Written Testimony
Submitted to The U.S. Senate Committee on Health, Education, Labor & Pensions
Subcommittee on Primary Health and Retirement Security

Hearing
"Feeding a Healthier America: Current Efforts and Potential Opportunities for Food is Medicine"
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Dear Chairman Markey, Ranking Member Marshall, and distinguished members of the Committee:

I am grateful for the opportunity to testify and share what I have seen and learned from Americans across our great nation. I would also like to extend my thanks to Senators currently advancing innovative Food is Medicine legislative and policy proposals that are supported by diverse stakeholders.

My Expertise:

My testimony reflects my expertise and experiences as a cardiologist, scientist, and public health expert. I serve as Director of the Food is Medicine Institute at Tufts University, an institute dedicated to understanding how to effectively integrate food-based nutritional treatments into healthcare. As a doctor, I see firsthand people of all ages and backgrounds suffering from diet-related illnesses. As a public health scientist, I see the incredible challenges Americans face, every day, to obtain and eat nourishing food. As a researcher, I focus on the science and practice of what we need to eat to keep our bodies healthy; and on the most effective policy and systems changes to support good nutrition, well-being, and health equity.

Over the course of any given year, I see and speak with thousands of people who are not as healthy as they could be. They are doing their best to care for themselves, and their families, patients, constituents, and employees. Most feel a vague unease about the harm our food is doing—and have no idea what the remedy is. Ordinary Americans face food-fad whiplash. Doctors watch their patients grow more obese and ever sicker. Policymakers with good intentions continue to make decisions based on dangerously outdated science. Social media adds to the confusion: thousands of influencers are now paid by the worst elements of the food industry to cynically pitch anti-nutrition messages – "advice" that can be literally lethal.

I'm here to say: *This is not ok. We can fix this. And you and your colleagues across the Senate and House have a responsibility to do so.*

Some ask me: how did a cardiologist become so focused on food and nutrition? My response: why isn't *every* cardiologist focused on food and nutrition? During my years of training in medical school, internal medicine residency, and cardiology fellowship, it was obvious that poor nutrition was the top driver of disease in most of my patients. And yet, we didn't learn anything meaningful on nutrition and health throughout my medical school training.

Think about that: the *top cause of poor health* in the United States – nutrition – is largely ignored by our healthcare system. This explains so many of the problems we face today.

The Facts:

- Poor nutrition is the leading cause of death and disability in the United States – causing more health harms than other major risk factors such as tobacco use, alcohol, opioids, physical inactivity, or air pollution (see *Figure 1* at the end of this testimony).
    - The food we eat is estimated to kill 10,000 Americans each week, cause 1,500 new cases of cancer each week, and cause 16,000 new cases of diabetes each week.[1-3]
    - These horrifying statistics likely *underestimate* the harms of our food, given what we are learning about effects of nutrition on the gut microbiome, brain health, depression, child development, autoimmune diseases, immune function, and more.
- When I entered medical school in 1991, we *did not have* these national epidemics of obesity or diabetes.
    - This has happened in our adult lifetimes, under our noses — under our watch.
    - This is very new: and the main driver is the recent changes to our food.
- Americans are *failing nutrition*. The average score on the Healthy Eating Index (HEI) — a measure of adherence with the Dietary Guidelines — is 58 out of 100. You don't have to be a college professor to know that's an F.
    - The problem is two-fold. First, we eat too much refined starch, sugar, salt, and other additives. These come from highly processed foods, especially in the form of "*acellular nutrients*." For the first time in human history, we are breaking down food into its *molecules* components that we shape and manipulate, devoid of all natural cell structure. This is harming our cells, causing a rush of rapidly digested nutrients into our bloodstream; and also starving our gut bacteria, leaving too few nutrients to reach our large gut. This "double hit" is driving obesity, diabetes, and more.
    - The second problem is that we eat too few fruits, vegetables, nuts, beans, whole grains, seafood, and yogurt (see *Figure 2* at the end of this testimony). These minimally processed foods are rich in fermentable fibers, bioactive phytonutrients, and other compounds that nourish our bodies and our gut bacteria.
    - Critically, when these harms are tabulated, both are important, but *the lack of healthy foods* is causing more health problems than the excess of harmful compounds. This is important: we can't only fight food like tobacco, aiming to regulate, tax, and penalize unhealthy items. *We must also reward, incentivize, and value healthy food for its true health and economic benefits*. We will return to this when we discuss Food is Medicine.
- Poor nutrition is crushing our economy. Poor nutrition is estimated to rack up *$1.1 trillion* in economic losses every year from preventable healthcare spending and lost productivity.[4]
    - For just one condition, type 2 diabetes – a malady almost entirely preventable and treatable with good nutrition – the U.S. government spends *$187 billion* annually on direct medical costs. [5] This is more than the entire budgets of many agencies and departments.
    - The costs of diet-related diseases are crushing families. Over the last 30 years, the average family on employer-sponsored insurance has *lost $125,000 in cumulative wages* due to rising healthcare premiums.[6] Today, the leading cause of household bankruptcy is catastrophic medical expenses. And relative losses are highest for rural, low-income, Black, and Hispanic families.

