

Food Assistance and Nutrition Research Small Grants Program: Executive Summaries of 1998 Research Grants. By Ann Vandeman (editor). Food and Rural Economics Division, Economic Research Service, U.S. Department of Agriculture, Food Assistance and Nutrition Research Report No. 10.

Abstract

The Economic Research Service Food Assistance and Nutrition Research Program (FANRP) offers a Small Grants Program designed to stimulate new and innovative research on food assistance and nutrition issues and to broaden the participation of social science scholars in these issues. ERS created partnerships with five academic institutions and research institutes in administering the program. This report presents a summary of the research findings from the first set of small grants, which were awarded in the summer and fall of 1998.

Keywords: Food assistance, nutrition

Preface

The Economic Research Service's Food Assistance and Nutrition Research Program (FANRP) offers a Small Grants Program designed to stimulate new and innovative research on food assistance and nutrition issues and to broaden the participation of social science scholars in these issues. ERS created partnerships with five academic institutions and research institutes to administer the program. The partner institutions competitively award small grants for 1-year research projects. Most grants are for \$20,000 to \$40,000. The Small Grants Program seeks to give junior scholars an opportunity to gain research experience in the field of food and nutrition assistance and to encourage more senior scholars to apply their skills and knowledge in this area as well.

This report presents summaries of the research findings from the first set of small grants, which were awarded in the summer and fall of 1998. These findings were presented at a workshop at ERS in Washington, DC, on October 14 and 15, 1999. The completed research papers can also be found on the web sites of the administering institutions, listed below:

Institute for Research on Poverty, University of Wisconsin

Focus: The effects of food assistance programs on food security, income security and other indicators of well-being among low-income individuals and families.

Web address: <http://www.ssc.wisc.edu/irp/home.htm>

The Joint Center for Poverty Research, University of Chicago and Northwestern University

Focus: Interactions between food assistance programs and other welfare programs; and the effects of the macroeconomy on the need for food assistance, the level of participation, and costs of food assistance programs.

Web address: <http://www.jcpr.org/usdarfp.html>

The Department of Nutrition at the University of California, Davis

Focus: The impact of food assistance programs on nutritional risk indicators (anthropometric, biochemical, clinical, and dietary), food purchasing practices, and food insecurity.

Web address: <http://nutrition.ucdavis.edu/usdaers.html>

Southern Rural Development Center, Mississippi State University

Focus: Food assistance research issues for rural people, families, and communities in the South.

Web address: <http://ext.msstate.edu/srdc/activities/food.htm>

The American Indian Studies Program, University of Arizona

Focus: The relationship between food assistance programs on reservations and family poverty.

Web address: <http://w3.arizona.edu/~aisp/projects.html>

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Food Assistance and Nutrition Research Small Grants Program

Executive Summaries of 1998 Research Grants

Ann Vandeman, Editor

Introduction

Food and nutrition assistance programs—food stamps; the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); the school meals programs; and others—have been a major component of public assistance to the poor since their origins in the 1930's. The U.S. Department of Agriculture (USDA) is the Federal agency charged with administering food and nutrition assistance programs, and as such, it has a particular interest in seeing that they are as effective as possible at alleviating food insecurity and contributing to the goal of a healthy, well-nourished population. Fundamental changes in the public assistance program environment brought about by welfare reform in the mid-1990's reduced cash assistance programs and left food and nutrition assistance among the only remaining entitlement programs available to all low-income households in the United States. This change in the role of food and nutrition programs in the social safety net increased the need for accurate information on how well the programs are working.

In 1998, the USDA's Economic Research Service (ERS) created partnerships with five academic institutions and research institutes to establish the Small Grants Program for food and nutrition assistance research. The purpose of the program is to stimulate food and nutrition assistance research in the new public assistance environment and to broaden the participation of social science scholars in the research effort. Grant recipients come from a number of disciplines

and employ a variety of approaches in their research. They include economists, sociologists, nutritionists, anthropologists, and public health professionals. Some conducted exploratory research using ethnographic methods to examine underlying factors influencing program participation and outcomes. Others used descriptive statistics to characterize the populations of interest. Still others used statistical models to analyze program behavior. All the methods employed contribute to a growing body of knowledge on the food needs, coping behaviors, and food program outcomes of low-income families and individuals. The project summaries are grouped here by the administering institution. The reader will find nearly as much variation in approaches and specific topics within the individual programs as between them.

Research Overview

ERS chose two of the five partner institutions for their experience in conducting policy-relevant poverty research at the national level and their ability to attract prominent scholars from a variety of social science disciplines to work on poverty and hunger issues. The Institute for Research on Poverty at the University of Wisconsin (IRP) has a distinguished history of research, including previous involvement in administering small research grants funded by the USDA's Food and Nutrition Service. IRP awarded four small grants in 1998/99:

- In their study of private food assistance, Daponte and Bade estimated that \$2.3 billion is spent nationally to deliver free food through a network of food pantries. They also found large differences in the level of assistance provided to the needy through local food banks.
- Derrickson et al. conducted a validation study of the USDA food security measure in which they confirmed the validity of the food security scale, but proposed an alternative method of using the measure to classify individuals as hungry or food insecure.
- Kanaiaupuni and Donato conducted a study of Mexican migration and legal status effects on household food expenditures and child health. They found that the children of parents who legally work and reside in the United States have better health and greater access to food, independent of how long parents have lived in the country.
- In their examination of the effects of WIC participation on child health and development, Kowaleski-Jones and Duncan confirmed the positive effect of WIC on birthweight. Their results also suggest that prenatal WIC participation confers advantages in later childhood social and behavioral development through a positive effect on child temperament.

The Joint Center for Poverty Research at the University of Chicago and Northwestern University was established in 1996 with a grant from the U.S. Department of Health and Human Services to conduct and fund research and to advise Federal policymakers on issues of poverty. Their existing small grants program with HHS and the Census Bureau served as a model for the FANRP Small Grants Program. The Joint Center funded five projects in 1998/99.

- Borjas analyzed trends in immigrant Food Stamp Program participation, which exceeded the domestic participation rate until 1995. Since 1995, the decline in immigrant participation has exceeded the decline in domestic household participation.
- Chernick developed and tested a model to estimate the extent to which States use federally funded food stamps in place of State-funded cash assistance to shift to the Federal Government more of the cost of supporting low-income families. His preliminary results showed an almost dollar-for-dollar offset of

food stamps for cash assistance with policy changes that increase food stamp benefits.

- Lee et al. examined program effects on children in their study of WIC. They found that WIC participation continued to increase while cash assistance and Food Stamp Program participation declined following welfare reform in 1996. WIC participation was associated with higher rates of receipt of preventive healthcare services and a lower incidence of health problems related to inadequate nutrition among the children in their sample.
- Page offered evidence of an increase in welfare caseloads following an increase in minimum wages, and suggested minimum wage legislation may not necessarily be an efficient means of increasing the incomes of low-skilled single mothers.
- Reid found evidence of negative effects of food insecurity on children's school achievement and psychological well-being, but no effect on children's height- and weight-for-age.

ERS chose the remaining three of the five partner institutions for their ability to direct research on a particular subset of food assistance and nutrition issues or on a particular subpopulation of those eligible for food and nutrition assistance who are of policy interest to USDA. Among these, the Department of Nutrition of the University of California at Davis (UC Davis) brought to the Small Grants Program its expertise in nutrition education design and evaluation. A core group of faculty there have focused research efforts on identifying meaningful approaches to nutrition education development and evaluation for ethnically diverse, low-income families served by a variety of food assistance programs. They view multidisciplinary research as critical in effectively monitoring the outcomes of nutrition programs. The three projects funded through UC Davis demonstrate the broad scope of nutrition problems to be addressed. They also show to some degree the challenges involved in determining nutrition and health outcomes from food assistance program participation when differences between participants and nonparticipants interfere with measuring program effects.

