

The Invisible Hand of Public Health

How Good Intentions Lead to Mass Harm

James Oliver

February 16, 2025

Abstract

The American food and healthcare systems are composed of well-intentioned individuals—farmers, doctors, policymakers, and scientists—who believe they are improving lives. Yet, despite their efforts, life expectancy is declining, chronic disease is surging, and public health is deteriorating. This paper shows that these outcomes are not the result of bad actors but of systemic misalignment—a structure in which every participant optimizes for their own constraints, producing mass harm as a byproduct.

The food system does not optimize for nutrition; it optimizes for efficiency and profit, leading to an overproduction of cheap, hyper-palatable, inflammatory foods. The healthcare system does not optimize for health; it optimizes for revenue, making chronic disease a more valuable economic asset than prevention. The result is a self-sustaining feedback loop in which food creates illness, and medicine monetizes its management.

This is not a conspiracy. There is no need for malice—only incentives. The system does not need villains to function as it does; it only requires that each actor follows their economic imperative. Without intervention, these forces will continue to drive public health toward collapse.

The solution is not to fight companies or institutions but to redesign the incentives that shape their behavior. If food companies profit from nutrition, they will optimize for it. If hospitals profit from prevention, they will prioritize it. A system designed for health will produce health as naturally as the current system produces disease.

I. Introduction

Across the United States, millions of individuals dedicate their lives to improving public health. Farmers and food scientists work to ensure food is affordable and widely available. Medical professionals and researchers devote their careers to treating disease and advancing medical knowledge. Public health officials and policymakers strive to enhance health outcomes at scale. These individuals operate with good intentions, believing their work contributes to the well-being of society.

Yet, despite these efforts, the nation faces a health crisis of historic proportions. Life expectancy is declining.¹ Chronic diseases are rising.² Obesity and metabolic disorders have reached epidemic levels.³ If so many people are working toward better health, why are the outcomes getting worse?

It is tempting to assume this is the result of bad actors—corporate greed, political corruption, or intentional deception. And while isolated cases of misconduct exist, they are exceptions, not the rule. The true cause is far more insidious: a systemic misalignment of incentives. The food system and healthcare system, though composed of well-meaning individuals, are incentivized in ways that are directly oppositional to consumer health.

The food industry, optimizing for efficiency, affordability, and consumer demand, has inadvertently created an environment dominated by cheap, highly processed, inflammatory foods. The healthcare system, structured around financial and institutional incentives, has evolved to treat chronic disease rather than prevent it.

The outcome is neither a grand conspiracy nor a failure of individual effort, but the natural consequence of systems following their own logic. The modern food system did not conspire against human health—it simply evolved to prioritize efficiency, often at the cost of nutritional integrity. The healthcare industry did not intentionally sideline prevention—it structured itself around the incentives available to it.

This is neither a mistake nor an accident. It is the inevitable result of systems optimizing for their own constraints. Harm does not result from deliberate intent, but from a structure where well-meaning individuals operate within incentives that produce unintended consequences.

The decline in life expectancy is not the result of a hidden agenda. It is the byproduct of a system indifferent to its outcomes. The following sections will examine these systemic forces in detail and explore potential pathways for realignment—toward a system where public health is not an afterthought, but an inevitable result of its design.

II. The Food System

The modern food system does not optimize for the body's health—it optimizes for efficiency, cost, and consumer demand. The result is a market flooded with cheap, hyper-processed, chemically engineered foods, not because they are the best option, but because they are the most profitable.

The Economic Imperative: Cheap Food, Chronic Disease

The common refrain is: “People can just choose healthier options.” In theory, this is true. In practice, it is a fantasy. The American food landscape is not a free market governed by consumer choice—it is a system where government subsidies and corporate incentives determine what is cheapest, most available, and most consumed.

Corn, soy, and wheat dominate the American food supply not because they are the most nutritious options, but because they are the most subsidized.⁴ These three crops receive the vast majority of federal agricultural subsidies, making them artificially cheap compared to fruits, vegetables, and nutrient-dense whole foods. The result is a distorted market where ultra-processed products—derived from these cheap ingredients—are far more affordable and accessible than their whole-food counterparts.

- **Corn** → High-fructose corn syrup (soda, candy), corn oil (fried foods), tortilla chips.
- **Soy** → Soybean oil (processed snacks, fast food, frozen meals).
- **Wheat** → White flour (pizza, bread, cereal, crackers).

