

# SPOTLIGHT ON SENIOR HEALTH

ADVERSE HEALTH OUTCOMES OF  
FOOD INSECURE OLDER AMERICANS

EXECUTIVE SUMMARY



*Both Feeding America and the National Foundation to End Senior Hunger strive to raise awareness about the pressing issue of senior hunger in the United States. Both organizations agree that research on senior hunger is not only imperative for raising awareness about the issue, but also critical for finding sustainable solutions to address the nutritional needs of older adults.*

#### **ABOUT FEEDING AMERICA**

Feeding America is the largest hunger-relief organization in the United States. Through its nationwide network of more than 200 food banks and 61,000 food pantries and meal programs, Feeding America provides more than three billion meals annually to an estimated 37 million people in need, including three million adults aged 65 and older.



#### **ABOUT THE NATIONAL FOUNDATION TO END SENIOR HUNGER**

The National Foundation to End Senior Hunger identifies and assesses the challenge of senior hunger by funding senior-specific research, fostering local collaboration and engaging diverse partners. Through research, education and community partnerships the National Foundation to End Senior Hunger works to create the tangible and replicable solutions necessary to reverse the escalating number of seniors in the lifecycle of hunger.





# RESEARCH OVERVIEW

*The Spotlight on Senior Health: Adverse Health Outcomes of Food Insecure Older Americans* research project found that food insecurity among individuals aged 60 and older living in the United States has a negative impact on seniors' health, nutrition, and overall well-being.

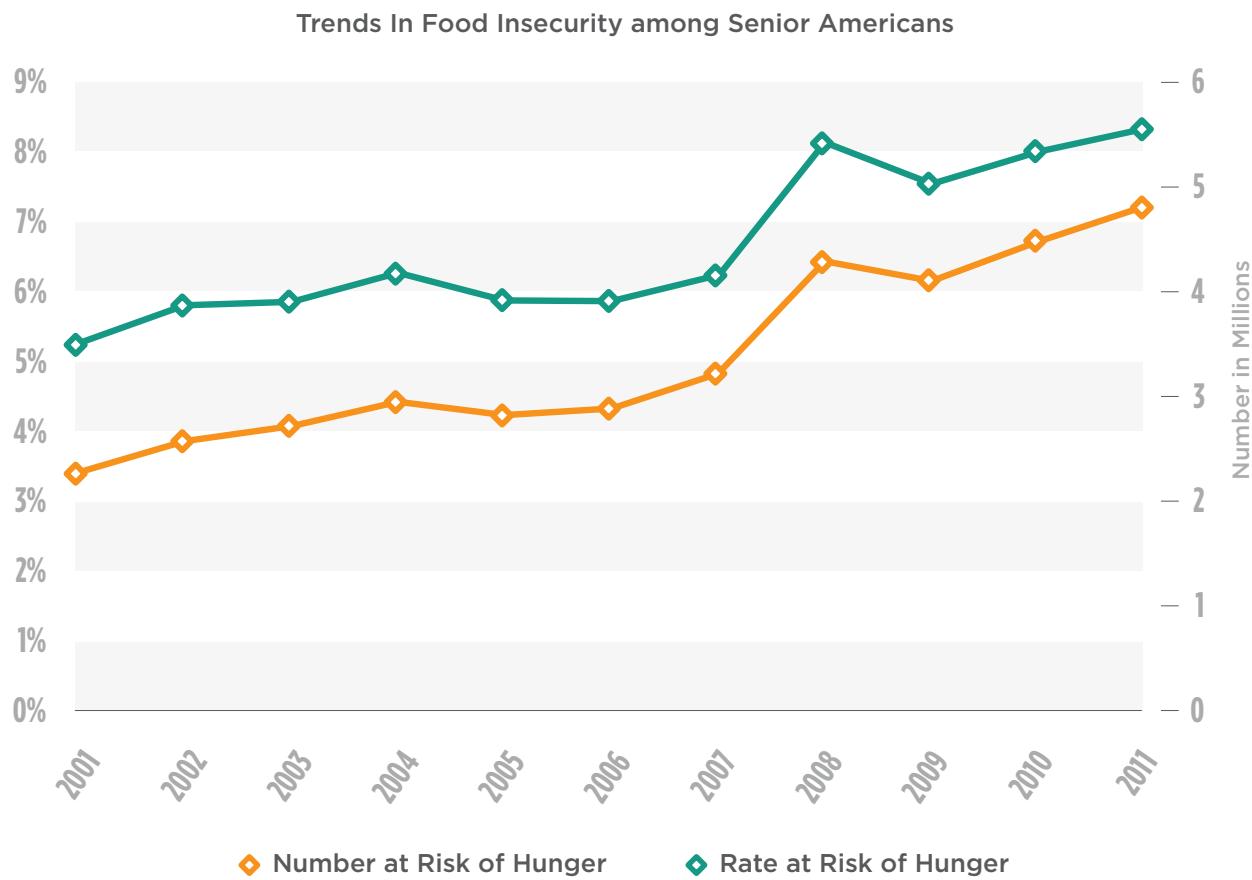
That is, food insecure seniors are more likely to have lower nutrient intakes and higher risk for chronic health conditions and depression than their food secure counterparts. Compared to younger age cohorts, seniors were found to experience more severe health implications of food insecurity. The goal of this research brief, which was generously supported by HMS, is to synthesize research commissioned in recent years by the

