Managing Risks in CDH Plans

by

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The Author

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This text is specifically designed to inform brokers of the content and implications of Section 3506 of the Affordable Care Act 'A program to facilitate shared decision making'

and, in particular,

Subsection 936 (b)(1) and (2)

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

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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 course will identify some ways that brokers can engage and educate their own clients to achieve those objectives.

Introduction: CDH 1.0 and 2.0 and the Affordable Care Act

CDHC or Consumer Driven Health Care has developed over the past decade. The term 'consumer driven health care' arose primarily from the Medicare Modernization Act of 2003 which established Health Savings Accounts.

Consumer Driven Health Care 1.0. This misnomer generally applies to high deductible health. In common insurance lingo 'consumer driven products' are those with $1000 or more annual deductibles. Each consumer spends that $1000 as best he/she sees fit – for physician visits, medications, tests or therapies. Only after satisfying the deductible does insurance begin to pay. Then, depending on the specific plan design, insurance pays all or part of additional medical expenses. In theory, when people spend their own money, they shop more wisely and get better value than they would if they only spent the carrier's money. This is the same theory that underlies other consumer products, ranging from refrigerators to cars to tennis racquets.

Unfortunately, the theory fails in healthcare for three main reasons. **First,** an annual $1000 deductible 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 $1000 in January and then enjoy lots of excessive medical care for free during the next 12 months. Or the $1000 has little impact for a patient facing a $50,000 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 this case.

Second, medical consumers have little meaningful quality information. 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 primarily, we suggest that so-called Consumer Driven Health Care is really nothing more than cost shifting to sick people. These plans have virtually nothing to do with consumerism.

Third, the 'high deductible as spending brake' fails to differentiate necessary from unnecessary medical spending. Eliminating *un*necessary spending can save a consumer and self funded account money; but eliminating *necessary* spending can increase costs to both. Take pharmaceutical products, for example. Studies show that the costs of non-adherence to necessary physician prescriptions include 2 – 3 times higher rates of hospitalization and rehospitalization for patients suffering from diabetes, coronary disease and high blood pressure. Actual annual costs of adherent diabetics run around $8,800 while annual costs of non-adherent diabetes average $16,500.[1] Another study, this time of Medicare beneficiaries, found that

[1] New England Healthcare Institute 'Improving Patient Medication Adherence'

raising office visit copayments reduced the number of office visits by about 20% annually. It also, however, increased the number of hospitalizations/100 people by 2 annually and increased the number of days in hospital per 100 people by 13 annually. [2]

Consider the big picture, healthcare spending compared to other countries. Since 2003 (the introduction of CDH plans) our healthcare spending has not improved – has actually gotten worse - relative to other countries.

2003 US healthcare spending/person compared to other countries [3]

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

2011 US healthcare spending/person compared to the same countries

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

During the same period, our healthcare outcomes as measured, by example, by longevity or infant mortality, have not dominated these other countries.

If current versions of CDH worked, then American healthcare spending would decrease relative to healthcare spending in other countries since our outcomes are not superior to theirs. That's

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

[3] OECD Health Data

the essence of consumerism: buyer's shop wisely for the best deals. Unfortunately, these data indicate that such consumerism benefits have not been realized.

Consumer Driven Healthcare 2.0 The critical element left out of CDH 1.0 is consumer education about medical care necessity and quality. Few so-called consumer driven health plans include meaningful medical care quality metrics like the Number Needed to Treat or Number Needed for Harm. Few consumers know their Starting Risk of developing various medical problems, or the Modified Risk offered by medications, therapies or tests.

Even fewer can understand which medical claims are meaningful and which are not. In short, few consumers know how to shop for medical quality and avoid unnecessary medical care. Lacking this knowledge, consumers tend to spend their money unwisely on medical waste…up to, about, 1/3 of the time according to numerous research studies. And lacking this information, co-called CDH plans are really nothing more than cost shifting from employers / insurance carriers to employees.

Lacking care quality metrics, consumers simply cannot make wise healthcare decisions. At best they know prices.

But price alone is an insufficient basis for choosing medical care. Studies show, however that when consumers understand medical care quality, i.e. their options and alternatives and the benefits and risks of each, then they tend to use less invasive, less aggressive *and often less costly* medical care.

One study, for example found that as many as 20% of patients who participate in shared decision making choose less invasive surgical options and more conservative treatment than do patients who do not use decision aids.

Another showed that providing decision aids to patients eligible for hip and knee replacements reduced both surgery rates and costs — with up to 38% fewer surgeries and savings of 12 to 21% over 6 months. [4] Consumer driven healthcare 2.0 introduces some key decision making metrics, a.k.a. decision aids, in the form of questions for patients to ask their doctors. Brokers can use this information in their own educational formats and platforms.

CDH 2.0 and the Affordable Care Act Section 3506 of the Affordable Care Act 'Program to Facilitate Shared Decision Making' specifically addresses consumer engagement. Here are some salient parts of that Section:

- **Sec. 3506 - Program to Facilitate Shared Decision Making**

  Under Sec. 3506, the Secretary of the Department of Health and Human Services (HHS) is required to establish a program that develops, tests and disseminates certificated patient decision aids. These

[4] Emily Lee and Ezekiel Emanuel, Shared Decision Making to Improve Care and Reduce Costs, NEJM, Jan 3, 2013

educational tools help patients and caregivers better understand and communicate their preferences about reasonable treatment options.

- (1) PATIENT DECISION AID- The term `patient decision aid' means an educational tool that helps patients, caregivers or authorized representatives understand and communicate their beliefs and preferences related to their treatment options, and to decide with their health care provider what treatments are best for them based on their treatment options, scientific evidence, circumstances, beliefs, and preferences.
- (2) PREFERENCE SENSITIVE CARE- The term `preference sensitive care' means medical care for which the clinical evidence does not clearly support one treatment option such that the appropriate course of treatment depends on the values of the patient or the preferences of the patient, caregivers or authorized representatives regarding the benefits, harms and scientific evidence for each treatment option, the use of such care should depend on the informed patient choice among clinically appropriate treatment options.

