The Challenge of Improving Nutrition and Public Health

A healthy diet is the most effective form of preventive health care. Obesity and related health issues from overeating reduce individuals’ quality of life and cost the United States billions in unnecessary health care costs. On the other side of the spectrum, food insecurity—and its driver, poverty—rob children of healthy development, and impede working age and elderly Americans’ ability to enjoy productive lives, with potentially long-term, and costly, impacts.1

Given these enormous costs, it makes sense to invest more in improved diets. Yet we face a conundrum: How do we ensure that everyone can make healthy dietary choices (through both equal access to healthy food and straightforward information about the consequences of their food choices) while maintaining the American ideals of free choice, free markets, and free speech?

We must navigate this conundrum to identify effective policies and actions that will ensure universal availability of and access to sufficient nutritious food and enable consumers to make healthy food choices. And to implement them, we must determine the appropriate roles of private-sector actors along the supply chain, the medical community and health care systems, multiple public agencies and institutions (including agriculture, health, education, commerce, and foreign assistance), and a range of civil society organizations.

While there are many questions about how to change the choices individuals make about food, the barriers to better policy are largely institutional and political. The decision-making apparatus for U.S. food policy does not function well to address systemic, long-term, multifaceted, complex challenges, such as improving nutrition across the population. This has been true for so long that it’s hard to even perceive what we could accomplish with shared purpose, constructive dialogue, and reasonable compromise. The key ingredients of healthy food choices may have largely disappeared from the shelves of the U.S. food policy marketplace, but like kitchen gardeners rediscovering old food ways, we can grow them anew.

This paper outlines the scope of the problem in the United States and examines policies and practices that can improve nutrition and public health domestically. AGree’s interest in better food and agriculture policy also includes helping to improve nutrition and public health in developing countries, but we address those challenges separately.2 This paper discusses the evidence for the following questions: What public policies, private-sector actions, and collaborative activities have been proposed to help Americans make healthy food choices? What are the appropriate roles of government, the private sector, and civil society in helping to ensure availability of and access to sufficient amounts of nutritious and safe food? What are their roles in promoting nutrition for good health?

Food Insecurity, Obesity, and Rising Health Care Costs

In 2010, 14.5 percent of U.S. households—nearly 49 million Americans—were food insecure, meaning they were not assured adequate food at all times during the year. Because of rising poverty during the economic crisis, U.S. food insecurity was greater from 2008 to
2010 than at any time since measurement began in the mid-1990s.

Meanwhile, Americans suffer an epidemic of obesity and nutrition-related chronic disease. The Centers for Disease Control and Prevention estimate about one-third of U.S. adults and 17 percent (or 12.5 million) of children and adolescents aged 2–19 are obese (Figure 1).\(^3\)

Between 1970 and 2003, average caloric intake in the United States increased to 2,757 calories, 20 percent higher than the World Health Organization recommends.\(^4\)

The burden of increasing health care costs is a major contributor to current U.S. fiscal challenges.\(^10\) States are estimated to spend as much as $75 billion a year on obesity-related medical costs, and this number could rise substantially if there is a shift in health care responsibility from the federal to state governments.\(^11\) If current trends continue, obesity and diabetes will account for one-fifth of U.S. health care expenses by 2020.\(^12\)

Several changes to our lifestyles and personal choices have contributed to the increase in obesity. More two-worker households pressed for time means that convenience often trumps healthier home cooking; ready-to-eat foods are often higher-calorie options.\(^13\)

Our jobs are more sedentary, and our diets consist of more processed, low-cost, high-calorie foods. Some have argued that farm subsidies, particularly for corn, have contributed to the growth in consumption of high-fat animal products, high-fructose corn syrup, and processed foods, although the evidence of such a link is scant. Marketing and media, which more often promote high-calorie snack food and fast food than fruits and vegetables, also play a role, as do changing norms around portion sizes and when and where to eat.

**Strategies to Improve Nutrition and Public Health**

Strategies to improve American diets, lower health care costs, and improve health abound. The critical question is: Which of these strategies will work, and of these, which reflects an acceptable balance between freedom of choice and speech and government action to promote the public interest? Should farm programs and policies encourage more fruit and vegetable production? Should marketing be restricted? Labeling increased? Should the U.S. government impose taxes on certain foods and beverages? Should government nutrition programs prescribe healthier purchases and healthier school meals? Should regional food efforts be supported to encourage awareness of and access to healthy foods? How should the government handle food safety and food related risks? And what can and should the private

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sector do to move both food companies and consumers to make choices that improve nutrition and health? These questions and the following sections are intended to highlight—rather than in any way endorse—potential approaches that seem to have traction among various constituencies.