    - The costs of diet-related diseases are crushing U.S. businesses. The average premium for employer-sponsored healthcare has risen *50% in just 10 years*.[7] Warren Buffet has called rising healthcare premiums "the tapeworm of American economic competitiveness." And the food we eat is feeding that worm.
    - The costs of diet-related diseases are crushing the federal budget and national debt. In 1969, the year I was born, 5% of the federal budget was spent on healthcare. Today, it's 30%. This is by far the *fastest rising discretionary cost* in the federal budget – crowding out every other priority including defense, border control, infrastructure, education, and more.
    - **Senators, if you want to do the things that you believe are important for the American people, you will never have the funds you need until we reduce healthcare spending. And healthcare spending will never go down until we fix food.**
- This is also an *urgent matter of national security*.[8] Don't take my word for it, listen to Mission:Readiness, a group of more than 700 retired U.S. generals and admirals who have been making this case for more than a decade.
    - In 1941, President Franklin D. Roosevelt convened the National Nutrition Conference on Defense,[9] to create urgent new policies to fix the food supply, when 1 in 3 young Americans did not qualify for the draft due to nutritional deficiencies.
    - Today, nearly *8 in 10* young Americans don't quality for military service, and the top medical disqualifier is overweight and obesity.
    - For our nation's sake, our elected leaders today must have the same vision and urgency as FDR to fix our food system.
- Today, *being healthy is the exception*. Far more Americans are sick than well. Poor diets are the primary reason that 7 in 10 adults have overweight or obesity, and 1 in 2 have diabetes or prediabetes.[10] Adding blood pressure and cholesterols levels, *only 1 in 15 adults* has optimal cardiometabolic health.[11]
    - Most American adults are walking around sick, many without even realizing it.
    - For the first time in U.S. history, life expectancy has been declining – and diet-related chronic diseases are a leading contributor.
    - And this starts young. Among 2-5 year-olds, more than 1 in 8 have obesity. Among teens, nearly 1 in 4 have obesity, and 1 in 4 have prediabetes.
- The burdens of our food are also *driving societal discord*. Americans of all incomes, races, and ethnicities —and all political parties, states, and cities — are experiencing high and risings levels of diet-related diseases. But those with lower incomes, living in rural communities, and from historically marginalized racial and ethnic groups are at even higher risk.
    - Forty million Americans — about 1 in 8 households — also experienced food insecurity at some point during the year. Food insecurity is associated with worse nutrition, higher rates of diet-related diseases, and greater healthcare spending.
- **The lack of attention to our food explains so much about the problems we face today: hundreds of millions of sick Americans, hundreds of billions of dollars in preventable healthcare costs, suffering U.S. businesses, exhausted federal and state budgets – and exhausted policy makers.**

The Power of Food is Medicine

Having devoted my career to understanding what we need to eat to stay healthy, and to studying private and public food systems changes to empower people to eat that way, I've been on the front lines helping people sort through the confusion and make better decisions. My work brings me face to face with everyday Americans, patients, doctors, and healthcare executives. I meet CEOs and dynamic entrepreneurs

who grow, package, and prepare our food; community activists fighting for health and food justice; and elected officials charged with fixing our food and health problems.

