



FOOD AS MEDICINE

Nutrition as a First-line Therapy
Solution for Payors and Providers



Impact of food and
nutrition on health
and healthcare



Barriers to
providing essential
nutrition



Evolution of food as
medicine and medically
tailored meals



Targeted solutions
for better outcomes
and reduced costs

It turns out mom was right, we should all “eat more vegetables.”

Introducing a more balanced diet, with a healthy intake of fruits and vegetables, can have a measurable impact on overall health. When it comes to the prevention or management of chronic conditions, the nutrition aspect of care couldn't be more impactful. Health providers and plans are under increasing pressure to address social determinants of health, including facilitating guided nutrition, providing access to the right balance of healthier foods, and eliminating food access barriers. With payor coverage, the Food as Medicine movement is taking flight.

WITH THIS BRIEF, WE IDENTIFY

- | Impact of food and nutrition on health and healthcare
- | Barriers to providing essential nutrition to patient populations
- | THEN: Evolution of Food as Medicine and medically tailored meal programs
- | NOW: Targeted solutions to drive better outcomes and reduce the costs of healthcare



The impact of poor nutrition on health

Poor dietary intake accounts for nearly 20% of the \$3.8 trillion spent on U.S. healthcare for chronic conditions, including diabetes, heart disease and stroke. Patients with chronic disease substantially increase the cost of healthcare with greater ER presentations, hospital admissions, and specialist care. Nutrition intervention is one key to driving better health outcomes and managing healthcare costs for a variety of chronic conditions.

Suboptimal Diets

High in fats and trans fats

Low in fruits and vegetables

Excessive added sugars, sodium and solid fats

Low in whole grains and low-fat dairy

are a leading risk factor for chronic diseases

Type 2 diabetes
\$237 Billion

Some cancers
\$208 Billion

Obesity
\$190 Billion

Osteoporosis
\$57 Billion

Cardiovascular disease
\$44 Billion



Physiological

- Hypertension
- Heart disease
- Type 2 diabetes
- Decreased life expectancy



Psychological

- Depression



Social

- Stigmatization



Economic

- Reduced productivity

Sources

Hartline-Grafton, H. (2017). The Impact of Poverty, Food Insecurity, and Poor Nutrition on Health and Well-Being. Food Research & Action Center (FRAC). Available at: <https://frac.org/wp-content/uploads/hunger-health-impact-poverty-food-insecurity-health-well-being.pdf>. Accessed on September 20, 2021.

Hartline-Grafton, H. (2019). Hunger is a Health Issue for Older Adults: Food Security, Health, and the Federal Nutrition Programs. Food Research & Action Center (FRAC). Available at: <https://frac.org/wp-content/uploads/hunger-is-a-health-issue-for-older-adults-1.pdf>. Accessed on September 22, 2021.

Garcia, S. P.; Haddix, A.; & Barnett, K. (2018). Incremental Health Care Costs Associated With Food Insecurity and Chronic Conditions Among Older Adults. *Preventing Chronic Disease* 2018; 15: 180058. DOI: <http://dx.doi.org/10.5888/pcd15.180058>.



Barriers to nutrition as an effective intervention

ECONOMIC STABILITY



- | Lack of access to affordable healthcare and prescription medications
- | Inability to afford transportation to medical appointments
- | Cost of living affecting stable housing

EDUCATION ACCESS AND QUALITY



- | Lack of educational and learning resources about healthy eating and nutrition
- | Language barriers for ESL or non-English speakers
- | Less early childhood education and development

HEALTHCARE ACCESS AND QUALITY



- | Lack of access to primary care physicians
- | Uneven quality of localized primary and specialty care
- | Deficiency of nutrition education in physician training
- | Unconscious biases by healthcare systems and providers leading to health inequities and substandard care

NEIGHBORHOOD AND BUILT ENVIRONMENT



- | Food deserts and food swamps
- | Lack of parks, playgrounds and neighborhood exercise outlets
- | Poor transportation links limiting ability to attend appointments

SOCIAL AND COMMUNITY CONTEXT



- | Weaker social norms to pursue preventative care
- | Fewer community support mechanisms for the values of healthy eating
- | Reduced trust between neighbors limiting ability to engage in healthy behaviors

THEN

The Evolution of Food as Medicine and Medically Tailored Meals

First U.S. home-delivered meal program

Philadelphia, PA - pioneering program run by Lighthouse Community Center for seniors, those with severe disabilities and other "shut-ins". This program eventually becomes Meals on Wheels.

Project Open Hand starts

California - nonprofit providing groceries and medically tailored meals to the elderly and those homebound suffering from AIDS.

