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**Testimony**

**of**

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**on the issue of**

**“The Causes, Consequences, and Future of Senior Hunger in America”**

**before the**

**United States Senate Special Committee on Aging**

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Mr. Chairman, Senator Smith, and members of the Committee, I thank you for the opportunity to appear before you today. I extend a special thanks to Senator Smith for calling this hearing to discuss the problem of hunger among senior citizens in our nation. My name is James Ziliak, and I am a Professor of Economics at the University of Kentucky and Director of the Center for Poverty Research. The Center is a nonpartisan, nonprofit research organization and is one of four poverty research centers funded by the Office of the Assistant Secretary for Planning and Evaluation in the U.S. Department of Health and Human Services.

My co-Principal Investigator, Dr. Craig Gundersen, who is an Associate Professor at Iowa State University, and I are here today to discuss the results of a research study we conducted along with Dr. Margaret Haist of the Center entitled “The Causes, Consequences, and Future of Senior Hunger in America.”<sup>1</sup> Funding for the study was competitively awarded to us by a grant from the Meals On Wheels Association of America Foundation and underwritten by the Harrah’s Foundation. The views expressed are our own and do not necessarily reflect the views and opinions of Meals On Wheels Association of America Foundation, Harrah’s Foundation, our universities, or any sponsoring agency in the Federal government.

### **The Face of Hunger among Senior Americans**

Hunger is a serious threat facing millions of seniors in the United States. Despite this important public health threat, we know very little about the face of hunger among seniors, its causes and consequences for well being, or what will happen in coming decades with respect to the number and composition of seniors who are at-risk of hunger. Knowledge of these issues is particularly pressing in order to best plan for the upcoming increase of seniors due the aging of “baby boomers”. The purpose of our report was to fill in some of the gaps in our knowledge of senior hunger in the U.S.

In our report we assembled data on senior Americans age 60 and older using the 2001-2005 Current Population Surveys (CPS), a nationally representative survey of over 50,000

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<sup>1</sup> Ziliak, James P., Craig Gundersen, and Margaret Haist. 2008. “The Causes, Consequences, and Future of Senior Hunger in America.” A Special Report prepared for the Meals On Wheels Association of America Foundation. Lexington, KY: The University of Kentucky Center for Poverty Research.

households per year, along with the Core Food Security Module designed by the USDA to measure food insecurity in the U.S. population. The USDA definition of *food insecurity* is “limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.”<sup>2</sup> Based on the survey questions we considered three major categories of food insecurity: (1) the weakest being whether a household experienced any form of food insecurity; (2) the middle being whether the household experienced enough complications providing food to be considered *at-risk of hunger*; and (3) the most severe form being whether the household suffered from *hunger* due to financial constraints.

Based on these categories we estimated that during our period of study over 5 million seniors—11.4 percent of all seniors—experienced some form of food insecurity. Of these, about 2.5 million were at-risk of hunger, and about 750,000 suffered from hunger due to financial constraints.

The data paint a portrait of senior hunger in America that is at once familiar and surprising. The familiar being that the poor, African Americans, and to a lesser extent, Hispanics, renters, and those living in the South are over-represented among those seniors at-risk of hunger relative to their representation in the population. The surprising being that seniors under age 70 and seniors living with a grandchild experience higher risks of hunger on average.

While certain groups of seniors are at greater-risk of hunger, hunger cuts across the income spectrum. For example, over 50% of all seniors who are at-risk of hunger have incomes above the poverty line. Likewise, it is present in all demographic groups. For example, over two-thirds of seniors at-risk of hunger are white.

### **The Causes of Senior Hunger in America**

We next conducted a formal statistical analysis of the causes of food insecurity and hunger. The models move beyond simple associations and help answer questions such as “what

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<sup>2</sup> Anderson, S. A. 1990. “Core Indicators of Nutritional State for Difficult-to-Sample Populations.” *Journal of Nutrition*, 120: 1557–1600.

is the effect of age on the probability of food insecurity holding income, race, education, and other factors constant?”

