

Consumerism and Value Creation in American Healthcare

Why educated consumers –
and only educated consumers -
can reduce costs, improve outcomes
and fix our broken healthcare system

Gary Fradin
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- Healthcare Problems and Solutions
- Understanding Health Insurance
- Transparency Metrics
- Uninformed: The Plight of America's Patients
- How to Talk to Your Doctor

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Healthcare value defined

Value is a relationship between dollars spent and outcomes.

- Spending less for better outcomes creates value.
- Spending more for poorer outcomes destroys value.

We can measure **individual test or treatment value** by considering specific costs and outcomes.

- If one treatment costs \$50,000 and another \$8,000, but both generate the same patient outcomes, we call the \$8,000 treatment 'better value'.

We can measure **healthcare system value** by considering total expenditures and population health metrics like longevity, disease morbidity and infant mortality.

- If Americans spend \$10,000 per person annually on medical care and live an average of 79 years, while another country spends \$4,000 per person but lives an average of 81 years, we say they have 'better healthcare system value'.

We can **increase** value by:

- Getting better outcomes for the same number of dollars, or
- Getting similar outcomes for fewer dollars, or both

We can **decrease** value:

- Getting similar outcomes for more dollars, or
- Getting poorer outcomes for the same number of dollars, or both

Our task in this book: determine which activities increase or decrease healthcare system value.

Table of Contents

Preface	Page 11
Introduction.....	Page 13
Part 1: Value Destroying Activities	Page 23
Employer Based Health Insurance	Page 25
Review Questions	Page 59
Some Government Incentives and Tax Benefits	Page 63
Review Questions.....	Page 99
Current Levels of Consumer Education and Knowledge....	Page 103
Review Questions	Page 135
Part 2: Value Neutral Activities (neither obviously create nor destroy value but can do either depending on how they're implemented)	Page 139
The Affordable Care Act	Page 141
Review Questions	Page 179
Price Transparency	Page 183
Review Questions	Page 211
Part 3: Value Creating Activities	Page 215
Decision Aids and Consumer Education	Page 217
Key Questions for Patients to Ask by Topic.....	Page 242
List of Key Questions	Page 312
Review Questions	Page 231
Integrating Consumer Education into Broker Services.....	Page 317
Review Questions	Page 331

Preface

I wrote this book as a text version of various lectures I gave to health insurance brokers between 2012 and 2014.

I originally titled it 'Health Insurance Topics' as the lectures were each self contained analyses of a particular issue with no intended overall theme. But such a theme appeared as I wrote: **value creation**.

Value means 'outcomes per dollar spent'.¹ We can create value by getting better outcomes at lower costs and we can destroy value by getting poorer outcomes at higher costs, plus a few variations on those definitions. The book's various sections fell into place within that framework:

- Activities that create value
- Activities that are value-neutral, neither obviously value creating or destroying value but possibly either depending on how they're implemented
- Activities that destroy value

I decided to keep the original lecture format so each chapter focuses on a single, independent issue. That means there's information overlap since, for example, discussions of both price transparency and systemic waste require an understanding of treatment variation. I sometimes used similar examples / case studies in different chapters to illuminate different points. I hope the overlap reinforces key ideas and doesn't simply bore readers.

I take the issues discussed here personally and seriously. As a child of the 1960s who, among other things, tried to create value in Chad, Africa by building primary schools and planting orchards - the latter in a leper colony outside N'Djamena - I have a great passion for activities that improve people's lots in life. I have an equal passion for opposing value destructive activities, with unnecessary medical care being a prime example.

Three personal notes. First, while writing this book I developed adhesive capsulitis, commonly known as early stage frozen shoulder, a painful condition that's not indicative of any major systemic health problems. With modest exercise and appropriate rest, the inflammation-based pain should subside over time. Corticosteroid steroid injections

¹ This definition comes from Michael Porter, What is value in healthcare? New England Journal of Medicine, Dec 23, 2010

apparently sometime speed this process. Will such injections work for me? I can't figure that out.

Specifically, I can't find the Number Needed to Treat to determine the likelihood of my benefitting from these injections, nor the Number Needed to Harm to determine the risks. I can't find recommendations on ChoosingWisely™ or from the US Preventive Services Task Force. In fact, I can't find any high quality, disinterested, methodologically valid outcome studies on the topic.

I can, however, find tons of information provided by *interested* parties like orthopedic surgeons and hospitals suggesting how their services – for which I would pay - can help me. Should I use those, and only those, information sources as the basis of my medical decision making? The obvious risk of information bias makes me uncomfortable.

This lack-of-objective-information situation occurs for virtually every patient and virtually every medical condition in our healthcare system. That's why I'm so enthusiastic about the budding consumer Decision Aid development movement. I hope that enthusiasm comes through in this text.

Second, my writing style varies between academic and conversational reflecting the original lecture basis of these chapters. I tried to make the material come alive by injecting occasional opinions and observations. I hope this enhances the reader's experience and is not, as my kids sometimes suggest, 'dumb, Dad'.

Third, I value reader feedback. If any of the ideas in this text stimulate your thinking, please let me know. I'm readily available at gfradin@HealthInsuranceCE.com. I promise to respond if you write to me!

I hope you find reading this book a worthwhile experience.

Gary Fradin

March, 2015

Introduction

Our healthcare system falls somewhere between a ‘mess’² and ‘insane’³ costing \$10,000 per person per year but putting us about 40th internationally in life expectancy and infant mortality.

That the system works badly is clear. *Why* it works so poorly and *what* we can do to fix it remain hotly debated topics, with the same basic positions restated consistently for almost a century.⁴

Some say we have *too much* government influence thus destroying the market’s ability to deliver high quality services at reasonable costs. Others argue that we have *insufficient* government influence, allowing private companies and healthcare providers arbitrarily to provide too much or too little care thus raising costs without improving outcomes.

Hundreds, even thousands of commentators wax poetic about the problems (OK, generally not so poetically) and their own favored solution.

As I’ve read dozens of books and hundreds of articles, I’ve been impressed with a similarity among proposed solutions: ‘If only we can get the payment and regulatory incentives right,’ they seem to say, ‘the system will work.’ Virtually everyone in the healthcare commentary business focuses on the **supply** of medical services - how we distribute medical care in this country - and proposes a fix that fits his or her own orientation.

I disagree. If we could have gotten the incentives right, we would have gotten the incentives right - or at least *close* to right - given that we’ve worked on this for decades with ineffective reforms regularly emanating from both the federal and state governments and carrier plans increasing in complexity, in theory at least, to improve outcomes and reduce costs. I don’t think we can create tremendous value by focusing on the supply side of healthcare.

² See Richmond and Fein, *The Healthcare Mess*, 2005. Both gentlemen were Harvard Medical School professors, with Richmond the US Surgeon General under President Carter.

³ Regina Herzlinger of Harvard Business School, speaking at the Massachusetts Association of Health Plans convention in Boston, December 2014. My notes are unclear if she said ‘crazy’ or ‘insane’. Apologies for any error here.

⁴ See Thomas Miller’s article ‘Health Reform: Only a Cease Fire in a Political Hundred Year’s War,’ *Health Affairs* June 2010 for the gory details

Instead, I think the demand side offers greater opportunities to rein in costs, reduce waste and improve outcomes.

Let me state my position clearly: I don't see payment reforms, organizational changes or plan design modifications making our healthcare distribution system much more efficient, effective or valuable, with 'value' defined as better outcomes at lower costs. I base that conclusion on the past 50+ years of our healthcare reform experience defined by **new financing paradigms every 20 or so years** (from major medical to managed care to tax advantaged deductibles and now to private exchanges), **cost growth averaging gdp + 3-5%** and **hard outcomes lagging behind other 1st world countries**.

No healthcare reform in the past 50 years has simultaneously improved access, reduced cost and improved outcomes, i.e. created more value, though some have improved access. Value creation – when it occurs - seems to come primarily from the private sector, though I'm not sure how frequently even this happens. We sometimes get better outcomes at higher costs, sometimes similar outcomes at higher costs, perhaps sometimes better outcomes at lower costs *per unit* but providers tend to make up the income loss per unit by doing more units so I'm not sure about the overall systemic gain.

We lack a value creation paradigm in healthcare. That's what I propose in this book.

Why we have the healthcare mess we have

It's as important to understand why we'll never get the supply side right – why incentive-oriented, regulatory-based reform efforts always fail - as to understand why the demand side offers such promise.

Our healthcare system exists, I would argue, for two main reasons, the less important of which is to get people healthy.

The prima facie case here: we're not terribly healthy. We don't live as long as other populations, we have higher infant mortality rates than most developed countries and higher disease morbidity rates, unconscionably high hospital readmission rates (about 20% within 30 days), tragically high hospital infection and error rates and a utilization waste factor north of 30%, probably closer to 40 or 45% and maybe even **half of all medical care**.⁵

⁵ I'll explain in detail in the chapter on Price Transparency

These situations simply would not exist if our system was primarily designed to get people healthy. 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 maybe haven't even 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 or pain reduction to their compensation.

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. Insurance carriers provide confusing policies that average 15% gross profit on their \$800 billion in annual premiums. Brokers shop for policies and benefits administrators explain them to employees who generally don't understand them, patient advocates help people navigate our nonsensical 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 no one knows how well those drugs actually work or even if they work at all.

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 \$3 trillion annually, double or triple what other countries pay for better results, about half of which, I suspect, leads to ineffective or harmful care when tested.⁶

'Necessary' care in American healthcare *always* means that someone can bill for it and only *sometimes* that patients benefit from it.

⁶ See Vinay Prasad's insightful study A Decade of Reversal, Mayo Clinic Proceedings, 2013

As evidence of the 'jobs program' nature of our healthcare system, consider these statistics provided by Jonathan Bush, founder and CEO of Athenahealth, a \$4 billion publicly traded health information company: ⁷

- 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.

All these people working in our healthcare jobs program share one common perception: 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 saying '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 healthcare exists 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. A reasonable, rational healthcare system would compensate participants for getting patients healthier less expensively. Our system compensates people for lobbying and negotiating better.

We consequently have really good lobbyists and really lousy value.

Three structural bases of our healthcare system

Think of our healthcare system as a 3-legged stool, supported by

- Employer centric financing and its related constraints, the core of our payment system

⁷ Bush, Where Does It Hurt, page 91. Jonathan is a 'Bush': his uncle and first cousin were presidents of the US.

- Subsidy and tax programs that incent poorer nutrition and less exercise, thus driving higher medical utilization rates and treatment costs
- Poorly informed patients who base their medical decisions on questionably designed studies and confusingly presented results, and who ultimately get both *more* and *poorer* care than they want or need from a clinical system designed to provide the most invasive and most expensive care whenever possible.

I contend that a system based on these 3 legs is designed to become a high cost / low quality jobs program, which is exactly what we have.

I'll develop each of these points in the first 3 chapters of this book, but as a quick overview here:

Leg #1: Employer based financing requires short term / 1 year long health insurance policies. This is the 'insane' bit that Regina Herzlinger described above. Though employer based financing only covers about half our population, the effects permeate far more widely. Medicare, for example, allows annual plan changes for its 50 or so million subscribers, tagging onto the employer timing model, though I know of few medical conditions, especially in the elderly, that fit neatly into 12 month treatment chunks.

- Some 70% of medical costs go to chronic conditions that require a long term focus to optimize outcomes, but we finance long term diseases with short term policies. This incents carriers and providers to focus on short term cost control, exactly the opposite of what patients need.
- Systems that focus instead on the long term generate better outcomes at lower costs.⁸
- Employer based financing also, almost by its very nature, requires a split between healthcare financing and service delivery. Yes, Kaiser Permanente and a couple other companies operate vertically integrated systems. But they developed in the 1930s and no one has been able to reproduce and maintain this structure since.
- This split pits carriers against providers and leads to competition over costs and payments rather than over outcomes. Atul Gawande calls carrier-provider relations 'war, every step of the way' which strikes me as a pretty poor way to

⁸ See, for example, Phillip Longman's insightful analysis of the Veteran's Administration Healthcare system in his book Best Care Anywhere.

structure a system designed to get people healthy but a pretty good way to design a jobs program.

Leg #2: Various Federal subsidy and tax programs incent Americans to consume huge quantities of carbohydrates and fat while exercising less and less leading directly to obesity, diabetes and coronary disease.

- The corn subsidy, a jobs program for mid-western farmers and Presidential-wannabes, leads directly to an obese, diabetic population. Our land use patterns and related tax programs mitigate against daily exercise. I'll show how this all works in great detail. These subsidies and tax breaks, of course, financially benefit certain industries and result from their lobbying power.
- Our population, responding rationally to the economic incentives presented by zoning regulations, food costs and tax incentives, seeks medical solutions to the related health problems. Our healthcare jobs program obliges with expensive labor, technology and pharmacologic-intensive programs. 'Obese? Take a pill and join our 12 week nutrition and exercise program. But let's run a stress test first. Don't worry – it's all covered by insurance.'

Leg #3: American patients are remarkably poorly informed about their treatment alternatives and likely outcomes and almost universally lack the skills to speak wisely with their physicians.

- We have no national data base of treatment effectiveness and lack even a standard measurement methodology. In fact, the Affordable Care Act kills meaningful comparative effectiveness research, a condition required by PhARMA for its support ⁹ thus leaving Americans only vaguely aware of how well various medications, tests and treatments actually work.
- Even when the data exist, consumers typically lack the tools to understand medical studies and claims. Does a pill that reduces your heart attack risk by 36% work better than one that prevents 1 heart attack in 100 people who take it? (The answer, according to Lipitor's ad in the Wall Street Journal, December 4, 2007: they're both the same.)
- Researchers, mainly from the Dartmouth Institute of Healthcare, suggest that patients have treatment alternatives 85% of the time or more. But other studies

⁹ See Steven Brill's analysis of the ACA as summarized in the New York Times book review http://www.nytimes.com/2015/01/11/books/review/americas-bitter-pill-by-steven-brill.html?_r=0

suggest that only about 10% of patients know this and explore the alternatives rigorously with their physicians.¹⁰

Given the lobbying, economic and political power of various groups supporting our healthcare jobs bill, I'm pessimistic about our ability to regulate or incentivize our way out of this mess. It's simply too lucrative for doctors, hospitals, pharmaceuticals, equipment manufacturers, carriers and all the others to maintain business as usual. Plus each individual component of our healthcare system believes that it produces such incredible value that compromising would harm patients, making compromise both economically and morally repugnant.

I don't see us ever getting the regulatory and incentive structures right, or even fixing them a little. The political power of entrenched interests simply won't let it happen.

The way out

There's only one group in our society with *potentially* enough power to overwhelm these various healthcare special interests: consumers. If consumers **demand** better care meaning better outcomes, they may provide the catalyst necessary to increase healthcare systemic value.

I'm being intentionally optimistic here because (a) I'm optimistic by nature and (b) I don't see any other reasonable path forward.

Imagine that a patient says 'Doc, I won't take this medicine until you tell me how many people benefit from it, out of 100 people who take it, over 5 years.' I assume the first time a doctor hears this question, he'll be surprised.

- The second time, she'll begin to wonder
- The third time, he might try to look up the answer
- And by the fourth or 15th time, she'll expect the question and know the answer, or perhaps even tell the patient before he or she asks.

Or if a patient asks 'what's the Number Needed to Treat for this procedure?'

- Or the Number Needed to Harm for this test?

¹⁰ Information presented at the Dartmouth Summer Institute for Informed Patient Choice, 2014

- Imagine if a patient says ‘I won’t take a medication with a Number Needed to Treat higher than 8 or a Number Needed to Harm lower than 5’. That’s what I call a well informed patient!

Or if a patient asks ‘what does ChoosingWisely say about this treatment?’

- I’ll suggest that part of the definition of a being a ‘well informed patient’ is *knowing* that ChoosingWisely exists and what it recommends about your particular medical situation.
- Another part is *using* ChoosingWisely in discussions with your doctor

Or imagine if a patient says ‘I won’t have a test or take a pill that the US Preventive Services Task Force grades lower than A’

Various research groups are already developing medical measurement tools. I’ll introduce some in this book. Though still at an early stage, there is sufficient content *today* to help patients make wiser medical care quality decisions, with their doctor’s help of course. (**I *always* advise patients to make decisions with their doctor’s help and never based only on what they read in this or any other text.**)

The standard objections

‘Here’s why consumerism won’t work’, people tell me, followed by some set of reasons like ‘healthcare is too complicated’ or ‘consumers aren’t that interested’ or ‘this is too time consuming’.

Some focus on price transparency – I’ll deal with that later – arguing that you need to know how much a medical intervention costs to shop wisely. My response: who wants the cheapest unnecessary or poor quality care? Remember, that’s perhaps 40 – 50% of all medical care.

I’ve never heard anyone say ‘I need to save some money so want the 2nd or 3rd best care for my kid.’ I only hear ‘I don’t care what it costs. I want the best care for my child.’ Price transparency is of secondary or tertiary importance. I actually place it 4th on my list of 4 factors to consider in medical care decisions. See the chapters on transparency and decision aids. Focus on the bigger issues, care necessity and quality, first.

Others favor wellness programs – I’ll deal with those later too – arguing that we can cut medical care utilization by becoming thinner, with lower blood pressure and blood sugar levels. Although I understand that people with lower blood pressure are less likely to have heart attacks, I don’t see corporate wellness programs having much systemic value creation impact.

I haven't read any studies showing that people with low cholesterol make wiser back MRI utilization decisions after hurting their backs while raking leaves. Lower back pain is the 5th most common reason for physician visits and many physician organizations recommend waiting 4 – 6 weeks before having a back MRI. ¹¹ How does your cholesterol level possibly improve your MRI decision making?

Nor have I read that thinner people choose antibiotics more wisely when they suffer from sinusitis. TheNNT analysis shows that 1 in 18 people who took antibiotics were helped by having a faster reduction in their sinusitis symptoms while 1 in 8 was harmed, mainly by gastrointestinal side effects. Diarrhea alone affected about 1 in 18, meaning your chance of benefiting from antibiotics and being harmed by diarrhea are about equal. ¹²

Being thin doesn't help you evaluate antibiotic tradeoffs at all, but being well informed does. Thin people don't choose hospitals more wisely, surgeons more wisely or medications more wisely. Being well informed does.

Well informed patients know these NNT and NNH data then consider whether their sinusitis is painful enough to risk diarrhea. Some may decide to take the drugs, others may not. Either decision is right for the right person, i.e. someone who understands the treatment benefits, risks and alternatives.

But neither is influenced by your cholesterol or blood sugar levels.

Well informed vs. poorly informed patients

Many studies show that poorly informed people utilize medical care more, and consequently cost more, than well informed folks. Poorly informed patients typically assume that medical care works better than, in fact, it does. Poorly informed patients also typically think that higher technology and more invasive treatments are better than alternatives.

I'll suggest these definitions of well and poorly informed patients:

- Well informed patients focus on outcomes meaning benefit and risk likelihoods from more than 1 treatment alternative.

¹¹ See ChoosingWisely. Among the reasons: patients who have a back MRI within 6 weeks of initially feeling the pain are 8x more likely to have surgery.

¹² <http://www.thennt.com/nnt/antibiotics-for-clinically-diagnosed-acute-sinusitis/>

- Poorly informed patients focus on anatomy, physiology and biology and try to become mini-MDs in their attempts to understand their medical problem and determine how to proceed.

Patients who focus on outcomes tend to get better outcomes.

Patients who focus on bodily functions tend to get more care.

Two tasks ahead

I see two primary tasks ahead for real medical care value creation.

- First expand on the current decision aids under development like ChoosingWisely, the US Preventive Services Task Force and TheNNT.
- Second, teach consumers how to apply these tools. That's the purpose of the **Value Creating** section of this book and of my consumer education website www.TheMedicalGuide.net.

I see brokers, carriers, hospitals, doctors, government agencies and independent information companies joining in this consumer education / value creation effort. There's a vast opportunity and market for the most creative and forward thinking to participate and prosper in this endeavor.

Part 1: Value Destroying Activities

Employer Based Health Insurance

Government Subsidies and Tax Policies

Current Levels of Consumer Education and Knowledge

Chapter 1: Employer Based Health Insurance

Exquisite inefficiency

Part 1: Overview

The US is the only advanced industrialized country to finance medical care primarily through employment. Most other countries use employer based financing either to supplement a national healthcare system (e.g. the United Kingdom) or ban it from competing with the national system (Canada).

Over time our employer based health coverage has slipped from a peak of 168 million people in 2000 ¹³ to about 140 million in 2010 ¹⁴ with a confluence of factors affecting the decline.

The US Census Bureau estimates that the percentage of *employed* people receiving employer sponsored health insurance has slipped from 76% in 1997 to 70% in 2010, while the percentage of uninsured employees increased from 14.7% in 1997 to 18% in 2010. ¹⁵

These coverage rates generate a different focus of healthcare system concerns here and abroad

- We worry about *coverage* and costs
- They worry about *outcomes* and costs

Three structural problems with employer based healthcare financing

#1: Moral hazard

Our employer based system finances all medical care with **insurance** rather than **payment plans** probably for historical reasons that we'll discuss shortly.

This confuses *insurance* (protection against financial harm caused by random events) with financing normal, routine and expected medical events like flu shots and knee replacements.

Compare health insurance to auto insurance. Auto insurance pays for unexpected events, like crashes; it doesn't pay for expected events like oil changes, tire rotations or

¹³ EBRI Issue Brief # 321, September 2008

¹⁴ Employment based health insurance 2010, Janicki, US Census Dept, February 2013

¹⁵ Ibid.

transmission rebuilds. Yet we expect health insurance to cover all medical events, from the most routine and predictable to the most random and unpredictable. This leads to enormous inefficiencies because, many argue, insurance is the wrong financing mechanism for routine medical events.

- Insurance pools risk inefficiently based on timing; those *not having* medical events this year pay for those having.
- This suppresses any market mechanisms from pooling more efficiently and developing better, more targeted, more actuarially based medical financing products - orthopedic payment plans for example, or pediatric immunization payment plans.

We can imagine lots of medical payment programs, underwritten and priced for individuals or banded for groups. Middle aged men might buy 5 or 10 year orthopedic and urologic plans but not birthing; younger women the opposite.

This kind of program pools need more efficiently than blanket insurance plans that cover every possible medical situation, for all people, that might occur this year. 'Insurance' then provides a safety net for the unexpected or random events not covered by specific payment plans.¹⁶

A fundamental problem using insurance to finance all medical activities is **moral hazard**. Insurance programs *always* face concerns about moral hazard. Moral hazard is the phenomenon in which people get more care than they need because it appears free to them. Insurance financing that includes this moral hazard component is a great foundation for a healthcare jobs program but a poor one for an efficient medical care financing system.

The moral hazard concept originated when home fire insurance was developed centuries ago. Underwriters were concerned that people with 'poor moral character' would burn their houses to collect the insurance proceeds then rebuild a less expensive house and pocket the difference. This translates in the health insurance arena to people having tests and treatments because –why not? It's free to me and may offer some benefits.

Medical care providers understand this issue and can generate income from it: 'let's send you for another test just to rule something out. Don't worry – it's covered by insurance' and medical testing and treatment industries develop. Dr. Sandeep Jauhar,

¹⁶ Regina Herzlinger has written extensively and creatively about this type of program. See especially her book *Who Killed Healthcare*.

Director of the Heart Failure Program at Long Island Jewish Medical Center, has written eloquently and painfully about this. Consider these various quotes from his 2014 book *Doctored*:

Bob and Joe and Dave have an unwritten agreement to call one another when patient issues arise outside their scope of expertise. If Bob, the nephrologist, sees a patient, he finds a cardiac and a gastrointestinal issue and consults the other two specialists and vice versa...a mutual scratching of backs...**Insurance companies can restrict medications, tests and payments. But they still cannot tell us who or when we can ask for help.** (page 97, emphasis added)

A large percentage of healthcare cost is a consequence of induced demand – that is, physicians persuading patients to consume services that they would not have chosen if they were better educated. (page 107)

[Describing one particular physician] ...he was doing a plethora of tests – eye exams, audiometry, pulmonary function tests, even Holter monitoring – to generate revenue ... he avoided the high-risk cases... ‘Those we would send to a cardiologist’ ...[and, quoting a gastroenterologist] ‘If a doctor doesn’t do excess testing, forget it, he isn’t going to be able to live.’ (page 167)

Dr. Jauhar’s unsettling conclusion about the impact of moral hazard:

In our healthcare system, if you have a slew of physicians and a willing patient, almost any sort of terrible excess can occur. (page 94)

Others have, of course, also written expansively about the impact of moral hazard on our healthcare system. My point in this discussion: by relying on insurance to finance all aspects of healthcare, the employer based model exacerbates, rather than ameliorates, this problem. By basing our entire healthcare financing system on and around the employer model, the moral hazard problems permeate all aspects of American healthcare financing, creating more healthcare jobs and less healthcare value.

While we can’t calculate an exact cost of moral hazard in our healthcare system, credible research suggests that 30% + of all medical spending is wasted on unnecessary care. That’s generally estimated at about \$700+ billion annually or \$2500+ per employer based policy. The Dartmouth researchers primarily responsible for that estimate, though, are quick to note that we ‘view these as an underestimate given the

potential savings even in low cost regions' ¹⁷ meaning that even they have no real solid idea how much moral hazard exists in our system.

But they and others admit that it's a lot.

A very lot.

Structural problem #2: Disconnecting payers from users

Payers in the employer based model are employers, often acting through their benefits department. Payers decide what network size employees want, what deductible levels, what drugs to include in the formulary and what copayments to have. This is particularly true in small companies covering the bulk of American workers that may offer only 1 policy to all employees.

Consider the impact of payer's decisions. A company opting for a wide provider network decides that each employee would prefer *paying more for health insurance to having more disposable income available* (and using a smaller network).

Or a company opting for a smaller network decides that employees prefer *more disposable income to having the most expensive doctors and hospitals available in-network*.

Employees, though, are the consumers and each may seek different things from our healthcare financing system. One may want higher deductibles or lower, wider networks or smaller, bigger drug formularies or not. Each facing his or her own specific medical issues can reasonably have his or her own set of preferences.

We call this 'consumer sovereignty' meaning that the most efficient economic distribution system is one in which consumers express their desires through purchases. We have seen this work quite effectively in other markets for hundreds of years.

Take the grocery market for example. A typical supermarket has thousands of products available because some people like expensive cuts of meat while others are vegetarians. Some people like ice cream while others are lactose intolerant. Some people like rye bread, others white bread and still others prefer bagels. And so on, for canned foods, soups, fruit and many other food products.

¹⁷ Dartmouth Atlas of Healthcare, Reflections on Variation, answer to the question 'The Atlas is often cited as a source for the estimate that 30% of the nation's spending is unnecessary --- what is the evidence?' <http://www.dartmouthatlas.org/keyissues/issue.aspx?con=1338>

Our food distribution system is 'efficient', or so goes the argument, because individual consumers, casting their own dollar-votes, decide which products should be available and how much shelf space stores should allocate to each product. As consumers demand more soup, the store supplies more soup. Ditto for apples, mangoes and bread.

Imagine the impact on our food choices if these decisions were made by your employer! 'Apples are good for my employees, so stock a lot. Cut down on cookies and fatty meats. And, since more and more people are lactose intolerant, switch to carrying more skim milk.' (As if your employer had any interest in making those decisions. Your employer wants to make and sell widgets, not decide what you should eat. Hmmm, sounds like healthcare, doesn't it?)

Restrictions on consumer sovereignty lead to higher prices, less choice and sometimes poorer quality. Would apple producers focus as much energy on their product quality if they knew that all stores had to buy more apples from them? Maybe – or maybe they'd focus more on quantity and price.

In the employer based health insurance model, consumers have far less sovereignty than many would like, since benefits administrators make many of their key consumption decisions. But remember the economic axiom: the more consumer sovereignty, the more efficiency. And vice versa.

Structural Problem #3: One year long policies

Some 70% of healthcare expenditures go toward chronic, long term and on-going medical care as opposed to episodic, acute care. A chronic condition is, for example diabetes and an on-going care example might be post-operative cancer treatment. Dozens more examples exist. The best outcomes result from continuity of treatment from the same provider. Medically, thus, *long term financing programs* tend to generate the best outcomes, generally at the lowest costs since care discontinuities can lead to errors, which add treatment costs.

Employers, however, oppose funding multi-year health insurance policies. Business conditions may change they reason, their employee census may change, prices may fall – why encumber themselves with long term liabilities? Employers like 1 year long policies so they can change the program if business conditions warrant.

This creates a conflict between *employee medical needs* and the *employer's business considerations*. We have, nationally, adopted the employer's position as the basis of our healthcare financing system, not the medical need position. Financing medicine

based on anything other than medical concerns adds inefficiencies (costs) to the system without any related benefits or value increases.

The employer financing model forces health insurance carriers to compete on short term medical cost controls rather than long term patient outcomes. I'll explain how all this works and some impacts later in this chapter.

These three structural problems – financing routine medical care through insurance, disconnecting payers from users and embracing 1 year health insurance plans - lead to an inefficient system with skewed incentives. Good for healthcare jobs growth but bad for system value creation.

But that's what we get with employer based financing as the core of our national healthcare financing system.

Three consequences of employer based health insurance

Uwe Reinhardt, professor of healthcare economics at Princeton, suggests 3 consequences of placing employer based health insurance at the center of healthcare financing.¹⁸

First, it is tremendously expensive. In 2013, for example, a typical family health insurance plan cost about \$22,000, up \$10,000 over the previous 10 years. This compares to the average family income in 2013 of about \$55,000. Under what definition of 'affordable' does this make any sense?

Reinhardt wonders how any employer who finances employee healthcare, carrier that designs plans or broker who implements benefit programs can take pride in his/her work product over the past decade. So do I.

Second, having employment at the center of our healthcare financing system requires lots of 'fill in' programs for people unable to obtain employer based insurance. Each of those programs – Medicare and Medicaid, for example, or SCHIP – develops their own regulations, licensure requirement, codes and prices resulting in overlapping and confusing payment categories.

We have, as a result:

- One healthcare system for fulltime, employed people. This system has its own access rules, reporting rules, prices and payment rules.

¹⁸ This section based on Reinhardt's lecture at the Pioneer Institute in Boston, 2014

- A second healthcare system for elderly people, with its own (different) access rules, reporting rules, prices and payment rules.
- A third healthcare system for very poor, unemployed people who (for lots of bureaucratic and political reasons but no medical ones) must *also* be either i children, ii blind or disabled, iii elderly, iv mentally ill, v pregnant or vi mothers.¹⁹ This system, as the two previously mentioned, also has its own access rules, reporting rules, prices and payment rules
- A fourth healthcare system for slightly poor, partly employed people (we sometimes call this ‘non-group’, a financial distinction but not a medical one)
- A fifth system for children not otherwise accounted for
- A sixth system for military veterans, but only if they’re also either old or accessing medical care as a result of combat injuries, or both, and finally
- A seventh system for people with kidney disease, provided it’s end-stage.²⁰

Inefficient and irrational are two polite ways to summarize this chaos: nuts might be more appropriate. Having all these overlapping, irrational categories creates confusion and complexity that makes our system far less efficient and effective than we would like or hope for, leading to more jobs, higher costs and, unfortunately, poorer outcomes than patients would hope for.

These different categories exist, again, because of the employer basis of healthcare financing. We needed to develop all these programs to address groups left out of the employer coverage model.

And **third**, having all these different categories has led to different prices for the same service.²¹

- The **List Price** exists though is rarely paid. It’s reserved for rich foreigners and uninsured Americans. It’s the highest price hospitals charge.

¹⁹ Ezekiel Emanuel makes this point in *Redefining American Healthcare*, page 47

²⁰ We also have the Indian Healthcare System which, you’ll be pleased to read, is funded under the Indian Healthcare Improvement Act, signed by President Obama in 2010 and which is included in the Affordable Care Act. Probably others too, but that falls outside my area of expertise.

²¹ This section comes from Ezekiel Emanuel’s book *Reinventing American Healthcare*, pages 72 -76. It follows from Reinhardt’s analysis.

- The **Medicare rate**, completely transparent, is stipulated by Medicare. It's generally about 80% of hospital costs, meaning hospitals must overbill some other category of patients to remain financially solvent.
- The **Commercial Insurance rate**, higher than Medicare and lower than List Price, varies by carrier based on their market clout and negotiating skills. It tends to run about \$135% of hospital costs though this can vary significantly.

One reason for the high price and variation: market clout. A carrier with 8% of the market generally negotiates relatively ineffectively with a hospital network that controls 60% of the beds.

- The **Usual and Customary rate** is the rate hospitals charge carriers with which they don't have a contract – a Colorado hospital that treats Florida insureds who injures themselves while skiing for example.
- The **Medicaid rate** is typically the hospital's lowest rate, often quoted as a percentage of Medicare's rate.
- The **Actual Cost** of providing the service is generally unknown. Many medical professionals interact with each patient, requiring detailed time-and-motion studies which are expensive to produce.

Note that in other – efficient – parts of our economy, the service provider determines his/her price for the service and then sells it to anyone who will buy with, perhaps, some quantity discounts to account for scale. But in medical care, the same service varies in price by patient and the same patient can switch from category to category, thus inducing different prices from the same providers for the same care. See why I suggested this is nuts?

This huge, complex, irrational and inefficient system exists, again, because of the employer centric structure of our healthcare financing system.

Two problems that employer based health insurance fails to address #1: Unnecessary Care

Unnecessary care, defined as care that does not improve patient health, is the largest single category of medical spending in this country. Credible estimates, as from the Dartmouth Atlas of Healthcare and Dartmouth Institute for Health Policy, suggest that up to about 1/3 of all healthcare spending or some \$700 billion annually is unnecessary. I think this a low estimate, but at 30% of medical spending, it trumps

- Heart disease, about 10% of medical spending

- Diabetes and cancer, about 5% of medical spending each.

In fact, according to Jonathan Bush, founder and CEO of Athenahealth, 'unnecessary care is part of the hospital business model'.²²

The interesting question for this section: who, in the employer financing model, tackles unnecessary care as a function of his/her job?

- **Does the benefits administrator care?**

Probably not. The benefits administrator generally wants to keep premium inflation around 'trend', the industry definition of healthcare inflation.

If his/her company's premiums inflate at trend, then he or she can take a CYA approach: 'I did my job. Our premiums reflect trend.'

If his/her company's premiums inflate faster than trend, then alter plan designs, generally by increasing deductibles and copayments and shrinking the provider network.

Engaging with carriers and providers to reduce unnecessary care is time consuming, a task for which the benefits administrator probably doesn't get paid and is probably ill-equipped. It will likely be an unsuccessful effort anyway. That's why most benefits people tend to take the CYA approach and settle for the 'we're at trend' justification for mediocrity.

- **Does the CFO care?**

Again, probably not. The CFO is busy, responsible for the company's financial health and less interested in the internal operations of a hospital. As long as premiums inflate at an 'appropriate' rate, then the CFO will focus on his/her company's core business, making widgets for example, and generate profit on those.

CFO's lacks both the time and expertise to work with doctors and hospitals on reducing unnecessary care. A huge company CFO might have the time and interest to work with a select group of providers on this issue. But hospitals that engage with this particular large company may well then turn around and bill other, smaller companies more to make up the difference.

- **Does the employer care, especially the small and mid-sized ones?**

²² Jonathan Bush, Where Does It Hurt?

Again, probably not. Most economists argue that employers simply reduce wage increases to fund health premiums. (See below). If premiums rise quickly, wages rise more slowly.

The employer corporation doesn't care – economically – if it pays employees wages or premiums. It's only concerned with the total employee costs.

#2: Underfunded Social Programs

Among developed countries, the US has the highest rates of diabetes, sexually transmitted diseases, teen pregnancy and auto mortality. We also have the second highest rates of heart and lung disease and lose more years of life before age 50 to drug and alcohol abuse.²³

Are sexually transmitted disease and teen pregnancy the *employer's* problem? The patients typically don't work for the employer but the employer pays for treatments through 'trend'.

We know that social and behavioral factors affect more than

- 70% of colon cancer and strokes.
- 80% of coronary heart disease
- 90% of adult on-set diabetes, and
- Probably most leg amputations (we lead the developed world)

But the underlying social and behavioral factors exacerbating these problems are not addressed by employer based health insurance. These are 'social' problems, appropriate for some government agency or non-profit to address – or so believe many employers and benefits administrators.

Perhaps as a result, we spend far less on social determinants of health (housing and rent subsidies, training programs for poorly educated or unemployed folks, disability cash benefits and social services in general) and far more on medical treatments after someone gets sick than do most other developed countries.

In fact, though we're #1 in medical spending per capita in the world, we're #13 in 'medical and social spending' combined. We have the ratios reversed from most others. The OECD average is about 2/3 of combined 'medical and social spending' going to

²³ For Americans Under 50, Stark Findings on Health, Tavernise, NY Times, Jan 9, 2013

social and about 1/3 going to medical; we're the opposite, joining only Korea and Japan as spending the majority of 'medical and social' on medical.²⁴

This situation developed largely because employers lobbied more successfully for health insurance premium tax breaks than did social service agencies for funding. (More on this below when we discuss the history of employer based health insurance.)

How well do employers negotiate for their employees?

In 1964, the average wage in this country was \$2.53/hour and the average health expenditure \$197 per person per year, requiring the average person to work about 78 hours (2 weeks) to pay for healthcare.²⁵ Divide \$197 by \$2.53 to see this.

In 2014, the average wage had risen to \$24/hour, healthcare cost to about \$8800 per person, requiring the average person to work 366 hours (9 weeks) to pay for healthcare.²⁶

This strikes many as a pretty poor track record. One wonders if individuals, negotiating for their own policies, might have done better than employers and brokers working together.²⁷

'But my employer pays 75% of my premiums'

This misconception pervades the employer based health insurance model. Let me explain what most people believe first, and then show the real costs.²⁸

Consider Mary, a single woman who earns \$35,000 a year. In this hypothetical example, the company's single premium is \$649/month (\$7791 annually) of which Mary

²⁴ See The American Healthcare Paradox by Bradley and Taylor for more on this. I only summarized their research here.

²⁵ This example comes from Philip Longman's excellent book on the Veteran's Administration Healthcare system, Best Care Anywhere

²⁶ Wage estimates from the Bureau of Labor Statistics for Dec 2013

²⁷ See in particular David Goldhill's Catastrophic Care. Philip Longman compares cost inflation in the Veteran's Healthcare Administration system to the employer based system in his book Best Care Anywhere. The VHA did a better job controlling costs while, according to Longman, generating better outcomes.

²⁸ This analysis comes from David Goldhill's 'Catastrophic Care', chapter 2 'The Hidden Beast'. I've adjusted the numbers slightly and changed the woman's name to Mary, though unclear exactly why.

pays 27% or \$2112 per year. She also pays a \$250 annual deductible and has 4 office visits at \$25 each.

Mary thinks her healthcare costs about \$2462, or roughly 7% of salary. Not too bad.

There's only one problem with this analysis: it's completely wrong. Not even close to correct.

Here's what Mary actually pays:

- The entire **\$7791** premium in foregone wages. Remember that her employer doesn't care if Mary receives compensation as salary or benefits. The employer only cares about the total annual cost of employing Mary.
- \$1276 in state taxes at a 3.6% state tax rate. Since states average spending about 10% of their budgets on healthcare costs for employees and Medicaid, Mary pays about **\$128** in healthcare costs to the state.
- \$3827 in Federal taxes, about 11% of her income. Since 20% of the federal budget goes to healthcare, Mary pays another **\$765** here.
- Medicare taxes (1.45%) plus the employer match (foregone wages again), another **\$1015**.

Mary actually spends about **\$10,000** on healthcare annually, not \$2462. See why all the healthcare system inefficiencies we've been discussing really matter?

Part 2: How did Employer Based Health Insurance Develop?

Let's consider two historical themes to understand both why we have an employer-centric healthcare financing model and why it works so poorly.

First, remember that healthcare and social services evolved independently and differently. Healthcare was a profitable industry, supported by powerful special interests; social services were not but, but rather were disorganized, politically weak and stigmatized for helping the 'undeserving'.²⁹

Consider this story from Bradley and Taylor's book *The American Healthcare Paradox* about Joe, a 28 year old, very low income diabetic:³⁰

²⁹ See Bradley and Taylor, *The American Healthcare Paradox* for a longer explanation of this point.

³⁰ *Ibid.* page 1

- His poor diet, including very little fresh food, exacerbates his condition
- He wears old, holey shoes that keep his feet constantly damp.
- His doctor admonishes him to eat better, take his insulin and keep his feet dry, but he can't afford to do these things often enough
- Last year he had 2 toes removed costing \$7000 and next year likely two more for \$14,000
- His doctor discussed the possibility of a foot amputation (\$18,000) plus rehab (total medical costs about \$30,000), plus a wheelchair (\$1000). This would make finding a job far more difficult, reducing Joe's chance of earning much income and consequently paying taxes (more or less paying for the social welfare of others). A leg amputation might permanently relegate him to surviving on government benefits, not a job.

Perhaps the most ironic or depressing part of this story: new shoes cost \$75 and an apple costs \$1 per day. Our (underfunded, disorganized) social services can't manage these minimal costs while our (well funded, powerful) medical system racks up tens of thousands in fees by implementing medical solutions to social problems.

Second, our healthcare financing system evolved inefficiently, from a vertically integrated 'financing + care provision' system to a non-vertically integrated one.

- Vertical integration means medical care and medical financing are the same entity with salaried physicians. Both the financing arm and medical care arm work together to generate the best patient outcomes at the lowest cost, at least in theory.

'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.³¹

³¹ 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

Vertically integrated healthcare entities compete with each other on value: outcomes per dollar spent, since they control their own income (i.e. the premiums they charge customers.)

- 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 'providers', generally hospitals and physician groups.

In this system, financiers always want to pay service providers less and service providers always 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'.³²

In a non-vertically integrated system, carriers and hospitals argue over payment formulas since hospitals do not control premiums. A very different focus from the vertically integrated model above.

How Employer Based Healthcare Started

(This section comes from an edited transcript of my lecture on Employer Based Health Insurance delivered at the Health Services Administrators in Braintree, Massachusetts on September 29, 2008. A version of this appeared in my book Understanding Health Insurance published in 2010. GF)

The myth – or perhaps truth - is that it started in Dallas around 1929 as a reaction to the stock market crash and financial meltdown.³³ The business problem for Baylor University Hospital in Dallas was that it didn't have enough money to pay its bills.

Prior to the stock market crash, hospitals raised funds in two ways. First they had paying customers who were billed 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 with the stock market crash, the wealthy didn't have as much money to donate, unemployment increased (reducing the number of patients able to pay), 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 raise money from taxes. You always have money. Pay us \$.50 every other week, \$.25 a week, for each of your

³² See Gawande's second book 'Better', chapter entitled Piecework

³³ This suggestion comes from Richmond and Fein, The Healthcare Mess, page 30.

employees and when they get sick, they come to us and we'll take care of them.” Employer based health insurance arrives.

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 don't have to worry about turning people away as long as they get the numbers right (which apparently they did), \$.50 per employee every other week. That was the true cost. The school system payments protected the hospital's cash flow, so the hospital stayed in business.

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

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. There was no outpatient doctor's coverage.

Fifth, community rating. The Dallas School System paid \$.50 per person every other week, regardless of individual medical status. There was 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 system: lack of consumer choice. As developed initially 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 'in-network'

The Baylor Hospital / Dallas School System deal worked so well that other hospitals soon 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 treatment, 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.

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 lost vertical integration. (More on this coming up soon.)

Back to Dallas. The hospitals are cranking along with the employer based financing model. They're very happy. They're making money. And then one of the Blues brothers comes along – Cross or Shield, I don't remember which – and offers 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.' Sounds pretty appealing, right?

Doctors looked at this and said, "Hey, we want in on this too." They organized a second Blues brother so doctors could get paid because the same depression was affecting all medical providers, both hospitals and physicians. Blue Cross for your doctor's bills and Blue Shield for your hospital bills (or maybe the other way around. Wikipedia didn't say when I looked it up.) Both organized to protect provider incomes.

And both – conceptually, if not in real life – competed with vertically integrated hospitals, like Baylor University Hospital was at the beginning with the Dallas School System.

The Blues developed a couple of very clever ideas in the 1930s. First, from a marketing point of view, they offered this very attractive provider choice option. Very appealing to many consumers.

Second, they began searching for the healthiest subscribers. An interesting business idea: 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 Blues 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.

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. The healthy pay less, the sick pay more but there's no value created: the total medical costs remain the same. But some people win and others lose.

This financing system has little to do with getting people healthy, or creating value. That was not its intention. It was designed to protect physician and hospital income. That was the original Baylor idea. Then carriers came along to make a profit on consumer demand for choice. The demand for choice leads 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.

As soon as you split finance and service provision there's an incentive on me, the doctor, to do more treatments. You're paying me by treatments, so I will do more treatments. 'That guy's got a sore shoulder that's probably due to a rotator cuff tear, so I'll operate on his rotator cuff.' Fee for service provides an incentive for doctors to do more procedures and hospitals to admit more people.

You, on the other hand, the carrier, want to limit the number of treatments. You want to ask if I have to do that procedure. We fight all the time. My clinical judgment (influenced, perhaps – at least psychologically – by the fee-for-service payment formula) vs. your financial judgment (influenced, perhaps – at least psychologically – by the same fee-for-service formula. You don't really trust my clinical judgment.) That's the conflict between healthcare payers and medical service providers.

Let's remember where we are. We're still in the 1930's and we're talking about the growth of the employer based system. Little cost control. We've developed the split between finance and service provision. Finance people will say, "You really don't need to do that procedure," and the service provider says, "Yes I do. Yes I do."

The Problem of Measurement in Fee for Service Medicine

There's a related problem in fee-for-service medicine – the problem of measurement. How well does a particular physician treat his/her patients? How well does a particular hospital perform certain surgical procedures? How well does a particular treatment work?

These are enormously difficult questions to answer. We do not even today have good measurement criteria or good data – and we had even poorer criteria and data in the 1930s. The data that we can measure might not be the most important. Remember that our healthcare goal is to extend life or improve life quality. We do not yet fully understand which treatments today will lead to longer lives in 30 or 40 years. Nor do we fully understand which treatment qualities will lead to long term life quality improvements.

We can only measure some aspects of medical treatments – surgical mortality rates, hospital infection rates, 30-day hospital readmission rates, for example. These may not always be the most significant outcome data, though they may be useful for some patients.

Whose interests are served by measuring or publicizing this information? Not the providers. They get paid fee-for-service for the *quantity* of medical care, not the *quality*. Publicizing outcome data may harm them economically. Thirty day hospital readmission rates may show that Hospital A provides poorer patient treatments than Hospital B. Or that Surgeon Z has a higher mortality rate than Surgeon X.

The risks of either inappropriate or unflattering outcome data becoming public were so great during the inception of our employer based system that providers fought against its release. The fee-for-service system suited their interests far better than any outcome based payment mechanism.

The fee-for-service / component payment structure suited their interests in a different way also. Absent good data collection, each physician – responsible only for his/her specific tasks – can argue 'I did my job correctly. The fault lies elsewhere.' Physicians act as subcontractors, narrowly defining their individual tasks, rather than as general contractors responsible for the life of the patient. This follows directly from payment systems that developed from the Split between finance and service delivery.

Fee-for-service / component financing serves provider interests, is inflationary and expensive, and is not designed to improve patient health. It's only 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.

The Impact of World War II

Let's continue with our historical / conceptual history of employer based health insurance.

During World War II, or perhaps as a function of it, more and more people got insured, most notably people in the military. They continued with insurance coverage after the war. In the relatively short post-war period we get lots more Americans covered for hospitalization insurance.

1942: 10 million hospital insurance / health insurance subscribers

1946: 32 million

1951: 77 million ³⁴

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. These helped turn hospitals from infection breeding institutions into patient treatment and improvement centers. Other technological innovations followed. These improved the quality of medical care, or the supply.

Third, the Federal wartime wage and price freezes fostered the development of 'fringe benefits' such as health insurance. These reduced the cost of insurance to the individual consumer and further helped stimulate demand. It's a pretty interesting story just how these developed.

³⁴ Richmond and Fein, The Health Care Mess pages 30 - 38

The government decided during the War to freeze wages and prices - to avoid domestic economic difficulties and help focus our economy on war production. Employers could not raise wages to attract new workers or to reward their best employees. The government controlled this aspect of employee compensation very tightly.

But the government allowed employers to offer fringe benefits such as health insurance. This was how employers could attract new talent and retain their current employees. 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 – as that was illegal during the war. Fringe benefits were simply a mechanism to get around the wartime wage freeze.

As we grew in 9 years from having 10 million to 77 million insurance subscribers in this country, the health insurance industry developed and gained political power. It lobbied Congress for favorable legislation. It applied political pressure. It acted, in short, just like all other powerful industrial groups.

The Hill Burton Act and IRS decisions strengthen 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 started 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 what health insurance ultimately financed. The government stimulated sales of employer based health insurance by subsidizing the price through the tax exemption.

To understand how this is a subsidy, let's look at both the employer and employee tax situations. The employer buys a \$100 insurance policy for an employee, and, prior to the IRS regs, pays corporate income tax on the \$100 ---- let's say that was 50%. So the employer's total cost was \$150: \$100 for the policy and \$50 for the income tax on that \$100.

By making the payment tax deductible to the employer – that means by foregoing the corporate income tax on that \$100 - the government reduced the cost. Health insurance now only costs the employer \$50; the employer takes a 50% tax deduction on the \$100 payment. That's a big savings compared to the previous \$150 expense.

The employee received this \$100 employment benefit. Prior to the IRS regulatory change, he/she would have paid their marginal tax rate on this income --- let's say 30%. By making this tax free to the employee – that means by foregoing the personal income tax on the \$100 – the government contributed \$30. In other words, the government subsidized the employee who received health insurance by \$30.

An interesting note from the employee point of view. \$100 in benefits is more valuable than \$100 in salary. The \$100 in salary is taxable, so nets only \$70. Remember our discussion above that 'My employer pays 75% of my premium.' I suggested that the employer doesn't care if he/she pays salary or benefits – the employer only cares about the total cost.

But the employee, according to many economists, does care. The employee prefers benefits since they're not taxed. The employee's foregone salary, according to this argument, is more valuable than benefits since it's not taxed. (I'm not sure I buy this argument completely but it does give me pause to consider.)

This subsidy for health insurance was so effective that the rate of Americans with hospital coverage skyrocketed. In the mid-1950s, about 45% of Americans had hospital insurance. By 1963, 77% had hospital coverage, and an additional 50% had some form of physician coverage.³⁵

The favorable tax treatment of fringe benefits led to healthcare inflation from higher *hospital* prices – because more people could afford to use hospitals.

Over this time period two strange incentives evolved in our healthcare marketplace: an *excessive hospitalization* incentive and an incentive to *cover the unemployed*. These two conditions merged in the late 1960s and 1970s. Their combined effect became clear by the 1980s as our health insurance costs skyrocketed and our employer based financing model became even more firmly entrenched.

Excessive Hospitalization Incentives

By the mid-1960s over three quarters of Americans had hospitalization insurance, paid for by employers and subsidized by the government. Hospitalizations became essentially free to patients, creating, in the words of Harvard Professors Richmond and Fein a 'not-so-subtle perverse incentive to hospitalize individuals.'

³⁵ Enthoven and Fuchs, 'Employment Based Health Insurance: Past, Present and Future' Health Affairs, Nov/Dec 2006

This was the case even for diagnostic tests that could have been performed on a less costly outpatient basis, they say. Over time the hospital became all the more important and central to the delivery of healthcare services.

This increased the need for health insurance:

Since medical care became more costly, insurance became more useful (indeed, necessary). In turn, the presence of insurance helped underwrite a buildup of resources and an upgrading of technology that added to costs and made insurance even more valuable.³⁶

Remember the incentives here.

- Employees liked the system because it appeared free to them;
- Carriers liked the system because the government subsidized their product (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 was subsidizing their health insurance payments, so they felt the pain only partially.

Our healthcare system was hospital based – not really interested in preventive care (hospitals couldn't charge much for that); not really interested in public health (the field was only just developing); not really interested in outpatient or chronic care. Providers focused on hospital care because that's where the money was.

Hospital insurance stimulated the excess use of hospitals, which created more need for hospital insurance. Three byproducts:

- First, we used hospitals for almost all medical care, even if less expensive setting existed;
- Second, we developed fewer outpatient, home based, preventive or non-hospital types of medical care;

³⁶ Richmond and Fein, op. cit., pages 38 - 39

- Third, we continued to underfund social program. All this hospital growth and funding (largely from government programs and tax subsidies) crowded out social service investments.

Yet this third issue was tremendously important. Let me quote Professors Richmond and Fein on the relative importance of hospital investment and public health investments.³⁷ And remember: these were two highly respected Harvard Medical School professors. Richmond, in fact, was US Surgeon General in the Carter administration.

- ‘A growing professional consensus holds that the health gains since WWII were largely **the consequence of applying our knowledge of health promotion and disease prevention rather than improved clinical care...**’ (i.e. public health investments)
- ‘The revolution in biology subsequent to World War II, a revolution that had brought many advances to clinical care, as yet **had only marginal effects on improving our vital statistics**’

Social spending had a bigger impact on our national health gains than did hospital investments! We invested the wrong way (assuming our healthcare investments were aimed at promoting health).

How Could Employers Afford Health Insurance Premiums after World War II?

What set of circumstances allowed this system to develop? Why was the employer based system healthy and growing until the late 1900’s, then in decline?

It turns out that for a number of years, this 40 year period more or less, many countries were (a) recovering from World War II or (b) gaining independence and expanding their educational systems. They were not economic threats to the United States – countries like Japan, India, Korea, China, or Western Europe. We dominated economically.

Our big firms in particular were very profitable. They didn’t have much foreign competition. They could afford to pay for employee healthcare. They could raise prices because nobody was competing with them to keep prices low. That’s the trend that you see from World War II to about the 1980s or so. Big firms could set the standard and then small businesses filled in the holes. All competed for labor based on offering attractive ‘salary + benefits packages’ and all could because the big firms were managing the world economy.

³⁷ Richmond and Fein, op cit, pages 92 and 94

This allowed the U.S. to have an extra cushion of money available for healthcare benefits. Even though people complained, the economy could support the excess premiums. Regulated industries - for political and various other reasons - were able to pass on the cost because our economy was stronger than any other. Unions were strong. They could demand health insurance and the big firms could afford it.

The key factors that fostered employer based health insurance post World War II all changed in the 1980s and 1990s:

World Economy, 1945 – 2000 +/-

Little foreign competition for American manufacturers;

Japan and Western Europe needed time to rebuild;

US manufacturers could keep prices high and afford health benefits

Importance of Large Firms, Regulated Industries and Unions

GM, US Steel, ALCOA, etc – profitable with little foreign competition. Able to share profits with employees as benefits;

Regulated industries (AT&T) – regulated monopolies were able to pass health insurance costs to consumers; they had little or no competition;

Unions were relatively strong, could bargain effectively for benefits

All these conditions changed in the 1980s and 1990s. Our ability to generate excess profits, if you will, to afford for the employers to pay for healthcare starts to disintegrate as foreign competition gets going. From World War II until about 1980 or 1990 we could afford employer based health insurance and there was no significant political group that was lobbying or arguing against it.

Medicare and Medicaid Remove Potential Political Threats to Employer Based Insurance

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

By introducing Medicare and Medicaid in the 1960s, this political force goes away. People are happy. They're not under pressure. They're not demanding universal

coverage because they've got coverage. Where are politicians going to find a block of supporters who are going to argue for single payer systems, universal healthcare? They don't exist because Medicare and Medicaid took the potential 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. This large voting bloc could have become a potent political force for universal coverage. Instead it became satisfied with Medicare.

Medicare Enrollment 1970 – 2000

<u>Year</u>	<u>Number Medicare Enrollees</u>	<u>% of US population</u>
1970	20 million	10%
1980	28 million	12%
1990	34 million	13.5%
2000	39 million	13.8%

Medicaid covers about the same population size.

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

The employer based system reaches its peak of 165 million people in 2000 and then it starts to decline. Why did it decline? Because the international economic conditions changed. American firms could no longer pass on benefit costs to their customers.

At the same time, the hospital lobbies and related groups had done such a good job of protecting their constituencies that healthcare became hugely expensive. Healthcare grew from about 4% of US GDP in 1950 to 14% in 2000 to about 19% today.

Lower cost alternatives to large general hospitals – freestanding outpatient clinics, for example – never took hold, presumably due to hospital lobbying efforts. Similarly, specialty hospitals – local diabetes clinics, for example – also failed to establish themselves, again presumably, for the same reasons. The Affordable Care Act, for example, didn't actually prohibit establishment of physician-owned specialty hospitals, but placed such burdensome requirements on their establishment as to destroy this as a potential market force.

By the early 2000s we had developed a perfect storm for healthcare system financial catastrophe. Our healthcare costs – primarily hospitalizations due to the government subsidies of fringe benefits – rose far faster than GDP. Meanwhile, American businesses' abilities to pay for their employee's health coverage diminished in the face of foreign economic competition.

Mandates

As healthcare became increasingly costly, carriers (reflecting employer's interests) tried denying services to patients. This spurred a political reaction, pitting patients and medical provider interests against employers. Perhaps the most impressive display of patient and special interest power presented itself by the growth of healthcare mandates.

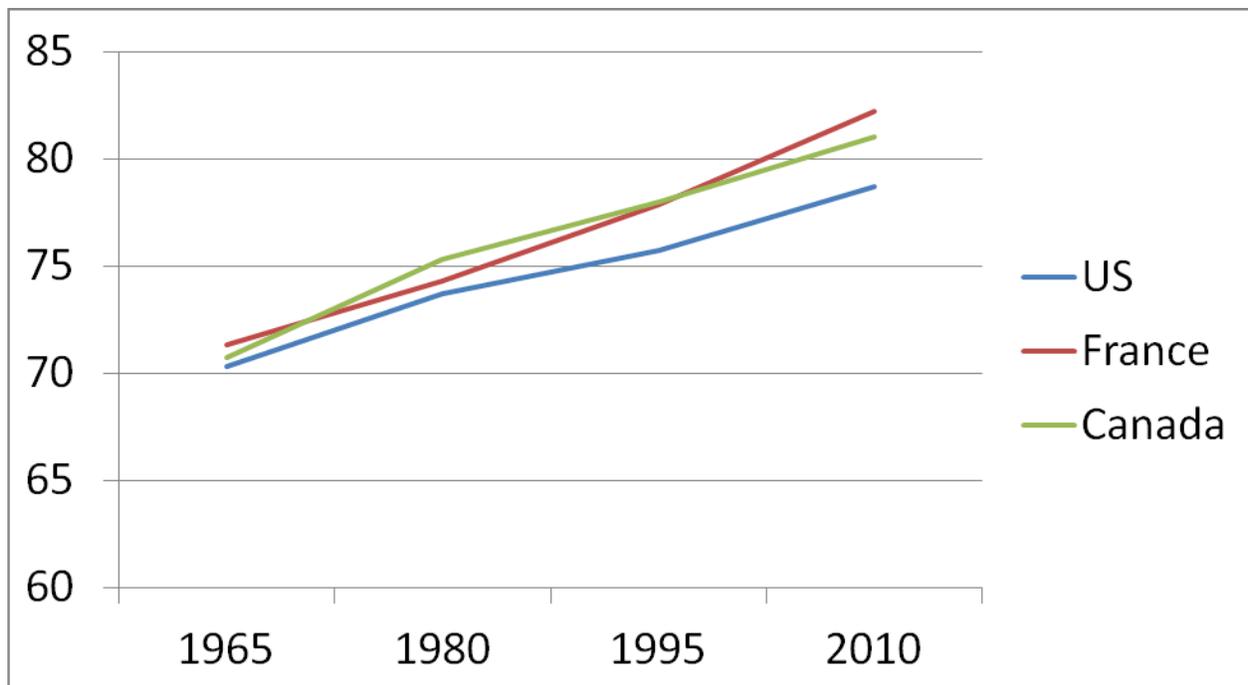
The number of state mandated services grew from 7 in 1965 to 1961 in 2008. These reflected the political power of special interests to protect the incomes of their members. Chiropractors lobbied for chiropractic to be included as a benefit in insurance policies. Nurses lobbied for minimum nurse-to-patient ratios. Voters generally supported mandates as protection against insurance carrier abuses.

Mandates raise prices. This increases the need for insurance but makes insurance less affordable, which increases the need for government subsidies (tax breaks and, in some states like Massachusetts, premium supports), which reduces the amount of money available for social programs and 'health promotion and disease prevention' activities (in the words of Richmond and Fein ³⁸) which in turn medicalizes social problems and raises costs.

But perhaps most disappointing of all, mandates don't improve patient health much. Consider this graph comparing American life expectancies to French and Canadian as we increased the number of healthcare mandates between 1965 and 2010. You can see how our life expectancy rates fell slightly below the trend line of the French and Canadians even as we required more healthcare services for our patients.

Instead, healthcare mandates are political reflections of the economic power of various healthcare groups. They have, apparently, little impact on health. But they insure that the various medical interest groups get paid.

³⁸ Richmond and Fein, *The Healthcare Mess*, page 92



Consumer Driven Healthcare to the rescue (or not)

The first major attempt to adapt employer based healthcare to these new economic realities was CDHC or Consumer Driven Health Care. The term ‘consumer driven health care’ arose primarily 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 – more or less employing the consumer sovereignty idea we discussed earlier in this chapter. Only after satisfying the deductible does insurance pay. Then, depending on the specific plan design, insurance pays all or part of additional medical expenses.

