AMERICAN HEART ASSOCIATION ISSUE BRIEF:

AFFORDABLE NUTRITION

The American Heart Association Industry Nutrition Forum (INF) collaboratively examines food system challenges related to nutrition security, prioritizes those for which INF members and the AHA have complementary strengths to leverage, and advances stakeholder action. Progressive dialogue, action and impact over time are stepping stones toward a food ecosystem that prioritizes health, equity and sustainability.

This Issue Brief on Affordable Nutrition synthesizes perspectives and evidence from peer-reviewed, published research, authoritative websites, and dialogue at the Affordable Nutrition Roundtable, convened by the AHA on June 8, 2022. The roundtable sought to clarify the language used to describe intersecting concepts regarding the nutritional quality, affordability and noneconomic costs of healthy foods and diets; examine different perspectives and the scientific and experiential evidence for different approaches to ensuring equitable access to affordable nutrition; discover data, insights, and actions or innovations needed by or among different sectors to advance effective solutions; and identify thought leaders and organizations as potential partners and resources for future action.
The Issue

The vast majority (9 in 10) of people living in the United States consume a diet that is less than ideal for promoting cardiovascular health and 48 percent consume a poor diet. Poor diet increases risk of heart disease and stroke, as well as diabetes, cancer, and other chronic diseases. The COVID-19 pandemic increased awareness that diet-related chronic disease also weakens the immune system in the face of infectious disease. The evidence-based reasons for eating a dietary pattern emphasizing nutritious foods in appropriate quantities and variety are clear.

However, the barriers to healthy eating are numerous and complex. Eight in 10 people agree that eating a healthy diet can reduce risk of heart disease, while health is identified as a leading driver of food purchase decisions for only 6 in 10 consumers. Taste is the leading factor for 80% of consumers. Importantly, food price is of primary importance for 66% of consumers, which is a far greater proportion than the 10% of US households that experience food insecurity. Nine in 10 Supplemental Nutrition Assistance Program (SNAP) recipients report barriers to achieving a healthy dietary pattern, with cost being the top issue (61% of recipients).

Intersecting disparities are found amongst food insecurity, unhealthy dietary intakes, and chronic disease. A poor-quality diet is more common in populations experiencing food insecurity, defined by the U.S. Department of Agriculture (USDA) as a “household-level economic and social condition of limited or uncertain access to adequate food.” Poor diet and food insecurity each contribute to disparities in chronic disease outcomes. U.S. food insecurity is higher than average in households with children, those headed by a single person or non-Hispanic Black or Hispanic people, and those with income below the poverty level. Almost half (48%) of all American adults have poor diet quality, with higher rates found among Black (56%) and Mexican American households (49%). Underrepresented racial and ethnic groups, especially Black, Hispanic, and Native American/Alaska Natives, are at higher risk for developing chronic diseases than their white counterparts.

Prevalent disparities in health, food security, and diet quality indicate a need to shift to a nutrition security paradigm. Because “nutrition security” is an unfamiliar term to many, therefore interpreted in different ways, definitions are needed. The American Heart Association (AHA)
defines nutrition security as individuals and households having equitable and stable availability, access, affordability and utilization of foods and beverages that promote well-being and prevent and treat disease. It is defined by the USDA as consistent access, availability, and affordability of foods and beverages that promote well-being, prevent disease, and, if needed, treat disease, particularly among racial/ethnic minority populations, lower income populations, and rural and remote populations including Tribal communities and Insular areas. While there are differences between these definitions, both capture the elements of food security, emphasize nutritional quality of foods, and speak to the need for equity.

The COVID-19 pandemic and global inflation are further exacerbating long-standing structural inequality and associated health and wealth disparities. Food prices in particular were 11.2% higher in September 2022 versus 2021. Examples of factors affecting nutrition security that marginalized racial and ethnic groups have experienced disproportionately include time and energy constraints (working multiple jobs, childcare), transportation issues, inadequate cash flow to purchase food at the best unit price and a lack of culturally relevant solutions, among others.

This issue brief focuses on one aspect of nutrition security: affordable nutrition. While the various features of nutrition security are interdependent and cannot be truly isolated, different sectors (governments, industries and nonprofit organizations) can each uniquely impact the affordability of nutritious food and diets. Focusing on the consumer, higher income, nutrition assistance and/or lower prices could each contribute to meeting recommended dietary patterns. From the food supply perspective nutritious foods being available at a cost that can be purchased by all, and improving the nutritional quality of familiar, low-cost foods can both contribute to affordable nutrition. A third important lens on affordable nutrition that is often not considered is the cost or cost savings of dietary quality. It is estimated that the cost of an unhealthy diet is $300 per person or $50 billion nationally in health care annual costs.

