



**GHCE**

# Global Health Clinical Elective



# Nicaragua Social Medicine Global Health Clinical Elective 2018 Guide

DECEMBER, 2017

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\*Many thanks to all of the former students, faculty, volunteers, and program coordinators for helping to assemble this course guide!\*

## ROTATION OVERVIEW AND GOALS

### Rudolph Virchow on Social Medicine:

*"If medicine is to fulfill her great task, then she must enter the political and social life. Do we not always find diseases of the populace traceable to defects in society? Physicians are the natural attorneys of the poor, and social questions fall to a great degree in their jurisdiction."*

The annual Nicaraguan Social Medicine rotation (January 7 – February 16, 2018) will have classroom, health facility, and community-based components. The coordinating organization for the course, Atención Primaria en Salud (APS), a Nicaragua-based non-governmental organization composed of more than 250 health promoters, has been offering educational opportunities to North American students for over 10 years. Since 2013, we are very excited to be offering the Nicaragua Social Medicine Course as a formal Global Health Clinical Elective in partnership with University of Washington School of Medicine. Other collaborating and supporting partners include: 1) National Autonomous University of Nicaragua, Managua, School of Medicine (UNAN); 2) Nicaraguan Ministry of Health; 3) University of Miami School of Medicine; and 4) many other partner individuals, organizations, and institutions.

Our hope is that your participation in the **Nicaragua Social Medicine Rotation** will help to launch you onto a career path to serve and advocate for the elimination of health disparities, both locally and globally, in the world through:

- Seeing the wisdom in making a lifelong commitment to a specific country or geographic region outside the United States;
- Influencing systemic changes in health systems to provide more equitable and effective care, with a particular focus on strengthening public systems;
- Appreciate the impact of public-private and public-non-governmental partnerships in the alleviation of health inequities;
- An appreciation of the power of community organizing to strike at the social roots of disease;
- Learning to deliver and manage comprehensive community-based primary health care programs, in resource poor settings including remote locations;
- Exposure to and participation in quality improvement and implementation science (operational research) that will lead to improved healthcare services in low resource settings;
- To serve as a catalyst for social changes that leads to the eradication of the root causes of ill health, first among them, epidemic economic poverty.

On behalf of our incredible team of community health promoters and other partners, we are looking forward to learning with you and from you during the rotation.

*¡Bienvenido a Nicaragua!*

## CONTACT INFORMATION - Nicaragua

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<b>Faculty Co-Supervisors</b>	Christopher Dodd, Clinical Instructor of Medicine, UW  Jonathan Colasanti, Assistant Professor of Medicine and Infectious Disease, Emory University		206-295-8978  305-401-4613	<a href="mailto:chris@doddinternational.com">chris@doddinternational.com</a>  <a href="mailto:jonathancolasanti@gmail.com">jonathancolasanti@gmail.com</a>
<b>U.S. Embassy</b>	Managua	Kilometer 5.5 Carretera Sur Managua, Nicaragua	+505-2252-7100  +505-2252-7888	<a href="http://nicaragua.usembassy.gov/">http://nicaragua.usembassy.gov/</a>  Emergency after-hours telephone: (505) 8886- 1495
<b>Emergency</b>			118	

CONTACT INFORMATION – U.S.

	Name	Address	Telephone	Email or Website
<b>UW International Emergency #</b>	Staff on Call	-----	<b>24 hour Emergency: +1-206-632-0153</b>	<a href="http://www.washington.edu/globalaffairs/emergency/">www.washington.edu/globalaffairs/emergency/</a>
<b>GHCE Director</b>	Dr. Scott McClelland	Harris Hydraulics Building, Room #315 1510 San Juan Road Seattle, WA 98195	+206-473-0392 (cell)  001-254-731-490115 (Kenya)	<a href="mailto:mccllell@uw.edu">mccllell@uw.edu</a>
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<b>Insurance</b>	On Call International		+1.603.328.1358	<a href="http://student.uwsearchlightportal.com">http://student.uwsearchlightportal.com</a> <a href="mailto:studentclaims@oncallinternational.com">studentclaims@oncallinternational.com</a>
<b>Hall Health Travel Clinic</b>	Anne Terry, MN, ARNP	315 E. Stevens Circle Box 354410 Seattle, WA 98195	+1-206-543-8915  +1-206-685-1011	<a href="mailto:travel@uw.edu">travel@uw.edu</a>
<b>Post-Exposure Prophylaxis</b>	Harborview Madison Clinic	325 Ninth Ave Box 359930 Seattle, WA 98104	1-888-448-4911 (CDC hotline)  +1-206-744-5100 (clinic)	<a href="http://depts.washington.edu/madclin/providers/guidelines/pep_occ.html">http://depts.washington.edu/madclin/providers/guidelines/pep_occ.html</a>

## ENTRY REQUIREMENTS

- **AS A U.S. CITIZEN, NO VISA IS NEEDED TO ENTER NICARAGUA**
- A valid U.S. passport that is valid for the entire length of stay; an agreement between the US and Nicaragua waives the six month passport validity requirement.
- An onward or return ticket with evidence of sufficient funds to support yourself during your stay.
- Upon arrival, you will have to purchase a tourist card for \$10 (US cash) and receive an entry stamp that is valid for 30-90 days.
- If you are staying longer than 90 days, you must obtain an extension from Nicaraguan Immigration. There are immigration offices located in the mall Metrocentro and Multicentro Las Americas. Each additional 30 days added costs C\$500. To solicit the additional time, you obtain a form from the immigration office that costs C\$5 and bring a copy of your personal information page of you passport as well as a copy of the Nicaraguan entry stamp in your passport.

## DEPARTURE REQUIREMENTS

- Valid entry stamp on your passport.
- \$35 departure tax; Check with your airline, this is often included in the price of the plane ticket.
- Exit with the same passport with which you entered.

## COUNTRY OVERVIEW



**Nicaragua is the largest country in Central America.** It is smaller in landmass than New York State with a population of 5,891,199. A little less than one third of the population lives within the capital city of Managua, the third-largest city in Nicaragua.

**Nicaragua shares borders with both Costa Rica and Honduras.** It borders the Caribbean Sea to the east and the Pacific Ocean to the west. It has the largest body of fresh water in Central America, Lago de Nicaragua. Nicaragua has rainforests to the east, mountains with tropical dry forests in the north, and deforested, populated areas in the west.