2) REQUIREMENTS FOR PATIENT DECISION AIDS- Patient decision aids developed and produced pursuant to a grant or contract under paragraph (1)--

- (A) shall be designed to engage patients, caregivers, and authorized representatives in informed decisionmaking with health care providers;
- (B) shall present up-to-date clinical evidence about the risks and benefits of treatment options in a form and manner that is age-appropriate and can be adapted for patients, caregivers, and authorized representatives from a variety of cultural and educational backgrounds to reflect the varying needs of consumers and diverse levels of health literacy;
- (C) shall, where appropriate, explain why there is a lack of evidence to support one treatment option over another; and
- (D) shall address health care decisions across the age span, including those affecting vulnerable populations including children.

Why the ACA included Section 3505: 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: [5]

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 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:

[5] Emanuel and Fuchs, The Perfect Storm of Overutilization, American Medical Association, 2008

> 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. 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 course provides both. It's short and easy to read. I designed it for practicality, not academic rigor. Read the relevant chapters to prepare for your doctor's appointments. It will guide you through the medical care questioning process.

Let the 3 Most Important Numbers in Medicine Guide Your Plan Designs

33% 40% 85%

We annually waste about 33% of medical spending on unnecessary care. [6] That's about $800 billion annually 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

[6] The 33% estimate comes from many sources including the Dartmouth Atlas of Healthcare and Congressional Budget Office.

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 are ineffective or harmful according to a massive study published in the Mayo Clinic Proceedings in 2013. [7] 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. H

igh 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 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. And brokers who teach their clients how to identify ineffective or harmful care will generate lower care costs and premiums as a result.

You have medical care options about 85% of the time. [8] Surgery or physical therapy? Mastectomy or lumpectomy? Deliver by C-section or vaginally? 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

[7] 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.

[8] 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

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 to your clients:

- 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. In other words, you have care choices almost all the time.

Chapter 1: 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. [9] Here's a chart from the Dartmouth Atlas using 2010 data showing mastectomies per 100,000 Medicare women in these two states:

But these two states had the same the breast cancer ***incidence*** rates: [10]

Connecticut: 137.3 per 100,000 people
Massachusetts: 132.8 per 100,000 people

And the same breast cancer ***mortality rates***: [11]

Connecticut: 22.5 per 100,000 people
Massachusetts: 21.9 per 100,000 people

[9] Treatment variation examples come from the Dartmouth Atlas

[10] Cancer Facts and Figures, 2013, American Cancer Society. These data cover the period 2005 – 2009.

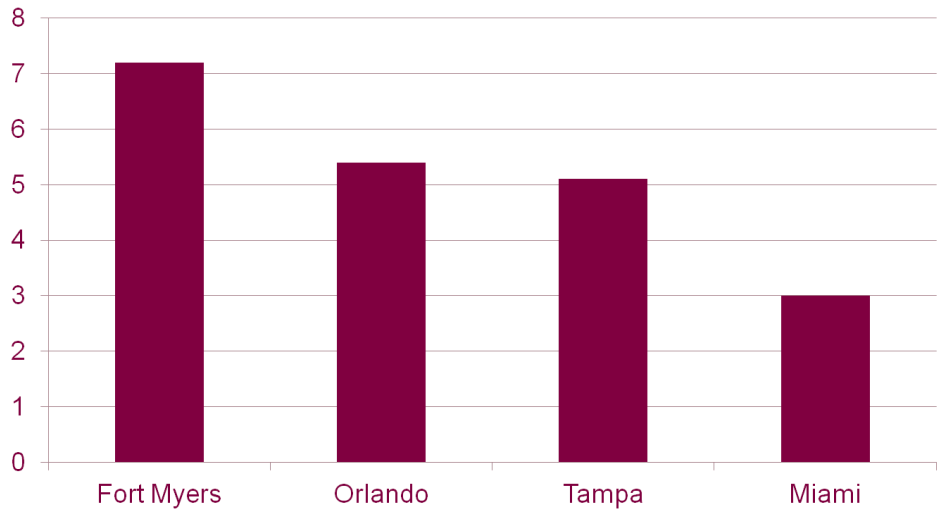
[11] Ibid.

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 2005, again from the Dartmouth Atlas, showing that Connecticut women have consistently had more mastectomies than Massachusetts' women:

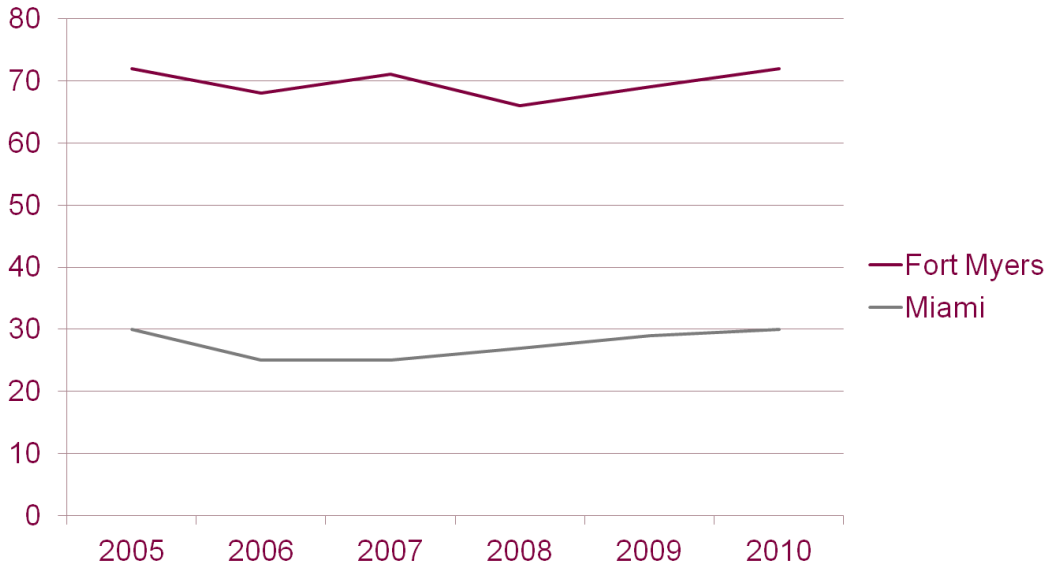
Mastectomies cost about $70,000 each. Lumpectomies, an alternative treatment, cost about $20,000. [12]

