



A Proposal for Improvements in the Supplemental Nutrition Assistance Program

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The health of Americans is less than optimal, with alarming rates of chronic diseases such as Type 2 diabetes, obesity, and heart disease. The Supplemental Nutrition Assistance Program has the potential to improve the health of its 45 million recipients, yet the program has no nutritional guidelines. In fact, research suggests the program negatively affects the health of many of its users. The Special Supplemental Nutrition Program for Women, Infants, and Children, on the other hand, has a history of beneficial outcomes for its users, in large part because of its nutritional guidelines and program limitations. The Supplemental Nutrition Assistance Program may benefit from following the model of a large-scale federal food program that improves the health of its beneficiaries.

THE HEALTH OF A NATION

Many Americans are in less than optimal health. Approximately two thirds of adults are overweight, half of whom are obese.¹ Diabetes prevalence continues to climb, with 29.1 million Americans suffering from the disease and approximately 86 million more with prediabetes.² Economically disadvantaged people are at heightened risk, with approximately 70% higher prevalence of diabetes³ and 19% higher prevalence of hypertension,⁴ compared with the highest-income population. Such chronic diseases are directly related to lifestyle, especially poor dietary choices.

NUTRITION FOR BETTER HEALTH

To promote better health, the U.S. government issues nutritional guidelines and related educational materials. The *Dietary Guidelines for Americans*, currently the 2015–2020 *Dietary Guidelines for Americans*,⁵ serve as the blueprint for federal food programs and nutrition policies that, in turn, affect large programs, such as the National School Lunch and Breakfast Programs, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and the Child and Adult Care Food Program. These recommendations generally

emphasize plant-based foods; more than three quarters of MyPlate, the government's representation of the dietary guidelines, is dedicated to vegetables, fruits, and grains. Although its remaining section on protein sources includes meat, MyPlate recommendations also encourage Americans to think beyond meat and poultry and incorporate more legumes, including soy products, nuts, and seeds, into their diets to meet protein needs. Additionally, the *Dietary Guidelines for Americans* cite vegetarian and Mediterranean diets, both of which are rich in plant-based foods, as examples of healthful dietary patterns Americans could follow for optimal health.⁵

Diets focused on foods from plant sources are associated with lower rates of obesity, diabetes, cardiovascular disease, hypertension, and certain forms of cancer, among other health problems,^{6,7} all of which currently exact a large personal toll, as well as an enormous financial burden on individuals, governments, and businesses.

THE SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM

The Supplemental Nutrition Assistance Program (SNAP) is the largest nutrition assistance program in the U.S., serving approximately 45 million Americans in January 2016. Administered by the U.S. Department of Agriculture (USDA), SNAP is designed to increase the food purchasing power of families and individuals with incomes $\leq 130\%$ of the federal poverty line.

The U.S. government began piloting programs to supplement the food purchasing power of low-income

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households in 1939. In 1964, the Food Stamp Program was given legislative authority and, in 1977, the program was incorporated into the Food and Agricultural Act.⁸ The name SNAP (including the word “nutrition”), according to the USDA’s website, was meant to reflect a new focus of the program on nutrition.⁹

The program is not intended to cover recipients’ entire food budgets; rather, it is intended to augment their food purchasing power. SNAP beneficiaries may also participate in WIC or in free or reduced-price school lunch and breakfast programs, if applicable. For fiscal year 2006, USDA noted that 6% of nutrition assistance program participants lived in families that benefited from all of these programs; 42% lived in families that benefited from only one. Only 13% of food assistance beneficiaries participated solely in SNAP.¹⁰ Some beneficiaries also receive assistance from Temporary Assistance for Needy Families, Supplemental Security Income, or Social Security.