Consider the pricing paradox: a fast-food burger costs less than a head of lettuce. A liter of soda is cheaper than a bottle of water. This is not an accident—it is policy. The government does not subsidize broccoli, but it does subsidize corn, which is processed into high-fructose corn syrup, a staple ingredient in nearly every ultra-processed food.⁵

Coca-Cola's High-Fructose Corn Syrup Switch: When Cost Determines Health

One of the most famous examples of cost-driven food optimization is Coca-Cola's switch from cane sugar to high-fructose corn syrup in the 1980s.

The decision was not about nutrition. It was not about taste. It was about cost. Corn syrup was cheaper than sugar due to U.S. agricultural subsidies, so Coca-Cola reformulated its flagship product.⁶

The executive who made the switch was hailed as a financial genius—he had saved the company millions. But this single decision permanently altered the American food landscape, cementing high-fructose corn syrup as the dominant sweetener in processed foods.

This is how the system works. Every decision optimizes for cost and efficiency. Public health is not part of the equation.

The Science of Addiction: Engineered for Overconsumption

The assumption that people can simply exercise moderation ignores a crucial fact: these foods are engineered for addiction. Just as the tobacco industry perfected the science of nicotine delivery, the food industry has spent decades optimizing “bliss point” engineering—the precise balance of sugar, salt, and fat that maximizes dopamine release, triggering compulsive consumption.⁷

The human body was never designed to handle this level of hyper-palatable stimulation. Processed foods override natural satiety mechanisms, blunting the body’s ability to recognize fullness, driving overconsumption.⁸ The numbers tell the story:

- The average American now consumes 500 more calories per day than in the 1970s.⁸
- Ultra-processed foods make up approximately 60% of all calories in the American diet.⁹
- Sugary beverages alone account for around 150 daily calories.¹⁰

This is not a matter of willpower. It is biochemical manipulation. Food companies invest millions in research to make products irresistible, hiring neuroscientists and sensory experts to create the most stimulating combinations of crunch, sweetness, and mouthfeel. These products hijack the brain’s reward system, much like addictive drugs.⁷

If you introduce a food supply that maximizes immediate gratification at the cost of metabolic function, public health will collapse. And that is exactly what has happened.

The Predictable Consequence: A Nation of Sick People

The human body is resilient, but it is not invincible. When an entire population is exposed to a food system designed for corporate efficiency rather than biological compatibility, the result is systemic metabolic failure. The statistics are staggering:

- **Obesity:** 42% of American adults are now obese, a near tripling since the 1970s.²
- **Diabetes:** 1 in 3 Americans has prediabetes, yet 80% are unaware of it.¹¹
- **Heart Disease:** Still the #1 cause of death, despite being largely preventable.²
- **Cognitive Decline:** Diets high in ultra-processed foods increase dementia risk by 28%.¹²
- **Falling Life Expectancy:** The U.S. is experiencing its first sustained life expectancy decline in modern history.¹

These are not isolated issues. They are symptoms of a system functioning exactly as designed. The modern food system was never built for health—it was built for profit.

III. The Healthcare System

The Core Issue: Chronic Disease is More Profitable Than Health

If a car manufacturer could choose between selling a vehicle that lasts 20 years with minimal repairs or one that requires constant, costly maintenance, which would be more profitable? The answer is obvious. A reliable, low-maintenance car is great for consumers but terrible for the company's bottom line. The American healthcare system operates on the same principle. Chronic disease is not an epidemic to be eradicated—it is a revenue stream to be managed.

In the U.S., healthcare is not structured to keep people healthy. It is structured to maximize billable procedures, prescriptions, and hospital stays. Fee-for-service medicine means that doctors, hospitals, and pharmaceutical companies are paid per intervention, not per outcome. A bypass surgery is a \$50,000 procedure. A lifetime of statins and blood pressure medication is worth tens of thousands per patient.¹³ A diabetes diagnosis means a recurring customer for insulin, glucose monitors, and dialysis treatments.

Contrast this with prevention. A nutrition consultation? Reimbursed at a fraction of the cost of a single ER visit. A lifestyle intervention? Often not covered at all. Even when prevention does exist—such as obesity or diabetes management programs—these services receive minimal funding compared to the billions spent on chronic disease treatment.

The Economic Machine: Chronic Disease as a Revenue Stream

Chronic illness has become one of the most reliable revenue generators in the American economy. 90% of healthcare spending is now devoted to managing chronic conditions, not curing them.² This is not a healthcare system; it is a disease management system.