Encouragingly, there has been considerable focus on the broader concept of nutrition security in a way that acknowledges and addresses health disparities. However, the complexity of these challenges should not be underestimated. Stakeholders operating in different sectors use different approaches towards this common goal, therefore cross-sector dialogue is important to improve understanding of and strengthen the different approaches, identify best practices, improve metrics, as well as seek opportunities to improve collective impact.
Needs and Potential Solutions

The health care sector is poised to “focus on the whole person,” addressing immediate nutrition security needs as well as long-term dietary knowledge, behaviors and access. Providing resources for those experiencing nutrition insecurity requires not only nutrition assistance programs, but also policies and systems to identify those in need, connect them to resources, and ensure follow-up. Validated tools that screen for social determinants of health (including food security) do exist and are increasingly implemented in health care and community settings. There is a need, however, for validated tools that screen for the nutrition security, per se, of individuals and communities.

POTENTIAL SOLUTIONS:
• Develop validated tools for nutrition security screening, referrals and follow-ups in health care and community settings.
• Improve access to medical nutrition therapy for diet-related disease treatment and prevention.

Collaboration between health care, community and food systems are vital to strengthen nutrition security referral practices and impacts. Technology has emerged to support health care providers in referring patients to community-based food nutrition resources. Such systems are useful in health care if they can be integrated into the health record and give providers a closed-loop follow-up mechanism. There is low uptake of such systems in resource-poor health care organizations, however. Additionally, improving access to medical nutrition therapy, nutrition training for physicians and increased diversity among health care practitioners will help increase the prioritization of nutrition in caring for patients as a whole person.

On the community end of the referral, there are barriers to adopting a social needs platform. Healthy food networks would increase confidence among health care providers when making referrals.

POTENTIAL SOLUTIONS:
• Improve provider training in nutrition and food security screening and referrals.
• Improve diversity among health professions, including nutrition and dietetics.
• Implement healthy food pantries and “farmacies” at health care facilities and food-is-medicine programs (through produce prescriptions or medically tailored meals), combined with nutrition and food skills education to address immediate access needs and facilitate diet quality over time.
• Cultivate healthy food networks in communities.
• Conduct research designed to inform health care adoption of innovative nutrition security programs and tools.
Models estimate that a 30% produce incentive for SNAP purchases has the potential to avert 39,000 diabetes person-years and 4,600 cardiovascular deaths over a 10-year period. Financial incentives increase fruit and vegetable purchases at farmers’ markets and grocery stores among SNAP recipients by increasing their purchasing power. The recent Special Supplemental Nutrition Program for Women, Infants and Children (WIC) benefit bump for purchasing fruits and vegetables has shown similar effects. However, WIC currently covers just 8% (12% post-benefit bump) of a family’s food costs, while SNAP’s portion is more than 50%. Those in need may be more likely to participate in the WIC program if the benefits covered a larger portion of food costs.

**POTENTIAL SOLUTIONS:**
- Incentivize nutritious food purchases to increase the value of the food dollar in alignment with healthy dietary patterns.
- Ensure that nutrition assistance program benefits are sufficient to support healthy diets.
- Remove barriers to nutrition assistance programs that emphasize healthy foods and diets.

There are significant differences across the U.S. in the accessibility and acceptability of nutrition assistance. These include state-level barriers to SNAP and WIC enrollment and use that are compounded by poor transportation options, immigration status, and limited cultural acceptance of food pantries or federal food aid. Encouragingly, the implementation of telehealth in the WIC program during the height of the COVID-19 pandemic alleviated transportation barriers and contributed to a 10% increase in child participation in WIC.

**POTENTIAL SOLUTIONS:**
- Expand access to food retailers (grocery stores, drug stores, convenience stores, grocery delivery services) that accept SNAP electronic benefits transfer and carry WIC-approved and other healthy foods, especially in historically marginalized communities.
- Work in tandem with community members and leaders to co-create solutions that respect culturally diverse food traditions and beliefs about using nutrition assistance, and break down community-specific barriers.

Economic policies and programs, such as agricultural subsidies and healthy food purchase incentives, may be more effective in lowering the cost of health-promoting diets if coordinated and aligned with dietary guidance. School-based programs provide meals at low or no cost to millions of children throughout the year, and with strong nutritional criteria have a significant positive impact on children’s diets. On the other hand, the Food Distribution Program on Indian Reservations falls short in supporting healthy diets, in part because the offerings are not culturally relevant.
Whether food is obtained through a food pantry, grocery store, school meal or commodity distribution program, both the nutritional quality and cultural relevance of foods offered are essential to empowering people to choose healthy diets. Modernizing nutrition education to be culturally relevant and informed by a community’s realities can also reduce barriers to participating in assistance programs and support behavioral change.