My testimony today brings together my training, the newest science, and these real-world experiences to provide effective, practical solutions to our national nutrition crisis. One of the top solutions sweeping the nation is: Food is Medicine.

- Food is Medicine (FIM) refers to food-based nutritional therapies to manage disease within healthcare.[12] FIM includes:
    - Physician screening and referral for appropriate medical conditions.
    - Treatment with medically tailored meals, medically tailored groceries, or produce prescriptions.
    - Accompanying nutrition and culinary education, delivered by RDNs, telehealth, or digital counseling.
    - EMR screening for food and nutrition insecurity.
    - Links to healthcare payers and reimbursement.
    - Medical nutrition education for doctors.
- Importantly, FIM can be used to *treat and manage disease* – not just for long-term prevention.
    - Commonly targeted conditions include type 2 diabetes, high-risk pregnancy, heart failure, and cancer.
- While FIM is a medical therapy, not a social program, it *also* helps address important social determinants of health like food insecurity and poverty.
    - This makes FIM a unique "dual purpose" intervention – an effective medical treatment that also addresses social determinants of health and advances health equity, giving all Americans a fair opportunity to achieve their top level of health.
- Whether using meals, groceries, or produce, FIM provides nutritionally curated items, covered in part or full by healthcare, to treat a patient's diet-sensitive condition. These programs can cut through barriers such as cost, transportation, and inadequate knowledge around healthy food.
- Research we and others have conducted shows that FIM programs work.
    - They increase the intake of healthy foods, reduce food insecurity, and improve health outcomes.
    - Observed benefits include lower hemoglobin A1c, body mass index, and blood pressure, as well as improved mental health and disease self-management.
- When targeted to high-risk patients with complex medical conditions, FIM programs also save money. Careful analyses indicate that FIM interventions will be either *highly cost-effective or even cost-saving* compared to many other common medical interventions.
- 1% of Americans produce 25% of healthcare costs; and 5% of Americans produce 50% of healthcare costs.[13] Medically tailored meals are an effective, cost-saving treatment for such high-risk, high-utilization patients.
    - In one state analysis, a medically tailored meals program resulted in net annual savings of $9000 for each patient treated – even after accounting for the costs of the program.[12]
    - Our research estimates that about 6 million Americans qualify for medically tailored meals, and that providing this treatment to these patients will save nearly $14 billion annually – even accounting for the costs of the program (see *Figure 3* at the end of this testimony).[14]
- Medical groceries and produce prescriptions are also highly cost-effective or even cost-saving.
    - North Carolina recently evaluated their Medicaid 1115 waiver experience, which included prominent FIM programming, delivered to 20,000 Medicaid beneficiaries across 33 mostly rural counties in the state. They found that, even accounting for the costs of the program, the intervention resulted in net cost savings for Medicaid.[15]

    - Our new research estimates that if about $45 per month of produce prescriptions were provided to Americans with diabetes and food insecurity, the program within 5 years would prevent 65,000 cardiovascular events and – due to healthcare cost savings – have no additional net cost. Over a lifetime, the program would prevent nearly 300,000 cardiovascular events and save more than $3 billion.
- FIM programs can also support local food systems, farmers, and rural communities.
    - Several FIM programs, such as Recipe4Health in Alameda County, California, focus on procuring food from local small and mid-sized farmers. This serves as an economic engine for farmers, their families, and their communities.