National Foundation to End Senior Hunger (NFESH) and several other organizations interested in issues affecting seniors. *Spotlight on Senior Health* underscores the critical need for innovative strategies for addressing the problem of senior hunger, which would aid in increased prevention of negative health outcomes associated with food insecurity.

## BACKGROUND

Existing research, namely the *Spotlight on Senior Hunger*, which was released by Feeding America and the National Foundation to End Senior Hunger in 2013, documents recent trends related to food insecurity among the senior population. **Between 2001 and 2011, the number of food insecure seniors more than doubled. In 2011, 4.8 million seniors, or 8.4 percent of the senior population, faced food insecurity.** This

means that nearly 1 in 12 seniors living in the United States had limited or uncertain access to enough food to sustain a healthy lifestyle. The increase in senior food insecurity is particularly concerning given the growing proportion of the population that is comprised of seniors; an estimated 10,000 Baby Boomers will turn 65 every day until 2030, as reported by the U.S. Census Bureau.

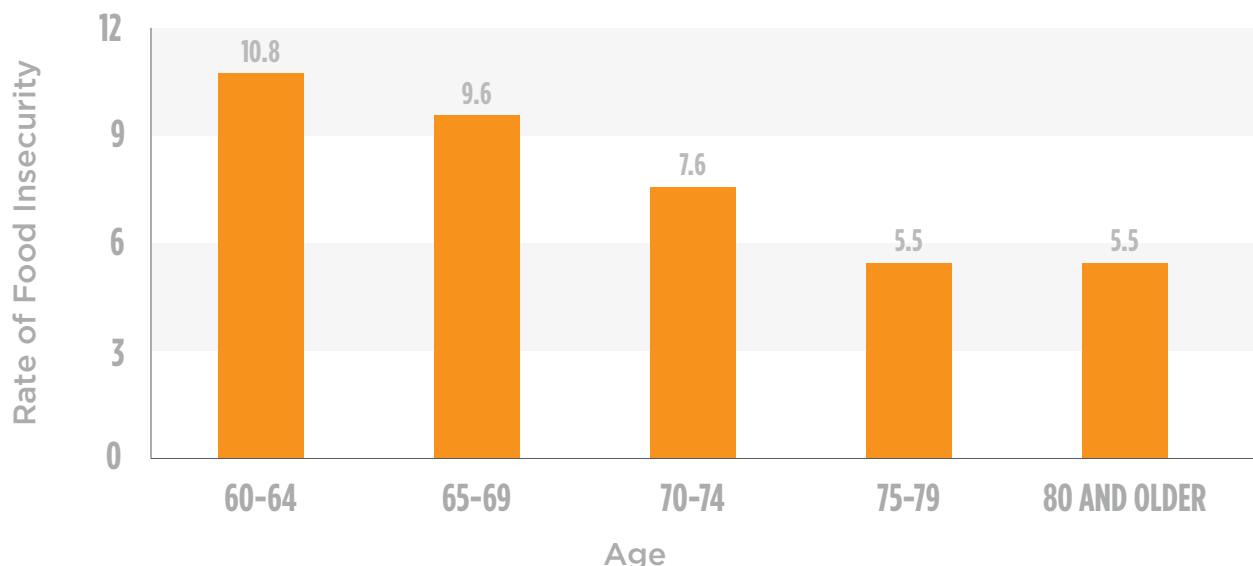


*Spotlight on Senior Hunger* also addresses the multiple known risk factors for food insecurity among individuals aged 60 and older. Race, ethnicity, employment status, and income were some of the factors found to be associated with senior food insecurity.

*Spotlight on Senior Health: Adverse Health Outcomes of Food Insecure Older Americans* builds on the existing research regarding the increase in senior food insecurity to explore the potential health implications of food insecurity among the senior population.



### Rate of Food Insecurity among Seniors by Age in 2011



## RESEARCH METHODS

The findings from *Spotlight on Senior Health: Adverse Health Outcomes of Food Insecure Older Americans* are based on analyses of senior-specific data collected from the National Health and Nutrition Examination Survey (NHANES). The NHANES provides information about food insecurity and its health and nutrition implications for the senior population living in the United States. Seniors were defined as any individuals aged 60 and older. The data analyses were conducted by Dr. Craig Gundersen and Dr. James Ziliak, and the results were summarized in their 2014 report entitled "Food Insecurity and Health among Senior Americans."

Used to assess the health and nutrition status of adults and children, NHANES is comprised of both an interview and physical examinations. It is conducted annually by the National Center for Health Statistics,

Centers for Disease Control and Prevention (NCHS/CDC) with 5,000 participants, comprising about 50 percent children and 50 percent adults. Seniors and other groups deemed as vulnerable populations are intentionally oversampled. Drs. Gundersen and Ziliak utilized NHANES senior data from 1999-2010 in order to measure the effects of food insecurity on health and well-being among the senior population. Additionally, the Core Food Security Module (CFSM), which is part of the Current Population Survey (CPS) and is conducted by the U.S. Census Bureau and the Bureau of Labor Statistics (BLS), was used. The CFSM is a set of 18 questions (or 10 questions for households with no children) that measures the level of food security in the household.

