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Ending Hunger in America, United States House of Representatives Committee on Rules

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Thank you to Chairperson McGovern and the members of the United States House of Representatives Committee on Rules for the opportunity to submit written testimony and statement regarding "Ending Hunger in America."

I am providing this testimony and statement on behalf of the Hunter College New York City Food Policy Center, of which I am the executive director. The Center was created in 2012 to develop collaborative, innovative and evidence-based solutions to prevent diet-related diseases, promote healthy eating and reduce food insecurity in New York City and other urban centers. The Center works with policy makers, community organizations, advocates and the public to create healthier, more sustainable food environments. We thank the Chairperson McGovern and his office for their support of our Center.

Background on Hunger, Food Insecurity, and Diet-related Diseases

"Where is my next meal coming from?" It's a question that millions of Americans asked themselves before the pandemic, are asking themselves today, and will, unfortunately, be asking themselves tomorrow. It's a question no one should ever need to ask in one of the world's wealthiest countries.

Before examining how hunger and food insecurity are afflicting Americans, it is important to highlight the distinction between the two concepts. The United States Department of Agriculture (USDA) defines food insecurity as "a household-level economic and social condition of limited or uncertain access to adequate food,"[1] and hunger is defined as "an individual-level

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physiological condition that may result from food insecurity."[2] Food insecurity is a social and economic condition that can lead to the physical manifestation of hunger. Therefore, when we talk about hunger in America, it is critical that we discuss food insecurity and center the social and economic challenges that contribute to it.

Food insecurity rarely exists in isolation, as low-income individuals and families are often impacted by many intersecting issues such as a lack of affordable housing, chronic or acute health problems, high medical costs, social isolation, low wages, and unemployment.[3,4,5] These types of issues are referred to as social determinants of health, defined as "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks."[6] All of these factors contribute to a "cycle of food insecurity and chronic disease."[7]

Food insecurity and hunger are also associated with increased risk and severity of diet-related diseases.[8] The United States is facing an epidemic of diet-related chronic diseases, with one in five deaths attributed to poor diet, which is more than any other risk factor including smoking.[9] Poverty and food insecurity, which are closely related,[10] correlate with some of the most serious and costly health problems in the United States.[11,12,13,14,15,16] A 2021 review published in *Current Nutrition Reports* noted that there is a strong correlation between food insecurity and risk factors for cardiometabolic conditions (which includes, but are not limited to obesity, hypertension, diabetes mellitus, and heart failure)[17] among adults.[18] It should also be noted that those with increased risk factors for cardiometabolic conditions are also at increased risk for adverse health

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outcomes, hospitalization, and death from COVID-19.[19] Reducing food insecurity can lead to improved health outcomes,[20] a decreased reliance on hospital utilization, and lowered healthcare costs.[21]

During the COVID-19 pandemic, food insecurity has increased significantly[22,23] and is now one of the most prominent health crises and health equity challenges in the United States, affecting as many as one in four Americans.[24,25] However, food insecurity and access to nutritious food were urgent problems before the pandemic, impacting 13.7 million American households in 2019.[26]

Hunger, Food Insecurity and Health Disparities

Food insecurity disproportionately impacts racial and ethnic minorities as well as low-income individuals and families.[27,28,29,30,31] An analysis of food insecurity trends from 2001 to 2016 found that the rates for both non-Hispanic Black and Hispanic households were at least twice that of non-Hispanic White households.[32] Furthermore, the burden of obesity and complications from conditions such as heart disease,[33,34] stroke,[35,36] type 2 diabetes,[37,38] and multiple types of cancer[39] are higher among Black and Brown communities than White communities.[40,41,42]

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Inequities in food retail environments in the United States are well documented and disproportionately impact the availability and affordability of healthy food across the country. Black and Hispanic neighborhoods tend to have fewer large supermarkets with fewer nutritious options than White neighborhoods, regardless of the community's income level. A study in *Preventive Medicine* examined data from the 2000 US Census and 2001 InfoUSA food store data and determined that, while the poverty level of a neighborhood impacted access to nutritious food, racial composition of the neighborhood was a stronger determinant.[43] Communities of color and low-income neighborhoods often have limited access to nutritious food[44] and more frequently live in areas referred to as food deserts, which are defined by the USDA as areas with limited access to affordable and healthy food.[45]

