Public Health 740  
Latino Steps per Day Study

The prevalence of obesity in the United States has been increasing at a remarkable rate, with an associated undesirable impact on the risk of diabetes and cardiovascular disease. National Health and Nutrition Examination Survey (NHANES) data from NHANES 2003 – 2004 demonstrated national overweight and obese prevalence rates in persons ≥ 60 years of age of 71% (31% obese). The prevalence of obesity in the Massachusetts Latino population was even higher at 42.3% in 2007 (BRFSS data). Attempts to control overweight and obesity on a population level have been largely unsuccessful, so that more recently a "small changes approach" has been advocated. The increasing prevalence of obesity has been a particular problem in the Latino community, where a combination of age and a genetic predisposition to the metabolic syndrome leads to a concomitant high prevalence of diabetes in older Latinos.

A study is to be proposed that will utilize the older Latino population (age ≥ 55) served by the Senior Center of Lawrence, Massachusetts. Previous work with the Senior Center resulted in a 94% one year retention rate in a similar project.

The proposed study will utilize the innovative and unobtrusive Fittlinxx® system comprised of 3 components: 1) the ActiPed® sensor, a small device worn on a shoe that continuously collects data on physical activity and transmits the data wirelessly whenever the wearer comes within 50 feet of a computer equipped with 2) the ActiLink® USB receiver; the data then being uploaded to 3) the ActiHealth® secure web database.

This study is a pretest-posttest randomized trial among an older weight predominantly Latino population served by the Senior Center of Lawrence, Massachusetts. Groups of pts (approximately 5 per group, where we assume that groups will have approximately 3 females and 2 males) are to be randomly assigned to one of two conditions corresponding to ‘team’ (condition I) or ‘control’ (condition II). The ‘team’ condition will work together in groups (teams) to increase their walking steps. The study is designed to detect a difference in the gain (6 mth – baseline) in steps/day between the two conditions, with the ‘team’ condition having a larger gain, where there is at least 80% power to detect the difference based on a two-side test with alpha equal to 0.05. Based on knowledge of the population, we expect that a total of 210 subjects will participate in the study.

Some pilot data are available. The pilot data are on 32 women and 5 men followed for approximately 1 week. Power and sample size calculations are needed within one week. As a starting point, write a descriptive report based on the pilot data that includes results that can be used to design the study.

Pilot Data: actdays1.xls (Use sheet Data1)