Four Ethical Principles for Brokers to Follow

By Gary Fradin

Four Ethical Principles

for Health Insurance Brokers to Follow

Table of Contents

Introduction

This text reviews four ethical business principles. Brokers who follow these principles in their customer dealings are commonly perceived as acting ethically; those who do not, act unethically.

Our purpose here is to glean time honored, traditional, universal ethical principles from various sources and apply those lessons to today's American health insurance brokers.

The four principles we will discuss in today's course:

1. Provide the **greatest good for the greatest number** of your clients.
2. Avoid selling **false hope** to clients, their employees and your subscribers.
3. ***Lifnei iver*** or **'Do not place a stumbling block before the blind'** from Leviticus 19:14 and a fascinating follow up, 'hochei-ach tochi-ach' (both expressions badly transliterated Hebrew) from the Book of Isiah, meaning roughly 'rebuke your neighbor when he errs out of love and concern', and
4. **Don't 'let the buyer beware' but instead 'do your fellow a favor'** from Genesis 23, the first commercial transaction described in the Bible.

We will discuss each of these principles in turn and tie their various lessons to modern health insurance broker and client interactions.

Why Continuing Education Classes?

First, an introductory comment on the purpose of continuing education classes. CE classes are not the venue to teach or learn regulatory details and provide policy form updates in our opinion. The continuing education regulatory constructs and requirements preclude this: most Massachusetts brokers only take CE classes once every 3 years, insufficiently regular and routine to use these courses as resources to keep current on plan and regulatory details.

Instead, CE classes can help brokers think more broadly about how our healthcare system functions and the role health insurance policies play in it. Brokers can step back from their day-to-day, detail-oriented activities to contemplate their larger role in ameliorating client problems. That is our point of departure, less regulatory detail, more systemic contemplation.

I hope that viewpoint resonates with readers and that this course helps brokers, at least a little bit, provide better services to their clients.

Widespread Applicability

The ethical issues raised in this course apply equally to advisors working in all forms of health insurance including:

- Medicare, our national single-payer healthcare system for the elderly that currently insures about 50 million Americans,

- Medicaid, our national single-payer healthcare system for low-income people, that currently insures about 60 million Americans. Medicaid actually comprises 50 different systems, each a single payer within its own state, each managed by the individual states and each funded 50/50 by the feds and each state. Medicaid recently expanded in most states under the Affordable Care Act.
- Commercial insurance, the private coverage purchased by employers for their employees, that currently insures about 150 million Americans,
- The Veteran's Administration Healthcare System, the government program that covers military veterans and
- The various other fill in programs designed to cover people left out of the above list of health insurance programs.

Education, Not Advocacy

This is an education course, not an advocacy exercise. Our goal is to stimulate broker's thinking. We hope this course will help you consider your own ethical standards. Following the principles outlined in this text means acting ethically. That will become clear as this text progresses (hopefully).

In parts of this text, we will discuss various ancillary benefits, medical tests, medications and procedures. Rather that advocating for or against any of these specifically, we'll introduce ethical principles that brokers can adopt to help their clients identify necessary and beneficial programs and care as distinct from unnecessary and non-beneficial. We'll show some ways to educate subscribers in a value-neutral way.

Our contention is that brokers who adopt this approach will help their clients / patients get better outcomes with less risk and at lower cost. In doing so, they act ethically.

Not all brokers will agree with this analysis. Some will think that our interpretations are too aggressive. Others will argue that the principles discussed here are not relevant to today's health insurance market. I disagree with those criticisms.

In fact, I'd argue that brokers who adopt the standards outlined in this course will have healthier businesses than brokers who do not. In brief:

- All professional brokers – at least the ones I meet in class, and that's well over 1000 in the past few years - are well trained and competent.
- All have access to the same prices and data from the same health insurance carriers.
- All know the regulations and / or can access regulatory information online equally easily.
- All are committed to excellent customer service, and all take their professional responsibilities seriously.

- All teach their clients how to navigate our overly complex *health insurance / payment* system to optimize carrier payments and minimize client out-of-pocket treatment costs.
- But only some – a small but hopefully growing number – teach their clients how to navigate our mind numbingly insane and complex *medical care and treatment* system to avoid waste and treatment harms.
- Only a few explain why our healthcare system is so complicated and why patients risk receiving unnecessary, overly expensive and low value care so often.
- Only a few teach clients how to maximize their chance of medical care benefits and minimize their risks of harm; most focus on how to maximize the value of insurance payments, not how to maximize the value of medical benefits.
- Only a few teach clients that more care may be worse for them than less care, that patients generally have treatment options, that some treatments shown effective in studies may be overused in real life so will likely not generate any benefit to a specific patient, and much more.

I respond to critiques that these ethical standards are unrealistic with this question: if you were a benefits manager for a large company, would you prefer the broker who only spreadsheets and advises on compliance? Or would you prefer the broker who also teaches these critical thinking and navigational skills?

I'd bet on the latter.

Nonetheless, regardless of whether you agree with the ethical standards introduced in this course, I hope you will consider them and that you will be a better broker as a result.

Principle #1:
Provide the greatest good for the greatest number of your clients

In this chapter, we will discuss and adopt the classic utilitarian definition of ethics as the greatest good for the greatest number of people. This comes from the English utilitarian school of philosophy led by John Stuart Mill and Jeremy Bentham.

Utilitarians call for maximizing the overall amount of wellbeing in a community. Actions are ethical if they generate more wellbeing and unethical if they generate less or the counterpart, more suffering and pain.

Utilitarian ethics is particularly poignant in health insurance. The entire community (more or less) pays into the system via insurance premiums. The government, another word for 'the overall community', funds or subsidizes healthcare in several ways including:

- Tax deductible commercial health insurance premiums,
- Direct payment of medical care for Medicare, Medicaid and some other patients. The money for those payments comes from taxes, paid by the entire community, and
- Favorable real estate tax treatment of hospitals.

The utilitarian ethical lens thus places particular ethical responsibilities on system participants including brokers. Ethical broker practices according to this viewpoint, can include:

- Maximizing the amount of medical benefit received from health insurance policies,
- Minimizing the amount of medical harm produced by or associated with those policies, and
- Minimizing the cost of those policies.

Unethical practices are the opposite, including things like

- Ignoring the amount of medical benefit received by policy holders,
- Ignoring the amount of medical harm received by policy holders,
- Failing to implement programs to maximize the amount of benefit received by policy holders and minimize harm.

We'll provide education first and ethical discussion later. We'll start by explaining why our healthcare system works as it does, a brief history lesson focused on the concept of **vertical integration**. Vertical integration means housing finance and medical service provision in the same corporate entity. We'll argue that vertically integrated systems are the most ethical form of private healthcare system according to the Utilitarian definition above.

With that as background, we'll discuss some fundamental healthcare system problems that flow from our lack of vertical integration. This chapter will focus primarily on ethical problems inherent in our commercial health insurance system. A future chapter or course will, hopefully, perform the same service for our public health insurance markets.

How We Got Here: The Origins of this Ethical Problem

Our healthcare system exists, I would argue, for two main reasons, the less important of which is to get people healthy. Instead, it exists primarily to pay participants in it – doctors, nurses, hospital administrators, insurance professionals, brokers, tort attorneys, and the like. American healthcare is fundamentally a jobs program, not a medical care one. This, according to our Utilitarian friends, is unethical; it takes resources and money from the many and gives benefits to the few. It does not, unfortunately, produce the greatest good for the greatest number of people / patients / policy holders / payers.

The prima facie evidence here: we're not terribly healthy despite paying more for medical care than any country in the world. We don't live as long as other populations, we have higher infant mortality rates than most developed countries, higher disease morbidity rates, and a utilization waste factor north of 20%.[1] That includes services and processes that are either harmful, do not deliver benefits, and / or include excess costs that could be avoided by replacing services or products with cheaper alternatives that have identical or better benefits.

This situation simply would not exist if our system was primarily designed to get people healthy efficiently and effectively. We have too many smart and caring people working in healthcare. A country that can put a man on the moon, as they say, can fix these problems if it wants to.

That we haven't fixed them and haven't improved on them enough over the past decades, results from the primary reason our healthcare system exists: to pay participants. American healthcare is more a jobs program than a medical improvement one and it actually performs this function remarkably well.

Doctors get paid to perform their tasks, as do hospitals, X-ray technicians and MRI operators, orthopedists and chiropractors, psychiatrists and podiatrists, nutritionists and pharmacists, acupuncturists, art therapists and even lowly continuing education teachers, all extremely busy, most fighting with carriers and Medicare over codes and payments, none tying patient range-of-motion increases, life expectancy increases, obesity rates, diabetes rates, infant mortality rates, or pain reduction rates to their compensation.

---

[1] Almost 25% of Healthcare Spending is Considered Wasteful, Peter G. Peterson Foundation, April 3, 2023 https://www.pgpf.org/blog/2023/04/almost-25-percent-of-healthcare-spending-is-considered-wasteful-heres-why#:~:text=Approximately%2025%20percent%20of%20healthcare,interventions%20that%20address%20such%20waste.

Financiers loan money for medical equipment and hospital construction, lawyers draw up financing and leasing contracts and sue when doctors screw up and sometimes even when they don't. For-profit insurance carriers provide confusing policies that generated over $41 billion in 2022 profits[2], with the highest gross profits in the Medicare Advantage arena.[3] Brokers shop for policies and benefits administrators explain them to employees who generally don't understand them. Patient advocates help people navigate our system that promotes quantity over quality while aiming to reduce utilization.

Pharmaceutical companies earn money making the drugs that lawyers sue over and advertising companies develop ads for those drugs that underwrite network TV news and sports, but few of us know how well those drugs work or even if they work at all. See, for example, the 2023 studies on Vitamin D testing and supplements to prevent bone fractures and over-the-counter decongestants, both billion-dollar industries, neither of which generated patient benefit. [4] Both case studies appear below, pages 37 – 39.

Compliance experts comply with mind-numbing paperwork and regulations designed to avoid the moral hazard related systemic abuse that runs rampant throughout our system. Software engineers write the codes that track all this stuff, administrators administer, managers manage, practitioners practice, consultants consult and so on and so forth for about $4.2 trillion annually, double or triple what other countries pay for better results.

'Necessary' care in America *always* means that someone gets paid for it and only *sometimes* that patients benefit from it.

As evidence of the jobs program nature of our healthcare system, consider these statistics provided by Jonathan Bush, founder and former CEO of Athenahealth, a huge health information company: [5]

- In 1990 there were 10 hospital employees per physician
- Twenty-five years later, ***after*** a hospital consolidation boom justified by greater hospital efficiency and ***after*** the computer revolution increased office efficiency throughout the developed world and ***after*** outsourcing took millions of jobs overseas, there were 16 hospital employees per physician, half administrators.

---

[2] https://www.penncapital-star.com/uncategorized/americans-suffer-when-health-insurers-place-profits-over-people/#:~:text=In%202022%2C%20UnitedHealth%20Group%20made,billion%20of%20profits%20in%202022.

[3] Medicare Advantage Insurers Report Much Higher Gross Margins Per Enrollee Than Insurers in Other Markets, Kaiser Family Foundation news release https://www.kff.org/medicare/press-release/medicare-advantage-insurers-report-much-higher-gross-margins-per-enrollee-than-insurers-in-other-markets/

[4] Szabo, Selling American on Vitamin D, Kaiser Health News, August 20, 2018, https://www.nbcnews.com/health/health-news/selling-america-vitamin-d-reaping-profits-n902276 and Berkeley Lovelace Jr, FDA Panel Says Common Over-The-Counter Decongestant Doesn't Work, NBC News, September 12, 2023

[5] Bush, Where Does It Hurt, page 91. Jonathan is a 'Bush': his uncle and first cousin were presidents of the US.

All these people working in our healthcare jobs program share one common perception: they're all overworked and think we need more of them for the system to work efficiently and create value.

If you don't believe me, just ask anyone in the industry. You'll get the same answer from brokers and lawyers, chiropractors and psychologists, primary care physicians and specialists, hospital bookkeepers and patient advocates: 'I provide really great services that save the system a ton of money. We need more people like me, doing what I do' which is another way of saving 'pay other people less because they provide less value than I do' unless, of course, we want to hire more of *everyone* which is probably the real goal of healthcare anyway.

How can *everyone* save the system money, given that healthcare inflation already outpaces gdp growth every year and we pay twice as much as other countries for poorer outcomes?

The answer is that our healthcare system today exists – and is primarily structured - to hire and pay people and all these various groups jockey and lobby for compensation to perform more of their tasks rather than competing over patient outcomes. This is a far cry from a healthcare system focused on getting as many people healthy as possible, and as quickly and inexpensively.

An ethical, reasonable, rational healthcare system would compensate participants more for getting patients healthier more quickly and less expensively. Our system instead compensates people for lobbying better, negotiating harder and intervening more even when participants should know better.[6]

This is the healthcare mess within which brokers are supposed to act ethically. Good luck!

Let's switch gears now and learn how our system developed so we can better understand why it works today as it does.

How our healthcare system developed and why it presents today's ethical imperative

Our healthcare financing system evolved from a vertically integrated 'financing + care provision' system to a non-vertically integrated one. This theme runs throughout today's course.

- Vertical integration means that medical care and medical financing are the same entity, with physicians on salary. Both the financing arm and medical care arm work together to generate the best patient outcomes at the lowest cost. This is the

[6] US hospitals performed about 229,000 unnecessary coronary stent procedures between 2019 and 2021. That's about 1 every 7 minutes. https://lownhospitalsindex.org/avoiding-coronary-stent-overuse/

basic concept of a Managed Care Organization or a Health Maintenance Organization (HMO).

'Managed competition' is competition among vertically integrated healthcare providers. Those generating the best outcomes at the lowest costs will gain customers; those operating at higher costs and generating poorer outcomes will lose. [7]

Vertically integrated healthcare entities compete with each other on *value*: outcomes per dollar spent. This incentivizes Managed Care Organizations to improve patient outcomes (life expectancy, diabetes control, post-surgical functionality and similar) without unduly raising prices. It *dis*incentivizes Managed Care Organizations from providing excessive, unnecessary or low quality care, or raising prices too aggressively. Vertically integrated entities are, therefore, more ethically structured than the alternatives.

The better a Managed Care Organization improves patient outcomes without raising prices, the more value it creates, the greater the company's market share and the bigger its business. This fits the Utilitarian view of an ethical healthcare system; it provides the greatest good for the greatest number. Good ethics, from this point of view, equals good business. So goes the theory at least.

- A 'non-vertically integrated system' has separate companies handling financing and medical care. Today we call financing companies 'insurance carriers' and medical care provision companies like hospitals and physician groups 'providers.'

  In this non-vertically integrated system, financiers want to pay service providers less and service providers want to bill more. The relationship between the two is 'war' according to Atul Gawande, professor at Harvard Medical School and staff writer for the New Yorker, 'every step of the way'.[8]

  In a non-vertically integrated system, carriers and hospitals argue over payment amounts and formulas. A very different focus from the vertically integrated model above where the entity's singular goal is outstanding patient outcomes at a reasonable price.

Non-vertically integrated systems, as I suggested above, are designed to generate jobs, incomes, and benefits for participants in it, like doctors, financiers and all the rest.

The more our healthcare system resembles a vertically integrated one, the more ethical it is because it serves the medical needs of patients, creating the greatest health good for

[7] Alain Enthoven of Stanford University, perhaps our greatest managed care theorists and proponent, has written widely about this which is somewhat outside the scope of this particular chapter. See his seminal article The History and Principles of Managed Competition for more.
http://elsa.berkeley.edu/pub/users/webfac/held/157_VC2.pdf

[8] See Gawande's second book 'Better', chapter entitled Piecework

the greatest number of patients. The less vertically integrated it is, the less ethical it is because it is designed to serve the needs of relatively few participants.

Ethical brokers, according to the Utilitarians, should help clients emulate the benefits of a vertically integrated system despite the current structure of our healthcare system. This is a heavy lift. We'll address some ways to do this in Chapter 3.

But first, we'll discuss how our healthcare system developed around this vertically / non-vertically integrated idea below. Then we'll discuss various problems that arise from our systemic development.

How Commercial Healthcare Started

As commonly accepted among health insurance historians, commercial health insurance started in Dallas around 1929 as a reaction to the stock market crash and financial meltdown.[9] Baylor University Hospital in Dallas faced a cash crunch and designed a creative solution to pay its bills.

Prior to the stock market cash, hospitals raised funds in two ways. First, they had customers who paid for services rendered - a fairly modest percentage of the population because most people didn't have a lot of money. Second, the community chest, the charitable organizations - the wealthy would donate to the hospital because it was a good place to donate your extra money. Charity made you feel good and was good for the community.

But after the 1929 stock market crash, unemployment reduced the number of patients able to pay, the wealthy didn't have as much money to donate, and the hospital faced a difficult financial landscape. So, Baylor University Hospital made a deal with the Dallas School System. They said, "School system, you always have money; you raise money from taxes. Pay us $.50 per employee per month and when they get sick, they can come to us and we'll take care of them." Commercial health insurance arrived.

A few comments about this.

First, it's a nice deal. It's a nice deal for the hospital because they stay in business. They don't have to worry about going out of business. They didn't have to worry about turning people away as long as they got the numbers right, which apparently they did at $.50 per employee per month. The school system payments protected the hospital's cash flow so the hospital stayed in business.

Second, this was very efficient. The hospital signed one contract with one employer group and received back enough money to stay in business. That was a pretty good incentive to look for other large employer groups.

[9] This suggestion comes from Richmond and Fein, The Healthcare Mess, page 30.

Third, there was no prevention or provider choice, but theoretically the teachers and other employees of the school system were happy because they got medical care essentially for free.

Fourth, this was for hospitalization only; no outpatient or physician office coverage.

Fifth, community rating. The Dallas School System paid $.50 per person per month, regardless of individual medical status. No medical underwriting.

Sixth, there were no quality controls, no outcome-based incentives, no holdbacks for poor hospital performance. Health insurance began simply to save the financial health of the hospital.

This was a vertically integrated system, almost textbook variety. And it exhibited the classic flaw of vertically integrated healthcare systems: lack of consumer choice. As initially developed with Baylor University Hospital, the Dallas school system employees could only go to one hospital. This has advantages and disadvantages.

Advantages:

1. Lower Costs

2. Reasonable medical care from a small number of in-network providers

Disadvantage:

1. Little provider choice as few hospitals are 'in-network'

The Baylor Hospital / Dallas School System deal worked so well that other hospitals copied it. Different hospitals looked for different large employers, offering the same kind of deal. Large manufacturers, the Dallas Morning News, and others. What problem begins to arise?

The Choice Problem

Consumers - school system employees or manufacturing workers, for example - wanted to choose among various hospitals. 'What do I know about Baylor University Hospital? I only know one thing. I know someone who went there and didn't get good care (whatever 'didn't get good care' means), so I want to go somewhere else.' Someone always knows of someone else who had a negative experience there. So you want to go somewhere else - consumers want choice.

A different way to understand our demand for choice in healthcare: we don't *really* trust our own doctor or, indeed, the overall medical system. We somehow think that we – patients – have better medical care insights than the various trained professionals in our network. This uninformed demand for choice has plagued our system since inception.

The way out of this problem, according to Michael Porter and Elizabeth Olmsted Teisberg in their massive tome Redefining Health Care, is for the government to

require results reporting, things like 30-day readmission rates for coronary procedures, 3-6-and-9 month follow-up data on orthopedic patient range of motion and pain, infant and maternal mortality rates and similar. As Porter and Teisberg put it back in 2006: *Mandatory measurement and reporting of results is perhaps the single most important step in reforming the healthcare system*.[10]

We still haven't made sufficient progress along these lines. That, it seems to me, is a fertile arena for ethical broker interventions. Indeed, that will be our focus in Chapter 3, below.

Remember vertical integration, where finance and service provision are the same company? Once you introduce choice, then you have one group handling finance and another handling service provision. You have a split and you lose vertical integration.

That split happened shortly after the Baylor – Dallas School System deal. A clever entrepreneurial company offered to provide financing for lots of Dallas hospitals. 'Dallas teachers' they might have said, 'you can sign up with Baylor University Hospital only, or, for just a little more money, sign up with us and we'll give you the choice of many hospitals in Dallas. We contract with lots of hospitals. We have a large network.'

These new companies competed with vertically integrated hospitals, like Baylor University Hospital and the Dallas School System.

The insurance entrepreneurs developed a couple of clever ideas in the 1930s. First, from a marketing point of view, they offered this very attractive provider choice option.

Second, they began searching for the healthiest subscribers. If they could find the healthiest people, they could offer lower priced policies and gain a competitive edge vs. their vertically integrated competitors signing up large employers at a fixed price per person.

Underwriting vs. Community Rating

The entrepreneurs – we'll call them 'insurance carriers' - figured that they would underwrite better than the competition so people would join them because their premiums would be a little bit lower. The community rating folks faced higher premiums because they took all employees. In a very real sense, underwriting is a form of rationing: people unable to pass the underwriting standard don't get covered. Or they pay a lot more.

Underwriting serves the economic interests of the carriers. It doesn't improve healthcare outcomes. It doesn't improve the healthcare system. It doesn't differentiate medical quality. It doesn't create patient value. It only makes one carrier lower cost than another carrier by having sick people pay more. It's a zero–sum exercise – healthy pay less, sick pay more - since total community medical costs remain the same.

[10] Porter and Teisberg, Redefining Health Care page 7

Our private healthcare financing system had little to do with getting people healthy or creating value. That was not its intention. It was designed to protect physician and hospital income, the original Baylor idea. Then carriers came along to make a profit from consumer demand for choice. The demand for choice led to the Split.

The Split and the Provider Payment Problem

Once you split finance from service provision, you have a wider consumer choice and you have to figure out how to pay doctors and hospitals. We're still, today, trying to get this one right.

The original and still most popular payment mechanism is fee-for-service. The doctor gets paid $100 for treating each broken arm and $350 for each rotator cuff surgery, or whatever.

As soon as you split finance and service provision, service providers have an incentive to do more. The more they do, the more they earn.

The insurance carrier, on the other hand, wants to limit the number of treatments only to those necessary to control costs. They ask service providers if they absolutely need to do that procedure. Insurers and providers fight all the time. It's a fight between

- provider clinical judgment, influenced, perhaps, at least psychologically, by the fee-for-service payment formula, and
- carrier financial judgment, influenced, perhaps, at least psychologically, by the same fee-for-service formula. Insurers don't *really* trust provider clinical judgment, at least not without discussion and justification.

That's the conflict between healthcare payers and medical service providers.

Fee-for-service / component financing is inflationary and expensive and not designed to improve patient health. It's designed to reward providers, which it did quite well historically. We, in the US, have traditionally performed more procedures / 1000 of population than similar developed countries around the world. Things today like spinal fusion surgery, hip replacements, knee replacements, coronary bypass surgeries. The Split between finance and service provision led us down this road. It continues to this day.

The Impact of World War II

World War II plays an important role in our story for three main reasons.

First, the soldiers who received health coverage while in the military wanted to continue with it afterward. They saw the advantages of having health coverage. They married and wanted their families to receive coverage also. This created *demand* for health insurance.

Second, our wartime economy devoted significant resources to medical technology improvements. Perhaps most significant was the introduction of sulfa drugs to combat

infections and ultrasound, originally used to determine tank structural integrity after battles. Sulfa drugs helped turn hospitals from infection breeding institutions into patient treatment and improvement centers. Ultrasound ultimately became a routine pregnancy evaluation tool. These and other new technologies improved the quality of medical care, or the ***supply***.

Third, the Federal wartime wage and price freezes fostered the development of 'fringe benefits' and the entire benefits industry. That's the financing arm and it's a pretty interesting story.

The government implemented wage and price freezes during the War to avoid domestic economic difficulties and help focus our economy on war production. Employers, in other words, could not raise wages to attract new workers or to reward their best employees. But they could offer 'fringe benefits' such as health insurance. This allowed employers to attract new talent and retain their current employees without raising wages. The concept of 'fringe' meant 'outside the normal compensation' and 'benefits' meant 'advantages of working here'. Employers couldn't simply raise wages, the traditional way of attracting labor, since that was illegal during the war. Fringe benefits were a mechanism to get around the wartime wage freeze.

These 3 factors – increased demand, improved supply, and creative financing - led to a tremendous increase in our insured population. Some coverage data points:

1942: 10 million hospital insurance / health insurance subscribers

1946: 32 million

1951: 77 million[11] out of a total US population of 150 million.

The health insurance industry arrived, grew and gained political power.

The Hill Burton Act and an IRS decision strengthens hospitals

Congress, just after World War II, passed the Hill Burton Act to fund hospital expansion. This increased the number of hospital beds in this country by about 40%, from 3.2 per 1000 people to 4.5. It also made hospitals the centerpiece of our medical care system; the travelling doctor who made house calls began to disappear.

Shortly thereafter, in 1953, the IRS decided that fringe benefits were exempt from federal income tax: those became *tax deductible to the employer* but *not income taxable to the employee*. This was essentially a government subsidy for hospital care since that's where most medical care took place. The government stimulated sales of commercial health insurance by subsidizing the price through the tax exemption.

[11] Richmond and Fein, The Health Care Mess pages 30 - 38

This subsidy for health insurance was so effective that by 1963, 77% of us had hospital coverage, and about 50% had some form of physician coverage.[12]

- Employees liked the system because it appeared free to them.
- Carriers liked the system because the government subsidized their product, tax deductible health insurance policies.
- Hospitals loved the system because they received patients and insurance payments – a wonderful recipe for making money.
- Employers objected somewhat to this system, but not terribly strenuously. After all, the government subsidized their health insurance payments, so they felt the pain only partially.

Through this period, roughly 1930 – 1965, healthcare discussions generally focused on insurance coverage, medical technology, hospital capacity and access. Indeed, access issues took center stage in the mid-1960s because of the potential political power of the elderly and the poor, both of which were left out of the employer based financing system.

Medicare and Medicaid Remove Potential Political Threats to Employer Based Insurance

One potential political threat to our employer based health insurance system could have come from the unemployed – that significant percent of the population that was too old to work or unable to find full time work with benefits. This was potentially a very potent political force that could have lobbied in favor of single payer healthcare, universal coverage or similar, like in other countries.

By introducing Medicare and Medicaid in the 1960s, this political force went away. Elderly folks were happy. They didn't demand or need universal coverage because they had Medicare. Ditto the poor with Medicaid. No large, identifiable voting block favored a single payer, universal healthcare system post-Medicare and Medicaid. M & M took that potential voting block off the table.

Here is an estimate of the population size that these two entitlement programs satisfied. I'll use Medicare, because this covers the elderly who vote in particularly high numbers and in particularly important electoral states like Florida.

Medicare Enrollment 1970 – 2020

Year	Number Medicare Enrollees	% of US population
1970	20 million	10%

[12] Enthoven and Fuchs, 'Employment Based Health Insurance: Past, Present and Future' Health Affairs, Nov/Dec 2006

1980	28 million	12%
1990	34 million	13.5%
2000	39 million	13.8%
2010	47 million	15%
2020	58 million	18%

Medicaid covers about the same population size.

The argument is that Medicare and Medicaid are key supporters of our employer based, commercial health insurance system. They allowed the system to grow and become entrenched nationally in the second half of the last century.

Post passage of Medicare and Medicaid, i.e. by the late 1960s, healthcare costs and cost increases became an issue. Indeed, in 1969 Robert Finch, then Secretary of Health, Education and Welfare warned Congress that "the nation is faced with a breakdown in the delivery of health care unless immediate concerted action is taken by government and the private sector". Both costs and the very structure of our healthcare delivery system became a topic of national debate, leading to a reconsideration of vertical integration.

Nixon's HMO Act of 1973

Nixon had to do something to address the rising costs of healthcare, but felt politically wedged-in. He couldn't support a Democratic healthcare plan sponsored by one of his chief rivals, Ted Kennedy. Nor could support a Republican plan sponsored by another political rival, Nelson Rockefeller – especially a plan that potentially harmed the physicians, hospitals and insurance carriers that supported Nixon politically.

He chose, instead, to pursue Health Maintenance Organizations, then conceived as a prepaid healthcare system that would motivate doctors and hospitals to control costs and keep patients healthy. Many conservative politicians and organizations agreed with the HMO idea because it was flexible, inexpensive, encouraged private investment in profit-making organizations and imposed few mandates or regulations. It sorta, kinda, almost resembled Baylor's original plan with the Dallas School System.

Nixon's plan faced opposition from both the left and right between 1970 – 1973. Kennedy and the Left consistently fought for higher levels of guaranteed benefits, community rating, open enrollment periods and significant Federal grants and loans to help HMOs proliferate. The American Medical Association and the Right wanted only basic levels of guaranteed benefits, less government funding and individual underwriting.

As a result of these competing pressures and Nixon's determination to implement his own plan (i.e. not Kennedy's or Rockefeller's), the HMO Act of 1973 deviated from our ideal vertically integrated model in three main ways:

First, under Nixon's law, HMO meant simply 'prepayment'. Healthcare delivery and healthcare finance were separate functions handled by separate companies. This satisfied independent insurance carriers, physician groups and general hospitals - all parts of Nixon's political base. But it lacked the key integration feature that made real managed care organizations like Kaiser-Permanente so successful.

Why did carriers, physician groups and general hospitals dislike vertical integration? The short answer: they wanted to compete for revenues with each other.

Carriers hoped to dominate the marketplace and dictate economic terms to providers. The American Medical Association wanted its members to remain free from carrier or hospital meddling so they could protect their incomes. Hospitals wanted to determine patient lengths of stay to protect their own cash flow.

None of these groups trusted the others or the government to protect their interests.

Second, Nixon's law called for a loose physician structure, in which practitioners could opt in or out of any HMO. Again, this satisfied the insurance, physician and hospital groups. But it was the opposite of vertical integration's tight structure in which physicians were fully integrated into both the hospital and financial system. The loose physician structure meant that providers lacked loyalty to any specific HMO.

Third, Nixon's law allowed providers to bill insurance carriers on a fee-for-service basis, not on a capitation basis.

In a capitated system, the vertically integrated HMO only received a specified amount of money per patient per year. The old Baylor – Dallas school system model charged $6 per employee per year. As long as Baylor University Hospital kept its costs below $6 per employee, it made money. But if Baylor's costs exceeded $6, it lost money and potentially went out of business.

Capitation, in other words, forced HMOs to control costs and use their resources efficiently. Absent capitation as in Nixon's Act, much of the underlying financial discipline disappeared.

These three factors – separate companies for finance and service provision, loose relationships between physicians and HMO entities and little-to-no capitation - drastically altered the original vertical integration model. Stanford Medical School Professor Alain Enthoven, for example, a key managed care theorist, argued in 1993, 'Some say that managed care has failed. I say that managed care has not yet been tried' since Nixon's HMO Act so perverted the vertical integration model.[13]

By the early 2000s, American healthcare had given up on the vertical integration / managed care approach in fact, if not in name, in favor of the fee-for-service based billing platform. Stanford's Enthoven articulated the fee-for-service flaws in his 2004

[13] Enthoven, Why Managed Care Has Failed to Contain Health Costs, Health Affairs, 1993, paraphrased for context here.

book 'Toward a 21st Century Health System' page xxix. Consider this list in light of the Utilitarian definition of ethics as creating the greatest good for the greatest number:

1. Fee-for-service creates an adversarial relationship between doctors and payers;
2. Fee-for-service has little accountability – poor data collection and provider motivations for economy;
3. Fee-for-service 'free choice of provider' leaves patients to make remarkably poorly informed choices;
4. Fee-for-service generates excess hospital capacity, high tech equipment and open-heart surgeries;
5. Fee-for-service generated an excess supply of specialists;
6. Fee-for-service misallocates resources, as no incentive to use the least costly settings for treatment;
7. Fee-for-service has no capacity to plan care processes from diagnosis to treatment to rehabilitation;
8. Fee-for-service has led to a dangerous proliferation of facilities for complex and costly procedures without the volumes necessary to maintain good outcomes;
9. Fee-for-service cannot practice total quality management due to lack of service integration;
10. Fee-for-service cannot organize the rational use of technology.

We created, in other words, an unethical healthcare structural mess in our quest for patient choice, profits and jobs.[14]

Consumer Driven Healthcare to the rescue (or not)

With the failure of the HMO movement, our commercial healthcare industry needed a new paradigm. One attempt was CDHC or Consumer Driven Health Care. The term 'consumer driven health care' arose from the Medicare Modernization Act of 2003 which established Health Savings Accounts.

'Consumer driven products' are high deductible health insurance policies with certain tax benefits. Each consumer spends the deductible as he/she sees fit, for physician visits, medications, tests, therapies etc. Only after satisfying the deductible does insurance pay. Then, depending on the specific plan design, insurance pays all or part of additional medical expenses.

CDHC policies embrace the notion of consumer sovereignty. Consumer sovereignty means each individual consumer makes decisions in ways he or she deems best for themselves; individual patient decision making for themselves, not physician decision making for patients would now drive our healthcare system.

[14] 'Mess' comes from the title of Richmond and Fein's 2005 book, The Healthcare Mess, op cit.

Consumer driven healthcare implicitly accepts The Split between healthcare finance and service delivery as a given. Effectively, HSAs and the entire CDHC movement says 'The Split exists and we can't figure out how to fix the problems it causes, so we'll turf the whole thing onto patients. Maybe they can rationalize our otherwise irrational system'. Maybe, in other words, they can make the system operate more ethically.

It didn't go well.

Problems equating high deductibles with consumerism in healthcare

Consumer driven healthcare as practiced using Health Savings Accounts, similar tax-deductible programs, and medical care price lists fail in healthcare for two main reasons.

First, an annual $1000 deductible (or even $3000) is too small to act as a real medical spending brake. Once satisfied, and depending on the specific plan design, all other medical care is free.

A patient might satisfy that deductible hurdle in January and then enjoy lots of excessive and unnecessary medical care for free during the next 12 months. Patients could even 'play' the system by scheduling all their expensive medical treatments during the same calendar year.

Or the deductible has little impact on a patient facing an expensive procedure. What's the difference to the patient if the procedure costs $45,000 …. $50,000….$60,000 or $100,000? Once the deductible is satisfied, the rest is free. 'Consumerism' fails to affect patient behavior in these expensive cases.

This fundamental flaw in the 'high deductible = consumer driven healthcare' thesis exists because the vast majority of healthcare spending goes to a very small group of high cost patients. Here's spending by percentage of the population. These numbers have remained remarkably constant for years.

Healthcare Consumption by % of Our Population [15]

1% of our population accounts for about 24% of medical spending

5% of our population accounts for about 49% of medical spending

10% of our population accounts for about 64% of medical spending

50% of our population accounts for about 97% of medical spending

50% of our population also accounts for 3% of medical spending.

The healthiest half of our population costs very little medically. These are typically the folks who purchase CDHC products and who often spend less than $1000 annually.

[15] Yu, et al, 'Medical Expenditure Panel Survey Statistical Brief #81', May 2005, Agency for Healthcare Research and Quality

Cutting their spending by 20 or 30% would have virtually no impact on *overall* medical spending or trend.

Here's the same chart using 2022 spending amounts, not percentages. In 2022, total US healthcare costs reached about $4.4 trillion for the approximately 333 million of us. Though the average annual healthcare spending per person that year was about $13,400,

The 1% heaviest users (3.3 million people) averaged about $320,000 each;

The 5% heaviest users (16.7 million people) averaged about $129,000 each;

The 10% heaviest users (33 million people) averaged about $85,000 each;

The 50% lightest users (167 million people) averaged about $790 each.

Very few of the 10% of users who account for about 2/3 of all medical spending will change their medical choices based on a $1000 (or even $2500 or $5000) deductible. *Whatever* the deductible, their medical care needs far exceed it.

Second, medical consumers have little meaningful quality information, and even if they have it, they rarely know how to use it. This makes medical decisions different from, say, car purchasing decisions. The car buyer can compare the quality of various cars before deciding which to purchase. Large or small, good gas mileage or poor, lots of luxuries or few, high resale value or low, etc.

But the medical purchaser generally has very little similar information. Which doctor has the best outcomes? Which hospital? How effective is this medication compared to that one? We generally lack detailed answers to these questions.

For these two reasons – unequal healthcare spending and lack of medical quality information / well educated medical consumers - so-called Consumer Driven Health Care had only a small impact on medical trend which has run at our gdp growth rate plus 3 – 5% annually for years. CDH policies became the vogue in the early 2000s. They pretty much ran their course within about a dozen years.

Americans continue to spend about twice as much on healthcare as other developed countries without getting any value for the excess spending, just as we did prior to CDHC policy introduction. Here are estimates for 2019, the last year before Covid hit and altered these statistics with a unique set of circumstances. (I don't know if or how Covid is representative of 'normal' healthcare trends, so I'll leave that out of this analysis.) [16] I could have included more countries but you get the idea from this limited comparison.

[16] OECD Health Data statistic updated annually https://stats.oecd.org/Index.aspx?ThemeTreeId=9

2019	Annual spending / capita	Life expectancy at birth
US	$10,855	78.8
Canada	$6,730	82.3
France	$4,014	83
Spain	$2,412	84
UK	$3,334	81.4

These other countries live 4 – 5% longer than us while spending about half as much on healthcare. We clearly haven't figured out how to generate good value for our healthcare system investment. We haven't figured out how to generate the greatest good for the greatest number.

The Affordable Care Act gives up on vertical integration in favor of wider coverage

The 2010 Affordable Care Act, a massive piece of legislation, is more-or-less a business plan for our entire healthcare economy.

Vast in scope and complexity, it's far too big to summarize quickly here. Instead, I'll focus only on 2 components: coverage expansion and patient decision-making assistance.

Why healthcare reform in 2009

President Obama decided to move aggressively on healthcare because of several disturbing trends. From 2000 - 2006

- Health insurance premiums rose by about 80% while
- Overall inflation only rose by 20%, but
- Median household income was actually down 3% in real (after inflation) terms.

Obama and his aides worried about two different health insurance death spirals especially affecting the individual and small group markets.

The **first** would occur when healthy people decide not to purchase health insurance, thus leaving only sick people in the insurance pool. Premiums would rise quickly forcing 'healthier' sick people opt out, leaving only the sickest of the sick still in. Health insurance then would become a payment program for sick people. It wouldn't, under these conditions, play its traditional role of protection against catastrophic financial calamity due to an unexpected illness for the vast majority of Americans.

The **second**, separate though somewhat related death spiral would occur when young people decide that health insurance is too expensive to purchase. Young 'Invincibles' – so called because they don't think they'll get sick – exit the market, leaving only older and more expensive participants in the pool. Again premiums rise, causing more and more young, healthy people to leave the pool and thus depriving the insurance pool of this healthy, inexpensive population.

Obama worried that continued economic stagnation - as began with the stock market crash in 2007 - would exacerbate both situations. Indeed, the number of uninsured had risen by about a million people per year from under 44 million in 2002 to over 50 million in 2009.

Among the reasons for this huge uninsured problem was our change in national economic circumstances. Our post-World War II economic dominance had lessened and along with it, businesses' ability to generate sufficient margin to cover all employee benefits. Employers responded to the changed economy by shifting benefit costs to their employees and outsourcing. That's why the percent of Americans covered by commercial / employer based health insurance shrunk from 59% to 48% between 2000 and 2020. Meanwhile, the number of Medicaid recipients and uninsured Americans grew. [17] (I included the 2020 numbers to show trend and the ACA impact.)

Year	Number of Medicaid Beneficiaries
2000	34 million
2010	54 million
2020	76 million

Year	Number Uninsured Americans
2000	39 million
2010	49 million
2020	32 million

[17] Medicaid data from stasta.com https://www.statista.com/statistics/245347/total-medicaid-enrollment-since-1966/. Uninsured data from the CDC including https://www.cdc.gov/nchs/data/nhis/earlyrelease/insur201106.htm#:~:text=Results-,Lack%20of%20health%20insurance%20coverage,(Tables%201%20and%202) and https://www.google.com/search?q=number+uninsured+americans+2020&rlz=1C1ONGR_enUS1065US1066&oq=number+uninsured+americans+2020&gs_lcrp=EgZjaHJvbWUyBggAEEUYOdIBCDYwMzdqMGo3qAIAsAIA&sourceid=chrome&ie=UTF-8

Thus, the prime focus and effect of the Affordable Care Act was coverage expansion, perhaps somewhat ethical in that it provided a greater good – health insurance – to a greater number of Americans. I'm underwhelmed by the ethical achievement of giving more people financial access to our otherwise unethical system. Our overall life expectancy numbers – flat since 2010 - support this skepticism. See below pages 25 – 26.

One way the ACA addresses vertical integration and The Split

The ACA also, in a relatively hidden and small way, addressed problems cause by The Split between healthcare finance and service delivery. We have already discussed how this grew out of the Baylor – Dallas School System's initial commercial insurance venture, how Nixon attempted to put this genie back into the bottle, and how the introduction of Health Savings Accounts and similar products cemented The Split into our healthcare system architecture.

Section 3506 of the Affordable Care Act discusses Shared Decision Making. Here is the legislative summary:

> The purpose of this section is to facilitate collaborative processes between patients, caregivers or authorized representatives, and clinicians that engages the patient, caregiver or authorized representative in decision making, provides patients, caregivers or authorized representatives with information about trade-offs among treatment options, and facilitates the incorporation of patient preferences and values into the medical plan.

We can read this as an attempt to circumvent The Split by helping patients make wise decisions in conjunction with but not entirely based on, their physician's recommendations. It harkens back to Porter and Teisberg's position on the importance of publicly available outcome measurement and results reporting. The ACA in this section recommends that patients not rely blindly on their physician's advice for two main reasons:

> First, the ACA recognizes the economic reality of physicians providing excessive care – sometimes – in response to the economic incentives they face.
>
> Second, the ACA understands that preference-sensitive care exists.

Preference-sensitive simply means that various treatment alternatives often exist. Some patients might reasonably prefer orthopedic surgery while others, equally reasonably, might prefer physical therapy. Or medication vs. surgery. Or other options.

Section 3506 implicitly accepts The Split as reality and legislates a mechanism to ameliorate its most negative consequences.

Where We Are Today
Post HMO, post ACA, post Split

Managed care as vertical integration has disappeared from our healthcare landscape. Today, post-Consumer Driven Healthcare and post-ACA, we live in a fee-for-service based medical billing environment. Each individual actor in our healthcare system faces various economic incentives either to provide or control care severity; each individual patient is supposed to make wise healthcare decisions while relying on the advice of financially compromised actors.