- Item: Retirees in Fort Myers in south*western* Florida are twice as likely to have back surgeries as similar retirees in Miami in south*eastern* 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 Dartmouth Atlas in 2010 per thousand Medicare beneficiaries. (I included Orlando and Tampa rates as more typical back surgery rates.)

[12] Health.costhelper.com provides cost ranges. These estimates are only a rough indicator as cost ranges are pretty wide.



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. [13] That's the savings from only 1 procedure in one 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

[13] 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.

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.

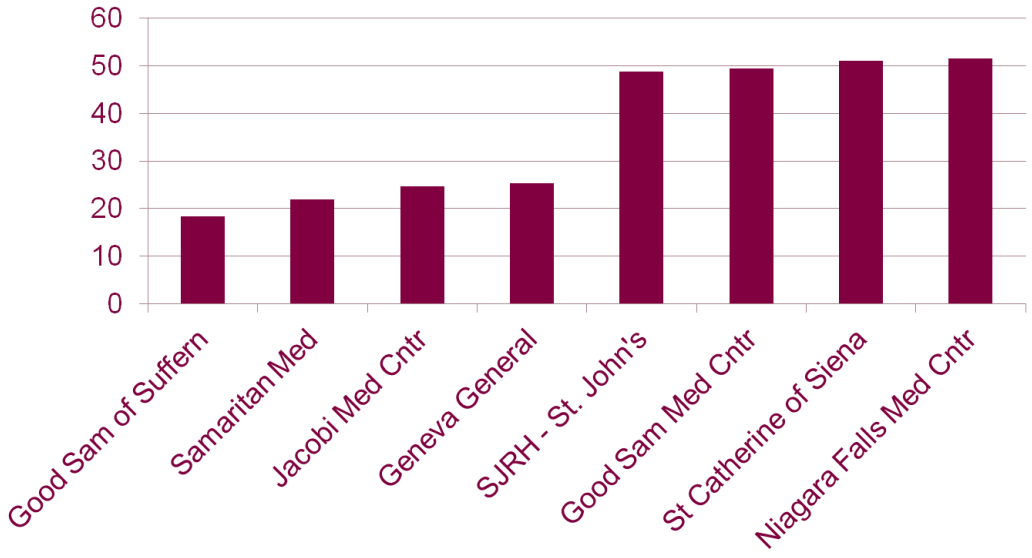
You can follow with

- 'Can I have a second opinion referral in a different utilization region?' That can help you identify and learn about your options. More on this in the Questions about Treatments section.

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: [14]



  Outcomes as measured by infant and maternal mortality rates are about the same despite the delivery process differences. This situation exists in all states.

  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.

[14] Ceseareanrates.com

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* [15]

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* [16]

- 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 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.

<u>Unnecessary care by treatment:</u>

[15] A Commercial Insurance Study of Vaginal Delivery and Cesarean Section Rates at New Hampshire Hospitals, April 2011

[16] Pregnant women's likelihood of cesarean delivery in Massachusetts linked to choice of hospitals, HSPH News, March 19, 2013

- 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. [17]

  Two more studies in 2008 and one in 2013 reaffirmed this conclusion. [18] We perform about 700,000 arthroscopic knee surgeries annually in this country costing some $4 billion. [19]

- Item: Lumbar fusion surgery often works less well than other, less aggressive techniques. [20] 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. [21]

  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. [22] [23]

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.

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[17] A Controlled Trial of Arthroscopic Surgery, New England Journal of Medicine, July 11, 2002

[18] 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/

[19] ibid. CBS News

[20] Kumar and Nash, Is there a high degree of Scientific Certainty in Modern Medicine, Scientific American, March 25, 2011

[21] Long term outcomes of spinal fusion surgery, Spine Magazine, Feb 15, 2011

[22] http://www.healthcarepayernews.com/content/4-procedures-wa-public-payers-may-or-may-not-cover

[23] 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

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. [24]

  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.

- Dozens more examples exist on ChoosingWisely.

- The US Preventive Services Task Force provides a similarly useful list. [25]

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.

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[24] www.ChoosingWisely.org

[25] 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.

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. [26]

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 much tissue surrounding the tumor they need to remove to get all the malignant cells. [27]

  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.

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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.

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[26] Makary, Unaccountable: What Hospitals Won't Tell You and How Transparency Can Revolutionize Healthcare, page 53

[27] Bloomberg, Doctors Need 1,600 Robot-Aided Prostate Surgeries for Skills, Feb 16, 2011

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:

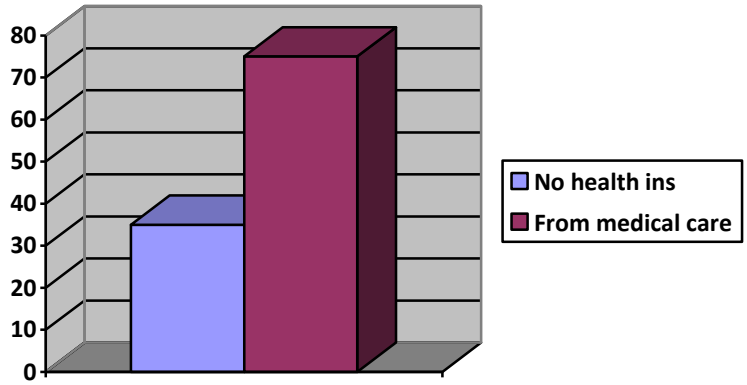
- About 18,000 Americans die annually due to lack of health insurance, according to 'Care Without Coverage' the Institute of Medicine's seminal study in 2002.