**POTENTIAL SOLUTIONS:**
- Align agricultural, nutrition and food assistance policies and emphasize cultural relevance.
- Modernize nutrition education to support the consumption of healthy diets using foods that are relevant to the individual or group.

The food industry is often called upon to make healthy food affordable. Affordability needs to be specific to each regional cost of living. Operational costs to reach lower-income markets are often high. It is important to find cost efficiencies at every point along the value chain, as sustainable solutions will require low prices, low margins and high value.

**POTENTIAL SOLUTIONS:**
- Employ innovation to formulate nutritious and affordable foods (packaged and prepared).
- Look for cost efficiencies across the food chain.
- Use pricing and marketing strategies to encourage healthy diets.
- Explore nonfinancial incentives and disincentives.
- Avoid targeted marketing of unhealthful foods to low-income audiences and historically marginalized racial and ethnic groups.

Studies show that educating charitable food system workers can improve the availability of nutritious foods in pantries and improve the healthfulness of client food choices. Color-coding food options and educating food pantry staff results in increased awareness and availability of nutritious foods, resulting in greater accessibility and increased selection of these foods among those in need.22

**POTENTIAL SOLUTIONS:**
- Encourage the use of a nutrition ranking system to guide food donations by retail donors and the USDA’s Emergency Food Assistance Program and Commodity Supplemental Food Program.
- Realign food bank incentives to provide the most nutritious foods.
- Employ choice architecture in food distribution.
Cross-Cutting Considerations for Affordable Nutrition Solutions

- **Food system transformation is needed to meet modern societal needs.** Yesterday’s food system was not created for today’s challenges, including climate change, fractured societies and communities, inequitable access to healthy and safe food and water to meet the needs of a growing population, well-being deficits globally, concurrent paradoxes of undernutrition and obesity, and inequalities across the value chain.

- **Advance research to validate meaningful and discriminating measurement tools.** What is “affordable” within the context of various settings or communities? How do we measure nutrition security vs. food security in populations and individuals? How should we screen for nutrition insecurity risk as one step in connecting those in need with nutritious food? What are the best proximal measures for diet quality? What are the appropriate measures of cost savings and return on investment of affordable nutrition interventions?

- **Commit to both individual and cross-sector contributions.** Promising endeavors include the promotion of nutritious foods by both the food industry and the charitable food system; the implementation of medically tailored meal, grocery and produce prescription programs coordinated between health care and community organizations; and collaboration between WIC and private health plans to cover nutrition education in a community.

- **Engage in dynamic communication to understand evolving nutrition security language and needs.** It is important to listen with empathy to consumers and stakeholders in other sectors; to develop and deliver services in a manner that respects dignity, including the acknowledgment that choosing a healthy diet is a luxury inaccessible to many people and ensuring cultural relevance of affordable and nutritious foods.

CROSS-CUTTING CONSIDERATIONS FOR AFFORDABLE NUTRITION SOLUTIONS

Thank you to Nutrition on Demand and SR Strategy LLC for dialogue facilitation of the Affordable Nutrition Roundtable and assistance in preparing the Affordable Nutrition Issue Brief. Thank you to Soaring Heart Design LLC for design of the Affordable Nutrition Issue Brief.
Appendix I: Sector-Specific Case Studies in Affordable Nutrition

The following are case studies of action related to affordable nutrition shared during the American Heart Association’s Affordable Nutrition Roundtable and 7th annual Foodscape Innovation Summit, both convened in June 2022.

Government

- The U.S. Department of Agriculture (USDA), as part of the equitable system goal, recently launched the Indigenous Food Sovereignty Initiative, promoting traditional foodways, Indian Country agricultural markets, with indigenous healthy foods tailored to American Indian and Alaska Native dietary needs.23

- Efforts to broaden accessibility to nutritious food and nutrition education for participants in the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) include the modernization of health care through expanded telehealth options, increased WIC benefits through the extension of age limits and approved food types, and ongoing iron fortification in formula and cereals to decrease nutrient gaps in targeted populations.22

- Through the Centers for Medicare and Medicaid Services (CMS) Innovation Center, the CMS is testing novel service deliveries and payments in order to reduce the expenditures of CMS programs while improving patient care. For example, the center has focused on enhancing the dietitian’s role in the diagnosis and treatment of malnutrition. They created toolkits to help dietitians assess patients and code diagnoses to increase reimbursement. Additionally, the CMS is building federally qualified health centers into their delivery models to expand their reach and be more inclusive of underserved populations. The center has also tested a range of Medicare Advantage health plan changes, including healthy food cards and clinically tailored meals for those living with hypertension or low-income subsidies, and coverage for blood pressure cuffs and glucose monitors to help improve patient self-monitoring practices.24