We don't do this very well. At $4.4 trillion – our 2022 healthcare spending - our *healthcare* economy was larger than France's total gdp (about $2.8 trillion) or Britain's ($3.0 trillion) and about twice as big as Russia's ($2.2 trillion).[18]

We have the highest healthcare expenditures per capita or as a percentage of our GDP in the world. See below, a list of per capita healthcare spending in countries that live longer than the US national average or any individual US state average:[19]

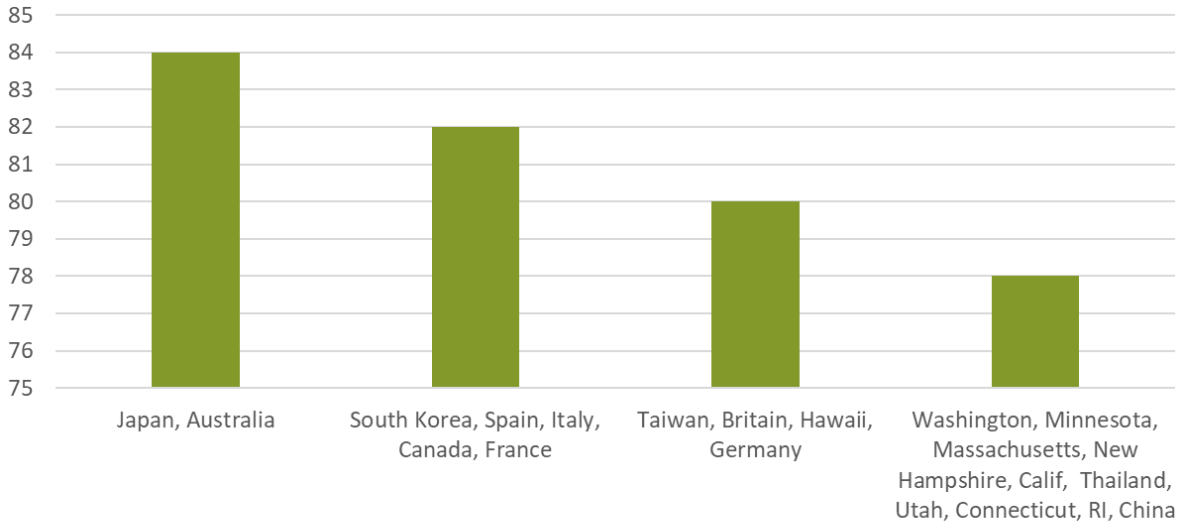
Country	**2022 per capita health spending**
US	$12,555
Australia	$ 6,569
France	$ 6,516
Canada	$ 6,319
Japan	$ 5,250
South Korea	$ 4,569
Spain	$ 4,461
Italy	$ 4,290

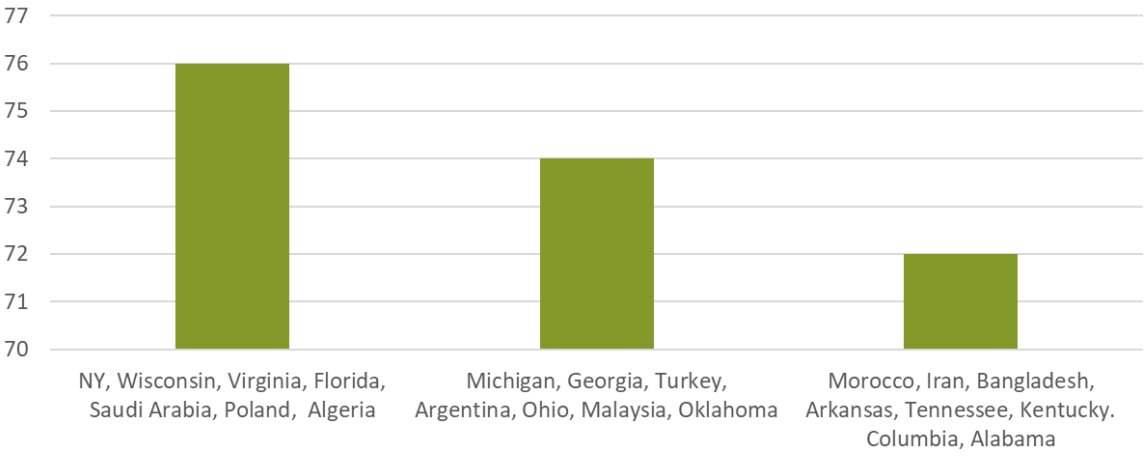
One way to see the magnitude of our healthcare system inefficiency is to see how those various countries compare to US state longevity at birth averages. These data were originally developed by the National Center for Health Statistics at the United Nations and presented by Nicholas Kristof in the New York Times, August 17, 2023. As you review these charts, consider this question: if private, commercial health insurance is as beneficial a system as its proponents claim, then why do we see such mediocre outcomes?

[18] World Bank, Gross Domestic Products 2022 https://data.worldbank.org/indicator/NY.GDP.MKTP.CD

[19] Data from Statistica https://www.statista.com/statistics/236541/per-capita-health-expenditure-by-country/#:~:text=In%202022%2C%20the%20United%20States,highest%20per%20capita%20health%20expenditure .

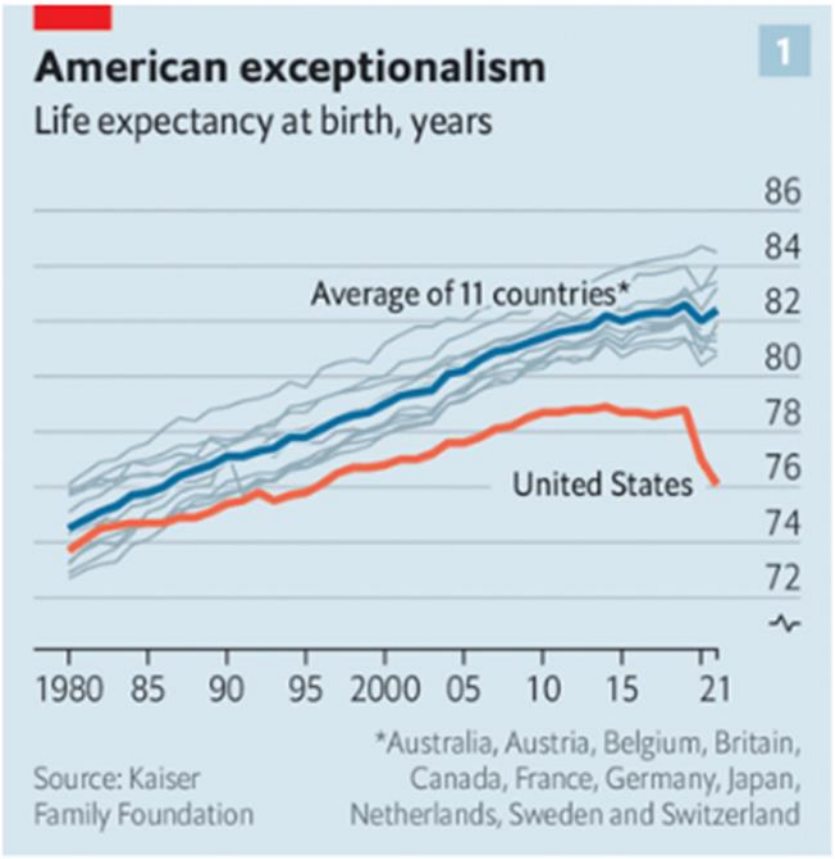
Average Longevity at Birth
Various countries compared to US States
Life expectancy in 2 year age bands on the left
'82' means '82 – 84 years'; '78' means '78 – 80 years'





Equally or perhaps more upsettingly, we have experienced **no** national life expectancy gains since about 2009, despite spending more each year on medical care. This differs from other advanced, industrialized countries. See the chart below published in The Economist, July 13, 2023. Note first that Americans, while spending more on medical care than the others, enjoyed shorter life expectancies. Equally interesting (upsetting),

see the 2009 – 2020 period, before Covid, when our life expectancy was flat – despite spending more on medical care each year - while the others improved. Finally, note the relative impact of Covid on American and other life expectancies.



The Economist

All this looks to me like a living, working, breathing definition of an unethical healthcare system as described by the Utilitarians. It *always* rewards the relatively few participants in it but only *sometimes* benefits the huge number of patients who need it.

Why do we have this spending-to-outcome discrepancy? Why does our largely private sector, commercial healthcare system perform so poorly?

We'll address those questions in our next section.

Some Ethical Problems for Brokers to Address in the commercial health insurance arena

Brokers know many of the specific problems that afflict our healthcare system. These range from complicated insurance rules that differ by carrier to complicated billing rules that differ by provider to complicated access rules that differ by policy, to many others. Additional system problems also include high overheads caused by having so many different insurance carriers, providers, treatments, medications and options. I originally thought about simply listing a bunch of problems that brokers face regularly and discussing some ethical issues that arise from dealing with them.

But let's go in a different direction. Instead of simply listing a bunch of problems, let's try to identify a core structural issue caused by The Split that underlies many – maybe even most – of these specific issues. This helps us address our ethical problem and understand why our commercial healthcare system fails to produce the greatest good for the greatest number.

We'll do all this by introducing an economic concept alternately called The Tyranny of Small Decisions or The Tragedy of the Commons. The first – the Tyranny of Small Decisions – often leads to the second, the Tragedy of the Commons.

Consider the visual image of a paradigm old English village to introduce these ideas. In this little village, a bunch of farmers lived in small houses around a central public open space called 'the Common' in which cows grazed. Each farmer had a cow or two and the Common provided sufficient room and grass for them all to graze and grow.[20]

Now imagine that our old English village prospered and grew. Families bought a second, third, fourth or fifth cow. New families moved in, each with a few cows. After a while the Commons became too small to support all these cows. Each individual cow lost weight and produced less milk. Villagers' incomes fell. The Commons became overgrazed. Its topsoil began to erode after each rain and eventually the grass disappeared. It ultimately became useless for grazing. We might call this the Tragedy of the Commons v1, in which everyone uses too many resources so there are not enough for all. [21]

In v1, each individual's small decision, made in each individual's own interest, diminished the overall good. The Tyranny of Small Decisions led to overgrazing and, in turn, to the Tragedy of the Commons in which everyone ended up worse off.

As an alternate version of this story, instead of each villager buying an extra cow, a new person moves to town with 30 cows. The Commons couldn't support this increase and

[20] Many New England towns have a Common today. Think of Boston Common or Cambridge Common in Massachusetts, places where cows grazed in colonial times but today are nice public parks.

[21] Apparently this happened to the Mayans in Central American centuries ago and the environmental degradation led to their civilization's destruction, though I'm not a Mayan historian. I did, however, enjoy a fascinating trip to Belize and Guatamela in 2020.

the tragedy unfolded. In the Tragedy of the Commons v2, one person consuming too much destroys the benefit that everyone enjoyed from their shared resource.

In either case, the Tyranny of Small Decisions, in which people individually made decisions to maximize their own welfare, led to overgrazing and, in turn, to the Tragedy of the Commons.

Another way to phrase this: the Tragedy of the Commons decreases the amount of good for the great number of people.

Let's update this to a real situation in Pomfret Vermont, 2023. Pomfret, a small town, apparently enjoys spectacular foliage each fall. [22] A relative handful of tourists annually enjoyed it. In 2021 or 2022 though, a Tic Tok influencer, apparently one of those tourists, broadcast descriptions of Pomfret's beauty to his or her audience. A few local inns also advertised the town's beauty. Thousands of tourists arrived. The town became overwhelmed. Among the problems:

- Tourists blocked Margarete Pierce's driveway, parked illegally on her land, and used her garden house as a toilet,
- Cathy Emmons watched tourists stroll onto her farm and steal tomatoes from her vine,
- Mike Doten got tired of pulling tourists out of ditches with his tractor.

According to the Boston Globe's description, 'The town's selectboard … voted to block the road to anyone except residents for three weeks at the height of the foliage season, from Sept. 23 to Oct. 15…Windsor County deputy sheriffs will staff checkpoints at the bottom of Cloudland Road in neighboring Woodstock and at the top of the road here in Pomfret." (I don't know how this is legal but that's a separate issue.)

The Tyranny of Small Decisions – individual publicity for individual interests - led to the Tragedy of the Commons, so now no tourists can enjoy Pomfret's beauty during foliage season.

The Tyranny of Small Decisions and the Tragedy of the Commons can provide a framework to understand many of our healthcare system problems. Let's explore some of them.

Medical Care Rationing. Rationing or 'the limiting of goods or services that are in high demand and short supply' per Investopedia, is a classic unintended, indirect consequence of the Tyranny of Small Decisions. We'll consider two case studies.

---

[22] This story comes from the Boston Globe, Sept 18, 2023 https://edition.pagesuite.com/popovers/dynamic_article_popover.aspx?artguid=04b5fe08-f5ff-489d-acbe-ae0c5035891e

First, pediatric bed rationing in Boston. Tufts Medical Center, Boston, closed its 41 bed inpatient pediatric unit in July 2022, then repurposed them as adult inpatient beds.[23] The justification, according to Dr. Daniel Rauch, Tufts Chief of Pediatric Medicine: "Should we take care of kids we don't make any money off of, or use the bed for an adult who needs a bunch of expensive tests?...If you're a hospital, that's a no-brainer."[24] Tufts could bill more for adults than kids. A small decision that clearly benefited Tufts' bottom line. Pretty simple to understand.

But a local Tragedy of the Commons followed, documented with Boston Globe headlines like:

October 21, 2022:

Hospitals scramble to find beds as pediatric admissions rise

By Jessica Bartlett Globe Staff, Updated October 21, 2022, 8:08 p.m.

November 10, 2022

Hospitals postpone pediatric surgeries as capacity crunch escalates

By Jessica Bartlett Globe Staff, Updated November 10, 2022, 5:37 a.m.

Hospital executives said pediatric intensive care unit beds at Massachusetts General for Children were operating at 150 percent capacity, and there were few signs the surge was nearing an end.

December 11, 2022

Hospital finances play a major role in the critical shortage of pediatric beds for RSV patients

Health Dec 11, 2022 10:33 AM EDT

[23] Boston Globe 'Who will care for our sickest children', Oct 26, 2022
[24] NY Times As Hospitals Close Children's Units…, Baumgaetner, Oct 11, 2022

This Commons Tragedy continued with higher prices. According to the Massachusetts Health Policy Commission report in September 2023, Children's Hospital and Mass General Brigham, representing about 73% of pediatric discharges in Massachusetts, have the highest commercial prices in Massachusetts. Among the data points in that report, the average commercial price per pediatric discharge at Boston Children's was 47 percent higher than at other state hospitals with significant inpatient volume, even after adjusting for the illness of the patient.[25]

Here, the few service providers benefit financially while the rest of us pay higher prices for the same care … if we can find it. Our national total number of inpatient pediatric beds fell by 19% from 2008 to 2018. The Tufts closing followed this trend. Pediatric hospitals have recently closed or partially closed in Richmond Virginia, Colorado Springs Colorado, Raleigh North Carolina, Doylestown Pennsylvania and Shriners New England because 'kids are not lucrative'. [26]

The Tyranny of Small Decisions – each hospital followed its own economic self-interest and closed less profitable beds in favor of more profitable ones to earn more money – led to a tragedy for the rest of us. A few service providers and investors made more money while many sick kids and their families suffered longer waits for care, longer ambulance or med flights to hospitals, higher prices and perhaps ended up medically much worse as a result.

Greatest good for the greatest number? I think not.

Second, maternity ward rationing in central Massachusetts and nationally. Leominster Hospital closed it maternity ward in 2023. Their justification: "reimbursement rates paid to hospitals for treating maternity unit patients on Medicaid are far lower than what private insurance plans pay" particularly harming Gateway cities like Leominster according to the Boston Globe's June 25, 2023 analysis.

Maternity beds in Gateway Cities were, in other words, unprofitable or at least less profitable than other types of hospital wards or other types of patients.

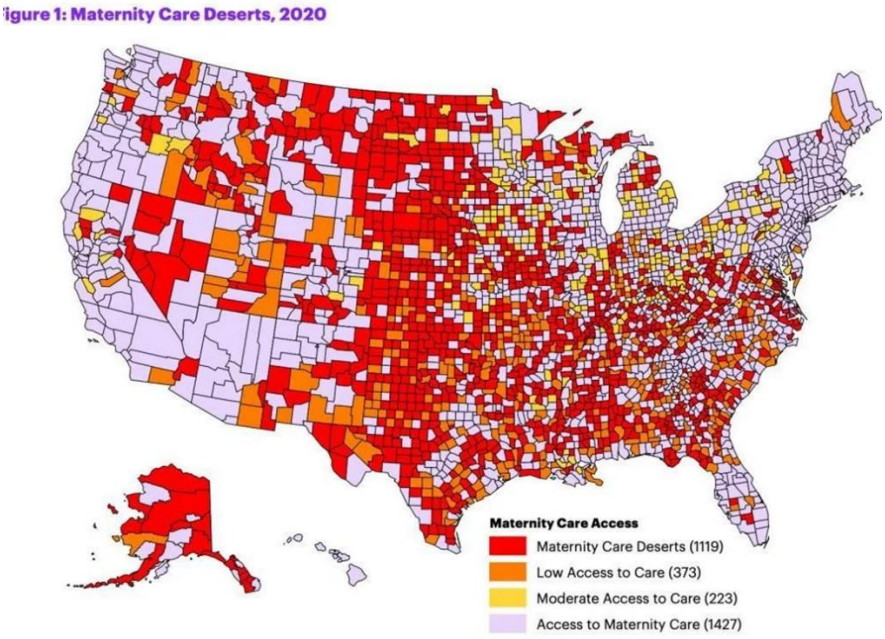
Leominster's closure also followed a state trend. Holyoke Medical Center closed its maternity center in 2020. Harrington Hospital in Southbridge closed its center in 2017.

And all this follows a national trend. According to the March of Dimes, the number of maternity deserts in this country – counties with no hospital providing maternity care,

[25] Jessica Bartlett, Boston Globe, Sept 10, 2023

[26] Boston Globe 'Who will care for our sickest children', Oct 26, 2022

no birth center, OB/GYN, and no certified nurse midwife – has increased over time, mainly in rural areas.[27] Here's their 2020 map



Pregnant women had to drive farther for their appointments and to give birth. This negatively affects them. Health Affairs reported that, after controlling for socioeconomic factors and clinical conditions, "rural residents had a 9 percent greater probability of severe maternal morbidity and mortality, compared with urban residents."[28]

Hospitals made more money – Tyranny of Small Decisions. Patients ended up worse off – Tragedy of the Commons. The same story unfolds time and time again, in specialty after specialty and treatment arena after treatment arena.

Let's switch focus now away from rationing and explore other clinical and ethical implications of the Tyranny and Tragedy.

Excessive care. Excessive care incentives so permeate our post-Split, commercially based healthcare system that Andrew Dreyfus, former CEO of Blue Cross Blue Shield of Massachusetts, claims healthcare today 'is designed around the needs of institutions and health professionals and not around the needs of patients'. [29]

Excessive care through disease mongering. Disease mongering means hyping treatments for little known diseases, more or less advertising diseases for which your company has a treatment. This instills fear among patients, expands markets and

---

[27] March of Dimes maternity desert report https://www.marchofdimes.org/maternity-care-deserts-report

[28] Rural-Urban Differences In Severe Maternal Morbidity And Mortality In The US, 2007–15, Health Affairs, December 2019

[29] Boston Globe, June 22, 2018

positions your product as a solution. Pfizer appears to engage in disease mongering about RSV with this ad, published in the Boston Globe, August 24, 2023, page 5.

We know this is disease mongering and not a public service announcement because Pfizer is not a public education organization; it's a private sector pharmaceutical that makes money by selling medications. This ad helps that process.

Other disease mongering examples exist too – look for them on TV and in your local newspapers - but I want to move on and discuss two other, related concepts: *overdiagnosis* and *overtreatment*. Overdiagnosis means broadening disease definitions so more people quality for medical care. Overtreatment means providing more care than necessary to patients. Both overdiagnosis and overtreatment can cause patients to experience higher care treatment risks and side effects without also enjoying higher chances of treatment benefit.

Excessive care through overdiagnosis. Overdiagnosis means broadening disease definitions so more people quality for medical care. According to H. Gilbert Welch, the overdiagnosis guru, it occurs "when individuals are diagnosed with conditions that will never cause symptoms or death."[30] Overdiagnosed patients, in other words, *can't* benefit from care because they weren't sick to begin with. But medical care providers, testers,

[30] H. Gilbert Welch, Overdiagnosed, page xiv

drug manufacturers and similar *can* benefit financially by treating these patients. We'll consider just one example, overdiagnosis of hypertension.[31]

In 1997, the definition of hypertension (high blood pressure) changed from diastolic blood pressure of 160 over systolic blood pressure of 100 to 140 / 90. That immediately switched about 13 million people from having normal blood pressure to having high blood pressure, or, in our terms, increased the market for blood pressure lowering medications by 13 million people.

The definition of hypertension changed more times, always increasing the number of people so-diagnosed. In 2017, for example, the American College of Cardiology and American Heart Association redefined hypertension as greater than 130 / 80, again increasing the number of hypertension patients and the market for hypertensive medications. I don't know how many people this affected.

During this time period, sales of ACE inhibitors, medications to treat hypertension, grew at an annual compound growth rate of 5%, hitting $6.9 billion in 2023. Ditto for various other anti-hypertensive medications. The hypertension redefinition appears to have stimulated these medication's sales (or, at least, didn't hurt) and again, benefited a few participants in our healthcare system.

Did the redefinition help the Commons? First, some data. The age adjusted heart disease mortality rate fell in this country from 170.5 per 100,000 in 2012 to 161.5 in 2019 or, using my back-of-the envelope calculation, by about 30,000 people annually nationally.[32] 30,000 fewer deaths divided by 13 million new patients = about 0.2% benefit. That's two tenths of one percent. About 99.8% of the newly diagnosed patients did not benefit from the new hypertension definition while 0.2% did. Maybe. That's the most optimistic reading of these data.

This interpretation assumes the redefinition itself led directly to the 30,000 fewer deaths. We don't know that to be the case. The entire mortality decrease could have been caused by other factors – less smoking, better diets, better overall physician advice or something else. We just don't know. At best 0.2% of the newly redefined-as-sick folks benefited from the redefinition. Perhaps none did.

All this raises some troubling questions, including

- How impactful were the redefinitions in preventing heart disease deaths?
- How impactful were ACE inhibitors in reducing heart disease mortality?
- How important were other medications?
- How many people were harmed either physically, emotionally, or financially by taking these medications after they were redefined as 'sick', not 'normal'?

[31] This case study comes largely from Welch, Overdiagnosis pages 20 - 23

[32] Mortality rate data from the National Center for Health Statics, part of the US Centers for Disease Control and Prevention https://www.cdc.gov/nchs/hus/topics/heart-disease-deaths.htm

- Could we have reduced heart disease mortality by a similar amount in less expensive ways than redefining at-risk folks and prescribing medications for them?
- Did the increase in hypertension medication sales and associated corporate profits affect the new hypertension definition?

A disturbing consideration of this last point comes from Otis Brawley, former Chief Medical and Scientific Officer of the American Cancer Society in his book How We Do Harm. He suggests that of our 555 guidelines (555!) for treating hypertension, "some are self-interested and harmful. Many are commercial documents"[33] meaning they're designed to sell products, more-or-less a form of disease mongering. No one, according to Brawley, promulgates good practices for guideline composition or hypertension redefinitions. Might the 1997 and other redefinitions reflect commercial pressures? Might this simply be the Tyranny of Small, Self-Interested Decisions on the part of hypertension treaters?

All we know for sure is that more Americans are now diagnosed with hypertension and that a very small percent of them benefit from redefinition as measured by age adjusted mortality rates per year. Medical statisticians could parse this analysis far better than I – this is simply an introductory overview – but at first cut, a 2/10s of 1% benefit rate appears underwhelming or, in our terms, like overdiagnosis.

But the drug makers, labs and related folks made more money.

We could expand this analysis, as Welch did in Overdiagnosed, to include hyperlipidemia (high cholesterol), diabetes, osteoporosis in women and many more. I hope, though, this one example can suggest what overdiagnosis is, why it's a systemic problem and, more directly for our purposes today, why it's an ethical one for brokers.

Excessive Care Through Overtreatment. Overtreatment means providing more care than necessary to patients. Patients can't benefit from overtreatment by definition; overtreatment is care that does not provide benefit. But patients can be harmed by it because all medical treatments involve some element of risk. The more care someone receives, the higher the chance of risk. An overtreated patient gets all the risks without the possibility of benefit.

But the overtreatment *providers* still get paid.

Consider coronary stents as one overtreatment example. According to research from the Lown Institute, between 2019 – 2021, US hospitals performed over 229,000 unnecessary coronary stent procedures, or about 1 every 7 minutes. [34] That's about 22%

[33] Brawley, How We Do Harm, page 243

[34] Lown Institute Hospital Index 2023, Avoiding Overuse: Coronary Stents. https://lownhospitalsindex.org/avoiding-coronary-stent-overuse/ Lown defines overuse as inserting stents in patients with a diagnosis of ischemic heart disease at least six months prior to the procedure, excluding patients

of all coronary stents and the unnecessary care cost Medicare alone up to $2.4 million. Rates of overuse varied widely by hospital: at some, more than 50 percent of all stents met criteria for overuse, while at others, fewer than 5 percent were unnecessary.

In all cases, the providers got paid – an economic incentive-based Tyranny of Small Decisions. But 229,000 people undertook the procedure risks without much or any likelihood of benefit because the stent was unnecessary, and everyone's health insurance premiums increased. An economic cost and tragedy for the rest of us.

Let's move from a specific to the general case and estimate the size of the overtreatment problem from a 2017 physician survey published by PLOS, an online medical journal. [35] According to physicians themselves, 20% of all medical care is unnecessary, including 22% of prescription drugs, 25% of tests and 11% of procedures. Among the most common excuses for this by the physicians were fear of malpractice and patient pressure or demands. In other words, in our post-Split healthcare system, no one pushes back sufficiently aggressively when patients want unnecessary treatment. That opens the door to our Tyranny and Tragedy.

By contrast, in a vertically integrated system where healthcare finance and service delivery are the same company, there is a brake on overtreatment; the finance arm, in its desire to keep premiums competitive, won't allow it. Unfortunately, though, today in much of America, one large hospital system typically controls 50-75% of the beds in a region, while the largest insurance carriers in a region – organizations potentially able to push back on overtreatment – typically only have about a 15 – 30% market share. This unequal playing field contributes to our unnecessary care problem; organizations incentivized to provide more care dominate.

One personal experience with overtreatment. I had a sore ankle in September 2023 that felt tight early in the morning, then loosened up during the day. I felt under time pressure to resolve the issue as I was going hiking with my kids in November, about 6 weeks in the future. I first tried rest but that didn't work. I then considered my treatment options:

- Option 1, see an orthopedist. That would take a couple months as orthopedists typically book weeks or months in advance. I suspected there was insufficient time to pursue this option. The orthopedist would probably (my uninformed guess here) want to run some tests, then have me return for a second visit and maybe prescribe therapy or medications (my guess again). I expected that the orthopedist would resolve my ankle pain problem but, most likely, after I returned from my hiking vacation.

with a diagnosis of unstable angina or heart attack within the past two weeks, and excluding patients who visited the emergency department over the past two weeks.

[35] https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0181970

- Option 2, see a physical therapist. My limited experience with PT suggested that I would visit once or twice a week for a few weeks. My experience also suggested that the therapy would work. I decided to keep this option on hold.
- Option 3, see my local chiropractor. Note here that I am not a shill for the chiropractic industry and do not understand anatomy; I'm just a commentator here. However, I like chiropractic primarily for one, virtually overwhelming reason: I can get an appointment in a day. Plus it's cheap. I had no idea if chiropractic would resolve my ankle pain problem, but I figured 'why not?'. Very low risk. I could learn quickly – in one afternoon since my chiropractor is about 15 minutes from my house – if chiropractic could help and it only cost $8.80 for a copayment. I figured it was worth the time to find out.

My chiropractor felt my ankle, gave me a couple stretches, and sent me home with 'come back if you still feel pain next week'. I did the stretches a couple times and, astonishingly to me, the pain disappeared. Problem solved. In one day. For $8.80.

Would the physical therapist or orthopedist have overtreated my problem? It certainly seems likely to me though I can't know for sure. But I feel like I maneuvered around the tyranny of their own small, incentive based decisions for my own benefit.

Excessive care through lack of high quality, randomize, comparative studies. We'll first discuss Vitamin D supplements to prevent bone fractures or extend life. Millions of Americans take vitamin D supplements and labs test 10 million vitamin D level in patients every year.[36] Vitamin D sales and testing has become a billion dollar industry with about 25% of Americans over age 60 taking vitamin D supplements.[37]

Though use of vitamin D supplements may make biochemical sense – the body needs vitamin D to help it absorb calcium, a mineral necessary for strong bones – a 2022 comparative study of 25,000 people with half taking the supplements and half taking a placebo found little-to-no benefit to the vitamin D supplements.[38] Indeed and perhaps more interesting from our perspective, that 2022 study found that 'no large randomized, controlled trials had previously tested the effects of daily supplemental vitamin D alone (without coadministered calcium) in preventing fractures in the U.S. population.'

Why were there no studies on such a widely prescribed vitamin? One answer may be that the American Clinical Laboratory Association, the trade association for the laboratory and diagnostic health industry, spent around $1 million on political lobbying annually since 2014 [39] though I don't know exactly where all this money went.

Another answer may be that the Endocrine Society – the leading organization in the fields of endocrinology and metabolism according to Wikipedia, that 'influences a wide

[36] Gina Kolata, Study Finds Another Condition that Vitamin D Pills Do Not Help, New York Times, July 27, 2022
[37] Szabo, Selling American on Vitamin D, Kaiser Health News, August 20, 2018, https://www.nbcnews.com/health/health-news/selling-america-vitamin-d-reaping-profits-n902276
[38] LeBoff et al, Supplemental Vitamin D and Incident Fractures in Midlife and Older Adults, NEJM, July 28, 2022.
[39] Open Secrets https://www.opensecrets.org/federal-lobbying/clients/summary?cycle=2022&id=D000023934

range of policies' according to its website [40] – argues that "vitamin D deficiency is very common in all age groups" and advocated a huge expansion of vitamin D level testing in patients in the 2010s.[41] Though the Endocrine Society's financial lobbying is relatively small, only about $120,000 in 2020 for example, it plays a large role in 'helping to shape healthcare and research policy in the US and around the world' according to its website.[42]

A third answer maybe be that 'it's obvious' that vitamin D helps people, based on a simplistic, linear, biochemical analysis. 'Bones need calcium, vitamin D helps bones absorb calcium so vitamin D supplements will help bones remain strong'. If only the human body was so simple! We have an extensive history of *medical reversal* in this country; medical reversal means 'high quality comparative studies show that something that makes sense in theory does not provide patient benefit in real life'. See *Ending Medical Reversal*, an outstanding book by Adam Cifu and Vinay Prasad for more on this.

I'll go out on a limb now and suggest that the financial lobbying impact of the American Clinical Laboratory Association, plus the intellectual clout of the Endocrine Society, combined with the 'obviousness' of vitamin D's benefit, supported an environment for continued vitamin D level testing in patients and supplement prescriptions, *always* to the economic benefit of the industry but *only sometimes*, if ever, to the medical benefit of patients. That's one impact of our profit motivated, private sector based medical industry post-Split.

We'll switch focus now to discuss excess care and medical spending on over-the-counter-decongestants**.** The US over-the-counter decongestant market was worth about $1.8 billion in 2023,[43] including common, over-the-counter medications such as Sudafed PE, Vicks Nyquil Sinex Nighttime Sinus Relief and Benadryl Allergy Plus Congestion. The problem with these and similar phenylephrine-based medications: they don't work. That's the unanimous conclusion of an FDA panel that reviewed several existing studies of phenylephrine-based medications in September 2023.

From our point of view, though – the impact of private sector medicine's lobbying for its own financial gain and not necessarily for patient benefit - the back story of how ineffective medications came to market and remained on the market so long is more compelling than the scientific analytics.

We begin in 1976 when the (then new) Food and Drug Administration adopted a 'safe and effective' standard for medications. [44] After an initial purge of unsafe or ineffective

[40] https://www.endocrine.org/advocacy
[41] Szabo op cit
[42] https://www.endocrine.org/advocacy
[43] Berkeley Lovelace Jr, FDA Panel Says Common Over-The-Counter Decongestant Doesn't Work, NBC News, September 12, 2023
[44] Much of this section comes from Haley Weiss, With the Decongestant Snafu, the FDA Tries Something New, Time, September 14, 2023

drugs in the 1970s, the agency's approval criterion morphed, in real life, from 'safe and effective' to 'safe' with few if any drugs were removed from the market during the ensuing 50 years due to their lack of effectiveness. The agency apparently lacked the resources to police medications as rigorously as, perhaps, it would have liked, and so focused more on product safety.

We'll jump ahead 30 years, bypassing drug reformulations and FDA oversight issues, to 2007 when two University of Florida researchers, Leslie Hendeles and Randy Hatton, filed a citizen's petition for the FDA to review various phenylephrine-based medicine studies. Hendeles and Hatton had themselves reviewed dozens of original studies and determined that over-the-counter, phenylephrine-based oral decongestants performed no better than a placebo. In other words, these medications were safe but *ineffective*. The FDA, in response, assembled the Non-Prescription Drug Advisory Committee (NDAC), composed of petitioners, manufacturers and the Consumer Healthcare Products Association, the industry trade group. The NDAC decided that the evidence on phenylephrine was "suggestive of efficacy" so left these drugs on the market. (I'm not sure what 'suggestive of efficacy' means, especially after years of patient utilization. 'Suggestive of efficacy' is not a standard statistical, regulatory or legal concept.)

Fast forward 8 more years and several new studies, and Hendeles and Hatton again filed a citizen's petition, this time to remove phenylephrine-based oral decongestants from the market. The FDA reviewed the newest information, this time with enhanced powers granted to it by the Coronavirus Aid, Relief, and Economic Security Act, passed in 2020. Post-2020, the agency could more easily revise over-the-counter approvals and recommendations.

That brings us to September 2023 when an advisory panel to the FDA concluded that phenylephrine-based oral decongestants are ineffective, more-or-less returning to the 1976 'safe and effective' standard. During those 50 years, Americans took a safe but ineffective medication thanks, in part, to weak FDA oversight (lobbying impact?) and weak regulations (lobbying impact?).

> I left out the history of Schering-Plough, since bought out by Merck and the maker of Claritin D. Their internal studies showed that phenylephrine-based oral decongestants were, in fact, ineffective. That's why they continued making Claritin D, a prescription medication, and didn't switch to a phenylephrine-based over the counter formulation. The Schering-Plough story suggests that the pharmaceutical industry knew of phenylephrine-based oral decongestant ineffectiveness but still promoted the medications to patients.

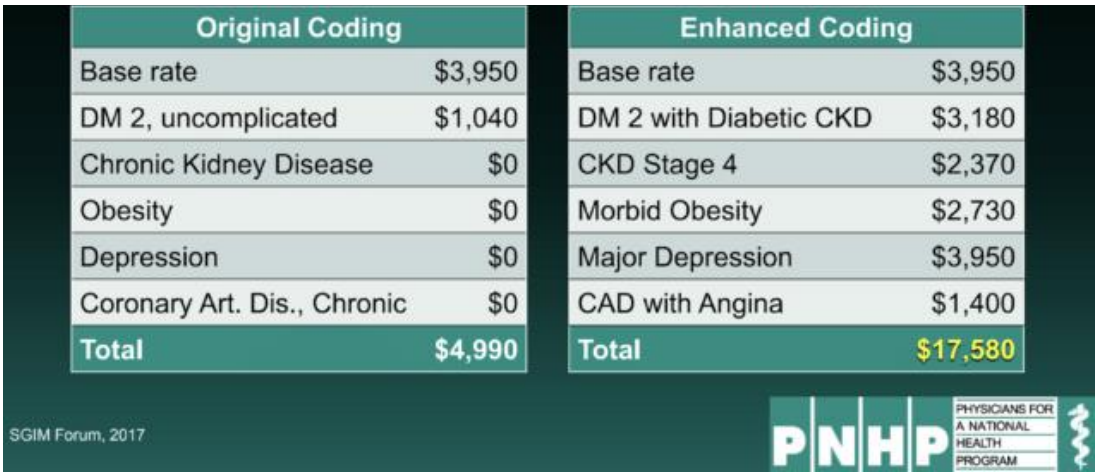
The net result of that 50 year lag, according to Hendeles and Hatton:

> Americans spend billions on drugs that contain ingredients that will not help them. That's not just a waste of money — it could mean they are delaying appropriate treatment, which can lead to more severe illnesses.

But the OTC drug provision industry made billions thanks, in large part, to their industry lobbyists.

Excess billing. Somewhat like the excess care problems, our post-Split healthcare system allows for excess billing. In this excess billing case, patients don't gain additional benefits – they (or their insurance carrier, which ultimately means their premiums) just pay more for the same care…at best. The excess billing problem may ultimately lead to overtreatment.

In our non-vertically integrated, post-Dallas healthcare system, providers typically bill by code. We have, in this country, thousands of codes, many subject to interpretation. The Physicians for a National Health Plan offers one example, below, showing the difference in potential billing for the same patient.



The players in our health insurance melodrama understand this, as do investors like private equity firms. Private equity firms purchased 355 physician practices between 2013 and 2016 and 578 between 2017 – 2021. Individual physician practices can have dozens or hundreds of doctors. [45]

Private equity investors seek high returns from their investments, up to 20% annually according to some estimates. Our post-Split healthcare system offers only 3 ways to accomplish this: see more patients, provide more treatments and/or bill at higher rates. PE owned firms apparently do all three, according to research published the Journal of the American Medical Association in 2022. [46] That study noted "Following a private equity acquisition, physician practices saw a 20.2 percent increase in charges per claim…and a 37.9 percent increase in new patient visits." Additionally, PE owned firms

[45] Robert Pearl, Private Equity And The Monopolization Of Medical Care, Forbes, Feb 20, 2023

[46] Association of Private Equity Acquisition of Physician Practices With Changes in Health Care Spending and Utilization, JAMA, Sept 2, 2022.

generated a 16% increase in the total number of encounters. (Encounters = lab tests, imaging, procedures).[47]

Little to none of this helps patients get healthier (personal opinion and probably an overstatement) while all benefit system participants – physicians, nurses, private equity investors, drug companies, etc - just like Andrew Dreyfus observed. This helps explain why we enjoy more healthcare spending year over year, while failing to enjoy improved outcomes as measured by increased longevity.

Medical procedure approvals. Let's turn now to a case study of spinal fusion surgery research and information dissemination to see how the Tyranny of the few can affect the well being of the Common. This comes from research published in Scientific American[48] by two researchers, Sanjaya Kumar, Chief Medical Officer at Quantros, a healthcare analytics company, and David Nash, dean of the Jefferson School of Population Health at Thomas Jefferson University.

We'll start in the 1990s when the Federal Agency for Health Care Policy and Research (now the Agency for Healthcare Research and Quality) released findings from a five-year investigation of the effectiveness of various treatments for low back pain. Here's Kumar and Nash's summary from their Scientific American article:

> Between 1989 and 1994, an interdisciplinary Back Pain Patient Outcomes Assessment Team (BOAT) at the University of Washington Medical School in Seattle set out to determine what treatment strategies work best and for whom. Led by back expert Richard A. Deyo, MD, MPH, the team included orthopedic surgeons, primary-care physicians, physical therapists, epidemiologists and economists. Together, they examined the relative value of various diagnostic tests and surgical procedures.
>
> They conducted a comprehensive review of clinical literature on back pain. They exhaustively examined variations in the rates at which different procedures were being used to diagnose and treat back pain. Their chief finding was deeply disturbing: what physicians thought worked well for treating low back pain doesn't. The implication was that a great many standard interventions for low back pain may not be justified. And that was immensely threatening to physicians, especially surgeons who perform back operations for a living.
>
> Among the researchers' specific findings: no evidence shows that spinal-fusion surgery is superior to other surgical procedures for common spine problems, and

[47] Discussion with Jane Zhu, co-author of the JAMA study and assistant professor of medicine at Oregon Health & Safety University https://www.opb.org/article/2022/09/16/what-happens-to-healthcare-spending-and-use-under-private-equity-ownership/

[48] Kumar and Nash, 'Myth: There is a high degree of scientific certainty in modern medicine', Scientific American, March 25, 2011.

such surgery leads to more complications, longer hospital stays and higher hospital charges than other types of back surgery.

Disgruntled orthopedic surgeons and neurosurgeons reacted vigorously to the researchers' conclusion that not enough scientific evidence exists to support commonly performed back operations. The surgeons joined with Congressional critics of the Clinton health plan to attack federal funding for such research and for the agency that sponsored it. Consequently, the Agency for Healthcare Policy and Research had its budget for evaluative research slashed drastically.

The back panel's guidelines were published in 1994. Since then, even though there are still no rigorous, independently funded clinical trials showing that back surgery is superior to less invasive treatments, surgeons continue to perform a great many spinal fusions. The number increased from about 100,000 in 1997 to 303,000 in 2006.

In 2023, twelve years after Kumar and Nash's Scientific American article, I searched for rigorous, independently funded clinical studies on back surgery. The most recent available was a 2018 summary of the evidence about spinal fusion surgery. Those researchers concluded "We found no high-quality systematic reviews and the risk of bias of the randomized controlled trials in the reviews was generally high." [49]

I also googled 'number of spinal fusion surgeries per year' and learned from various sources, that we in the US experienced 500,000 in 2011 and 1.3 million in 2021, though that later number may include a wider definition. [50] These procedures cost about $50,000 each for an annual national total of perhaps $68 billion.[51]

Since the Baylor – Dallas School System initial foray into health insurance, medical providers, suppliers, financiers and others have made Small Decisions for their own financial benefit. Many have harmed The Commons. That's unethical in the classic Utilitarian context.

Let's move on now to Ethical Issue #2 today, the problem of Selling False Hope.

[49] Harris, et al, Lumbar spine fusion, what is the evidence? Internal Medicine Journal, Dec 5, 2018
[50] iData Research 8/16/23
[51] Cost of spinal fusion surgery in the 30 biggest US cities, Becker's Spine Review, Carly Behm, Feb 21, 2022 https://www.beckersspine.com/spine/53684-cost-of-lumbar-spinal-fusion-in-the-30-biggest-us-cities.html . Boston's cost was $50,150

Ethical Principle #2:
Avoid selling false hope

Health insurance brokers often provide products and services for which clients act or pay now but benefit in the future. Physical therapy today might avoid expensive, painful surgery tomorrow. Routine dental care today might avoid expensive and painful tooth extractions and implants in the future. An annual physical this year may identify inexpensively treatable abnormalities and avoid far more expensive coronary procedures in a decade.