A Thought Experiment: What If Everyone Became Healthy Overnight?

Consider this scenario: If every American woke up tomorrow completely healthy, free from chronic disease, what would happen to the healthcare industry?

The demand for prescription drugs would vanish. Hospitals would see massive declines in patient admissions. Medical device companies, pharmaceutical giants, and insurance providers would face financial devastation.

This would not be a moment of triumph, but an economic collapse. The system is not designed to eliminate disease—it is built to manage it indefinitely.

- Diabetes is a \$400 billion industry with insulin alone generating \$27 billion per year.¹¹
- Statins (cholesterol drugs) have generated over \$1 trillion in total sales.²
- Obesity-related conditions account for \$173 billion annually in direct medical costs, from joint replacements to sleep apnea treatments to weight-loss drugs.¹⁴

- Dialysis and kidney disease treatment form another multi-billion-dollar industry, fueled largely by complications from diabetes and hypertension.¹⁵

These numbers are not just statistics—they are evidence that chronic disease is the foundation of the American healthcare economy. If the U.S. population were to suddenly become metabolically healthy, it would wipe out billions in healthcare profits overnight. The financial incentive is to sustain disease, not eliminate it.

The Perverse Incentives of Chronic Disease: The \$52,000 Therapist

The Therapist's Business Model: Curing vs. Retaining a Patient

To understand the economic value of chronic disease, consider the economics of therapy.

A therapist charges \$100 per session and sees a patient weekly.

Scenario 1: The Patient is Treated Quickly

- The therapist is highly effective and helps the patient recover in one year.
- That means $52 \text{ sessions} \times 100 = \$5,200$ total revenue from this patient.
- The patient no longer needs therapy and moves on with their life.

Scenario 2: The Patient Stays in Therapy Indefinitely

- Instead of improving in one year, the patient remains in therapy for 10 years.
- The therapist earns $100 \text{ per week} \times 520 \text{ weeks} = \$52,000$ in total revenue.

A financial contradiction emerges—the therapist earns 10 times more if the patient remains in therapy rather than getting better. By successfully treating the patient, they reduce their own income. The better they are at their job, the worse their financial outcome. Conversely, the less effective they are, the more they financially benefit.

Healthcare's Chronic Disease Model Works the Same Way

Chronic disease follows the same economic principles:

- **Scenario 1: A Cured Patient (Bad for Business)** → No ongoing revenue.
- **Scenario 2: A Chronically Ill Patient (Good for Business)** → Recurring revenue for decades.

From a financial perspective, a patient who remains in the system generates exponentially more revenue than a patient who is cured. This is not a failure of healthcare—it is the natural outcome of a system designed to sustain treatment rather than eliminate disease.

A cured patient is lost revenue. A chronically sick patient is indefinite revenue.

IV. The Illness Flywheel

Food Creates Disease → Disease Creates Medical Profits

The cycle is not just persistent—it is self-reinforcing. Every component strengthens the others, ensuring that the system does not collapse but perpetuates itself indefinitely.

1. The **food industry** produces hyper-processed, inflammatory foods because those are the most profitable.
2. These foods drive rising rates of **obesity, diabetes, and chronic disease**.
3. The **healthcare industry** profits by managing these conditions rather than preventing them.
4. Because chronic illness is now so common, **treating it becomes the default**, rather than questioning its existence.
5. This **normalizes chronic disease** as an unavoidable part of life rather than an engineered consequence of systemic incentives.

This is a closed-loop system. The food industry creates the sick customers. The healthcare industry profits from treating them. No external force is required to maintain it—the system sustains itself.

No Single Bad Actor: Why the System Runs Itself

There is no need for a secret meeting. There is no cabal of executives plotting to keep people sick. The system does not require malice—only incentives.

Every participant in this cycle is just following their economic imperative:

1. **A policymaker** subsidizes staple crops (corn, soy, wheat) to ensure food security.
2. **A farmer** plants these subsidized crops because they are guaranteed to be purchased.
3. **A product formulator** at a food company uses the cheapest ingredients to maximize margins.
4. **A marketer** optimizes for sugar, salt, and fat because these flavors drive the most sales.
5. **A retailer** stocks the most profitable, fastest-moving foods—highly processed, shelf-stable products.
6. **A consumer** buys what is cheapest and most available.
7. **A doctor** treats the resulting disease, prescribing medications instead of recommending lifestyle changes.

8. **A hospital administrator** prioritizes procedures over prevention because that is how hospitals are reimbursed.
9. **An insurance company** prices plans assuming that chronic disease is inevitable.