SNAP—A WIDE RANGE OF FOODS

To receive SNAP benefits, a household’s monthly income and assets must be below certain levels. As of early 2016, a family of four qualifies if it has a monthly gross income <\$2,628 and <\$2,250 in assets, such as a checking or savings account.¹¹ The federal government covers the full cost of SNAP benefits for food purchases, while the administrative costs are split roughly evenly between the federal and state governments. SNAP expenditures in fiscal year 2015 were almost \$74 billion.¹²

Benefits from SNAP can be used for most foods intended for human consumption, as well as food-producing seeds and plants for gardens.¹³ SNAP funds cannot be used for alcoholic beverages, tobacco, vitamins, food for animals, lunch counter items, or foods to be eaten in stores. In some jurisdictions, restaurants can accept SNAP benefits. Aside from these limitations, retailers are free to accept SNAP funds for essentially any food product. Sodas, candy, doughnuts, and other snack pastries, fatty meats and cheeses, energy drinks, and even luxury food items, when available, are all covered dollar for dollar with SNAP benefits.¹³

Some have suggested changing SNAP’s structure. In particular, pilot programs have put a focus on healthful foods, using financial incentives. Most notably, in the 2011 Healthy Incentive Pilot program, every dollar that SNAP participants spent on targeted fruits and vegetables yielded 30 cents in additional Electronic Benefit Transfer credit.¹⁴ The program demonstrated small but significant increases in purchases of these items. In addition, the 2014 Farm Bill committed \$100 million for the Food Insecurity Nutrition Incentives Program

through 2018, providing point of purchase cash incentives for SNAP participants who purchase fruits and vegetables.¹⁵

THE WIC PROGRAM AS A MODEL FOR SNAP

In contrast with SNAP, WIC includes only foods deemed by program guidelines to provide good nutrition. Candy, sodas, and snack foods are excluded. The WIC program is based on the use of “packages”—dedicated foods and products that have been designated and approved by the USDA. At its inception, WIC had two packages: one for infants and one for children, pregnant women, and breastfeeding women. Those packages first included infant formula, milk, cheese, eggs, infant and adult cereals, and fruit juice.

In 1977, the program added a third food package for children with special dietary needs, including metabolic disorders and premature birth. Three years later, the number of packages increased from three to six, and dry beans, peas, and peanut butter were added to the available foods. The newer packages also set a maximum level of 6 grams of sugar per dry ounce for cereals. Another expansion in 1992 provided an additional package and added two new items: carrots and canned tuna, along with increased amounts of juice, cheese, beans, peas, and peanut butter for women who were fully breastfeeding. During the same year, the WIC Farmers’ Market Nutrition Program was also established.

In 2003, the USDA asked the Institute of Medicine to evaluate the program, including how it addressed the nutrition and health issues of its participants.¹⁶ As a result, some changes were made to the packages that affected their content as well distribution criteria. The National Academy of Medicine, in its most recent review of WIC, has taken on the task of aligning the program with the *2015–2020 Dietary Guidelines for Americans*.¹⁷

An interim rule in 2007 provided additional changes in the food packages by adding fruits, vegetables, and whole grains. The amounts of certain foods, such as milk and juice, were reduced as well, and the packages allowed more food substitutions to accommodate cultural eating patterns. All state WIC agencies were required to implement these changes by October 2009, with the most recent change, or Final Rule, released in 2014. This rule included a number of additions, described by state agency participation. Outcomes of the new rule highlighted increased diversity of foods available in packages and an overall increase in fruit and vegetable options. With the new rules, 29% of state agencies started offering whole-wheat pasta as an alternative to whole-wheat

bread, and 39% of state agencies offered fresh fruits and vegetables as an alternative to jarred baby food for infants. Additionally, the proportion of WIC state agencies offering frozen, canned, and dried fruits and vegetables increased by 9, 8, and 5 percentage points, respectively. Lastly, the number of state agencies offering soy-based beverages and tofu increased by 21% and 23%, respectively, with the new rule.¹⁸

A 2012 survey conducted in California showed that in the 6 months following the 2007 rule implementation, consumption of whole grains increased by 17.3% among participants, and fruit and vegetable consumption increased 7.2%.¹⁹ A systematic review looking at nutrient intakes and health outcomes of WIC participants found 10%–20% increased intake in targeted foods and nutrients among the mothers and a positive effect on birth weights and hemoglobin levels for mothers.²⁰

These findings contrast with those for SNAP. In a review of three longitudinal studies regarding food security and weight status, Larson et al.²¹ found that long-term SNAP participation was associated with higher BMI, whereas WIC participation was not associated with increased BMI for short- or long-term participants. SNAP participation has also been associated with lower dietary quality compared with income-eligible and higher-income non-SNAP participants,²² as well as greater weight circumference, elevated triglycerides, elevated fasting glucose, and metabolic syndrome compared with income-eligible nonparticipants.²³

A PROPOSAL FOR A HEALTHIER SNAP

The authors developed a proposal that would allow retailers to accept SNAP payments for a simple set of healthful foods, similar to the WIC program, with the goal of testing a means for improving overall nutrition and contributing to better health for program participants.

