

Welcome to the Food Research & Action Center's winter issue of *ResearchWire*. This quarterly newsletter focuses on the latest research, reports, and resources from government agencies, academic researchers, think tanks, and elsewhere at the intersection of food insecurity, poverty, the federal nutrition programs, and health.



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## IN FOCUS

### Initiatives to Make SNAP Benefits More Adequate Significantly Improve Food Security, Nutrition, and Health

The Supplemental Nutrition Assistance Program (SNAP, formerly "food stamps") is the largest nutrition assistance program administered by the U.S. Department of Agriculture. SNAP has a critical role in reducing food insecurity and in improving health, nutrition, and well-being. However, inadequate benefits — SNAP's key shortcoming — severely limit the program's ability to do even more to improve the food security, health, and well-being of low-income Americans.

A new paper developed by FRAC describes the inadequacy of SNAP benefits, reviews the body of research showing positive effects from more adequate SNAP benefits, and concludes with some of the key policy solutions that can improve benefit adequacy. Highlights from, and a link to, the research paper are provided below.

#### SNAP Benefits are Inadequate

The monthly benefits provided by SNAP enhance the food-purchasing power of eligible low-income individuals and families. However, as described by many studies, including one by the Institute of Medicine, the greatest shortcoming of SNAP is that benefits for most households are not enough to get through the entire month without hunger or being forced to sacrifice nutrition quality.<sup>1,2,3,4,5</sup> This limitation persists even in the face of overwhelming evidence on the gains from more adequate monthly SNAP benefits.

#### More Adequate SNAP Benefits Improve Food Security, Nutrition, and Health

The research is clear: more adequate SNAP benefits improve participant food security, economic security, nutrition, health, and performance in school. More specifically, each time Congress has one way or another improved the adequacy of SNAP benefits for some or all beneficiaries, follow-up research has found positive effects for affected program participants.

## IN FOCUS

- The significant, temporary increase in monthly SNAP benefits from the American Recovery and Reinvestment Act (ARRA) of 2009 helped reduce food insecurity by 2.2 percentage points and reduce very low food security by 2.0 percentage points among low-income households between December 2008 (pre-ARRA) and December 2009 (about eight months post-ARRA).<sup>6</sup>
- In another of the many studies showing positive effects of the ARRA boost, inpatient Medicaid cost growth significantly declined in Massachusetts after the ARRA increase, especially among people with chronic illnesses.<sup>7</sup> The cost declines were driven by reduced hospital admissions and, to a lesser extent, reduced length of stay per admission.
- The Summer Electronic Benefit Transfer for Children demonstration project provided low-income



households with children \$60 per month in SNAP-like benefits. Among families receiving SNAP before the project started, food insecurity among children was reduced by one-fourth.<sup>8</sup> The demonstration project also had favorable impacts on multiple nutrition outcomes among participating children.

- Federally funded financial incentives to purchase fruits, vegetables, or other nutritious foods, which boost the overall purchasing

power of SNAP benefits, have improved food security and dietary intake among SNAP participants.<sup>9,10</sup>

### Policy Solutions Exist to Improve the Adequacy of SNAP Benefits

To make SNAP a fully effective antidote to food insecurity and a far more effective boost to nutrition, health, and child development and learning, the following actions to improve SNAP benefit adequacy should be considered:

- replace the Thrifty Food Plan with the more appropriate Low-Cost Food Plan as the basis for SNAP benefits;
- eliminate the cap on the SNAP Excess Shelter Deduction;
- raise the minimum SNAP benefit; and
- authorize a SNAP Standard Excess Medical Deduction for persons who are elderly or have disabilities.

Read the full paper [here](#).



# Research Highlights

## Federal Nutrition Programs

### [Association between Supplemental Nutrition Assistance Program participation and cost-related medication nonadherence among older adults with diabetes](#)

Older adults with diabetes who were participating in the Supplemental Nutrition Assistance Program (SNAP) were less likely to forgo medication due to cost, according to research published in *JAMA Internal Medicine*. Researchers compared cost-related medication nonadherence between SNAP participants and eligible nonparticipants using national data on 1,302 low-income adults 65 years of age and older with diabetes or borderline diabetes who had been prescribed medications and had some out-of-pocket medical expenses in the past year. Cost-related medication nonadherence was defined as having delayed refilling a prescription, taken less medication, or skipped medication to save money. According to the study's authors, the "findings suggest that participation in SNAP may help improve adherence to treatment

regimens among older adults with diabetes. Connecting these individuals with SNAP may be a feasible strategy for improving health outcomes."