Problems equating high deductibles with consumerism in healthcare

Unfortunately, CDHC policies as ‘consumer sovereignty light’ 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.

Or the deductible has little impact on a patient facing an expensive procedure. What's the difference to this 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 the past several years.

Healthcare Consumption by % of Our Population ³⁹

- 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

So the healthiest 50% of our population accounts for only about 3% of medical spending. These are typically the folks who purchase CDHC products and who often spend less than \$1000 annually. Cutting their spending by 20 or 30% would have *virtually no impact* on *overall* medical spending or trend.

Here's the same chart using 2010 spending data. In 2010, total US healthcare costs reached about \$2.7 trillion for the approximately 310 million of us. Though the 2010 average annual healthcare spending per person was about \$8,700,

- The 1% heaviest users (3.1 million people) averaged about \$209,000 each;
- The 5% heaviest users (15.5 million people) averaged about \$85,000 each;
- The 10% heaviest users (33 million people) averaged about \$52,000 each;
- The 50% lightest users (155 million people) averaged about \$500 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.

³⁹ Yu, et al, 'Medical Expenditure Panel Survey Statistical Brief #81', May 2005, Agency for Healthcare Research and Quality

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.

Consider these data points:

- The US overall inflation rate averaged about 3% per year from 2002 – 2012.⁴⁰
- US healthcare premium increases averaged about 6.2% between 2002 and 2009 – right in the historical range of gdp + 3 – 5%.⁴¹
- The World Bank’s US 2015 gdp growth estimate (I’m writing this section in February of 2015) is 3%. The various Massachusetts carriers estimated 2015 trend at the last meeting of the Massachusetts Association of Health Underwriter board of directors meeting in 2014 (I’m on that board) at about 6 - 8%. Again, right in our historical range.⁴²

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 the estimates for 2012 and 2013, the latest years available from the OECD’s Health Statistics spreadsheet.⁴³ I also included estimates from China and India for comparative purposes, though these numbers are pretty squishy.

⁴⁰ <http://www.usinflationcalculator.com/inflation/current-inflation-rates/>

⁴¹ OECD Healthdata 2014.

⁴² The main 2015 cost drivers are specialty pharmaceuticals, not inpatient utilization or cost rates. I suppose that indicates some progress on the hospitalization front, but I wonder how happy employers will be learning that their health insurance renewals will, again, outpace inflation by a fairly wide margin.

⁴³ OECD, op cit.

Spending

US	\$8,745
France	\$4,288
Canada	\$4,602
Germany	\$4,884
Italy	\$3,183
Netherlands	\$5,178
Spain	\$2,987
UK	\$3,287
China	\$309
India	\$132

Life Expectancy at Birth

US	78.7 years
France	82.1 years
Canada	81.5
Germany	81
Italy	82.3
Netherlands	81.2
Spain	82.5
UK	81
China	74
India	64.5

Here are some 2013 Rx consumption rates per capita.⁴⁴

US	\$1010
Canada	\$771
France	\$651
Germany	\$668
Netherlands	\$450
Italy	\$514
Spain	\$492
UK	\$367

⁴⁴ Ibid.

Unfortunately, 'consumerism as deductibles' falls short of real healthcare consumerism as these charts and analysis suggest.

Healthcare Exchanges – a new twist from ObamaCare?

I'll spare you a lengthy description of Exchanges as envisioned by the Affordable Care Act, as these are in development and unfolding as I write this chapter. I have nothing useful to say about them at this time. They may just be another shiny new object or may be a paradigm shift. I don't know. We'll need a few years to understand their impact.

My chapter on the Affordable Care Act describes healthcare reform in some detail so I'll refer readers to that.

Three additional problems with having employer based health insurance as the centerpiece of our healthcare financing system

Price structure: Today's health insurance policies are priced at 'employer contribution + employee contribution'. Losing your job may lead to a quadrupling of your health insurance premiums, assuming that your employer pays 75% of the premium.

Labor market distortions: Some employees either choose jobs or remain on their jobs for the health insurance. Two main reasons for this are

- cost – employer contributions reduce employee costs, and
- access – pre-existing conditions traditionally made health insurance unavailable to some people if they changed from their current jobs, though the Affordable Care Act has changed much of this.

One research paper estimated that employer based insurance reduced job mobility by 25 – 40% ⁴⁵ at least until the ACA impacts work their way through our healthcare system.

Impact on the Federal budget: Tax breaks for employer based health insurance (not income taxable to the employer or employee) constitute the biggest tax break / loophole

⁴⁵ Gruber & Madrian, 'Health Insurance, Labor Supply and Job Mobility' Working Paper 8817, NBER, March 2002

in the federal budget, an estimated \$260 billion annually.⁴⁶ This is roughly 3x the mortgage interest tax deduction.

This tax break is regressive: higher income people with expensive policies are subsidized by lower income people with less expensive policies.

Many on Capitol Hill seek to reduce this tax break. Here, for example, is Representative Paul Ryan who ran for Vice President in 2012 with Mitt Romney. The tax deductibility of employer based health premiums

tilts the compensation scale toward ever-greater (tax free) benefits and away from higher (taxable) wages. This isn't just a big driver of runaway healthcare costs, as more dollars chase the same amount of services. It's also a big reason why too many Americans haven't seen a raise in a long time.⁴⁷

Ryan, among other things, echoes my suggestion that employers pay premiums by withholding wage increases from employees. \$1 of benefits is worth more to the employee than \$1 of wages since the wages are taxed.

Paul Starr, Princeton Professor of Sociology who normally sits far to the left of Ryan, agrees with him on this point, saying the employer based premium tax exclusion has

long been the target of criticism on both distributive and allocative grounds: it provides the biggest subsidies to higher income employees with the most generous insurance, and it contributes to America's inflated health spending by obscuring the true costs. Nixon and Clinton considered limiting the exclusion, but each rejected the idea because of political opposition.⁴⁸

Summary: Employer Based Health Insurance

Employer based insurance provides some 160 million Americans with health coverage. But it does so remarkably poorly.

⁴⁶ Health Affairs *Health Policy Brief*, August 1, 2013 'Premium Tax Credits', http://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=97

⁴⁷ Turner, Capretta, Miller and Moffit, Why ObamaCare is Wrong for America, Forward

⁴⁸ Paul Starr, Remedy and Reaction, page 258

- By setting powerful employer business interest groups against far weaker population health interest groups, it's a key cause of underfunding our various (health related) social services
- The employer based structure harms **employers** by putting an unnecessary (for widget production) economic and administrative burden on them.
- It harms **employees** by reducing their medical care options
- It harms **patients** by locking our system into one focused on short term cost control rather than long term outcome improvement, or, in economic terms, value creation
- It harms **carriers** by reducing their ability to develop high value products and by forcing them to satisfy employer needs rather than patient, and
- It harms **providers** – doctors and hospitals – by reducing their ability to focus on long term outcomes and treatment excellence, but rather on short term costs, carrier and network referral requirements and associated administrative tasks aimed at reducing moral hazard.

Where will this take our healthcare system? Stanford Business School Professor Alain Enthoven summarizes in prophetic terms. Our employer based model, he suggests, will unfold 'like a Shakespearean tragedy: known, tragic flaws taking their inexorable toll.'⁴⁹

Or, as Lady Macbeth might put it,

The employer based healthcare financing system simply doesn't work. Band-aids and piecemeal reforms cannot not fix this fundamentally flawed model.

(I've admittedly taken some pretty generous poetic liberties here. Lady Macbeth actually said 'Here's the smell of the blood still. All the perfumes of Arabia will not sweeten this little hand'. It's not easy ending a chapter on employer based healthcare financing with a Shakespearean quote!)

⁴⁹ Health Affairs, Forum on Employer Sponsored Health Insurance, 2006
<http://content.healthaffairs.org/content/25/6/1537.full>

Review Questions

Answers on next page

1. This chapter suggested that Moral Hazard is endemic to health insurance. What is moral hazard?
 - a. People get more care than they need because it appears free to them
 - b. People with poor moral standards get more care than appropriate because they are greedy
 - c. There is a close correlation between high morals and low healthcare costs
 - d. 'Moral hazard' addresses the mind-body relationship. Basically moral people sleep better so remain healthier than lose moral people who more typically suffer from sleep disorders

2. This chapter suggested that disconnecting health insurance payers from healthcare users leads to inefficiencies. What does 'disconnecting health insurance payers from users' mean?
 - a. Payers are employers but users are employees
 - b. Payers are generally government entities that pass rules and legislation but users – who must implement those rules – are employers
 - c. Payers are, in reality, tax payers who fund most healthcare in this country even though employers are the biggest cohort of users
 - d. Payers are carriers who actually pay doctors and hospitals for their services while 'users' are all the entities that make up the bills, like pharmaceuticals, device manufacturers etc

3. This chapter suggested that having 1 year long health insurance policies leads to systemic inefficiencies. Why?
 - a. Carriers and providers try to control short term spending to keep renewal increases low, while some 70% of spending goes to patients with chronic diseases that require a long term focus.
 - b. Renewing annually creates far more paperwork, and therefore costs, than a more efficient system would have
 - c. Most employers would prefer longer term policies – 10 or even 20 year long policies – so they could plan and cut overhead
 - d. One year long policies opens the door to expanded lobbying on Capitol Hill from groups that offer the 'newest and greatest' short term health insurance fixes

4. This chapter suggested that having employment as the core of our healthcare financing system leads to underfunding social programs (that often have a major impact on health). Why is that?

- a. Many of the social causes of medical problems – poor nutrition or poor housing, for example – are not the employer’s financial responsibility. As such, they are often left out of our health insurance discussion, since carriers and employers focus so intently on the next year’s policy renewal price.
- b. Social programs, as many studies have shown, have little to no impact on medical care or spending
- c. Employers lobby aggressively to cut social spending programs which might, if they worked well, increase the employer’s premium costs
- d. Employers, brokers and carriers combine to develop fully comprehensive insurance plans. Anything not included in those plans, virtually by definition, is not relevant to promoting good health.

5. Who pays health insurance premiums?

- a. The employee by foregoing wages
- b. The employer by foregoing profits
- c. The government by crediting the premiums equally to the employer and employee
- d. Hospitals by undercharging for their service

6. Why do we have healthcare mandates in this country?

- a. To improve care quality. Since the introduction of mandates our 30 day readmission rates have fallen almost to zero
- b. To improve care outcomes. Since the introduction of mandates, our average longevity at birth has increased by almost 100 years
- c. To reduce infant mortality. Since the introduction of mandates, our infant mortality rates have fallen to the lowest in the world
- d. To reward lobbying by influential groups like nurses (who lobby for nursing mandates), chiropractors (who lobby for chiropractic mandates), pharmaceuticals (who lobby for pharmaceutical mandates) and similar.

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Correct answers in bold

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Chapter 2: Some Government Incentives and Tax Benefits that make Wellness Programs necessary and ineffective

How much impact can medical care have on a population's health? In other words, does an extra \$100 billion spent on medical care make us healthier than

- \$10 billion for cleaner air
- \$20 billion for better housing
- \$30 billion for nicer public parks and
- \$40 billion for better public transportation systems?

Probably not. In fact Bill Frist, former Republican US Senate Majority Leader and a cardiac surgeon claimed

Health is not health services. Health is behavior, it's genetics, it's socio-economic status, it's disparity, it's environment.

Health services has about a 15 – 20% impact.⁵⁰

Frist's in a good position to know as he addresses the issue from both a public policy and medical professional point of view.

The Massachusetts Health Policy Commission's 2013 Cost Trends Report – consider this just one of dozens of government reports that study the same issues and arrive at the same conclusions – agrees with Frist's assessment, stating

Research shows that [medical] outcomes are driven largely by social and behavioral factors, along with public health policies, while **health care services delivered account for only 10 percent** of general variation in health status.⁵¹

Academic researchers agree too. Consider the observations by of Harvard Medical School Professors Jules Richmond and Rashi Fein that our phenomenal health gains since World War II

⁵⁰ CNBC Meeting of the Minds: The Future of Healthcare, broadcast July, 2009

⁵¹ 2013 Cost Trends Report, Massachusetts Health Policy Commission, p 22, direct quote with emphasis added

were largely the consequence of applying our knowledge of health promotion and disease prevention rather than improved clinical care...the revolution in biology subsequent to World War II, a revolution that had brought many advances to clinical care, as yet had only marginal effects on improving our vital statistics.⁵²

Let's not quibble about medical care's actual percentage impact, but agree that it's probably somewhere between Frist's and the Massachusetts Health Policy Commission estimates, probably around 15%. This means other issues – behavior, genetics, socio-economic status, disparity and environment – account for 85% or so of a population's health status.

The question for this chapter: how have government programs impacted our behavior, socio-economic status, disparity and environment...and consequently healthcare costs and outcomes? My point of departure: government programs that improve our behavior and environment will reduce our demand for health services. Government programs that make us less healthy will increase our demands for medical services.⁵³

Understanding *Demand* for Healthcare

In broad terms, demand for medical services comes from two sources: population age and population health. Let's look at population aging briefly first, then focus on the far more interesting issue of population health.

The US population median age has increased annually from 28 in 1970⁵⁴ to 37.6 in 2014.⁵⁵ As we age, we cost more medically. One estimate broke this down by age group using 2004 data.⁵⁶ Consider the spending ratios in the chart below rather than exact costs: people in the 65 – 74 age bracket cost about 3x more than those in the 19 – 44 range. These ratios remain approximately the same over time even as healthcare costs rise per capita.

⁵² Richmond and Fein, *The Healthcare Mess*, pages 94 and 92

⁵³ Some researchers argue that there is an insatiable and always increasing demand for medical services, that as we get richer and our basic needs are less expensively met, we will devote increasing resources to medical care. I don't necessarily disagree with this reasoning but suggest that a less healthy, more obese population will need more medical services than a less obese one. I think the two theories are compatible.

⁵⁴ <http://scholar.lib.vt.edu/theses/available/etd-12098-13236/unrestricted/CHAP2-3.PDF>

⁵⁵ CIA Factbook estimate <https://www.cia.gov/library/publications/the-world-factbook/fields/2177.html>

⁵⁶ "U.S. Health Spending By Age, Selected Years Through 2004." By Micah Hartman and others. *Health Affairs*, November 2007.

Annual Healthcare Spending by Age Group, 2004 ⁵⁷

Age group (years)	Annual personal healthcare spending per person
0-18	\$2,650
19-44	\$3,370
45-54	\$5,210
55-64	\$7,787
65-74	\$10,778
75-84	\$16,389
85+	\$25,691
Average per person	\$5,276

Though demographers can extend this analysis in several interesting ways, I propose simply to accept that we, as an aging population, will spend more money on healthcare over time annually simply because our population ages, though we can discuss the efficiency and effectiveness of that medical spending, which I do elsewhere in this book.

I want to focus instead on our population's health, primarily obesity and physical fitness and discuss some government programs affecting these. While we can't do much to affect aging (except extend it) but we can do quite a bit to affect population health.

Consider these data:

- Average daily caloric consumption per American grew from 2200 in the 1970s to about 2700 in the early 2000s ⁵⁸ - a 23% increase.

⁵⁷ This chart comes from justfacts.com <http://www.justfacts.com/healthcare.asp> and uses data from the 2007 Health Affairs article cited above.

⁵⁸ See the USDA's Agriculture Fact Book, Chapter 2 'Profiling Food Consumption in America' for example <http://www.usda.gov/factbook/chapter2.pdf>. See also the USDA's Dietary Guidelines for Americans, published and updated about every 5 years

- The greatest caloric gains came from fats, oils, milk and milk byproducts and sweeteners.⁵⁹
- Some 130 million Americans are overweight (about 40% of us) and 60 million obese
- Only about 48% of American adults meet the 2008 Physical Activity Guidelines of 150 minutes of moderate exercise per week. Inactive adults have a higher risk for early death, heart disease, stroke, type 2 diabetes, depression, and some cancers.⁶⁰
- Adults with more education are more likely to meet the 2008 Physical Activity Guideline for aerobic activity than adults with less education.⁶¹
- Adults whose family income is above the poverty level are more likely to meet the 2008 Physical Activity Guideline for aerobic activity than adults whose family income is at or near the poverty level.⁶²

Obesity, caused largely by dietary and exercise behaviors, increases healthcare costs. Here are some examples courtesy of US government researchers:⁶³

- 81 million Americans suffer from cardiovascular disease. Major risk factors include high levels of blood cholesterol and other lipids, type 2 diabetes, hypertension (high blood pressure), metabolic syndrome, **overweight and obesity, physical inactivity**, and tobacco use.

Cardiovascular disease treatment costs about \$300 billion annually or 10% of all healthcare spending.

- 74.5 million Americans—34 percent of U.S adults—have hypertension. Hypertension is a major risk factor for heart disease, stroke, congestive heart

⁵⁹ Dietary Guidelines for Americans 2010, US Department of Agriculture and US Department of Health and Human Services, page 11

<http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf>

⁶⁰ See the CDC's webpage Facts about Physical Activity

<http://www.cdc.gov/physicalactivity/data/facts.html> . The 2008 Physical Activity Guidelines for Americans articulates the types of physical activities recommended along with suggested weekly time for each.

<http://www.health.gov/paguidelines/pdf/paguide.pdf>

⁶¹ <http://www.cdc.gov/physicalactivity/data/facts.html>

⁶² <http://www.cdc.gov/physicalactivity/data/facts.html>

⁶³ Dietary Guidelines for Americans, op cit. page 3

failure, and kidney disease. Dietary factors that increase blood pressure include excessive sodium and insufficient potassium intake, **overweight and obesity**, and excess alcohol consumption.

- Nearly 24 million people—almost 11 percent of the population—ages 20 years and older have diabetes. The vast majority of cases are type 2 diabetes which is heavily influenced by **diet and physical activity**.

Diabetes costs about \$150 billion annually or 5% of our healthcare spending.

Let's state this differently: obesity raises healthcare costs about as much as does 20 years of aging.⁶⁴ An obese 40 year old costs medically about the same as a healthy weight 60 year old. Remember that as we age, we require more medical care. Here the aging and obesity trends converge: we have both an aging population and an increasingly obese one.

The OECD expands on obesity's impact:

The lifespan of an obese person is up to 8-10 years shorter (for a BMI of 40-45) than that of a normal-weight person, mirroring the loss of life expectancy suffered by smokers.⁶⁵

Obesity, some studies suggest, is contagious with its spread patterns mimicking infectious diseases. In one particular study researchers found that

a person's risk of becoming obese was 2% per year, **but the risk rose another 2% for every five obese social contacts they had.**⁶⁶

Bill Walczak, Executive Director of Boston's Codman Square Health Center put this in lay terms:

In lower-income communities, there is an expectation that when you get older, your hair gets gray and you get diabetes, because it's so common.⁶⁷

⁶⁴ Strum 'The Effects of Obesity, Smoking and Drinking' Health Affairs, March 2002

⁶⁵ Obesity and the Economics of Prevention, Fit not Fat, © OECD 2010
From Executive Summary

⁶⁶ Hill, et al, Infectious disease modeling, PLOS Computational Biology, November 4, 2010, emphasis added

⁶⁷ Quoted in Boston Globe, November 8, 2010, page G6

Kenneth Thorpe, former Assistant Secretary of Health and Human Services, estimated that obesity related healthcare spending between 1987 and 2001 accounted for more than a quarter of all healthcare cost increases during that period.⁶⁸ Today Thorpe estimates, obesity adds about \$700 to the cost of healthcare per American adult per year.⁶⁹

Why are we so obese? Why does it affect low income people disproportionately? What happened since the 1970s to cause all this?

The Corn Story

Our domestic corn productivity grew dramatically, from about 72 bushels per acre in 1970 to 155 bushels in 2013 with the acreage up slightly over time.⁷⁰ This expansion is stimulated, many suggest, by the \$5 billion in annual corn production subsidies.

Our total corn production grew from 2010 to 2014 by about 11%, to 14 billion bushels.⁷¹

About 55% of this corn becomes animal feed and 5% sweetener, sometimes called high fructose corn sweetener, sometimes corn sweetener, sometimes corn sugar and even sometimes just 'sugar'.

Corn, as Michael Pollan has eloquently written, is

what feeds the steer that becomes the steak. Corn feeds the chicken and the pig, the turkey and the lamb, the catfish and the tilapia and, increasingly, even the salmon, a carnivore by nature that the fish farmers are reengineering to tolerate corn. The eggs are made of corn. The milk and cheese and yogurt, which once came from dairy cows that grazed on grass, now typically come from Holsteins that spend their working lives indoors tethered to machines, eating corn.

To wash down your chicken nuggets with any soft drink in the supermarket is to have some corn with your corn...after water, corn syrup is the principle ingredient. Grab a beer for your beverage and you'd still be drinking corn in the form of alcohol-fermented glucose refined from corn.

⁶⁸ Thorpe, The Impact of Obesity on Medical Spending, Health Affairs, October, 2004

⁶⁹ <http://www.wsbtv.com/news/news/local/obesity-related-healthcare-can-be-costly/nYy4k/>

⁷⁰ cornandsoybeandigest.com, Sept 2013 USDA Crop Production summary

⁷¹ Projection by Kansas State University, May 15, 2014

Corn is in the coffee whitener and Cheez Whiz, the frozen yogurt and TV dinner, the canned fruit and ketchup and candies, the soups and snacks and cake mixes, the frosting and gravy and frozen waffles, the syrups and hot sauces, the mayonnaise and mustard, the hot dogs and bologna, the margarine and shortening, the salad dressing and relishes and even the vitamins.⁷²

Each American, on average, consumes over **half a ton** of food that uses corn as an ingredient. Here's the breakdown:⁷³

- Total average annual food consumption average: 1994 lbs / person consisting of
 - **630** lbs of milk, yogurt, cheese, ice cream (**corn based as cow feed**)
 - **415** lbs of vegetables, mainly potatoes and **corn**
 - **264** lbs of meat and poultry⁷⁴ (**corn based as animal feed**)
 - 197 lbs of grains
 - 273 lbs of fruit, mainly water weight
 - 141 lbs of sweetener, including **42** lbs of **corn syrup**
 - **85** lbs of fat, butter & oil (**fat & butter from corn + corn oil**)

“When you look at the isotope ratios,” in American’s hair and skin according to Todd Dawson, a Berkeley biologist who’s done this sort of research, “we North Americans look like corn chips with legs.”⁷⁵

One result of the corn subsidies / cheap and easy availability of corn for livestock feed, is that we eat about 40% more meat, on average per person per year, than western

⁷² Michael Pollan, *The Omnivores Dilemma*, page 18

⁷³ From National Public Radio’s report on food consumption by correspondent Allison Aubrey, December 31, 2011

⁷⁴ Estimate from Chartbins.com

⁷⁵ Paraphrased from Pollan, *Omnivores Dilemma*, page 18

Europeans ⁷⁶ - about $\frac{3}{4}$ pound of meat per person per day. That's about 2.5 times the government recommendation of $\frac{1}{3}$ pound of meat *and beans*. ⁷⁷

The US government actually recommends against eating that much meat. Here are recommendations from the US Department of Agriculture's Dietary Guidelines for Americans: ⁷⁸

Food Groups to Encourage

- Fruit
- Vegetables
- Whole Grains

Food Groups Discouraged in Large Quantities

- Meat
- Sugar

Note the advice / subsidy discrepancy. We encourage but don't subsidize fruit and vegetables. We subsidize but don't encourage meat and sugar. Money in the form of subsidies, seems to speak louder than words in the form of recommendations.

How subsidized corn affects food prices in supermarkets

I did some detective work in 2010 and 2012 at my local Shaw's grocery store in Easton, Massachusetts. Shaw's is a typical mid-market American supermarket with some 135 stores throughout New England. It's not upscale like Whole Foods nor a budget operation like PriceRite. Shaw's prices are roughly comparable to other large chain grocery stores I've visited in my travels.

In both 2010 and 2012, I determined prices per calorie of various foods by dividing the package cost by number of servings, then by calories per serving. For fruits and vegetables, I found average calories per piece or per pound online then determined the

⁷⁶ The raw data comes from Chartbins.com. France, Italy, Germany, Britain and Switzerland average about 187 pounds of meat per person per year. We consume about 264.

⁷⁷ See the USDA Dietary Guidelines for Americans, 2005 edition.

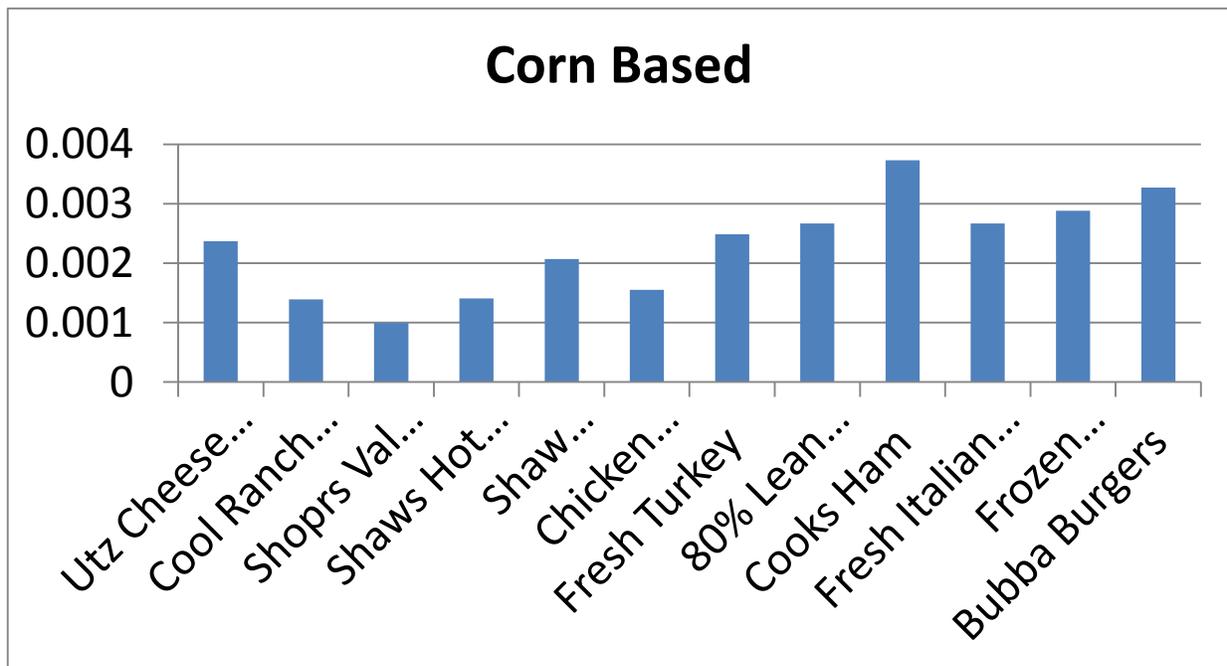
⁷⁸ I refer specifically to the 2005 recommendations because they're so clearly stated. Recommendations from other years say pretty much the same things.

price per piece or pound at Shaw's. (I'm not sure the local branch manager was pleased with my detective work but, as I recall, I forgot to ask permission.)

The graphs I plotted for food costs/calorie were very similar both years. I'll reproduce the October 21, 2012 results below.

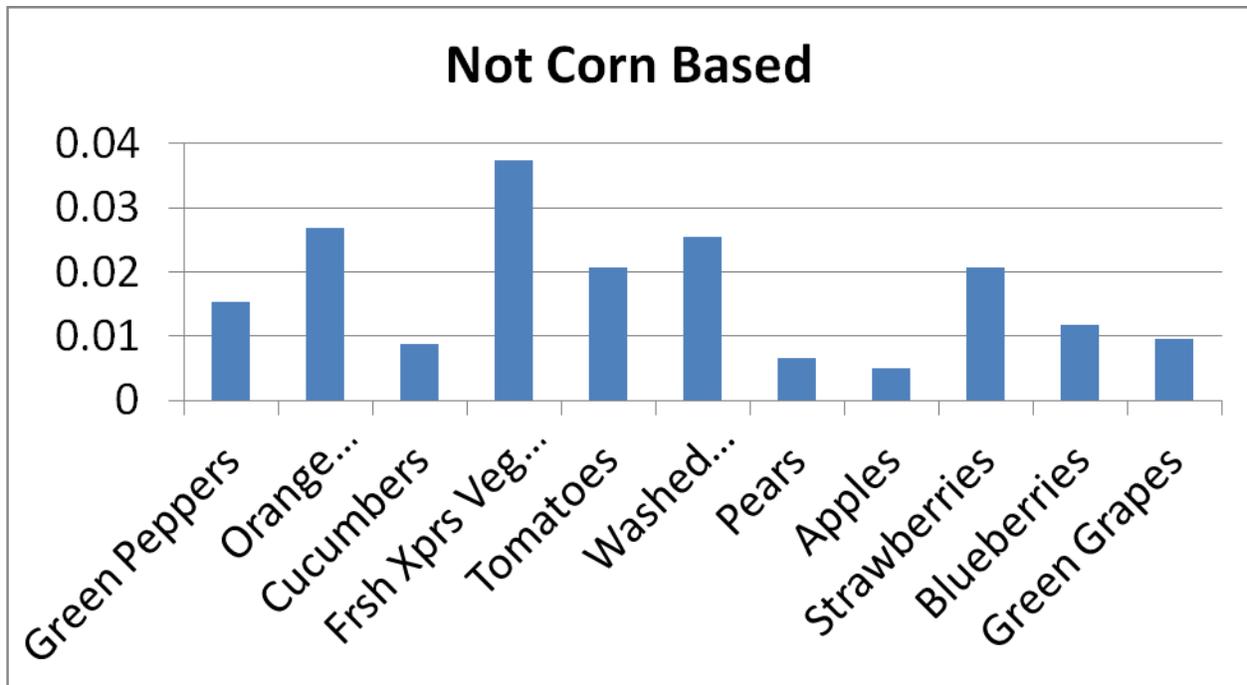
My goal in all this: determine how much it costs to purchase 2700 calories of corn-based products and compare that to 2700 calories of non-corn based. I wanted to see the impact of the corn subsidy on actual daily, monthly and annual food costs for an average American.

The first chart shows the cost/calorie of corn based foods like cheese doodles, Shoppers Value Corn Chips, Shaw's brand hot dogs and chicken legs, 80% lean ground beef, fresh Italian sausages and frozen meatballs.



As you can see, these foods cost about 2 tenths of 1 cent per calorie.

The second chart shows costs of some non-corn based foods like green and orange peppers, Fresh Express salad bags, washed green beans, tomatoes and apples – the foods encouraged by the US Department of Agriculture.



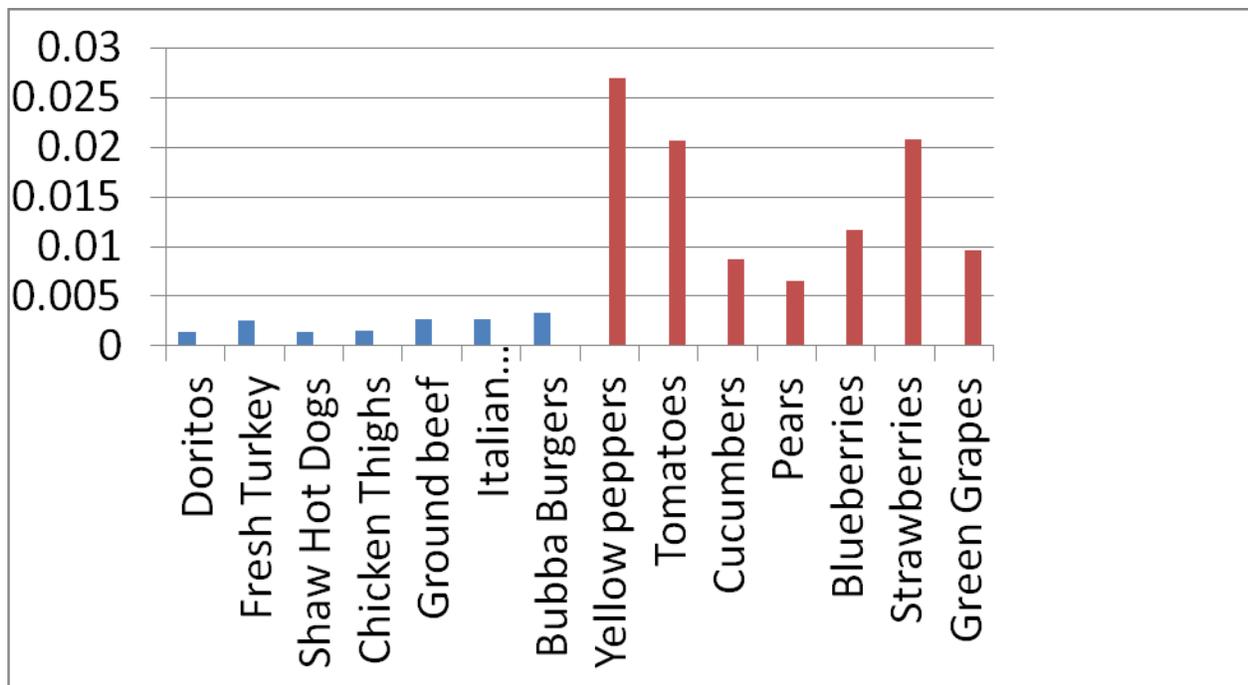
These foods average about 1 cent per calorie.

Let's assume you're a cash-strapped, low income person, trying to feed your family. You need to purchase 2700 calories of food per day to satisfy them, so when you buy the non-corn based 'healthier' foods, you choose the cheapest like apples and pears, costing about half a cent per calorie. Orange peppers, Fresh Express salad bags and strawberries become luxuries.

The difference between the *average* cost of corn-based foods and the *lowest* cost non-corn based is about 1/3 of a cent. (I'm intentionally underpricing the healthier foods to minimize the food cost differences people face; I want to understate the case here, not overstate it.)

Multiply that 1/3 of a cent times 2700 calories and you'll see that the cost of eating better runs about \$9/person/day. That's not the cost of *eating*, but of eating *better*. People who eat orange peppers, bags of salad, tomatoes and strawberries see a bigger cost difference.

Here's a comparison chart showing corn based (subsidized through the corn subsidy) foods on the left in blue, and non-corn based / non-subsidized on the right in red.



At the \$9 per day premium for eating better, our average American needs to spend \$3000 annually to eat better.

The average household of 2.5 people spends about \$7500 annually and a family of 4 about \$12,000.

Remember, again, that's not the cost of *eating* but of *eating better* due to the corn subsidy, centrality of corn in our food production system and lack of subsidies for many fruits and vegetables.

Let's correlate this to saturated fat and cholesterol, both discouraged by the US Department of Agriculture's Dietary Guidelines:

- All animal based foods – low cost these days, thanks in part to the corn subsidy - contain fat and cholesterol
- Cheese consumption – high in fat and cholesterol – has tripled since the 1970s.

Perhaps as a result, Americans combine cheese and meat far more frequently than do people in other countries. See the popularity of Philly Cheese Steak sandwiches, cheese burgers, ham and cheese sandwiches and Egg McMuffins (a delicious combination of corn based eggs, ham and cheese).

One BBC TV show, Top Gear, aired an amusing Q & A (sorry, I don't remember which episode. I normally watch it late at night) asking How to be an American: 'wear cowboy boots and put cheese on everything'. I guess that's how we're perceived internationally. Perhaps with good reason.

- No plants contain animal fat or cholesterol. This led Deepak Chopra and 3 other academic physicians to write in the Wall Street Journal ⁷⁹

The disease that accounts for more premature deaths and costs Americans more than any other illness is almost completely preventable simply by changing diet and lifestyle.

But changing diet and lifestyle may be cost prohibitive for a large section of our population. Indeed, the Economist analyzed American food prices and concluded

Americans, increasingly, cannot afford to eat a balanced diet [because] ... Over the last four years, the price of the healthiest foods has increased at around twice the rate of energy-dense junk food. ⁸⁰

Let's switch now from discussing the 55% of corn that becomes animal feed to the 5% that becomes sweetener.

High Fructose Corn Sweetener and other corn byproducts

As our corn productivity increased in the 1980s and 90s, corn byproducts replaced sugar in breads, cereals, yogurts, soups, lunch meats and other products since corn was so cheap.

- HFCS consumption 1970s was about 26 pounds per person per year
- HFCS consumption 2000: 85 pounds per person ⁸¹

Corn subsidies leading to less expensive corn sweeteners saved Coke and Pepsi about \$100 million annually over the past 20 years according to studies from Tufts University

⁷⁹ Chopra et al, Alternative Medicine is Mainstream, Wall Street Journal, January 9, 2009

⁸⁰ *Economist* 7/9/11, If you build it, they may not come

⁸¹ USDA agricultural fact book

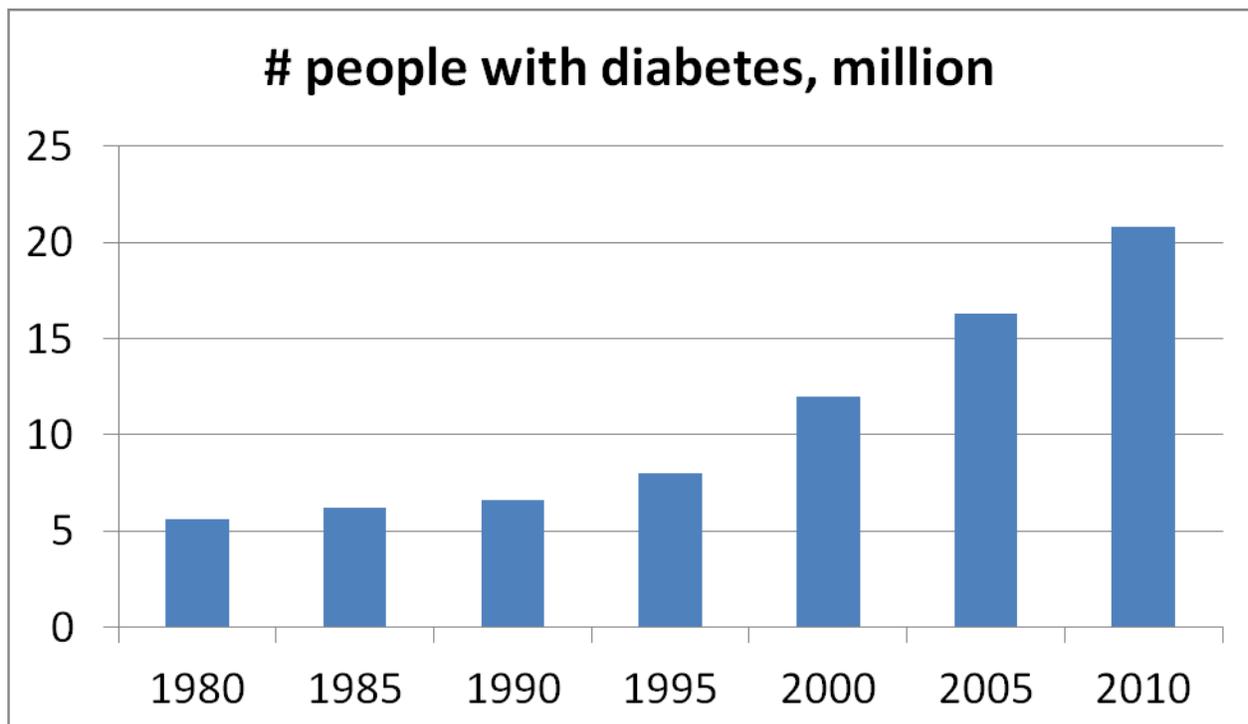
researchers.⁸² Soda consumption has doubled since the 1970s to about 50 gallons per person per year.⁸³

Michael Pollan summarized this nicely in the New York Times:⁸⁴

Nearly 10% of all the calories Americans consume now come from corn sweeteners; the figure is 20% for many children [because sweeteners are in *everything*]...

Sweetness became so cheap that soft drink makers, rather than lower their prices, super-sized their serving portions and marketing budgets.

It's probably no coincidence that the wholesale switch to corn sweeteners in the 1980s marked the beginning of the epidemic of obesity and Type 2 diabetes in this country.



⁸² Harvie and Wise, Sweetening the Pot: Implicit subsidies to corn sweeteners and the US obesity epidemic, <http://www.ase.tufts.edu/gdae/Pubs/rp/PB09-01SweeteningPotFeb09.pdf>

⁸³ Duffrey, Food Price and Diet, Archives of Internal Medicine, March 2010

⁸⁴ Pollan, When a crop becomes king, NY Times, July 19, 2002

**The rational response?
Eat fast food!**

Economically, if you had just \$5 to maximize your calories, that's certainly a way to do it, according to Dr. Lauren Smith, Medical Director of the Massachusetts Department of Public Health.⁸⁵

Consider these data points about Massachusetts as one sample state:

- Average Massachusetts household income: about \$67,000
- Average Massachusetts household size: about 2.5 people

At 20% of income for food (my estimate) the average person in Massachusetts has about \$15 to spend on food daily. What meal can you buy for \$5?

The KFC \$5 Fill Up, 3 Piece Tenders! You get a whopping 1120 calories, 95 grams of sugar and 18 grams of saturated fat. Here's the nutritional information, downloaded from the KFS website in December of 2014 with notes about the corn bases:

	Sugars (grams)	Calories	Saturated Fat (grams)	Sodium (mg)
3 Chicken Tenders (corn fed)	0	380	2.5	940
Mashed potatoes & gravy (corn sugar)	3	120	6	530
Flaky biscuit (corn butter)	2	180	6	530
20 oz Mountain Dew (corn sugar)	75	280	0	130
Choc Chip Cookie (corn sugar, butter)	15	160	3.5	90
Totals:	95	1120	18	2220
US Daily Recommendation	25	2000	11 – 13	2300

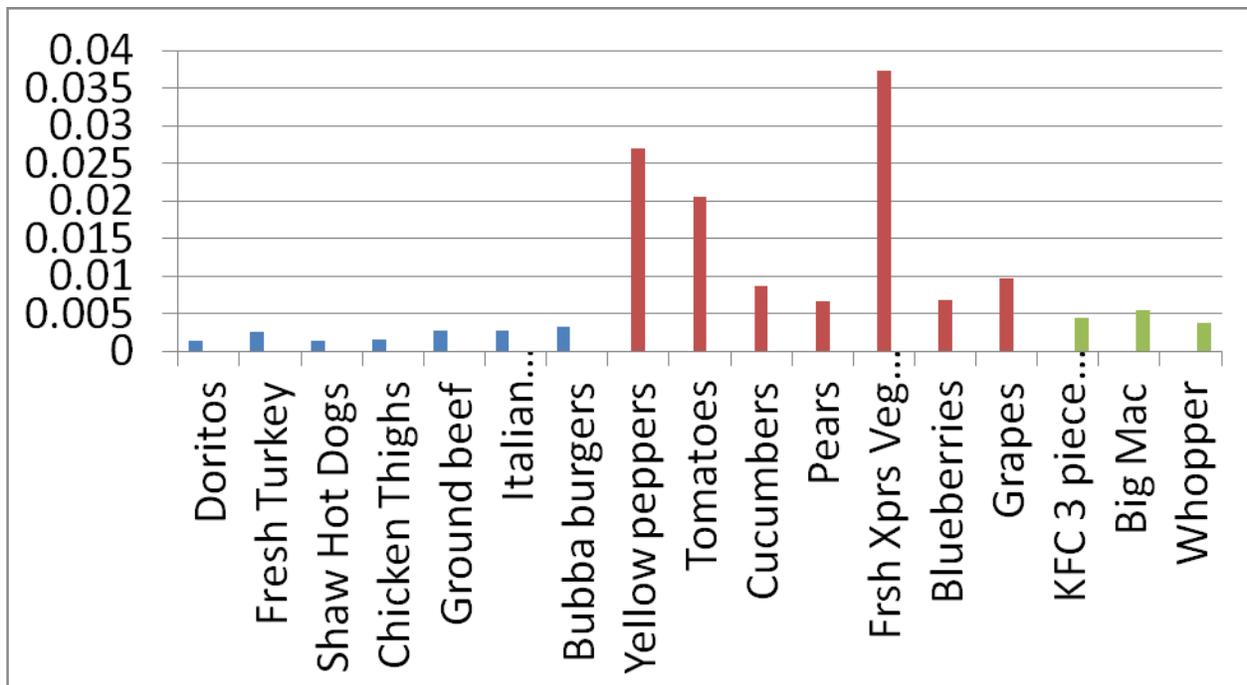
⁸⁵ Boston Globe on September 9, 2010.

Or perhaps you prefer Taco Bell. Their \$2 Beefy 5-Layer Burrito Value Meal with Mountain Dew and Nacho Cheese Doritos consists of

- chips (corn, subsidized)
- beef (corn based, subsidized)
- cheese (corn based, subsidized)
- tortilla (corn, subsidized)
- soda (HFCS, subsidized)

For \$2, you get 1020 calories, 35 grams of fat, 66 grams of sugar and 2000 grams of sodium.⁸⁶

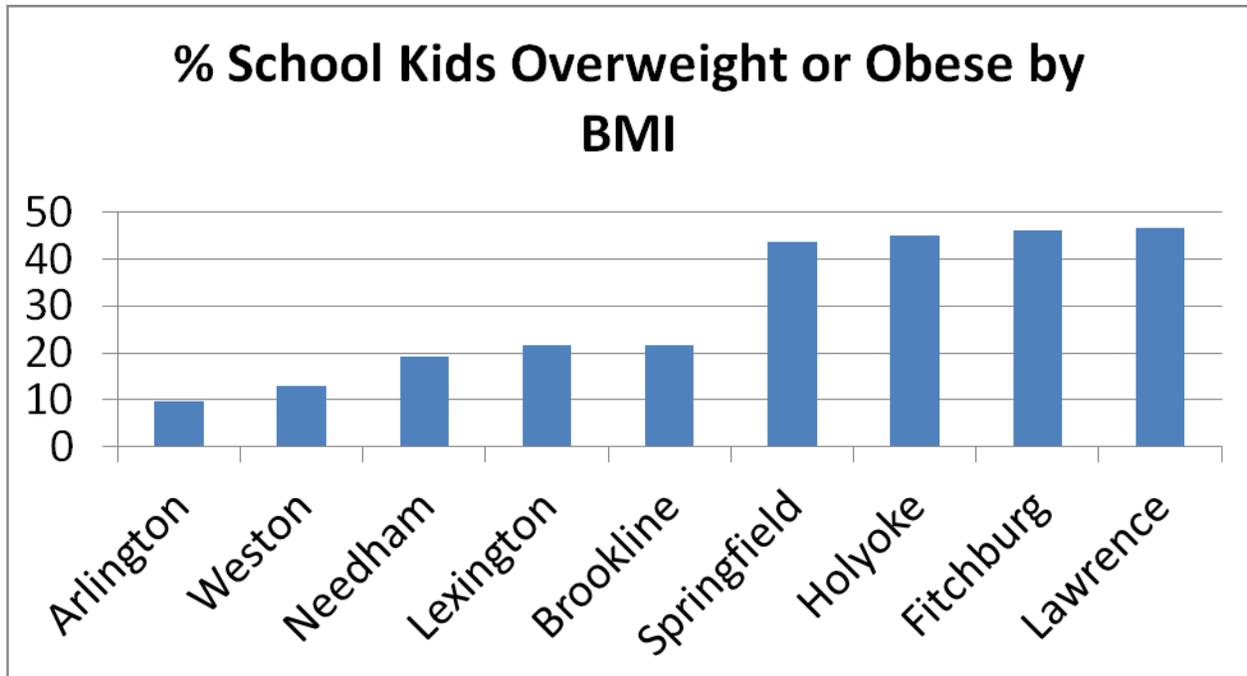
Let's see how fast food compares on a cost/calorie basis to food at Shaw's supermarket.



I think we're beginning to see where the obesity epidemic comes from and why it affects lower income people the most. But the proof, as they say, is in the pudding.

⁸⁶ Information downloaded from Taco Bell's website in 2010 or 2011 according to my notes. It was apparently not offered in 2015 when I wrote this chapter.

The Boston Globe reported, in September of 2010, rates of overweight or obese school children by town. This dramatically demonstrates the problem: Springfield, Holyoke, Fitchburg and Lawrence are among the poorest towns in Massachusetts while Needham, Lexington and Weston are among the richest.



Dietary Guidelines for Americans, 2015

Scientific Report published February 19, 2015

The US Dietary Guidelines Advisory Committee, established jointly by the US Departments of Agriculture and Health and Human Services, publishes nutritional guidelines every 5 years. Their 2015 Scientific Report summarizes our national nutritional, obesity and related medical problems.

- About half of American adults have one or more chronic diseases and
- About 2/3 of American adults are overweight or obese.

Both of these situations are preventable with 'poor dietary patterns, overconsumption of calories, and physical inactivity directly contributing to these disorders'.

I'll summarize some key points below, generally as direct quotes with minor grammatical modifications:⁸⁷

- the majority of the U.S. population has low intakes of key food groups that are important sources of nutrients, including vegetables, fruits, whole grains, and dairy. Furthermore, population intake is too high for refined grains and added sugars.
- no matter where food is obtained, the diet quality of the U.S. population does not meet recommendations for vegetables, fruit, dairy, or whole grains, and exceeds recommendations, leading to overconsumption, for the nutrients sodium and saturated fat and the food components refined grains, solid fats, and added sugars.
- a healthy dietary pattern is higher in vegetables, fruits, whole grains, low- or non-fat dairy, seafood, legumes, and nuts; moderate in alcohol (among adults); lower in red and processed meat; and low in sugar- sweetened foods and drinks and refined grains.
- individual nutrition and physical activity behaviors and other health-related lifestyle behaviors are strongly influenced by personal, social, organizational, and environmental contexts and systems [like socio-economic status, geographic proximity to fresh food and access to safe exercise areas. See below, the discussion of the Whitehall studies, for more on this.]

The Committee wrote in their cover letter to the Secretaries of Health and Human Services and of Agriculture:

The dietary patterns of the American public are suboptimal and are causally related to poor individual and population health and higher chronic disease rates. Unfortunately, few improvements in consumer food choices have occurred in recent decades. On average, the US diet is low in vegetables, fruit and whole grains and too high in calories, saturated fat, sodium, refined grains and added sugars....

More than two-thirds of adults and nearly one-third of children and youth are overweight or obese. These devastating health problems have persisted for

⁸⁷ From the Executive Summary of <http://www.health.gov/dietaryguidelines/2015-scientific-report/PDFs/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf>

decades, strained US healthcare costs, and focused the attention of our healthcare system on disease treatments rather than prevention. They call for bold action and sound, innovative solutions.

Since our public programs are obviously failing us, can the private sector step up and provide the innovative solutions the Committee seeks?

Implications for broker services i Wellness programs as an attempt to add value

Many corporations and agencies have introduced wellness programs, attempting to educate people to eat better with inducements for lowering their cholesterol, blood pressure, blood sugar and the like. The apparent theory: people make bad food consumption decisions because they don't know better. Wellness programs typically provide both nutritional education and a financial incentive to change behavior.

We have some academic evidence about the impact of education on food consumption. A study published in the Archives of Internal Medicine in 2010 compared soda consumption among groups that received advice about the nutritional impacts of drinking soda *without* any financial inducement to change behavior, to a group that received similar advice *with* a financial incentive to change. The result:

- Those receiving advice *without* an economic incentive had no decrease in soda consumption
- Those receiving advice *with* an economic incentive did have a soda consumption decrease.⁸⁸

How much of an incentive?

We can estimate the required incentive size by comparing costs for unhealthy / high calorie / high fat / high cholesterol food to costs of healthier choices. As we've already seen, the difference is about \$3000 per person per year. I suggest that wellness programs need to incent people at least this much to generate the desired behavioral change....but probably more.

- Healthier foods aren't as convenient as KFC or a Big Mac. Consider convenience – ease of access and preparation - when you calculate the appropriate wellness incentive. (I, for example, hate cutting fruits and vegetables. I sometimes go without simply because I find cutting so unpleasant.)

⁸⁸ Duffrey, op cit

- Healthier foods don't taste as good, especially to someone habituated to high sugar, high salt, high fat foods. You'll probably need an additional incentive to get people to change their taste preferences.

New York Times reporter Michael Moss explored this idea in some detail in his 2014 book 'Salt, Sugar, Fat'. He writes that the giant food companies aim for the taste 'bliss point' – a combination of sugar, salt and fat – that satisfies people's taste buds and gets them to want more, to keep eating as in the famous potato chip ad 'Bet you can't eat one'. The critical factor, Moss explains, is that you generally need *all three* tastes – salt, sugar and fat - to reach bliss: having only 1 of the 3 doesn't work.

Foods outside that bliss point - fruits and vegetables for example – are less tasty and satisfying for most people. Moss presents tons of research to back his analysis, including detailed discussions with food scientists working for the largest food production companies.

That's why I suggest you need additional financial incentives to get people to eat foods outside the bliss point.

My guess, somewhat educated but really only a guess: corporations would need to budget around \$4000 per person per year (i.e. \$16,000 for a family of 4) to effectuate real dietary change. Compare this to a 2013 wellness average of about \$450 per employee, not per member of the employee's family.⁸⁹ Way short.

That's the wellness bind. The amount *necessary* to generate behavioral change far exceeds the amount *available* for the task.

These are, of course, averages. High income employees would probably need less of a financial incentive; low income folks probably more. (I'll address the issue of income disparity and effects on disease rates later in this chapter.)

We're starting in a \$3000+ hole per person. Those private sector wellness programs may not offer much help despite their noble attempts to create systemic value.

Let's continue but change gears. Diet is only part of the 'diet and exercise' behavior change program. Let's discuss the exercise bit next.

⁸⁹ Ladika, Well, Well: Employers Tie Health Care Financial Incentives to Specific Outcomes, Workforce Magazine, September 29, 2012

Exercise

Americans don't exercise enough. We know that from many studies, including compliance with the 2008 Physical Activity Guidelines quoted at the beginning of this chapter.

Why don't Americans exercise enough? We all know that exercise is good for us. We all want to exercise more. I've never heard anyone say they want to exercise less (well, maybe a few landscapers). But too few of us do.

I'd like to focus on 3 reasons we exercise too little: the home interest deduction, our relatively low federal gas taxes and single acre zoning, and suggest that they explain much about our lack of daily exercise. People, I would argue, respond rationally to economic incentives.

American population densities are much lower than European or Canadian. This allows Europeans and Canadians to develop more sophisticated and efficient urban public transportation systems. An exercise impact of this, according to Alain Desroches of the Public Health Agency of Canada in a personal email:

The denser, mixed use development in Canada makes average trip distances only half as long as in America, so more walkable than the longer trips Americans make. Canada also has higher transit user rates per capita accounting for more walking between trips.

This was at least partly due to these country's reactions to oil price hikes in the 1970s. Most Western European countries dramatically shifted their urban transportation policies in the 1970s to curb car travel and promote public transportation and walking according to John Pucher, writing in Transportation Policy magazine.⁹⁰ They walk to work, shopping and social events; we drive.

Our suburban physical environment, dominated by single family houses, exacerbates this problem. Over time, Americans have purchased bigger and bigger houses, generally on larger and larger lot sizes.

- In 1970 the average new house contained about 1400 square feet of living space
- In 2012 new houses averaged almost 2600 square feet

⁹⁰ Pucher, Why Canadians cycle more than Americans, Transportation Policy, 2006
http://vtpi.org/pucher_canbike.pdf

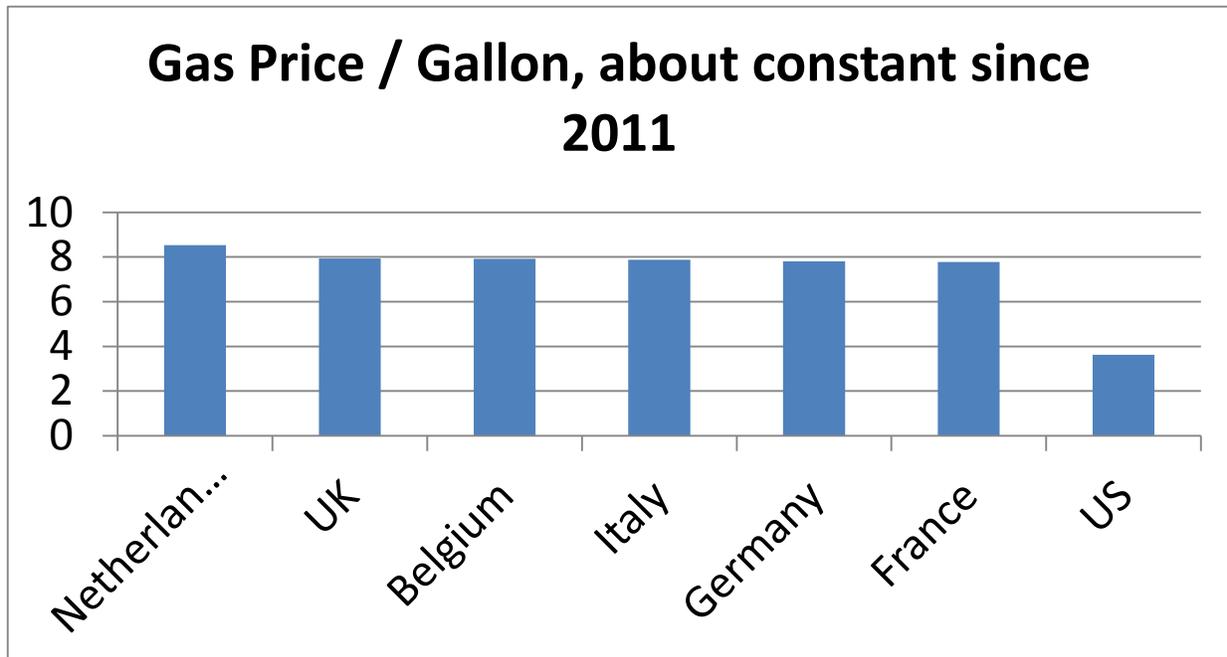
'The home mortgage interest deduction subsidizes Americans to buy bigger homes...**Americans, even poor Americans, have *almost twice as much living space as the average resident of France or Germany***' claims Harvard economics professor Edward Glaser.⁹¹ Our government tax policy incents us to place these homes on larger lots by making local property taxes deductible on our annual Federal income tax. Local property tax deductibility acts as a subsidy to buy larger lots: the bigger the lot, the higher the property tax deduction.

Commuting from these larger homes on larger lots requires a car. Consider the person who passes 100 dwelling units while going from home to work:

- Pass 100 homes on single acre lots = go 100 linear acres (about **4 miles** if square acres). Too far to walk. And too difficult to locate a public transportation hub nearby.
- Pass 100 homes in cluster = perhaps 5 linear acres (about **1/5 of a mile**). Easily walkable and, with high population density, much easier to locate a public transportation hub nearby.

As gas prices rose over time, our government responded by keeping gas prices low through below-world-market gas taxes. Consider this chart comparing prices per gallon of gas in various countries in February 2011:

⁹¹ Boston, Globe 5/7/10, page A19



Americans paid about \$3.75 per gallon compared to western Europeans who paid about \$8. (Though prices have fluctuated since, the relative ratios remain roughly constant.)

Exercise summary

The three government subsidies – behavior incentives, if you will - significantly impact American's daily exercise:

- Home mortgages are income tax deductible, incenting people to buy bigger houses
- Property taxes are income tax deductible, incenting people to buy bigger lots
- Gas taxes are below the world market, incenting people to drive, not walk or take public transportation

Let's do a quick calculation to assess the impact:

- Assume someone walks 5 minutes from their home to and from the local public transportation stop to get to work, total 10 minutes daily, at the *home end* of each journey
- Then assume he/she also walks 5 minutes from public transportation to work each day, total 10 minutes daily at the *work end* of each journey

- The 5 day commute to and from work on public transportation accounts for **100 minutes** per week of walking
- Now assume 5 more journeys per week, to shopping (because of the local availability of stores) and socializing (restaurants, cafes, bars and walks to and from public transportation) = 100 more minutes of walking per week for a **grand total of 200 minutes** or about 166 hours of walking exercise per year that typical suburban Americans don't get.

At 3 miles per hour – a comfortable walking pace – our typical European or Canadian walks about 500 miles more annually than a typical American, burning perhaps an extra 50,000 calories per year.

Compare this exercise pattern --- about 200 minutes of public transportation related walking per week – with the 2008 Physical Activity Guidelines for Americans. Among the statements in the Summary: ⁹²

Most health benefits occur with at least 150 minutes a week of moderate intensity physical activity, such as brisk walking.

The physical environment in western Europe and Canada helps residents meet this standard; the physical environment in the US mitigates against it. That, in and of itself, can explain some of the obesity rate differences between us and them.

Implications for broker services and wellness programs ii

We've already discussed the cost difference between eating healthier and less healthy food and implications for wellness program incentives. I suggested that incentives in the \$4000 range, per person per year, would probably be necessary to generate the desired food consumption behavior change, though that's a guess on my part: the actual number may be lower *or higher*.

Now let's add an exercise incentive.

Americans walk, according to the analysis above, about 166 hours/year less than Europeans and Canadians due to the differences in land use and availability of public transportation. How much do we need to incentivize people so they spend 166 hours of their leisure time walking?