A comprehensive corporate wellness program may prevent or reduce employee diabetes treatment costs for many years.

These future benefits affect both employees and employers. Employees theoretically gain better health and lower medical costs in the future. The employer – the majority payor in standard commercial health insurance policies – gets lower future health insurance premiums and less future employee absenteeism.

This text will address some ethical issues arising from selling or promoting these 'pay-now-and-benefit-in-the-future' types of programs. We'll focus on the ethics of selling hope and specifically of selling false hope.

A simple hypothetical example about promoting routine wellness visits

Consider whether an employer should actively promote the annual wellness visit included in ACA compliant health plans.

The 'annual wellness visit', better known as an annual physical, provides the employee with a range of screening tests and an opportunity to talk with his or her doctors about his or her medical status. Promotion might include

- Memos or emails reminding employees to get their annual physical,
- Brochures highlighting the benefit, perhaps with emotional wording like 'Get your annual physical - it might save your life' and could include a testimonial from someone who discovered a serious health risk at her physical,
- A benefits seminar at which the benefits manager or broker extolls the advantages of having an annual physical.

Offering a promotional program will presumably result in a higher percentage of employees accessing this benefit, i.e., having an annual physical.

Offering no such promotional program will presumably result in a lower percentage.

What should the broker advise? We'll present 3 different implications of the employer's promotional actions in the false hope arena, based on 3 different research conclusions.

* First, a broker relying on WedMD's analysis and conclusion might encourage an employer to promote annual physicals aggressively.

WebMD suggests that regular checkups benefit the patient - "not only help you stay healthy, but they could save you money, too" - and to the employer, stating that physicals "cut costs for the employer that provides your health insurance" by finding diseases early when they're easiest to treat. [52]

The employee, they suggest, might avoid a $50,000 heart bypass procedure or treat arthritis without need for a joint replacement, both resulting in substantial future savings. Overall, according to WebMD, the annual physical might help the employee lower his or her medical bills, avoid taking medications, and avoid surgery. When the patient / employee saves money, so does the employer who typically pays most or all the health insurance premium. (We assume here some sort of experience modification affecting health insurance premiums.)

Based on the WebMD study, an ethical, professional broker would likely encourage an employer to promote this benefit aggressively.

* On the other hand, though, some researchers like Dr. Ateev Mehrotra of Harvard Medical School disagree with WebMD's analysis, arguing that "we should move forward with the elimination of the annual physical" and that patients should only visit their doctors when they're sick or have a scheduled screening test like a colonoscopy.[53] Randomized studies, he suggests, support his view that the current costs of wellness visits outweigh the future savings. Many other researchers agree with Dr. Mehrotra.[54]

A broker subscribing to Dr. Mehrotra's analysis might recommend that a company *not* promote the annual physical benefit very aggressively to employees.

* But on yet another (third?) hand, some researchers go even farther including Dr. Michael Rothberg of the Cleveland Clinic who generally *avoids* giving physicals, suggesting they do more harm than good.[55] He argues that doctors are trained to look for problems and "If you get near them, they'll start to look for things and order tests because that's what doctors do."

The risk, in Rothberg's opinion, is overdiagnosis or false positive test results, finding and treating problem that doesn't exist. This leads to additional current costs to the employer and risks to the employee with little-to-no potential future benefit because there's no problem in the first place; that's the definition of false positive or overdiagnosis.

---

[52] Watson, Why Regular Check Ups Make Financial Sense, WebMD, September 5, 2022 https://www.webmd.com/healthy-aging/annual-checkups-seniors-lower-costs#:~:text=Routine%20checkups%20with%20your%20doctor,they're%20easiest%20to%20treat.

[53] Gold, Your Annual Physical is a Costly Ritual, CNN, April 14, 2015 https://www.cnn.com/2015/04/14/health/annual-physical-ritual-costly

[54] For example, Heid, **Do I Really Need and Annual Physical?,** Time, January 10, 2018, Levine, **Is It OK to Skip Your Annual Physical**?, AARP, October 25, 2018, Kliff, **TV Docs Say Annual Checkups Save Lives**, VOX, September 26, 2016, Emanuel, **Skip Your Annual Physical**, NY Times, January 8, 2015

[55] Ibid.

A broker subscribing to Dr. Rothberg's analysis might encourage the employer to advise skepticism to employees about the value of annual physicals.

Who's right?

- WebMD's 'get your annual physical, it will improve your health and save your employer money in the future'
- Dr. Mehrotra's 'not so fast, we don't see any benefit in comparative studies' or
- Dr. Rothberg's 'avoid it; the risks outweigh the benefits'?

The answer is that the research you rely on as a broker has direct implications for your client. Your advice to the employer risks selling false hope or even harm.

Consider the likely impacts of your actions or non-actions:

- If you advise the employer to **encourage employees** to get their annual physicals i.e., rely on the WebMD analysis, you promote the hope that future employer medical costs will be lower and future employee health status will be higher.

But if WebMD is wrong and Dr. Mehrotra is right, the broker's advice promotes the *false hope* of future benefit. And if Dr. Rothberg is right, the broker's advice might promote increased risk and cost.

- If you advise the employer to **tell employees to do their own research** about annual physicals i.e., rely on Dr. Mehrotra's analysis, then, presumably, some will not get them. They might, as a result, suffer poorer future health if the WebMD analysis is right and Dr. Mehrotra wrong.

The employer would also likely incur higher future medical costs, again if WebMD is right and Dr Mehrotra wrong.

On the other hand, some employees might not waste their time or energy on (wasteful in Dr. Mehrotra's opinion) physicals. This path offers the hope / false hope of avoiding current waste without any compensating future benefit.

- If you advise the employer **not to say anything** and let their employees decide for themselves, then, according to Dr. Rothberg's analysis, some will get harmed by having their annual physical, at least by facing higher-than-necessary medical testing and exploration costs.

Some employees in this 'don't actively promote it' scenario might think 'the annual physical must be good since my employer included it in my policy' and incur both increased medical risks and higher costs as a result if Dr Rothberg is right. The employer, in other words, *implicitly* promotes the false hope of benefit by not *explicitly* advising employees to be skeptical or informing them of the risks.

Meanwhile, the employer might face higher short term medical costs from these (harmful in Dr. Rothberg's opinion) annual physicals. Here the broker *implicitly* promotes the false hope of benefit by not *explicitly* informing the employers of the risks.

My point in this introductory section: any healthcare related product or service could include implications about future financial benefits or costs to employers and employees. And any broker action either to promote or not a specific benefit risks selling false hope, either explicitly or implicitly.

Beware of what you sell and how you promote it.

Understanding hope and false hope

Hope in its simplest sense is an optimistic state of mind based on an expectation of positive outcomes from a set of conditions, events or circumstances.[56] 'I hope the Red Sox win' or 'I hope to recover from this illness' for example. In these cases you have a set of circumstances – the Red Sox playing baseball or you being ill – and a goal that will bring you joy.

Hope in a richer sense also includes a fact-based expectation that your goal is achievable. You may know, for example, that the Red Sox pitching is particularly good this year, that their infield is very strong or that their team batting average is highest in the American league. Those facts – or your interpretation of them – makes your goal seem reasonable and contributes to your sense of optimism. Ditto about your illness and related medical treatment.

Some philosophers suggest hope rests on these 2 necessary conditions – desire for a specific goal that makes you feel good and the fact-based belief that the probability of achieving that goal is greater than 0.[57]

Other commentators go even further, arguing that hope entails an action plan to achieve your goal [58], a set of steps that probabilistically lead to you achieving your goal. This assumes, of course, that you are an active participant - like a patient trying to get healthy – not a passive one like a Red Sox fan.

All these conditions and nuances can give us a headache! To avoid becoming bogged down in minutia, we'll settle on 'hope' containing 3 features in this text:

1. Having a *goal* that generates something positive for you.
2. Having a *probabilistic expectation* about your likelihood of achieving that goal.
3. Having a *plan* to achieve that goal.

[56] Wikipedia definition

[57] John Patrick Day in the American Philosophic Quarterly, 1969 as discussed in Is There A Problem With False Hope, Bert Messchenga, Journal of Medicine and Philosophy, August 2019

[58] Charles Snyder in the Wikipedia discussion op cit and the Messchenga paper ibid.

False hope contradicts at least one of these features:

- You may have an incorrect goal, in other words seek something that will not generate the desired positive impact on you if-or-once you achieve it.

Consider a depressed person who hopes a Sox win will improve his mood. He buys an expensive ticket to Fenway Park, pays for parking, watches the Sox win – against the Yankees! – but still feels depressed. Here, the false hope that a Sox win would make him feel better was an incorrect goal.

- You may have an unrealistic expectation about the probability of achieving your goal.

Consider a patient who opts for a particular surgery hoping it will be successful despite the published 6% success rate. When it turns out unsuccessful – a near certainty in this case - he feels discouraged. He suffered from false hope of success based on an unrealistic expectation.

- You may have a faulty plan to achieve your goal or no plan at all.

Consider the high school athlete who hopes to play in the NBA but spends his time watching video games instead of training and developing his basketball skill set. Bad plan. He suffers from the false hope that his natural ability would be enough to make the Celtics.

These are, of course, supercilious examples. Each feature above has lots of variation available. Readers can embellish upon them.

Nonetheless I propose that this list is good enough, useful for our purposes. It will help us understand the notions of hope and false hope. It provides a template for us to evaluate various benefit programs.

Hope, false hope and ancillary insurance programs

We'll now shift focus from a theoretical discussion of hope and false hope to a discussion of wellness programs, one type of employee benefit. We'll use wellness programs as a specific to represent the general false hope issue.

Wellness programs aim to improve the physical, mental, and emotional health of employees. They cost about $238 per employee per year according to the Fidelity Investment Business Group on Health's report released in June of 2021.[59] That's down from about $521 in 2013.[60] Most large employers offer some sort of wellness program for their employees though the specific program components vary considerably.

[59] Mayer, How much are employers investing in wellness programs, Human Resource Executive, June 10, 2021
[60] Frakt and Carroll, Do Corporate Wellness Programs Work, Generally Not, New York Times, September 11, 2014

Total spending on corporate wellness programs hit $20 billion in 2021.[61]

SHRM, the Society of Human Resource Managers offers a nine step guide on how to establish and design a wellness program.[62]

- Step One – Conduct Assessments including a health risk assessment to determine which programs you need and an organizational assessment to determine which programs you can realistically offer.
- Step Two – Obtain Management Support by determining your strategic priorities, program expectations and senior management orientations.
- Step Three – Establish a Wellness Committee to build, sustain and communicate a wellness culture to the employees.
- Step Four – Develop Goals and Objectives, most commonly to reduce healthcare costs. Other typical goals include reducing absenteeism, boosting worker productivity and increasing employee retention.
- Step Five – Establish a Budget to implement the program.
- Step Six – Design the Program Components commonly including weight loss programs, exercise programs, smoking cessation and nutrition education.
- Step Seven – Select Wellness Program Incentives or Rewards. According to SHRM's website, these are "an effective tool to change unhealthy behaviors, to adhere to healthy behaviors, to increase participation rates or to help individuals complete a program."
- Step Eight – Communicate the Wellness Plan to engage employees in it.
- Step Nine – Evaluate the Success of the Program, a necessary step according to SHRM to sustaining management and employee support for it.

Many of these steps are internal actions a company takes, including communication and budgeting. Useful though they are, we'll sidestep Steps 1 – 5, 7 and 8 as they're more focused on program implementation than hope and/or false hope raising. Step 9 is premature for our discussion since we haven't yet developed the program so can't yet discuss the outcomes. We'll sidestep it also.

We'll focus instead on Step 6, designing the program components and ask if a wellness program must inevitably raise false hope or if one can be designed - somehow - only to raise realistic hope. As a first cut, the prospects look unpromising.

---

[61] Global Newswire, Global Corporate Wellness Market, July 29, 2021 https://www.globenewswire.com/news-release/2021/07/29/2270961/0/en/Global-Corporate-Wellness-Market-to-Reach-87-3-Billion-by-2026.html . One quote from this article "The U.S. Market is Estimated at $20.4 Billion in 2021"

[62] https://www.shrm.org/resourcesandtools/tools-and-samples/how-to-guides/pages/howtoestablishanddesignawellnessprogram.aspx downloaded and summarized November 30, 2022

Two healthcare economists, Austin Frakt and Aaron Carroll, writing in the New York Times in 2014 reviewed several high quality studies and concluded that wellness programs do not work. [63] Among the research they cited:

- ”We found little evidence that such programs can easily save costs through health improvement” Horowitz et al *Wellness Incentives in the Workplace* Health Affairs, 2013
- Wellness programs “did not save money for the employer in the short term” Gowrisiankaran et al, *A hospital system’s wellness program* Health Affairs, 2013
- “They generally do not achieve long term behavior change” and any decrease in medical spending associated with wellness programs “is not statistically significant” Mattke et al, *Workplace wellness programs study, Final Report*, Rand Corporation 2013.

Other studies arrived at similar conclusions:

- “The results were disappointing. There seemed to be no causal effects.” Aaron Carroll describing the *Illinois Workplace Wellness Study* in the New York Times, 2018 [64]
- “The research found no significant differences in outcomes like lower blood pressure or sugar levels and other health measures. And it found no significant reduction in workers’ health care costs.” Reed Abelson describing the *BJ’s Wholesale Club experience* in the New York Times, 2019 [65]

Nonetheless, some people, often financially compromised, still claim wellness programs work and generate high returns on the employer’s investment. They present statistics and assorted data to back their claims.

I find these claims and the studies they rely on unconvincing. The reasons are complicated, nerdy, relevant, and, unfortunately, critical to understanding why so many studies justifying wellness programs are not credible.[66] Put briefly, first, these pro-wellness programs compare *one specific group* of people before and after participating in a wellness program. This methodological slight-of-hand allows them, sometimes if not always, to find benefits such as higher employee retention or lower hospitalization costs.

But when comparing that one group to a control group - a similar group of people that does not participate in a wellness program – those benefits generally disappear.

[63] Do Corporate Wellness Programs Work, Generally Not, New York Times, September 11, 2014
[64] Workplace Wellness Programs Don’t Work Well, NY Times, August 6, 2018
[65] Employee Wellness Programs Yield Little Benefit, NY Times April 16, 2019
[66] These are outlined in Workplace Wellness Programs Don’t Work Well, NY Times, August 6, 2018 op cit

In other words, when studying only one group, the wellness program results may simply mirror other workplace trends. For example,

- If employee retention increases nationwide, for example during a recession when employees find it difficult to change jobs, then it will show up in our before-and-after study.
- If gym participation rates are up, for example due to a cool new fitness fad, then they will also be in our before-and-after study.
- If smoking rates are down nationally, then they will also be in our before-and-after study.

We can't determine, when looking only at one employee group before-and-after, whether the wellness program itself accounted for any of the benefits. They may have occurred anyway, for reasons unrelated to the program itself.

Second, researchers, especially those financially compromised, may find a before-and-after statistical fluke and claim it as a wellness program benefit.

- 'Financially compromised' means paid by a wellness program or similar organization that stands to benefit financially from favorable report results.
- 'Financially disinterested' means paid by an organization that cannot benefit financially from the study outcomes. We want to read studies authored by financially disinterested parties.
- 'Statistical fluke' means a change that happened randomly or for reasons unrelated to the program.

Consider, for example, an increase in daily outdoor walking among employees who participated in an October - March corporate wellness program. The April and May walking increase might occur every year simply because the weather improves. But our before-and-after wellness program analysis picks it up, incorrectly, as a wellness benefit.

The bottom line: weak study methodologies used by financially compromised researchers can justify wellness investments while better, more scientifically valid methodologies used by financially disinterested researchers do not.

Here we enter the false hope arena, just as we did earlier in our discussion about promoting annual physicals. The study you choose to believe can determine your actions as a broker. But the study you choose to believe may not correlate to real life benefits. Beware!

The vast preponderance of high quality, statistically valid studies – ie. those produced by financially *dis*interested researchers using comparative study methodologies - conclude wellness programs **do not** generate medical or financial benefits to employers. Brokers who sell them or advise their clients to adopt them raise false hopes of future benefit and act, according to the argument in this text, unethically.

Let's articulate this using the 3 features of hope and false hope introduced earlier. Hope entails

- Having a goal that generates something positive for you. False hope entails having a goal that will not generate a positive benefit for you.

In this case, improving employee health and reducing future medical costs is a reasonable and valid goal. No false hope problem with this feature.

- Having a probabilistic expectation about the likelihood of achieving that goal. False hope means pursuing a goal that you *do not* have a reasonable likelihood of achieving.

In this case, based on the preponderance of financially disinterested, methodologically valid studies, employers have very little if any realistic expectation of achieving their goals.

They engage in the false hope of improving employee health and reducing future medical expenses by participating in wellness programs.

- Having a plan to achieve the goals.

Wellness programs qualify as a 'plan' in that they have a bunch of steps that seem to go in a direction. Unfortunately it's a bad plan; at the end of it they are unlikely to achieve their goals. (I don't know whether a 'bad plan' qualifies as a 'plan'. It's a semantic issue. In this case, the 'plan' doesn't get you to the hoped for benefits.)

A deeper dive into the context

Let's dig a little deeper and consider the context of wellness programs, some reasons employees participate in non-healthy behaviors and some obstacles wellness programs face when trying to change employee behavior.

Wellness programs address various chronic medical conditions and diseases. Chronic disease treatments consume about 85% of all healthcare spending with about half of Americans – that's roughly 160 million folks - having one or more chronic diseases. The number of chronic disease patients grows by 7 – 8 million every 5 years.[67]

The ten most common chronic conditions are arthritis, cancer, chronic obstructive pulmonary disease, coronary heart disease, asthma, diabetes, hepatitis, hypertension, stroke and weak or failing kidneys. These often – not always – have a lifestyle cause, a combination of excess body weight, suboptimal nutrition and insufficient exercise.

[67] The Relation of the Chronic Disease Epidemic to the Healthcare Crisis, Holman, American College of Rheumatology, Feb 19, 2020

We have known about these chronic diseases, their costs and their causes for years, yet they continue and increase. Why? This chapter will suggest answers and focus on diabetes as a prime example of a lifestyle-caused chronic condition.

Diabetes occurs when your body produces too little insulin and results in you having too much sugar in your bloodstream. The disease comes in 2 basic forms: Type 1, an autoimmune disorder typically identified in kids for which there is no cure and Type 2, largely behaviorally based, in which your body doesn't use insulin well and can't regulate sugar in blood stream. About 95% of diabetic population has Type 2. It is largely preventable and potentially reversable. (Type 1 is neither.) We'll focus on Type 2 in this chapter.

Diabetes increases your risk of developing many of the chronic conditions listed above, perhaps most notably hypertension, failing kidney and heart disease. We might consider it a common cause of and link among America's epidemic of chronic diseases. That's admittedly an overstatement, though not a huge one.

Diabetes is defined by your number on one of 4 medical tests:

- Your A1C (aka hemoglobin A1C or HbA1c) above 6.5%
- Your fasting blood sugar above 126 mg/dL
- Your glucose tolerance above 200 mg/dL 2 hours after drinking a liquid. You need to fast the night before.
- Your random blood sugar above 200 mg/dL

About 37 million Americans have diabetes. It is the 7th leading cause of death and the #1 cause of kidney failure, lower limb amputations and blindness in the US. The number of diabetics has doubled in the past 20 years.

Two syndromes / conditions predict a patient becoming diagnosed with diabetes: 'prediabetes' and 'metabolic syndrome'. Though overlapping in some ways, these are distinct. Both provide a warning to patients about their likely diabetes diagnosis future.

Prediabetes is a narrowly defined condition in which you have too much sugar in your bloodstream though not enough to have full blown diabetes. By the CDC's definition, you have prediabetes if tests determine the following about your blood sugar:

- Your A1C or hemoglobin A1C or HbA1c test is 5.7 and 6.4%.
    - Full blown diabetes is defined 6.5% or greater.
- Your fasting blood sugar test is 100 – 125 mg/dL.
    - Full blown diabetes is defined as 126 mg/dL or greater.
- Your glucose tolerance test is 140 – 199 mg/dL.

- Full blown diabetes is defined as above 200 mg/dL.

Here's a summary chart.[68]

Result*	A1C Test	Fasting Blood Sugar Test	Glucose Tolerance Test	Random Blood Sugar Test
Diabetes	6.5% or above	126 mg/dL or above	200 mg/dL or above	200 mg/dL or above
Prediabetes	5.7 – 6.4%	100 – 125 mg/dL	140 – 199 mg/dL	N/A
Normal	Below 5.7%	99 mg/dL or below	140 mg/dL or below	N/A

About 96 million Americans have prediabetes including, according to Dr. Dariush Mozaffarian, dean of the Tufts Friedman School of Nutrition Science and Policy, about 1 in 4 American teenagers.[69] The condition increases your risk of developing Type 2 diabetes and suffering from all the problems associated with and resulting from it.

Metabolic syndrome, the other common precursor to full blown diabetes, is defined more broadly, again by the results of medical tests. It is a cluster of medical conditions occurring together, first identified in 1998. Though researchers quibble about the exact numbers that define it, here is a generally accepted definition. [70]

- Obesity or having a BMI > 30.
    - Alternatively, males have a waist circumference >40 inches, females > 35.
- Blood triglyceride levels above 150 mg/dL
- Low HDL (good) cholesterol, levels below 40 mg/dL in men or 50 in women
- High blood pressure, greater than 130/85 for people under 60 years old or on blood pressure medications.
    - For people over 60 years old, the American Heart Association suggests levels above 150/90 become worrisome.

[68] CDC Diabetes Basics https://www.cdc.gov/diabetes/basics/getting-tested.html

[69] Boston Globe, Nov 22, 2021 'The Obesity Pandemic Has Made Covid Much More Deadly'

[70] This definition comes from Harvard Health, Shmerling, Metabolic Syndrome is On the Rise, Oct 2, 2020 and AARP, Levine, Metabolic Syndrome

- Elevated blood sugar, having a fasting blood glucose level above 100 mg/dL, an A1C above 5.7 or taking diabetes medications.

Researchers seem to suggest that having 3 or more of these indicators defines someone has having metabolic syndrome.

Some 37% of Americans suffer from metabolic syndrome with the risk increasing as you age; some 50% of 60-year-olds have it including almost 60% of Hispanics over 60. [71]

People with metabolic syndrome are about 4x more likely to develop diabetes than healthy folks, 3x more likely to suffer a heart attack or have a stroke, and 55% more likely to develop kidney disease. In addition, according to the National Heart, Lung and Blood Institute[72], the syndrome increases your risk of developing

- Coronary heart disease
- Erectile disfunction
- Heart failure
- Inflammation and immune system problems – raise risks of complications from infections and Covid
- Organ damage esp pancreas, liver, gall bladder, kidneys
- Polycystic ovary syndrome (PCOS)
- Pregnancy complications such as preeclamsia, eclampsia, and gestational diabetes
- Problems with thinking and memory
- Sleep apnea and
- Certain cancers.

Metabolic syndrome, like prediabetes and diabetes itself, is largely preventable by maintaining a healthy weight, eating a healthy diet, exercising regularly and avoiding smoking.[73]

[71] AARP, Metabolic Syndrome, Levine
[72] National Heart, Lung and Blood Institute https://www.nhlbi.nih.gov/health/metabolic-syndrome/living-with
[73] Ibid.

This link between obesity, defined as having a Body Mass Index greater than 30, and diabetes is so strong that some researchers invented a new word for it: diabesity.[74] As the Cleveland Clinic put it in 2021:

The pancreas creates insulin, which is a hormone that moves glucose out of your blood. Normally, insulin transports glucose to your muscles to use right away for energy or to the liver, where it's stored for later.

But when you have diabesity, your cells resist letting insulin move glucose into them. To make matters worse, the area of your liver where excess glucose is usually stored is filled with fat. It's like trying to put furniture in a room that's already packed. With nowhere to be stored, the glucose remains in the bloodstream.

Your pancreas becomes overworked, and as a result, it wears out. It starts producing less insulin. Diabetes develops and then quickly worsens if the fat resistance remains

The CDC calls diabetes the most expensive medical condition in the US, though no one knows for sure how much it costs because it affects so many other medical conditions. Should we include leg amputations as diabetes costs? The associated prosthetics? The replacement prosthetics ten years downstream? Unclear.

The CDC estimated direct diabetes costs and related reduced productivity at the lower end, $327 billion in 2017. That's about $500 billion today give a take a few dozen billion, about 14% of healthcare spending. That's the low estimate.

On the higher end, the American Diabetes Association claims that 25% of all US healthcare spending goes to diabetes and related treatments.[75] I don't know who's right here, but under either estimate, diabetes is a big deal and very expensive.

We know a lot about it, understand its causes and estimate its costs as high under any reasonable assumptions. Why don't we prevent it?

Why We Don't Prevent Diabetes
and cut healthcare spending while improving American's health

The classic advice for treating metabolic syndrome or pre-diabetes, the two typical precursors of full blown diabetes, is lifestyle modification. This traditionally has 2 components: dietary improvement and exercise increase. In short, eat a bit less of healthier foods, and exercise a bit more.

Easier said than done.

Let's put some numbers and costs into this advice. We'll use a typical American male as a case study. This will provide an analytic framework to understand the problem. You can then apply the framework other demographic groups.

[74] Cleveland Clinic, November 2021 'Diabesity: How Obesity is Related to Diabetes', slightly edited in the following quote.
[75] American Diabetes Association. Economic costs of diabetes in the US in 2017. *Diabetes Care.* 2018;41:917–928.

We could have used American females instead of males – same methodology, just different numbers. Ditto for Latino women, Appalachian residents, Appalachian single parent families, elderly urban men, etc. Same methodology, different demographic groups, different numbers.

We'll first address the dietary part of that old 'diet and exercise' mantra and consider calorie **quantity** and **quality**.

In 2022, the average American male – we'll call him Joe - was 5 foot 9 inches tall, 38 years old, exercised 1 – 3 times per week and weighed 198 lbs.[76] He had a BMI of 29.2, almost obese. He gained about 1.5 pounds per year. According to online calorie consumption estimates[77], he eats about 2650 calories per day; that's the amount that generates his 1.5 pound / year weight increase.

We'll assume that Joe is single for analytic ease.

Joe needs to reduce his daily calorie intake to 2237 to lose ½ a pound per week. That would get him down to 172 pounds in a year for a BMI of 25.4, slightly overweight but not nearly obese. It would probably get him out of the prediabetic or metabolic syndrome condition and help him avoid diabetes.

I choose the ½ pound weight loss per week as a moderate amount. I didn't want to bias this analysis with a more aggressive number. A faster weight loss, with the associated greater degree of daily discomfort / hunger, might lead to a quick termination of a dietary program with the associated relatively fast rebound back to Joe's original weight.

In other words, I want to stack the odds in Joe's favor.

We'll assume here that Joe spends 10% of his income on food. That comes from the US Department of Agriculture's 2021 estimate. [78]

---

[76] Average weight American male adult from healthline.com https://www.healthline.com/health/mens-health/average-weight-for-men
Average height American male adult from World Population Review https://worldpopulationreview.com/state-rankings/average-height-by-state
Average age Americans in 2022 from World Population Review https://worldpopulationreview.com/state-rankings/median-age-by-state
How Much Do Americans Exercise, Romero, Washingtonian, May 12, 2012
Daily calories to lose ½ lb / week from www.Calculator.net
Daily calories to gain 1.5 lbs / year from www.Calculators.net
Average American annual weight gain from Washington Post, 'Look How Much Weight You're Going to Gain' 1/29/2016

[77] In this case I used www.calculator.net.

[78] US Dept of Agriculture estimate 2021, https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=76967#:~:text=In%202021%2C%20U.S.%20consumers%20spent,from%20home%20(5.1%20percent).

We know that Joe earns $1,144 / week – that's $59,488 per year - thanks to various Bureau of Labor Statistics studies.[79] That means he has $16.34 available for food each day, 7 days / week, a combination of eating in and eating out. The BLS says we split this about 50/50.

If Joe was a Black or Hispanic male – an example of specific socio-economic groups – he would only earn $820 / week ($42,640 per year) [80] meaning $11.71 available for food.

Or if Joe were a woman, again a different socio-economic group, he would earn, on average, about 15% less and need about 10% fewer calories.[81]

Quick quantitative summary about Joe:

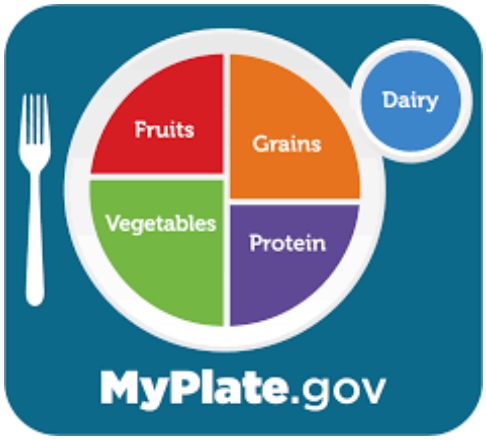
- He currently eats about 2650 calories per day. He gains about 1.5 pounds per year.
- He needs to reduce his daily caloric intake to 2237 to lose ½ pound per week or 26 pounds / year. That's 13% of his body weight.
- He has $16.34 available for food daily.

Let's turn now from calorie quantity to calorie **quality**. The most recent government recommendation is that our food plate consist of 50% fruits and vegetables, 25% grains – mainly whole grains – and 25% protein and dairy. That's a rough approximation of the US Department of Agriculture's MyPlate, image below. You can google MyPlate.gov for more.

[79] Overall Median weekly earnings from BLS, wkyeng (5).pdf, July 29, 2022, 'Usual Weekly Earnings of Wage and Salary Workers Second Quarter 2022'

[80] Black and Hispanic male earnings from BLS, 'TED, The Economics Daily', Oct 25, 2021, https://www.bls.gov/opub/ted/2021/median-weekly-earnings-were-916-for-women-in-third-quarter-2021-83-3-percent-of-mens-earnings.htm#:~:text=Source%3A%20U.S.%20Bureau%20of%20Labor,End%20of%20interactive%20chart.&text=In%20the%20third%20quarter%20of%202021%2C%20median%20weekly%20earnings%20for,the%20median%20for%20White%20men.

[81] Earning estimates from various BLS studies. Calorie estimates from calculator.net; I simply substituted 'female' for 'male' using Joe's numbers. The calculator estimated 2008 calories / day for a woman instead of 2237 for Joe.



I don't like this graphic. It's too cartoonish in my opinion and not detailed enough as a guide. I prefer the Canadian Food Plate version, below. It conveys the same information but with more impactful graphics; it shows specific foods in each category. We'll call it the Food Plate and use it in this text rather than the MyPlate image above for graphic and presentation reasons only. Feel free to disagree with my artistic taste.

The Canadian Food Plate
Water is the recommended drink.

You can quickly see the breadth and types of foods in each category and the approximate serving size of each.

Proteins, for example, include nuts, beans, legumes and eggs, not just chicken, beef, pork, and fish and take up a quarter of your meal plate.

Fruits and vegetables come in lots of different colors and flavors, with that variety apparently providing nutritional benefits.

This version suggests that we eat lots of different vegetables, not just potatoes and tomatoes, the most commonly consumed vegetables in the US, which together dwarf all the others combined.[82]

Ditto lots of different fruits, not just apples and oranges, the most commonly consumed fruits in the US, which, along with bananas, dwarf the others.[83]

That's why I like this graphic: it's impactful and suggests what to eat simply and comprehensibly.

It also tells you what to avoid. Look at what's not on this plate:

- Corn
- Sugar
- Sweeteners
- Oils, salad dressing
- Refined, bleached flour
- Processed foods and snacks like chips, cookies & baked goods
- Sugary drinks
- Beer, wine & alcohol

We eat lots of these foods. Consider these food consumption amounts from a 2016 Pew study of American food and nutrition practices:[84]

Baked goods, a $35 billion / year market segment not on the Food Plate, includes refined flour and sugar.

Sweeteners, about 15% of daily calories for the average American, include sugar and corn based products (in addition to non-caloric options like aspartame). A can of regular Coke contains 140 calories for example. Americans consume about 40 gallons of

[82] Potatoes and tomatoes most commonly consumed vegetables, US Economic Research Service, Department of Agriculture, 2019 https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=58340
[83] Apples and oranges are top US fruit choices, US Economic Research Service, Department of Agriculture, 2019 https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=58322
[84] What's On Your Table: How America's Diet Has Changed Over the Decades, Drew Desilver, Dec 13, 2016

soft drinks per person annually, 72% non-diet.[85] Soft drink sales run about $318 billion per year. Not on the Food Plate.

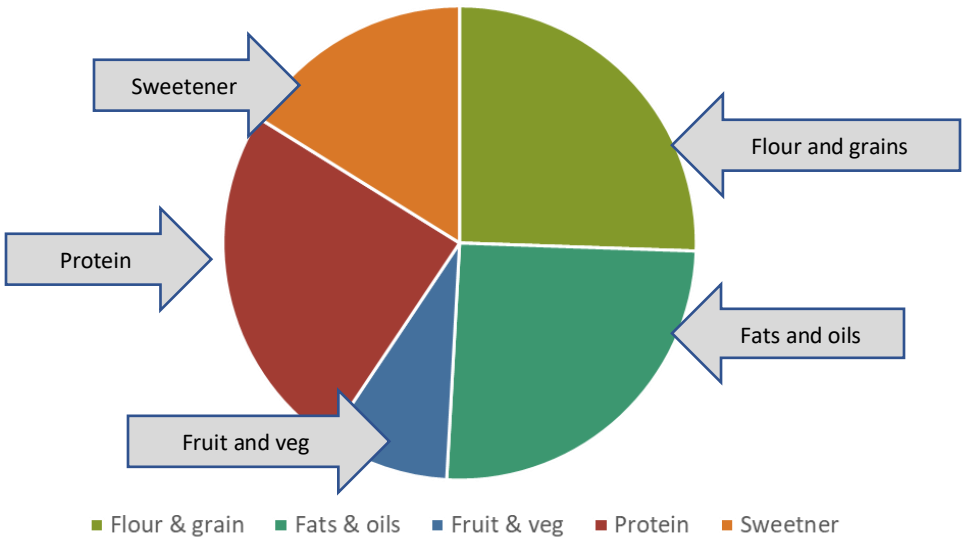
Snacks, about 27% of children's daily caloric intake (remember Tufts School of Nutrition Dean Dr. Mozaffarian's estimate on page 11 above that 1 in 4 American teenagers is pre-diabetic?), mainly salty snacks, candy, cookies, and sugary drinks. Salty snacks, ice cream, candy and cookies are a $70 billion / year industry segment. Not on the Food Plate.

Oils for cooking, flavoring, and salad dressing, about 23% of our daily calories. On average. Americans consume about 36 pounds of these per year. Not on the Food Plate.

Processed foods including hydrogenated oils, HFCS, flavoring agents and emulsifiers used in foods like potato chips, sugary drinks & processed meat, not on the Food Plate. Processed foods tend to lead to higher weight gain than unprocessed.[86]

Instead of eating the high quality calories shown on the Food Plate above, here, according to the Pew Research folks, is what we really eat:

What Americans Eat
Pew Research estimates



I find this estimate credible based on supermarket shelf space allocations and restaurant menus.

[85] Diet vs regular soda percent estimates from statistica.com https://www.statista.com/statistics/1133019/carbonated-soft-drinks-regular-vs-diet-volume-us/

[86] First randomized, controlled study finds ultra processed diet leads to weight gain, Clinical Center News from NIH, 2019 https://clinicalcenter.nih.gov/about/news/newsletter/2019/summer/story-01.html

Supermarkets allocate shelf space according to food sales, more to foods that sell the best. See the space allocated to salad dressing, cookies, and sweetened breakfast cereal for example.

Restaurants offer meals that people request the most. Moderate priced, popular restaurants - the large chains for example – frequently offer 'burger and fries' or 'chicken, potato and vegetable of the day' or 'salad' generally lettuce, tomato and carrot shavings doused in dressing. Many restaurants offer more dressing options than vegetable variety. Compare all this to the frequency of fruit offerings.

Joe, our typical American male, thus faces 3 tasks in the attempt to improve his diet and avoid diabetes.

- Eat fewer calories.
- Eat higher quality calories.
- Stay within his $16.34/day food budget.

How might he accomplish all this?

Composite Daily Menus

Let's compare the daily costs of Joe's current diet and a healthier one designed to prevent diabetes. I've developed two sample day's meals – one called Food Plate based on the Canadian Food Plate above and the other called Typical based on the Pew analysis. I used food prices at my local Shaw's supermarket in Easton, Massachusetts in October 2022.

These diets are composites of what people *should* eat and what they often *in fact* eat. In designing these menus – particularly the typical one - I considered supermarket shelf space. I choose popular items meaning lots of people buy and eat them.

We have, of course, endless food options and combinations in this country. I present this analysis in part to show calorie and cost data and in part to show a methodology. You can do a similar analysis yourself and see your own results. I suspect they will be close to mine below.

The healthier Food Plate diet below comes to 2237 calories for a day (our goal for Joe to lose ½ pound / week); the typical diet comes to 2648 calories (very close to our daily estimate of 2650 for Joe to gain 1.5 pounds / year).

Look at the cost difference.

Breakfast, Food Plate

- 1 whole wheat English muffin = 120 calories, $.88
- 2 tablespoons peanut butter = 190 calories, $.32
- 1 medium banana = 105 calories, $.24
- 1 large orange = 87 calories, $.73

- Black coffee = 2 calories, $.20
- 504 calories
- $2.37 at Shaw's, Easton

Breakfast, typical diet

- Shaw's honey bran muffin = 420 calories, $1.25
- Coffee = 2 calories, $.20
- Cream @ 35 calories per serving of Coffeemate = 35 calories, $.07
- Sugar @ 30 calories per serving of granular sugar = 30 calories, $.04
- 487 calories
- $1.56 at Shaw's, Easton

Lunch, Food Plate

- Spinach salad w/ tomato, carrots, yellow pepper, beets (130 cal total, $5.02)
    - 1 serving of fresh spinach = 20 calories, $1.71
    - Half a tomato = 45 calories, $1.50
    - Half a serving of carrots = 15 calories, $.16
    - Half a yellow pepper = 25 calories, $.85
    - Half a serving of beets = 25 calories, $.80
- Oil & vinegar dressing = 84 calories, $.22
- .33 lb chicken breast @ 748 calories per pound = 247 calories, $1.32
- 1 pita = 90 calories, $.37
- Apple = 95 calories, $.66
- 648 calories
- $7.62 at Shaw's, Easton

Lunch, typical diet

- Ham & cheese on sub roll with mustard & iceberg lettuce (538 cal total, $3.20)
    - Ham,.25 pound @ 885 calories per pound = 221 calories, $2.00
    - Cheese, 1 slice = 100 calories, $.30
    - Sub roll = 200 calories, $.50
    - French's mustard, 1 serving = 1 calorie, $.03
    - Iceberg lettuce .15 of a head = 16 calories, $.37
- Bag of chips from multi-bag box = 150 calories, $.52
- 3 Oreos = 160 calories, $.26
- Apple = 95 calories, $.66
- Coca Cola, can = 140 calories, $.23
- 1083 calories
- $4.88 at Shaw's, Easton

Dinner, Food Plate

- Basmati rice bowl with broccoli, summer squash, snap peas, green beans, .4 lb salmon, soy (873 calorie total, $8.48)
    - 2 cups Basmati rice @ 170 calories per cup = 340 calories, $.38
    - 1/3 pound of broccoli = 51 calories, $.66
    - 1/3 pound of summer squash = 24 calories, $.66
    - 1 serving of sugar snap peas = 35 calories, $1.00
    - ¼ pound of green beans = 25 calories, $.82
    - .4 pounds of salmon = 378 calories, $4.80
    - 1 tablespoon low salt soy sauce = 20 calories, $.16
- Blueberries (.6 pint) = 137 calories, $1.20
- Strawberries (.5 lb.) = 75 calories, $2.50
- 1085 calories
- $12.17 at Shaw's, Easton

Dinner, typical diet

- Pasta with sauce, ground beef, grated cheese (578 calories, $2.55 total)
    - Barilla pasta, 1 serving = 200 calories, $.37
    - Prego traditional pasta sauce, 1 serving = 70 calories, $.80
    - 80% ground beef, .25 pounds = 288 calories, $1.25
    - Grated Kraft parmesan cheese, 1 serving = 20 calories, $.13
- Green salad with dressing (150 calories)
    - Dole American salad bag, 2 servings = 30 calories, $1.50
    - Ken's House Italian dressing, 1 serving = 120 calories. $.25
- Canned peaches, 1 serving = 100 calories, $.50
- Friendly's vanilla ice cream, ½ serving = 105 calories, $.28
- Bottle of Budweiser beer = 145 calories, $1.38
- 1078 calories
- $6.46 total, food from Shaw's, Easton, beer from Walmart

You can see my spreadsheets at the end of this chapter for additional details. I encourage you to use this methodology with your dietary analysis. You can adjust the daily calorie targets to fit your own needs, then insert your foods of choice.

We learn from this process that 2237 healthier Food Plate calories cost $22.16 / day. Those are the foods Joe is supposed to eat, with meals designed to lose ½ pound per week. If Joe spends 10% of his salary on food as the Bureau of Labor Statistics suggests, then he needs to earn at least $80,000 per year to afford this menu.

But Joe only earns $59,488 per year. We learned that earlier in this chapter. He can't afford the healthy Food Plate!

> Imagine that Joe is a Black or Hispanic male. He'd only earn $42,640 per year making the Food Plate even more unaffordable.
>
> Try this with your socio-economic demographic of interest and see what you learn.

Now let's consider the 2648 calorie typical diet. It only costs $12.90 / day, making it affordable to people earning at least $47,000 per year. Joe earns that much. It is tasty and satisfying.

But he gains 1.5 pounds per year on it and risks prediabetes, metabolic syndrome and diabetes.

We're beginning to learn why we don't prevent diabetes by following the 'eat more fruits, vegetables and whole grains, less processed food, fat and sugar' mantra. It's too expensive.

This analysis only addressed foods prepared at home using one supermarket's prices. I ran a similar analysis on restaurants, comparing healthier and typical meals at Cheesecake Factory and D'Angelo's. It's methodologically easy; simply look up your items of choice on the restaurant's menu and nutritional guide – sometimes they're listed together on the menu - then divide.

At the Cheesecake Factory, 'The Club' sandwich with turkey, bacon, bread, French Fries, lettuce, tomato and mayonnaise contains 1740 calories and costs $17.95. That's 1.0¢ per calorie.

