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The Impact of Nutrition Program Service Cuts on a Senior Population in Northwest Indiana

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Reliance on social services and health care safety net programs has spiked as the country muddles through the "great recession" and a sputtering economic recovery; but just when need is increasing, budgets for these programs are being trimmed due to declining tax revenue at all levels of government and a pervasive concern regarding soaring government budget deficits. Countercyclical federal aid from the 2009 economic stimulus bill helped state and local social service agencies mitigate some of the more disastrous consequences during the first two years of the recession. However, these funds are nearly depleted. In order to balance government budgets, deep program cuts are being debated in Washington and state capitals as there is little appetite for additional government borrowing or tax hikes.

Private philanthropy is unable to fill the shortfalls in publicly funded programs. Aggregate national giving declined by 3.6% in 2009, marking just the second time in the last 50 years where total giving declined from a prior year. (*Giving USA*, 2010). Hence, local safety net programs, including those for home-bound seniors, are now facing some of their most extraordinary challenges in several decades.

Among the programs in the cross-hairs of the budget deficit hawks is the Older Americans Act (OAA) which is scheduled for funding reauthorization this year. Title IIIC of the OAA funds senior nutrition components, and on June 21, 2011, the Senate Committee on Health, Education, Labor & Pensions conducted a subcommittee hearing on Senior Hunger and the Older Americans Act. There, Senator Rand Paul(R-KY) and others questioned whether these nutrition program expenses are justified. (http://help.senate.gov/hearings/hearing/?id=8dd4f284-5056-9502-5d30-a66996ae4d55). This national debate has a direct impact on senior nutritional services and the health and well-being of seniors in Lake County, Indiana.

Background

Two rounds of belt tightening hit clients of the Meals on Wheels of Northwest Indiana (MoWNI) program, the first in October 2010 and another in January 2011. MoWNI is a local nonprofit organization affiliated with the national Meals on Wheels program. It offers nutritional and other services to seniors in the northwest region of Indiana including home-delivered meals to nearly 800 seniors in Lake County, approximately half of whom are fully or partially funded by Northwest

Indiana Community Action (NWICA), the state's designated Area Agency on Aging for the six-county region. It also provides services to other Northwest Indiana counties and receives financial support from the Lake Area United Way and other private donors.

NWICA reduced funding and trimmed care plans for 283 low-income seniors receiving services from MoWNI in Lake County. It had little choice but to require the reductions. Demand for senior services increased dramatically since the onset of the recession in 2008, food and fuel costs rose, and as the NWICA costs grew its budget was cut. In July 2010, NWICA was handed a 10% budget reduction in federal OAA, Title IIIC funds.

The other principal funding source for senior nutrition programs is the state-funded CHOICE plan. It is available to seniors who are not eligible for Medicaid services under the state's waiver. CHOICE's budget is fixed because it is not eligible for federally-subsidized Medicaid funding. The state could have supplemented the Title III funding, but it did not choose to do so.

Concerned about the potential impact these service cuts would have, MoWNI asked the School of Public and Environmental Affairs (SPEA) at Indiana University Northwest to determine if these service reductions were having deleterious effects on their beneficiaries. The assessment was taken on as a service-learning project by the Spring 2011 SPEA Management in the Nonprofit Sector class of Indiana University Northwest.*

MoWNI provides home-bound seniors with nutritionally balanced hot lunches and cold supper snacks (sandwich, fruit and milk) five days per week. In addition to the direct nutritional benefits, the weekday visits provide welcomed social contact to an often isolated population. This reassurance checking and regular social interaction buttresses the goal to have seniors "age in place" instead of living in institutional settings. MoWNI services also help community-based seniors financially since money which beneficiaries would have been spent on food can be reallocated to medications, heat, and other necessities.

In October 2010 and again in January 2011, NWICA reduced the services authorized in the care plans of 283 of MoWNI's clients, roughly three-fourths of its publicly-funded beneficiaries in Lake County. These clients sustained cuts in one of the following ways. Some seniors had their food deliveries reduced from five to three days per week, a 40% reduction. Others had their cold supper snacks eliminated.

Among the beneficiaries who were reduced from five to three weekly home deliveries, some volunteered to pay for the other two days at the modest rates charged to privately-funded beneficiaries. It costs MoWNI $5.90 per day to purchase, prepare, and deliver its meals, but thanks to philanthropic support, private clients pay only $4.25. However, purchasing the food deliveries, even at the subsidized price, can cause hardships that have health status consequences for this low-income population, so we consider this as another type of benefit cut.