No one in this sequence made a decision to cause harm. No one conspired to create an obesity epidemic or an explosion of chronic disease. And yet, the system produces sickness at scale, year after year. No one is driving the car, but the engine is still running.

The Illusion of Reform: Why Incentives Block Change

Because the system is self-sustaining, reform efforts that do not address core incentives will fail.

- **Nutritional guidelines** are updated, but remain compromised by industry lobbying.
- **Public health campaigns** encourage healthier eating, but they cannot outcompete billion-dollar food marketing budgets.
- **Medical schools** introduce lifestyle medicine courses, but doctors still operate in a reimbursement model that pays them per procedure, not per health outcome.

This is why nothing changes—every attempt at reform is outmatched by the sheer force of systemic inertia. **A system optimized for disease cannot produce health.**

The Inescapable Logic of the Cycle

The reason this will never stop on its own is because each part of the system depends on the others to survive:

1. The food industry creates the demand for medical care.
2. The healthcare industry relies on the continued existence of disease for revenue.
3. Both industries generate trillions of dollars from this dynamic.
4. This financial weight ensures that no policy change, no public health initiative, and no consumer movement will be sufficient to dismantle it.

The only way to break this cycle is to fundamentally realign incentives so that health itself becomes the most profitable outcome. A system incentivized to produce sickness will create a nation of sick citizens. A system incentivized to produce health will create a nation of healthy citizens. Outcomes follow incentives.

V. Breaking the Cycle: The Only Way Out

If the system is self-sustaining, and reform efforts that do not change core incentives are doomed to fail, what is the solution? The answer is not to fight the system at the margins, but to fundamentally realign incentives so that health itself becomes the most profitable outcome.

Flipping the Model: A Subscription for Prevention, Not Disease

The issue is not that the healthcare industry profits—it is what it profits from. The problem is not subscriptions—it is what they are monetizing.

- A therapist makes \$52,000 over 10 years by keeping a patient in weekly therapy.
- A hospital makes billions by managing diabetes for decades.

What if the model remained, but the incentive was reversed?

- What if a therapist made the same amount by helping people build mental resilience and long-term emotional well-being?
- What if a hospital profited from preventing diabetes, rather than waiting until it developed?

The financial structure does not need to be dismantled—it needs to be repurposed. A subscription-based model that rewards prevention rather than treatment would not eliminate revenue—it would redirect it toward sustaining health rather than managing illness.

Policy Shifts: How Government Can Stop Funding Disease

Private industry does not set the rules—it simply optimizes within them. If the incentives stay the same, so will the outcomes. The government is responsible for setting the rules of the game, and if the current rules reward disease over health, then the results will remain unchanged.

Three immediate structural changes would begin this realignment:

- Shift agricultural subsidies away from corn, soy, and wheat and toward nutrient-dense foods like vegetables, legumes, and regenerative agriculture.
- Reform healthcare reimbursement models to reward prevention rather than paying per procedure.
- Implement front-of-package labeling and stricter marketing laws to prevent ultra-processed foods from dominating consumer choices.

The role of government is not to fight against private industry—it is to set the correct incentives so that industry naturally optimizes for the right outcomes. The free market is

a powerful force, but it follows the path of least resistance. Right now, that path leads to disease. Government policy determines whether the system optimizes for sickness or for health.

The Future: A System Where Health is Profitable

The only way out of this cycle is to create a system in which food companies and medical institutions profit from health instead of disease. The fundamental question is not whether change is possible—it is whether the market incentives can be shifted so that health is the logical, inevitable outcome of the system.

VI. Conclusion: A War Without Bullets

Every year, preventable chronic diseases kill more Americans than all U.S. combat deaths in World War II—many times over.

- **Total U.S. combat deaths in World War II:** 405,399¹⁶
- **Annual deaths from preventable chronic diseases (U.S.):**
 - **Heart Disease:** 700,000 deaths/year¹⁷
 - **Type 2 Diabetes & Related Complications:** 87,000 deaths/year¹⁸
 - **Obesity-related illnesses:** 300,000 deaths/year³
- **Total:** 1,087,000+ preventable deaths every single year¹⁹

These deaths do not come from battlefields, air raids, or enemy fire. They are not the result of war, terrorism, or natural disasters.

They come from the normal function of an economic system in which food manufacturers optimize for hyper-palatable, nutrient-poor products; healthcare providers are reimbursed for procedures rather than prevention; and government policy subsidizes calorie abundance over nutritional quality.