## MAJOR FINDINGS

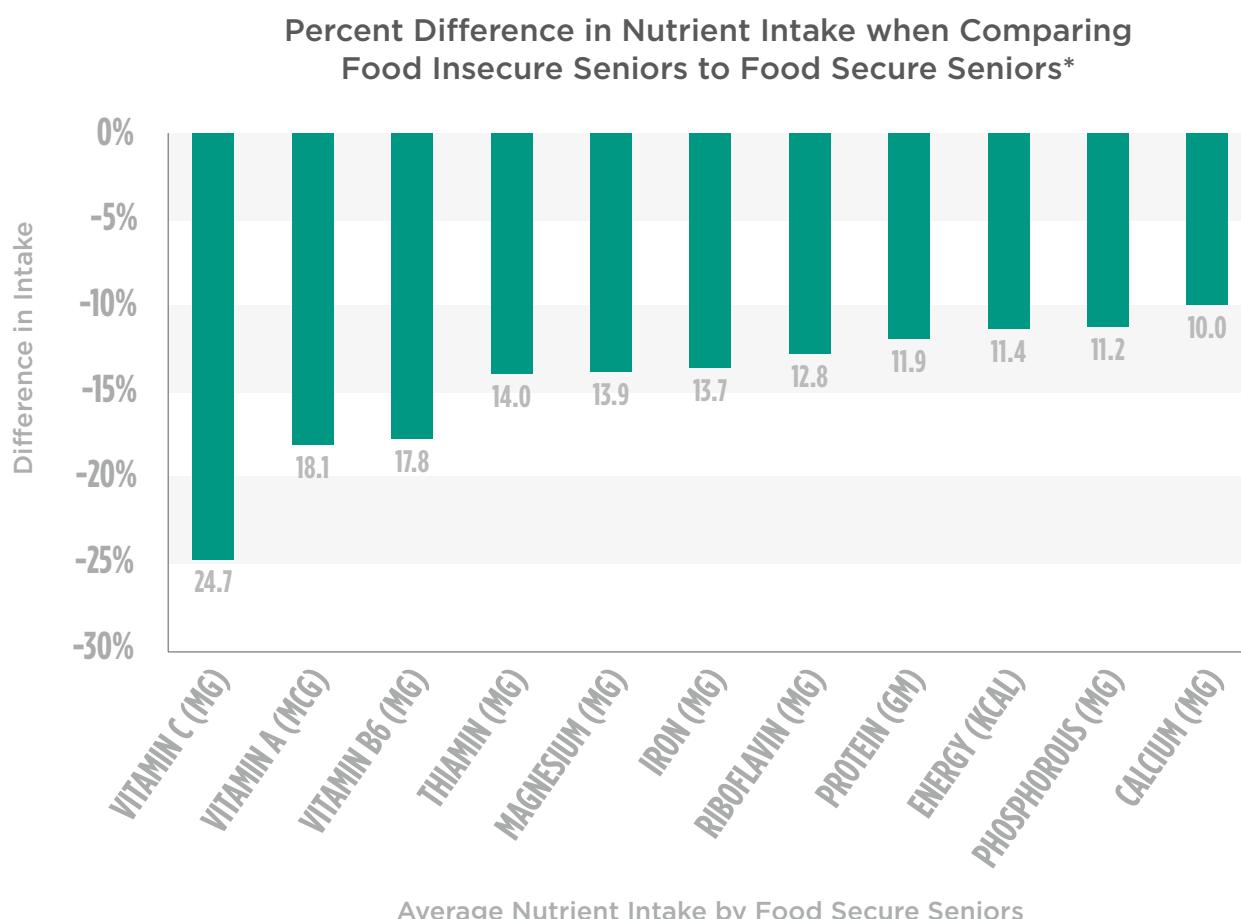
### NUTRIENT INTAKE

Seniors who are food insecure consume, on average, fewer nutrients and calories compared to food secure seniors. In an assessment of seniors' intake of various nutrients, **food insecure seniors consumed less calories and lower quantities of all 10 key nutrients than their food secure counterparts.** For example, food insecure seniors had intake levels of iron and protein that were 14 percent and 12 percent lower, respectively, than that of food secure seniors. Notably, many of these nutrients, including iron and protein, are known to be particularly important to the health of the senior population.

The differences in nutrient intake between food secure and food insecure seniors persist when accounting for other known risk factors for poor health, such as race,

income, and age. That is, food insecurity still has a negative association with nutrient intake for all nutrients, except Vitamin A and calcium, when controlling for other known risk factors.