Food is Medicine is Accelerating – But Much More is Needed

Based on these health and cost benefits, FIM is accelerating across the nation.[12]

- Ten states now have section 1115 waivers to implement FIM in Medicaid: California, Delaware, Illinois, Massachusetts, New Jersey, New Mexico, New York, Oregon, North Carolina, and Washington. Groups in other states are pushing for similar waivers, such as in Oklahoma, Florida, and others.
- Medicare Advantage programs across the country are implementing FIM based on Congress' 2018 expansion of Special Supplemental Benefits for the Chronically Ill (SSBCI). In 2020 when the program launched, 71 plans covered medically tailored meals, and 101 plans covered medical groceries and produce prescriptions. Today, 422 plans cover medically tailored meals, and 929 plans cover medical groceries and produce prescriptions.
- The Department of Veterans Affairs and the Indian Health Service have launched FIM pilot programs.
- The Department of Health and Human Services recently held its first FIM Summit, and CMS and CMMI are together developing toolkits and definitions for FIM programs.
- Large commercial payers are implementing FIM, including Elevance, Blue Cross Blue Shield, Geisinger Health, and Promedica.
- Kaiser Permanente, the largest nonprofit integrated health system in the nation, is coordinating its 5 years of growing FIM programs into the nation's first healthcare FIM Center of Excellence.
- EPIC and other large commercial EMRs are integrating food insecurity screening into their applications.
- Nonprofits across the nation are implementing FIM, including within coalitions like the Food is Medicine Coalition and National Produce Prescription Collaborative.
- Private sector companies are launching FIM programs, like Instacart, Walmart, Kroger, and more.
- Venture capital is investing in exciting FIM start-ups, like Season Health, Territory Foods, NourishedRx, Good Measures, Farmbox Rx, and more.
- The Rockefeller Foundation and American Heart Association have committed $250 million to FIM research.
- The National Institutes of Health has approved a plan to launch FIM Networks or Centers of Excellence, similar to the NIH-funded Cancer Centers of Excellence that have been so critical to advance cancer research and treatment.
- The American Academy of Pediatrics and American College of Lifestyle Medicine have committed to FIM training for all their members.
- The Accreditation Council for Graduate Medical Education (ACGME) has announced plans to make medical nutrition education mandatory for all residency and fellowship programs by 2026.

These American Innovations Require Policy Updates

With the evidence and progress, the nation is at a tipping point to accelerate FIM. More research and implementation projects are critical to assess which FIM programs work best for which patients – especially in Community Health Centers, Medicare, Medicaid, and the VA. This includes:

- Optimal dose ($/month), program duration, and intensity of nutrition and culinary education.
- Meals vs. groceries vs. produce; hospital pick-up vs. retail shopping vs. home delivery.
- Eligible disease conditions and social criteria.

Today, the vast majority of Americans cannot access FIM therapies.

- Most states have not applied for Medicaid 1115 waivers to implement FIM.
- Medicare Part A & B – which cover more than two-thirds of Medicare enrollees – do not cover FIM.
- Many commercial plans are awaiting greater clarity in federal healthcare around FIM.
- FIM vendors and suppliers are not available in most parts of the country.
- Most doctors remain poorly educated around nutrition and FIM.

It's time for Congressional action to catalyze the scaling and success of FIM. Congress should:

- Include support for FIM programs at Community Health Centers (such as proposed in S.2840, introduced by Senators Sanders and Marshall). These Centers serve the most vulnerable Americans and are most likely to benefit from collaborations and support in this space.
- Encourage CMS to continue to release guidance and toolkits to make it easier for states to apply for Medicaid 1115 waivers that include FIM.
- Advance FIM in Medicare, such as through S.2133, the Medically Tailored Home-Delivered Meals Demonstration Pilot Act, introduced by Senators Marshall, Cassidy, Booker, and Stabenow in the Senate Finance Committee.
- Encourage CMMI to incorporate and test FIM approaches in their existing pilots.
- Appropriate at least $40 million to the NIH Office of the Director for the specific purpose of launching the FIM Networks or Centers of Excellence, a concept which has already received clearance at NIH. This initiative will combine cutting-edge research with patient care, advancing FIM just as the NIH Cancer Centers of Excellence have advanced cancer treatment and control.
- Provide a meaningful increase in support for the NIH Office of Nutrition Research, which is today woefully underfunded compared to other NIH Office of the Director offices (*see* Table 1 on following pages) despite the pressing importance of its research mission for the American people.
- Support continuing FIM pilots at the Department of Veterans Affairs and Indian Health Service.
- Initiate FIM pilots for military personnel and their families at the Department of Defense.
- Expand support for produce prescriptions within the USDA GusNIP program.
- Ensure meaningful nutrition education for doctors by contacting accreditation and licensing bodies to indicate that it's time for change, including the American Association of Medical Colleges (AAMC), Accreditation Council for Graduate Medical Education (ACGME), Accreditation Council for Continuing Medical Education (ACCME), and American Board of Internal Medicine (ABIM).
- Incorporate report language to encourage NIH to implement FIM research across its institutes and centers, coordinated by the Office of Nutrition Research.
- Incorporate report language to encourage CMS to accelerate food and nutrition security screening and clinical care and referral pathways in the EMR.
- Incorporate report language to ensure Health Savings Account can be used for accepted FIM therapies.

Healthcare systems, payers, doctors, patients, public and private sector vendors, and advocacy and clinical groups all support FIM. **It's time for Congressional action to bring FIM to the American people. T**hank you for the opportunity to testify.

Figure 1. Modifiable causes of death in the United States. Source: JAMA. 2018;319(14):1444-1472. doi:10.1001/jama.2018.0158/