Here some of the associations previously mentioned come into sharper relief. Holding other factors constant we find that a senior is more likely to be at-risk of hunger if they were

- *Between the ages of 60 and 64.*
- *Living at or below the poverty line.*
- *A high school dropout.*
- *An African-American or Hispanic.*
- *Divorced or separated, or living with a grandchild.*
- *Socially isolated.*
- *Holding liquid wealth less than \$25,000 and net worth less than \$50,000.*

Let me expand on some of these findings. Conventional wisdom and some community level studies hint that food insecurity is likely to be worse among the oldest old. Our results based on national data find the opposite. Seniors age 80 and older were 2 percentage points less likely to be at risk of hunger compared to 60-64 year olds. That is, an 84 year old is over one-third less likely to be at-risk of hunger than a 64 year old on the baseline food insecurity rate of 5.6 percent. At this juncture we do not fully understand the reasons for the declining age gradient, and believe it should be a research priority going forward, but there are a few factors that are consistent with our results. One possibility is that elderly nutrition programs such as Meals On Wheels have historically focused resources on the oldest old, and the programs have been effective in alleviating food insecurity and hunger among this older age cohort. Another possibility is that seniors have developed time-tested strategies to meet basic needs and thus are less likely to state that they are hungry.<sup>3</sup> There is also the possibility that emotional and physiological factors are at play in that older seniors suffer from declining sensory perception leading to the loss of enjoyment of food (and, subsequently, less demand for food) and they have

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<sup>3</sup> Schoenberg, N. 2000. “Patterns, Factors, and Pathways Contributing to Nutritional Risk Among Rural African American Elders.” *Human Organization*, 59(2): 234-244.

reduced physical and mental activity that lessens the need for caloric intake. While the pathways are potentially many and varied, our results highlight a sizable population facing an unmet food need that is likely to grow significantly with the ‘Baby Boom’ generation entering their sixties.

Income offers strong protection against hunger. We find that households above 200 percent of the poverty line have nearly a 15 percentage point lower probability of experiencing any form of food insecurity, a 6 percentage point lower probability of being at risk of hunger, and a 2 percentage point lower probability of being hungry. This suggests that enhanced efforts to combat poverty in America will have positive spillovers in terms of reductions in hunger.

At the same time we also find that over and above the protective factor of high incomes, access to a stock of wealth insures against the hardship associated with food insecurity and hunger. This includes homeownership and other liquid and illiquid assets. Policies that enhance saving for retirement and homeownership will have the additional benefit of reducing risk of hunger.

Even holding income and other factors constant we find that education pays in terms of reduced odds of food insecurity among seniors. That is, a high school graduate is 20 percent less likely to be at risk of hunger compared to a high school dropout, and a college graduate is 40 percent less likely. We do not yet know the precise pathway why education reduces hunger risk, but the leading explanation for the positive link between education and overall health is typically attributed to health information; that is, educated persons are both more aware of research relating to the health consequences of behavior and better equipped to respond to new health information emanating from that research.<sup>4</sup> This suggests that efforts that reduce dropping out of high school and that foster college completion will likely lead to lower hunger risk among future generations of seniors.

Marriage insures against hunger risk on a scale comparable to a high school diploma; that is, married couples are at about a 20 percent reduced probability of being at risk of hunger compared to never married seniors. But not all forms of family structure improve food security.

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<sup>4</sup> Grossman, M. and R. Kaestner. 2004. “Effects of Education on Health.” In *The Social Benefits of Education*, J. Behrman and N. Stacey, eds., 69–123. Ann Arbor, MI: University of Michigan Press.

Seniors living with a grandchild, even holding income and other factors constant, were about 50 percent more likely to be at risk of hunger compared to those with no grandchild.

In additional analyses we found that after controlling for other factors, seniors who are socially isolated—that is, without access to emotional and financial support—are also about 50 percent more likely to suffer from hunger. Our results show that improved efforts to provide services to the socially isolated have the potential to reduce hunger risk.

Another surprising result of our study was that holding other factors constant, there were sizable racial differences in the risk of hunger. African-Americans were 4.2 percentage points more likely to be food insecure than white persons, or nearly 75 percent above the baseline rate of 5.6 percent. Hispanics were about 20 percent more likely to be at-risk of hunger compared to whites, though were at no greater risk of currently experiencing hunger. The magnitudes of these racial differences are staggering when considering that the model conditions on income, education, age, gender, and other factors. Like the results related to age, the causal pathways underlying the racial gaps are not known and are in need for additional research.