- Frongillo and Lee found that food-insecure elderly have poorer nutritional and health status than food-secure elderly. Among the food insecure, those who received food assistance measured more poorly on health and nutrition status than those who did not

receive it. This counterintuitive result demonstrates the difficulty of distinguishing between the effects of program participation and individual behavior; i.e., those who are worse off initially are more likely to participate in food assistance programs.

- Perez-Escamilla et al. compared food-security status and nutrition intakes among preschoolers in food stamp participant and nonparticipant households. They found that while nutrient intakes in nonparticipant households were lower than in participant households, caffeine intake from sodas among preschoolers was higher in participant households, pointing to the need for nutrition education. Food security was higher among households with food stamps in their study, but the level of food security observed was a function of how long food stamps lasted each month.
- The Wang and Dixon study shows that bone mineral density, an indicator of osteoporosis, was not positively associated with either WIC or Food Stamp Program participation in women. Bone mineral density increased with education in their study, but only among white women.

The Southern Rural Development Center (SRDC) was chosen to administer small grants for its ability and commitment to conduct research on the problems of the rural poor in the South and its particular focus on the effects of welfare reform on this population. By virtue of the land-grant status of the SRDC member institutions, USDA has a special relationship with the SRDC. The South is also of particular interest because of the large proportion of rural poor and rural African Americans who reside in the region. SRDC funded six studies in 1998/99.

- Goetz et al. examined the effect of an economic downturn on welfare caseloads and the relative importance of the recipients' characteristics versus local economic conditions in determining what happens to caseloads. The local unemployment rate and the educational level of recipients both had significant effects on caseloads, leading the authors to recommend policies aimed at these variables to mediate the impact of economic downturns.
- Kurzynske and McGough evaluated a relatively simple and inexpensive food security survey method that could be repeated periodically. They found that the food insecure identified in the Kentucky Survey, a statewide telephone survey, were similar to the

food insecure in national survey data, though the proportion of food insecure in Kentucky was below that measured from national survey data for the State. The poor, those with less formal education, families with children, minorities, and those already receiving food stamps and WIC were most likely to be food insecure.

- Lokken involved her geriatrics students in investigating the conditions of hunger, food insecurity, and nutritional risk among the elderly in Mississippi. They were surprised to find that among low-income elderly, those currently receiving food stamps were more food insecure. Their regression results showed three factors to be significantly related to food insecurity/hunger: receiving food stamps, being African American, and inadequate cooking utensils such as pots and pans.
- Molnar et al. examined and compared food assistance availability and use through private, non-profit food pantries in rural and urban communities in eastern Alabama. They found that rural users indicated higher levels of satisfaction with food pantry services than urban users. They also found that churches play an important role in distributing private food assistance, particularly in rural areas. Overall, urban food pantry users and non-users were more likely to receive or apply for food stamps than rural users and non-users.
- The small grant received by Monroe et al. helped to fund their continuing study of women transitioning from welfare to work in rural Louisiana, which focuses on food needs and coping strategies. Most of the women in their study, to date, were not experiencing food insecurity. Program benefits such as Medicaid were a much higher priority and concern. Nearly all the women still received food stamps but few used food pantries or surplus commodity distributions, services that may not be available in their rural communities.
- Zekeri studied the adoption of electronic benefits transfer (EBT) for delivering food stamps in Alabama from the recipients' perspective. He found that most food stamp recipients preferred EBT to paper coupons. EBT was viewed as a better way to deliver benefits. EBT eliminated waiting for delivery of food stamps and increased security and protection against loss and theft. Recipients also felt the system reduced the social stigma of receiving public assistance.

American Indian families living on reservations are a significant component of the low-income rural population in many of the Western and Plains States. ERS chose the University of Arizona's American Indian Studies Program (AISP) to administer small grants for research focusing on the food assistance and nutrition needs and problems of American Indians. AISP is the home of the only doctoral program in American Indian Studies in the country. The program maintains close ties to the tribal colleges, which have a special relationship to USDA by virtue of their land-grant status gained in 1994. The five projects conducted by tribal college faculty, students, and staff all addressed in some way the particular problems unique to life on a reservation and in remote rural areas—sparse populations with limited access to services, few opportunities for employment, lack of transportation, and roads made periodically impassible by weather.

- Bauer et al. focused on the problem of access to healthy food for reservation residents. They found limited availability of fresh fruits and vegetables, whole grain foods, and low-fat milk in the small trading posts and convenience stores that are often the only stores nearby on the extensive Navajo reservation.
- Davis et al. also found remoteness and lack of transportation to be a barrier to many Northern Cheyenne who are eligible for food assistance programs but are unable to access program benefits.
- Grant et al. conducted a survey of tribal elders, other community members, and service providers to document the changes in eating habits and food preparation among Gros Ventre and Assiniboine peoples since the establishment of the Fort Belknap Reservation and the introduction of Federal food assistance programs there.
- Henry et al. found higher-than-average levels of food insecurity among Oglala Lakota College

students, and a need for basic nutrition, food safety, and preventive health information targeting students and their parents.

- Phillips and Finn examined food choices and weight control practices among Cheyenne River Lakota households and also found potential for improvement in healthy eating habits through nutrition education and a need to create more opportunities for physical activity.

The ability to determine accurately the outcomes of food assistance and nutrition programs, both as measures of a program's success and of its unintended consequences, is among the policy-relevant issues that this Small Grants Program endeavors to address. One of the complicating factors for program impact research is that available data rarely include information to measure program impacts directly, as when individuals are observed before and after program participation, or when a control group is created by randomly selecting individuals to participate or not. Instead, eligible participants and nonparticipants are compared at a point in time. But if the characteristics of these groups differ, nonparticipants will not be a good control group. In fact, if programs are effectively targeted, people who are most at risk of food insecurity and hunger will be those most likely to enroll and participate in food assistance programs. Thus Food Stamp Program participants are found to be worse off than eligible nonparticipants in terms of food insecurity, medical needs, and other measures of well-being. The Food Stamp Program may make participants better off than they otherwise would be, but not better off than eligible nonparticipants as a group. This self-selection problem is common throughout behavioral research. As always, one should be cautious in interpreting results whenever this estimation problem is present. We hope to encourage creative solutions to this problem and other challenges posed by food assistance and nutrition policy research through the Small Grants Program.

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The Evolution, Cost, and Operation of the Private Food Assistance Network

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Grant awarded by: Institute for Research on Poverty,
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In the past 20 years, delivery of assistance to the poor has drastically changed. While the availability of cash assistance has decreased, the availability of food assistance has widened. The most substantial change in assistance available to the needy may be the emergence of food pantries as a source of free food to prepare at home. According to research conducted by Second Harvest, the national network of food banks, approximately 19 million individuals in the United States received an estimated 960.5 million pounds of food from food pantries in 1997. Still, many policymakers, academics, and participants in the private food assistance network know little about this network. This study fills the knowledge gap on the private food assistance network.

Researchers Daponte and Bade ask three basic questions about the private food assistance network: How did it evolve? How much does it cost? How does it operate? Their paper provides a detailed examination of domestic food policy since the 1930's. They show how agricultural and welfare policies contributed to

developing a supply of free food for the needy, and how private efforts, such as the formation of Second Harvest and its member food banks, facilitated the creation of a private food assistance network to distribute this food through about 34,000 food pantries. Their research also highlights policy changes in the Food Stamp Program that, they argue, contributed to the tremendous demand for free food in the early 1980's.

Daponte and Bade used 1997 data from Second Harvest to estimate private food assistance network costs. Including the cost of food, the value of volunteer labor hours, and other food pantry operating expenses, they estimate total network costs at approximately \$2.3 billion, or about one-twelfth the size of the Food Stamp Program.

Daponte and Bade address the operation of the private food assistance network through case studies of two metropolitan food banks. Their examination of the processes and policies surrounding the Connecticut Food Bank and the Greater Pittsburgh Community Food Bank highlights the heterogeneous nature of the private food assistance network. Although these two food banks operate in areas with approximately the same number of people living in households with incomes below the poverty level, the Greater Pittsburgh Community Food Bank distributes four times as much food as the Connecticut Food Bank. The authors assert that historical forces, personnel characteristics, and the political environments in these communities influence the amount of food their private food assistance networks can distribute to needy households.