  That's out of approximately 50 million Americans who lack health insurance. The chance of dying from no health insurance is about **.00036.**

- 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. [28] (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.[29]

[28] 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

[29] 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.

That's why I wrote this book and developed TheMedicalGuide website.

A brief note – actually 2 - about Wellness Programs

as a mechanism to reduce healthcare costs

Many brokers implement corporate wellness programs in an attempt to reduce medical care spending. These aim to improve health by incenting employees to eat better, which means more fruits and vegetables and less junk food and fatty meat (plus exercise more, but that's a future post). They're *supposed* to reduce healthcare costs.

But they don't and can't because they ignore food price fundamentals. Americans eat, on average, about 2700 calories/day. (FDA estimate) For a variety of reasons, healthy food costs more than unhealthy, with the difference exceeding 1/3 of a cent per *calorie*, which is a big deal per *day* or per *year*.

Here are sample costs from my local Shaw's Supermarket in Easton, Massachusetts: Tortilla chips, hot dogs and cheese curls about $.001 per calorie (that's 1/10th of a cent) 80% ground chuck and Italian sausages about $.003, Apples and pears about $.007, Blueberries, grapes and cucumbers about $.01 (10x chips and hot dogs), Fresh vegetables about $.02 (20x chips and hot dogs),

Multiply 1/3 cent per calorie by the average 2700 calories consumed daily and you learn that eating better costs about $9 more per person per day or $3000 per year or $12,000 for a typical family of 4. That's the difference between eating unhealthier and eating healthier foods.

Your employee wellness incentive needs to approach these amounts just to equalize healthy and unhealthy food costs plus something extra to change employee food consumption patterns. In other words, you'll need to pay over ten times current wellness program incentive amounts to generate your desired wellness nutrition improvements.

But perhaps the saddest part: even if these programs worked, they wouldn't reduce *unnecessary* medical spending, currently running about $800 billion annually. Why invest in programs that don't improve health or reduce unnecessary medical spending? Far better, cheaper and more efficient approaches exist. We'll outline one in this texts – how to teach employees to identify and avoid unnecessary medical care.

The second problem with corporate wellness programs: Nutrition is only part of wellness – exercise is the other part. Assume, as listed above, that eating healthier food costs about $3000 more per person per year than eating poorly based on the cost per calorie of foods like fruits, vegetables and hot dogs. What about the second part of wellness, the exercise component. *How much* do employers need to pay their employees to exercise?

Let's estimate the incentive required to get employees to *walk* more, walking being traditionally our most common form of exercise. In most parts of the world, people walk to work, walk to shop, walk to school and walk to their nearest public transportation hub. But Americans don't walk nearly as much as others. *It's often simply impossible to walk to shop, work or public*

transportation because so many of us live in the suburbs; we have far lower urban housing and job densities than other countries.

This has a huge exercise impact according the Public Health Agency of Canada: *The denser, mixed-used development in Canadian cities leads to average trip distances only half as long in Canada and thus more walkable than the longer trips Americans make. Canada also has higher transit user rates per capita than the US, accounting for walking between trips.*

Consider that a 'typical' Canadian or European walks 5 minutes from home to public transit, then 5 minutes from transit to work, back and forth 5 days per week, total 100 minutes; 20 more minutes daily for shopping, socializing and other routine activities due to local availability in high density, mixed use areas, 5 days per week, total another 100 minutes. (These are conservative estimates.) At 3 miles/hour – a comfortable walking pace – this Canadian or European walks about 166 more hours annually than a similar American, covering 500 more miles and burning perhaps 50,000 more calories. Incenting a similar 166 hours of walking for American employees would cost $1660, paying people $10/hour to walk in their leisure time. Alternatively, gym exercise equipment that burns, say 600 calories per hour, lowers the incentive to about $800 – plus, of course, the annual gym membership, probably another $250 or so.

Let's tie this together. To generate long term behavioral change, the wellness program would need to pay each employee. $3000 annually to improve his/her nutrition and $1600 +/- annually to exercise as much as a typical Canadian or European walks, plus FICA, workers comp and state unemployment insurance, say 15% more, for a grand total exceeding $5000 per employee per year**.** Plus wellness program fees. Way too expensive for a program that might not work anyway. A far less expensive and more effective way to reduce healthcare costs: teach employees to avoid unnecessary medical care. That's potentially a $3000 savings per policy annually.

Who actually has the lowest medical costs?

Researchers have pretty clearly identified your 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.

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. Dartmouth Medical School Professor Albert Mulley puts it this way in a major study: *Well-informed patients consume less medicine – and not just a little bit less, but much less.*

He and his team estimate about a 16% 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 two-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 two providers or procedures generate the same outcomes, ask about your *options*. We call these *process* questions.

We learned above, for example, that C-sections and vaginal deliveries often generate the same infant and maternal outcomes, but that some hospitals *tend to perform C-sections more often*, while others *tend not to.* Ditto for back surgery, mastectomies, bypass surgery and more. Jack Wennberg, founder of the Dartmouth Institute for Healthcare and the Dartmouth Atlas, and perhaps the most important healthcare researcher since 1980, suggests that you have a choice in about 85% of medical interventions. In other words, you have at least two *different treatment options* that generate *similar medical outcomes* about 85% of the time. Process questions help you identify and explore your various options.