The Cheesecake Factory's Skinnylicious Factory Chopped Salad including dressing contains 530 calories and costs $15.95. That's 3.0¢ per calorie, 3x more per calorie than the Club sandwich.

At D'Angelo's, the medium Italian sub contains 790 calories and costs $10.29. That's 1.3¢ per calorie.

The D'Angelo's Garden Salad with small Pokket (pita bread) but without dressing contains 180 calories and costs 4.6¢ per calorie, about 3.5x more per calorie than the Italian sub.

As with our supermarket example above, eating the Food Plate healthier calories costs more. The oft-recommended 'fruits, vegetables and whole grains, not processed food, fat and sugar' diet is still too expensive.

How much more expensive? According to my supermarket food data above, eating healthier – meaning eating according to the Food Plate – costs about $9.12 more per person per day. That's $3320 per year or, for the US average 2.6-person household, over $8300.

A *single person* would need to earn $33,000 more annually to afford the Food Plate meals above. That's using the US Department of Agriculture's '10% of your income on food' estimate discussed above.

An *average American household* would need to earn $83,000 more.

That's not the cost of eating but the *additional* cost of eating a healthy diet, the one designed to avoid or exit from, metabolic syndrome.

Even if my analysis is off by 50% - which it isn't – the typical American household would still need to earn $40,000 more in order to eat Food Plate style.

That's a significant economic disincentive to eat healthy foods and a significant economic incentive to stay the course.

Why do healthier foods cost more?

This chapter is not a discussion of food subsidies but the question often arises from astute readers. Here's a very short explanation:

Congress and various states subsidize food production.[87] In 2016, for example, the feds provided $13.9 billion in crop subsidies and insurance payments, equivalent to 25% of farmers income. Those subsidies generally went to the largest and best organized farm groups like huge companies that produce commodities - corn and soybeans for example. About 90 million acres – half our farmland – goes to those types of heavily subsidized products.

Food producers, in turn, then use those products in processed foods. That helps explain why corn sugar (a.k.a High Fructose Corn Sugar, HFCS and corn syrup) is included in so many of our processed foods. Just check the ingredients of your favorite jars or cans of food. We'll discuss this more in the section on food tastes, below.

Subsidized corn sugar helps control the cost of real sugar, thus expanding the market for sweeteners, about 15% of American's typical daily calories.

Meanwhile, only about 10 million acres, or 3% of our cropland, goes to fruits, nuts and vegetables, products not typically included in the farm subsidy programs. They're more expensive for 2 reasons:

- Consumers pay the full price for their production since production costs are not subsidized
- There is no excess supply since their acreage is constrained by market forces, not supplemented by subsidies. Tighter acreage means less supply. The standard economics of price being determined by supply and demand factors then takes over.

We subsidize the foods we're not supposed to eat much of and fail to subsidize the foods we're supposed to eat in abundance.

But wait, there's more

Let's now discuss some additional, non-cost problems of switching from our typical to a Food Plate diet. The problems fit into 3 groups: hunger, taste, and convenience. How much of a financial incentive would be required to induce people to overcome these

[87] This analysis comes from Barth, Congress Finally Passed a New Farm Bill, January 7, 2019, Modern Farmer

problems? We'll take some guesses. Remember: the guess amounts are over and above the $3320 per person food cost difference.

Hunger: as people eat fewer calories, they feel hungry. That's the prime behavioral reason so many diets fail: people want that satisfyingly full feeling.

I sometimes hear people claim, 'I lost 25 pounds and never felt hungry.'

I rarely see these dietary results replicated on a large group of people over a long time period, making me dubious. Indeed, studies suggest that the vast majority of dieters regain all their weight within 2 years. I suspect hunger or related food cravings is a primary culprit.

When people claim to have lost weight without feeling hungry, I often ask 'Why doesn't everyone do that?'. That generally ends the conversation.

I can identify only 2 large groups of people who successfully lose weight by dieting and keep it off for a long time: actors and athletes. (Apologies if I unintentionally missed a group.) Actors and athletes often / always have body weight requirements included in their employment contracts. That's a tremendous economic incentive, far exceeding anything that employers, insurance companies or the medical establishment can provide to employees or patients.

A word about the long term issue facing dietary incentives. Good food habits – eating certain foods, losing your taste for others, acclimating yourself to a certain 'appropriate' hunger – takes months if not years to develop. By 'appropriate' hunger, I mean accustoming yourself to feeling somewhat hungry much of the time and feeling only somewhat full immediately after meals, not 'stuffed' or 'fully satisfied'.

Most people, according to studies, need at least a few months to adapt to this new feeling and develop new food habits; other folks need much longer.[88] I needed a year when I lost 40 pounds in 2021 but that story comes later in this chapter.

How much of an economic incentive does Joe need to switch from his traditional 2650 calories per day to the Food Plate's 2237? Probably less than the $200,000 Matthew McConaughey earned for his 50 pound weight loss in Dallas Buyer's Club but I don't know how much less. Perhaps 3% of Joe's annual income? 5%? While I don't know the exact amount, I'm pretty sure that a calorie-restricted dietary program needs to address this issue and that it's costly.

Taste. Our Food Plate lacks many tastes common to the typical American diet including sugar, salt, salad dressings and mayonnaise. Because of this, people sometimes complain that healthy foods taste bland. They also sometimes describe food cravings, missing various tastes and sensations.

[88] Grohol, Need to Form a New Habit? Give Yourself At Least 66 Days, PsychCentral, October 7, 2018 https://psychcentral.com/blog/need-to-form-a-new-habit-66-days ; UCL News August 9, 2009 Interview with Phillippa Lally https://www.ucl.ac.uk/news/2009/aug/how-long-does-it-take-form-habit

Food producers know this and have identified the 'bliss point', a combination of sweetness, saltiness and richness (generally some sort of fat) that people find satisfying. The right combination of these sends a jolt of endorphins to your brain causing a pleasure sensation and desire to do it again. That's why people like mayonnaise on sandwiches, salad dressing on their salads and cream and sugar in their coffee. It makes food more satisfying. How often have you heard 'I just couldn't drink black coffee'?

The combination of sweetness, saltiness and richness works better together than any one ingredient on its own. That's why a standard sized Hershey Bar contains 35 milligrams of sodium[89] and a Nestle Crunch Bar 66 milligrams,[90] why Jif peanut butter contains 2 grams of sugar per serving[91] and Barilla pasta 7 grams[92].

Fruits and vegetables lack the bliss point. There's infinitesimal salt in an apple or yellow pepper, infinitesimal sugar in spinach or kale. And no fat.

The good news is that people can adjust their tastes to become satisfied with non-bliss point foods. The bad news is that it takes time to develop the habit, likely that same as to adjust to the new 'slightly hungry' or 'no longer totally full' eating feeling. Again, programs aiming to help people eat fewer-but-healthier calories need to maintain their incentives for this lengthy time period.

A personal observation about food habits and their development.

I recently had an 11:00 am meeting at a local college. The building's foyer featured a Dunkin' Donuts kiosk with a constant line of students from 10:30 am when I arrived until 11:30 when I left.

This was just one of several food outlets on campus.

I watched student after student, dozens if not a hundred plus during my hour there, order bacon-egg-and-cheese on a bagel, sausage-egg-and-cheese on a croissant or similar, along with various lattes and macchiatos.

I looked up the calories:

- 16 ounce latte, 190 calories
- 16 ounce Caramel Macchiato, 250 calories
- Sausage, egg and cheese croissant, 720 calories
- Bacon, egg and cheese bagel, 520 calories

No vegetables. No fruit. No whole grains. Virtually nothing from the Food Plate.

College age people develop habits when they live away from home for the first time. Unhealthy habits in this case, according to the US and Canadian food plate guidelines.

I left my meeting depressed about the future health of these college kids. Most (or at least many) will have 'the talk' with their doctor in a couple of decades, *after* they become prediabetic or develop metabolic syndrome.

They'll talk about their need to lose 10-20% of their body weight and drastically change their diet to avoid diabetes. A heavy lift in their 40s and 50s.

But, unfortunately, an entirely preventable near certainty.

Convenience. Joe's 'typical' meals described in this text included a store baked honey bran muffin as opposed to the Food Plate home cooked eggs and toast. His ham-and-cheese sandwich lunch with a bag of chips and Oreos was quicker to make than the Food Plate made-from-scratch spinach salad with chicken breast. Not only quicker to make, but also quicker to eat.

And his industrially produced dinner pasta sauce with canned peaches and ice cream for dessert was easier to prepare than the Food Plate home-made rice bowl.

Accessing these convenient foods is easy and relatively stress free – just open the can or package. Meanwhile, shopping for, cutting and preparing the less-convenient-but-healthier Food Plate meals is more difficult and time consuming, and therefore more stressful in our time compressed daily lives.

As one indication of convenience importance in our daily food decisions, consider the number of take-out food options now available. (I'm not sure if take-out counts as eating at home or out, but it doesn't much matter what we call it as long as people stay within their '10% of salary on food' parameter.) We had, for example, 71,856 pizza restaurants in 2012 but 78,092 in 2020.[9394] That's almost a 9% increase in 8 years, not including other competitive take out options. All this suggests that increasing numbers of us order out to eat in, the definition of convenience.

How much should designers of wellness or diet programs incentivize people to eat more labor intensive / healthier foods as opposed to more convenient-but-less healthy? I don't know – sorry, not a program designer – but food convenience is one factor that such programs need to address. 'Address' here means 'provide economic incentives to do'.

Summary of the diet part of 'diet and exercise'

---

[93] Latte and macchiato calories estimates from Java Express https://www.javapresse.com/blogs/enjoying-coffee/how-many-calories-are-in-coffee#:~:text=Calories%20In%20A%20Latte%2C%20Cappuccino%2C%20And%20Other%20Espresso%20Drinks&text=Cappuccino%20(8%20ounces)%3A%2080,16%20ounces)%3A%20250%20calories I couldn't find exactly what I sought on Dunkin' Donut's website.

[94] Number of pizza restaurants in the US, Statistics https://www.statista.com/statistics/377597/number-of-pizza-restaurants-us/

We have established so far that eating fewer-but-healthier calories costs more than eating more-but-unhealthier ones. The cost difference is about $9.12 per person per day or $3320 per year. Those are, of course, just estimates – take them with a grain of salt. (Bad pun.)

We have also discussed

- how eating fewer calories makes people feel hungry
- how eating non-bliss point foods diminishes taste satisfaction, and
- how consuming less convenient foods is more difficult and time consuming.

Overcoming those behavioral obstacles requires additional financial incentives for the 6-to-8 months – or more – necessary for the new dietary habits to get formed.

Remember our discussion so far: we want to help people avoid prediabetes, metabolic syndrome and diabetes. We have explored the 'diet' part of that standard 'diet and exercise' recommendation. We learned that eating healthier foods is more expensive, less tasty, less convenient and less comfortable. The dietary goal is, therefore, difficult to achieve.

Tons of real world evidence shows this, including increasing rates of obesity and diabetes in the past 20 years.

Let's switch focus and turn to the exercise side now, to see if that holds more promise for success.

Exercise

The April – May 2004 issue of Harvard Magazine summarized some then-current research at Harvard University and Medical School as follows (lightly edited for context):

[Researchers are developing] a pill, a marvel of modern medicine that will regulate gene transcription throughout your body, helping prevent heart disease, stroke, diabetes, obesity, and 12 kinds of cancer—plus gallstones and diverticulitis.

Expect the pill to improve your strength and balance as well as your blood lipid profile. Your bones will become stronger. You'll grow new capillaries in your heart, your skeletal muscles, and your brain, improving blood flow and the delivery of oxygen and nutrients.

Your attention span will increase. If you have arthritis, your symptoms will improve.

The pill will help you regulate your appetite, and you'll probably find you prefer healthier foods. You'll feel better, younger even, and you will test younger according to a variety of physiologic measures.

Your blood volume will increase, and you'll burn fats better. Even your immune system will be stimulated.[95]

There is just one catch. There's no such pill.

The prescription instead is exercise.

Everyone knows that exercise is good for you. The Harvard quote makes the point poignantly. But touting the overall benefits of exercise is not our aim here. Instead, our focus is diabetes prevention and, more specifically, the impact of exercise on people with prediabetes or metabolic syndrome. How does exercise impact these groups?

Several papers address this, mainly metabolic syndrome patients. I'll quote 3 below.

One study by the Norwegian University of Science and Technology Faculty of Medicine in 2008 found that 36% of patients with metabolic syndrome reversed the condition with 4 months of exercise.[96] "The study shows that shows that exercise in general, but especially interval training, is able to partially or completely reverse metabolic syndrome," according to lead author Arnt Erik Tjønna.

Second, a 2017 meta-review of 16 studies was, according to the authors, the "first to compare the effects of aerobic, and combined aerobic and resistance, exercise on clinical outcome measures in people with metabolic syndrome".[97]

The authors concluded that

- BMI was significantly reduced in exercise versus control groups.
- Fasting blood glucose was significantly reduced in exercise compared to control groups.
- Triglycerides were significantly improved, and LDL cholesterol was significantly improved in exercise versus control participants.
- HDL cholesterol was unchanged in exercise versus control participants.

Third, a 2019 metastudy, published in Nutrients suggested that "physical activity as a treatment for metabolic disease remains underutilized." [98] Among their findings

In one component study "exercise training resulted in marked improvements in the metabolic profile of the participants, including triglycerides, HDL cholesterol, blood pressure, fasting plasma glucose, and waist circumference. Of the 105 participants with

[95] The Deadliest Sin, Harvard Magazine, April – May 2004
[96] https://norwegianscitechnews.com/2016/08/exercise-to-combat-metabolic-syndrome/
[97] Ostman et al, The effect of exercise training on clinical outcomes in patients with the metabolic syndrome: a systematic review and meta-analysis, Cardiovascular Diabetology, 2017
[98] Myers et al, Physical Activity, Cardiorespiratory Fitness, and the Metabolic Syndrome, Nutrients, July 19, 2019

the metabolic syndrome at baseline, 30.5% (32 participants) were no longer classified as having the metabolic syndrome after training."

A different component study found "strong support the use of aerobic exercise for patients with the metabolic syndrome who have not yet developed diabetes."

A third component study totaling 77,000 patient hours of exercise for folks with metabolic syndrome found "In analyses comparing aerobic exercise training versus control groups, there were reductions in BMI, waist circumference, systolic blood pressure and diastolic blood pressure, fasting blood glucose, triglycerides and low-density lipoprotein."

The authors concluded that "achieving the minimal physical activity guidelines (at least 150 minutes per week of moderate-intensity activity or 75 minutes per week of vigorous intensity activity) has been consistently demonstrated to have significant benefits on metabolic risk" and "Among subjects who meet the criteria for the metabolic syndrome, health outcomes are significantly improved by aerobic or resistance training, or their combination."

Terrific benefits to people suffering from metabolic syndrome. Unfortunately, Americans don't exercise much or enough.

The CDC recommends that adults get 2.5 to 5 hours of moderate cardio exercise per week and 30 minutes of muscle strengthening exercise. Only 23% of us meet these targets, skewed toward higher income folks.[99] Lower income folks, those most likely to find switching to the Food Plate diet more economically difficult, tend to exercise the least.

How much might it cost to incentivize people to exercise? An old economic rule-of-thumb suggests that people value their free time at 1/3 the amount they normally earn. Our hero Joe, earning the US male average of $1,144 / week, gets $28.60/hour and would therefore values his free time at $9.44/hour. He would, according to this economic theory, exercise in his free time if someone paid him $9.44 / hour or more.

Joe probably should exercise about 4 hours / week – that's conservative, the mid-point of the CDC's weekly recommendation. I exercised about 7 hours / week during my own weight loss period, mainly brisk walking, but again, that discussion comes later in this chapter. Joe's 4 hours / week would cost $37.76, or $1964 in annual incentives. I don't know who pays this – an employer, insurance company, hospital, TPA or other. At this point, I only want to suggest what the incentive would be. I focus here on why we fail to prevent diabetes and invite others to figure out the rest.

The Context of our Failure to Treat Metabolic Syndrome and Prevent Diabetes

[99] Only 23% of adults meet guidelines, Time Magazine, Ducharme, June 28, 2018.

Two socio-medical factors underly our failure to treat patients suffering from metabolic syndrome and to prevent diabetes. I'll briefly address each in turn.

Television. Americans watch, on average, about 3 hours of TV each day.[100] The states in which people watched the most TV correlate closely with states having the highest percent of obese people – West Virginia, Alabama, Arkansas and Mississippi. Obesity often leads to diabetes. We begin to see the television link

"The best single behavioral predictor of obesity in children and adults is the amount of television viewing," according to Harvard School of Public Health's Professor Steven Gortmaker.[101] "The relationship is nearly as strong as what you see between smoking and lung cancer." Wow.

Unpack this:

TV watching is non-weight bearing, non-aerobic, entirely sedentary activity that generates no metabolic system benefit or weight loss.

TV watching exposes viewers to (generally less healthy) food products. That advertising leads to sales, otherwise companies wouldn't continue. Products advertised rarely include the fruits and vegetables that are supposed to account for half our food plate.

The average American child sees over 40,000 TV commercials per year according to estimates by the American Psychological Association.[102] That's a lot of low-quality food message reinforcement!

TV watching, according to anecdotal evidence, is associated with munching low quality foods. People report eating salty snacks, buttery popcorn, sugary baked goods and similar while watching TV; fewer (none?) report over-indulging in broccoli or kale.

The take-away about television watching: if you want to create an obese, diabetic population, get them to watch a lot of TV. Our bountiful viewing options including streaming services, seem ideally suited to this task.

Cholesterol treatments. Our typical diet, referenced in the meal case study above, leads to high blood cholesterol, with statin prescriptions a primary treatment. About 1/3 of American adults currently take a statin.[103]

---

[100] Hubbard, Outside of Sleeping, Americans Spend Most of Their Time Watching TV, US News, July 22, 2021. Also Statistica, Average Daily Time Spent Watching TV, https://www.statista.com/statistics/186833/average-television-use-per-person-in-the-us-since-2002/#:~:text=Estimates%20suggest%20that%20in%202022,hours%20watching%20TV%20each%20day.

[101] The Way We Eat Now, Craig Lambert, Harvard Magazine, May-June 2004

[102] Protecting Children From Advertising, American Psychological Association, June 2004 https://www.apa.org/monitor/jun04/protecting#:~:text=The%20average%20child%20is%20exposed,a%20year%2C%20according%20to%20studies.

[103] The 1/3 estimate is extrapolated from the trend. https://consumer.healthday.com/general-health-information-16/misc-drugs-news-218/number-of-americans-taking-statins-keeps-rising-cdc-694895.html or https://www.ahrq.gov/data/infographics/statin-use.html

Statins, it turns out, may *increase* your risk of developing type 2 diabetes.

Statins prevent the buildup of fatty deposits in blood vessels and reduce the inflammation that occurs when arteries are blocked. This lessens your risk of having a heart attack, but it may also make cells more resistant to insulin, the hormone that helps regulate glucose levels in blood. The net effect according to various studies:[104]

- Statins increase your risk of developing diabetes by about 9% on average, but
- The higher the statin dose, the higher the diabetes risk, and
- The higher your blood sugar levels when you start taking the statin, the more likely you are to develop diabetes.

That means sicker people, taking higher statin doses, are more likely to develop diabetes, exactly the people most at risk.

One study found that, on average again, 1 in every 255 people who take a statin for 4 years will develop diabetes[105] but older patients especially those suffering from multiple health problems are at higher risk that younger, healthier people.[106]

Note the caveat here: though changes in blood sugar caused by statins are 'pretty modest' according to Dr. Jill Crandall, an endocrinologist at the Albert Einstein College of Medicine in New York, they may be enough to tip someone from prediabetes to full blown diabetes.[107]

Let's tie all this together:

- Diabetes and related medical costs account for up to 25% of all healthcare spending, with diabetes rates rising
- About 90% of diabetes is type 2, caused by lifestyle behavior
- The standard 'lose weight and exercise to avoid diabetes' prescription is both unaffordable and unpalatable to most of us; diets generally fail within 2 years
- The economic incentives required to keep people on their diet and exercise programs are unaffordable to employers, insurance carriers or similar
- One common behavioral response to our high stress lifestyles – TV watching – may exacerbate the diabetes problem

[104] This analysis comes from Madhusoodanan, NY Times, October 25, 2022 Ask Well 'Do statins increase the risk of type 2 diabetes?'
[105] Sattar, Statins and risk of incident diabetes, https://www.ncbi.nlm.nih.gov/books/NBK78906/
[106] Madhursodanan, op cit
[107] Ibid.

- Medical treatments for other behaviorally related health problems, i.e. statins to lower cholesterol, may also exacerbate the diabetes problem.

Is there a medical solution?

Semaglutide

Semaglutide developed by Novo Nordisk, apparently treats obesity and diabetes quite well.

In one large random controlled study, for example, patients taking 2.4 milligrams of semaglutide lost an average of 6% of their body weight by week 12 and 12% of their body weight by week 28. That's impressive.

Other studies have suggested similar successes.[108]

In February 2022, the British National Institute for Clinical Excellence (NICE), the UK's medical rationing agency, approved Wegovy, Novo Nordisk's brand name for semaglutide to treat obesity. In the vernacular, NICE approval means the drug works; it has a higher approval bar than the US Food and Drug Administration.

Eli Lilly has developed a competitor weight loss drug called tirzepatide, not yet approved as of time of writing. I assume other companies have already, or will, similarly design competition to semaglutide.

NICE's stringent use guidelines for semaglutide illustrate some underlying issues with the drug.[109]

- It is approved for people with at least 1 weight related medical issue and a BMI of 35 or more, or, only exceptionally, for people with a BMI between 30 – 34.9
- It can only be prescribed as part of a specialist weight management program including supervised weight loss coaching. This has implications for the US where only 1% of physicians are trained in obesity medicine.[110]
- Semaglutide can be prescribed for 2 years, maximum.

Novo Nordisk also sells semaglutide it for diabetes treatment under the brand named Ozempic.

But the pricing:

---

[108] Weghuber et al, One-Weekly Semaglutide in Adolescents with Obesity, NEJM, Nov 2, 2022

[109] Much of this discussion comes from 'NICE approves Wegovy for obesity', European Pharmaceutical Review, February 10, 2022 https://www.europeanpharmaceuticalreview.com/news/168431/nice-approves-wegovy-semaglutide-for-obesity/

[110] Kolata, The Doctor Prescribed and Obesity Drug; the insurance company called it vanity, NY Times, May 31, 2022. Much of the following discussion comes from this source.

- Ozempic, semaglutide for diabetes, lists for $894 for 4 weeks in the US. Insurance companies normally cover it for diagnosed diabetics.
- Wegovy, semaglutide for weight loss, lists for about $1,350 per month. Insurance companies normally don't cover it, at least not without a fight.
- Saxenda, basically Wegovy lite also by Novo Nordisk, also lists for $1,350 per month. Ditto on the insurance coverage front.

This creates confusing incentives. In the US, having a high BMI does not necessarily quality a patient for Wegovy or Saxenda as in the UK. American doctors must wait until their patient becomes diabetic. Patients 'only' suffering from obesity and metabolic syndrome don't have access so must settle for less robust, older medications, often with unpleasant side effects. As the New York Times reported, one doctor 'finds herself rejoicing when patients have high blood sugar levels'[111], i.e., becomes diabetic and therefore eligible for treatment.

We don't yet know the long term effects of semiglutide because the it's too new:

- Does a patient who loses 12% of their body weight in 7 months then keep it off?
- What happens when, in the UK situation, semaglutide's prescription runs its full 2-year course: does the patient regain the weight or not?
- Is 2 years long enough for the patient to develop good eating habits?
- Can the patient afford to stay on the healthier diet?
- What is the medical cost difference between staying on Wegovy for life and returning to obesity and diabetes?

We also can't yet answer the most important economic question: how do semaglutide treatment costs compare with medical treatment costs over time? We can only, today, guess at the answer.

Semaglutide and, perhaps, Novo Nordisk's competitor's drugs, may be the light at the end of the obesity-to-metabolic syndrome-to-diabetes tunnel. Or they may be the proverbial headlight of an oncoming train. I certainly don't know which, but the future looks murky to me. At best.

Case study
My own experience with metabolic syndrome

My doctor diagnosed me with metabolic syndrome in August 2020 based on various numbers from my annual physical.

[111] Ibid.

A quick word on numbers and annual physicals. I consider these equivalent to a half-semester report card in high school, a rough indication of your academic health and direction. You might be a good student having a bad semester for some ephemeral reason. You might have a serious intellectual disease. Or you might be going in a bad academic direction, through lack of effort for example. Your half semester report card doesn't tell which.

A series of report cards over time might though. Consider a student with an A average in 8th grade, an A- average in 9th grade, a B average in 10th grade and a C- average on the first half semester report card in 11th grade. We see a trend. The report card suggests need for an intervention by the school, parents, community, or others to identify and address some issue or other.

Similarly, my 2020 annual physical numbers suggested an issue. What is was – lifestyle, individual biology or something else – remained to be determined.

Add to that my own idiosyncratic personality: I don't like to receive failing grades. I found myself annoyed more than concerned and determined to do something about it. I self diagnosed – always a bad idea – my problem as lifestyle and decided to lose weight, exercise more and see what happened.

My August 2020 numbers compared to the metabolic syndrome guidelines:

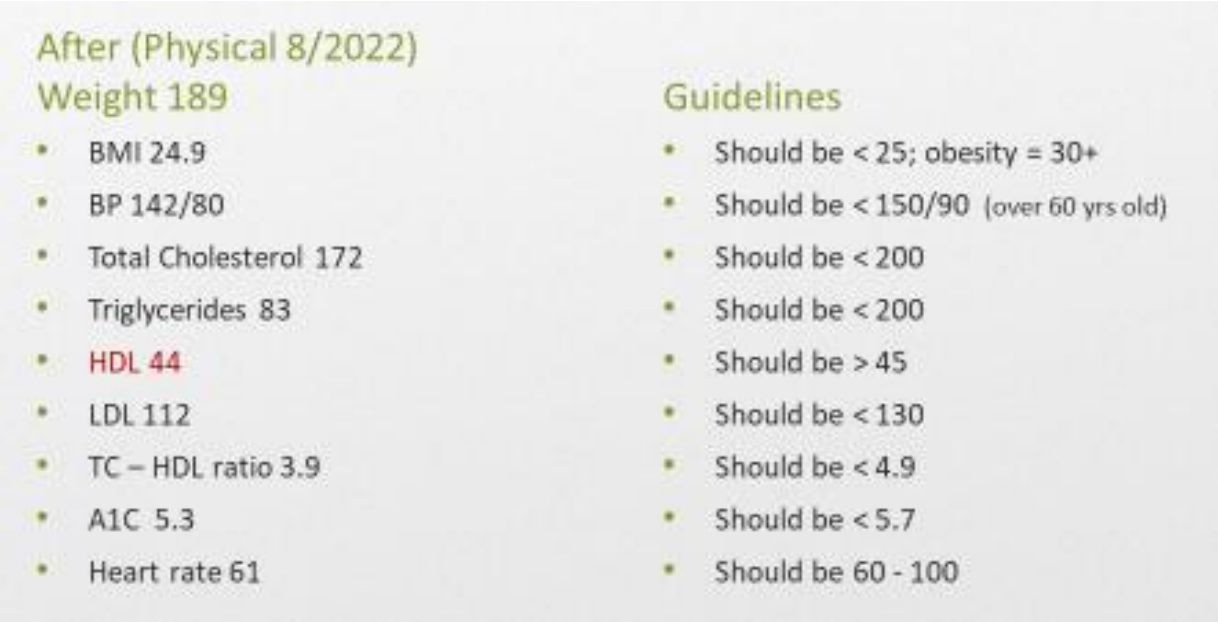
I put myself on diet-and-exercise program and lost about 40 pounds in a year. See the addendum to this chapter for details.

But the big question facing me: would the healthy habits, developed over a year, maintain themselves and keep me at a healthy weight at the 2 year anniversary? I know

the 2 year failure rate of weight loss programs, well over 80% with some estimates as high as 97%.

Also, what would that metabolic profile look like 2 years later?

Here are the results from my August 2022 physical:



And here's the side-by-side comparison of all those numbers two years apart to show the remarkable impact of weight loss and exercise increase in one relatively easy-to-read chart.

Diet and exercise worked well to get me out of the metabolic syndrome.

It's a shame that cost, convenience, and other factors keep so many others from enjoying this success and the related good health / low healthcare costs.

Chapter summary

Diabetes accounts for up to 25% of all healthcare spending. Its incidence grows over time, along with the underlying causes: obesity, low quality caloric food consumption and insufficient exercise afflict many of us, perhaps a majority of Americans, perhaps a large majority.

Many afflicted folks progress through metabolic syndrome and / or prediabetes to full blown diabetes. Efforts to intervene behaviorally - typically referred to as lifestyle changes involving dietary improvements and exercise increases - generally fail, by some estimates up to 97% of the time.[112] They're

- Too expensive for average income Americans
- Too uncomfortable to maintain for years
- Too inconvenient
- Too dissonant with our normal lifestyles, TV watching for example.

New, promising medications are too expensive for widespread use, with 'widespread' meaning the 70 million currently obese Americans. Insurance companies balk at the cost.

I don't see a hopeful path forward. Instead, I see our diabetic population growing along with the associated healthcare costs.

A pessimistic end to a pessimistic chapter.

My calorie and cost spreadsheets
All data from Shaw's, Easton Massachusetts, October 2022. I made several trips to gather data.

In case you have trouble reading the spreadsheets below, the column headings are

- Item name
- Cost / package. The store publishes this.
- Servings / package. This is on the nutritional label of all packaged foods, or you can google it for fruits and vegetables.

[112] The Weight of the Evidence, Harriet Brown, Slate, March 24, 2015 https://slate.com/technology/2015/03/diets-do-not-work-the-thin-evidence-that-losing-weight-makes-you-healthier.html.

- Calories / serving. Again, on the nutritional label. Google provides this information about other foods - calories / pound of apples for example, or calories in a medium apple.
- Cost / calorie. This is a simple division: cost / package divided by number of servings / package divided by number of calories / serving.
- # servings per meal. That's how much you put on your plate. You may choose 2 servings of spinach for example, or ½ serving of ice cream.
- Total calories = Again a simple calculation: the number of calories / serving times the number of servings on your plate.
- Total cost = the cost / calorie for each food times the number of calories on your plate.

Item	Cost / package ($)	Servings / package	Calories / serving	Cost / calorie	# servings	Total # calories	Total cost ($)
2 large Egglant's Best eggs - range fr	4.99	12	70	0.005940476	2	140	$ 0.83
2 pieces Arnold Multigrain toast	5.29	16	110	0.003005682	2	220	$ 0.66
1 medium banana	0.69	3	100	0.0023	1	105	$ 0.24
1 large orange	0.73	1	87	0.008390805	1	87	$ 0.73
Black coffee	19.99	100	2	0.09995	1	2	$ 0.20
Total						554	$ 2.66
Healthy lunch							
Spinach salad	5.99	3.5	20	0.085571429	1	20	$ 1.71
Tomato	2.99	1	90	0.033222222	0.5	45	$ 1.50
Carrot	3.49	11	30	0.010575758	0.5	15	$ 0.16
Yellow Pepper	1.7	1	50	0.034	0.5	25	$ 0.85
Beets	3.99	2.5	50	0.03192	0.5	25	$ 0.80
Olive oil - Bertolli	7.49	33	120	0.001891414	0.67	80.4	$ 0.15
Balsamic vinegar - Filippo Berio	6.99	33	11	0.019256198	0.33	3.63	$ 0.07
.3 lb of chicken breast	3.99	1	748	0.005334225	0.3	224.4	$ 1.20
1 pita	2.99	8	90	0.004152778	1	90	$ 0.37
Apple	1.99	3	95	0.006982456	1	95	$ 0.66
Total						623.43	$ 7.47
Healthy dinner (Rice Bowl)							
2 cups brown rice	20.99	111	170	0.001112348	2	340	$ 0.38
Broccoli	1.99	1	154	0.012922078	0.33	50.82	$ 0.66
Summer squash	1.99	1	74	0.026891892	0.33	24.42	$ 0.66
Snap peas	2.99	3	35	0.02847619	1	35	$ 1.00
Green beans	3.29	4	25	0.0329	1	25	$ 0.82
Salmon	11.99	1	944	0.012701271	0.4	377.6	$ 4.80
Low salt soy sauce	3.29	20	20	0.008225	1	20	$ 0.16
Blueberries	2	1	229	0.008733624	0.5	114.5	$ 1.00
Strawberries	4.99	1	149	0.033489933	0.5	74.5	$ 2.50
Total						1061.84	$ 11.97
Total Daily Calories & Cost						**2239.27**	**$ 22.10**

Item	Cost / package ($)	Servings / package	Calories / serving	Cost / calorie	# servings	Total # calories	Total cost ($)
Typical breakfast							
Honey bran muffin (Shaw's)	$5.00	4	420	0.00297619	1	420	$ 1.25
Coffee	19.99	100	2	0.09995	1	2	$ 0.20
Cream (Coffeemate)	4.49	63	35	0.002036281	1	35	$ 0.07
Sugar (Domino's granular)	1.99	54	30	0.001228395	1	30	$ 0.04
Total						487	$ 1.56
Typical lunch							
Ham	7.99	1	885	0.009028249	0.25	221.25	$ 2.00
Cheese (20 slices / lb)	5.99	20	100	0.002995	1	100	$ 0.30
Sub roll	2.99	6	200	0.002491667	1	200	$ 0.50
Mustard (French's)	2.49	79	1	0.031518987	1	1	$ 0.03
Lettuce - ice berg	2.49	1	105	0.023714286	0.15	15.75	$ 0.37
Bag of chips	21.99	42	150	0.003490476	1	150	$ 0.52
3 Oreos	5.49	21	160	0.001633929	1	160	$ 0.26
Apple	1.99	3	95	0.006982456	1	95	$ 0.66
Coca cola	2.79	12	140	0.001660714	1	140	$ 0.23
Total						1083	$ 4.88
Typical dinner							
Regular pasta (Barilla)	2.99	8	200	0.00186875	1	200	$ 0.37
Pasta sauce (Prego traditional)	3.99	5	70	0.0114	1	70	$ 0.80
Ground beef - 80%	4.99	1	1152	0.004331597	0.25	288	$ 1.25
Grated cheese (Kraft parm)	5.99	45	20	0.006655556	1	20	$ 0.13
Green salad - Dole American	3	4	15	0.05	2	30	$ 1.50
Italian dressing (Ken's house)	3.99	16	120	0.002078125	1	120	$ 0.25
Canned peaches	3.49	7	100	0.004985714	1	100	$ 0.50
Ice cream (Friendly's)	4.99	9	210	0.002640212	0.5	105	$ 0.28
Beer (Bud) Walmart	8.27	6	145	0.009505747	1	145	$ 1.38
Total						1078	$ 6.46
Total Daily Calories & Cost						2648	$ 12.90

The broker's ethical responsibilities

Promoting false hope contradicts the broker's responsibility to protect the client's / subscriber's interests in 3 main ways.

First, programs that promote false hope generate unnecessary costs to clients; they pay for programs that do not benefit them. That's the easy and obvious first takeaway from this text.

Brokers have a prima facia obligation to avoid wasting their client's money. Promoting false hope generates a financial harm to clients and subscribers. It acts in opposition to the broker's primary responsibility.

Second, programs that promote false hope undermine support for, and belief in the value of health insurance brokers. It justifies mistrust in broker advice and undermines broker credibility and the value of broker advice.

Consider a Medicare broker for example, Medicare being our national health insurance system for the elderly that comprises about 20% of total healthcare annual spending. Medicare brokers typically advise clients to purchase a Medicare supplement or Part C.

- Supplements pay for gaps in Medicare Parts A (hospital care) and B (physician services) coverage and may also provide Part D (drug) coverage.
- Part C (Medicare Advantage) acts like an old fashioned HMO. It offers lower premiums in return for subscribers using a narrower provider network. Some Part C plans may also cover medications.

- Medicare brokers earn commissions from selling Supplements and Part C plans.
- Clients generally ask for broker advice about which plan to purchase
- False hope can lead some clients to question their Medicare broker's credibility and advice. This can directly impact the broker's compensation and business.

Third, promoting false hope undermines credibility in our healthcare system. When one aspect of our system fails to live up to the promoted expectations, as I have argued wellness programs do, reasonable people can question the credibility of claims about other aspects.

- Hospitals, for example, often claim they're in the top 50 or 100 on some scale or other. Patients may choose those hospitals in the hope of receiving outstanding care.
- One underreported element in generating good patient outcomes is the patient's belief in his or her doctor and hospital. This placebo effect is important though difficult to quantify.
- False hope that undermines this kind of patient belief may lead to less robust outcomes than otherwise.

I hope the main takeaway from this text is that broker's have an obligation to avoid promoting false hope.

Ethical Principle #3:
Lifnei Iver, Leviticus 19:14
and extensions from the Book of Isiah

Lifnei iver translates as 'before the blind' and defines a prohibition against misleading blind people by use of a 'stumbling block'. Colloquially this ethical admonition is called 'do not place a stumbling block before the blind'.

Clearly placing a stumbling block – a large boulder, tree trunk, table for example – in a blind person's path is unethical. This obviously would not only cause physical and perhaps emotional injury, but equally obviously cause *predictable* injury. The person who places the stumbling block reasonably anticipates that a blind person will walk into it. At first glance, that appears the basis of this admonition.

Why single out blind people? Perhaps there were lots of blind people walking around in Biblical times bumping into things and hurting themselves or, perhaps lots of people put stumbling blocks in front of the blind people who roamed the streets…a sort of juvenile prank gone wild. While perhaps empirically possible, neither of these interpretations rises to the level necessary to include in the Bible as metaphysical lessons for humanity. (Still not a Biblical scholar.)

Instead, according to those who study and interpret this professionally, the Bible uses 'blind' to mean unable to see in a metaphorical sense, meaning someone or group that is unaware, unsuspecting, uneducated, poorly informed, overly trusting or otherwise ignorant of problems or obstacles that may harm them as they try to achieve their goals.

Indeed, classical rabbinic literature refers to *lifnei iver* figuratively as a prohibition against misleading people. One midrash (commentary on the Torah) argues that the recipient of advice is metaphorically blind to its accuracy so would metaphorically stumble if provided with self-serving, inaccurate, or otherwise inappropriate advice and counsel.[113]

A stumbling block to a blind person thus equates to biased advice in the insurance or healthcare arena; a biased doctor giving medical care advice that increases his or her billing, or an insurance broker more interested in securing large commissions than in helping clients optimize their insurance protection without overpaying. Dozens of other routine and mundane situations can also exist in healthcare.

Two business ethical implications follow from all this.

Lifnei iver ethical transgressions of co-mission

The first and most obvious involve **actions** or things that people do - ethical transgressions of ***co***-mission in other words - things like

[113] See the midrash Sifra for more on this or read the summary in Wikipedia https://en.wikipedia.org/wiki/Lifnei_iver

- Misleading investors, decision makers or others with phony financial statements or representations. Most insurance brokers don't prepare financial statements for investors, but rather represent either their own business successes or company size to clients, 'financial statements lite' you might say.

  Imagine a broker saying 'I have 100 clients like you' meaning white collar businesses with 50 – 100 employees for example, when, in fact, the broker only has 7. 'One hundred' indicates significant experience in that specific insurance market and probably a high degree of professionalism and success. 'Seven' indicates far less experience and related knowledge of that market.

  But the client might rely on the broker's representation and make a contracting decision based on it. That misrepresentation misleads the client about the broker's experience and competence and acts like a stumbling block in the path of making a wise decision.

  Unethical under the active 'transgression of co-mission' metric introduced above.

- Recommending a policy that generates high commissions but doesn't serve the client's interests as well as a policy with lower commissions. Here the client asks for advice and the broker commits *lifnei iver* - putting a stumbling block in the form of bad / self-serving advice before the unsuspecting / 'blind' client. Again, an active transgression of co-mission.

- Telling a client 'that portion of the policy doesn't apply to you; it's just the insurance company's way of protecting itself'. This was perhaps most classically a problem during the HMO era of the 1990s when insurers routinely rejected claims or during the pre-ACA period when carriers could rescind policies. (Rescission means the carrier refunds your premiums instead of paying a big claim, a practice outlawed by the Affordable Care Act.)

  Here again, the broker's action placed a stumbling block before the client by misrepresenting an insurance policy's components. Again, an active ethical transgression of commission.

- Other inaccurate statements and recommendations that mislead, misdirect, or confuse clients.

Lifnei iver ethical transgressions of o-mission

Second and less obvious and but more problematic, some Biblical scholars have extended *lifnei iver* beyond active placement of that metaphorical stumbling block to passively not removing it.

You should not only not *put* a stumbling block in the blind person's path in other words – i.e. take an action that causes harm to someone else – but you cannot *passively* allow

someone to be taken advantage of if you (a) know about the problem and (b) are in a position to do something about it.

Torah scholar Nehama Leibowitz puts it this way: [114]

> even by sitting at home doing nothing, by complete passivity and divorcement from society, one cannot shake off responsibility for what is transpiring in the world at large… By not protesting, "not marking the graves" and danger spots, you have become responsible for any harm arising therefrom, and have violated the prohibition: "Thou shalt not put a stumbling block before the blind…"

Leibowitz's interpretation moves beyond active transgressions of **co-**mission to passive transgressions of **o**-mission. You can act unethically, in other words, and violate *lifnei iver* by ***not acting*** when you see someone making a misguided decision.

Professor Hershey Friedman in his article *Placing a Stumbling Block Before the Blind Person: An In-Depth Analysis* [115] extends this again, concluding that the admonition 'do not place a stumbling block before the blind' is really an ethical imperative requiring people to do everything possible to help the unaware, the unsuspecting, the overly trusting, the uneducated and therefore vulnerable among us.

Friedman's underlying assumption apparently is that people make misguided decisions because they lacked all facts necessary to make wise decisions. They face stumbling blocks in the form of poor information because they trust biased information sources.

Or, phrased differently, people would make wise decisions (wiser at any rate) if they had access to, and understood, all the relevant, necessary facts. Better information in other words.

Applying These Ethical Principles to Health Insurance Brokers

How might these ethical issues arise in healthcare? How might brokers remove the related stumbling block from their clients? Answering these questions allows us to suggest some general client education issues – things ethical brokers should teach their clients - including:

- Teach some key **outcome oriented** questions for patients to ask physicians so clients generate better information. That in turn can lower their medical spending and utilization factors, not to mention, enjoy better medical care. We'll suggest some questions later in this course, and

[114] Quoted in Hershey H. Friedman 'Placing a Stumbling Block Before the Blind Person: An In-Depth Analysis http://www.jlaw.com/Articles/placingstumbling.html

[115] Ibid.