The authors conclude with recommendations for making the public food safety net more effective, noting the value of private food assistance as a supplement to the current public food assistance system.

Independent Validation of the Core Food Security Module with Asians and Pacific Islanders

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Grant awarded by: Institute for Research on Poverty,
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Derrickson et al. conducted an independent validation of the national household food security measure—the Core Food Security Module (CFSM) and its categorical algorithm—with Asians and Pacific Islanders in Hawaii. They conducted their research in three parts: a qualitative study (n=61), a pilot stability study (n=61), and a study replicating methods used to develop the CFSM (n= 1664). Caucasians, Hawaiians and part-Hawaiians, Filipinos, and Samoans residing in Hawaii comprised the ethnic groups of focus.

The authors confirmed the face validity of the CFSM with Asians and Pacific Islanders in Hawaii. Their findings indicate that the CFSM yields valid and reliable scale measures among Asians and Pacific Islanders in Hawaii, with the possible exception of American Samoans (n=23). However, they suggest weak credibility, validity, and stability of the CFSM categorical algorithm: 27 percent of 111 households identified as food secure with one or more affirmative replies responded affirmatively to “unable to eat bal-

anced meals”; 50 percent of 64 households classified as experiencing moderate hunger responded affirmatively to “respondent hungry”; and only 62 percent were consistently classified in the same category over time.

Derrickson et al. developed and tested a “face valid” algorithm using three categories. They classified one affirmative response as “at risk of hunger.” Those who responded affirmatively to either the “respondent hungry” item or the “adults didn’t eat for a whole day” item were classified as “adult hungry,” and those who responded affirmatively to the “children hungry” item were classified as “child hungry.” Compared with the national algorithm, they found this algorithm resulted in a lower percentage classified as food secure (85 percent versus 78 percent), a greater percentage classified consistently as food insecure without hunger over time (57 percent versus 80 percent), and improved face and concurrent validity.

In general, the authors found that progressively deteriorating food security status, as experienced in Hawaii, resulted in decreased vegetable intake, increased reliance on Saimin (a popular dried noodle product), and increased use of alternative sources of food (food pantry use, eating with friends, fishing, etc.). Respondents most often perceived “balanced meals” as meals including “meat, starch, and a vegetable.” Derrickson et al. suggest caution when extending their results to ethnic groups not studied. In conclusion, they argue that their findings warrant further investigation of a shorter household food security measure and a reassessment of the CFSM categorical algorithm.

Recency of Migration and Legal Status Effects on Food Expenditures and Child Well-Being

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Grant awarded by: Institute for Research on Poverty,
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Recent years have witnessed growing debate about the integration prospects of U.S. immigrants. Widespread attention has focused on the costs of immigration, especially in cities that suffered from the onset of a deep recession in the late 1980's. Since that time, public concern about immigrants in the U.S. economy has led to welfare reform that limited public assistance to legal immigrants who, some studies reported, imposed costs to U.S. taxpayers through their use of educational and welfare services. Steady growth in undocumented migration has accompanied these changes. By the end of the 1980's, estimates suggested a gross inflow of 3.8 million persons from Mexico alone, which represented a substantial increase from the estimated 99,000 illegal Mexican immigrants of two decades earlier.

Recent research has accumulated considerable evidence about the challenges that confront individuals with uncertain legal status in U.S. society. Undocumented households tend to be poor, often living below established poverty thresholds. Like other immigrants, those without documents are especially likely to be medically underserved, uninsured, and

relying on emergency medical care, which increases the risks of preventable death. Many are ineligible or afraid to use public service programs designed to help poor families. Yet to date, primarily because of data limitations, we know little about the effects of illegal immigrant status on social behavior and well-being.

Kanaiaupuni and Donato address this gap with new data from a longitudinal, binational project (Health and Migration Survey) that surveys households in Mexico and in the United States. The data from this report come from a total of 262 households randomly chosen in two migrant destination neighborhoods, one in Houston and the other just north of San Diego. They used these data to examine the health effects of legal status, nativity, and recency of migration. The authors focus their analysis on child health and food security.

Kanaiaupuni and Donato use multivariate analysis to predict household food expenditures, breastfeeding behavior, children's current illness (serious conditions lasting at least 10 days), and mother-reported overall health status of children. Their sample includes 232 children under 7 years old, all but 40 of whom are U.S. citizens. They find children are much better off if both parents have legal documents—they have more food, higher household incomes, and better health status. Children with at least one undocumented parent suffer significant health costs—their chances of poor health are between three and eight times higher than children with legal parents. Their results also suggest that the advantages conferred by legal status are insensitive to time; net of legal status, children of recent immigrants are no healthier than those whose parents have lengthier U.S. exposure. The authors anticipate future research that will explore the mechanisms that contribute to these differences. To date, their findings suggest that children living in illegal immigrant households would benefit from targeted public health, food assistance, and nutrition policies.

Effects of Participation in the WIC Food Assistance Program on Children's Health and Development: Evidence from NLSY Children

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Grant awarded by: Institute for Research on Poverty,
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Established in 1972, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) has as its goal to increase the nutrition level and general well-being of children. The WIC program is currently one of the fastest growing Federal assistance programs. Program expenditures for WIC have almost tripled in the past two decades, from \$1.3 billion in 1980 to \$3.7 billion in 1997. Part of the popularity of WIC has been because it is one of the most directly targeted and interventionist of the Federal welfare programs. Available evaluations of this program testify to its value in reducing infant mortality, rates of low birthweight, and early child anemia. However, many of the WIC program evaluations were conducted prior to 1990, and though many were of high quality, they either relied on data from a single State, or compared results across selected States. More current research is needed to examine the potential benefits of WIC par-

ticipation among a nationally representative sample of women and their children.

Much of the previous work on the effects of WIC has focused on infant birthweight, nutrient intakes, presence of anemia, and propensity of mothers to breast-feed their infants. Fewer studies have estimated the effects of WIC participation on developmental infant measures, such as motor functioning, social functioning, and temperament, because of data limitations. The paucity of such studies is unfortunate because developmental outcomes are important predictors of later childhood social and behavioral development. Others have also identified as an important research goal the need for information about the effects of WIC on a wider range of child outcomes.

This study from the National Longitudinal Survey of Youth investigates the effects of WIC participation on birthweight, motor and social skills, and temperament for a national sample of children born between 1990 and 1996. The authors use sibling fixed-effect models to account for potential unmeasured heterogeneity among the mothers of children in this sample. Both their ordinary least squares and fixed-effect regression estimates confirm the positive effect of prenatal WIC participation on infant birthweight. They argue that these results, based on a national sample and accounting for fixed effects, offer stronger evidence of the program's positive effects than previous studies. WIC participation had no significant effects on the motor or social skill indices in their model. However, their fixed-effect estimates show that prenatal WIC participation is associated with lower scores on measures of difficult temperament. They find this result encouraging, suggesting that further research accounting for sibling effects may uncover evidence of more extensive benefits from WIC than previously documented.

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Immigration and the Food Stamp Program

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Grant awarded by: The Joint Center for Poverty Research, University of Chicago and Northwestern University

The growth of the welfare state in the past few decades coincided with the resurgence of large-scale immigration to the United States, adding a new and explosive question to the already contentious debate over immigration policy: Do immigrants “pay their way” in the welfare state? The available empirical evidence suggests that immigrant participation in cash benefit programs has risen dramatically since 1970. Congress reacted to this trend by enacting welfare reform legislation in 1996 that denied noncitizens many types of means-tested assistance, including food stamps.

Because of data constraints, much of the research analyzing immigrant participation in welfare programs investigates the extent to which immigrants enroll in cash benefit programs, with little attention paid to the trends and determinants of immigrant participation in other programs. This paper uses data from the 1970 to 1990 decennial censuses, the 1984-85 and 1990-91 Survey of Income and Program Participation, and the 1994-97 Current Population Surveys (CPS) to analyze trends in immigrant participation in the Food Stamp Program. The study describes the differential trends in immigrant and native participation in the Food Stamp Program, explores the factors that cause these differential trends, and examines the extent to which immigrant participation in public assistance programs affects the propensity of the second generation to receive food stamps.