Methods

A confidential survey was mailed on March 1, 2011 by MoWNI to the 283 beneficiaries who sustained service cuts. (See Appendix A for a copy of the survey.) Of the 283 surveys sent, 95 MoWNI beneficiaries replied, for a credible response rate of 34%. We would have preferred a larger response rate but this was prevented in part by confidentiality constraints. To assure complete client privacy, responses were returned to MoWNI, and the surveys had no identifiers. Consequently only one round could be fielded since we could not identify nonrespondents and send a second request for their participation.

However, if there is a bias in the sample, it likely to be an underrepresentation of the most functionally impaired, such as those beneficiaries who have the most difficulty seeing, reading, completing forms, etc. If the most frail elderly are underrepresented in the sample, then the impact of the service cuts we were trying to determine would likely be understated.

The survey items were developed from a literature review of senior hunger, geriatric nutrition and dietary research, and an examination of validated survey instruments used to measure senior hunger risk factors (Chen, Schiling, & Lyder, 2001; Holmes, 2006; Poh, 1996; Soderhamn, Bachrach-Lindstrom, and Ek, 2007; Shepherd, 2009; Ziliak and Gundersen, 2009). It targeted nutrition, behavioral factors, social isolation, and food security based on their documented ties to overall geriatric health and the impact these factors have on maintaining the independence of individuals in the community as they advance in age (Chen, Schiling, & Lyder, 2001).

The consensus in the literature is that although energy requirements tend to fall with advancing age as people become less active, seniors' nutritional requirements are similar to those of younger adults. Elderly people still need small nutritionally dense meals and regular healthy snacks to achieve optimal nutritional status (Shepard, 2009). Inadequate nutrition is closely associated with increased and more extended hospitalizations, frailty, exacerbation of medical conditions and increased incidence of disability (Chen, Schiling, & Lyder, 2001).

Social factors such as isolation have been shown to affect seniors negatively in multiple ways, including depression which reduces appetite, level of energy, and the likelihood to prepare and eat meals (Lee, 2004). Seniors tend to eat more and better when others are present, and the absence of mental stimulation has been shown to accelerate and exacerbate the onset of Alzheimer's and other mental degenerative conditions (Denny and Sara, 2008).

Food insecurity is "a lack of access, at times, to enough food for an active, healthy life for all household members; limited or uncertain availability of nutritionally adequate foods; or an uncertain ability to acquire acceptable foods in socially acceptable ways" according to the U.S. Department of Agriculture defines (Nord, Andrews, and Carlson, 2008). Both food insecurity and poor nutritional status figure significantly in the need to institutionalize a senior (Ziliak and Gunderson, 2009). Hence,

our survey targeted both food insecurity and nutritional status.

The survey also asked demographic information on age, gender, ethnicity, household size and income so we could determine if there were subsets of seniors at greatest risk.

Results

Population Characteristics

The MoWNI beneficiary population which sustained benefit cuts was comprised primarily of low-income seniors. A majority (57%) reside in households with incomes less than $13,000, which is 119% of the federal poverty level(FPL) for a family of one and 88% of the FPL for a household of two for 2011 (*Federal Register*, 2011). Thirty-six percent resided in households with incomes between $13,000 and $26,000, and just 7% reported household income in excess of $26,000.

Survey respondents ranged in age from 65 to 98, with a mean age of 80 and a median of 81. With respect to ethnicity, respondents were nearly equally divided between African-Americans (n=42) and Caucasians (n=41). Two respondents identified their ethnicity as Latino, one as Asian, one as Other, and eight did not respond to this question.

Respondents reported maintaining good health habits. Fewer than 9% smoke; just 3% consume three or more alcoholic drinks per day; 91% see a doctor regularly; and 99% are aware of the importance of good nutrition to their health.

However, MoWNI beneficiaries are a vulnerable, socially isolated population. As one respondent stated on her survey form, “They are the only people I see during the day.” Most MoWNI beneficiaries are home-bound, two-thirds eat alone, and only 29% have a daily caregiver. The prevalence of risk factors associated with senior nutritional deficiencies is shown in Table 1. Although 95 surveys were returned, not all items were answered by all respondents, so the number of respondents as well as the percentage of those who answered affirmatively is shown in both tables.

Table 1: Percentage of Respondents with Risk Factors for Senior Nutritional Deficiencies

	Percent Answering “Yes”	N
Eat alone most times	67	86
Unable to prepare a meal even with food in home	38	84
Have a daily caregiver	29	85

Have visitors regularly	49	88
Ability to leave your home unassisted	44	90
Leave your home during the course of the day	44	77

Impact of Reduced Services: Food Insecurity

We were unable to obtain region-specific information on food insecurity among seniors, but we did identify recent statewide and national data. In 2007, 5.9% of Indiana seniors were food insecure, making it the twelfth worse state in the country on this measure, and the only state among the lowest quartile above the Mason-Dixon line or in the Midwest. For example, the proportion of seniors who were food insecure in adjacent Illinois was 3.9%. The national 2007 average rate of senior food insecurity was 5.7%, with the worst state in the country, Mississippi, at a 12.3% rate. (Ziliak and Gunderson, 2009) In relative terms, Indiana seniors were starting from an already relatively food insecure base when the recession hit.