No dictator ordered these deaths. No general planned this war. No enemy declared it. And yet, the casualties mount. Year after year. Quietly and systematically. This is not a war in the traditional sense, but its body count exceeds anything a war could ever achieve.

The most staggering truth isn't just the number of lives lost. It's that these deaths happen without a single shot fired—without a single bad actor, without a single act of malice.

This Is Not a Conspiracy—It's Worse

The most unsettling truth is not that this crisis exists, but that it exists without malice.

Every major actor in this system is acting with good intentions:

- The government is trying to ensure food security by subsidizing staple crops.
- The food industry is simply creating products that consumers want.
- The healthcare industry is focused on helping people get better.

And yet, despite these good intentions, the result is mass harm. This is the most dangerous part: good intentions are not enough.

If this were a conspiracy, it could be exposed and dismantled. If this were the work of a singular villain, they could be confronted. But there is no villain—only a system functioning exactly as designed.

This is why public health will continue to decline—unless something fundamentally shifts.

A System That Finally Works for Us, Not Against Us

The most hopeful part of this realization is that systems are not immutable. They are designed, and they can be redesigned.

This is nobody's fault. The system did not arise from malice, but from incentives—each part evolving to optimize within the constraints it was given. Policymakers wanted food security. Farmers wanted stable income. Corporations wanted efficiency. Doctors wanted to help patients. Every actor followed the logical path available to them, and yet, the system that emerged produces mass harm.

Now that we understand this, we face an enormous opportunity. If a system can emerge unintentionally, it can also be designed intentionally. We now have the power to shape a system that optimizes not for disease management, but for health itself.

We have millions of dedicated professionals—scientists, doctors, engineers, policymakers—who devote their lives to improving human health. Let them help.

Right now, their efforts are constrained by a system that rewards disease over health. If we change the incentives, we unlock their full potential.

- If we align subsidies with nutrition, the food industry will create healthier products.
- If we align reimbursements with prevention, doctors will prioritize long-term health.
- If we shift regulation to empower consumers, people will make better choices.

This is not about forcing companies to act against their interests—it is about making health the most profitable outcome. The future of public health depends on one thing: breaking the cycle and making health the inevitable outcome.

Ad astra per scientiam.

Key Takeaways

1. Good intentions do not override bad incentives

Even when actors in the system—the government, the food industry, and the healthcare industry—operate with good intentions, systemic harm persists. The root issue is not individual malice but structural incentives.

2. The system does not require bad actors—only misaligned incentives

If corporations profit from chronic illness, they will optimize for chronic illness. If hospitals profit from disease management rather than prevention, they will optimize for disease management. The system follows the incentives it is given.

3. The cycle is self-reinforcing

The food industry manufactures the conditions for chronic disease. The healthcare industry profits from treating it. These roles are structurally complementary, requiring no conspiracy—only economic alignment.

4. Superficial reforms fail because they do not alter fundamental incentives

Public health campaigns, labeling laws, and revised medical guidelines cannot compete with billion-dollar incentives that sustain the status quo. The system will not change unless the rules of the system change.

5. The rules are written by policymakers—so they must be rewritten for health

Private industry operates within the framework it is given. If the framework rewards disease, disease will persist. If the framework rewards health, health will prevail. The incentives must be rewritten at the structural level.

6. The only viable solution is to make health profitable

The system does not need to be dismantled—it needs to be realigned. If doctors are incentivized to prevent disease, they will prevent disease. If food companies profit from nutrition rather than hyper-palatable products, they will optimize for nutrition. The system itself must be rewritten so that the logical outcome is health, not sickness.

7. We already have the people who want to solve this—remove the constraints

There are millions of doctors, scientists, policymakers, and engineers dedicated to improving human health. However, they are constrained by a system that rewards disease. If we change the incentives, we unleash their full potential.

Falsification Check

As Richard Feynman famously stated:

“It doesn’t matter how beautiful your theory is, it doesn’t matter how smart you are. If it doesn’t agree with experiment, it’s wrong.”

The purpose of this section is to ensure that this framework adheres to that principle. A claim, theory, or model is only meaningful if it remains consistent with observable reality.

This principle of falsification is the cornerstone of the scientific method, ensuring that only theories that withstand rigorous scrutiny remain accepted as valid explanations of reality.