The data suggest that the immigrant-native gap in participation rates in the Food Stamp Program widened until about 1995. Since 1995, there has been a decline in the number of both native and immigrant households that receive food stamps, but the decline has been steeper in the immigrant population. Borjas estimates a regression relating participation in the Food Stamp Program to immigrant status, period effects (for years 1994-97), and a vector of socioeconomic characteristics including age of household head and members, educational attainment of household head, and State of residence. His results show that a large part of the gap in participation rates between immigrant and native households can be attributed to differences in socioeconomic characteristics between the two groups, particularly educational attainment. Further, he argues that because declines in immigrant participation began before and continued concurrent with the enactment of welfare reforms restricting immigrant access to Food Stamps, his results are not consistent with the view that welfare reform caused the narrowing gap in participation rates. Using data from the CPS for 1995-97, Borjas finds that immigrant households had much higher entry rates into the Food Stamp Program, but roughly the same exit rates. He notes, however, that these figures may not be indicative of other periods because of welfare reform. In a third model using 1970 Census and pooled 1995-98 CPS data, Borjas finds a strong link between the use of cash benefits in the immigrant generation and the use of food stamps among the second generation, controlling for socioeconomic characteristics and 1970 educational attainment and wages.

Noting the data limitations to conducting such a study prior to 1994, Borjas concludes by looking forward to the increased capacity for understanding more about immigrant participation in food stamps and other assistance programs now that immigrant status along with program participation is collected annually as part of the CPS.

State Budgetary Behavior and the Fiscal Interactions Between Food Stamps, AFDC, Medicaid, and SSI

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Grant awarded by: The Joint Center for Poverty Research, University of Chicago and Northwestern University

The Federal Government has full control over the eligibility requirements and benefit structure for the Food Stamp Program, which is financed mainly with Federal funds. By contrast, the States have substantial powers to set the requirements for several cash assistance programs, and they must pay a substantial portion of the costs of these programs out of State funds. By controlling the rules for cash programs, States can influence the amount of all types of benefits each household receives—including food stamp benefits—and at the same time influence total State spending on welfare programs. In this study, Chernick develops a model to measure the extent to which States may be using their influence to shift more of the costs of welfare to the Federal Government by substituting food stamps for cash assistance. Depending on the preferences and budgeting rules used by States, funds released by substituting food stamps for cash assistance can be used to fund other welfare programs, provide tax relief, or to supplement other State and local spending.

Most recipients of Aid to Families with Dependent Children (AFDC)/Temporary Assistance for Needy Families (TANF), Supplemental Security Insurance or General Assistance are also eligible for food stamps. The link between cash assistance and food stamps is the way cash income is counted in determining food stamp benefits. Food stamp benefits are based on a household's "net income" after certain deductions, including a standard deduction and a deduction for some housing expenses. A household with no "net income" receives the maximum food stamp benefit. Each dollar of positive "net income" causes a reduction of 30 cents in food stamp benefits. In this sense, the State's contributions to cash assistance programs are implicitly "taxed" at a rate of 30 percent. The actual values of this implicit "tax" in each State vary for different values of the food stamp shelter deduction.

To estimate the extent of substitution of food stamps for cash assistance, Chernick used variation over time in the food stamp maximum benefit, the standard income deduction, the maximum excess shelter deduction, and variation among States in the average "tax" rate on cash benefits. He estimated the effect of these variables on AFDC benefits per recipient, total AFDC spending per capita, and Medicaid spending. Data are from the 48 contiguous States and the District of Columbia for the period 1983-95.

The interaction between the implicit "tax" and the excess shelter deduction results in actual implicit "tax" rates ranging from 30 percent to 45 percent. The average cost to States of raising the income of AFDC/TANF recipients by \$1.00 is a function of this "tax" rate and the proportions of the State's food stamp recipients receiving a shelter cost deduction and recipients above the shelter cap. The average cost of \$1.60 is quite high, and potentially serves as a strong deterrent to States contemplating raising their benefit levels.

Chernick's preliminary results suggest a significant and economically large effect of the food stamp "tax" on cash assistance. The estimated effects on cash benefits are large enough to imply that a decrease in the food stamp implicit "tax" on AFDC/TANF benefits would lead to both an increase in cash benefits and a decline in food stamp outlays. However, he emphasizes that even with the excess shelter deduction taken into account, there is not enough variation in the implicit "tax" that States face to be very confident of the results. Hence, at this stage of the research, the estimates must be viewed as highly tentative. The results also show an almost dollar-for-dollar offset of food stamps for cash resulting from increases in the food stamp maximum benefit and in the deductions from income.

Chernick also found evidence that funds saved by substituting food stamps for cash assistance were used to increase Medicaid spending on AFDC recipients, suggesting that at least some of the States' savings remain within their welfare budgets.

Chernick cautions against using the estimates for forecasting effects of changes in food stamp implicit "tax" rates outside of the sample range. Because the analysis is based on program rules set prior to welfare reform, it is not appropriate to apply the results to the post-welfare-reform environment. He is conducting further research using alternative instruments to try to improve the accuracy of the estimates.

Patterns of Food Stamp and WIC Participation and their Effects on the Health of Low-Income Children

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The primary purposes of this study are to examine: 1) the patterns of program participation in the Food Stamp Program (FSP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) during 1990-98, the time of welfare reform in Illinois and 2) the effects of WIC on young children's health outcomes. The authors use a unique linked data set based on population-level administrative data on all births, food stamp and WIC participation, and Medicaid eligibility and claims in Illinois between 1990 and 1998.

Lee et al. estimate that about 65 percent of all children born in Illinois during the study period and observed for 5 years (i.e., those born between 1990 and 1993) received either WIC, food stamps, or Aid to Families with Dependent Children (AFDC)/Temporary Assistance for Needy Families (TANF) by age 5. While this overall program participation rate changed very little across birth cohorts, the authors found a considerable shift in participation patterns across the three programs. As welfare reform was implemented in Illinois, both FSP and AFDC/TANF participation rates declined substantially, while WIC participation rates continued to increase. Further, most of the

decrease in food stamp participation was due to drops in entries to TANF.

The authors found some evidence to suggest that in recent years, families have been forgoing food stamps and turning more to WIC for essential food items for their young children. Increases in WIC funding alone do not explain the increase in WIC participation during the study period, as the rate of WIC funding increase declined while the rate of WIC participation increase continued to climb. They also found that spells of participation for both food stamps and WIC have become shorter in recent years, although shorter spells are more noticeable in the Food Stamp Program than in WIC.

Two findings relate to the effects of WIC on health services and outcomes in this study:

- Among children enrolled in Medicaid, WIC participants are significantly less likely to be diagnosed with health problems associated with inadequate nutrition (failure to thrive and nutritional deficiencies) than are nonparticipants. However, WIC participation had no effect on the probability of a child subsequently being diagnosed with anemia.
- Children in WIC are more likely to receive preventive health care services, measured as an initial well-child exam received through the Early Periodic Screening, Diagnosis, and Treatment Program (required of State Medicaid programs through Title XIX of the Social Security Act), than are those not in the WIC program.

Lee et al. conclude that their findings of positive WIC program effects combined with declining rates of participation in the Food Stamp program suggest a growing need for coordination among the assistance programs to best meet the food and nutritional needs of low-income families with young children.

Does the Minimum Wage Affect Welfare Caseloads?

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The degree to which minimum wages affect employment has been of interest to economists and policy-makers for many years. This interest has stemmed largely from a potential inconsistency between the intent of minimum wage laws and their theoretical effects. The goal of minimum wage policy is to increase an individual's ability to support a family and avoid welfare through full-time work. But the conventional neoclassical model of competitive labor markets predicts that higher wages come at the expense of lower employment levels. For minimum wages to improve total wage payments to low-skill workers, the demand curve for low-skilled labor must be relatively inelastic.