Consider these factors:

⁹² <http://www.health.gov/paguidelines/guidelines/summary.aspx>

- People generally value their leisure time at about 1/3 of their hourly income, or at least that's the rule of thumb I learned at Harvard so many years ago.
- The 2014 hourly wage, as reported by the US Bureau of Labor Statistics, was \$24.63.⁹³ Estimate 1/3 of that at \$10/hour for budgeting purposes.

The conclusion: Wellness programs would need to pay about \$1600 per person per year to incent people to spend 166 hours of their leisure time in corporation-sponsored exercise endeavors. That's the amount necessary to match our western European and Canadian counterparts.

Of course, some exercise programs burn calories more quickly than walking so an appropriately incented program would offer a range of options, time commitments and payments.

Our wellness program, therefore, would need to budget more than \$5000/person/year to generate the desired nutritional and exercise changes. Remember that this may be a low estimate: I only calculated the cost difference between eating poorly and well, and not exercising at all and getting 166 hours/year. I left out any behavior change premium: some people may enjoy their current lifestyles and need some additional payment to get out of that comfort zone. I have no idea how much that might be.

Targeting behavior change

Now for the wrench in the works.

All the analysis above describes 'average' people and 'average' disease rates. But studies indicate a very wide population divergence from 'average' with some groups exhibiting far higher disease rates and others lower. Targeting programs at those with highest risk is more expensive than the 'averages' above, perhaps much more so.

One outstanding group of studies called the Whitehall studies aimed to identify groups at highest risk. Unlike most medical studies, the Whitehall folks didn't focus on *what causes* disease but rather *who gets sick*. Incorporating their information into wellness programs will help managers target interventions.

Some background: 'Whitehall' in Britain is the same as 'Capitol Hill' in the US, the seat of national government power and offices of many national civil servants. The Whitehall studies have tracked disease rates among British bureaucrats since the late-1960s.

⁹³ <http://www.bls.gov/news.release/empst19.htm>

Whitehall researchers choose the British civil service as their Petri dish for several reasons:

- British public administrators tended to remain on their jobs for many years, often their entire career. This gave researchers longitudinal information.
- British privacy laws, at least during the initial period of these studies, allowed researchers to identify specific individuals rather than just groups of people. This gave researchers the ability to follow up on specific disease and behavior details at an individual level.
- The British civil service was very hierarchical and status oriented, consisting of several different grades. Oxford and Cambridge graduates entered the service at the highest grades, made the most money and enjoyed the highest status; high school dropouts exactly the opposite.

Given the status-based nature of hiring and promotions, it was highly unlikely that someone entering the civil service at grade 4 would be promoted to grade 2 or even grade 3: the grade at which you entered was generally the grade from which you retired.

This gave researchers the ability to track disease rates by income and status.

I'll let Professor Michael Marmot, Director of the Whitehall studies, summarize what they found: ⁹⁴

- *Firstly, just looking at heart disease, it was not the case that people in high stress jobs had a higher risk of heart attack, rather it went exactly the other way: people at the bottom of the hierarchy had a higher risk of heart attacks.*
- *Secondly, it was a social gradient. The lower you were in the hierarchy, the higher the risk. So it wasn't top versus bottom, but it was graded.*
- *And, thirdly, the social gradient applied to all the major causes of death.*

Those at the bottom of the hierarchy were 3x more likely to die of heart disease than those at the top.

⁹⁴ These quotes come from an interview at UC Berkley in March 2002, <http://globetrotter.berkeley.edu/people2/Marmot/marmot-con3.html>

Today's corporate benefits advisors and wellness program managers – at least, those who have read this far in this chapter - could have predicted this, largely based on the food cost analysis above. People at the bottom of the hierarchy earned less money so ate a less healthy diet. They had, consequently, higher cholesterol rates, higher blood pressure, were more frequently overweight and consequently less healthy.

Unfortunately that conclusion is wrong! Here's Professor Marmot again

- *we looked at the usual risk factors that one believes that are related to lifestyle -- smoking prime among them, but plasma cholesterol, related in part to fatty diet and an overweight, sedentary lifestyle.*
- *We asked how much of the social gradient in coronary disease could be accounted for by smoking, blood pressure, cholesterol, overweight, and being sedentary.*
- *The answer was somewhere between a quarter and a third, no more.*

After controlling for risk factors like cholesterol and smoking, people in the lowest grades were twice as likely to die of coronary disease as those in the highest grades.

- *The social gradient applied to all the major causes of death -- to cardiovascular disease, to gastrointestinal disease, to renal disease, to stroke, to accidental and violent deaths, to cancers that were not related to smoking as well as cancers that were related to smoking -- all the major causes of death...*
- *2/3 at least of this gradient is unexplained*

Was Whitehall unique? Does it apply to America? Or, stated differently, is Senator Frist right (from the first page of this chapter) when he claims 'health is socio-economic status and disparity'?

The answer is yes to the second two questions above. These patterns exist not only in Britain but also here in the US. Here's the New England Journal of Medicine discussing Class: The Ignored Determinant of the Nation's Health ⁹⁵

- Differences in rates of premature death, illness and disability are closely tied to socio-economic status
- Unhealthy behavior and lifestyle alone do not explain the poor health of those in lower classes

⁹⁵ September 9, 2004

- There is something about lower socioeconomic status *itself* that increases the risk of premature death

Sounds like Whitehall's conclusion.

The International Journal of Cancer considered the impact of socio-economic class on breast cancer survival rates. Their rather startling conclusion ⁹⁶

- breast cancer patients of low Socio-Economic Status have a significantly increased risk of dying as a result of breast cancer compared to the risk in patients of high SES.
- Low SES patients were diagnosed at a later stage, had different tumor characteristics and more often received suboptimal treatment.

However...

- Even after adjusting for all these factors, the risk of dying of breast cancer remained 70% higher among patients of low SES than among patients of high SES.

Madeline Drexler of Harvard's School of Public Health summarized the issue here succinctly

'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 ...' ⁹⁷

The 2015 Dietary Guidelines Advisory Committee report echoes this, saying (in typical governmental bureaucratese)

- Health and optimal nutrition and weight management cannot be achieved without a focus on the synergistic linkages and interactions between individuals and their environments ⁹⁸

That's the same conclusion Professor Stuart Wolf reached in his study of disease rates and social patterns in very poor but very egalitarian Roseto, Pennsylvania ⁹⁹

⁹⁶ Bouchardy et al, Social class is an important and independent prognostic factor of breast cancer mortality, International Journal of Cancer, Vol 119, Issue 5, March 2006

⁹⁷ Drexler, The People's Epidemiologists, Harvard Magazine, March 2006

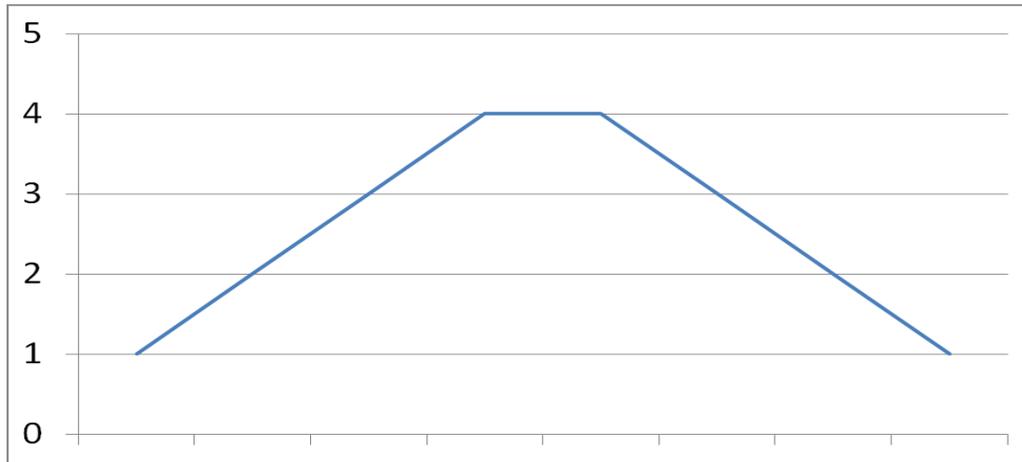
⁹⁸ 2015 Dietary Guidelines Advisory Committee report issued February 19, 2015, Part D, Chapter 4

⁹⁹ Wolf and Bruhn, The Power of the Clan: Influence of Human Relationships on Heart Disease

the characteristics of a tight-knit community are better predictors of healthy hearts than are low levels of serum cholesterol or tobacco use.

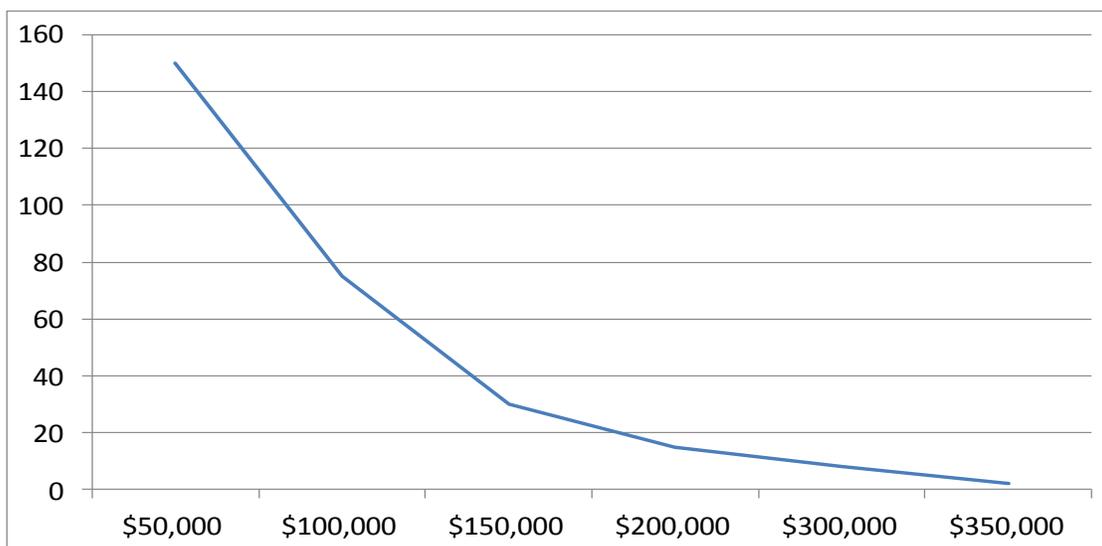
Whitehall and wellness programs

Let's apply this information to a typical corporate wellness program. Screening for cholesterol, blood pressure and other disease indicators assumes a bell curve model.



A few people at the far left have low cholesterol, blood pressure or blood sugar and are unlikely to get sick, while people at the far right have high levels and are therefore at risk. Most people fall in the middle. The appropriate wellness program focus using this model is the group at the far right.

But Whitehall, the New England Journal of Medicine, Madeline Drexler and Stuart Wolf suggest a different disease risk model:



Here, a lot of people earn \$50,000 or less per year while a few earn \$250,000 or more. Whitehall suggests that disease rates among the \$50,000 earners will run about 3x the rate of the \$250,000 folks, making the low income folks and equally appropriate wellness program target.

Let's assign some numbers to a hypothetical risk scenario. The company above has 10 employees earning \$250,000 or more annually (high income, high status) and 150 employees earning \$50,000 or less (low income, low status). For every heart attack in the high income, high status group, how many heart attacks can we expect among the low income people?

Take a second to think this through.

The correct answer is 45. Three times the risk and 15 times the number of people. While it's unlikely that these numbers would play out in a company as small as this, the ratios would likely hold over very large numbers of companies and employees.

Whitehall and the 2015 Dietary Guidelines Advisory Committee report

The 2015 DGAC report specifically acknowledged that low income groups face greater impediments to healthy lifestyle behavior than do others in our society, saying, for example 'household food insecurity hinders the access to healthy diets for millions of Americans'.¹⁰⁰ More than 49 million people in the United States, including nearly 9 million children, live in food insecure households.¹⁰¹ For these people, the issue is not 'what should I eat' but rather 'will I eat anything at all'. Food access, rather than nutritional quality, becomes a primary concern. As does food price.

Related to this, the Committee found that closer proximity and greater access to convenience stores (as in lower income, inner city food deserts) is associated with significantly greater Body Mass Index scores in the community and/or increased odds of being overweight or obese.¹⁰² Access, not quality, often rules nutrition decision making.

The Committee bluntly stated that

¹⁰⁰ From the Executive Summary of <http://www.health.gov/dietaryguidelines/2015-scientific-report/PDFs/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf>

¹⁰¹ Part B of the 2015 DGAC report

¹⁰² DGAC report, Part D, Chapter 4, Question 2

nutrition services that take into account the social determinants of health are largely unavailable in the U.S. health system to systematically address nutrition-related health problems, including overweight and obesity, cardiovascular disease, type 2 diabetes, and other health outcomes.¹⁰³

Can employer-based wellness programs address this disparity?

Implications for broker services and wellness programs iii

We've previously discussed how corporate wellness programs need to budget some \$4000 annually per person to affect nutritional behavior change, and \$1600 to affect exercise change, totaling over \$5000 per person per year if they hope to accomplish their goals.

Now we see that targeting these programs to the most at risk – and medically most expensive - can raise those amounts. The lowest income, lowest status employees are probably the least interested in the program. They worry about doing their jobs, losing their jobs and may even need to rush to a second job just to pay their rent.

- They're probably suspicious of people telling them to eat or behave differently.
- They may face food insecurity issues.
- They probably lack any financial cushion or discretionary income, so the wellness incentive may go to other basic needs like rent, car payments, clothes or children's education rather than their own behavior change.

These people - the corporate medical cost drivers - are the most expensive to reach and impact.

Interestingly, I once described all this socio-economic risk stuff to a health insurance company medical director. His response: that fits our experience. Almost all the largest claims come from lower income employees.

Your highly compensated, well educated, higher status employees will probably gladly participate in wellness programs. They'll take your wellness bonus money and possibly even spend it appropriately. But that won't impact your claims experience much because they're typically not the cost drivers.

Corporate wellness programs seem particularly ill suited to address the socio-economic lifestyle disparity problems in this country.

¹⁰³ From the Executive Summary of the 2015 DGAC report, emphasis added

The gap between high and low income groups in the US income trends over time

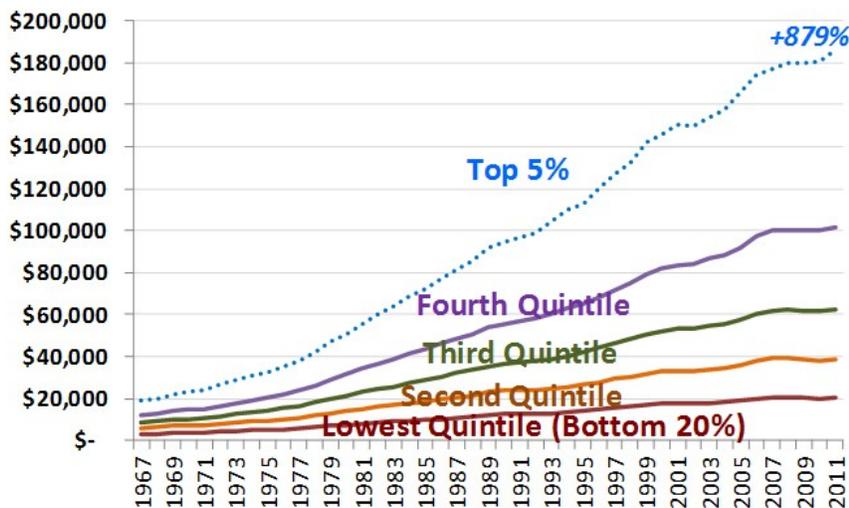
Whitehall and related studies indicate that lower socio-economic groups have higher disease rate than higher socio-economic groups. Whitehall and the others also found a gradient: the greater the socio-economic and status differences, the greater the disease rate differences too, even after controlling for risk factors like cholesterol and smoking.

Over time, US income differences between high and low socio-economic groups have expanded. Consider this chart based on US Census data showing an increasing gap between higher status / socio-economic groups and lower.

Historical US Income Inequality

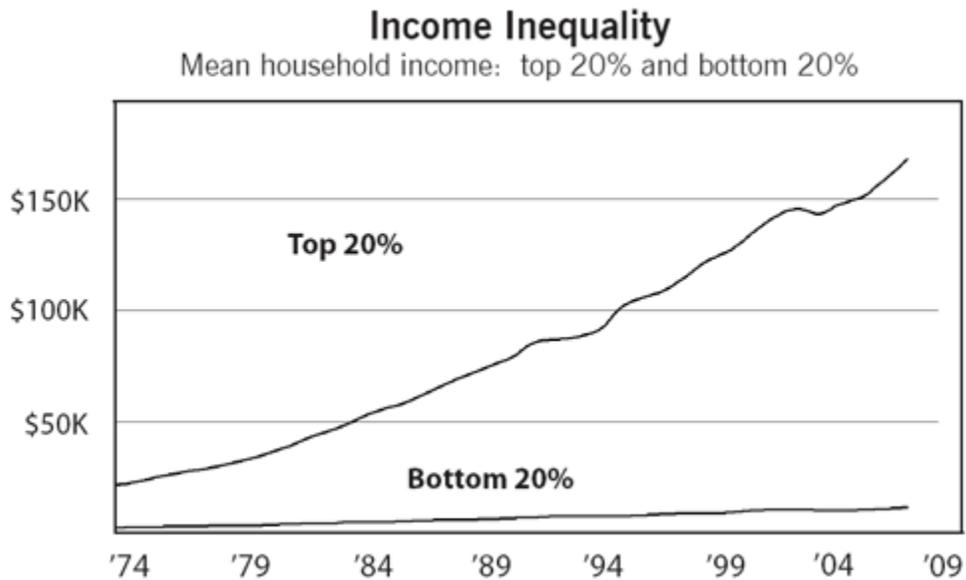
Source: US Census Bureau, Income Limits for Each Fifth and Top 5 Percent of Households

(Current Dollars)



Or this one, more starkly showing income differences between the top and bottom 20% of households.¹⁰⁴

¹⁰⁴ This comes from theeconomiccollapseblog.com, apparently a doomsday commentary that I don't necessarily endorse. I use their graph here only because it is so cleanly presented



Here are some questions that follow from this analysis, with their unsettling answers:

- Do the highest American income groups enjoy ‘really great’ health while the lowest still enjoy ‘pretty good’? In other words, do the wealthiest ‘drag up’ the poorest so we all enjoy better health over time? or
- Do the poorest groups have ‘really lousy’ health while the wealthiest enjoy ‘pretty good’? In other words, do the poorest ‘drag down’ the healthiest so our overall health improves, but very slowly (especially given our medical spending levels)?

While some evidence exists that we all, on average, enjoy better health over time (e.g. longer life expectancies than previously) the stronger evidence appears to indicate that increased income discrepancies over time ‘drag down’ the wealthiest rather than ‘drag up’ the poorest.

Consider Harvard Magazine’s analysis, ‘Unequal America’ by Elizabeth Gudrais published in its July-August 2008 issue. Here are some of the observations and data points as direct quotes.

- Between 1983 and 1999, men’s life expectancy decreased in more than 50 U.S. counties
- For women ... life expectancy decreased in more than 900 counties—more than a quarter of the total.

- 4 percent of American men and 19 percent of American women can expect their lives to be shorter than or, at best, the same length as those of people in their home counties two decades ago.
- People at the top of the U.S. income spectrum “live a very long time,” says Cabot professor of public policy and epidemiology Lisa Berkman, “but people at the top in some other countries live a lot longer.”

Harvard Magazine’s observation:

There is ... evidence that living in a society with wide disparities—in health, in wealth, in education—is worse for all the society’s members, even the well off....

echoing Stuart Wolf’s decades old research into disease patterns in Roseto Pennsylvania. *More* income inequality seems to ‘drag down’ the wealthiest rather than ‘drag up’ the poorest. Relative deprivation seems more impactful than absolute.

Some conclusions

The three quotes with which I started this chapter – Senator Frist, the Massachusetts Health Policy Commission and Harvard’s Richmond and Fein – are all probably spot on. Here they are again as a reminder:

From Frist

Health is not health services. Health is behavior, it’s genetics, it’s socio-economic status, it’s disparity, it’s environment.

Health services has about a 15 – 20% impact.

From the Mass Health Policy Commission

Research shows that [medical] outcomes are driven largely by social and behavioral factors, along with public health policies, while health care services delivered account for only 10 percent of general variation in health status.

From Richmond and Fein. Our health gains since World War II

were largely the consequence of applying our knowledge of health promotion and disease prevention rather than improved clinical care...the revolution in biology subsequent to World War II, a revolution that had brought many advances to clinical care, as yet had only marginal effects on improving our vital statistics.

Lots of others echo these sentiments too.

We've seen how government subsidies and tax policy make some foods very inexpensive and others relatively more expensive. Admonitions to eat healthy food in the face of these cost differences generate little behavioral change. Our national health, as measured by obesity or average cholesterol rates for example, has declined over time.

Similarly, we've seen how zoning and tax policies affect our physical environment, impacting exercise rates among Americans. Again, admonitions to exercise more tend to generate little behavioral change.

And we've estimated the financial incentive necessary to change employee behavior. My guess – between \$5000 and \$6000 per person annually – falls way outside any corporate wellness budget.

We've seen how the lowest paid employees tend to be the highest risk, most expensive medically. I suggested some problems attracting this group to wellness programs. Perhaps most significantly, I think wellness programs that fail to attract this higher-risk group can't possibly succeed.

Wellness programs are, I suspect, necessary given the incentives that make healthy living so expensive. But they're also probably ineffective for exactly the same reasons.

No company has the financial power to overcome all the government incentives, subsidies and tax breaks that make wellness programs necessary.

The real tragedy in all this

We face a 'triple whammy' in healthcare costs today.

- Our population is aging and older people always cost more medically.
- Our government programs make healthy eating and exercising increasingly unaffordable to more and more Americans. Obese people cost the same as people 20 years older, which compounds our aging problem.
- Our increasing socio-economic inequality drags down the overall health of our society on average, including the wealthiest, leading us all to demand more medical care, not less than we might otherwise need.

In the face of these trends, our healthcare system wastes \$700 billion or more annually on unnecessary care: our inefficiently organized *supply* of medical services exacerbates the problems of our unnecessarily high *demand* for those services.

Corporate wellness programs won't ameliorate these trends and, even if they do, probably won't reduce the number of unnecessary cardiac stress tests or the false positive rate from those tests.

- Probably won't reduce the number of back MRIs and unnecessary spinal fusion surgeries that result ¹⁰⁵
- Probably won't reduce the number of head CT scans related to sinusitis, advised against by the American College of Emergency Physicians and the American Academy of Pediatricians ¹⁰⁶
- Probably won't reduce the number of pediatric antibiotic prescriptions for ear aches, unnecessary 95% of the time and harmful about 15% ¹⁰⁷
- Probably won't reduce the amount of ineffective medical care like postnatal dexamethasone therapy for lung disease of prematurity, use of laparoscopic mesh for inguinal hernia repair or any of the 144 other ineffective interventions listed in Vinay Prasad's seminal article in the Mayo Clinic Proceedings ¹⁰⁸
- Probably won't reduce geographic treatment variation rates for cancer treatments, orthopedic treatments, cardiovascular treatments and others that alone represent about 1/3 of medical spending, at least according to tons of research published by scholars at the Dartmouth Institute, among other places.

In all these senses, government subsidies and tax policies fail to create healthcare system value and seem, at least according to my analysis, to destroy it. This public sector failure has led to the private sector development of wellness programs, aimed mainly at undoing the harms caused by these various subsidies and tax programs.

¹⁰⁵ See ChoosingWisely, position statements by the American Academy of Family Physicians and others <http://www.choosingwisely.org/doctor-patient-lists/imaging-tests-for-lower-back-pain/>. Some research suggests that people who have back MRIs shortly after they feel back pain are 8x more likely to have back surgery but don't recover faster.

¹⁰⁶ See ChoosingWisely, <http://www.choosingwisely.org/?s=ct+scans+sinusitis&submit=>

¹⁰⁷ See Antibiotics for Otitis Media on the NNT website, <http://www.thennt.com/nnt/antibiotics-for-otitis-media/>

¹⁰⁸ See Prasad et al, A Decade of Reversal, Mayo Clinic Proceedings, August, 2013 <http://www.mayoclinicproceedings.org/cms/attachment/2007391767/2029532464/mmc2.pdf>

I worry that these programs are ill targeted. I fear that even if wellness programs worked well, we would still waste the same \$700 + billion annually. Being thinner doesn't lead to making wiser medical treatment choices.

Instead, consumer education about treatment options and outcomes does. But that's a different topic, unrelated to the corn subsidy and corporate wellness programs and perhaps more complicated and subtle than the market wants right now.

That said, it's probably still a good idea to eat more fruits and vegetables...

If you can afford them.

Review Questions

Answers on next page

1. About how much more does it cost, per calorie, to eat healthier foods?
 - a. About 1/3 of a cent
 - b. About \$1
 - c. About \$10
 - d. About \$100

2. Americans each eat about 2700 calories of food daily. About how much more does a typical family of 4 need to spend annually in order to eat healthier - rather than less healthy - food per year?
 - a. About \$1.96
 - b. About \$100
 - c. About \$125
 - d. About \$12,000

3. The US government encourages us to eat certain foods and discourages us from eating large quantities of other foods. Which food groups does the government subsidize?
 - a. Both
 - b. Neither
 - c. The food groups we are encouraged to eat
 - d. The food groups we are discouraged from eating in large quantities

4. This text suggested a ballpark annual amount of money necessary to incentivize people to change their diets and choose healthier foods rather than less healthy. What is that annual amount of money?
 - a. \$150
 - b. \$200
 - c. \$4000
 - d. \$100,000

5. What impact do our zoning laws have on the amount of daily exercise most Americans get?
 - a. Single acre zoning generally puts more distance between someone's house and work, requiring driving to work, rather than walking to a public transportation stop. This lowers the daily amount of walking most Americans do, as compared

to Europeans or Canadians.

- b. Single acre zoning makes our neighborhoods more beautiful and less crowded, thus making evening / after dinner walks more attractive
- c. Single acre zoning makes the distance to the nearest gym too long to drive, especially in the winter when it's typically cold and snowy outside
- d. There is no relationship between zoning laws and daily exercise

6. This course suggested that the 'average' European or Canadian walks about 166 hours per year more than a similar American. Studies show that people value their free time at about 1/3 of their average hourly wages. The average American wages in 2014 were about \$24. Roughly how much would an employer have to pay an employee to incent that employee to walk 166 hours in his or her spare time?

- a. \$1600
- b. \$200
- c. \$150
- d. \$200,000

7. Former Senator William Frist, a cardiologist, suggested roughly the impact that 'health services' have on 'health'. What is Frist's estimate?

- a. 98%
- b. 96%
- c. 15%
- d. Less than 1%

8. About what impact will wellness programs have on our rate of ineffective or harmful medical services, like using head CT scans to diagnose sinusitis, or using laparoscopic mesh for inguinal hernia repair?

- a. No impact at all
- b. A major impact. Wellness programs will reduce the rate of these and similar ineffective medical services by well over half
- c. Wellness programs are expected to eliminate the amount of ineffective and unnecessary medical care within 8 – 10 years
- d. Recent studies suggest a decrease of 5 – 10% of all ineffective services by 2025.

Review Questions

Correct answers in bold

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Chapter 3: Poor Levels of Consumer Education and Knowledge

what you don't know can hurt you

Let's start with an analogy.

Clayton Christensen, a professor at Harvard Business School best known for studying business innovation - and particularly disruptive innovation - wrote an insightful article about the US educational system in the May 11, 2014 Boston Globe.¹⁰⁹ As you read some highlights from that article, consider the analogy to our healthcare system.

- *Tuition costs have been ballooning faster than general inflation...and what do we get in return?*
- *Nearly half of all bachelor's degree holders do not find employment or are underemployed upon graduation. At the same time, employers have not been satisfied with degree candidates.*
- *Two recent Gallup polls showed that although 96% of chief academic officers believe they're doing a good job of preparing students for employment, only 11 percent of business leaders agree that graduates have the requisite skills for success in the workforce.*
- *And this is all occurring while higher education leaders were convinced that they were innovating all along.*

Now let's substitute 'healthcare' for 'education' and rewrite:

- *Premiums have been ballooning faster than general inflation...and what do we get in return?*
- *Lower life expectancies, higher infant mortality and poorer access than other countries.*
- *At the same time, employers have not been satisfied with broker services.*
- *A recent poll showed that although most brokers believe they're doing a good job of developing benefit strategies and communications, only about half of business leaders agree that brokers do a good job implementing and executing desired programs.*

¹⁰⁹ Clayton Christensen et al, Thank You MOOCS, Boston Globe, May 11, 2014

- *And this is all occurring while brokers are convinced that they were innovating all along.*

The poll in question was Zywave's 2013 study of customer satisfaction with broker services that received 5500 responses. Some highlights: ¹¹⁰

- Creates strategic plan that aligns with company goals: **43% unsatisfied**
- Offers employee benefits and consumerism communication / education: **41% unsatisfied**
- Assists with creating or maintaining a workplace wellness program: **66% unsatisfied**

Part of the problem comes from our employer based health insurance distribution system. We are the only major advanced, industrialized country that uses employer based health insurance as the primary mechanism of financing healthcare. Other countries use employer based coverage – if they allow it at all – to supplement the national health insurance system.

We, in the US, use public programs like Medicaid and Medicare to supplement employer based coverage, exactly the reverse of everyone else. If you can get health coverage through your employer, you (generally) cannot get public coverage. How does employer based primacy impact our overall healthcare system?

Princeton economic professor Uwe Reinhardt answered that question in his New York Times piece 'The Culprit Behind High US Health Costs' in 2013. ¹¹¹ Here are some direct quotes:

- *Most health-policy analysts I know regret that employers appointed themselves their employees' agents in the markets for health insurance and health care*
- *[Employers are] the sloppiest purchasers of health care anywhere in the world. For more than half a century, employers have passively paid just about every health care bill that has been put before them, with few questions asked.*

¹¹⁰ This study was summarized at the Massachusetts Association of Health Underwriters annual 'Benefest' in a presentation by Sarah Lucas of Marshberry entitled 'Trends and Best Practices in Employee Benefits Agencies'.

¹¹¹ Uwe Reinhardt, The Culprit Behind High US Health Costs, NY Times, June 7, 2013

- *One reason for the employers' passivity in paying health care bills may be that they know, or should know, that the fringe benefits they purchase for their employees ultimately come out of the employees' total pay package.*
- *In a sense, employers behave like pickpockets who take from their employees' wallets and with the money lifted purchase goodies for their employees*
- *[Carriers] are merely the conduits for the employers' wishes.*
- *When agents perform poorly, one should look first for the root cause at the principals' instructions.*
- *a decade of health care cost growth under employment-based health insurance has wiped out the real income gains for an average family with employment-based health insurance.*

Reinhardt then provided his data. In 2013, for an average family of 4, employer based health insurance cost \$22,000, up \$10,000 since 2003, compared to median family income of \$55,000. He then suggests

- *One must wonder how any employer as agent for employees can take pride in that outcome*

I would extend that query to brokers, echoing the Christensen and Zywave points above.

Over time we developed more and more 'fill in' programs to cover people excluded from the employer based system – old people, unemployed people, veterans, children and others. Combining and coordinating these various programs leads to confusion, inefficiencies and costs.

One confusing consequence of employer based primacy and myriad fill in / supplementary programs, for example, is that our system treats people differently based on non-health factors, like who they are or where they work. Unlike other advanced countries, we have different systems and rules for

- Full time employed people
- Part time or low income people
- Very poor people, provided they are also either **i** children, **ii** blind or disabled, **iii** elderly, **iv** mentally ill, **v** pregnant women or **vi** mothers (if they don't fit into one of these six categories, they are treated like 'part time or low income people'. Understand?)

- People over 65 years old
- Young people who don't otherwise qualify for health insurance
- Military veterans provided their medical problems are 'combat related' and
- People with kidney disease, among others.

As you move from group to group – in other words, as your economic conditions change (generally) - you face different medical access rules, different financing rules and tons of paperwork. This does nothing to improve health and adds no efficiencies to our system.

We, in other words, base our healthcare financing and access systems on non-health related categories of people. Since the groupings are arbitrary, much more a function of interest group lobbying than healthcare distribution efficiency, compliance becomes extraordinarily difficult: compliance experts can't apply logic or reason to regulations. Instead, they must memorize or continuously consult the regs. This makes absolutely no medical or economic sense except, perhaps, to the favored business interest groups.

It only adds overhead, inefficiencies and costs to the system.

Complexity and confusion add costs more in the US than in other countries

Consider the relative inflation rates in the US and some other advanced countries. Inflation, of course, is driven by many factors, only one of which is systemic complexity. But it's difficult to design rational, cost-cutting, efficiency-promoting reform on top of an inefficient, irrational structure.

I use 2003 as my comparison basis because that was the year we introduced tax advantaged deductibles, designed to reduce unnecessary utilization and costs. Policy makers in the W. Bush administration figured that if patients pay with their own money they'll be more frugal and less wasteful. That was a big change from the traditional first-dollar-coverage in managed care that many saw as promoting unnecessary care.

	2003 healthcare spending	
US	\$3788 per capita	
Canada	\$2054 per capita	US spends 1.84x as much
United Kingdom	\$1344 per capita	US spends 2.82x as much
France	\$2093 per capita	US spends 1.81x as much

Germany	\$2943 per capita	US spends 1.29x as much
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	2011 healthcare spending	
US	\$8508 per capita	
Canada	\$4522 per capita	US spends 1.88x as much
United Kingdom	\$3405 per capita	US spends 2.50x as much
France	\$4118 per capita	US spends 2.07x as much
Germany	\$4495 per capita	US spends 1.89x as much

Since the Medicare Modernization Act of 2003, our relative healthcare spending position has worsened. We not only spend *more* than these countries but, on average over time, we spend *more more*.

An underlying problem, at least from the broker or ‘benefits advisor’ perspective is that the enormous complexity of our healthcare system leads brokers to become expert at compliance, not at healthcare or healthcare systemic efficiency. In fact, ‘health’ insurance brokers today need understand nothing about ‘health’, only about compliance, to have successful, financially lucrative careers.

But compliance, as I suggested above in the discussion of Christensen and Reinhardt, does nothing to control costs or improve systemic value. Benefits advisors who *only* advise about compliance provide far less value to their clients than they could.

This was made poignantly clear to me one day in a lecture. I asked an experienced broker why she attended, as her agency normally didn’t contract with me. Her response:

I sell CDH plans, understand HSAs, HRAs, deductibles, FSAs, networks and all the rest.

But I recently switched employer, and I now have a high deductible plan...

And I don’t know how to use it!

Consumer engagement to the rescue ... or not

My somewhat depressing response to her comment: if the pros don't know how to navigate our healthcare system for themselves – don't know which services to use, which are wasteful and harmful – how much can they help their clients? Too often, their compliance advice only helps their clients access unnecessary, inappropriate or wasteful services, with up to some 40 or 50% of all healthcare spending going to services that do nothing to promote health.¹¹² The compliance focus only promotes easier access to care, much of which is unnecessary.

Brokers, and far too often also their clients, lack the tools to differentiate necessary from unnecessary interventions. That's the real impact of the broker comments quoted above.

Indeed, today's 'consumer engagement' emphasis falls into the same quagmire as the rest of our system. 'Consumer engagement' to health insurance brokers means knowing deductibles, plan design details, tax implications and the like. Knowing these things does not decrease costs, waste, unnecessary care or improve patient outcomes.

But better outcomes are (almost) always cheaper than poorer outcomes!

Healthier people cost our healthcare system less, and the more efficiently our system turns people from unhealthy to healthy, the less we spend on them. Poorer outcomes – infections, returns to operating tables, ineffective medications, high false positive test rates etc – always cost more. (Yes, I know that MRI costs vary significantly. But no one wants the cheapest unnecessary MRI.)

That's why the medical community, as opposed to the brokerage community, defines consumer engagement as knowing **how well** medical care works, not how to access it financially or where to get the cheapest. The well informed consumer, to the medical community, knows about the 'health' part of health insurance.

Note the discrepancy between the insurance and medical definitions. The insurance definition does nothing to improve outcomes or reduce waste and thus can't have much cost control impact.

But the medical definition directly attacks waste and improves outcomes so **can** significantly reduce costs. In fact scholars like Dr. Michael Barry of the Informed Medical Decisions Foundation and Dr. Albert Mulley of Dartmouth Medical School, suggest that

¹¹² Several scholars at Dartmouth Medical School, notably Elliott Fisher and John Wennberg, have written extensively about this. Shannon Brownlee's excellent *Overtreated* provides plenty of detail. I'll belabor this point myself later in this book. The 'up to 50%' estimate is mine, not theirs.

well informed (medical definition) patients cost roughly 20% less than poorly informed patients. Much more on this coming up.

Unfortunately, our medical consumer engagement process falls trap to yet *another* definitional problem. Here's Dr. Suzanne Koven, summarizing it in the Boston Globe: ¹¹³

- I appreciate patients informing and advocating for themselves
- I don't appreciate patients arguing with me about anatomy and physiology

In the 10 or so minutes patients typically spend with doctors, they can either question their doctor's competence ('arguing about anatomy and physiology') or discuss treatment options. They probably don't have time to do both.

And they'll probably lose the anatomy and physiology argument. Doctors know much more about medical care and technology than the typical patient ever will. Four years of medical school really do provide a solid technical foundation. Your doctor can out-fact you many times over. (Yes, your doctor may have misdiagnosed your problem. But that's best remedied by a second opinion, not an argument about physiology.)

You, however, know much more about your own treatment preferences than your doctor does. That's the real goal of consumer engagement: aligning treatment processes with patient preferences. That process – having doctors and patients explore treatment options to choose the best for each patient – can have a huge impact on utilization and costs. ¹¹⁴

We have not, in this country, developed a standard definition of 'consumer engagement' or 'well informed patient' because, I suggest, of the 'mess' ¹¹⁵ that our system has become, largely due to the irrational employer based financing model upon which it rests. Compliance issues have become so overwhelming that brokers, and often their clients, simply don't have the time or energy to discuss more impactful issues.

As brokers struggle with compliance and plan designs, physicians with appropriate consumer information and advocacy, and the internet explodes with medical factoids and information, consumers get overwhelmed. Who gives them direction for their own

¹¹³ Suzanne Koven MD, Is physician burnout really a problem? Boston Globe, May 26, 2014

¹¹⁴ We'll discuss preference sensitive decision making in detail later in this book

¹¹⁵ "Mess" comes from the title of Dr. Julius Richmond and Rashi Fein's 2005 book 'The Healthcare Mess'. Both authors were professors at Harvard Medical School.

research? What do they need to know? Which information is correct? Which is valid and appropriate?

Six faulty assumptions

Too often patients make assumptions and medical decisions that are, simply, wrong. I'll give some examples. How many of these resonate with you?

Faulty assumption #1: Good medical care leads to good health

Many people believe that good medical care leads to good health. As one thoughtful and articulate broker once said to me over an informal lunch, describing his young family, 'I have great healthcare for my kids. They're doing really well.'

Nonsense, I responded. 'Your kids are doing well because they're intellectually and emotionally within the normal range, have a mother and father who love them, live in a safe neighborhood, get plenty of good food and fresh air, have friends, and are warm in the winter and cool in the summer. The quality of their physicians and hospitals has virtually nothing to do with their health.'

Indeed, overwhelming evidence shows that good health comes from, in no particular order, good nutrition, exercise, emotional security, environment, public safety, socio-economic status *and* medical care, but that medical care is a relatively small component of good health.

How small a component? About 10%, according to the Massachusetts Health Policy Commission's 2013 cost trends report. Here are direct quotes from page 22:

- Massachusetts residents have better overall health than the United States average, with an additional 1.6 years of life expectancy and 0.9 fewer physically or mentally unhealthy days per month.

but

- Research shows that such outcomes are driven largely by social and behavioral factors, along with public health policies, while health care services delivered account for only 10 percent of general variation in health status.

Richmond and Fein, the two highly respected Harvard Medical School professors, echoed this in their 2005 book *The Healthcare Mess*:¹¹⁶

¹¹⁶ Richmond and Fein, *The Health Care Mess*, pages 92 and 94

Health gains since World War II were largely the consequence of progress in applying our knowledge of health promotion and disease prevention rather than improved clinical care.

Dr. William Frist, cardiologist and former US Senate Majority Leader, estimates medical care's impact slightly higher than the Massachusetts Health Policy folks, at 15 – 20%, saying

Health is not health services. Health is behavior, it's genetics, it's socio-economic status, it's disparity, it's environment. Health services has about a 15 – 20% impact.¹¹⁷

We all know this but we forget it when we, ourselves, get sick or frightened. One reason, I submit, is that we have not been taught how best to use our medical care system. (Now *that's* an interesting value added role for brokers. Don't worry – I'll go into it in detail later.)

Here are some numbers to bolster my argument that 'more medical care isn't better for you'. Compare average medical spending per capita in various states with average longevity in those states. The assumption, of course: if more medical spending had a big impact, people who live in high spending states would live longer than people in low spending. That is not nearly the case.¹¹⁸

State	\$/capita 2009	Longevity at birth 2013
Massachusetts	\$9,278	80.5
Minnesota	\$7,409	80.9
Washington state	\$6,782	79.9
Utah	\$5,031	80.2
Mississippi	\$6,571	75.0
Oklahoma	\$6,532	75.9
West Virginia	\$7,667	75.4

Good medical care doesn't necessarily lead to good health. Lots of other things are far more important.

¹¹⁷ CNBC Meeting of the Minds: The Future of Healthcare, broadcast in July 2009.

¹¹⁸ Spending data from Kaiser Family Foundation. Longevity data from Measure of Americans. I used longevity data 4 years in the future to account for any potential health benefits of high 2009 spending.

By the way, based on the state data presented above, should a broker provide the same benefits advice in Minnesota and West Virginia? Or Massachusetts and Utah?

Faulty assumption #2: Lower deductibles and wider networks = better health insurance

Brokers and consumers too often equate better health insurance policies with lower deductibles and wider provider networks. Poorer policies have the opposite.

Unfortunately, there's no evidence - none that I've seen, at least, and I've looked - that lower deductibles or wider networks lead to better patient outcomes.

One reason for the faulty equation of wider networks with better policies: we have very poor outcome data by provider in this country. Lacking such data, consumers apparently prefer easier access to lots of (potentially mediocre) physicians and hospitals, figuring that one of them should be good in a crisis I guess.

Though we lack evidence that lower deductibles and wider networks lead to better patient outcomes, we have some evidence that lower deductibles and generous benefits can lead to patient harm. Here's Bernard Rosof, Chairman of Huntington Hospital in New York:

Often people with generous insurance plans can run up large bills and face life threatening complications from unnecessary care.¹¹⁹

We also have extensive evidence that *better decision making* leads to better outcomes.

Faulty assumption #3: Newer technologies and medications are better

This is almost a mantra in this country: newer technologies / newer meds / robotic surgeons etc are better, so, when in doubt, get the newest.

This overlooks the fact that 'newer' is a very poor proxy for 'better'. Extensive evidence shows that *outcome based decision making*, not the newest shinny object, leads to better outcomes.

Consider Pradaxa, a newer blood thinner than warfarin, heavily advertised on TV and designed to overcome warfarin patient's need for excessive testing. Pradaxa's annual sales hover around \$800 million. Its TV ads claim

In a clinical trial, Pradaxa was proven superior to warfarin at reducing the risk of stroke in patients with Afib not caused by a heart valve problem

¹¹⁹ More care is not necessarily better care, Connolly, Washington Post, 9/29/09

suggesting to the poorly informed, who don't know the right questions to ask or how to make outcome based decisions, that the newer drug was better. However...

In their legal settlement announced in May of 2014, Pradaxa paid **\$650 million** to settle **4,000 claims** that company didn't adequately warn of risks including severe or fatal bleeding. (If death is a side effect, what's the main effect?) Unlike warfarin, there is no known reversal agent or antidote for Pradaxa.

Or consider robotic surgeries for hysterectomy patients. The da Vinci robot, approved by the FDA in 2005, is designed to generate better results and an easier recovery than traditional laparoscopic surgery, meaning less pain and fewer complications¹²⁰ all of which sounds great to the uninformed.

But a massive study of 264,000 women who had either laparoscopic or robotically assisted hysterectomies at 441 hospitals between 2007 and 2010 showed no benefits from robotic surgery when benefits are measured as complication rates or blood transfusion rates. The robotic procedures, however, cost about \$2000 more. That's roughly 1/3 more.

Again an interest group, the robot manufacturers, benefited by making more money, while patients did not, at least in terms of enjoying better outcomes. Just higher costs.

The morale of these stories, and there are many more: *newer* isn't necessarily better in medicine. *More heavily advertised* isn't necessarily better. Instead *better* is better, based on outcomes from comparative studies. Well informed patients learn the right questions to ask and types of information to consider when evaluating their treatment options.

Faulty assumption #4: Publishing price lists will save money

Today, almost as an article of faith, brokers, carriers and healthcare consumers claim that knowing prices will save money. This is commonly called 'transparency' and the theory runs rampant among health insurance thinkers.

While I agree that a wise consumer should compare prices of similar quality products, then choose the least expensive to get the best value, I *don't agree* that simply publishing price lists will lead to any benefit, either systemic or individual. Remember:

- You don't want the cheapest *unnecessary* care
- You also don't want the cheapest *poor quality* care

¹²⁰ Rabin, Questions about Robotic Hysterectomy, New York Times, Feb 25, 2013

- You don't want cheap *inappropriate* care when slightly more expensive care might be preferable.

Let's consider tonsillectomies in northern New England. Here are tonsillectomy rates per 1000 children in various pediatric service areas during the period 2007 – 2010.¹²¹

Middlebury, Vt	5.6	Burlington, Vt	2.9
Berlin, NH	10.4	Lewiston, Maine	5.2
York, Maine	7.3	Portland, Maine	4.0
Presque Isle, Maine	5.8	Bangor, Maine	2.7
Dover, NH	8.1	Waterville, Maine	3.6
Manchester, NH	8.1	Ellsworth, Maine	3.8
Exeter, NH	8.4		

We know from these data that having about 3 tonsillectomies per 1000 children is appropriate, since there are no reports of kids in Burlington Vermont, Bangor Maine, Waterville Maine or Ellsworth Maine suffering poor health due to an insufficient number of tonsillectomies.

We also know that about 2/3 of tonsillectomies in Berlin New Hampshire, and half the tonsillectomies in York Maine are unnecessary since their tonsillectomy rates are so high.

Shopping for the least expensive tonsillectomy in Berlin or York leads to a bad medical care decision over half the time: people doing that get the cheapest unnecessary care. Imagine that your child has a bad reaction or needs a surgical re-do from an unnecessary tonsillectomy!

A far better approach is to learn the service quality and necessity first, and then, for two equally necessary services of similar quality, choose the least expensive. Don't put the cart before the proverbial horse.

Perhaps a better way to understand transparency is to consider the many types necessary to enhance good medical decisions. A wise patient would want access to transparency data addressing:

¹²¹ These data come from the Dartmouth Atlas of Healthcare, Tonsillectomies per 1000 Children by Pediatric Surgery Area, 2007 – 2010. 'Pediatric service areas' are the geographical regions served by a specific pediatrician office. Kids in Burlington Vermont, for example, typically use Burlington pediatricians, not Berlin New Hampshire docs.

- Prices
- Treatment intensity as, for example, our tonsillectomy example above, or C-section rates by hospital, mastectomy rates by region or similar
- Clinical quality/ infection rates by provider and by treatment
- Treatment benefits
- Provider conflicts of interest

Providing only 1 may distort the message and lead patients away from making wise decisions rather than toward systemic efficiencies.

Another way to express this: homeowners who hire the cheapest plumber, framer, roofer, electrician and painter end up with the most expensive house that leaks. We tend to forget this when we consider healthcare prices.

Faulty assumption #5: Getting the least expensive care saves money

This variation on ‘publishing price lists will save money’ ignores a key factor in physician compensation: that doctors want to maintain their incomes and that time is their main inventory. When they receive less money per patient, they respond by seeing more patients.

This has negative, foreseeable but generally unforeseen consequences.

Dr. Sandeep Jauhar MD, PhD, and director of the heart failure program at Long Island Jewish Hospital, claims that ‘there is no more wasteful entity in medicine than a rushed doctor’.¹²² Because we’re so rushed, he says, ‘we order tests, prescribe drugs, hospitalize patients and — one of the costliest decisions a doctor can make today — call specialists for help’ rather than explain to patients why some tests are unnecessary and specialist referrals inappropriate. ‘Specialists in turn,’ he says, ‘order more tests, scans and the like.’

Cutting payments to physicians becomes a self defeating strategy.

Faulty assumption #6: Raising deductibles saves money

Deductibles, generally running about \$1000 per year, are designed to act as a speed bump when patients consider medical care. Patients will spend their own money more

¹²² Sandeep Jauhar, Busy Doctors, Wasteful Spending, New York Times, July 20, 2014

wisely and frugally than they would spend the insurance carrier's money, according to the theory, thus avoiding unnecessary care and saving money.

Deductibles, unfortunately, act as a blunt instrument, perhaps doing more harm than good by failing to differentiate necessary from unnecessary medical care. Reducing *unnecessary* care can, indeed, save money. But reducing *necessary* care can lead to poorer outcomes and higher costs.

Consider, by contrast, the French approach to deductibles. The French modify or exempt from cost sharing by **person** (disabled, elderly or sick), **treatment** (expensive, effective or necessary) and **medical condition**. The deductible is waived for people suffering from one of 30 'long and costly diseases' like cancer, severe chronic disease or long term psychiatric illness *for medical care is related to that condition*. But these people are still responsible for unrelated medical deductibles, say a broken leg or sprained ankle.

Our 'one size fits all' deductibles, by not differentiating among people, treatments or medical conditions sometimes actually add to costs rather than reducing them. One Medicare study showed that adding a modest copayment reduced the number of outpatient visits by about 20% per year.

But that came at the cost of 2 additional hospitalizations per 100 patients per year. The study conclusion, published in the New England Journal of Medicine:

uniform increases in cost sharing for prescription drugs can have deleterious effects on health ¹²³

without reducing costs at all.

These faulty assumptions – and the system developed from them – lead to these types of conclusions by eminent scholars:

- American health outcomes among insured populations lag substantially behind those of other countries. ¹²⁴
- Americans at top income levels live longer than people at bottom income levels, *but less long than people at top income levels of other countries* ¹²⁵ and

¹²³ Trivedi 'Increased Ambulatory Care Copayments and Hospitalizations Among the Elderly, NEJM Jan 28, 2010

¹²⁴ Bradley and Taylor, The American Healthcare Paradox, page 9

- Even the people most likely to be healthy, like college-educated Americans and those with high incomes, fare worse on many health indicators ...¹²⁶

Despite us paying more for medical care than any other country in the world!

The Fundamental Problem: Old School Thinking

Our systemic confusion and complexity has led to remarkable levels of specialization, not only in medical care but even in the brokerage community. Some brokers focus on Medicare, others on large group benefits, others on small group, some operate only in 1 state, others in many. Some agencies have wellness specialists, tax specialists and CDH specialists, others contract these functions out.

But few advise their clients about medical care issues, leaving that arena to physicians, often harried, often leading time compressed lives.

Our healthcare distribution system looks like is:



Two equally important but completely unrelated boxes. In the Old School, brokers provide financing programs while physicians provide medical care, but never the twain shall meet.

Brokers typically explain that they can't give medical advice because they're not trained or licensed to do this, which is, of course, true. **But I think they've conceptualized the problem incorrectly, relying more on superficial thinking than serious analysis.**

Read on...

In the Old School 'nonintegrated' model, we expect physicians to address the following issues during an average 15 minute meeting with each patient:

¹²⁵ Gudrais 'Unequal America' Harvard Magazine July 2008 referring to research by Harvard Prof Majid Ezzati

¹²⁶ For Americans Under 50, Stark Findings on Health, Tavernise, NY Times, Jan 9, 2013

- Patient's personal health status
- Disease diagnosis
- Treatment recommendations and alternatives
- Lifestyle issues and impacts on health
- Medication options, benefits and risks of each
- Individual risk factors and likelihood of future medical events
- Specific tests including benefits and risks of each
- Trends in medical care and new information since the patient's last visit
- Risks of having / not having specific tests or treatments
- Referral options *and more*

It's obviously very difficult to address all these issues satisfactorily in 2 hours, let alone 15 minutes.

Five concerns about leaving all medical education to doctors

First, doctors respond to uninformed patient demand.

Studies show that about 1/3 of physicians would order a clinically unwarranted MRI if the patient demanded it, which raises patient risks without benefits since the MRIs in question are 'clinically unwarranted'.¹²⁷

Many patients assume, as discussed above, that more medical care is better medical care, so a physician who doesn't prescribe a medication, test or treatment is a poorer physician.

Increasingly, physicians are compensated based on patient satisfaction survey results. Patients who believe 'more care is better care' penalize doctors who withhold painkillers, fail to prescribe a requested drug or test or skimp on referrals. This decreases the physicians' ability to counter the 'more is better' argument, even if they want to.

Studies show that, perhaps as a result of these factors, when faced with a potential screening test option, 95% of physicians recommended the screening test to their patients, and when faced with the option to prescribe medications, over 90% of physicians prescribed.¹²⁸

¹²⁷ O'Reilly, Patient satisfaction: when a doctor's judgment risks a poor rating, AMED News, November 26, 2012

¹²⁸ Data from presentation by Benjamin Moulton at Dartmouth's 2014 Summer Institute for Informed Patient Choice

Second, doctors respond to our legal / tort system, in which fear of malpractice lawsuits leads to excessive testing, Rx prescribing, excessive diagnoses and treatments. In one Gallup survey, physicians attributed 34 percent of overall healthcare costs to defensive medicine and 21 percent of their practice to be defensive in nature. Specifically, they estimated that 35 percent of diagnostic tests, 29 percent of lab tests, 19 percent of hospitalizations, 14 percent of prescriptions, and 8 percent of surgeries were performed to avoid lawsuits.¹²⁹

Third, doctors get burned out so sometimes order tests, medications or treatments because it's easier than not ordering. One doctor described his interaction with a patient this way:

I could tell she wasn't happy. I decided that discussing the evidence would have been futile and I was too tired anyway

Fourth, doctors pathologize or medicalize normal human behavior. Consider the patient who tells his doc 'I sometimes forget people's names in social settings.' Early stage dementia? (There's a drug for that). Social anxiety (There's a drug for that too.) Or a normal human reaction to noise and social stimulation? (There may even be a drug for that but it's probably not necessary.)

Or the patient who went to the beach last weekend and tells his doc 'I love watching the women parade around in their bikinis.' Diagnosis: hyper-sexual disorder.

But the next patient, who went to the same beach, reports that 'I completely ignored all the women parading around in their bikinis.' (Low-T and, of course, there's a pill for that)

Pathologizing, of course, ties closely to malpractice issues described above as well as the problem of uninformed demand.

Fifth, physicians favor interventions. This is sometimes called 'supply sensitive care' which simply means that if medical technologies or interventions are available, physicians will use them.

This is also sometimes called Roemer's Law after Professor Milton Roemer who first discovered the relationship between medical supply and utilization in the 1950s. Roemer found that as more hospital beds are built in a community, more hospital beds are used. His law: a hospital room built is a hospital room occupied because physicians, whether consciously or not, tend to use all the medical resources at hand.

¹²⁹ Hettrich, The Costs of Defensive Medicine, AAOS Now, December, 2010. AAOS Now is the Journal of the American Association of Orthopedic Surgeons

Let's apply Roemer's Law to radiologic scanners. Consider the growth of scans since the mid 1990s as more and more machines became available.

Scans per 1000 people/year ¹³⁰

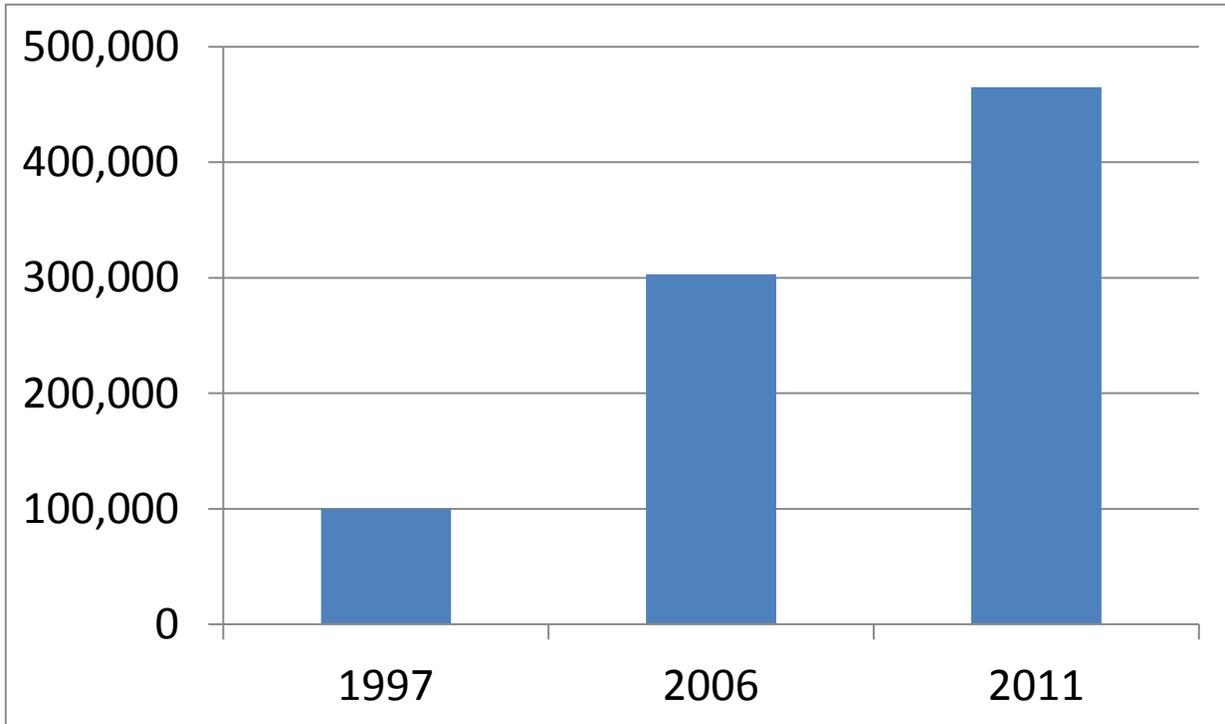
	MRI	CT
1996	52	17
2010	149	65

Note in passing the (non) impact of the internet on reducing medical care intensity. Google doesn't have much impact on reducing excessive or unnecessary care, despite most patients today claiming that they're 'well informed' since they do online research before engaging in medical care. Sorry, I don't buy it.

Now look at the impact of graduating more orthopedic specialists from medical schools:

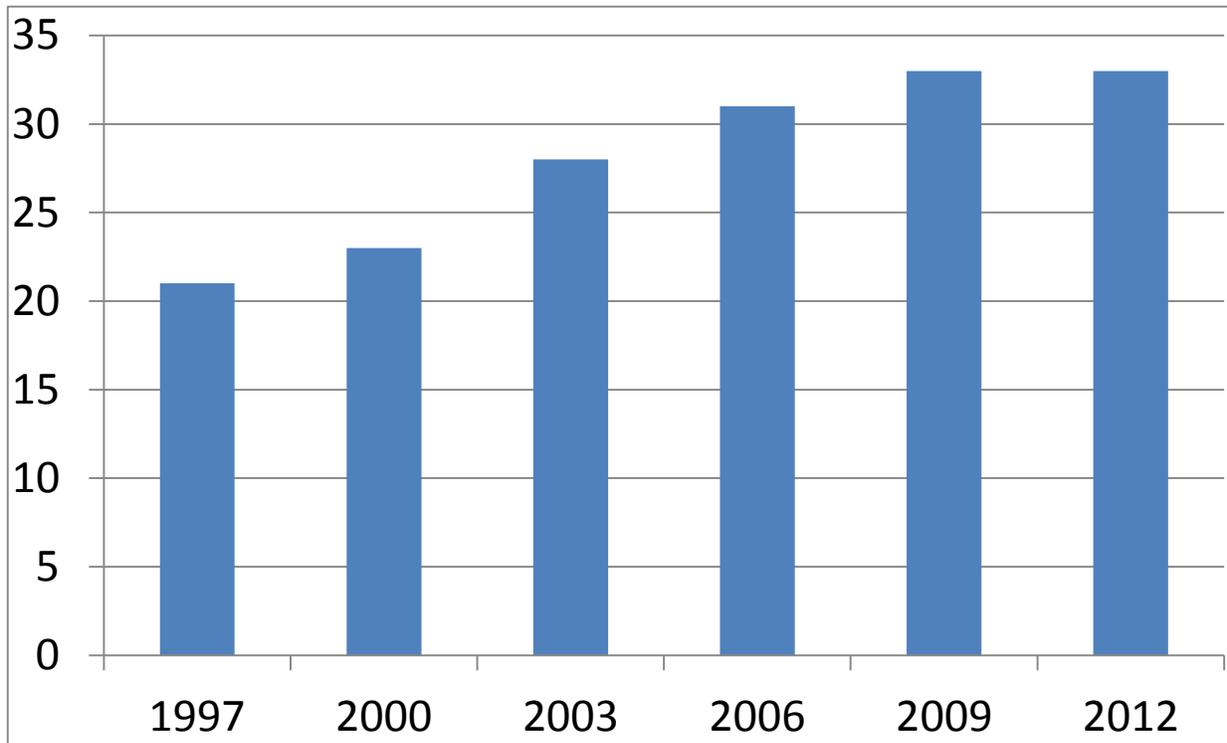
Number of Spinal Fusion Surgeries
performed annually in the US

¹³⁰ These data presented by Dr. Steven Woloshin at Dartmouth's Summer Institute for Informed Patient Choice, 2014



Since the mid-late 1990s, fetal oxygen sensors have become almost universally adopted in delivery rooms, despite the US Preventive Services Task Force not endorsing this technology in birthing. Fetal oxygen sensors identify stress on the fetus' heart and can lead to emergency C-sections. That's one of potentially many reasons for our increased rate of C-section deliveries since the mid-1990s.

