at the bus terminal and the south side of the main mall. Example (approximate) fares:
- A trip within the city costs P30, and at night the cost is around P30-40.
- Riverwalk 40p
- Game City 40-50p
- Airport Junction 40- 60p
- Airport ~90-120p
- Mokolodi 75-120p

Cabs are often available at Riverwalk and Game City, and they can be easily ordered by phone. If you find that you are taking cabs frequently, it is possible to get the cell phone number of a specific driver and call that person directly when needed. Furthermore, by using a single driver for most of your transportation during your stay you can often ask for lower rates, especially if the driver is self-employed or works for a small cab company rather than a large one. Another idea some have had success with is flagging cabs that already have occupants. Apparently, this results in a significantly lower fare (as low as 2 pula, per one traveler).

Taxi drivers who often work with the Penn visitors are saved in the Resident phones. Residents most commonly use Samson Khunong: 71481155 (Penn employee-- NOT a cab driver, but sometimes makes extra money driving Penn folks around beyond the scope of his duties.)
Deluxe Cabs: 71300074, 73595919 *very reliable and recommended*

Combis
The combis are the crowded minivans that take passengers around town. They follow specific routes, but there are no route maps so if you do not know which combi to take, ask anyone; people are very friendly and helpful and will make sure you get to where you are going. The cost is P3.50 to ride anywhere on the route. Combis are often full, but there is always room for one more. They are the usual way most locals get around town. Combi rides are always an adventure and a true Botswana experience.

Buses
You can get to any sizable city in Botswana by bus. Typical times are: Gabs-Francistown, 6 hours (P83/person). Francistown-Maun, 6 hours (P40/person). Buses can be found on the north side of the bus station, and they generally leave every half an hour or whenever the bus is full. Destinations are located on the front of the bus. Buses can be very crowded and are not air conditioned, but you can't beat the price. Get there early to get a seat.

Plane Travel

DO NOT CHECK ANYTHING OF VALUE – THERE IS A RISK THAT IT WILL BE TAKEN FROM YOUR CHECK LUGGAGE (CELL PHONES, CAMERAS, ETC.)

Air Botswana: Office on Main Mall. 3951921. Flights to Jo/burg, Maun, Kasane. Typical fares are $200-400 range.
South African Air: Offices in Broadhurst and Game Malls. 3095740, 3972397

Travel agents/Tour Guides

- **Please refer to the folder on the Google Drive marked "Travel Advice" or email Dr. Williams for travel advice/tips
- Tim Race: He will lead outstanding camping trips to the Kalahari. He has all of the necessary equipment. He is on the higher price range.

Restaurants

All easy to get to by car- none of these are really inexpensive but are so by USA standards. Andy Schafer rating (actually he did not go to them all):

- **The Daily Grind**: Closest to an American coffee shop you will find in Gabs! Located one block away from Pilane on Independence Ave. Open 7am – 7pm on weekdays and shorter hours on the weekend. Free Wi-Fi.
- **PMH cafeteria**: Back open and good as ever. Huge plates for <30 pula. They run out of food by ~1-1:30pm.
- **Fresh Café:** Right next to the Choppies near ICC flats. Delicious breakfast, lunch, and brunch. Good coffee as well.
- **Bull and Bush**: *** English pub, excellent ribs, excellent pizza, music and disco dancing some nights, monthly trivia contest.
- **Gaborone Yacht Club**: *** At the Gaborone Dam. This place was a favorite for "sundowners" on a Wednesday or Friday after work (closed to public on other days). Take a cab and watch the sunset over the water. Enjoy the wine and beer and the best hamburgers in town.
- **Chutneys and Embassy*****: Very popular Indian restaurants
- **Maharaja**: *** Indian restaurant next to the Bull and Bush
- **Moghul**: ****Indian, less expensive than the Maharaja.
- **AVANI**: ** expensive, but excellent Sunday brunch. Mahogany: upscale restaurant with piano player. Happy hour on weekdays from 6-7pm with half-price drinks.
- **Newscafe**: ** mid-range, upscale, South African franchise, at present seems to be the place for the young professionals (esp. Thursday evenings
- **Sanitas:** ****Tea house: favorite for Sunday brunch and for lunches. Located in a garden center that has many plants to purchase. Nice setting. Free Wi-Fi.
- **No 1 Ladies Coffee House:** ***excellent desserts and food. Free Wi-Fi. Adjacent to craft stores.
- **Mokolodi**: ****there is a very nice restaurant at the game park about 15 km down the road to Lobatse. One of the nicer restaurants in Gabs. Can get some exotic foods such as kudu steak, ostrich, impala steak, etc. recently started doing breakfasts.
- **Basilico**: new italian restaurant near Pilane. It is one of the nicer restaurants in Gabs. Requires advanced reservations.
- **Grand Palm Hotel:** The Beef Barron is one of the nicer restaurants but also expensive. There is also a good Chinese restaurant at the hotel.
- **Red Lantern:** Excellent Chinese Restaurant in Broadhurst – 3908514. Will also do take-out orders which you have to collect.
- **Ashoka:** African Mall. Indian food. Well worth a visit for curry lovers
- **Caravella**: Portuguese. One of the best restaurants in Gabs, expensive.
- **Main Mall**:
    - Café Pie Time: free Wi-Fi, cheap pies and pizzas. Recommended.
    - Main Deck: free Wi-Fi, upstairs, bar with food and outdoor seating
    - Nandos: popular South African chain, chicken dishes.
    - Debonnaire Pizza ***(they actually deliver)
- **Riverwalk Mall**:
    - Milky Lane: Only ice cream store in Gabs (has outlet at game city also)
    - Equatorial Coffee ** Company: lunch and coffee
    - Simply Asia: Thai/noodle dishes. Very good.
    - Dros: pub food and great place to have beers and watch a soccer match.
    - Mugg and Bean: best coffee drinks, excellent breakfast and lunch. They make their own muffins, cakes are for sale and are huge but excellent.
    - Rodizo's – Brazilian Steakhouse; on Thursdays, all you can eat meat for 140 pula which includes a free glass of wine
    - Pizza Hut

Airport Junction:

- Ocean Basket: known for its great seafood dishes.
- Cappuncinos: nice café/restaurant. Free Wi-Fi. Good salads and pizza
- Café Europa: great café with free Wi-Fi and excellent pizza.
- Rhapsody: upscale restaurant that turns into a dance club with DJ on fri/sat nights.

Malls

The term "mall" is used for any collection of stores. There have been two relatively modern malls built in the past decade in Gabs, Riverwalk and Game City.

- **Main Mall**: Center of town near the government buildings. This is a 10' walk from the hospital. and about a 20' from ICC, and a 3 min walk from Pilabe Court. Past its prime, but some atmosphere and is undergoing a revival. Outdoor mall with a lot of stalls where people sell crafts, vegetables, etc. You can bargain. Good place to walk from the hospital to get a pie or pizza for lunch, or for basic groceries (Spar, Payless).
- **BBS Mall**: Near the private hospital in Broadhurst. Also, about a 20' walk. Also, more atmospheric that the modern malls. There is a good **second-hand bookstore** at this mall that is above the Woolworths. It has much more atmosphere than Riverwalk or Game and on the weekends is full of stalls where you can bargain for all sorts of things
- **Riverwalk:** Multiplex movie, restaurants, grocery stores, liquor store, hardware store, computer store, electronics store, internet café, book store (expensive), clothing and sports stores.
- **Game City**: Largest mall in Gabs, near Kgale Hill. All mall-type stores, plus Game – a huge Walmart type place where you can get most everything.
- **African Mall**: near the main mall, small but also with some atmosphere. Good fabric store and bakery.
- **Airport Juntion**: newest and nicest mall – indoor and most like a traditional American mall

Movies

New Capital Cinemas has location at Riverwalk and Game City. These theaters tend to play the large blockbuster Hollywood movies, other bad movies from the US, and some Academy nominated movies. Tickets are around P25. Movies show from Wednesday to Sunday. Movies are assigned seating – like going to the theater. They will ask for your seat preference when you buy the tickets.

Sports

- Gyms are found in Gaborone. Most Penn people go to Jack's Gym in the Village Mall or I-Towers (accessible by combi). The gym has a great pool, cardio equipment, weights, and classes. The staff is uniformly nice and helpful. You can pay by day, week, or month. Student rates available as well. There is also a gym in the Broadhurst area and at the Gaborone Sun hotel.
- Virgin Active is the newest and fanciest gym in Gabs but it located in Airport Junction which is far from Pilane.
- Zumba: It has become part of the Pilane Court experience to go to evening Zumba classes held at the school next door. These classes are fantastic and a lot of fun. It is only 30 pula for a one-hour class from 5:30-6:30pm. A Saturday morning class is sometimes available as well at 8:30am. The current tenants at Pilane can provide more information, and you can check out their Facebook page as well (Zumba in Gabz).
- Tennis: Tennis club at Gaborone Sun and National Tennis Center (have to join either of these). One can use the courts at the University of Botswana for free.
- Squash: Squash courts at the Gabs Sun, the National Squash Center (behind the National Stadium) and Jacks Gym.
- Running: National Stadium is open, and you can often see outstanding, young Batswana training there. You will see few runners on the street. There is also nice running behind the stadium on packet sand – towards the Cricket pitch and around the UB stadium and old airstrip. You will need some guidance, but you can take a very long run in the bush by going past the cricket pitch.
- Football: Spectator games nightly on the dirt fields between the National Stadium and the University. If you are lucky there will be some national team games at the stadium.
- Rugby: The Gaborone Rugby Club is located near the Village Mall.
- Cricket: There is a national cricket pitch behind the main football stadium
- Golf: The Club is walking distance from the Gabs Sun. Greens fees/club rental/pull cart rental cost about $25. There is a beautiful course about 15km north of the city at Phakalane. It costs about $50 to play there.
- Ultimate Frisbee: Monday and Thursday nights at 7pm at the Gaborone Sports club in the Village. 30 pula because it is played under the lights at the private club. Great turnouts with lots of ex-pats.

Night Life

Dancing:

- Che Ntemba in Mogoditshane- P20 to enter, and a mix of local music and American pop. Filled mostly with locals. Great scene, but bring ear plugs
- Bull and Bush becomes a dance club late on weekend nights
- Boulevard in Phakalane

Karaoke: sometimes available at the Red Lantern restaurant

Bars:

- Bull and Bush: "English pub" in north part of Gabs. Large screen television to watch sports, pool, and great pizza. Mix of ex-pats and Batswana. Once a month trivia contest. We usually enter at least one team. Quiz night is the last Wednesday of the month at the Bull and Bush. Jonestribe and UPENN have teams regularly in this event which is great fun.

Day trips (You can hire a cab for all or part of a day to take you to any of these places
In Gaborone:

- Kgale Hill: Kgale Hill is located in the southwest part of Gabs. It is a moderate hike, about 3 kilometers to the top. Great 360-degree view of Gabs from the top. Look out for the baboons. *Note: Cars have been broken into when left at the foot of the hill. You can leave your car in the nearby parking lot at Game City and walk to the hill. Because of recent mugging, the USA embassy has advised against climbing Kgale. It is ok to go but go in a group and do not bring anything of value.*
- Gaborone Dam: The only body of water in Gabs! Fun place for a picnic. Can check out the yacht club for sundowners. Can also rent 4-wheelers for a ride around the dam. Sometimes you need a permit, but sometimes an "exception" will be made. There have been some muggings there lately so check it out with some of the locals before going
- Mokolodi Game Preserve: Located a mere 15 kilometers outside Gaborone on the road to Lobatse. Game includes various antelopes, giraffe, zebras, warthogs, white rhino, and elephants. This is a nice and convenient "first safari". You can take guided tours and attend various educational programs on site. It is about P35 for a one-day pass. Make sure you save time to eat at their restaurant. They also have a Sunday champagne brunch + game drive combo which is fun. You can now also walk with cheetahs at the park - but currently you can only do this on weekday afternoons, so it is difficult to arrange with the derm clinic schedule.
- Gaborone Game Park: About a 5-minute drive or 20 minute walk from the flats. It is certainly not very exotic by African standards (antelope, warthogs, zebras and ostrich)., but very pleasant place to spend an afternoon. GGP does not require a 4-wheel drive car (but can only go in with a car) and only 10 Pula. There are several Game View sites where one can sit and enjoy the peace and bird sounds. You need to make reservations to go to the park on the weekends.
- National Museum: Located near the Main Mall and a block from PMH. Nice museum, but not very big. You only need a couple of hours.
- Art: Thapong Visual Arts Center is a cooperative of artists' studios, located near Jack's Gym, across from the old prison in Gaborone Village. Open daily until 6:30pm, Thapong features an amazing collection of resident artists' works that are best described as contemporary African sculptures and paintings. The studios are in shanties scattered around the cooperative, and the artists are always more than willing to talk with visitors. Ask for Barnabus.
- Craft Center: A group of craft stores in the Broadhurst section of town. Open during the week and on Saturdays until 15:00. Here you will find a bunch of ex-pats buying crafts, clothes, and eating at the Italian deli. There is a hair salon here and a wine shop that sells Biltong (local dried meat).
- Local theatrical groups and dance troupes often have events and it is worth looking out for these as they are normally very good and well attended. Liza Rissik tries to circulate the information when she hears about them.

Around Gaborone:

- Thamaga: Small village outside of Gabs known for its pottery. It is a great place to buy souvenirs. Approximately 30-45-minute drive along the road to Gabane, and can catch a bus there at the bus station.
- Gabane: village close to Gabs: can visit the Kgotla (tribal meeting place). There is a pottery studio run by Martin who is very friendly, they also sell beautiful handmade pottery. Highly recommended.
- Oodi: There is a weaving cooperative that one can tour and get local weaving. Easily included on a drive to Mochudi.
- Otsi: There is a crafts cooperative run by Camphill. A very nice ½ day trip. Can also take in the Vulturary outside of town. There is a nice little Barantani Lodge in the village where one can stop for a cold drink. A cheese factory is across the road from the village
- Mochudi: Interesting local museum with a great view of the valley
- Molepolole: On the way to the Kalahari. Can visit Scottish Livingstone Hospital which was started by Dr Alfred Merriweather missionary /doctor, his wife still lives out there. She started the Shepherd School with 8 children, today there are over 500.