There are only two possible outcomes for any falsifiable claim:

1. **Falsification:** If a premise is contradicted by empirical observations, the framework must be revised or discarded.
2. **Provisional Acceptance:** If a premise cannot be falsified, it must be provisionally accepted as the best available explanation until such time that it can be falsified.

This framework rests on three fundamental premises. If any of them are false, the argument collapses.

1. **Government policy determines the financial incentives of both industries.**
Food subsidies, healthcare reimbursement structures, and regulatory frameworks shape the economic realities of both sectors. If government intervention had no meaningful impact, then market forces alone should produce optimal public health outcomes. To falsify this, one would need to show that healthier populations emerge naturally, independent of government policy, in environments where these financial incentives remain unchanged.
2. **Food companies optimize for profit, not nutrition.**
Food manufacturers develop products based on economic incentives, favoring cost-efficiency, long shelf life, and consumer demand over health outcomes. If this were false, companies would systematically prioritize producing the most nutritious, least addictive foods even when more profitable alternatives exist.
3. **The healthcare industry profits more from managing chronic disease than from preventing it.**
Hospitals, pharmaceutical companies, and insurance providers generate more revenue from treating long-term illness than from eliminating it. If this were false, the industry would consistently invest in and prioritize prevention over sustained disease management.

If any of these premises are disproven, this framework must be revised or discarded. If they hold under empirical scrutiny, the framework remains a coherent explanation for the systemic failures in public health.

References

- [1] Centers for Disease Control and Prevention. Life expectancy in the u.s. dropped for the second year in a row in 2021. *National Center for Health Statistics*, 2022.
- [2] Centers for Disease Control and Prevention. Chronic diseases in america: The leading causes of death and disability. *CDC National Center for Chronic Disease Prevention and Health Promotion*, 2023.
- [3] George Washington University STOP Obesity Alliance. Fast facts – obesity-related chronic disease. *Milken Institute School of Public Health*, 2023.
- [4] Food Revolution Network. Food deserts: Causes, impacts what to do. *Food Revolution Blog*, 2022.
- [5] Farm Action. The great contradiction between u.s. food subsidies and dietary guidelines. *Farm Action Report*, 2019.
- [6] Center for Science in the Public Interest. Soda industry spent \$67 million opposing state, city soda taxes warning labels. *CSPI Policy Brief*, 2016.
- [7] Gearhardt et al. Social, clinical, and policy implications of ultra-processed food addiction. *BMJ*, 2023.
- [8] National Institutes of Health. Ultra-processed diets cause excess calorie intake and weight gain: A randomized controlled trial. *Cell Metabolism*, 30:67–77, 2019.
- [9] American Medical Association. What doctors wish patients knew about ultra-processed foods. *AMA Public Health Report*, 2023.
- [10] Centers for Disease Control and Prevention. Sugary drinks and obesity: A major contributor to metabolic disease. *CDC Public Health Reports*, 2024.
- [11] American Diabetes Association. Economic costs of diabetes in the u.s. *Diabetes Care*, 47(1):26–35, 2022.
- [12] Kumar B. Rajan, Lisa L. Barnes, and Neelum T. Aggarwal. Association of ultra-processed food consumption with cognitive decline. *JAMA Neurology*, 79(10):1034–1044, 2022.
- [13] National Institutes of Health. The high cost of medical procedures and chronic disease management. *NIH Health Policy Report*, 2024.
- [14] Centers for Disease Control and Prevention. Fast facts: Health and economic costs of chronic conditions. *CDC Chronic Disease Report*, 2023.
- [15] Centers for Disease Control and Prevention. Chronic kidney disease in the united states, 2023. *CDC Public Health Reports*, 2023.
- [16] U.S. Department of Defense. U.s. military casualties in world war ii. *National Archives Report*, 2023.
- [17] Centers for Disease Control and Prevention. Leading causes of death in the united states. *CDC National Vital Statistics*, 2023.
- [18] Centers for Disease Control and Prevention. Diabetes mortality in the united states. *CDC Chronic Disease Report*, 2023.
- [19] Centers for Disease Control and Prevention. Annual mortality from preventable chronic diseases. *CDC Public Health Report*, 2023.

Acknowledgments

This work reflects a collaborative effort: the human author originated and refined the ideas, while generative AI systems assisted with drafting, formatting, and synthesis. The intent is not personal recognition but to contribute these insights to shared human knowledge, making them as accessible as possible for educators, policymakers, and curious minds alike.

No external funding was received, and the author declares no competing interests.

License

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). This allows others to share, adapt, and build upon the work, provided proper attribution is given to the author.