Nonprofit Sector

- The AHA builds trusted partnerships with community-based health care, food and social service organizations to develop community-led, culturally relevant nutrition security solutions. Working to build bridges between health care and community resources through policy and systems change is a particular emphasis, such as implementing systems for screening for social determinants of health with closed-loop referral to resources such as SNAP enrollment or produce prescription.25

- Healthy Markets-Martha’s Table strives to connect affordable, nutritious food access with education for families and individuals through their mobile meal vans and after-school Joyful Food markets. They endeavor to fully engage participants in the education that comes with nutritious food access, and in this way provide a more valuable experience for families.26
Industry Sector

- Kroger Health, the healthcare arm of The Kroger Company, leverages five Food as Medicine Strategic Pillars for their customers: product innovation (including the OptUP app to guide healthier choices), research, customer engagement, partner engagement, and live our purpose. Across these pillars, personalized engagement and education are supported for both customers and employees, and research is underway to document impact.27

- In its philanthropic efforts, PepsiCo has developed a product, tested in Mexico, Guatemala and parts of Asia, designed to address moderate acute malnutrition. The company used a portion of revenue from commercial Quaker products to fund the development and implementation of these specialized products and interventions, which were demonstrated to improve growth outcomes in children. In its commercialized efforts, PepsiCo sought to close nutrient gaps in Mexico through fortification of commonly consumed, affordable Quaker products.28

- EatWell Meal Kits aims to meet both acute medically prescribed dietary needs and long-term behavior change. Patients receive medically tailored meal kits upon hospital discharge that are low cost to insurers and include how-to videos teaching culinary and nutrition skills.29

Health Care Sector

- Using “choice architecture” in health care facilities is an example of how Morrison Healthcare is implementing behavioral nudges to encourage long-lasting lifestyle change. Traffic-light labeling of foods based on nutritional content and the strategic organization of these foods within a facility give consumers the opportunity to choose the healthier option. These strategies demonstrate that people will redirect to healthier options if made more readily available to them.30

- Geisinger’s Fresh Food Farmacy program is targeted to a patient’s medical diagnosis but provides enough food for their entire household. It empowers food-insecure participants to manage their health conditions by making long-lasting behavioral changes. Findings demonstrate a reduction in hemoglobin A1C, low-density lipoprotein (LDL) cholesterol, triglycerides, blood pressure and/or body weight, as well as decreased emergency department admissions among participants.31
Endnotes


Appendix II: Affordable Roundtable

Objectives

- Clarify the language used to describe intersecting concepts regarding the nutritional quality, affordability and noneconomic costs of healthy foods and diets.
- Examine different perspectives and the scientific and experiential evidence for different approaches to ensuring equitable access to affordable nutrition.
- Discover data, insights, and actions or innovations needed by or among different sectors to advance effective solutions.
- Identify thought leaders and organizations as potential partners and resources for future action.

Agenda

**WELCOME AND REVIEW OF OBJECTIVES**
Cheryl Toner, MS, RDN, nutrition portfolio lead, AHA

**KEYNOTE: AFFORDABILITY AS A CRITICAL COMPONENT OF NUTRITION SECURITY**
Sara Bleich, Ph.D., director of nutrition security and health equity, food and nutrition service, USDA

**COMMUNITY ENGAGEMENT AND IMPLEMENTATION**
Brian Dittmeier, senior director, public policy, National WIC Assoc.
Donna Banzon, director of healthy markets, Martha’s Table
Jessica Donze Black, vice president community impact, AHA

**FOOD INDUSTRY PRODUCTION AND COMMUNICATION**
Marc R. Watkins, M.D., chief medical officer, Kroger Health
Marianne O’Shea, Ph.D., vice president of global nutrition science, PepsiCo
Mickey Rubin, Ph.D., executive director, Egg Nutrition Center

**PUBLIC HEALTH RESEARCH AND TRANSLATION**
Anne N. Thorndike, M.D., MPH, associate professor, Department of Medicine, Harvard Medical School; physician and director of the cardiac lifestyle program, Massachusetts General Hospital
Marlene Schwartz, Ph.D., director of the Rudd Center for Food Policy and Health and professor of human development and family sciences, University of Connecticut
Stephanie Silvera, Ph.D., professor and MPH graduate program coordinator, Public Health Department, Montclair State University

**FACILITATED DISCUSSION**
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Appendix III: Industry Nutrition Forum Members

- Ajinomoto Health & Nutrition North America Inc.
- Aramark
- Canola Council of Canada
- Cargill, Inc.
- Egg Nutrition Center
- General Mills, Inc.
- International Flavors and Fragrances
- Kroger Health
- McCormick Science Institute
- McDonald’s
- Quaker Foods
- Simply Good Foods Co.
- Unilever
- United Soybean Board