Rate of C-sections
as percentage of all US births



Many more examples exist. But to summarize: Doctors face different financial, corporate and emotional pressures and incentives from the patients they advise. Here are some of those differences:

Physician Issues and Concerns

- Success
- Fear of lawsuit
- Fear of feeling guilty
- Local / regional / hospital norms
- Income and time constraints
- Personal preferences
(religion, experience, etc)

Patient Issues and Concerns

- Success
- Pain
- Recovery process
- Infection / readmission risk
- Impact on family
- Personal preferences
(religion, personal image, etc)

Asking ‘Doc, what would you do if you were me?’ tends to get answers from the Physician List, while patients worry about issues on the Patient List.

Doctors may also have different goals and risk tolerances from patients. Research suggests, for example, that 72% of oncologists advising early stage breast cancer patients rate 'keeping your breast' a top goal while only 7% of patients do.

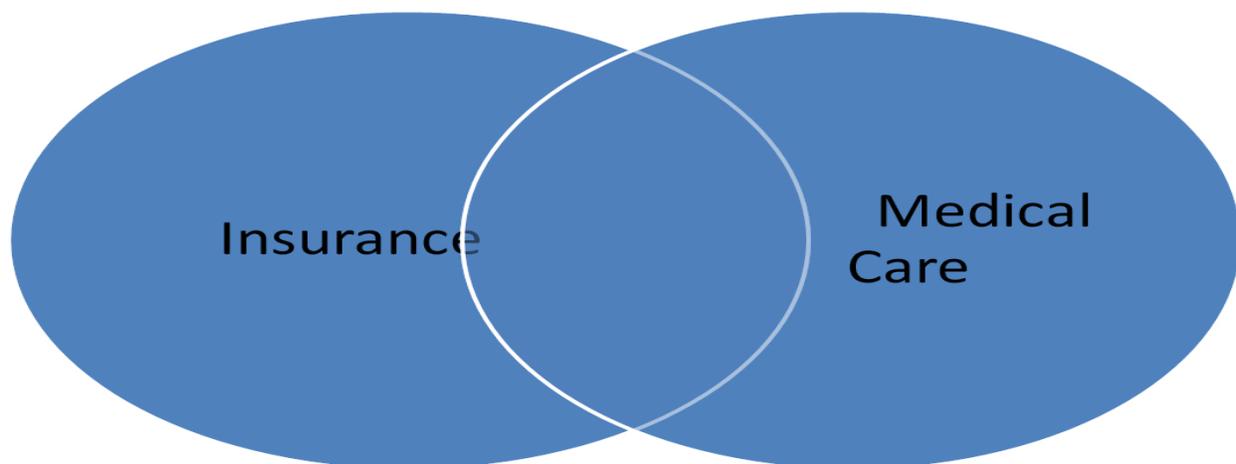
Meanwhile, 0% of oncologists rate 'avoid using prostheses' highly while 33% of patients do.¹³¹

We have learned, over the past few decades, that leaving medical education entirely to physicians - even with a bit of online research - has led to healthcare inflation at approximately gdp + 3 to 5% with, unfortunately, poorer national statistics than other countries that spend less on medical care.

Splitting healthcare financing from healthcare delivery has been proven inefficient. It's time to reconsider the Old School model.

New School: Integrating Finance and Care Delivery

Rather than continue with the ineffective Old School model, let's introduce a New School approach.



In the New School, financing and medical care overlap.

- Doctors understand networks, deductibles, plan designs and prices and *include them in treatment prescriptions*.
- Brokers understand medical terms, preference-sensitive decision making, outcome metrics, treatment intensity issues and *include them in plan designs*.

¹³¹ Data from presentation by Benjamin Moulton at Dartmouth's 2014 Summer Institute for Informed Patient Choice

To do this, brokers need to understand and communicate 3 fundamental concepts to their subscribers:

- **Outcomes**, meaning how well does a medical intervention work. Brokers who help their clients focus on medical outcomes will help them avoid unnecessary medical care and choose higher quality care over lower.

The best way to determine outcomes is from studies comparing patients who had a specific medical intervention with patients who did not. Other attempts to quantify outcomes are less robust, provide less good information and can lead to suboptimal medical decisions.

We too often in this country, use proxies for outcomes. Proxies include 'famous hospital', 'well known surgeon', 'well advertised medication', or 'game changing therapy'. Proxies may or may not correlate closely to actual patient outcomes.

The important point for brokers to communicate to their clients: shop for medical care based on outcomes. They'll enjoy better outcomes that way.

- **Process**, meaning *how* providers implement a particular treatment.

Extensive evidence shows that some hospitals favor C-sections in situations that other hospitals do not, and that doctors in some regions routinely treat early stage breast cancer with mastectomies while doctors in others routinely prescribe other treatments. The Dartmouth Atlas of Healthcare has tracked these differences at hospital, regional and state levels for years.

One simple tool for brokers here: advise patients to ask their physician 'am I in a high or low intensity region / hospital for this procedure?' They can use that information when they obtain a second opinion.

- **Preference-sensitive**, meaning that two patients with similar diagnoses and prognoses may choose different treatments *and both be right*.

This is, perhaps, the single most important issue in American medicine. Scholars ranging from Harvard Business School's Regina Herzlinger to Dartmouth's John Wennberg suggest that patients enjoy the best outcomes, often at the lowest costs, when they make well informed decisions. 'Well informed' means knowing the likely treatment outcomes (both benefits and risks), their process options (mastectomy or lumpectomy for example) and the prices.

Laura Landro, writing in the Wall Street Journal, summarized the impact: ¹³²

Studies show that when patients understand their choices and share in the decision making process with their doctors, they tend to choose less-invasive and less expensive treatments than they would otherwise have received.

The broker's educational role in this New School paradigm is to inform patients that they have choices and help them access key information to make wise choices; it is **not** to give specific medical advice.

My Proposed Decision Making Tree that integrates clinical and insurance information

Brokers and benefits advisors can teach people to use this Decision Tree. It can organize your thinking and ensure that you address the key issues in making your medical decisions.

First identify the most likely benefits and risks of a particular medical intervention and the chance of each. Ask 'do the likely benefits of this medical intervention outweigh both the treatment risks and doing nothing?'

If you answer 'no, the likely benefits do not exceed the risks and are not better than doing nothing' then stop.

But if you decide that the likely benefits exceed the risks, continue.

Second identify your intervention options. You almost always have them. You can have surgery or physical therapy for example, take a brand name medication or generic, have an injection or take a medication, change your diet or take a pill.

Decide which process you prefer. Research shows that different processes often generate similar outcomes. There's often no objectively right or wrong process decision. Rather these are personal choices or preference-sensitive decisions.

Third decide which provider generates the best outcomes using the treatment process you prefer. Some orthopedic surgeons may generate better spinal fusion surgical outcomes than others; some physical therapists better knee pain reductions.

Provider outcomes often – though not always – correlate with experience. The more shoulder surgeries a surgeon performs, the better his/her shoulder surgery patients tend to do.

¹³² Laura Landro, Weighty Choices in Patient's Hands, Wall Street Journal, August 4, 2009

If you can't determine actual outcomes by physician, use volume or experience with patients like you as a responsible proxy. Though not perfect, it can lead you in a positive direction.

Fourth, if two providers generate the same outcomes using the process you prefer, consider price.

Be sure to consider price 4th, only after you've determined that an intervention is likely beneficial, that you're getting the process you prefer and that you've chosen the best provider available.

Follow this 4-step process and you'll likely end up with better outcomes, be more satisfied with your care and perhaps even save some money along the way.

America's research community is developing tools to help patients with these tasks.

The Affordable Care Act on Decision Aids and Shared Decision Making

Section 3506 of the Affordable Care Act or Obamacare addresses Decision Aids and the Shared Decision Making process. The goal is to engage patients in *informed* decision making with healthcare providers.

Decision Aids are **tools** that present clinical evidence of risks and benefits of treatment options; they focus on likely outcomes. Decision Aids are not simply articles describing how a medical treatment works but without quantifying likely benefits and harms; that's an encyclopedia, not an Aid.

Shared Decision Making, on the other hand, is a **process** in which patients and their physicians decide together how to proceed. Unlike the old school paternalist model in which physicians *tell* patients which treatment to have, in the Shared Decision Making model physicians *help patients decide* which treatment option best suits their goals.

Shared Decision Making acknowledges that about 85% of medical decisions are 'preference sensitive', meaning the patient has more than 1 reasonable option and that two different patients suffering from the same medical condition can make different treatment decisions but both be right.

This may seem intuitively obvious to many. Unfortunately, research shows that physicians only discuss alternatives with patients about 14% of the time, and only about 9% of physicians inform patients that they have choices.¹³³ As a result, the impetus to inform patients that options exist most of the time may fall on the insurance community.

¹³³ Benjamin Moulton, op. cit.

Decision Aids and Shared Decision Making also implicitly acknowledge a new vision of the physician's role. The ideal modern physician, suggests Dr. Atul Gawande of Harvard Medical School insightfully

should be neither paternalistic nor informative but rather interpretive, helping patients determine their priorities and achieve them.¹³⁴

This means patients need to learn basic outcome and intensity information outside the doctor-patient framework and opens a new, and potentially role redefining opportunity for brokers and carriers.

A Decision Aid Example

Decision Aids, currently under development at several medical schools and institutions, provide outcome data quantifying risks and benefits of medical interventions.

Consider the Number Needed to Treat. This tells how many people need to take a medication, have a test or have a treatment for 1 person to benefit from it.

The NNT acknowledges that medicine doesn't work perfectly, equally well on all people, all the time. But various interventions work - to paraphrase Abraham Lincoln - on some of the people, some of the time. The NNT tells how often, so how likely you are to benefit from a particular intervention.

The most comprehensive source of NNT information is a website entitled, not surprisingly, TheNNT.com.

Here's an example: 18 adults suffering from acute sinusitis need to take a course of antibiotics for 1 to benefit by having a faster resolution of symptoms.¹³⁵ The Number Needed to Treat for adults with sinusitis to benefit from antibiotics is 18.

Another example: 5 kids suffering from the croup need to take steroids for 1 to enjoy respiratory improvement. The NNT here is 5.

Some more NNT examples¹³⁶

¹³⁴ Sheri Fink's review of Atul Gawande's Being Mortal, New York Times Book Review, November 6, 2014

¹³⁵ <http://www.thennt.com/nnt/antibiotics-for-clinically-diagnosed-acute-sinusitis/>

¹³⁶ This chart appeared in BusinessWeek, January 2008.

THE NUMBER NEEDED TO TREAT

How well do drugs work? Ads and news stories usually say that a medicine slashes the risk of, say, heart attacks by a big number, like 50%. But that often overstates the benefit, because it fails to provide the absolute risk. If only 2 people in a group of 100 are expected to have a heart attack, then a drug that cuts the rate by 50% prevents just 1 heart attack when taken by all 100 people. That's why researchers favor using the "number needed to treat" (NNT). It shows how many people must take a drug for one person to benefit.

DRUG	NNT	DETAILS
Antibiotic cocktail to eradicate ulcer-causing stomach bacteria (<i>H. pylori</i>)	1.1 to eradicate bacteria	Bacteria will be eradicated in 10 of 11 people with 6 to 10 weeks of treatment.
Antibiotic cocktail to eradicate ulcer-causing stomach bacteria (<i>H. pylori</i>)	5 to heal ulcers	Ulcers in 1 in 5 people will heal by the end of treatment. One in two will be cured in a year.
Lipitor and other cholesterol-lowering statins , when used in people who have had a heart attack or have signs of heart disease	16-23 to prevent one heart attack	In clinical trials, with 5 years of treatment, 1 in 16-23 people is spared a coronary event. To prevent an actual death, the NNT is 49.
Lipitor and other cholesterol-lowering statins , when used in patients without heart disease, but who have risk factors like high blood pressure	70-250 to prevent one heart attack or stroke	Benefits with 5 years of treatment are smaller in those without existing disease, and the NNT increases with lower initial risk.
Lipitor and other cholesterol-lowering statins , when used in patients without heart disease, but who have risk factors such as high blood pressure	500+ to prevent death or serious medical conditions	In clinical trials, there was no significant reduction in deaths or serious events, so a precise NNT can't be calculated.
Avandia , which controls blood sugar	1,000+ to prevent heart attacks, other effects of diabetes	The drug reduces blood sugar, but that does not translate into fewer problems, such as kidney failure, nerve damage, amputations.
Zetia , which lowers cholesterol	1,000+ to prevent heart disease	Companies admit that it has not been shown to reduce heart disease or heart attacks.

Data: Bandolier, Therapeutics Initiative, *BusinessWeek*

Knowing the NNT can help patients in two different ways:

- First, patients can decide if a medical intervention works well enough to have. An NNT of 300, for example, make work so poorly – in your opinion – that it's not worth having.

But an NNT of 2 works so well that you may decide to have this treatment.

- Second, the NNT helps patients decide which intervention works better. The lower the Number Needed to Treat, the better the medication intervention works.

How to determine the Number Needed to Treat

Researchers compare two similar groups of people, as alike as possible, except that one group gets the medication while the other does not. This comparison study identifies the medication as the independent variable. Researchers then note the outcomes from both groups and quantify the medication's impact.

That helps explain why the NNT numbers above seem so high: most adults recover from sinusitis and most kids recover from croup even without medication.

TheNNT.com lists dozens of medical interventions.

A second type of Decision Aid

ChoosingWisely, an initiative of the American Board of Internal Medicine Foundation, invited dozens of specialty medical associations to list *5 Things Patients and Doctors Should Question*. The ABIM Foundation then posted these lists on a website called ChoosingWisely.

Here are 3 examples from the hundreds listed:

- *Don't do imaging for low back pain within the first six weeks, unless red flags are present*, a recommendation of the American Academy of Family Physicians.

The Family Physician Academy's justification: Imaging of the lower spine before six weeks does not improve outcomes

- *Don't indiscriminately prescribe antibiotics for uncomplicated rhinosinusitis*, a recommendation of the American Academy of Allergy, Asthma & Immunology.

The Allergy, Asthma & Immunology Academy's justification: Viral infections cause the majority of acute rhinosinusitis and only 0.5 percent to 2 percent progress to bacterial infections.

Most acute rhinosinusitis resolves without treatment in two weeks.

- *Don't perform annual stress cardiac imaging as part of routine follow-up in asymptomatic patients*, a recommendation of the American College of Cardiology.

The College's justification: Performing stress cardiac imaging or advanced non-invasive imaging in patients without symptoms on a serial or scheduled pattern (e.g., every one to two years or at a heart procedure anniversary) rarely results in any meaningful change in patient management. This practice may, in fact, lead to unnecessary invasive procedures.

As of January, 2015, some 63 medical associations participated in the ChoosingWisely campaign, posting more than 300 treatment recommendations.

Other Decision Aids exist and are being developed all the time.

Decision Aids help focus doctor-patient discussions. No longer need patients argue about anatomy and physiology. Instead, doctors and patients can interpret Decision Aids together and discuss treatment outcomes and processes – far more fruitful discussions.

Decision Aids: necessary for Shared Decision Making

The Decision Aids listed above – and others - are a necessary step toward true patient involvement in medical decisions. ‘Involvement’ is sometimes called ‘Shared Decision Making’ in which patients and doctors together decide how to proceed.

Decision Aids are tools; Shared Decision Making is a process. Both work together.

How impactful are Decision Aids and Shared Decision Making?

Research presented at the Dartmouth Summer Institute for Informed Patient Choice, Hanover New Hampshire, June 2014 shows the following:

- Patients with stable coronary angina who used Decision Aids and engaged in Shared Decision Making with their physicians, were 20% less likely to choose stent insertion than patient who did not so engage
 - Absent Decision Aids, 88% of patients thought stents would help them
- Patients suffering from hip or knee arthritis were 25% less likely to choose hip or knee replacement after viewing Decision Aids
- Back pain patients with herniated disks opted for spinal fusion surgery 30% less frequently
- Men diagnosed with early stage prostate cancer were 50% more likely to choose ‘watchful waiting’ than more invasive treatments.

Using Deductibles and HRAs with Decision Aids

The broker can now evolve from CHD version 1, deductibles with some tax benefits, to CDH version 2, deductibles that can incorporate consumer education into a true employee engagement / benefits program.

To move successfully from CDH 1 to CDH 2, brokers need to incorporate three components into their programs:

- Content
- An employee communication program, and

- Plan design incentives

Let's brainstorm, first with a radiology education program:

Consumer Engagement Example: Radiology

Incentive: \$25 per employee to complete the following educational module. Then, \$50 toward the out-of-pocket costs if an employee decides to have a back MRI.

Module content: Low back pain is the fifth most common reason for physician visits. This brief tutorial can help you *benefit* from your physician visit and *avoid unnecessary costs and medical harms*.

Medical research shows that getting an X-ray, CT scan or MRI shortly after the pain begins rarely helps since most people feel better in a month or so with or without the scans.

But imaging raises costs and risks of unnecessary care:

- Lower back MRIs cost about \$1000
- CT scans about \$1200
- X Rays about \$250

One study found that back-pain sufferers who had an MRI in the first month were *eight times more likely* to have surgery, and had a *five-fold* increase in medical expenses—but didn't recover faster.

The excess imaging problem is that people both with and without back pain can show similar imaging results, meaning an identified abnormality in the test may not be the cause of your pain.

Once identified however, abnormalities need further evaluation. This can subject patients to costs and treatments which are often unnecessary since they don't speed recovery.

Review Questions:

1. How common are visits to the doctor due to back pain?
 - Uncommon
 - Very common. Back pain is the 5th most common reason for physician visits

2. If you have back pain, should you automatically, immediately get an imaging exam, like an MRI, CT scan or X-ray?
 - Yes, as soon as you feel any kind of back pain
 - Maybe not, since people who have imaging tests don't seem to get better medical results than people who wait before having the test
3. About how much does a lower back MRI cost?
 - About \$20, my radiology co-payment,
 - About \$1000 on average

Content continues: Some medical organizations recommend *against* imaging tests for back pain within the first month.

The American Academy of Family Physicians, representing 105,000 primary care physicians advises:

- Don't do imaging for low back pain within the first six weeks, unless red flags are present.
- Imaging of the lower spine before six weeks does not improve outcomes, but does increase costs.

The North American Spine Society, representing 7500 doctors, advises:

- Don't have advanced imaging (e.g., MRI) of the spine within the first six weeks for non-specific acute low back pain in the absence of red flags.
- In the absence of red flags, advanced imaging within the first six weeks has not been found to improve outcomes, but does increase costs.

The American College of Physicians, representing 126,000 physicians, advises:

- Don't obtain imaging studies in patients with non-specific low back pain.
- In patients with back pain that cannot be attributed to a specific disease or spinal abnormality, imaging with X-ray, CT scan or MRI does not improve patient outcomes.

The American Society of Anesthesiologists – Pain Medicine, representing 50,000 members who advocate for patients in pain, advises:

- Imaging for low back pain in the first six weeks after pain begins should be avoided in the absence of specific clinical indications
- Most low back pain does not need imaging and *doing so may reveal incidental findings that divert attention and increase the risk of having unhelpful surgery.*

Review Questions:

1. Do many medical professional organizations recommend that you wait 4 – 6 weeks before having a back imaging test, or have the test immediately upon feeling pain?
 - Wait 4 – 6 weeks unless specific red flags are present
 - Have the test immediately
2. Why do several medical professional organizations recommend waiting 4 – 6 weeks before having an imaging test?
 - To reduce patient costs and risks
 - To harm patients

Here are some Red Flags:

- a history of cancer or unexplained weight loss,
- fever or recent infection ,
- loss of bowel or bladder control,
- abnormal reflexes or loss of muscle power or feeling in the legs.

And here are some Key Questions to ask your doctor:

- Do you agree with the recommendations from the American Academy of Family Physicians and others that I wait 6 weeks before having a scan for my back pain?
 - If not, why not?
 - Do you think those recommendations apply to me?
- Do you worry that back imaging tests may incorrectly identify the cause of my back pain?

- Do I have the red flags listed above?
- And What other therapies do you recommend?

Many more Decision Aids and Educational Modules exist

Research organizations are continuously developing Decision Aids about the major healthcare cost drivers. A short research project will identify some of these for you. That's the easy part.

The hard part is integrating the clinical information with insurance plan designs. Though difficult, it's necessary if brokers want to change the Zywave reported client satisfaction numbers:

- Creates strategic plan that aligns with company goals: **43% unsatisfied**
- Offers employee benefits and consumerism communication / education: **41% unsatisfied**
- Assists with creating or maintaining a workplace wellness program: **66% unsatisfied**

Brokers face a dilemma: whether to remain in their comfort zone which we call CDH version 1, providing spreadsheets, products and compliance services or move to CDH version 2 that integrates financial and clinical considerations into plan designs.

I encourage anyone who has read this chapter to consider: If you were a client, would you prefer a broker who engaged in traditional insurance brokerage or who integrated clinical education into plan designs?

I'd also encourage people to consider their own history: Are you satisfied with health insurance trend and utilization rates?

I suggest that if you consider these two questions, your path forward becomes clear.

Robert Frost articulated the options poetically:

Two roads diverged in a wood and I –
I took the one less traveled by,
And that made all the difference

Review Questions

Answers on next page

1. One consequence of having employer based health insurance as the central mechanism of financing medical care in this country is the development of various 'fill in' programs for non-employed people. Examples include Medicare for elderly people and the Veteran's Healthcare Administration for military veterans, each with its own eligibility requirements, access criteria and payment programs. About how many such programs exist in the US?

- a. 1
- b. About 6
- c. About 295
- d. About 13,500

2. We have two different definitions of 'well informed consumer'. The health insurance industry defines a well informed consumer as one understanding deductibles, network restrictions, referral requirements and similar. How does the medical industry define well informed consumer?

- a. The same way, someone who understands deductibles, network restrictions and referral requirements
- b. As someone who understands how well medical care works
- c. As someone who has read lots of books about medical care
- d. As someone who uses google to research their treatments

3. Can we usefully separate healthcare *financing* from healthcare *service* provision?

- a. Yes. A professional broker, for example, only need describe the insurance policy to provide a complete service to his/her customers
- b. No. We cannot usefully separate healthcare financing from service delivery. Every attempt to do that has resulted in higher costs and poorer outcomes
- c. Sometimes. We can usefully separate financing from service deliveries for orthopedic conditions but not for cardiovascular
- d. Sometimes. We can usefully separate financing from service deliveries for acute conditions but not for chronic

4. What is the best way to determine a medical care outcome?

- a. From a comparative test, one that compares a group of people who had a specific medical intervention with a similar group that did not
- b. By reviewing the relevant biological information

- c. By reviewing the relevant anatomical information
 - d. By reviewing the relevant genetic information
5. What does 'preference sensitive' mean in medical care?
- a. That one patient may prefer one treatment process while another, similar patient may prefer something different and that both patients can make the right decisions
 - b. That some people prefer one physician while others prefer someone else
 - c. That some physicians prefer one type of patient while other physicians prefer a different type
 - d. That some patients may prefer one hospital while others prefer a different hospital
6. What is the Number Needed to Treat?
- a. The number of patients who need to have a treatment for one to benefit
 - b. The number of doctors who need to perform a surgery for 1 to get it right
 - c. The number of patients a doctor needs to treat in order to have one patient benefit from his/her care
 - d. The number of surgeries a hospital needs to host to get optimal outcomes
7. What are Decision Aids?
- a. Decision Aids are tools that present clinical evidence of risks and benefits of treatment options; they focus on likely outcomes.
 - b. Techniques that can aid a physician who needs to make an important decision
 - c. Surgical tools to help hospital residents make better use of their time
 - d. Computer programs that determine the optimal treatment protocol for a specific patient
8. Which, below, is NOT a credible decision aid?
- a. TheNNT
 - b. ChoosingWisely
 - c. The US Preventive Services Task Force
 - d. Brochures developed by Pfizer, the manufacturer of Lipitor, that explain the benefits of taking statins

Review Questions

Correct answers in bold

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Part 2: Value neutral

can create or destroy value depending on how they're implemented

The Affordable Care Act

Price Transparency

Chapter 4: The Affordable Care Act

a very brief overview of a very big and complicated Act

What it is, Why it is and
Does it improve healthcare system value?

Introduction and overview

President Barak Obama introduced the Affordable Care Act (a.k.a. the Personal Protection and Affordable Care Act or Obamacare) in 2010. It's a huge piece of legislation, vast in scope and complexity, more or less a business plan for our \$3 trillion healthcare economy.

At \$3 trillion, our *healthcare* economy is about the size of France or Britain's *total* economy, half again as big as Russia's or India's total, and twice as big as Korea's or Spain's.¹³⁷ Our healthcare economy only serves the *medical* needs of our 310 million people, while India's *total* economy serves all the needs – medical, transportation, education, defense, foreign aid etc – of its 1 billion people. Ditto for Russia with 140 million people.

Consider the Affordable Care Act's size and magnitude as roughly equivalent to developing or fixing the entire economic program for Russia *and* Saudi Arabia, or Iran, Israel, Argentina, Poland and Mexico *together*. It's that huge and complicated and, I would guess, about equally unsuited to glib slogans or simplistic approaches.

This chapter will introduce the ACA, explain what it is, how political forces affected it and how it will, in turn, impact our healthcare system. I'll try to assess whether or not it creates or destroys healthcare systemic value though it's a tough call and one that I'll make with trepidation and caution.

The Act itself is huge, 2409 pages of text, consisting of 10 different chapters and having as its main thrust, better access to health services for Americans.¹³⁸

Chapter 1, 374 pages, explains how health insurance becomes a guaranteed issue product (meaning you cannot be denied coverage) with an individual mandate covering all Americans. Coverage is, in other words, both available and required.

Chapter 1 also introduces subsidies, exchanges and employer's responsibilities under the Act.

¹³⁷ World Bank, Gross Domestic Products 2013 <http://databank.worldbank.org/data/download/GDP.pdf>

¹³⁸ This summary comes primarily from McClanahan, Cliff Notes Version of the ACA, Forbes, 7/9/12

Chapter 2 addresses the role of public programs like Medicaid, the Children’s Health Insurance Program and the Indian Health Services. This Chapter discusses subsidies and enrollment standards and extends the CHIP program through 2019.

Chapter 3 consists of 501 pages that improve healthcare quality and efficiency. This Chapter addresses the process of changing from a fee-for-service financing model to quality based payments through Medical Homes, Accountable Care Organizations and similar. It also reduces Medicare spending via efficiency gains and seems to assume that private health insurance carriers will follow Medicare’s model.

Chapter 4, Prevention of Chronic Disease and Improving Health, spends 130 pages discussing how our healthcare system will transform in order to treat chronic illnesses, like obesity. It mandates food labels in restaurants and elevates the US Preventive Services Task Force’s role in determining which preventive tests will be covered at no out-of-pocket cost to patients.

Chapter 5, 256 pages, tells how our healthcare work force will evolve. It addresses the lack of primary care physicians, creates the Ready Reserve Corp and increases the Public Health Service Corp of first responders to deal with healthcare emergencies like epidemics and terrorism.

Chapter 6 aims to reduce systemic fraud and abuse and expand nursing home transparency.

Chapter 7, a short chapter called ‘Improving Access to Innovative Therapies’ is basically dedicated to improving access to generic drugs.

Chapter 8, Senator Ted Kennedy’s baby, is the CLASS act or Community Living Assistance Services and Support, or federally funded long term care insurance. This was put on the back burner as it proved so difficult to implement.

Chapter 9 explains how we pay for all this, including fees on health insurers, drug manufacturers and medical device manufacturers and the “Cadillac” Tax on high cost health plans, among other things.

Chapter 10, Strengthening Quality Affordable Health Care for All Americans, 372 pages, is a bucket list of programs that various politicians wanted to include, like gun owner’s rights and Nebraska’s cornhusker kickback. Some commentators, including Princeton Professor Uwe Reinhardt, suggested that much of Chapter 10 was designed to be included in either House or Senate drafts for political reasons, then cut during the conference committee’s ‘cleansing’ process. Scott Brown’s election to replace Ted

Kennedy scuttled that idea by depriving the Democrats of a filibuster-proof senate majority and effectively leaving all these programs in the final bill.¹³⁹

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 affecting the individual and small group markets primarily.

The **first** kind of 'death spiral' 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, not 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 of these situations. Indeed, the number of uninsured had risen in this country from under 44 million in 2002 to over 50 million in 2009.

In addition to potential insurance death spirals, Obama saw two kinds of healthcare waste consuming vast amounts of healthcare spending.

¹³⁹ Uwe Reinhardt's comments at the 2014 Pioneer Institute Hewitt Healthcare Lecture, available on YouTube https://www.youtube.com/results?search_query=uwe+reinhardt+pioneer

The **first** kind – geographic treatment variation tracked extensively by researchers at the Dartmouth Institute for Healthcare and Health Policy – alone represented about a third of all spending. Here’s Dartmouth researcher Dr. Elliott Fisher after completing a massive study of Medicare treatment utilization rates: ¹⁴⁰

a large fraction – perhaps a third – of medical care is devoted to services that do not necessarily improve health outcomes or the quality of care ...

care in the U.S. could be just as good or better and cost a lot less — perhaps as much as 30 percent less — if all U.S. regions could safely adopt the more conservative practice patterns of lower-cost regions

Many other studies and research organizations, including the Congressional Budget Office, have arrived at similar overspending conclusions.

The **second** kind of waste – non-evidence based care - was quantified by a research team led by Dr. Vinay Prasad, senior fellow at the US National Cancer Institute. ¹⁴¹ This team reviewed every article published in the New England Journal of Medicine over a 10 year period (2000 – 2010) then identified those that tested and overturned ‘common’ or routine medical practices. It’s a fascinating though not a terribly easy-to-read study.

Prasad’s conclusion:

Of all those things we’re doing that lack good evidence, probably about half of them are incorrect.

Or, as Nicholas Balakar summarized Prasad’s work in the New York Times

Many doctors persist in using practices that have been shown to be useless or harmful

I’ll have much more to say about both the Dartmouth and Prasad studies in the chapter on Price Transparency.

Obama and his team worried that our healthcare system had no systematic, routinized mechanism for identifying such useless, ineffective or harmful practices and of informing

¹⁴⁰ More Healthcare Isn’t Better Healthcare, Dartmouth News, Feb 2003. See the Dartmouth Atlas for a list of other research organizations that agree with the 1/3 waste estimate.

¹⁴¹ Prasad, A Decade of Reversal, Mayo Clinic Proceedings, July 2013. Short summary in Balakar, Medical Practices May Be Useless, or Worse, New York Times, 7/26/13. Quotes above from both studies. Researchers had known about ineffective treatments prior to this study, but Dr. Prasad quantified the impact in a methodologically valid fashion.

doctors. We lacked a national, comprehensive data base of treatment outcomes and metrics. The economic and personal costs of failing to develop such a data base were probably both incalculable and huge.

In 2009, thus, Obama perceived the following about our healthcare system:

- Cost trend for past 30 to 40 yrs averaged our GDP growth rate + 3 to 5%, economically unsustainable
- Coverage trend
 - Increasing numbers and rates of uninsured
 - Possible death spirals in the small group and individual markets
- Tremendous medical test and treatment inefficiency when defined by
 - Geographic variation and
 - Effectiveness
- Mediocre outcomes when measured by longevity, disease morbidity, infant mortality as compared to other developed countries

Obama's concern: the private sector, mainly health insurance carriers, physicians, hospitals, pharmaceutical companies, medical device manufacturers and similar, could not *alone* solve these healthcare problems. The government had a role and responsibility to help also.

As an analogy, consider the relationship between a city's zoning regulations and private construction companies. The city says 'build industrial buildings here and residences there', then leaves the private companies to do the actual work. The public sector's responsibility is organizational; the private sector's is fill in and implementation. This imperfect analogy may shed some light on Obama's orientation and thinking.

A different way of saying the same thing: Obama did not trust markets to solve our healthcare problems. He thought our healthcare system needed some extra-market inputs.

Two traditional visions of healthcare reform

Democrats and Republicans fundamentally disagree about the government and the market roles in healthcare reform. They've fought each other over the same basic issues for 100 years, ever since Teddy Roosevelt first introduced a national healthcare

program.¹⁴² I'll summarize in 'compare and contrast' fashion briefly below then expand on their different approaches.

Republicans favor market solutions, arguing that efficiency comes from the unfettered relationship between a product buyer (patient) and seller (physician, hospital, pharmaceutical, etc). Republicans see high healthcare costs, rather than high uninsured rates, as the fundamental problem and they believe that the best way to lower costs is through competitive markets.

- The market mechanism promotes efficiency, meaning the best outcomes at the lowest cost, far better than any other mechanism.
- The market also stimulates medical innovation far better than any government program can.
- Activities that suppress the market do more harm than good for our healthcare system according to Republicans.
- As costs come down, so do rates of uninsured folks, since many would like to purchase health insurance policies but simply can't afford to.

Democrats see the healthcare system very differently.

- Wider coverage, they say, is a necessary precursor to cost reduction. You can't develop an efficient healthcare system while 50 million people lack access.
- The government needs to protect people against abuse by healthcare businesses. 'Yes', Democrats might say, 'we can reduce medical care costs in this country through the market mechanisms. But some ways to do that are unsatisfactory' like cancelling policies when people get sick or having stringent pre-existing condition exclusions that deny sick people access.
- Activities that focus on market solutions can do more harm than good for our healthcare system according to Democrats. That's why programs like the Affordable Care Act are necessary and important.

Both the Democratic and Republican positions presented above and below are overly simplistic summaries: sometimes Democrats agree with Republicans and vice versa,

¹⁴² See Thomas Miller's article Health Reform: Only a Cease-Fire in a Political Hundred Year's War, Health Affairs, June, 2010 <http://content.healthaffairs.org/content/29/6/1101.full?ck=nck&related-urls=yes&legid=healthaff;29/6/1101&cited-by=yes&legid=healthaff;29/6/1101>

and sometimes Democrats or Republicans disagree with the summaries. Read the discussion below more as ideal positions rather than detailed policy proposals.

Paradigm Democratic Position

Democrats fundamentally believe that healthcare is a right. Americans, they say, are entitled to clean air, clean water, elementary school education and access to medical care. Extending coverage to all Americans is simply the right thing for a just, enlightened society to do.

The logical extension of the Democratic position is a national single payer system, sometimes called Medicare for All. Indeed, here is Senator Barak Obama, speaking in 2008:

If I were designing a system from scratch, I would probably go ahead with a single payer system.

Democrats believe that we need more governmental involvement in healthcare, more oversight, more regulation, more programs to protect people against systemic abuse, and, most importantly, more programs to ensure equity and expand coverage rates. Coverage, according to them, is the primary healthcare systemic problem right now. It's both morally wrong and economically inefficient to continue having 50 million uninsured Americans.

Our healthcare problems, say the Democrats, are fundamentally caused by having *insufficient* governmental involvement in healthcare.

Evidence by Democrats: Why wider coverage will lower costs

Single payer healthcare systems cost less: Medicare's administrative budget runs about 2% of total program costs, while private health insurers average around 15%. That difference – 13% of about \$3 trillion in total annual healthcare spending – approaches \$400 billion dollars annually.

Single payer healthcare systems generate better results: Western European countries, Canada, Japan and other developed countries that have embraced single payer healthcare enjoy longer life spans and lower infant mortality rates than we do.

Our private sector based healthcare financing system generates poorer value, meaning poorer results at higher costs. One key reason for this, according to Democrats: our overly expensive healthcare system deprives our various social programs of resources. In fact, Americans spend less on social support programs like

housing subsidies, nutrition programs, job training and retraining and public health in general than do most other developed countries.¹⁴³

Democrats point to people like Joe described below, as needing far more social supports than exist today.¹⁴⁴ By medicalizing Joe's problems – meaning treat what are fundamentally social problems with expensive medical care – we end with poorer outcomes at higher costs. (I included this discussion in Chapter 1 already. If you remember it, skip it this time. Apologies for redundancy.)

Joe, 28 years old, suffers from type I diabetes. He works only occasionally, has little cash available and consumes a poor diet consisting mainly of processed food with few fresh fruits or vegetables.

Joe's shoes have holes in them so his feet are constantly damp. Last year he had 2 toes removed from his right foot due to poor circulation, costing \$7,100 though he didn't pay any of this on his own. His doctor admonishes him to keep his feet dry, eat better food and take his insulin but Joe can't afford to do any of these sufficiently regularly.

He will likely lose toes on his left foot costing \$14,000 and faces a potential below-the-knee amputation (\$17,000) leading both to total medical expenses exceeding \$30,000 and a lifetime existence on social benefits. Post-amputation, it's unlikely that Joe will earn enough to pay very much in taxes – one standard measure of contribution to our society - if he pays anything at all.

The first tragedy in Joe's story: new shoes cost \$50 and apples about \$1/day. We, as a society, could solve many of Joe's medical problems for a few hundred dollars annually and help turn him from an economic 'taker' into an economic contributor.

The second tragedy is that we already spend enough on healthcare + social service combined to treat problems like Joe's. In fact, according to Bradley and Taylor's research published in their book *The American Paradox*, the US already spends at about the OECD average for healthcare and social services together. But we misallocate those resources. We're 1 of only three countries that spends the majority of [medical + social] on 'medical'; most other countries spend about 2/3 on 'social'.

We have, thus, medicalized our social problems, very expensively and inefficiently. That's why single payer systems generate better results at lower medical costs than we

¹⁴³ For a fascinating discussion of this, see Bradley and Taylor, *The American Paradox*

¹⁴⁴ Bradley and Taylor start their book with this description

do: by controlling medical spending more tightly, they allow societies to invest more in social programs.

This resource misallocation harms everyone in our society, claim Democrats, not just the poor. They cite research studies to back up this line of reasoning. Elizabeth Gudrais, for example, summarizing research by Harvard Professor Majid Ezzati, finds that ¹⁴⁵

Americans at top income levels live longer than people at bottom income levels, but less long than people at top income levels of other countries

Bradley and Taylor find, in *The American Paradox*, that

American health outcomes among insured populations lag substantially behind those of other countries.

Our entire system needs, according to Democrats, a complete overhaul with Medicare for All or something similar as the ultimate goal.

Why the Democratic vision won't work

The Democratic single payer goal is politically impossible to achieve. Consider these factors:

First, we already have an \$800 billion private health insurance industry and we're not in the business of nationalizing industries in this country, especially not industries that big.

Some 160 million Americans get employer based private insurance today, and 98% of companies with more than 200 employees offer it. The push-back from these people against a Medicare for All program would be enormous and create a political passage impossibility.

Second, most Americans like the existing system with polls showing support at about 2/3 of the population, about the same rate as support the single payer systems in other countries. Poll methodologies vary but this seems a general average of the dozens I've read. There's no popular sentiment for dramatic systemic change.

Third, all single payer systems developed organically, each with its own unique flavor and features. The British National Health Service, for example, started in 1942 when German bombs destroyed much of Britain's infrastructure. There wasn't much healthcare existent, nor much alternative to government provided medical care. Post war the system grew, people became used to it and today it flourishes.

¹⁴⁵ Gudrais, *Unequal America*, Harvard Magazine July, 2008

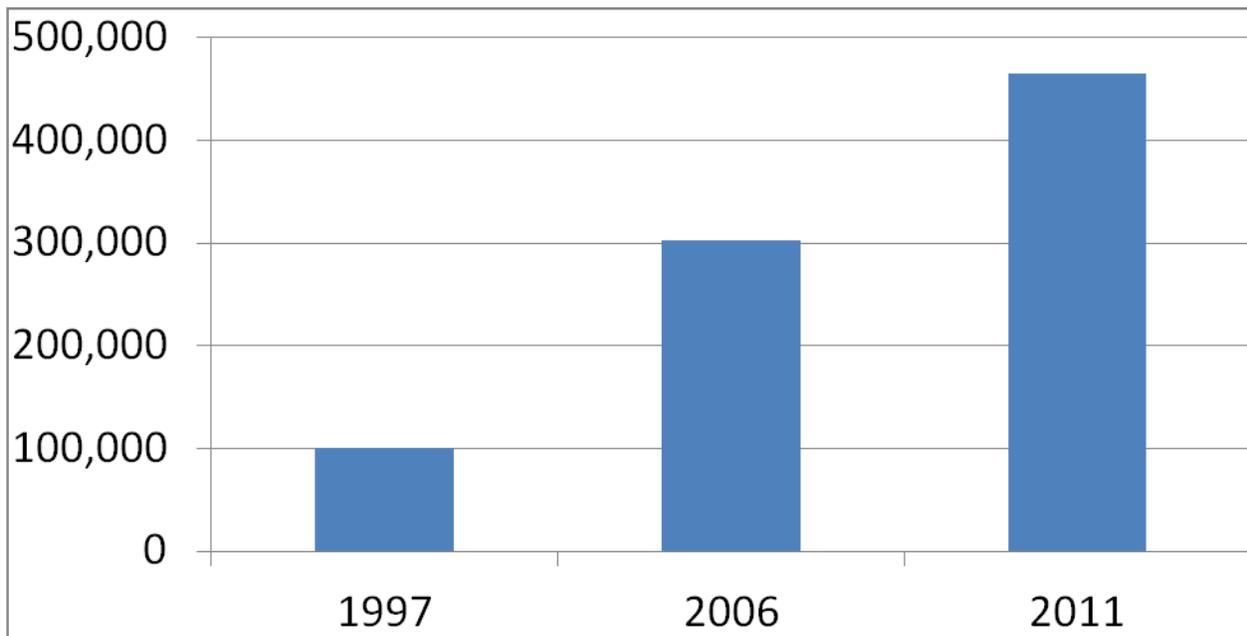
Our current medical system looks nothing like Britain's in 1942. The development analogy doesn't work.

Fourth, Medicare isn't actually all that efficient. Its payment formulas promote excess and it's a poor basis for systemic expansion, at least in the opinion of many commentators.

Consider this brief history. Medicare's 1980s payment program rested on a 'cost plus' formula, in which providers were reimbursed their actual service delivery costs 'plus' a small profit percentage of 'cost'. This rewarded the least efficient care providers the most. A hospital might provide a certain service for \$100. At a 10% 'plus' factor, it earns \$10. But if a different hospital can provide the same service for \$500, it earns \$50. The clear message to hospitals: become less efficient.

Medicare learned this by the 1990s and switched to fee-for-service payments. Now hospitals would get paid a specific amount for each service provided. This rewarded excessive care and led, in part, to explosions in our surgery rates. See the growth in spinal fusion surgeries at least partially due to our payment incentives.

Number of spinal fusion procedures performed annually in the US



Medicare and providers fight over payment codes and costs, not patient outcomes. It has about 140,000 billing codes.¹⁴⁶ It also has, depressingly, about a 20% patient readmission rate within 30 days of hospital discharge. Perhaps the two are related.

Fifth, even if Democrats could enact a Medicare for All type program, Republicans would object, fight it and keep on fighting. That's one lesson of our hundred year's war over healthcare reform – it's never over.

Though perhaps laudable in goal, the paradigm Democratic approach to healthcare reform is simply impractical.

Paradigm Republican Position

Republicans see healthcare very differently from Democrats. They see healthcare provision as a product, not a human right. As a product, it will respond to market forces that demand efficiencies. Republicans believe that the suppliers of healthcare will develop new products to capture markets, that the best of the suppliers will succeed and that our system will be better for it.

The key element in the Republican's vision is stimulation of consumer demand for services by getting money into patient's hands. They favor refundable tax credits that allow people to purchase their own insurance policies rather than having their employer do this for them, and higher deductibles so consumers have 'skin in the game' when making medical care decisions.

Republicans think our uninsured problem is caused primarily by the high cost of medical insurance. Their efficiency-oriented programs will reduce costs they say, thereby making insurance affordable to more people and reducing our rate of uninsured to a more reasonable number, one that public programs can, realistically, address.

Mitt Romney, in an early draft of RomneyCare in Massachusetts, aimed for individual monthly premiums of \$200. Though never passed, that is the type of low cost insurance option Republicans would like to offer.

Republicans worry about market inefficiencies causing US hip replacements to average about \$40,000 while Spanish cost about \$8000, or New York City colonoscopy prices to range from \$2000 to \$8700 depending on the hospital, for exactly the same service.¹⁴⁷

¹⁴⁶ <http://www.forbes.com/sites/brucejapsen/2013/05/04/140000-new-government-diagnosis-codes-doctors-hate/>

¹⁴⁷ Data from Elizabeth Rosenthal, NY Times, Paying Until it Hurts

These discrepancies exist because market forces are suppressed in our healthcare system by regulations and public programs claim the Republicans.

Our healthcare problems, they say, are fundamentally caused by having *too much* governmental involvement in healthcare.

Evidence per Republicans

Today's 'health insurance', say Republicans, actually combines two different financial products, 'insurance' traditionally defined as protection against catastrophic financial harm from unexpected events, and 'routine medical financing' or payments for normal, expected medical activities.

Suppressing market financing for routine, predicted medical activities like flu shots, child deliveries and knee replacements decreases efficiency and raises costs. Better financial tools exist.

Using insurance to finance all medical activities opens the system to moral hazard abuse. 'Moral hazard' means people spend insurance money less judiciously than they would spend their own and get more medical care because it appears 'free' to them. An insurance based healthcare financing system is, virtually by definition, one that promotes excessive care and waste.

Republicans sometimes point to Switzerland and Singapore as two countries that have organized their healthcare financing systems 'efficiently'. Other times they point out specific examples of efficient healthcare providers like

- Shouldice Hernia Hospital in Canada that generates outstanding outcomes for about half the normal US cost. This hospital is so fascinating that the Harvard Business School case study on it was, when last I checked, the 4th best seller of all its case studies.
- Apollo Hospitals in India, subject of another Harvard Business School case study, and Bumrumgrad in Thailand, compete for international patients by providing outstanding outcomes at relatively low costs.

Republicans would like to see the efficiencies of Shouldice, Apollo and Bumrumgrad copied throughout the US.

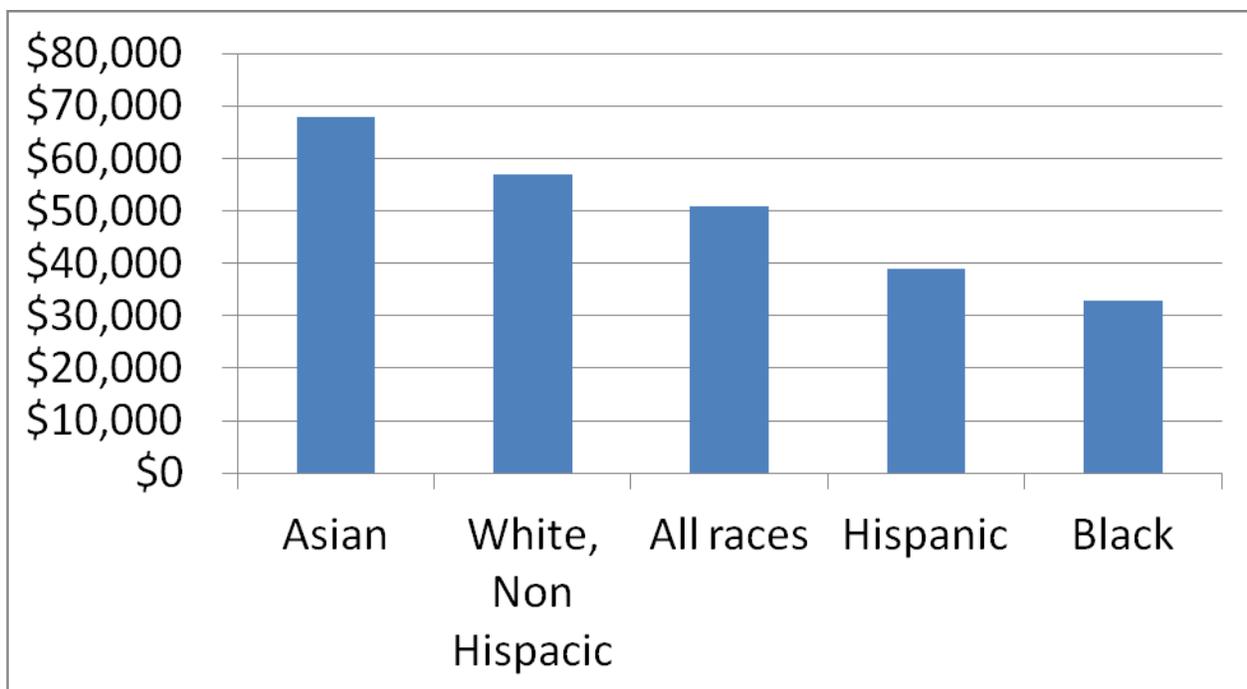
Why the Republican vision won't work

First, health insurance has traditionally been unavailable to many Americans due to pre-existing conditions, especially in the individual markets. Tax credits don't matter if insurance is simply unavailable to you.

Second, health insurance may remain unaffordable if the tax credit is too small. Republicans since John McCain ran for president in 2008 have suggested a family tax credit around \$5000. Family health insurance policies average around \$20,000. I don't know how that size refundable tax credit makes family policies 'affordable'.

Consider the distribution of household incomes in this country as presented in this chart using 2012 census data.¹⁴⁸

Median US household incomes, 2012



The median household income in this country was around \$50,000 with a median household size of about 2.5 people. It's not obvious that the \$5000 tax credit goes to health insurance rather than, say, food or housing.

It's even less obvious for the third of Americans who are Hispanic or Black, both averaging around \$35,000 per household.

¹⁴⁸ Income, Poverty and Health Insurance Coverage in the US 2012, DeNavas-Walt, US Census Department

Third, Republican proposals haven't been vetted otherwise known as 'eviscerated' by lobbyists. We have only bare bones Republican proposals and cannot anticipate how any actual legislation might change or what the legislation might include after going through Congress. Would Republicans make the same deals with general hospitals to restrict specialty hospital development, pharmaceuticals to kill comparative effectiveness research and lawyers to avoid on tort reform as Obama did? (See below). We don't know. Nor do we know what other issues may arise and political compromises any prospective Republican plan may involve. For that reason, I'm uncomfortable pitting *un-vetted* Republican theories against *vetted* Democratic proposals and attempting to draw any meaningful conclusions.

Partisans build straw men to destroy

Both political parties ask the same question, though from different points of view: Do you really trust *them* with your healthcare?

Reform advocates play on distrust of private insurers that

- Charge subscribers outrageously high premiums to fund their
- Bloated, uncaring staffs that
- Reject claims or rescind policies when you get sick, just to enhance their bottom lines
- While paying healthcare executives millions of dollars annually.

See - you need more government oversight to protect you!

Reform opponents generally offer dire forecasts about the future, suggesting death panels, economic disaster, loss of liberty or fundamental changes to the American way of life. Opponents have used the same word – socialism - to fight healthcare reforms for at least 50 years, all the while vowing to protect Medicare.

Here's Ronald Reagan, for example, circa 1966 arguing against Congressional passage of Medicare

one of the traditional methods of imposing socialism on a people has been by way of medicine. It's very easy to disguise a medical program as a humanitarian project, most people are reluctant to oppose anything that suggests medical care for people who possibly can't afford it

Write to Congress 'We do not want socialized medicine'

Today's reform opponents often echo the same sentiments.

Both reformers and opponents, however, say exactly the same thing about themselves and their opponents:

We put forward realistic common sense suggestions but the other guys follow strict ideology, refuse to compromise and have another agenda.

The Democrats gain power

In 2009, Democrats gained control of the Presidency and both Houses of Congress with, for the first time in decades, a filibuster proof Senate majority. This gave them both the opportunity to implement their own healthcare agenda and the responsibility to do so.

Simultaneously, according to Paul Starr in his book *Remedy and Reaction*, various healthcare interest groups realized that the current health insurance framework and inflation rate trend were unsustainable. Their appetite for systemic modification met the Democrats ascendancy to power.

The Democrats decided to back off their Medicare for All approach and make a Grand Bargain with the health insurance industry:

- The government would require everyone to purchase health insurance and subsidize those unable to afford it;
- The industry would accept all applicants, regardless of medical condition, at community rates.

The Affordable Care Act, thus, rests on three legs:

- Leg #1: Community rating with guaranteed issue
- Leg #2: the Individual Mandate
- Leg #3: Subsidies to make insurance affordable

Everything else, more or less, supports these three components.

Note how this addresses Barak Obama's original concerns:

- The individual mandate solves the various death spiral problems
- Subsidies address the huge uninsured problem

- Guaranteed issue addresses the access problem

Republicans, still believing that more governmental involvement in healthcare simply makes the system worse, and realizing that they couldn't advance their agenda politically, decide to fight judicially and challenge two of these three legs to Court. 'If you can't win politically, try to win in court' became their approach as the hundred years war over healthcare reform continued.

Let's explore each ACA component.

Leg #1: Community rating with guaranteed issue policies

The ACA reformed the health insurance markets by prohibiting carriers from discriminating based on medical conditions or employment status. No longer would we have 'group' and 'non-group' rates or pre-existing condition exclusions. This was in line with the Democratic idea that healthcare is a right.

Community rating without compulsion, however, leads to the adverse selection problem. Healthy people, according to this theory, would not purchase health insurance until they got sick. Carriers would price policies at the sick person rates, thus driving more healthy people out of the market, destroying the notion of 'insurance pools' and leading to a different type of death spiral than previously discussed.

The flip side, if you will, of guaranteed issue health insurance at community rates is the individual mandate.

Leg #2: The individual mandate

The individual mandate or requirement that all Americans have health insurance solves the adverse selection problem. Carriers, by and large, went along with the 'guaranteed issue at community rate' program, since the individual mandate simultaneously eliminated the adverse selection problem and provided them with 30 million new customers.

Politicians, however, were a different story. Some saw the individual mandate as a tax, others as an infringement on individual liberties and still others changed their minds with the political winds. I'm not sure any added constructively to the discussion. Since I'm a non-partisan commentator, I'll point out the position changes and discrepancies among both Republicans and Democrats. Neither, in my opinion, comported themselves with distinction or honor.

Consider first what Iowa Republican Senator Charles Grassley said to Chris Wallace on Fox News, June 14, 2009 about the individual mandate: ¹⁴⁹

There isn't anything wrong with it, except some people look at it as an infringement upon individual freedom.

But when it comes to states requiring it for automobile insurance, the principle then ought to lie the same way for health insurance, because everybody has some health insurance costs, and if you aren't insured, there's no free lunch ...

I believe that there is a bipartisan consensus to have individual mandates.

Grassley completely changed his position a few months later, as he said to the Washington Monthly on October 7 of the same year:

the individual mandate, which for the first time would have a federal penalty against people who don't have health insurance.... I'm very reluctant to go along with an individual mandate.

And, just in case anyone was confused (?), he explained his position to the Huffington Post on February 1, 2011

I think it's a violation of the Constitution to tell you 'you have to buy something'

Note how Grassley doesn't complain about the cost of the mandate or accuse it of being a tax, two standard refrains from Republicans. Why would he avoid those positions? (See below)

Now consider Newt Gingrich's 2008 comments. ¹⁵⁰

you've got to require everybody to either have insurance or to post a bond...The fastest growing section of the uninsured is people [with] over \$75,000 income, who are making a calculated gamble that if they get sick, you'll take care of them. I think that's just immoral.

Gingrich clearly understands both the adverse selection problem and free rider problem, i.e. that people receive medical care that they don't pay for.

¹⁴⁹ <http://www.foxnews.com/story/2009/06/14/transcript-sens-dodd-grassley-on-fns/>

¹⁵⁰ Roy, Gingrich Now Says He Was 'Wrong', Forbes, 12/28/11

the one loophole I'll give them is, if they don't want to buy any insurance, post a bond. We can figure out the value of the bond, but probably if you posted \$100,000, \$150,000 bond, you wouldn't have to buy

He said pretty much the same thing on Meet the Press in May of 2011:

I've said consistently that we ought to have some requirement that you either have health insurance, or you post a bond, or in some way you indicate you're going to be held accountable.

All this was before he called the individual mandate 'fundamentally wrong' on his 2012 Presidential website:

I am completely opposed to the Obamacare mandate on individuals.... I am against any effort to impose a federal mandate on anyone because it is fundamentally wrong

He explained why during the GOP Presidential Debate in Manchester, New Hampshire on June 13, 2011, shortly after his Meet the Press statement above:

If you explore the mandate, it ultimately ends up with unconstitutional powers. It allows the government to define virtually everything. And if you can do it for health care, you can do it for everything in your life, and, therefore, we should not have a mandate.

Like Grassley, Gingrich opposes the individual mandate on liberty, not tax grounds: he also omits the standard Republican outcry against taxes. Why? (answer still coming, below)

I have no particular antipathy for either Grassley or Gingrich and no particular reason for highlighting these two Senators. I simply started researching statements about the individual mandate, found the information above, and stopped there. I expect I could have found similar discrepant statements from others.

Meanwhile, Barak Obama, trying to gain political support for the ACA, engaged in the following discussion with George Stephanopoulos on ABC News about the individual mandate:

STEPHANOPOULOS: But you reject that it's a tax increase?

OBAMA: I absolutely reject that notion. ¹⁵¹

¹⁵¹ Good, Obama in 2009: The Individual Mandate is Not a Tax, abcnews.com, 6/28/12

He clearly didn't want to be seen as a tax raiser.

Nancy Pelosi said pretty much the same thing to David Gregory on NBC News

GREGORY: It is a new tax on the American people.

PELOSI: No, no, no. It's not a tax on the American people.¹⁵²

The Democrats don't want to call the mandate a 'tax' because they'll lose politically. But the Republicans don't want to call it a tax either because they'll lose in court; they know that Congress has the power to tax even if it's politically unpalatable. They can score political points by complaining about 'taxes' and win an occasional battle here and there, but they know they'll ultimately lose the legal war if they base their opposition to the individual mandate on taxes. Instead they play the liberty card and hope it carries the day in court. Stay tuned.

During the arguments in the court challenge, before the Fourth Circuit Court, US Acting Solicitor General Neal Katyal, speaking for the government (i.e. the Democrats, since the ACA passed with only Democratic senators supporting it) said the individual mandate is

independently authorized by **Congress's taxing power**...The minimum coverage provision appears in the Internal Revenue Code and **operates as a tax**. It is projected to raise billions of dollars in revenue each year.

The practical operation of the provision **is a tax**. Individuals who are not required to file income tax returns for a given year are not required to pay the penalty¹⁵³

Solicitor General Donald Verrilli's brief on the legality of the individual mandate said pretty much the same thing: "Congress' taxing power provides an independent ground to uphold the minimum coverage provision"¹⁵⁴

Is the individual mandate a tax as the Democrats say it is or it isn't, depending on which Democrat was talking and who he/she was talking to? Or is it a violation of individual liberty as Republicans said it is, shortly after they said it wasn't?

The US Supreme Court ruled 5-4 that the individual mandate is a tax on people who don't have health insurance, saying, in the words of Chief Justice John Roberts, it

¹⁵² Jones, Pelosi: Individual Mandate Isn't a Tax, cnsnews.com, 7/2/12

¹⁵³ Roy, Obamacare's Individual Mandate 'Is a tax', Forbes, 7/6/12

¹⁵⁴ Ibid.

'makes going without health insurance just another thing the government taxes'. It's not, apparently, an attack on individual liberty.

What is the individual mandate economically?

What might the Democrats have done had the Supreme Court decided against the individual mandate, i.e. that it was unconstitutional? Uwe Reinhardt gives us a glimpse of one possible thought process.

The individual mandate acts economically, he says, as an intergenerational grand bargain. It protects today's young when they get old from paying actuarially based health insurance premiums.

The young pay in now and subsidize the elderly, according to Reinhardt, and the individual mandate guarantees that when they get old, some other young people will pay in to protect them.

Reinhardt suggests an economic alternative to the legal individual mandate. You don't need to purchase health insurance, he proposes, but if you don't, you never can. If you opt-out, in other words, you can never opt-back-in. That restriction, he thinks, will function just as well as the individual mandate.

Perhaps this was a Democratic fallback position, in case the Courts decided differently. I suspect they would not simply have given up the fight. Our hundred years war somehow just keeps on going.

Interestingly Reinhardt's Princeton colleague, Paul Starr, recommends only a 5-year opt-back-in restriction. The lifetime ban, he thinks, is simply too brutal. Maybe that would have been the political compromise position.

Leg #3: subsidies to make health insurance affordable

The ACA provides subsidies to individuals and families earning up to 400% of the federal poverty level. Since the Obama administration wanted to keep the ACA 'revenue neutral', meaning that it would not add to the national debt, it raised money to fund those subsidies in several creative ways, none of which, of course, avoided controversy.