**Increase Consumption of Fruits and Vegetables**

An important step in improving diets is to eat more fruits and vegetables. This is among the most glaring gaps between the American diet and the *U.S. Dietary Guidelines*. The Guidelines recommend that Americans consume more fruits, vegetables, whole grains, fat-free and low-fat dairy products, and seafood, and fewer foods with sodium (salt), saturated fats, trans fats, cholesterol, added sugars, and refined grains. The Guidelines currently serve as a foundation for nutrition interventions and education to improve health. They also influence food labeling and advertising rules, standards, and guidelines for the federal nutrition assistance programs. While it is difficult to precisely estimate the dietary changes needed to align U.S. food consumption patterns with the Dietary Guidelines because of the numerous combinations of foods that can yield healthy diets, we know in which direction diets need to shift.

This gap in Americans’ consumption of the recommended amounts of fruit and vegetables exists for a variety of reasons, and ultimately influences both supply and demand for fruits and vegetables. While people do exercise personal choice in health decisions, including food choices, social influence plays a big role. Marketing, cultural norms, family norms, education, and in the case of children, parents’ decisions all influence diet choices.

In addition to those social influences are issues of affordability and access. Not everyone has easy access to healthy food choices given what they can afford, where they live, or, if they are dependents, who provides their food. Fruits and vegetables are more expensive on a calorie basis than energy-dense refined grains and fats. There is also evidence that overall healthier diets cost more. Low-income households may be optimizing their food budgets to get the most satiating diet at the lowest cost.

Finally, institutional purchases, such as within the federal food security programs, influence supply and demand of healthy food. The National School Lunch Program and the School Breakfast Program serve about one-third of U.S. school children. The school meals are prepared and sold by not-for-profit School Food Authorities at the school district level, and they must balance a “trilemma” of (a) ensuring nutrition quality, (b) restraining program costs, and (c) encouraging student participation. All of these decisions affect what is served, and ultimately what farmers grow to sell to the programs. To maintain participation levels, for example, many programs serve quick-service, restaurant-style menus. To maintain revenue levels, they also serve comparatively less healthful, but appealing foods through a la carte lines and vending machines. The USDA’s School Nutrition Dietary Assessment study found that most meals served provide sufficient amounts of food energy, protein, and other nutrients, but also that most meals failed to meet recommendations for avoiding too much of other nutrients (such as saturated fat) and ingredients (such as sodium).

New rules seek to strengthen nutrition standards while maintaining the economic feasibility of school meal program operations. Reauthorization legislation in 2010 for the Child Nutrition and Special Supplemental Food
Program for Women, Infants, and Children (WIC) for the first time directed USDA to establish nutrition standards that apply to all foods sold in schools. The law requires competitive food sales to raise sufficient revenue to cover their costs so they are not cross-subsidized by the federal meals programs.

If all Americans were to follow the Dietary Guidelines’ recommendations on fruits and vegetables, imports and domestic production would need to increase considerably to meet new demand. If the increased supply were to come exclusively from domestic sources, U.S. producers would have to more than double their fruit acreage and increase vegetable acreage by nearly one and a half times—still only a small fraction (less than 10 percent) of total American cropland. Yet the current U.S. planting flexibility restriction bars growers who participate in federal crop programs from planting fruits and vegetables on land for which they receive direct payments. Groups representing fruit and vegetable producers have insisted on this provision in successive farm bills, asserting that removing it would give program producers an unfair advantage; they would be able to plant specialty crops while still receiving the cross-subsidy that the direct payment represented. This will be largely moot if the direct payment program is eliminated in the next farm bill. Policies aside, there are a number of production barriers such as capital costs for new equipment, access to manual labor, and access to markets that may also impede increased supply.

Improve Marketing and Advertising Targeted to Children

Another set of questions focuses on whether public policy should try to affect food advertising, and much of the attention is focused on advertising to children. Those who support such policies point to the Institute of Medicine’s report, Food Marketing to Children and Youth: Threat or Opportunity? The report summarized evidence from 123 studies of the effect of advertising on children’s food choices and health outcomes and concluded, “Food and beverage marketing practices geared to children and youth are out of balance with healthful diets and contribute to an environment that puts their health at risk.” The report also cites the Federal Trade Commission finding in 2006 that children ages 2–11 watched 25,600 advertisements in a one-year period, of which 5,500 were for food and beverages. The most frequent ads were for restaurants and fast food, cereals (of which 84 percent of ads were for sweetened cereal), and desserts and other sweets. Children saw on average 1,400 ads for fast food and restaurants, but only 16 ads for vegetables and legumes, and not one ad for fresh fruit. The American Psychological Association argues that children under age 8 cannot understand an advertiser’s persuasive intent. Claims that would be recognized by most adults as deceptive may be unclear to children.