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 book 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, generally supported by high quality evidence of good outcomes. The alternatives are all '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. Beware of confusing our outcome and process questions with commonly asked fact questions, the answers to which dominate web-based research and only 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 question 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? (I'll address that below.) Much of patient medical research falls into this fact-accumulation category but it rarely helps you identify unnecessary care. Dr. Vinay Prasad, senior fellow at the National Cancer Institute summarizes this problem succinctly. Medical practices, he says [30]

> *all sound good if you talk about the mechanisms, the nut and bolts, what does it do, how does it work….but the real question is: Does it work?*
>
> *You shouldn't ask how does it work, but whether it works at all.*

Gary Schwitzer, editor of HealthNewsReview calls this 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')

[30] *Medical Procedures May Be Useless, Or Worse*, NY Times, Nicholas Bakalar, July 26, 2013, emphasis added. Dr. Prasad's study of medical treatments and outcomes appears in the August, 2013 Mayo Clinic Proceedings, http://www.mayoclinicproceedings.org/article/S0025-6196(13)00405-9/pdf

- 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 tendency questions of your doctor directly.

Learning disease specific medical facts does have a role though it won't help you identify and avoid unnecessary care. It can help you decide whether or not to have a specific procedure – a different issue. The fact question 'how long is the recovery period?' helps you understand the lifestyle adjustments you'll need to make.

- You may decide, after learning the answer, not to have a particular medical procedure, or not to have it *at this time*. That's a personal decision, that the treatment benefits do not exceed your lifestyle adjustment problems. You may, for example, have child rearing responsibilities that supersede your immediate medical care needs and decide to put off treatment until your kids get older.
- That's not an *unnecessary* care decision. The treatment may be necessary and effective but one that you simply can't manage right now.

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*. Fact questions help you decide whether or not to have a medical intervention at all due to lifestyle and other non-medical considerations. Answers to these questions won't help you identify necessary and unnecessary care.

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.

Follow this Decision Tree

First, decide if a particular intervention is necessary, meaning it generates more benefits than harms or than doing nothing. If *un*necessary – meaning it does not generate sufficient benefits to you, in your opinion - don't have it. (Different people may make different decisions about the same intervention.)

Second, if necessary, learn about your treatment options. Remember that you have options about 85% of the time. Compare the benefits and risks of each then choose the one you prefer.

Third, decide which physician and hospital generates the best outcomes for your preferred treatment process. If you can't get good outcome data by physician and hospital, try to determine how many times per year each physician and hospital treats someone with *your condition* and with *your preferred treatment option.*

Fourth, consider price. Be sure to consider price fourth, only after you've determined that the treatment is *necessary*, that you *prefer* it to the alternatives and that a particular doctor and facility generates the best *outcomes*. Show this Decision Tree to your doctor. He/she will help you think through each step.

'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 criteria, 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 book, 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 three points:

1. The average physician visit takes about 7 minutes. That's perhaps long enough to diagnose and prescribe (perhaps), but not to 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.) 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 annually on unnecessary care, and, as presented in a previous post,

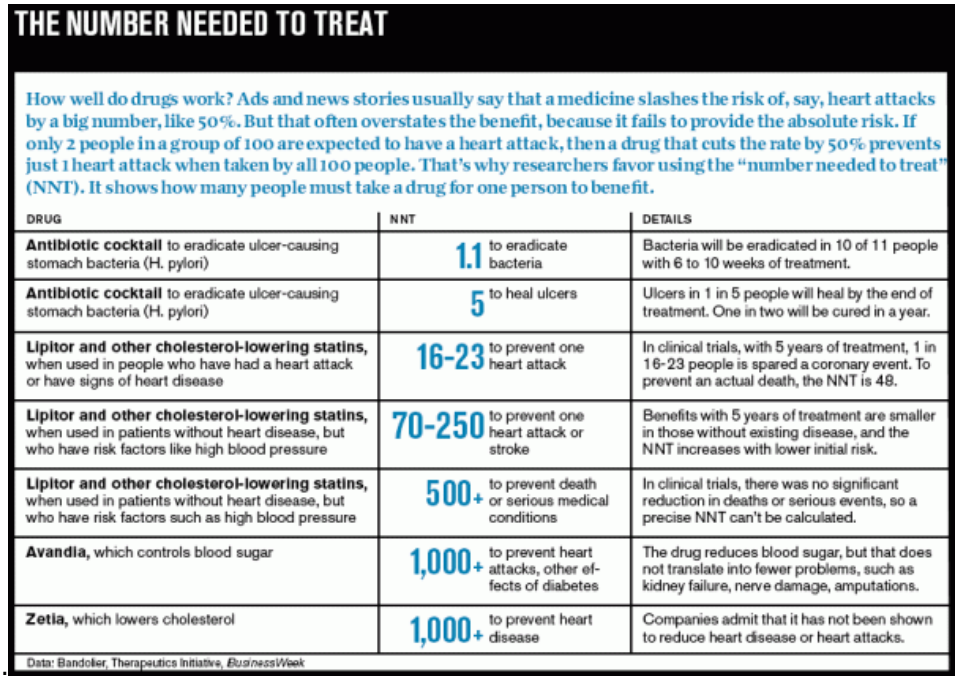
* 40% of established medical practices wouldn't be ineffective or harmful when tested.

Our question remains: How do patients learn about these critical and complicated issues? One clear suggestion: from their brokers.

Can Health Insurance Carriers teach their subscribers about medical care quality?

I recently heard several health insurance CEOs speak at a conference where the cold cut lunch was more satisfying than some panelist comments. Here are 5 questions I left with:

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. Why not tell your subscribers which interventions work well, which poorly



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 (H. pylori)	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 (H. pylori)	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 48.
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*

All carriers, even the small ones, have sufficient data to provide this info to their 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, the folks who pay your premiums?

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?

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 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 if they practice what they preach about evidence based consumer engagement. Unfortunately, when faced with an opportunity to help their subscribers make wise medical care choices, they too often hide the data and choose agnosticism, which leaves brokers and clients all alone to integrate clinical considerations into financial plan designs.

Doctors Can't, Carriers Won't, so Brokers Must

We'll develop some specific metrics in the form of questions for brokers to teach their clients to ask about medical care. But before we do, I need to make 1 underlying point. Whatever questions you ask about specific care, ASK THE KEY QUESTION ABOUT MEDICAL CARE DATA.