While this term, "food desert," is used widely to describe communities and neighborhoods lacking access to fresh foods, many advocates argue that "food desert" is inaccurate because it conceals the vibrant life and food systems in these communities and implies that, like actual deserts, these areas are naturally occurring.[46] Instead of using the term "food desert," it is more accurate to refer to this issue as "food apartheid," "because 'food apartheid' looks at the whole food system, along with race, geography, faith, and economics," says food activist Karen Washington in an interview with the magazine *Guernica*.[47] Using the term "food apartheid" to address food justice disparities calls for an approach to the food system that acknowledges the role of race and class as well as geography and economics.[48]

There is a growing body of research and acknowledgment among academics, advocates, and health care professionals that health outcomes and disparities are more frequently driven by social determinants such as food insecurity and access to adequate nutrition than by medical care alone[49,50] Many families experiencing poverty and food insecurity rely on low-cost foods, which are often unhealthy and low in nutrition, and exacerbate chronic conditions such as obesity, diabetes, and hypertension.[51]

Federal Food Assistance and Health Outcomes

Federal food assistance programs, including the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children

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(WIC), have proven to be effective in impacting food insecurity and public health. Participation in these benefits programs has been associated with improved health outcomes from a variety of diet-related diseases, as well as lower overall healthcare costs.[52,53,54,55] According to a 2015 study appearing in *Food Policy*, SNAP participants have fewer doctor visits, use fewer sick days, and are more likely to self-report "excellent" or "good" health than comparable non-participants.[56] A study from *BMC Geriatrics and Population Health Management* found that access to federal food assistance programs such as SNAP reduced the likelihood of hospitalization for older adults by 14 percent and cut the likelihood of nursing home admission by 23 percent.[57] Additionally, a cross-sectional study of more than 1,300 older adults with diabetes who were SNAP participants published in *JAMA Internal Medicine* reported that those older adults were 5.3 percentage points less likely to report cost-related medication nonadherence compared with eligible participants not enrolled in SNAP.[58]

However, federal programs are often not enough to meet the needs of households and individuals experiencing food insecurity or to ensure a healthy diet. A 2018 study conducted by the USDA found that 88 percent of SNAP participants report encountering some type of barrier to a healthy diet. The most common, reported by 61 percent of SNAP participants, is the cost of healthy foods. The USDA reports that SNAP participants who struggled to afford healthy food were more than two-times as likely to experience food insecurity.[59] According to research from the Center on Budget and Policy Priorities, more than half of SNAP recipients use all of their benefits for the month within the first two weeks.[60] Additionally, allotments for SNAP benefits are set at the federal level and are the same across all states, not accounting for the higher cost of living in certain areas.[61]

The Role of Food as Medicine Programs and Interventions in Fighting Food Insecurity and Promoting Health Equity

There is overwhelming evidence demonstrating the impact of food and diet on health, specifically among diet-related diseases. Whether or not a poor diet can cause damage to the body should no longer be debated, as evidence supports the potential causal relationships

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between dietary factors and diet-related diseases such as ischemic heart disease, diabetes, and certain cancers. While diet has the potential to cause disease, it is also capable of building, maintaining, and restoring health.