Study provides critical evidence for the power of Food as Medicine

U.S. government study comparing diet and exercise to drug treatment for those at high risk for Type 2 diabetes. **Metformin group:** 31% reduced risk compared to placebo. **Diet and exercise group:** 58% reduced risk.

WHO report

"Diet, Nutrition and Chronic Disease" comprehensive report recognizes link between food and the prevention of diabetes, cardiovascular disease and cancer.

First Medicare reimbursement for lifestyle-based initiative

Used to treat cardiovascular disease, the program by Dr. Dean Ornish of UCSF helps heart attack patients lower blood sugar, blood pressure and cholesterol levels and reverse arterial blockages through diet, exercise, reduced stress and increased social connections.

1954

1985

2002

2003

2010

2011

2018

2019

2020

Food Is Medicine Coalition (FIMC) begins

Association of nonprofit, medically tailored food and nutrition services providers advancing public policy supporting access to food and nutrition, sharing best practices, and promoting research on the efficacy of food and nutrition services for people with chronic and/or severe illnesses.

CHRONIC Act expands supplemental care benefits

Medicare Advantage supplemental care benefits, including provision of meals, are expanded through Creating High-Quality Results and Outcomes Necessary to Improve Care (CHRONIC) Act of 2018.

CMS starts reimbursing specialized meals

CMS finalizes rule allowing Advantage plans to be reimbursed for supplemental benefits, including providing specialized meals, holding potential to improve health outcomes.

Massachusetts Food for Health initiative launches

Robust, multi-pronged initiative providing support services - including groceries, home-delivered meals and nutrition education - to measure clinical outcomes, ER use, inpatient hospital admissions, overall healthcare expenditures, and the ability to live independently in the community.

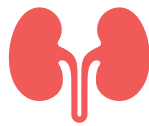
Medically Tailored Home-Delivered Meal Demonstration Pilot Act of 2020

The House of Representatives introduces H.R. 6774, which would establish a Medicare pilot program to address the critical link between diet, food, chronic illness and the health of elderly adults.

NOW

The Future of Food Intervention Programs

At Food For Health, we believe that pairing nutrition with education and lifestyle modification solutions is the most empowering and effective approach to food as medicine. Our programs are designed for at-home delivery of nutritious, tailored meals, groceries and produce to support the prevention or management of chronic conditions, improve overall health and address social determinants of health.



Renal



Diabetes
Pre-Diabetes



Chronic
Heart Disease



Weight
Management



Oncology



Pre-natal
Post-partum



SDoH / Lack of
Access to
Healthy Foods

Medically Tailored Meals,
Grocery & Fresh+Pantry Plans,
Produce Prescriptions,
Graduated Programs

Fully customizable medical and
population tailored programs

Educational tools to inform and
influence healthy habits and
sustain lifestyle changes

Wide range of quality,
nutritious pantry, fresh, and
frozen foods

Convenient at-home delivery

Reduced ER visits,
hospitalizations, readmissions,
and cost of care

White label branding options
available



About the Author



James Gillespie, Ph.D., J.D., M.P.A., M.S. Director of Health and Life Sciences

Senior Advisor and Strategy Consultant, Stanford University School of Medicine

Research Affiliate, Yale University School of Medicine

Co-Founder and Board Member, Black Healthcare and Medical Association

Advisory Board Member, Healthcare Businesswomen's Association

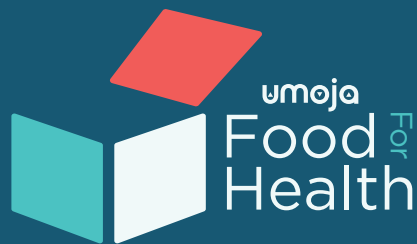
Northwestern University Kellogg School of Management, M.S., Ph.D.

Harvard University School of Law, J.D.

Princeton University School of Public Policy, M.P.A.

Massachusetts Institute of Technology, B.S.

Carnegie Mellon University Heinz School; Rand Graduate School



At Food for Health, we provide at-home delivery of nutritious, tailored groceries, recipes and educational tools to improve health, and support the prevention or management of chronic conditions. Food for Health is a division of Umoja Supply Chain Solutions. At Umoja, we apply our proven expertise in food and logistics to support hunger relief, reduce food insecurity, address social determinants of health and deliver medically tailored nutrition programs. Our creative, customizable solutions are fueled by our talent, analytics, industry insights and vast network of partners, and backed by our commitment to equity and access to food and healthcare for all.

umojafoodforhealth.com