The **official language is Spanish**, although both English and indigenous languages are used on the East Coast. The population is 58.5% Roman Catholic and 21.6% Evangelical Protestant.

## APS NICARAGUA



*Atención Primaria en Salud* (Primary Healthcare, in English) is a non-profit community-based organization founded in July of 1996 in Nicaragua by a Guatemalan physician, Dr. Saul Contreras. APS emerged as a response to the increased privatization of healthcare and as an urban-based program providing access to much-needed health services and medications in Managua during trying financial times. Through collaborations and some external seed funding, the organization expanded rapidly to rural areas in multiple municipalities in Nicaragua with a motto of “Health for all...now” and the goal of equipping communities with the knowledge, technical expertise, and tools for improving health and quality of life. Today, the backbone of the organization is a network of approximately 300 trained community health workers (CHWs), who are based in 11 municipalities throughout Nicaragua<sup>1</sup> (one urban and ten rural). Each CHW is from the community in which they serve, most of these communities are difficult to access, and although these areas are fountains of natural riches, they are places with very low economic resources. CHWs participate in APS organizational meetings and receive continuing education trainings, either bimonthly or quarterly, depending on the region.

The name of the organization has its roots in the historic 1978 United Nations meeting and statement made at Alma Ata, where primary health care was declared as a right and responsibility of global populations (Declaration of Alma Ata, 1978). With this goal in mind, APS works to reach underserved and difficult to access communities by providing training, skills, and materials to a network of CHWs. CHWs are lay community members, usually democratically elected to participate on community boards (*Gabinete de Poder Ciudadano*, in Spanish), who volunteer to improve the health and wellbeing of their communities. APS views community health workers as the most far-reaching extension of the Ministry of Health, capable of bringing primary care to communities with little to no access to basic preventive and curative health services and of catalyzing microeconomic and public health projects that strike at the social roots of disease.

For more information, visit: <http://www.apsnicaragua.org/index.htm>

# PACKING TIPS

## General:



Err on the side of packing light. Don't bring anything that you would be heartbroken if it were lost, stolen, or ruined. Take fewer clothes than you think you need - Managua has many used clothing stores and you can buy some clothing if needed. This ensures that your clothes are more appropriate to local conditions, and even helps out the local economy. Any items you may have forgotten can be purchased in Managua. Expect some items, such as electronics, to be more expensive (although a basic cell phone can be purchased in-country without costing too much.) APS Coordinator Fabiola has a small but great library of books on Nicaraguan history and politics that she'll give you once you arrive.

## Documents and other Essentials:

Make copies of important documents and leave them with someone you trust back in the U.S. This includes your passport (color copy) and the front and back of credit cards. You may wish to also scan these copies and email them to yourself as a PDF. Your passport is needed to get in and out of the country, and at most banks in the country to withdraw or exchange money directly (money can be withdrawn from an ATM without a passport), but can otherwise be left at home. Store it in a secure location when you are not using it. An extra, laminated color copy of your passport should travel with you wherever you go. This will be a sufficient form of ID while in country.

## Other important items recommended to bring to Nicaragua include:

- Travel itinerary, receipt and copy of e-tickets
- Travel insurance documents
- A credit card, if possible the one used to purchase your airplane ticket
- A debit card, to withdraw money from the bank or ATM
- Medications
- Syllabus, textbooks, and required readings
- Back-up pair of glasses and extra contact lenses, if needed
- Sunscreen and mosquito repellent
- Flash drive
- Digital camera
- Portable mosquito net (only needed in rural areas)
- Water filter if you will be spending a significant amount of time in rural areas.
  - Filtered water is readily available in urban areas.



## Clothing:

People in Nicaragua tend to dress conservatively. Failure to do so, particularly among women, will lower your credibility and can invite unwanted attention. Despite the heat, it is rare to see Nicaraguans in shorts except at the beach and at home.

**For work: men should dress in slacks and button-down shirts and women in business length skirts or slacks and blouses. Always wear your white coat.** For leisure, T-shirts and jeans are common. Make sure your clothing is breathable and/or lightweight if you are not used to the heat. Capri pants (to mid-shin) are a great option for women to remain modest but stay a little cooler. In selecting your clothes, think humble but NEAT. Even the poorest Nicaraguans have ironed shirts and polished shoes- no matter how old the clothing may be. It's very common for Nicaraguan doctors and residents to be wearing jeans, a scrub top, and a white coat. We found it most comfortable to wear a nice slacks, a scrub top or button down shift, and a white coat. White coats are required in most hospitals in Managua and outside of the big city.

Do not bring too much! You can clean your own laundry, and if not, you can find someone to help you. You will be able to do you laundry often.

You may also want to include:

- Few pairs comfortable pants
- Lightweight shirts
- Dress clothes for hospital
- Walking shoes
- Swimsuit
- Hat
- Flip-flops, Crocs or Tevas (for walking when in the rain)
- Sturdy, comfortable shoes that look nice enough for the hospital
- Poncho
- Lightweight jacket or long sleeved shirt (it can get cool in the mountains). If you are prone to feeling cold, you might consider bringing a combination of these items, especially for cool nights

## Toiletries

Remember that you are limited in what you can bring in your carry on, but not your checked bag. It's a good idea to bring the basics. However, the most popular toiletry brand names are available in Managua. If you have a preferred brand of a toiletry that you don't wish to be without for a few weeks you should consider bringing it with you. Some face wipes (any brand you like) are nice for traveling to help you feel less dust-covered.