Longer trips ***(please refer to the folder marked "Travel Advice" on the google drive for more information or tips on travel from Dr. Williams and prior residents. Especially helpful for how to get discounted rates for your travel)***

With most trips, there are accommodation options for luxury, standard comfort, budget, and camping. **Trips to Chobe, Victoria Falls or Namibia are not possible over a weekend and would have to be done with vacation time at the end of your stay.**

- **Khama Rhino Sanctuary in Serowe**: About a 4-hour drive to the north. It is a good overnight trip and one can stay in a self-catering chalet in the rhino sanctuary. This could be easily done in a weekend.
- **Okavango Delta**: This inland delta is the biggest tourist attraction in Botswana. The camps in the delta are very expensive but are all-inclusive and the most unique part of Botswana. You will have to pay ~$300 for a charter flight to get from Maun to the camps in the Delta but you will not regret it. Great animals, birds, and night sounds of the tree frogs plus incredible scenery. You can also stay outside the park in Maun and do day trips into the delta for a much lower cost. It is possible to do a trip to the Delta over a weekend, but it is a very short costly trip due to the high price for flights.
- **Chobe Game Preserve/Victoria Falls**: In northeast part of Botswana. Chobe has the highest concentration of elephants in Africa. The evening sundowner cruise on the Chobe river is a must. Please request to be on a large boat for safety. The sunsets are amazing, and you will see the game in a totally different environment. Elephants swim across the river and the hippos wallow in their pods. The Chobe River Lodge has self-catering chalets either 2 or 3 bedded. In the past there has been a UPENN rate that was negotiated by Gill, but it is uncertain whether this is still valid. Day trips to Victoria Falls are available.
- **Madikwe**: Right over the border in South Africa. You must make reservations ahead. There are lots of lodging options and different price levels, but none that are "cheap". It is an absolutely fabulous (and romantic) weekend getaway. Just outside of Madikwe is Masela Sela at a far more reasonable price, around P600 a night, which includes a game drive each day + an extra one if you pay for it. Most people have preferred to stay in the park. You can view the lodges at: www.madikwesafaris.com. UPenn has negotiated a discount rate at Tau but this will only be provided for last minute bookings made within 7 days. They also require proof of affiliation with UPenn – an ID badge or recently a copy of your program letter from Dr. Kovarik or a letter written from Dr. Williams has worked. Also check out http://www.bushbreaks.co.za/ for good last-minute deals.
- **Jo'burg**: Five hours by car from Gabs, or you can take a Flight Connect bus from Riverwalk to Joburg airport. Make sure you get a very, very detailed map, as street signs are nearly nonexistent, and it is very easy to get lost (and your trip could be hours, hours long). Northern suburbs are beautiful and safe, but Jo'burg proper is known to be very, very dangerous. Great restaurants and great B&Bs. Some activities include Soweto Township tour, the Apartheid Museum, and various other cultural activities. Remember the Tlkoweng border closes at 22:00.
- **Pretoria:** On the way to Jo'burg, but an hour closer. During season the Jacaranda trees that line the streets are UNBELIEVEABLE in season. There is also an excellent zoo. The Kruger museum is well worth it for an understanding of South African history.
- **Khutse**: gateway to the Kalahari, known for its extreme isolation, picturesque desert scenery and plentiful predators – namely lions. This is also an expensive destination even for camping. There is a new lodge just outside of Khutse that is very nice and the place to go if you are not a camper or if you cannot arrange for a camping trip. **Remember safety first - one should never do this trip without an experienced guide or other persons due to the dangerous predators. Always go with more than one vehicle.**
- **Tuli Safari Lodge**: It is very worthwhile trip. The scenery is beautiful, and the lodge is very nice. One can stay inexpensively in a great tent site on the banks of the Limpopo river. About a 5-6-hour drive from Gabs.

INFORMATION TO HELP YOU BE SUCCESSFUL WITH YOUR WORK IN BOTSWANA

WORKING IN THE HOSPITALS

YOU WILL WORK HARD IN THE HOSPITAL! THIS IS NOT A VACATION! TAKE RESPONSIBILITY FOR YOUR PATIENTS. READ ABOUT YOUR PATIENTS, FOLLOW UP DETAILS. BE CURIOUS AND TAKE ADVANTAGE OF THIS OPPORTUNITY. DO NOT PASS WORK OFF TO THE PHYSICIANS ON THE GROUND OR LONG-TERM ROTATORS. THEY ARE OVERWORKED AND YOU ARE THERE TO BE "YOUR OWN DOCTOR" – YOU ARE NOT JUST AN OBSERVER. You should not think of yourself as a "volunteer," you are here to work like any other rotation of your residency and are an integral part of patient care in Botswana. You will be held accountable to the same standards of conduct and professionalism as you would in your home program. If your behavior or performance is felt to be below what is expected for the RIG rotators, your program director will be contacted.

Global Health

Before traveling to Botswana for a clinical rotation, we highly recommend that you review the global health training material from Unite for Sight: http://www.uniteforsight.org/global-health-university/. In particular, the online (free!) courses on Global

Health History, Cultural Competency, Volunteer Ethics and Professionalism, International Research, and most applicably the general Global Health course, are very useful.

This is an HIV webstudy program that may be useful in preparing for the trip: **https://www.hivwebstudy.org**

In spite of good intentions, international health work that does not follow global health best practice principles can be wasteful, unethical, and harmful. Worst practices are serious public health concerns that create new and oftentimes more substantial barriers to patient care, thereby reinforcing and furthering health disparities and the cycle of poverty. Furthermore, these worst practices most often violate concepts of social justice and human rights. Due to high costs, schedule constraints and complicated logistics, many global health endeavors take the form of short-term medical missions, which undermine the local health care system, cause significant harm, and reinforce poverty. These missions are often labeled as medical tourism or "volunteer vacations" – "short-term overseas work in poor countries by clinical people from rich countries" – and can be seen as:

• Self-serving: providing value for visitors without benefitting the local community.
• Raising unmet expectations: sending volunteers who do not have appropriate language or medical training or accountability who set standards that can then not be maintained in the long term.
• Ineffective: providing temporary, short-term therapies that fail to address root causes.
• Imposing burdens on local health facilities: providing culturally irrelevant or disparaging care and leaving behind medical waste.
- *Inappropriate: failing to follow current standards of healthcare delivery (continuity, access) or public health programs (equity sustainability)*

Although our practices are not perfect, we try in every way to be mindful of the best practices of global health. A large portion of what you will learn from your experience in Botswana will be about global health and how to adapt your practices from home to be ethical and useful within the local healthcare system. This means listening to and learning from the local physicians.

About Princess Marina Hospital (PMH)

There are two parallel health systems in Botswana - the public system and private system. Each system has their own set of hospitals, clinics, and physicians. Care in the public sector is completely free for Batswana, including laboratory testing, hospitalization and medications. The University of Pennsylvania has been working in the public sector, and we have been based in Princess Marina Hospital (PMH) in Gaborone since January 2004. Penn's (not Dermatology's) second hospital site at Nyangabgwe Hospital (NRH) in Francistown has been open since January 2006. These are the two largest government referral hospitals in Botswana. There is also a very important third "health system" -- that of the traditional healer. Most Batswana seek some of their care from traditional healers in addition to the public system. Much of the renal/liver failure can likely be attributed to traditional medications. PMH is the main tertiary care hospital and referral hospital for southern Botswana. NRH is the main referral hospital in Northern Botswana. Both are located near the center of their respective towns. Until recently there had been no medical school in Botswana, therefore, around 90% of the physicians in the hospitals are from outside Botswana (just like us). As a result, most physicians do not speak Setswana, and physicians rely on the nurses for translation (just like us).

The University of Botswana (UB) medical school started its first pre-med class in August 2008. Prior to this all Batswana medical students spent their clinical years at hospitals outside Botswana. Botswana started its own internship program in January 2007 and the first residencies (Peds and Medicine) started in January 2010. There are now also residencies in Emergency Medicine, Family Medicine and Pathology. UPenn is heavily involved in helping with training UB students and residents of so you will have the privilege of participating in this as well. Currently all pediatrics and family medicine residents, as well as University of Botswana medical students, rotate through the dermatology clinic, and **you are responsible for helping to teach them basic dermatology they can use in Botswana**. You will be relied upon to be an important part in the teaching program – both directly and as a model for how an academic program function. There may also be other medical students on service rotating from Australia, South Africa and Ireland. Because there is a nursing school at the University of Botswana, most nurses are local Batswana.

Harvard and Baylor are also working at PMH

The Botswana–Harvard School of Public Health AIDS Initiative was founded in 1996. They actively work on research studies including mother-to-child transmission; mutation rates for Clade C HIV and other biological features of Clade C Virus; Clade C vaccine studies; and several drug studies. They are a branch of the Harvard AIDS Institute, and are located in the multimillion-dollar research laboratory at PMH. They have been very productive in research. They are not involved in inpatient care or medical education. Important players include Max Essex, DVM, PhD (Director of Harvard AIDS Institute); Richard

Marlink, MD (Director of the Botswana-Harvard AIDS Partnership); Hermann Bussman, MD and William Wester, MD. They have no inpatient or teaching presence.

Baylor College of Medicine has been a very important provider of outpatient pediatric HIV care and medical education at PMH. Their multimillion-dollar research and clinical facility, the Botswana-Baylor Children's Clinical Center of Excellence, opened at PMH in the spring of 2003. Baylor is also in the process of building a new Pediatric Oncology Center in partnership with Bristol Meyers Squibb. They have added a number of physicians in the past few years and are now contributing to the inpatient pediatric care and teaching. The Harvard and Baylor programs are large, well-funded, and well organized. We are not in competition. In fact, we all complement each other since we work in different areas. UPenn/CHOP are the only foreign medical schools working at NRH in Francistown

Set-up of Medical Wards

The following is a description of the wards at Princess Marina. As part of your rotation you will be seeing inpatient consults in the medical wards at the hospital. There are two medical wards - male and female, one oncology ward, two surgical wards – male and female, one isolation ward, one pediatric ward, an ICU and two orthopedic wards – male and female. On each of the medical wards you will find seven main "cubicles" of patients. Each cubicle contains approximately ten tightly-packed patients, most on hospital beds but some on the floor. The most tenuous patients are in Cubicle 3 ("high dependency cubicle"), right in front of the nurses' station. Medicine generally runs about 20 beds over the maximum (mattresses on the floors).

Medical teams are called "firms" on the medical wards (also given color names – Pink Team, Blue Team, Green Team). Some of the firms are designated as part of the teaching program and each has at least one PMH intern or Medical Officer (MO). A PMH MO is a physician who has graduated from medical school, completed internship, but s/he has not done a residency. Therefore, an MO could be a new graduate or could be someone who has been practicing for years. Each firm is headed by an attending, called a "specialist." A "specialist" is someone who has completed a residency, and in addition, they often have an area of focus. Penn has full-time clinical specialists at PMH. At any given time, some are working on the wards and clinics of PMH and some are doing outreach training in a number of the surrounding referral hospitals. We also have a specialist working full-time on tuberculosis. Penn medical students and residents are fully integrated into the firms at PMH. MOs and interns are the primary caretakers of the patients, and specialists supervise them with morning rounds three times a week and afternoon rounds on the other two days. (The specialists have morning clinic twice a week.) MOs, interns, and you round on patients every day (except the weekends, unless on call), and perform all corresponding blood tests, invasive procedures, admissions, and discharges. When you are taking care of inpatients, it is very important that you communicate directly with a member of the team. Chart notes are not as carefully read or followed so if you do not communicate your advice directly, it is common for it to be ignored for a few days. It is also important to make sure any critical medications that you advised/ordered are being given by checking the chart and speaking directly to the nurses.

Access to Educational Material

In the flats there is Internet access, and several e-Textbooks are available on our Google Drive account (see below). In the flats are a slightly outdated Pharmacopeia, Sanford guide to HIV-related ID, and most recently a Bolognia 1st edition and a 7th edition DIGM, as well as a Fitz atlas. PMH also has a medical library that has many outdated textbooks. We have been regularly contributing texts to the library to help upgrade the resource. Dr. Williams also has numerous pdf versions of derm textbooks to share on request.

Adjusting

It will take days to adjust to the "foreign" diagnoses, testing available, formulary, charting, hospital geography, language, personnel, and most importantly the limited resources. One of the most difficult things to adjust to is learning how to triage your care. You must think before virtually every decision to determine if what you are doing is necessary and making best use of your limited resources. It is very challenging learning how to prioritize what to work up and what to leave. Coming from a culture in the developed world where virtually no abnormality is ignored (even if it should be) this takes some time. So…prepare for a difficult orientation (we will guide you) and be open-minded (crucial). Be prepared for the frustration of dealing with a new system, inefficiencies, lack of accountability, items being "out of stock", inability to get the lab tests you are accustomed to getting, and deaths that would not occur in the US. Consultants from the other departments can be particularly problematic both by ability and lack of interest. All of this is superimposed on jet lag. **Most people require about two weeks to get past the frustrations and inefficiencies that are part of our work in Botswana. Changes are being made slowly by evolution not revolution.** Certainly, by the middle of your rotation you will feel in pretty good control and by the end regret that you are leaving.

DAILY HOSPITAL/CLINIC EXPERIENCE AND SCHEDULE

Derm Clinics at Princess Marina run Tuesday, Wednesday, and Friday from approximately 8:00 AM until the last patient is seen (typically around 2PM), during which you will see may see anywhere between 15-35 patients. Outreach clinics are in a different location each week with a variable time schedule and typically more patients are scheduled. You may have a nurse (called a sister), a local public health worker, medical assistant, local medical student or local medical resident with you in clinic and one of them should be able to assist with translation. As the dermatology resident, you are responsible for running dermatology clinics, keeping up with the admin duties of clinic, and managing follow up of patients at PMH and outreach sites. Dr. Tori Williams, a US dermatologist employed locally by the Ministry of Health of Botswana working in conjunction with the Botswana UPenn Partnership has been full time in Botswana for 2 years (until Feb 2018). She was a RIG recipient who rotated in Botswana when the clinic was run only by single rotating dermatology residents without supervision or local assistance. She wanted to come back to find a way to provider better care for patients and make the rotation more educational and less burdensome for rotating residents. She has worked incredibly hard to organize and restructure the dermatology clinic to make it more functional, sustainable, easier for you and to most importantly much better for patients. It may be difficult for you to understand why you are being asked to do things in a certain way, but please understand that the structure of clinics comes from years of trial and error worked out by Dr. Williams and others. Because there is so much turnover between resident providers, we must be extra careful about record keeping and follow up. Please follow instructions carefully and do not make changes to the work flow unless you discuss them with Dr. Williams. One of the biggest improvements has been the addition of a local medical officer. Her name is Dr. Karen Mosojane and she is an exceptional physician who Dr. Williams has trained. In the absence of Dr. Williams, Dr. Mosojane will be the supervising physician of dermatology clinics in Botswana. Please respect her and listen to her guidance. Although she had not completed a dermatology residency, she is well versed in the local disease pathologies and most importantly an expert in the local healthcare system. You also may have the assistance of a clinical research fellow working with BUP. However, you should not become overly reliant on the assistance of local providers. You need to pay careful attention when being trained so that you know how to operate independently because there will be days that you are working alone in clinic. You should utilize this rotation as an opportunity to take an active role in coming up with differential diagnoses and treatment plans. **You should be actively reading, doing literature reviews and critically thinking about how to best care for your patients. You should be discussing your ideas with the team to get feedback - this is CRITICAL for complicated patients. Even if a patient will follow up after you are done with your rotation, you can still come up with a management plan to pass on to the next resident, add to the biopsy log** or if appropriate, add them to the "Complicated List" on the Google Drive along with your thoughts on how to proceed with their care. You are expected to be working from at least 8-5 during the weekdays. If you finish clinic early, it does not mean you have the afternoon off. There is plenty of work to be done including completing admin work, reviewing pathology at the lab, reading about your patients, keeping the supply closets organized and stocked, keeping handouts up to date and copies replenished in the file folders and organizing the teaching slides at NHL.

Schedule Overview

- Medicine intake rounds/morning report M, T, W, F at 7:30 in the male medical ward conference room. You should attend this at least once per week during your rotation to get a feel for inpatient medical care in Botswana and introduce yourself to the medical officers and residents you will be working with in clinic and on the wards. Mondays are the best day so that the timing does not interfere with your clinic.
- Medicine and pediatric inpatient consults M-F, 8-5 (non-urgent Thu consults can be delayed until Fri) – these will typically come to you after intake rounds or by speed dial/cell phone/word of mouth. If the patient is stable, you can request that they be brought to derm clinic to be seen which is often easier. The dermatology residents MUST ALWAYS CARRY THE DERM CONSULT PHONES. The numbers are 73282498 and 77583003 and the speed dial is 2331 (other medical officers and residents can call you free of charge from their hospital phone, always list this number at the end of your consult notes). See the inpatient then discuss with Dr. Williams or Dr. Mosojane.
- Dermatology clinic T, W, F mornings: You are responsible for this clinic with the supervision of Dr. Williams or Dr. Mosojane, however there are days when you may be in clinic alone. Clinic starts at 8:00 AM
    - Tuesday clinics occur at the IDCC (HIV clinic). This clinic has the same pool of patients as the Wed/Fri clinics, but derm only has clinic space at this location on Tuesdays.
    - Wednesday and Friday clinics are in the main outpatient medical area (room #4 or #5)
    - Mondays are for inpatient consults, catching up on admin work, especially pathology results, calling back patients with results and reading about your patients. Please consult the Resident Checklist on the google drive for an outline of tasks to be completed on Mondays and throughout the week.
- Outreach clinics on Thursdays: There is an outreach schedule that you will receive. See below for details

The Patient log

A patient log of all patients seen (demographics, where they were seen, and the presumed diagnosis, f/u date, etc) must be kept, as a requirement of the AAD in order to keep the program, and your trip funded. We currently log patients directly during clinic on an excel spreadsheet with a laptop. Alternatively, you can always use the previous method of handwriting this

data and adding it to the patient log once you have computer access. Remember to update/upload the patient log on google drive at least once weekly.