SNAP participants were 5.3 percentage points less likely to engage in cost-related medication nonadherence than eligible nonparticipants, even after accounting for factors such as demographics, health characteristics, and prescription drug coverage. Comparable reductions in nonadherence were observed in subgroup analyses among SNAP participants with prescription drug coverage and with less than \$500 in out-of-pocket medical expenses. However, such reductions were not observed for SNAP participants without prescription drug coverage or with higher medical costs, perhaps because the SNAP benefit was insufficient for these subgroups.

### [SNAP benefits and childhood asthma](#)

A higher SNAP benefit amount was associated with a reduction in asthma-related emergency room (ER) visits for children, based on a study in *Social Science & Medicine* that explored the



"breathe or eat" tradeoff. The study relied on SNAP administrative and Medicaid claims data from Missouri in examining the impact of SNAP benefit timing and amount on the probability that a child would visit the ER for an asthma-related condition. While the study did not find a strong link between SNAP benefit timing and asthma-related ER visits, there was evidence for an inverse relationship between SNAP benefit size and asthma-related ER visits. Meaning, as monthly SNAP benefits increase, there is a reduction in the likelihood that a child will be treated in the ER for an asthma-related condition. More research is needed to better understand the impact of SNAP, especially benefit timing, on health care utilization.



### [WIC recipients in the retail environment: a qualitative study assessing customer experience and satisfaction](#)

A study in the *Journal of the Academy of Nutrition and Dietetics* finds that improvements are needed to the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) retail experience in order to retain participants and promote full utilization of program benefits. Researchers explored

the retail experience of 55 WIC participants in four states through semistructured interviews and focus groups. Participants reported that they had difficulty in identifying WIC-approved foods and experienced stigma during checkout, which could explain program attrition and underutilization of benefits. In addition, participants reported challenges using the cash value voucher for fruits and vegetables, and decision fatigue and confusion when selecting from a narrow set of eligible items. A number of suggestions were offered to improve the retail experience, including better signage of WIC-approved foods and training of checkout staff. According to the authors, “dissatisfaction with the retail experience may lead to the underutilization of WIC benefits or program exit,” and strategies to improve the experience need to be tested to ensure they “are effective and do not contribute to stigma.”

### [The impact of 1 year of healthier school food policies on students' diets during and outside of the school day](#)

More students selected a school meal after the implementation of improved school meal and competitive food nutrition standards, according to a study in the *Journal of the Academy of Nutrition and Dietetics*. In the fall of



2012, Massachusetts implemented the new federal school meal nutrition standards, as well as statewide competitive food nutrition standards that were “nearly identical” to the new federal competitive food requirements (that went into effect in 2014). This study examined the impact of these standards on school meal participation, competitive food selection, and dietary outcomes among 160 students in 12 middle and high schools.

The number of students choosing a school meal (versus no school meal) increased by 13.6 percent after the new standards were implemented. While competitive food purchases were unchanged, there was a decrease in the number of unhealthy afterschool snacks consumed after implementation. That means students did not compensate for the lack of unhealthy snacks at school by increasing the consumption of unhealthy snacks outside of school. Students also consumed about 22 fewer grams of sugar daily, on average, after the nutrition standards went into effect. There were no significant differences in daily or afterschool intake of energy, total fat, saturated fat, fiber, or sodium. The authors conclude, “with the reduction in the number of unhealthy school snacks, significantly more students selected school meals ... This provides important new evidence

that both national school meal and snack policies may improve daily diet quality and should remain strong.”

### [Implementing school-based policies to prevent obesity: cluster randomized trial](#)

In a *Preventive Medicine* study, students in middle schools implementing strong

nutrition policies had healthier weight trajectories than their peers in schools with only physical activity policies or with no policies. Twelve middle schools were randomly assigned to one of four groups: 1) nutrition policies, 2) physical activity policies, 3) nutrition and physical activity policies, and 4) no policies. The first three groups received technical assistance and support to implement strong nutrition and/or physical activity wellness policies. The nutrition policy groups focused on, for example, complying with school meal nutrition standards, limiting sugar-sweetened beverages in the school, and limiting the use of food as a reward. The students in schools receiving nutrition policy support (with or without physical activity) had less than a 1 percent increase in body mass index (BMI) percentile over three years, while those students in schools receiving no nutrition policy support had a 3 to 4 percent increase in BMI percentile during the same period. The nutrition policies also were linked to reductions in unhealthy food, sugar-sweetened beverage, and fast food consumption. The study provides evidence that school-based nutrition policies can limit BMI increases among middle school students.