There are no substantive differences in food security across broad regions of the country once we control for state-specific differences (households in the South and West have higher probabilities of being food insecure without these controls). This suggests that permanent state policy, or more likely, geographic barriers (such as difficulty getting to a store or limited availability of elderly nutrition services) in Southern and Western states may contribute to the greater probability of food insecurity among households in these regions.

We concluded this part of our analysis by constructing profiles of households at “high-risk” and at “low-risk” of food insecurity. Our results predict that an African-American who is a high school dropout, is divorced, is living with a grandchild, is between the ages of 60 and 64, is renting, is living in the non-metro South, and is disabled or unemployed has the greatest risk of being hungry—exceeding 80 percent. If we double the income of that household, but hold everything else the same, then the risk of hunger falls nearly 40 percent and yet still remains disturbingly high.

However, we showed that the risk of hunger is near zero for a white college graduate who is married, not living with a grandchild, is age 80 or older, is a homeowner in a metro area in the Northeast, and is retired. This holds generally whether the household's annual income is above or below the poverty line, highlighting the cumulative protective roles of marriage, higher education, age, race, and homeownership.

## **The Health Consequences of Senior Hunger**

The next part of our report examined the health-related consequences of food insecurity among senior Americans. Low intakes of essential nutrients present a serious threat to the health of elderly persons in the United States. In national nutrition studies, the elderly have been found to have low intakes of energy, fiber, magnesium, antioxidants, and some other micronutrients.<sup>5</sup> For about 25 percent of elderly persons, these intakes are low enough to lead to an increased risk of nutrient deficiencies.<sup>6</sup> The effect of insufficient nutrient intakes is large enough that an estimated one-third to one-half of all health conditions in elderly persons may be related to low intakes.<sup>7</sup>

While there has been extensive work looking at nutrient-related deficiencies among the elderly and the consequences of those deficiencies, much less work has been done looking at the health consequences of food insecurity among the elderly. To address this issue we turned to data from the 1999-2002 National Health and Nutrition Examination Surveys and examined a variety of outcomes that relate to nutrients, obesity, diabetes, depression, activities of daily living (ADLs), and self assessments of general health.

After controlling for other risk factors for poor health we find that seniors experiencing some form of food insecurity are

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<sup>5</sup> Berg, R. and J. Cassells. 1992. *The Second Fifty Years. Promoting Health and Preventing Disability*. Institute of Medicine, Division of Health Promotion and Disease Prevention. Washington, DC: National Academy Press.

<sup>6</sup> Millen, B. 1999. "Preventive Nutrition Services for Aging Populations." In Seiler, W. and H. Stähelin (ed.), *Malnutrition in the Elderly*. Darmstadt, Germany: Steinkopff.

<sup>7</sup> Ryan, V. and M. Bower. 1989. "Relationship of Socio-Economic Status and Living Arrangements to Nutritional Intake of the Older Person." *Journal of the American Dietetic Association*, 89: 1805-1807.

*Significantly more likely to have lower intakes of energy and major vitamins.* This holds across all the nutrient intake measures we considered. For example, across all the measures, the positive effect of being fully food secure is over twice as large (and generally much larger) than having one's income lifted from the poverty line to twice the poverty line.

*Significantly more likely to be in poor or fair health.* For sake of comparison, suffering any form of food insecurity has a similarly sized negative effect on overall self-assessments of health as not having graduated from high school.

*More likely to have ADL limitations.* Seniors with any form of food insecurity are much more likely than fully food secure seniors to have ADL limitations. The effects are again large – the ADLs of these seniors are roughly equivalent to a food secure senior that is 14 years older.