The #1, Key Question to Ask Your Doctor: 'How good is the evidence that this care will benefit me?' In the absence of good evidence – meaning rigorous comparative studies – only about half of all medical treatments generate patient benefit. In other words treatments that make biological, theoretical or logical sense are proven ineffective in clinical tests about half the time. In fact, research shows that 40% of established medical practices are ineffective or harmful when subjected to comparative tests. A further 22% were unclear. Examples include

Prolonged antibiotic use in patients with persistent symptoms and history of Lyme disease. No benefit found in 2 randomized, placebo-controlled, double blind studies

Low calcium diet for patients with history of kidney stones vs. diet low in animal protein and salt (but normal calcium) After 5 yrs, low calcium group had double rate of kidney stones

Intensively lowering blood sugar in Type 2 diabetics to reduce cardiovascular events. Low blood sugar group (A1c < 7%) sustained for 3.5 yrs increased mortality without fewer cardiovascular events compared to more permissive goal

The problem, as reported in the New York Times

They all sound good if you talk about the mechanisms, the nut and bolts, what does it do, how does it work….but the real question is: ***Does it work?***

You shouldn't ask how does it work, but whether it works at all.

A YouTube summary from researcher Dr. Vinay Prasad, Senior Fellow at the National Institutes of Health:

Of all those things we're doing that lack good evidence, ***probably about half of them are incorrect.****Their continued use jeopardizes patient health.*

Focus discussions with your doctor on medical evidence and outcomes. You'll get better care that way, and more likely avoid unnecessary or harmful interventions. Remember the key message: you need high quality comparative study information to determine how well a medical intervention works. Ask your doctor if that evidence exists for each medical care recommendation he/she makes.

Chapter 2: Metrics and Questions about Preventive and Screening Services

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 Services
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%' *<u>don't help you determine</u>*** 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 woman 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.

- 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 <u>levels</u> 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. [31]

[31] 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

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.[32] See this statement in their ads: *Unlike some statins, Zetia has not been shown to prevent heart disease or heart attacks.*

In other words, there is no correlation between cholesterol level lowering due to taking Zetia and heart attack rates.

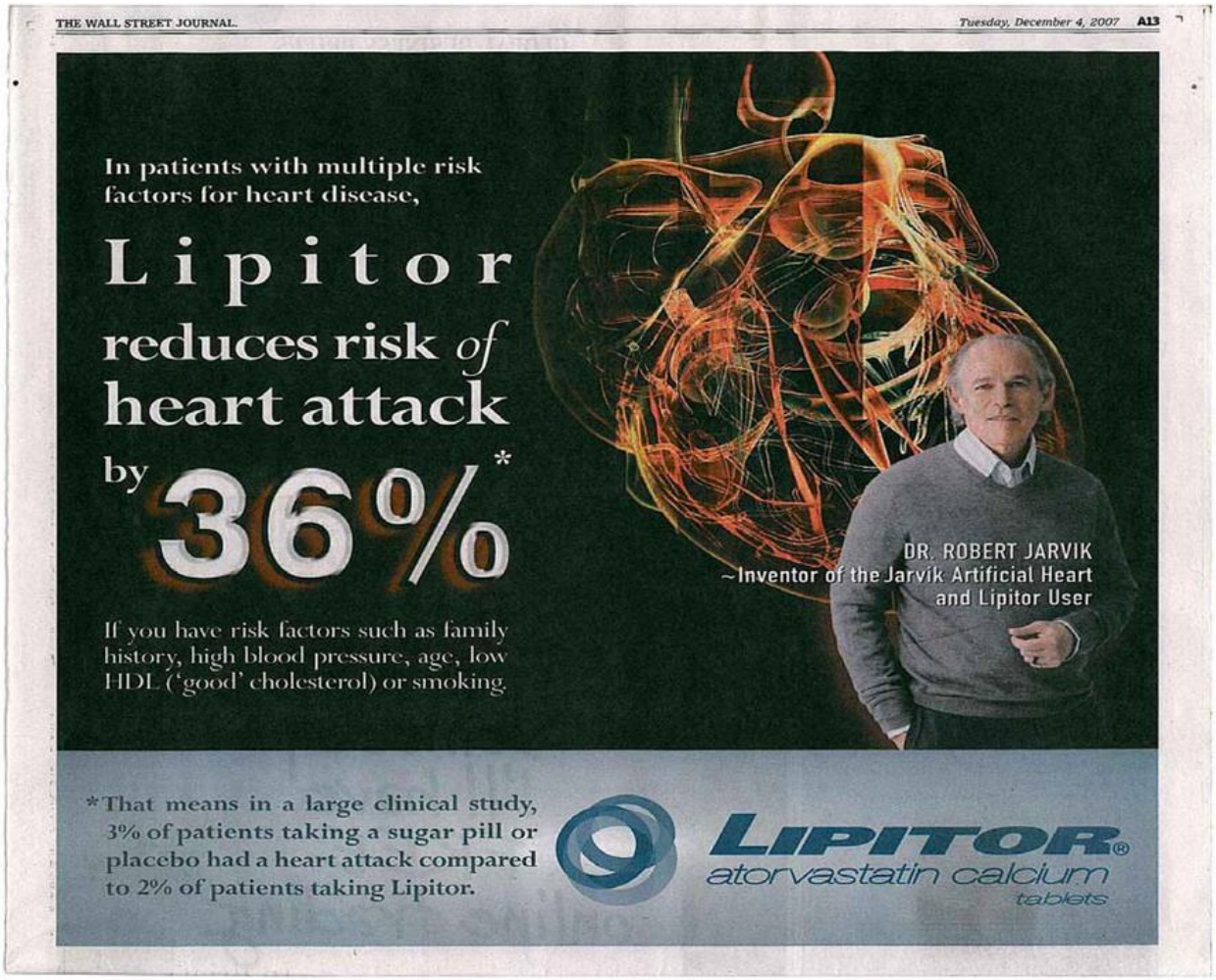
- Clarify, when you ask your doctor, exactly what you mean by 'benefit'.