There are two primary methods to rein in advertising that targets children: industry self-regulation and stronger government regulation. In recent years, attention has focused on a series of voluntary industry initiatives by the Council of Better Business Bureaus and other private-sector associations. Many argue that to make a difference in the actual marketing environment that children face, these voluntary initiatives need stronger voluntary principles and accountability. “If industry fails to demonstrate a good faith commitment to this issue and take positive steps,” Deborah Platt Majoras, Federal Trade Commission chair in the George W. Bush administration, warned in 2005, “others may step in and act in its stead.”

Impose Taxes on Less Healthful Foods and Improve Food Labeling

Another strategy often discussed to influence choice and demand is taxing less healthy foods. Health policy advocates tend to support such taxes because they have the biggest favorable impact on food choice. For example, the director of the Centers for Disease Control and Prevention, Thomas Frieden, has argued for a 10 percent sales tax on sugar-sweetened beverages. USDA Economic Research Service researchers have estimated that a 1 percent increase in the price of caloric sweetened beverages would lead to a 1.26 percent decrease in the quantity consumed.
More research is needed to understand the impact of taxes on food and beverage consumption. The federal government could carry out pilot projects and then support well-designed research to estimate the impact, such as how taxes might affect average intake reductions. Research could also estimate other social and economic effects that are relevant to policy decision-making, such as the degree of consumer dissatisfaction and the regressivity of the resulting tax burden and health benefits.

Whether and how to label food more precisely is also a question. Some argue that the government should play a more substantial role in regulating claims about nutrition and health qualities that consumers cannot themselves verify. The U.S. government ensures that consumers have access to quality information on nutritional content and health-related qualities, both positive and negative, through requirements for consistent and accurate labeling of calories, saturated fats, cholesterol, and sodium, among other nutrients. A report by USDA’s Economic Research Services on mandatory food labeling suggests that consumers who use food labels are more likely to eat more fiber and iron than those not reading labels. A separate study found even greater impact of food labeling on consumer choices. Furthermore, the federal government recently implemented a new requirement that many large chain restaurants must now post calorie levels for standard menu items. More research is needed, however, to better understand the impact of specific strategies to provide nutrition information on healthy food choices and overall dietary quality.

**Improve Nutrition in Food Assistance Programs**

The federal government devotes approximately $70 billion annually to food and nutrition assistance programs for vulnerable families, and proposals are on the table to improve the nutritional effectiveness of these programs.

In 2010, fully one in five Americans participated in one or more of the major nutrition programs. The Supplemental Nutrition Assistance Program (SNAP) is by far the largest. One-half of all children will participate in SNAP at some point during their childhood, including 90 percent of African American children. Evidence is growing that SNAP improves food security among families. For example, a 2010 study commissioned by USDA’s Economic Research Services finds that SNAP participation reduces by more than 30 percent the likelihood of being food insecure. Another nutrition program, WIC, provides nutrition counseling, services, and a package of particular high-nutrient foods and infant formula to about 9.2 million pregnant and post-partum women, infants, and young children each month.

Proposals to improve the nutritional quality in SNAP have included restricting the class of foods eligible for purchase (for example, by making sugar-sweetened beverages ineligible). Others have proposed an extra subsidy for more favored categories of foods, such as municipal “bonus bucks” programs for farmers’ markets or the Healthy Incentive Pilot subsidy for fruit and vegetable purchases. The WIC food package was revised in the late 2000s to improve nutrition content and more strongly promote breastfeeding rather than infant formula.

The effects on behavior of such policy changes could be complex. For example, restricting SNAP benefits might cause inconvenience, stigma, or lower "take-up" of benefits by eligible people. Likewise, further changing
The WIC package might cause additional risk or difficulties for formula-fed infants.

Three other federal nutrition programs are the National School Lunch Program, the School Breakfast Program, and the Child and Adult Care Food Program, which serves meals in centers and home day care settings. Using these programs to improve nutrition among students could improve health but would likely raise costs, as noted above.

Expand Local and Regional Food Systems

In recent years, a broad-based national effort has emerged to encourage Americans to “buy local” and help support local farmers with direct-to-market sources of revenue. Americans purchased $4.8 billion in locally produced foods in 2008, about one-fifth through direct market channels such as farmers’ markets and roadside stands. As of October 2011, there were nearly 7,300 farmers markets in the United States, an 18 percent annual growth rate since USDA began tracking these outlets in 1994.

One federal program that is supporting regional food networks is the 2009 “Know Your Farmer, Know Your Food” initiative. It promotes and supports local and regional foods through several programs. The Know Your Farmer initiative also helps spark demand by issuing coupons for direct-to-consumer fruit and vegetable purchases for seniors and for mothers and children enrolled in WIC. The initiative also supports farm-to-school tactical teams to assist school food administrators in purchasing more locally and regionally grown food.