The program focuses on staple foods (grains, vegetables, legumes, and fruits) selected for nutritional value, as described in the Healthy Staples section, and limits purchases to foods in these categories. These foods would come with simple food preparation tips to help people eat healthfully, even if they have very limited time or minimal equipment for food preparation.

Consistent with SNAP's role as a program designed to supplement participants' food choices, SNAP clients would continue to be free to add whatever foods they may wish to purchase with personal funds.

HEALTHY STAPLES

In this proposal, participating grocers must supply basic healthful foods, referred to as "Healthy Staples":

- Grains: oatmeal, whole-grain bread, pasta, tortillas
- Vegetables: fresh, frozen, or low-sodium canned
- Beans/peas/lentils: dried, low-sodium canned, tofu
- Fruits: fresh, frozen, or canned
- Basic multiple vitamins

These foods and products fall within the three dietary patterns (healthy vegetarian, healthy Mediterranean, and healthy U.S.) that the federal government cited as healthful. This list emphasizes the foods that are underconsumed (notably fruits, vegetables, and other fiber-rich foods) and minimizes nutrients commonly consumed in excess, such as saturated fat, added sugars, and sodium.⁴ The program was designed to provide foods that are familiar and healthful. As examples, a SNAP recipient using foods exclusively from the Healthy Staples menu could choose oatmeal with raisins for breakfast, an apple for a snack, sautéed mixed vegetables over brown rice for lunch, spaghetti with tomato sauce for dinner, and peaches with sliced bananas for dessert. Other wholesome meal ideas include lentils with brown rice and broccoli, or a pasta salad with sliced carrots, tomatoes, and lima beans.

NUTRITIONAL ADVANTAGES

The nutrients in foods that qualify as Healthy Staples and fulfill 1 day of the USDA's Thrifty Meal Plan market basket recommendations²⁴ (Table 1) for a 2,000-calorie diet were analyzed by a registered dietitian using Nutrition Data Systems for Research. Although the analysis yielded <2,000 calories (probably because of the substitution of products such as processed meat, whole-fat dairy, candies, soda, and juice with whole fruits, vegetables, legumes, and grains), results showed these foods can easily provide nutrition that is superior to that of average American diets. However, most participants are likely to add products purchased with their own funds, and the resulting meal patterns would reflect these food choices.

Based on the aforementioned 1-day nutritional analysis, individuals or families choosing solely from the Healthy Staples plan would likely get more than twice the fiber, iron, vitamin E, and folate; almost twice the potassium, calcium, and magnesium; almost 40% more vitamin D; and more than five times more beta-carotene than those following a typical American diet.²⁵ Using 2001–2002 National Health and Nutrition Examination Survey data as a point of comparison,²⁵ a Healthy Staples participant would consume 65% less fat and 85% less saturated fat, and the excess of 250 mg cholesterol²⁶ consumed daily would be reduced to essentially zero.

Table 1. Healthy Staples in Amounts Based on a 2,000-kcal USDA's Thrifty Food Plan Market Basket²⁴

Food	Pounds per week
Meat and beans	
Black, brown, or Bayo beans, dry, cooked, fat not added in cooking	2.31
Lentils, dry, cooked, fat not added in cooking	2.31
Peanuts, roasted, without salt	0.43
Grains	
Rice, brown, cooked, regular, fat not added in cooking	0.875
Oatmeal, cooked, not specified as to regular, quick or instant, fat not added in cooking	0.875
Spaghetti, cooked, whole wheat, fat not added in cooking	0.875
Vegetables	
Carrots, raw	1.48
Broccoli, raw	1.48
Tomatoes, canned, low sodium	1.875
Beans, lima, immature, canned, low sodium, fat not added in cooking	1.875
Beans, string, cooked, from canned, not specified as to color, fat not added in cooking	1.875
Onions, mature, raw	1.48
Fruits	
Raisins	1.5
Apples, raw	1.5
Peach, cooked or canned, unsweetened, water pack	1.51
Banana, raw	1.51
Milk products	
Milk, soy, ready-to-drink, not baby's	6.2
Rice beverage	6

USDA, U.S. Department of Agriculture.