Using food for prevention and treatment of disease has a long history and documented efficacy.[62,63] In fact, evidence indicates that sustained dietary changes can be as effective as pharmacological interventions in treating certain diseases, especially in the early stages of the disease.[64,65] In some instances, a long-term, specific diet may be more effective than medication at mitigating, stabilizing, and reversing disease.[66,67,68,69,70] Additionally, using drug treatments in combination with a healthy tailored diet may be more impactful than drugs alone; there are a plethora of studies which demonstrate the extensive health benefits of food as medicine and indicate that the focus should not be on diet or medicine alone, but rather on diet and medicine.[71,72,73,74]

The global epidemic of diet-related diseases has led to the increased use of food as medicine as a way to treat these illnesses and avoid costly healthcare.[75,76] Food as medicine, however, is not a specific treatment; rather, there are a variety of different food interventions that have been used to help prevent, treat, or co-treat disease.[77] Some of the most widespread forms of food interventions include medically tailored meals (meals specially designed and prepared for people based on their medical conditions) and food prescriptions (foods assigned by a doctor or health care professional for treatment, co-treatment, or prevention of a disease).[78]

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Medically Tailored Meals

Many people living with chronic disease seek dietary changes to help them manage their health,[79,80,81] but often these patients face a variety of barriers such as cost, food insecurity, lack of food proximity, physical disability, and a lack of educational resources about food as treatment or co-treatment.[82,83] Medically tailored meals (MTMs) are a food as medicine intervention that can help overcome some of these barriers, including cost and mobility, through directly providing meals to people living with chronic conditions.[84,85] Patients in medically tailored meal programs are provided with meals (oftentimes through delivery) that are individually tailored to their health conditions, medications, and other dietary needs.[86]

There has been extensive research published about the health effects of MTM programs.[87,88,89,90] In 2018, Boston-based MTM provider Community Servings supported a clinical trial appearing in the *Journal of General Internal Medicine* of 44 food insecure adults living with type 2 diabetes, providing participants with home-delivered MTMs for 12 weeks.[91] In this trial, participants reported lower rates of food insecurity and improved Healthy Eating Index scores while receiving meals.[92] In a 2016 randomized controlled trial appearing in the *Journal of Clinical Oncology* evaluating the impact of home-delivered MTMs provided by the New York City-based God's Love We Deliver to 180 patients with cancer, participants self-reported higher Quality of Life scores after 12 weeks in the program.[93] Furthermore, in a 2018 study published in *Health Affairs* of diabetes patients experiencing food insecurity, researchers found that emergency room visits were less frequent among those participating in a MTM delivery program compared to patients participating in a non-tailored meal delivery program.[94]

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Other studies have found connections between participation in MTM programs and reduced health care costs.[95] MANNA, an organization that provides MTMs to people at nutritional risk as a result of managing serious illness in Pennsylvania and New Jersey,[96] conducted a 2013 study published in the *Journal of Primary Care & Community Health* of the relationship between its MTM program and healthcare costs.[97] The researchers found that healthcare costs for each participant were reduced by an average of $10,754 per month in the first three months of receiving services from MANNA.[98] In another study conducted by Community Servings and published in *JAMA Internal Medicine* in 2019, MTM recipients saw a 16 percent decrease in healthcare costs and fewer inpatient or skilled nursing facility admissions compared to the control group, who did not receive meals from Community Servings.[99]

Nutrition Incentive Programs and Produce Prescription Programs

The Gus Schumacher Nutrition Incentive Program (GusNIP, formerly known as the Food Insecurity Nutrition Incentives (FINI) Program), is a USDA food insecurity incentive program named for Gus Schumacher, who was a pioneer in advocating for increased consumption of fresh fruits and vegetables among participants in food assistance programs such as SNAP.[100] GusNIP provides funding opportunities for a variety of healthy food incentive programs, including Nutrition Incentive Programs and Produce Prescription Programs.[101] Programs that develop and implement linkages between clinics and community organizations can increase the use and efficacy of existing resources and also improve service delivery.[102,103,104]

Over the last decade, Nutrition Incentive Programs have expanded widely across the United States as an evidence-based solution to increasing fruit and vegetable consumption among food insecure individuals.[105] The USDA defines Nutrition Incentive Programs as programs that "increase the purchase of fruits and vegetables by low-income consumers participating in the Supplemental Nutrition Assistance Program (SNAP) by providing incentives at the point of purchase."[106]

