Dr. Olivier Drouin, from Montreal Canada, helping a patient on a Project Amazonas expedition.

Orosa Clinic Introduction

We are constructing and operating a medical clinic which will be the only consistent source of medical care for over 6,000 people in 33 communities in the Orosa River Basin of the Amazon Rainforest in Peru.

Project Amazonas has been providing medical care to these communities since 1994. In July 2011, community leaders from the Orosa River Basin presented a formal request to us for the establishment of a medical clinic on the Orosa River.

The services and scope of the clinic are based upon years of care provided for these communities as well as a series of formal interviews with patients and local health promoters in 2011. Such patients have included people paralyzed with spinal tuberculosis, filariasis, advanced melanoma, cirrhosis of the liver, HIV/AIDS (a first mortality occurred on the Orosa in 2011), malaria, hernias, broken limbs and cases of highly probable uterine and prostate cancer, as well as many less severe yet still highly debilitating medical conditions.

Education and Prevention

Many common medical conditions in the region are preventable and/or greatly reducible. These include common diarrheas (the #1 killer of infants), dehydration-related headaches and myalgias, parasitic infections, and others. An Orosa clinic will serve as the ideal platform for working aggressively with local communities on issues of sanitation, clean-water supply, and health education. Project Amazonas already has a multi-year history of working with local communities on such initiatives. A permanent clinic will make them more effective and open up many additional opportunities.

Dr. Devon Graham treating a severe case of diarrhea.

Early Detection and Treatment

While the clinic will be open to walk-in patients, monthly visits to each community being served will serve as an important means of monitoring community health and detecting and treating medical conditions while they can still be effectively treated, or before they become aggravated or debilitating. Rapid assay kits and the necessary medical equipment will greatly aid in this process. The closest X-ray machine is currently in Iquitos; the nearest ultrasound is in Pevas. The most advanced medical equipment at the clinic in Yanashi is a light microscope. Having the technical capacity to diagnose medical conditions will mean early and rapid onset of therapy.

Accessibility

The clinic will be centrally located to serve communities on the middle and upper river, as well as Matahuayo creek, a tributary with two desperately poor communities. Travel time to reach medical attention will be cut dramatically for residents from all communities, and people from the most isolated community will be able to reach the clinic in as little as an hour to two hours, depending on river levels. To reach the Yanashi clinic (the nearest clinic currently), their minimal travel time is 4 to 12 hours (by motorized boat).

Staffing

Dr. Paul Kater volunteering his time in the Amazon.

Our objective is to have one to two MD's at the clinic (or on visitation to communities) at all times. We will apply to the Ministry of Health to have recent medical graduates posted to the clinic to serve their obligatory rural medical service. Those Peruvian professionals will be augmented by a Peruvian RN and technician, as well as by volunteer medical professionals and senior medical students. Currently we receive between 60 and 80 requests annually for medical postings by international medical and dental students. The number of requests has increased rapidly over the past three years and will continue to do so. Until now, we have worked at finding placement for such volunteers at government health posts and clinics. Now we will have an additional option for such postings, particularly for volunteers who desire a longer-term posting (several months duration).

Patient Tracking

Patient records at the government clinics in the Amazon are currently on paper only. Each clinic has long shelves covered with patient records organized by national identity number (if a patient has one). From the outset, the Orosa clinic will keep computerized records that can provide better patient tracking and also be used to provide medical statistics for the communities on the river.

Jonathan Shanin, AidJoy's Executive Director, discussing the community's medical needs.

Current Orosa River Medical Care Options

1. Travel to the Centro de Salud de Yanashi, a government clinic located on the Arambassa River. At many times of the year, access across swamp forest to Yanashi is impossible due to unfavorable water levels (too low for boat travel, yet too high for ground travel). The alternative journey is 8 to 10 times the straight line distance between the nearest point of the Orosa River to the Yanashi clinic.

2. Travel to the Puesto de Salud at Huanta, a government health post located at the mouth of the Orosa River. For people living on the mid and upper stretches of the Orosa, this is a long trip, equal to the round-about route to Yanashi.

3. Visit a local herbalist or shaman of which there are several in different communities on the Orosa.

4. Visit the Project Amazonas field station in the hopes that someone will be there and will have medications.

Dugout canoes remain the primary source of transportation in the Orosa River Basin

Nourish International volunteers from University of New Mexico working with local villagers on the ground preparation for the Orosa Clinic.

Collaborating Organizations

Several organizations and formal entities will be involved in the construction and long-term operation and financing of the clinic. These entities include, but are not limited to the following:

Project Amazonas

Oversight of the construction and operation over the long-term of the medical clinic. Has been operating on the Orosa River since 1994, and has its primary biological field station located on the river, and which is operated collaboratively with local communities.

Federación de Pueblos Yaguas de los Ríos Orosa y Apayacu (FEPYROA)

The indigenous political organization that unites the Yagua Indian communities located on the Orosa (south of the Amazon) and Apayacu (to the north of the Amazon) rivers.

AidJoy

Promotion and long-term sustainability of the clinic though various forms of media (website, documentaries, films, etc.) as well the expansion of relationships with likeminded charities, universities, and for profit partners.