### Special Populations

#### Veterans and food insecurity

According to an IMPAQ International issue brief, 6.5 percent of veterans are food insecure, and only 30.3 percent of food-insecure veterans and 41.3 percent of low-income veterans live in households participating in the Supplemental Nutrition Assistance Program (SNAP). Food insecurity rates, SNAP participation, and risk factors for food insecurity were examined using national data from 2011 to 2017 on more than 25,000 veterans 21 years of age and older who were not currently on active military duty.

In terms of risk factors, food insecurity declined with age. Nearly 10 percent of veterans under 45 years of age were food insecure, compared to 4.3 percent and 2.3 percent of those 45 to 64 years, and 65 to 74 years, and 75 years and older, respectively. Similarly, food insecurity rates varied by service era, with higher rates observed in those serving in the current era (8.4 percent) or Gulf War (9.2 percent) compared to those who served in the Vietnam War (5.7 percent) or Korean War (2.7 percent). Female, less educated, non-White, and unmarried veterans also were more likely to be food insecure, as were veterans experiencing serious mental illness or reporting fair/poor health. For instance, veterans experiencing serious mental health illness had food insecurity rates that were 10 times

higher than veterans who did not report such issues (35.2 percent versus 3.4 percent).

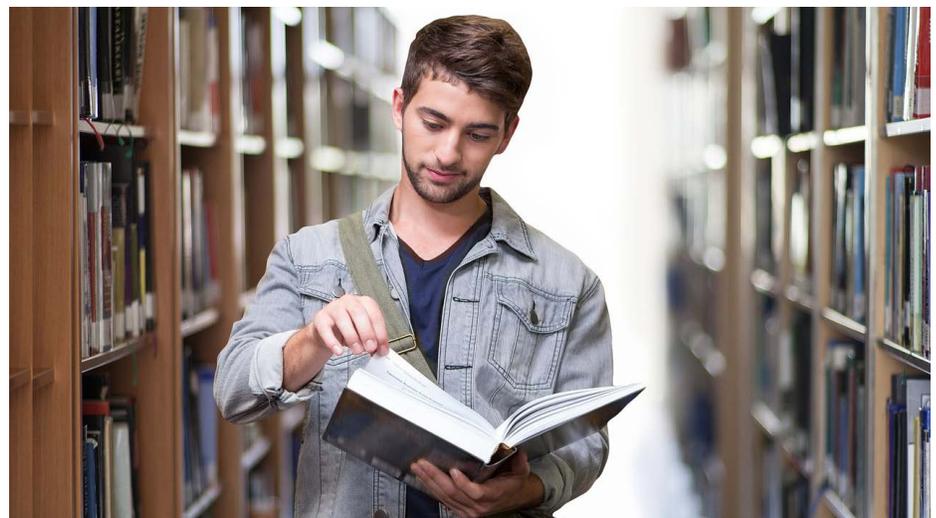
While the overall food insecurity rate for veterans was lower than the rate for the general U.S. population, these estimates “mask the relatively high rates of food insecurity observed among specific subpopulations of veterans and [underscore] the importance of accounting for specific risk factors when serving them.” The authors recommend screening for food insecurity during primary care and behavioral health visits, and connecting food-insecure and low-income veterans to SNAP and other social services that can support health and well-being.

#### [“It’s a feeling that one is not worth food”: a qualitative study exploring the psychosocial experience and academic consequences of food insecurity among college students](#)

New research in the *Journal of the Academy of Nutrition and Dietetics* adds to the growing evidence that struggling with food insecurity in college contributes to poor physical and mental health and interferes with academic success. Researchers

interviewed 25 undergraduate students (who were recruited from the UC Berkeley Food Pantry) to explore how food insecurity impacts psychosocial health and academic performance.

Nine main themes emerged during the in-depth interviews: 1) the stress of food insecurity interfering with daily life and academic performance; 2) the fear of disappointing or worrying your family if you admit you are struggling; 3) being jealous of or resenting students in more stable food and financial situations; 4) finding it difficult to develop meaningful social relationships because you cannot afford to eat out with friends; 5) feeling sad or depressed about being food insecure; 6) feeling hopeless or undeserving of assistance; 7) being frustrated or angry with the academic institution for not providing enough support; 8) being tired or hungry, or having to work more hours, which makes it difficult to focus on academics; and 9) the mental trade-off between thinking about food and studying. The researchers call for institutional and systemic solutions that alleviate food insecurity and promote holistic well-being in the higher education setting.