In addition we used data from the 1999–2003 Panel Study of Income Dynamics, a nationally representative longitudinal survey that has followed the same set of families and their children since 1968, to estimate the effect of food insecurity on household food expenditures (adjusted for the USDA family food need standard). On average a family experiencing any form of food insecurity spends about 60 percent less on food relative to needs, and a family that is suffering from hunger spends 88 percent less than a food secure household. However, once we controlled for other factors that determine food spending we no longer find an economically or statistically significant link between food insecurity and food expenditures. Although we find no significant differences in the amount of money spent on food between food secure and food insecure households, holding other factors constant, the fact that food insecure households experience a litany of worse health outcomes is a puzzle. One possibility is that there are substantive differences in the types, quality, and timing of food consumed that lead to worse health, but this topic too is in need of further research.

### **The Future of Senior Hunger**

We conclude our report by offering predictions on the possible scope of senior hunger in America in the year 2025. This year was selected in part because all members of the 'Baby



Boom' generation will be above age 60 and thus the demographic bulge of retirees will be at its peak.

We used data from both the 1980s and 2000s in the CPS and population projections from the U.S. Census Bureau. We employed a projection technique that was based on our results from the determinants of food insecurity. Specifically we developed a three-step procedure based on a parsimonious group of seven economic and demographic variables that affected hunger— whether someone was a homeowner, whether a person lived in a poor household, the gender of an individual, the age of an individual, whether a person lived alone, the race of an individual, and whether the person graduated from high school. The first step involved relating food insecurity among seniors in the early 2000s to their age cohorts twenty years prior in the 1980s. The second step involved predicting food insecurity for each age cohort twenty years in the future based on demographic and economic data from the 2000s. The third and final step required weighting the predictions by the U.S. Census's projections of the size of each age group two decades in the future.

Our baseline projections indicate that in 2025 an estimated

- 9.5 million seniors will experience some form of food insecurity.
- 3.9 million seniors will be at-risk of hunger.
- 1 million seniors will suffer from hunger.

The projected numbers of seniors who will experience each type of food insecurity in 2025 are about 75 percent, 50 percent, and 33 percent higher, respectively, than our current estimates.

The baseline projections are quite robust to more complicated prediction models and suggest that in the absence of significant economic or policy reforms the percentage of seniors at risk of hunger in 2025 will be of comparable magnitude to the present. That is, as a fraction of the senior population, these projected numbers are remarkably stable compared to current data. We believe that a couple of countervailing forces are at work—the growth in the fraction of high school graduates between the mid 1980s and mid 2000s is pulling down our estimates of hunger risk while at the same time the growth of the non-white population, especially those with Hispanic ethnicity, over the same period is pushing the estimates upward. Such stability is not

without precedent in key social indicators; witness the remarkable stickiness of the U.S. poverty rate over the past two decades.

Making projections twenty years into the future is a useful exercise but one that should be accompanied with some caveats. The strength of our methodology here is its relative transparency, but its main drawback is the assumption of constant cohort effects over time. For example, our projections implicitly assume that older persons in 2025 will have lower food insecurity rates than younger persons. However, these lower food insecurity rates may reflect a cohort effect for younger seniors rather than an age effect. In other words, it could be that those born after 1935 are more likely to be food insecure at later ages than those born before 1935. One possibility is that the current generation of older seniors developed effective coping strategies in light of their first hand experiences with major economic and social changes from the Great Depression and World War II and thus are less likely to report food insecurity. Given that current 40 to 60 year olds have not faced social dislocations on a similar scale, and thus have had less need to develop coping strategies for food need, they may be more likely to report food insecurity when they reach the ages of 60 to 80 in 2025. If so, then our projections of hunger in 2025 are too low.

Alternatively, if strong economic growth in the future reduces poverty substantially, or there are significant improvements in education attainment, it is possible our estimates of food insecurity will be too high. Moreover, we recognize the influence that elderly nutrition programs such as Meals On Wheels and the Food Stamp Program have on alleviating senior hunger in America. Expansions of these and related programs could lead to further reductions in hunger not captured in our projections.

## **Conclusion**

We believe this report is a first step in improving our understanding of senior hunger in America, but that much work remains to be done. We again thank the Committee for the opportunity to share the results of our research. We hope our findings will serve as a springboard for additional research on the causes of hunger identified here, and for further policy

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discussions on the provision of food assistance through programs such as Meals On Wheels and food stamps to ensure that no senior be at risk of going without safe, adequate, and nutritious food.