Nourish International

Initial site preparation and construction with a team of students from the University of New Mexico (UNM).

Florida International University

Long-term sustainability of the clinic though partnerships with the FIU School of Medicine, The Honors College at FIU, and the undergraduate pre-medical society STITCH.

Dirección de Salud de Loreto, Perú (DIRESA)

The regional government health authority of the state of Loreto, Peru.

Centro de Salud de Yanashi

The nearest government health clinic, and with the ability to refer patients with social security coverage onward to Iquitos (with treatment, but not transportation or living expenses being covered by the government). Patients from the Orosa River who have ever been to a clinic most likely visited this one, and as such, Yanashi will have their patient files. The Yanashi clinic is also responsible for vaccination and anti-malaria campaigns on the Orosa River. A working relationship with the Centro de Salud de Yanashi has already been established, and several donations of equipment and basic, but lacking medications took place in 2011 and 2012. Our Orosa Clinic will help to reduce some of the work load of the understaffed Yanashi Clinic, and it is anticipated that an excellent collaborative partnership will be established with the medical professionals there.

Equipment Needs for the Orosa Clinic:

Equipment needs have been divided into broad categories.

Medical and Laboratory Equipment

- Automated Electronic Defibrillator [AED] (1)
- Crash Cart and appropriate supplies (1)
- Portable 10- or 12-lead EKG (1)
- Portable Doppler-style Ultrasound (1)
- Portable X-ray (digital) (1)
- Clinical Centrifuge (preferably bucket style) (1)
- Heating block (1)
- Supply of distilled water
- Complete water quality test kit including E-coli, heavy metals, phospho-organics, etc. (1)
- Compound Light Microscope (2)
- Dissecting Microscope (2)
- Power supply for Microscopes (4)
- Microscope Slides and Clover Slips
- Digital Pharmacy Scale (1)
- Full set laboratory glassware (2)
- Autoclave (1)
- Autoclavable metal storage trays and bags (4)
- Freezer/Refrigerator (1)
- Otoscope (6)
- Ophthalmoscope (6)
- Digital Thermometers (6)
- Reflex hammer (6)
- Blood pressure cuff (8)
- Stethoscope (8)
- Small LED flashlights [for pupil dilation] (8)
- Digital Timer (8)
- Glucose Meter and Test Strips (4)
- Suture Kit (Hemostat Pliers, Forceps, and Lister Scissors) (4)
- Eye Chart (4)
- Optometric Analysis Equipment (1)
- Rapid assay kits for malaria, HIV, urinalysis, blood, TB, etc.
- Pregnancy tests
- Full set of standard laboratory reagents and biological stains
- Digital camera (2)

Medical and Dental "Consumables"

- Medicines [Antibiotics, Analgesics, Antipyretics, Antiemetics, etc.]
- Wound-care and bandage materials
- Cast making materials
- Latex and non-latex gloves
- Syringes and Needles
- IV tubing
- Bags of saline and dextrose solutions
- Sutures in individual antibiotic solution [combined needle and surgical string would be easiest]
- Sheets, pillowcases, hospital gowns, face masks, hair nets, etc.
- Health Education materials for distribution

Dental Equipment

- Dental chair (1)
- Standard set of reusable dental equipment for extractions and tooth cleaning (3)
- Lighting and magnification apparatus (1)
- Foot pedal controlled drilling apparatus (1)
- Pain reduction supplies [such as Nitrous Oxide cylinders and gas masks]

Waste Management, Housekeeping & Maintenance

- Incinerator (1)
- Full set of cleaning supplies (brooms, mops, buckets, etc.) (1)
- Washing Machine (1)
- Dryer (1)
- Complete set of mechanics tools (1)
- Ladder (2)
- Wheelbarrow (2)
- Dolly (1)
- Standard tools [shovel, axe, machete, post-hole digger, hand saw, circular saw, drill, etc.]

Staff/Volunteer Housing and Kitchen

- Staff Housing Bed (4)
- Table (2)
- Desk (4)
- Chair (8)
- Shelving Unit (2)
- Freezer/refrigerator (1)
- Full set of kitchen utensils [pots, pans, cutlery, etc.] (1)
- Water storage tanks (2)
- Water purification equipment
- Complete set of linens, mattresses, pillows, etc.) (8)

Transport & Related

- Skiff – 25', covered – capable of carrying 8-12 persons plus stretcher or wheel chair (1)
- Outboard motor – 60 HP, ecological [4-stroke fuel efficient marine]
- Plastic 55 gal fuel drums (10)
- Outboard motor tool kit (1)
- Satellite Phone (2)

Power and Electrical

- Solar panel (20)
- Deep cycle-gel batteries (20)
- Power converter (2)