Most empirical research on minimum wages has focused on the relationship between minimum wage increases and employment rates, especially among teenagers. To date, there have been no studies that estimate the impact of minimum wage legislation on potential welfare recipients. Passage of the Personal Responsibility and Work Opportunity Reconciliation

Act of 1996 (PRWORA) intensifies the need to understand the relationship between work and welfare.

In this study, Page uses variation in minimum wages across States and over time to estimate the minimum wage effect on the size of State welfare caseloads. Data are for 1983 to 1996. Her model includes a number of explanatory variables, including the average production wage, gross State product, current and lagged unemployment rates by State, and a number of socioeconomic variables. Her empirical results indicate that, controlling for these factors, State, and time trends, the elasticity of the welfare caseload with respect to the minimum wage is between 0.1 and 0.2. In other words, a 35-percent increase in the minimum wage, like the increase recently implemented in California, could lead to a 3- to 7-percent increase in the size of the welfare caseload, all else remaining equal. These results are remarkably stable to the inclusion of additional variables that influence the evolution of caseloads over time, such as State-specific welfare reforms and changes in a State's political climate.

These results suggest that minimum wages, which are intended to improve the financial independence of low-skilled workers, appear to have an important side effect: the wage gains experienced by those who keep their jobs are accompanied by an increase in the welfare rolls. Page argues that policies like the Earned Income Tax Credit, which increases income through the tax code without depressing the demand for low-skill labor, are likely to be more effective than minimum wages in facilitating the transition from welfare to work.

The Consequences of Food Insecurity for Child Well-Being: An Analysis of Children's School Achievement, Psychological Well-Being, and Health

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The effect of food insecurity on child well-being has been the subject of much research in developing countries. With a few exceptions, research on food insecurity in the United States has focused on examining the causes of food insecurity, potential solutions, and, more recently, on assessing the incidence of food insecurity. Very little research has attempted to analyze

the effect of food insecurity on child well-being in the United States. Reid uses the 1997 Child Development Supplement to the Panel Study of Income Dynamics to examine the effects of food insecurity on school achievement, psychological well-being, and health of children.

The analyses provide evidence that food insecurity affects a child's school achievement and psychological well-being. They do not support a hypothesized negative impact of food insecurity on child health. Using children's assessment scores for the letter-word, application, passage comprehension, and calculation subtests of the Woodcock Johnson test as measures for school achievement, Reid finds that food insecurity depresses children's scores on the letter-word, passage comprehension, and calculation subtests. Similarly, using indices of external and internal behavior problems as measures of psychological well-being, her results show food insecurity increases the numbers of both external and internal behavior problems among children. However, Reid finds no effect of food insecurity on child health when measured by indicators of low height-for-age and low weight-for-age.

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Impact of Food Insecurity and Food Assistance Program Participation on Nutritional Risk Among the Elderly

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The purposes of this study are to examine: 1) the factors associated with the food insecurity of the elderly in the United States, 2) the consequences associated with food insecurity for the nutritional and health status of the elderly, and 3) the impact of food assistance programs among the nutritionally needy or food-insecure elderly on their nutritional and health status.

Frongillo and Lee used data from two cross-sectional surveys and one longitudinal study: the third National Health and Nutrition Examination Survey (1988-94), the Nutrition Survey of the Elderly in New York State (1994), and the Longitudinal Study of Aging (1984-1990). Their multiple linear and logistic regression analyses examined three sets of issues: (1) how health and physical functioning, as well as sociodemographic and economic factors, contributed to food insecurity in the elderly, (2) the extent to which food-insecure elderly were likely to have lower nutrient intake and skinfold thickness (a measure of body fat), poorer self-reported health status, and greater nutritional risk, and (3) whether food assistance participants differ from nonparticipants with respect to their nutrient intake, skinfold thickness, self-reported health status, nutritional risk, and rates of hospitalization and mortality; and how these differences compare between food-secure and food-insecure elderly.

The authors found that low levels of income and education, minority status, and food assistance program participation were significantly related to food insecurity. Functional impairments and lack of social support were significantly related to food insecurity among the elderly, even after controlling for those factors. Food insecurity was significantly associated with lower intakes of energy, protein, carbohydrates, saturated fat, niacin, Vitamins B-6, B-2, B-12, magnesium, iron, and zinc, as well as lower skinfold thickness. Also, food-insecure elderly were 2.3 times more likely to report fair or poor health status and had higher nutritional risk. The authors found poorer nutritional and health status among food-insecure or needy elderly than among food-secure elderly across all three data sets. Among food-insecure or needy elderly, food assistance participants had lower nutrient intakes and skinfold thickness, greater nutritional risk, poorer self-reported health status, and higher rates of hospitalization and mortality than nonparticipants. Among the food-secure elderly, however, participants and nonparticipants had similar nutritional and health status.

Food security in the elderly is associated not only with limited food affordability, availability, and accessibility, but also with inadequate food utilization. Food-insecure elderly are those with multiple problems that prevent them from achieving nutritional well-being, and lead them to seek food assistance programs. Food-insecure elderly have poorer nutritional and health status than do food-secure elderly.

The results of this study imply that both program efficacy and the need status of participants are playing roles in determining the impact of food assistance programs. The authors conclude that better theoretical and empirical knowledge of how the needs of this population are dynamically related to food assistance program delivery is essential to determining program impact and to make food assistance programs more effective and beneficial for needy elderly.

Influence of Food Stamps on the Nutritional Status of Inner-City Preschoolers from Hartford, CT, Who Receive WIC Benefits

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Grant awarded by: Department of Nutrition,
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The authors compared the food and nutrition situation of low-income preschoolers who received food stamps (N=59 FS) and those who did not (N=41 NFS). The 100 children participating in the study were recruited in the waiting areas of the two largest hospitals in Hartford, CT. The average age of the sampled children was 2.6 years. Fifty percent were female, and 84 percent were Hispanic. According to their caregivers, all had been enrolled in WIC at some point in the preceding year, and 95 percent were receiving WIC benefits at the time of the study. Groups were comparable in demographic characteristics, but the socioeconomic status of the FS group was lower than that of the NFS group.

The authors report that 74 percent of the 100 households in their sample were food insecure as measured by the Radimer/Cornell hunger scale. Among the FS group, the average monthly FS allotment was \$260 and represented 96 percent of monthly food expenditures. Logistic regression results showed a positive and statistically significant relationship between "How long food stamps last each month" and food security, even after controlling for monthly income, monthly food stamp allotment, household size, maternal education, and car availability.

Twenty-four-hour recall data indicate that FS preschoolers tended to have higher intakes of iron, zinc, and folate than NFS preschoolers (statistically significant at the 10 percent level). Among those with monthly household incomes of less than \$1,000, FS children had higher intake of fiber, riboflavin, niacin, pantothenic acid, and vitamins B-6 and D than NFS children. After controlling for energy intake and child's age, the positive association between FS and the intakes of niacin and vitamin B6 remained statistically significant. Low-income FS children also consumed more sodas and had a higher caffeine intake than NFS children.

The authors draw three conclusions from these results. First, food stamps provide children with higher intakes of essential nutrients. Second, the monthly duration of food stamps has an independent effect on the food security of food stamp households. Third, food shopping, budgeting and menu planning lessons may be important for food stamp recipients to maximize how long their food stamps last each month and to increase the nutritional value of foods purchased with them.

The authors gratefully acknowledge the study participants, the Hartford WIC providers, and the hospital staff who made their project possible.

Relationships Between Participation in Food Assistance Programs and Skeletal Health in Adult Women and Men

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Grant awarded by: Department of Nutrition,
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The relationship between osteoporosis and socioeconomic status has never been explored even though income and education-related lifestyle factors, such as diet and activity, are known to affect bone status. The primary objectives of this study are to determine if an association exists, and if bone density is higher among the poor who participate in food assistance programs.

