Research Action Plan Advisors

Ann Albright, CDC
Karen Bachman-Carter, Indian Health Service
Seth A. Berkowitz, UNC School of Medicine
Lauren Shw Rieder Biel, DC Greens
Joslyn Brenton, Ithaca College
Bridget Carle, The Rockefeller Foundation
Cathryn Couch, Ceres Community Project
Tiffany Gary-Webb, University of Pittsburgh Graduate School of Public Health
Kurt Hager, Tufts Friedman School of Nutrition Science and Policy
Sheila Hanley, Centers for Medicare & Medicaid Services (CMS) Innovation Center
Devon Klatell, The Rockefeller Foundation

Gita Rampersad, Feeding America
Darshak Sanghavi, Babylon
Pam Schwartz, Kaiser Permanente
Hilary Seligman, UCSF School of Medicine
Karen Siegel, CDC
Andrea Talhami, DC Greens
Jean Terranova, Community Servings
Alissa Wassung, God’s Love We Deliver
Marianna Wetherill, University of Oklahoma-Tulsa Schusterman Center
Norbert Wilson, Duke Divinity School and Sanford School of Public Policy at Duke
Allison Yoder, Academy of Nutrition and Dietetics Foundation
Vision

- **Effective, appropriate** Food is Medicine interventions are integrated into the US health care system, providing access to a wide range of proven interventions.

- All Food is Medicine research centers equity throughout the research continuum, in order to ensure that interventions truly empower individuals and communities and are effective across demographic groups.

- Everyone has the food that will allow them to live a healthy, dignified life.
What the Plan Includes

- Food is Medicine definitions and explanation of Research Action Plan scope
- Overview of foundational food and health research and peer-reviewed research on Food is Medicine interventions
- Recommendations for the next phase of Food is Medicine research
Food is Medicine interventions include:

1. the provision of food that supports health, such as medically tailored meals or groceries, or food assistance, such as vouchers for produce; and
2. a nexus to the health care system.

<table>
<thead>
<tr>
<th>In scope</th>
<th>Out of scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food/food assistance IN ADDITION TO education, resource referrals, lifestyle change programs, etc.</td>
<td>Interventions focused on micronutrients, supplements, or parenteral/enteral nutrition products</td>
</tr>
<tr>
<td>Enhancement of food support programs due to health risks/conditions</td>
<td>Existing federal food support programs with the exception of WIC</td>
</tr>
<tr>
<td>Medically tailored meals, medically tailored groceries, produce prescriptions</td>
<td>Nutrition education, lifestyle change programs without food support</td>
</tr>
</tbody>
</table>
Interventions Defined

Interventions are:
- Primarily developed in the community/evolution of community-based programs
- National associations and coalitions are coalescing around definitions and standards
- Dynamic, with innovation at the boundaries of each category

<table>
<thead>
<tr>
<th>Preparation level and type of food</th>
<th>Medically tailored meals</th>
<th>Medically tailored groceries*</th>
<th>Produce prescriptions*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ready-to-eat (reheated in an oven or microwave) meals and snacks</td>
<td>A range of perishable and nonperishable grocery items, including produce, that will require further preparation</td>
<td>Produce—fresh, frozen, or canned (no added salt, sugar, or fat)—which, depending on the items, may require further preparation</td>
<td></td>
</tr>
<tr>
<td>Complete or near-complete (over 50% of caloric needs met) nutrition</td>
<td>Partial or near-complete nutrition</td>
<td>Supplemental nutrition</td>
<td></td>
</tr>
</tbody>
</table>

*There is significant overlap between these two categories as some produce prescriptions cover significant amounts of produce (either via voucher or direct provision) or even non-produce, minimally processed items.
Medically tailored meals: Fully prepared meals designed by a Registered Dietitian Nutritionist to address an individual’s medical diagnosis, symptoms, allergies, and medication side effects.