  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

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.

[32] 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.



One client'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. [33]

> *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.*

[33] The caller had read my earlier book Transparency Metrics, approved for insurance broker continuing education credits in several states. 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.

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. [34]

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.' [35]

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.

Questions about Preventive Services
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.

[34] Patient compliance with physician recommendations is spotty, leading sometimes to poorer outcomes than desirable.

[35] The first sentence is a direct quote. It's burned into my memory. The second sentence is as close as I recall.

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. [36]

Ask about all of these potential harms.

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.'

- Some may decide to proceed anyway.

- 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*. [37]

[36] http://www.uspreventiveservicestaskforce.org/uspstf09/breastcancer/brcanup2.htm

[37] Ibid. pages 213 and 217

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. [38]

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.

Questions about Preventive Services

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. 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.

[38] Letting Doctors Make the Tough Decisions, Chen, New York Times, Aug 11, 2011

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 (*BRCA1* or *BRCA2*). 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*
Hypothyrodism 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 Services
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 chapter 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 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. [39] 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

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.

[39] 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

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. We discussed them in the last Chapter.

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 in the previous chapter. 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). [40]

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.

[40] 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/

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 Medicine in 2012 [41] and the other in the Lancet in 2010. [42]

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).*[43]

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 or only at age 60 or 70 (or other)? Armed with this information, you and your doctor can now have an *informed* discussion and you can make a *wise* decision.

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!**

[42] 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/

[43] 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.

- Studies suggest that most people respond to learning that '.2 in 100 will die' by thinking 'I might be one.'
- About the same number 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.

Chapter 3: Metrics and Questions about Medications and Treatments

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. [44]

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.)

*****

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. [45]

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?***

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*

[44] This calculation comes from www.TheNNT.com

[45] This NNT estimate comes from Bloomberg BusinessWeek, Do Cholesterol Drugs Do Any Good, January 16, 2008

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, so I won't take Vitamin D at all? 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. [46]

- 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. It's an extremely powerful tool.

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. [47]

- 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 difference decisions. That's a topic to discuss with your doctor.

****

[46] 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.

[47] Dr. Nortin Hadler, Worried Sick, page 223

Final thought: Dr. David Newman suggests that knowing the Numbers Needed to Treat and Harm is *basic literacy for patients and doctors*. [48]

- 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.

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 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 3 or 5. We simply may not know the long term effects, both positive and negative.

[48] Dr. David Newman, Hippocrates' Shadow, page 217

One physician's opinion

Dr. Robert Lamberts, board certified in internal medicine and pediatrics and a practicing physician in Georgia, presents 5 practical rules for doctors to battle "more medicine," his term for unnecessary care. [49] Which resonate with you?

1. Never order a test that doesn't help you decide something important. Ordering tests "just to know" does much more harm than good.

2. Use consultants only to do things you can't. Orthopedists will always give an NSAID and physical therapy for problems, so I don't send patients to them unless they've failed those treatments (where appropriate). I am just as good at ordering PT, and am more careful with NSAID prescriptions than they are.

3. Don't give a patient a drug without explaining to them why they need it. If I can't make a good case for a drug, I shouldn't be giving it. This is not simply "to lower your cholesterol," or "to treat your blood pressure," but because doing so will raise your life-expectancy.

4. Remember the number that *really* matters: how many birthdays a person gets to celebrate in health. I don't care about blood pressure, LDL, or even A1c if treating it doesn't raise the birthday total.

5. Don't forget about another number: how much money patients have in their wallets. There's no point in ordering a drug they can't afford, or making them pay for a test they don't need (even when they ask for either).

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. Can I have a 2nd opinion referral in a ***different intensity*** region?

Questions about treatments
What comparative studies did you rely on to make that treatment recommendation?

[49] Dr. Rob Lamberts, Testing Wisely, The Healthcare Blog, May 5, 2013
http://thehealthcareblog.com/blog/2013/05/05/testing-wisely/

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. [50]

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.

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:

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[50] 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

- '23% of patients reported less pain after surgery' or
- '18% reduction in second heart attacks over 5 years'.

I'm 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 ½ a heart attack per 100 people who take it.
>
> Avoiding ½ 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 'out of 100 people like me, how many avoid a heart attack by taking the medication?'

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. We introduced those in the last chapter.

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.

One more reason to ask about comparative studies:

"Contradicted practices don't disappear immediately. There's an inertia, a 10-year period of time when the contradicted procedure continues to be practiced" according to Dr. Vinay Prasad, chief fellow at the National Cancer Institute and lead author of a 2013 study published in the Mayo Clinic Proceedings. [51]

Dr. Prasad's team reviewed every article published in the New England Journal of Medicine between 2001 and 2010 and found 363 studies of established medical practices. In 146 of them – almost half – the newer drug or procedure was no better than, and sometimes even worse than the previously used treatment. Further, more than 40% of the established practices studied were either ineffective or harmful. Dr. Prasad suggested why these ineffective or harmful practices continue: 'They all sound good' like they *should* work.

He cautioned patients about where to focus their attention. Not the nut-and-bolts of *how* the medical treatment works but rather, in his words

[51] See 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. Quotes from the Bakalar article, emphasis added.

*the real question is: Does it work? What evidence is there that it does what you say it does? What trials show that it actually works? You shouldn't ask **how** does it work, but whether it works at all."*

The best way to answer these questions? Get comparative study information.

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 above. About 3 in each 100 people with the various risk factors listed will have a first heart attack over the 4 year study period. 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. [52] 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.

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 Chapter 1 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

[52] 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

- Knee replacement
- Radical prostatectomy and many more. [53]

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.

Unfortunately, it's very hard to tell if your own, particular procedure is unnecessary. That's why I suggest you follow up with ***Can I have a second opinion referral in a different intensity region?***

Questions about treatments
Can I have a second opinion referral in a different intensity region?