Table 2 illustrates the prevalence of food insecurity among MoWNI beneficiaries experiencing benefit cuts. One-fourth of respondents answered "Yes" to at least one of the four questions designed to capture food insecurity, and more than one-fifth of the group either feared they would run out of food or were unable to purchase foods recommended for their diets. Positive correlations among these four items were strong (r=.62 to .67) and statistically significant at <.01 level.

It should be noted that due to an inadvertent error in two items in the survey instrument ("Worried you would run out of food in the last 6 months" and "Unable to buy the right foods because of lack of money in the last 6 months"), there were particularly low response rates for the second and fourth items reported below. Had this not occurred, it is quite likely that more than 23 of the respondents would have answered "Yes" to one of the four items used to capture food insecurity and the overall estimate of food insecurity would have been greater than 25%.

Also, we should note that there were several comments indicating an increase in food insecurity from the individual comments made on the survey and in follow-up phone calls to those who agreed to be interviewed. Two examples are: "I'm receiving fewer meals after the second budget cut. I only receive 'Meals on Wheels' three days. I lost 14 pounds since January"; and "I miss my cold supper meals. I'm getting by on frozen meals. The portions are too small; I don't feel full but it will do."

Table 2: Food Insecurity Indicators

	Percent	

	Answering "Yes"	N
Run out of food in the last 6 months	13	89
Worried you would run out of food in the last 6 months	21	52
Hungry or did not eat because you could not afford food in the last 6 months	8	89
Unable to buy the right foods because of a lack of money in the last 6 months	23	60
Respondents answering "Yes" to one or more indicator	**25**	**91**

Impact of Reduced Services: Weight Loss

The most disturbing finding from the survey is not shown in the tables. *More than one-third (35%) of respondents reported losing weight during the previous six month.* This is a larger proportion than those who were found to be food insecure, but this seemingly anomalous result may be explained in a number of ways. First, the survey may not have captured all respondents' opinions due to the error in the instrument noted above, so the percentage may have been considerably more than 25%. Also, seniors are known to be reticent with respect to "complaining" as exemplified by the respondent comment above, "I don't feel full but it will do." So although their services were reduced and they experienced weight loss, respondents may not have revealed their true opinions on the food insecurity questions. Finally, some respondents may have lost weight due to medical conditions or other reasons unrelated to food insecurity brought on by the service cuts.

We know that there was weight loss from the individual comments made on the survey and in follow-up phone calls to those who volunteered to be interviewed. As noted above, one respondent stated he had lost 14 pounds and another contended that she had "lost 9 pounds" since the services were reduced.

Program cuts were found to be an equal opportunity stressor with weight losses reported proportionately in all demographic categories. Statistically significant correlations with weight loss during the prior six months were found when examining individual variables. However, when multiple regression was applied, these associations all washed out except for age which was found to be a tiny (.013), but statistically positive predictor for weight loss during the prior six months. This finding

contradicts Ziliak and Gunderson (2009) who found that the younger a senior was, the more likely they were to be food insecure.

No statistically significant differences were found in the likelihood of recent weight loss due to income level, gender, ethnicity, household size, eating alone, caregiver presence, or for any other measure of social isolation. Except for a very weak statistical association with advancing age, these service cuts were harming all beneficiaries similarly.

Discussion

We acknowledge limitations to this study. Our database will not allow us to determine how much of the reported weight loss or food insecurity status found here is attributable solely to service cuts. However, given that the respondents' proportions are so much greater than statewide and national benchmarks, certainly some of the reported weight losses and status as a food insecure household must be a result of receiving less food and/or having to pay out of pocket for previously funded meals. Clearly, some seniors are being harmed as a consequence of these budgets cuts.

Given today's political climate, we fear that these recent cuts are just the tip of the iceberg for the frail elderly and other vulnerable populations. Today, proposals are being debated by the Congress which would turn Medicare into a health insurance premium subsidy program and Medicaid into a state block grant. The loss of entitlement status for these two longstanding health programs that seniors rely upon would be quite detrimental to health and well-being of the elderly population. Other seniors' programs like Social Security which have been fixtures for generations are similarly threatened.

