

# DIABETES AND SNAP: AN OPPORTUNITY FOR CHANGE?

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For most of human history, the poor have starved. While US food assistance programs and rapid economic growth reduced the rate of starvation in this country, the old relationship between poverty and malnutrition has recently taken a different and more subtle but still costly form—obesity. Currently the largest food assistance program in the US is the Supplemental Nutrition Assistance Program (SNAP). In addition to requirements imposed by states, households must be at no more than 130 percent the Federal poverty line to be eligible for SNAP. In recent years, primarily due to the recession, SNAP expenditures have increased despite efforts to better target and reduce program abuse. In 2012 the program paid out benefits of \$74B, with an average monthly benefit per recipient of \$133.

Obesity is on the rise nearly everywhere in the United States and increasing health care costs, especially in treatment of obesity-related conditions such as heart disease and diabetes. There are other costs such as discrimination against obese people in the workplace and by doctors. The cost of SNAP pales beside the cost of diabetes alone: The American Diabetes Association estimates annual costs of diabetes to be \$176B in treatment and \$69B in reduced productivity.<sup>i</sup> Figure 1<sup>ii</sup> shows the spatial distribution of counties with the highest and lowest incidence of diabetes, while Figure 2 shows the spatial distribution of counties with the highest and lowest per capita SNAP payments. While it is clear that the incidence of SNAP

payments is not perfectly correlated with diabetes, the two are related.<sup>iii</sup> To help see this relationship more clearly, Figure 3 shows only those counties falling in the top 10 percent of BOTH diabetes and SNAP payments.

The spatial relationship between diabetes and SNAP is relatively stable. The same data plotted for 2004 outcomes (not shown) produced a very similar set of high incidence/payment counties.<sup>iv</sup>

It is important to note that the maps do not tell us that SNAP recipients also have diabetes, or that SNAP somehow causes diabetes. While both of those statements could be true, our maps provide no evidence to support or invalidate that claim. It is worth further study. If food assistance recipients later become recipients of expensive medical assistance due to diabetes, then the public pays twice for their poverty status.

Currently the SNAP program places few restrictions on what types of food may be purchased.<sup>v</sup> In fact, the USDA, the agency in charge of delivering the program, has no information about the types of food purchased with SNAP, only the category of store in which it was sold. Advocates for the current unrestricted purchase policy suggest that placing restrictions on individuals' purchasing decisions would stigmatize them, reducing program effectiveness. They also argue that beneficiaries are capable of balancing across the competing claims on their time, needs, and limited resources—for example, preparing healthy meals from

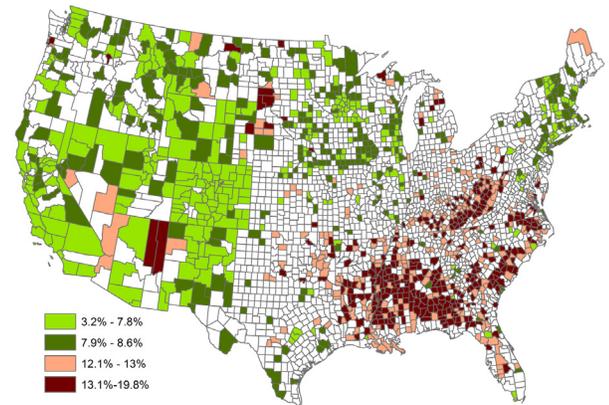


Figure 1. Upper and Lower 10th and 20th Percentile Counties, Incidence of Diabetes, 2009.

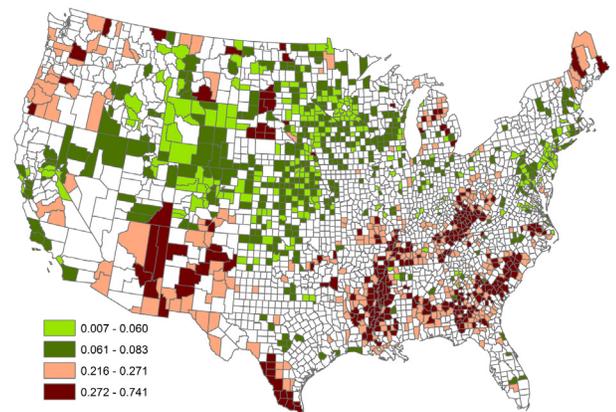


Figure 2. Upper and Lower 10th and 20th Percentile Counties for SNAP Payments Per Capita (\$000), 2009.

