

VIEWPOINT

A “Food Is Medicine” Approach to Disease Prevention Limitations and Alternatives

**Alyssa J. Moran, ScD,
MPH, RD**

Department of
Health Policy and
Management,
Johns Hopkins
Bloomberg School of
Public Health,
Baltimore, Maryland.

**Christina A. Roberto,
PhD**

Department of Medical
Ethics and Health
Policy, Perelman School
of Medicine at the
University of
Pennsylvania,
Philadelphia.

During the past 5 years, “food is medicine”—the provision of free, nutritious food through the health care system—has received an astounding amount of intellectual attention and financial investment.¹ Food is medicine was a key initiative in the 2022 National Strategy on Hunger, Nutrition, and Health, and 2 states have launched coalitions to sustainably fund these programs. The Rockefeller Foundation, National Institutes of Health (NIH), and Patient-Centered Outcomes Research Institute have announced more than \$350 million in food is medicine research funding. Expert commentaries on the promise of food is medicine for preventing and treating chronic diseases have been published in leading scientific journals, and major research institutions have established food is medicine initiatives. It is well established that there is value in offering food at no cost to people who need it. But the medical and public health communities’ enthusiasm for food is medicine seems unjustified by its likely benefit.

The food is medicine concept is not new. For nearly 4 decades, community organizations have provided medically tailored foods to patients with diet-sensitive conditions, such as HIV/AIDS and type 2 diabetes. These

[W]e need to focus on changing food industry behavior to ensure that unhealthy foods are not ubiquitous...while ensuring that our existing nutrition assistance programs are accessible and health promoting.

programs fill a gap in treatment by making it easier for patients with serious health conditions to meet their specific nutritional needs. The recent food is medicine movement expands this idea to encompass a range of programs, from culinary education with food support to “prescriptions” from physicians that patients exchange for healthful foods.² The rationale is that because health plans cover the cost of medications, such as statins, that reduce chronic disease risk, they ought to also cover the cost of foods that reduce that risk.

Although certain patients may better manage their diseases by enrolling in food is medicine programs, such as medically tailored meals after an acute health event, robust evidence to support significant salutary benefits from the wide array of food is medicine programs being offered is lacking.³ Much enthusiasm has been built around a handful of studies, most of which do not convincingly isolate the effect of food provision from standard care. Our own enthusiasm for this approach is tem-

pered by the significant behavioral challenges plaguing the proposed interventions. First, people must enroll in food is medicine programs through the health care system, which is difficult for many to consistently access.⁴ Second, the health care system is overburdened. Even in primary care settings, most physicians lack capacity to address nutrition with their patients.⁵ Third, patient care coordination in the US is poor, with many physicians rarely making referrals to existing nutrition counseling services despite high need.⁵ Fourth, patient adherence to chronic disease medications is low even though the positive health effects from medications are relatively immediate.⁶ Eating healthy foods involves a far more complex sequence of behaviors, often resulting in a less direct and immediate effect on health outcomes. We are thus skeptical that food is medicine programs will lead to long-term improvements in diet or health.

Some would argue that we just need more research to uncover how to implement food is medicine programs effectively. We agree that some well-conducted randomized controlled trials could be useful. But should so much of our intellectual talent and resources be directed toward these research questions when there are other strategies that are far more likely to improve dietary habits? As an example, the World Health Organization has called on governments to implement evidence-based, cost-effective policies to prevent and control noncommunicable diseases, including improving food served in public institutions, reformulating foods to be lower in sugar and salt, and implementing clear, front-of-package nutrition labeling systems.⁷ There is also an ample body of research supporting taxes on unhealthy food and beverages. Despite some progress, none of these policies have been fully adopted across the US even though countries worldwide are implementing them. These policy strategies would benefit greatly from more research and advocacy, but they receive a fraction of the attention and resources of food is medicine.

Proponents will argue that investing in food is medicine does not preclude investments in evidence-based prevention strategies, but the fact is that resources, time, and attention are limited. In 2019, the NIH invested \$1.9 billion in nutrition research, just 5% of total NIH funding, despite the enormous health and economic toll of diet-related diseases. Directing so much of that funding toward food is medicine will mean that an even smaller piece of the funding pie will be available for other nutrition research topics. The priorities of large funding agencies influence scientific agendas, particularly in

Corresponding

Author: Alyssa J. Moran, ScD, MPH, RD, Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, 624 N Broadway, Baltimore, MD 21205 (amoran10@jhu.edu).

public health and medical institutions, where careers are highly dependent on obtaining external research grants. The millions of dollars in research funding for food is medicine will mean that talented scientists will turn their intellectual attention and effort toward studying food is medicine programs and away from more promising prevention strategies.