- Teach about **Cochrane**, a little used by patients, but excellent information source that brokers can advise clients to use.

  A quick word about Cochrane and online information sources: All are not equally credible. Some may be biased due to their advertiser requirements. Others may accept conflicted donations, i.e. get funding from organizations with an agenda other than pure research. Still others may be low quality, i.e. not very good scientific reporters.

  Cochrane is about the best easily accessible, financially unbiased, scientifically high quality source for typical patients. There are a couple other equally good options like the US Preventive Services Task Force. But in this course, we'll only discuss Cochrane as that alone is a big topic. We'll have much more to say about it later in this course.

As context for Case Study 1 below, consider utilization reports that brokers typically receive about their client's medical treatments and the related *lifnei iver* responsibilities using Friedman's interpretation above.

Case Study 1
Arthroscopic debridement and the broker's ethical responsibilities

We'll take a simple orthopedic example and assume that the broker sees a utilization report indicating that the client had arthroscopic debridement for osteoarthritis of the knee. (We'll assume here for simplicity purposes that the broker sees only 1 report for only 1 treatment for only 1 patient. In real life, of course, brokers might see hundreds or thousands of treatments for clients with dozens or hundreds of insured employees. That doesn't change the essential ethical issues here. It simply complicates and compounds them.)

Arthroscopic debridement (AD) involves surgery to remove damaged cartilage or bone from someone's knee. This is generally done to ameliorate knee pain. Theoretically damaged cartilage and bone fragments cause pain and inhibit proper knee functioning. Debridement should result in less knee pain and, possibly, better knee functioning.

Often with debridement - the removal of damaged bone or tissue – doctors also spray jets of fluid to wash and suck out all debris around the joint. This is called lavage or washout. Thus, the broker might see debridement plus lavage on the utilization report.

Debridement always generates physician income because physicians bill fee-for-service. In theory debridement also benefits patients. Might the fee-for-service incentive act as a stumbling block in which physicians give biased advice? Might this increase client utilization and costs without also generating patient benefit?

Might, in other words, the client be the unaware, unsuspecting, overly trusting, uneducated and therefore vulnerable person Friedman described above?

The answer here is clearly yes. Not even a close call.

Here's some additional background data from Cochrane. (See description of Cochrane below). Cochrane says unambiguously in the conclusion to its arthroscopic debridement systematic review that "there is gold level evidence that AD (arthroscopic debridement) has no benefit for undiscriminated OA (osteoarthritis)."[116]

The broker, knowing this, now faces a dilemma. Should he or she act ethically, remove the stumbling block and provide relevant facts to the client? Or should he or she transgress ethically and remain quiet? That answer, from an ethical point of view at least, is clear and obvious. Yes, remove the stumbling block.

More interestingly, what consequences might the broker expect from his or her ethical and non-ethical actions?

If the broker follows the non-ethical approach: No one will know. The client's medical expenses will increase because of the fee-for-service billing. The client's medical risks will increase from having a procedure. But the client's medical benefits will not increase. That's clear from Cochrane's analysis.

If the broker follows the ethical approach: Alternatively, if the broker acts ethically and introduces relevant facts to the client after the debridement expenses and risks, the client might not engage in similarly non-beneficial care in the future. That's clearly in the client's interests. Plus, the broker now has a client more appreciative of his or her services and more likely to engage the broker's services long into the future.

Practicing ethics, in other words, is good for business.

> Of course, the client might be annoyed and respond with 'why didn't you tell me that before I wasted my money and suffered the various discomforts associated with surgery without any chance of pain reduction benefit?'
>
> First, the broker might reasonably say 'I didn't know you were planning arthroscopic debridement.'
>
> Second, the broker might offer classes on 'Excellent Sources of Healthcare Outcome Information' or similar, related topics to pre-empt such questions. We'll touch on these later in this course.

What 'similar non-beneficial care' might the broker's intervention eliminate?

In this case, since debridement didn't work to alleviate the patient's knee pain, the client will likely seek other knee osteoarthritis treatments. Here's a partial list of options along with a brief Cochrane comment about each:

- Joint lavage – no better than placebo
- Doxycycline – minimal to non-existent pain reduction
- Transcutaneous electrostimulation – no better than placebo

[116] Arthroscopic debridement for knee osteoarthritis, Cochrane https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD005118.pub2/full

- Braces and orthoses – little to no pain reduction benefit
- Therapeutic ultrasound – no better than placebo
- Joint corticosteroid injection – possibly some short-term benefit but no evidence of benefit after 6 months

Note that I, as a non-physician, don't know *how* any of these treatments work; I can't comment on the medical technologies or biological / anatomical aspects.

I only know that they don't benefit patients.

Knowing this outcome information - and there's much more available - could save the client significant cost, stress and potentially treatment risk.

The client. of course, could have had any of these other interventions first, instead of debridement. The ethical broker, following the same methodology and process, would have arrived at the same point regardless of which treatment the patient had first.

Understanding Cochrane

Now, finally, a word about Cochrane.

Cochrane, formerly the Cochrane Collaborative, is a huge international network of medical researchers that publishes systematic reviews of medical studies. 'Systematic reviews' compare multiple (generally all relevant) medical studies on a particular topic, evaluate the scientific methodology of each, then summarize the highest quality studies into one review. Physicians typically use Cochrane regularly and many / most medical libraries subscribe to it.

The Cochrane review of arthroscopic debridement for knee osteoarthritis summarized and evaluated 3 random controlled studies on a total of 271 patients.

- One study, the best according to the Cochrane analysts, compared AD plus lavage to a sham procedure,
- The second, with a higher risk of research bias, compared AD to a washout procedure,
- The third, also at a higher risk of bias, compared AD to closed-needle lavage.

After reviewing all three studies – both the study methodologies and results – the Cochrane authors concluded that gold level evidence shows arthroscopic debridement has no benefit for undiscriminated knee osteoarthritis whether resulting from mechanical or inflammatory causes.

Cochrane publishes a library of systematic reviews organized by specialty and subspecialty, updated periodically. It is widely regarded as outstandingly high quality and regularly used by medical researchers and practitioners.

> Sidebar - my own Cochrane study. I once showed a course draft that referred to Cochrane analyses to a friend, a fellow centrally placed in the Massachusetts health insurance world with 30+ years of experience working with carriers and

brokers. He had never heard of Cochrane but, coincidentally, had dinner scheduled the next evening with an old high school friend, a physician. At dinner, he reported back to me afterwards, he casually asked his friend, 'Ever heard of Cochrane?'

His physician friend replied 'Of course. I use it all the time.'

Cochrane is widely known and used by physicians but virtually unknown and rarely if ever used by brokers and patients. Consider the potential *lifnei iver* ethical issues about this.

The Cochrane organization funds itself by subscriptions to its library and grants from international funding sources. Compare that to other commonly used online information sources that often fund themselves with advertising or rely on grants from commercially incented industry players.

- Can you even figure out who funds them?
- How might their funding sources exert editorial control and introduce bias?

Cochrane does not accept commercial or conflicted funding, i.e. funding from parties that could potentially introduce bias into the Cochrane review process. Here's a partial list of their 2019 funders. It's the All-Star team of international unbiased medical funders. It was easy to find. Just google Cochrane funding sources. (Try this with other information providers.)

- NIHR, the National Institute of Health Research in the United Kingdom. The NIHR is the research arm of the UK's National Health Service.
- Den danske regering/The Danish Government (Rigshospitalet Research Committee), a Danish specialty hospital.
- Bundesministerium für Gesundheit (BMG) - Federal Ministry of Health, Germany
- National Institutes of Health (NIH), part of the U.S. Department of Health and Human Services, is the nation's medical research agency
- South African Medical Research Council (South Africa)
- Health Research Board / Public Health Agency, Health and Social Care Research and Development (Northern Ireland)
- World Health Organization
- Foreign, Commonwealth and Development Office (UK)
- Direction générale de l'offre de soins (France)
- Ministry of Health, Social Services and Equality (Spain)
- Chief Scientist Office (Scotland)
- Ministry of Health (New Zealand)
- Ministry of Health, British Columbia (Canada)
- McMaster University (Canada)
- Norwegian Agency for Development Cooperation (Norway)

- Health and Social Fund, Lower Austria (Austria)
- Amsterdam University Medical Center (Netherlands)
- Institut National du Cancer (France)
- Ministry of Health (Austria)

Some ethical lessons from this brief case study of arthroscopic debridement. First, a well-informed broker, practicing *lifnei iver,* can save his or her client money, time and risk while strengthening the client-broker relationship. A win-win in this treatment specific case.

Remember that debridement is but one of many different treatments that generate little to no patient benefit. Cochrane lists hundreds (thousands?). Some research suggests that up to about a third of all US healthcare spending generates no patient benefit. This approaches $1 trillion annually, meaning brokers have a tremendous opportunity to save their clients money by reducing their amount of ineffective, non-beneficial care.

A well-informed broker, practicing *lifnei iver* as outlined in this simple example, could save a client thousands of dollars annually and perhaps even more, plus pain and risk.

Second and more broadly, though, this case shows why brokers should teach clients to learn about medical care outcomes, not processes, not fancy names, not new-fangled-inventions. We'll give another case study example below.

Outcome focused patients who ask '*how well* does that treatment work?' not '*how* does that treatment work?' tend to enjoy better outcomes, choose less risky and less invasive treatments and cost less.

Cochrane is one specific tool to help patients research outcomes. Cochrane's systematic review summaries are available online for free; anyone can find them.

Follow Up: Introducing A Key Outcome Oriented Question for Patients to Ask Their Doctors
One way brokers can practice *lifnei iver*

One potential challenge Cochrane poses – a minor issue in my opinion – is their use of medical terms and jargon. 'Arthroscopic debridement', for example, is not only a big and somewhat intimidating word but is also often abbreviated as 'AD'. Patients might get intimidated or confused, but it's an easily solvable problem. If and when confused, simply ask your doctor 'what does Cochrane say about your proposed treatment?' That's an invitation for your doctor to look it up.

In my experience, doctors welcome insightful questions like this and are eager to engage with thoughtful patients who ask.

The simple, non-threatening question 'what does Cochrane say about your proposed treatment?' opens the door to an outcome-based discussion. Outcome-based issues should be the primary focus of all patient-doctor treatment discussions. Cost and

insurance coverage issues, while important, are secondary. Have you ever heard anyone say, 'I choose the ineffective treatment for my child because it was cheaper?'

Instead, I regularly hear 'I don't care what it costs. I want the best care for my kid.'

Remember:

1. Patients see doctors to improve their health, obviously. The wise patient first learns *how well* a specific treatment will likely work. Cochrane, almost uniquely in the medical reporting business, provides that information in universally highly credible detail.
2. The outcome-based, Cochrane focused discussions may indicate that the treatment doesn't work or doesn't work well enough for a specific patient to choose. In that case, discussions of cost or insurance coverage are meaningless; neither matter for a treatment that doesn't work well enough for a patient to choose.
3. Cochrane may not cover a specific treatment under discussion. The treatment might be too specialized for Cochrane's more general audience. But the outcome-based question 'what does Cochrane say' opens the door to follow up 'if it's not addressed in Cochrane, what other outcome-based studies exist?'

   A variation on this question: 'what do high quality, outcome-based comparative studies show about this treatment?'

The important concept here: wise patients start their outcome-based questions by referencing Cochrane and / or their own, similar research. That will indicate to their doctors that they're interested in clinical outcomes as reported by high quality, unbiased sources. The follow up questions above will reinforce that.

The broker's educational, ethical role here is to teach clients the right questions to ask and, of course, explain why outcome oriented questions are the best place to start.

I hope you can see how a discussion of outcomes differs from a discussion about costs and insurance coverage.

Let's conclude with the 3 main takeaways from this arthroscopic debridement case study:

1. Many treatments generate no patient benefit but serve only to raise patient costs and risks.
2. Brokers who (a) help patients focus on outcomes, (b) teach clients how to research treatment outcomes and (c) encourage them to discuss their researched outcome information with doctors act ethically and, in doing so, develop stronger client-broker relations.
3. Cochrane is an excellent source of treatment outcome information and one that ethical brokers can teach their clients to use.

Case Study 2
Aduhelm and the broker's ethical responsibilities

Let's consider now a more systemic situation instead of a specific treatment and use the 2021 FDA approval of Aduhelm for Alzheimer's disease as our example. Aduhelm is the brand name for aducanumab. We'll refer in this course to Aduhelm as it is more commonly recognized in the lay community.

> This case study was written in July, 2021 shortly after the FDA approved Aduhelm despite vociferous objections. While the FDA may reverse or modify its decision, the essential ethical and educational issues raised in this case study remain important and valid.

In this case the broker can act *a prioi* – before the client spends money - not *a posteriori*, after the client wastes money on non-beneficial care, as most likely occurs in the arthroscopic debridement case above. The Aduhelm situation shows how brokers, acting ethically, can advise clients before they waste money, time, resources, and emotional energy on non-beneficial care.

This case also allows us to introduce 2 new components of a medical literacy program, concepts that patients rarely understand but often confuse to their detriment:

1. Surrogate endpoints vs. patient events
2. Statistical significance vs. clinical significance.

   Don't worry about the intimidating sounding words. The concepts are pretty easy to grasp.

There are many more, equally important concepts for patients to understand of course. Rather than provide a complete medical literacy program here though, our purpose is simply to introduce some notions that ethical brokers can address in their client education programs. These concepts are samples or examples. We want to show that various tools exist to help patients make wiser medical treatment decisions and, in the process, reduce their medical spending and treatment risks. [117]

In doing so, the broker acts ethically according to the *lifnei iver* principle.

- Imagine how the quality of your client's medical decisions might improve if they learn about and then access these tools.
- Imagine the impact on their medical spending.
- Imagine the impact on your client retention.
- These are all positive results from acting ethically.

[117] For more on medical literacy and specific patient decision making tools, see **Beyond Deductibles** and **How to Be a Patient**, both by Gary Fradin and both available on www.lulu.com.

Brokers, of course, can't practice medicine. But brokers can teach clients how do their own homework and medical research better (*everyone* today uses google). Brokers can also help clients frame discussions with doctors to avoid potential information biases if only due to information left out by the doctor.

In other words, the ethical broker can help clients frame discussions with their doctors with the goal of helping clients avoid being unintentionally unaware, unsuspecting, overly trusting, uneducated and therefore vulnerable… just as Biblical scholars Leibowitz and Friedman suggested earlier ago in this text.

Some background on Alzheimer's disease and Aduhelm

Alzheimer's disease is the most common form of dementia, a general term for memory loss and other cognitive problems serious enough to interfere with daily life. Alzheimer's disease accounts for 60-80% of dementia cases. [118]

Alzheimer's is a progressive disease in which dementia symptoms gradually worsen over several years. During early states, memory loss is mild, but is late-stage Alzheimer's, individuals lose the ability to carry on a conversation and respond to their environment. Alzheimer's is the sixth-leading cause of death in the United States. On average, a person with Alzheimer's lives 4 to 8 years after diagnosis but can live up to 20 years, depending on various factors.

Alzheimer's has no treatment or cure.

Or, at least, that was true until the FDA approved Ahuhelm in June, 2021. Biogen, Adhuelm's manufcturer, plans to price it at $56,000 per patient per year.

Aduhelm, according to the FDA, doesn't actually stop or even slow the progression of Alzheimer's disease, at least for most people, most of the time. Dr. Sam Grandy, director of the Mount Sinai Hospital Center for Cognitive Health summarized Aduhelm this way in the New York Times: "no one was improved by Aduhelm and patients' cognition always continued to decline at some rate."[119]

Data analysts have found, however, that a small subgroup of patients may receive benefit from the drug.

- Is that significant either statistically or clinically? We'll get to that below. These are two concepts that ethical brokers can teach their clients.

The FDA approved Aduhelm based on its ability to remove brain plaques called beta-amyloid, that supposedly contribute to the disease. In other words, the FDA used a surrogate metric – beta-amyloid – instead of actual patient experience to approve the drug.

---

[118] This description comes from the Alzheimer's Association website https://www.alz.org/alzheimers-dementia/what-is-alzheimers

[119] Cleveland Clinic and Mount Sinai Won't Administer Aduhelm to Patients, Belluck, New York Times, July 14, 2021

- How do surrogates metrics and patient events correlate? Why might one be credible and the other not? These are two additional concepts that brokers can teach their clients, the differences between surrogate metrics and patient outcomes. We'll discuss below.
- What ethical issues does this raise for brokers?

Insurers balked at covering Aduhelm because of the huge price, $56,000 per patient per year. Michael Sherman for example, chief medical officer at Point32Health in Massachusetts claimed that Biogen should cut the price to $5,400 given the drug's questionable benefits and potential risks. [120]

- Is price a relevant factor in *lifnei iver* ethics? Does one put a stumbling block, from an ethical perspective, before a blind person at $56,000 per year, but not at $5,400 … or the reverse? We'll get to that too.

This brief overview frames our *lifnei iver* discussion about the broker's ethical role in the Aduhelm roll out. We'll adopt Professor Friedman's yardstick, the admonition that 'do not place a stumbling block before the blind' is really an ethical imperative demanding that people do everything possible to help the unaware, the unsuspecting, the overly trusting, the uneducated and therefore vulnerable among us.

Key educational concepts that bear on *lifnei iver*: surrogate endpoints vs. patient events and statistical significance vs. clinical significance

Let's look at some typical stumbling blocks before patients that the Aduhelm case introduces and focus here on vocabulary. Words can act as stumbling blocks by confusing people. I'll define some terms here, words common in medical research to show that.

'Endpoints' or 'events' are the outcomes measured in a study. These come in two flavors, surrogate and patient.

- **'Patient events'** or **medical events** are actual patient experiences like heart attacks, strokes and death.
- **'Surrogate' endpoints** or **metrics** are biomarkers like cholesterol levels or amyloid beta plaque reduction, that *seem to indicate* something about the likelihood of a patient having an actual medical event.

The FDA sometimes uses surrogate endpoints to approve drugs when either (a) the patient events take a long time to study like strokes, (b) the surrogate is easy and inexpensive to measure or (c) the relationship between the surrogate metrics and patient events are well understood and strong, like controlling blood pressure and having or dying of a heart attack.

[120] Boston Globe, June 23, 2021 "State's Second Largest Health Insurer Slams Biogen"

No relationship between surrogates and patient events is perfect. Take the high blood pressure mentioned above, one of the clearest and most compelling surrogate-event combinations. Some people with high blood pressure never have or die from, a heart attack. In fact, according to the US National Cancer Institute, high blood pressure only kills about 4 sixty-year-old American men per 1000 over 10 years.[121] Way more than 4 sixty-year-old American men per 1000 have untreated high blood pressure; the American Heart Association estimates that about 25 – 30% of all Americans suffer from the condition [122].

That would suggest that 250 or more 60-year-old men per 1000 *have* high blood pressure while only 4 *die* of it over 10 years. Some researchers call that correlation - between the surrogate metric 'high blood pressure' and the patient event 'death' – weak, even very weak. Nonetheless, the surrogate endpoint of 'high blood pressure' often stands for 'dying from a heart attack' in studies and treatment guidelines.

In addition, researchers sometimes use surrogate endpoints because they're relatively easy and inexpensive to measure. This can also be problematic. Consider the classic case of beta blockers (atenolol in particular), a blood pressure lowering medication.

Beta blockers clearly lower blood pressure, the surrogate metric. Lower blood pressure *should* lead to fewer heart attacks, the patient endpoint, at least in theory. But Cochrane's 2017 systemic review found that atenolol had little to no effect on heart attacks or mortality. [123] Somehow, atenolol manages to lower blood pressure without reducing the number of heart attacks.

> Patients who read this sometimes conclude that 'the study must be wrong' since the theory is so compelling. That's another stumbling block; too often in medicine, patients rely on theory, not evidence.
>
> That's also why Cochrane is so important. Its systemic reviews include *all* relevant studies and consider both the research methodologies and outcomes.
>
> For some psychological reasons that I don't understand and can't explain, patients too often ignore study outcomes in favor of simplistic logic and medical theory. Another stumbling block.

With the above discussion about surrogates and patient outcome endpoints as background, switch focus back to Aduhelm. Here the FDA relied on the surrogate endpoint of amyloid beta plaque reduction in the approval process, not on actual patient symptom changes. Amyloid beta plaques are hard substances that clump together

[121] Know Your Chances Risk Chart, US National Cancer Institute https://knowyourchances.cancer.gov/big_picture_charts.php

[122] https://www.heart.org/en/news/2018/05/01/more-than-100-million-americans-have-high-blood-pressure-aha-says

[123] https://www.cochrane.org/CD002003/HTN_beta-blockers-hypertension

between brain neurons in Alzheimer's patients. These inhibit normal brain functioning.[124]

The FDA said the surrogate endpoint amyloid beta plaque reduction is "expected" to predict a clinical benefit, despite the failures of dozens of amyloid-targeting drugs over many years.[125]

The FDA, interestingly, instructed Biogen, Aduhelm's manufacturer, to complete a patient symptom follow up study by 2029. 'Patient symptoms' are a fancy way of saying 'events' like developing Alzheimer's disease, having Alzheimer's disease progress on some recognized, objective scale or dying from Alzheimer's disease.

This suggests questions within the FDA about how well amyloid beta plaque reductions correlation with patient Alzheimer's patient symptom reduction.

It also suggests that doctors and patients won't know how well Aduhelm actually works until 2029, eight years after the FDA approved the drug and, presumably, eight years after clients start demanding coverage for it from their health insurance carrier.

The ethical question for the broker: Should you explain all this to your clients? After all, clients want benefits advisors to help them control healthcare spending while they enjoy better clinical outcomes.

The ethical broker says 'yes, I should explain all this to my clients'. The ethical broker understands that patients who confuse surrogate endpoints with patient events increase their chance of making unwise treatment decisions. Surrogate endpoints often show more benefit than do patient event measurements. Clients who rely (unknowingly) on surrogates may choose non-beneficial care more than clients who rely on patient endpoints.

The unethical broker says 'no, I do not need to explain all this to my clients'. The unethical broker takes the 'I only arrange financing for healthcare. My clients can choose whatever medical care they want. Their medical choices are not my professional responsibility'.

The problem with the unethical position: utilization and therefore medical spending will likely increase among people who rely on surrogate endpoints. This runs counter to the broker's responsibility to help clients control their healthcare spending. You simply can't control medical spending very well if clients mistakenly waste money on non-beneficial medical care.

In this case, as with arthroscopic debridement earlier in this course, good ethics equals good business practice.

[124] https://www.brightfocus.org/alzheimers-disease/infographic/amyloid-plaques-and-neurofibrillary-tangles
[125] Sachs, The FDA's Approval of Aduhelm, Health Affairs, June 10, 2021

Why the FDA relied on surrogate endpoints and the underlying ethical issues

Why did the FDA rely on surrogate endpoints, not patient endpoints? This topic allows us to introduce an entirely new set of issues that ethical brokers can teach to their clients.

Some background: [126] In 2015, Biogen started two randomized controlled trials, called EMERGE and ENGAGE, to test the effectiveness and safety of aducanumab, the more technical name for the product that would ultimately be branded and marketed as Aduhlem. In its 2019 data analysis of patient endpoints, Biogen found that the EMERGE trial showed positive results for patients taking a high dose of aducanumab.

The ENGAGE trial did not generate similar positive patient endpoint results.

The EMERGE study's results were statistically significant according to the researchers who ran it. *Were they also clinically significant?*

Let's introduce and define the two terms, statistical and clinical significance.

- ***Statistical significance*** means the result didn't happen by accident or wasn't a fluke. In common use, statistical significance means that another research study, using the same methodology, would likely generate similar results.

  'Not statistically significant' means the results may have happened by chance and another research study, using the same methodology, might not generate similar results.

  Statistical significance applies to the study methodology and data quality.

  Researchers who evaluated Aduhelm determined that the outcomes didn't happen by chance meaning other studies on the same product, using the same research methodology, would probably generate about the same results.

- ***Clinical significance*** means the medication in question impacted either a large enough number of patients, or impacted patients strongly enough, to warrant physician and patient attention. An outcome that *slightly* benefits 1 patient in 10,000 isn't clinically significant but one that *greatly* benefits 39 in 100 is.

  Applying this to our current case study, an outcome that changes Alzheimer's symptoms on the Clinical Dementia Rating Scale (CDRS) by 5 – 8 points probably is clinically significant, i.e. warrants physician and patient attention. The Clinical Dementia Rating Scale runs from 1 – 18 with higher numbers indicating more severe illness.

[126] This analysis comes from Garber, Alzheimer's drug sets a dangerous precedent, Lown Weekly, June 14, 2021

Aduhelm generated a 0.39 point symptom reduction[127] i.e. far less than 1.

Not clinically significant in our opinion, though a specific patient, armed with these facts might arrive at a different conclusion.

Thus, a *statistically* significant study might not be *clinically* significant.

The client educational message here: Patients who misinterpret the endpoint results (statistically but not clinically significant) will be more likely to make unwise treatment decisions. They might confuse the two terms and choose a statistically significant treatment that doesn't generate much, if any, patient improvement.

Should an ethical broker teach these four concepts – surrogate endpoints vs. patient events, statistical significance and clinical significance – and many others to their clients?

Rather than answering that question here, I leave it open-ended. *What would you do*?

If you were a client, *what would you want your broker to do?*

Sidebar
Some other key medical literacy concepts
for ethical brokers to teach their clients

I decided to list some other key concepts for ethical brokers to teach their clients rather than leave readers hanging, wondering 'what else is there in the patient education arena?' Each is worth its own course.

- How to present disease risks and interpret treatment benefits - relative vs. absolute risk data, 'big' vs. 'small' risks and improvements.
- Screening vs. diagnostic tests - meaning and role of each.
- Evidence quality – double blind comparative vs. observational studies, long term vs. short term studies, large vs. small studies, etc.
- How reporting bias and conflicts of interest impact studies and guidelines - who and what are behind the study and report and what impact does this have.
- Disease mongering and overdiagnosis, i.e. medicalizing normal human functions, equating risk factors with diseases, identifying innocuous abnormalities as 'stage 1 cancer', etc.
- Red flag words – breakthrough, game changer, promising, dramatic, etc. that have no clinical meaning but may influence patients.
- The non-medical context of disease risks, utilization drivers and treatment outcomes – fee-for-service billing, patient socio-economic status, loneliness and isolation, etc.
- Second opinion role, necessity and impacts.
- Treatment variation – why different doctors treat similar patients differently, and how to protect against both undertreatment and overtreatment.

[127] Ibid.

- Under – vs. Over- treatment. Undertreatment means receiving insufficient care and being harmed by the disease; overtreatment means receiving excess care and risk being harmed by the treatment.

These are all potentially fruitful areas of patient education but, unfortunately, lie outside the scope of this particular ethics course.[128]

Cost as an ethical differentiator

Michael Sherman, chief medical officer at Point32Health claimed that Biogen should cut Aduhelm's price from $56,000 to $5,400 given the drug's questionable benefits and potential risks. [129]

- Is price a relevant factor in *lifnei iver* ethics? Does one put a stumbling block, from our ethical perspective, before a blind person at $56,000 per year, but not at $5,400 … or the reverse?

  I understand, of course, that more people can afford $5,400 but that's an economic issue, not a *lifnei iver* ethical one.

To address the ethical issues in pricing a medical treatment, we need first to contextualize price as a stumbling block. We'll approach this from three perspectives:

1. How important is price in a patient's medical decision making? This question focuses on the role of health insurance or third-party-financing.

   Today about 90% of Americans have health insurance, meaning other policy holders fund the treatment, not the patient him or herself after the relatively small deductible and co-insurance if any. We'll explore some ethical issues about this below.

2. What responsibility does each individual patient have to protect other people from paying excessively high premiums? This question focuses on each patient's responsibilities toward others and the broker's role here, if any.

   Does Aduhelm's high price, in other words, place additional ethical responsibilities on each patient who might access it and therefore on the brokers who design policies to cover it? This important ethical issue falls somewhat outside the typical *lifnei iver* parameters but is fertile ground for discussion. We'll touch on it below.

3. How important is the benefit-to-harm tradeoff in determining price? This question gets to the signal prices send to potential consumers. In most of our

[128] For a more in-depth discussion of these issues, see Gary Fradin's books **How to Be a Patient** and **Beyond Deductibles**, both available on www.lulu.com.

[129] Boston Globe, June 23, 2021 "State's Second Largest Health Insurer Slams Biogen"

economy – hotels, restaurants, cars etc. - high prices equate to high quality, low prices to lower quality.

In the Aduhelm case, we have relatively low reported benefits but comparatively high risks (see below). Should an ethical insurance carrier insist on low prices to encourage utilization, thus optimizing the potential benefits…or high prices to discourage utilization?

Which action fits within the *lifnei iver* context?

We'll address each of these issues in turn.

The importance of price in medical decisions. Healthcare is a relatively inelastic service, meaning people access approximately the same amount regardless the price. This is, obviously, because health insurance funds most individual medical care so individual patients do not factor price into their consumption decisions once their annual deductible has been reached.

Or for treatments that exceed the annual out of pocket maximum, like Aduhelm.

Aduhelm's price, at either Biogen's $56,000 or Michael Sherman's $5,400 exceed almost every individual plan deductible.

Thus from our purely *lifnei iver* ethical perspective, Aduhelm's price does not place a stumbling block before the blind.

Dr. Sherman's comments appear aimed at achieving a different goal, either protecting Point32Health's financial position or avoiding raising premiums company wide. While both of those goals may be laudable, neither fits within our current ethical context.

Does Aduhelm's high price place additional ethical responsibilities on brokers? There is a relatively weak argument under *lifnei iver* that it does, but a much stronger argument under a different ethical concept, fairness.

The relatively weak *lifnei iver* argument goes along these lines. If Aduhelm becomes widely used at the $56,000 price point, this will force insurance carriers to raise premiums on everyone. That, in turn, will force some people to drop health insurance due to cost. The lack of health insurance is a stumbling block to people who need medical care.

Thus indirectly, brokers who fail to educate their clients about Aduhelm's true benefits (or lack thereof) may place a stumbling block before other policy holders. The indirect nature makes this ethical obligation relatively weak.

A far stronger obligation falls under the fairness ethical standard which defines ethical behavior as treating everyone equally regardless their station in life.[130] Ethicists could argue that it is unethical / unfair for some people to cost the healthcare system huge

[130] https://www.scu.edu/ethics/ethics-resources/ethical-decision-making/thinking-ethically/

amounts of money - $56,000 per year for many years - while receiving little benefit in return. That, if seems to us, is a far stronger ethical argument but one that falls somewhat outside the scope of *lifnei iver*.

Different ethical issue. That's why we simply mention it here.

How important is the benefit-to-harm tradeoff in determining price? In most of our economy, high prices signal better quality. Higher cost hotels provide more comforts and better services than lower cost hotels. More expensive TVs provide better pictures than less expensive TVs, and so on.

Thus pricing Aduhelm at $56,000 per year suggests that it works relatively well. Pricing it at $5,400 per year suggests that it works relatively poorly.

Dr. Sherman suggested that Aduhelm should cost $5,400 per year based on his valuation of the medication's benefits and harms. While he might be correct in the classical pricing sense, I think he got the *lifnei iver* / stumbling block ethics backwards, primarily because of our excessively complex and insanely incentivized health insurance system.

At $5,400, carriers will be less inclined to restrict access to Aduhelm. More doctors, figuring 'the carrier pays and my patient wants it' will prescribe it. Doctors who do so, parenthetically, will get higher patient satisfaction grades from frightened, poorly informed patients, than doctors who do not. Talk about crazy incentives!

More patients, as a result, will figure 'it the carrier pays, it may work for me' and take it.

This gives a false hope of benefit. Based on the initial studies, very few patients actually enjoy symptom improvement. Most only subject themselves to the risks and potential harms of Aduhelm. How common are these?

According to the Lown Institute's summary:

> 1% more patients taking aducanumab (Aduhelm) experienced a serious adverse event that researchers attributed to the drug, compared to patients taking placebo (0.7% of placebo group vs 1.7% of aducanumab group). If all 6 million Americans diagnosed with Alzheimer's each year took the drug, that would result in 60,000 more serious adverse drug events each year.
>
> The aducanumab group also reported higher rates of headache (19.6% vs 15.2%), falls (14.1% vs 11.8%), and diarrhea (8.2% vs 6.8%), compared to the placebo group. Applied to 6 million potential aducanumab users, this would result in 252,000 more cases of headache, 84,000 cases of diarrhea, and 138,000 more falls each year.[131]

[131] Garber, Lown Weekly June 14, 2021, op cit.

Overall, up to 40% of all Aduhelm patients had side effects including dizziness and small brain bleeds.[132]

At the $5,400 price point, carriers remove the price stumbling block, at least in large part. They would, presumably and consequently, impose *fewer* restrictions on utilization so more people would take the drug and experience these adverse events.

But at the $56,000 price point, carriers impose a price stumbling block. They would, presumably and consequently, impose *more* restrictions on utilization so fewer people would take the drug and experience these adverse events.

Remember that Aduhelm shows virtually no clinical, statistically significant patient event benefits. That's why regulators relied on surrogate endpoints.

In this weird case where insurance finances a consumer product, placing a stumbling block before people who seek this kind of treatment – where the patient harms apparently exceed the benefits – becomes ethical!

Clearly this is not what the original ethicists considered when developing the *lifnei iver* guidelines. They assumed, presumably, that the blind person chose a path toward greater benefit that the stumbling block would inhibit. In our current upside-down case, however, the drug seems to do more harm than good, so the stumbling block would save people from Aduhelm's harms.

That's why Dr. Sherman, while probably on strong *economic* grounds, gets the ethical issue of Aduhelm backwards. The correct ethical position under *lifnei iver* is to raise the drug's price to restrict access and protect policy holders from the higher likelihood of harm than benefit.

At least, that's what the evidence shows to date.

Summary of *lifnei iver*

We started by defining the ethical *lifnei iver* principle from Leviticus as 'do not place a stumbling block before the blind'. This definition evolved in two different directions.

First and most obviously, don't inhibit people from obtaining truthful information necessary to make a wise decision by lying, shading the truth, misleading clients or providing self serving information when people ask for your advice. We called these 'ethical transgressions of co-mission'.

Second and less obviously, don't ***passively*** allow someone to be taken advantage of if you (a) know about the problem and (b) are in a position to do something about it. We called these 'ethical transgressions of o-mission'. Under this interpretation, *lifnei iver* is really an ethical imperative requiring people to do everything possible to help the

[132] Saltzman, Alzheimer's Drug is Hit By Another Rejection, Boston Globe, July 24, 2021 https://edition.pagesuite.com/popovers/dynamic_article_popover.aspx?artguid=4d0ac9e0-8c44-41f4-9f8f-d555947b4bdb&appid=1165

unaware, the unsuspecting, the overly trusting, the uneducated and therefore vulnerable among us.

Under this second definition, we explored how price can sometimes be, and sometimes not be, a stumbling block, depending on the benefit-harm trade-off that each individual makes and the impact of third-party payments. Some tools to help people make those trade-off decisions include understanding surrogate endpoints, patient outcomes, statistical significance and clinical significance. Other decision tools also exist.

But one question, at least, remains: **how strong is the ethical admonition against the transgressions of o-mission we discussed above?**

And related, why did Biblical ethicists develop this doctrine in the first place?

Extensions from the Book of Isaiah: Why Biblical ethicists discuss *lifnei iver*

Hochei-ach tochi-ach roughly translates as 'we must rebuke our neighbor'. The Book of Isaiah continues in the next verse "You shall not take revenge nor bear a grudge… but you shall love your neighbor as yourself."

What's the big deal about rebuking? Why must we do it? Who in the health insurance field should do it? Who and how should they rebuke? Let's discuss.

In the Book of Isaiah, Isaiah himself delivers a remarkable verbal thrashing of his neighbors and community. He doesn't just type messages into his Facebook echo chamber; instead, he goes into the streets and confronts people. He tells them to change "to unlock the shackles of evil; to loosen the thongs of the yoke; to send forth crushed souls to freedom," as translated into English from the original text.

He claims to have received divine instructions "Tell My people of their rebelliousness; Proclaim their wrongs…"

Imagine hearing that directed at you from a member of your own community. Talk about making people feel uncomfortable!

Everyone must have disagreed with, even hated, Isaiah. As the rabbi and scholar Abraham Joshua Heschel put it, paraphrased here 'To the patriots, he seemed pernicious; to the pious multitude, blasphemous; to the men in authority, seditious.' [133]

This notion of speaking out against wrongs – rebuking in other words – is perhaps most succinctly and poignantly summarized in modern times, in Ted Kennedy's famous eulogy of his brother Bobby in 1968. Read this as an updated summary of the *hochei-ach tochi-ach*, the notion that we must rebuke our neighbor. Bobby, Ted said, was someone who

[133] Comments and interpretation from sermon by Rabbi Ken Carr at Temple Chayai Shalom, October 9, 2019

saw wrong and tried to right it, saw suffering and tried to heal it, saw war and tried to stop it.

Someone, in our terms, who lives up to Isaiah's *hochei-ach tochi-ach* ethical standard.

Why is this so important ethically? Why rebuke?

Commentators suggest that rebuking keeps us from hating, from nursing a grudge that could explode into vengeance, from engaging in destructive activities. Rebuking can address small problems before they escalate into large, costly ones, and diffuse potentially destructive motivations that destroy relationships.

Rebuking, in other words, shows you care, at least enough to engage in potentially difficult and upsetting discussions.

In business terms, it's cheaper to rebuke a client than lose the account.

> I once had a vaguely related experience like this, a discussion with a new boss. I worked for CARE in Chad, Africa at the time and was an outspoken (obnoxious?) 20-something. I liked my old boss, a very experienced professional who was moving to a different position in the company and had worked closely with him.
>
> I often, in our current context, rebuked him. I prefer today to call it 'asking good questions' and 'suggesting potential pitfalls' but that's probably just with the ameliorative benefit of hindsight.
>
> The new boss questioned the old boss. 'Why', he asked, 'do you tolerate this from Gary?'
>
> The wise old boss responded, 'It's cheaper to hear it from him than to make a mistake in the real world.'

Interestingly, the scholar Abraham Joshua Heschel said much the same thing about Isaiah and the other Prophets: "The striking surprise is that prophets of Israel were tolerated at all by their people." Somehow, apparently, society realizes that squeaky wheels – rebukers in our terms – perform a useful function.

In business or economic terms, rebuking can be efficient, low cost and effective. Rebuking can take many forms for a health insurance broker:

- He or she can say 'I see on your utilization report that you have many treatments of suspect quality' and then discuss some sub-optimal medical decisions that the client has made. Having arthroscopic debridement is one, taking atenolol probably another.
- He or she can say 'I see that you didn't get a second opinion before deciding on [some specific treatment]' and then discuss how second opinions can improve patient satisfaction with care and reduce medical spending.

- He or she can say 'Did you discuss Cochrane with your doctor prior to making [a specific medical decision]?' That opens the door to discussion of Cochrane and the role of outcome studies in general.

Let's tie this into our previous discussion of *lifnei iver:*

- Brokers shouldn't put a stumbling block – either actively or passively – before their clients.
- This can often revolve around information quality like medical outcomes.
- We introduced several case studies to show types of stumbling blocks and types of ethical broker interventions.
- Now we introduce a different justification for removing stumbling blocks, the notion of rebuking those you care about. Rebuking your client (i.e. removing a stumbling block) when you see him/her or it making a poor decision, can diffuse potentially big problems in the future.

A Tale of 3 Brokers

Consider this hypothetical but potentially realistic interaction with a client suffering from knee pain who considers having arthroscopic debridement for knee osteoarthritis.

Broker #1 could say nothing, ignore the ethical discussions above and take the position that 'I just arrange healthcare financing. How the client uses that financing is up to him or her.'

The client could then complain about a premium increase the next year. Then Broker #1, explaining the increase, could explain that the knee surgery caused part of the increase. The client could then complain 'and I didn't even benefit from the surgery!'

The client then asks for competitive quotes from new brokers, one of whom says 'Oh, arthroscopic debridement doesn't work. I could have told you that and saved you time, money and a premium increase.'

Broker #1, the 'how-the-client-uses-his-insurance-policy-is-up-to-him' one, loses the account.

Enter **Broker #2** who rebukes the client to show that he or she actually cares about the client. Broker #2 could speak out about arthroscopic debridement – that's from *lifnei iver*.

And the client could reply 'I'm busy, maybe some other time.'

Broker #2 then lets it drop.

> Sure, Broker #2 tried.
>
> Sure, Broker #2 acted somewhat ethically and told the client that he or she was making a mistake.
>
> Sure, Broker #2 attempted to remove a stumbling block and followed *lifnei iver*.

But Broker #2 didn't act ethically under *hochei-ach tochi-ach,* the 'we must rebuke our neighbor' standard. #2 is more like the Facebook 'post to the echo chamber' person, less like the prophet Isaiah. He or she said what they had to say and moved on.

Under *hochei-ach tochi-ach*, though, the broker should insist, tell the client 'I must teach you and your staff about Cochrane, I must give you tools to make wiser medical decisions to save you time, money and risk.' Then, of course, the client and broker discuss mechanisms to do this. That's **Broker #3**.

A tale of three brokers.

- Broker #1 who doesn't practice *lifnei iver* **or** *hochei-ach tochi-ach.*
- Broker #2 who attempts to practice *lifnei iver* **but not** *hochei-ach tochi-ach.*
- Broker #3 who practices both *lifnei iver* **and** *hochei-ach tochi-ach.*

Which are you? Which broker will likely enjoy the highest account retention? Which will likely be the most successful?

I know how I would vote.

Continuing Education classes and *hochei-ach tochi-ach*

How do insurance continuing education classes fit into *hochei-ach tochi-ach*, the notion that we must rebuke our neighbors when we see them acting in error?

Consider these summary observations about our system from various commentators over the past couple of decades:

- In **2005**, Harvard Medical School Professors Rashi Fein and Julius Richmond – the latter a former US Surgeon General – representing the medical school perspective called the American healthcare system a '**mess**'.[134]
- In **2010**, Harvard Business School Professor Regina Herzlinger, speaking at a Massachusetts health insurance association meeting and representing the business school perspective, called our health insurance system '**insane**'. [135]
- In **2011**, Otis Brawley, Chief Medical Officer of the American Cancer Society, representing the medical practitioner's perspective, summarized American healthcare as "**How We Do Harm**".[136]
- In **2014**, Ezekiel Emanuel, principal author of the Affordable Care Act, representing the public policy perspective, called our healthcare system '**terribly complex, blatantly unjust, outrageously expensive, grossly inefficient and error prone**.'[137]

[134] The Healthcare Mass, Richmond and Fein, 2005

[135] From my notes on her lecture, December 2010.