If SNAP benefits excluded unhealthful, high-fat, or highly-processed foods, but included healthful fruits, vegetables, legumes, and grains, recipients could have a nutritious diet that, based on a nutrient analysis of a day's worth of Healthy Staples (as defined by the USDA's Thrifty Food Plan), provided >1,800 calories a day.

DIETARY QUALITY

The Harvard School of Public Health developed a scoring system to quantify the risk for developing chronic disease associated with various eating patterns. Called the Alternate Healthy Eating Index (AHEI), it was designed to be a better predictor of disease risk than the USDA's Healthy Eating Index.²⁷

The AHEI puts a numerical value on several dietary patterns: daily servings for vegetables, fruits, whole

grains, nuts and legumes, red and processed meat products, sugar-sweetened beverages and fruit juice, sodium, and alcohol, and the percentage of calories from trans fats, omega-3 fats, polyunsaturated fats. A study including 112,524 participants from the Health Professionals Follow-Up Study and the Nurses' Health Study showed that those with the highest AHEI scores had the least chronic disease risk, compared with those who had the lowest scores. The mean scores in this study were 47.6 for women and 52.4 for men.²⁷

Based on this scoring system, a food pattern based on the USDA's Thrifty Food Plan market basket and drawn only from the Healthy Staples plan for SNAP has an AHEI score of approximately 75 points (of 110 possible, 68%), considerably higher than the averages among the health professionals. For comparison, Wang and colleagues²⁸ calculated an AHEI score for Americans by different socioeconomic subgroups using National Health and Nutrition Examination Survey data. People with a low SES, a poverty income ratio of <1.3, and <12 years of education had an AHEI score of approximately 33 points (of 110 possible, 30%), compared with the highest SES who had an AHEI score of approximately 41 (37%). Using the previous and different AHEI scoring criteria, Leung et al.²⁹ found an AHEI score of 21.1 points (of 87.5 possible, 24%) among adult SNAP users. Of course, to the extent that other foods were added to this scenario, the AHEI would be expected to change.

These data suggest that prioritizing healthful foods in the SNAP program could improve nutritional quality and reduce risk of heart disease, Type 2 diabetes, and other illnesses related to overweight and obesity.

ECONOMIC CONSIDERATIONS

Individual SNAP participants receive up to \$194 in benefits each month, depending on their economic situation.³⁰ In 2015, an average of 45.7 million people participated in SNAP. The average monthly benefit used per person in 2015 was \$126.39,³¹ or 65% of the maximum allowed benefit.

Based on the USDA's Thrifty Food Plan market basket,²⁴ the cost of a varied meal plan with fresh and shelf-stable fruits, vegetables, legumes, and grains to yield a diet of 1,800 calories per day was calculated. The monthly cost, including a common multivitamin, was \$121.02, which is almost \$73 less than the \$194 benefit provided by the most complete current program coverage. Thus, if benefits were to continue at current levels, the Healthy Staples program could provide complete nutrition and considerably more abundant food, compared with the current system.

As noted above, the average monthly benefit used per person is approximately 65% of the maximum allowed benefit. Of the \$121.02 monthly cost of the Healthy Staples program, 65% is \$78.66. The difference in costs between the current SNAP system and a program based on Healthy Staples would have been approximately \$26 billion for fiscal year 2015. These funds could either be used to expand program coverage or retained as savings.

EXPLORATORY EVALUATIONS OF HEALTHY STAPLES

As first steps in gathering opinions that would gauge the interest in Healthy Staples products among SNAP recipients, the authors conducted two small exploratory surveys. Foods similar to those described as Healthy Staples were distributed for free to 32 individuals; no other financial compensation was provided. Of these, 21 low-income individual adults who receive SNAP benefits were provided a week's worth of Healthy Staples foods that fulfilled the USDA's Thrifty Food Plan recommendations, and 11 received similar items in a neighborhood retail setting designated by the USDA as a food desert. Both groups were surveyed as to the acceptability and usefulness of the items.