### [Food insufficiency and children with special healthcare needs](#)

Children with more complex special healthcare needs (SHCN) are at greater risk of food insufficiency, but medical home access can provide some protection, based on new findings in *Public Health*. In a national sample of 48,709 children, researchers examined the prevalence of household food insufficiency by SHCN status and complexity. (Food insufficiency is commonly defined as inadequate food intake due to lack of money or resources.) Rates of household food insufficiency were 5.8 percent among children with no SHCN, 6.2 percent among children with less complex SHCN (i.e., an SHCN managed solely by prescription medication), and 13.3 percent among children with more complex SHCN. After accounting for sociodemographic factors, children with more complex SHCN had nearly twice the odds of food insufficiency compared to children with no SHCN or less complex SHCN. Further analyses revealed that access to a medical home model of care (e.g., having adequate care, referrals, and care coordination) provided some protection from food insufficiency for children with more complex SHCN. Food insufficiency risk was cut in half if these children had medical home access. The researchers recommend expanding the medical home for children with



SHCN and referring at-risk children identified in health care settings to food insecurity interventions, such as the Supplemental Nutrition Assistance Program and the Special Supplemental Nutrition Program for Women, Infants, and Children.

### [Dietary Quality and Food Insecurity](#)

#### [Relationship of food insecurity to women's dietary outcomes: a systematic review](#)

According to a new literature review in *Nutrition Reviews* focused on women's dietary outcomes, "food insecurity negatively affects the entire diet — not only intake of fruits and vegetables or protein but also intake of all major food groups, macronutrients, and micronutrients." The review included studies set in the U.S. and Canada that were completed between 1995 and 2016. Based on the 24 studies that met inclusion criteria, food-insecure women consume less dairy, total fruit and vegetables, calcium, magnesium, and vitamin A than food-secure women, which is consistent with prior

literature reviews. But unlike prior reviews, this more recent review found that food-insecure women also consume fewer total grains and meats/meat alternatives, and less protein, total fat, iron, vitamin C, and folate. The authors note that their findings on folate and iron are particularly troubling given the importance of these nutrients to women during conception, pregnancy, and breastfeeding. The authors reinforce the importance of food insecurity screening and the federal nutrition programs (specifically the Supplemental Nutrition Assistance Program and the Special Supplemental Nutrition Program for Women, Infants, and Children) in improving the food security and dietary quality of low-income women, especially low-income women who are pregnant or may become pregnant.

#### [The association between food insecurity and diet quality varies by race-ethnicity: an analysis of National Health and Nutrition Examination 2011-2014 results](#)

Food insecurity was associated with lower dietary quality among non-

Hispanic Whites and Asians, but not among non-Hispanic Blacks or Hispanics, in a study published in the *Journal of the Academy of Nutrition and Dietetics*. In a national sample of 4,393 nonelderly adults, researchers examined the association between food insecurity and dietary quality by race-ethnicity and gender. After accounting for sociodemographic and health characteristics, food insecurity was associated with lower dietary quality among the full sample. (Dietary quality scores were 54.6 for food-secure adults and 52.4 for food-insecure adults, out of a maximum score of 100.) However, additional analyses revealed that this association varied by race-ethnicity.

Among non-Hispanic Whites, food insecurity and marginal food security were both associated with lower dietary quality. Among Asians and “other” races/ethnicities, food insecurity also was associated with lower dietary quality. (The “other” category included American Indian or Alaska Natives, Native Hawaiian or Other Pacific Islanders, and multiracial adults.) Among non-Hispanic Blacks or Hispanics, food insecurity was linked to lower dietary quality, but the association was not statistically significant. This lack of significance could be a result of methodological issues (e.g., not accounting for acculturation in the case of Hispanics), or barriers to healthy eating that “overshadow” the association between food insecurity and diet quality (e.g., poor food access and limited household resources in the case of non-Hispanic Blacks). Finally, the study found no association between food insecurity and dietary quality by gender. Overall, the findings reinforce the need for more food insecurity research that

focuses on understudied racial-ethnic groups, including Asians, American Indian or Alaska Natives, Native Hawaiian or Other Pacific Islanders, and multiracial adults.

### Child Development and Behavior

#### [Household food insecurity in early adolescence and risk of subsequent behavior problems: does a connection persist over time?](#)

A recent *Journal of Pediatric Psychology* study linked household food insecurity in early adolescence to behavioral problems that persisted throughout adolescence. The study examined household food insecurity status and behavioral problems over a six-year period in a sample of low-income, urban families. Household food insecurity in early adolescence was significantly associated with more internalizing behaviors and total behavior problems, and these associations persisted over the six-year period. (Internalizing behaviors include, for example, being withdrawn, depressed, or anxious.) The authors conclude that pediatricians and mental health care providers should routinely screen for food insecurity using validated tools, become familiar with federal nutrition programs, and connect at-risk patients to these programs.