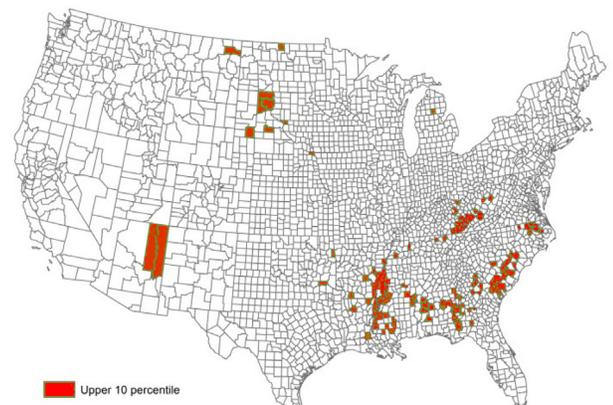


Figure 3. Counties in Top 10 Percent for BOTH Diabetes Rate and Per Capita SNAP Payments, 2009.

fresh vegetables may be difficult for some families if they face limited kitchen facilities, or if they are working several part time jobs. Proponents of more restrictive purchasing policies suggest that food dollars might go further if participants were restricted to lower-cost and higher-nutrition items. The grocery industry might also be concerned about the added complexity and costs of tracking (and denying) selected purchases at point of sale. Arguments about which items can and cannot be purchased with SNAP funds at the checkout counter could increase staff turnover and potentially drive away other customers.

The high incidence counties in Figure 3 present an opportunity to experiment with a food vendor partnership. Under the partnership, vendors in high incidence counties could be paid a small premium for reporting the exact composition of foods purchased with SNAP dollars. Vendors exceeding a survey-based threshold for proportion of highly nutritious food could be rewarded with SNAP bonuses. If vendors were incentivized to focus on foods with high nutritional value (vegetables and fruit, for example) store layout and staff training policies might be altered. Most Americans have heard the phrase “Want fries with that?” when ordering in a fast food restaurant. This question is a result of corporate training of fast food workers to encourage customers to purchase a high margin item. If fruits and vegetables became higher margin items through SNAP program incentives, some vendors might respond by placing those items differently in their stores, stocking a wider variety of the items, and encouraging counter staff to highlight the items for purchase. One might start hearing convenience store clerks say, “The tomatoes look really good today.” The high diabetes/SNAP payment counties in Figure 3 are predominantly rural so the costs of a pilot would be low due to low numbers of people and vendors involved.

If incentives are structured in a way that causes vendors to promote healthy food, SNAP could contribute to improving health outcomes for participants and non-participants nation-wide.

The benefit of such a system, piloted in counties with high incidence of both SNAP and diabetes is that the vendor incentives might spill over into encouraging non-SNAP users to also purchase a higher proportion of healthy foods in their diets, reducing overall incidence of the disease. In effect, SNAP might be able to reduce the community-wide incidence of the disease. It is possible that community-level conditions (eating habits, what is considered normal in terms of body size, etc.) affect the risk of becoming obese or diabetic. Under a SNAP-vendor partnership, the region might develop a culture of good nutrition that could persist after incentives were reduced or eliminated.

A ten-year pilot system in selected counties could provide evidence as to whether a vendor incentives approach can have a measurable impact on the county-level incidence of diabetes. A long-term pilot would be needed for current diabetes sufferers to age out of the system (or even be cured) and to allow vendors sufficient time to alter their practices. The pilots, if successful, could be implemented in other high payment/incidence counties and slowly rolled out to lower payment/incidence counties in stages. If incentives are structured in a way that causes vendors to promote healthy food, SNAP could contribute to improving health outcomes for participants and non-participants nation-wide. ♻️

#### ENDNOTES

<sup>i</sup><http://www.diabetes.org/diabetes-basics/diabetes-statistics/>

<sup>ii</sup>The authors thank Qiong Yang of Pennsylvania State University for assistance in producing the maps.

<sup>iii</sup>County SNAP participation rates and diabetes rates are strongly correlated (Pearson's correlation=0.546,  $p<.000$ ). This measure assesses correlation between two variables, with a range of 0 (no correlation) to 1 (perfect positive correlation) or -1 (perfect negative correlation). Obesity and diabetes rates are also strongly correlated at the county-level (Pearson's correlation=0.710,  $p<.000$ ). Data from the USDA Food Atlas ([www.ers.usda.gov/data-products/food-environment-atlas](http://www.ers.usda.gov/data-products/food-environment-atlas)) were used for this analysis.

<sup>iv</sup>While some counties in Alaska have high per capita SNAP payments, neither Alaska nor Hawaii have counties in the top ten percent for incidence of reported diabetes.

<sup>v</sup>Recipients cannot buy alcohol, vitamins and medicines, foods that will be eaten in the store, or hot foods.

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