The authors used the National Health and Nutrition Examination Survey (NHANES) III, 1988-94 for their

analysis. They limited their sample to nonpregnant premenopausal women aged 20 years and older; postmenopausal women; and men age 50 and older. Their outcome variables were bone mineral density (BMD, g/cm²) for the femoral neck and total body. They used multiple linear regression to assess relationships between participation in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and the Food Stamp Program, and bone density. They also included age, nutrient intakes, physical activity, oral contraceptive use, pregnancy history, income, education, and cultural factors indicated by language spoken at home and place of birth in the regression models.

The authors found that education was a positive predictor of BMD in all three groups—premenopausal women, postmenopausal women, and men—but only among whites. Participation in WIC was not related to BMD. Participation in the Food Stamp Program was associated with lower BMD in low-income Mexican American men and African American postmenopausal women. In premenopausal women, neither participation in the Food Stamp Program nor in WIC was associated with BMD. As in the Frongillo and Lee study, these results are likely to derive from the participants' reasons for entering the programs, rather than from program impacts. Further research is needed to address the potential impacts of length of participation in food assistance programs on BMD.

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Economic Downturns and Welfare Reform: An Exploratory County-Level Analysis

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Grant awarded by: Southern Rural Development
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Over the past 20 years, the U.S. economy has experienced remarkable growth. The combination of rising incomes, low and declining rates of unemployment, low interest rates, and rapid GDP growth have led to a booming stock market. Since new firms are being created and many old firms are expanding, job creation has been rapid. While the strong economy makes it easier for individuals to move off welfare, problems remain. First, not all areas of the United States are sharing equally in the growing economy. Second, certain welfare recipients, primarily younger and less-educated workers, face different and often more limited employment prospects than those of most workers. Third, past welfare recipients still face a variety of barriers to employment that are beyond their control.

In this study, the authors examine the relationship between recipients' characteristics, local economic conditions, and the decline in welfare program participation in Kentucky counties. They develop a statistical model to quantify the effect of an economic downturn on welfare caseloads, and to separate the effects of welfare recipients' characteristics from the effect of local economic conditions on changes in welfare case-

loads. Their dependent variable is a function of the reduction in county-level adult caseloads between June 1997 and January 1998.

County economic conditions affecting caseload reductions include the unemployment rate, recent job growth, and the number of retail sector jobs per adult welfare recipient. Other factors that may affect transitions into the workforce—and that are beyond the control of individuals—include availability of daycare for children and the presence of Family Resource Youth Service Centers. Whether a welfare recipient lives adjacent to a metro area should also affect the likelihood of transitions. The authors use five variables to capture individual characteristics of adult welfare recipients that affect transitions into the workforce, independent of local county conditions: age of the recipients, average number of children per recipient, previous amount of time on assistance, educational attainment, and previous work experience.

Their results show that an increase in the unemployment rate, a decrease in the availability of retail sector jobs, and rural status of a county each reduce the rate at which caseloads decline. The directions of these effects match theoretical expectations, and the effects are statistically significant. The proportion of recipients who are young, who have been on welfare rolls for longer periods, who have less prior work experience, and who have low levels of educational attainment all had negative effects on caseload decline, everything else being equal. The average education of recipients and the unemployment rate in a county were the most important factors affecting caseload reductions. Thus, the authors suggest that a combination of policies targeted at raising the education attainment of former recipients and stimulating job growth would be more effective than other policies in maintaining caseload reductions during a recession. Overall, they found recipients' individual characteristics "explained" 33 percent more of the variation in caseload reductions than did county-level economic conditions, even though more variables were included for economic conditions than for individual characteristics.

Assessing Food Insecurity in Kentucky

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The purpose of this study is to measure the nature and extent of food insecurity in Kentucky using a relatively inexpensive, reliable survey method. The authors used the University of Kentucky Phone Survey, a telephone survey of approximately 1260 Kentucky households in which each residential telephone line has as an equal chance of being contacted. The survey was conducted in March/April and July 1999. The authors modified food security questions from the National Health and Nutrition Examination Survey (NHANES) III for their survey. They asked respondents to provide answers that represented their own and their family's experience. Five questions were asked, including one question specifically concerning children in the household.

Survey respondents were representative of the demographics of the State, with a small over-representation of higher income and educated people due to phone access. To compensate for this, results were statistically weighted to account for the population without phones.

The authors classified households as food insecure when the respondents answered that they and their family sometimes or often did not have enough to eat. The results showed an estimated 6.5 percent of Kentucky households were food insecure, with 1.1 percent responding positively to "often not having enough to eat" and 5.4 percent responding to "sometimes not having enough to eat." Sixty-six percent of food insecure households indicated experiencing at least one day in the past 12 months without food or money to buy food. Of those indicating at least one day without food, 88.5 percent reported that this was due to not having enough money, food stamps, or WIC vouchers. Households with children had more than double the rate of food insecurity as households without children. The proportion of food-insecure minority households was 14.5 percent, almost triple the non-Hispanic white level of 5.2 percent.

The results of the Kentucky survey are not directly comparable to national survey data on food insecurity. However, Kurzynske and McGough found that food-insecure households in Kentucky have demographic characteristics similar to national samples: they are the poor, those with less formal education, families with children, minorities, and Food Stamp and WIC program participants. They conclude that the Kentucky Research Survey Center's telephone survey of Kentucky households is a relatively inexpensive, expedient method to monitor State food insecurity trends.

The Impact of Food Stamp Reforms on Elderly in Mississippi

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This study examined the nature and extent of hunger, food insecurity, and nutritional health issues in the elderly population of Mississippi. Lokken combined research and teaching to conduct the study, using a two-phase data collection process. In phase I, students conducted 62 face-to-face interviews with elderly individuals, collecting qualitative data which they used to develop the survey instrument for phase II of the study. The students were responsible for conducting telephone interviews during phase II of the study, resulting in 212 completed interviews.

Lokken and her students explored the following issues: (a) the adequacy of current food stamp allotments, (b) the effects of food stamp reforms on the elderly, (c) the degree of hunger and food insecurity and the patterns of eating among low-income elderly in Mississippi, and (d) the characteristics of the high-risk elderly. Qualitative findings from phase I indicate hunger and food insecurity in Mississippi. The major food issue affecting low-income elderly is the lack of sufficient money to purchase healthful foods, including fresh produce and meat. Other issues include lack of

access to transportation, poor overall health, and lack of nutrition education.

For the second phase, respondents were randomly selected from a purchased telephone list of 10,000 Mississippi residents who were 55 years of age or older and had household incomes of 150 percent or less of the poverty level for a family of two. Of the 212 respondents, 19.4 percent were currently receiving food assistance, 49.5 percent had less than a high school education, 47.9 percent were White and 49.3 percent were African American, and 77.4 percent were female.

Lokken tested several hypotheses in the second phase of the study. First, she expected to find that low-income elderly currently receiving food stamps would be made better off (that is have lower levels of hunger, food insecurity, and nutritional risk) than those not receiving food stamps. Her regression results showed that three factors have a significant impact on food insecurity: current food assistance receipt, ethnicity, and access to adequate cooking utensils. However, without controlling for factors affecting the individual's decision to participate in the Food Stamp Program, this result cannot be taken as an indicator of the effect of food stamp receipt on food insecurity.

A second set of hypotheses examined a number of possible predictors of food insecurity and hunger among low-income elderly in Mississippi. Lokken found a number of factors statistically related to experiencing food insecurity and hunger, including food stamp participation, ethnicity, level of education, recent changes in weight, poor health, eating fewer than two meals per day, often being without enough money to buy food, lacking adequate cooking utensils, and having tooth or mouth problems.

Food Assistance in East Alabama: Issues of Access and Need

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Grant awarded by: Southern Rural Development
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Food banks are a relatively recent private, nonprofit response to changes in the welfare system and the growing recognition that hunger is a real and relatively widespread problem. The growing reliance on private food assistance makes it increasingly important that information be gathered on how private food banks operate and on the needs of the client and potential client base for these institutions.

This study focuses on the East Alabama Food Bank (EAFB), which is part of the Second Harvest system of food banks. It serves several counties in east central Alabama and covers a mix of rural and urban communities. Through probability-in-proportion-to-size methods, Molnar et al. randomly selected six rural and six urban member agencies of the EAFB. They focused specifically on food pantries that distribute food for

home preparation and consumption. They developed a case study of these agencies through site visits and interviews with directors.