Outpatient Clinic
To start clinic, you will need:

- Your 12-page yearly calendar
- Laptop with your biopsy and patient excel log.
- A nurse, medical assistant or a UB med student or resident who can translate.
- Your biopsy bag/supplies
- The dermatology consult phones
- A bottle of water and snacks for you (also good to bring a lunch because clinic often runs into lunchtime)

Since there are often consults to see and other admin work to do in the afternoon, it is optimal to see everyone you can in the morning even if you go past 2PM. Your translator/assistant may leave you at 1 pm but it makes more sense to try to finish seeing patients instead of breaking for lunch. If you finish seeing all the patients that are registered before noon, this does not mean you are done with clinic. You need to stay in clinic until at least 12:30 to see any patients that show up late. If you leave early, you need to make sure a nurse knows how to contact you to return and see patients if more show up. Although we request all patients to show up at 8am to register, some are driving down from very far away and will arrive in the afternoon. You need to be available from 8-5pm to see patients Monday - Friday. This might mean returning to PMH in the afternoon if you have gone home early - this is part of your job so please do not leave these patients who have travelled so far without care. You may also receive requests to see inpatients at hospitals we do not travel to, such as Scottish Livingstone hospital (SLH, patients often managed by Harvard-associated physicians). These patients can be seen in our clinic, just request that the consulting team arrange for ambulance transport.

Currently there is a shortage of nurses, so it is unlikely that you will find one to sit with you throughout clinic. Malebogo is the nurse currently assigned to dermatology and will be the most helpful to you during your rotation. The nurses can usually be found in room 1,2 or 3. Politely introduce yourself and ask them for assistance if you are having problems finding a translator in the morning or to help with making follow up phone calls for results (best done around 1:30-2pm).

Olaf Rodriguez is a clinical research fellow from UPenn who will be working in Botswana from Sept 2017 – May 2018. Our clinical research fellows are amazingly valuable resources in clinic, but unfortunately cannot perform procedures due to liability issues. Lesego Ndlovo is a research assistant that will be working with Dermatology until Jan 2019.

Dermatology Supplies in Clinic and the Wards
Our clinic supplies are stored either at the hospital or the derm closet at Pilane. Room 4 of the outpatient department now has a large storage cabinet where we keep a small stock of all supplies needed for clinic. You are responsible for keeping this cabinet organized and replenishing supplies from the storage closet at Pilane. There is a hyfercator, a cryotherapy gun and attachment for dispensing, and a microscope that can be used for Tzanck's and KOHs (but the light source is weak and there is only one ocular piece so it can be difficult to see. There are better microscopes at NHL if needed). We have a set of ~20 sterilizable biopsy kits that can be used if we run out of disposable kits. The second small storage cabinet in Room 5 contains some additional supplies. The combination for the locks on both of these cabinets is 103. **Please be aware that anything left out has a risk of being stolen/lost.** When clinic is not happening at PMH OPD Room 4, you must bring a biopsy bag with disposable biopsy kits and anything you might need for procedures and patient care. If the rooms are locked, you ask hospital security to open them for you.

As of January 2016, we have been able to obtain cryogun and access to liquid nitrogen after years of hard work to make this happen. Currently, we are designating two clinic days a month when we will have the cryo canister filled with liquid nitrogen; we have been requesting that patients who would benefit from cryo follow up on this day. The cryo is most useful for our albino population who have extensive sun damage and frequent skin cancers. The cryo canister is kept in the IDCC supply closet (can get key from the nurses in the IDCC lab). It is also possible to fill the canister on other days if it is absolutely needed and the patient cannot return on a cryo day.

There is a large stock of dermatology supplies kept in a closet in flat 2 at Pilane court (the combination is 5643) including things such as 4.0/5.0 nylon suture, disposable scalpels, 3/4/5 mm punch biopsies, Band-Aids, tegaderms, gauze, tape, alcohol wipes, KOH, Giemsa, slides and coverslips, lidocaine, aluminum chloride, an assortment of needles, and N-95 masks etc. Please do your best to keep it organized, and let the incoming resident know what supplies are needed at least 2 weeks before he/she is scheduled to arrive so that he/she may collect them if possible. There is an inventory stock list available on the google drive under “references for clinical duties” folder. Please take time to update this each month to determine what supplies are running low or overstocked. In general, disposable punch kits (or suture removal kits which function well for punch biopsies) and kenalog are always needed. Other supplies wax and wane. Formalin tends to leak on the flights and is available from the

histology lab. Bottles are usually available in clinic. **Please be sure to restock the biopsy bag after you use supplies each day.** Bringing supplies from the US makes your experience in clinic easier and more efficient, however, not all residents are able to bring supplies so there may be months when you must rely on all local supplies which have variable availability.

Procedures that may need to be performed on consult patients include punch or shave biopsies, scabies preps, Tzanck smears, KOH preparations, and fungal and bacterial cultures. Make sure to carry EVERYTHING you may need with you in the biopsy bag at all times at the hospital. It is very difficult to find anything on the wards, so it is important to have everything from alcohol wipes to tape and slides with you for consults.

Generally/sometimes obtainable from the hospital are: cotton swabs, purple-topped specimen bottles, 10% formalin (at NHL or in a large jug on top of supply closet in room 4), distilled sterile water, slides and cover slips (microbio), culture swabs and bacterial/fungal culture medium (from micro lab, but we currently use culturette swabs from the US), KOH (microbio), lidocaine (procedure rooms), syringes/needles, and more N-95 masks (on the ward or in IDCC clinic). You can order these supplies through the OPD nurses.

Patient encounters
When patients come in the room, they will give you the number they were given at registration that morning, and they should be more or less in order from 1 through the end (20, 30, 40....). They will also give you their medical record cards, on which you will write their note. Unlike those in the USA, notes at Marina are written entirely for communication and patient care. We do not have to "buff" the charts with medically extraneous information that is required for billing; so, make the notes short, pertinent, and of course legible. Exams are generally focused.

Prescriptions are done right in the Assessment/Plan portion of the note. You need to write out all instructions, including how much to dispense and # of refills (generally written as # of months out of twelve (e.g. 3/12 for a 3-month supply, 5/52 for 5 weeks supply....). The pharmacy at PMH can compound agents and we utilize this for topical steroids. You must indicate an amount to be dispensed – generally sizes are in multiples of 25g for compounded medications: 50g, 100g, 150g, 200g, 250g (difficult to get amounts larger than this). Some medications need a special-order form. At outreach clinics more medications will need special order forms including tretinoin, aldara, chlorhexidine, bactroban, cyclosporine, azathioprine, cellcept, A listing of the available dermatologic drugs and those which commonly need a special order form is included in this manual (Dr. Williams will also give you the most up to date printed formulary to include what is out of stock at the moment). Medication supplies are highly variable, so it is best to call the pharmacy and ask for anything the patient critically needs.

Booking/Appointments
The patients all show up first thing in the morning. When patients register, they are given a number on a first come-first serve basis. We see the patients based on the order of their registration number but always use your clinical judgment to see sick patients sooner. Prisoners, elderly, inpatients and babies are allowed to cut in the line.

Appointments are made by hand on a calendar that you will carry in clinic (12 monthly pages).

The calendar will only be partially accurate. Prisoners are generally allowed to show up without a booking. If there are too many patients to see, you may choose to have some of those without bookings come back for another scheduled day. This should only be a problem if you are in clinic alone. You MUST tell them first thing in the morning – they do not mind coming back another day if they are told early, but they will mind if they wait all morning and then are told to come back another day once they have been waiting for hours. During clinic, you will also have a small flow of patients who just received a referral for dermatology and are there to make a booking. Sometimes, these patients can get mixed in with patients who actually have appointments for that day. You can choose to see these patients the same day if you have time or to make them a booking for another day.

There is a much larger number of patients needing/wanting derm appointments than our clinic can handle. As a specialist, we ideally should be seeing patients for consultation, coming up with a treatment plan then referring them back to their primary local doctor. In this way we provide more sustainable care for our patients in the long term. Remember to discharge patients to follow up as needed if their condition is resolved or refer patients back to general medical clinic or their local clinic if their condition is benign/chronic and you have a management plan outlined. Doing so, along with spacing out follow-up where possible, will open up slots in clinic for new patients and patients with chronic severe conditions.

Referrals and Colleagues
The other specialties available at PMH are: Rheumatology, Pulmonology, Endocrinology, Renal, Cardiology, Oncology, Neurology, Ortho, STI Clinic, Urology, ID, Eye Clinic, Dental, OMFS (functions like ENT), General Surgery, Gynecology
When making referrals you must be very direct and specific with what you want the physician to order/perform. If you just write "work up" – they may just do nothing!

The IDCC is the outpatient adult HIV clinic on the grounds of Princess Marina Hospital. This is a very high-volume clinic with lots of skin disease. Since these are outpatients, you should see consults from this clinic as soon as possible so that the patients do not have to wait too long for your services. These consults may come as regular bookings. You also may receive phone calls from the physicians asking to see patients more urgently.

The Baylor International Pediatric AIDS Initiative (BIPAI) runs the outpatient pediatric HIV clinics in the Center of Excellence (COE), which is located on the campus of Princess Marina. Dr. Mogomotsi (Mogo) Matshaba is the Clinical Director, and it is very important that you introduce yourself to him and to the other pediatricians at the center if you share any patients. These physicians run both the inpatient and outpatient pediatric services at Princess Marina, and they also will call you for inpatient and outpatient consults.

Pathology and other Tests

Biopsies can be done in clinic using disposable kits or sterilized kits. Sterilization has become difficult, so we try to use the disposable biopsy kits first until they run out. If you use a sterilizable kit – put the used items in the sink after use and rinse off any blood. Then put them back in the bag which they came in. Give the used bags to one of the OPD nurses and inform her of the need to turn them in and pick up a new "Skin Clinic Kit". You must closely follow up with the nurse to ensure a clean kit has been picked up and returned to you.

You must get patient consent prior to doing biopsies, ED&Cs or excisions. There are consent forms found in the handout file folder. If the patient is <18 you must get consent from a parent (this can be done verbally over the phone).

BE CAREFUL WITH SHARPS AND FLUIDS. Wear goggles get sharps into the container immediately, and control the environment of the room. You will be given instructions by Liza at orientation about what to do in case of an exposure, and you will have a dose of Truvada/Darunavir (provided by Liza at orientation), with you at all times, just in case. See below for details on what to do-- we will take care of you.

Limit biopsies to only cases where histology will affect management, and where a therapeutic trial is not a good option.

The oncologists need tissue confirmation of Kaposi's sarcoma and other cancers before they will start chemo for widespread disease, so we tend to do a lot of biopsies for r/o KS. Special stains including PAS have a tendency to get lost and delay results significantly-- try to avoid biopsies meant to differentiate between tinea and eczema (do KOH for this). Tzank smears should be done to r/o HSV/VZV. A review of other bedside exams that are very useful in clinic can be found under the "lectures" tab on the google drive.

The biopsies should be taken, along with an acquisition form (marked Urgent DERMATOLOGY and highlighted), to the National Lab across the street for processing. It is imperative that you write complete clinical descriptions and differential diagnoses to accompany each specimen.

You are responsible for following up on all results of biopsies taken by the dermatology residents (including the ones who came before you) and recording the results in the biopsy log.

- As soon as you do a biopsy, enter the data that you can into the biopsy excel log on your laptop as well as the biopsy book (a small book where you will collect the accession stickers). For biopsies done by Dr. Mosojane– enter data from her pathology forms into the biopsy log. It is helpful to take a photo of her path forms to allow you to have access to the history for making the clinical PowerPoints.
- Schedule the patient to follow up in 4-6 weeks to get results. You must also record a phone number (or ideally two), but this should NEVER be *instead* of scheduling a follow-up. Patients are often very hard to reach by phone.
- Record the follow up date in the biopsy log.
- If a patient is complicated or has a severe/life threatening skin condition, be sure to discuss them with Dr. Williams and/or Dr. Mosojane, as well as add the patient to the Complicated Patient List on the Google Drive.
- After clinic, take the specimens across Chuma/Notwane street to the National lab (NHL) on the 2nd floor, turn right, enter the histology room on the right. Ask the person at the computer immediately inside the door to log in the specimen. Write on the top of the paper order "Derm Urgent" and highlight this. She/he will give you a sticker with a PS (surg path) number on it-- stick this into the paper biopsy book and record it in the biopsy log. **Never leave the National lab until you have these stickers.**
- Backup the biopsy log onto Google Drive at least once weekly (see below for instructions).

Getting biopsy results

When dermatology specimens are ready to be read, they are supposed to be placed in a pink cardboard box in the back of the histology room. Walk into the room where you turned in the specimens, go through a door at the back of the room, and look

on top of the fridge immediately on the left. If you have trouble ask one of the histotechnicians setting in the room (Lancaster, Thapelo, Tato, Edson, Boi, Misha). Take the slides and review them yourself on one of the free scope (generally there is one in the room just across the hall-- KK sits in that room and is very nice and helpful-- he or a colleague can usually set you up). Triage the slides by writing your thoughts on the back and prioritizing patients that are very ill, have a suspected cancer or other serious condition. Please bring anything to Dr. Williams or Dr. Mosojane's attention immediately if you are concerned for an urgent/severe illness.

Then you will review the slides with a local pathologist - either Dr. Feng, Dr. Ramos or Dr. Mohan. They may wish to review them right then or ask you to come back at another time. If there is anything urgent, please bring this to their attention and politely ask that they review it immediately if possible. Please be respectful of the local pathologist's time, as they are very overworked. If the local pathologist is comfortable with a read, they will sign out the case themselves. If they need extra assistance, they will request dermpath consultation. Dr. Carrie Kovarik and Dr. Kari Wanat both read our slides in their spare time. To have them review cases, you need to get the slide scanned and notify them of which cases need to be read. We are currently using the Ventana Slide Scanner to share slides digitally. Each week as derm slides are produced, Thapelo Bale or Thato (histotechs) should be scanning and assigning all our cases on the slide scanner. (Please see Appendix for details on how to access scanner online). You need to send an email to notify Carrie/Kari when new slides are ready to be reviewed (usually once per week or more frequently if urgent cases come up). Send an email to Dr. Kovarik, Dr. Wanat, Dr. Williams, Dr. Mosojane and anyone else who is on the care team at the time (Carrie.Kovarik@uphs.upenn.edu, kwanat@gmail.com, tori22@gmail.com, kimos89@gmail.com). There is a template for how to format these emails on the google drive under "references for clinical duties" folder. Please triage the cases and clearly label anything as urgent when you need a read quickly for a sick patient. Carrie or Kari will email you the read and she will consolidate the clinical/histology photographs/reads into one file on Google Drive for easy reference.
Please see below for instructions on using our Google Drive account to facilitate this exchange of information.

Record the biopsy result in the biopsy log excel file, and when you get back to the National Lab, enter it into IPMS under Dr. Kovarik's username (see Appendix). Remember to keep a log of which specimens need to be entered into IPMS so that you do not lose track.