First, the ACA ends 'overpayments' to Medicare Advantage. In this program, Medicare pays private insurance carriers to manage Medicare beneficiaries. The private carriers, in other words, made money off of Medicare Advantage.

Since the carriers were going to get some 30 million new subscribers under the ACA and make money off of them, Obama reasoned that they could give back some of what they got from Medicare Advantage.

'Not even close' argue Republicans. Medicare Advantage is the most efficient part of Medicare. The ACA is gutting, in other words, the only part of Medicare that actually works well.

Second, the ACA increases taxes on industries that will benefit from the 30 million newly insured Americans, like medical device manufacturers. Republicans say this stifles job creation in this dynamic, growth industry.

Third, the ACA increases taxes on the richest Americans, those earning more than \$250,000 annually. The Democrats say that wealthy Americans benefit from lots of social investments – roads, bridges, public schools etc – so they should give a very small portion of their incomes back to benefit those needing health insurance subsidies.

Republicans say this penalizes job creators.

Fourth, the Cadillac tax. Beginning in 2018, sponsors of insurance (not the beneficiary, i.e. employers not employees) pay a 40% tax on the portion of premium over \$27,500 for family plans and \$10,200 for individual plans. It acts more or less like the luxury tax in baseball.

Three goals of the Cadillac tax

First and perhaps foremost, the Cadillac tax provides revenues for ACA subsidies, probably in the \$16 billion dollar per year range.¹⁵⁵ It does this by reducing the tax deductibility of employer funded health insurance premiums.

This tax benefit costs the US Treasury about \$250 billion annually as is the biggest loophole in the US tax code. The home mortgage interest deduction, by comparison, only costs the Treasury about \$70 billion per year.

It acts, economically, as a subsidy for wealthy people generally, encouraging them to use more medical care. Wealthier people tend to choose more generous health insurance policies with lower deductibles, and pay higher premiums than poorer people who more typically choose higher deductible plans. The premium deductibility, thus, benefits the wealthier more. The Obama administration and, interestingly, some Republicans like Paul Ryan (see below) think this is wrong and/or economically inefficient.

¹⁵⁵ Turner, et al, Why Obamacare is wrong for America, page 35

- Obama thinks it's wrong for 'average' Americans, with household incomes around \$50,000 and high deductible health insurance policies, to subsidize the lower deductible plans purchased most frequently by richer people
- Ryan opposes our overall increase in tax deductible benefits of which health insurance is one. Consider this quote from the foreward to Turner's book Why Obamacare is Wrong for America. The tax deductibility of employer paid premiums, says Ryan...

tilts the compensation scale toward ever-greater (tax free) benefits and away from higher (taxable) wages.

This isn't just a big driver of runaway healthcare costs, as more dollars chase the same amount of services.

It's also a big reason why too many Americans haven't seen a raise in a long time.

Ryan, in his budgetary 'Roadmap', called for repealing the tax exclusion for employer paid premiums and replacing it with a fixed-dollar refundable tax credit.¹⁵⁶

Second and related, the Cadillac tax forces wealthier people to shop more wisely for their medical care by increasing their deductibles and copayments. This is a tacit acceptance of the W. Bush administration's Health Savings Account approach to reducing moral hazard related systemic waste. Moral hazard, if you remember, is the phenomenon in which people spend the insurance carrier's money less wisely than they would spend their own and get more medical care than they need because it appears free to them. Moral hazard is an inflationary force in our healthcare system.

The Cadillac tax attempts to reduce moral hazard excess by ensuring that all Americans – not just the middle class and poorer among us - consider the necessity and cost of each procedure.

Third, the Cadillac tax reduces the amount of money flowing into our healthcare system. This should, in theory, also have some inflation-mitigation impact.

Legal problems with subsidies: King vs. Burwell

We may delete this section if/as the King decision becomes clear

¹⁵⁶ Turner, *ibid*, page 201

ACA opponents, continuing the Hundred Year's War Over Healthcare Reform, challenged the constitutionality of subsidies available through federally-established exchanges.

Background: King, a Virginia resident, earned below the individual mandate threshold so would not be required to purchase health insurance absent a subsidy. With the subsidy, however, he would need to purchase a policy or face the IRS penalty. King, apparently, didn't want health insurance.

Virginia did not establish its own health insurance exchange but instead used the federally established exchange as did 34 other states.

King challenged the constitutionality of subsidies in Virginia since, according to the Affordable Care Act wording, subsidies are available to people 'enrolled in through an Exchange established by the state'. The Virginia exchange was not established by the state of Virginia, but rather by the feds.

King, the plaintiff in this case, argued that Congress intentionally restricted payment of subsidies to state exchanges as an inducement to getting states to set up exchanges. (Their legal argument is actually much more complicated than this but let's stick with an overview.)

The government, the defendant here, argued that the law intends for federal exchanges to be treated identically to state exchanges and that, at least, the IRS interpretation of the statute in question was 'reasonable'.

The Fourth District Court heard the case and ruled unanimously for the government saying that the wording in the statute was ambiguous, and that the IRS interpretation was reasonable. HOWEVER, and, as we have learned about healthcare reform, nothing is ever settled, the District Court also

"cannot ignore the common-sense appeal of the plaintiffs' argument; a literal reading of the statute undoubtedly accords more closely with [the plaintiffs'] position," and "the [government has] the stronger position, although only slightly."

The US Supreme Court agreed to hear this case and is expected to rule in the spring of 2015. I, of course, have no idea what or how they will decide. Some impacts of a decision in favor of the plaintiff, however, are either clear or troublesome.

According to friend-of-the-court briefs filed in late January, 2015 by the American Cancer Society, American Diabetes Association, American Heart Association and National Multiple Sclerosis Society, some 10 million Americans will lose their health insurance subsidies should the Court rule in favor of King.

This will lead to ‘severely dysfunctional insurance markets’ in 34 states according to an amicus brief filed by America’s Health Insurance Plans on January 29, 2015.

The Commonwealth Fund projected the impact on individual health insurance premiums:¹⁵⁷

- A 40-year-old nonsmoker in Cheyenne, Wyoming, earning \$20,000 annually pays \$84 in premiums each month if she chooses the benchmark silver plan. If subsidies are terminated, she pays \$407 for the same plan—more than 20 percent of her wages.
- In the more competitive Miami insurance market, that same woman pays the same amount for the benchmark plan with the subsidy in place (\$84), but the price jumps to \$274 without it.
- Individual premiums could increase by 47% as healthy people drop their coverage and only sicker ones retain it (adverse selection leading to a death spiral)
- The insurance market, access and coverage consequences of a pro-King decision would be, according to this analysis, ‘dramatic’.

We cannot predict how this decision might ultimately impact and change our healthcare system. Stay tuned.

Compromises necessary to make the Grand Bargain

I’d like to discuss only 3 of the many compromises the Obama administration made to ensure passage of the Affordable Care Act. Ezekiel Emanuel, in his overview book *Reinventing American Healthcare*, called these examples of ‘the tortured interplay of policy and politics’. Did these compromises allow enough of the Democrat’s vision to remain? Did they so severely impact the legislation as to destroy its original intent? Did they buffer the Democratic vision enough for some Republicans to accept? All tough questions. I don’t know most of the answers.

Restrictions on specialty hospitals: Most American hospitals today are ‘general’ hospitals that provide virtually all medical services to people living in their catchment area. ‘Specialty’ hospitals, by contrast, provide only 1 service.

¹⁵⁷ <http://www.commonwealthfund.org/publications/blog/2015/feb/king-v-burwell-what-shutdown-could-mean-consumers?omnicid=EALERT714323&mid>

General hospitals, like any businesses, worry about competitors. They demanded protection against specialty hospital encroachment into their markets as a price for supporting the Affordable Care Act. They got it in the form of some very burdensome regulations regarding specialty hospital development and expansion. What this means for American patients in terms of value creation – the impacts on hospital costs and quality - is an open question.

The hospital sector of our economy is huge, comprising some 5,000 acute care facilities with some 800,000 beds and 4.6 million employees (potential voters). Hospitals tend to be the largest private employers in each state. See this list of the 10 largest Massachusetts private employers in 2012, for example, with hospitals in bold:¹⁵⁸

Employer	# Mass Employees
Massachusetts General Hospital	24,000
Stop & Shop	23,000
University of Massachusetts	17,600
Steward Healthcare	17,000
Harvard University	16,800
Brigham and Women’s Hospital	15,000
UMass Memorial Hospital	14,800
MIT	14,000
Raytheon	12,400
State Street	12,400

Hospitals are 4 of the state’s top 10 private employers. This represents both a great number of votes, significant lobbying power and a potentially enormous source of political campaign contributions.

Other states show similar employment demographics.

A huge fear among general hospitals is that specialty hospitals will pick off the most profitable market segments – orthopedics, cardiology or dermatology, for example - and leave general hospitals only with the least profitable like psychiatric wards and geriatrics.

Among the well-known specialty hospitals in this country:

- Dana-Farber (cancer, Boston)

¹⁵⁸ Boston Business Journal April 24, 2012

- Joslin (diabetes, Boston)
- Massachusetts Eye and Ear (Boston)
- Hospital for Specialty Services (orthopedics, New York)
- MD Anderson Cancer Center (Houston)
- Memorial Sloan-Kettering (cancer, New York)

General hospitals are probably right to worry about specialty competition. Regina Herzlinger claims 'specialty hospitals generally provide better, cheaper healthcare' in her book *Who Killed Healthcare*, then goes on to explain the interplay between lobbyists, politicians and general hospitals ¹⁵⁹

The general hospitals go to Congress and they say, These specialty hospitals, they're bad for my health. They're killing me. In the rest of the economy, if Dell said, Hewlett-Packard is killing me so much in the printing business that I can't sell computers anymore and I'd like you to drive them out of business, Congress would say, Go away. If you can't compete with Hewlett-Packard, don't come to us. You need to be more efficient. We will not eliminate your competitors.

But we treat general hospitals very differently, despite evidence of their inefficiency or poor value creation.

Jonathan Bush from athenahealth agrees with Herzlinger. ¹⁶⁰ He calls the mergers of 551 hospitals between 2007 – 2012 a 'victory of the inefficient' that allowed general hospitals to charge premium prices for commodity services like hernias, hysterectomies, hip replacements and births, and use their political clout to raise prices, control referrals and keep competitors out.

Bush questions general hospital efficiency, noting that hospitals averaged 10 employees per physician in 1990, before all these mergers, and 16 employees after despite the computer revolution and the outsourcing industry developing during this period. Those impacts were supposed to make businesses more efficient, not less.

The Affordable Care Act negotiators, realizing that they needed hospitals as their partners in healthcare reform, agreed to the following specialty hospital restrictions (partial list).

¹⁵⁹ Galvin, *Consumerism and Controversy*, Health Affairs, July 2007

¹⁶⁰ Bush, *Where does it hurt?*, Chapter 5

- Specialty hospitals must obtain Medicare Certification by December 31, 2010 if they want to treat Medicare patients.¹⁶¹ Few hospitals can remain viable without Medicare's business.
- Specialty hospitals could not expand their capacity beyond the number of operating rooms, procedure rooms and beds for which the hospital was licensed as of March 23, 2010, unless an exception is granted by the Secretary of the Department of Health and Human Services¹⁶² The political lobbying for and against exception provision would be, I expect, fierce.
- New and expanding specialty hospitals must be located in a county where population growth is 150% of average state growth for past 5 yrs
 - Have a Medicaid inpatient admission percentage equal to or greater than the average of all hospitals in the county
 - Be located in a state with a below-national-average bed capacity and
 - Have a bed occupancy rate greater than the state average.¹⁶³

Under the Affordable Care Act, will we see another Dana-Farber hospital built in another city? Unclear. Will this create more or less value for American healthcare consumers? Also unclear.

But what is less unclear is that existing general hospitals will face less cost and quality pressure than otherwise.

Was this a deal with the devil, one from which American patients and premium-payers will benefit? I certainly can't say.

Comparative effectiveness research: How can a patient tell which of two drugs works better, or even if either drug works at all? How can you tell if back surgery will more likely alleviate your back pain than would physical therapy? Should you have coronary angioplasty or take aspirin to prevent a heart attack?

¹⁶¹ http://www.healthcapital.com/hcc/newsletter/04_10/Specialty.pdf

¹⁶² <http://www.coxsmith.com/portalsresource/lookup/wosid/intelliun-105-8302/media.name=/LIBRARY1Poppittpresentation.PDF>

¹⁶³ <http://www.outpatientsurgery.net/outpatient-surgery-news-and-trends/general-surgical-news-and-reports/healthcare-reform-bill-puts-physician-owned-hospitals-in-peril--03-24-10>

Though it's easy to find answers to these questions – just ask google – *it's hard to determine if the answers are right*. Drug companies typically study their own drugs for example and, not unsurprisingly, find they work better than the competition's: ¹⁶⁴

- In 5 trials funded by Eli Lilly, it's drug Zyprexa was better than Risperdal manufactured by Janssen
- But in 3 of 4 trials funded by Janssen, Risperdal was better than Zyprexa

This situation exists throughout the medical system, from drugs to surgeries and back again. We often simply don't know, objectively and conclusively, what works well in medicine, what poorly and what not at all.

Obama wanted the Affordable Care Act to establish and fund 'comparative effectiveness research' to test various medical interventions and determine how well they really worked. He also wanted consumers to have access to this 'care quality' information along with pricing information, so they could spend their healthcare dollars wisely.

In other words, Obama wanted to treat healthcare services just like other goods and services. You wouldn't purchase a TV without knowing its quality, nor a steak, nor hire an architect or a plumber. The same, thought the Democrats, should hold true in healthcare. Obama thought the government had an important role to play here, to establish comparative study guidelines and methodologies and to become the trusted, objective repository of all this data and information.

Not so fast, warned industry lobbyists, especially from PhARMA. "You have to be very careful," said "Billy" Tauzin, then president of the Pharmaceutical Research and Manufacturers of America, in explaining why he mobilized his industry's legions of lobbyists in fierce opposition to the administration's proposal. "An arrogant staffer writing a report was about to dramatically change the direction of health care in America." ¹⁶⁵

PhARMA worried that objective comparative research would show that many drugs were ineffective or harmful, which would harm drug companies profits. That would have been a deal-breaker in Obama's attempts to get drug manufacturers on board as ACA allies...and possibly an Affordable Care Act deal breaker too. PhARMA and Obama administration staffers knew that Tauzin only needed to convince 1 Democratic Senator

¹⁶⁴ See Shannon Brownlee, *Overtreated*, page 230

¹⁶⁵ This paragraph comes from Phillip Longman's article *The Republican Case for Waste in Healthcare*, *Washington Monthly*, March/April 2013

to switch sides in order to kill the bill. As Steven Brill describes in his book America's Bitter Pill, Tauzin "knew they could never get 60 votes in the Senate if the drug makers switched sides and began financing a different set of ads, and he said so." ¹⁶⁶

The price for PhARMA support of the ACA: neuter comparative effectiveness research. The Democrats caved. Did they have an option?

Phillip Longman, writing about all this in the Washington Monthly, summarizes the result:

In its final language, the ACA specifically bars policymakers from using cost-effectiveness as a basis for even recommending different drugs and treatments to patients. In practical effect, the ACA ensures that such research won't even be done, let alone be used as a criterion for guiding how the nearly \$2.6 trillion the U.S. spends on health care each year might be put to best use. ¹⁶⁷

Was this a necessary deal? Probably. Did it create value for our healthcare system? Probably not. Did it destroy value? Possibly. Maybe. Probably. Take your pick.

Overall, was this another deal with the devil that did more good than harm or not? Again, I don't know.

Punting on malpractice and tort reform: Tort reform changes the way in which patients collect money from physicians and hospitals that commit errors. Medical malpractice judgments are sometimes very large, especially in wrongful death and child delivery cases. ¹⁶⁸

This raises healthcare costs in two different ways. First, doctors and hospitals pay very high prices for their medical malpractice insurance. This raises the 'cost of doing business' that ultimately get passed on to consumers.

Second, physicians may change their behavior to avoid potential lawsuits, for example by ordering excessive tests or delivering more babies by C-section. This also raises the costs of doing business and may actually sometimes backfire if, for example, an excessive test generates a false positive result that incorrectly identifies a medical problem that then gets treated.

¹⁶⁶ From the New York Times Review http://www.nytimes.com/2015/01/11/books/review/americas-bitter-pill-by-steven-brill.html?_r=0

¹⁶⁷ Longman, Washington Monthly, op cit

¹⁶⁸ I relied on Christy Rakoczy's analysis from The Arguments For and Against Tort reform for this section <http://legalfinancejournal.com/the-arguments-for-and-against-tort-reform/>

No one knows exactly how much the current (unreformed) tort system costs our healthcare system but most commentators suggest that it's 'a lot.' Perhaps a 'very lot'.

Ezekiel Emanuel, one of the principal authors of the ACA, tells why Obama decided not to pursue tort reform in his book *Reinventing American Healthcare*:

Late one summer afternoon, I met my brother Rahm—then the White House chief of staff—in his West Wing office. We chatted, and then he asked in his usual staccato, "What else is going on, Zeke?"

"I'm also working on the medical malpractice proposal I told you about," I began.

He immediately cut me off: "Shut the f— up! We are not doing malpractice. Period. Every time the AMA comes in here, they don't talk about malpractice." Their first, second and third priority, he said, was the formula used by Medicare to determine doctors' pay. "We don't need to do malpractice for the doctors, and I am not alienating the president's base for nothing," he barked. "Stop it."

Rahm's reaction told me everything that I needed to know about the politics of the issue. Democrats would accept malpractice reform under two circumstances: if they needed it to keep the AMA's support for the bill, or if they needed it to attract Republican support. Neither was true.

Between foregoing the public option that alienated liberals, changing the tax exclusion that offended unions, and making deals with drug companies that pissed everyone off, the president did not need to antagonize the plaintiff bar for no gain.¹⁶⁹

Politics trumped policy. Did Obama make the right call here? Did this decision, on top of the restrictions on specialty hospitals and neutering of comparative effectiveness research, leave enough in healthcare reform to make it meaningful?

These are but 3 of the many issues reformers faced. I can't say yet, if ever, whether or not the ACA created much value for our healthcare system. I tend to agree with the New York Times summary:¹⁷⁰

the insurers got a fair shake, uninsured and underinsured patients truly benefited, hospitals and pharmaceutical companies and medical equipment companies

¹⁶⁹ Emanuel, *Reinventing American Healthcare*, page 185

¹⁷⁰ http://www.nytimes.com/2015/01/11/books/review/americas-bitter-pill-by-steinbrunn.html?_r=0

were left free to charge exorbitant prices, while the general public was left with no real strategy for cost containment.

The net value impact on our healthcare system? Better access for the uninsured certainly. But more than that? I simply don't know.

Measuring the ACA's effectiveness
Metric #1 - Quantification

The Affordable Care Act attempts to impact several different aspects of our healthcare system, including (partial list)

- Expand coverage
- Control costs
- Improve quality and
- Improve population health

Ezekiel Emanuel suggests using dashboards to measure each of these. Here are some examples.

How well does the ACA expand coverage? You can see the Congressional Budget Office estimate compared to Emanuel's below.

Metric	CBO Prediction	Emanuel Prediction
# states expanding Medicaid by 2020	N/A	All 50 states
# people purchasing ins through exchanges, Jan 1, 2016	22 million	>30 million
# purchasing through exchanges, Jan 1, 2020	25 million	>50 million
# no longer receiving ins from ER but covered by exchanges, Jan 1, 2020	11 million	25 million
% private sector workers with employer sponsored health ins, Jan 1, 2025	61% of workers in private companies	<20% of workers in private sector companies

How well does the ACA help control medical costs? Again, see both the CBO and Emanuel's estimates.

Metric	CBO estimate	Emanuel estimate
Federal Medicare and Medicaid spending exceed \$1 trillion	2016	2018
Federal Medicare and Medicaid spending exceed \$1.5 trillion	2024	2025
Overall per capita healthcare inflation at GDP + 0%	??	2020

Third, some care quality metrics. Here compare our 2014 levels to Emanuel’s goals / hopes for the ACA.

Metric	2014 levels	Emanuel Goals
All cause hospital-wide readmission rate for Medicare	18.6%	15% by 2018 12% by 2022
Overall hospital-acquired infections	1 in 20 patients	Lower than 1 in 40 by 2016
Central line-associated infections	41,000 annually	10,000 by 2016
All patients obtain their complete medical records electronically	??	2018

Fourth, some population health metrics. I, for one, would be delighted to see these kinds of population health improvements over the next few years.

Metric	Current Level (2014)	Emanuel Goal
% adults who are overweight or obese	69%	59% by 2025
% of children who are overweight or obese	32%	22% by 2025
Infant mortality rate	5.9 per 1,000 live births	4.0 per 1,000 live births by 2025
Deaths of adolescents ages 10 - 24	60 per 100,000	40 per 100,000 by 2025

**Measuring the ACA’s effectiveness
Metric #2: Qualitative measures**

Emanuel's dashboards seem like reasonable ways to measure the ACA's impact on our healthcare system and I always like quantifiable indicators. They tell the target and allow commentators to see if we hit the target or not, and if we miss by how much and why. This falls into the 'evolutionary' nature of the ACA as perceived by Democrats. 'We can correct ACA mistakes in Phase 2', they might think, 'once we know how well we did on Phase 1.' Not an unreasonable approach.

But I'd like to suggest a completely different way of measuring the ACA's impact, a qualitative rather than quantitative metric and one that indicates a paradigm shift in our healthcare system. It tracks the movement of healthcare from an *inefficient* industry to an efficient one. This idea actually comes from David Cutler, economics professor at Harvard.¹⁷¹

Cutler defines efficient industries in 3 ways. **First, efficient industries use information well.** They track what they do, why they do it, how much it costs, whether they achieved their goals or not and how to improve the process, among other things. As Cutler summarizes 'you can't manage what you can't count' and efficient industries like car and computer manufacturing, count and track lots of their activities to the penny and byte.

Medical care fails to quantify adequately many (most?) of these types of data. As one simple example, studies show pretty conclusively that surgeons performing the highest volumes of a procedure annually get the best patient outcomes and surgeons performing the lowest volumes generate far poorer outcomes. That's a pretty blunt or 'inefficient' measure. Here's what we don't know about this, a partial list:

- What is the volume threshold?
- How much better do patients of high volume surgeons do, as compared to patients of low volume ones?
- Are there outcome gradations by volume? If so, what are they?
- Do 'high' and 'low' volume definitions vary by procedure?

And, perhaps most fundamentally

- How many of a given type of procedure does each surgeon do annually?

Somewhat astonishingly for me at least, there are no easily accessible, public sources of that information, at least not in Massachusetts. I learned this from an official at CHIA,

¹⁷¹ David Cutler, You Tube, Healthcare Reform, Univ Washington, Nov 13, 2013

the Massachusetts Center for Health Information and Analysis, the state's healthcare data collection and dissemination agency who explained the methodological problems assembling that information, which are both existent and significant. (I don't fault this or any particular agency for failing to have this information available. It indicates a systemic problem, one characterized by David Cutler as stemming from healthcare's status as an inefficient industry.)

Also and somewhat indicative of an inefficient industry, individual hospitals may have these data. They often, in fact, have tons but, as Dr. Paul Ruggieri says in his excellent book *The Cost of Cutting*, no legitimate entity has ever held them accountable for their reluctance to publish.¹⁷² Perhaps the ACA will. If so, that's a clear value add.

Second, efficient industries have rational employee compensation arrangements.

They reward workers for delivering higher value. Healthcare workers, though they are rewarded for doing lots of things like ordering more tests or scheduling more appointments, are rarely rewarded for adding value.

- Who in our healthcare system is financially rewarded for dissuading a patient from having more tests?
- Our piecemeal, fee-for-service financing system rewards quantity increases, not value creation.
- Our medical care system routinely pushes for the most aggressive care, not the least.¹⁷³

Third, efficient industries empower workers to improve value. Each Toyota worker famously is empowered to stop the production line when he or she detects a quality problem.

Where is the healthcare equivalent? Who, if anyone, can tell a surgeon to stop?

Let's explore in this issue in *The Tale of Two Polyps* below, originally described by Dr. Marty Makary in his book *Unaccountable*.¹⁷⁴

The Tale of Two Polyps

¹⁷² Ruggieri, *The Cost of Cutting*, page 117

¹⁷³ Dr. Andy Lazris, *Curing Medicare*, introduction. I'll discuss this much more in the chapter on Price Transparency

¹⁷⁴ Makary, *Unaccountable*, pages 21 - 23

A gastroenterologist named Dr. Cotman, one day performed a routine colonoscopy and found a golf ball sized polyp that appeared benign. He thought the best removal technique was to lasso it with a wire snare and remove it while the patient was asleep.

But Dr. Cotman was somewhat inexperienced with this technique, so called in a colleague who performed the procedure 'slick and fast' according to Makary, 'it was awesome'.

Upon awaking, the patient learned that doctors had removed a polyp during the colonoscopy, was pleased, then went home. No ill effects. The process seemed routine to the patient in every way and, apparently, unremarkable from his point of view.

Some days later, Makary assisted a respected colorectal surgeon named Dr. Frederick on an identical colonoscopy procedure and identified a similar polyp. 'It looked so similar it was almost as if it were the same patient' Makary reported. He asked if Dr. Frederick would use the same wire snare lasso technique to remove it.

- 'I like to remove these in the operating room by taking out the colon' Dr. Frederick responded.

Colon removal sounded like overkill to Makary, who had just observed the 'slick and fast' removal of a similar polyp by a different physician. He relayed this story to Dr. Frederick and who responded 'I just like to take these out with surgery.'

The patient awoke from the colonoscopy, learned about the polyp, was terrified according to Makary, and scheduled surgery for a few weeks hence. That surgery was ultimately successful in that a benign polyp was removed and the patient recovered fully.

Let's let Dr. Makary summarize his thoughts about these experiences:

- Everyone in the colonoscopy unit – nurses, anesthesiologists, technicians, me, even the scheduler – knew this surgeon [Dr. Frederick] took disproportionately more screening-colonoscopy patients to surgery whereas other doctors worked as a team to get the best doctor to remove polyps with a wire snare
- While nearly every employee knew this surgeon wasn't a team player – and wasn't really doing the right thing for many patients – their input didn't matter.
- The only thing the two physicians had in common was that they reported to no one except their respective, information-deprived patients.

I'll suggest that the real long term value creation impact of the ACA will occur in situations like this.

- Will residents like Makary have the power to create patient value, like Toyota workers have when they see a quality problem present itself?
- Will patients have access to critical information about physicians so they choose their doctors wisely?
- Will hospitals, carriers and ultimately consumers hold physicians accountable for creating value – as Dr. Cotman did above – or destroying it, as Dr. Frederick did?
- Will the Cotmans of the world be financially rewarded more than the Fredericks?

If the ACA moves us in this direction, then we can see real value being created. But that's a long term objective and perhaps one too subtle for us to discuss or measure today.

Conclusion

Will the ACA add value to our healthcare system?

Ezekiel Emanuel thinks so though he doesn't expect the Affordable Care Act to solve all our healthcare problems, rather just to improve things. He calls our system 'terribly complex, blatantly unjust, outrageously expensive, grossly inefficient, error prone'.

He and the Democrats aim for an evolutionary step, not perfection. The standard by which Emanuel wants to be judged is both modest and historical: 'modest' mainly by changing the direction of our systemic development toward more value creation and 'historic' by serving as the basis for future reforms. Healthcare reform, for Emanuel, is never over but is, rather, a process. He sees the ACA as the first in a series of reform steps. He's optimistic that structural reforms will create value over time.

Republicans disagree. They see the ACA's direction as wrong, taking us backward rather than forward, in an inappropriate evolutionary manner. They think the government expansion and market suppression features, whatever their short term dashboard gains, cause long term systemic harms that they will have to undo when they (almost inevitably at some point) gain more power in Washington. They see the ACA's structural changes as an impediment to true systemic improvement.

My two cents: I don't know if structural reforms ever increase systemic value, though clearly insuring more people is a good thing. I think the deals reached to restrict specialty hospital development, comparative effectiveness research and tort reform are symptoms of the problem I discussed in the Introduction. We never get value creation

from supply side structural reforms because of the tremendous economic and lobbying power each special interest group has in blocking true value creation (unless, of course, they can make money off the reforms).

I continue to think that the real value creation action lies on the demand side with consumers, through improved patient education so people learn how to make medical decisions based on care quality. The comparative effectiveness research programs, had they been appropriately implemented, would have been a major step forward here. But political realities trumped patient need, reprising the problem with all structural reforms in healthcare.

One unintended consequence of the ACA's failure to promote true consumerism is an opening for the private sector to step into the consumer education void. This first and loudest attempt is through Price Transparency programs, in which carriers post prices for medical services so patients can choose the least expensive.

I think this is probably a misguided effort and I'll tell you why in the next chapter.

Review Questions

Answers on next page

1. Why did President Obama decide to reform healthcare in 2009?
 - a. He worried about the rising rate of uninsured people and the potential of death spirals in the individual and small group markets
 - b. It seemed easier than dealing with Iraq and Iran
 - c. Republicans indicated strong support for a major healthcare reform movement
 - d. Doctors, trial lawyers and insurance carriers demanded major systemic reforms

2. Healthcare reform rests on 3 legs. Which below is NOT one of those legs?
 - a. The Individual Mandate
 - b. Guaranteed issue policies at community rates
 - c. Subsidies to make insurance affordable
 - d. Major tort reform

3. What is the Individual Mandate?
 - a. A requirement that all Americans have health insurance
 - b. A requirement that all physicians treat 'any willing patient'
 - c. A requirement that all hospitals treat 'any willing patient'
 - d. A Federal requirement that States inform all their residents of their healthcare financing options

4. What does 'guaranteed issue' mean?
 - a. That you will be allowed to purchase health insurance regardless of your age or medical condition
 - b. That insurance companies have to issue guarantees about health outcomes
 - c. That hospitals have to issue guarantees about health outcomes
 - d. That physicians have to issue guarantees about health outcomes

5. What are health insurance subsidies based on?
 - a. Your medical condition
 - b. Your income
 - c. Your proximity to a hospital
 - d. The number of health insurance policies available to you

6. What is the Cadillac tax?

- a. A tax on the amount of premium above a certain threshold.
- b. A tax on Cadillacs
- c. A tax on people who drive Cadillacs
- d. A tax on physicians who drive Cadillacs

7. This chapter suggested that efficient industries differ from inefficient ones in three basic ways. Which below is NOT one of those ways?

- a. Efficient industries use information well
- b. Efficient industries have rational employee compensation arrangements
- c. Efficient industries empower employees to create value
- d. Efficient industries pay far lower salaries

8. The Obama administration made several compromises to ensure passage of the Affordable Care Act. Which below is NOT one of those compromises?

- a. It severely restricted development of new specialty hospitals
- b. It gutted comparative effectiveness research
- c. It did not reform tort practices
- d. It rewarded acupuncturists – a key source of Obama’s political support and campaign financing – by lowering their Federal licensure requirements and expanding their list of approved procedures to include steroid injections and some organ removals.

Review Questions

Correct answers in bold

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Chapter 5: Price transparency

Value creation or not depending on what else becomes transparent

Dr. Clifton Meador, former dean of the University of Alabama Medical School, issued this caution about the role of financing and prices in American medicine:

Solutions to the high costs of medical care are almost exclusively financial or payment based [but] the underlying causes are based on misdirected clinical and diagnostic thinking ¹⁷⁵

In other words, Meador cautions us about using financial tools like price lists to address clinical problems.

Dr. Andy Lazris, geriatrician and author of Curing Medicare, agrees, decrying our medical care system that

pushes the most aggressive care, often despite a paucity of evidence to support that approach ...as little as 15% of what doctors do is backed up by valid evidence ¹⁷⁶

Prices can vary dramatically for the same service throughout our healthcare system. 'Transparency' means 'making prices public so people can choose the most economical alternative'. Some say this increases systemic value.

I'm not so sure.

Some pricing examples

Here are some graphic examples of price differences within a relatively small geographic region for the same services. These prices come from the New Hampshire medical price website, nhhealthcost.org, downloaded in 2013 for arthroscopic knee surgery. I chose this website because it was public and easy to use.

<u>Facility</u>	<u>Total Cost</u>
Concord Ambulatory Surgery Center	\$3,431

¹⁷⁵ Health Beat blog by Maggie Mahar, 5/16/11

¹⁷⁶ Andy Lazris, Curing Medicare, introduction

Franklin Regional Hospital	\$5,118
Cheshire Medical Center	\$6,644
Parkland Medical Center	\$7,717
Weeks Medical Center	\$9,873

Pretty wide variation for the same service. Here are some prices for a pelvic MRI, same website.

<u>Facility</u>	<u>Total Cost</u>
Derry Imaging Center	\$1,486
St Joseph Hospital	\$2,574
Exeter Hospital	\$2,758
Speare Memorial Hospital	\$3,381
Monadnock Community Hospital	\$3,868

Impressive differences. The same situation occurs for dozens of tests and treatments throughout our healthcare system.

Why prices matter (a lot)

Paying too much for a test, medication or treatment directly affects two groups of people: individuals / families with high deductible health plans and self insured companies. Both, in an economic sense, function the same way – they spend their own money on medical care. Each dollar saved drops directly to their own bottom line.

Paying too much indirectly affects us all by raising overall costs and therefore health insurance premiums.

Thus, the argument goes, considering price generates benefits for us both individually and collectively.

Why prices don't matter (much)

Prices do not tell us

- If we will benefit from the medical care
- If we will be harmed by the medical care
- If we use excellent, average or mediocre providers and treatments.

In short, shopping for medical care primarily based on price can lead patients to cheaper unnecessary or poor quality medical care. And, since it's cheaper, perhaps to *more* unnecessary or poor quality care.

How much unnecessary and poor quality care exists in the US?

The standard estimate of unnecessary care quantity in our healthcare system today is about 1/3. That comes from the Dartmouth Atlas of Healthcare and is based on the amount of geographic treatment variation identified by studying Medicare intensity levels by geographic region. Some regions routinely provide more care to residents while others routinely provide less. The Dartmouth researchers added up all the differences and concluded that the variation equaled about 1/3 of all medical spending.

With our total healthcare expenditures approaching \$3 trillion annually, this '1/3' estimate accounts for about \$700 billion annually and perhaps as much as \$900 billion. Aetna claims the actual amount is at least \$765 billion.¹⁷⁷

But I think this a low estimate, and perhaps a very low one based on two analyses that we'll discuss in some detail later in this chapter.

- First, Dr. Vinay Prasad and his team from the National Cancer Institute and National Institutes of Health, in a very rigorous, detailed study, estimated that about half of all established treatments are ineffective or harmful.¹⁷⁸

If we cut geographic 'low intensity' utilization rates by about half to account for Prasad's findings, **we might double the Dartmouth waste estimate to \$1.5 trillion or more**...potentially well over half of all medical spending.

- Second, Dr. Al Mulley and his team from Dartmouth Medical School estimated the potential systemic savings from incorporating patient preferences into

¹⁷⁷ <http://www.aetna.com/about-aetna-insurance/document-library/corporate-responsibility.pdf> page 11

¹⁷⁸ Prasad, A decade of reversal, Mayo Clinic Proceedings, August 2013

treatment designs at about 20%.¹⁷⁹ Mulley's insight, along with others who have studied the same phenomenon, was that patients who understood their options tended to choose less medical care – both a lower number of procedures and less intense / aggressive / expensive ones.

If we cut geographic 'low intensity' utilization rates by 20% to account for Mulley's findings, **we increase the Dartmouth waste estimate to about 40% of all medical spending.**

Add the Prasad and Mulley numbers to Dartmouth's original waste estimate and you get a very large number. I think a perfectly reasonable, even conservative estimate is 40% of all medical spending.

But I won't argue with higher estimates.

Overestimating treatment benefits

Patients typically overestimate the benefits of medical care and underestimate the risks. Sometimes they think all the tests, drugs and treatments are crucial to maintaining their health. Other times they discount the risk and side effect warnings. Still other times they think the care quality is all equally good from all providers.

In general, patients seem to think that medical care is always – or, at least *almost* always - beneficial and necessary.

But patients often miss on their benefit estimates and overstate them by quite a bit. One study, for example, found that women without the BRCA genetic mutation overestimated their cancer risk reduction benefit from prophylactic bilateral (double) mastectomy 4 fold or more.¹⁸⁰

- The average estimated risk reduction was 65%. Most women in the study group estimated their chance of developing breast cancer *without* surgery at 76%, and

¹⁷⁹ Mulley, Patient Preferences Matter, The King's Fund, 2012
http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/patients-preferences-matter-may-2012.pdf

¹⁸⁰ These examples come from If Patients Only Knew How Often Treatments Could Harm Them, Austin Frakt, New York Times, March 2, 2015. Frakt summarizes 30+ studies of patient expectations of medical care benefits, based largely on Patient's Expectations of the Benefits and Harms of Treatments, Screening and Tests by Hoffman and Del Mar, JAMA Internal Medicine, Feb 2015

their chance of still developing breast cancer *with* the double mastectomy at 11%.

- Meanwhile, the real risk of developing breast cancer without surgery was 17%. Whatever the prophylactic mastectomy benefits, they were no greater than 17%, far less than the estimated 65% risk reduction anticipated by most patients.

Another study found that 80% of patients overestimated the benefit of hip fracture prevention medications, 90% overestimated the benefits of breast cancer screening and 94% the benefits of bowel cancer screening.

Clifton Leaf, assistant managing editor of Fortune magazine, makes pretty much the same point in his upsettingly insightful analysis of the war on cancer, *The Truth in Small Doses*. Most patients seem to believe that ‘the newest cancer fighting drug, or at least the next one after this one, will certainly provide terrific treatment benefits, so I have to have it.’

Unfortunately, as Leaf shows in almost excruciating detail, those apparent benefits are often illusory or statistical manipulations. Take our war on breast cancer, for example, and consider all the ‘newest and greatest’ drugs developed since 1970, then see the impact on both our actual number of female breast cancer deaths and our national breast cancer death rate per 100,000 women: ¹⁸¹

Year	Actual Number of Breast Cancer Deaths	Crude Breast Cancer Death Rate (deaths per 100,000 women)
1970	29,652	28.4
1975	32,158	29.4
1980	35,641	30.6
1985	40,093	32.8
1990	43,391	34.0
1995	43,844	32.2

¹⁸¹ Leaf, *The Truth in Small Doses*, page 127. Data from the National Center for Health Statistics (CDC) and National Vital Statistics System

2000	41,872	29.2
2005	41,116	27.3
2010	40,996	26.1

I did my own 'back of the envelope' analysis of breast cancer mortality gains over the past 20 or so years and found equally unimpressive improvements. I learned that from the mid-1990s to 2006 our national age of breast cancer death remained the same: 68, despite improved technologies, treatments, access and more widespread screening.

	Mid-1990s	2010 ¹⁸²
Average age of breast cancer diagnosis	62 ¹⁸³	61
Average age of breast cancer death	68 ¹⁸⁴	68
Number of survival years post-diagnosis	6	7

My concern: frightened patients may, under the influence of myth, ads, hope or hype, make unwise medical care choices, 'unwise' in the sense that the care probably won't benefit them much and may harm them some. But they may justify their choices based on relative prices: 'it cost \$5,000 from Supplier A and only \$1,000 from Supplier B. I'll give it a try. Saves me / my employer / my HSA \$4,000!'

Would they have 'given it a try' for \$5000?

We often think, as behavioral economists like to point out, in relative, not absolute terms. That \$4,000 savings seems pretty good, a motivation to buy. That's why so many consumer products advertise '\$500 off this weekend only' without telling the actual

¹⁸² 2006 data from National Cancer Inst, SEER Stat Fact Sheet: Breast downloaded Oct 2012

¹⁸³ Glockler, Cancer survival and incidence, The Oncologist, Dec 2003

¹⁸⁴ Saenz, Trends in Breast Cancer Mortality, Population Reference Bureau, Dec 2009

price. It's a good deal *relatively*, perhaps especially appealing to scared patient consumers.

That's why I find studies that indicate patients would opt for less, or at least very different care if they had better information about the likely benefits and harms, critically important.¹⁸⁵

With these types of benefit overestimates and harm underestimates in mind, I'd like to propose a 4-Step Decision Making paradigm.¹⁸⁶ I suggest that patients who follow this process will make better medical decisions, end up more satisfied with their outcomes and save some money along the way.

Perhaps quite a bit of money.

How to make a wise medical decision

I suggest that wise patients use the following decision criteria when considering and accessing medical care. Price considerations are 4th on this list of 4, meaning they're relevant but that other factors are far more important.

First decide if medical care will help you. You can learn this from comparative studies of patient outcomes.

Care may not benefit you for a two main reasons.

- You may not be 'sick' even though some indicator or other shows you to be 'at risk'. Our sickness indicators change overtime, with some becoming more expansive and others more restrictive. Someone, for example, with blood sugar of 130 mg/dl was 'not sick' prior to 1997 but 'was sick' after, when a new threshold definition was adopted.

Similarly, a 65 year old with blood pressure of 145/90 'was sick' prior to new definitions adopted in 2013, but was 'not sick' after.¹⁸⁷

As a general rule, medical care cannot improve your health if you're not sick.

¹⁸⁵ Frakt, op cit

¹⁸⁶ This is the 2nd or 3rd time I discuss this in this book. My excuse: seems like a pretty worthwhile approach to medical decision making. Hope repetition serves to reinforce the message rather than bore readers.

¹⁸⁷ <http://www.webmd.com/hypertension-high-blood-pressure/news/20131218/new-blood-pressure-guidelines-raise-the-bar-for-taking-medications>

- You may be sick but treatments may not work. We learn from comparative studies which treatments work most of the time, which some of the time and which infrequently.

Sometimes simply waiting for the 'sickness' to heal itself is the best strategy. This seems the case for pediatric ear aches - the NNT of antibiotics to reduce pain caused by Otitis Media in the first 7 days is 20, for example ¹⁸⁸ - and most back pain. ChoosingWisely states that 'back-pain sufferers who had an MRI in the first month were eight times more likely to have surgery, and had a five-fold increase in medical expenses—but didn't recover faster.' ¹⁸⁹

In your own case, unfortunately even if you're sick, medical care may not be able to help you.

Once you determine that medical care can help you - *if* that's what you determine and *if* you determine that it can help you *enough* - then **second**, decide which care *process* you prefer. You almost always have options: mastectomy or lumpectomy for early stage breast cancer, spinal fusion surgery or physical therapy for back pain, acupuncture or injections for a sore shoulder and many others.

- The various options sometimes (often?) generate similar outcomes though the treatment, risk and recovery processes may differ significantly.
- There's often no one 'right' answer for everyone, only 'right' answers for each individual

Once you decide which process you prefer, then, **third**, determine which medical provider gets the best outcomes.

- One spinal surgeon, for example, may generate far better patient outcomes than another so, if you've already decided you prefer spinal fusion surgery to physical therapy, choose the better surgeon. Ditto for hospitals.
- A good indicator of likely outcomes is the annual volume of patients like you that each physician and hospital treats. Though this is not foolproof – far from it, in fact – it's about the best indicator we currently have to predict likely patient outcomes.

¹⁸⁸ See Otitis Media evaluation on www.TheNNT.com

¹⁸⁹ Imaging tests for low back pain on www.ChoosingWisely.org

Finally, **fourth**, *after* you determine that medical care can benefit you, and *after* you decide which treatment process you prefer, and *after* you decide which provider gets the best results for patients like you, consider prices.

- You may find that two equally good providers charge different prices for your preferred treatment process. In that case and ***only in that case***, the wise patient chooses the low cost provider.

Be sure to follow these steps in order and rigorously. That will ensure you get the best outcomes, from the process you prefer, at the lowest cost. Don't short circuit this decision tree or you risk getting sub-optimal outcomes, from a process you really don't like, from a provider who's not very good and perhaps overpaying along the way.

Why this decision making process is so important Part 1

The story and legacy of J. Alison Glover: physicians rely on hunches too much

Dr. Glover was a British physician and researcher, perhaps the first to identify the role that physician 'hunches' had in medical care. Glover studied tonsillectomy procedure rates and impacts in the 1920s – 30s.¹⁹⁰ He learned that in Scotland between 1931 and 1935, 60 people died from enlarged tonsils and 513 from tonsil removal including 369 children under 15 years old.

- In this case, even though people were sick, the available medical care couldn't help them much.
- Had they applied Step 1 above, many would have opted against having tonsillectomies and, perhaps, lived as a result.
- Had they applied Step 4 only, the dismal results would have been the same, but some people would have saved money in the process, a Pyrrhic victory if ever there was one.

The US healthcare system, during the same years, was expanding its rate of tonsillectomies in children. Knowing the Scottish experience, however, the Americans tried a different approach, radiation to treat tonsillitis between the 1930s and 50s. This

¹⁹⁰ See In pursuit of the Glover phenomenon <http://the-141.blogspot.com/2012/05/in-pursuit-of-glover-phenomenon-what.html> and John Wennberg A debt of gratitude to J. Alison Glover <http://ije.oxfordjournals.org/content/37/1/26.long>

was both unnecessary and ubiquitous, according to the Chicago Tribune's 2004 analysis.¹⁹¹ The treatments led to increases in thyroid, salivary gland and jaw cancer.

- Patients rigorously using our 4-step process above would, again, have learned in Step 1 that medical care would possibly generate more harm than good.
- They may also have determined in Step 1 that they really were not sick. As such, medical treatments could not make them 'better'. See below.
- They might also have determined, in Step 2, that tonsillectomies were less risky than radiation.

Glover hypothesized that physician preferences, rather than patient need, drove tonsillectomy rates. He tested this hypothesis by reviewing tonsillectomy rates at the Hornsey Borough School in north London, in the late 1920s.

British children in those days got their medical care through the local school with the school physician acting, more or less, like a Primary Care Physician does today in the US, while sometimes even performing surgeries like an American specialist would. As such it was the school's responsibility to diagnose and treat tonsillitis, along with lots of other illnesses.

Glover found that in 1928, an unnamed Hornsey school physician performed 186 tonsillectomies. A new doctor named Garrow arrived in 1929 and the number of tonsillectomies fell to 12.

- The average number of tonsillectomies per year from the previous physician, 1921 – 1928: 169
- The average number of tonsillectomies per year after Garrow took over, 1929 – 1933: 13
- The percent of apparently unnecessary tonsillectomies between 1921 and 1928: about 92%.

Glover identified no outcome differences or population changes during this time. It appeared, though, that some 156 children received unnecessary tonsillectomies annually from the previous doctor. They were not, in our terms, 'sick'.

¹⁹¹ Goldman, Radiation Babies, Chicago Tribune, Nov 14, 2004

- Again, to tie this back to our price transparency discussion, wise Hornsey parents would have determined whether or not tonsillectomies provided benefit first and then considered price (if that was a factor in 1929 Britain. I'm not sure it was.)
- Unwise parents would have assumed something about the procedure benefits then jumped to our Step 4 and compared prices from available providers.

OK, one might say. The Hornsey situation happened a long time ago, in a country far away. It doesn't apply to American medicine today.

John Wennberg follows in Glover's footsteps

Wennberg, then a young researcher at Dartmouth Medical School, built on Glover's ideas and tracked tonsillectomy rates in Vermont in the 1970s. He found exactly the same thing as Glover did in Hornsey:

- 7% of children under age 16 had tonsillectomies in Middlebury Vermont, while
- 70% did in Morrisville, despite these two communities being demographically similar.

Wennberg identified a similar treatment variation rate when comparing Waterbury Vermont to next door Stowe, again two socio-economically and demographically similar towns (among the full time residents though not necessarily the ski vacationers who didn't generally have tonsillectomies there anyhow).

Parents choosing the cheapest tonsillectomy provider in Morrisville or Stowe would have received less expensive though still unnecessary care about 80% of the time. Not a vast improvement over the 92% unnecessary rate discovered by Glover in Hornsey, years before.

'Too long ago' you still might say. 'My doctor uses the most up-to-date technology, so this wouldn't happen to me. Those Vermont studies are 50 years old.'

In 2013, Wennberg, now an elderly senior researcher and his colleagues at Dartmouth published a tonsillectomy rate analysis among kids in Northern New England during the period 2007 – 2010. Here's what they found in each Pediatric Surgery Area, per 1000 children:

Rates per 1000 children by Pediatric Surgery Area	Surveys of New Hampshire, Vermont and Maine by Dartmouth affiliated researchers
Middlebury, Vt 5.6	Burlington, Vt 2.9
Berlin, NH 10.4	Lewiston, Maine 5.2
York, Maine 7.3	Portland, Maine 4.0
Presque Isle, Maine 5.8	Bangor, Maine 2.7
Dover, NH 8.1	Waterville, Maine 3.6
Manchester, NH 8.1	Ellsworth, Maine 3.8
Exeter, NH 8.4	

The average rate in Burlington Vermont and Bangor Maine was about 3 tonsillectomies per 1000 children while the average rate throughout New Hampshire was about 9, a 3-fold rate difference. The unnecessary tonsillectomy rate in New Hampshire between 2007 and 2010: about 68%, better than Glover’s Hornsey example 80 years before but still awfully high.

The Dartmouth researchers could not identify population health differences that explained this treatment rate difference, just as Glover had been unable to in Hornsey. Nor could they identify population health gains from the excessive tonsillectomies.

Throughout this story, the treatment rate differences appear due to physician preferences, not patient need.

- The appropriate mechanism to avoid unnecessary care remains consumer education and use of our 4-Step Program, not price lists and not google searches.
- Parents choosing the cheapest tonsillectomy providers in New Hampshire would have received less expensive unnecessary care for their children 2/3 of the time...just like the parents in Stowe or Morrisville 50 years earlier or Hornsey 80 years before. Not much systemic evolution over the years.

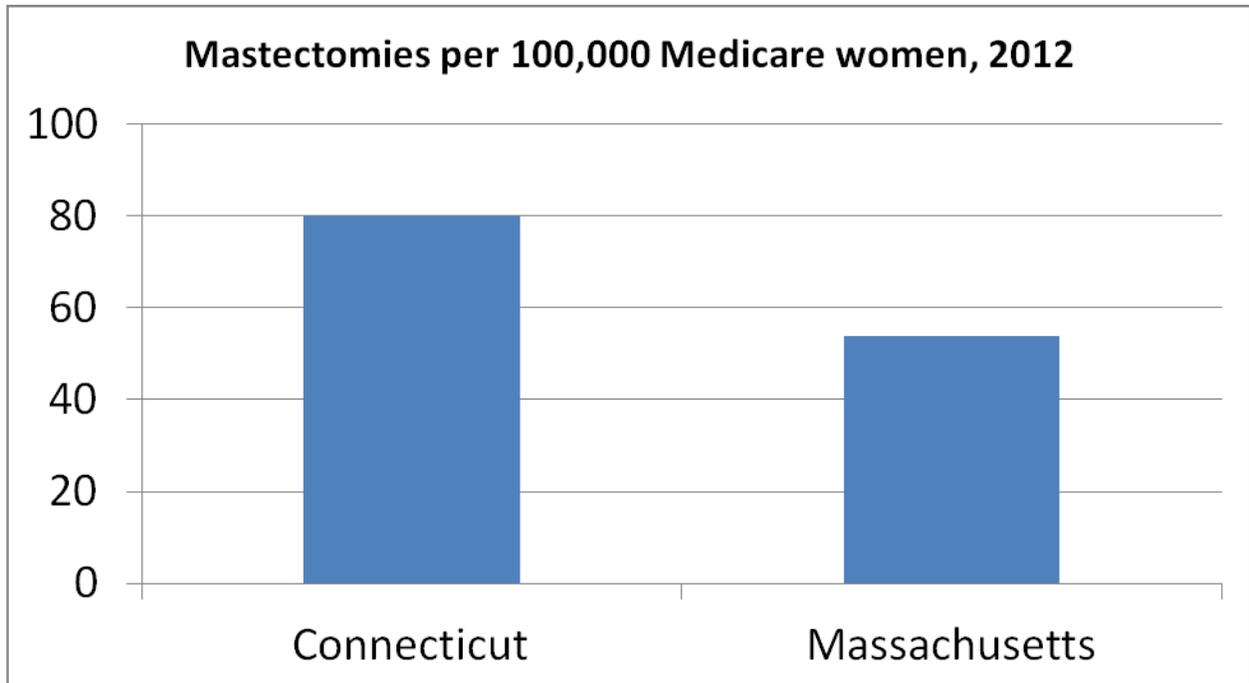
Physicians appear, according to Wennberg, to rely on ‘hunches’ too often, rather than data and scientific outcome evidence from comparative studies when making treatment recommendations to patients, just as they did in Hornsey and Morrisville many years before.

But perhaps the most shocking treatment variation example comes in the mastectomy rate differences among Massachusetts and Connecticut Medicare beneficiaries. Note that both Massachusetts and Connecticut patients have access to outstanding medical

care in facilities affiliated with Harvard and Yale medical schools respectively. It just doesn't get any better than that!

I say 'most shocking' because in this breast cancer treatment case we have disease incidence rates, disease treatment rates and patient outcome rates. This puts to bed the 'population difference' justification for treatment variation rates.

Here's a chart showing mastectomy rates in both Massachusetts and Connecticut, per 100,000 Medicare beneficiaries, from the Dartmouth Atlas of Healthcare, 2012.



Connecticut women are about 50% more likely to have mastectomies than Massachusetts women.

This raises the 'sickness' question: are Connecticut women sicker than Massachusetts women? Do they get breast cancer 50% more frequently?

The answer is no, according to breast cancer incidence rate data from the American Cancer Society.¹⁹² The breast cancer rates are virtually identical.

¹⁹² American Cancer Society, Cancer Facts and Figures, 2011-2012

Breast cancer incidence rates per 100,000 women

	Non Hispanic White	African American	Hispanic
Connecticut	139	113	127
Massachusetts	137	109	104

Now, if women in both states were equally sick but received different treatments, did Connecticut women benefit from the additional mastectomies?

Again the answer is no. Breast cancer mortality rates are almost identical in both states.

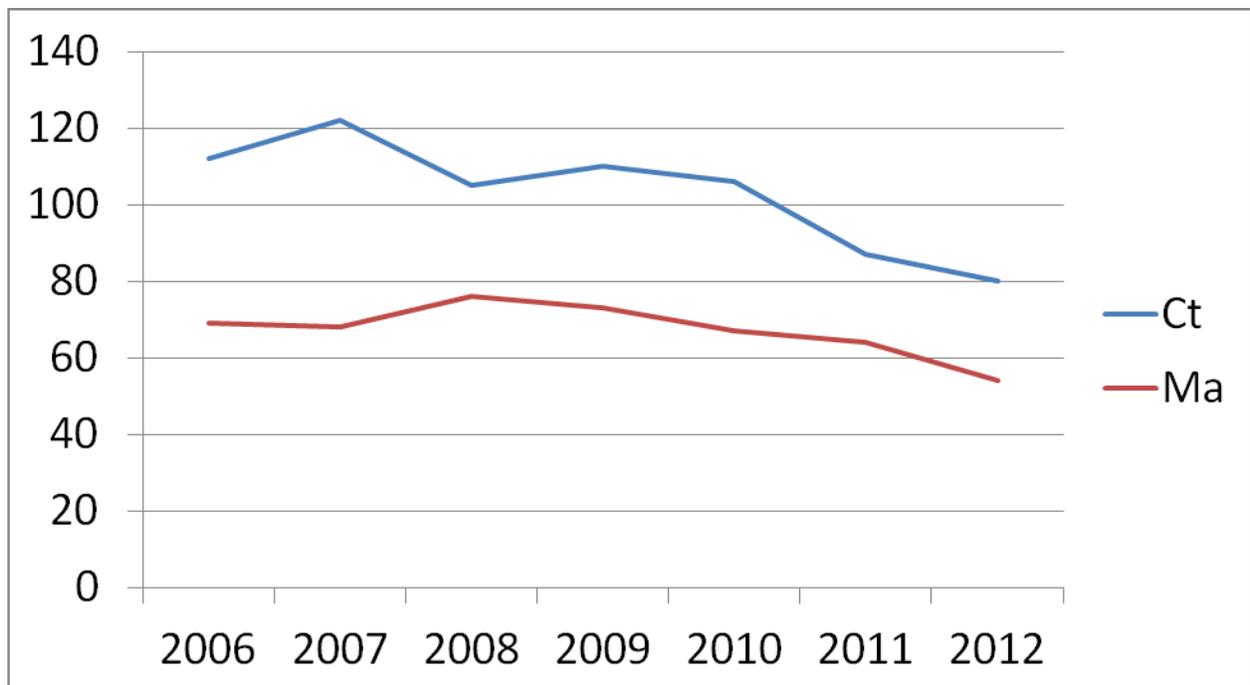
¹⁹³

Breast cancer mortality rates per 100,000 women

	Non-Hispanic White	African American	Hispanic
Connecticut	24.0	27.4	12.1
Massachusetts	23.5	27.3	12.1

This treatment variation situation has existed for years. Connecticut always has more, per thousand women. Here are the rates from 2005 – 2012, again using data from the Dartmouth Atlas:

¹⁹³ <http://www.cancer.org/acs/groups/content/@epidemiologysurveillance/documents/document/acspc-030975.pdf>



That 50% more in Connecticut rate has existed for many years.

If the additional mastectomies Connecticut women received over time had any benefit, then we would see breast cancer mortality rate differences that approximate the treatment differences. That is not the case.

Rate discrepancies like these exist for dozens of medical tests and treatments.

These situations – tonsillectomy rates in Vermont in the 1970s and northern New England from 2007 – 2010, and mastectomy rates in Massachusetts and Connecticut in the 2000s – are exactly the same as Glover identified in Hornsey in the late 1920s.

- Knowing treatment prices would no more help a Connecticut women in 2010 avoid an unnecessary mastectomy – or a Scot in the 1920s avoid dying from a botched procedure or an American in the 1940s avoid radiation-induced thyroid cancer - than a Hornsey child in 1928 avoid an unnecessary tonsillectomy.
- Most likely, price transparency would only have helped that Hornsey child or Connecticut women get cheaper unnecessary care.

An underlying cause of this problem, according to many who have studied it: physicians like to use the newest available technology¹⁹⁴ and patients generally believe that more medical care is better medical care. Wennberg put it this way:¹⁹⁵

- Few surgeons are hesitant believers in the efficacy of the operations they perform, nor do they doubt their clinical necessity.
- Most patients are convinced that the benefits of surgery exceed the risks by a wide margin.

Yet, as we have just seen, these two certainties do not add up to patient benefit as often as either doctors or patients would like. Knowing prices adds nothing to the patient's chance of benefit.

Why this decision making process is so important Part 2

The impact of Vinay Prasad's research:

half of established medical interventions are found to be useless or harmful when subjected to comparative studies

Dr. Prasad, Senior Fellow at the National Cancer Institute and National Institutes of Health, was lead author in an extraordinary, though little discussed, study published in the Mayo Clinic Proceedings in 2013, *A Decade of Reversal*.¹⁹⁶ Prasad and his team reviewed every article published in the New England Journal of Medicine between 2001 and 2010 and found that 363 studied an 'established' medical practice, meaning a commonly used medical protocol.

Of those, 146 studies or 40% reversed the practice.

In other words, 40% of comparative studies on existing, established, routine medical practices showed those practices were ineffective or harmful. The actual percentage is probably closer to 50% being ineffective or harmful when Prasad's 'inconclusive' group, 139 practices or 22% is included.

Stated differently, about half of what doctors do doesn't work. As Prasad told the New York Times

¹⁹⁴ See Dr. Lazris's comment at the beginning of this chapter.

¹⁹⁵ <http://ije.oxfordjournals.org/content/37/1/26.long>

¹⁹⁶ <http://www.mayoclinicproceedings.org/article/S0025-6196%2813%2900405-9/abstract>

They all sound good if you talk about the mechanisms... the nuts and bolts, what does it do, how does it work....but the real question is: Does it work? ¹⁹⁷

Or, as he said in his fascinating You Tube summary: ¹⁹⁸

Of all those things we're doing currently that lack good evidence, probably about half of them are incorrect.

Patients who are embarking on procedures, screening tests, diagnostic tests should really try to ascertain whether or not those are based on good evidence. By good evidence, I mean randomized controlled trials powered for hard endpoints such as mortality or morbidity and not surrogate endpoints.

Consequences of medical reversal are quite dire. All the people who were subject to the intervention during the years it fell in favor... in retrospect, we realize, received no benefits

These are practices that should never have been instituted, that were instituted in error...even for things that make perfect sense.

The take away message from our paper is that a large proportion of medical practices which are based on little to no evidence are probably incorrect. Their continued use jeopardizes patient health and wastes limited healthcare resources.

Remember Prasad's definition of *evidence*: randomized controlled studies powered for hard endpoints, not biological, anatomical or physiological explanations of why some intervention makes sense. Wise patients discuss outcome evidence with their doctors; unwise discuss anatomy and physiology. Prasad clearly explains why the latter approach doesn't work.

Here are some of Prasad's examples of medical reversals. You can find the entire list on the Mayo Clinic Proceeding website. As you review this list, ask yourself if you would like to have the *cheapest* of the reversed procedure or test. My guess: you don't want it at all, regardless the price.

