

Title: Chronic Health Conditions in Rural Caribbean Guatemala

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Context: The purpose of this research is to characterize the presence of chronic health conditions among healthcare seekers in the underserved indigenous community of Sarstún, Izabal Department, Guatemala.

Objective: This research seeks to determine if healthcare seekers within this remote region of Guatemala experience elevated rates of certain chronic health conditions. Local estimates of the population served by the clinic are 3,188 persons. The clinic serves not only the village of Sarstún but also numerous outlying communities.

Design: Cross-sectional study.

Human Subjects Review: IRB exempt.

Setting: Community based primary care clinic in rural Guatemala along the Caribbean coast.

Main Outcome Measures: Population data about chronic health conditions in Sarstún clinic patients for comparison to the national averages from the World Health Organization (WHO).

Results: Our cohort included all patients 18 years or older excluding pregnant women. 18 men and 40 women were included. 2 men did not have their BMI recorded. The rate of prediabetes was 20.7% and the rate of overweight BMI was 44.6%. There are currently no national statistics to which these rates could be compared. The obesity rate (30.3%) was well above national average (19%). The hypertension rate (15.5%) was below the national average (17%) according to the 2015 American Heart Association guidelines (≥ 140 systolic or ≥ 90 diastolic) used by the WHO. Using the current 2019 AHA guidelines (≥ 130 systolic or ≥ 90 diastolic) the Sarstún hypertension rate was 29.3%. The diabetes rate (10.3%) was slightly above the national average (8%). It is anticipated that these trends will occur in larger samplings.

Conclusions: This preliminary study suggests significant differences from national average rates according to WHO. The rates of diabetes and obesity were both elevated, while the difference in the rate of hypertension was equivocal. Limited sample size inhibited researchers from doing a statistically powerful comparison. The conditions studied have been associated with genetic factors, sedentary lifestyle, and diets high in processed food. This rural community, however, operates on subsistence farming, fishing, and other manual labor. The data establish cause for more extensive cohort studies among the population regarding these conditions. Future plans include further data collection for statistically powerful comparisons.