Note: You must print out all path reports for any cancer diagnosis. Oncology requires a hard copy of pathology reports before they will book a patient. Patients can obtain a copy from National Health Lab, or you can also print reports in the room across from the histology lab or in room 1 in the OPD. In general, once a diagnosis of KS has been made, the report needs to be printed and the patient should be called to come to clinic to pick up their report. When they come please order CXR, abdominal ultrasound, FBC, RFT, LFT and refer to oncology. Oncology has requested that we complete these additional tests prior to the initial Onc visit to expedite their work up/treatment plans.

Note: There is a copy machine on the first floor of NHL if needed for forms or patient handouts. You can also print from the computer in Room 5 or ask one of the nurses to make copies for you.

Please note that path specimens have a tendency to get severely delayed or lost. The pathology team is overworked and short staffed. Check in with the path staff daily for slides that are ready to be reviewed. On the master patient and biopsy log excel sheet, there is a running list of slides that are pending from the national lab. This needs to be updated each time slides are signed out or new biopsy accession numbers are acquired**. Print a copy of the list of pending slides from the NHL every Monday and discuss it with one of the histotechs then tape it on the wall above the computer in the back of the lab. This is very important, if we do not give the histotechs a list of our slides to pull, they generally have not provided us with any slides**. Each week you should check the status of biopsies by entering the specimen # into IPMS at the National Lab to see what stage of processing it is in (accepted in lab, grossed, assigned to a pathologist, signed out, etc-- see Appendix). If it is not obvious where the slide is, ask one of the histotechs to help locate it. In a worst-case scenario, slides can be recut from the block if they are truly lost. If the block is lost, you will have to repeat the biopsy.

After you have signed out a path case, write the diagnosis on the slide then store it in our slide boxes which are kept in a cabinet in the room across from the histology room. There are general storage boxes divided up by year and then there is a teaching set. If the slide is a good example of a diagnosis, please add it to the teaching set. The path requisition form should be stored in the large binder in the same cabinet. Please keep this cabinet clean and organized.

When you have a slide that you would like to photograph yourself, you can use a photo attachment which can be found in the term storage closet at NHL. You remove the eyepiece from a full microscope then insert the attachment. You then snap the resident iPhone into the viewing apparatus to take photos of the slides. When the slide scanner is down, we use this attachment to photograph slides for dermpath consultation. Dr. Feng also has a camera attached to the microscope in her office, please ask for assistance from her if you wish to use this.

Handing off the biopsy book/log to the next derm resident is a **crucial part of your role**. **It is also VITAL that you pass off a "sign out" of information on inpatients, severely ill/complicated patients or things that need to be followed up urgently.**

Microbiology

- Culture swabs must be placed in vials containing transport medium and vials can be obtained from the micro trailer or the culture media room in National Health Lab. As of May 2016, the lab is also willing to accept culture medium from the US, which is good because contamination of the NHL medium has been a problem.
- For tissue culture specimens: you need a separate urine specimen cup for each type of culture. Place sample in cup and add a small amount of sterile saline. Please do not cut up a single 3mm punch for H&E and tissue cultures. Please perform a separate punch for tissue culture and H&E.
- Each micro test (bacterial, mycobacterial (the lab only performs AFB microscopy), and fungal cultures) needs its own accession form. Bacterial cultures should be ordered in IPMS. Take the forms to the main lab to be entered into the system, and to get an associated accession number. Enter this number into the micro log which is a tab on the excel spreadsheet.
- Take bacterial and mycobacterial specimens around the corner to the micro trailer to drop off. Please put on gloves before you hand off specimens to lab workers.
- Bacterial and AFB results should be available within 3-5 days. Our results are kept in a folder marked "Derm Results" that can be found in the micro trailer.
- Fungal cultures should be taken to the mycology lab at NHL on the second floor, down the hall from histology (turn left from the stairwell). Please introduce yourself when you walk in the room to drop off specimens. You will also find results in this room. Fungal results take 4-6 weeks. We have had very low yield with getting pertinent results from our fungal tissue cultures, often due to contamination.

Other labs

Chemistry and Hematology tests can be ordered through IPMS (see appendix), or on paper when IPMS is down. The nurses or UB residents in clinic with you can be very helpful to assist with ordering these on IPMS. If you order a test on IPMS, you will be able to view the results on IPMS. If you order by paper, you will not be able to see results unless the patients get their results printed directly from the lab. Nurses can also retrieve a print out of lab results printed on paper for you by request. Bacterial cultures can also be ordered on IPMS and results retrieved on the computer.

NOTE: Flow cytometry for CTCL is available, and is done by Diagnofirm

- Send patient to PMH main lab with Diagnofirm form completed AND two PMH hematology forms completed -- one for FBC and one for "Other: flow cytometry CTCL panel, **TWO lavender EDTA tubes**"
- Courier goes to Diagnofirm **only on Tuesdays and Thursdays around 12PM**
- After you order flow, follow up and check that it was received by going to the first floor at NHL. There is a lab receptionist behind the glass doors who can search for the patient in the intake booklet. She can confirm if the specimen was drawn and that it was sent to diagnofirm

The National Health Lab receives the results and enters them into IPMS, which can take a long time. Recommend calling Diagnofirm directly (395 0007) and having them email results to you. You can also contact Dr. Mohan (mohansn@yahoo.com, 72590406 if you are having difficulty obtaining the results.)

Outreach Clinics

Affiliated with Princess Marina Hospital is an Outreach service where internists and specialists travel to public hospitals outside of Gaborone to provide consults to patients.

There are four dedicated outreach sites for dermatology, Kanye, Lobatse, Mahalapye, and Mochudi, that we will be visiting, and there is a schedule of attendance for the clinics which you will be given over email.

Preparing

- PMH has agreed to provide free transport for the residents going to outreach clinics on Thursdays.
    - You must fill out a transport form with the correct date and hospital superintendant signature on it each week.
    - Pick up time will vary depending on the site and if a lecture is being given. The earliest pick up time possible is 6:30 am. In general, Mahalapye is 6:30, Lobatse and Kayne are 7:00 and Mochudi is 7:30.
    - Turn the form into the transport cubicle across from the Private Ward at least 3 days in advance. ONLY give it to the man who sits at the desk to the far right.
    - Currently we have been having the superintendent fill out our transport forms in a bundle at the beginning of each month and Dr. Mosojane has been coordinating this.
    - If for some reason transport cannot be arranged via PMH, cabs can be hired for P400-P900. That cost will cover them for the day, so they should generally wait for you and take you home when you are finished around 2-3pm.

- You will be giving clinical lectures at outreach sites. You are responsible for determining which sites will be requesting a clinical lecture from you during your first week in Botswana. Dr. Mosoajne will assist with this. Remember your talk needs to be basic and medically relevant to non-dermatologists. It should be no longer than 45 minutes. We currently do not do a lecture at Mahalapye or Kanye due to our inability to reach the hospital in time for their morning conference.

Outreach Duties:
The dermatology residents have been traveling to these outlying hospitals to provide dermatology consults primarily to outpatients for the past 6 years. Clinic functions the same as at Princess Marina Hospital and uses the same formulary. However, medication supplies can vary greatly at outreach sites so please check with the pharmacist at the outreach clinic to see whether key meds are in stock (eg betamethasone, clotrimazole, etc). Some outreach sites are also unable to compound topical steroids. In these cases, we counsel patients on how to mix the steroids themselves.

Also, it is appropriate to let the local physicians know you are available for inpatient consults and see them as necessary. Biopsies and cultures can be performed and transported back to PMH. It is best to get an email address or phone number of the doctor you work with so that you can email or communicate the biopsy results by phone. There are labs with microscopes in all the hospitals to perform KOHs and Tzancks.

If a patient needs dermatology follow-up you can scheduled them on an upcoming outreach day for that site. However, you should always attempt to see if it is possible for patients to come to PMH for follow up (especially for closer sites like Mochudi and Lobatse). The outreach sites are heavily booked out so only make follow up visits for patients who cannot be adequately managed by a local clinic physician. Also, since all f/u will likely be done by a different resident, please try to take photos of difficult cases to pass on to future residents and note that you have taken a photo in your exam section of the note.
~30 patients are usually scheduled per day in the outreach dermatology clinics. Number of patients vary greatly- so do not be surprised if more than 30 patients show up. Typical dermatology cases range from common complaints such as acne, eczema, and drug rashes to more severe presentations such as extensive vitiligo, ulcers, infections, or genetic diseases.

You should definitely plan on seeing more people than just the patients who are scheduled. Numerous local villagers, nurses, doctors, and doctors' families will also want to be seen. Please be flexible and see them as well (time permitting), as they have few opportunities to see a dermatologist. Outreach is a wonderful experience that allows the resident a chance to see patients in rural areas and collaborate with doctors outside of the PMH system.

The Princess Marina Inpatient Medicine/Pediatric services and Dermatology Consults
Rounds begin shortly after the morning intake report is completed (around 830-900). The team composition will vary. All of the teams are integrated including Marina interns, MOs, and Penn people. In some situations, the residents will lead rounds, in others the specialist. Most teams gather the pending laboratory data prior to beginning rounds. Rounds usually start in the ICU or private ward and continue onto the main medical ward. Each patient on the service is seen in turn and the daily plan established and carried out. Rounds continue until 1200-1300. At 1300 visiting hours begin, and the ward is flooded by families and relatives, making it virtually impossible to continue work.

When called to see a patient on the inpatient service, you will need to write a note in the chart, in addition to discussing your assessment and plan with the referring resident physician. When you are called for a consult, always try to get a name and number for the referring physician and find out which team they belong to (Pink, Green, Blue) to make communication easier. You can also request that the patient be brought to clinic if they are ambulatory. The doctor's notes section is the area of the file where the daily progress notes are written. Just like in the outpatient setting, notes should be clear and to-the-point. All non-pharmacy orders (e.g. nursing orders, transfusion orders, diet orders, IVF orders, etc.) go into the note. But everything needs to be reviewed with a nurse to ensure that it gets done. Do not forget to write a note every time you see the patient - they can be very brief but still need to be documented.

If you would like to start the patient on a medication, try to discuss this first with the referring physician and primary team. All drug orders need to be completed on the official medication sheets, which usually are found at the front of the file. The names, dosages and availability of many medications are quite different than what you may be accustomed to in the United States, but you will quickly catch on as you become more accustomed to PMH. Below in this guide, there is a list of the dermatologic medications available on the formulary.

All laboratory orders and procedures are taken care of by the medical team, but it is important that you personally communicate any labs or procedures you wish to order. The primary teams are very overworked and often do not see our recommendations in the chart. In general, you need to follow up with the resident taking care of the patient several times to ensure that what you recommended gets done. The nursing staff is usually willing to assist you with any procedures, but you are responsible for doing them, ordering the appropriate tests, and cleaning up after yourself.

If a biopsy is needed on an inpatient, attempt to discuss this first with the resident on the primary team but this is not necessary if you are unable to find them. Remember to get patient consent, take photos, record patient info in the patient log, record all biopsies in the biopsy log/book, get contact info for the patient and schedule them a follow up appointment to review results.

RECORD KEEPING: **GOOGLE DRIVE ACCOUNT**

We use Google Drive to facilitate much of the data backup and record keeping, which used to be kept in excel files saved on relatively random hard-drives.

To Access:
Go to drive.google.com
Username is: BUPDerm (not case-sensitive)
Password is: botswana (case sensitive)

You can work directly online or download the file, edit it, and upload when convenient.

We recommend that each evening after work, you log onto the drive and do the following:

- Upload the biopsy log to the google drive so there is a backup. This must be done at least once a week!
- Create ppt files for photos taken that day, this must be done for every patient biopsied. **Add as much history and detail as you can remember** to each powerpoint file so that if the slide is read by Dr Kovarik or Dr. Wanat, the clinical information will be easily accessible. Dr. Williams also reviews cases to determine treatment plans, so it is very important to be as detailed as possible.
- Add any complicated patients you have seen to the Complicated Patient List on the drive. Please read over the whole list to familiarize yourself with the complicated patients you may see coming through clinic.

Photography

- ***You must get patient consent to take photographs. If the patient is under 18, you must have parent consent. Consent forms can be found in English/Setswana in the handouts file folder. These should be left in the back of the folder when completed.***
- Use the Derm Resident iPhone for taking clinical photographs.
- Take a low power photo of your completed note which includes the patient name or label.
- Lighting is very poor in most of our clinic rooms so check your photos to make sure they are coming out well. Flash may or may not be appropriate depending on the lighting. Tap the screen to make sure you are in focus.
- At least once a week ensure that the photos on the iPhone are backed up to the Google Drive. When you have Wi-Fi click on the "Google Photos" icon on the phone's applications and then going to the "Assistant" tab. You should see a notification that the photos are backing up. You should also check on the Google Drive on your desktop to ensure all your photos have been uploaded before the end of your rotation.
- **THE PHOTOS YOU TAKE IN BOTSWANA ARE NOT YOUR PROPERTY. IF YOU HAVE OBTAINED CONSENT, YOU MAY USE THEM FOR TEACHING PURPOSES. YOU MAY NOT PUBLISH ANY PHOTOS OF PATIENTS FROM BOTSWANA WITHOUT CONSULTING DR. WILLIAMS ON THE LOCAL APPROVAL PROCESSES. YOU ARE NOT ALLOWED TO PUBLISH CASES OR PUBLISH ANYTHING RELATED TO YOUR WORK IN BOTSWANA WITHOUT DISCUSSING THE LOCAL APPROVAL PROCESS WITH DR. WILLIAMS.**

Specific Disease Tips

- Kaposi Sarcoma*:* A common referral because the oncologists require tissue diagnosis before starting chemotherapy for widespread disease.
  --We use template notes to ensure all pertinent history is documented. There is a template for New KS Patients and Follow ups.
  --The clinical spectrum is wide. Many cases are classic, but it can fool even seasoned dermatologists sometimes.
  --Consider KS in any patients with massive lymphedema (Elephantiasis nostra verrucosa). Note that filariasis is *not* endemic to Botswana.
  --However, many patients referred in have alternative diagnoses, most commonly lichen planus, psoriasis, lichen simplex chronicus, stasis dermatitis.
  --Check the mouth: if there is evidence of KS in the oral mucosa, it may be elsewhere in the GI tract and might suggest a risk of a GI bleed. Check a stool guaiac if able, and/or ensure rapid access to Oncology.
  --if a patient has recently started ARVs, KS associated IRIS is common and severe facial swelling is a hallmark sign of this. These patients can get very sick quickly and have a high mortality rate - need to rush their results and get them into Onc quickly.

— Please refer to the KS Treatment Guidelines in the Clinic Resources Folder to guide your evaluation and management of these patients.

- Leprosy is uncommon in Botswana, but we do have cases now and then. Must refer all cases of confirmed or highly suspected Leprosy to the TB clinic who controls the MDT treatment. The Ministry of Health provides drugs for them, screens all contacts and assures a steady stream of medications.
- Eczema is one of the most common diagnoses you will see due to the dry weather and cultural tendency to bathe frequently and use heavily scented products. There are multiple handouts available to guide your treatment and counseling for these patients. Counseling is the most vital part of these visits.