#### [Transitional dynamics of household food insecurity impact children's developmental outcomes](#)

Authors of a *Journal of Developmental & Behavioral Pediatrics* study concluded that deepening food insecurity and persistent marginal food insecurity “may have potentially the most harmful effects on children’s developmental outcomes,” when compared to other types of transitions into and out of food insecurity. In a national sample of 11,958 children, researchers explored how transitions into and out of food insecurity, at varying depths, between kindergarten and first grade impact children’s developmental outcomes. Nine transitions were explored in statistical models that accounted for a variety of child- and school-level characteristics, with five transitions demonstrating detrimental impacts.

Deepening food insecurity (i.e., moving from marginally food insecure to food insecure) had a negative impact on self-control, math scores, and working memory. Remitting marginal food insecurity (i.e., moving from marginally food insecure to food secure) and persisting marginal food insecurity (i.e., staying marginally food insecure) both had detrimental impacts on self-control and interpersonal skills, but the effects were more pronounced for persisting marginal food insecurity. In addition, emerging food insecurity (i.e., moving from food secure to food insecure) and persisting food insecurity (i.e., staying food insecure) negatively impacted externalizing behaviors. Overall, the findings indicate that food insecurity, even if it is marginal or emerging, needs to be addressed in early childhood given the harmful consequences for child development.

## Policy Prescriptions for Health: Baltimore's "Checkup" Shows Hardship-Free Kids are Healthier Kids



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**A**fter the holidays, people tend to do two things: make New Year's resolutions and schedule an appointment for their annual checkup. Checkup appointments not only look at the current status of a patient's health, but also provide an opportunity for clinicians to advise a patient on how to maintain or improve his or her health.

The city of Baltimore, like other cities, needs to seize this opportunity. Children's HealthWatch recently did a "**checkup**" of Baltimore families with young children (0 to 4 years of age) and offered policy and practice prescriptions for improving the health and well-being of these families.

Based on interview data collected during a child's primary care appointment between January 2012 and January 2017 at the University of Maryland Medical Center, 45 percent of families were hardship-free. Hardship-free means that families were food secure, stably housed, had adequate energy resources to heat or cool their homes, did not forgo seeking medical care or filling prescriptions due to cost, and did not have to choose between paying for health care costs or other basic needs.

The Children's HealthWatch data also found that when caregivers were in hardship-free families, they were 175 percent more likely to be in good or excellent health, and 82 percent less likely to report depressive symptoms (among female caregivers) when compared to caregivers with one hardship. Young children in hardship-free families were 93 percent more likely to be in good or excellent health, 25 percent less likely to have been hospitalized since birth, and 38 percent more likely to meet developmental milestones when compared to families with two hardships. In short, children and caregivers in hardship-free families had better health.

How do we increase the number of hardship-free children and families in Baltimore and other communities? By advancing the following policies and strategies that provide opportunities for all families with children to become hardship-free and for entire communities to be healthy.

- **Screening for economic hardships in clinical settings using validated screening tools.** Clinicians then can use the screening results to connect at-risk families to community-based resources.
- **Increasing the number of eligible people enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).** This would enable thousands of eligible women and children to receive the nutrition they need for healthy growth and development.
- **Increasing the number of "hunger-free schools."** Currently, 242 of Maryland's high-needs schools have opted to use the federally funded Community Eligibility Provision (CEP) to provide free breakfast and lunch to all their students. Increasing school participation in CEP would ensure that more students receive the nutrition they need to learn and more families have the resources they need to afford food at home.
- **Increasing investments in affordable housing.** Nearly three-quarters of renters in Maryland with extremely low incomes, i.e., households with incomes less than

30 percent of the area median income, pay more than 50 percent of their income for rent, a condition known as being severely rent burdened. This often results in housing instability, a known risk factor that can compromise child health and family well-being.

- **Raising the minimum wage to \$15 per hour.** About 273,000 children across Maryland would benefit from higher family incomes that would help them improve their ability to afford food, housing, utilities, and health care.

While the Baltimore checkup reflects an encouraging picture of good health outcomes when families are hardship-free, the Children's HealthWatch recommendations can help even more families in the city, and in communities across the nation, become hardship-free.

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## Endnotes

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