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Research has demonstrated that produce prescription programs can improve local fruit and vegetable consumption, nutrition knowledge, and food purchasing practices.[107,108] One 2020 study appearing in *Current Developments in Nutrition* assessed the impact of a fruit and vegetable prescription program on the health outcomes and behaviors of Navajo children aged six and under.[109] Native American and Alaska Native populations were found to have higher than average childhood obesity rates, and food insecurity is a significant component of this disparity. A local nonprofit teamed up with local healthcare providers to launch the Navajo Fruit and Vegetable Prescription (FVRx) Program with the aim of addressing the high childhood obesity rates among this population. At the conclusion of the six month program, participants reported a significant decrease in food insecurity (from 82 percent to 65 percent), and 38 percent of children previously categorized as overweight or obese had achieved a healthy BMI.[110]

Produce Prescription Programs, defined by the USDA as programs that "financial or non-financial incentive prescriptions of fresh fruits and vegetables in addition to nutrition educational opportunities to increase procurement and consumption of fruits and vegetables, reduce individual and household food insecurity, and reduce healthcare usage and associated costs."[111] Produce Prescription Programs have been known to improve health outcomes especially among people with diet-related chronic diseases.[112,113] Research has also demonstrated that these programs can improve local fruit and vegetable consumption, nutrition knowledge, and food purchasing practices.[114,115] These prescription programs have been reported to improve

[107] Slagel N, Newman T, Sanville L, et al. A Pilot Fruit and Vegetable Prescription (FVRx) Program Improves Local Fruit and Vegetable Consumption, Nutrition Knowledge, and Food Purchasing Practices [published online ahead of print, 2021 Jun 2]. *Health Promot Pract.* 2021;15248399211018169. doi:10.1177/15248399211018169

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prenatal care and birth outcomes,[116] and to reduce food insecurity,[117,118] diabetes,[119] heart disease,[120] hypertension,[121] and obesity.[122,123]

The benefits of produce prescription programs are multifaceted as they can reduce barriers to dietary changes by improving affordability and accessibility of fruits and vegetables and increasing knowledge related to diet-related health conditions.[124,125,126,127]Produce prescription programs represent a burgeoning field in the Food as Medicine landscape and will require more rigorous research in order to demonstrate their impact on longitudinal health outcomes and support their integration into national policy.[128]

Effective Policies and Opportunities for Improvement

There has been growing policy support for food as medicine programs. In 2019, the Center for Health Law & Policy Innovation at Harvard Law School and medically-tailored meal nonprofit Community Servings released the Massachusetts Food is Medicine State Plan.[129] Sponsored by State Senator Julian Cyr (D-MA) and State Representative Denise Garlick (D-MA), the plan advocated for the Office of Medicaid (MassHealth) to create a food and health pilot program that would connect Medicaid enrollees with diet-related diseases to community-based nutrition organizations.[130] The authors of the plan estimate that food insecurity, hunger, mental health and the physical health conditions to which they contribute currently cost the state of Massachusetts approximately $1.9 billion annually.[131] The goal of the program would be to reduce those costs while also achieving better health outcomes for patients.[132,133]

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[132] Massachusetts Food is Medicine State Plan. Food is Medicine Massachusetts. Accessed August 19, 2021. https://static1.squarespace.com/static/5c82ced1a56827591142c3df/t/5ced77c2104c7b83e962f5f7/1559066563313/Food+is+Medicine+State+Plan+Infographic.pdf.
[133] Home. Food is Medicine Massachusetts. Accessed August 19, 2021. https://foodismedicinema.org.

Interest and action surrounding the use of food as medicine has also reached the federal level. In January 2018, the House of Representatives created a bipartisan Food is Medicine Working Group led by Representatives Jim McGovern (D-MA), Chellie Pingree (D-ME), Roger Marshall (R-KS), and Jackie Walorski (R-IN) whose purpose is to draw attention to hunger and address its impacts on health.[134] One of the Food is Medicine Working Group's key goals is to shape policy that would secure medically tailored meals made with fresh fruits and vegetables for more chronically-ill Americans.