- HIV-associated photodermatitis: May be from drugs (eg sulfa, anti-hypertensives, some ARVs) but HIV itself predisposes to photosensitivity. Patients fairly often presents with the end-stage, chronic actinic dermatitis. Consider Pellagra too. We do not biopsy this because the results are typically of little utility to identifying the etiology and/or changing management.
- Evaluation and management of pruritic papules of HIV
    - Pruritus may be increased at low CD4 counts, so even traditionally non-pruritic eruptions, such as acne, bacterial folliculitis, may itch in this population)
    - Partial differential: Pruritic papular eruption of HIV (may be a pool of many diseases), eosinophilic folliculitis, Pityrosporum folliculitis, scabies, arthropod assault, follicular eczema, prurigo nodularis, et al.
- Severe variants of psoriasis (including rupioid, erythrodermic), seborrheic dermatitis, PRP, lichen planus, atopic dermatitis (especially children with severe eczema).
- You will often need to try to differentiate tinea from eczema or psoriasis. If a scraping is not feasible, it is generally better to take your best guess and treat empirically with close follow up, rather than perform a biopsy (which will likely require a PAS stain, causing lengthy delay). Of course, there may be situations where this is not true.
- SJS/TEN, generally from Neviripine (NNRTI) or cotrimoxazole. Many patients also on Sulfa drugs. Risk of SJS/TEN rises as CD4 count decreases.
- Severe acne: Isotretinoin (RoAccutane) is not currently available but if it becomes available again, please refer to Roaccutane Guidelines in the clinic resources folder.
- Other common diseases: HSV (including eczema herpeticum), VZV (including primary varicella and disseminated zoster), connective tissue diseases (SLE, SCLE, DLE, RA, scleroderma, dermatomyositis), CTCL (patch and tumor stage), widespread tinea, Syphilis, molluscum, bullous impetigo and other pyodermas in kids, HPV-disease (verruca vulgaris/plantaris/plana, acquired epidermodysplasia verruciformis, condyloma, vulvar cancer, verrucous carcinoma), albinism, large skin cancers (melanoma, SCC, BCC), multifocal fixed drug eruptions, immunobullous disorders.
- Disseminated deep mycoses: Endemic opportunistic pathogens include Crypto >>> Histoplasma >> Blastomyces, Emmonsia species, et al.
- Cutaneous manifestations of TB: uncommon, but the "id" reactions are probably the most often diagnosed (erythema induratum, lichen scrofulosorum, papulonecrotic tuberculid), and if not diagnosed before they self-resolve, it may be a missed opportunity to diagnose TB at an early stage. Refer to TB clinic for work-up and treatment.
- There was a measles outbreak a few years ago. Keep it on your radar.

HIV

Needle Stick Exposure and PEP

The risk of needle stick exposure is quite real. Most sticks occur when you are rushed or stressed. In the event of a potential exposure immediately stop working, take your first dose of PEP, and notify your clinical supervisor. We will take care of you.

Please note, just as in the United States, you must report all needle stick exposures and other risks, to your supervisor. Your information can be kept confidential if you choose, but we like to know the circumstances surrounding incidents so we can work to prevent them and to make sure that you receive appropriate follow-up on return to Penn. Your clinical supervisor will discuss this with you in country. **See Appendix 9.**

HIV/AIDS in Botswana

HIV/AIDS surveillance has been taking place since 1990 in various settings in Botswana. The prevalence is close to 40%, making it the country with the second highest percentage of adults infected. As a result, one-third of children are "AIDS orphans."

A number of factors have contributed to this prevalence:

- Excellent roads with the vast majority of the population located in a relatively small geographic area.
- Customarily, men have a minimum of 4 homes and have at least one sexual partner in each location. These homes include the village dwelling or homestead, usually the principle home; the cattle post; lands for arable farming; and the urban home.
- Rapid movement between the homes, resulting in only narrow differences between rural and urban HIV infection rates.

- Premarital sex and teen pregnancy are fairly normal.

Botswana's Response to HIV/AIDS
In the past five years Botswana has created and put into place an extensive HIV prevention and treatment program. This has required the development of an entire HIV management infrastructure since very little was in place. As with all other aspects of health care the program is free to all citizens (they have national health care). **Anti-retrovirals (ARV's) can only be prescribed or changed at one of the treatment sites (we can continue medications on admitted patients).**

At the present time there are over 32 ARV sites around the country caring for over 75,000 patients. This is remarkable given that there was essentially no treatment as recent as 2005. There are over 17,000 patients registered at the clinic at PMH making it the **largest HIV clinic in the world!**

Who is targeted for the ART program?
All infected patients get started on ARV's if they have a documented HIV (+) test. Pregnant woman are also a target group for treatment. First line therapy in Botswana is Combivir and efaveranz or nevaripine or doltragavir(women of pregnancy potential).

HIV Testing in Botswana:
As of March 2004 HIV, testing has been done on an "opt out" or routine basis. Therefore, extensive counseling and an in-depth consent procedure is not required. **Every patient of undocumented HIV status should be tested (unless they decline)**. This is one of our outcome's measures. We cannot manage HIV successfully if we do not identify those infected before they are seriously ill. Rapid testing is readily available in every hospital setting. There is no need to confirm HIV positive tests (whether done by rapid method or ELISA) with a western blood testing since the prevalence is so high in Botswana. Patients can now also be sent to a special clinic set up with the sole purpose of testing for HIV and counseling positive patients on what to do next. The UB residents and nurses can help you refer patients to this clinic.

Well that's it for now (except for the Appendices)... Enjoy your time on the wards at PMH and please once you return to the States let us know how we can improve the experience at PMH and what more information you'd like to see included in this document. Send your ideas and suggestions to Dr. Kovarik at Carrie.Kovarik@uphs.upenn.edu , Dr. Lipworth at alipworth@gmail.com and Dr. Williams at tori22@gmail.com.

APPENDIX 1: Glossary of acronyms

BUP: Botswana UPENN Partnership
UB: University of Botswana
ACHAP: African Comprehensive HIV-AIDS Partnership
IDCC: Immunodeficiency Care Center, the HIV clinic at PMH
KITSO: National HIV training program
BOTUSA: Botswana-USA partnership
BONASO: Botswana Network of AIDS Services Organizations (sp)
BONEPWA: Botswana Network of People Living with HIV/AIDS

Medical Acronyms
CCF: Congestive cardiac failure
PTD: Pulmonary tuberculosis
ATT: Anti-tuberculous therapy
PMTCT: Prevention of mother to child transmission program
CI: Clinically immuno - suppressed – not HIV tested but looks like it
ARV: Anti-retrovirals

APPENDIX 2: MAIN OUTREACH CONTACTS:
Mochudi
Dr. Farrar: 72527079, farraroh@yahoo.co.uk
Alternatives: Dr Onyach, Chief Medical Officer
Email home coonyach@info.bw
Mobile 7186 0095
Dr Mahbub: mobile 7141 9490

Kanye

Dr Mungandi-- Acting CMO
mobile 77018844
work docinnocent@yahoo.com

Lobatse

Dr. Lecoge (Superintendent)
Landline 5315623, 5315669
OPD Nurse: Talane 75321104
Dr. Moshabesha 76208649 (person to call to schedule lectures)

Mahalapye

Dr. Khumalo
Cell: 74232334, Email: mkhumalo@gov.bw
The hospital number is 471-8000
Alternative: Dr. Tshitenge (Family Medicine)
cell: 71550036,
email: stephotshitenge@yahoo.com

APPENDIX 3: Important Phone Numbers/Addresses

(Note: all cell numbers start with 7, all land lines start with 3)

Derm phones	77583003, 73282498
Dr. Victoria (Tori) Williams	75331911; tori22@gmail.com
Liza Rissik	work+267355-4855, cell+26772214170
Princess Marina Hospital:	3953221, 3621400
USA Embassy	3953982
National operator:	100
International operator:	101
National directory:	192
International directory:	193
Direct dial to USA:	001-area code-number
Direct dial to South Africa:	0027 – (11 = Jo'burg) + phone number

Address of Pilane Court Flats, Plot 154/155, Ext 9, Gaborone

PASSWORDS

- COMPUTER LOG-IN FROM WINDOWS SCREEN – "hospital" or "pmh01"
- IPMS logo password – "ipms"
- Dr. Mosojane's log in info - Username: MOSKAR00 Password: TUMI27
- Malebogo's log-in info – Username: RALMAL00 (double zero) Password: STHEMBISO. Use WILVIC (order entry live)
- Dr. Kovarik's log-in info – Username: KOVCAR00 (double zero). Password: upennbw12
- Dr. Williams's Log-in info Username: WILVIC01 Password: SKIPPY Order entry: WILVIC

APPENDIX 4: **Checking on slides in IPMS**

1) Log on to IPMS using Dr. Kovarik's username/password
2) Click "Live Laboratory"
3) Click "Inquiry"
4) Click "Print Specimens (Internal)"
5) Enter the number of the specimen as "PS_ _ _ _" or scan the barcode from the biopst book
6) Press enter
7) click "Short form Y"
8) See the 4-letter acronym listed
   a) RLAB = Received by lab
   b) RSRS = Received in Grossing
   c) GRSS = Grossed
   d) STAI = Stained
   e) ASSP = Assigned to pathologist
   f) SOUT = Signed out
9) If either ASSP or SOUT, Press F12 twice in a row to see who it was signed out to, or how it was read

10) Look at the report, with a pathologist's name on it (Kayembe, Zhou (Feng), or Chowdry, and (if SOUT), with a read. Print if you would like.

Press ESC to go back and enter other samples.

APPENDIX 5: USING THE VENTANA SLIDE SCANNER

The scanner is located in the back of the histology lab at NHL

You can log in remotely from any computer – but you can't access the software when you are logged into the Upenn network at NHL (because this is the same network the scanner uses).

Type this IP address into your brower to pull up the ventana software log in page:
http://41.216.211.105
User ID: Carrie
Password: botswana

You will then see a list of all cases organized by case number and patient name. Double click on a case to pull up the slide. Double click on the slide to enlarge and zoom to be able to read the histology.

Click on "case list" in the upper left corner to return to the home page with all the cases.

There is a box in the upper right above the case list that reads "Pending, Unreleased, Released, In Progress." Click on the down arrow at the right edge which will display a drop-down menu of options. You can click/unclick these choices to show you each category of cases. This becomes useful when you want to view older cases that have already been signed out.

To sign out the case click on the orange "Report/Sign out" button on the upper right.

In some cases, there will be difficulty signing out the case, if so follow these steps:

Click on slide to open it for viewing.
On the left side of the screen you will see a menu bar with the labels: Nav./Comments/Analysis
Click on the Analysis tab
Type something in the box entitled "result comment" - this can be anything. I usually just write the diagnosis.
Then click the disk button in the right lower corner to save the changes
Then click the normal orange "report/sign out button"
Change the FOV Type to "Analyzed"
Then click the "sign out" button

APPENDIX 6: Entering Dr Carrie Kovarik's path reads into IPMS

1. Find a free computer in the histology room across the hall from where you drop off specimens. Edwin or KK can help you
2. If you need to start the computer, windows log-in is pmh01/pmh01, and when you connect to IPMS, enter the password 'ipms'
3. Log in to IPMS using Dr. Kovarik's info: Username KOVCAR00, password upennbw12
4. Click "Laboratory Live"
5. Click Princess Marina Hospital
6. Click "Pathologist Desktop"
7. In "Received date" type "t-30"
8. In "Through" box, type "t"
9. Press "Enter" until you are in "Spec Type" and then press F9
10. Type "NP"
11. Select NPHL (Surgical Histopathology)
12. Press OK
13. If there are no specimens, press "Continue"
14. Click "Add Specimen"
15. Scan the barcodes from any of the accession forms from specimens that Carrie has read. If no barcode, you can write in the PS numbers.
16. press "Save"
17. Check the sample you wish to enter first
18. Click "Findings Entry" on the right
19. Click "Micro" (as in "microscopy")
20. Enter the histologic description in the text box
21. Click "Save"
22. Go down one line to "Diagnosis", click on it, and enter the diagnosis into the text box
23. Click "Save"

24. Scroll down to #12, "Proc Comp" and click on it
25. Write "Y" in the green "Comp box
26. Click save
27. Scroll down to #14 and click on it. Press F9 and type PM (for malignant), PN (non-malignant), or PI (infection)
28. Click "Manual Sign" on the right
29. Close the draft page with no findings reported that will pop up automatically
30. Click on the first box in the "Final Signature" table
31. Enter KOVCAR00
32. Go to "Change Status" and write "Y"
33. Click Enter.
34. Go on to the next specimen and repeat

APPENDIX 7: KEY CONTACTS

Administration of the Botswana-UPenn Partnership – Philadelphia Office

- Carrie Kovarik, M.D., Head of the Dermatology Program and Co-Director of the AAD Dermatology Rotation

Administration of the Botswana-UPenn Partnership – Gaborone Office

- Liza Rissik , Student, Resident and Visitor Coordinator seeletsok@bup.org.bw, or missk198422@hotmail.com
- Ari Ho-Foster – C.O.O
- Dr Tonya Arscott-Mills – Paeds TB
- Dr Nicola Zetola – TB
- Dr. Surbhi Grover – Rad-Onc

Other Key People associated with the Dermatology Rotation

- Dr. Tori Williams, MOH/Penn/UB dermatologist tori22@gmail.com
- Dr. Mohan Narasimhamurthy UB Pathologist mohansn@yahoo.com
- Dr. Mogomotsi Matshaba (Mogo), Clinical Director of the Baylor Pediatric Clinic
- Dr. Adam Lipworth, Co-Director of the AAD Dermatology Rotation

APPENDIX 8: Botswana UPenn Occupational Post-Exposure Prophylaxis (PEP) Protocol for Healthcare Workers (Updated September 2013)

Introduction:

As an organization committed to the betterment of HIV care in Botswana, we may be exposed to bloodborne pathogens during the course of our work. All staff teams that work more than 2 hours away from the BUP sites and BUP sites (Francistown, Ghanzi, 214 Independence) have their own 48 hours supply. The full month's course is stored with Liza Rissik at 244G in the main office. In case of an exposure a call to the HIV specialists named below is to be made as soon as possible. If neither one of them can be reached, start PEP and contact Liza Rissik at (+267)72214170 who will advise you on who to contact. In case of a valid exposure an overnight courier will deliver the needed 1-month supply to the site of the exposed staff member.

HIV

The risk of acquiring HIV disease from a **percutaneous** or mucocutaneous exposure varies and is difficult to quantify. In general, the risk of acquiring HIV secondary to a needlestick injury from a hollow needle is approximately 0.3%. There are many factors that influence this general risk, which could be higher depending on the size of the inoculum and the burden of disease in the patient. Mucocutaneous exposures carry a risk of approximately 0.09% with the risk also varying depending on the size of the inoculum. Other potentially infectious fluids include cerebrospinal fluid, amniotic fluid, peritoneal, pleural or pericardial fluid, saliva and breast milk. Risk with exposure to these fluids is in general very low and difficult to quantify. Urine and feces (unless obviously contaminated with blood) are not considered to harbor HIV. In general exposure to these fluids would not necessitate post exposure prophylaxis.

Current estimates indicate a national HIV prevalence of 17.6%.[i] This is higher in healthcare settings, where prevalence rates are at least 54%.[ii] Many individuals in the inpatient settings are presenting with advanced disease which also increases the risk of transmission as many of those patients have high viral loads.

Hepatitis B

The risk of acquiring Hepatitis B infection varies depending on the level of exposure but may range from 6-30%.[iii] The level of viremia will also affect transmission, which is higher in patients with Hepatitis E antigen positivity. Mucocutaneous exposure also carries a risk of transmission that is less than that of a direct needlestick. Other potentially infectious fluids are similar to those listed under the HIV section. The risk of developing chronic Hepatitis B infection after an acute infection is < 5%. Of those with a chronic hepatitis B infection 15% will develop cirrhosis or cancer as a consequence of the infection.

Current estimates of Hepatitis B disease in Botswana are limited with one retrospective study in HIV positive individuals reporting Hep B surface antigen positivity of 10.6%. Of those, 40% were Hepatitis B e antigen positive.[iv] Individuals who are vaccinated for Hepatitis B and have developed an appropriate antibody response are considered immune from infection.