The authors also conducted face-to-face interviews of a sample of over 200 low-income community residents, including food bank users and nonusers. They collected data on demographic characteristics, economic characteristics, reasons for their need for food assistance, level of “food insecurity,” transportation needs and availability, history of food pantry use, perceived obstacles to food pantry use, and use of government programs such as food stamps or Temporary Assistance for Needy Families.

Molnar et al. examined their survey results for differences in urban and rural responses. A large portion of the total sample had children under 18 years old living at home. Many respondents were single mothers. A sizable subgroup of rural pantry users were elderly people. The majority of respondents had incomes less than \$15,000 per year, with rural residents somewhat more likely to be in the lowest income brackets.

Food pantry users reported a high level of satisfaction with the services received. Transportation to the pantry site was a problem at least sometimes for a quarter of pantry users both in rural and urban locations. The biggest obstacle for nonusers appeared to be lack of knowledge. A central finding of the study is the high degree of variability in the operation of the different food pantries within the EAFB system.

From Welfare Reliance to Wage Work: A Report on Food Security Among Louisiana's Rural Welfare Population

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Grant awarded by: Southern Rural Development Center, Mississippi State University

The purpose of this study is to advance knowledge and understanding of welfare reform and food assistance issues in the rural South through interviews with former and soon-to-be former welfare-reliant women in Louisiana. The authors are interested in the early progress, barriers to success, and needs of welfare-reliant families, with particular emphasis on issues such as the nontraditional mechanisms women use to establish food security and make ends meet for their families. Their paper is a preliminary report from a second round of qualitative interviews with a targeted group of rural Louisiana women.

From fall 1997 through spring 1998, the research team conducted the first round of qualitative interviews with 84 women in 7 rural Louisiana parishes at the sites where the women participated in GED classes or training programs. Beginning in late fall 1998, the team began visiting these women again; at the time of their initial report on the research, 52 women had been interviewed in the second round. Respondents were asked a wide variety of questions pertaining to their transition away from welfare reliance, including those on the short form of the USDA Food Security module. The authors summarize the quantitative responses the women gave to the food security items and to related

open-ended questions about food sources and strategies for feeding their families.

By the second interview, only 21 percent of the women were still participating in the welfare program through the Family Independence Temporary Assistance Program (FITAP), Louisiana's Temporary Assistance to Needy Families program. Approximately two-thirds of the women reported still receiving Medicaid benefits for themselves while just over 90 percent of the women reported that their children were still receiving Medicaid benefits. Most of the women (87 percent) still received food stamps for their household. The average monthly food stamp benefit of those still participating in the program was \$249. Few women indicated that church or community food banks or pantries were available in their communities. More than 86 percent of the women reported that their children ate free or reduced-price school breakfasts and lunches.

A majority of the women reported food security in their households. However, approximately 20 percent of the women reported concerns over their food security; these women may be experiencing anxiety over their food supply. The food insecurity of these women seemed to be attributable to their inability to serve "balanced meals" as often as they would like, rather than to an actual shortage of food. The provisioning strategies of these women were typical of strategies reported in the research literature: they reduced the size of meals, skipped meals, served meals they did not consider nutritionally balanced, and let their children eat first, taking what was left for the adults in the family.

For the women interviewed for this study, and for women like them around the Nation, the transition from welfare reliance to wage-based self sufficiency is just beginning. The authors suggest it will be important to continue monitoring such women and their families to ensure that food assistance programs like food stamps support their transition.

Assessing the Benefits and Problems Associated with the Use of Electronic Benefits Transfer for Food Stamps in Macon County, Alabama

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Grant awarded by: Southern Rural Development Center, Mississippi State University

Zekeri collected qualitative and survey data in Macon County, AL, to examine the benefits and problems associated with Electronic Benefits Transfer (EBT) from the recipients' point of view. Recipients were asked to identify benefits and problems with using EBT and whether EBT reduces benefit waste, fraud, and abuse. Of the 1,100 food stamp recipients in the county randomly selected to participate in the study, 857 responded to the questionnaire.

Zekeri found a majority of the sampled recipients (75.3 percent) felt that the EBT system is a "good" method of delivering Food Stamp Program benefits. Sixteen percent rated the system "fair." Only a few respondents rated EBT "poor." The responses to other questions indicated that large majorities of Macon County food stamp recipients prefer EBT to coupons. Most respondents (74 percent) found the EBT card easier and better to use than paper coupons.

Approximately 63 percent said the system reduces the stigma associated with using food stamps in grocery stores.

Most recipients (87 percent) believe the EBT system is a safe method of delivering food stamp benefits. Seventy-nine percent felt that EBT is more reliable and secure than coupons. According to recipients, then, the EBT system may reduce costs of issuing and redeeming program benefits by reducing losses from fraud and abuse.

Overall, food stamp recipients in Macon County, AL, who have experienced both the EBT and coupon systems overwhelmingly prefer EBT. Reasons reported for preferring EBT included general convenience, increased security against loss or theft, and reduced embarrassment or stigma.

The majority of food stamp recipients surveyed saw no major problems with the EBT system. Nearly three-fourths of all respondents indicated that there were no problems with the system. Specific issues respondents rated as "not a problem" included using the card to buy food (84 percent), keeping the Personal Identification Number (PIN) secret, knowing your Food Stamp account balance (79 percent), taking good care of the card (75 percent), getting help from store cashiers (75 percent), remembering your Personal Identification Number or changing it (67 percent), replacing lost cards (66 percent), and using the card outside of Alabama (61 percent).

The American Indian Studies Program University of Arizona

The Availability and Variety of Healthful Foods at Convenience Stores and Trading Posts on the Navajo Reservation

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Grant awarded by: The American Indian Studies
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A basic assumption of health and nutrition education programs is that the foods being promoted will be available. On the Navajo reservation, where the nearest source for groceries may be a trading post or convenience store, this assumption may not be valid. To test this assumption, Diné Tribal College staff and students, in partnership with the University of New Mexico, developed and administered a 69-item food inventory at rural trading posts and convenience stores

across the three States encompassing the Navajo reservation. The food inventory included only “healthful foods” such as fruits, vegetables, low-fat dairy products, and lean meat. Interviewers asked store managers open-ended questions about the stores’ primary customers and foods most commonly sold. The sample included a total of 48 stores, with one large grocery store for comparison. Individual foods were combined into broad food categories.

The authors used analysis of variance to determine differences in food categories by State, type, and distance of store from a major grocery store. Seventy-five percent of store owners reported that local people were their primary customers, and 53 percent reported that “junk food” was the food most commonly sold, while 19 percent reported staples as the foods most commonly sold. All but five stores had at least one fresh fruit or vegetable available; the mean number of these items available was nine. Only 4 stores had 1-percent milk, and only 6 stores had skim milk available. Ninety percent of the stores accepted WIC stamps, and these stores had whole grain cereals, fruit juices, and low-fat string cheese available. There were no differences in food availability by type of store or distance from a major grocery store. However, the number of fresh fruits and vegetables and total variety differed significantly across States. Their results show that the number of healthful foods available throughout the reservation is limited, and that store owners would stock more of such foods if they were demanded.

The Impact of Welfare Reform on Food Assistance Programs on American Indian Reservations: The Northern Cheyenne Case Study

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The goal of this research project was to identify and evaluate the impacts of recent welfare reforms, particularly reforms related to food assistance programs, in the Northern Cheyenne Nation. The report documents the recent experiences of food assistance programs and participants, and clarifies how recent welfare reforms affect food assistance and other service needs of Northern Cheyenne residents. Davis et al. present historical, demographic, and cultural information about the Northern Cheyenne nation that is useful for understanding current conditions as well as the significance of food assistance programs. They report on the nature of the current programs, the views of the program directors, and client experiences with the food programs. The report concludes with an analysis of the authors' findings and a discussion of policy implications.