[136] Title of Brawley's 2011 book

[137] See the title of Ezekiel Emanuel's 2014 book about the Affordable Care Act "Reinventing American Healthcare: How the Affordable Care Act Will Improve our Terribly Complex, Blatantly Unjust, Outrageously Expensive, Grossly Inefficient, Error Prone System"

- In **2017**, Elisabeth Rosenthal, Editor in Chief of Kaiser Health News, representing the medical journalist's perspective, titled her book about American health insurance "**An American Sickness**".
- In **2018**, Jonathan Engle of Columbia University's Mailman School of Public Health, representing the public health perspective, called American healthcare "**uniquely dysfunctional**".[138]
- In **2020**, Princeton economists Anne Case and Angus Deaton – the later a Nobel Prize winner – representing the economic perspective, called American healthcare a "**calamity**".[139]

Thus commentators across the board - representing medical schools, business schools, medical practitioners, public policy experts, journalists, public health schools and economists – claim our healthcare system delivers poor value as measured by what we get for what we pay.

Yet most health insurance Continuing Education classes focus on regulations and policy forms, including insurance deductibles, Health Savings Accounts, Health Reimbursement Accounts, tax implications of various insurance programs, supplementary insurance, state and federal regulations and mandates, HIPAA and the like, all routine things that brokers deal with daily and weekly.

That is, perhaps, appropriate only in a very narrow sense.

In the larger sense, this approach ignores the deep flaws in our healthcare system. American healthcare and health insurance delivers suboptimal outcomes – our life expectancy, for example, lags other advanced, developed countries – while costing too much. Typical Continuing Education classes ignore the bigger picture, astonishingly to me, coming as I do, from the *hochei-ach tochi-ach*, we must rebuke, orientation.

This strikes me as an opportunity for the Massachusetts Department of Insurance to practice rebuking within the educational arena, *hochei-ach tochi-ach*. But, sadly, it doesn't.

Here is one data set to highlight the poor quality of our expensive healthcare system and the rebuking opportunity available within the Continuing Education framework. See below the American life expectancy at birth data from 2019, the year before Covid. (The years during and shortly after Covid were obviously abnormal.)

In 2019, according to the US Centers for Disease Control, Americans enjoyed a life expectancy at birth of 78.8 years, on average.[140] That compares to:

---

[138] See Jonathan Engle, Unaffordable, published in 2018

[139] Anne Case and Angus Deaton, Deaths of Despair

[140] US life expectancy data from the US Centers for Disease Control 'US Life Expectancy Increased in 2019' https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2020/202012.htm, and the Vital Statistics Rapid Release, Rep[ort #010 of February, 2021 by Elizabeth Arias et. al. See also the Boston Globe summary, July 20, 2021 https://edition.pagesuite.com/popovers/dynamic_article_popover.aspx?artguid=05426cb9-28d8-4050-aab0-

- **82** years in Austria, Belgium, Canada, Greece, Ireland, the Netherlands and New Zealand, all countries that spend far less on healthcare per capita than we do,
- **83** years in Australia, France, Israel, Italy, South Korea, Norway, Spain and Sweden, also countries that spend far less than we do, and
- **84** years in Japan and Switzerland, ditto on the healthcare spending front.

Humans in large, economically advanced, demographically diverse countries can easily live to 83 years on average. The 10 countries listed above – from Australia to Sweden – prove this. I didn't even compare us just to the best echelon of performers above, Japan and Switzerland.

Americans fall about 5% short of the 83 year level despite spending at least double what these other countries spend on healthcare, either per capita or as a percentage of each country's GDP.

Clearly this presents an educational opportunity – an ethical requirement? - to rebuke.

Unfortunately, depressing as these figures are on the healthcare effectiveness front, they mask the gross *inequality* of our system, something that makes all this look far worse. The CDC reports, again for 2019, that non-Hispanic Black Americans, combined male and female, had a life expectancy at birth of only 72 years on average.

That's a large, distinct and identifiable group of 45 million Americans living, medically, on par with:

- North Korea, Kosovo, Moldova, Surinam, Ukraine and Uzbekistan but behind countries like
- Azerbaijan, Bangladesh, El Salvador, Kazakhstan and Syria, all of which had a 2019 life expectancy of 73 years.

Shockingly again, this gets worse. Black males, about 22 million Americans, had a 2019 life expectancy of only 68.3 years. That's almost 20% worse than our (already poor) overall national average, putting them on par with:

- Kiribati, Laos, Rwanda, Senegal, and Turkmenistan but behind countries like
- Guyana, Iraq, and Mongolia.

I do not print this list to demean any country. Instead, I want to show how American health outcomes compare to far less wealthy countries with healthcare systems far inferior to ours. None of the countries listed above – from Surinam and Uzbekistan to Turkmenistan and Mongolia - enjoy the bounty of healthcare technologies, providers, and services available in America.

5a84029276bb&appid=1165. Life expectancy data for all countries except the US from the World Bank, Life Expectancy in Years https://data.worldbank.org/indicator/SP.DYN.LE00.IN

This highlights the huge inefficiency and inequality in our healthcare services and suggests some educational opportunities available within Continuing Education classes.

My ethical question to CE regulators and providers following from *hochei-ach tochi-ach*, the 'we-must-rebuke-our-neighbors' ethical standard from the Book of Isaiah: How can you ignore this in your CE course requirements? How can you leave these issues out of your 'appropriate' list of topics?

Our Continuing Education regulators *require* ethics courses but *don't follow* the ethical precepts discussed in those courses. At least, not of this one. I wonder what the prophet Isaiah and centuries of biblical ethicists would say.

The Book of Isaiah contains this admonition: "Tell My people of their rebelliousness; Proclaim their wrongs". Harsh, stern words designed to shake people up and get them to improve, yet commands noticeably absent from the Continuing Education platform.

Continuing Education classes could, of course, teach brokers about the problems we face. Propose solutions. Expand people's thinking. Stimulate improvements. Make our healthcare system better. But they don't.

I see a huge missed opportunity here, highlighted by our first ethical principle when applied to our current endeavor, insurance continuing education. I wish I could figure out who to rebuke. Any suggestions?

Ethical Principle #4: Do Your Fellow a Favor

Avoid *caveat emptor* (let the buyer beware) or *mekach taut* (fraudulent sale)

Our second ethical principle rephrases, redefines and further clarifies our first. This time we'll focus on types of information for ethical brokers to disclose when presenting policy options to their clients. In *lifnei iver* terms, we'll identify some specific ways for brokers to remove potential stumbling blocks from before their (metaphorically blind) patients.

Interestingly from a Biblical perspective – and I'm still not a Biblical scholar – this ethical principle covers similar ground to *lifnei iver*. This seems to suggest that the Bible deemed this whole line of thinking tremendously important, at least important enough to discuss and emphasize it twice.

What disclosure responsibilities do health insurance brokers have both legally and ethically when they present a policy to clients?

First, brokers must honestly explain policy terms.

Second, they cannot leave out important information.

Third, they must quote the price.

But do they also have a fourth ethical requirement – to disclose policy implications, such as likely medical outcomes and medical risks? Should the broker provide clients with information about likely impacts of using their health insurance policies? Should they present clients with data about treatment practices and medical outcomes?

In other words, should the broker explain how insurance policies are often misused by poorly informed patients and how this may cause them harm? Or how the various incentives in our healthcare system combine often to provide more care than many people need, or indeed that is good for their health?

The well informed broker knows that patients sometimes overuse our medical system, meaning get excessive and unnecessary care. Some insurance programs may actually increase the likelihood of this. High deductible plans, for example, may inhibit overuse until the deductible is met, then *dis*inhibit the same behavior after. Subscribers may think 'care is now free to me – or almost free – so I might as well get as much as possible to save money next year.' Rather than generating benefit, this excessive care can only harm the subscriber / patient in two separate and distinct ways.

First in no particular order, excessive care can harm the patient, the employer group and the healthcare system *financially* through both direct and indirect additional costs. The direct costs come from copayments and other out-of-pocket spending like parking, transportation, missed work, hiring childcare and the like. The indirect costs come from increasing your company's utilization experience – or your community's – thus impacting premium cost trends over time.

Unnecessary care, in other words, increases the costs of funding our healthcare system.

Second, unnecessary and excessive care can harm the patient *medically* through error or side effects for example. This by definition. 'Unnecessary care' means care you don't need, that won't make you healthier, from which you won't benefit. But all medical care contains some element of risk, some chance of harm. The patient who receives unnecessary care cannot benefit from it – by definition – but may be harmed by it.

As a general rule, patients should avoid unnecessary care, if only for this 'potential medical harm' reason.

Many people underestimate medical risks or consider that 'low risk' or 'essentially risk free' means 'no risk'. Hmmm…

Consider the sad case of Samantha Reckis, a 7 year old girl living on Cape Cod in 2003.[141] Samantha ran a fever over Thanksgiving and her parents gave her Children's Motrin, about as safe and benign a medication as exists. Unknown to anyone at the time, Samantha suffered from an uncommon skin disorder called Stevens-Johnson syndrome that makes your skin feel hot, more or less like a bad sunburn. That's what her parents felt apparently when they touched her skin.

The Stevens-Johnson condition can be exacerbated by exposure to ibuprofen, an ingredient in Motrin. When Samantha's parents gave her Children's Motrin to reduce her 'fever', she had a bad reaction – so bad, in fact that it developed into a condition known as Toxic Epidermal Necrolysis, an extremely rare and painful skin condition. Over the next 9 years, poor Samantha endured multiple hospitalizations and surgeries, lost nearly all of her skin, suffered permanent lung and liver damage and became legally blind.

In February 2013, a Plymouth County jury found that Johnson and Johnson, the makers of Motrin, was at fault for causing Samantha's condition because the company had failed adequately to warn patients of this potential adverse effect. Such a notice, the jury decided, could have alerted Samantha's parents or physicians to stop using the drug and thus reduce the harms caused to Samantha. The jury awarded Samantha $50 million and each of her parents $6.5 million, all to be paid by Johnson and Johnson.

This is an extreme example of harms from a standard and safe medical intervention. If Children's Motrin can cause all these harms to a little girl, imagine the potential downsides and potential harms from more invasive and risky interventions.

- Vioxx for example, a drug 'as good as aspirin but with fewer stomach bleeds' led to 12,000 deaths according to a court settlement.
- Menaflex, a bovine based knee cartilage replacement, caused adverse reactions in 42% of patients in pre-approval FDA studies.
- Estimates of the harms caused by medical devices range from a low of 16,000 Americans to a high of 160,000.[142] (We have only this wide estimate of device

[141] Family Awarded $63 Million in Motrin Case, Wallack and Lazar, Boston Globe, Feb 3, 2013
[142] Jeanne Lenzer, The Danger Within Us for many more examples and details.

harms due to the lousy data on device harms. But even the low estimate seems pretty high to me.)

Should brokers inform their subscribers of these types of risks? Should brokers tell patients how to protect themselves from harms? Or should brokers adopt the 'let the buyer beware' ethical standard and limit their own responsibilities to selling insurance policy packages?

Research has demonstrated that above a certain level of care, generally defined as the Medicare norm in low cost regions, the excess doesn't generate patient benefit. As Jonathan Skinner, a Dartmouth Institute of Healthcare researcher summarizes

> There is just no evidence that doing more helps. At best you do the same and in some cases you actually do worse [due to infections, errors, sides effects, etc.] [143]

Other researchers have discovered that patients who receive excessive and unnecessary care actually have slightly higher mortality rates. As Elliott Fisher, Director of the Dartmouth Institute for Health Policy and Clinical Practice learned in his huge early-2000s research study on treatment variation, hospitals that spent the most on patient care and did the most tests and procedures experienced a 2 – 6% higher patient mortality rate. [144] The reason, according to Fisher, is quite simply that

The additional medicine patients get in the high-cost regions leads to the harm. [145]

Fisher in his studies noted that for every 10% increase in regional medical spending per capita over the Medicare minimum, the risk of death went up. Slightly admittedly but statistically significantly. Somewhere in the ballpark of children's Motrin risk. (Samantha Reckis' story haunts me.)

More care, in other words, is worse for you than less care. Once Fisher and his cohort discovered this, an entire industry of researchers descended on healthcare statistics to determine which interventions generate the best benefits, which the most harms and, perhaps most importantly, how to determine those outcomes.

One result of this years-long effort is that researchers have learned that patients generally have 2 or more treatment options that generate roughly similar outcomes but that may pose very different risks. Not to mention different costs.

Another is that researchers determined that only a relatively small proportion of medical interventions have been tested to see how well they actually work - how effective they are, in other words.

---

[143] Jonathan Skinner, John E. Wennberg, How Much is Enough", NBER Working Paper 6513, 1998

[144] Brownlee, Overtreated, page 50

[145] Fischer, et al, The Implications of Regional Variations in Medicare Spending Part 2, Annals of Internal Medicine 2003:138, pages 292 - 293

A third is that researchers have definitively learned that more medical care isn't always better than less.

Fisher actually summarized all this research in a brief Letter to the Editor of the Boston Globe on March 2, 2018 entitled 'Check Your Assumptions at the Door.' Patients should, he recommends

> Question widely held assumptions:
>
> That current treatments – including drugs – all have been proven safe and effective (safe, maybe; effective, no) …
>
> That physicians can tell you what's best for you (they can, but only if they know what is important to you);
>
> Or that more medical care is always better (it's not).
>
> The system is ripe for disruption and new thinking. But it will take a fearless commitment to keeping patients at the center.

Should the broker – the 'benefits advisor' – participate in this 'fearless commitment to keeping patients at the center'… in other words, a client educational process? Or should the broker ignore current research and stick with spreadsheeting and compliance?

Should the broker teach clients how best to use their benefits and specifically their health insurance policies? Or does the broker's ethical responsibility end with arranging medical care financing?

Should the broker stick with a narrow definition of professional responsibility and let the policy buyer beware? Or should the broker adopt a more expansive definition of professional ethics?

What ethical disclosure responsibilities does the broker have?

Review Questions
Correct answers on next page

1. Which disclosure responsibilities does the health insurance broker have according to this text?

    a. Policy costs only
    b. Policy coverages only
    c. Policy coverages and gaps
    d. Policy costs, coverages, gaps and some likely implications of using the policy

2. Is overuse of medical care a problem in the US today?

    a. No
    b. Only for orthopedic care
    c. Primarily for cardiac care

d. Yes

3. What is one harm from having employees overuse medical care?

    a. It increases company utilization and experience modifier thus leading to higher premiums in the future
    b. Employees will miss too much work on physician visits and the company may lose money
    c. Employees will discuss their medical experiences too often and this may reduce workplace efficiency
    d. Employees will become paranoid about their health and workplace efficiency may suffer

4. What is a second harm from medical overuse?

    a. People will address perceived medical risks without much hope for concomitant benefit
    b. The US economy will tank
    c. Americans will perceive themselves as too sick to work and the economy will tank
    d. Doctors will earn too much money and skew real estate prices

5. Is more care generally better than less care?

    a. Yes
    b. Only for orthopedic care
    c. Never for cardiac care
    d. No

6. What have we learned from research into care over-utilization?

    a. That Americans never overutilize medical care
    b. That overutilization is a national good thing because it stimulates medical research
    c. That overutilization of prescription drugs helps most people avoid addiction
    d. That over-utilization increases mortality rates

7. Have all medications been proven safe and effective?

    a. Safe maybe, effective no
    b. Safe no but effective yes
    c. None have been proven safe or effective
    d. All have been proven safe and effective

8. Is this text primarily an educational text, an advocacy exercise or a medical treatise?

    a. Educational text

b. Advocacy exercise
c. Medical treatise
d. None of the above

9. Where does the fundamental ethical standard in this course come from?

   a. The Bible
   b. The Koran
   c. The Buddah
   d. The US Constitution

10. This text makes several claims about health insurance brokers. Which below is not such a claim? In other words, which statement below is **false**?

    a. Today's health insurance brokers are well trained, competent and professional
    b. All health insurance brokers have access to the same data and pricing
    c. All health insurance brokers understand the regulatory environment
    d. No health insurance brokers are interested in their client's well being

11. This text makes several additional claims about health insurance brokers. Which below is not such a claim? In other words, which statement below is **false**?

    a. Only some teach their clients how to navigate our complex medical care system
    b. Only some teach their clients how to maximize their chance of medical care benefits and minimize their risks of harm
    c. Only a few teach clients that more care may be worse than less care
    d. Most have extensive educational programming aimed at expanding medical literacy

12. Which type of health insurance broker does the author prefer: one that only spreadsheets and ensures regulatory compliance or one that also teaches basic medical literacy?

    a. One that only spreadsheets
    b. One that only ensures regulatory compliance
    c. One that spreadsheets and ensures regulatory compliance
    d. One that spreadsheets, ensures compliance and teaches basic medical literacy

Review Questions
Correct answers in bold

1. Which disclosure responsibilities does the health insurance broker have according to this text?

   a. Policy costs only
   b. Policy coverages only

c. Policy coverages and gaps
d. Policy costs, coverages, gaps and some likely implications of using the policy

2. Is overuse of medical care a problem in the US today?

a. No
b. Only for orthopedic care
c. Primarily for cardiac care
d. Yes

3. What is one harm from having employees overuse medical care?

a. It increases company utilization and experience modifier, thus leading to higher premiums in the future
b. Employees will miss too much work on physician visits and the company may lose money
c. Employees will discuss their medical experiences too often and this may reduce workplace efficiency
d. Employees will become paranoid about their health and workplace efficiency may suffer

4. What is a second harm from medical overuse?

a. People will address perceived medical risks without much hope for concomitant benefit
b. The US economy will tank
c. Americans will perceive themselves as too sick to work and the economy will tank
d. Doctors will earn too much money and skew real estate prices

5. Is more care better generally than less care?

a. Yes
b. Only for orthopedic care
c. Never for cardiac care
d. No

6. What have we learned from research into care over-utilization?

a. That Americans never overutilize medical care
b. That overutilization is a national good thing because it stimulates medical research
c. That overutilization of prescription drugs helps most people avoid addiction
d. That over-utilization increases mortality rates

7. Have all medications been proven safe and effective?

a. Safe maybe, effective no
b. Safe no but effective yes
c. None have been proven safe or effective
d. All have been proven safe and effective

8. Is this text primarily an educational text, an advocacy exercise or a medical treatise?

a. Educational text
b. Advocacy exercise
c. Medical treatise
d. None of the above

9. Where does the fundamental ethical standard in this course come from?

a. The Bible
b. The Koran
c. The Buddah
d. The US Constitution

10. This text makes several claims about health insurance brokers. Which below is not such a claim? In other words, which statement below is **false**?

a. Today's health insurance brokers are well trained, competent and professional
b. All health insurance brokers have access to the same data and pricing
c. All health insurance brokers understand the regulatory environment
d. No health insurance brokers are interested in their client's well being

11. This text makes several additional claims about health insurance brokers. Which below is not such a claim? In other words, which statement below is **false**?

a. Only some teach their clients how to navigate our complex medical care system
b. Only some teach their clients how to maximize their chance of medical care benefits and minimize their risks of harm
c. Only a few teach clients that more care may be worse than less care
d. Most have extensive educational programming aimed at expanding medical literacy

12. Which type of health insurance broker does the author prefer: one that only spreadsheets and ensures regulatory compliance or one that also teaches basic medical literacy?

a. One that only spreadsheets
b. One that only ensures regulatory compliance
c. One that spreadsheets and ensures regulatory compliance

d. One that spreadsheets, ensures compliance and teaches basic medical literacy

Why Health Insurance Brokers Need Ethical Disclosure Standards

The only effective, sustainable way to control your client's healthcare expenses is to teach them how to avoid unnecessary, ineffective, excessive and low quality medical care. That's my opening position.

Any other attempts to control healthcare expenses - financial engineering, clever insurance plan designs or ancillary programs – fail to reduce healthcare inflation. Here's the depressing historical summary: Over the past 60 years, we've tried

- Cost sharing or 'major medical' in the 1960s. These programs were inflationary so they were replaced by
- First dollar coverage or HMOS in the 1979s through 90s, the opposite of cost sharing. People complained about the restrictions so they were replaced by
- High deductible plans, the opposite of first dollar coverage post 2000. People complained about the deductible size.

We've tried

- wide hospital networks figuring that more competition would lower costs, and
- narrow hospital networks, figuring that more carrier control would lower costs;
- defined benefit plans to allow employers more design latitude and
- defined contribution plans to allow employees wider choice,
- individually underwritten plans to reward healthy people and
- community wide rates to avoid penalizing sick people and
- virtually everything in between.

Some companies have adopted ancillary programs to reduce spending like

- Wellness programs to reduce demand for medical services, but these show disappointing returns on investment if any returns at all, and
- Price transparency programs to help employees spend less for specific medical services, but these have little, if any impact outside of a few commodity services like X-rays and MRIs that are probably way overused anyway. What's the point in getting a less expensive unnecessary scan?

These programs all fail for the same reason: Patients will always find a way to access a medical service that they believe will improve their health. In other words, if patients – i.e. your subscribers – believe they need it, they'll get it.

Even if that belief is false. And there's nothing you can do about it.

The only thing we've never tried: teaching employees how to avoid unnecessary and poor quality care. That's a really promising approach.

And that's what ethical brokers should introduce.

Disclosing data on medical care quality: some ethical issues

This text will introduce medical care quality metrics. It's designed to give brokers and patients – ordinary people not trained in medicine, statistics or econometrics, not professional researchers and not nerds - the tools necessary to choose high quality, beneficial medical care and avoid low quality, ineffective or harmful care.

Once you, as a broker, understand these metrics, you'll be in a position to decide whether or not to teach them to your clients. Anecdotal evidence suggests that the better brokers understand these topics, the more likely they are to teach them to clients.

And the more ethical it makes them.

The wise patient today knows that more care doesn't mean better care. But do most of your subscribers and patients have the skills to differentiate high from low quality care, and better from poorer outcomes? I suspect not. That can put you in an uncomfortable ethical position.

Consider this evidence from the US Department of Health and Human Services. 88% of Americans, they find, are medically illiterate, meaning lack the skills necessary to assess likely treatment benefits and harms [146] though I suspect the real number – the percentage of people who understand and use the tools described later in this text – is actually much lower.

Interestingly, however, virtually everyone I meet either professionally in classes or socially claims to be medically literate and generally sees themselves not only as medically literate but also very well informed about medical care. I think that underscores the problem!

Health and Human Services also claims that medically illiterate patients have higher hospitalization rates and medical costs, and poorer health outcomes, the exact opposite of broker's goals.

Knowing this, can you, as a broker, simply develop plans that raise deductibles without including a complementary education program that helps your subscribers spend their deductibles wisely? Is that really ethical? Would you want someone to do that to you?

'Do unto others as you would have them do unto you.'

How a medically literate consumer thinks

Here's a simple overview of how a medically literate person makes a medical care decision. Ask yourself as you go through this list – how many of your clients follow this protocol? And, if you don't teach it to your clients, who will?

[146] https://health.gov/communication/literacy/quickguide/factsbasic.htm

- **First determine how well the medical intervention works** and decide if it works well enough for you. You'll need to understand what a comparative study is, and understand how to interpret the study results. I'll show you how. Different patients can make different decisions based on the same set of facts.
- **Second consider your treatment options.** You have them about 85% of the time. Learn to explore them. Again, I'll show you how.
- **Third determine which providers – practitioners and hospitals – generate the best outcomes for your preferred intervention**. I'll show you a simple and useful way to choose. It's better than looking up lots of outdated statistical indicators on lots of hard-to-navigate-and-understand websites.
- **Fourth, evaluate your insurance policy** to see which providers are in-network, which treatments are covered, what your copayments are and how to access the care you want.

I submit that an ethical broker will teach subscribers to follow this process, with the likely result that they'll tend to generate better outcomes with less risk and at lower costs.

But deviate and watch spending and risk increase and benefits potentially decline.

The Goldilocks principle

Good, proper and appropriate medical care fits the Goldilocks principle: not too little, not too much, but just right.

- Too little medical care leads to *undertreated* patients and poorer-than-optimal outcomes. Undertreated patients are harmed by their diseases.
- Too much medical care leads to *overtreated* patients and higher-than-necessary costs and medical risks. Overtreated patients are harmed by their care, not their diseases.
- Inappropriate medical care leads to suboptimal outcomes, excessive costs, patient dissatisfaction and sometimes lawsuits.

Overtreatment, and inappropriate care represent about 40% of medical interventions. I'll explain in the 'Slippage' chapter below. Attacking slippage, in other words, becomes a prime focus of ethical broker activities.

The best medical decisions

The best medical decisions come from wise, well informed patients working together with thoughtful, caring clinicians.

- **Patients** know their own hopes and fears and the benefit / risk tradeoffs they are prepared to make. Different patients, when faced with the same set of facts, can reasonably make different care decisions and all be right.
- **Clinicians** have extensive knowledge and experience that can aid a patient.
    - Wise patients avail themselves of this knowledge, experience and counsel.
    - Unwise patients ignore it or delegate decision making to their clinician.

Ignoring clinician counsel deprives patients of potentially valuable insights. That's the 'art' of medical care.

Delegating decision making forces your treaters to assume or guess the benefit / risk tradeoffs you're willing to make. Studies suggest that clinicians often get this wrong.[147]

The Slippage Problem in US Healthcare

I got this term from David Cordiani, CEO of Cigna, a huge national health insurer, who introduced it in his keynote talk at Yale's annual Healthcare Conference in April, 2015. 'Slippage' is to healthcare what 'breakage' is to shipping and 'spoilage' is to food service – stuff that goes wrong, the inevitable problems at afflict any industry.

We can estimate the amount of slippage in our healthcare system from expenditure data since we so often assign dollar values to medical interventions. Read the expenditure data below as indicators of slippage volume: when I suggest that 40% of *expenditures* are ineffective or inappropriate, I imply that about 40% of *interventions* are ineffective or inappropriate. Not an exact equality but good enough for government work.

Cordani somewhat conservatively pegged slippage at 'at least 25%' of all US healthcare spending but added that the real figure is probably much higher. Consider 25% a low estimate.

That approaches $800 billion dollars nationally per year or about $2500 per health insurance policy.

Using a different approach, PLOS arrived at a roughly similar conclusion by surveying physicians about the unnecessary care they provide to their own patients in 2017. [148] In other words, this survey asked physicians about their own behavior and the behavior they observed in their colleagues.

The overall estimates for unnecessary care from this group of 2100 physicians:

- 20% of medical care was unnecessary,
- 22% of prescription medications were unnecessary,
- 25% of tests were unnecessary, and

[147] Mulley et al, Patient Preferences Matter

[148] Overtreatment in the United States, Lyu et. al. September 6, 2017
https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0181970

- 11% of procedures were unnecessary.

Among the specific findings:

- 27% of respondents (physicians) believed that at least 30 – 45% of overall medical care was unnecessary,
- 30% believed that at least 30 – 45% of prescriptions was unnecessary,
- 38% believed that at least 30 – 45% of tests were unnecessary,
- 16% believed that at least 30 – 45% of procedures were unnecessary.

This strikes me as a big deal.

In 2018 a Washington State survey used yet another approach to put some meat on this slippage / unnecessary care bone. The Washington Health Alliance analyzed utilization and billing data from 2.4 million commercially insured patients who used 47 oft-overused services, and found that 45% of services delivered were wasteful accounting for 36% of medical spending.

Cordani's 'at least 25%' waste estimate might be low.

The Washington study is noteworthy for a couple of reasons. First the Washington Health Alliance, the group responsible for this study, consists of virtually all the hospitals, insurance carriers and large benefits agencies in the state. This report was cowritten by the Washington State Medical Association and the Washington State Hospital Association, essentially the medical establishment in Washington.

Second, the group identified overuse from the Choosing Wisely list. Choosing Wisely is a creative and very useful medical decision making tool that far too few patients know or use.

Choosing Wisely

Choosing Wisely is funded by the American Board of Internal Medicine Foundation that basically asked lots of specialty medical associations to submit a list of service that their members do but that don't generally benefit patients. Among the 70+ organizations that submitted a list: the American Academy of Allergy, Asthma and Immunology, the American Academy of Family Physicians, the American Academy of Dermatology, the American College of Cardiology and many more.

Each partner organization submitted at least 5 services that 'physicians and patients should question' because of the low level of benefit provided (if any benefit at all) and / or high level of patient risk.

Choosing Wisely is a useful, albeit low bar for poor quality care.

The Washington State folks identified 'appropriate' care as care that is

- Supported by evidence
- Truly necessary

- Not duplicative of other tests or procedures already received and
- As free from harm as possible.

They used Choosing Wisely's list as the basis for determining low quality care and waste, defining low quality care as

- Likely wasteful, meaning there are serious questions about the appropriateness of the service, or
- Wasteful, meaning the service was very likely unnecessary and should not have occurred.

Remember that 'likely wasteful' and 'wasteful' care is, while clearly subjective, defined both by Choosing Wisely – i.e. the various medical specialty organizations - and the state hospital and medical establishment. Again, a pretty conservative bar.

Third, the Washington State report focused on 47 commonly overused services of which just 11 common tests, procedures and treatments represented 93% of the overuse. That list includes preoperative tests and lab studies prior to low-risk surgery, too frequent cancer screenings, eye imaging tests for people without significant eye disease, annual EKG tests or cardiac screening for people with low risk of heart disease, and imaging for uncomplicated conditions such as low back pain.

In other words, the Cordani and PLOS systemic slippage estimates are supported by the Washington State details indicating that (a) slippage is a huge financial problem and (b) it comes from a relatively limited number of services.

Brokers thus can focus their educational efforts fairly narrowly and have a potentially great impact on their client's health and finances. Our question: is it ethical to do so? And should they?

Five kinds of slippage

Let's expand on the Washington State definition of low quality care to identify 5 types of medical interventions that can generate patient harm and financial waste:

- **Care that doesn't work** or works so badly that you don't want it
- **Care that works on some people** but likely not on you for reasons like age, sex, overall health and, surprisingly, socio-economic status
- **Care that works in tests but is overused in real life** so quite possibly won't benefit *you*
- **Care that you don't want** when you learn of your treatment alternatives
- **Care from low quality providers** (clinicians and hospitals) when higher quality providers are available.

I'll discuss all these in more detail below.

How to avoid slippage

Identifying slippage is Step 1. Avoiding it is Step 2.

My suggested slippage avoidance process: teach your clients *to ask the right questions of their doctors*. I'll discuss those questions later in this text.

I developed this process for two main reasons:

First, extensive research shows that most patients trust their doctors and value the patient doctor relationship. Attempts to undermine or go around it seemed doomed to failure.

Patashnik, Gerber and Dowling argue in their excellent book Unhealthy Politics that physicians are the most credible source of patient information, far more than 'studies' or 'guidelines'. [149] Any attempt to undermine physician credibility, in their and my opinion, will simply fail.

My questions therefore enhance the doctor-patient discussion process. Remember that doctors are all highly trained, have access to all the relevant literature, are experienced you and generally welcome patients sharing their hopes, fears and concerns. At least, that's what physicians report.

Second, very few patients are 'medically literate' and able to understand, evaluate and critic medical studies and reports.

This doesn't mean people are stupid!

Rather, it means they haven't had the necessary training. Medically illiterate folks – even if they're otherwise very well educated – need guidance when googling to understand complex information about medical technology and science.

I don't see the utility of showering medically illiterate folks with data and study conclusions. You end up with 'This study shows surgery benefits but that study shows medication benefits. I'm confused so I'll ask my doctor' and you go to my first reason above.

******

My questions and the discussions they prompt can overcome those problems. These questions allow your subscriber's physician – their most trusted medical advisor - to interpret complex information and apply it to them.

But who in our complex healthcare system, teaches your subscribers how to talk with their doctors? There's clearly a need as demonstrated by the waste data presented

[149] Patashnik, Unhealthy Politics, chapter 3

above. Seems to me we as a healthcare system, and brokers as a profession, have dropped the ball on this.

Why Brokers?
The problem of advice bias and three types of care

Who advises people NOT to receive medical care or to question routine medical advice and care? In our healthcare financing system, physicians are paid to treat. They have a financial incentive to intervene for they generally do not get paid unless they do something to the patient. Many studies have shown that surgeons tend to recommend surgery far more than non-surgeons do, and sometimes more than patients need.

But physicians, as Patashnik, Gerber and Dowling argued above, are patient's most trusted advisors.

Thus we see a biased medical advice system. Practitioners generally only make money by providing medical care. No one in our healthcare system is paid to advise patients against medical care. No one, in other words, balances the economic intervention interests of clinicians.

'But my doctor suggested that I not have this procedure' goes the superficial but true counter argument. Put this into a tri-partied context.

- Some care is clearly necessary, meaning that virtually all physicians evaluating the same patient would recommend it.
- Some care is clearly unnecessary, meaning that virtually no physicians evaluating the same patient would recommend it.
- And some care is in the gray area, meaning that some physicians might recommend it while others might not.

The 'my doctor recommended against this procedure' statement probably falls into category 2 above, though possibly category 3 too.

The advice bias problem arises only in category 3, the gray area. Research suggests that this is perhaps the largest of the 3 categories.

How large is each category? In other words, what percentage of medical care falls into each? John Wennberg, founder of the Dartmouth Institute, answers this in his book Tracking Medicine. [150] He calls our category 1 'effective care' defined as services that, on the basis of reasonably sound medical evidence, are known to work better than any alternative. This group of treatments accounts, based on his research, for only about 15% of all medical care.

Wennberg calls our category 3 above, the gray area, 'preference sensitive' care meaning care for which there is more than one option and in which different people can make

[150] Wennberg, Tracking Medicine, pages 8 – 10, then Parts II and III

difference decisions and all be correct. Preference sensitive care requires judgment and individuality to evaluate the risk-benefit tradeoffs.

Consider torn or injured rotator cuffs, for example. A surgeon will likely examine the patient, identify a rotator cuff tear and recommend surgery. But a physical therapist, reviewing the same data on the same patient, might well suggest physical therapy, at least to start. Is one right and another wrong?

That situation arose for a student of mine, a licensed health insurance broker in his 60s who managed to tear his right rotator cuff. 'It was so weak and sore' he told me, 'that I couldn't shift the gears on my pick up.' It apparently had a gear shift next to the steering wheel.

He went on to tell me that he visited an orthopedic surgeon who took an MRI, identified the cuff tear, and recommended surgery. 'I would have agreed to surgery' he went on to say, 'prior to hearing your lectures and reading your books.' (See – there actually is some value to continuing education classes!)

'But I asked the surgeon if all physicians would agree with that analysis and recommendation. He answered with a snort that some might suggest physical therapy but that would be a waste of time and that I'd be back in his office shortly thereafter.'

My former student decided to try PT and reported when next I saw him that his shoulder was pain free and that he had regained 99%+ range of motion – it might have been 100% but he wanted to be conservative - in the same time as surgical recovery but without the costs and risks of surgery. 'Thanks' he smiled as he relayed the story.

Wennberg estimates that preference sensitive care represents about 25% of medical spending, making our category 3 larger than category 1, the clearly beneficial group of treatments.

Wennberg goes on to describe supply sensitive care, or the 60% of medical spending that is about the frequency with which patients get treatments. Physician decisions, he claims, are strongly influenced by the capacity of the local medical market. Areas that have more surgeons experience more surgery; areas with more Neo Natal Intensive Care Units have more babies admitted to NICUs; areas with more cardiac catheterization beds have more cardiac catheterizations, etc.

How often should a physician see patient in pain, suffering from a chronic condition or desiring to feel better? Once a month? Once a quarter? Semi-annually? The answer, according to Wennberg:

The doctor will sort it out based on how sick an individual patient is and how many opening he has in his schedule. Specialists tend to fill their appointment books to capacity. [151]

[151] This discussion comes from Maggie Mahar, Money Driven Medicine, page 172, including Wennberg's quote.

Thus a physician might say to a patient 'I'd like to see you again in 3 weeks', but the office booking clerk, seeing that the doctor is booked for the next 6 weeks, asks the doctor if waiting 6 weeks is OK. 'Fine' the doctor replies, raising the question of why he or she originally wanted to see the patient in 3 weeks.

This is sometimes called Roemer's Law, named after a healthcare economist named Milton Roemer who discovered that if more hospital beds exist in a region, there are more hospitalizations.

And it's sometimes called 'supply induced demand.' A hospital buys a new MRI machine and suddenly lots of patients need MRIs. Or when a new dermatology practice opened near my house, I tried to get an appointment only to learn that they were fully booked for the next 3 months. How was that possible for a new practice? According to Wennberg, they simply saw patients more frequently to fill up their calendars. (I don't know if that was the reason but it certainly seemed likely.)

Wennberg's estimate that 25% of medical spending goes to preference sensitive care and 60% falls into the supply sensitive category highlights the problem of advisor bias. And our current fee-for-service physician payment system exacerbates it. Your physician might consciously think 'I'd like to see this patient again in 3 weeks' and subconsciously 'and I'll get paid to see her.'

Or 'this procedure will probably help the patient' and subconsciously 'and I'll get paid to perform it.'

Does this actually happen? Let me quote conclusions from 3 recent studies on the impact of fee for service payments on physician recommendations:

- On average a 2 percent increase in payment rates leads to a 3 percent increase in care provision, with elective procedures responding most strongly to pricing incentives.[152] In other words, when physicians get paid more to do something, they do it more frequently.
- When specialists are paid through a fee-for-service scheme rather than on a capitation basis, surgery rates increase 78%. [153] Again, the more specialists are paid, the more they tend to do.
- Patients seeing fee-for-service ophthalmologists were twice as likely to have cataract surgery as patients seeing doctors in capitated systems. Interestingly the number of cataract surgeries dropped by 45% within 6 months after a studied

[152] Do Physician's Financial Incentives Affect Medical Treatments? Clemens et al, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2101251

[153] Shafrin, Operating on Commission: analyzing how physician financial incentives affect surgery rates, Health Economics http://onlinelibrary.wiley.com/doi/10.1002/hec.1495/abstract

ophthalmology group of physicians switched to a capitated payment contract. [154] Or, in the vernacular, physicians respond to financial incentives.

Thus we see a systemic bias in favor or patients receiving more medical care based on the advice – potentially biased - that they're likely to get. This makes medical service different from, for example, legal services.

In court the prosecution and defense attorneys argue different interpretations of the same facts, more or less, in John Wennberg's terms, different preference sensitive interpretations. The judge or jury then decides who is right.

But in medical care, patients only have one interpretation, that of their own physician. Patients generally rely on one interpretation and rarely have the skills to question it. (Yes, patients sometimes get second opinions and these can be incredibly useful. But only if they're used in specific ways. I'll get to that.)

We lack in medicine the 'alternative interpretation' feature that opposing attorneys offer in legal services. Where do patients learn how and when to question tests and procedures, especially common ones – things like the eye imaging tests, cancer screenings and annual EKGs that the Washington State report highlighted as waste?

Carriers might play that role – but the managed care experience of the 1990s has turned popular opinion against trusting carriers too much.

Second opinions are too cumbersome. Who wants to get a second opinion when the doctor says 'let's run this test to rule out' something or other? Or when your doctor says 'it's time for your annual mammogram'? Or even 'your cholesterol level is getting high. The guidelines recommend that I put you on medication to lower it.' 'High' to your doctor may be 'moderate' for the patient, assuming, of course, that the patient is medically literate, an assumption that is incorrect 88% of the time according to HHS.

Even if patients get a second opinion, it may be from another doctor in the same practice who may have an informal – perhaps even unconscious – motivation to support his/her colleague.

That leaves the broker. Should the broker advise clients of potential risks of easy availability of medical care? How much should the broker inform clients about systemic abuses? In sum…

What ethical disclosure responsibilities does the broker have to protect his/her client from unnecessary / excess treatments and the related potential medical harm?