I tried to choose relatively non-technical discussions. Many of Prasad's 146 reversals are very technical, specialized interventions and his discussions are often aimed at a

¹⁹⁷ <http://well.blogs.nytimes.com/2013/07/26/medical-procedures-may-be-useless-or-worse/>

¹⁹⁸ <https://www.youtube.com/watch?v=fB1qEoDO2nE>

medically trained audience.

<p>Intensive Blood Glucose Control and Vascular Outcomes in Patient with Type 2 Diabetes</p>	<p>A target A1C of 7.0% or less was the guideline for most patients with diabetes. However data were inconsistent how glucose control played a role in vascular disease. In the Action in Diabetes and Vascular Disease (ADVANCE) trial, the effects of glucose control on major vascular outcomes were evaluated. There was no evidence of reduction in macrovascular events and intensive glucose control was associated with increased risk of severe hypoglycemia and increased rate of hospitalization.</p>
<p>A Randomized Trial of Arthroscopic Surgery for Osteoarthritis of the Knee</p>	<p>Arthroscopic surgery is widely used for osteoarthritis of the knee even in the face of scant evidence of its efficacy. This failed to show a benefit of arthroscopic surgery for treatment of osteoarthritis of the knee as assessed by WOMAC scores</p>
<p>Effects of Combination Lipid Therapy in Type 2 Diabetes Mellitus</p>	<p>Fibrate therapy has long been used in the treatment of dyslipidemia in type II diabetes. Though statins are considered primary therapy to reduce the risk of cardiovascular events, rates remain elevated despite use. Two large previous studies of fibrate therapy in type II diabetics conflicted with regard to their effect on cardiovascular events. The Action to Control Cardiovascular Risk in Diabetes (ACCORD) Lipid study demonstrated here that statin and fibrate combination therapy did not differ in outcomes compared with statin therapy alone at similar levels of serum lipids.</p>
<p>Two Controlled Trials of Antibiotic Treatment in Patients with Persistent Symptoms and a History of Lyme Disease</p>	<p>Many patients with persistent symptoms of Lyme disease receive prolonged courses of antibiotics, although the effectiveness of this practice remains unknown. This randomized, placebo-controlled, double-blinded trial failed to show any significant improvement in symptoms after a prolonged 90- day course of</p>

	antibiotics in patients with persistent symptoms.
Calcium plus Vitamin D Supplementation and the Risk of Fractures	Observational evidence and data from randomized clinical trials suggested that calcium or vitamin D supplements or both may slow bone loss and reduce the risk of falls. However, in this randomized clinical trial involving 36,000 postmenopausal women, calcium with vitamin D supplementation did not significantly reduce hip fracture, and increased the risk of kidney stones

Consider our mastectomy data from Connecticut and Massachusetts above. Rates are down in both states, more dramatically in Connecticut, even though Medicare enrollment is up. Does this mean 20 or 30% of the Connecticut mastectomies performed in 2006 – 2010 (and earlier – I didn't include those data to keep the above chart easy-to-read) were performed in error (Prasad's term)?

That's in addition to the rate discrepancy between Connecticut and Massachusetts.

Why this decision making process is so important Part 3

**Al Mulley and the problem of patient preference misdiagnosis:
well informed patients often prefer treatments that differ from what their doctor
thought they would want**

Dr. Albert Mulley and his team from Dartmouth's Geisel School of Medicine evaluated the phenomenon and impact of physician attempts to diagnoses patient treatment preferences.¹⁹⁹ Patients who learn of all their treatment options, it turns out, often choose very differently from their physicians, or indeed, from what their physicians would expect them to choose.

Mulley summarizes his conclusion this way:

Well-informed patients consume less medicine – and not just a little bit less, but much less. When doctors accurately diagnose patient preferences, an enormous source of waste – the delivery of unwanted services – is eliminated. It is particularly notable that when doctors accurately diagnose the preferences of

¹⁹⁹ http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/patients-preferences-matter-may-2012.pdf . See especially page 9, source of quote in the next paragraph

patients struggling with long-term conditions, those patients are far more likely to keep their conditions under control, leading to fewer hospitalizations and emergency department visits.

But rushed doctors treat as *they think* the patient wants. This ‘silent misdiagnosis’ harms both patients and the system:

- It harms patients by providing care to them that they would not have chosen had they been better informed. Patients, according to Mulley, can suffer just as much from a missed *preference* diagnosis as from a missed *medical* one.
- It harms the entire system when doctors select more aggressive, invasive and expensive treatments than the patients themselves would, thus increasing overall costs. ‘Patients choose fewer treatments when fully informed’ according to Mulley, a conclusion reached in other studies.²⁰⁰

This echoes Wennberg’s suggestion above about specialist enthusiasm for surgery and Lazris’s about the system promoting the more aggressive care far too often.

Mulley estimated the overall system savings from better patient preference diagnoses at 15 – 20%, but this comes with a huge caveat. He and his team evaluated the impact of improved patient preference diagnosis in the Britain’s National Health Service. The UK averages spending less than half per capita on healthcare as we do, about \$3,400 per person compared to over \$9,000 per American. The potential savings for our healthcare system is enormous, possibly well over that 20% estimate.

Dr. Sandeep Jauhar, cardiologist and author of ‘Doctored’ agrees with Mulley’s thesis, suggesting that healthcare reforms

will have to focus less on payment models and more on education...better-informed patients might be the most potent restraint on overutilization ...Shared decision making would be more likely to get patients the treatments they want [while helping them avoid unnecessary or inappropriate care]

Adding to this whole line of thinking, Atul Gawande, one of the key thought-leaders in this field, suggests a new role for doctors that builds on Glover, Wennberg, Prasad, Mulley and Jauhar’s thinking:

²⁰⁰ See the Dartmouth Atlas of Healthcare, sections on Preference-Sensitive Care and Reflections on Variation

the ideal modern doctor should be neither paternalistic nor informative but rather interpretive, helping patients determine their priorities and achieve them²⁰¹

I think this is a brilliant summary of the doctor's role. But it takes time to 'help patients determine their priorities and achieve them'; it's not a role one can play in a time compressed environment.

What this means for price transparency

Step 1 of our 4 step 'how to make a wise medical care decision' really matters. This step, in case you forgot, is 'determine that medical care can benefit you'.

That, I think, is where our medical care system should point patients first. Prices are where our medical care system should point patients last.

Dr. Andy Lazris summarizes the problem nicely:

an idea has blossomed within our medical thinking that equates aggressive, specialized care with good care ... with enough perseverance, our healthcare delivery system is capable of virtually anything...the perception that science and technology can cure everything ...[but] as little as 15% of what doctors do is backed up by valid evidence ... [instead] technology is king

the public – from patients and their families to doctors and experts and politicians and journalists – perceive that more is better²⁰²

Knowing prices does nothing to fix this problem.

When I think of the various healthcare problems we face, and of price transparency as the solution, I am reminded of a quote I heard at a convention some years ago – sorry, can't remember exactly where or when – about healthcare: Never have so many bright and talented people worked so incredibly hard to achieve so little.

That quote and the energetic price transparency movement also remind me of Ronald Reagan's famous campaign response to a tried-and-failed political initiative of an opponent: *There you go again.*

²⁰¹ Sheri Fink, New York Times Book Review of Gawande's Being Mortal, November 6, 2014

²⁰² Lazris, Curing Medicare, page xviii

In healthcare *'there you go again'* means yet another attempt to solve clinical problems with financial tools. It never works. Dr. Meador told us that in the beginning of this chapter.

The problems raised by attempting to solve clinical problems with financial tools

Our healthcare financing tools, commonly called 'health insurance', focus almost exclusively on 'financing' and almost totally disregard 'health'. David Dranove of Northwestern University summarized the impact of this fallacy in his book *The Economic Evolution of Managed Care* on cost control reforms in the 1980s and 90s: they 'utterly failed, on all accounts'.

Though there are many reasons for this, I think the two fundamental are:

- A primary financial focus almost inevitably reduces the amount of time each physician has for each patient. Time is the physician's primary inventory, one which he or she must use wisely to maximize his or her income. As the payment for each inventory unit – i.e. each minute – decreases, physicians need to maximize their income per unit. Hence, they see more patients per hour or day.

Michael Porter, Harvard Business School's great business strategy professor, put this succinctly in his 2006 book *Redefining Healthcare: Without the discipline of value-based competition on results, carriers have incentive to reduce the time physicians spend with patients.*²⁰³

Price lists and price transparency programs take us exactly where Porter warned we don't want to go. We need to focus on outcomes, not prices, to improve outcomes. We cannot improve value (outcomes per dollar spent) otherwise and we'll probably end up decreasing it.

- Financial / price based solutions lead to 'simplistic actions such as across-the-board cuts in expensive services, staff compensation, and head count' according to Porter.²⁰⁴ More succinctly, he says,

'It is a well-known management axiom that what is not measured cannot be managed or improved'²⁰⁵ meaning financial solutions to clinical problems may

²⁰³ I wrote this quote in my notes while reading Porter and Teisberg's *Redefining Healthcare*, but can't find the exact reference. This article in the Harvard Business Review says pretty much the same thing. <https://hbr.org/2011/09/how-to-solve-the-cost-crisis-in-health-care>

²⁰⁴ Ibid

²⁰⁵ <https://hbr.org/2011/09/how-to-solve-the-cost-crisis-in-health-care>

lead to cuts that negatively impact care quality. Rather than *managing* some critical but unquantifiable care components, market pressures may lead to across the board *cuts*.

That was, more or less, our experience with HMOs in the late 1990s and early 2000s: fairly brutal cuts and cost controls that led, among other things, to the Patient's Bill of Rights. Might we simply re-create the same experience, only this time motivated by price lists?

I'll let some physicians express all this in their own words.

Dr. Vikas Siani, President of the Lown Institute, suggests that publishing prices lists will put more pressure on clinicians to improve their efficiency. This will limit the amount of time for each patient's care and serve to erode, not enhance, the doctor-patient relationship.²⁰⁶

Dr. Joshua Fenton of UC Davis Medical School, lead author of a study that concluded "Patient satisfaction is linked to higher healthcare expenses and mortality, study of 50,000 people over 7 years' claims²⁰⁷

Doctors may order requested tests or treatments to satisfy patients rather than out of medical necessity, which may expose patients to risks without benefits. A better approach is to explain carefully why a test or treatment isn't needed, but that takes time, which is in short supply...

...and which may decrease in supply under the increased billing pressures that result from excessive price considerations.

Publishing prices absent the critical and, as yet poorly developed quality metrics may make this situation worse, not better. The net result may be *more* unnecessary tests and treatments, not fewer according to Dr. Jauhar who says

There is no more wasteful entity in medicine than a rushed doctor.²⁰⁸

To save time, he says, doctors order more tests or refer to more specialists. This adds costs and risks; it doesn't decrease them.

²⁰⁶ <http://www.doconomics.com/blog/?p=4647>

²⁰⁷ <http://www.ucdmc.ucdavis.edu/publish/news/newsroom/6223>

²⁰⁸ Jauhar, New York Times, 7/20/14

Time compressed physicians have less time to develop personal relationships with each patient. This leads, according to a study of 20,000 diabetics and their care givers, to less empathy for patients and poorer outcomes.²⁰⁹

- Patients of high empathy doctors had about 35% fewer metabolic complications like hyperglycemia or diabetic comas.
- Empathy means sharing feelings with other people, not belittling, undermining or judging, according to Dr. Rana Awdish, a critical care physician at Henry Ford Hospital who's involved in hospital's empathy program. These skills can be taught and practiced, she says, but this requires emotional availability on part of physician, something he or she needs time with patients to develop.
- Dr. Jauhar addresses the empathy issue from a typical physician's point of view: 'Among my colleagues I see an emotional emptiness created by the relentless consideration of money.'²¹⁰

Kaplan and Haas, in their 2014 Harvard Business Review article 'How Not to Cut Health Costs' give an example:

- Starting kidney dialysis with a fistula (a surgical procedure to connect to an artery or vein) rather than catheter generates better outcomes, meaning longer lives with fewer complications.
- Patients starting at optimal times in their disease progression cost tens of thousands of dollars less per year than otherwise.
- One nephrologist said that spending 30 minutes more per patient with advanced kidney disease could dramatically improve rate of fistula or graft starts, *but there was no time or compensation for the discussion.*
- Publishing nephrology office price lists will, suggest these authors, take us in the wrong direction, generate more patient harm and ultimately cost our system more.

Actions like helping patients choose doctors based on price destroys healthcare system value.

²⁰⁹ Bakalar, NY Times, Doctor Empathy a Factor in Diabetes Care

²¹⁰ Jauhar, Doctored, page 170

But actions that (1) increase the amount of time physicians have with patients and that (2) enhance the doctor-patient relationship, that (3) help doctors diagnose preferences better and that (4) help patients choose effective care based on their preference and high quality outcome studies, add value.

How to turn price transparency from value-destroying to value-creating

Our definition of value includes two components: costs and outcomes, value being measured as outcomes per dollar spent. Focusing only on spending will probably decrease systemic value by reducing outcomes, for all the reasons above.

Including critical outcome factors along with prices can turn this positive, into a value creating exercise. I'll list some components below as examples. The chapter on Decision Aids goes into this in much more detail.

Consider first **birthing**, about 10% of non-Medicare hospital income. Along with price lists by hospital, an informed patient would need to know

- Infant mortality rates by hospital
- Infant and maternal readmission rates
- C-section rates
- Plus have some indication of whether or not each hospital's catchment area population was abnormal in some critical respect.

For **preventive care**, a wise patient would need to know

- Mortality and morbidity rates both with and without the preventive care
- Harm rates from the preventive care such as false positives and test and treatment harms
- Plus have an ability to understand what all these numbers and statistics really mean.

For **hospital choice**, patients need to know

- Infection rates
- 30 and 60 day readmission rates
- Tendency / process information by hospital per 1000 people in each hospital's catchment area, similar to Dartmouth Atlas information

- Volume of similar patients treated annually. Though an imprecise metric, care quality correlates relatively well with care quantity, and the hospitals performing the highest number of similar surgeries annually tend to generate the best patient outcomes.

For **surgeon choice**, patients need to understand

- Infection rates, complication rates, mortality rates, return-to-operating room rates and hospital readmission rates by surgeon / by procedure
- It does not seem fair that hospitals should be privy to this important information while prospective patients, whose health could be influenced by it are not, says Dr. Paul Ruggieri, general surgeon and former clinical instructor at Harvard Medical School.²¹¹
- Absent that information, patients need volume rates by surgeon. ‘Patients can improve their chances of survival substantially – even at hospitals with high volumes of a procedure - by selecting surgeons who perform the operations frequently,’ according to Dr. John Birkmeyer, former Chief of General Surgery at Dartmouth – Hitchcock Medical Center in New Hampshire.

For **pharmaceuticals**, note that the Americans average about 13 prescriptions / capita / year, double other OECD countries that generate similar or better population statistics.

- Several new Decision Aid reference sources provide useful drug information though in different forms. I particularly like Number Needed to Treat and Harm analyses. I’ll discuss much more of this in the chapter on Decision Aids

Patients who know this quality information can use their doctors as ‘interpreters’ (Gawande’s term) to help them determine which care they really want and which process they prefer. Prices can have a role in those discussions but, I suggest, probably a relatively limited one.

Conclusion

Good health is cheaper than poor health. That’s both axiomatic and true.

Activities that get patients healthier are almost always less expensive than activities that either keep people unhealthier or do not positively impact health.

²¹¹ Ruggieri, The Cost of Cutting, page 127

Well informed patients who understand their options tend to cost less than poorly informed patients. Well informed patients who use our 4-Step Decision Process will chose care wisely by balancing the likely benefits against the likely harms. They will use outcome data from comparative studies to help them make their decisions, consult with their physicians about options and alternatives and ultimately end up healthier.

Poorly informed patients assume that more medical care is better medical care, tend to assume higher likelihoods of benefit and lower of risk than are true, and are ultimately somewhat less likely to end up in good health.

Turning patients from poorly informed to well informed saves money. Shopping by price, especially for medical interventions that do not benefit patients, does not.

I conclude that Price Transparency is value-creation neutral:

- Listing prices alone, absent the critical quality indicators discussed above and in detail elsewhere in this book, probably destroys value.
- But listing prices *along with* those critical quality metrics, and using prices to engage patients in a discussion of care quality can increase system value.

It's too early in this process to know where this is headed and to issue a definitive conclusion.

Review Questions

Answers on next page

1. Do prices among vendors vary much for the same medical service?
 - a. Yes
 - b. No
 - c. Only in New Hampshire
 - d. Rarely in New Hampshire

2. Can you determine which vendor provides the highest quality medical services from price lists?
 - a. Yes
 - b. No
 - c. Only in New Hampshire
 - d. Rarely in New Hampshire

3. Can a patient determine if he or she will benefit from a specific medical service by learning its price?
 - a. Yes
 - b. No
 - c. Only in New Hampshire
 - d. Rarely in New Hampshire

4. About how much ineffective or harmful medical care exists in this country?
 - a. About 2% of medical care is ineffective or wasteful
 - b. About 40 – 50% of medical care is ineffective or wasteful
 - c. About 97.8% of medical care is ineffective or wasteful
 - d. Well over 100% of medical care is ineffective or wasteful

5. This text suggested 3 reasons that explain why medical care is sometimes ineffective or wasteful. Which below is NOT one of those reasons?
 - a. Physicians rely on hunches, not science, too often
 - b. Medical care that has not been subjected to comparative studies is proven ineffective or harmful about half the time when subjected to those studies
 - c. Physicians too frequently treat patients according to physician preference, not patient preferences
 - d. Doctors are poorly trained in this country

6. This text suggested a Four Step Process for making wise medical care decisions. Which below is Step 1 of that process?

- a. Determine if medical care provides more benefits than harms or than doing nothing
- b. Pray
- c. Ask a trusted friend or relative what to do
- d. Learn as much as you possibly can about the anatomical and physiological causes of your medical problem

7. Which below is NOT an element of the Four Step Process?

- a. Determine which treatment process you prefer
- b. Determine which doctor and hospital generates the best outcomes for your preferred process
- c. If two providers generate the same outcomes from your preferred process, consider prices
- d. Pray

8. Which, below, is *most likely* to happen if medical prices become widely known to patients?

- a. Doctors will spend less time with each patient
- b. Our national 30 day hospital readmission rate will drop
- c. Our infant mortality rate will drop
- d. Americans will live longer

9. Which, below, is *least likely* to happen if medical prices become widely known to patients?

- a. Care quality will improve
- b. Prices for many ineffective treatments will fall
- c. Doctors will advertise the prices of their (often ineffective or harmful) services
- d. Hospitals will advertise the prices of their (often ineffective or harmful) services

10. Americans seem to perceive that more medical care is better and that higher technology care is better than lower. How will posting prices affect these perceptions?

- a. It won't
- b. It may reduce moral hazard when people understand what care costs
- c. It may induce more moral hazard when people learn true care costs
- d. It may incent people to drop insurance coverage

Review Questions

Correct answers in bold

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 - b. No
 - c. Only in New Hampshire
 - d. Rarely in New Hampshire

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- b. Determine which doctor and hospital generates the best outcomes for your preferred process
- c. If two providers generate the same outcomes from your preferred process, consider prices
- d. **Pray**

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Part 3: Value Creating Activities

Decision Aids and Consumer Education

Integrating Consumer Education into Broker Services

I originally wrote this chapter as a short, stand-alone book called 'How to Talk to Your Doctor'. My purpose was to develop a hands-on, meaningful, easy-to-use and understand consumer education program.

I've included the entire text here. Apologies for redundant points and examples but many of the key points are worth repeating.

I hope this chapter helps people develop their own consumer education programs.

Chapter 6: Decision Aids and Consumer Education

Implementing true healthcare consumerism

Well informed patients consume less medicine – and not just a little bit less but much less....Healthcare may be the only industry in which giving customers what they really want would save money. Dr. Albert Mulley et. al. Patient's Preferences Matter, The Kings Fund, 2012. Mulley is a professor of medicine at Dartmouth University in New Hampshire.

When fully informed, the number of patients who choose conservative (and often cheaper) medical care rises 20%. Dr. Michael Barry, Harvard Medical School and the Informed Medical Decisions Foundation

Studies show that when patients understand their choices and share in the decision-making process with their doctors, they tend to choose less-invasive and less-expensive treatments than they would have otherwise received. Laura Landro, Wall Street Journal, August 4, 2009, Weighty Choices, in Patients' Hands

Health outcomes improve when patients are engaged in their own care. People are eager to play a strong role in their own health care *when given the right tools.* US Institute of Medicine, Patients Charting the Course, 2011

CDH plans aim to engage consumers in their healthcare decisions.

The quotes above suggest the type of consumer engagement that improves outcomes, reduces risks and controls costs.

This chapter will identify some ways that brokers can teach their own clients to achieve those objectives.

Excessive care and the broker's role

As brokers design benefit plans, they should be cognizant of the risk of receiving too much – or inappropriate - medical care. Our healthcare system regularly and predictably delivers excessive and unnecessary medical care to well-insured people.

This unnecessary care doesn't generate benefits like longer lives, greater range of motion or less pain. But it costs your clients money and exposes them to risks including infections, errors and side effects.

You want them to avoid unnecessary care whenever possible. The opposite risk – of receiving too little medical care – also exists. Drs. Ezekiel Emanuel (one of the ACA lead authors) and Victor Fuchs (professor emeritus at Stanford Medical School) suggest 7 key reasons why Americans get too much medical care:²¹²

1. **The physician culture** which emphasizes thoroughness, or analysis and investigation into every possible diagnosis and treatment plan. This is reinforced by a typical interpretation of the Hippocratic Oath, that 'to use my power to help the sick to the best of my ability and judgment' means to do everything for the patient regardless the cost or effect on others.
2. **Fee for service payment systems** reward more medical care, not better medical care. This has led, among other things, to Americans getting 2 – 3x more MRI scans per 1000 per year than Britons, French or Germans. The risk of excessive MRI and other radiologic scans: the more you scan, the more you find and the more you need to investigate. Excessive testing drives up costs and risks of error, unnecessary care, infection or medical harms.
3. **Physician information overload** with a paucity of high quality comparative studies, leading to physician-directed marketing by pharmaceuticals and other self-interested parties. These companies can selectively highlight favorable studies, which may bias physician orientations, and against which few neutral, objective high quality counter examples.
4. **Medical malpractice laws** subtly and sometimes not-so-subtly lead to excessive tests and treatments, though the exact extent of this is open to question.
5. **American consumers tend to favor technologically sophisticated interventions** over the old and plain / tried and true remedies. Patients often prefer more tests and more interventions to fewer and leads, according to

²¹² Emanuel and Fuchs, The Perfect Storm of Overutilization, American Medical Association, 2008

Emanuel and Fuchs, to epidemics of unnecessary antibiotics for viral infections, for example.

6. **Direct to consumer marketing**, in which, for example, pharmaceutical companies spend \$4 billion per year advertising drugs that include advice to 'ask your doctor if XXXX is right for you'. Studies suggest that every \$1 of medical advertising returns up to \$4 in pharmaceutical sales.
7. **Health insurance coverage**, less often first dollar coverage these days, but which still shields patients from incurring the true and full costs of care. A patient may only pay \$500 for a \$50,000 procedure, and that \$500 is often tax advantaged.

As these authors state:

Alone each of these factors would induce some overutilization. When they coincide, however, they amplify and reinforce each other to create a perfect storm of 'more': more referrals to specialists, expensive tests, procedures and treatments.

The remedy is within broker's grasp: education as articulated in Section 3506 of the Affordable Care Act. Studies show that the more well educated your clients, the less medical care they consume.

In short, the best and probably only way to ensure that your clients get all the medical care they need but none that they don't is by teaching them the right questions to ask their doctors.

- When they ask the *right* questions, they'll get the information necessary to make wise and well informed healthcare choices. They'll get better care as a result.
- But when they ask the *wrong* questions, they can get lots of information that won't help them make wise decisions.

Wise, well informed patients learn to differentiate the right (useful) information from the wrong (useless though often true).

Asking the right questions isn't hard. You don't need a mini-MD. In fact, you don't even need to know very much about medicine. But you need to understand *why* certain questions are important. And you need a script. This chapter provides both. It's easy to read. I designed it for practicality, not academic rigor.

Let the 3 Most Important Numbers in Medicine Guide Your Plan Designs

33%

40%

85%

We annually waste over **33%** - and probably much more - of medical spending on unnecessary care.²¹³ That's about \$800+ billion annually, and perhaps over \$1 *trillion*, that subjects people to risks of error, infection and side effects without improving their health. The 1/3 waste estimate originated with scholars affiliated with the Dartmouth Atlas of Healthcare and is accepted by the Congressional Budget Office.

These researchers found that Medicare (our national health insurance program for the elderly) annual expenditures *per capita* vary widely despite the fact that Medicare pays about the same amount *per treatment* nationwide. Other studies suggest that non-Medicare spending follows the same patterns. But outcomes as measured by patient health or longevity are not better in higher spending regions.

Boston, for example, averaged \$9,816 per Medicare beneficiary in 2010 compared to

- Burlington, VT \$7,545
- Lebanon, NH \$7,427 and
- Rochester, NY \$7,766

This suggests that Boston area folks get about 30% more medical care (physician visits, radiology tests, medications, procedures) than their Vermont, New Hampshire or upstate New York colleagues without enjoying longer lives or other benefits...but perhaps with 30% more risk of infection, error and harm.

The bottom line: *More* medical care isn't *better* medical care; *better* medical care is better medical care. Brokers who teach their clients how to identify and avoid unnecessary care will generate less unnecessary care and therefore lower medical care utilization.

About **40%** of established medical practices – and maybe even 50% - are ineffective or harmful according to a massive study published in the Mayo Clinic Proceedings in 2013.

²¹³ The 33% estimate comes from many sources including the Dartmouth Atlas of Healthcare and Congressional Budget Office. My own analysis in the chapter on Transparency, puts the waste factor higher, perhaps 40 - 50% of all spending.

²¹⁴ This estimate comes from Dr. Vinay Prasad, chief fellow at the National Cancer Institute who, with his team reviewed every article published in the New England Journal of Medicine between 2001 and 2010 and identified 363 studies of established medical practices.

- 146 – more than 40% – were either ineffective or harmful.
- Another 22% were ‘unclear’.

Why do physicians use ineffective or harmful treatments?

The main reason why these ineffective or harmful practices continue according to Dr. Prasad: They all sound good if you talk about the mechanisms, the nut and bolts, what does it do, how does it work. Examples include

- high-dose chemotherapy and stem cell transplant for breast cancer
- intensive glucose lowering in Type 2 diabetes patients in intensive care, which not only failed to reduce cardiovascular events but actually increased mortality
- withholding vaccines from multiple sclerosis patients in the belief that they increased flare-ups
- denying oral contraceptives to women with lupus for fear they increased the severity of the disease, and many more.

High quality comparative studies showed that **none** of these practices improved patient health. ‘They weren’t just practices that once worked, and have now been improved upon; rather, they never worked. They were instituted in error, never helped patients’ according to Dr. Prasad.

He suggests that patients focus their attention on medical care outcomes, not on care mechanisms. The real question, he suggests, is: Does it work?

- You shouldn’t ask how does it work, but whether it works at all.

Patients who ask the ‘does it work’ questions get better care. Brokers who teach their clients how to identify ineffective or harmful care will generate lower care costs and premiums as a result.

²¹⁴ Vinay Prasad, A Decade of Reversal, Mayo Clinic Proceedings, August, 2013, summarized in Nicholas Bakalar, Medical Procedures May Be Useless, or Worse, New York Times, July 26, 2013. The actual number may be 50% when Prasad’s ‘unclear’ group of treatments is equally divided into ‘effective’ and ‘ineffective or harmful’ care.

You have medical care options about **85%** of the time.²¹⁵ Outcomes are often the *same* though the treatment processes – and costs – can differ widely. John Wennberg, founder of the Dartmouth Atlas of Healthcare and generally regarded as the most important medical researcher of the past 25 years, suggests that 85% of all medical care allows for a choice of treatments:

- Surgery or physical therapy
- Surgery or medication
- More aggressive or less aggressive care
- Bigger or smaller surgical procedures, and many more.

Wennberg divides the 85% of care allowing for choice into two broad categories:

- Preference sensitive care often generates the same *outcomes* through different *processes* as, for example, mastectomy or lumpectomy for early stage breast cancer. Someone – generally the doctor – expresses a *preference* for one treatment process over another. Various factors affect the physician's preference including his/her experience with that treatment.
- Supply sensitive care in which the *supply* of medical services like MRI machines or orthopedic surgeons determines the *frequency* of MRI scans or back surgeries. More orthopedic surgeons = more back surgeries and more MRI machines = more MRI scans. But voluminous research shows that excessive MRI scans, back surgeries or other supply sensitive treatments do not lead to better patient health.

All this means two things for patients:

- First, you should always ask your doctor what treatment options exist because they generally do.
- Second, beware of confusing *ease of scheduling* a medical treatment with the *necessity of* that medical treatment.

²¹⁵ John E. Wennberg, *Tracking Medicine*, pages 8 – 13, also Dr. James Weinstein, Director of the Dartmouth Institute on NPR All Things Considered, 'Surgery May Not Be The Answer To An Aching Back', April 6, 2010

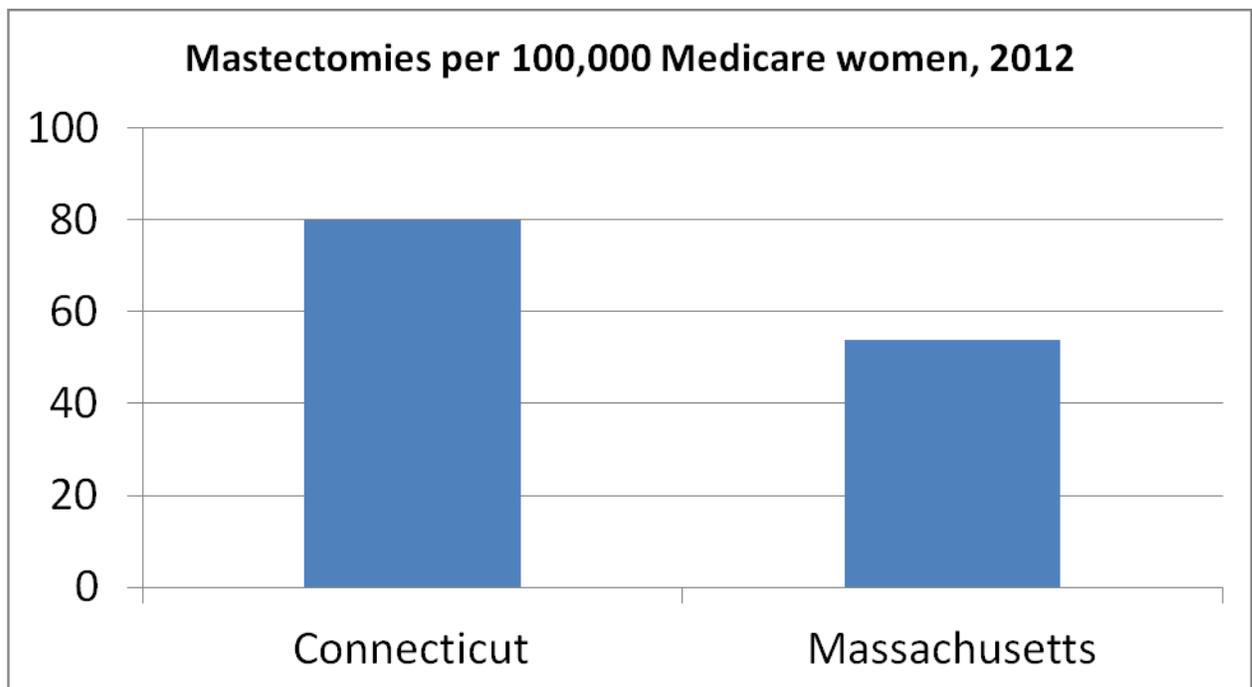
The Problem

Some background, research and examples that introduce our orientation

Americans use too much medical care. Unnecessary care doesn't generate patient benefits but **can** cause patient harm and **always** generates unnecessary expenses. Here are some very brief examples by category to indicate the size and scope of this problem and to introduce our approach of asking the right questions.

Unnecessary care by geography:

- Item: Connecticut women are far more likely to have mastectomies than neighboring Massachusetts women.²¹⁶ Here's a chart from the Dartmouth Atlas using 2012 data showing mastectomies per 100,000 Medicare women in these two states:



But these two states had the same the breast cancer **incidence** rates:²¹⁷

Connecticut: 137.3 per 100,000 people

Massachusetts: 132.8 per 100,000 people

²¹⁶ Treatment variation examples come from the Dartmouth Atlas

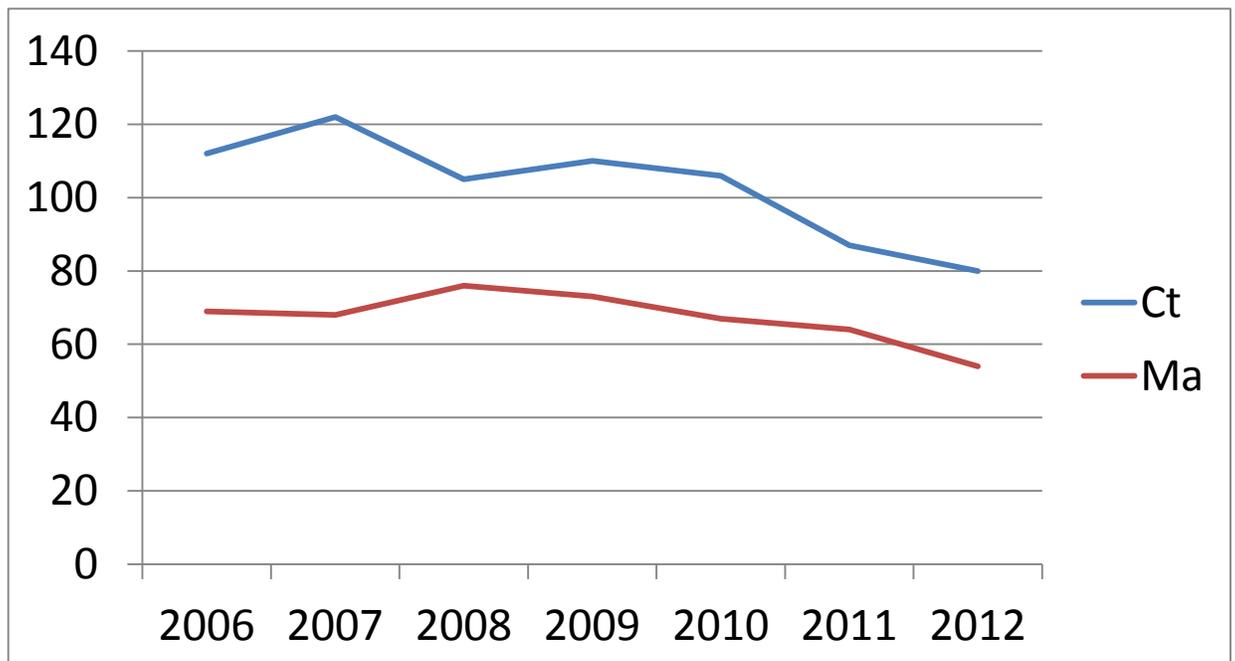
²¹⁷ Cancer Facts and Figures, 2013, American Cancer Society. These data cover the period 2005 – 2009.

And the same breast cancer **mortality rates**:²¹⁸

Connecticut: 22.5 per 100,000 people

Massachusetts: 21.9 per 100,000 people

Many more procedures on the same population with the same outcomes suggest that many Connecticut mastectomies are unnecessary. This trend has continued for years. Here are the comparative rates since 2006, again from the Dartmouth Atlas, showing that Connecticut women have consistently had more mastectomies than Massachusetts' women:



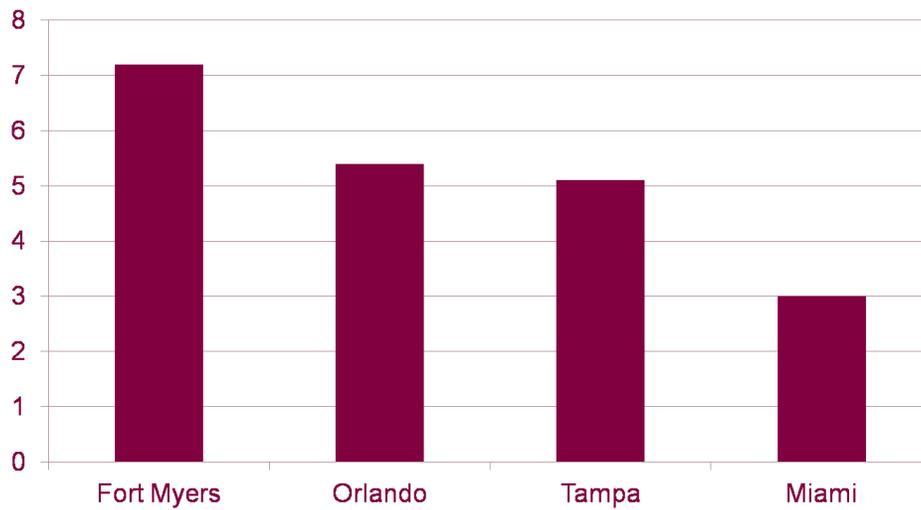
Mastectomies cost about \$70,000 each. Lumpectomies, an alternative treatment, cost about \$20,000.²¹⁹

- Item: Retirees in Fort Myers in *southwestern* Florida are twice as likely to have back surgeries as similar retirees in Miami in *southeastern* Florida. Like the Connecticut – Massachusetts mastectomy example, similar people get different care but end up with similar outcomes. Here's that chart, again from the

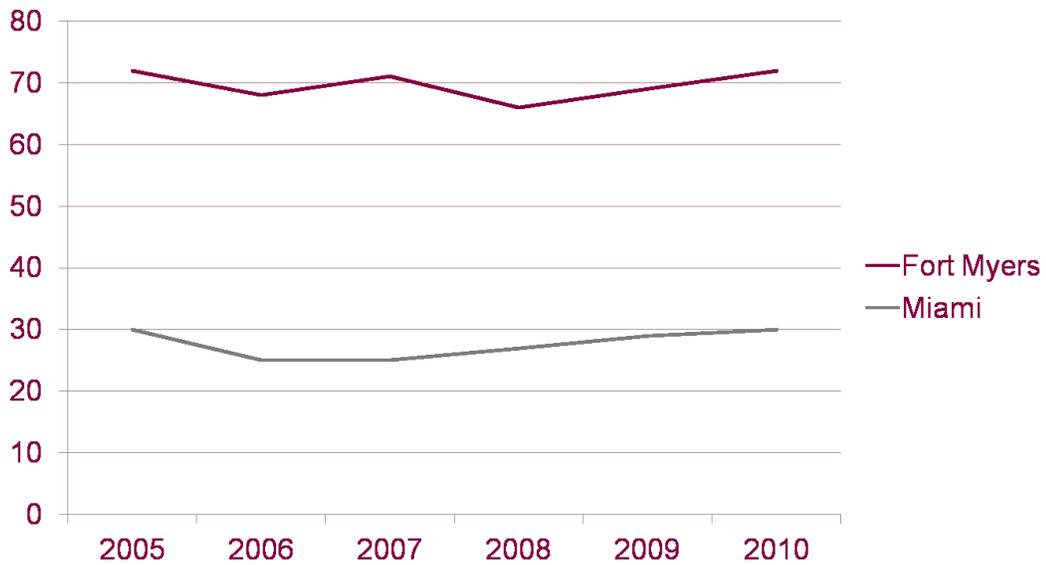
²¹⁸ Ibid.

²¹⁹ Health.costhelper.com provides cost ranges. These estimates are only a rough indicator as cost ranges are pretty wide.

Dartmouth Atlas in 2010 per thousand Medicare beneficiaries. (I included Orlando and Tampa rates as more typical back surgery rates.)



Note the rate consistency in both Fort Myers and Miami over time:



The Washington Post estimated that Medicare could save about \$20,000,000 annually if Fort Myers folks received back surgery at the same rate per 1000 as their Miami counterparts.²²⁰ That's the savings from only 1 procedure in one

²²⁰ Gaul, When Geography Influences Treatment Options, Washington Post, July 24, 2005. The Post estimates about 500 excessive southwestern Florida surgeries annually at \$40,000 per surgery.

small part of the country. More importantly, thousands of people could avoid unnecessary procedures.

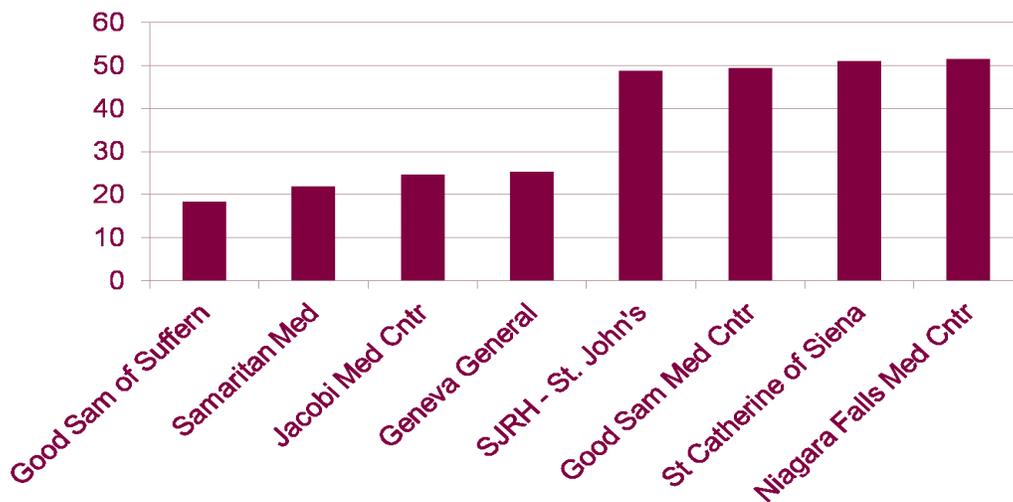
- Dozens, if not hundreds of similar examples exist for treatments ranging from angiography to prostate removal, and knee surgery to bypass grafts. Many researchers estimate that the total potential savings from eliminating this geographic treatment variation approaches \$800 billion annually. This very brief introduction to geographic variation suggests two key questions to ask your doctor about treatments:
- ‘Am I in a high or low utilization region for this particular treatment?’ Different regions can be high or low for different procedures.

This can create an opening to discuss the necessity of your treatment plus your 2nd opinion referral options.

Unnecessary care by hospital:

- Item: Some hospitals perform 40% or more of their deliveries by C-section; others 20% or less.

Here, for example, are C-section rates at various New York State hospitals in 2011, all of which performed at least 475 deliveries: ²²¹



Outcomes as measured by infant and maternal mortality rates are about the same despite the delivery process differences. This situation exists in all states.

²²¹ Ceseareanrates.com

Several state governments and research organizations have looked into this rate discrepancy to determine if *patient characteristics* or *hospital management styles* drive the rate variation. Most have concluded that patient differences do not.

Here, for example, is part of the official New Hampshire Insurance Commissioner's report on delivery variations in that state:

There are no obvious reasons that explain why c-sections are higher at one NH hospital versus another and

There does not appear to be a relationship between c-section rates and health status among hospitals ²²²

A 2013 Harvard School of Public Health study echoed this, saying

the same woman would have a different chance of undergoing a c-section based on the hospital she chooses...certain hospitals' high rates of cesarean births have more to do with characteristics of the hospitals themselves than with characteristics of their patients ²²³

- Dozens more hospital treatment variations exist for many different treatments. Here are 2 more examples:
 - People in Tom's River, New Jersey – using their local hospital – are about twice as likely to have heart bypass surgery as similar people in next door Mount Holly or nearby Freehold using those local hospitals, according to Medicare's data. Tom's River does more than twice as many heart bypass procedures per 1000 people in their catchment area as the other 2 towns do in theirs. Bypass surgeries cost about \$150,000 each.
 - People in Lawrence, Massachusetts – using their local hospital – are about twice as likely to have angiography as similar people living in demographically similar Lowell, Haverhill, Fall River or Springfield. Lawrence does about twice as many procedures per 1000 people in their catchment area as the other towns do in theirs. Angiographies cost about \$5000 each and often lead to stent insertion costing an additional \$10,000

²²² A Commercial Insurance Study of Vaginal Delivery and Cesarean Section Rates at New Hampshire Hospitals, April 2011

²²³ Pregnant women's likelihood of cesarean delivery in Massachusetts linked to choice of hospitals, HSPH News, March 19, 2013

or more. Unnecessary angiography exposes people to these potential costs, plus risks of infection or error.

This brief introduction suggests a key question to ask about hospital choice:

- 'How does this hospital *tend to treat* patients like me?'

There may be enormous process variation with few outcome differences. More on hospital treatment trends in the Questions about Hospitals section.

Unnecessary care by treatment:

- Item: Arthroscopic surgery to reduce pain from knee osteoarthritis works no better than, and sometimes slightly worse than a placebo procedure, according to a randomized, double blind controlled study published in the New England Journal of Medicine in 2002.²²⁴

Two more studies in 2008 and one in 2013 reaffirmed this conclusion.²²⁵ We perform about 700,000 arthroscopic knee surgeries annually in this country costing some \$4 billion.²²⁶

- Item: Lumbar fusion surgery often works less well than other, less aggressive techniques.²²⁷ One large study compared outcomes of people on worker's compensation due to back pain who had spinal fusion surgery with similar folks who had physical therapy and exercise interventions. After 2 years
 - Fewer spinal fusion surgery patients returned to work,
 - More spinal fusion patients were permanently disabled, and
 - Spinal fusion patients had about 4x more days off of work.²²⁸

²²⁴ A Controlled Trial of Arthroscopic Surgery, New England Journal of Medicine, July 11, 2002

²²⁵ Arthroscopic Knee Surgery No Help for Many, Associated Press, 9/10/2008 on <http://www.nbcnews.com/id/26644064/#.UqCFgtJDsuc> and <http://www.cbsnews.com/news/common-arthroscopic-knee-surgery-not-effective-no-better-than-sham-researchers-say/>

²²⁶ *ibid.* CBS News

²²⁷ Kumar and Nash, Is there a high degree of Scientific Certainty in Modern Medicine, Scientific American, March 25, 2011

²²⁸ Long term outcomes of spinal fusion surgery, Spine Magazine, Feb 15, 2011

Based on studies such as this, the Washington State Health Technology Assessment Program, for example, voted to end coverage of lumbar fusion surgery for the state's public employee health plan, Medicaid and workers compensation.^{229 230}

This brief introduction suggests a key question to ask your doctor about treatment choices:

- 'What comparative studies did you rely on to make that treatment recommendation?'

More in our Questions about Treatments section.

Unnecessary care by test:

- Don't have an MRI for lower back pain if the pain has lasted less than 6 weeks unless specific red flags exist, according to the American Academy of Family Physicians in ChoosingWisely, an educational campaign organized by the American Board of Internal Medicine Foundation.²³¹

The Academy claims that imaging of the lower spine before six weeks does not improve outcomes, but does increase costs.

- Healthy, asymptomatic adults should not have annual cardiac stress tests, according to the American College of Cardiology, again in ChoosingWisely.

The College says that such tests rarely result in any meaningful change in patient management but may lead to unnecessary invasive procedures.

- Don't do radiologic imaging for uncomplicated headaches, according to the American College of Radiology in the same ChoosingWisely campaign. The College of Radiology suggests that

Imaging headache patients absent specific risk factors for structural disease is not likely to change management or improve outcomes but incidental findings from images can lead to additional medical procedures and expense that do not improve patient well-being.

²²⁹ <http://www.healthcarepayernews.com/content/4-procedures-wa-public-payers-may-or-may-not-cover>

²³⁰ Many similar examples exist. For an interesting take on this problem, see Sherwin Nuland, 'Medical Fads: Bran, Midwives and Leeches', New York Times, June 25, 1995

²³¹ www.ChoosingWisely.org

- Dozens more examples exist on ChoosingWisely.
- The US Preventive Services Task Force provides a similarly useful list.²³²

This brief introduction suggests a key question to ask about medical tests:

- ‘What does ChoosingWisely and/or the US Preventive Services Task Force say about this particular test?’ More on choosing tests wisely in the Questions about Preventive Care section.

Unnecessary care by specialist:

Some specialists generate better patient outcomes than others.

We include this as an unnecessary care category because poorer outcomes can lead to more medical care – second surgeries, for example, or longer hospital stays.

Those second surgeries or longer hospital stays are unnecessary. A wiser patient, asking better questions and making more well-informed choices, could have avoided them.

- Item: Mortality rates from pancreatic surgery vary by surgeon’s annual volume. Here’s that chart from **Unaccountable** by Dr. Marty Makary.²³³

Number of Operations Performed per Surgeon per Year	Death Rate
Fewer than 2	14.7%
2 - 4	8.5%
More than 4	4.6%

- Item: Surgeons need to perform over 1600 robotic-assisted prostate removal surgeries before they are able to gauge with at least 90 percent accuracy how

²³² See www.uspreventiveservicestaskforce.org for clear and detailed analyses of dozens of preventive care services. The USPSTF gives letter grades to each, and the Affordable Care Act uses these grades to determine which preventive services should be offered at no cost to patients.

²³³ Makary, *Unaccountable: What Hospitals Won't Tell You and How Transparency Can Revolutionize Healthcare*, page 53

much tissue surrounding the tumor they need to remove to get all the malignant cells.²³⁴

A spokesman for the robot manufacturer suggested that this number is high ‘by an order of magnitude’.

I don’t know who’s right, of course. But I do know that a well informed consumer doesn’t want to be patient #15 or 31. Or probably even #177 or 299.

This brief introduction suggests a key question to surgeons:

- ‘How many patients *like me* (with my condition) do you operate on annually?’

More in our Questions about Specialists section.

Lots more examples exist.

We’ve introduced some unnecessary care categories by providing examples by **geography, hospital, treatment, test** and **specialist** and suggested a key question to ask about each.

These are not difficult questions to ask, not aggressive or argumentative, more inviting collaboration between your doctor and you. Learning the answers can steer you toward high quality care and away from unnecessary.

The next chapter provides more details about this ‘ask the right questions’ approach to avoiding unnecessary care.

An impact of unnecessary care

Consider these data comparisons:

- About 18,000 Americans die annually due to lack of health insurance, according to ‘Care Without Coverage’ the Institute of Medicine’s seminal study in 2002.

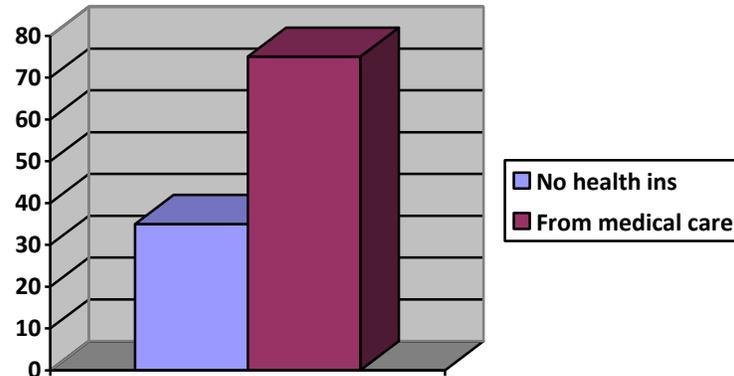
That’s out of approximately 50 million Americans who lack health insurance. The chance of dying from no health insurance is about **.00036**.

²³⁴ Bloomberg, Doctors Need 1,600 Robot-Aided Prostate Surgeries for Skills, Feb 16, 2011

- About 187,000 Americans die annually due to harm from our medical care system (errors, infections, inappropriate care etc), according to a Health Affairs study in 2011.²³⁵ (Other credible estimates range from about 44,000 to 225,000)

That's out of about 250 million insured. The chance of dying from medical care system harm is about **.00075** according to the 2011 Health Affairs estimate.

This graph shows those relative chances of dying.



You have a higher chance (albeit, a small one) of dying from *easy access* to medical care than from *difficult access* according to these studies. I find this upsetting.²³⁶

Who actually has the lowest medical costs?

Researchers have pretty clearly identified the least expensive subscribers / employees / customers. They have something in common, but it's not physical:

- They're not necessarily thin, non-smokers or exercise enthusiasts.
- And they're not necessarily experts about their health insurance policies.

Instead they know something special about medical care. That knowledge saves them – and you – lots of money.

²³⁵ Goodman, The Social Cost of Adverse Medical Events, Health Affairs, April, 2011. The 44,000 estimate comes from To Err is Human, US Institute of Medicine, 1999. The 225,000 estimate from Starfield, Is US Health Really the Best in the World?, Journal of the American Medical Association, July 26, 2000

²³⁶ I generally don't put huge stock in mortality estimates from any one study as it may be biased or flawed. But the researchers who published these studies are pretty good scholars and the peer-reviewed publications are credible. I suspect these estimates are close and I hesitate to second guess them.

Your least expensive folks know that *more* medical care isn't necessarily *better* medical care.

- They've learned to ask *how well* medical care works, not *how it works* or how much it costs.
- They're well informed about *outcomes*.

The least expensive consumers always consider multiple treatment options, and quantify the benefits and risks of each option before deciding on a treatment.

Many studies show that when people understand their options, they tend to choose less risky, less invasive and less expensive care.

- One study of benign prostate disease found that 40% fewer patients chose surgery when they learned that the benefits – fewer urinary problems – would likely be offset by sexual dysfunction.
- Another study of back pain patients with herniated disks found that those who focused on outcomes were 30% less likely to opt for surgery.
- Other studies find similar patient decision patterns.

Dartmouth Medical School Professor Albert Mulley puts it this way: *Well-informed patients consume less medicine – and not just a little bit less, but much less.*

He and his team estimate about a 20% system-wide cost decrease – and maybe much more – directly attributable to this sophistication.

The Solution

Patients who ask the right questions can identify and avoid unnecessary care. The 'right questions' tell the likelihood that you will benefit from, or be harmed by, a medical test or procedure. We call these **outcome questions**.

Our suggested Four-step process:

- **First, ask about outcomes.** Answers to outcome questions tell you most of what you need to know in order to avoid unnecessary care. Your doctor, in the process of answering your outcome questions, will provide such medical facts as necessary for you to make a wise decision.

- **Second**, if the care outcomes exceed the harms, or the benefits of doing nothing, **determine which process you prefer**. You almost always have choices. Explore them.
- **Third**, once you decide which care process you prefer, **determine which provider** – physician and hospital – generates the best outcomes for your preferred process.
- **Fourth** and finally, if you determine that two providers generate equally beneficial outcomes from your preferred process, then **consider the prices** they charge.

Asking **outcome** questions doesn't require detailed medical knowledge. Rather, it requires an understanding of the key, underlying medical care issues like treatment variation and the importance of comparative research studies. Outcome questions are deceptively simple. You need ask only a few. For example:

- Out of 100 people like me, how many benefit from this treatment?
- Out of 100 people like me, how many are harmed by it?

Answers to those two questions – and a few others like them - tell you enough to make wise decisions. Though the questions listed in this chapter may seem simple and even obvious, I caution: developing them required extensive research into medical care, statistics and evaluation methodologies. I reviewed a great deal of data, read many research studies and leaned heavily on the works of, among others:

- Michael Porter of Harvard Business School, especially his massive work ***Redefining Healthcare***, written with co-author Elizabeth Teisberg, which emphasizes the need to focus on medical care outcomes, not processes
- Regina Herzlinger, also of Harvard Business School, especially her book ***Who Killed Healthcare*** which introduces the role consumers *can* play in their healthcare decisions
- Dr. David Newman of Mount Sinai Medical Center and Columbia Medical School, especially his book ***Hippocrates's Shadow*** which discusses some useful, common sense ways to improve communication with your doctor
- Shannon Brownlee of the New America Foundation, especially her book ***Overtreated*** which details the size and scope of our unnecessary care problem

- Dr. Stephen Woloshin and his co-authors, all from Dartmouth Medical School, especially their book ***Know Your Risks*** which introduces some fundamental risk analytics in an engaging, easy-to-understand fashion
- Dr. H. Gilbert Welch, also from of Dartmouth Medical School, especially his two books ***Should I Be Tested for Cancer?*** and ***Overdiagnosed*** which document the extent of unnecessary testing in this country
- Dr. John Wennberg of Dartmouth Medical School, especially his work ***Tracking Medicine*** which discusses how both the *supply of medical resources* and *idiosyncrasies of physician preferences* affect patient care, and
- Dr. Michael Marmot of University College London, especially his work on the Whitehall studies and book ***The Status Syndrome*** which show how one's job status and income impact disease and mortality rates.

They're all excellent, insightful books, well worth reading.

Asking process questions

Medical researchers have definitively answered the question: '*do different doctors and hospitals treat similar patients differently?*' The answer is yes.

Treatment variation means that the medical community has not agreed on the 'best' way to treat a particular medical problem. Two or more equally good options may exist, often supported by high quality evidence of good outcomes. The alternatives may all be 'evidence-based'. Your job as the patient in this situation: decide which of the alternatives you *prefer*.

- Some wise, well informed and thoughtful women diagnosed with early stage breast cancer may prefer mastectomy, while
- Other equally wise, well informed and thoughtful women may prefer lumpectomy or 'watchful waiting'.
- There's often no universal right or wrong, but there may be right or wrong approaches *for you*.

This situation of having reasonable treatment alternatives exists, according to Dartmouth's Wennberg, about 85% of them. Process comparison is a big deal!

Beware of confusing our outcome and process questions with commonly asked fact questions, the answers to which dominate web-based research and rarely help you identify unnecessary care. Excessive fact accumulation serves very poorly as a proxy

for outcomes and tendencies. Take our Connecticut – Massachusetts mastectomy example again. The fact question ‘what organs do you remove in mastectomy and in lumpectomy?’ really addresses two risks:

- The certainty that doctors remove all cancerous tissue so you’ll have a good outcome. This is a proxy for your chance of benefiting from this procedure.
- The risk of a bigger vs. smaller surgical procedure, a proxy for your chance of surgical harm.

Rather than asking such questions - the answers to which may correlate poorly to outcomes - ask the outcome and process questions directly. Accumulating lots of medical facts may confuse more than it illuminates unless you also know the outcomes - in which case, why ask the fact questions?

Gary Schwitzer, editor of HealthNewsReview calls this fact information fascination ‘infoxication’, nothing to do with Fox TV, but lots to do with excessive noise, factoids, sketchy data, poorly framed issues, poorly formed conclusions and generally poor quality research. Schwitzer reviewed 1700+ medical news articles over the past decade based on their reporting quality. His results:

- About 2/3 of articles failed to *quantify* medical harms but often minimized them (‘side effects were minor and infrequent’)
- About 2/3 of articles failed to *quantify* the medical benefits but often exaggerated them (saying this is a ‘medical breakthrough’ or ‘game changer’)
- Most also failed to evaluate the *quality of evidence* reported, not differentiating between
 - corporate press releases and objective studies,
 - potentially biased industry-funded observational studies and double blind randomized, comparative data, or
 - correlation and causality.

Far better to ask our treatment outcome and process questions of your doctor directly.

Summary:

- Outcome questions help you differentiate necessary from unnecessary care and determine better or poorer quality medical care.

- Process questions help you identify treatment options so you can choose the care that you *prefer*.

In our increasingly high deductible insurance world, medical care prices are always a concern. But I caution against getting low cost unnecessary care and avoiding high cost necessary.

**‘When patients are fully informed about their options,
they often choose very differently from their physicians.’**

Dartmouth Atlas of Healthcare

Doctors and patients often have different medical decision making criterion, though both clearly and obviously want the patient’s health to improve as a first priority. Doctors may also concern themselves with, among other things,

- Tort issues, in which a physician considers the likelihood of a lawsuit when making a treatment recommendation
- Hospital norms in which, for example, some hospitals perform c-sections on patients who would deliver vaginally in other hospitals. (We’ll discuss in the Hospitals section.)
- Professional preferences in which, for example, a specific physician prefers mastectomy to lumpectomy or arthroscopic knee surgery to physical therapy and medication. (We’ll discuss this in the Treatments section)
- Insurance or other regulations in which, for example, doctors are financially rewarded or penalized for performing certain tests.

Patients generally don’t care about these issues. They care, instead, about the

- Likelihood of complete recovery
- Post surgical pain
- Recovery period length
- Personal and family impact
- Cost
- And other individual, personal issues

Asking your doctor ‘what would you do if you were me?’ will likely generate answers based on the doctor issues listed above. Asking the questions listed in this section, by contrast, will likely generate answers more closely aligned with the patient concerns. That’s why becoming fully informed about your options, per the Dartmouth Atlas quote above, is so important.

Can Physicians Teach Their Patients to Identify and Avoid Unnecessary Care?

I’m pretty sure that doctors aren’t – and can’t be – patient educators. They simply don’t have time, expertise or training to diagnose maladies, prescribe treatments *and* teach patients about care quality. Consider these points:

1. The average physician visit takes about 10 minutes. That’s perhaps long enough to diagnose and prescribe (perhaps), but not *also* to introduce, explain and apply indicators like the Number Needed to Treat, preference-sensitive care or overdiagnosis on a test-by-test or patient-by-patient basis. As evidence of this problem...
2. Fewer than 10% of American patients were told by their doctor about various screening test risks. Perhaps one reason for this...
3. ‘Doctors need to work on their people skills’ says Laura Landro, healthcare columnist for the Wall Street Journal. ‘Doctors are rude. Doctors don’t listen. Doctors have no time. Doctors don’t explain things in terms patients can understand.’ (I think she overstates the problem) As a result...
4. The average patient only understands about 50% of what the doctor says, according to David Cordani, CEO of Cigna. What’s worse, perhaps, is that the average patient only retains about 50% of what he/she understands for 24 hours.²³⁷ (I don’t have data on information retention after a week or two but suspect it’s pretty low.)