Medically tailored groceries: Distributions of unprepared or lightly processed foods that recipients are meant to prepare for consumption as home; the contents are sufficient to prepare nutritionally complete meals or provide a significant portion of ingredients for such meals, including produce, whole grains, legumes, and proteins.

Produce prescriptions: Vouchers and debit cards that can be redeemed for produce, or direct distribution of produce made available to recipients based on a health condition or health risk; produce is generally fresh but can also be canned or frozen with no added sugar, fat, or salt.
Foundational Research: Food Insecurity

Over 20 studies examined the impact of food insecurity on health outcomes, finding that food insecurity is associated with:

- **Worsened mental health outcomes** including depression, anxiety, and stress
- **Worsened physical health outcomes** including heart disease, obesity, diabetes, hypertension, and hyperlipidemia
- **Poor health and developmental risk in children**
- **Health-damaging circumstances and behaviors** including poor diet quality, unhealthy weight control, disordered eating, poor diabetes self-management, low medication adherence, and missed clinical visits
- **Increased health care utilization and costs** including inpatient hospitalizations, emergency department visits, and prescription medications

bit.ly/FoodisMedicineResearch
Over 50 studies examined the association between the following key federally funded food support programs and physical and/or behavioral health outcomes.

1. Supplemental Nutrition Assistance Program (SNAP)
2. National School Lunch Program (NSLP)
3. Older Americans Act Nutrition Services Program (OAANSP)
4. Special Supplemental Nutrition Program for Women, Infants and Children (WIC)

Criteria: Conducted in the United States, written in English, and published in peer-reviewed journals within the last 25 years (15 for WIC).
All three programs are associated with lower health care utilization and positive health outcomes—notably, improvements in weight status, self-reported health status, and diet quality.

Mixed results: higher rates of obesity among SNAP participants, particularly when participants are compared with eligible nonparticipants (those who meet the program’s eligibility requirements but are not enrolled)

Importance of understanding the baseline health and demographic characteristics of participants. Difficulty of isolating program participation.
Foundational Research: WIC

Third-largest food program, serving about 7 million people (parents, children < 5, and infants) each month through the provision of food (via packages, vouchers, or credits), nutrition education, and referrals to social and health care services. WIC meets our definition of a Food is Medicine intervention:

- **Provision of food**: Targeted, supplemental nutrition for different stages of pregnancy and childhood development (7 different packages). Food via checks, vouchers, or electronic benefits card.
- **Nexus to the health care system**: Applicants must undergo a health assessment by a health professional and be deemed “at nutritional risk” (criteria vary by state).
Recommendations

- The National Institutes of Health should invest significantly more in Food is Medicine research.
- A federal agency or federally appointed entity should be formally tasked with coordinating efforts across federal agencies to explore the impact of Food is Medicine interventions in many populations and geographies.
- The Centers for Medicare and Medicaid Services, along with state Medicaid agencies, should seek to capture data on Food is Medicine interventions from natural experiments generated by program policy changes. Evaluation of these impacts should be a priority for research funding.
- Build coverage for Food is Medicine Services into baseline benefits for U.S. health care programs
- Address regulatory barriers which currently inhibit community-clinical partnerships
- Improve access to fruits and vegetables in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)
Food & Society's Work

- **2019**: Food is Medicine Initiative launched with support from the Walmart Foundation
- **JAN 2022**: Food is Medicine Research Action Plan published
- **MAY 2023**: Food is Medicine Research Action Plan Sacramento convening
- **OCT 2023**: Food is Medicine Research Action Plan Boston convening
- **JAN 2024**: Food is Medicine Research Action Plan Kansas City convening
- **2024**: Launch of updated Food is Medicine Research Action Plan, revised with support from the Walmart Foundation

Q&A
The Food is Medicine Research Action Plan can be downloaded from:

[AspenInstitute.org/food](AspenInstitute.org/food)

Email us at [foodandsociety@aspeninstitute.org](mailto:foodandsociety@aspeninstitute.org)