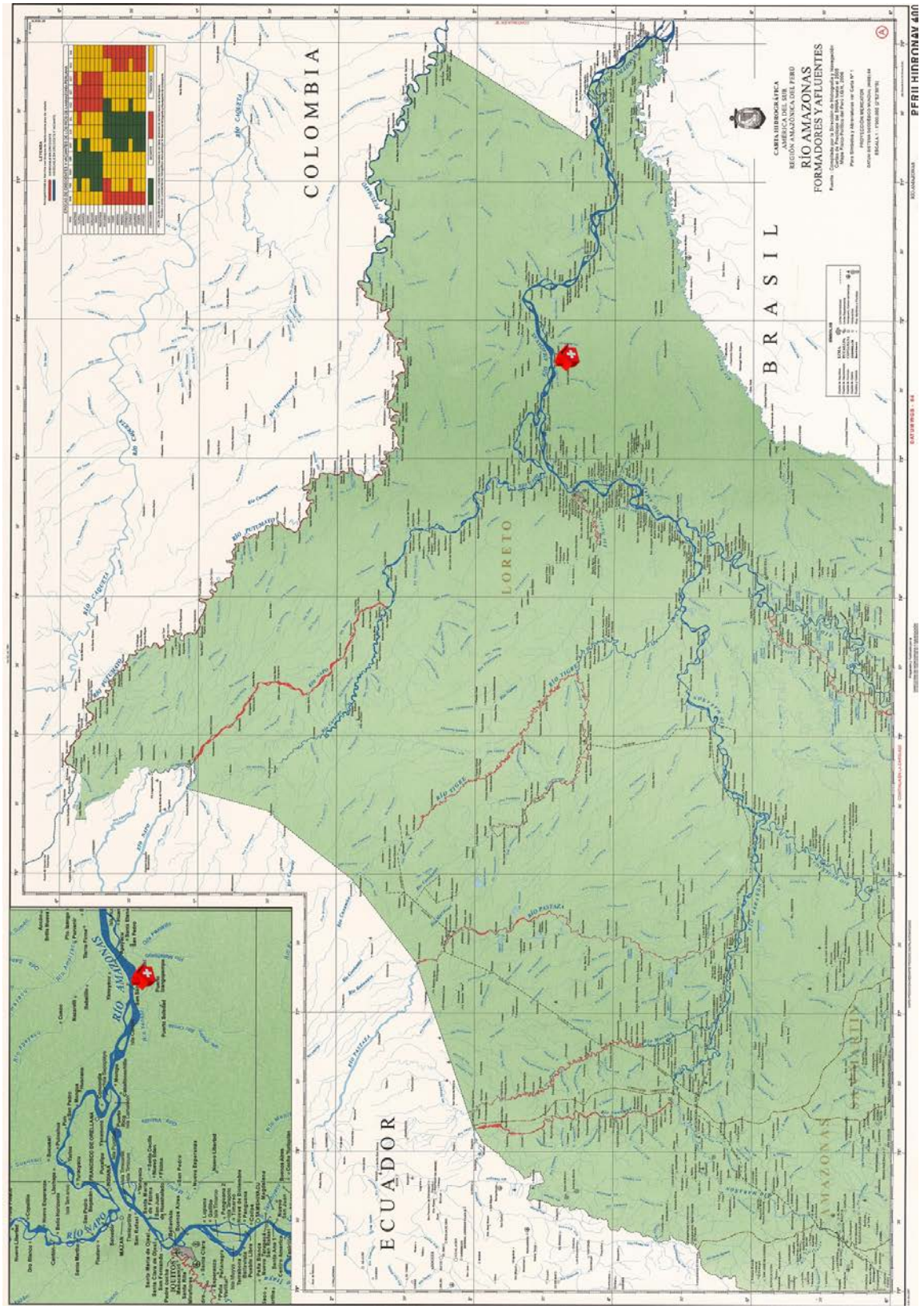
  Back-up diesel or gasoline generator (1) [also for use during peak demand or when needed to operate power-draining equipment]

Furnishings and Clinic Basics

- Patient Bed (4)
- Exam Table (2)
- Gynecological Exam Table with Stirrups (1)
- IV Pole of adjustable height with wheels (6)
- Antibiotic Hand Sanitizer Dispenser (8)
- Chair (20)
- Infant Crib (2)
- Standard Tables (4)
- Desk (4)
- Bench (4)
- Weigh scale and height measurement (4)
- Infant weigh scale (1)
- Wall Cabinet (4)
- Wheelchair (non-motorized) (2)
- Portable stretcher (2)
- Portable fan (4)
- Metal shelving [pharmacy shelving] (2 units)
- Locking cabinet [pharmacy and lab] (1 unit)
- Portable refrigeration unit or cold box (for vaccination campaigns where there is no power available) (1)
- Reusable cold packs for vaccine/antivenin transport (8)
- Long term refrigeration unit for antivenin and vaccines capable of maintaining a constant temperature between 2-4^{o} C (1)

Office and Computation

- Computer (2)
- Laptop for use away from clinic (2)
- Printer/Scanner (2)
- Bookshelf (2)
- Medical Reference Texts
- Filing Cabinet (4)
- Airtight (insect proof) plastic file storage boxes (20)
- Internet service [the area does not currently have cellphone coverage but should receive coverage in the next year or two, at which time internet coverage would be available for about s/150 monthly.]
- Multimedia projector (2)
- Small portable generator for health education campaigns (1)
- Portable projection screen (1)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