This is not to bash doctors.

Rather, it’s to admit that they, like all of us, have strengths and weaknesses. Their strengths include diagnostic and prescription skills. Their weaknesses include patient education and communication.

Consider the bigger picture. If doctors taught patients to avoid unnecessary care, then we wouldn’t spend \$800 billion - \$1.2 trillion annually on unnecessary care.

²³⁷ These estimates come from Cordani’s keynote address to the Yale Healthcare Conference, April 10, 2015. He also estimated that the average physician visit lasts 7 minutes.

Our question remains: How do patients learn about these critical and complicated issues?

Can carriers educate consumers?

The short answer is 'probably not'.

Patients don't trust carriers to give advice or make clinical decisions in the patient's best interests. Rather, perhaps based on our HMO experience of the late 1990s when carriers arbitrarily rejected expensive claims, patients tend to think that carrier decisions reflect the carrier's financial interests more than the consumer's health needs. I actually once heard a senior manager at a highly respected carrier state that, almost word for word. I appreciated his honesty.

I've asked other senior carrier sales managers if they were interested in teaching their subscribers about care quality and metrics, helping them avoid unnecessary care. Their immediate and universal responses: no, followed up by one or more of

- We're agnostic about what they choose and we don't want to interfere with the doctor-patient relationship
- We're in the healthcare financing business, not the medical advising business
- We're so busy teaching people about our plan designs that we don't have time to teach a brand new field

One possible additional concern: A real emphasis on healthcare consumerism might pit carriers against their own contracted hospitals and physicians who, at least according to some commentators, need to perform unnecessary treatments to remain in business.

²³⁸

Not long ago, I attended a health insurance conference where CEOs from several carriers described their commitment to consumer education, consumer engagement and the like. All the generalities sounded good but I ended up finding their comments vacuous and unsatisfying. After I left, I jotted down 5 questions that I probably should have asked:

If you really embrace healthcare consumerism...

²³⁸ Dr Jauhar quoted a specialist who stated this eloquently: 'If a doctor doesn't do excess testing, forget it, he isn't going to be able to live' *Doctored*, page 167

Question 1: Why don't you publish NNT and NNH data on treatments and medications? The Number Needed to Treat tells how many people need to have a procedure for 1 person to benefit. The Number Needed for Harm tells the same thing about harms. All carriers have sufficient data and real world patient experience to generate reasonable data. Why not tell your subscribers?

Question 2: Why don't you publish C-section rates and outcome data for deliveries by hospital? C-section rates vary by hospital even if patient health status does not. Why not tell your subscribers?

Question 3: Why do you fund treatments that ChoosingWisely recommends against? ChoosingWisely lists interventions that specialty medical societies like the American College of Cardiology recommend *against* because they don't benefit patients. Why fund procedures that the relevant medical specialty society officially discourages?

And why, if you fund them, don't you include ChoosingWisely information?

Question 4: Why do you fund care that the US Preventive Services Task Force grades as D? The USPSTF evaluates and grades dozens of preventive care interventions. 'D' means *no benefit* or the treatment harms exceed the benefits. Why do you fund treatments that the government says harm people?

Question 5: Why are you agnostic about patient choices? You – health insurance carriers – know which treatments work well, which poorly and which not at all; you have tons of data. But you don't tell your subscribers. Why – if you really embrace healthcare consumerism - do you leave your subscribers to make these decisions without the benefit of your information and experience?

Health insurance carriers can offer tremendous value to their subscribers in the consumer education arena. Unfortunately for a variety of business, financial and legal reasons, they too often opt out, which leaves brokers and clients all alone to integrate clinical considerations into financial plan designs.

Brokers Can Educate

We'll develop some specific metrics in the form of questions for brokers to teach their clients to ask about medical care. Why do I think consumer care-quality education is an appropriate broker responsibility?

The broker's long term financial interests and client's long term health interests are closely allied:

- The more *effectively* the client uses healthcare resources, the better the client's outcomes. Effectively using healthcare resources means keeping utilization rates and the related costs as low as possible; unnecessary utilization, as we've already discussed ad nauseum, only raises risks and costs. Teaching clients to use our healthcare system effectively benefits the client and thus also, the broker.
- The more *efficiently* the client uses healthcare resources, the less expensive for the client and the more likely the client will renew / rely on the broker's advice. Efficiency means getting the right care, at the right time, from the right provider, at the right price.

Teaching clients to access healthcare resources **effectively** and **efficiently** leads to better outcomes at lower costs, which (among other benefits like improved client health) serves the broker's long term business interests.

Where else can your clients reliably get high quality, professional advice about how best to use our healthcare system? I'd argue that brokers can and should step into this void.

If they don't, someone else might.

And whichever entity ultimately teaches your clients how to use our system effectively and efficiently might just steal your commissions along the way.

I've organized the Consumer Education section of this chapter as Key Questions for Patients to Ask. Hopefully people will use the various sections as their own needs arise.

Key Questions for Patients to Ask

Questions about Preventive Care	Page 243
Questions about Screening Tests	Page 257
Questions about Medications	Page 267
Questions about Treatments	Page 273
Questions about Hospitals	Page 281
Questions about Specialists	Page 289
Questions about Primary Care Physicians	Page 295
Why We Don't Provide Disease Specific Questions	Page 303
Why You Need to Ask These Questions Yourself	Page 305
Concerns about Medical Ads	Page 307
List of Questions	Page 312

Questions about Preventive Care

Preventive medical services aim to help you avoid future bad medical events like having a heart attack or dying of breast cancer. Some preventive medical services work very well: they do a good job helping patients avoid those future bad medical events. Other preventive services work less well. These 4 questions can help you differentiate between the two.

1. Out of 100 people like me, how many **benefit** from this preventive service?
2. Out of 100 people like me, how many are **harmed** by this preventive service?
3. What grade does the **US Preventive Services Task Force** give this service?
4. Does **ChoosingWisely** comment on this service?

Questions about preventive care

Out of 100 people like me, how many benefit from this preventive service?

Use this phrasing for 3 reasons:

First, you get a number as your answer (hopefully). This is more useful than 'many people benefit' since 'many' means different things to different people.

Second, focus on people like you. Impacts may differ if you're a slim 25 year old male tri-athlete or an obese 80 year old female smoker.

Third, identify the benefit you desire. Avoid a heart attack? Lower your cholesterol? Be specific! (See the discussion below about types of benefits.)

Explanations

Out of 100...

- Answers in the form of '2 out of 100 people like you benefit' allow you to determine whether the service works well enough for you to have it. That's a judgment call.

You may make a different decision if the answer is 2 or 58 out of 100 benefit.

- Answers like '**this preventive service reduces your chance of having a heart attack by 33%**' don't help you determine how well the service works.

33% of what? You need to know how many, out of 100 people like you, would have the event *without* this preventive service to understand what a 33% reduction means.

Let's say 3 in 100 people would have heart attacks *without* preventive medicine, and 2 in 100 *still* had heart attacks even with preventive meds. (We learn this from comparative studies. See Chapter 6 for more on this.)

Some might report this as a 33% reduction, 1 heart attack in 3 avoided. But 100 people had to take the meds to avoid that 1 heart attack. That means only 1 in 100 benefits.

Confused?

Ask our 'out of 100 people like me' question to get a clear answer!

Beware of percentages as answers. They tend to confuse more than they clarify and may mean that the answerer doesn't really know how well the medical procedure works.

...people like me...

- If you're a wealthy, upbeat, middle aged athletic person in Los Angeles, a study of impoverished, depressed, obese smokers in Scotland may not be terribly useful. (Yes, some preventive recommendations are *actually* based on this group of Scots.) Ask your doctor about studies on people **like you**. They may or may not exist.
- If studies on *people like you* don't exist, then your doctor should tell you and together you and he/she can estimate the benefit for you.

What does 'benefit' mean?

- We sometimes measure patient events, like heart attacks or strokes. We also sometimes measure biochemical levels, like cholesterol or blood pressure.

The levels (cholesterol, blood pressure, blood sugar and many more) may or may not correlate very closely to patient events like heart attacks or strokes. In fact, some correlate remarkably poorly. See below.

- Your question 'out of 100 people like me, how many *benefit*?' generally implies 'avoid a heart attack, stroke or some other specific event'.

Learning that 60, 70 or 80 out of 100 people like you generate better levels may not tell you much about your chance of avoiding a heart attack.

In fact, one ad campaign said that reducing your *cholesterol levels* with statins does not affect *heart attacks* in 99 out of every 100 people who do so, on average.²³⁹

Another pharmaceutical manufacturer actually states in their ads that lowering your *cholesterol level* with their drug Zetia **does not reduce patient events** like heart attacks or heart disease at all.²⁴⁰ See this statement in their ads: *Unlike some statins, Zetia has not been shown to prevent heart disease or heart attacks.*

²³⁹ See the Lipitor ad that ran in the Wall Street Journal December 4, 2007, for example. I reproduced it on the next page. The fine print, bottom left, says that, on average, 97 out of each 100 people with various risk factors in the control group **did not have** a heart attack during the study period (meaning that their various risk factors did not lead to a heart attack), and 2 out of each 100 in the test group **still had** a heart attack, meaning only 1 out of each 100 who lowered their cholesterol with Lipitor in the test group actually avoided a heart attack during the study period.

²⁴⁰ See Zetia's ad in Parade Magazine, 9/11/11, among other places. You can probably also find this on their website www.Zetia.com. It was there November 30, 2013 when I wrote this section.

In other words, there is no correlation between cholesterol level lowering due to taking Zetia and heart attack rates.

- Clarify, when you ask your doctor, exactly what you mean by 'benefit'.

If your doctor answers with a level like cholesterol, blood pressure or blood sugar, ask how closely the level correlates to the patient event in question *for people like you*.

Here's the Lipitor ad that ran in the Wall Street Journal December 4, 2007

THE WALL STREET JOURNAL Tuesday, December 4, 2007 A13

In patients with multiple risk factors for heart disease,

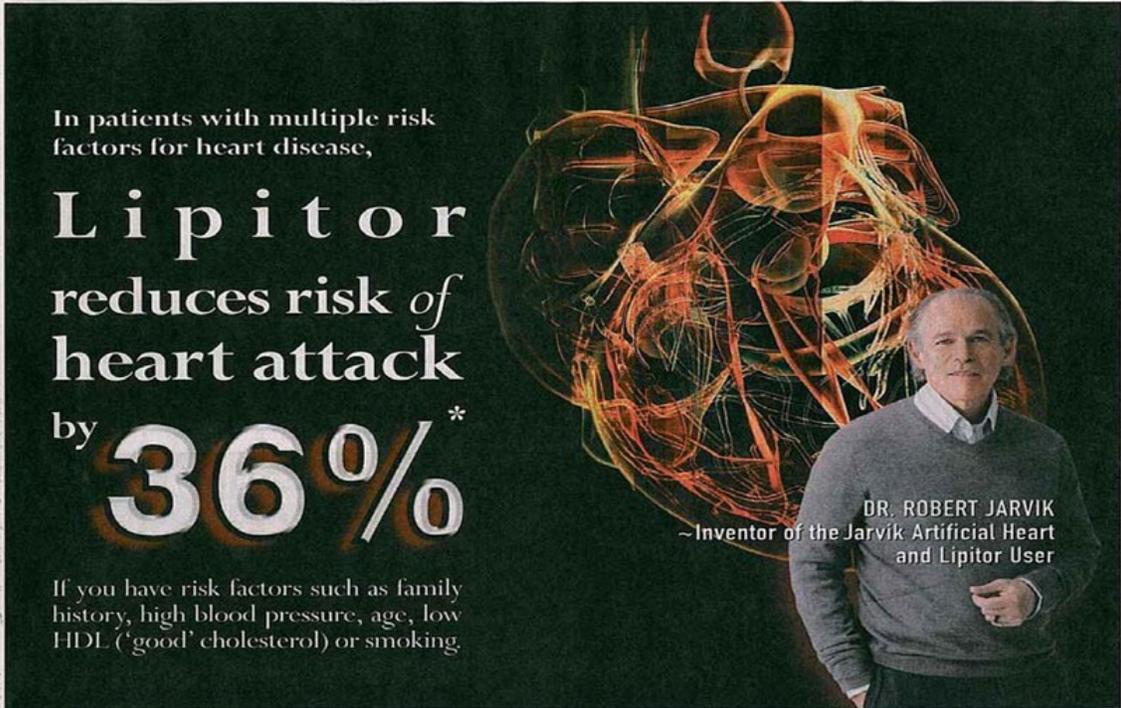
Lipitor
reduces risk of heart attack
by **36%***

If you have risk factors such as family history, high blood pressure, age, low HDL ('good' cholesterol) or smoking.

DR. ROBERT JARVIK
- Inventor of the Jarvik Artificial Heart
and Lipitor User

*That means in a large clinical study, 3% of patients taking a sugar pill or placebo had a heart attack compared to 2% of patients taking Lipitor.

 **LIPITOR**[®]
atorvastatin calcium
tablets



One person's experience asking the 'out of 100 people like me' questions

People occasionally tell me about their experiences. Here's my best recollection of one particularly poignant phone call. ²⁴¹

I have a good relationship with my cardiologist, so I felt comfortable asking him your 'out of 100 people like me' questions. So I did.

He put down his pen, looked at me and said 'no one has ever asked me that. I don't know the answer. Let's figure it out' and he started typing on his computer.

The process of finding answers got me involved and I ended up feeling more comfortable with his treatment recommendations as a result. I feel like I now have an even better working relationship with him than I did before.

I'm also more inclined to comply with his recommendations. ²⁴²

I asked a few questions then he announced 'now I have to tell you about my next experience'.

I asked my dermatologist the same questions.

His response: 'you come into my house and ask me those questions? If you don't trust my judgment, I think you should get another dermatologist.' ²⁴³

Patients and doctors differ!

- Some patients want to engage their doctors around these questions, others do not.
- Some doctors want to engage their patients in the decision making process, others do not.

Choose the doctor whose style and professional demeanor work for you. This is not a 'one-size-fits-all' activity; it's increasingly an individual, consumer driven one.

²⁴¹ The caller had read my earlier book Transparency Metrics. I don't know anything about his medical condition – indeed, I don't even remember his name - and merely reproduce key parts of our conversation as best I recollect it.

²⁴² Patient compliance with physician recommendations is spotty, leading sometimes to poorer outcomes than desirable.

²⁴³ The first sentence is a direct quote. It's burned into my memory. The second sentence is as close as I recall.

Questions about preventive care

Out of 100 people like me, how many are harmed by this preventive service?

Use this phrasing for 3 main reasons:

First, you get a number as your answer (hopefully). This is more useful than 'very few people are harmed' since 'few' means different things to different people.

Second, focus on people like you. Harms may differ if you're a slim 25 year old male tri-athlete or an obese 65 year old female diabetic smoker.

Third, identify the harms of concern. Some harms to consider:

- **False positive results** indicating you have a medical problem when, in fact, you really do not.

False positive rates vary by test. Some have reported false positive rates of 20% or more over time. But once identified, all positive results need to be investigated. This can lead to expensive and potentially risky procedures.

Ask your doctor how often people experience false positives for the specific test he/she recommends. Try to avoid answers like 'not very often' or 'it's a very reliable test'. Instead, try to get numbers like '3 out of every 100 positive test results are false positives'. Then decide if the test is reliable enough *for you*.

- **Treatment harms** such as medication side effects, surgical error or infection.
- **Overdiagnosis**, or identification and treatment of harmless abnormalities. (Not all abnormalities harm you. Some – many? – never cause symptoms or harms.)

Our increasingly powerful medical tests can sometimes identify abnormalities that doctors can't exactly understand. But once found they need further investigation which causes you risks and costs.

The US Preventive Services Task Force reports that some screening tests have overdiagnosis rates of 20% or higher.²⁴⁴

Ask about all of these potential harms.

²⁴⁴ <http://www.uspreventiveservicestaskforce.org/uspstf09/breastcancer/brcanup2.htm>

What if your doctor doesn't know the answers?

Some medical treatments have been studied more than others, so your doctor can sometimes find the answers easily, sometimes with difficulty and sometimes not at all. Each patient can decide for him or herself how to react if your doctor says 'I don't know how many people, out of 100 like you, will benefit from this treatment.'

Remember the huge caution discovered by Dr. Vinay Prasad about treatments that make anatomical, physiological and biological sense but that haven't been tested: they're ineffective or harmful about half the time.²⁴⁵

When faced with ambiguity, some patient may decide to proceed anyway, while others may decide not to proceed until they can get clear answers to these questions.

There's no universal right or wrong, only right or wrong *for you*. Consider these two different points of view as you proceed: First, Dr. David Newman, concerned that many common and accepted interventions don't work terribly well, suggests you try to get as much outcome information as possible:

- *Push hard if necessary. Do not allow confusion to stand. When a physician continues to speak in ambiguities, it is often a sign that medical science doesn't have a concrete answer to your question. Ask if this is the case...and*
- *You need to know how much the medical interventions you undertake have the potential to help you.*²⁴⁶

On the other hand, Dr. Pauline Chen, writing in the New York Times, cites a 2011 study that found 2 out of 3 patients preferred that their doctors make decisions for them, especially in conditions of uncertainty.²⁴⁷

There are no easy suggestions of how to proceed when your doctor can't answer your 'out of 100 people like me, how many benefit' question. My best advice, as I repeat throughout this book: discuss these issues with your doctor and make the decision that feels most comfortable to you.

²⁴⁵ I've already discussed Dr. Prasad's research so many times in this book that I'm sure it's getting tedious. See his article A Decade of Reversal in the Mayo Clinic Proceedings, August 2013 <http://www.mayoclinicproceedings.org/article/S0025-6196%2813%2900405-9/abstract>

²⁴⁶ Ibid. pages 213 and 217

²⁴⁷ Letting Doctors Make the Tough Decisions, Chen, New York Times, Aug 11, 2011

Questions about preventive care

What grade does the US Preventive Services Task Force give this service?

The **US Preventive Services Task Force** is part of the Department of Health and Human Services. It evaluates dozens of preventive medical services, makes recommendations and gives letter grades to each.

- Their evaluations are widely considered the 'gold standard' of clinical analyses by insurance carriers, public agencies and research institutions.
- The Affordable Care Act (Obamacare) requires Medicare and approved carriers to provide services graded 'A' and 'B' by the USPSTF to patients at no out-of-pocket costs.

USPSTF letter grades:

A means high certainty that the net benefits are substantial

B means moderate certainty that the net benefits are moderate

C means at least a moderate certainty that the net benefit is small

D means there are no net benefits or the harms exceed the benefits

I means current evidence is insufficient to make a determination

You should always discuss the USPSTF recommendations and letter grades with your doctor whenever he/she recommends a preventive procedure.

You do not always have to ***follow*** the USPSTF recommendations, as your own case may be unique or you may weigh certain factors differently from the USPSTF. But if you choose not to follow those recommendations, you should understand why.

USPSTF write-ups are thoughtful, thorough and well worth consideration by wise patients. You can read all their recommendations at <http://www.uspreventiveservicestaskforce.org> or simply google USPSTF.

List of A and B recommendations

as of February 10, 2014

more details and descriptions for all these topics available on the USPSTF site

Topic	Description	Grade	Release Date of Current Recommendation
Abdominal aortic aneurysm screening: men	The USPSTF recommends one-time screening for abdominal aortic aneurysm by ultrasonography in men ages 65 to 75 years who have ever smoked.	B	February 2005
Alcohol misuse: screening and counseling	The USPSTF recommends that clinicians screen adults age 18 years or older for alcohol misuse and provide persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce alcohol misuse.	B	May 2013*
Anemia screening: pregnant women	The USPSTF recommends routine screening for iron deficiency anemia in asymptomatic pregnant women.	B	May 2006
Aspirin to prevent cardiovascular disease: men	The USPSTF recommends the use of aspirin for men ages 45 to 79 years when the potential benefit due to a reduction in myocardial infarctions outweighs the potential harm due to an increase in gastrointestinal hemorrhage.	A	March 2009
Aspirin to prevent cardiovascular disease: women	The USPSTF recommends the use of aspirin for women ages 55 to 79 years when the potential benefit of a reduction in ischemic strokes outweighs the potential harm of an increase in gastrointestinal hemorrhage.	A	March 2009
Bacteriuria screening: pregnant women	The USPSTF recommends screening for asymptomatic bacteriuria with urine culture in pregnant women at 12 to 16 weeks' gestation or at the first prenatal visit, if later.	A	July 2008
Blood pressure screening in adults	The USPSTF recommends screening for high blood pressure in adults age 18 years and older.	A	December 2007
BRCA risk assessment and genetic counseling/testing	The USPSTF recommends that primary care providers screen women who have family members with breast, ovarian, tubal, or peritoneal cancer with one of several screening tools designed to identify a family history that may be associated with an increased risk for potentially harmful mutations in breast cancer susceptibility genes (<i>BRCA1</i> or <i>BRCA2</i>). Women with positive screening results should receive genetic counseling and, if indicated after counseling, BRCA testing.	B	December 2013*
Breast cancer preventive medications	The USPSTF recommends that clinicians engage in shared, informed decisionmaking with women who are at increased risk for breast cancer about medications to reduce their risk. For women who are at increased risk for breast cancer and at low risk for adverse medication effects, clinicians should offer to prescribe risk-reducing medications, such as tamoxifen or raloxifene.	B	September 2013*
Breast cancer screening	The USPSTF recommends screening mammography for women, with or without clinical breast examination, every 1 to 2 years for women age 40 years and older.	B	September 2002†
Breastfeeding counseling	The USPSTF recommends interventions during pregnancy and after birth to promote and support breastfeeding.	B	October 2008
Cervical cancer screening	The USPSTF recommends screening for cervical cancer in women ages 21 to 65 years with cytology (Pap smear) every 3 years or, for women ages 30 to 65 years who want to lengthen the screening interval, screening with a combination of cytology and human papillomavirus (HPV) testing every 5 years.	A	March 2012*
Chlamydial infection screening: nonpregnant	The USPSTF recommends screening for chlamydial infection in all sexually active nonpregnant young women age 24	A	June 2007

women	years and younger and for older nonpregnant women who are at increased risk.		
Chlamydial infection screening: pregnant women	The USPSTF recommends screening for chlamydial infection in all pregnant women age 24 years and younger and for older pregnant women who are at increased risk.	B	June 2007
Cholesterol abnormalities screening: men 35 and older	The USPSTF strongly recommends screening men age 35 years and older for lipid disorders.	A	June 2008
Cholesterol abnormalities screening: men younger than 35	The USPSTF recommends screening men ages 20 to 35 years for lipid disorders if they are at increased risk for coronary heart disease.	B	June 2008
Cholesterol abnormalities screening: women 45 and older	The USPSTF strongly recommends screening women age 45 years and older for lipid disorders if they are at increased risk for coronary heart disease.	A	June 2008
Cholesterol abnormalities screening: women younger than 45	The USPSTF recommends screening women ages 20 to 45 years for lipid disorders if they are at increased risk for coronary heart disease.	B	June 2008
Colorectal cancer screening	The USPSTF recommends screening for colorectal cancer using fecal occult blood testing, sigmoidoscopy, or colonoscopy in adults beginning at age 50 years and continuing until age 75 years. The risks and benefits of these screening methods vary.	A	October 2008
Dental caries prevention: preschool children	The USPSTF recommends that primary care clinicians prescribe oral fluoride supplementation at currently recommended doses to preschool children older than age 6 months whose primary water source is deficient in fluoride.	B	April 2004
Depression screening: adolescents	The USPSTF recommends screening adolescents (ages 12-18 years) for major depressive disorder when systems are in place to ensure accurate diagnosis, psychotherapy (cognitive-behavioral or interpersonal), and follow-up.	B	March 2009
Depression screening: adults	The USPSTF recommends screening adults for depression when staff-assisted depression care supports are in place to assure accurate diagnosis, effective treatment, and follow-up.	B	December 2009
Diabetes screening	The USPSTF recommends screening for type 2 diabetes in asymptomatic adults with sustained blood pressure (either treated or untreated) greater than 135/80 mm Hg.	B	June 2008
Falls prevention in older adults: exercise or physical therapy	The USPSTF recommends exercise or physical therapy to prevent falls in community-dwelling adults age 65 years and older who are at increased risk for falls.	B	May 2012
Falls prevention in older adults: vitamin D	The USPSTF recommends vitamin D supplementation to prevent falls in community-dwelling adults age 65 years and older who are at increased risk for falls.	B	May 2012
Folic acid supplementation	The USPSTF recommends that all women planning or capable of pregnancy take a daily supplement containing 0.4 to 0.8 mg (400 to 800 µg) of folic acid.	A	May 2009
Gestational diabetes mellitus screening	The USPSTF recommends screening for gestational diabetes mellitus in asymptomatic pregnant women after 24 weeks of gestation.	B	January 2014
Gonorrhea prophylactic medication: newborns	The USPSTF recommends prophylactic ocular topical medication for all newborns for the prevention of gonococcal ophthalmia neonatorum.	A	July 2011*
Gonorrhea screening: women	The USPSTF recommends that clinicians screen all sexually active women, including those who are pregnant, for gonorrhea infection if they are at increased risk for infection (that is, if they are young or have other individual or population risk factors).	B	May 2005

Healthy diet counseling	The USPSTF recommends intensive behavioral dietary counseling for adult patients with hyperlipidemia and other known risk factors for cardiovascular and diet-related chronic disease. Intensive counseling can be delivered by primary care clinicians or by referral to other specialists, such as nutritionists or dietitians.	B	January 2003
Hearing loss screening: newborns	The USPSTF recommends screening for hearing loss in all newborn infants.	B	July 2008
Hemoglobinopathies screening: newborns	The USPSTF recommends screening for sickle cell disease in newborns.	A	September 2007
Hepatitis B screening: pregnant women	The USPSTF strongly recommends screening for hepatitis B virus infection in pregnant women at their first prenatal visit.	A	June 2009
Hepatitis C virus infection screening: adults	The USPSTF recommends screening for hepatitis C virus (HCV) infection in persons at high risk for infection. The USPSTF also recommends offering one-time screening for HCV infection to adults born between 1945 and 1965.	B	June 2013
HIV screening: nonpregnant adolescents and adults	The USPSTF recommends that clinicians screen for HIV infection in adolescents and adults ages 15 to 65 years. Younger adolescents and older adults who are at increased risk should also be screened.	A	April 2013*
HIV screening: pregnant women	The USPSTF recommends that clinicians screen all pregnant women for HIV, including those who present in labor who are untested and whose HIV status is unknown.	A	April 2013*
Hypothyroidism screening: newborns	The USPSTF recommends screening for congenital hypothyroidism in newborns.	A	March 2008
Intimate partner violence screening: women of childbearing age	The USPSTF recommends that clinicians screen women of childbearing age for intimate partner violence, such as domestic violence, and provide or refer women who screen positive to intervention services. This recommendation applies to women who do not have signs or symptoms of abuse.	B	January 2013
Iron supplementation in children	The USPSTF recommends routine iron supplementation for asymptomatic children ages 6 to 12 months who are at increased risk for iron deficiency anemia.	B	May 2006
Lung cancer screening	The USPSTF recommends annual screening for lung cancer with low-dose computed tomography in adults ages 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.	B	December 2013
Obesity screening and counseling: adults	The USPSTF recommends screening all adults for obesity. Clinicians should offer or refer patients with a body mass index of 30 kg/m ² or higher to intensive, multicomponent behavioral interventions.	B	June 2012*
Obesity screening and counseling: children	The USPSTF recommends that clinicians screen children age 6 years and older for obesity and offer them or refer them to comprehensive, intensive behavioral interventions to promote improvement in weight status.	B	January 2010
Osteoporosis screening: women	The USPSTF recommends screening for osteoporosis in women age 65 years and older and in younger women whose fracture risk is equal to or greater than that of a 65-year-old white woman who has no additional risk factors.	B	January 2012*
Phenylketonuria screening: newborns	The USPSTF recommends screening for phenylketonuria in newborns.	A	March 2008
Rh incompatibility screening: first pregnancy visit	The USPSTF strongly recommends Rh (D) blood typing and antibody testing for all pregnant women during their first visit for pregnancy-related care.	A	February 2004

Rh incompatibility screening: 24–28 weeks' gestation	The USPSTF recommends repeated Rh (D) antibody testing for all unsensitized Rh (D)-negative women at 24 to 28 weeks' gestation, unless the biological father is known to be Rh (D)-negative.	B	February 2004
Sexually transmitted infections counseling	The USPSTF recommends high-intensity behavioral counseling to prevent sexually transmitted infections (STIs) in all sexually active adolescents and for adults at increased risk for STIs.	B	October 2008
Skin cancer behavioral counseling	The USPSTF recommends counseling children, adolescents, and young adults ages 10 to 24 years who have fair skin about minimizing their exposure to ultraviolet radiation to reduce risk for skin cancer.	B	May 2012
Tobacco use counseling and interventions: nonpregnant adults	The USPSTF recommends that clinicians ask all adults about tobacco use and provide tobacco cessation interventions for those who use tobacco products.	A	April 2009
Tobacco use counseling: pregnant women	The USPSTF recommends that clinicians ask all pregnant women about tobacco use and provide augmented, pregnancy-tailored counseling to those who smoke.	A	April 2009
Tobacco use interventions: children and adolescents	The USPSTF recommends that clinicians provide interventions, including education or brief counseling, to prevent initiation of tobacco use in school-aged children and adolescents.	B	August 2013
Syphilis screening: nonpregnant persons	The USPSTF strongly recommends that clinicians screen persons at increased risk for syphilis infection.	A	July 2004
Syphilis screening: pregnant women	The USPSTF recommends that clinicians screen all pregnant women for syphilis infection.	A	May 2009
Visual acuity screening in children	The USPSTF recommends vision screening for all children at least once between the ages of 3 and 5 years, to detect the presence of amblyopia or its risk factors.	B	January 2011*

Questions about preventive care
Does *ChoosingWisely* discuss this service?

ChoosingWisely is an initiative of the American Board of Internal Medicine Foundation.

The ABIM is the largest physician organization in the US. Its non-profit Foundation invited other medical societies (such as American College of Cardiology and American Academy of Family Physicians) to list 5 things their members **do** that they **shouldn't do**. Several dozen medical societies responded.

The entire list is published on www.ChoosingWisely.org. Recommendations and discussions are very short, relatively user friendly and generally easy to understand. Here are four samples, chosen randomly from the dozens available, simply for illustration purposes:

From the American Academy of Family Physicians

Don't do imaging for low back pain within the first six weeks, unless red flags are present.

From the American Urological Association

Don't prescribe testosterone to men with erectile dysfunction who have normal testosterone levels.

From the American College of Cardiology

Don't perform annual stress cardiac imaging or advanced non-invasive imaging as part of routine follow-up in asymptomatic patients.

From the American College of Radiology

Don't do imaging for uncomplicated headaches.

Dozens more recommendations exist on *ChoosingWisely* from many more medical societies. Review those relevant to you before, after – and maybe even during – your own doctor's meetings.

Why I like *ChoosingWisely* and the *US Preventive Services Task Force*

I like sources that base their recommendations on

- solid, unbiased academic research, are
- held in high repute by the medical community, that
- make actionable recommendations to patients, and that have
- no financial interest in their recommendations.

Both of these sources qualify.

...no financial interest...

Some medical research is funded by drug companies, for example. They stand to gain financially when studies show that their products work really well. That makes me uncomfortable. I prefer studies funded by organizations that cannot benefit financially from the study results.

...held in high repute by the medical community...

The US Preventive Services Task Force is repeatedly referred to as 'the gold standard' of clinical recommendations; *ChoosingWisely* is the medical community.

...make actionable recommendations...

'Actionable recommendations' suggest what you, a wise and well informed patient, should do. Or not do.

Information sources that recommend - especially that recommend *against* certain tests and treatments (given the amount of unnecessary care in this country) - are, in my opinion, more meaningful than sources that simply say 'on the one hand' and 'on the other hand'.

Questions about Screening Tests

Some screening tests are beneficial, others less so. These 4 questions will help you decide which are which.

We'll focus on Event X, a specific medical event like having a heart attack or dying of colon cancer. You can substitute whichever medical event concerns you for Event X. Be sure to include a time period, say 5 or 10 years. Ask '*Out of 100 people like me...*'

1. ...how many will have Event X if they **don't** have the screening test?
2. ...how many will **still have** Event X if they have the screening test?
3. ...how many **actually benefit** from the test and treatment by avoiding Event X?
4. ...how many are **harmed** by the screening test and related treatment?

We'll explain each question individually in the next few pages. Remember that you can also ask questions introduced in the last section such as which screening tests the US Preventive Services Task Force and ChoosingWisely recommend.

Two types of patients and two types of medical tests:

- First, **symptomatic** people can benefit from earlier care (surgery on a smaller tumor for example), **due primarily to education**.

For example a woman may feel a lump in her breast and visit her doctor; she's learned that breast lumps are potentially serious.

She'll have a diagnostic test to identify her breast lump. In other words, **symptomatic people get diagnostic tests** to identify their medical problems and develop treatment plans.

Diagnostic tests are scheduled based on medical need.

- Second, **asymptomatic** people may benefit from earlier care **due to primarily to screening tests**.

Screening tests are scheduled based on your calendar.

The same woman (as above) may have her annual mammogram every May 15th because she can't feel every microscopic abnormality in her breasts.

We'll focus, in this section, on asymptomatic people getting screening tests.

The four questions listed above can help you determine how well screening tests actually work.

Consider, for example, the statement ‘breast cancer mortality rates are down over time’.

This does not necessarily mean that mammography **screening** tests work terribly well or account for all the improvement.²⁴⁸ The breast cancer mortality rate reduction may occur because symptomatic women get earlier – and, over time, better – treatment. When you talk to your doctor about tests, ask whether patient benefits come primarily from **screening tests on asymptomatic people** or **diagnostic tests on symptomatic ones**. It’s an important distinction.

Dr. Otis Brawley, Chief Medical Officer at the American Cancer Society, thoughtfully articulates the screening impact measurement problem, referring specifically to mammography:

Mammography is one of three things central to a woman’s breast health...

In addition, she should get a clinical breast exam.

We also encourage people to be aware of their breasts and note changes in their breasts over time...if she detects a mass, she should present to a healthcare provider for an evaluation.

Mammography combined with good treatment saves lives. It decreases the risk of death by somewhere between 15 and 30%.

In other words, screening mammography accounts for *some* breast cancer survival improvements while better education / earlier treatment of symptomatic women accounts for the rest. We cannot precisely determine the relative impacts.

Brawley warns us to beware of over- or under-attributing improvement benefits to screening tests.

*Ref: American Cancer Society Behind the Science: Mammography video,
<http://www.cancer.org/research/researchaccomplishments/behind-the-science-videos>*

²⁴⁸ See, for example, Bleyer, *Effect of Three Decades of Screening Mammography on Breast Cancer Incidence*, New England Journal of Medicine, November 22, 2012 or *Ignoring the Science on Mammograms*, New York Times, November 28, 2012 by Dr. David Newman, and *Vast Study Casts Doubts on Value of Mammograms*, Gina Kolata, New York Times, February 11, 2014

Questions about screening tests
Out of 100 people like me,
how many will have Event X *without* the screening test?

This question helps you determine which medical risks are **big enough** to concern you. Not all are.

Some people may decide that a 7 in 100 chance of having an event is too *small* a risk to warrant a screening test.

- Others may think that a 1 in 100 chance is *big* and definitely warrants the test.

No one answer fits everyone. Words like 'big' and 'small' mean different things to different people so don't help you decide.

Remember when you ask this question to include a time frame: over 5 years or over 10 years for example, whichever concerns you the most.

Appropriate answers come in this form:

- '3 in 100 people like you will have Event X in the next 5 years without a medical intervention'

Inappropriate answers come in this form:

- 'You're at risk of having Event X'
- 'A significant number of people like you are likely to have Event X'
- 'Enough people like you will have Event X to justify screening'

The downsides of unnecessary screening include overdiagnosis and false positive harms.

A good follow up question: after you learn how many people, out of 100 like you, will have Event X *without* a screening test, ask **Out of 100 people like me, how many will still have Event X if they have the screening test?**

Remember, you can substitute 'stroke' or 'hip fracture' or 'develop diabetes' or many others for 'Event X', depending on your own situation.

Questions about screening tests
Out of 100 people like me,
how many will *still have* Event X *with* the screening test?

This question helps you determine how well the screening test works; it reminds you and your doctor that screening tests aren't perfect.

You may learn, for example that 6 people out of 100 like you will *still have* Event X even if they have the screening test. Knowing how many people still have the event may influence your decision to have the screening test at all.

The answer to this question leads directly to ***Out of 100 people like me, how many actually benefit from the test by avoiding Event X?***

Questions about screening tests
Out of 100 people like me,
how many *actually benefit* from the test by avoiding Event X?

This tells the likely benefit *to you* of a particular screening test.

- **Benefit** is the difference between the number of people who would have the event ***without*** screening, and the number who ***still*** have it, with screening. Include a time period, say over 5 or 10 years.

Remember: **you need to know 2 numbers to determine how well a screening test works.** You can't tell from just 1 number.

What about 5-year survival rates?

Five year survival rates (or 10 or 20 year for that matter) **do not tell you how many lives a screening test saves.**

Here's why:

- The 5-year survival clock starts when the abnormality (generally a suspected cancer) is found.
- As our screening technologies improve over time, we identify smaller and smaller abnormalities. Identification starts the 5-year survival clock.

Researchers call this 'lead time bias': lead time is the amount of time between the detection of a disease and its clinical presentation. By identifying smaller abnormalities, we start the clock earlier and automatically extend the lead time, thus always increasing the number of people who 'survive' at least 5 years.

But this doesn't tell us if the screening tests saves any lives; people may still die at the same age only now live longer with a diagnosis. (Or they may actually live longer. You can't tell from only 1 number.)

Beware of relying on 5-year survival statistics. They may mislead you. We have much better ways to measure screening test effectiveness. Ask the questions introduced in this chapter, for example. You'll get more useful information.

Questions about screening tests
Out of 100 people like me,
how many are harmed by the screening test?

We discussed some key harms previously. To reiterate and summarize:

- **False positive results** indicate that you have a medical problem when, in fact, you really do not.
- **Treatment harms** including medication side effects, surgical error or infection.
- **Overdiagnosis** or the identification and treatment of abnormalities that will never harm you.

False positives and overdiagnosis may lead to unnecessary treatment.

Ask your doctor about all three of these risks.

Remember that there are benefits and risks of *testing* and benefits and risks of *not testing*.

Ask yourself if you're more concerned about

Missing a potentially dangerous abnormality until it's too late Many dangerous abnormalities can be successfully treated once they become symptomatic. Unfortunately we don't always know which or how frequently.

Or

Suffering the potential harms of false positives and/or overdiagnosis

You may not be able to have one of these without the other.

Case Study: Asking these 4 questions about colonoscopies

I'll provide estimates for a **50 year old non-smoking male over 10 years**. Your own numbers may differ based on your age, sex, smoking status and other factors. See the references below.

I listed the answers in two forms: *out of 100* people and *out of 1000* because the incidence and benefits are decimal points on a scale of 100. I hope this clarifies and doesn't confuse the issue.

I choose colonoscopies because the data are fairly easy to get and because this is a generally non-emotional test. No other reasons. I'm neither a fan of, nor opposed to, colonoscopies.

Out of a hundred 50-year old non-smoking men, how many will die of colon cancer over a 10 year period without colon cancer screening? Our answer comes from Risk Charts published in the Journal of the National Cancer Institute: it's about **.2** (that's 2/10ths of 1).²⁴⁹

Since people get confused by decimal points, we can also state this risk as 2, 50-year old non-smoking men per thousand will die of colon cancer over 10 years. Two per thousand is the same as .2 per 100. It's also the same as saying that 99.8% of 50-year old non-smoking men will not die of colon cancer over a 10 year period. Which presentation impacts you the most? The colon cancer mortality risk increases as you age. Sixty and 70 year old men face higher risks than do 50-year olds. I've stated *average* risks. You may face higher or lower risks based on family history, diet or other factors. Ask your doctor if you deviate from the norm, and if you deviate, how much and in which direction.

Out of one hundred 50-year old non-smoking men, how many will *still* die of colon cancer over a 10 year period *with* screening? The answer is about **.1** (that's 1/10th of a person) or 1 per thousand men screened will still die of colon cancer.

I base this on two large studies that found about a 50% colon cancer mortality reduction from colon screening exams and associated treatment, one published in the New England Journal of Medicine²⁵⁰ and the other in the Lancet.²⁵¹

²⁴⁹ Woloshin et al, Risk Charts, Journal of the National Cancer Institute, June 5, 2002. You can find the same information on the VA Outcomes Group website, http://www.vaoutcomes.org/our_work/risk-charts/

²⁵⁰ Zauber et al, Colonoscopic Polypectomy and Long-Term Prevention of Colorectal-Cancer Deaths, New England Journal of Medicine, February 23, 2012, easy to read summary in the New York Times, *Report Affirms Live Saving Role of Colonoscopy*, Denise Grady, February 22, 2012

Out of 100 fifty-year old non-smoking men, how many benefit from screening by avoiding dying from colon cancer? This is a simple subtraction from the numbers above. Colonoscopy screening prevents about .1 death in our 100 person reference group of 50 year-old non-smoking men, or 1 death per 1000 non-smoking, 50-year old men over 10 years. The benefit increases with age. Do you see why statements like ‘colonoscopy reduces colon cancer mortality by 50%’ can be misleading?

Out of 100 fifty-year old non-smoking men, how many are harmed by colonoscopies? Research suggests that between .1 and .2 people per hundred screened suffer colon bleeding or perforation, about the same as the number of 50-year-old non smokers who avoid dying over 10 years.

The Johns Hopkins Medicine Colorectal Cancer website states, for example: *The examination has an extremely small risk of complications (0.1% to 0.2% risk of bleeding or perforation).*²⁵²

You can now make an informed decision about colonoscopy.

You know the **benefit** per 100 fifty-year old non-smoking men over 10 years is about .1 life saved over 10 years.

You also know the **risks**, about .15 people harmed by colon perforation or bleeding per 100 people screened.

Do you think the benefits outweigh the risks? If so, at all ages? Patients with this information can now have *informed* discussions and can make *wise* decisions.

A note on phrasing: the Johns Hopkins website calls colonoscopies ‘*crucial to improve one’s chances against colon cancer*’ with ‘*an extremely small risk of complications*’.

But we’ve shown that the benefits and harms are about *the same* for 50 year old men.

How can the benefits be ‘crucial’ and risks ‘small’ ***if they’re the same number?***

The answer: **patients don’t ask the right questions!**

²⁵¹ Atkin et al, Once-only flexible sigmoidoscopy screening in prevention of colorectal cancer: a multicentre randomised controlled trial, Lancet, April 28, 2010, easy to read summary in Dr. Margaret McCartney’s blog <http://margaretmccartney.com/2010/04/29/bowel-cancer-screening-and-noise-to-signal-ratio/>

²⁵² http://www.hopkinscoloncancercenter.org/CMS/CMS_Page.aspx?CurrentUDV=59&CMS_Page_ID=33CD25B0-CCC6-4F55-A226-3C202E67D0B1, downloaded 1/24/14

The psychology of reciprocals:

Our final word on reporting benefits and risks

Remember reciprocals from high school? Most people forgot...unfortunately. Learning that .2 in 100 men will die of colon cancer is the same as learning that 99.8 in 100 --- that's 99.8% --- will *not* die.

- Some people respond to learning that '.2 in 100 will die' by thinking 'I might be one.'
- Others respond to learning that '99.8% will not die' by thinking they'll be fine.
- Different medical treatment actions follow from these different reactions.

How do *you* respond to alternate presentations of the same risks?

Try to remember, whenever you hear medical risks and treatment impacts, to consider the reciprocal. It may affect your treatment choices.

Questions about Medications

You can ask many of the same **preventive** and **screening** questions about medications:

- Out of 100 people like me, how many benefit or are harmed by the medication?
- What does the USPSTF or ChoosingWisely say about this medication?

In addition, here are four other useful medication questions:

1. What is the **Number Needed to Treat** for this medication?
2. What is the **Number Needed for Harm** for this medication?
3. When do I **stop taking** this medication?
4. Are there any **long term studies** about the effects of this medication?

Questions about medications What is the Number Needed to Treat?

The **Number Needed to Treat** (NNT) tells how many people need to take a medication for 1 person to benefit. The NNT tell you *how well* a medication actually works. Doctors learn about NNTs in medical school so will understand this question.

- An NNT of 75 means that 1 in 75 people who takes it, actually benefits from it; 74 do not.
- The lower the Number Needed to Treat, the more effective the medication.

Researchers calculate the Number Needed to Treat from a *comparative study*.

That compares a group of people that *received* the medication to a similar group that *did not*.

Researchers identify how many more people benefited in the medication group then calculate how many people needed to take the medication for 1 to benefit.

Good NNT studies are very specific, identifying **benefits, personal characteristics** (age, disease history, etc) and a **specific time period**.

Two NNT examples

for illustration purposes only

I choose these examples because the data are relatively easy to find. See the references below. I'm neither a fan of, not opposed to Vitamin D supplements or statin medications.

Vitamin D supplements for elderly, institutionalized adults to prevent hip fractures have an NNT of about 36.²⁵³

That means 35 out of 36 people who took Vitamin D supplements did not benefit over a 3 - 5 year period by avoiding bone fractures. You learn that from a comparative study.

Most of these people didn't benefit because they were not going to have a bone fracture during this time period anyway, so the medication did not help them.

A few may not have benefited because they *still* had bone fractures.

But all 36 spent money on the medicine and exposed themselves to Vitamin D harms. (We'll discuss harms in the Number Needed for Harm section below.)

²⁵³ This calculation comes from www.TheNNT.com

Statins to prevent a first heart attack or stroke in people *with* risk factors but *without* known heart disease have an NNT of between 70 and 250 over 4 years.²⁵⁴

Again, most people weren't going to have a heart attack during this time period anyway and a few still had heart attacks despite taking the statins. Unfortunately, we don't know in advance which people fall into which category.

Hundreds of NNT calculations exist. Ask your doctor about them. Follow up with ***What is the Number Needed for Harm?***

²⁵⁴ This NNT estimate comes from Bloomberg BusinessWeek, Do Cholesterol Drugs Do Any Good, January 16, 2008

Questions about medications What is the Number Needed for Harm?

The **Number Needed for Harm** (NNH) tells how many people need to take a medication for 1 person to be *harmed*.

It's exactly the opposite of the Number Needed to Treat

- An NNH of 75 means 1 in 75 who take the medicine is harmed by it; 74 are not harmed.
- The higher the Number Needed for Harm, the safer the medicine.

Let's see the Number Needed for Harm in our Vitamin D and statin examples from the previous page.

First, the Vitamin D example. TheNNT.com website estimates the Number Needed for Harm from kidney stones or renal insufficiency from Vitamin D supplements: 36, *the same as the Number Needed to Treat!*

In other words, for every person who benefits from Vitamin D supplements by avoiding a hip fracture, another suffers kidney harm.

The wise patient, along with his or her physician, can now make an informed decision: am I more concerned about suffering a hip fracture or suffering renal harm? Or equally concerned? Different people can reasonably answer those questions differently.

Second, the statin example. Studies show that the Number Needed for Harm for causing diabetes among people who took statins for 4 years is 255.²⁵⁵

The *well informed* patient now understands that for about every 2 heart attacks prevented, 1 person develops diabetes. The *wise* patient discusses this information with his or her doctor and decides together with his/her doc how to proceed.

Learning the **Number Needed to Treat** and **Number Needed for Harm** allows you to compare medication benefits and harms. They're extremely powerful tools.

²⁵⁵ Sattar, Statins and the Risk of Incident Diabetes, The Lancet, Feb 27, 2010. There are other statin risks also, but I wanted to keep this example simple. For an easy-to-read summary of statin risks, see Dr. Barbara H. Roberts, The Truth About Statins, Chapter 3. Roberts lists many risks but only provides NNH calculations for some, including rhabdomyolysis.

Additional comments about NNTs and NNHs

Once you learn a medication's Number Needed to Treat, you need to decide if that number satisfies *you*.

Different people make different decisions about the same numbers.

Dr. Nortin Hadler of the University of North Carolina Medical School, for example, suggests that public insurance like Medicare only cover services with NNTs up to 20 for 'hard outcomes' like death, stroke, heart attacks, renal failures, etc, and only cover NNTs up to 5 for 'soft outcomes' like feeling better or enjoying less depression.²⁵⁶

- An NNT of 5 means that 80% of people taking the medicine do not benefit from it. Do you understand why? (Only 1 in 5 benefits. 4 in 5 do not. That's 80%.)

Where do you draw your line? Different people make different decisions. That's a topic to discuss with your doctor.

Final thought: Dr. David Newman suggests that knowing the Numbers Needed to Treat and Harm is ***basic literacy for patients and doctors***.²⁵⁷

- Absent NNT and NNH information – or a similar metric – you simply can't make wise, well informed medication decisions.
- Do you agree with Dr. Newman?

I previously offered an alternative metric, the 'out of 100 people like me' series of questions. Now you have 2 options.

Use whichever you find most appealing when you consider medications, treatments and preventive services.

But use one of them.

And always discuss your research and concerns with your doctor.

²⁵⁶ Dr. Nortin Hadler, *Worried Sick*, page 223

²⁵⁷ Dr. David Newman, *Hippocrates' Shadow*, page 217

Questions about medications
When do I stop taking this medication?

Medication guidelines – especially for preventive meds – typically detail when to *start* taking the drug, but not as often when to *stop* taking it. Your underlying medical condition may change over time due to diet, exercise, stress levels, other medications, aging, environmental conditions or behavioral changes. Two potential ways to phrase this question:

- **When do I stop taking this medication? Or**
- **How will I know if my condition has changed sufficiently to stop needing this medication?**

Feel free to ask about any medication that does not have a clear end point.

You can follow up with ***‘Are there any long term studies about the effects of this medication?’***

Questions about medications
Are there any long term studies about this medication?

Some medications may have been tested for 1 year, say, but be prescribed for longer.

What are the 8, 15 or 20 year effects, both positive and negative?

You and your doctor may need to estimate, since the exact data may be unavailable. Beware of taking a drug for the rest of your life - maybe 30 or 40 years - if it's only been tested for 1 or 2. We simply may not know the long term effects, both positive and negative.

Questions about Treatments

Asking your doctor these 5 questions can help you avoid unnecessary treatments:

1. *What **comparative studies*** did you rely on to make that treatment recommendation?
2. What are the ***results*** of those studies?
3. Do I ***differ from the norm*** in any important ways?
4. Am I in a high or low ***intensity region*** for this treatment?
5. Would most doctors agree with your recommendation or might some doctors recommend something different? (This is a 2nd opinion question)

Questions about treatments

What comparative studies did you rely on to make that treatment recommendation?

Comparative studies compare two groups of people that are alike in all ways except that one group gets the medical treatment while the other does not.

- Comparative studies are the foundation of 'evidence based medicine'.

Asking this question will help you and your doctor choose the **best** treatment for you.

- Sometimes you have a choice among multiple treatment options. **Ask about comparative studies on them all.**

A comparative study example: spinal fusion surgery

Orthopedic surgeons who perform spinal fusion surgery often report that their patients benefit from the procedure. But *comparative studies* show that fewer patients benefit than from other interventions and more patients suffer harms.²⁵⁸

One such study compared results of spinal fusion surgery to non-surgical interventions for people on worker's comp for back pain. Among the results:

- **25%** of spinal fusion patients returned to work vs. **60%** of non-surgery folks
- **11%** of spinal fusion patients were permanently disabled vs. **2%** of non-surgery

'The result we're provided is nothing new' and has been known for years according to the study's lead author.

These outcomes led Wolters Kluwer, a huge international legal, tax, finance and healthcare advisory firm, to conclude that for people suffering from low back pain

Spinal fusion surgery leads to worse long term outcomes – including a lower rate of return to work – compared to nonsurgical treatment.

Despite studies like this, our national rate of spinal fusion surgeries has increased 6-fold over the past 20 years to about 450,000 annually.

²⁵⁸ Long-term outcomes of lumbar fusion among workers' compensation subjects: a historical cohort study, Nguyen, abstract <http://www.ncbi.nlm.nih.gov/pubmed/20736894>, quotes from 'Spinal fusion may leave some back pain patients worse off' Salamon, HealthDay, Feb 23, 2011. See also Spinal Fusion Surgery Provides Worse Outcomes In Workers' Compensation Patients, Medical News Today, Feb 16, 2011 <http://www.medicalnewstoday.com/releases/216543.php>

Questions about treatments

What are the results of those comparative studies?

Comparative studies typically show that a treatment improves patient health *some* of the time, often reported as:

- '23% of patients reported less pain after surgery' or
- '18% reduction in second heart attacks over 5 years'.

I don't like the *form* of these answers. Percentages tend to obfuscate and confuse rather than illuminate.

- 18% of how many?
 - If **2 out of 100 people** had heart attacks, then an 18% reduction = about **.4 of a heart attack avoided** out of 100 people. (That's about 4/10ths of a heart attack avoided per 100 people, or 1 heart attack per 250 people.) Maybe not such a huge impact.
 - But if **60 out of 100** people in your comparative study control group had heart attacks, then an 18% reduction = **11 heart attacks avoided**. A much bigger impact.
- '23% reported less pain after surgery'
 - How many reported similar pain reduction *without* the surgery over roughly the same time period?
 - How many reported pain reduction from a different treatment, surgical or otherwise?

Try to get your answers in this form:

- '18 out of 100 people who had the treatment avoided a heart attack compared to 5 out of 100 who had the placebo' or
- '23 out of 100 people who had the surgery reported less pain after their recovery period compared to 9 out of 100 who had physical therapy, and 3 out of 100 who had no medical intervention at all'

A word of caution

The way medical outcomes get reported has a huge impact on the treatment choices people make.

Consider how you respond to these statements about a hypothetical medication to prevent heart attacks in people with Condition X:

- **50% reduction in the heart attack rate of people with Condition X**
Most people respond that they want the medication; 50% is a big reduction.
- **200 people with Condition X need to take this medication for 1 to avoid a heart attack**
Most people respond that they don't think the medication is very effective.

But the two statements are exactly the same if only 1 person out of 100 with Condition X has a heart attack without the medication. Do you understand why?

If 1 in 100 people with Condition X has a heart attack without the medication, and the medication cuts the heart attack rate by 50%, then the medication will prevent $\frac{1}{2}$ a heart attack per 100 people who take it.

Avoiding $\frac{1}{2}$ a heart attack in 100 people = avoiding 1 heart attack in 200.

In this case, a 50% reduction = avoiding 1 heart attack in 200 people.

The main point again: a 50% reduction sounds like a big impact. But it may only affect 1 in 200 people, which sounds like a small impact. That's why the phrasing – the form of the benefit statement – is so important.

It's also why we recommend asking the 'out of 100 people like me, how many avoid a heart attack by taking the medication' question.

This confusion, where a 50% reduction equals only 1 benefit out of 200 people, leads some researchers to use Number Needed to Treat and Number Needed for Harm metrics.

Feel free to show this page and the previous to your doctor when you discuss results of comparative studies. He/she will have a strong enough background in statistics to help you understand these reporting issues.

Questions about treatments

Do I differ from the norm in any important ways?

Comparative studies typically report averages and their results are generally valid for 'average' people. But you may deviate from the medical norm in some important way.

Consider the Lipitor benefits from the ad earlier in this chapter. About 3 in each 100 people with the various risk factors listed will have a first heart attack over the 4 year study period.

Now see the fine print, lower left in that ad. That's the average risk reported in this study.

But your own risk may be lower or higher. You may have a unique genetic make-up, for example. Or you may have a particularly high or low stressed job, or enjoy particularly high or low socio-economic status.²⁵⁹

Ask your doctor how well the comparative studies reflect your own, individual case. They may reflect it very well. Or not. That's one reason I introduced the 'out of 100 people *like me*' series of questions earlier in this book.

²⁵⁹ For an interesting analysis of your job's impact on disease rates, see the interview with Dr. Michael Marmot, director of the Whitehall studies <http://globetrotter.berkeley.edu/people2/Marmot/marmot-con3.html>. For an interesting analysis of socio-economic status and disease rates see Beyond Health Care – Socioeconomic Status and Health in the New England Journal of Medicine <http://www.nejm.org/doi/full/10.1056/NEJMe0802773>

Questions about treatments

Am I in a high or low intensity region?

Research shows that the **same patient** can get **different treatment** from **equally competent physicians** in **different geographic regions**. We introduced this in earlier with a discussion of Connecticut – Massachusetts mastectomy rate differences and southeastern vs. southwestern Florida back surgery rates.

Researchers have learned that physicians develop *treatment tendencies*. These are often regional since physicians working in the same region tend to attend the same medical society meetings, discuss treatment issues together and work in the same hospital or hospital system.

The list of surgical procedures exhibiting high variation rates includes:

- Heart valve replacement
- Coronary angiography
- Coronary bypass surgery
- Hip replacement
- Knee replacement
- Radical prostatectomy and many more.²⁶⁰

Researchers call these ‘preference-sensitive’ treatments, meaning that some physicians *prefer* to treat patients with these medical issues one way while others *prefer* to treat similar patients differently. Results are often the same but regional treatment rates can vary 2 or 3 to 1 for similar populations.

Your doctor will know if you’re in a high or low intensity region for your particular treatment. (If he or she doesn’t know, look it up in the Dartmouth Atlas of Healthcare.)

If you’re in a high intensity region – like Connecticut for mastectomies – then you know that you’re more likely to receive an unnecessary procedure than in a low intensity region like Massachusetts.

Discuss this with your doctor. Learning that you’re in a high intensity region may segue nicely into your request for a second opinion.

²⁶⁰ This list comes from the Dartmouth Atlas, www.DartmouthAtlas.org.

Questions about treatments
Would most doctors agree with your recommendation or might some doctors recommend something different?

or

Can I have a second opinion referral to someone who might recommend a different treatment?

This can help you in three ways:

- * If the 2nd opinion *agrees* with the first opinion, you're pretty certain you need the treatment.
- * If it *disagrees* with the first opinion, it exposes you to credible alternatives.
- * It *reduces the chance* that, post treatment, you'll think 'if only I had known that in advance'.

Remember: ***You don't want to avoid a necessary procedure, just as you don't want to have an unnecessary one.***

The best method to determine which preference-sensitive procedures are ***necessary or unnecessary for you*** is to get opinions from physicians who will likely disagree. One way to identify them: phrase your second opinion question as above.

This process offers you a good chance to hear about the benefits and risks of a specific procedure ***as it applies uniquely to you***, directly from physicians who have examined you and may have different treatment orientations.

As those physicians explain their recommendations, they'll also provide all the factual information necessary for you to make a wise and well informed decision.

The relevant facts will come almost automatically. You just need to put yourself in the right position to receive them.

Questions about Hospitals

These 4 questions can help you choose an excellent hospital that's appropriate for you.

1. What are this hospital's ***outcomes for patients like me?***
2. ***How many patients like me*** does this hospital treat annually?
3. How does this hospital ***typically treat*** patients like me?
4. Do I increase or decrease my chance of benefit and harm by choosing another hospital?

A note about choosing hospitals and specialists

The logic of hospital and specialist choice overlaps. Try, for example, substituting 'specialist' or 'surgeon' for 'hospital' in the 4 questions above.

Consider this section and the next (listing Questions about Specialists) as different versions of the same information.

Questions about Hospitals

What are this hospital's outcomes for patients like me?

Some hospitals may generate excellent coronary outcomes but mediocre urologic. Others may have high thoracic surgery readmission rates but low orthopedic.

Reasons why hospitals may excel at certain procedures and not others vary:

- Some may achieve the volumes necessary for excellence
- Others may focus their resources on certain treatments
- Still others may have standard operating procedures or internal operations that promote or inhibit excellence.

You want a hospital that generates excellent outcomes for patients with *your* medical condition. Overall hospital mortality, infection or readmission rates may confuse more than they clarify.

- An **average** hospital readmission rate of, say 15% may mean a 30% readmission rate in one department but only 9% in some others.

I encourage you to ask your PCP about disease-specific outcomes at your various hospital options. Try to get risk adjusted outcome information by procedure.²⁶¹

- Some organizations report outcomes this way. Try Medicare's Hospital Compare information, for example www.medicare.gov/hospitalcompare

If outcome information is unavailable ask **How many patients like me does this hospital treat annually?**

Hospitals treating more patients *with the same condition* tend to get better outcomes than doctors treating fewer. This is a general rule of thumb, not a hard-and-fast principle. More below.

²⁶¹ Risk adjustment adjusts for the severity of illness among patients and allows for fair comparisons among hospitals.

Hospital outcomes vary by patient type: Some New England examples

These examples show outcomes at various Massachusetts hospitals for Medicare patients using *risk adjusted data* from 2006 – 2009.²⁶² Note that different hospitals have the highest and lowest risk adjusted mortality rates by disease.

