

Galapagos Background

- Total Population (2010) = 25,124¹
- Largest city = Puerto Ayora (Santa Cruz)
- Average monthly income in Galapagos = \$772.03/month²
- Average monthly income in mainland Ecuador = \$251.70/month²
- Booming tourism industry contributes to rapid population growth³
- 4 of 18 main islands (>1km²) open for human residence (Santa Cruz, Isabela, San Cristobal, Floreana)



Galapagos Health Care System

Health care services:

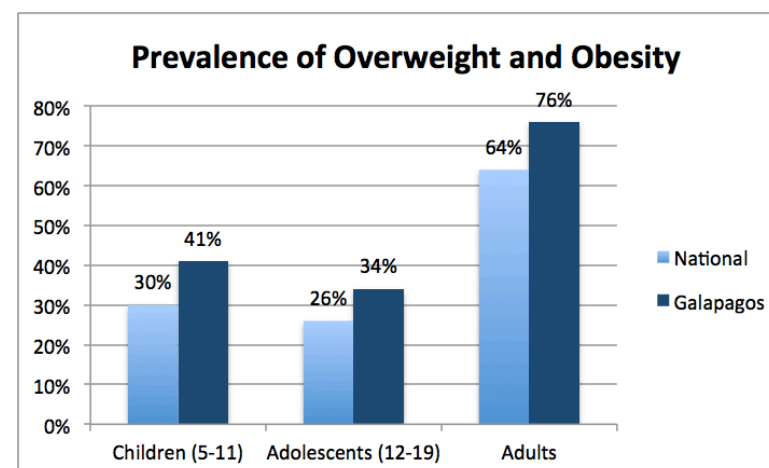
There is one hospital (Hospital República del Ecuador) for all of the Galapagos. It is located centrally in Puerto Ayora and is operated by the Ministry of Health. The Ecuadorian Ministry of Health is universal in that it covers all citizens regardless of insurance status.⁴ There is one primary care clinic on Santa Cruz, but this is reserved exclusively for social security (IESS) subscribers. Many Galapagos residents (37%) are insured under this employer-sponsored and government-subsidized plan.⁴ The clinic was built in 2009 as a result of extensive national investments in the IESS system by the current president.

The IESS clinic in Puerto Ayora:

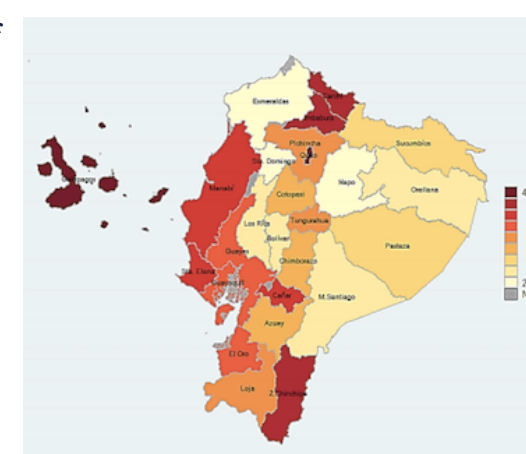
The clinic is modern and comparable to small clinics in the United States. The facility is equipped with an electronic medical record system that interconnects all IESS facilities in Ecuador. The clinic is staffed with 3 family medicine physicians, 1 pediatrician, 1 physical therapist, 1 dentist, 1 pharmacist, and 4 nurses. X-rays and laboratory diagnostics are available on site.

Challenges:

The geography and weather of the Galapagos alone represent gigantic barriers to seeking health care. Ocean currents often render inter-island travel impossible. Specialty care is only available on mainland Ecuador, which is two hours away by plane. With 98% of the area reserved for animals, there are strict environmental protection policies that hinder public health infrastructure.



Left: Prevalence of overweight and obesity by age groups in Galapagos and mainland Ecuador⁵



Right: Prevalence of overweight and obesity by province⁵

Project Goals

- Establish a rapport with patients and healthcare staff
- Collect qualitative data from observed physician-patient encounters
- Collect quantitative data on various health indicators from medical records
- Develop hypotheses to explain health disparities

Methods

The diagnoses and treatments for all patients receiving physical therapy consultations were recorded for a period of one week at the IESS clinic on the island of Santa Cruz. Patient complaints were classified based on the diagnosis code that the physical therapist assigned to the patient visit in the IESS system. In addition, observations of the culture surrounding diet and exercise routines were recorded during four weeks of living in Puerto Ayora. The different tactics used for counseling patients to lose weight by the physical therapist and the primary care physician were compared.

Observations

Cultural Factors:

- White rice and fried food (potatoes, plantains) are dietary staples
- Fruits are eaten frequently, although it is very common to blend them into juice and add white sugar
- The town of Santa Cruz is easily traversable by foot, but the vast majority of the population chooses to travel by taxi or by motorcycle
- Stigma against people who are overweight in the Galapagos is non-existent

Physical therapist approach towards weight loss counseling:

Patients demonstrated a clearer understanding of the negative consequences of being overweight. The physical therapist used common terms and concepts to explain how excess weight leads to pain and musculoskeletal impairments.

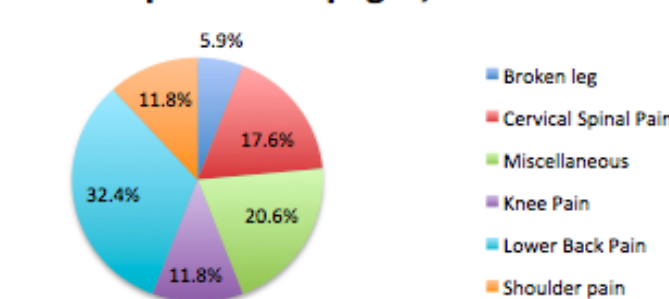
Physician approach towards weight loss counseling:

The physicians advised patients to lose weight in order to lower cholesterol, HbA1c, and triglyceride levels. Patients were often confused about the implications of these values, and seemed less eager to alter their life-style.

Results

The most common cause for seeing the physical therapist was lower back pain, which accounted for 32% of all appointments. Patients often complained of chronic pain lasting multiple years. Usually, the physical therapist attributed such pain to being overweight or to improper posture. Throughout the shadowing experience it became increasingly apparent that the physician and physical therapy approaches towards weight loss counseling were dramatically different.

Reasons for Consulting Physical Therapist in Galapagos, Ecuador



Conclusion

Geographic, economic, and cultural factors contribute to the prevalence of overweight and obesity in the Galapagos, and effecting long-term change will require a multidisciplinary technique. Counseling overweight patients about the importance of losing weight in the context of pain management and quality of life improvement could prove to be more effective than fear-based methods. The tangible reward of pain alleviation seemed to make more of a lasting impression on patients than the intangible reward of a lower blood pressure reading or blood glucose level. Future studies are warranted to find ways to measure the effectiveness of different weight loss counseling techniques.

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Citations

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