Only the shoppers in the retail setting of a food desert were randomly asked to participate in an oral survey upon receiving the groceries; answers to the questions did not affect whether they received the groceries. Shoppers in the retail setting were unanimously satisfied with their Healthy Staples groceries.

Those who received a week's worth of Healthy Staples grocery items in a home setting and were able to provide opinions about preparing and consuming the foods at the end of the week reported the Healthy Staples groceries satisfying in taste and, for the most part, easy to prepare. None described any disappointment regarding the absence of candy, soda, or similar products or expressed concern over the possible unfamiliarity with foods such as whole grains, fruits, and beans.

These exploratory surveys were small in size and not equivalent to a pilot. Additional limitations include the short time of the encounter in the retail setting, as well as the absence of an experience of personally selecting the qualifying groceries from a participating grocer. However, the goal was to assess acceptance of the products themselves, not necessarily to mimic the occurrence of selecting the items.

OTHER CONSIDERATIONS

Food deserts are perpetuated by programs that reward retailers for stocking food with little nutritional value,

and provide no incentive for stocking simple basics, such as vegetables, fruits, oats, rice, or beans. Under the current rules for the program, retailers are reimbursed for stocking virtually any product intended for human consumption. The Healthy Staples program uses the economic power of SNAP to end food deserts by reimbursing retailers who stock healthful foods and curtailing the economic rationale for stocking less nutritious foods.

For retailers, a program of this type would be considerably easier to implement than new rules proposed by USDA in 2016, which would require retailers to stock a variety of dairy products; breads and cereals; meats, poultry, and fish; and fruits and vegetables, including both perishable items in at least three of the four categories. It would also be more likely to rectify the areas of deficit in SNAP participants' diets.

In limiting choices, the Healthy Staples program is in line with other food assistance programs. The WIC program and school lunches have clear rules and limitations based on health. The current SNAP program already limits choices in that benefits cannot be used for rent, medical care, transportation, or any other need; they can only be used for food products. The USDA reported that, if given cash, many individuals would spend less of the received income on food than they do when given SNAP benefits.³² In other words, SNAP pushes individuals to buy more food rather than other items, such as clothing, transportation, or educational materials.

IMPLEMENTATION

Current professed challenges facing implementation of the Healthy Staples food plan include grocer and SNAP recipient compliance and understanding.³³ Similarly to the WIC program, the Healthy Staples program uses a finite list of foods from which to choose. Grocers would need to be prepared with electronic barcode scanners to ensure proper foods were purchased and then reimbursed. With the current expansion and increased oversight for the Electronic Benefits Transfers systems,³⁴ program limitations should be easier to enforce (no cigarettes or alcohol can be purchased using SNAP, for example) and allow for ease in regulating the Healthy Staples plan. With appropriate advance notice of this type of overhaul to SNAP, retailers should be able to restock their shelves with healthful products at no financial loss. SNAP recipients, too, should receive ample notice of such changes and be provided resources to make the transition clear and manageable. It may also be desirable to provide SNAP Education programs throughout the country to correspond to the food selections

offered within a new, healthier SNAP. Ultimately, accountability for appropriate use of SNAP for Healthy Staples will lie with the USDA, as it currently does for ensuring that SNAP retailers are not selling ineligible products.

Some may regard the proposed program as a significant departure from the current SNAP program, as indeed it is. A significant change is needed to address the health conditions that remain highly prevalent, especially among those who are economically disadvantaged. The proposal aims to return SNAP to its original intended purpose as a supplemental program and includes those items that are simple, inexpensive, and have a nutritional value that is fully supported by the 2015–2020 Dietary Guidelines for Americans.⁵

SUMMARY

Many Americans are at risk of health conditions, and economically disadvantaged people are at particular risk of obesity, diabetes, and other health problems. The current SNAP provisions may aggravate these problems by putting unhealthful products, such as processed meat, sodas, chips, and cheese, on the same economic basis as more-healthful choices. Compared with the current program, the Healthy Staples program would provide healthful foods, improved nutrition, and better health, and would allow much greater program coverage.

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