We should not overlook that this shift in attention is a boon to the food industry, which has historically avoided regulation by shaping public narratives about the causes of, and responses to, public health problems. Throughout the 20th century, the food industry has perpetuated a personal responsibility narrative, reducing the social causes of diet-related diseases to unhealthy "lifestyle" factors such as poor dietary choices and too little exercise. It took decades for researchers and advocates to educate the public and policy makers about the role of our toxic food environment in driving inequity in chronic diseases. The food is medicine movement risks undoing this work by casting a social problem as a medical one and further shifting public discourse away from commercial interests as major drivers of disease. It is no surprise that many large, influential food companies such as Amazon, Instacart, and Kroger have loudly touted their support for food is medicine by joining task forces, supporting pilot programs, and integrating programming into corporate social responsibility campaigns.

It is abundantly clear that individuals espousing food is medicine care deeply about people's health. These are values we share. But why channel government dollars for food through the health care system when there are more efficient ways to use these funds? Federal nutrition programs, such as the Supplemental Nutrition Assistance Program; the Special Supplemental Nutrition Program for Women, Infants, and Children; and the National School Lunch Program and School Breakfast Program, are already equipped to provide food to families in need. And if these programs were even more aligned with the Dietary Guidelines for Americans and easier to access, they could further improve the health of millions. Food is medicine funding could be redirected toward modernizing these programs to cover more people and better support public health

nutrition goals. For example, rather than providing food prescriptions at a health care visit, we could provide additional benefits for fruits and vegetables through the Supplemental Nutrition Assistance Program, expand universal free school meals, and invest in food service infrastructure to improve school food quality. These strategies, among many others, are generally supported by food is medicine scientists and advocacy groups and would reach far more food-insecure families than health care interventions. These policy changes could be achieved within the existing nutrition assistance landscape rather than adding to the patchwork of programs in which low-income families must enroll.

Some might argue that food is medicine is the easiest path forward to encourage healthy diets in a nation where the food industry has successfully thwarted population health policies that might hurt their bottom line and where federal nutrition program funding is often under threat. It may seem like healthy food policies are out of reach, but the COVID-19 pandemic proved that federal nutrition programs can be reformed, and quickly. Many of our federal nutrition program benefits were increased and made easier to access. Furthermore, more than 100 countries and 6 US cities and counties have implemented taxes on sugary drinks, 8 US states have passed legislation establishing universal school meal programs, and the Food and Drug Administration has proposed voluntary sodium reduction targets for our food supply that could be made mandatory. This is meaningful progress that could be accelerated with more resources to do the work.

In a country in which prevention dollars are relatively scarce, we are forced to make decisions about where to direct public resources. Although food is medicine programs may fill gaps in treatment for some patients, they are not the best bet for preventing diet-related diseases. Instead, we need to focus on changing food industry behavior to ensure that unhealthy foods are not ubiquitous and not as cheap and heavily marketed while ensuring that our existing nutrition assistance programs are accessible and health promoting. We already know that investing in these interventions can make a real and sustained difference in people's lives.

ARTICLE INFORMATION

Published Online: November 30, 2023.
doi:10.1001/jama.2023.24472

Conflict of Interest Disclosures: Dr Moran reported receiving consulting fees from the University of Pennsylvania during the conduct of the study. No other disclosures were reported.

REFERENCES

- Bleich SN, Dupuis R, Seligman HK. Food is medicine movement—key actions inside and outside the government. *JAMA Health Forum*. 2023;4(8):e233149. doi:10.1001/jamahealthforum.2023.3149
- Downer S, Berkowitz SA, Harlan TS, Olstad DL, Mozaffarian D. Food is medicine: actions to integrate food and nutrition into healthcare. *BMJ*. 2020;369:m2482. doi:10.1136/bmj.m2482
- Volpp KG, Berkowitz SA, Sharma SV, et al; American Heart Association. Food is medicine: a presidential advisory from the American Heart Association. *Circulation*. 2023;148(18):1417-1439. doi:10.1161/CIR.0000000000001182
- 2021 National healthcare quality and disparities report. Agency for Healthcare Research and Quality. Accessed November 1, 2023. <https://www.ahrq.gov/research/findings/nhqdr/nhqdr21/index.html>
- Harkin N, Johnston E, Mathews T, et al. Physicians' dietary knowledge, attitudes, and counseling practices: the experience of a single health care center at changing the landscape for dietary education. *Am J Lifestyle Med*. 2018;13(3):292-300. doi:10.1177/1559827618809934
- Choudhry NK, Kronish IM, Vongpatanasin W, et al; American Heart Association Council on Hypertension; Council on Cardiovascular and Stroke Nursing; Council on Clinical Cardiology. Medication adherence and blood pressure control: a scientific statement from the American Heart Association. *Hypertension*. 2022;79(1):e1-e14. doi:10.1161/HYP.000000000000203
- More ways, to save more lives, for less money: World Health Assembly adopts more best buys to tackle noncommunicable diseases. Published May 26, 2023. Accessed November 1, 2023. <https://www.who.int/news/item/26-05-2023-more-ways--to-save-more-lives--for-less-money---world-health-assembly-adopts-more-best-buys--to-tackle-noncommunicable-diseases>