**Suggested Personal Medical Supplies** (most are readily available at a local pharmacy or the supermarket, except for HIV post-exposure prophylaxis)

- Thermometer
- Sunscreen (SPF 30 or higher)
- Insect repellent (>25% DEET or 20% Picardin)
- Malaria Prophylaxis *NOTE: due to changes in regulations at the level of the Ministry of Health in Nicaragua, some past students could not purchase chloroquine for malaria prophylaxis at a regular pharmacy. If you are planning to use chloroquine or malarone, plan to bring it with you from the US. Doxycycline was available for purchase at all Nicaraguan pharmacies.*
- HIV post-exposure prophylaxis
- Stand-by treatment for diarrhea
- Band-Aids
- Tweezers
- Acetaminophen (Tylenol)
- Ibuprofen or Naproxen (Aleve)
- Diphenhydramine (Benadryl)
- Pseudoephedrine or phenylphedrine
- Hydrocortisone cream
- Antifungal cream
- Antibiotic ointment
- Personal medications in original bottles

### Supplies for clinical work:

- White coat
- Stethoscope
- Penlight
- Hand sanitizer
- Nitrile or latex gloves
- Surgical gloves
- N-95 masks
- Blood pressure cuff
- Scrubs (at least 2 pair) and cloth scrub cap and/or face mask
- Face mask (for OR)
- Goggles (for OR)
- Shoe covers for the OR, if you prefer

### Other suggestions

- Earplugs (if you're a light sleeper)
- Laptop. Use only in appropriate places.
- Small notebooks
- Headlamp and small flashlights (electricity goes out frequently)
- Extra batteries
- Reading material

### For rural week(s):

Hammocks for sleeping are available at Huembes in Managua. It does get cold at night, so we suggest bringing a warm jacket. There was no running water on site. Bring extra body wipes or go to the river to shower. Bring enough mosquito repellent.

## MONEY

Nicaragua uses the **Nicaraguan Cordoba (NIO)**. The December 2017 **exchange rate is about 30.9 NIO per US dollar**. Most current exchange rate: <http://finance.yahoo.com/currency-converter>. You can bring U.S. dollars and use them in most places, and generally you will receive an exchange rate that is comparable to what the official value is. Not all places can give you change for \$20 bills, and many smaller places (e.g. neighborhood pharmacies) may roll their eyes at having to exchange a \$5 bill. Though exchange is not guaranteed for smaller places of business, urban supermarkets and places in the mercados are usually willing to change or break bills. **Bills need to be in good condition** – generally crisp without tears or markings as many places will not accept well-worn or torn bills. (When keeping US bills in your pocket or within your clothes, try to keep them in a small plastic bag so they don't get wet from sweat. Nicaraguan money is made for tropical weather, but US dollars are not.)

**Exchange:** Banks will change cordobas for dollars (just remember to bring your passport!). Places in the mercados exchange US dollars for cordobas and will often give you a better rate for the dollar, although it's a bit more risky. When receiving cordobas for dollars in the mercado, double-check the amount you receive for the exchange, including the bills and go to a well-known person. The APS Director, Fabiola Thomas, can recommend someone.

In many formal places of business, you can pay with a credit card. You can also use your debit card at any of the banks to withdraw money, although you may have to cover a fee at the bank here as well as at your bank in the US. **After you go to an ATM, try to break your larger bills at a supermarket or a credible store** that has the means to provide change right away so you aren't stuck with larger bills and no way to spend them. Remember to call your bank and credit card companies to make them aware that you will be using your cards internationally.

### Estimated Course/Rotation Expense Budget

These estimates are inclusive of the entire 6 weeks and is reported as cost-per-person. Please find below, a report of total costs broken down into further detail. These costs will vary by person and experience, and is intended to give you a rough idea of expenses:

#### Course Fee total: \$1850 (2018 tuition)

Included:

- Clinical instruction \$1000
- Rent + Bills \$400
- APS donation: \$450

#### Additional Expenses total: \$1,816.33

Included:

- Essential Costs: \$1,305.17
- Average Flight Costs: \$500
- Leisure Costs: \$511.16

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## Course Fee + All costs: \$3,816.33

Below, please find further description of what 'essential costs' and 'leisure costs' entail:  
(This was calculated to the best of ability using receipts, bank withdrawal statements and recall of spending that week/contribution to our 'common' fund. Common fund=\$ used for items that were shared for that week)

**\*Estimated essential costs.** This budget is representative of the following:

1) Living expenses total: \$569.93

Included:

- House supplies, breakfast foods, small dinners +snacks, water, toiletries: \$413.68
- Food (lunch), laundry (~\$11.25 per 5 day week to Eyra): \$56.25
- Transportation (taxi [~\$15 per 6 day week] + bus pass [\$10 one time]): \$100

2) Phone (\$15)

3) Internet (\$15.20 for two months)

4) Course Preparation total: \$173.61

- Recommended medications & supplies via country guide and travel clinic

5) International Bank Fee total: \$31.43

- Includes charges for ~8 ATM withdrawals and 4 debit card transactions

**\*Estimated leisure costs.** This budget is representative of the following:

1) Destinations:

- Ometepe Island Trip (\$103)
- Masaya & Granada
- Corn Islands Trip (\$280.47; Includes: \$98.25 hotel/food + flight \$182.22)

2) Dining Out: \$25.04

3) Souvenirs and other shopping: \$108.65

## TRANSPORTATION: Getting From A → B Safely

Nicaragua is a country with plenty of charm and mystery worth exploring; so don't hesitate to plunge into public transportation to begin your Nicaraguan adventures! Managua doesn't use numbered addresses, rather directions are given in meters or varas (1 vara = 0.83 meters) from the nearest landmark. Streets have names, but are not labeled with signs. Get to know the landmark closest to where you're living to be able to direct a taxi to bring you back home. Google maps is very helpful to learn street names and get yourself oriented.

As always, when traveling in a new place, be aware of your surroundings, avoid wearing jewelry, and keep your money/valuables in a safe place, i.e. money belt. The idea is fairly simple: don't identify yourself as a target for criminals. In general, it is okay to ask someone who appears non-threatening and knowledgeable for directions, but ask more than one person to be sure you've been pointed in the right direction. Beware that people may give you an answer, even if they don't know, just to save face and/or tell you what you want to hear. You will find that most people you encounter are kind, friendly and willing to help.

### Buses

There is no published bus route guide so getting around Managua by bus becomes a matter of asking locals which bus will get you to your desired destination. For travel within Managua **each trip costs 2.5 cordobas**. Buses will display a sign on the front saying either "solo tarjeta"- meaning you must swipe a prepaid bus card to pay, "mixto"- meaning the bus accepts the bus card or coins, or if no sign is displayed usually only coins are accepted. The **bus pass must be purchased in a kiosk in the mall** (we went to Multicentro Las Americas) and be sure to bring your passport along to get your card for the first time. The card can be recharged many places, including at the pulperias (ask if they do "recarga de TUC").