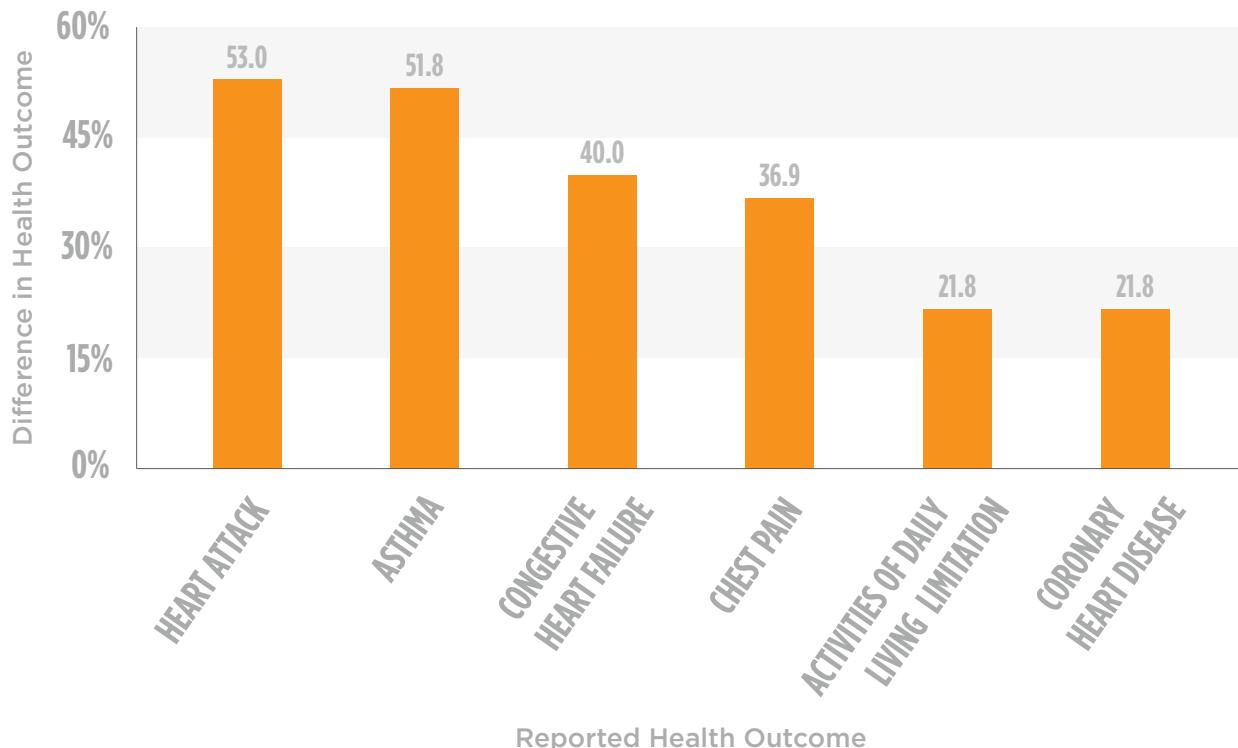
The distribution of food by the charitable food assistance network offers critical nutritional support to individuals in need. Increased distribution of nutrient-rich foods would ensure that food insecure seniors receive more access to nutrients vital to their health. Similarly, nutrition education efforts focused on the senior population could provide increased information about how to address the specific nutritional needs of seniors.



\*The differences are statistically significant at the 99 percent confidence interval for each of the 11 nutrients. When controlling for other factors that affect nutrient intake, differences in nutrient intake persist for all nutrients, except for Vitamin A and calcium, though the differences are more muted.



### Percent Difference in Health Outcomes when Comparing Food Insecure Seniors to Food Secure Seniors\*



\*The percentage differences are statistically significant at the 99 percent confidence interval for each of the identified health outcomes, except for coronary heart disease which is significant at the 90 percent confidence interval, when controlling for other factors affecting health outcomes.

#### HEALTH OUTCOMES

Among the senior population, food insecurity is associated with increased risk of developing negative health conditions, such as diabetes, high blood pressure, and asthma. Food insecurity was found to be negatively associated with nine diseases and other negative health conditions when controlling for other variables that affect health. Compared to food secure seniors, **food insecure seniors are 53 percent more likely to report a heart attack, 52 percent more likely**

**to develop asthma, and 40 percent more likely to report an experience of congestive heart failure.** In addition, food insecure seniors are 22 percent more likely to experience limitations in their Activities of Daily Living (ADLs), which are those fundamental activities, such as eating, dressing, and bathing, that individuals typically can perform independently. These high rates probably reflect, in part, the challenges these seniors face in accessing enough food.



## DEPRESSION

The segment of the senior population facing food insecurity is more prone to experiencing depression. After controlling for other known risk factors, food insecure seniors were 60 percent more likely to experience depression than food secure seniors, indicating that food insecurity has a negative impact on the general well-being of older individuals.