Hepatitis C

As with hepatitis B and HIV, the risk of acquiring hepatitis also depends on the level of exposure but risk from a needle stick is estimated at 1.8%. Hepatitis C can also be transmitted in bodily fluids such as semen, vaginal secretions and breast milk (rare). In the same retrospective study cited above, they found no evidence of previous Hepatitis C infection. This cohort was from 2001, so it is possible that there may now be hepatitis C circulating in our community. However, there is currently no treatment available to prevent hepatitis C infection. Thereby in case the source patient is determined to be hepatitis C positive the exposed client will be tested for hepatitis C at exposure and then again 6 months after.

In the case of a needle stick, other blood or body fluid exposures which may occur while working, follow the recommendations below. Please note the following:

INITIAL STEPS TO FOLLOW IF YOU HAVE BEEN EXPOSED TO BLOOD OR BODY FLUIDS	
1	Do not panic
2	Remove gloves and wash hands with soap and water or rinse exposed mucus membranes with water for 5 minutes. If you are wearing contacts, remove those as well prior to washing out your eyes. Do not squeeze the area of the needle stick to make it bleed more. Do NOT use disinfectants as this may increase transmission rate.
3	Notify your local supervisor **immediately** and then notify the HIV Specialist (or designated PEP counselor, hereafter referred to as PEP counselor). The PEP counselor will help you decide if you need prophylaxis to prevent HIV transmission (see Steps A, B, C below) and need protection against Hepatitis B transmission. Please see the sections below for additional details.
4	Do rapid test for HIV and hepatitis B Ag test (if you are not vaccinated or did not respond to the vaccination for Hepatitis B) on source patient. If the source patient does not consent, by Botswana law you can test the patient, but CANNOT disclose the results. If the patient is a known HIV patient on ART send a viral load, if the patient is not on ART just test for Hepatitis B if the exposed person is a non-responder to the vaccination or has not received the hepatitis B vaccination.
5	Do a rapid HIV test and Hepatitis B titer/antibody panel (if not done 6 months after vaccination was completed) on yourself and document the results. This is voluntary. If you choose not to do this, you will be asked to sign a waiver, but will not be asked to disclose the reason why you are declining. **If you decline the test, you will not be eligible for post exposure prophylaxis through BUP.** However, you are encouraged to get tested and seek PEP in the public sector.
6	Begin treatment with the supply of antiretroviral drugs given to you by the HIV specialist or PEP counselor if your exposure is determined to warrant PEP
7	If a decision is made that you need prophylaxis, take the first dose as soon as possible if you choose to take PEP. Be aware of the potential interactions of PEP with other medicines you may be taking (including oral contraceptives, anti-seizure medications, anti-tuberculosis medication and other significant medical conditions such as pregnancy).

For the PEP Counselor:

For all reported exposures the form in the annex has to be filled out irrespective of whether the exposed person received PEP or not. The Form is to be filed with Boinelo Mabe from HR within 72 hours of the reported event for safe keeping.

Determine PEP recommendations using table below

HIV negative individuals not on rifampin or an enzyme inducing epileptic drug should receive the standard regimen listed below. If any of those conditions should exist, the optimal prophylactic regimen should be discussed with a specialist. Pregnant healthcare workers should also be offered the regimen listed below. If the source patient is on ARVs and failing therapy, the case should be discussed with an HIV specialist and the current regimen given below pending alternate recommendations.

Infectious body fluids are: blood, any body fluid that is blood tinged, semen, CSF, vaginal -, peritoneal -, amniotic - , pericardial -, synovial fluid
Noninfectious (unless contaminated with blood) are: saliva, urine and tears

Exposure to infectious fluids (see above)	HIV source	PEP (all courses are for 28 days)
Intact skin	Regardless of HIV status	No PEP indicated
needle stick, mucous membrane exposure or compromised skin	positive, on treatment, and suppressed	Truvada (blue) 1 pill once a day and Raltegravir (grey) 1 pill twice a day this may cause diarrhea, nausea and vomiting, counsel person on this (read package inserts)
needle stick, mucous membrane exposure or compromised skin	Positive on treatment but suspected or documented failure	Discuss with HIV specialist at BUP, if unable to reach, initiate Truvada and Raltegravir and discuss regimen with HIV specialist at the earliest possible time.
needle stick, mucous membrane exposure or compromised skin	Positive not yet on treatment	Truvada (blue) 1 pill once a day and Raltegravir (grey) 1 pill twice a day (read package inserts)
needle stick, mucous membrane exposure or compromised skin	Negative and presumed to be low risk	Do not initiate regimen and discuss with HIV specialist
needle stick, mucous membrane exposure or compromised skin	Negative and presumed to be medium to high risk	Truvada (blue) 1 pill once a day and Raltegravir (grey) 1 pill twice a day (read package inserts)
needle stick, mucous membrane exposure or compromised skin	Unknown	Truvada (blue) 1 pill once a day and Raltegravir (grey) 1 pill twice a day (read package inserts) Start regimen above until source patient HIV status is known or for full 28 days if unable to find out source patient HIV status

MAIN SIDE EFFECT OF PEP DRUGS	
Tenofovir	Headache, nausea/vomiting
Emtricitabine	GI side effects, usually well tolerated
Raltegravir	Headache

Special Situations regarding Post Exposure Prophylaxis
If the healthcare worker is already HIV positive:
Data currently indicate that the risk of super-infection is low for sexual transmission. There are currently no data about the risk of super-infection with exposure to HIV through a needle stick or mucosal splash. These will have to be reviewed by an HIV specialist on a case by case basis. A few general recommendtions are included below

1. Not currently on ART: Individuals who are exposed may wish to review their eligibility for ART. In these situations send an urgent CD4 count so that results can be reviewed within 72 hours. If individuals do now qualify for ART, we will refer them urgently to their healthcare provider for ART initiation.

2. On ART: The majority of individuals on ART will not require any further intervention. Obtain a viral load to document that the patient is virologically suppressed or recommend this be done with the patients healthcare provider. An exposure from a patient failing first or second line regimens should be reviewed on a case by case basis. If there is a large exposure from a known drug resistant patient, it may be reasonable to recommend modifying the healthcare worker's ART.

If the healthcare worker has Tuberculosis:
Use of integrase inhibitors in the setting of rifampin is associated with subtherapeutic levels of integrase inhibitors. In the case of an exposure in an HIV negative healtcare worker with TB, those cases should be discussed with an HIV specialist.

Hepatitis B post-exposure prophylaxis:
All healthcare workers here at BUP should have had three Hepatitis B vaccinations and a Hepatitis B titer determined after the conclusion of the series to document adequate response. Immunecompromised employees should receive four times the usual dose (40mcg) for an adequate response. One to two months after their last vaccination a titer should be drawn and then the documented result kept with the workers files for future reference. If the health care worker has not responded he/she should receive another series and if still no response one to two months after completion of the second course he/she should be categorized as a non-responder. The definition of hepatitis exposures are the same as for HIV exposures unless the source is HbsAg negative. If the source is HbsAg negative NO prophylaxis is necessary.

Hep B prophylaxis recommendation:
Test source for Hepatitis B surface Antigen, if positive then:
Responders: No need for treatment
Non-responders after one series of vaccination: Hep B IgG (HBIG) x1 plus one HepB vaccine
Non-responders after two series of vaccination: HIBG x2
Non vaccinated:HBIG x1, initiate Hep B vaccination series
If the Hep B surface antigen of the health care worker is positive, refer the healthcare worker for further evaluation

Follow up:
All health care workers who were tested for HIV and Hepatitis B and were felt to have had a high risk exposure have to get HIV, hepatitis C and if they were negative for hepatitis B also HbsAG testing 6 weeks, 3 and 6 months after the initial exposure.

BAIS III, 2008.
HIV Care and Support Program, Botswana UPenn Partnership
Exposure to Blood: What Healthcare Personnel Need to know. www.cdc.gov
Wester CW et al. Serological Evidence of HIV-Associated Infection among HIV-1–Infected Adults in Botswana. Clinical Infectious Diseases 2006; 43:1612–5.

IMPORTANT CONTACTS FOR PEP:
Joe Jarvis +26772478777, or drjoejarvis@gmail.com
Nicola Zetola +26774514877, or nzetola@gmail.com

Exposure report form
Please do not document the fulll name. Only the first and last name intials plus the date of the incident. For example for Miriam Haverkamp exposed on 1/1/2012 you would document: MH010112

Date and time: _____(dd/mm/yy: hh:mm)

Report for:_____

Brief description of incident:

_____

_____

_____

_____

_____

_____

_____

_____

_____

Risk of incident: high intermediate low negligible

Source patient HIV testing: Results: positive negative

Not done, reason:_____

If positive: VL:_____ current regimen:_____

Source patient HBs Ag testing: Results: positive negative

Not done, reason:_____

Source patient Hep C testing: Results: positive negative

Not done, reason:_____

Exposed HCW HIV testing: Results: positive negative

Not done, reason:_____

If refused _____
date and signature of HCW

Exposed HCW HBs Ag testing: Results: positive negative

Not done, reason:_____

If refused _____
date and signature of HCW

Exposed HCW HBs Ab testing: Results: positive negative

Not done, reason:_____

If refused _____
date and signature of HCW

Exposed HCW Hep C testing: Results: positive negative

Not done, reason:_____

If refused _____

date and signature of HCW

Exposed person testing log:

Date	HIV Test results/date	Hepatitis C testing results/date	HBs AG testing results/date	Initials of person documenting
6 weeks				
3 months				
6months				

Decision about PEP: Elligible not elligible (reason):_____

Declined by HCW _____
Date, time initials of HCW

PEP regimen: Atripla Truvada/Raltegravir

Other, describe:_____Not applicable

Remarks:

_____

_____

_____

_____

_____

_____

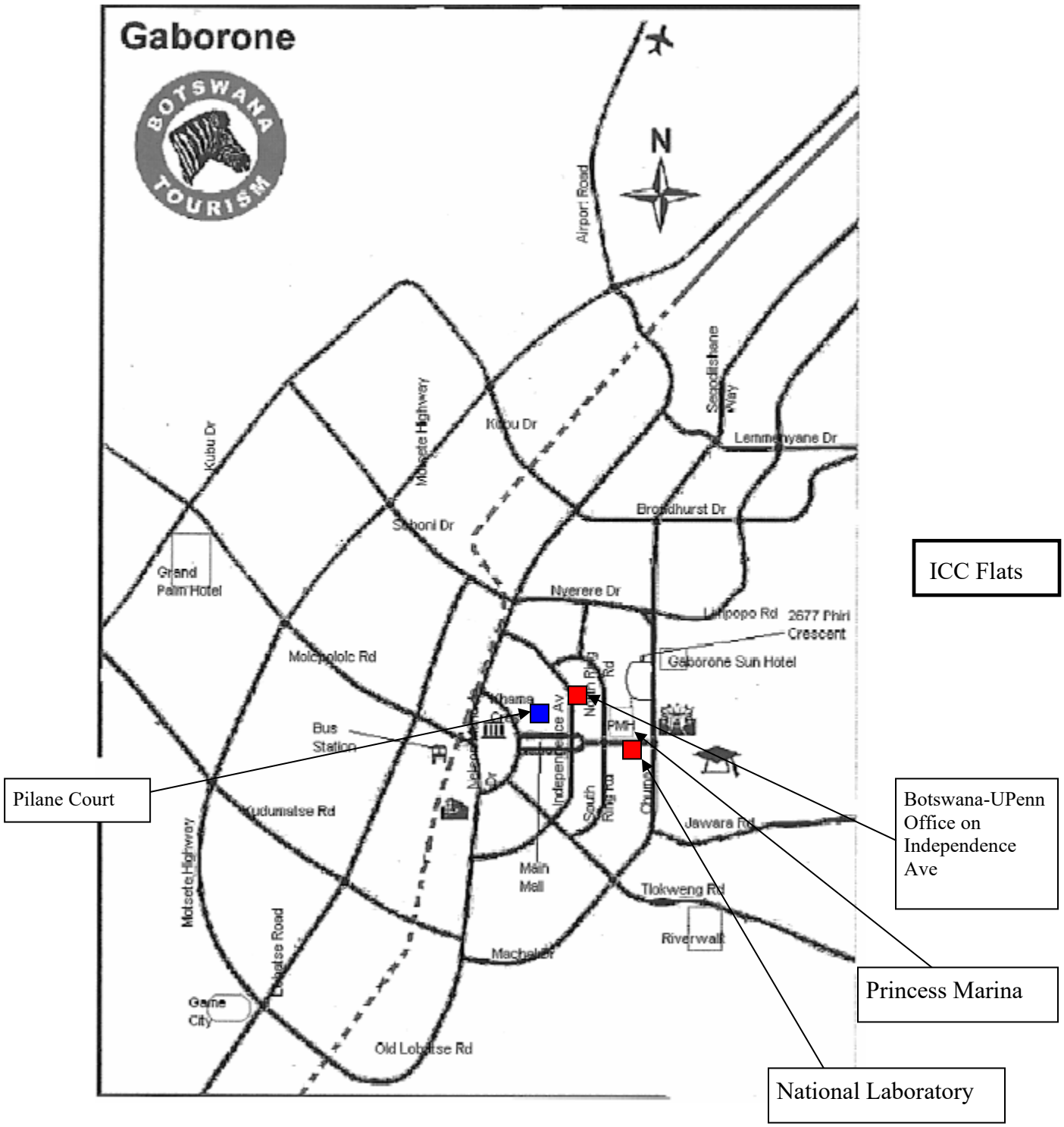
_____

_____

_____
(date: dd/mm/yy) Signature and name of counselor:

APPENDIX 9: MAP

1. Overview of Gab



APPENDIX 10: IPMS (Integrated Patient Management System)

IPMS is the electronic medical record/lab work ordering system that they are trying to launch at PMH. It was used previously but fell out of favor because of systems issues. The government is now trying to implement an electronic medical record, and this is the first phase.

USING IPMS: To access IPMS, click on the desktop icon.

For ordering Tests

- Choose "Live screen" (not training)
- Click on **Applications**
- Choose **Order Entry**
- Use the patients PA number (can type PA followed by the number directly without zeros) or PM number as #UPM then the number without the zeros (If it says PM00123456/98765 you would type #UPM123456 , the other numbers after the slash are the patient's ID or "Omang" number which is not relevant to the IMPS system)
- Under "order doctor" enter your **user name (WILVIC for Dr. Williams)**
- Click **category** and choose the appropriate category:
  - For microbiology (urinalysis, bacterial culture), use MIC
  - For hematology or chemical pathology use LAB
- To navigate around the screen, use the **enter** button
- Once in category, navigate to the **procedure** box and enter the code of the test you'd like to order. Here are some commonly used derm tests:
- Under MIC
  - MURMC (for urinalysis)
- Under LAB:
- HFBC (For CBC)
- CLFT (Liver function test)
- CRFT (Renal function test)
- SRPR (For syphilis)
- SAG6PD (For G6PD)
- SAANA (For ANA)
- SCHCV (For HepC)
- HCHCB (For HepB)
- HESR (For ESR)
- SCHIVR (For rapid HIV test…. note, this test requires that you input more patient info)
- anti-ds dna = SAANTIDSDN
- ANTI-SM = SAASMAB
- ANA = SAANA
- C1 ESTERASE INH = SA
- COMPLEMENT PATHWAY = SA
- ENA = SAENA
- FECAL PORPHYRINS = SAFPORPH
- HEMA PORPHYRINS = SAHPORPH
- URO PORPHYRINS = SAUPORPH
- G6PD= SAG6PD
- HSV AB = SAHSVAB
- IGs= SAIMMUNO
- LUPUS ANTICOAG= SALUP
- PROTEIN ELECTROPHORESIS = SAQPE
- ANTI STREPTOLYSIN = SASO
- pregnancy serum = EBHCG
- pregnancy urine = mic→MURG
- If you want to order a test but don't know it's code or if you want to browse available tests, navigate to the procedure box and use the **F9** button

For reviewing test results

- Click **review**
- **Process desktop**
- **Process by Patient**
- Enter patient information

Ordering Tests on Paper

National Lab

Keep in mind that although PMH is trying to implement an electronic system, the National Laboratory is not a part of PMH. They have their own computer system, phone system etc. Therefore, for any tests that you bring to the national lab (fungal cultures and H+E will still require paper forms).