Lowest risk adjusted **pneumonia** mortality rates:

- Norwood 7.3%
- Falmouth 7.5%
- Boston Medical Center 8%

Highest risk adjusted **pneumonia** mortality rates:

- Sturdy 15.1%
- Fairview 14.7%
- Cambridge Health Alliance 12.6%

Lowest risk adjusted **heart failure** mortality rates:

- Southcoast 7.9%
- Brigham and Women's 8%
- Saint Anne's 8.2%

Highest risk adjusted **heart failure** mortality rates:

- Lowell General 12.2%
- Baystate Greenfield 12.1%
- Baystate Ware 12.1%
- Cape Cod 12.1%

The famous Boston teaching hospitals were generally about average:

	<u>Pneumonia mortality rate</u>	<u>Heart failure mortality rate</u>
Brigham and Women's	10.3%	8.0%
Beth Israel Deaconess	8.9%	8.9%
Massachusetts General	8.8%	11.8%
Tufts	9.3%	10.3%

Talk to your doctor about this so you get referrals to the 'best' hospital for your needs.

²⁶² Source: hospitalcompare.hhs.gov. Risk adjustment discounts the severity of each person's illness so doesn't penalize hospitals that treat sicker patients.

Questions about Hospitals

How many patients like me does this hospital treat annually?

Studies show that the *more frequently* a hospital treats a specific type of patient, the *better the outcomes* for those patients.

- One study found that the 30 day mortality rate for various procedures was inversely related to the hospital volume of those procedures.²⁶³ In other words, as the volume increased, the mortality rate decreased.
- A study of one particular procedure - elective abdominal aortic aneurysm repair - found that the risk adjusted mortality rate was 3 – 11% less in high volume hospitals than in low.²⁶⁴
- Another study estimated that 602 patient deaths could have been avoided in only 1 year for a select set of procedures in California had those patients used high volume hospitals.²⁶⁵

You can also ask if the number of patients treated is above any recommended threshold.

- The Leapfroggroup, for example, has developed threshold recommendations for several procedures such as
 - Coronary artery bypass graft, minimum 450 procedures/year
 - Abdominal aortic aneurysm repair, minimum 50 procedures/year
 - Percutaneous coronary intervention, minimum 400 procedures/year²⁶⁶
- Other organizations may have other threshold recommendations too. Ask your doctor.

²⁶³ Urbach, BMJ, October 2004

²⁶⁴ Kileen, Journal of Vascular Surgery, May 2008

²⁶⁵ Dudley, JAMA, March 2000

²⁶⁶ http://www.leapfroggroup.org/media/file/Leapfrog-Evidence-Based_Hospital_Referral_Fact_Sheet.pdf

Why hospital *quantity* often equals *quality*

Extensive research suggests that hospitals treating *more* patients with the same condition get *better outcomes* for those patients.

Practice makes perfect in medicine for two unique, specific reasons.

First, **surgeons** with more experience generate fewer errors.

- The classic example is Shouldice Hernia Hospital in Canada, where each surgeon performs some 700 hernia repairs annually.²⁶⁷
- The Shouldice failure rate, as measured by re-repairs of the same tear, is some 50 times lower than the US rate.²⁶⁸
- Cigna reported similar findings, about a 50% difference in need for a second hernia surgery based on the surgeon's annual volume.²⁶⁹

Second, **hospital internal procedures** (e.g. communication systems and information flows) become more efficient with volume.

- Attending physicians, recovery room nurses, floor nurses and others become more attuned to treatment-specific medical problems so identify and address them more quickly.
- They learn to identify and treat 'out of bounds' patients more quickly and effectively than other medical professionals working with smaller numbers of similar patients.

Whenever you consider which hospital to use, ask these two questions:

- **What are your outcomes for patients like me?** And, if you can't get a satisfactory answer
- **How many patients like me do you treat annually?** Is it above any industry recommended threshold?

²⁶⁷ See Harvard Business School case study #9 – 805 – 002 and Atul Gawande's article The Computer and the Hernia Factory in his book Complications

²⁶⁸ This comes from Atul Gawande's live lecture at the Coolidge Corner Theater in Brookline, Massachusetts on 2/2/08 where he indicated a .1% failure rate at Shouldice.

²⁶⁹ Figures discussed by David Cordani, Cigna CEO at the Yale Healthcare Conference, April, 2015

Questions about Hospitals

How does this hospital typically treat patients like me?

Hospitals may exhibit different treatment tendencies.

- Some annually perform C-sections in 45% of deliveries, others in 20%.

Another example:

Elyria Ohio residents, using their local hospital, had about twice as many angioplasty procedures as Cleveland residents, using their local hospitals.²⁷⁰ The Elyria and Cleveland hospital service areas are geographically contiguous.

Note the trends over time:

- 2005: Elyria 35, Cleveland 23 angioplasties per 1000 Medicare beneficiaries in their service areas
- 2007: Elyria 31, Cleveland 21
- 2010: Elyria 31, Cleveland 16

The New York Times described this in 2006:

nearly all the procedures at the Elyria hospital are performed by a group of cardiologists who dominate coronary care in this city and have an unabashed enthusiasm for angioplasties, the highly profitable procedure in which they specialize...

The Elyria cardiologists do not perform bypasses. Because they are not surgeons, the North Ohio cardiologists must refer a patient to another doctor if they conclude that bypass surgery is that patient's best option.²⁷¹

Compare treatment tendencies at different hospitals to find the one that's right *for you*.

- One good information source: your primary care physician
- Another: the Dartmouth Atlas of Healthcare

Be sure to discuss all this with your doctor, as, of course, you should discuss everything introduced in this text with him or her.

²⁷⁰ Based on Medicare beneficiaries as reported in the Dartmouth Atlas of Healthcare.

²⁷¹ Abelson, NY Times, August 18, 2006, Heart procedure is off the charts in an Ohio city

Case study: Dermatology care²⁷²

Kim Little, diagnosed with skin cancer in a tiny spot on her cheek, went to Baptist Health Medical Center in Little Rock for treatment.

She had Mohs surgery, a very specialized dermatologic procedure that's sometimes necessary but other times apparently not. Medicare places it at the top of its overused or overpriced procedure list.

Her dermatologist removed the cancer but didn't close the wound; she went across the street to the Arkansas Center for Oculoplastic Surgery where a plastic surgeon did that.

'It was no bigger than many cuts that heal on their own, and it definitely could have been repaired by one doctor, but at that point what was I going to do?' she recalled to the New York Times. "I have an IV in my arm and a hole in my face that Dr. Breau refused to stitch."

Her bills included \$1,833 for the Mohs surgery, \$14,407 for the plastic surgeon, \$1,000 for the anesthesiologist, and \$8,774 for the hospital charges. (She later had them reduced.)

Little refused follow up treatment at Baptist, choosing instead the University of Arkansas Medical Center where the dermatologist suggested that she had been overtreated; a less extensive process would probably have served her just as well. Would a different dermatologist have closed the wound him or herself rather than sending Little across the street? Unclear.

Could she have saved money by asking about her treatment process in advance? Also unclear.

But maybe.

The moral of this story: Ask 'how does this hospital typically treat patients like me?'

Apparently Baptist Health Center and the University of Arkansas Medical Center would treat the same patient very differently. A wise patient would want to know that in advance.

²⁷² This case study comes from **Patients' Costs Skyrocket; Specialists' Incomes Soar**, Rosenthal, New York Times, January 18, 2014

Questions about Hospitals
Do I increase or decrease my chance of benefit and of harm
by choosing a different hospital?

This question invites you to compare multiple hospitals based on **care quality**.

Care quality includes answers to the 3 questions you already posed:

- What are each hospital's outcomes for patients like you? (Be sure to consider both good and bad outcomes, like successful surgeries and infection rates.)
- How many patients like you does each hospital treat?
- What treatment tendencies does each hospital exhibit?

Answers to those 3 questions can help you make a wise, well informed hospital choice.

A reasonably useful hospital quality comparison website

The Department of Health and Human Services compares mortality rates for risk adjusted Medicare patients with various diseases, by hospital, on its website www.HospitalCompare.hhs.gov.

Risk adjustment discounts illness severity so provides a good apples-to-apples comparison.

Two major downsides of this site:

First, it only compares hospital outcomes for a few diseases.

Second, it only uses Medicare data. If you're not on Medicare, you'll need to assume that the non-Medicare population gets the same outcomes...probably a reasonable assumption.

That's why I consider this only a 'reasonably useful' site.

I prefer data driven hospital comparisons to more reputation-based surveys such as those published by US News and World Report or JD Powers and Associates because I care more about my chance of surviving a specific medical procedure than I do about the hospital's overall reputation.

Again, that's my personal opinion.

Questions about Specialists

These three questions can help you choose excellent specialists who treat you appropriately.

1. What are your **outcomes** for patients like me?
2. **How many** patients like me do you treat annually?
3. How do you **normally treat** patients like me?

Remember to review our discussion of hospitals from the last chapter when you consider choosing a specialist. The logic of hospital and specialist choice overlaps.

For that reason, each write up in this section is extremely brief.

Questions about specialists
What are your outcomes for patients like me?

'Outcomes' mean 'how well patients generally do'. Some standard outcome measures

- Speed of return to previous functional health status
- Satisfaction with amount of pain reduction
- Post surgical infection rate, and many more.

You can feel free to ask your doctor about these or any other outcomes that concern you. He or she may keep up with their previous patients and have detailed records.

Unfortunately, though, we often lack this information by specialist. In that case, ask ***How many patients like me do you treat annually?***

Questions about specialists

How many patients like me do you treat annually?

Research shows that the *number of patients treated annually* correlates better to *good outcomes for those patients* than almost any other indicator.

We discussed some examples earlier.

- Surgeons performing 4 or more pancreatic surgeries per year generate mortality rates about 10% lower than surgeons operating only 1 or 2 times per year.
- Surgeons need to perform 1600 robotic prostate removal procedures before they are able to gauge with at least 90 percent accuracy how much tissue surrounding the tumor they need to remove.

Medical societies and research organizations sometimes recommend annual surgical thresholds, or the minimum number of procedures a surgeon should perform annually to generate good outcomes. You can ask if that's the case for your particular procedure.

As a general rule, surgeons performing the highest number of similar surgeries generate the best patient outcomes. See our discussion of hernia surgeries above.

The number of procedures performed annually is a good (though unfortunately, not always exact) proxy for outcomes. Use it as part of your criteria in choosing your surgeon.

Higher volumes may mean higher quality unnecessary care

Dr. Marty Makary documents in his book **Unaccountable** that the most lucrative procedures are the most commonly performed, sometimes perhaps in the absence of clear patient need; the economic incentives are exceedingly strong. For example²⁷³

- Medicare pays about \$5000 for a complex, 12 hour brain-cancer surgery. But it pays more for a 2 hour back surgery. An orthopedic surgeon who stacks 3 back surgeries together can earn \$15,000 - \$20,000 a day, compared to \$5K for the brain surgeon.
 - Perhaps not unsurprisingly, an increasing number of medical students go into orthopedics. But I wonder if we have enough bad backs to keep them all busy.
- Consider this email that one of Makary's physician friends received from his boss: *'As we approach the end of the fiscal year, try to do more operations. Your productivity will be used to determine your bonus.'*²⁷⁴ I wonder if this is a subtle suggestion to perform more procedures on patients in the gray area.
- Some 20% of heart defibrillators inserted into patients didn't meet treatment guidelines. Defibrillators are high cost procedures, about \$25,000 each.²⁷⁵

These examples highlight the wise patient's dilemma. Choosing a high volume surgeon

- Increases your likelihood of having good outcomes and avoiding harm, but
- Also may increase your likelihood of receiving unnecessary care.

This is a very difficult problem. Discuss it with your referring primary care physician. You only want the highest quality necessary care.

And you want to avoid unnecessary care, regardless the quality.

²⁷³ Dr. Marty Makary, *Unaccountable*, pages 137 - 152

²⁷⁴ *Ibid.* page 147

²⁷⁵ *Ibid.* page 151

Questions about specialists
How do you typically treat patients like me?

Some specialists develop expertise in a particular medical approach such as **prostate removal surgery** for early stage prostate cancer, while others develop a different process expertise, say **radiation therapy**.

These are called preference-sensitive treatment decisions. Different doctors may treat similar patients differently, though their outcomes may be the same.

Be sure, when you choose a doctor, that his/her treatment preferences and experience match your own.

Remember that you have treatment options about 85% of the time and often a range of specialists from which to choose.

Ask this question of several so you get treated according to **your** preferred process.

Questions about Primary Care Physicians

Your PCP manages your overall health and directs you to specialists as needed.

Ask yourself these 4 questions when choosing your Primary Care Physician:

1. Do you feel comfortable discussing your most intimate personal issues with this person?
2. How does this doctor handle annual physicals?
3. Does this doctor refer to aggressive or conservative specialists?
4. Does this doctor refer to excellent specialists?

Primary care physicians differ fundamentally from specialists

Specialists deal mainly with sick people and aim to return them to good health (or maintain their level of health without it degrading further, as is the case of many chronically ill people).

PCPs generally have large caseloads of relatively healthy people and aim to keep them healthy.

As such, you need a fundamentally different criterion for choosing PCPs than you do for choosing specialists.

Questions about Primary Care Physicians
**Do you feel comfortable discussing your most intimate,
personal issues with this person?**

Many medical situations have both a physical and emotional component. You want a PCP who can understand and address both; one you feel comfortable confiding in.

- Dr. David Newman describes the 'human connection' with your doctor as a healthcare tool.
- Dr. Atul Gawande phrases this differently: 'we are used to thinking that a doctor's ability depends mainly on science and skill...but these may be the easiest parts of care'.²⁷⁶

The human connection with your PCP may be even more important than your doctor's technical skills in *keeping you healthy*. All doctors are technically highly trained and very proficient. But you may develop a more open and comfortable relationship with one physician rather than with another. That's the human connection Dr. Newman describes.

Remember that you almost always have treatment and referral options. Discussing these freely and comfortably with your PCP can help ensure that you get treated appropriately *for you*.

One way to identify PCPs who treat you the way you want to be treated: **ask how he or she handles *annual physicals***.

²⁷⁶ Gawande, The Bell Curve in *Better*, 2007

Questions about Primary Care Physicians How does this PCP handle annual physicals?

Some excellent Primary Care Physicians perform lots of tests at annual physicals. Other, equally excellent PCPs, use annual meetings to talk more and test less.

Neither approach is universally right or wrong as there are benefits and risks of *testing* and benefits and risks of *not testing*. We discussed some earlier in this section.

Here are the pros and cons of having screening tests in a nutshell:

- Some people worry **more** about missing a potentially dangerous abnormality until it's too late to treat. They worry **less** about getting an inaccurate test result or being overdiagnosed with a meaningless abnormality.
- Other people worry **more** about having a false positive test result or being overdiagnosed than about missing a serious asymptomatic abnormality. They may figure that enough lethal abnormalities can be successfully treated once they become symptomatic that screening test risks exceed the benefits.
- The right approach for you is what you and your doctor decide together, provided you have a good relationship with your PCP.

Related / follow up questions:

- How open is this doctor to discussing specific tests and either omitting or including them based on *your* preferences?
- Does this doctor prefer to manage your health by numbers (i.e. test results) or the 'human connection', more a combination of medical science and his/her feel for your personality? Which approach do you prefer?

Some considerations about annual physicals

a.k.a. Periodic Health Exams

Dr. Elizabeth Rosenthal, health columnist for the New York Times suggests that

*for decades, scientific research has shown that annual physical exams — and many of the screening tests that routinely accompany them — are in many ways pointless or (worse) dangerous, because they can lead to unneeded procedures.*²⁷⁷

Other physicians and organizations who share this opinion include

- The American College of Physicians ‘*There’s no strong evidence base for the periodic health exam*’²⁷⁸
- The Journal of the American Medical Association, Internal Medicine ‘*Current evidence does not support an annual screening physical examination for asymptomatic adults*’²⁷⁹
- The Society for General Internal Medicine ‘*Don’t perform routine general health checks for asymptomatic patients*’²⁸⁰
 - The Society says *regularly scheduled general health checks without a specific cause including the “health maintenance” annual visit, have not shown to be effective in reducing morbidity, mortality or hospitalization, while creating a potential for harm from unnecessary testing.*

But annual meeting and discussions between patients and their physicians may well generate benefit.

Dr. Benjamin Brewer, writing in the Wall Street Journal, uses the annual physical time to

build trust and rapport. That helps me to motivate, to provide hope and to persuade patients to face things about their health that they'd rather not...

²⁷⁷ Elizabeth Rosenthal, Let’s (Not) Get Physicals, NY Times, June 2, 2012

²⁷⁸ Bonnie Darves, Rethinking the Value of the Annual Exam, ACP Internist, January, 2010

²⁷⁹ Allan V. Prochazka, Support of Evidence-Based Guidelines for the Annual Physical Examination, JAMA Internal Medicine, June 27, 2005

²⁸⁰ ChoosingWisely, statement by the Society of General Internal Medicine

I do a comprehensive review of family history, social history, lifestyle and investigate any new complaints. An annual check-up can take up to an hour. The time allows me to listen, look for hidden problems, dispense advice on lifestyle issues, give preventive care, arrange testing and to discuss health, not just disease...

Health is more than the absence of disease, and quality care is more than the sum of the tests that can be done on your organ systems. Relationship-based care has a beneficial impact on health quality, costs and outcomes that goes way beyond disease detection and health screening.²⁸¹

Dr. Brewer uses annual physical time to develop the human connection we discussed above. Other doctors, my own included, suggest that the patient interview is the most important part of each annual meeting.

How do you wish to use ***your own*** face time with your doctor? More tests than talk? More talk than tests? There's no universally right or wrong answer, only right or wrong approaches for you.

²⁸¹ Brewer, Annual Physicals Can Pay Unexpected Benefits, Wall Street Journal, January 8, 2009

Questions about Primary Care Physicians

Does this doctor refer to aggressive or conservative specialists?

Some **surgeons**, for example, may prefer to operate *as soon as possible*; others may prefer to wait *as long as possible* before operating.

Some **specialists** may insist on performing a battery of tests before meeting with you; others may prefer to meet you first and perform fewer tests after.

The outcomes from all these different approaches may be the same but the process can differ.

Which do you prefer? Aggressive? Watch and wait? Neither is universally right or wrong, better or worse, though either may be right or wrong **for you** based on your own treatment preferences.

Your PCP – if you have a good relationship with him or her – can help guide you to the specialists who will treat you as you want to be treated.

Imagine a primary care doc on the Connecticut – Massachusetts border with patients and hospital admitting privileges in both states.

He/she knows that referring women with early stage breast cancer to Connecticut oncologists will more likely result in mastectomy while referring to Massachusetts oncologists more likely lumpectomy and watchful waiting.

Which women does he/she refer to which state? The answer depends on how well the doc knows his/her patients and the various specialists. That's why the human connection is so important.

Questions about Primary Care Physicians
Does this doctor refer to excellent specialists? or

Does this doctor refer to specialists who exceed the recommended annual threshold?

We discussed in our Specialist section that some specialists generate better patient outcomes than others.

One measure of surgical excellence: the mortality rate for patients like you.

If this information is unavailable (as it is, far too often), then a good indicator of surgical excellence is **the number of patients like you treated annually**

Ask your PCP the same questions you would ask a specialist:

- What are this specialist's **outcomes for patients like me?** and
- **How many** patients like me does this specialist treat annually?
 - Is this above the recommended treatment threshold if one exists?

A note on referral practices²⁸²

PCPs referral patterns vary significantly with rates varying up to 5-fold, suggesting that some over-refer while others under. PCPs tend to consider specialist's reputations, ease-of-communication and access, geography and previous experience but, as the JAMA article authors conclude, physician referrals are often

Based on little or no objective information...although consultants may use presumed markers of clinical excellence, such as academic pedigree, publication record or professional rank, there are limited empirical data to substantiate whether, and to what extent, those attributes correlate with measures of quality.

Equally important, physicians have few mechanisms for personal performance feedback and little or no training in how to evaluate the quality of care that their peers provide.

Discuss this with your own PCP if/when you need referrals. Having an open dialogue with your doctor may serve you better than doing extensive on-line research about your various specialist referral options.

²⁸² This section comes from Choudhry et al, Selecting a Specialist, Journal of the American Medical Association, November 12, 2014 <http://jama.jamanetwork.com/article.aspx?articleid=1930825>

Why We Don't Provide Disease Specific Questions

The wise patient's fundamental question is always the same: 'Will this medical intervention improve my health?'

Our outcome based questions are specifically designed to get you the answer.

Ask our questions and you will quickly learn such disease specific or test specific information as is *necessary* and *relevant*.

In other words, **focus on outcomes and you'll make wise decisions**. Our questions help you do that. Try to avoid the 'nuts and bolts' questions that Dr. Prasad cautioned us against.

An analogy: When you buy a car, you typically ask

- What's the gas mileage?
- What's the crash test rating?
- What's the estimated resale value? and maybe
- What's the estimated annual repair cost?

These questions focus on how well the car works, analogous to medical outcomes. Answers to a few – maybe just these 4 – differentiate a good from a mediocre car.

You don't normally ask

- What's the engine compression ratio? or
- How thick is the metal in the chassis?

Asking hundreds of fact questions like these may not tell you how well the car works and if it's safe.

Ditto for medical care. Disease specific questions resemble the compression ratio or metal thickness questions. They provide factual details that may or may not correlate to outcomes, but can confuse an unsophisticated questioner.

I urge you to focus on outcome questions first and process questions second. As you ask these, your doctor will provide such disease specific information as necessary for you to make a wise decision.

Why You Need to Ask These Questions Yourself
and not rely on advice from friends or satisfaction surveys

Many organizations like Angie's List and HealthGrades publish patient satisfaction surveys of physicians and hospitals. And many of your friends will freely share their experiences and give advice.

I urge you to ignore it all!

Medical care differs from hotel and restaurant choice: recommendations from unsophisticated medical consumers can lead to more unnecessary care, not less.

That's the conclusion of analyses in Forbes and amednews, a publication of the American Medical Association, as well as a large study by researchers at UC Davis.²⁸³

Doctors with the highest satisfaction scores tend to **overtest, overprescribe** and **overtreat**.

Patients, often believing that **more** medical care is **better** medical care, like this excess.

But researchers at a large UC Davis study found that the patients who are **most satisfied** with their doctors get **more prescriptions, cost more** and are **more likely to be hospitalized**; they had more unnecessary care than less satisfied patients.

- More tests, prescriptions and treatments exposed these patients to more care risks without much benefit, since the treatments were unnecessary to begin with.
- Sadly, the UC Davis study discovered that the most satisfied patients also died more frequently, thus confirming the harms of excessive and unnecessary care.
- Here's the conclusion from that study (unfortunately, inelegantly phrased):

For every 100 people who died over an average period of nearly four years in the least satisfied group, about 126 people died in the most satisfied group

despite the fact that the

more satisfied patients had better average physical and mental health status at baseline than less satisfied patients.

²⁸³ See Why Rating Your Doctor Is Bad For Your Health, Kai Falkenberg, Forbes, January 21, 2013, Patient Satisfaction: When A Doctor's Judgment Risks a Poor Rating, Kevin O'Reilly, amednews.com, November 26, 2012, and Patient Satisfaction Linked to Higher Healthcare Expenses and Mortality, News from UC Davis Health System, February 13, 2012

*The association between high patient satisfaction and an increased risk of dying was also stronger among healthier patients.*²⁸⁴

Researchers also see a relationship between physician satisfaction scores and opiate prescribing.

- Some doctors worry that withholding pain killers from patients in pain can lead to lower scores.
- But prescribing can lead to addictions.

Another study found that 36% of physicians would order a clinically unwarranted MRI if the patient demanded it.

- That exposes patients to test risks – false positives and overdiagnosis – without much hope for benefit since the scans were clinically unwarranted in the first place.

Today, about 1/3 of all physicians receive annual compensation incentives based, at least in part, on satisfaction scores, with the percentage growing.²⁸⁵

That's why you need to ask all the questions in this book yourself and make your own decisions. Relying on surveys or other people's experiences may increase your medical costs and risks without increasing your chance of benefit.

²⁸⁴ UC Davis, *ibid*, direct quotes

²⁸⁵ Forbes, *ibid*

A concern about medical ads

Many patients ask their doctors about the tests, medications and treatments they see advertised.

- Some studies suggest that every dollar spent on direct-to-consumer medical advertising generates over \$4 in sales.
- Other studies show that nearly 1 in 3 adults ask their doctor about a specific drug they've seen advertised.²⁸⁶
- Still other studies suggest that about a quarter of patients believe that only 'extremely effective' drugs can be advertised to consumers.²⁸⁷

I urge you to ignore all medical advertising.

Ads aim to sell you something. They want you to buy their drug (generally, sometimes another product or service) or ask your doctor to prescribe it.

Note the underlying assumption here: your doctor would not recommend or prescribe it if you don't ask. Stated differently, your doctor either *doesn't know about* this drug or *would err by not prescribing* it. Somehow you, lacking sophisticated medical training, can correct your doctor's misunderstanding about this drug's effectiveness. All this questions your doctor's competence.

- If your doctor is incompetent, then get another doctor.
- If you don't like the way your doctor prescribes, then get another doctor.

But, as we discussed in the previous section about physician satisfaction ratings, doctors may feel pressured to recommend or prescribe drugs that patients' request; they are often financially incented to keep patients happy. Far better to describe your symptoms and then base your discussions on the questions we provided in this chapter.

²⁸⁶ Shannon Brownlee, *Overtreated*, page 187

²⁸⁷ Woloshin, Value of Benefit Data in Direct to Consumer Ads, *Health Affairs*, April 2004

A second concern about medical ads

The Food and Drug Administration - the federal agency that regulates medical advertising - does not require benefit claims in medical ads. This leads me to worry that viewers will assume benefits that may not exist.

Here's the requirement about print product claims, directly from the FDA website: ²⁸⁸

- Print product claim ads may make statements about a drug's benefit(s).

'May' not 'must'.

Ditto for broadcast claims ads. There's no requirement that drug ads make any benefit claims at all or – implicitly – that the drugs advertised actually have any benefits.

Try this exercise yourself. Review some medical ads and try to identify benefit claims. How big are they? How frequently do they occur? How clear are they?

- Can you answer our simple question 'out of 100 people like me, how many benefit from this drug?'

Compare these to car ads, for example, that often include city and highway mileage claims.

Then review the risk section and ask the same questions. Are harms 'rare' or 'infrequent'? (What, exactly, does infrequent mean...5 in 100? .002 in 100?)

Finally compare the benefit and harm claims. Ask yourself if you have enough information to challenge your doctor's prescription expertise.

²⁸⁸

<http://www.fda.gov/Drugs/ResourcesForYou/Consumers/PrescriptionDrugAdvertising/ucm072077.htm#reminder>, see Risk Disclosure Requirements for Different Types of Advertisements.

A Dose of Skepticism Never Hurts when reading, watching or hearing medical ads

Many disease definitions are ambiguous, with lots of people falling into the gray area between *definitely being sick* and *definitely being healthy*. Medical ads sometimes blur these distinctions, leading more people to request treatment than ever historically by suggesting that a specific drug or treatment can help.²⁸⁹ But evidence of the drugs' efficiency on this gray-area population is often scant. Medication ads for Attention Deficit Hyperactivity Disorder, for example, suggesting benefits like 'schoolwork that matches his intelligence' (whatever that means) and less family tension are placed in popular magazines like *Good Housekeeping* and *People*, often with little or no empirical evidence of benefits or harms.²⁹⁰

- One result: \$9 billion in 2012 ADHD medication sales.
- A second result: The FDA has cited every major ADHD drug, including Adderall, Concerta, Focaline and Strattera, for false and misleading advertising.

Antipsychotic ads for Abilify, Geodon, Zyprexa, Seroquel and similar drugs also overstep the bounds. According to a 2010 New York Times report,

Every major company selling the drugs — Bristol-Myers Squibb, Eli Lilly, Pfizer, AstraZeneca and Johnson and Johnson — has either settled recent government cases for **hundreds of millions of dollars** or is currently under investigation for possible health care fraud.²⁹¹

The fundamental issue, according to Dr. Jeffery Lieberman, Chairman of the Psychiatry Department at Columbia University: "the aggressive marketing of these drugs may have contributed to the enhanced perception of their effectiveness in the absence of empirical evidence."²⁹²

A dose of skepticism never hurts when viewing product ads. Far better to ask your doctor the questions listed in this book than to rely on ads as medical advice.

²⁸⁹ Historically, for example, about 5% of children were classified as having attention deficit disorder, but the CDC estimates that about 15% of high school age children get that diagnosis today. See *Selling of Attention Deficit Disorder*, Schwarz, *New York Times*, Dec 14, 2013.

²⁹⁰ *Ibid.* The data in the bullet points come from that article.

²⁹¹ *Side Effects May Include Lawsuits*, Duff Wilson, *New York Times*, October 2, 2010, emphasis added

²⁹² *Ibid.*

Summary and Key Questions

Let's tie all this together:

- If you choose your doctors wisely and can communicate with them comfortably, then you can ask the right questions.
- This will help you differentiate necessary from unnecessary care and more effective vs. less effective care.
- But if you don't communicate comfortably, or you ask the *wrong* questions, then you expose yourself to unnecessary risks.
- Poor communication and poor questions can result in more testing, more false positives, more overdiagnosis, more medications, more treatments, more costs...and poorer outcomes.

The wise patient learns that more care doesn't mean better care, more online research doesn't mean better online research, more questions doesn't mean better questions and more treatment doesn't mean better outcomes.

Better discussions with your doctor, focused on the questions in this chapters, leads to better analysis and better care.

I hope this chapter helps you ask better questions, get better care, enjoy better outcomes and save some money in the process.

Key Questions about Preventive Care

- Out of 100 people like me, how many benefit?
- Out of 100 people like me, how many are harmed?
- What grade does the USPSTF give this service?
- Does ChoosingWisely comment on this service?

Key Questions about Screening Tests

- Out of 100 people like me, how many will have Event X without the test?
- Out of 100 people like me, how many still have it with the test?
- Out of 100 people like me, how many actually benefit from the test?
- Out of 100 people like me, how many are harmed by the test?

Key Questions about Medications

- What is the Number Needed to Treat?
- What is the Number Needed for Harm?
- When do I stop taking this medication?
- Are there any long term studies about this medication?

Key Questions about Treatments

- What comparative studies did you use for that recommendation?
- What are the results of those studies?
- Do I differ from the norm in any important ways?
- Am I in a high or low intensity region for this treatment?
- Would most doctors agree with your treatment recommendation?

Key Questions about Specialists

- What are your outcomes for patients like me?
- How many patients like me do you treat annually?
- How do you normally treat patients like me?

Key Questions about Primary Care Physicians

- Are you comfortable discussing intimate information with this person?
- How does this doctor handle annual physicals?
- Does this doctor refer to aggressive or conservative specialists?
- Does this doctor refer to excellent specialists?

Key Questions about Hospitals

- What are this hospital's outcomes for patients like me?
- How many patients like me does this hospital treat annually?
- How does this hospital typically treat patients like me?
- Do I increase or decrease my chances of benefit and harm by choosing another hospital?

Review questions

answers on next page

1. As surgeons perform more procedures annually, do their patient outcomes generally improve?
 - a. Yes, surgeons performing the most number of similar surgeries (e.g. hernia repairs) tend to generate the best patient outcomes
 - b. No, all surgeons generate roughly the same patient outcomes, regardless the number of times a surgeon performs the procedure
 - c. Sometimes, but the most important variable is the number of times each surgery is performed annually in each hospital
 - d. There is no correlation between surgical experience and patient outcomes

2. What is ChoosingWisely?
 - a. An initiative of the American Board of Internal Medicine Foundation in which 60+ medical societies listed activities that patients should question or avoid
 - b. A decision process in medicine
 - c. A suggestion from many doctors that patients choose medical care 'wisely' as opposed to 'unwisely'
 - d. A statistical protocol for generating the best patient outcomes at the lowest cost

3. Which question below will likely generate the most useful information for a patient?
 - a. Out of 100 people like me, how many benefit from this test by avoiding a heart attack?
 - b. Is this a good test?
 - c. Do you think I should have this test?
 - d. Do you have this test yourself?

4. Which question below will most likely help a patient choose a surgeon wisely?
 - a. How many surgeries like mine do you perform annually?
 - b. Where did you go to medical school?
 - c. Where did you go to undergraduate school?
 - d. How much money did you earn last year?

5. Should patients have more screening tests or fewer?
 - a. More
 - b. Fewer

- c. That depends on the patient's preferences. Some worry more about having an undiagnosed abnormality so want as many screening tests as possible. Others worry more about having a false positive test result and the related risks and harms. There's no 'one size fits all' answer
 - d. More cancer screening but fewer orthopedic
6. Do all hospitals treat similar patients similarly?
- a. No, significant variation exists as exemplified in the C-section rate differences among hospitals
 - b. Yes, all hospital treat similar patients similarly
 - c. Most hospitals treat similar patients similarly, especially pregnant women
 - d. Hospitals within a region treat similar patients similarly. For example, hospitals in New England and the Rocky Mountain states perform more C-sections per 1000 births than do hospitals in the southeast or Pacific northwest
7. Which is bigger, a 33% risk reduction or a 1 in 100 risk reduction?
- a. 33%
 - b. 1 in 100
 - c. There is insufficient information to answer this question. In fact, both risk reductions are the same if the starting risk is 3 in 100
8. What is the US Preventive Services Task Force?
- a. An independent set of experts working within the Department of Health and Human Services that evaluates and grades preventive medical services
 - b. A military group that forces prisoners to test preventive medical services
 - c. A group that writes reports every 5 years on the state of preventive services in the military
 - d. An engineering group that evaluates road and bridge structures to determine which are at risk of collapse so need preventive maintenance
9. Does the FDA require drug manufactures to state drug benefits in ads?
- a. Yes
 - b. No, drugs ads *may* (not '*must*') state benefits
 - c. Yes to orthopedic drugs but no to psychiatric drugs
 - d. Yes to pediatric drugs but no to adult drugs

Review questions

Correct answers in bold

1. As surgeons perform more procedures annually, do their patient outcomes generally improve?

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- b. No, all surgeons generate roughly the same patient outcomes, regardless the number of times a surgeon performs the procedure
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Chapter 7: Integrating Consumer Education into Broker Services

Brokers and other insurance professionals use terms like ‘consumer engagement’ and ‘informed consumer’ in two very different – and sometimes opposing – ways. This can create confusion among subscribers and patients, and even among brokers themselves.

To *risk management professionals* – and the medical community - ‘informed consumer’ means someone who understands treatment options, risks, benefits and trade-offs. An informed consumer - to risk management folks, for example - might prefer a treatment that *differs* from the one recommended by his/her physician.

A case-in-point: an oncologist might recommend a mastectomy for a woman with early stage breast cancer, based on *his* analysis of the risk-reward tradeoffs. Meanwhile the patient might prefer to watch-and-wait before operating based on *her* analysis. Both analyses may be factually correct, but the doctor and patient value the risks and rewards differently. We saw an impact of this in our discussion of mastectomy rates in Connecticut and Massachusetts.

An informed consumer, from the risk management or medical point-of-view, thus takes an active role his/her own *medical decision making* and is able to make wise medical care decisions.

To *compliance oriented insurance professionals*, ‘informed consumer’ means a subscriber who understands the component parts of the health insurance policy and the associated regulations about how to use it.

An informed insurance consumer - to the compliance professional, for example - might prefer to compliment a Health Savings Account with a Flexible Spending Account rather than a Health Reimbursement Account, based on some set of specific medical spending habits and needs. Or the informed insurance consumer might prefer a lower-cost policy that pays for medical services on a reference-based model rather than a higher-cost plan that pays everything over the deductible.

This type of informed consumer is one able to make wise *coverage choices* and use the insurance policy most effectively.

This interview highlights these two different definitions of ‘informed consumer’. I published it originally in my 2012 book *Transparency Metrics*, but think it’s a worthwhile addition to this book.

The interviewer, Todd McDonald, owner of Aisling Partners, a brokerage firm in Worcester Massachusetts, articulates the *compliance definition*. He wants to help

insurance customers understand policy provisions and tax implications so they can use their policies most effectively.

Todd initially wants to leave the consumer alone to decide which medical care is necessary and which providers appropriate; he doesn't, initially, adopt the risk manager perspective. He suggests that the traditional broker advisory responsibility ends when the consumer understands policy provisions.

Meanwhile I use the *risk manager's - or medical – definition* of informed and engaged consumer. I suggest that consumers who are well informed about medical care options will make better choices for themselves, meaning better outcomes at lower costs.

I also suggest that the process of becoming a 'well informed medical consumer' is one that can be taught and learned, though admittedly, it rarely is today. My comments focus on the types of education one needs to become well informed about medical purchasing and suggest that choosing care based on medical quality metrics generally results in lower total care costs, and probably lower insurance costs too.

The savings available from making informed *medical* choices, I suggest, likely trump the savings available from making informed *insurance* choices.

I also wonder who in our medical care system can teach consumers to become well informed about medical care. Doctors? Hospitals? Carriers? Brokers? Or some other entity.

As you read this interview, ask yourself if either definition of 'well informed' is *sufficient* in our evolving healthcare system and market...or if we need to combine *both*.

Todd ultimately suggests that wise and innovative brokers will need to combine both definitions of informed and engaged consumers in order to maintain their advisory role. You can sense his discomfort – and also his excitement – about exactly how to do this.

Do you agree with Todd? Do you think he's being too aggressive, defining the broker's future role too expansively? Or do you think he's being too conservative by not defining the broker's role expansively enough?

This interview was sponsored by the Massachusetts Association of Health Underwriters and was taped on May 25, 2012. We thank MassAHU for permission to publish this transcript.

Transcript

Todd McDonald: Good morning, I'm Todd McDonald, President of Aisling Partners, a benefits consulting agency located in Worcester Massachusetts and I'm joined by Gary Fradin, President of TheMedicalGuide.

This morning we're going to spend some time talking about consumer engagement. What does it mean? What is it? So welcome Gary.

As I take a look back in time and think about the notion of Consumer Engagement and Consumer Driven Health Plans, I keep wonder 'what is it'? Ten years ago we saw the introduction of annual deductibles, high deductible health plans sometimes called CDHC or Consumer Driven Healthcare, I think that was the introduction of consumerism in healthcare. The challenge was the lack of data, the lack of information and so forth. So Gary, in your mind, what is consumer engagement?

Gary Fradin: Great question. You started off with a hard one.

I think consumer engagement means helping healthcare consumers – patients – make medical decisions the same way they would make car-buying decisions, or refrigerator-buying decisions. Use the same types of criteria, ask the same types of questions and bring all the skills that we have developed as a society that make us great consumers to medical care. I think we'll have tremendous benefits, both for the patients and for healthcare costs.

So I'd say consumerism in medical care means the same thing as consumerism in automobiles and other products.

TM: And in automobiles, for those of us buying a new car, you can go online, you can research, you can find out what a dealer paid for the car, the mark-up and all of that.

I think the challenge that we've had in healthcare historically is the lack of information, the costs and quality. So let's talk a little bit about that. What you say seems to be straight-forward, seems to make sense to me in the role that I play as a benefits advisor to companies.

Why is there such a challenge to make it happen? What are the barriers to entry to consumer engagement when it comes to this type of consumerism?

GF: Barriers to entry. Tough question.

There are probably lots of barriers to entry. The one that strikes me as most significant is the fact that we have relatively lousy outcome data about medical care. We simply don't know what works well, what works badly, and exactly *how well* it works.

It's like buying a car if you don't know the miles per gallon. Maybe we can get some pricing information. But if a car dealer tells you a car gets good gas mileage, does this mean 16 miles per gallon or 41?

In medical care, we hear things like 'that's a risk factor for having a heart attack' or 'that's a risk factor for cancer' and this is a good treatment. Well...*how much* of a risk factor, *how good* of a treatment and how will it affect me? Those are questions that we're increasingly starting to focus on and we're developing some data to help us get those answers.

TM: What's interesting in the role that I play with clients is that consumer engagement really plays out around product design. The various health insurance carriers have created over the past several years, new products designed to engage the consumer. Deductibles, co-insurance and things of that nature. We have products today designed to get consumers to make decisions, to learn where providers fall within certain tiers for example, limited networks.

So from a product standpoint there's this notion of consumer engagement, working with employers and employees to understand product.

From your perspective and the topic that we really want to get into today, beyond insurance products, beyond 'where do I go, what hospital is in-network', you're talking about consumer engagement at the physician level, at the choice level, is there an overabundance of prescriptions, of unnecessary medical care. Let's talk a little bit about that from your perspective.

GF: Let me make a couple points because you're raising critical issues here.

One is that researchers estimate, based on lots and lots of medical studies, that we waste up to 1/3 of all medical spending on unnecessary medical care. That's care that can't help you – because it's unnecessary – but costs you money and could potentially actually harm you.

The lowest range of estimates that I've seen is 20%. That's from Donald Berwick who ran Medicare for a couple of years. The commonly accepted estimate of medical waste is up to about 1/3 of care that generates 'no detectable benefit'.

That estimate hasn't changed despite plan design changes. We still waste up to about a third.

My comment about plan design changes is that carriers and regulators have tried to organize our healthcare delivery system to become more efficient and cut down on unnecessary care through iteration after iteration after iteration over the past over the

past 20 or 30 years, and we have always seen healthcare inflation running about double CPI (the Consumer Price Index inflation rate) or about double the GDP growth rate. We haven't seen that fall significantly despite plan design changes.

I don't think this is a regulatory issue – reducing unnecessary care – and I don't think it's a plan design issue, although high deductibles seem to have some impact. I think the way to reduce unnecessary spending is to educate consumers, educate patients and show why it's in their interest not to get unnecessary care. It doesn't benefit them – it might hurt them.

TM: Let's talk about that a little bit. My firm provides advice and guidance to clients. We do it at the employer level and at the employee level. We have benefit communication meetings and so forth. From your perspective, what are the tools and resources available? What tools exist to engage consumers outside of products, outside of plan designs?

GF: I think that those tools are being developed. We're starting to get the relevant data about quality so people can make medical decisions based on care quality, not necessarily price.

Nobody wants to get bad quality care. Forget price for a moment. I have yet to hear a parent say 'times are tough, we're cutting back on medical care quality for our kids'. I've never heard that. I always hear parents say 'I don't care what it costs, I want my kid to get the best care he or she can get.'

One tool that we've been working on a lot is called the Number Needed to Treat. Teaching consumers to ask their doctor 'what's the Number Needed to Treat with this medication, this medicine or this screening test?' NNT simply tells you how many people have to have a medical procedure or take a medication in order for 1 person to benefit.

TM: Can you give an example.

GF: Sure, I can tell you about cholesterol lowering medications. Lots of people think that high cholesterol leads to heart attacks.

Study after study after study has suggested that people with high cholesterol – using all kinds of different definitions of 'high' cholesterol, these are generally industry funded studies – suggest that about 3 people out of 100 with high cholesterol will have a heart attack in the next 4 or 5 years. Roughly, approximately 3 out of 100. Some studies show somewhat higher rates. These are folks who don't have heart disease.

If you reduce your cholesterol with a statin, you bring that number from about 3 having a heart attack out of 100 to about 2 having a heart attack out of 100.

In other words, you have to give 100 people a statin for about 4 years to prevent 1 heart attack. The Number Needed to Treat is about 100.

Let me make 2 points going in 2 different directions here. Some commentators have suggested that insurance not pay for interventions that have a Number Needed to Treat greater than 20. An NNT of 20 means that only 5% of people benefit. So if you learn the Number Needed to Treat, you can learn how efficient or how effective this medical intervention is, so you can choose.

The sister, or cousin if you will, of Number Needed to Treat is Number Needed to Harm.

TM: NNH?

GF: Yes, NNH. Obviously that tells you how many people have to take the medication for 1 person to be harmed.

Let me tie all this together and refer to what Dr. David Newman of Columbia Medical School claims. Knowing the Number Needed to Treat and Number Needed to Harm is basic medical literacy. If you don't know these numbers and you can't discuss them, then you're medically illiterate. It's sort of like an accountant saying 'you made money, but I don't know what your earnings per share were, or exactly how much you made'.

TM: So is your expectation that individual consumers should know their own NNT and NNH information and should know these facts and be able to go into a physician and discuss them?

I guess I'll use myself as an example. I happen to have had, 2 days ago, my annual physical. I went in and had my 12 minutes with my doctor and part of the discussion was, ironically, around cholesterol. There have been a lot of articles about cholesterol and statins and the danger of them.

I thought I was being a good consumer, I thought I was engaging by simply asking my doctor and challenging the notion of whether or not I should remain on a statin. And my doctor's comment to me was that the belief still is that the rewards of being on a statin outweigh the risks.

My doctor went on to say 'if it's of any help, Todd, I too am on a statin and have been, so I would not be prescribing something to you that I myself am actually not engaged in taking.'

From my standpoint as someone who is in this industry and do what I do, I felt that I had become a better consumer, that I engaged in the process more by asking questions and actually challenging the notion of remaining on this, asking about the risks and rewards. I'm not sure that many people take the step that I took.

But I get the sense from our discussion certainly that there's more to do, more questions to ask and that I should be armed with NNTs and NNHs and so forth. Is that true?

GF: I think so.

First, let me make one point very strongly: if you're comfortable with your doctor, do what your doctor says. I in no way want to make people uncomfortable. That is dysfunctional all the way through.

But I hesitate to rely very much on your doctor's story about himself. Your doctor may have different risk tolerances from you. He may have different orientations. Different family background and genetics. He may or may not exercise the same as you. He may have all kinds of different risk factors. And his decision criteria may not be the same as yours.

To some extent, and I don't want to belittle doctors, I'm not trying to do that, but to some extent this is like when you buy a used car and you go to a dealer with lots and lots of high quality used cars. You look at a Ford Taurus. The salesman says 'well, I drive a Ford Taurus' suggesting a personal endorsement for how good this car is. OK, but I don't know how he made his decision. Does he drive young kids around? Does he schlep hockey equipment? Is his wife a baker and he makes deliveries for her? Did he get a particularly good deal on a used Taurus, when, perhaps, he would have preferred a Honda Civic? I don't know how he made his decision.

And I don't know how your doctor made his statin decision. Lots of studies suggest that when patients are well informed about their treatment options, they often choose differently from their doctors. That's why I think you have to know what the outcome numbers are.

Remember, doctors learn how to calculate the Number Needed to Treat and Number Needed to Harm in medical school. But they don't talk to patients about it because they figure that in 12 minutes, they don't have time to teach this to a patient.

But if you go in and ask the question, and say 'I will take a medication that you prescribe, but I want to know the NNT, I want to know the Number Needed to Treat so I know how well it works. In fact, I want to know the Number Needed to Treat for 2 or 3 different options, and then I want to choose the best. And I don't want to take a

medication if you don't know how well it's going to work for me.' That's how I would offer for consumers to engage with their doctors.

TM: And I like it. I truly do. The question is how to get consumers to be able to take that step, to have the comfort and the confidence to be able to challenge their physician, question their physician – and I don't mean that in a negative or derogatory sense – but to give them the comfort and the confidence.

Is there data or resources – are there any tools available that I could use, prior to having gone to my physical 2 days ago, any resources that I could have reviewed or tools that I could have evaluated to make me a better consumer and a more engaged consumer, by asking particular questions?

GF: Sure. In fact we have a website that does this in quite a bit of user friendly detail.

Let me go through four simple questions that we sometimes suggest people ask prior to, or during, their appointments about preventive medications, simply as an example here.

Question #1: Out of 100 people like me, how many will have the bad medical event without taking medication? In other words, out of 100 people with high cholesterol like me, how many will have a heart attack? In the statin example, we said about 3. If your total cholesterol level is 350, it might be 5. It might be 6. If your total cholesterol level is 202, it might be 2. Remember, you're asking 'out of 100 people *like me* how many will have the bad event?' You want to know *your* risks, not necessarily average or theoretical risks.

Question #2: Doc, if I take the medication, if I have the screening test, if I have the medical intervention, then **out of 100 people like me, how many will still have the bad event?** Because we know that medicine doesn't work perfectly all the time.

Question 3: Out of 100 people like me, how many actually benefit from the medication by avoiding the bad medical event? Get the number.

And Question #4: Out of 100 people like me, how many are harmed?

These are simple questions. You would ask these of a car dealer, in a different form of course. You would ask these if you're buying a refrigerator. You would ask these types of questions about many different products.

TM: I think that's the key. When you say 'ask'...we're a society that has just taken advice, taken whatever is said by our doctor, trusting it, doing whatever is prescribed, and I think we're at a day and an age where it's so complex.

In the health insurance world, we engage around products, tiers, networks, HRAs, HSAs, FSAs, and so on. For many of us, when we think of consumer engagement, we think of doing a better job of educating the consumers on product and product design.

You're talking about a completely different, though interwoven piece, saying that the consumer or the patient needs to ask questions and understand *medically* what steps need to be taken.

GF: Yes. Let me turn this into a question for you. We're entering a high deductible world where people are starting to spend their money 'more wisely'.

High deductibles give you the opportunity to spend your money more wisely. Somebody has to educate people about *how* to spend their money more wisely.

Where in our healthcare distribution system does that entity lie?

- Is it physicians – you have 12 minutes per year. Is that the right entity?
- Is it the hospital – are they going to teach you which questions to ask about your medical care?
- Is it the insurance carrier? The problem with the carrier is we all know why a carrier would tell you about unnecessary care. They want to save money. Or, at least, that's the cynical public perception.
- Is it the employer, who's probably pretty busy making widgets, especially during a recession. They don't have a lot of extra resources to teach about medical care.

Where in our healthcare distribution system – our medical distribution system – is there an entity that can take on the responsibility of doing this teaching so we can reduce the 33% waste factor, besides the broker?

TM: I don't think there is, and I think that of all the stakeholders, the various people involved in the process, none others of them have the ability, the bandwidth, the time to do that, and I think you make a very valid point.

It's just an interesting dynamic that for 20 years I've been in the business. We provide advice and guidance and council to employers, more and more to employees, now the notion of wellness which engages a whole different element to all this.

Now all of a sudden, in the role that we play, thinking about education and engagement at a completely different level. To talk about NNTs and NNHs, what questions to ask

your provider. It's a completely different way to proceeding, a completely different approach. And at the same time, critically important.

GF: Let me ask you a question.

TM: Please.

GF: You said that at your physical a couple days ago was the first time you pushed back and challenged your doctor. Why? You've had a physical presumably every year for many years. Why now? What happened this year?

TM: A little more knowledge, a little more understanding. Certainly the likes of folks like you. News and information is becoming greater. I don't simply want to take the status quo as many of us have done, when the doctor gives a prescription we take it without asking.

I think the notion of statins and harms and long term effects have really resonated with me and have caused me to push back on that particular item.

I think in general, we can all agree that our healthcare system is flawed, at many levels.

You mentioned waste before, 33% waste. Above and beyond all of that, for me to go in once a year for my personal health, and literally have about 12 minutes to ask questions, review data, update personal information and all that to me is challenging and troubling. I need to become my biggest and my own advocate for my own healthcare.

And I think getting back to your original question 'why this year?' I think because more information is available. We are changing and I think there's a dynamic going on in our industry where we need to challenge where we need to be, in the role that we play providing advice and guidance beyond product, beyond solution, beyond all of that to provide advice and guidance at the employee level.

GF: I think it's really interesting when you make the point about more information becoming available. That resonates with me. More and more information is becoming available to consumers. I think we run the risk of having information overload. The question is 'what information is really useful?' What information is bogus or biased or not terribly useful? How does a consumer figure that out?

TM: Gary, that's a complete struggle for me and I'm sure for just about every consumer. What is the right information? If I read the Harvard Business Journal, that's one piece of information. If I read another article, another book...it's very challenging to know what

information is accurate. From which stakeholders does this information come and is there any bias or connection back to a provider or manufacturer?

Maybe I can turn this back to a question for you. As a consumer, how do I navigate my way through the various information channels to arrive at what I think is good, solid accurate information so that I can make good, solid, accurate personal choices?

GF: I think that's the question that highlights the broker's role.

A broker clearly can't give medical advice. They're not licensed for this. And a broker can't say 'here is a procedure that works and here is a procedure that doesn't work' according to some study. That's not the broker's role.

It seems to me that the broker's future role and the growth of this part of the business is teaching people the questions to ask. If you ask the right question, you have a pretty good chance of getting the right answer. But if you don't ask the right questions, then you may get all kinds of misinformation or confusing information or biased information.

We at TheMedicalGuide try to simplify this by, for example, asking the 4 questions that we discussed a few minutes ago to determine Out of 100 people like me, how many will be harmed?, Out of 100 people like me how many will benefit?

We try to simplify the process by teaching people to ask questions about the Number Needed to Treat and Number Needed to Harm. I should probably add that we teach questions to ask about lots of different kinds of medical interventions.

I guess my feeling is that if brokers can put on consumer engagement programs and courses for their subscribers that help people ask the right questions of their doctors, then we've gone a big step. We've made progress. And Step 2 I can't tell you about yet. I don't know what it is!

TM: Going back to your question - when you have all these stakeholders and providers being part of the equation, who is best served to do it – for someone who spent 20 years in this business, I have an initial challenge, internally, to think that I am the one, and my firm is the one, to provide consumer engagement at a level that gets so specific to medical care and so forth.

At the same time, I can see the validity to this and that many of us can't hide behind the notion that consumer engagement is teaching and educating about product and all of the elements that go along with that. It's a challenge. It's a shift in thinking for me.

GF: Do you think, as a business owner, you can avoid getting involved in this kind of consumer education?

TM: I don't. I truly don't.

The question is when? How quickly? How broad of a spectrum? How deeply? It's a challenge. I say this openly, it's really a shift. It's a mental shift to think of the role that we play and how we will engage the consumer at a completely different level.

At the same time, it's tremendously exciting.

And then beyond all of that, the complexities to everybody. As we sit in the roles that we play as advisors to employers and employees, you have new products – with all sorts of functionality and limitations, with tiers and networks, and the account based elements of HSAs, HRAs and all that. It has become so complicated. My point being that complexities at the product level and at the distribution level are just immense and enormous, and then you fold in another component and layer.

I guess trying to understand it and articulate it, and taking it back to the role that we play, I have to wonder and ask 'how do we do this?' What is the first, best step for us to do it? I guess I'll put that to you. There was a question, or at least a thought of a question in all that.

GF: I think it's very thought provoking. I don't have an answer. As you were talking, I was thinking about that famous Chinese curse or blessing 'May you live in interesting times.' Yes, it is tough to navigate the future.

Look, it's always tough to navigate. It's always tough to run a small business. I guess the first step I would say to brokers who want to get into this brave new world is to become familiar with some of these consumer aids, these medical decision making aids, to become familiar with this part of the business, and on a case-by-case basis work it in. I wish I had a better and more complete answer.

TM: But I think that your answer is representative of the stage we're at in the development of all this. I truly do.

One of the things that comes to my mind, and I certainly want to garner your perspective on, is this notion of cost and quality. It's at times such a nebulous thing, where many carriers, going back to the product designs, and consumer engagement at the product level, is about cost and quality.

Your thoughts on cost vs. quality, the importance of it. Is cost a real driver and issue or do you believe quality prevails, that someone is going to request and require quality without much notion of cost?

GF: I think transparency is clearly both. You have to know price. You don't want to get the same quality for \$2000 that you can buy for \$600.

But I think that the first step, the driving force, is quality. Everyone wants the best medical care they can get for themselves and their family. One of the reasons that so many people use expensive hospitals is that we equate higher costs with better quality care. Or high credentials with better quality. Or medical school affiliation with better quality. I think people want quality. Then, if you find 2 procedures that have the same NNT and the same outcomes, then sure, go for the least expensive one.

I would warn people against assuming that you can learn something about the care quality from the price, because you can't. A broker once said to me 'this quality information is too complicated. If you assume the quality is all the same, then you can shop based on price'. My response was 'besides that Mrs. Kennedy, how was your trip to Dallas? I heard you had a nice breakfast.'

The ballgame is quality. And price is a secondary consideration. I have yet to meet a person who wants poor medical care, and I have yet to meet someone who wants the cheapest *unnecessary* medical care. I only meet people who want good, necessary care.

TM: I think you bring up a great point, and the challenge that we see every day is also the waste in care. People don't want bad care, but I think it still goes back to waste. It goes back to that 33% waste factor, it goes back to how the system is currently structured, and I think that is a tremendous challenge. The complexities of the system. Waste continues to be an issue.

But getting back to your NNT, unnecessary care ideas, are these regional? National? International? Is this about how our healthcare is structured here or is it relevant beyond state and even national boundaries?

GF: I think all healthcare consumers in all countries have the same questions. I think all parents want good care for their kids, all sick people want good care for themselves, and if you're in a government funded system, a privately funded system, or a mixed system, you as the consumer still have the responsibility for asking the right questions and getting the best care for yourself. So I don't think the structure of the system matters for consumer responsibility and engagement. I think people are all the same – they all want good medical care. No one wants to have unnecessary care that won't help them but might harm them.

Research is currently being done on all these different kinds of metrics all over the world, with researchers having the same fundamental question: how can we identify

good, high quality, necessary care as opposed to poor, unnecessary, low quality, wasteful care. Everyone is interested in the same thing.

My guess would be that there will be an explosion of knowledge in this whole quality arena in the next decade or so. The early adopter brokers who start to educate their clients now, start to learn the programs now, start to learn what this is all about now will put themselves in an awfully strong position as all of this evolves to capitalize on it and grow their businesses in the future.

TM: I think that's a great point. I think that's something that brokers like me need to be mindful of. We have been, and continue to be moving away from product based sales, product based advice and guidance to become a true benefits consultant. I think it's a tremendous opportunity personally for those willing to engage.

GF: It's exciting.

TM: It's tremendously exciting. I think we as brokers have a role to play and I think a unique one. The other stakeholders that we don't believe are equipped to participate in this consumer engagement process, my hope is that that changes at least in some capacity. We really need them to be part of the equation in some way, shape or form, so this becomes a collaboration.

GF: I would agree with that.

TM: This has been a tremendous dialogue.

GF: Yes, it's been interesting. You asked good questions.

TM: Thanks. Hopefully this has been useful to the people watching who want to learn more about the consumer engagement process.

We've discussed a tremendous spectrum of what it means and what it is. Historically, engagement has been around product – how can we engage consumers around products, so they best utilize the plan that they have chosen.

But today we've discussed taking this to a different level and really getting to the medical aspect of consumerism and consumer engagement...asking questions, understanding outcomes, a completely different aspect to the world of healthcare as it stands today. Gary, thank you for your time, your comments, your insights...

Review Questions
answers on next page

1. What does the *medical care* industry mean by 'well informed consumer'?
 - a. Someone who understands treatment options, risks, benefits and trade-offs
 - b. Someone who understands deductibles, copayments and other components of his/her health insurance policy
 - c. Someone who has done lots of online research about his/her medical condition

2. What does the *health insurance* industry generally mean by 'well informed consumer'?
 - a. Someone who understands treatment options, risks, benefits and trade-offs
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3. About how much impact does *plan design* have on the amount of *unnecessary medical care*?
 - a. Very little, as evidenced by the fact that we still waste up to about a third of all healthcare spending on care that generates no detectible benefit
 - b. A great deal, as evidenced by the fact that we have cut our rate of unnecessary medical care dramatically over time

4. What impact has plan design had on the rate of medical inflation over time?
 - a. Very little impact. We still spend see medical spending growing at about 2 to 3x the overall inflation rate
 - b. Very big impact. The medical inflation rate has fallen below the overall inflation rate in the past few years

5. What does this statement mean from your doctor: "I too take a statin to control my cholesterol"?
 - a. That you and your doctor have exactly the same medical conditions and exactly the same orientation to care, so you too should take a statin
 - b. That statins are good for almost everyone
 - c. It doesn't mean much of anything since you and your doctor may have different genetics, exercise routines, diets, orientations to care, treatment preferences and risk tolerances

6. Which professional entity seems best positioned to teach consumers how to choose their medical care more wisely?

- a. Doctors
- b. Nurses
- c. Health insurance brokers
- d. Pharmaceutical salespeople

7. This interview suggested a new frontier in employee engagement and education. What is it?

- a. Teaching employees which medical information is useful and which is not
- b. Developing fixed commission products
- c. Selling more disability and voluntary products

8. Which activity will likely have the greatest impact on medical care cost reduction?

- a. Teaching employees how to avoid unnecessary medical care
- b. Developing narrower provider networks with higher barriers to switching from one network to another
- c. Expanding the use of HRAs
- d. Restricting access to primary care physicians

9. A broker once said 'this quality information is too complicated. If you assume the quality is all the same, then you can shop based on price'. What's wrong with this?

- a. Everything. Quality is the ballgame. No one wants the least expensive, poor quality unnecessary medical care
- b. Nothing. This is a quick and dirty way to summarize medical care purchasing to employees with high deductible plans

10. Over the course of this Interview, how does Todd McDonald's position change?

- a. He's initially skeptical about having brokers inform patients about how to use the medical care system – preferring to inform patients only about how to use their health insurance – but by the end, he's excited by the opportunity to engage employees on a whole new level. He suggests that this may be a key future component of the 'benefit advisors' role
- b. He thinks the broker's role is and always will be to teach about how to use their benefits but not to engage consumers about how to use the medical care system and to ignore the existence of, and impact of, unnecessary medical care.

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