[154] Effect of Physician Reimbursement Methodology on the Rate and Cost of Cataract Surgery, Shrank, 2005 https://www.ncbi.nlm.nih.gov/pubmed/16344447

Review Questions
Answers on next page

1. What is the only effective, sustainable way to control your client's healthcare expenses?
   a. Promote medical literacy
   b. Raise deductibles
   c. Introduce a wellness program
   d. Ration employee access to medical care

2. Roughly what percent of Americans is medically literate?
   a. 12%
   b. 50%
   c. 75%
   d. 100%

3. Roughly what percent of Americans consider themselves medically literate and well informed about medical care according to this text?
   a. 12%
   b. 50%
   c. 75%
   d. 100%

4. Which statement is true about medically literate patients?
   a. Medically literate patients have lower hospitalization rates and medical costs
   b. Medically literate patients have higher hospitalization costs
   c. Medically literate patients have higher medical costs
   d. Medically literate patients have poorer medical outcomes

5. This text outlined a 4 step medical decision making process. Which below is not one of those steps?
   a. Determine how well a medical intervention works for your ailment
   b. Explore your treatment options
   c. Learn which provider – doctor and hospital – does that treatment the best
   d. Pray

6. How does this text differentiate undertreatment from overtreatment?
   a. Undertreatment increases the risk of being harmed by the disease; overtreatment increases the risk of being harmed by the care
   b. Undertreatment is like rationing
   c. Overtreatment means you are harmed by a different disease
   d. Undertreatment costs the healthcare system much more

7. About how much slippage exists in US healthcare?
   a. Less than 5%
   b. About a third
   c. More than 80%

d. More than 90%

8. What is ChoosingWisely?
   a. A list of treatments that patients and clinicians should question and likely avoid
   b. A list of really good treatment
   c. A list of the best medications
   d. A list of the best hospitals

9. What is one lesson from the Washington State study?
   a. That wasteful and low quality care represent over a third of all medical spending
   b. That environmental factors drive most healthcare spending
   c. That environmental factors do not drive most healthcare spending
   d. That commercial insurance policies control spending very well

10. John Wennberg of Dartmouth identified 3 categories of medical care. Which below is not one of them?
    a. Necessary and effective care
    b. Preference sensitive care
    c. Supply sensitive care
    d. Alternative, low cost care like herbs and potions

11. Which below is most credible to most patients?
    a. Double blind controlled studies
    b. Guidelines published by medical specialty associations
    c. Research studies from famous medical schools
    d. Recommendations from the patient's own doctors

12. What approach does this author recommend for helping patients avoid wasteful care?
    a. Learn the key questions to ask their doctors so they focus discussions on likely outcomes
    b. Read lots of medical studies from high quality research institutions
    c. Learn the guidelines that relate to your medical problems
    d. Get opinions from others who have had your medical condition treated successfully

Review Questions
Correct answers in bold

1. What is the only effective, sustainable way to control your client's healthcare expenses?
   a. Promote medical literacy
   b. Raise deductibles
   c. Introduce a wellness program
   d. Ration employee access to medical care

2. Roughly what percent of Americans is medically literate?
   a. 12%
   b. 50%
   c. 75%
   d. 100%

3. Roughly what percent of Americans consider themselves medically literate and well informed about medical care according to this text?
   a. 12%
   b. 50%
   c. 75%
   d. 100%

4. Which statement is true about medically literate patients?
   a. Medically literate patients have lower hospitalization rates and medical costs
   b. Medically literate patients have higher hospitalization costs
   c. Medically literate patients have higher medical costs
   d. Medically literate patients have poorer medical outcomes

5. This text outlined a 4 step medical decision making process. Which below is not one of those steps?
   a. Determine how well a medical intervention works for your ailment
   b. Explore your treatment options
   c. Learn which provider – doctor and hospital – does that treatment the best
   d. Pray

6. How does this text differentiate undertreatment from overtreatment?
   a. Undertreatment increases the risk of being harmed by the disease; overtreatment increases the risk of being harmed by the care
   b. Undertreatment is like rationing
   c. Overtreatment means you are harmed by a different disease
   d. Undertreatment costs the healthcare system much more

7. About how much slippage exists in US healthcare?
   a. Less than 5%
   b. About a third
   c. More than 80%
   d. More than 90%

8. What is ChoosingWisely?
   a. A list of treatments that patients and clinicians should question and likely avoid
   b. A list of really good treatment
   c. A list of the best medications
   d. A list of the best hospitals

9. What is one lesson from the Washington State study?
   a. That wasteful and low quality care represent over a third of all medical spending
   b. That environmental factors drive most healthcare spending
   c. That environmental factors do not drive most healthcare spending
   d. That commercial insurance policies control spending very well

10. John Wennberg of Dartmouth identified 3 categories of medical care. Which below is not one of them?
   a. Necessary and effective care
   b. Preference sensitive care
   c. Supply sensitive care
   d. Alternative, low cost care like herbs and potions

11. Which below is most credible to most patients?
   a. Double blind controlled studies
   b. Guidelines published by medical specialty associations
   c. Research studies from famous medical schools
   d. Recommendations from the patient's own doctors

12. What approach does this author recommend for helping patients avoid wasteful care?
   a. Learn the key questions to ask their doctors so they focus discussions on likely outcomes
   b. Read lots of medical studies from high quality research institutions
   c. Learn the guidelines that relate to your medical problems
   d. Get opinions from others who have had your medical condition treated successfully

Overview of Disclosure Ethics

The Biblical View of Business Ethics: 'Do not do unto others as you would not like done to yourself' and 'Love thy neighbor as yourself' are two fundamental ethical dictates of Judeo-Christian religions. We – Americans coming from Judeo-Christian traditions and teaching – believe that we have responsibilities to treat others as we would want them to treat us.

The Business Ethics Center of Jerusalem defines business ethics as 'the value structure that guides individuals in the decision making process when they are faced with a dilemma of how to behave within their business or professional lives.'[155]

Ethical business considerations fall into two separate categories.[156] First, business ethics regulates conduct in direct contact situations, such as with employees, clients or

[155] See www.besr.org/DCPage.aspx?PageID=198
[156] This discussion comes from www.besr.org/DCPage.aspx?PageID=199

suppliers. These commonly fall into standard categories including employee relations, honest representation and truth in advertising.

These types of ethical issues have an immediacy or personal effect: lying to a customer may induce that person to buy the wrong product. Shading the truth may persuade a client to purchase a policy that benefits the broker inappropriately. In both cases, the only party harmed is the party in direct contact with the unethical broker.

Second, business ethics involves social responsibility. These ethical issues consider how much all of us must take responsibility for society as a whole. Ethical social behavior, for example, includes protecting our natural resources, caring for the poor and providing equal educational opportunities to all.

This course will deal primarily with the first type of ethical business considerations – the direct contact situations – though we will make some social responsibility types of ethical observations also.

Unequal Knowledge about our Healthcare System

What does 'unequal knowledge about the healthcare system' mean?

Brokers typically know a great deal more about our healthcare system than do their clients. Among the areas of broker expertise:

Underwriting guidelines
Regulations
Provider cost data (at least rough and crude measures)
Outcome data (again, rough and crude measures)
Treatment complication data (assuming a well informed broker)
And several similar categories.

We will explore the broker's ethical responsibilities to share all available information with their clients.

In developing our overall position on the ethics of disclosure, we will rely primarily on the Torah. Why?

The Torah also known as the beginning of the Old Testament or Five Books of Moses, has served as the moral and ethical foundation of our Judeo-Christian western civilization for thousands of years.

Virtually all the great historical ethicists and philosophers had a deep understanding of the Torah's teachings. These permeate our shared views of right and wrong, morals and ethics, and have done so for a very long time.

Some Judeo – Christian Business Ethical Positions on Disclosure: Start with Abraham's purchase of a burial plot for his wife Sarah

In the first commercial transaction in the Torah or Old Testament, Abraham laid down the 'full disclosure' commercial principle.[157]

The story of Abraham purchasing a burial plot for his wife Sarah is instructive from our ethical viewpoint. The haggling over land takes five steps in Genesis 23: 3 - 20:

> **Step 1:** Abraham explains what he needs in vague terms – a burial plot for his wife. He does not stipulate where or exactly what kind of burial plot;
> **Step 2:** The sellers offer 'the choicest of our burial places';
> **Step 3:** Abraham considers this (perhaps even goes on a guided tour of choice burial places) then asks for 'the cave of Machpelah…which is at the end of [the sellers] field', and offers to pay 'full price';
> **Step 4:** The sellers confirm that they have exactly what Abraham wants 'the field and cave that is in it';
> **Step 5:** The buyer and seller ultimately agree on the land and price and transact the purchase in public 'in the presence of the sons of Heth, before all who went in at the gate of his city'.

Note the similarity with health insurance policy sales:

> **Step 1:** the Buyer explains what he/she needs in vague terms – a policy to cover my employee's medical needs, perhaps with some specific issues in mind;
> **Step 2:** the Broker says 'we have many quality plans available' and explains them;
> **Step 3:** the Buyer considers several options, then stipulates what he/she wants;
> **Step 4:** the Broker confirms that a specified policy contains the desired benefits;
> **Step 5:** the Buyer enrolls by signing a contract.

It was clear from Abraham's negotiations that he had the opportunity to view the land and cave prior to purchasing. The seller had helped him learn about the land, pointing out the choicest burial place. Indeed, the seller may even have warranted the land: 'none of us will withhold from you his burial place', thereby confirming that this was, in fact, burial property.

The seller apparently understood that Abraham – 'a foreigner and a visitor' – did not know all details about local burial plots. The seller therefore helped Abraham learn everything that he needed to know so he could make a wise, informed purchase.

There was no ambiguity about the land, the location or the use. No confusion about exactly what Abraham bought…because the seller provided such a thorough and detailed education.

Caveat emptor 'Let the Buyer Beware' is Unethical

[157] This interpretation is entirely my own and not entirely in line with typical or traditional religious commentaries. The genesis of this interpretation comes from www.torah.org Business Ethics: The Challenge of Wealth and various commentaries including *Parchas Chayei, Parchas Sarah, Parchas Metzora, Parshas Shoftim* and *Responsa-Vayigash.*

The lesson about this transaction? That in the Torah there is no concept of 'let the buyer beware'. The seller taught Abraham everything he needed to know about local burial plots, made very clear to Abraham exactly what he was buying and made his declarations publicly.

'Let the buyer beware' assumes that all parties to a commercial transaction have the same information regarding price, quality, use, location, comparative markets, etc. This was clearly not true for Abraham, the 'foreigner and visitor'. The seller could have taken advantage of his lack of knowledge to swindle him – but did not. The seller educated the buyer. This is the ethical business lesson of Genesis 23: 3 – 20.

'Let the buyer beware' also assumes that all parties have not only equal information and equal access to information but also equal abilities to understand the information available. In the Biblical case, Abraham was only able to understand the intricacies of burial plots after being educated by the seller. Is this concept still valid today? Can 'let the buyer beware' serve as a valid basis for commercial transactions?

The answer is no. Traditional Torah ethics remain valid today for two main reasons.

First, sellers and buyers rarely have exactly the same information. The seller virtually always knows his / her products far better than the buyer. The simple reason is that the seller deals in this market – for this product – far more frequently than does the typical buyer.

Today's health insurance broker, for example, spends his or her entire professional life dealing with health insurance policies. The broker constantly hears customer and market feedback – 'I thought the policy covered this but my claim was rejected' or 'The specialist my doctor recommended wasn't in network' or 'This carrier answered all my questions completely and handled my claim quickly' for example.

The buyer, on the other hand, probably only deals with health insurance issues once or a very few times per year. This puts the buyer at an information disadvantage. He or she simply can't know as much about the products, carriers, markets and nuances as the pro who deals with these issues daily.

This was clearly the case for Abraham, whose expertise did not include detailed knowledge of local burial plots. That's why he relied on the seller's representations and information – he had no other option.

Second, in the real world, sellers can understand their product information far better than the buyer can. This is primarily because the health insurance broker has studied healthcare issues in far greater depth than the typical buyer. Even if the buyer has access to information, he / she often lacks the background and context in which to place that information.

Again, this is similar to Abraham's situation. He was a merchant, with expertise in his own arena – not in burial plots. He was not in a strong position to understand burial plot issues without additional education.

Our clients are similar to Abraham. They are accountants, schoolteachers, fishermen or others, with expertise in their own fields, not healthcare. Lacking the broker's healthcare education and background, they are less able to understand healthcare details and issues than the broker.

How many of your clients know and understand the systemic information presented earlier in this text?

Thus for these two reasons – that the broker has both *better access to product information* and a *better ability to understand that information* – today's health insurance salesperson has an ethical responsibility to educate the client. Just like Abraham's burial plot seller.

Mekach Tau or fraudulent sale

According to traditional Talmudic law, it is forbidden to sell an item—whether moveable items or real estate—if the item is defective. If this is done without informing the buyer of the defect before he completes the purchase, the seller is perpetrating a fraud. [158]

The prohibition is not necessarily or only a function of price, i.e. charging full price for a defective product. Instead, it is an issue of the seller misleading the buyer either intentionally or unintentionally. (Sema 228:7)

Sometimes defining faulty products is simple. Selling a broken watch, for example, is clear: if the watch doesn't tell time, then it is faulty. Two issues here. First intent. Did the seller intend to deceive the buyer? If so, then various compensation modes become relevant. Second quality. Even if the seller did not intend to defraud the buyer, then the doctrine of *mekach tau* still holds.

But selling a product designed to maintain your health becomes dicey. What do commentators say about a product that buyers use as designed but that makes buyers less healthy, something like insurance payments for Aduhelm, the Alzheimer's product we discussed earlier in this course? Is the broker who sold the coverage that funded Aduhelm committing an ethical transgression?

Or can the broker claim *caveat emptor*, let the buyer beware, and hide behind the argument 'I only arrange healthcare financing. Not my job to ensure that my client spends the money wisely.'

Do Your Fellow A Favor

The Torah and various commentaries clearly provides the answer. According to this doctrine of *mekach tau*, the seller is obligated to make full disclosure of any defect in the goods or services sold. We have already discussed this.

[158] This discussion comes from Mind the Blemish: Principles of Mekach Ta'us https://dinonline.org/2016/03/04/mind-the-blemish-principles-of-mekach-taus/

Rabbi Dr. Meir Tamari, an expert on business ethics, states this clearly and strongly, 'there is no Jewish basis for the "let the buyer beware" concept'.[159] He continues:

> Such philosophy presupposes that all the players in the market possess the same access to information regarding price, quality and comparative markets. They are able and are required to ascertain the truth of the state of the playing field, and if they do not, that is their problem.

The problem, of course, is that no such market exists or can exist. The seller virtually always knows more about the product, the applications - and the misapplications - than the buyer as we discussed above.

Tamari continues 'if there is a flaw in the goods [or services] one is obliged to reveal it to the buyer' otherwise 'the sale is cancelled [the buyer cannot be forced to accept a discount in lieu of the defect] … there does not need to be any intent to defraud; even if sold in good faith, the seller still bears responsibility and the sale may be cancelled'.[160]

Thus, the health insurance broker who claims 'I didn't know that the policy contained that' has no ethical defense: Jewish law makes the seller responsible to understand fully all the implications of each health insurance policy.

What about the broker who claims 'not my job to watch how people use their health insurance'?

Rabbi Tamari addresses this in the Business Ethics Guide, Economic Justice in a Jewish Perspective. [161] He quotes the Rabbis that 'he who does not *do his fellow a favor*, is not of the sons of Abraham' for 'we force one to act contrary to the selfishness of Sodom'.

This answers our questions above. The seller must first educate the buyer and make full disclosure about the policy's coverage. But second and equally important, the seller must *do his fellow a favor* and highlight problems with the health insurance policy that *may* occur. In other words, highlight ways that people use their health insurance in ways harmful to their health.

Why would Jewish law --- which later became Judeo-Christian ethics – place such a burden on sellers?

There appears some thinking that these burdens ultimately work to the advantage of the seller. If all sellers act ethically as described above, then it becomes very easy to sell products to buyers. The reason: buyers would have a very high degree of confidence in the seller's representations.

Business Ethics = Business Efficiency

[159] Tamari, Honesty in Business Dealings, https://www.besr.org/library/honesty.html
[160] Tamari, Honesty in Business Dealings, https://www.besr.org/library/honesty.html
[161] http://www.besr.org/library/responsa/economic.html

In doing this, the Torah advises us to *put business long term financial interests ahead of short term profit goals*.

If everyone followed the Torah's teachings, in other words, we would have a very well functioning business economy. The Torah can be seen as a manual for how to prosper in business. We'll read its various ethical teachings in this light.

Ethical sellers – i.e. those who follow the Torah's teachings - would not have to prove their honesty or credibility. They could concentrate, instead, on selling products. This is very efficient: sellers could focus on their income generating activities (i.e. sales) rather than spending time explaining or justifying their personal ethical standards, or establishing personal credibility. They would thus generate higher incomes.

Abraham's burial plot sellers, apparently, had this credibility, as there is no mention of Abe searching for other plot sellers. He did not shop around for a 'better deal'. He was – apparently – satisfied with his seller's ethical positions and chose to do business with him.

The religious laws outlined above ultimately work to the seller's advantage.

Efficiency and Health Insurance Sales

Let's apply this standard to health insurance brokers. If we all *do our clients a favor* and warn them about risks of healthcare systemic abuse and excess, then we may help control healthcare inflation. By *doing our clients a favor*, we may serve the interests of our entire economy by reducing healthcare costs.

In short, we do well for our clients and do well for our country by doing our clients a favor. We also, according to the Torah, do well for ourselves as brokers by adhering to this ethical standard.

Whose Interests Should the Broker Protect?

This ethical disclosure standard seems to require brokers to act against physician and hospital financial interests by educating clients about medical risks, waste and low quality care – teaching them, in other words, how to make wise medical care decisions. Providers, under our fee-for-service financing arrangements, have an economic incentive to treat, and often to overtreat, up to about 40% of the time according to the data presented earlier. Brokers, under this standard, have the burden of countering these physician economic incentives.

Seen in this light, the Torah's teachings may set up a conflict in our healthcare economy. Let's look at the gray area, in which a subscriber may or may not need treatment, and discuss the economic incentives facing each party. (Ethical discussions always focus on gray areas, as these are the difficult cases. There's no ethical dilemma in an easy or obvious case.)

Providers – physicians and hospitals – have an economic interest in treating and make the most money by providing the most treatment. The lens through which they view the

patient may – consciously or unconsciously – include their own financial self interest. 'Patients of this type', they may think, 'often improve with treatment.'

Upton Sinclair, and American writer in the early 1900s, summarized this problem succinctly while campaigning for governor of Illinois:

> It is difficult to get a man to understand something when his salary depends on him not understanding it.

When in doubt, our economic system tends to motivate providers to treat.

Patients with health insurance generally have little or no *economic* incentive to avoid treatment. They purchased insurance exactly for this situation. They generally have minimal out of pocket costs, depending on their policy type and deductible situation. Even a $1000 or $3000 out of pocket payment pales in comparison to a potentially life saving treatment or to treatment that eliminates a chronic pain.

In addition, patients who are sick or in pain are often scared and want to trust someone who offers relief. The reassuring physician who counsels 'I have treated many patients like you successfully' provides exactly the advice that the patient wants to hear.

Thus, our systematic incentives may induce unnecessary treatment for patients in the gray area. The providers gain, but the patient doesn't pay.

Who Wins and Who Loses in the Gray Area?

This seems, at first cut, a win-win situation. The provider wins – gets paid. The patient wins – gets better. Even if the patient doesn't improve much, he/she didn't pay much. No harm, no foul.

Except for two problems. First, in the US, a great deal of care generates little to no patient benefit, as discussed earlier. But the provider always gets paid. Our 'win-win' becomes 'providers win, patients get nothing' around 30% of the time.

Those odds might be attractive to patients if medical treatments were risk-free - if we never had treatment complications, then reasonable and rational patients might decide that a 70% chance of improvement is good enough. They might discount the 'no benefit' risk and agree with their physician's advice to receive treatment.

Unfortunately, however, medical treatments are never risk-free. This is the second problem. There are always complication risks. Remember Samantha Reckis from earlier in this course? She's the little girl on Cape Cod who went blind from taking children's Motrin. Expanding on this, consider these data points from a large Johns Hopkins study published in 2016:[162]

- 250,000 Americans die from medical errors annually,

[162] Johns Hopkins study released May 3, 2016
https://www.hopkinsmedicine.org/news/media/releases/study_suggests_medical_errors_now_third_leading_cause_of_death_in_the_us

- 10% of US deaths are due to medical error
- Medical errors are the 3rd leading cause of death in the US.

In addition, according to a 2018 survey of 6700 physicians, 691 or slightly over 10% reported that they themselves had made a medical error in the previous 3 months. [163]

This is not the business efficiency envisioned in the Torah's ethical discussions. This is very inefficient and unethical: one group in our society (providers) wins with every transaction while another (patients) loses fairly regularly.

They sometimes lose big time.

The Broker's Education Responsibility

What group in our society can counter the providers? Who can give warnings to patients about risk? Who can give unbiased advice to patients about when to trust providers and when not to? Who can act – in Biblical terms – like Abraham's burial plot seller?

I suggest that the broker has these responsibilities. This is a wider definition of broker duties than is currently common in our industry. But it is the definition that follows from the ethical standards discussed in the Torah.

Is it enough simply to describe the health insurance policy in detail?

Such a description would include a discussion of copayments and deductibles, pre-existing condition exclusions if any, available providers, prescription drug coverage, price etc and then show alternative products and describe them.

Though this may satisfy some customers, it does not satisfy the Torah's ethical requirement.

The broker also has an ethical responsibility to describe policy implications – the likelihood of benefit and harm from using the health insurance policy.

And the broker has an ethical responsibility under the 'do your fellow a favor' principle to teach clients how to identify and avoid wasteful and / or harmful medical care.

How Much Should Brokers Disclose?

The question posed by Rabbi Tamari in Parchas Shoftim above, in the discussion of *do the fellow a favor* remains: How much should a seller disclose about a product to a customer?

Tamari starts with the religious doctrine of Mekach Taut or faulty sale, discussed above. That's the doctrine requiring full disclosure of any defect in the goods or services sold, and a cancellation of the sale due to product defects *even if the seller was ignorant of the flaw at the time of sale*.

---

[163] Physician Burnout, Well-being and Work Unit Safety Grades, Tawfik et. al, Nov 1, 2018 https://www.mayoclinicproceedings.org/article/S0025-6196(18)30372-0/fulltext

It is unclear from Genesis 23 exactly how much information Abraham's burial plot seller provided. He apparently provided a great deal and probably all that was necessary in that circumstance. But we get into a gray area when applying the lessons of Genesis to more complicated transactions, like health insurance policy sales.

Is it a 'product defect', for example, if someone goes to a less expensive and also lower quality in-network hospital and picks up an infection? Or if someone opts for surgery and has a complication, only to learn later that physical therapy might have been a wiser choice? Or if someone takes a heart attack prevention medication, later has a heart attack and subsequently learns that the medication was proven ineffective in comparative studies?

That's why the Rabbis expanded their discussion to include *do the fellow a favor*. Now we have the ethical tools to address this question.

Review Questions
Answers on next page

1. What does 'let the buyer beware' mean?
    a. That the buyer should beware that the seller is probably lying when he/she represents something
    b. That the buyer should beware that the seller is probably taping the transaction to protect him/her self in the event of a fraud accusation
    c. That the buyer should beware that the product probably contains hidden defects that the seller is not under any legal or ethical obligation to disclose
    d. That they buyer must do his/her own product research because the seller feels him/her self under no ethical obligation to disclose product details

2. What does 'let the buyer beware' assume?
    a. That the buyer understands that the seller is probably lying when he/she represents something
    b. That all parties to the transaction have equal abilities to understand the product information available
    c. That buyers have a certain minimum level of intelligence
    d. That sellers have less than a certain minimum level of intelligence

3. Is 'let the buyer beware' an ethical or unethical standard?
    a. This is an ethical standard
    b. This is not an ethical standard. In fact, it is unethical
    c. It is only an ethical standard for service type products like health insurance
    d. It is generally an ethical standard but is inappropriate for service type products like health insurance

4. What does 'do your fellow a favor' mean?
    a. That buyers should help sellers whenever possible

b. That sellers should try to put themselves in the buyer's position, and should educate buyers as they would like to be educated themselves if they were the buyer
c. That sellers should embrace 'the selfishness of Sodom' thus creating a more competitive market
d. That buyers should embrace 'the selfishness of Sodom' thus putting more demands on the seller

5. Is 'do your fellow a favor' an ethical standard?
   a. No
   b. Yes
   c. Only when the buyer figures that the 'favor' is worth less than the product in question
   d. Only when the buyer figures that the 'favor' is worth more than the product in question

Review Questions
Correct answers in bold

1. What does 'let the buyer beware' mean?
   a. That the buyer should beware that the seller is probably lying when he/she represents something
   b. That the buyer should beware that the seller is probably taping the transaction to protect him/her self in the event of a fraud accusation
   c. That the buyer should beware that the product probably contains hidden defects that the seller is not under any legal or ethical obligation to disclose
   d. **That they buyer must do his/her own product research because the seller feels him/her self under no ethical obligation to disclose product details**

2. What does 'let the buyer beware' assume?
   a. That the buyer understands that the seller is probably lying when he/she represents something
   b. **That all parties to the transaction have equal abilities to understand the product information available**
   c. That buyers have a certain minimum level of intelligence
   d. That sellers have less than a certain minimum level of intelligence

3. Is 'let the buyer beware' an ethical or unethical standard?
   a. This is an ethical standard
   b. **This is not an ethical standard. In fact, it is unethical**
   c. It is only an ethical standard for service type products like health insurance
   d. It is generally an ethical standard but is inappropriate for service type products like health insurance

4. What does 'do your fellow a favor' mean?
   a. That buyers should help sellers whenever possible

b. **That sellers should try to put themselves in the buyer's position, and should educate buyers as they would like to be educated themselves if they were the buyer**
c. That sellers should embrace 'the selfishness of Sodom' thus creating a more competitive market
d. That buyers should embrace 'the selfishness of Sodom' thus putting more demands on the seller

5. Is 'do your fellow a favor' an ethical standard?
   a. No
   b. **Yes**
   c. Only when the buyer figures that the 'favor' is worth less than the product in question
   d. Only when the buyer figures that the 'favor' is worth more than the product in question

Some Concrete Ways for Health Insurance Brokers to 'Do Your Fellow a Favor' and to Avoid 'Letting the Buyer Beware'

We discussed the low quality and wasteful care problems earlier in this text. Let's drill down on the issue here as a brief summary.

Our fee-for-service healthcare financing system is weak at generating outcome data - we have fewer follow-up studies than we should. Many argue that this is due to our billing system: providers get paid based on inputs – procedures performed – rather than on outcomes. This can create a disincentive to study care effectiveness. Studies showing that treatments generate poor outcomes may hurt them economically.

Ditto for drug manufacturers, device manufacturers, hospital and other participants in the healthcare system. All exhibit a reluctance to engage in outcome studies.

As a result, medicine today is less scientific than we would like to believe. Here's Shannon Brownlee, author of *Overtreated*, articulating the treatment outcome problem over the past few decades and continuing until today:

> Much of what doctors were doing was based more on hunches than good research. There were gaping holes in medical knowledge even when it came to something as seemingly mundane as a tonsillectomy. [164]

And here's Harvard Business School Professor Michael Porter on the issue of choosing the 'best' physician or hospital:

> Physicians generally lack information on results, or their efficiency in achieving results, that is essential for knowing if they are doing their job well…most

[164] Brownlee, op cit, page 27

> physicians lack any objective evidence of whether their results are average, above average or below average. [165]

As a result, medical practitioners rely on guidelines or norms. Not always a good idea. Yale Medical School Professor Dr. Sherwin Nuland explains the problems using routine standards or current 'care norms' as decision making justification:

> Better watch out or the pendulum swing of medical dogma will bash your head in. It swings back and forth far more often than most people realize and with greater velocity.
>
> Thirty years ago patients with inflammation of … the colon were routinely treated with a diet low in roughage. There was no uncertainty about this course of action…and yet, a few years later, medical opinion reversed: decreased roughage was found not to be a panacea but a cause of the disease.
>
> This new medical discovery was announced in the same assuredness and supported by just as much evidence as had been used for precisely the opposite viewpoint. [166]

This is sometimes called Medical Reversal, today's in-vogue term to describe how we embrace a treatment for a while only to reject it years later when it's shown to be non-beneficial or harmful. Nuland summarizes one such incidence above. Vinay Prasad in his brilliant book Ending Medical Reversal lists dozens more including

Estrogen replacement therapy for postmenopausal women to reduce heart attacks, a treatment he claims 'was of no benefit to the heart…. Doctors stopped recommending it not because we discovered something better, but because we never should have used it in the first place.' [167]

Coronary stent insertion to prevent heart attacks in asymptomatic patients until the COURAGE study showed that stents did not help patients live longer. [168]

Vertebroplasty or insertion of medical grade cement into brittle vertebra to strengthen the bones and take pressure off the nerves. This became a billion dollar a year business in 2012 even though two 2009 studies showed that patient pain reduction was the same in the placebo and treatment groups. Patients, companies – your clients – spend a billion dollar a year on a treatment works no better than a sham!

And over 140 more in his book's Appendix.

---

[165] Porter and Teisberg, Redefining Health Care, page 54

[166] Sherwin B. Nuland, 'Medical Fad: Brain, Midwives and Leeches' New York Times, June 25, 1995, section 4, page 16.

[167] Prasad, Ending Medical Reversal, pages 2 – 3

[168] Ibid, page 27

Prasad argues that much of what doctors do is unfounded in science and is, simply, wrong. This can help us focus on the broker's ethical disclosure issue. Should the broker, armed with a company's claims experience and recognizing that some employees have preventive stents or vertebroplasty, inform the client of these issues?

Clearly brokers cannot give medical advice. They're not qualified or licensed to do so and should avoid doing it, despite the fact that I regularly hear about brokers giving medical advice. One, for example, told me in class that clients often ask her how to choose a primary care physician. Her shocking answer, shocking to me at least: look for a PCP with specific training in your issues of concern.

> 'If you have gastro-intestinal problems, for example, look for a PCP who is trained in internal medicine. If you have orthopedic problems, ask your potential PCPs if they have any advanced training in orthopedics.'

I say 'shocking' because I know of no studies showing that those kinds of PCPs generate better patient outcomes than a control group and neither did this broker. (See why a basic knowledge of comparative studies is useful?)

But I see a potential lawsuit on the horizon. (I'm not a lawyer.) What happens to a client who follows this broker's advice, chooses a PCP and has a bad medical outcome? Might the client sue the broker for poor advice? (I'm still not a lawyer and have no idea is this is realistic or not. But why would a broker open herself to such potential problems?)

I will argue instead that brokers should teach clients how to identify and avoid unnecessary, ineffective and wasteful medical care. Two reasons for this. First, the company hires the broker to help control healthcare costs, to save money on healthcare in other words. Part of this professional responsibility includes helping the company avoid wasting money on ineffective care.

That seems to me part of the broker's fiduciary responsibility, and a core part at that.

Second, under the 'do your fellow a favor' ethical standard, the ethical broker should preemptively educate clients before they waste money on ineffective care. What would Abraham have said if he bought a cemetery plot for his wife and only later learned that the seller knew Abe was purchasing non-cemetery land but didn't say anything in advance? The Rabbis would label that unethical and so, I suspect, would most reasonable people today.

Today's broker knows about healthcare waste, low quality care and care harms based on their own studies and professional education if not only from the data presented in this text. You have the knowledge. Is it ethical to withhold it from your clients? We've clearly seen, under the 'do your fellow a favor' standard, that it is not.

The ethical question has, thus, shifted from '*should* the broker disclose information about healthcare system waste to the buyer?' to '*how* should the broker disclose this information?'

The Process of Disclosure in today's healthcare system

Dr. Prasad echoes many researchers in claiming that clinicians rely on hunches rather than facts far too often. Science gives us facts; hunches give us guesses.

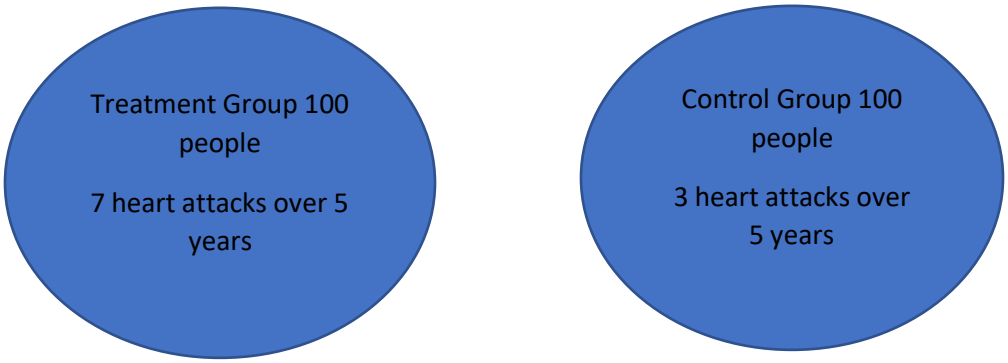
I propose that Step 1 in client disclosure and education starts with explaining how medical science arrives at facts and how to differential facts from hunches. That process – science in other words – relies on comparative testing.

Comparative tests tell us if and how well a medical intervention works in real life, on real people.

When testing, medical researchers typically divide a large group of people in half to make 2 identical smaller groups. They give one group the treatment but not the other.[169]

Then researchers watch both groups for a time period, say 5 years, and note medical differences like the number of heart attacks, deaths or strokes. They attribute any differences to the intervention.

Here's a simple visual representation of a comparative study for a hypothetical heart attack preventive medicine. The Treatment Group gets the medicine while the Control (or Placebo) Group does not. In this case, for simplicity purposes, I've assigned 100 people to each group. Note that this example is not based on any actual medication and is presented only to show what a comparative study looks like.



Can you determine how well the medicine worked to prevent heart attacks? In this example, the medicine prevented 4 heart attacks per 100 people over 5 years.

Simple! Actually not simple at all. Medical research methodology is very complicated and worthy of many texts, each much longer than this. But this example shows the

[169] Research methodology is extremely complicated. If you're interested in learning more, check out Know Your Chances by Woloshin et al. It's an easy to read introduction to medical statistics and research methodology.

essence of what a comparative study is. In effect, this example shows how the science tells us how well medical care works.

Scientifically determined outcomes, 'facts' in other words, rely on comparative study data. That's how researchers determined that vertebroplasty worked no better than a placebo to reduce back pain, that estrogen didn't protect postmenopausal women from having heart attacks and that stents in stable patients did not prevent heart attacks….among lots of other things.

But what happens if you don't have 5 years available? Say that a new heart attack prevention medicine just came on the market, looks promising and you, a person with some elevated heart attack risk, have a doctor's appointment the next day.

Your doctor may say 'this is the newest generation of heart attack preventive medicine and has been configured to reduce the side effects of the old drug. I suggest you try it and see how you tolerate it.'

In theory the new drug works well. But it hasn't been tested yet in real life, on real people, for years. So how well does it work?

Dr. Prasad studies that issue. He asks in his research 'how well do medical interventions work if they haven't been subjected to comparative tests?'

How well, in other words, does medical theory hold up to subsequent testing?

Prasad and his team conducted a fascinating study summarized in his book Ending Medical Reversal. They reviewed every article in the New England Journal of Medicine between 2001 and 2010 and pulled out those that tested an established medical practice, i.e. subjected an established medical practice to a comparative study. Established medical practices are those commonly used on patients like inserting stents into stable patients and, at least for a time historically, prescribing estrogen to postmenopausal women to prevent heart attacks … interventions that made medical sense and that the medical community embraced.

363 studies qualified.

Prasad then asked 'Of those 363 studies, how many *affirmed* the practice?' i.e. found that it benefited patients.

38% affirmed the practice, 40% negated the practice, (found it ineffective or harmful) and 22% were ambiguous.

Dr. Prasad's research shows that if you base your medical decisions on biology, physiology, anatomy and logic – *but not on test results* – you are wrong about as often as you are right.

We'll call this Prasad's Law at restate it clearly here: Medical interventions that haven't been subjected to comparative testing are ineffective or harmful about half the time. How do we know that they're ineffective or harmful? We learn this when they're subsequently tested, potentially many years in the future.

But that's after patients have used it!

According to Dr. Prasad, rather than focusing on outcomes, patients often

> gravitate toward the nuts and bolts — what does it do, how does it work?
>
> But the real question is: Does it work? What evidence is there that it does what you say it does? What trials show that it actually works?
>
> You shouldn't ask *how* does it work, but *whether it works at all*. [170]

He goes on to claim that 'of all those things we're doing currently that lack good evidence, probably about half of them are incorrect.' [171]

Why is this the case?

Our bodies are enormously complicated and our understanding of medical risks, causality and treatment impacts is surprisingly limited. Sometimes (often?) rather than using the most *important* biological or anatomical factors in our medical theories, we use the most *easily accessible and measurable*.

Here's an analogy to illustrate: [172]

> Assume that our bodies are controlled by a wizard located in our brain, more or less like the fellow behind the curtain in the Wizard of Oz.
>
> The wizard in our brain has a wall of knobs that control body parts and functions - one controls cholesterol levels, another blood pressure, a third bone density, a fourth eye ball pressure, etc.
>
> If each knob is 1 inch in diameter and 1 inch apart (so the wizard can get his fingers around it) the wall is six and a half feet high and half a mile long!

We simply can't account for all the initial effects, rebound effects, interactions and modifications from turning a knob or two. We don't always know, for example, how

---

[170] Quotes from Nicholas Bakalar, Medical Procedures May Be Useless, or Worse, New York Times July 26. 2013, italics added

[171] These are quotes from Dr. Prasad's video http://www.mayoclinicproceedings.org/cms/attachment/2007391767/2029532458/mmc3.mp4 . Some minor edits for grammar and syntax

[172] I've adapted this example from David Newman, Hippocrates's Shadow, page 202

turning a knob 2 feet high 100 yards from here affects a level controlled by a knob 3 feet high 300 yards away. And how either of these affects a knob 4 foot high 400 yards away. Or the impact of the last knob change on the first. And so on.

Medicine rarely works in the simplified 'if A causes B, and B causes C, then A causes C' scenario.

Now, as an ethical broker, do you think this is something your clients should know? A meaningful way to 'do your fellow a favor' is to explain what a comparative test is and why using test data as the basis of medical decision making is so important.

Or do you prefer to 'let the buyer beware' and endure the same client decision making mistakes next year as last. And as the year before that.

And then, when your client complains that premiums increases are too high, simply raise deductibles and say 'wellness program' more loudly…just like last year, the year before and the year before that.

Medically well informed patients always ask 'has it been tested for the outcomes that concern me?'

If it *has been* tested, then your doctor can tell you how well it works. All physicians today can access extensive databases of medical studies…in their offices… in real time so they can answer this question.

If answers exist.

Asking this question may motivate your doctor to refresh his or her memory and look for new studies that have been published since the last time he or she checked.

You and your doctor can then decide if the intervention works well enough for you. I'll show you how in the next section.

But you may learn that the intervention *has not been* appropriately tested. In that case, you know your chance of benefit is only 50/50. Prasad's Law tells us that.

And even if it benefits you, it might not benefit you very much.

Examples of medical care that *should* work, but doesn't
Case studies that illustrate the power of ethical disclosure education

I'll present 6 case studies to show the power of asking 'has it been tested for the outcomes that concern me?' and why you need to ask this question about every medical intervention: [173]

- Niaspin, an HDL 'good cholesterol' boosting drug
- Atenolol, a blood pressure lowering drug
- Zetia, a cholesterol lowering drug
- Vertebroplasty, a back surgery technique
- Arthroscopic knee surgery, a knee osteoarthritis remedy
- Rest after heart surgery, an historical example to tie everything together

Niaspin, an extended release niacin drug. Niacin, a B vitamin, has been shown in tests to raise good (HDL) cholesterol. More good cholesterol is associated with a lower heart attack risk, so artificially raising it benefits patients, at least in theory.

Niacin doesn't lower total cholesterol like commonly prescribed statin drugs.

Cardiologists have prescribed various niacin products for years. One, Niaspin manufactured by Abbott Labs, generated about $900 million in 2009 sales from about 8 million prescriptions. [i]

In 2011, the AIM-High trial of niacin effectiveness showed that, while extended release niacin *is* associated with higher HDL levels and lower triglyceride levels, this *does not* translate to a reduction in cardiovascular events like heart attacks and strokes. [ii]

In 2013, a second study, this time of Merck's niacin drug Tredaptive found the same thing: no difference in coronary event rates between people taking Tredaptive with a statin, and those just taking the statin. [iii]

Dr. Steven Nissen, Chief of Cardiology at the Cleveland Clinic, summarized the Tredaptive study findings: It raised good cholesterol. It lowered bad cholesterol. It didn't improve clinical outcomes. That is a stunning finding. [iv]

Two studies on two different niacin based drugs arrived at the same conclusion: niacin doesn't reduce rates of heart attacks or strokes.

This is an example of Prasad's Law: interventions that appear to make biological sense and that are adopted before publication of comparative tests are proven ineffective or harmful about half the time when they finally are tested.

[173] All reference notes for this section appear at the end of this text

Patients who bought and took Niaspin received no heart attack or stroke reduction benefit from it.

They only exposed themselves to side effects like burning, tingling, itching, headaches, stomach upset, intestinal gas, dizziness, and redness of the face, arms, and chest. [v]

Plus the price of Niaspin pills.

Atenolol, a blood pressure lowering drug

High blood pressure is a common condition in which the long-term force of the blood against your artery walls is high enough that it may eventually cause health problems such as heart disease. High blood pressure can damage the heart and coronary arteries and lead to heart attacks, strokes and death, among other events.[vi]

Lowering blood pressure, therefore, *should* reduce the number of heart attacks, strokes and deaths. So strongly do physicians subscribe to this theory that they write millions of blood pressure lowering medication prescriptions annually, worth billions of dollars, including 36 million prescriptions for atenolol in 2010.

Atenolol recorded $161 million in 2014 sales.[vii]

Unfortunately comparative study hard outcomes do not support the theory.

Start in 2003 with publication of the LIFE study on two of the most commonly prescribed blood pressure lowering medications - also called beta blockers - losartan and atenolol. [viii] Neither outperformed the placebo.

In an accompanying European Heart Journal editorial, Dr. Franz Messerli, writing for the European Society of Cardiology concluded

the LIFE study should be considered as the final straw that will break the camel's back and hopefully motivate physicians to no longer expose their elderly hypertensive patients to the cost, inconvenience, adverse effects, and most importantly, to the inefficacy of beta-blockers.

That was followed up by a 2004 meta review (a compilation that integrates results from several different studies to develop a single conclusion) in the Lancet entitled 'Atenolol in hypertension: is it a wise choice?' [ix] Those reviewers found that

there were no outcome differences between atenolol and placebo in the four studies, comprising 6825 patients, who were followed up for a mean of 4.6 years on all-cause mortality, cardiovascular mortality, or myocardial infarction [heart attacks].

The theme was then picked up in the March 15, 2005 issue of The American Family Physician, a publication of the American Association of Family Physicians. Dr. Henry

Barry's article 'Should Atenolol Be Used for Hypertension?' concluded that, though atenolol *did* lower blood pressure,

It does not appear to reduce the rates of cardiovascular mortality or morbidity.

Let's summarize:

- One major, high quality comparative study in **2003** concluded atenolol generates 'no benefit'
- A large meta study in **2004** concluded 'no benefit'
- Physicians writing in various highly regarded journals – who reviewed the underlying study data – between **2003 and 2005** recommended *against* prescribing these drugs
- **Six years later**, docs wrote 36 million Atenolol prescriptions and **ten years later** Atenolol achieved $161 million in annual sales.

I hope you're beginning to understand why you need to ask if it has been subjected to comparative testing about *every* medication.

And find out what those test results are.

Even for medications that have been around for a long time.

Zetia, a cholesterol lowering drug. Zetia (ezetimibe) lowers cholesterol by blocking its absorption in the intestines, unlike statins that block cholesterol absorption in the liver.

Some patients can't tolerate statins.

Others might not achieve their desired cholesterol reduction goals with statins alone.

Zetia offers benefits to both types of patients: those who can't tolerate statins and those who don't achieve their cholesterol goals from lifestyle changes and statins alone. As Zetia's website, zetia.com, said from about 2011 - 2016 [x]

> *Adding Zetia to a statin is proven to help reduce cholesterol more than a statin alone.*

Zetia's annual sales ranged between about $1 and $4 billion since 2008.

Unfortunately for Zetia users and the people who pay for it, we should also point out the next sentence on zetia.com, the one following 'Adding Zetia to a statin is proven to help reduce cholesterol more than a statin alone', this one written in bold

Unlike some statins, Zetia has not been shown to prevent heart disease or heart attacks.