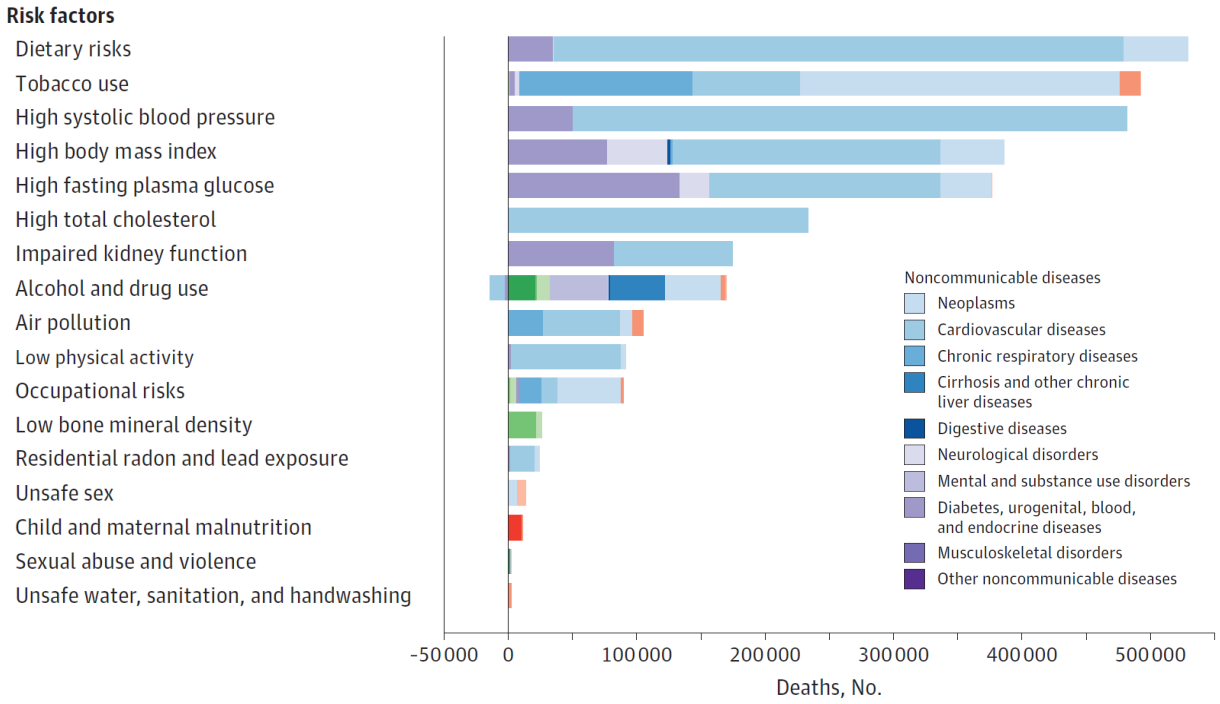

Figure 2. Dietary intakes of Americans compared to goals (Dietary Guidelines for Americans). Source: https://www.dietaryguidelines.gov/sites/default/files/2021-11/DGA_2020-2025_CurrentIntakesSnapshot.pdf

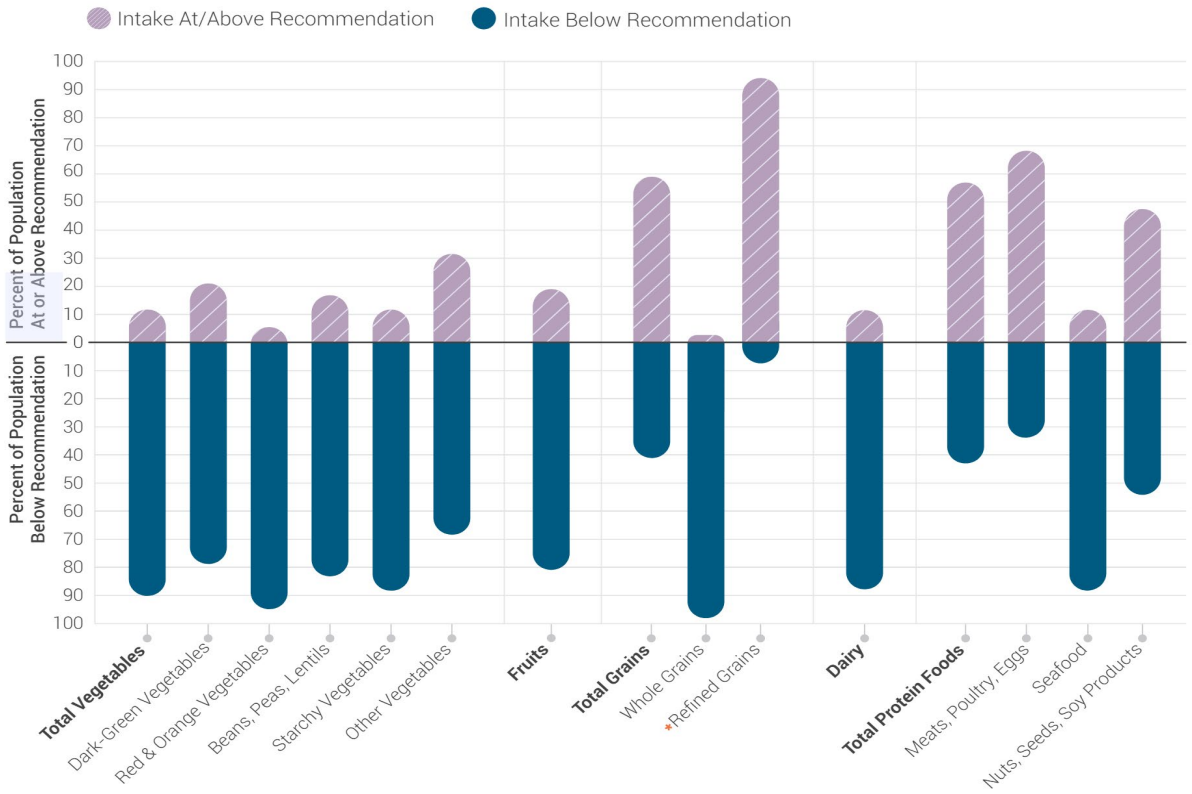

Figure 3. Estimated health effects, costs, and net savings of providing medically tailored meals to the approximately 6.3 million eligible Americans with high-risk, complex medical conditions and limited activities of daily living. Source: https://tuftsfoodismedicine.org/true-cost-fim-case-study-report/