In Managua there are four main bus stations: **Mercado Roberto Huembes, Mercado Israel Lewites, Mercado El Ivan** and **Mercado Mayoreo**. Buses departing from these locations are mostly destined for longer trips across the country (i.e. Leon, Rivas, Matagalpa, Masaya). Always be in charge of your own belongings and maintain a watchful eye. For longer distance bus trips, once you are on the bus, a man will pass down the aisle, ask your destination, and tell you how much the fare is... this is the appropriate time to pay him. If you are unsure of where to get off once you are on the bus, feel free to ask the bus driver to clue you in once you have reached your destination.

### Minivans

Minivans are ideal for traveling shorter distances outside of Managua (i.e. to Masaya, Granada, Jinotepe). The most popular station for minivans is called "La UCA" (pronounced: ooka). It is located across the street from the Universidad Centroamericana (UCA); you will notice a dense population of commuting students at this bus station. Minivans do not have specific schedules, but they come and go frequently making it easy to catch a ride at your convenience. Once again, you will pay the man in the van once you get moving. Having currency in coins is always a good idea (although not imperative), to expedite the payment process and avoid the eye rolling associated with having to break larger bills. Make sure your belongings are kept securely in your lap. Similar to buses, the minivans get packed well beyond "capacity" at peak hours.

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## Taxis

Taxis can be extremely convenient, but you still have to exercise caution. Always use a taxi that has a light on the roof, a license plate in the front and back of the car, and a registered number painted on the side. Pick a taxi driver who is older in age. Most of the crime associated with taxi drivers happens with younger drivers, so feel free to gauge the vibes of your prospective driver and decide whether or not you feel comfortable getting in his vehicle. Taxis do not have meters. When you hail a taxi, ask how much the fare is to your destination *before* getting in the car. Prices are per person so be sure to specify how many people are traveling. The price the cab driver will quote you is negotiable so try asking a knowledgeable source ahead of time approximately how much the fare should be. You can also tell the taxi driver you want the “precio Nicaraguense” not the “precio Gringo”. When it comes to transportation, cab drivers are rarely able to make change for any bill over 50. Smaller bills will surely get you farther... in a transportation sense that is!

Also, taxis occasionally pick up more than one client if it is a busy time of day. If you are a female and alone, it is not recommended to get in a taxi where there is already a man in the backseat. You should always sit in the backseat, where you can clearly see the driver. Be careful taking cabs at night - try to ride with a group of people you know and can trust. . If in doubt, call one of the trusted taxi drivers below or even better arrange ahead a time and place for them to pick you up.

The APS Director, Fabiola Thomas, can give you phone numbers of some trustworthy taxi drivers. Below are a few trusted taxis:

- Juan Espinoza: 8659-4417 (in 2014 we had Juan drive us daily to our clinical sites and he was one of the most punctual and trustworthy people we met in Nicaragua- highly recommended!!)
- Bismark Cruz: 8690-8653 (claro)
- Elester Mendez: 8991-5826 (movistar) (if he’s not working, he can refer you to his brother, Manuel)
- Ramón: 8726-8698 (especialy fair on pricing)
- Pedro Joaquin: 8523-7590

## On Foot

If you are female, it is common to be greeted by men on the street who holler “Adioss” or blow kisses at you as you walk past. This is a relatively benign gesture so you needn’t feel threatened. But as a rule, whether male or female, don’t forget to walk confidently and with purpose. Naturally, walking is a great way to get around, but in a big city like Managua, it has its limits. There are few crosswalks and crossing the street can be very dangerous. It is best to walk around without a big bag or valuables. If you do carry a bag on you, keep it across your chest on the shoulder furthest from the street, and be aware of people who approach you. If carrying a laptop, carry it in a type of bag other than a typical computer case.

## Housing

There are many different housing options in Managua. APS director Fabiola Thomas and Chris Dodd can assist in finding housing. Rent is about \$800 total for the 6 weeks for four students sharing an apartment.

Previously, students have stayed with Fabiola but her house is far from the center of town and cannot accommodate more than 2 students. If not arranged ahead of time (ask Chris Dodd what the plan is as something has probably already been arranged), there are many families that rent extra rooms to university students in Managua for very reasonable prices. Ask Fabiola, UNAN students and anyone else you meet if they've heard of something.

**2017 Housing Input from Students:** Fabiola found us an amazing 3 bedroom house that all 4 of us lived at while we were in Managua. It was in a great neighborhood, relatively close to most of the hospitals and clinics we had to go to, and rent/utilities/internet/laundry were all included in the APS Course fee of \$1,600.

Two of us spent the fourth week of the rotation on Isla de Ometepe, where we lived with a clinic nurse/dietitian and her family. During the fifth week, all four of us lived in the Convent in Mulukukú, which was a far cry from our luxurious house in Managua, and had much less privacy, comfort, running water, electricity and quiet than we were used to. During the last week we were in homestays with the Promotores and two of us at Marlene's house stayed in private rooms on cots, while the other two at Dennis' house slept outside on cots under mosquito nets.

## HEALTH INFORMATION

Keep in mind that many medications are available for purchase at pharmacies that have convenient hours, and that pharmacists can also help you find the right medication for whatever might be ailing you. It definitely helps to be prepared with the basics for middle-of-the-night issues (Ibuprofen, Imodium, etc. - see the packing list for details and exceptions), but if you need something, you will most likely be able to find it at a pharmacy.

Drinking unpurified tap water in Managua is very common, and after a few days, we drank it too. The tap water is treated in Managua and almost all Nicaraguans drink it

- Drink ONLY purified water outside of Managua, especially when traveling on your rural week
- Drink a lot of water; this is a tropical country so hydrate constantly
- When traveling for your rural community health worker week, keep in mind that the families you stay with may drink the tap water in their local area, so it may help to be prepared with your favorite purification system

### **Malaria and mosquito-borne illnesses:**

- In December and early January of 2013/2014 there was a dengue outbreak in Nicaragua that attracted a lot of attention from the Ministry of Health
- We (the 2014 course group) chose to not take malaria prophylaxis and instead were vigilant about avoiding mosquito bites using bug repellent (this also helps with avoiding dengue)

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exposure). We did not get any mosquito-borne illnesses, even traveling to Ometepe and the Corn Islands.

