

Orthopedic Mission to Jinotega, Nicaragua January 2010

A Report

**Carried out under the auspices of Project Health for León
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Team Members

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Contacts in Jinotega

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The Location

Nicaragua is very poor as a result of the Sandinista war but seems to be recovering at a rapid rate with significant improvements noted each year when we return. Jinotega (the city of the mists) is located about 100 kilometers north of Managua, Nicaragua at an altitude of about 1,000 meters.

The drive from Managua now takes about one hour 45 minutes. Like other tropical cities at higher altitudes Jinotega has a very pleasant climate year round. Though this trip in January falls in the dry season, it did rain two days. Temperatures ranged from 65-80 degrees during our stay there.

Jinotega is placed in a small valley in the coffee growing mountains and has a population of about 120,000 people. We stay three blocks away from the hospital in the Hotel Café, a very nice facility which is very clean and had a fine restaurant. It even has Wi-Fi for

laptops. We went out to several other nice restaurants during our stay and they also provided good food. The tap water is apparently chlorinated and other than some mild diarrhea and a couple of colds, no one got seriously sick (however many of us were taking daily Doxycyline for Malaria and diarrhea prevention).

The Facility

The hospital is in the middle of the city and moderately old with large multibed wards in narrow wings for ventilation. There are some “private” wards with private rooms for patients with insurance but none of our patients this year were in them.

The operating theater has three rooms, of which they kindly allow us the use of the two largest. The third is mostly used for C-sections during our stays. Much of their equipment is in poor condition. Sterile practice is problematic as they are not careful about the sterile field and gowns and drapes often have perforations. They do not use sterile waterproof barriers on their back tables or surgical field. They do not have a flash autoclave and so any instruments needing rapid sterilization are placed in a “sterilizing solution” (composition unknown). They have very few infections though.

Circulators and Anesthesia Technicians (who provide the anesthesia) often leave the rooms for extended periods of time.

Their fluoroscope (Donated by Project Health for Leon) has not been able to be repaired. We brought some battery powered Stryker 2000 and 4000 surgical drill-saw combos, however, they do not have a flash autoclave and so cannot sterilize the batteries (which still must be wiped with alcohol and covered with stockinette or a glove). They are running low on batteries for these. They use Black and Decker drills, wiped down with alcohol for minor procedures but the ones we have taken them are now defunct.

They have a video tower with which they have done a few arthroscopies over the past year using the arthroscopes and instruments we brought four years ago.

The Schedule

We traveled all day Saturday arriving in the evening.

We held clinic from 8 to 3 on Sunday

We operated from 8 to 3-5 on Monday – Thursday. We did one case Friday that got bumped Thursday by emergency C-sections.

We left for Managua Friday at 11 and flew out on Saturday at 8AM.

Many of us got stranded in airports because of the big snowstorm and didn't actually get back to NC until Sunday or Monday.

The Patients

We saw about 80 patients in the clinic on Sunday with about 9 more “consults” during the week between surgical cases. Many of the patients had conditions that were untreatable or that we did not have the expertise to treat.

We performed 31 operations which are listed in the table below.

Room A

Room B

Monday	Kenneth Martin 20 Male (Rodriguez Gonzalez); Right 4-5 Claw toes; Dan Murphy	Bladimir Centero; 19M; Rt bimalleolar ORIF; L Dahners
Monday	Lester Jose Espinoza; 29M; Right ACL; Dan Murphy	Karen Hernandez; 13F; Left elbow OR dislocatio; Jennie Hooker
Monday	Samuel Zamora; 16M; Machete toes wire revision: CER/Murphy	Emilio Herrera Castro; 11F; Right ankle closed reduction; Jennie Hooker
Monday	Meyda Araz-Melendez; 48M; Right plantar fascia release; Murphy	Hugo Lopez; 58M; L patella ORIF revision; L Dahners
Monday	Carel Rugumen; 9F; Left Humerus Supracondylar Grade IIIC ORIF; Jennie Hooker	

Tuesday	Crecencio Reyes Val Dahnersez; 49M; Rt Knee Arthroscopy & MMT; Dan Murphy	Mayna Rivera; 52F; Lt Clavicle ORIF; C Rhoades
Tuesday	Gerardo Contrera Tellez; 8M; L Knee staple replacement; Jennie Hooker	Cesar Orlando Rodriguez; 25M; Left ulna hemi resection and graft to radius non union; C Rhoades
Tuesday	Betty Hernandez Mairena; 10F; L partial talectomy/percutaneous Achilles tendon lengthening; Jennie Hooker	Berlis Moreno; 34F; EIP to EPL transfer; C Rhoades
Tuesday	Darwin Blandon; 15M; Rt Peri acetabular osteotomy; L Dahners	Pedro Perez; Distal Radius Fx ORIF; CER
Tuesday		Marcos Castro; 55F; L Carpal tunnel release and Guyon's canal release; C Rhoades
Tuesday		Carla Escot; 33F; Rt Carpal tunnel revision/fat graft/ulnar release; C Rhoades

