Community Uninsurance and Unmet Health Care Needs: Is There a Spillover Effect for Rural Areas?

Michael Castro

Department of Sociology,

Bowling Green State University

Abstract: Providing comprehensive health insurance coverage is an important step towards improving population health. Research suggests that high community medical uninsurance creates a spillover effect for local healthcare systems that decrease overall healthcare access, although the relationship for rural areas is less clear. Using a sample of adults 18-64 in 2010 and 2011 (n=611,600) from the Behavioral Risk Factor Surveillance System (BRFSS) along with county-level estimates produced by the Census Bureau and the Health Resources and Services Administration, this study assesses how community-effects play an additional role towards unmet medical need in addition to the characteristics of the individual. Preliminary analysis suggests that higher community uninsurance leads to higher rates of insured individuals with unmet medical needs but not higher rates of uninsured individuals with unmet medical needs. Findings from this study will provide insight into the difficulties that may be encountered during the implementation of the Affordable Care Act (ACA).

Introduction

With the 2010 implementation of the Patient Protection and Affordable Care Act (ACA), it is expected that the level of uninsurance will decline in the United States. As of 2012, 47.9 million or 15.4 percent of the population (DeNavas-Walt, Proctor and Smith 2013) still lacked medical insurance. While many programs are in place to assist medical coverage of children (i.e. SCHIP), a majority (85%) of the uninsured population is comprised of working age adults aged 18 to 64. Obtaining more comprehensive health insurance coverage is an important step towards improving population health. A goal of this study is to understand the possible barriers to obtaining health insurance coverage among working-age adults and the patterns of unmet need for medical care.

One major reason that being medically uninsured is an obstacle to personal health and well-being is that it increases the burden of cost to the individual. Often this translates into not being able to see a doctor due to this prohibitive cost, otherwise known as having an unmet medical need. Recent estimates suggest that among uninsured employed adults in the U.S. over a third (35.2%) had an unmet need for medical care in the past year while only 8.7% of employed adults with private insurance experienced the same issue (Driscoll & Bernstein, 2012). And yet, it may be that an individual's unmet need for health care is not solely determined by their insurance status but is in part influenced by the insurance status of the community (Institute of Medicine 2009). While it is true that the uninsured experience greater chances of having an unmet need for medical care, individuals *with* insurance may also face a greater instance of unmet need when they live in areas with high levels of community uninsurance. In other words, in areas of high levels of uninsured adults, a spillover effect may occur in which individuals with insurance also face barriers to care and increased levels of unmet need.

The limited extant research on this topic suggests a few potential reasons why this may occur. For example, in areas with higher levels of community uninsurance, the local healthcare system may experience a greater strain on resources and funding due to the lower levels of funding from premiums or Medicaid subsidies. In response, the local healthcare systems may decide to reduce the availability of specialized care or availability of clinics to the population.

A goal of this study is to understand the potential mechanisms that prohibit working age adults from seeking care and to uncover patterns of unmet need for health care. The design of the research draws from the Andersen behavioral model of health services use (2004). At its core, the Andersen model suggests that the use of health services is determined by three factors for the individual—predisposing factors (e.g. age, race/ethnicity), enabling factors (e.g. income, employment, or insurance status) and need. This study includes the effect of larger community disadvantage such as neighborhood uninsurance or poverty arguing that it puts a strain on resources in terms of government assistance and healthcare. This strain on the community may then trickle down to the individual who must navigate the resources available. Both the community characteristics and the individual characteristics play a role in the outcome of the individual's health care access, which can be thought of in terms of having a usual source of medical care, being able to visit a doctor when in medical need, or having positive health outcomes.

Much of the current research on this issue utilizes the Medicare Expenditure Panel Survey (MEPS) or the Community Tracking Survey (CTS) both of which target metropolitan areas while overlooking rural areas. This study aims to include rural areas in the study in order to provide a more inclusive look at the relation between community uninsurance and unmet need for health care. Rural areas, due to the sparseness of the population, have more limited options

for how they can address the needs of the community. Using research with urban areas does not address whether rural areas can take the same approach.

The data comes from a collection of sources, but its main source is the 2010 and 2011 Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a nationally-representative survey coordinated by the Centers for Disease Control and managed on a state-by-state basis by state-level health departments. Each state conducts its own sample selection by stratifying each group into geographic regions and then randomly selecting from each stratum. The subject of the study asks a random member from a household about their health behaviors and whether they have chronic medical conditions or whether they exhibit behaviors that may lead to worsen chronic conditions.