The analyses reveal impacts of food assistance program changes on Northern Cheyenne cultural and social life as well as on the range of formal and informal services and resources—the local safety net—to which the economically vulnerable Cheyenne have access. Cultural impacts can be seen in the struggle of tribal members to uphold one of their central values—sharing resources with both family and nonfamily to ensure survival—which, like many other American Indian groups, the Northern Cheyenne place as a high

priority. Prevalence of the value placed on sharing and caring for others is evident in the low to nonexistent level of homelessness on this reservation. It is also evident in the everyday actions of individuals who share food with those in need, regardless of how much or how little they have. However, as the numbers needing food assistance increase, the ability of families and the community to care for them is strained.

The authors show that, despite the significance of food assistance programs for increasing well-being, there are important obstacles for individuals attempting to access food assistance. Poor families living in remote reservation areas must make and get to appointments with program personnel in order to receive their benefits. Lack of transportation or of gas money for others to drive them, and a lack of telephones are the most frequently cited problems. The considerable paperwork required of food stamp and other program recipients, and the complexity of the system are often difficult to navigate for many individuals who are trying to establish and maintain eligibility for benefits. This is particularly the case for those who lack high school diplomas or whose first language is Cheyenne. Other common complaints include the lack of jobs and workplaces on or near the reservation where clients may complete required work hours, and inadequate childcare. The frequency of such problems indicates the declining ability of local programs to serve their clients' needs adequately, despite the programs' best efforts. A service gap leads to clients' discouragement and loss of confidence when they fall through the safety net.

Interviews with program directors and clients show that both groups understand the problems and gaps in services. However, constrained by regulations and limited resources, programs are often unable to make the changes needed to solve these problems. Such constraints leave many clients feeling frustrated and perceiving that programs are insensitive to their needs.

Because the Cheyenne are relatively representative of tribal populations in the Plains and elsewhere, this study presents useful insights about the impact of welfare reform on food assistance programs and other elements of the social safety net operating in many reservation communities. The study's findings indicate the importance of examining the intricacies of clients' experiences with food assistance programs, the complexity of food programs, and the relationship of food programs to the whole range of formal and informal resources on which the Northern Cheyenne rely.

Federal Food Programs, Traditional Foods and the Gros Ventre and Assiniboiné Nations of the Fort Belknap Indian Reservation

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Grant awarded by: The American Indian Studies
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Eating habits and food preparation among the Gros Ventre and Assiniboiné peoples have changed dramatically since the establishment of the Fort Belknap Indian Reservation and the introduction of Federal food distribution programs on the reservation. This project documented such changes from the perspective of tribal elders, community members, and associated service providers. Data were collected from both men and women over the age of 50 through a survey designed by Fort Belknap College's principal investigator, a consultant, and three student researchers who were graduates of the college. The survey was administered in and around Fort Belknap Indian Reservation communities during the summer of 1999.

The story that emerges from the study is one of change and loss. Primary food sources have changed dramatically. The results reflect change from traditional

modes of obtaining food (hunting, fishing, and gathering) to reliance on store-bought food. Small gardens, which were prominently featured as a food source historically, have greatly diminished in present times. The use of some dairy products (milk and butter) has varied little over time, but cheese and cottage cheese make up a larger portion of the dairy products consumed today. Survey results also indicated a majority of elders do not receive any type of assistance from the food programs available on Fort Belknap Reservation. Surplus commodities are distributed on the reservation, but not widely.

Traditional food preparation has been replaced by consumption of fast foods, and the traditional Indian diet of buffalo, deer, antelope and elk meats, wild turnip, onion, and carrot, and choke cherries, June berries, service berries, Morgan grapes and Indian peanuts has all but disappeared. Use of traditional foods is now limited to reservation-wide cultural events. The knowledge and skills of tribal elders concerning traditional hunting sites, traditional food preparation, and the use of traditional herbs and plants for healing purposes has not passed to the next generation and is at risk of being lost and disappearing altogether from reservation life and culture.

The study findings suggest that opportunities may exist for less conventional food assistance and nutrition education programs to support the development of traditional food resources on the reservation. Such programs might promote improved nutrition and increased self-sufficiency for the reservation community while at the same time encouraging the preservation of the tribes' productive natural resources, heritage, and culture.

Assessment of Food Concerns, Nutrition Knowledge, and Food Security of Oglala Lakota College Students on the Pine Ridge Reservation

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Grant awarded by: The American Indian Studies
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Students from five educational sites on the Pine Ridge Indian Reservation (in South Dakota) were surveyed: Pine Ridge College Center, Pine Ridge; Wounded Knee College Center, Manderson; Pahin Sinte College Center, Porcupine; LaCreek College Center, Martin; and East Wakpamni College Center, Batesland. The interviews, conducted in 1999, included general demographic background questions, multipart interest/needs questions, questions related to current food understanding, and questions related to food adequacy.

Overall, the survey results show Oglala Lakota College (OLC) students are five times more likely to be food insecure with hunger than the national average of 3.5 percent for all households reported by the Economic Research Service for 1998. The authors suggest further research to determine if this level of food insecurity affects academic performance. Students from the Wounded Knee College Center were eight times more likely to be food insecure than the national average.

At the Pine Ridge College Center, 30 percent of the students stated that they consumed the same thing for several days in a row because they had only a few different kinds of food on hand and no money to buy more. This result was surprising because the Pine Ridge College Center houses the largest supermarket on the reservation, and is located within 2 miles of two other grocery stores.

“Feeding self and family” was the primary concern of OLC students, with employment and housing being tied for second place for needs/interests. Employment was the greatest financial need, with “feeding self and family” second. Parents were the number one source of information for feeding students and family; second was a dietitian or nutritionist. Less than 10 percent of OLC students utilized USDA extension programs for information. Parents were ranked the highest (70 percent) in terms of trustworthiness of the information provided.

Thirty-three percent of OLC students surveyed could not pick out which package of chicken was the best buy. Over 12 percent of OLC students surveyed did not understand why hot foods should be kept hot and cold foods cold. Over 86 percent did not know how many servings of bread, cereal, rice, and pasta are recommended for adults, teens, and children daily. Sixteen percent stated incorrectly that physical activity did not count unless you worked up a sweat. Also, 12.4 percent did not know that some form of physical activity is needed at least four times per week for overall good health.

The authors suggest that the new extension education program in holistic human health at OLC, with assistance from other land-grant universities, could coordinate educational activities to improve OLC students’ knowledge of nutrition and health issues identified in the survey.

Dietary Choices and Weight Control Practices Among Cheyenne River Lakota Households

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This study describes the prevailing dietary choices and weight control practices among Cheyenne River Lakota households. The authors surveyed a random sample of Cheyenne River Lakota households during the summer of 1999 using a standardized questionnaire and in-person interviews. Follow-up interviews on a random subsample of households helped to verify the questionnaire and sought further information on weight control program preferences.

A total of 216 households participated in the survey. The most frequently consumed high-fat foods included butter/margarine (35 percent > 5 times per week), potato and corn chips (29 percent > 5 times per week), cheese (27 percent > 5 times per week), and hot dogs, bologna, and luncheon meats (26 percent > 5 times per week). Few reported consuming fruits (11 percent > 5 times per week), or vegetables (18 percent > 5 times per week) on a daily basis. Sweetened beverages were consumed frequently, including regular pop (43 percent > 5 times per week) and Kool-Aid® or punch (39 percent > 5 times per week).

Most respondents engaged in mild exercise for at least 30 minutes 3 times per week or more (78 percent). Weight loss or maintenance techniques used frequently included increasing activity levels (59 percent), eating more fruits and vegetables (76 percent), eating less fatty foods (65 percent), eating less sweets (74 percent), and reducing the amount of total food consumed (70 percent). Most individuals (64 percent) were favorable to joining a program that promotes healthy diet and exercise. Major barriers to exercise included lack of time (54 percent) and medical reasons or disabilities (42 percent). Barriers to eating healthful foods included higher costs (50 percent) and unpopularity with the family (40 percent). The authors conclude that nutrition and weight control programs that address these reported barriers and provide incentives for increased participation are needed.