If IPMS is down (or at outreach)

Please note that each test requires a separate form

- Heme path: for FBC (CBC)
- Microbiology: bacterial cultures, fungal cultures, urinalysis
- Tissue culture: for H+E (in the box, under investigations required write H+E)
- Chem path: everything else (LFT, RFT, ANA, HIV, RPR, HepC/B or just write in any additional test that is not listed – ANA, ENA, aldolase etc

Accessioning Tests

Blood/urine tests

Give the form to the patient. They will go get the tests themselves. Instruct them to bring the results to the next visit.

Bacterial cultures

Bring the form to the Main Lab. They will give you an accession number (they write it on the sheet). Write that number in the biopsy book. Bring the (labeled) sample and the form to the microbiology lab **WEAR GLOVES WHEN PASSING OFF THE SPECIMEN***. You will leave both with them and sign their sample reception book.

- Note: with IPMS, you still need to go to the main lab to obtain a label for your specimen (you will need your patient's PA number). You can then drop off your (sample to the microbiology lab.

Fungal cultures

Bring the form and labeled sample to the National Lab. Go to the second floor, and turn left, the fungal culture room is through the double doors on your right. Give them the sample and the form and write down the accession number in the biopsy book (it should start with MYC).

Pathology specimens

Bring the form and labeled sample to the National Lab. Go to the second floor, and turn right, and then go through the double doors on your right.

- Sign the specimen reception book
- BEFORE TURNING ALL SAMPLES CHECK TO ENSURE THERE IS: A SPECIMEN IN THE BOTTLE, LID IS CLOSED TIGHT, THERE IS FORMALIN IN THE BOTTLE, BOTTLE IS LABELLED CORRECTLY, PATH FORM IS LABELLED CORRECTLY AND ALL NAMES/SITES MATCH
- Hand the tech at the computer the forms and the labeled formalin bottles. They will enter the info into the computer and print you a sticker. Take the sticker and put it into the biopsy book.
- Note: all skin samples should be labeled DERM URGENT and highlighted.

APPENDIX 11: PMH Drug formulary -- THIS IS JUST AN ESTIMATION OF WHAT MIGHT BE AVAILABLE AT ANY GIVEN TIME, please call pharmacy to confirm

OTC = buy at the store
Chem = buy at chemist / private pharmacy
Highlighted = variable availability at PMH, can still rx but tell pt it may not be available, and they might have to buy at the chemist
**** = needs special order always ** = needs special order only at outreach***

Drugs by Category

Analgesics
Aspirin 75, 300mg
Ibuprofen 400mg tablet, 100mg/5ml
Indomethacin 25mg capsule
Naproxen 250mg tablet
Paracetamol 100, 500mg tablet, 24mg/ml syrup
Gabapentin 100mg tablet
Morphine 10, 30mg tablet, suspension 10mg/5ml

Antibiotics Oral –*availability is highly variable, call pharmacy to check if looking for specific coverage*
Amoxicillin 250mg tablet
Amoxicillin 125/5ml suspension
Amoxicillin + Clavulanic (250 + 125)mg tablet
Amoxicillin + Clavulanic (25 + 6.25) mg/ml suspension
Cephradine (first generation) 250mg capsule
Ciprofloxacin 250mg tablet (RESERVED for drug resistant TB)
Cloxacillin 250 mg capsule, 125mg/5ml susp
<20 kg: 50-100 mg/kg/d in 4 divided doses x 7d
>20kg, adult: 250-500 mg QID x 7d
Co-trimoxazole (400 + 80) mg tablet BID (TMP-SMX)
Co-trimoxazole (200 + 40 mg/ 5ml) suspension
Doxycycline 100mg tablet
Clindamycin 300mg tablets
Dapsone 50 mg tablet
Erythromycin 250mg tablet
Erythromycin 125/5ml suspension
Penicillin phenoxymethyl 250mg tablet, 125/5ml suspension
Penicillin Benzathine 2.4 million IU injection
Rifampin 150mg tablet, 100mg/5ml syrup

Antibiotics Topical
Benzoyl peroxide cream 5%
Benzoyl peroxide gel 10%, 5% (chem)
Benozyl peroxide wash 5%, 10% (chem, expensive)
Tetracycline eye ointment
Whitfield ointment
Chlorhexidine 1% cream **
Gentian Violet
Povidine iodine ointment
Silver sulphadiazine 1% cream
Sulphur 10% ointment
Bactroban (mupirocin 2%) **
Polymixin-bacitran-neomycin ointment (chem)
Dettol or Savlon antiseptic solution OTC

Antibiotics Ophthalmological
Chloramphenicol eye gtt
Gentamycin eye gtt
Tetracycline eye ointment
Neomycin-gramicidin-polymixin eye gtt or ointment (chem)

Antibiotic Washes
Chlorhexidine 15% solution available for dilution **
Mouth Wash 0.2% Body Wash 2%
Hydrogen peroxide 3% solution
Povidone iodine 10% solution
Dettol or Protex antiseptic bar soap OTC
Dettol or Savlon antiseptic solution OTC
Dilute Vinegar Soaks or Bleach Baths

Antifungals Oral
Fluconazole 200mg tablets, 50mg/ml suspension **reserved for crypto meningitis
Griseofulvin 125, 500mg tablet
Ketoconazole 200mg tablet
Nystatin 100,000IU/ml mixture
Terbinafine 250mg tablets ** or (chem)
Itraconazole 100 mg tablets ** or (chem, very expensive)

Antifungals Topical
Clotrimazole 1% cream
Selenium sulfide 2.5% shampoo
Whitfield's ointment (Benzoic acid and salicylic acid)
Gentian Violet solution
Zinc undecenoate 10% powder*when prescribing write "Athlete's Foot Powder"
Miconazole cream (chem)
Lamisil 1% cream (chem)

Antidepressants
Amitriptyline 25mg, 50mg tablet
Imipramine 25mg tablet
Fluoxetine 20mg tablet

Antihistamines
Chlorpheniramine (Allergex) 4mg tablet, 0.4mg/ml syrup
Promethazine 10, 25mg tablets, 25mg/ml injection
Cetirazine 10mg, 5mg/5ml syrup**
Loratidine 10mg**
Ranitidine 150mg tablet
Omeprazole 20mg tablet (chem)

Antimalarials
Chloroquine 250mg tablet, 50mg/5ml base syrup
Mefloquine 250mg tablet

Antipruritics
Calamine 15% lotion
Camphor/menthol products OTC
Allergex (Chlorpheniramine) 4mg tablet, 0.4mg/ml syrup
Promethazine 10, 25mg tablets, 25mg/ml injection
Amitriptyline 25mg, 50mg tablet
Imipramine 25mg tablet
Gabapentin 100/300mg tablets
Loratidine 10mg **
Ceterizine 10mg**

Antiviral
Acyclovir 200mg tablet
Acyclovir eye ointment (keratitis), Acyclovir ointment/cream (chem)
Imiquimod 5% cream ** **(*not available until further notice)***

Bisphosphonates
Ibandronate 150mg monthly **

Corticosteroids
Clobetasol cream
Betamethasone valerate 0.1% cream **(this is a mid-potency steroid!)**
**topical steroids are dispensed in 15g tubes. If patient needs a large amount, you must compound it with Vaseline (preferred) or Aqueous Cream.*
PMH will compound it but outreach clinic often do not have this capability. 50, 100, 150, 200, 250g or 500g are common sizes for large jars
****bc topical steroids are frequently out of stock always advise pts it can be bought at chemist for ~25 pula for 15g tube***
Hydrocortisone 1% cream

Prednisone 1mg, 5mg tablet
Prednisolone 1mg, 5mg tablet
Methylprednisolone 80mg/ml injection
Dexamethasone 4mg/ml injection
Dexamethasone 0.5mg tablet
Kenalog 10/40mg/ml injection *only if provided by dermatology clinic

Anxiolytics
Diazepam 2mg, 5mg tablet
Nitrazepam 5mg tablet
Temazepam 10mg tablet

Hormonal Therapy **when prescribing birth control it is best to just write a generic prescription for "oral contraceptives to take daily as directed" so patients will be given whatever type is available*
Levonorgestrel + ethinyloestradiol(0.15 + 0.03) mg tablet (Seasonale)
Northisterone + mestradol (1+ 0.05) mg tablet (Norinyl)
Oestrogen vaginal cream
Spironolactone 25 mg tablet
Depot shot – available at local clinic

Immunosuppressive Drugs
Methotrexate 2.5mg tablet, 25mg/ml injection
Cyclosporine 25 mg tablets **
Cellcept 250mg **
AZA 50mg **

Keratolytics
Salicylic acid ointment 5%, 10%, 20%, 40%
Epimax PLUS contains Urea 10% OTC
Stronger urea compositions can be purchased at the chemist where they can make up any % needed

Ophthalmology
Gentamycin eye ointment
Fluoromethalone + neomycin (1 + 5) mg eye drops
Hydrocortisone eye ointment
Tetracycline eye ointment
Polyvinvyl alcohol 1.4% (artificial tears) eye drops
Prednisolone 0.12% eye drops
Prednisolone 1% eye drops
Zinc Sulphate 1% eye drops
Neomycin-gramicidin-polymixin eye ointment/drops (chem)

Retinoids
Isotretinoin (Roaccutane) 10mg, 20mg *(not available until further notice)*
Tretinoin 0.05% cream **

Scabicides
Benzyl benzoate 25% (chem)
Sulfur 2-10% ointment
Tetmosol soap (monosulfiram 5%)

Miscellaneous
Allopurinol 100mg tablet
Colchicine 0.5mg tablet
Paraffin gauze
Bactigras (paraffin gauze with chlorhexidine 0.5%)
Podophyllin 20% ointment (chem)
Promethazine 10, 25mg tablet, 25mg/ml injection
Silver nitrate pencil (in derm closet)
Sunscreen lotion SPF 30 *(often more available at outreach clinics, **VERY LIMITED SUPPLY SO ONLY RX FOR MEDICAL INDICATION**)*
Zinc Oxide paste
Zinc mixed with Castor Oil (use this in place of zinc oxide paste and can also use this for sunscreen)
Sitz bath, KMNO4 soaks OTC

Moisturizers (ALL ARE OTC)
Plain Store Brand Aqueous cream
Aqueous cream 500g mixed with 50ml glycerin
Blue Seal Vaseline
Epimax (thick cream)
Epimax PLUS (contains 10% urea)
E-45 (thick cream)
AQUA cream (thick hypoallergenic cream)
Sebamed cream (thick hypoallergenic cream)
Olay, Nivea, Cetaphil are brands with lighter moisturizers for face (chem)

Mild Soaps (OTC)
Sanex ZERO is the only cheap readily available unscented soap (25P for large bottle)
Sebamed, Cetaphil, AQUA bar, Epimax – from chemist or Clicks
Dove – hard to find fragrance free version
Less ideal but easier to find and cheaper: Sunlight Gentle, Dettol Sensitive, Orchard, Lux

Drugs by Disease
Acne vulgaris:
Mild-Mod disease can be referred back to local clinic after initial consult and treatment plan
Topical:
Benzoyl peroxide cream, gel 5%
Benozyl peroxide wash 5%, 10% (chem, expensive)
Salicylic acid ointment 5%,10%
Sulphur 10% ointment
Tretinoin 0.05% cream**
Erythromycin solution (125/5ml) – oral syrup which can be used topically
Tetracycline eye ointment
Intralesional kenalog (if available in clinic)
Oral:
Doxycycline 100mg tablet: once or twice daily
Erythromycin 250mg tablet: 500mg twice daily
Amoxicillin 250mg tablet : 500mg once or twice daily
Co-trimoxazole (400 + 80) mg tablet (TMP-SMX) twice daily
Co-trimoxazole (200 + 40 mg/ 5ml) suspension
Isotretinoin (Roaccutane) 20mg tablets: start at 20-40mg and up titrate to 1mg/kg/day daily as tolerated. Pt needs to sign consent form *(not available until further notice)*
Hormonal:
oral contraceptives
Spironolactone 25 mg tablet: *start at 25mg and up titrate to 100-150mg daily*
Depot shot is available at local clinics

Actinic keratoses (for OCA pts)
Cryotherapy – *book patient at monthly cryo day in derm clinic*
Imiquimod 5% cream ** *- start 3x/wk QHS for 6 wks on one body area at a time then rotate (not available until further notice)*
Tretinoin 0.05% cream **
Podophyllin 20% cream *start 3x/wk* (chem)
Sunscreen

Alopecia Areata
Betamethasone 0.1% cream, ILTAC

Aphthous stomatitis
Gentian violet 0.5% TID
2% lignocaine gel (chem)
0.2% chlorhexidine mouth rinse 3-4 times daily** *-can refer to dental clinic to get oral rinse*
Dapsone or colchicine
Acyclovir if persistent

Atopic Dermatitis:

Mild-Mod disease should be referred back to local clinic after initial consult, treatment plan and handout given
Topical:
Clobetasol cream
Hydrocortisone 1% cream, ointment
Betamethasone 0.1% cream, ointment (compound with Vaseline or aqueous cream)
Antihistamines
Wet pajamas/Wet wraps
Bleach baths *(1/2 cup of bleach for a bath tub or 6 capfuls) – Bleach is called "Jik" in Botswana*
Betadine scrub (1-2 gtt in tub)
Ambient sunlight
Eczema handouts
Antihistamines:
Allergex (4 mg tab, 2 mg/5ml soln)
4 mo-1 yr: 2.5 ml qhs
1-5 yo: 5 ml qhs
5-12 yo: 7.5-10 ml qhs
Adult: 4 mg BD-TID
Amitriptyline 25mg QHS
Imipramine 25mg tablet QHS
Promethazine 10, 25mg tablets
Promethazine 25mg/ml injection
Loratidine 10mg **
Ceterizine 10mg**
Systemic Immunosuppressives:
Methotrexate 2.5 mg, 25mg/ml injection
Cellcept 250mg **
Azathioprine 50mg **
Cyclosporine 25 mg tablets **

Bacillary Angiomatosis (r/o bone, LN dz)
Erythromycin 500mg QID x 8 wks (skin dz)
Doxycycline 100 BID x 8 wks (skin dz)

Bullous Pemphigoid
Doxycycline 100 mg OD-BD
Prednisone
Methotrexate 2.5mg tablet
Cyclosporine 3-5 mg/kg/d**
Nicotinamide 50 mg tablets - *500mg-2gm suggested daily dose but very difficult to find in Botswana (chem)*

Candidiasis
Clotrimazole 1% cream
Miconazole cream (chem)
Selenium sulfide 2.5% shampoo
Whitfield's ointment (Benzoic acid and salicylic acid)
Gentian violet 5% to oral mucosa or nail fold TID
Fluconazole 200mg tablets, 50 mg/5 ml susp **fluconazole at PMH is restricted to crypto meningitis, must buy at chemist**
Griseofulvin 125, 500mg tablet *–poor coverage of candida*
Ketoconazole 200mg tablet
Adults: 200-400mg daily x 7d
Kids >2 yo: 3.3-6.6 mg/kg/d
Extensive course needed for mucocutaneous disease
Nystatin suspension 100,000IU/ml - *rinse and swallow 2.5 ml 4-5 times daily*

Connective Tissue Disease
Prednisone/Prednisolone
Methotrexate 2.5mg
Chloroquine 250mg tablet
AZA 50mg tablets*
Cellcept 250mg **
Cyclosporine **
Antipruritic agents
Topical steroids
Intralesional steroids
Penicillamine (chem)
SPF 30
Typically, best to trial MTX or chloroquine as first line immunosuppressant bc easier for pts to access

