



CHIMPS

Children's Health International Medicine Project of Seattle
4800 Sand Point Way NE • PO Box 5371, CH-30 • Seattle, WA 98105

2005 AAP Resident International Travel Grant **Trip Report, El Salvador** **Parmi Suchdev, MD, MPH**

I finally got to practice what I preach. During my intern year, I co-founded Children's Health International Medicine Project of Seattle (CHIMPS), which organizes annual outreach trips to rural El Salvador, focusing on public health education and sustainable medical assistance. By working in alliance with a local nongovernmental organization (NGO) and returning to the same community each year, CHIMPS provides an ethical model for short-term international health work. Receiving an AAP International Travel Grant allowed me to return to El Salvador to build upon CHIMPS' mission of collaboration, education, service and sustainability.

My hosts for my trip were Chris and Lori Macklin, volunteers for ENLACE, a local El Salvadoran NGO (www.enlaceonline.org). One of the communities ENLACE serves is Los Abelines, a rural community in northeastern El Salvador with a population of about 1,800. In addition to limitations in infrastructure (i.e. no electricity or roads, limited access to clean water or latrines), the people of Los Abelines have numerous health concerns. Working with the Los Abelines health committee, CHIMPS has identified key local health problems, including dental caries, parasitic infections, and malnutrition, and has initiated interventions on previous trips to address these concerns. One of my goals for my trip was to address the problem of malnutrition in Los Abelines by evaluating the prevalence of iron deficiency anemia and initiating targeted interventions for those identified with anemia.

Although iron deficiency is the most common nutritional disorder in the world, there are no global figures of disease burden, given the difficulty of directly measuring of iron levels. My project represents the first direct measurement and assessment of iron deficiency in a rural community of El Salvador. With the assistance of ENLACE volunteers, I used a single finger stick to obtain capillary blood from 338 children and adult volunteers in Los Abelines. Using a hematofluorometer donated from Helena Labs (ProtoFluor® Z), zinc protoporphyrin to heme ratio (ZPPH) was measured in each participant. Elevated ZPPH is a sensitive diagnostic indicator for iron deficiency anemia. Each participant was also surveyed for demographic factors, diet history, and other comorbidities. Anthropometric indicators (height, weight, mean



CHIMPS

Children's Health International Medicine Project of Seattle
4800 Sand Point Way NE • PO Box 5371, CH-30 • Seattle, WA 98105

arm circumference) were measured for each participant as well as physical exams for clinical findings of malnutrition. Each patient was given a card with their height, weight and ZPPH to help with follow-up by the local physician and future CHIMPS teams.

A total of 30.2% of patients tested were iron deficient. The majority of these cases were in infants and children under the age of 5. One of the most likely attributable factors was poor nutrition, with the average person reporting to eat less than one serving of meat or green vegetables and 1.5 servings of fruit during an average week. I am still working on performing further analysis, including looking at the anthropometrical data and its relation to iron deficiency. The CHIMPS group that will be returning to Los Abelines in June will be initiating interventions for those identified with iron deficiency, including providing iron replacement vitamins, parasite treatment, and nutrition counseling. During my visit to Los Abelines, we also started a community garden to help introduce iron rich foods, such as spinach and a grain-based drink (horchata).

In addition to my work with the anemia study, I was able to assist the local physician in seeing some pediatric patients that came to the clinic, many of whom I knew from my previous visit as an intern. Many kids even remembered the "La Cucaracha" song I taught them nearly two years ago!

I also had the opportunity to share my experiences when I returned to Seattle by helping conduct a Grand Rounds titled, "Building sustainability through brief international projects: The ethics of international medicine." This presentation initiated an important and interesting discussion in our academic community about short-term international work and gave visibility to CHIMPS, which will hopefully help sustain our future endeavors. The highlight of my trip was definitely seeing old friends and witnessing the small but noticeable impact CHIMPS has been able to make over the last few years. Having the opportunity to serve others in developing countries and build lasting relationships is something I will always hold close to my heart.



CHIMPS

Children's Health International Medicine Project of Seattle
4800 Sand Point Way NE • PO Box 5371, CH-30 • Seattle, WA 98105



Photo 1. Testing patient for iron deficiency.



Photo 2. "Team Anemia." (Positioned left to right) ENLACE volunteer (Lori Macklin), community social worker (Doris De Leon), principal investigator/visiting pediatrician (Parmi Suchdev), visiting student (Alexandra Yarosevich), and local physician (Mirna Garcia).