- If you are concerned about malaria, take a look at the malaria endemic areas map that the Travel Health Clinic gives you, and this should help you decide about whether or not you want to take malaria prophylaxis

### **Parasites and other creepy-crawlies:**

- Most Nicaraguans give themselves a course of de-worming medicine every six months or so, and we purchased Albendazole to take upon returning to the US. The dose is 400mg of Albendazole PO once, and it is very cheap
- After your rural week, check yourself over for ticks, and pay particular attention to your feet for chiggers (chigoe flea) which are small fly larvae that can burrow under your toenails. They should be removed with tweezers or a sharp needle
- When traveling in rural areas, shake out your clothes and shoes before putting them on, since scorpions and other insects can come hang out there
- Piles of dirty clothes can attract cockroaches
- Some people refer to the small geckoes that hang out on the walls of houses as “scorpions,” but they are harmless.

### **Rotation Information (from students)**

2016:

#### **Puesto de Salud de Hugo Chavez:**

Great site to work at for someone interested in Primary Care. We were able to work with one of the nurses, Meira who involved us in the care of patients. We were able to do PAP smears, vaccine administration, Depo-provera injections, and interview patients. What made this rotation awesome was being able to go out into the community to make some house visits for those who were disabled or could not come into clinic. During our time there, Zika was on the rise. Therefore, we were also able to join some of the health personnel to go into the neighborhoods to provide education on transmission prevention. It was great to go into the community to see where our patients were coming from.

2017:

#### **Isla de Ometepe (Moyogalpa and San Jose del Sur):**

This was a new site in 2017 (or one they hadn't used in a few years maybe?) and two of us spent a week on the island. We spent a few days in a clinic in Moyogalpa, doing urgent care and home visits, a little time in the larger hospital in Moyogalpa, one day in the Puesto de Salud in San Jose del Sur and a few hours each afternoon exploring the island and local life. I thought it added a lot to our experience, and would recommend the experience to anyone interested in primary care.

#### **Exercising:**

- Jogging in Managua was doable in the Los Robles/Planes de Altamira neighborhood where 2017 students lived.

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- Joining the Pro Fitness gym in Managua was fun (\$35/month) and they had Insanity and "Ritmos Latinos" classes 4 nights a week plus machines/weights and a full boxing gym open 6 days a week
- Exercise or yoga videos using water bottles as weights was a great way to work out without having to leave the house - download a few of your favorites before you leave!
- A smaller or travel yoga mat might be a good investment for this trip

Otherwise the health information you get at the GHCE orientation is pretty complete. Use your common sense about water, street food, etc.

## Safety Information

Nicaragua is generally one of the safest countries in Central America right now, that being said, foreigners are still seen as wealthy targets. Using common sense and exercising the same caution you would when traveling anywhere will serve you well.

- Be careful when crossing the street, as pedestrians DO NOT have the right of way in Nicaragua and are expected to get out of the way of cars
  - Don't make a habit of going out with expensive electronics (iPhone, laptop, camera) and be judicious about when you take these items out and show them around
  - When traveling, distribute money between a small interior wallet for large amounts of cash and a wallet or coin purse for daily purchases
  - Once you are settled in your living space, keeping your passport, extra cash, laptop, camera and other valuables in a locked, hard-sided suitcase when not in use will give you peace of mind about these items
  - When walking around Managua (or anywhere), avoid wearing flashy jewelry and watches, this is a precaution that ordinary Nicaraguans also take
  - If you have a piece of jewelry that has a lot of meaning, leave it at home (I left my engagement ring at home, and purchased a simple band instead, and the peace of mind was definitely worth doing this)
  - Consider making a laminated, color photocopy of your passport to use as identification for most errands (this may not work when exchanging money at a bank, however)
  - If you feel unsafe or uncomfortable in any situation, feel free to leave. Although you might risk offending someone, better to offend someone than endure an unsafe situation or take a risk you are uncomfortable with.

## COMMUNICATION

- **Nicaraguan Phone Calls: *Movistar* and *Claro***
  - You can buy a phone with a single carrier for about \$20 (US) or a phone with 2 sim cards, one for each company for about \$40 (US).
    - If you plan to spend a significant amount of time in Nicaragua, many people choose to have sim cards from each company. This is because a call to a phone of the opposite carrier costs more.
    - Most of the 2017 students paid C\$199 (\$7 USD) every two weeks for Movistar service (minutes, texts and data) and that lasted us plenty of time
  - Phone usage is pay-per-use: you can buy minutes, called “saldo” at gas stations, pulperías, other businesses, or online (the easiest way to do this)
    - You’ll receive text messages about special promotions Always try to buy minutes when there are promotions. Once a week, usually Friday, you get 4, 5 or 6 times the amount of minutes you buy.
    - When you recharge your minutes you should receive a text message immediately stating what you bought. Don’t walk away from the retailer until you have confirmation that they sent you your minutes.
- **International Phone calls**
  - **Skype and calling from Nicaraguan cell phones are the preferred method of calling home for most people from the US**
  - You can use your Nicaragua phone to call the US, this also costs about C\$2-3 (8-12cents) per minute and reception is generally very good.
  - U.S. cell phones can also be used, just check with your company about international plan before traveling (many carriers have reasonable text plans).
    - More and more Nicaraguans use smart phones, but use yours at your own discretion as it is a valuable item that could be stolen

## FOOD

Welcome to the birthplace of *gallo pinto*! No, this is not referring to a feast of painted rooster, but the ubiquitous dish of rice and beans, served with any or all meals of the day. Lunch is usually the biggest meal of the day, consisting of a chicken, fish, or meat dish with rice, beans, and bastimento (tortilla, yuca, guineo, depending on the area). Nicaraguan queso, accompanies most meals. Generally the cheeses have strong flavors, and are not pasteurized. Food is commonly fried to perfection. A typical dinner might consist of gallo pinto, with a fried egg or queso and more bastimento.

If you are in a homestay situation and the food you are being is served is making you ill, respectfully tell your house mom, “La comida me cayó mal.” It is better to be frank and let her know the food is upsetting your stomach then to become dehydrated and sick.