The New York Times review of Zetia's 2008 clinical trial, concluded it [xi]

> … failed to show that the drug had any benefits…[and]
>
> … no trial has ever shown that it can reduce heart attacks and strokes

Our old friend Steve Nissen from the Cleveland Clinic (of Atenolol fame above) called these results 'shocking'. [xii]

Harlan Krumholz, cardiologist at Yale Medical School went even further, asking 'How can a drug have $4 billion in sales without any evidence of benefit?' [xiii]

Vertebroplasty to relieve back pain Let's switch focus now from medications to procedures. Consider vertebroplasty, a procedure to inject medical grade cement into fractured vertebra (back bones) to reduce back pain. It's a minimally invasive procedure with a low complication rate, about 1 – 3%.[xiv] Complications include soft tissue damage, nerve root pain and compression, pulmonary embolism, respiratory and cardiac failure and death.

In 2008, the US market for vertebroplasty was $245 million.

Then in 2009 the New England Journal of Medicine published two studies comparing vertebroplasty to a control or placebo group that received lidocaine (a topical skin numbing agent), massage and aromatherapy to reproduce operating room smells.

- The Australian study found 'no beneficial effect' of vertebroplasty compared to the control group.
- The Mayo study concluded that patient improvements were similar in the placebo and experimental groups.[xv]

Vertebroplasty, in other words, worked as well as, but no better than, the safer and far cheaper placebo.
Dr. Rachelle Buchbinder, lead author of the Australian study, recommended that vertebroplasty not be performed outside of research settings. There are some risks, she reasoned, without any demonstrated patient benefits.

Did any of your own clients have vertebroplasty? If so, are these the clients who demand that you lower their healthcare costs?

See where this goes?

Surgery for Knee Osteoarthritis Knee osteoarthritis is a degenerative disease that causes pain, stiffness and decreased knee function.

Arthroscopic surgery, including lavage (removal of particulate material such as cartilage fragments and calcium crystals) and debridement (surgical smoothing of articular surfaces and osteophytes) was the widely used treatment in the early 2000s despite the fact that, according to the New England Journal of Medicine in 2008 'scientific evidence to support its efficacy is lacking'. [xvi]

Estimates of the number of knee arthroscopies performed annually in the US vary, and not all address osteoarthritis so we'll have to estimate the size of this problem:

- A 2002 New England Journal of Medicine study estimated 650,000 procedures at $5,000 each, creating a $3.25 billion market. [xvii]
- A 2014 NEJM study estimated the market at 500,000 knee arthroscopies at about $20,000, generating a $10 billion market. [xviii]
- Vinay Prasad in his 2015 book Ending Medical Reversal estimated the market at 700,000 patients spending $4 billion.[xix]

How poorly does the scientific evidence support the efficacy of arthroscopic surgery to treat knee osteoarthritis?

- A 2008 New England Journal of Medicine published study concluded that they 'failed to show a benefit of arthroscopic surgery for the treatment of osteoarthritis of the knee' [xx]
- This followed a 2002 comparative study which concluded 'At no point did [the] arthroscopic-intervention group have greater pain relief than the placebo group'
- In addition, 'objectively measured walking and stair climbing were poorer in the débridement group than in the placebo group at two weeks' (Treatment side effects really matter!)
- The 2002 study concluded 'This study provides strong evidence that arthroscopic lavage with or without debridement is not better than and appears equal to a placebo procedure in improving knee pain and self-reported function.' [xxi]

Those disagreeing with these study conclusions present the usual 'weak study methodology' case, primarily, I would suggest, to protect their incomes. Even at our lowest market estimate - $3 billion – that's certainly a big incentive for lots of people to protect their turfs.

These studies raise some uncomfortable questions:

- Why, after the 2002 paper, did doctors continue to prescribe this procedure and patients have it?

- Why after the 2008 study did both parties continue to use it?

This is an extension of Prasad's Law that says treatments adopted absent testing are proven ineffective or harmful about half the time. Here we have treatments used *even after* studies showed no patient benefit, underscoring the need for you to ask this question and insist on a clear answer about *every* medication and procedure.

Asking encourages your doctor to check (again?).

Never hurts but may help.

A lot!

Rest after heart surgery, an historical example to tie all this together. We'll start in the early 1900s with Dr. James Herrick's advice then fast forward to today's protocols.

Herrick was an extraordinarily influential coronary care researcher who received impressive accolades from both the Association of American Physicians and the American Medical Association.

In his major 1912 paper, Herrick wrote that, after having a heart attack or heart surgery 'the importance of absolute rest in bed for several days is clear'. [xxii]

Herrick's recommendations were adopted by most hospitals according to cardiologist Eugene Braunwald. Over time hospitals extended Herrick's advice of absolute bedrest from several days to a few weeks.

That remained the treatment norm for decades. Indeed, thirty four years after Herrick's paper, Dr. Thomas Lewis published his own coronary care textbook *Diseases of the Heart* and elaborated on Herrick's prescription:

> Rest in bed should continue for 4 – 6 weeks to ensure firm cicatrisation of the ventricular wall … Patients have lost their lives … by neglect of these precautions. [xxiii]

Lewis' justification came from pathological studies showing that it can take 6 to 8 weeks for firm scarring of the lesion to occur. Rest for that amount of time was considered necessary to minimize ventricular rupture risks. [xxiv]

Dr. Paul Woods, another coronary care authority, reinforced that message in his textbook *Diseases of the Heart and Circulation* in 1959, 13 years later, recommending 3 – 6 weeks of bedrest or more depending on the severity of the heart attack.[xxv]

Thus three medical textbooks written between 1912 and 1959 agreed: post heart attack and heart surgery, patients should rest, pretty much for as long as possible.

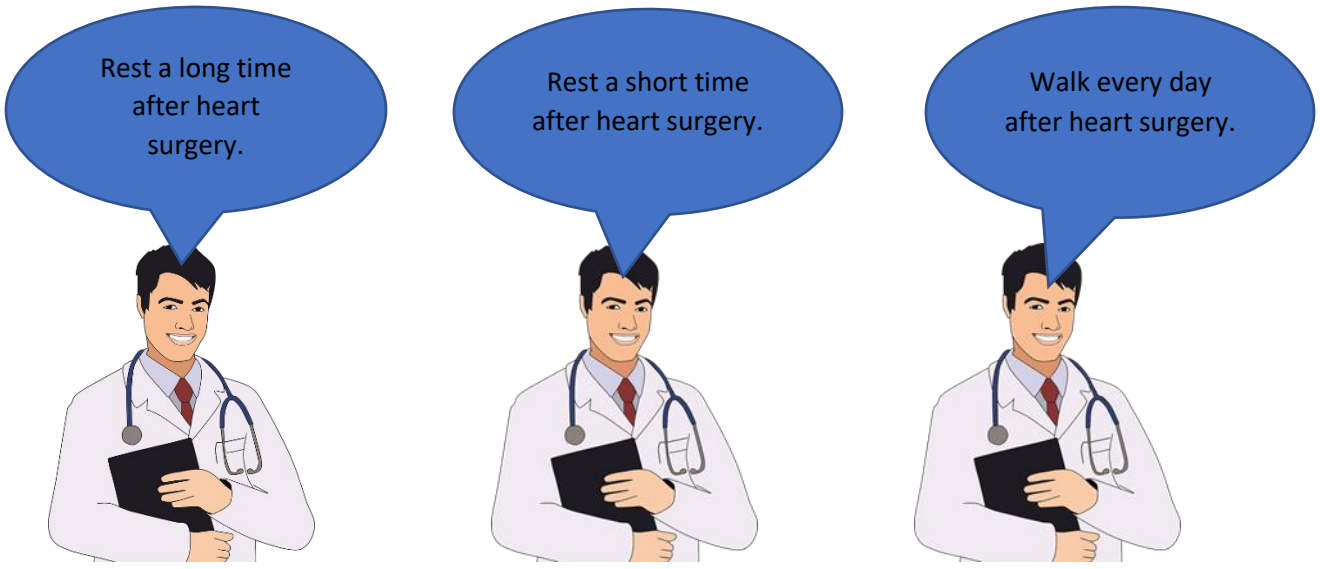
But by the 1960s medical opinion reversed. Braunwald in an overview of cardiac practices, claims doctors began to realize that

> Prolonged bed rest, which had been routine since Herrick's day, could actually be harmful in some patients by leading to venous thrombosis and fatal pulmonary thromboembolism. In uncomplicated cases, the duration of absolute bed rest was shortened to about five days. [xxvi]

Patients who asked 'what do you recommend doc?' in the ***1940s and 50s*** would have received the long bedrest recommendation.

But patients who asked the same questions in the ***1960s and 70s*** would have received the short bedrest advice.

And today, patients are advised to walk every day during the first 6 – 8 weeks post heart surgery, the exact opposite of Herrick's, Lewis's and Woods' recommendations. [xxvii]



1950s 1970s 2000s

How can 'rest' and 'don't rest' both be right? They obviously can't. At least one is wrong. Drs. Herrick, Thomas and Woods offered their *best guesses* backed up with biological justifications. In effect, they said 'our best guess is that the risk of ventricular rupture

exceeds the risk of venous thrombosis and fatal pulmonary thromboembolism' (if they even knew those risks existed).

Their guesses were really testable propositions which, apparently, weren't actually tested until relatively recently. When tested, we learned that thrombosis risks exceed ventricular rupture risks. Thrombosis and embolism risks are so high in fact that today's patients are advised not even to stand in one place for more than 15 minutes! [xxviii] The exact opposite of Herrick's, Thomas's and Woods' advice.

That's why wise patients don't research *why* a specific medical recommendation makes sense. Doctors and scientists can justify a wide range of (often conflicting) recommendations, just as we've seen here. Prasad's Law tells us that absent testing for specific outcomes of concern, those recommendations are wrong about half the time.

Instead of relying on theory, wise patients rely on test data, the facts.

The tragedy of this story is that some heart attack recovery patients presumably died in the last century *from following the established protocols and textbook advice*.

They didn't ask if the recommendations had been tested.

The ethical broker's next step: Help clients interpret test results

Let's return to our simple comparative study example in which 7 people in the placebo group had heart attacks and 3 did in the treatment group. How does a medically literate patient discuss these results?

This presents a golden opportunity for brokers to teach clients how to interpret and discuss treatment benefits with their doctors.

The standard, correct **and useless** way to summarize the tests results is 'this medicine cut the heart attack risk by 57%.' (The math is quite simple: 7 people in the placebo group had a heart attack. 4 people avoided a heart attack by taking the medicine. 4/7 is 57%.)

Though correct, this is not useful for medical decision making.

57% of what?

- In this case, 57% of 7 per 100. (I'm getting confused by all these numbers and I'm writing this stuff!)
- But here's another example of a 57% risk reduction. From 3 in 10,000 to 1.29 in 10,000 over 10 years. That's a 57% reduction.

- Or from 5 in a million to 2.15 in a million over 15 years. That reduction of 2.85 events per million people over 15 years is, again, a 57% reduction.

Preventing 4 heart attacks in 100 people over 5 years may seem like a pretty good benefit.

- But preventing 2.85 heart attacks in a million people over 15 years seems like a pretty small benefit. (If you're not totally confused by now you should consider yourself brilliant.)

Here's a general rule of thumb for reporting test results: whenever you hear expressions like '57% better than', or 'reduces your risk by 57%', ask '57% *of what*?'

- If it's 5 in a million, then a 57% reduction is a pretty insignificant number.
- But if it's 7 in 100, then you probably want to pay attention.

Percentage reductions like 57% better than sound more impressive than they really are. I'd even say that whenever someone quotes study results in this way they're trying to sell you something. That's why retail vendors – refrigerators, clothes, appliances - tend to quote prices in percentage off. It sounds bigger than it is.

- 'Prices slashed by 57%' sounds big.
- 'Prices slashed by $4.38' sounds small.

It's the same in medicine.

A better way

I propose that brokers teach clients to ask these two simple questions to learn the results of comparative tests:

- Out of 100 people like me, how many benefit? and
- Out of 100 people like me, how many are harmed?

Ask '**out of 100**' to get a number for your answer. '4' for example, conveys more information than 'some', 'many', 'a few' or 'quite a few'.

Some patients may decide that 4 people benefiting is good enough to have the treatment while others say 'only 4? That's not very many'. Different people can reasonably interpret the answers differently. That's the essence of a doctor-patient discussion: apply information to the particular desires of a specific patient.

Ask about '**people like me**' because treatments can have different impacts on different demographic groups. Consider these examples.

Age: The American Academy of Pediatrics recommends against prescribing cough and cold medications for respiratory illnesses in children under 4 saying 'these products offer little benefit to young children and can have potentially serious side effects'. [xxix] They're apparently fine for 6 or 8 year olds - or 30 or 40 year olds – but not for very young children.

> … out of 100 people … these medications work, but
>
> … *like me* … not if you're under 4 years old

Gender: In 2014, the Food and Drug Administration cut the recommended dose of Ambien, a sleep aid, in half for women after determining that men and women metabolize it differently. Women, it turns out, have more of the drug in their bodies the next morning, putting them at higher risk of impaired driving.[xxx]

> … out of 100 people … the medication works, but
>
> … *like me* … not so well for women

Other patient differences exist but we don't always know how frequently. You and your doctor may have to estimate the impact on people like you.

An interesting *<u>like me</u>* category that most people don't consider but that an ethical broker should discuss: social status

I'll define social status ambiguously as a combination of wealth, income and sense of control over your life, analogous to the way former US Supreme Court Justice Potter Stewart defined pornography: you know it when you see it.

The notion that social status impact disease rates and treatment effectiveness was first introduced in the Whitehall studies during the last 1900s. These studies tracked disease and death rates by job and rank in the British civil service and their conclusions have been reproduced in other studies, in other countries.[xxxi]

Whitehall found that low social status folks had higher disease and death rates than high status folks. Surprisingly – and this is the big deal - this was not *only* due to measureable factors like cholesterol, blood pressure, blood sugar, smoking, obesity or exercise rates.

After correcting for those factors, *the lowest status folks were about twice as likely to have heart attacks, develop other diseases and die as the highest status ones*.

Whitehall also found a gradient: the higher you are on the social status scale, the lower your disease and death rates and the reverse, the lower you are on the social scale, the higher your disease and death rates.

Over and above specific disease risk factors, Whitehall concluded, there is something about social status *independently* that impacts people's health. Harvard School of Public Health Professor Nancy Kreiger, whose own work affirms Whitehall's conclusions, put it this way:

> An individual's health can't be torn from context and history. We are both social and biological beings—and the social is every bit as "real" as the biological. [xxxii]

A major 2016 study in JAMA, the Journal of the American Medical Association found that the life expectancy gap between the richest 1% of Americans and the poorest was about 12 years on a gradient similar to Whitehall's. In an accompanying editorial, Nobel laureate Angus Deaton emphasized the impact of income and social status on health and castigated traditional medical thinking:

> The finding that income predicts mortality has a long history… the mortality gradient by income is found wherever and whenever it is sought…**but the medical mainstream emphasizes biology, genetic factors, specific diseases, individual behavior, health care, and health insurance.** [xxxiii]

Consider the medical impacts of your own social status. Let's say that after examining you, your doctor says 'your cholesterol level is slightly higher than I'd like. The guidelines suggest lowering it. I'll prescribe a medication.'

- If you're a *low* status person (facing higher than average heart attack risks according to Whitehall) you may be undermedicated, leaving you exposed to *disease* harms.
- But if you're a *high* status person (facing lower than average heart attack risks according to Whitehall) you may be overmedicated, exposing you unnecessarily to *medication* harms.

Try to include social status factors in your 'like me' discussions with your doctor along with age, gender, general health status, family history etc. One good information source is the 2004 report 'Work, Stress and Health: The Whitehall II Study'. Share it with your doctor. It's surprisingly easy to read and it may change the way you think about medical care.

It did for me.

Define the benefits that matter

Identify the **benefits** of interest to you. If you are taking a heart attack prevention medication ask 'out of 100 people like me, how many avoid a heart attack by taking this medication?'

If you want to reduce your back pain, ask 'out of 100 people like me, how many enjoy less back pain as a result of this procedure?'

Beware of listing 'lower my cholesterol' or 'lower my blood pressure' as the benefit you hope to achieve. These 'test benefits' may or may not correlate closely to 'patient' or 'event' benefits. Focus on the specific benefits you hope to achieve.

And be as specific as possible.

ONE PATIENT'S EXPERIENCE ASKING THE 'OUT OF 100 PEOPLE LIKE ME' QUESTIONS

Sean, a middle aged insurance professional told his story in class one day. He had previously attended several of my lectures and apparently they had an impact.

Sean had been brought up in conservative Ireland and learned that there are two people you never question: your priest and your doctor.

Fast forward several decades. He moved to Massachusetts, built a successful business and had his own family. One day he took his daughter to the doctor for a minor issue. I don't know what it was.

The doctor prescribed treatment and Sean remembered the lectures and plucked up the courage to ask 'Doc, out of 100 kids like her, how many benefit from this treatment?'

The doctor's answer was apparently satisfactory.

But more importantly for our story is what happened next. The doctor, as Sean recounted the story, shook his hand and introduced him to the other physicians in the practice saying (and here's the direct quote)

I have 1700 patients in my practice. Sean is 1 of only 4 who have ever asked me how well medicine works

I asked Sean for permission to use his story. His email response:

Please feel free to quote me. If it helps 1 person then it worked

Some case studies to indicate the power of asking this question
Real life situations that develop from ethical disclosure actions:

Consider antibiotics to treat pediatric ear infections, a quite common childhood problem. Ear infections can be painful for the child and frightening for the parents who, not unreasonably, want to do something to help their child.

Ear aches are sometimes viral and sometimes bacterial. Doctors often prescribe antibiotics.

This intervention – antibiotics to treat pediatric ear aches - has been studied so Prasad's Law doesn't apply.

A meta review – that's a compendium of several individual studies – of 15 studies on 4100 kids concluded that 6 in 100 who took antibiotics reported less ear pain after 2 – 7

days; 94 in 100 did not enjoy less ear pain as a result of the antibiotics. [xxxiv] Most had a complete recovery within 2 – 7 days without the medication.

But 11 in 100 who took antibiotics suffered uncomfortable side effects like diarrhea.

- Out of 100 kids who take antibiotics to treat ear infections, how many benefit by enjoying less ear pain in 2 – 7 days? **6**
- Out of 100 kids who take antibiotics to treat ear infections, how many are harmed by diarrhea or other uncomfortable side effects? **11**

Now you have sufficient information to discuss this intervention with your pediatrician. Does it work well enough for your child? Some parents may decide yes, others no.

But in both cases, it's an informed decision made by a parent in light of the facts.

Dozens of similar cases exist. One website www.TheNNT.com lists about a hundred. Choosing Wisely www.ChoosingWisely.org takes a slightly different approach and lists hundred more. Both sites will provide good information for you to discuss with your doctor.

Comparing 'out of 100 people like me…' to 'the guidelines say…'
Case study of hypertension

The American Heart Association recommends that people over 60 years old begin treatment for high blood pressure when their readings exceed 150/90. [xxxv]

But out of 100 people like that, how many benefit by following those guidelines?

Some answers come from a 2009 Cochrane report that summarized 15 trials totaling 25,000 subjects over age 60 with moderate to acute hypertension followed for average 4.5 years. [xxxvi]

> Out of 100 people over 60 years old with moderate to acute hypertension, how many avoid cardiovascular disease or death over 4.5 years?
>
> Answer: About 4

Here are Cochran's numbers:

- Risk of cardiovascular death or disease without taking hypertensive medication: 14.9/hundred. This is the control group.
- Risk of cardiovascular death or disease among patients taking hypertensive medications: 10.6/hundred. This is the test group.
- Medication benefit: 4.3 fewer deaths or diseased patients/hundred (4.3%)

I don't know how many, if any, were harmed by the medication.

This case study shows why the ethical broker doesn't simply 'let the buyer beware' and rely on some set of guidelines but instead 'does his fellow a favor' and teaches a better question to ask.

What if your doctor can't answer these questions?

Prasad's Law! If your doctor can't answer these questions, the medical intervention hasn't been studied thoroughly.

It's ineffective or harmful about half the time. [xxxvii]

Period.

That's why asking these questions is so important!

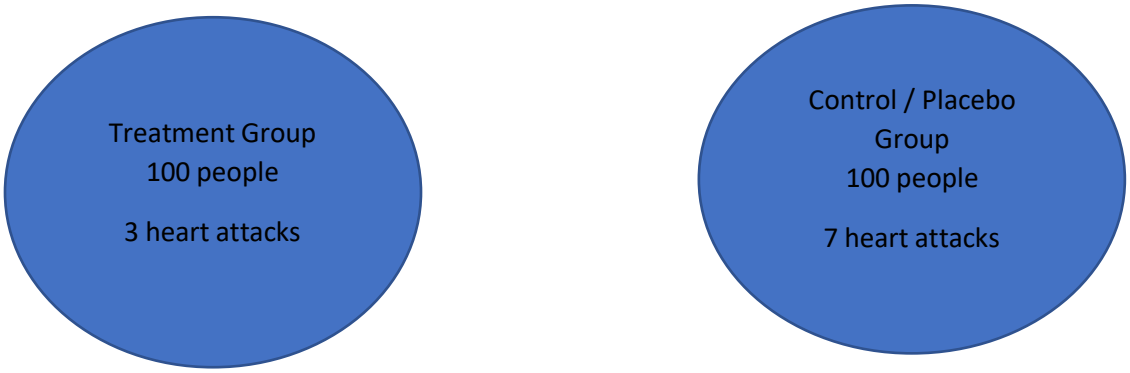
An alternative metric that some ethical brokers have introduced

A different version of 'out of 100 people like me, how many benefit and are harmed' has been developed by researchers over the past couple of decades. It's called the Number Needed to Treat (NNT) and Number Needed for Harm (NNH).

The Number Needed to Treat tells us how many people need to take a particular medication, or have a test, for one person to benefit. An NNT of 1 means that if 1 person takes this medication, then 1 person will benefit from it.

But an NNT of 50 means that 50 people need to take a medication for 1 person to benefit. We get NNT data from comparative studies (remember them?)

Consider this comparative study of the same heart attack prevention medicine we introduced earlier. Can you estimate the number of people who need to take the medicine to prevent 1 heart attack?



In this hypothetical example, the medication prevented 4 heart attacks per 100 people who took it. Therefore 25 people had to take the medicine to prevent 1 heart attack. The Number Needed to Treat or NNT is 25.

Once you know this, you can compare treatment effectiveness. In fact one group of clever researchers has developed an entire website based on NNT calculations called, not surprisingly, TheNNT.com. This site lists the Number Needed to Treat and to Harm for lots of different interventions.

Here's a sample to show the power of using NNT calculations to choose a heart attack prevention treatment for people without heart disease and who have not had a heart attack.[174]

- The NNT for statins to prevent a non-fatal heart attack is 104.
- The NNT for statins to prevent a stroke is 154.

Now consider the Number Needed for Harm from statins:

- The NNH for developing diabetes is 50.
- The NNH for muscle damage is 10.

This means that 104 people need to take statins for 5 years to prevent 1 non-fatal heart attack. But 2 of those 104 people will develop diabetes and 10 will experience muscle damage.

This example shows how you can compare benefits and harms from a medical intervention.

Let's now look at how to compare benefit from different medical interventions. This time we'll compare statins to adopting a Mediterranean Diet.

- The NNT of statins to prevent 1 heart attack among people with no heart disease and who have not previously had a heart attack is 104.
- The NNT of people who adopt the Mediterranean Diet is 61.

In addition, some people were harmed by the statins – we discussed that above – while none were harmed by the Diet. (Remember that I don't give medical advice. These are just some research summaries.)

[174] The statin calculation comes from http://www.thennt.com/nnt/statins-for-heart-disease-prevention-without-prior-heart-disease-2/. The Mediterranean Diet calculation comes from http://www.thennt.com/nnt/mediterranean-diet-for-heart-disease-prevention-without-known-heart-disease/

These metrics, the NNT and NNH, give patients a clear way to compare treatments and to decide which works best, just like the 'out of 100 people like me, how many benefit' question discussed above. Both metrics get to the same answers but some people prefer one to the other. I thought it useful to introduce both in this section.

Review Questions
Answers on next page

1. What, according to this text, is the basis for many / most medical recommendations?
    a. Scientifically determined facts
    b. Physician hunches
    c. Medical research
    d. Physiology and anatomy

2. How do we determine facts in medicine?
    a. Through comparative studies
    b. By analyzing biology and physiology
    c. By hunches
    d. By algorithms

3. What is a comparative study?
    a. Divide a large group of subjects in two, then give one of the two groups the treatment and the other a placebo
    b. Compare different people who take the same medicine to get a good overview
    c. Compare the effects of medical care on lots of different people
    d. Study how well a medical intervention works in the real world

4. What is Medical Reversal?
    a. Stop doing something that doesn't work
    b. Take different drugs to reverse the impact of the initial drug
    c. Redo or undo a surgery
    d. Go to a second doctor when you are not satisfied with the first

5. How often do subsequent comparative studies lead to Medical Reversal?
    a. About half the time
    b. Less than 5% of the time
    c. More than 95% of the time
    d. Always

6. What is a good follow up question when you learn that 'this medication cuts your chance of having a heart attack by 57%'?
    a. 57% of what?
    b. Really?
    c. So you recommend it?
    d. Would you take it yourself?

7. Which is a better metric: Asking 'Out of 100 people like me, how many benefit?' or asking 'What is the NNT of that treatment?'
    a. Asking 'out of 100 people like me, how many benefit?'
    b. Asking 'what is the NNT of that treatment?'
    c. Neither is a good question for your doctor
    d. Both questions mean essentially the same thing

8. If you have a medical treatment that has not been subjected to comparative testing, what is the likelihood that your will receive no benefit from the care?
    a. 50%
    b. 4%
    c. 85%
    d. 99%

9. What is Prasad's Law?
    a. A penny saved is a penny earned
    b. Medical interventions that have not been subjected to comparative studies are shown to be ineffective or harmful about half the time when they finally are tested
    c. The most hospital beds in a region, the more hospitalizations
    d. Never start a land war in Asia

10. Which factor below was shown in the Whitehall studies to impact disease rates and life expectancy?
    a. Social status
    b. Childhood exercise rates
    c. Prenatal care
    d. Driving distance to your primary care doctor

11. If the Guidelines recommend treatment, does this always mean a large number of people will benefit?
    a. Yes
    b. No
    c. Yes for preventive care but no for chronic

d. Yes for chronic care but no for preventive

Review Questions
Correct answers in bold

1. What, according to this text, is the basis for many / most medical recommendations?
    a. Scientifically determined facts
    b. Physician hunches
    c. Medical research
    d. Physiology and anatomy

2. How do we determine facts in medicine?
    a. Through comparative studies
    b. By analyzing biology and physiology
    c. By hunches
    d. By algorithms

3. What is a comparative study?
    a. Divide a large group of subjects in two, then give one of the two groups the treatment and the other a placebo
    b. Compare different people who take the same medicine to get a good overview
    c. Compare the effects of medical care on lots of different people
    d. Study how well a medical intervention works in the real world

4. What is Medical Reversal?
    a. Stop doing something that doesn't work
    b. Take different drugs to reverse the impact of the initial drug
    c. Redo or undo a surgery
    d. Go to a second doctor when you are not satisfied with the first

5. How often do subsequent comparative studies lead to Medical Reversal?
    a. About half the time
    b. Less than 5% of the time
    c. More than 95% of the time
    d. Always

6. What is a good follow up question when you learn that 'this medication cuts your chance of having a heart attack by 57%'?
    a. 57% of what?

b. Really?
c. So you recommend it?
d. Would you take it yourself?

7. Which is a better metric: Asking 'Out of 100 people like me, how many benefit?' or asking 'What is the NNT of that treatment?'
    a. Asking 'out of 100 people like me, how many benefit?'
    b. Asking 'what is the NNT of that treatment?'
    c. Neither is a good question for your doctor
    d. Both questions mean essentially the same thing

8. If you have a medical treatment that has not been subjected to comparative testing, what is the likelihood that your will receive no benefit from the care?
    a. 50%
    b. 4%
    c. 85%
    d. 99%

9. What is Prasad's Law?
    a. A penny saved is a penny earned
    b. Medical interventions that have not been subjected to comparative studies are shown to be ineffective or harmful about half the time when they finally are tested
    c. The most hospital beds in a region, the more hospitalizations
    d. Never start a land war in Asia

10. Which factor below was shown in the Whitehall studies to impact disease rates and life expectancy?
    a. Social status
    b. Childhood exercise rates
    c. Prenatal care
    d. Driving distance to your primary care doctor

11. If the Guidelines recommend treatment, does this always mean a large number of people will benefit?
    a. Yes
    b. No
    c. Yes for preventive care but no for chronic
    d. Yes for chronic care but no for preventive

Integrating These Ethical Standards Into a Discussion with a Benefits Administrator

Consider this situation: A Benefits Administrator for a large company puts the company's benefits out to bid. Two brokers respond. Both offer similar plans at similar prices. Both are experienced. Both are professional. Both offer all the standard services – 401(k) administration, FSA administration, wellness programs, etc. Both are impressive.

The Benefits Administrator tries to find some reason to choose one broker over the other. Since they appear to be mirror images of each other, he has little to choose. So he asks both brokers 'why should I choose you?'

Broker A talks about experience: 20 years in the business, a good customer service reputation, intimate knowledge of carriers and plenty of references. Broker A talks about his commitment to clients and interest in helping clients. He even offers to meet with the Benefits Administrator quarterly to provide policy and regulatory updates.

Certainly, thinks the Benefits Administrator, Broker A is fine. There's nothing wrong with him. A solid choice.

Then Broker B comes along. This broker also has years of experience, a good customer service reputation, good relations with the various local insurance carriers and plenty of references. This broker also offers to meet quarterly to discuss policy and regulatory updates. (Both brokers, it seems, value face time with the Benefits Administrator.)

But in addition to all these services, Broker B makes a surprising statement:

> *My company has a clear business standard that defines our relationship with clients. The ethical standard that we embrace is called 'Do Your Fellow A Favor'. I've studied business ethics and decided that I want my company and my employees to live up to this standard.*
>
> *Many of my competitors use a different ethical standard. They 'let the buyer beware.'*

Intrigued, the Benefits Administrator asks Broker B to continue.

> *I won't save you any premium money in the short term as compared to Broker A. He's a fine broker who is perfectly capable of running rates and showing alternative policies.*
>
> *I won't show you any plans that he doesn't. And I offer all the same services as he does.*

But in addition to offering everything that he offers, under my 'do your fellow a favor' standard, I'll also educate your employees about how to use our healthcare system.

I'll tell them things about the healthcare system that they probably won't learn from their doctors but that may help them interact with their doctors. I'll help them become wiser consumers of medical care.

The Benefits Administrator starts to yawn as Broker B continues:

Better educated consumers, who shop more wisely, use medical resources more efficiently. In the long run, this may save you money….maybe quite a bit.

The Benefits Administrator suddenly perks up:

You'll save us money? Explain. Give me an example.

Broker B then summarizes:

I noticed that in the past few years, several of your employees had vertebroposty procedures for their back pain. A few others had arthroscopic knee surgery for knee osteoarthritis. (Broker B apparently really did his homework.)

I also noticed that several take Atenolol and quite a few took Niaspin over the years.

All these treatments have been shown in comparative studies to work no better than a placebo.

That means you may have wasted your company's money on ineffective treatments, and your employees exposed themselves to medical risks without receiving any benefit.

'What?' the Benefits Administrator bursts out, shocked. 'How can you say that?' Broker B continues:

As part of our 'Do Your Fellow a Favor' educational campaign, we teach people how to identify and avoid unnecessary and low quality medical care.

A key part of that educational process involves teaching employees what a comparative study is and how to understand the results.

I'm happy to include you in our seminars, but for now I'll just summarize some studies. Both of those procedures – vertebroplasty and arthroscopic surgery to

treat knee osteoarthritis – have been shown to be ineffective in comparative studies. Neither benefited patients more than a sham procedure.

Ditto for Niaspin and Atenolol.

While we don't tell your employees what specific care to get or to avoid – we're not licensed or trained for that - we teach them the skills to evaluate care quality and to discuss this with their doctor. Studies show that employees who have these skills get better medical care, with less risk and at significantly lower costs.

And they tend to avoid ineffective treatments, like the ones I mentioned.

I, of course, don't know which of your employees had these procedures or which took those medications. I only know that it's highly unlikely that they received any benefit from them.

'So,' says the Benefits Administrator, somewhat stunned 'having this information available may reduce my employee's rate of ineffective care. That could affect our Experience Modifier and save us some premium money in the future. Interesting.'

Broker B continues:

The US wastes about a trillion dollars annually on ineffective and unnecessary medical care. Your company alone probably wastes tens of thousands.

Our 'Do Your Fellow a Favor' program aims to reduce that, not by restricting access but by helping your employees make wiser medical care decisions and talk more effectively with their doctors.

It's a new approach in the benefits arena but one that shows great potential.

And it's risk free: people only participate if they want to. But we're finding that lots of employees really want access to this information and pay attention when we present.

'Interesting,' comments the Benefits Administrator. 'I've never heard of that approach but it seems to make sense to me. We would probably need a custom approach to our employees since we work 2 shifts and have several people off-site.'

Broker B responds:

Each company is different and we always try to fashion the educational process around the company's needs. The information content is similar but our approach varies by client.

In the end, the Benefits Administrator considers the two brokers. One who takes the 'let the buyer beware' approach about dealing with our healthcare system. The other who 'does his fellow a favor'.

Which will help my employees the most, he wonders.

In the end, the Benefits Administrator chooses…..*Well, who would you choose?*

How Should an Ethical Broker Proceed?

The British think death is inevitable; Canadians think death is preventable; Americans think death is optional.[175]

Shannon Brownlee summarizes an underpinning of our overuse of medicine in *Overtreated*: [176]

> Our relentless search for wellness through medicine has created a kind of therapeutic imperative, the urge to treat every complaint, every deviation from the norm, as a medical condition.

If we test or intervene with every new development along our normal aging process, we'll abuse our medical system --- and likely generate more unnecessary and counterproductive care, and perhaps higher mortality rates.

> We've come to believe that if a test can be performed, it should be performed… [almost] regardless of whether the intervention will improve the patient's sense of wellbeing.
>
> Maybe an old French proverb got it right: the physician's job is 'to cure sometimes; to relieve often; to comfort, always.'

The ethical, sensitive broker understands this and helps clients accordingly.

Clearly no broker can keep current on all healthcare literature and advise clients on all healthcare decisions. That's beyond any human's capabilities.

But, as we have argued in this course, the ethical broker has a responsibility to advise clients not only on policy details but also on likely treatment outcomes, and to help clients chose policies that improve chances of treatment successes.

We have outlined some issues in this course. Many, many more exist.

Hopefully, we have pointed brokers in the right direction, both for ethical advising and for their own future research.

But in this concluding chapter I'd like to offer some general advice for how best to act ethically including practicing ***lifnei iver*** (removing stumbling blocks from before your clients), ***hochei-ach tochi-ach*** (rebuking your clients when they erroneously make unwise decisions) and ***do your fellow a favor***: [177]

1. Educate yourself about our healthcare system.

---

[175] I don't know the origin of this expression. I first heard it from John Kingsdale, Director of the Massachusetts Healthcare Connector, at a speech at the Boston Harvard Club sponsored by the Pioneer Institute of 1/15/09.

[176] Brownlee, op cit, page 206. Same source for the next quote and the French proverb.

[177] Some of this advice comes from the Afterward of Overtreated. See Brownlee, op cit pages 308 - 310

The more you know about our healthcare system, the better you can help your clients.

Today's bookstores are full of insightful and useful books about healthcare. Some that I have found particularly useful include

Overtreated by Shannon Brownlee;
Ending Medical Reversal by Vinay Prasad
Overdiagnosed by by H. Gilbert Welch
An American Sickness by Elisabeth Rosenthal
Know Your Chances, by Steven Woloshin
Doctored by Sandeep Jauhar
How We Do Harm by Otis Brawley
The Quality Cure by David Cutler
Mistreated by Richard Pearl

Typical feedback from brokers who have these books is that they contain fascinating and very useful information. Ethical brokers use that information their normal professional work. folks.

I'd also add a few of my own books, though my perception of their quality and value may be biased:

How to Be a Patient
Beyond Deductibles
Consumerism and Value Creation in American Healthcare
Transparency Metrics

Help your clients understand the importance and utility of their primary care doctor. Help them find primary care doctors with whom they can communicate easily.

2. Help your clients ask questions. Help them remember that doctors are guides to medicine, not gods to be believed unquestioningly.

   Here are 5 questions I regularly teach people to ask.

   - Has the proposed treatment been subjected to comparative tests?
   - Out of 100 people like me, how many benefit and are harmed by it in tests?
   - Is it overused in real life?
   - Would most doctors make the same treatment recommendation or might some suggest something different?
   - How many patients like me do you treat annually?

3. Help your clients use the web appropriately, not excessively. I often encourage people to focus their internet research on 3 sites:

   - ChoosingWisely

- The US Preventive Services Task Force and
- Cochrane

These 3 non-financially-conflicted resources present good analyses of likely medical intervention outcomes.

I tend to stay away from other sites.

Help your clients to have the courage and skills to advocate for themselves, for in the end, all healthcare decisions are ultimately their own.

****

We have, in the Judeo-Christian ethical tradition, thousands of years of business experience. Hopefully some of the ideas in this course will help today's health insurance brokers continue that ethical tradition.

---

[i] Armstrong, Abbott Doubled Niaspin US Sales Before Trials Cut Use, Bloomberg, June 10, 2013 https://www.bloomberg.com/news/articles/2013-06-10/abbott-doubled-niaspan-u-s-sales-before-trials-cut-use

[ii] This sentence paraphrases the New England Journal of Medicine discussion of the AIM High study http://www.nejm.org/doi/full/10.1056/NEJMoa1107579#t=article .

[iii] http://www.reuters.com/article/merck-cholesterol-idUSL1N0BREGB20130227 and For a good summary see CBS News estimate, Study: Heart Drug Tredaptive is Ineffective, Jonathan Lapook, July 29, 2013

[iv] CBS News, op cit

[v] This list comes from WebMD http://www.webmd.com/vitamins-supplements/ingredientmono-924-niacin%20and%20niacinamide%20vitamin%20b3.aspx?activeingredientid=924&

[vi] http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/WhyBloodPressureMatters/Why-Blood-Pressure-Matters_UCM_002051_Article.jsp

[vii] http://www.pharmacompass.com/sales-forecast/atenolol

[viii] See 'The LIFE Study: The straw that should break the camel's back' by Franz Messerli for a brief summary in the European Heart Journal, March 2, 2003.

[ix] A meta review is a comparison of several tests. Meta reviewers study, for example, the methodology of each individual test to ensure that researchers didn't goof somewhere along the line. http://www.ncbi.nlm.nih.gov/pubmed/15530629

[x] I had used this example in lectures for several years. When I visited the site in late December 2016, I discovered that it had been replaced with a 'prescribing highlights' pdf in small print.

[xi] Drug Has No Benefit In Trial, Makers Say, Berenson, NY Times, January 14, 2008

[xii] Ibid.

[xiii] Another Vytorin Mess for Merck, Herper, Forbes, Nov 15, 2009

[xiv] Estimate from Johns Hopkins Health Library

[xv] For a good summary of those studies, with expanded comments, see Sham-Wow by Walter Eisner in Orthopedics This Week, August 11, 2009, https://ryortho.com/2009/08/sham-wow/

[xvi] Kirkley et al, A Randomized Trial of Arthroscopic Surgery for Osteoarthritis of the Knee, NEJM, September 11, 2008

[xvii] Moseley et al, A Controlled Trial of Arthroscopic Surgery for Osteoarthritis of the Knee, NEJM, July 11, 2002
[xviii] These estimates from Cram, et al, Total Knee Arthroscopy Volume, New England Journal of Medicine, Sept 19, 2014. I was unable to develop a specific number of procedures by year, nor estimate the annual growth rate of knee arthroscopies.
[xix] Prasad, Ending Medical Reversal, page 22
[xx] Kirkley, op cit
[xxi] Moseley, op cit

[xxii] Braunwald, The treatment of acute myocardial infarction,

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3760555/

[xxiii] Silverman et al, British Cardiology in the Twentieth Century, Chapter 27
[xxiv] Julian, Ischemic Heart Disease in Dialogues in Cardiovascular Medicine, 2006 http://www.dialogues-cvm.com/document/DCVM40.pdf
[xxv] Silverman, op cit.
[xxvi] Braunwald, op cit.
[xxvii] WebMD, Recovering after heart surgery, http://www.webmd.com/heart-disease/guide/heart-disease-recovering-after-heart-surgery#1
[xxviii] WebMD, op cit.
[xxix] ChoosingWisely, American Academy of Pediatrics, http://www.choosingwisely.org/societies/american-academy-of-pediatrics/
[xxx] CBS News 60 Minutes, Feb 9, 2014 http://www.cbsnews.com/news/sex-matters-drugs-can-affect-sexes-differently/
[xxxi] See, for example, Isaacs and Schroeder, Class – The Ignored Determinant of the Nation's Health, New England Journal of Medicine, September 9, 2004 http://www.nejm.org/doi/full/10.1056/NEJMsb040329, Drexler, The People's Epidemologists, Harvard Magazine, March-April 2006 http://harvardmagazine.com/2006/03/the-peoples-epidemiologi.html, The Panel Study of Income Dynamics at the University of Michigan https://psidonline.isr.umich.edu/, and Bradley and Taylor, The American Healthcare Paradox
[xxxii] Drexler, The People's Epidemiologists, Harvard Magazine, March-April, 2006
[xxxiii] Chetty, The Association Between Income and Life Expectancy in the United States, JAMA, April 26, 2016. See also Deaton's editorial, On Death and Money: History, Facts and Explanations, same issue, slightly paraphrased with emphasis added.
[xxxiv] This information comes from Antibiotics for Acute Otitis Media on theNNT.com http://www.thennt.com/nnt/antibiotics-for-otitis-media/. The underlying studies Sanders S, Glasziou PP, DelMar C, Rover sMM. Antibiotics for acute otitis media in children. Cochrane Database of Systematic Reviews 2004, Issue 1. Art. No.: CD000219. DOI: 10.1002/14651858.CD000219.pub2.
Turck D, Bernet JP, Marx J, et al. Incidence and risk factors of oral antibiotic-associated diarrhea in an outpatient pediatric population. J Pediatr Gastroenterol Nutr 2003;37:22-26.
[xxxv]
http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/PreventionTreatmentofHighBloodPressure/American-Heart-Association-backs-current-BP-treatments_UCM_459129_Article.jsp
[xxxvi] Musini, 2009, Pharmacotherapy for hypertension in the elderly
[xxxvii] I assume your doctor has internet access and can look up any relevant comparative studies. Though I don't normally give specific advice, I'll make an exception here: if your doctor doesn't use the internet … get another doctor!