

Poster Presentations: GIS and Health Institute

Danielle Cote (*Public Health*): A Pilot Study Examining Distance Traveled and Alternative Sites for Care among a Primarily Spanish-Speaking Sample of Urban Adults Utilizing a Free Clinic in Providence

For a sample of Providence clients of Clinica Esperanza (CE) I computed the distance from the patients home to CE as compared to the distance from the patients home to the closest Rhode Island Community Health Center (an alternative site for care for low-income populations). The goal of this comparison was to identify areas where more outreach or, referral networks, may be necessary for CE to best serve the needs of their clients. Further work will use qualitative and quantitative data to analyze the characteristics of patients, and kinds of care sought, for those travelling the greatest distances to Clinica Esperanza with the goal of improving utilization and services for patients being served by CE.

Valery Danilack (*Community Health*): Community Factors Related to Smoking Cessation During Pregnancy

Even though smoking during pregnancy is harmful to the developing fetus, some women continue to smoke. Factors related to successful smoking cessation during pregnancy remain unclear. As part of a study of smoking during pregnancy, we studied the relationship between community characteristics and smoking cessation and views of smoking during pregnancy. From subject interviews and self-administered questionnaires conducted during mid-pregnancy, the main outcome variables examined were whether the woman quit smoking during pregnancy and how much the woman thought smoking harmed her baby. Subject addresses were matched to their town and census tract of residence and community data was obtained from national agencies including the U.S. Census Bureau and Federal Bureau of Investigation. Community factors examined as explanatory variables included crime rates, demographics, and consumer behavior. The data suggest that community factors related to smoking may differ by race, and the next aim is to investigate the combined influence of individual and community characteristics on smoking cessation during pregnancy.

Paul Davis (*Community Health*): Rhode Island Healthcare: Pediatricians, Hospitals, and Emergency Medical Services

The project involves locating these facilities throughout the state in attempts to visualize its distribution and potential access needs of RI communities.

Gilvan Ramalho Guedes (*Environmental Change Initiative*): Exploring the Direct Impact of Cash Transfers on Poverty and Inequality in Rural Brazil: A Counterfactual Analysis

The rural retirement program in Brazil is one of the most important exogenous cash transfers to the rural households, since it is pegged to the minimum salary and a stable source of income. However, its importance to the household budget is mediated by the household size and composition and by other income generating strategies pursued by the household. In some cases, inter-household private transfers may function as another source of well-being in rural areas, although their impact on poverty and inequality depends on the selectivity of migration by SES of origin households. In this poster, we present exploratory, initial results of the simulated impact of these two types of cash transfer on income poverty among the rural population in Brazil. By means of counterfactual micro-simulation applied to thematic maps, we ask what would be the change in poverty if we eliminated the two income sources, one at a time, from the household budget. Our results suggest that, from 1996 to 2009, the first order (direct) impact of the rural retirement income on poverty increased while the impact of the private transfers decreased. This descriptive result is in tandem with the increase in the real value of the minimum salary, as well as Miranda's finding (2007) that Brazilian households act altruistically, adjusting the private transfers in face of government transfers to the beneficiary household.

Samantha Hanna (*Community Health*): Analyzing the Geographic Distribution and Neighborhood Risk Factors of Childhood Obesity in Rhode Island

The purpose of this project is to assess the geographic distribution and neighborhood risk factors of childhood obesity in patients of Hasbro Children's Hospital in Providence, Rhode Island. To date, all restaurants and food stores in Rhode Island have been mapped. The next process in this project will be geocoding the addresses and data of patients at Hasbro Children's Hospital. This process is currently underway. The future results of this project hope to identify neighborhood risk factors for childhood obesity, such as proximity to fast food restaurants and convenience stores, proximity to parks, or presence of sidewalks in neighborhoods.

Vanessa Lazar (*Center for Alcohol & Addiction Studies*): Spatial Patterns of College Student Drinking

This project looks at alcohol density in the area surrounding the RWU campus, and the locations on and off campus where students reported consuming alcohol and where they were cited for alcohol violations. It's a part of a larger project comparing the drinking patterns and campus environments between a suburban and urban university.

Samantha Rosenthal (*Community Health*): Substance Dependence and Poor Mental Health across New England among 18 to 24 Year Olds from the New England Family Study

The New England Family Study was starting in the 1960s examining perinatal exposures among women in Providence and Boston. Today we have followed up with the 3rd-generation of this cohort who are 18 to 24 years old. This project examines the geographical distribution of where this sub-cohort resides and has resided since birth, as well as the distribution of substance dependence and poor mental health outcomes.

Tim Squires (*Economics*): Malaria's Impact: An Enlightening Approach

This project looks at the impact of malaria on economies throughout the world. Using a continuous map of malaria, generated from over 8000 surveys, I work to determine the impact of malaria on GDP. Since GDP is not available on a continuous basis over the earth, lights seen from space is used as a proxy. Comparing these two measures I can determine if malaria not only affects countries as a whole but also individual areas within a country. Since Malaria and GDP are interrelated I instrument for malaria prevalence using malaria ecology.

Ana Tribin Uribe (*Economics*): Effects of the Use of Mercury in Gold Mines by Illegal Armed Groups in Colombia

American-financed coca eradication projects in Colombia (the same that are being implemented in Mexico) have forced illegal groups to switch to a more profitable and legal business as the gold. Therefore, the non-state armed groups have been extracting gold without following the proper rules to do it and thus, using huge amounts of mercury. The use of mercury is damaging the environment and, even worse, is contaminating the water of the villages, which has an impact on people's health in areas close to the mines. "Colombia has the shameful first position as the world's largest per capita mercury polluter from artisanal gold mining" (New York Times).