The 2017 group hired Doña Sonia, Fabiola’s friend, who cooked us a late lunch and left extra for dinner for weeknights. We paid her about C\$900 (\$30 USD) per week to cook and about the same amount for groceries. It worked out to about \$1-2 per person per meal (with 10 meals per week) and she made some really excellent dishes. We’d highly recommend her for future years!

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Your barrio - In our neighborhood we found folks who sold tortillas, eggs, and other items for cheap. Plus, there are vendors who come by frequently selling ice cream, cookies, candy, and most importantly - FRUIT. It should be papaya and kalala (passion fruit) season when you arrive, but enjoy whatever looks good!

Grocery Stores -

- **La Union** – close to housing. They had lots of variety, good deals, and worked when places in our neighborhood were closed and/or when we needed random items
- **La Colonia** - Generally good quality and similar to La Union.
- **Palí** - extremely cheap, good for some things like snacks (try the lemon & salt peanuts!)

## ENTERTAINMENT

### Malls:

- **Multicentro Las Americas** is the mall closest to District 6.1 where APS works. It has amenities such as department stores, a movie theatre, supermarket, and a food court. The shops range from clothing, to electronics, —but overall, you will find better deals in the mercados.
- **Metrocentro** is a mall that has the same amenities, but is larger in size, so has more stores and variety.
- **Plaza Inter**, another popular mall, has a food court and movie theatre as well as a good selection of shopping.
- **The Gallerias Santa Domingo** is the largest mall in Managua, but is also the most expensive. It has many restaurants, bars, stores, and the largest movie theater. Movie times for all theatres can be found online.

### Dining/Nightlife:

- Casa de los Mejia-Godoy is a great spot for dinner and live music. The Mejia-Godoy's are a popular Nicaraguan family nationally recognized for their musical and philanthropic contributions. This hotspot, opened up by the family in 1998, features “comidas típicas” and musical entertainment, ranging from traditional folk to modern favorites like PerroZompopo. Find out who is playing and make a reservation requesting a table close to the stage for an up close cultural experience.
- Doña Tanya's , located near Centro Comercial Managua, has great food, no frills, no alcohol.
- Doña Haydee's - also good food with music and traditionally dressed wait staff.
- Fandango was right behind our house in 2017 and was a great place to watch salsa dancing Weds-Sat nights

**Day Trips:** Laguna de Apoyo is the outcome of a volcano that more or less imploded, creating a huge crater that has since formed a lake of subterranean and rain water. The laguna is located between Granada and Masaya and can be accessed via bus or taxi from either location. The water is clean and ideal for swimming. If you are visiting for the day, the best option may be to pay one of the hostels a small fee to use their beach access, chairs, bathrooms/changing rooms, and even kayaks. Some hostels may offer snacks, beverages and meals. This is truly a unique Nicaraguan experience!

Walking around the city of Granada you may forget you are actually in Nicaragua. As the oldest colonial settlement in the country, it has a strong European feel. You can make a day of walking around the city and enjoying the variety of dining options from Italian to French. (If you're looking for pizza, try Pizzeria Don Luca; ChocoMuseo for your chocolate fix). If you desire intense relaxation, check out “Seeing Hands Blind Massage.” This establishment, located

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behind the EuroCafe off the central park, creates jobs for blind people. You can get a great hour-long massage for about \$15.00. Other activities in town include taking a boat ride around the Islets of Granada. This is a relaxing way to enjoy Lake Nicaragua and admire the wildlife – namely a large array of birds. Granada is also home to the International Poetry Festival, which is worth checking out if you are in town during the right time of year.

**Masaya:** About an hour outside of Managua by bus, this is easily a day trip. It is a city known for its folkloric and artisan culture. Try the Mexican restaurant Jarochito's one block north of the central park- the pollo pibil tocos and fruit smoothies were amazing. There is a great market in town, easily identified as it is within the confines of what appears to be a castle. It is a tourist friendly market, and you can pick up any Nicaraguan trinkets, picture frames, woodwork, hammocks, pottery, etc. On Thursday evenings (starts around 7-8pm) is the "Noche de Verbena" held inside the market (~50 cordoba entrance fee) featuring music and folklore dancing. Drinks and dinner are also available. Be sure to arrange ahead of time a taxi ride back to Managua (~600 cordobas for 2 people) or stay overnight as riding the bus back at night is not advisable.

There is a different market attached to the bus station called the Mercado Municipal Ernesto Fernandez. This market is more popular with locals, who go there to buy anything from food to clothing to school supplies. The *Masaya Volcano National Park* is only a short bus ride outside the central part of the city. At the park, you can go on guided tours that show you the three craters contributing to Volcan Masaya, one of which is continuously active.

### **Weekend Trips:**

#### **Isla de Ometepe:**

Ometepe is the island in the middle of Lake Nicaragua. It is an adventure/hippy tourist destination and has lots of places to stay and enjoy the hiking, kayaking, beaches etc. We stayed at Finca Mystica, which was a lovely eco-lodge outside of the town of Merida, and had some of the best food and fruit juices in Nicaragua, all for about \$80 per person for a weekend (food and alcohol included). The waterfall hike was also really pretty.

#### **Matagalpa:**

2017 students: We spent a weekend here in between our rural weeks in Mulukukú and with the health promoters who lived outside of Mulukukú. It was a long bus ride to get there, but the cool mountain air, diverse array of foods, good hiking up to the Cross and in Selva Negra coffee farm made it so worth it. We stayed at Buena Onda and Martina's Place, both nice hostels. Highly recommend checking out Selva Negra, or another nearby farm and maybe doing a coffee tour. Best ice cream in Nicaragua at "Besame/Kiss Me".

#### **Corn Islands:**

People travel from all over the world to visit these islands, and for less than \$200 round trip, you can get an hour long flight from Managua and spend a weekend here! We stayed on Little Corn Island and had a wonderful time snorkeling, walking up and down the beach, enjoying the fresh coconut in the food and drinks, and overall being on a small island in the Caribbean that was beautiful and relatively inexpensive (<\$20 a night per person for hotel!). For all the information you need to plan your stay consult your guidebook and <http://www.bigcornisland.com/>

*Resources: Check out [www.ViaNica.com](http://www.ViaNica.com) for more detailed travel and activity information.*

# CULTURAL ADJUSTMENTS

*In the country where the streets have no name, but they have soul*

The Nicaragua culture is very rich in language, images, stories and gastronomy.