As the momentum behind using nutrition as a tool for improving public health builds, universities have begun working with policymakers to devise healthier federal food programs.[135] Tufts University's Food is Medicine Public Impact Initiative is a notable example of this type of collaboration.[136] Led by faculty at the Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy, the oldest and largest graduate school of nutrition in North America, the initiative aims to "raise awareness of the tremendous impact of food on national well-being... and provide trusted science on actionable and impactful solutions."[137]

Support of food as medicine programs and policies provide a unique opportunity to address hunger and food insecurity and positively impact diet-related disease outcomes among Americans. Policymakers must continue to collaborate with diverse stakeholders to create policy solutions that not only aim to eradicate hunger but also improve nutrition and health for all Americans.

Recommendations

We provide the following recommendations to address hunger in the United States while also promoting health and addressing diet-related diseases that disproportionately affect food-insecure Americans.

1. Expand Nutrition Assistance Programs and Simplify Enrollment Processes.
    - Streamline the process for eligible Americans to receive Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Program for Women, Infants and Children (WIC) benefits.
    - Facilitate the expansion of food purchases made with SNAP online and wirelessly.
    - Increase the minimum benefit amount for all SNAP and WIC recipients, giving them more purchasing power.

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[134] Food is Medicine Legislation. Food is Medicine Coalition. Accessed August 19, 2021. http://www.fimcoalition.org/legislation.
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[137] Public Impact Initiative: Food is Medicine. Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy. Accessed August 19, 2021. https://nutrition.tufts.edu/about/public-impact-initiative-friedman-school/food-is-medicine.

- Increase the bonus amounts provided by nutrition incentive programs funded by GusNIP so that participants can purchase more fresh, whole foods.
- Provide equipment to retailers to allow them to accept SNAP, eWIC, and other healthy food incentives electronically.
- Expand and create new healthy food incentive programs for people to purchase healthy foods, and even healthy prepared foods.
- Improve awareness and use of existing food assistance programs, such as SNAP, WIC, and the Farmers' Market Nutrition Program.

2. Examine the Nutritional Profile of Meals Provided by Public Institutions and Emergency Food Providers
    - Analyze the nutritional quality and the proportion of "healthy" and "unhealthy foods" offered by institutional food programs.
    - Ensure nutritional profile of emergency meals meets the dietary needs of older adults and the chronic diseases they might be managing.
3. Enhance and Advance Public Awareness of the Role of Food in Relation to the Prevention and Treatment of Disease.
    - Nutrition and food education must begin early.
        - Public schools should integrate courses into their core programming about basic food, nutrition and agriculture.
        - Publicly funded child care centers should incorporate some form of nutrition and food education containing interactive lessons about physical activity and healthy eating.
        - Create school gardens in public schools and utilize these gardens as a hands-on approach to teaching students about food and nutrition.
    - Regulate and restrict the promotion of unhealthy food in public facilities such as schools, public transit, public parks and public housing developments.
4. Increase Community Access to Culturally Appropriate, Unprocessed, Fresh, Whole Foods and Food as Medicine Programs for the Prevention and Treatment of Disease.
    - Support the expansion of sources of fresh fruits and vegetables in communities that lack retail access to fruits and vegetables.
    - Health insurance companies must offer coverage for a wide variety of food as medicine programs and individualized nutrition counseling in the treatment of chronic diseases.
5. Invest in Research to Strengthen the Evidence Base for Food on the Prevention and Treatment of Disease.
    - Congress must approve increased funding to the NIH to provide grants to researchers specifically focused on the use of food in prevention and treatment of diet-related diseases, which disproportionately affect food insecure Americans..
    - Topic areas for funded research should include:

        - Specific dietary patterns and interventions on the prevention and treatment of disease.
        - Traditional medicine practices from around the world in the prevention and treatment of disease. Practitioners of these traditional medical practices should be involved in the design and implementation of these studies.
        - Food as medicine programs (such as medically tailored meals and produce prescriptions) on health outcomes.
        - Incorporate foods and dietary patterns from many different cultures into this research to ensure food interventions are culturally appropriate for all participants.
    - Research should include robust clinical trials with large sample sizes necessary to evaluate the effectiveness of various food as medicine interventions.
    - Invest in research to identify and tailor effective implementation of food as medicine programs for at-risk communities in a variety of settings.
    - Congress must increase federal funding for the development of a wide variety of food as medicine programs including medically tailored meals, produce prescriptions, and nutrition incentives.
6. Hospitals Should Be a Model for Advancing Food as Medicine and Integrating Dietary Evidence for the Prevention and Treatment of Disease Into Institutional Practices and Programs.
    - Hospital administrators and leaders should be provided with up-to-date resource guides containing the current state of evidence on the role of food in the prevention and treatment of disease as well as existing policies and programs that can be integrated into hospital systems.
    - Federal, state, and local government agencies should provide financial incentives and guidance to public and private hospitals and healthcare settings that develop and maintain food as medicine programs, including medically tailored meals and produce prescriptions.
    - There must be a complete overhaul of the meals served at hospitals to ensure that hospital food is medically-tailored to address disease and support health, and provides a foundation for the use of food as a therapeutic
        - Every meal served at a hospital should be made considering the specific nutritional needs of the patient and their specific disease state, based on the latest and most prevailing science.
        - Hospitals should provide a variety of different meal options for the diverse cultural backgrounds of patients.
        - Hospitals should hire chefs to create meals or purchase meals from a vendor that are delicious and tailored to the individual nutritional, medical, cultural, and religious needs of patients.

        - Hospitals should provide meals that are easy and simply duplicated by their patients which would allow them to prepare nutritionally sound meals in their own homes. Patients should be provided with easy-to-follow recipes specifically tied into available foods within that patient's community.
        - Whole-food, plant-forward scratch cooking should be prioritized in all hospital kitchens.
        - Ultra-processed foods, unhealthy fats, and high fructose corn syrup must be banned completely from hospital cafeterias.
    - Create screening questions for healthcare providers to identify relevant food as medicine interventions for patients and require that health care providers integrate nutrition assessment into clinical workflows.
    - Provide physicians with robust, evidence-based guides and literature about the state of the science regarding food's impact on prevention and treatment of disease.
7. Mandate Education About Nutrition and the Role of Diet in the Prevention and Treatment of Disease Within Educational Curricula for Physicians and Health Care Providers (e.g., Nurses, Physician Assistants, Nurse Practitioners).
    - Require a series of nutrition courses among the earliest core requirements in medical school curricula that provides all medical students with a background on the role of diet in the prevention and treatment of disease. Courses would include:
        - Basic Nutrition
        - The Role of Food in the Prevention and Treatment of Disease
        - Food as Medicine Programming and Interventions (medically tailored meals, culinary medicine, food prescriptions)
        - Food Insecurity: Causes, Effects, and Solutions
        - Dietary Supplements, Nutraceuticals, and Functional Foods
        - The Role of Food in Traditional Medical Practices Around the World
        - Interacting with Patients about Diet, Lifestyle, and the Impact of Food on Disease
    - Require a series of nutrition courses in health care provider education/training that highlights the role diet plays in the prevention and treatment of disease.
    - Develop Continuing Medical Education courses centered on food as medicine topics, including popular food as medicine programs and current evidence about the role of food in the prevention and treatment of specific diseases.
    - Develop detailed competencies for physicians and health care providers to support Food as Medicine including ongoing training and education on:
        - How to apply client/patient-centered principles to all food as medicine programs and interventions.
        - Understanding the interaction of food, medicine, disease, and policy.

- Understanding the history of food as medicine and respecting the knowledge, wisdom, and practices that have been passed down for thousands of years.
- Developing effective and ethical communication skills and techniques to achieve desired goals and outcomes.
- Applying knowledge of foods, cultural foods, eating patterns, and food trends in treatment and counseling of patients.