# 60%

FOOD INSECURE SENIORS ARE  
60% MORE LIKELY TO EXPERIENCE  
DEPRESSION

## LIVING WITH GRANDCHILDREN

Households with grandchildren are almost three times as likely to be food insecure as households without grandchildren. **The high food insecurity rate among multigenerational households indicates that nutrition assistance programs that serve seniors must also be able to support the nutrition needs of their children and grandchildren.**

# 3X

HOUSEHOLDS WITH GRANDCHILDREN  
ARE ALMOST 3X AS LIKELY TO BE FOOD  
INSECURE AS THOSE WITHOUT

## COMPARISON TO YOUNGER ADULTS

Seniors experience more severe health consequences as a result of food insecurity when compared to younger adults, specifically individuals ages 40 to 59. Compared to seniors, adults in this age group are actually at an increased risk of being food insecure, in part because they do not yet have access to an age-specific safety

net, such as Social Security or Medicare. Despite this heightened risk of food insecurity, however, adults ages 40-59 do not experience the negative health effects related to food insecurity as severely as seniors do. **Seniors aged 60 and over are particularly vulnerable to the health implications of food insecurity compared to other adult age groups**, suggesting that tailored interventions for addressing food insecurity are needed to meet the specific needs of the senior population.

## FOOD INSECURITY AFFECTS HEALTH INDEPENDENT OF INCOME

# 200%

SENIORS WITH AN INCOME BELOW  
200% OF THE FEDERAL POVERTY  
LINE ARE MOST AT-RISK

Low-income seniors, defined in this study as those with an income below 200 percent of the federal poverty line, are most at-risk of facing food insecurity. In 2011, 200% of the poverty line equated to \$21,780 for a single person. Despite the fact that low-income seniors are at higher risk of food insecurity, all food insecure seniors experience lower nutrient intake and poorer health outcomes than food secure seniors, regardless of income. Given that higher income among food insecure seniors does not protect from negative health consequences, it is clear that **food insecurity affects health and well-being independent of income levels**. Many factors contribute to seniors' ability to age well, and food insecurity must be considered one of those variables in order to fully understand potential causes of poor health among seniors.



## POTENTIAL IMPLICATIONS

**This report highlights the high rate of food insecurity among the senior population and its clear association with poor health and nutrition among older individuals.**

The findings demonstrate that seniors are more likely to experience severe health consequences related to food insecurity than other age cohorts. Although other factors, such as income, also influence health outcomes among seniors, it is clear that food insecurity affects seniors' nutrition and well-being independent of other risk factors. Given that the proportion of the United States population that is aged 60 or older continues to grow, and that food insecurity has reached unprecedented levels among the senior population, it is critical to continue to engage those involved in public policy, charitable food assistance, and healthcare, among others, in this issue.

The charitable food assistance network provides food to individuals in need, which is one important way of combatting food insecurity among seniors. To assure its effectiveness, a greater effort could be made to ensure that the meals and groceries provided by this network include foods that are rich in essential nutrients. Senior-focused nutrition education efforts also aid in addressing the unique nutritional and health concerns of seniors. More home-delivery programs may be needed to distribute food to homebound seniors and seniors with limited mobility. In addition, an intergenerational approach to food distribution might better accommodate the large number of seniors who currently reside with or raise grandchildren and ensure that more such individuals receive assistance.

As Drs. Gundersen and Ziliak point out, much recent research has demonstrated that participation in the Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamp Program) leads to

reductions in food insecurity. Participation rates among SNAP-eligible seniors, who could benefit from the program, have historically been low. Increasing efforts to enroll seniors in SNAP could help address some of the health outcomes outlined in this report. In addition, the Commodity Supplemental Food Program (CSFP) offers nutrition assistance to low-income seniors, and the Child and Adult Care Food Program (CACFP) also supplements the food provided to senior residents of adult care centers. We encourage policymakers, community leaders and other anti-hunger advocates to leverage the findings of this study to promote increased participation in these programs, as they would assist more at-risk seniors in receiving nutrition assistance vital to supporting positive health.

We also appeal to physicians and others in the healthcare community to give serious consideration to these findings in their interactions with food insecure seniors. The prescreening of all senior patients for food insecurity is one way in which some healthcare professionals have already started to address the issue of senior hunger. This is likely an effective measure for detecting negative health conditions among food insecure seniors and recommending an appropriate form of treatment or management of the condition, recognizing that food insecure seniors may not have access to the necessary resources to properly follow some treatment plans. Increased awareness of senior food insecurity, along with concentrated efforts to provide nutrition and health support to seniors, would help to increase the feasibility of healthy and higher quality of aging among the senior population.



## ACKNOWLEDGEMENTS & CREDITS

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