SLE – *do good ROS, check ANA, ENA, FBC, LFT, RFT, UA, start with chloroquine +/- pred > MTX > cellcept*
Discoid Lupus – *trial topical tx if skin limited, add immunosuppressant if signs of systemic involvement*

Scleroderma – *check ANA, ENA (includes scl-70 and anti-centromere), RFT, UA, should be on an ACE inh if HTN, do a good ROS to check for pulmonary, GI and cardiac symptoms – book for echo via cardio, PFTs via pulm, book endoscopy directly via minor theatre if any concerns/symptoms. Trial chloroquine +/- pred > cellcept > AZA >cyclosporine. Consider adding ranitidine 150mg daily for reflux/dysphagia. Amlodipine or nifedipine 5mg helps with pulm sx and pain/tightness of hands. Add statin if digital ulcers*

Dermatomyositis – *do good ROS for weakness, dysphagia, pulm/cardiac sx, if w/in first 2-3 years of presentation do CBC, CXR, abd U/S or other imaging as indicated by sx to screen for malignancy. Always make sure pt is up to date on age appropriate cancer screenings. Trial tx with pred +/- chloroquine > MTX > AZA > cellcept > cyclosporine, dapsone. Could consider rituximab for severe recalcitrant disease*

Eosinophillic Folliculitis
Recurrent crops of very itchy papulopustules in an acneiform distribution (face, scalp, chest, extensor arms) – are usually excoriated so don't see pustules. CD4<300 but can persist with higher counts. Eosinophilla supports dx
ARVs, Topical steroids, Antihistamines, Sunlight
Other options to consider for severe disease: roaccutane, doxy, itraconazole, permethrin, indomethacin, dapsone

Erythema Nodosum
Do ROS/look for underlying triggers: TB (fevers, weight loss, cough/chest pain), meds, hormones/pregnancy, sarcoid sx, connective tissue disease sx, occult infections, neoplasms (weight loss, B symtpoms), IBD, GI parasites
-Work up rec for all: FBC, LFT, RFT, HIV, pregnancy test, RPR, CXR. No need to biopsy if very typical clinical appearance/history
-Consider adding ANA, Hep B/C, ASO, empiric treatment for Strep/URI/GI parasites, Mantoux test (must be done at diagnofirm) and/or sputum gene expert if TB suspected
-Treatment options: NSAIDs, ILTAC > doxycycline, minocycline (if samples available), erythromycin, chloroquine, short course of prednisone > dapsone, colchicine > cellcept

Herpes Simplex
Acyclovir 200mg tablet
HSV, 1st episode: 400mg PO TID x 7-10 days
HSV, recurrent: 400mg PO TID x 5 days
Oral HSV, suppression: 400mg PO BID
Genital HSV, 1st episode: 200mg PO 5 times a day x10 days
Genital HSV, recurrent: 200mg PO 5 times a day x 5 days
Genital HSV, suppression: 400mg PO BID
Disseminated HSV infection in immunocompromised:
5mg/kg IV Q 8 hours x 7d **IV often not available at PMH**
HSV encephalitis: 10mg/kg IV Q8 hours x10days
Renal dosing for IV route. CrCl 25-50: q12h; CrCl 10-24: q24h; CrCl<10: q24h, decrease dose by 50%; HD: usual dose as supplement.
Chronic HSV w HIV: start at 800mg TID x 4-12 weeks
Gentian violet

Herpes Zoster
Acyclovir 200mg tablet
Herpes zoster, localized: 800 mg PO 5 times a day x 7-10d (initiate within 48 hours of onset)

Herpes zoster, disseminated: 5-10mg/kg IV every 8 hrs for 7-10d **IV often not available at PMH**
Varicella, acute: 800mg PO 4 times a day for 5 days
Renal dosing for IV route. CrCl 25-50: q12h; CrCl 10-24: q24h; CrCl<10: q24h, decrease dose by 50%; HD: usual dose as supplement.
Gentian violet

Herpes Zoster neuralgia
Paracetamol 500mg-1gm q4-6 hrs prn
ASA 300-900mg q4-6 hrs
Morphine 10, 30mg tablet
Amitriptyline 25mg, 50mg tablet
Imipramine 25mg tablet
Gabapentin 100/300mg tablet

Intertrigo
Zinc oxide paste
Zinc + castor oil cream
Zinc undecenoate 10% powder *write for "Athlete's Foot Powder"
Cornstarch
Hydrocortisone

Lichen Planus
Topical Steroids, MTX , Metronidazole 500 mg BID
Can also consider trialing Griseofulvin 1g/day, Dapsone, Cyclosporine

Leprosy (WHO): REFER ALL PATIENTS TO TB CLINIC FOR TREATMENT
Dapsone 100mg tablet
Rifampin 150 mg tab, 100mg/5ml syrup
Clofazamine 50mg

Melasma
SPF 30 OTC – do not prescribe from hospital
Hydroquinoine 4% cream (chem)

Molluscum
Favor no treatment bc benign and most will self-resolve
Tretinoin 0.05%
Salicylic acid 20% ointment
Canthardin (if available in derm clinic)
Can consider curettage/cryo/electrodessication

Mycetoma
H&E with PAS to confirm dx. Do fungal and bacterial tissue culture however this often does not yield results.
Eumycetoma: more common, black/white grains
Surgical debulking
Ketoconazole 200-400mg daily x mos-yr
Poor response to griseo, variable response to terbinafine
Itraconazole or fluconazole works better, but very expensive
Actinomycetoma: less common, white/yellow/brown/red granules
Co-trimoxazole (400 + 80) mg tablet BID x mos-yrs
Rifampin, tetracyclines, fluoroquinolones, streptomycin

Papular Pruritic Eruption of HIV
Very common and itching may not remit after CD4 count rises. Will most often just see symmetric widespread hyperpigmented excoriated macules, papules and prurigo nodules
*** always start with emperic treatment for scabies with sulphur ointment x 2 wks*
Maximize antihistamines, Dry Skin Care, Topical Steroids, Calamine, Camphor, light therapy, pentoxyfilline (chem)
Homemade capsaicin – cut up chillis and soak in sunflower oil then strain out peppers. Refrigerate for storage. Apply as needed to itchy skin
After consultation can refer back to local clinic with treatment plan
--DDx for itchy bumps with HIV: follicular eczema, drug reactions, scabies, arthropod bites, pityrosporum, demodex, 2ndary syphillis, contact derm, if photodistributed - PMLE, CAD

Pemphigus Vulgaris
Prednisone, Topical Steroids, MTX, Cellcept, AZA
Rituximab is available through Onc only for severe refractory disease

Photodermatitis
r/o pellagra, consider chronic actinic dermatitis, PMLE, drugs, HIV
Stop drug triggers if possible: Tb meds (ethambutol), sulfa meds, furosemide, HCTZ, statins, griseo, Tetracyclines, NSAIDs ARVs, enalapril, dapsone, OCPs
SPF 30 OTC
Topical steroids
Antihistamines

Pruritus
Do good ROS, if indicated consider CBC with diff, LFTs, Bun/Cr, TSH, HIV, RPR, Hep panel, stool for O&P, CXR, sputum AFB, malignancy screen
Calamine 15% lotion
Chlorpheniramine 4mg tablet, 0.4mg/ml syrup
Promethazine 10, 25mg tablets, 25mg/ml injection
Amitriptyline 25mg, 50mg tablet
Imipramine 25mg tablet
Gabapentin 100/300mg tablets
Loratidine 10mg
Ceterizine 10mg
Camphor lotion OTC

Psoriasis
Topicals
Hydrocortisone 1% cream
Betamethasone 0.1% cream
Salicylic Acid (5,10,20%) ointment
Urea cream 20, 40% (chem)
Selenium sulfide shampoo
Ketoconazole shampoo (chem)
Sunlight
ILTAC
Systemics
Methotrexate 2.5 mg tablet
Cyclosporine 3-5 mg/kg/d ** *if very severe or pustular. Need to closely monitor RF and taper off in 6-12 mos max*
Roaccutane
Sulfasalazine 500mg for joint involvement – can titrate up to 4 times daily

Pyodermas: impetigo, folliculitis, furunculosis
Consider pityrosporum, demodex, eosinophillic folliculitis and zoster folliculitis in ddx of folliculitis
Benzoyl peroxide cream 5%, 10%
Benzoyl peroxide wash (chem, very expensive)
Chlorhexidine 15% solution that needs to be diluted to a 2% wash
Hydrogen peroxide 3% solution
Povidone iodine 10% solution
Dettol or Savlon antiseptic solution OTC
Bleach Baths or Vinegar Soaks
Gentian violet

Antibiotics Topical
Tetracycline eye drops
Benzoyl peroxide 5% cream, gel
Erythromycin 125/5ml solution
Chlorhexidine 1% cream
Povidine iodine ointment
Silver sulphadiazine 1% cream
Sulphur 10% ointment

Gentian violet
Bactroban (mupirocin 2%) **
Polymixin-bacitran-neomycine ointment (chem)

Antibiotics Oral
Amoxicillin 250mg tablet
Amoxicillin 125/5ml suspension
Amoxicillin + Clavulanic (250 + 125) mg tablet
Amoxicillin + Clavulanic (25 + 6.25) mg/ml susp
Cephradine (first generation) 250mg capsule
Ciprofloxacin 250mg tablet (RESERVED for drug resistant TB)
Cloxacillin 250 mg capsule, 125mg/5ml susp - *first line for strep/MSSA*
<20 kg: 50-100 mg/kg/d in 4 divided doses x 7d
>20kg, adult: 250-500 mg QID x 7d
Co-trimoxazole (400 + 80) mg tablet BID
Co-trimoxazole (200 + 40 mg/ 5ml) suspension
Dapsone 50, 100mg tablet
Doxycycline 100mg tablet – *first line for MRSA*
Clindamycin 300mg tablets
Erythromycin stearate 250mg tablet
Adults: 250mg 4 times daily x 7- 10 days
Kids: 30mg/kg/day divided into 4 doses
Erythomycin 125/5ml suspension
Penicillin phenoxymethyl 250mg tablet, 125/5ml suspension
Penicillin Benzathine 2.4 million IU injection
Rifampin 150mg tablet

Rosacea
-think about demodex in HIV pts
Sulphur 10% ointment
Doxycycline 100mg tablet
Erythromycin 250mg tablet
Metronidazole cream (chem)
Benzoyl peroxide cream, gel 5% - if more acne/rosacea overlap
Benozyl peroxide wash 5%, 10% (chem, very expensive)
SPF 30 (chem or OTC)

Scabies
Sulfur ointment: 2.5% for infants and <6yr old, 5% for pregnant females, 10% everyone else
Apply from neck down QHS x 1wk, rest 1 week then repeat. If severe or recalcitrant treat QHS x 2 weeks, break for a week then repeat for 2 weeks
Tetmosol soap (Monosulfiram 5%) *in hot bath or shower, lather with soap, paying particular attention to skin folds. Use 1-2 times daily for 2 weeks*
Launder sheets, clothing etc. or leave outside exposed to air for 72 hrs.
Benzyl benzoate 25% *to whole body QHS x 2 days, then repeated 3 days later (chem)*
Permethrin and Ivermectin not available in Botswana

Seborrheic Dermatitis
Selenium sulfide 2.5% shampoo
Clotrimazole 1% cream
Whitfield ointment
Hydrocortisone 1% cream
Ketoconazole cream/shampoo (chem)

SJS/TEN
Supportive care
IVF, watch lytes, signs of sepsis
If significant mucosal/genital involvement consult ophtho/urology
Bactigras or Parrafin Gauze to coat erosions
Use linen savers coated with Vaseline as bandages for large areas
Silver Sulfadiazine to coat non-healing erosions at risk for infection
Chloramphenicol or gentamicin eye gtt
For severe genital erosions can coat a condom in petroleum jelly and place in vagina to prevent adhesions

Syphilis (secondary)
Benzathine benzyl PCN 2.4 MU IM x 1 if new infxn, weekly x 3 wk if unknown duration
Erythromycin 500mg QID
Doxy 100mg BD
Treat partner and test for other STDs
If CNS sx need LP

Tinea Corporis/Cruris/Pedis, Topical
Whitfield's ointment (Benzoic acid and salicylic acid) BD
Clotrimazole 1% cream
Miconazole cream (chem)
Selenium sulfide 2.5% shampoo
Zinc undecenoate 10% powder *write for "Athlete's Foot poweder"
Gentian Violet
Betadine shampoo
Salicylic acid for crusting

Tinea Corporis/Cruris/Pedis, Oral
(treat extensive tinea 2-4wks, 4-6 wks for Majocchi's)
Fluconazole 200mg tablets, 50mg/ml susp *(chem) reserved for crypto at PMH*
Adults: 100-200mg daily
> 6 mos: 6 mg/kg/d
Griseofulvin 125, 500mg tablet
Adults: 500mg daily
Kids: 15 mg/kg/d
Ketoconazole 200mg tablet
Adults: 200-400mg daily
Kids >2 yo: 3.3-6.6 mg/kg/d
For onychomycosis: can do pulsed dosing of ketoconazole/griseo/fluconazole but favor not treating due to poor efficacy of these. If pt is motivated should buy terbinafine

Tinea capitis
Clotrimazole 1% cream
Selenium sulfide 2.5% shampoo
Whitfield's ointment BD (Benzoic acid and salicylic acid)
Griseofulvin 125, 500mg tablet
20-30 mg/kg/d x 6-8 wks.
For kerion, consider 1-2 wk. course of prednisone

Tinea versicolor
Selenium sulfide 2.5% shampoo
Clotrimazole 1% cream
Extensive/refractory
Ketoconazole 400mg x 1 followed by sweating, repeat in 1 wk.
Ketoconazole 200mg daily x 1-2 wk.
Itraconazole or Fluconazole may also be used (chem)

Urticaria
Do ROS for triggers: meds, infections (HIV, TB, URI, tooth infection, GI parasites, h pylori), thyroid sx, B symptoms for lymphoma, autoimmune sx. If otherwise healthy and no pos ROS trial symptomatic treatment with loratidine/cetirizine qAM and allergex qPM, can up titrate to 4x normal dose as needed to control. If severe and chronic, do basic labs to include FBC, RFT, LFT, RPR, HIV, can consider CXR to r/o neoplasm/TB. If uncomplicated urticaria, can give a treatment plan and refer back to local clinic.
Chlorpheniramine (Allergex) 4mg tablet, 0.4mg/ml syrup
Cetirazine 10mg, 5mg/5ml syrup **
Loratidine 10mg**
Ranitidine 150mg tablet
Omeprazole 20mg tablet (chem)
For severe refractory cases can consider Dapsone, Cellcept, AZA

Vitiligo

For mild/mod disease - always attempt to counsel against therapy. Give treatment guidelines handout and return pt to local clinic
Do ROS for thyroid disease
Betamethasone 0.1% cream
Hydrocortisone 1% cream
Ambient sunlight

Warts
Disseminated flat warts and EDV are very common in our HIV pts but we don't have great tx options. Aldara has limited efficacy in disseminated flat warts so I don't often use it due to limited supplies. I favor sal acid/tretinoin

Salicylic acid 20% ointment *used under occlusion with tape/plaster*
Tretinoin 0.05% cream
Podophyllin 10, 20% ointment (chem or if in derm clinic)
Cantharidin (if in derm clinic)
Pumice stone/nail file
Aldara 5% cream ** *(not available until further notice)*
Book for cryo day in derm clinic

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[i] BAIS III, 2008.

[ii] HIV Care and Support Program, Botswana UPenn Partnership

[iii] Exposure to Blood: What Healthcare Personnel Need to know. www.cdc.gov

[iv] Wester CW et al. Serological Evidence of HIV-Associated Infection among HIV-1–Infected Adults in Botswana. Clinical Infectious Diseases 2006; 43:1612–5.