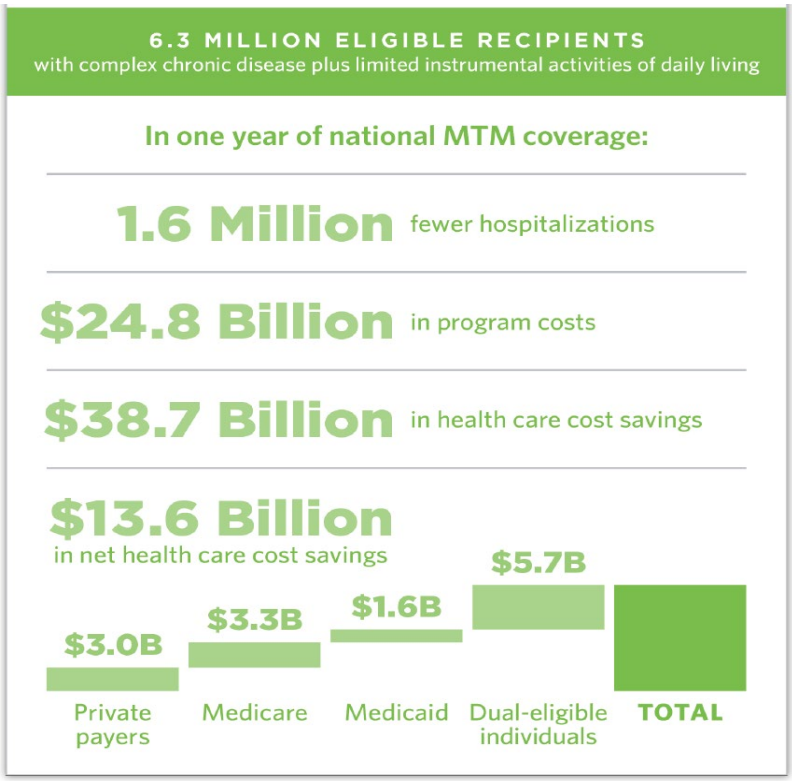

Table 1. FY 2023 and FY 2024 Funding for Offices within the NIH Office of the Director. Source: https://officeofbudget.od.nih.gov/pdfs/FY25/insti_center_subs/27-OD_FY25_CJ_Chapter.pdf

Division of Program Coordination, Planning, and Strategic Initiatives (DPCPSI)
Budget Summary
(Dollars in Thousands)

	FY 2023 Final	FY 2024 CR	FY 2025 President's Budget	FY 2025 +/- FY 2023
Office of the DPCPSI Director	28,426	28,426	41,026	12,600
Office of Behavioral & Social Sciences Research	40,845	40,845	40,845	0
Office of AIDS Research	67,589	67,589	67,806	217
Office of Research on Women's Health	77,557	77,557	153,909	76,352
Office of Disease Prevention	17,873	17,873	17,873	0
Office of Dietary Supplements	28,500	28,500	28,500	0
Office of Data Science Strategy	85,000	85,000	85,000	0
Office of Research Infrastructure Programs	309,393	309,393	259,393	-50,000
Office of Nutrition Research	1,313	1,313	1,313	0
Common Fund	735,001	735,001	722,401	-12,600
Total	**$1,391,497**	**$1,391,497**	**$1,418,066**	**$26,569**

Footnotes

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