Wednesday	Sanet Cruz Zelaza; 34F; Rt Knee Arthroscopic medial menisectomy; Dan Murphy	Silvio Palacio; 39M; Rt femur nail; L Dahners
Wednesday	Silvia Hernandez Zeledor; 51F; Rt rotator cuff repair; Dan Murphy	Jaime Antonio Rivera; 27M; Cerebral palsy-wrist fusion; C Rhoades Jennie Hooker
Wednesday	Maria Pastora Valle; 63F; Left Total Knee removal and knee fusion; Dan Murphy & L Dahners	Janita Perez; 15F; Rt Shoulder Open Capsulorrhaphy; CER/JH
Wednesday		Ramon Ilbada Aranz; 70M; Rt tibial plateau HWR; JK
Wednesday	Alfonse Calvo-Samola; 38M; Gouty tophi excision left hand/elbow; Dan Murphy & C Rhoades	Daniel Chavarria; 20M; Left external fixator removal lower extremity; JK

Thursday	Verkys E. Aguilera; 8F; Bilateral percutaneous Achilles tendon release; Jennie Hooker	Walter Aguayo Torres; 23M; Left Knee Arthoscopy ACL? & Medial menisectomy; Dan Murphy
Thursday	Holvin Blandon; 3M; Rt genu valgum, left genu varum hemi epiphyseodesis; JH	Daniell Vargas; 21F; Right ankle biopsy and curretage; JK
Thursday	Brandon Alfonso Lara Sobelvario; 7M; Right femoral/pelvic osteotomies; Jennie Hooker	Oliver Fuentes; 44M; Left Ring/5th Dupuytrens release; C Rhoades

Thursday

Jose Pineda;48M;Left tibia infected nonunion
posterior lateral bone graft;L Dahners

Friday

Carlos Herrera;14M;Left distal femur/proximal
tibia epiphyseodesis;Jennie Hooker

We encountered no known complications on this trip.

The Equipment

We took approximately 1000 pounds of tools, supplies, medications, equipment and implants with us, most of which we left in Jinotega.

We expended a lot of effort in organizing the supplies that are there.

Results from the previous year's surgery

We saw two patients from previous years' surgery. The doctors assured us that the others were all doing well (although this is difficult to believe).

Maria Pastora Valle;63F; Left Total Knee removal and knee fusion;Dan Murphy & L Dahners We had attempted a salvage of her failing TKR with screw fortified cement in one of the previous trips but she had fallen back into varus and was having a lot of pain.

Ada Julissa Amaya Estrada 7 yo F L multiple flexor tendon Z lengthenings by Don Bynum, came to clinic and had great range of motion

Overall

We all had a wonderful time with very gracious hosts, believe we did some good for the people of Nicaragua and are ready to go back next year.

NEXT YEAR

Equipment to take

Injectable steroids

- 3.2 and 2.5mm drill bits (1/8" and 3/32" chrome or cobalt or titanium drills from the hardware store work fine)
- Steinman pins and K-wires
- pliers, wire cutters, out of chrome cobalt so they will tolerate autoclaving
- pin/bolt cutters

- videotapes or books (in Spanish if possible) that demonstrate sterile technique, how to setup the back table and drape the patient

AO technique

Campbell's

dyonics shavers (linvatec unit not working jan 2010)
metal trays to make sets with
large self retaining retractors
cement, cement, cement
extension cords for OR
Power and batteries for Styker ref 4115
O vicryl
2" ace wrap
T handle chuck (big ass)
3" tape
sterile stockinette
coban
slings
staples
richard staples - have inserter?

- Small Frag Screws – all sizes, but especially shorter ones
- Large Frag Screws - all sizes, but especially shorter ones
- Instruments for Angled Blade Plates and more plates various sizes
- Fiberglass Casting Material
- Sterile Webril
- Sterile Esmarchs
- Small Mallet
- Steri Strips and Benzoin
- Small Ronguers

wire cutters

- Scissors-Mayo and Metzenbaum

- Ace Bandages
- Suture – Ethibond and Monocryl
- Mini Frag Screw Driver for 1.5 and 2.5 Screws
- Cautery Pencils
- Suction Tubing
- Sterile Yankauer and Neuro Suction tips
- Sterile Gloves
- Fiber Wire
- Knee Immobilizers – all sizes
- Alumi Foam finger splints
- Arm Slings
- 4 x 4 and 4 x 8 Gauze for Dressings
- Laps
- Cloth Gowns
- Cloth Drapes
- Small Osteotomes - Hand
- Large Osteotomes – Narrow Widths
- Currettes – Small Sizes
- Rasps
- Permanent Markers
- Bins to Organize Supplies
- Label Maker

Equipment to invent

- Autoclavable impervious drapes for back table and “U” drapes for patient limbs
- o Tarps?

Medical textbooks that are only 1-2 editions out of date (spanish texts are great if you can get them but english are helpful too, and we can read them when we're stumped)

If you feel like spending some money at the store, bring some

"organizer trays" like for silverware or desk drawers that we can sort screws into,

Cordless electric drills (Black and Decker type) theirs are all dead!!!!!!!!!!!!

7, 10 and 11mm wrenches for them to use on external fixators

wire cutters, pliers and vice grips that don't have rubber handles if you can find them

Baggies to sort things into