We hope these findings will make public policy-makers slow down and consider more carefully the potential harms that can befall safety net program beneficiaries as they review options to reduce spending at the federal, state, and local levels. Like the predominant positions of the experts who testified at the recent Senate hearings on the reauthorization of the OAA, (http://help.senate.gov/hearings/hearing/?id=8dd4f284-5056-9502-5d30-a66996ae4d55) we too believe that reducing community-based supports for the elderly is a penny-wise-pound-foolish deficit reduction strategy with a high likelihood of backfiring.

Program cuts like the ones examined here can easily lead to more senior hospitalizations and more of the frail elderly leaving the community to spend the rest of their days in nursing homes, paid for by Indiana Medicaid. Nutritional frailty leading to Sarcopenia (unintentional loss of body weight and lean muscle mass in seniors), is a leading cause for hospitalization and eventual institutionalization for the elderly (Bales and Ritchie, 2002). Fifty percent of hospitalized elderly patients are malnourished (Chen, Schilling and Lyder, 2001).

Seniors account for roughly one-eighth of the U.S. population, but in 2009 more than half of U.S. hospital admissions and 70% of the aggregate cost for hospitalized patients with a principal diagnosis

of "Nutritional Deficiencies" came from the age 65 and older population for a total price tag of $345 million (AHRQ, H-CUP, 2009). More than half of all admissions and nearly 60% of all costs for hospitalized patients with a principal diagnosis of "Fluid and electrolyte disorders" were also patients age 65 and older. The national hospital tab for seniors with this diagnosis is nearly $5 billion (AHRQ, H-CUP, 2009).

If the risk of increased hardship is not a sufficient deterrent to senior nutrition program budget reductions, perhaps the risk of far greater hospital and nursing home costs will dissuade the deficit hawks. Nutritionally-caused nursing home admissions can be averted with the standard MoWNI five-day-per-week hot lunches and cold supper snacks. As April 30, 2011 the weekly cost to the state for full MoWNI services was $29.50, and the statewide average Medicaid reimbursement rate for one week in a skilled nursing facility (SNF) was $1,067 (Myers and Stauffer, 2011).

Of the 86 respondents who answered the question, 30 seniors stated they lost weight in the last six months. If just one member of this group of 30 ends up in a SNF due to the recent service cuts, that person's nursing home costs will exceed the entire cost for all 30 beneficiaries for full MOWNI services by 20%. If just one-tenth of this group, three of these 30 seniors, are admitted to a SNF, the state will have forfeited enough funding for full MoWNI services for more than 100 beneficiaries. Which is a more prudent taxpayer expense, home-delivered meals or nursing home care?

State and federal policymakers should heed the findings in this case study and the rest of the literature. Seniors want to live out their lives in the community and taxpayers want smart fiscal policies. Cutting seniors' community-based nutrition programs thwarts both goals.

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Appendix A

Meals on Wheels Questionnaire

Please help us assess how the recent changes in your services have impacted you, by completing this ***confidential*** survey.

Please return the survey in the postage paid envelope by March 15, 2011.

Tell Us About Yourself:

Female _____ Male _____ Age: _____ Household size: _____

Ethnicity: African-American/Black ___ Asian ___ Caucasian/White ___ Latino/Hispanic ___ Other ___

Annual Income:

Less than $13,000 ____ $13,000-$26,000____More than $26,000 ____

Place an **X** in the appropriate choices indicating how often you eat or drink the following:

	Daily	Most Times	Some Times	Never
Breakfast				
Lunch				
Dinner				
Snacks				
Fruits				
Vegetables				
Milk/Dairy				
Eat fewer than 2 meals per day				
Have 3 or more drinks of beer or liquor				

Please See Reverse Side to Complete Survey

Please circle Yes or No		

Did you know, if you don't eat nutritious food, your health can be affected?	Yes	No
Are you a smoker?	Yes	No
Are you seeing your doctor regularly?	Yes	No
Are you drinking 8 glasses of water or fluid daily?	Yes	No
Do you have a daily caregiver?	Yes	No
Do you have the ability to leave your house unassisted?	Yes	No
Do you leave your house during the course of the day?	Yes	No
Do you have visitors regularly?	Yes	No
Do you eat alone most of the time?	Yes	No
Are you unable to prepare a meal even when there is food in the house?	Yes	No
In the last 6 months have you run out of food?	Yes	No
In the last 6 months were you worried you would run out of food?		
In the last 6 months were you hungry or did not eat because you could not afford food?	Yes	No
In the last 6 months were you unable to buy the right foods for your health because of no money?		
In the last 6 months have you had any weight loss?	Yes	No
Would you be willing to discuss your food and eating situation in more detail?	Yes	No
If Yes, please provide your First Name only, phone		

number and best time to call. First Name: _____ Number: _____ Best time to call me: _____		