For community characteristics data, the study will draw from a series of different small area estimates which publish information by county. For unemployment, the Local Area Unemployment Statistics (LAUS) will be used; for poverty, the Small Area Income and Poverty Estimates (SAIPE) will be used; finally for uninsurance the Small Area Health Insurance Estimates will be used. All three releases are based on Census surveys that use state level administrative data to disaggregate state level estimates to reflect county trends by a model prediction. Other sources of information are from the Area Resource File, which is a collection of county-level estimates on various research topics including physician populations by type of physician. This study will utilize the county FIPS code as the common link between all datasets to allow for a streamlined connection of all datasets. The analytic sample is composed of 611,600 adults ages 18 to 64. The analysis will use a multilevel model logistic regression on unmet medical need to account for the intraclass correlation between the individual who is uninsured and the community that has uninsured people. A first look at the data suggests some

support for the hypothesis that community uninsurance has a stronger effect for the insured than the uninsured. Each figure shows the relationship between county-level uninsurance and the proportion that have an unmet need. Although the slope for the uninsured in Figure 1 is larger than the insured in Figure 2, the R-squared coefficient is much stronger when unmet need for the insured is regressed along community uninsurance (.147). The initial analysis suggests that insured adults have more overall unmet medical need in communities with higher uninsurance than uninsured individuals.

Figure 1:

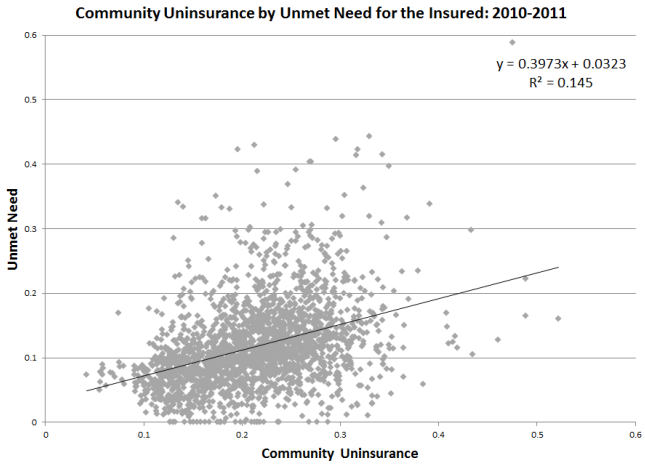
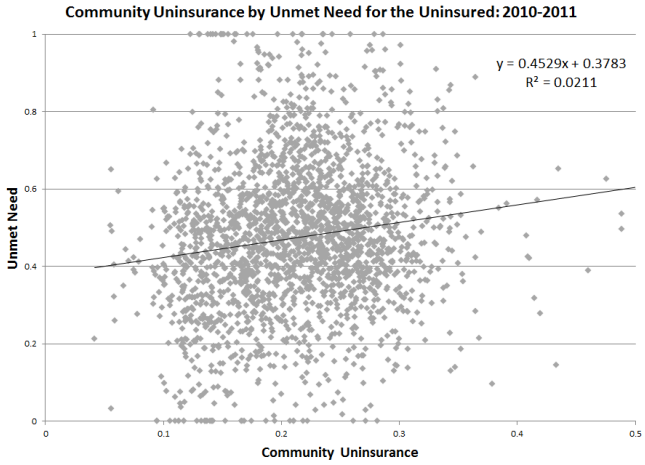


Figure 2:



This study identifies unmet need for health services as well as identifies potential challenges and barriers associated with the provision of care necessary for the successful implementation of ACA. Results of this research will enable planners and policy makers to design appropriate health care and health care delivery systems and to develop plans to adequately allocate resources particularly in more rural areas.

References

Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2010, 2011.

Davidson, Pamela L., & Andersen, Ronald M., & Wyn, Roberta, & Brown, E. Richard. (2004). *A Framework for Evaluating Safety-Net and Other Community-Level Factors on Access for Low-Income Populations*. Inquiry 41(1), p. 21-38. Retrieved from http://www.inquiryjournalonline.org/doi/abs/10.5034/inquiryjrnl_41.1.21

DeNavas-Walt, Carmen, & Proctor, Bernadette D., Smith, Jessica C. (2013). *Income, Poverty, and Health Insurance Coverage in the United States: 2012*. Bureau of the Census. Suitland, MD. Retrieved from http://www.census.gov/prod/2013pubs/p60-245.pdf

Driscoll, Anne, & Bernstein, Amy. (2012). *Health and Access to Care Among Employed and Unemployed Adults: United States, 2009–2010*. NCHS Data Brief, No. 83. Retrieved from http://www.cdc.gov/nchs/data/databriefs/db83.htm