It is formed by diverse influences that goes from the Spaniard in the Pacific Coast until reach the African and British Culture in the Atlantic Coast, all of this mixed with the native indigenous Mesoamerican culture.

As with all cultures, it has its positive and negative things that make the country unique and special. While driving from the airport to your living quarters you may encounter children trying to sell you candy or offering to wash your car windows. They will request a tip for this, but this practice is not recommended as it simply reinforces child labor.

The back of the *Moon Nicaragua* guidebook has an excellent summary of a lot of aspects of Nicaraguan culture, and it is a quick read.

One adjustment you'll need to make may be that the accent in Nicaragua is very different from other countries in Central and South America. Nicaraguans often let words run together and drop the "s" from the end and middle of words. Your confidence in your Spanish may be knocked down a few pegs. It took a while to adjust our ears to understand people, but eventually you should be able to adjust.

Other language difficulties we encountered were mainly in the hospital, where different terms are used than what you might expect. Many medical terms are direct cognates, but there are some slang or location-specific terms. In general, older eponyms are more common in Nicaragua than in the US. If you are confused, don't be afraid to ask a friendly medical student or resident. Some terms from previous students wished they'd known at the start:

**Fonseca:** Hospital Lenin Fonseca, a sub-specialty hospital in Managua, however, the term "Fonseca" is often used to refer to renal dialysis, since the only dialysis machines in Managua are located there.

**Quirofano:** operating room

**"filococco":** we puzzled over what this type of bacteria was, until we realized that the word we were hearing was "estafilococco," or *Staphylococcus aureus*, but with the Nicaraguan accent dropping the "s"

**MAI:** Mycobacterium Avium Complex

**TAC:** CT scan

**TAR:** HAART

**UCI:** ICU

**turno:** call/night shift

**hacer visitas/pasar visitas:** rounds

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**se va al terreno:** going out for home visits

**dar de alta:** discharge a patient from a hospital

**ingresar:** to admit a patient to the hospital

**tacto vaginal:** cervical checks (during labor)

**chimbomba:** amniotic membranes/sac

**pileta:** cement platform with washboard and tub

**regla:** menstrual period

**tasa de filtracion:** glomerular filtration rate

**metodos:** contraceptive methods

**genotipaje:** genotype

**ictericia:** jaundice

**ITS:** STI

**remangarse la camisa/recojerse la camisa:** push up your sleeves

**subirse/levantarse la camisa:** lift up your shirt

**desabrochar:** to unbutton

**relajese el brazo:** relax the arm

**mete aire con la boca/la nariz:** deep breath

**el fondo:** source, root cause, diagnosis

In general, you may be surprised at how physicians interact with patients, in terms of things like explaining diagnoses or providing counseling. It is much more “doctor knows best” than in the US. It may be a great opportunity to demonstrate some compassionate bedside manner and patient-centered practices. Also, show respect by addressing people, especially the elderly, as “Don” or “Doña” followed by their first name.

The culture is very relaxed and people operate on “Nica Time” and will often show up to a scheduled meeting 30 minutes late (or sometimes more). This can be frustrating for those accustomed to operating on more of a “schedule”, so just be aware that it will happen, be patient and take it in stride. Although time is more fluid in Nicaragua, it is generally more polite to be punctual yourself, as a foreigner.

# Guidelines for the Management of Needlestick Injury and Body Fluid Exposure

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## Background:

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

## Pre-departure advice:

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

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

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

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

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

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

### 1) Don't Panic.

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

### 2) Wash the exposed area.

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

### 3) Let someone know.

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

### 4) Decide if you need to start medications.

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

### 5) Arrange for testing.

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

### 6) Decide if you need to come home.

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



## 7) Get support.

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

### Preferred HIV PEP Regimen:

Raltegravir (Isentress; RAL) 400 mg PO twice daily

### AND

Truvada, 1 PO once daily

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

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

## SUGGESTED READINGS

In addition to the books listed on DGH's website, Nicaragua Network recommends checking out the following books before you go (don't worry- nobody can get to them all!) \*\*indicates that a copy has been left at APS for your use and underline indicates most highly recommended by students!:

**\*\*Moon Handbooks: Nicaragua.** Amber Dobrzensky, 2013. The author lived in Managua for 4 years and this is a virtually complete guide book to Nicaragua with many side trip suggestions. Take with you everywhere!

**\*\**The Best of What We Are.*** John Brentlinger. University of Cambridge Press, 1995. Account of Revolutionary years, with some oral history.

**\*\*The Country Under My Skin: A Memoir of Love and War.** Gioconda Belli. Alfred A. Knopf, 2002. The Nicaraguan poet and novelist tells the story of her participation in the revolution and the conflicts she confronted as woman and revolutionary.

**\*\**The Jaguar Smile: A Nicaraguan Journey.*** Salman Rushdie. Random House, 1987. In his first work of nonfiction, recounting his travels there in 1986, Rushdie paints a brilliantly sharp and haunting portrait of the people, the politics, the terrain, and the poetry of "a country in which the ancient, opposing forces of creation and destruction were in violent collision."

**\*\**Blood of Brothers: Life and War in Nicaragua.*** Stephen Kinzer. G.P. Putnam's Sons. 1991, New York Times correspondent's first-person account of Nicaragua from 1976-1990.

***Nicaragua Without Illusions: Regime Transition and Structural Adjustment in the 1990s.*** Edited by Thomas Walker. Essays examining global economic influences upon Nicaragua, 1997.

**Sandinista: Carlos Fonseca and the Nicaraguan Revolution.** Matilde Zimmerman. Duke University Press, 2000.

***Sandino's Daughters.*** Margaret Randall. Conversations with Nicaraguan women about their struggle against Somoza.

***Sandino's Daughters Revisited: Feminism in Nicaragua.*** Margaret Randall. Rutgers University Press, 1994. Conversations with many of the same women as in the previous book, as well as new voices.

***A Canary for the World: A Nicaragua Environmental Primer.*** Jerry Mueller, Nicaragua Network, 2000. Chapters on Nicaragua's forests, mining in Nicaragua, and on the various "dry" and "wet" canal proposals.

**\*\*Nicaragua: Land of Sandino.** Thomas Walker. 3rd edition, 1991. A good synopsis of the political history of Nicaragua from a Sandinista perspective.