Although an emerging market segment, locally grown foods still represent a very small proportion of total food sales and the national-level health impacts are difficult to measure. Although specific links between improved health and local and regional food systems have not been established, the growth and attention show promise in engaging the public in more conscious food choices. Farmers’ markets, farm-to-school programs, direct-to-consumer marketing of foods, and Community Supported Agriculture arrangements have helped families learn more about the foods they eat, become exposed to new foods, and engage in community activities. Furthermore, increased enthusiasm around local and regional foods has made many consumers better informed about where their food comes from.

Ensure Health and Safety of the Food Supply

Heightened concern and demand in the United States and globally for a healthy, safe, and affordable food supply has driven research and adoption of new technologies and practices that have reduced exposure both to potentially harmful agricultural and food inputs as well as food-borne pathogens. These include improvements in contamination detection methods through improved institutional capacity and reduced diagnostic costs. However, concerns remain that there is insufficient scientific understanding about the comprehensive, synergistic, and cumulative effects to human health and the environment from exposure to inputs used in agricultural production and food manufacturing, such as pesticides, chemicals, fertilizers, transgenic seeds, antibiotics, and hormones. There are particular concerns about the exposure of women of childbearing age, pregnant women, and children, with some studies indicating that current exposure levels are harmful to child development and health.

understanding and sound methods and metrics for risk assessment. Widely embraced by diverse groups, the report recommends harnessing scientific advances to make toxicity testing quicker, less expensive, and more directly relevant to human exposures.40 More effort is needed to advance these and other strategies recommended for improving understanding.

Improvements in food safety will also be needed to further reduce the adverse health effects from biological contaminants. Each year, food-borne illness affects more than 48 million Americans. The Food Safety Modernization Act represented a sweeping reform of food safety laws, providing the Food and Drug Administration (FDA) new enforcement authority to achieve higher rates of compliance with prevention- and risk-based food safety standards and to better respond to and contain problems when they do occur. The act also provides the FDA with important new tools to hold imported foods to the same standards as domestic foods and directs FDA to build an integrated national food safety system in partnership with state and local authorities.

Critical Choices

All these strategies, and others, hold potential for improving American diets and public health. Clearly, given the country’s growing girth and persistent food insecurity, current programs and policies are not as effective as they could be. As the costs of obesity-related diseases continue to rise and the toll on individual health mounts, the call for a public health response grows louder. The health care costs, some argue, are reason enough for government intervention. To nudge the nation toward better diets (and better health), both the public and private sectors must continue to grapple with the above strategies and issues.

A major question in any discussion will be what is the appropriate role of government, the private sector, and others in civil society in helping to ensure the availability of and access to sufficient amounts of nutritious and safe food? What are their respective roles in promoting good nutrition for good health? Market-driven forces play an important role in the efficiency and effectiveness of global, domestic, regional, and local food markets. Billions of consumers today in countries around the world have access to a wide variety of affordable foods because of market forces. Efforts to improve nutrition and promote health must recognize and leverage the fundamental nature of personal freedoms and free-market principles while attending to the public health costs of the foods we eat.

Following are some of the critical questions1 with which stakeholders and policymakers must wrestle in developing strategies and actions to address the challenge of improving nutrition and public health in the United States:

- Should marketing of foods be restricted and labeling made more visible in order to encourage healthier food choices?
- Should foods that are high in sugar, fat, and salt be taxed?
- Should government restrict or incentivize the choices of nutrition program recipients to encourage healthier food choices?
- Should private-sector interests be excluded from the process of setting nutritional criteria in the school lunch and breakfast programs?
- Should public policy do more to promote regional food production and consumption?
- Does current research, oversight and regulation of biological contaminants, transgenics, and chemicals used in agriculture adequately protect the public and the environment?

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1 These questions are illustrative of the types of issues AGree will address; they are not exhaustive.
Notes


2 These issues are discussed in AGree’s The Challenge of Meeting Future Demand for Food paper and will be further explored in the context of AGree’s work to support vulnerable populations’ access to nutritious food, both in the United States and overseas.


14 U.S. Department of Agriculture & Department of Health and Human Services (2010).


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31 To be eligible, households income must fall under 185 percent of the federal poverty threshold or be participating in one of several other safety net programs. In addition, there must be evidence of nutritional risk, broadly defined, at a cost of $6.8 billion in fiscal year.


34 Eligible children are from families with incomes below 130 percent of the federal poverty threshold, although all federal school meals are subsidized to some extent. In fiscal year 2010, the NSLP served 31.6 million lunches daily, on average, and the smaller and newer SBP served 11.6 million breakfasts. The cost for both was $13.3 billion.


38 Martinez, et al. (2010).