*Sandino: The Testimony of a Nicaraguan Patriot, 1921-1934.* Compiled and edited by Sergio Ramirez, 1990. An anthology of the writings of Augusto C. Sandino, who fought the U.S. Marine occupation of Nicaragua.

*Revolution and Counterrevolution in Nicaragua.* Essays edited by Thomas Walker. Westview Press, 1991.

*Fire from the Mountain: The Making of a Sandinista.* By Omar Cabezas. 1985. Prize-winning story of Cabezas' years as a guerrilla fighter in the mountains of Nicaragua with the FSLN.

*A Special Place in History: The Atlantic Coast in the Nicaraguan Revolution.* Jane Freeland (afterward by Dr. Myrna Cunningham). War on Want, Nicaragua Solidarity Campaign, London, 1988.

*The Death of Ben Linder; The Story of a North American in Sandinista Nicaragua.* Joan Kruckewitt. Seven Stories Press, 1999.

*Nicaragua in focus: A Guide to the People, Politics and Culture.* Hazel Plunkett. Interlink Books, 1999.

*The Many Faces of Sandinista Democracy.* Katherine Hoyt. Ohio University Press, 1997. Papers in International Studies, Latin America Series. Covers Sandinista thought on representative, participatory and economic democracy and includes a chapter on democracy within the Sandinista Party.

*A High Price to Pay: Structural Adjustment and Women in Nicaragua.* A Witness for Peace Publication, 1996.

*Voices of Sandinismo in Post-Election Nicaragua.* Interviews by Midge Quandt (Introduction by Mark Lester). Nicaragua Network Education Fund, 1997. Can be purchased from the Nicaragua Network.

*Women and Revolution in Nicaragua.* Edited by Helen Collinson. Zed Books Ltd., 1990.

*Broken Promises: Agrarian Reform and the Latin American Campesino.* William Thiesenhusen. Westview Press, 1995. Includes chapter on Nicaragua.

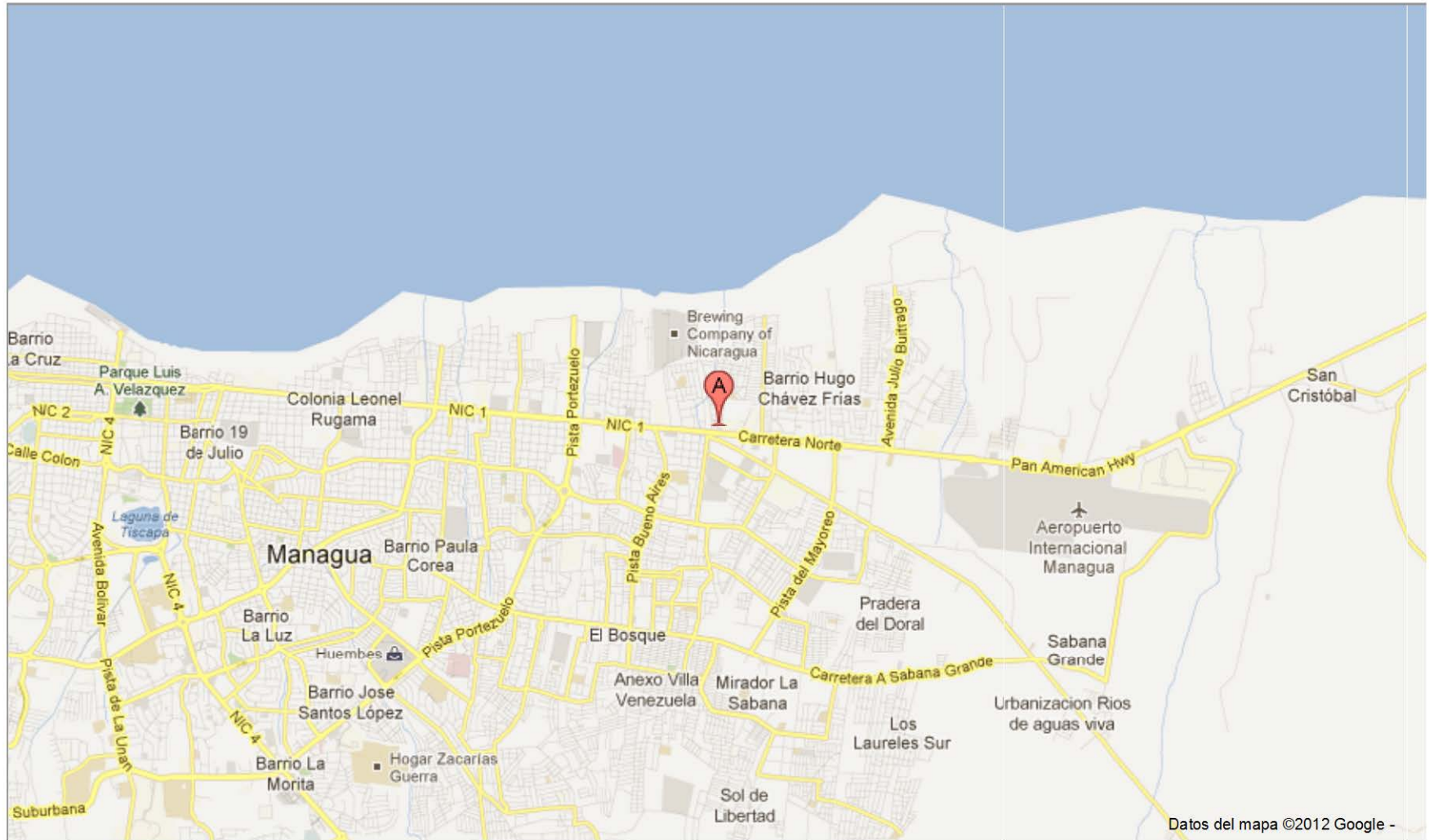
*Nicaragua: A Country Guide.* Kent Norsworthy. 1989. Introduction to Nicaragua covering politics, military history, state of the economy, influence of U.S. foreign policy, and society at large. Order from Resource Center, PO Box 4506, Albuquerque, NM 87196

# MAPS

## Nicaragua



Managua: Distrito 6.1, where APS works; A= Health Center Silvia Ferruffino



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