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'.

Explanation: We know that about 1 in every 3 treatments is unnecessary, based on analyses of regional treatment differences.

- Unfortunately, we don't know exactly which treatments on which patients.
- ***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: look in different intensity regions.

[53] This list comes from the Dartmouth Atlas, www.DartmouthAtlas.org.

That's why we suggest our two step process

- First, determine if you're in a high or low intensity region for your particular issue. You doctor can help here, as can the Dartmouth Atlas.
- Second, get a second opinion in a different intensity region.

This process has one added benefit to you. You'll hear about the benefits and risks of a specific procedure ***as it applies uniquely to you***, directly from physicians who have examined you.

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.

Chapter 4: Questions about Hospitals and Physicians

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 chapter 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 14% may mean a 30% readmission rate for one, low volume department but only 9% for another, higher volume one.

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. [54]

- 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.)

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. [55] 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%

[54] Risk adjustment adjusts for the severity of illness among patients and allows for fair comparisons among hospitals.

[55] Source: hospitalcompare.hhs.gov. Risk adjustment discounts the severity of each person's illness so doesn't penalize hospitals that treat sicker patients.

- Baystate Ware 12.1%
- Cape Cod 12.1%

The famous Boston teaching hospitals were generally about average:

	Pneumonia mortality rate	Heart failure mortality rate
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.

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. [56] 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. [57]

- 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. [58]

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

[56] Urbach, BMJ, October 2004

[57] Kileen, Journal of Vascular Surgery, May 2008

[58] Dudley, JAMA, March 2000

- Percutaneous coronary intervention, minimum 400 procedures/year [59]

- Other organizations may have other threshold recommendations too. Ask your doctor.

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. [60]

- The Shouldice failure rate, as measured by re-repairs of the same tear, is some 50 times lower than the US rate. [61]

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?

Questions about Hospitals
How does this hospital typically treat patients like me?

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[59] http://www.leapfroggroup.org/media/file/Leapfrog-Evidence-Based_Hospital_Referral_Fact_Sheet.pdf

[60] See Harvard Business School case study #9 – 805 – 002 and Atul Gawande's article The Computer and the Hernia Factory in his book Complications

[61] 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.

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.[62] 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. [63]

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

Case study: Dermatology care [64]

Kim Little, diagnosed with skin cancer in a tiny spot on her check, 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.

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[62] Based on Medicare beneficiaries as reported in the Dartmouth Atlas of Healthcare.

[63] Abelson, NY Times, August 18, 2006, Heart procedure is off the charts in an Ohio city

[64] This case study comes from **Patients' Costs Skyrocket; Specialists' Incomes Soar**, Rosenthal, New York Times, January 18, 2014

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

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.

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 two examples in Chapter 1:

- 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 Shouldice Hernia Hospital in the last chapter.)

In other words, 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 example [65]

- 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 neurosurgery graduates go into back surgery. But I wonder if we have enough bad backs to keep them all busy.

[65] Dr. Marty Makary, Unaccountable, pages 137 - 152

- 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.'* [66] 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. [67]

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.

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 tendencies are the same as yours.

Remember that you have treatment options about 85% of the time and normally 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:

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[66] Ibid. page 147

[67] Ibid. page 151

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'. [68]

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*.**

[68] 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 in Chapter 4.

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.* [69]

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'* [70]

[69] Elizabeth Rosenthal, Let's (Not) Get Physicals, NY Times, June 2, 2012

- The Journal of the American Medical Association, Internal Medicine *'Current evidence does not support an annual screening physical examination for asymptomatic adults'* [71]

- The Society for General Internal Medicine *'Don't perform routine general health checks for asymptomatic patients'* [72]

    - 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…
>
> 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. [73]

Dr. Brewer uses annual physical time to develop the human connection we discussed a few pages ago. 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.

Questions about Primary Care Physicians
Does this doctor refer to aggressive or conservative specialists?

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[70] Bonnie Darves, Rethinking the Value of the Annual Exam, ACP Internist, January, 2010

[71] Allan V. Prochazka, Support of Evidence-Based Guidelines for the Annual Physical Examination, JAMA Internal Medicine, June 27, 2005

[72] ChoosingWisely, statement by the Society of General Internal Medicine

[73] Brewer, Annual Physicals Can Pay Unexpected Benefits, Wall Street Journal, January 8, 2009

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. 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?

Feel free to ask your PCP about recommended thresholds. They may exist but be difficult for you to find.And asking may impact his/her referrals.

Why We Don't Provide Disease Specific Questions

The wise patient's fundamental question is always the same: 'Will I get better?' (or, in the case of preventive care, 'will this intervention help me live longer?')

> 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 in Chapter 6.

******

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 likely confuse an unsophisticated questioner.

I urge you to focus on outcome questions. 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. [74]

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

  more satisfied patients had better average physical and mental health status at baseline than less satisfied patients.

  The association between high patient satisfaction and an increased risk of dying was also stronger among healthier patients. [75]

[74] 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

[75] UC Davis, ibid, direct quotes

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.[76]

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.

[76] Forbes, ibid

Chapter 5: Medical Claims and Summary

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.[77]

- Still other studies suggest that about a quarter of patients believe that only 'extremely effective' drugs can be advertised to consumers. [78]

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 chapter 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, then ask our questions when your doctor recommends a medical intervention.

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 about viewers assuming benefits that may not exist.

Here's the print product claims requirement, directly from the FDA website: [79]

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[77] Shannon Brownlee, Overtreated, page 187

[78] Woloshin, Value of Benefit Data in Direct to Consumer Ads, Health Affairs, April 2004

[79] http://www.fda.gov/Drugs/ResourcesForYou/Consumers/PrescriptionDrugAdvertising/ucm072077.htm#reminder, see Risk Disclosure Requirements for Different Types of Advertisements, emphasis added.

- 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? Does the ad provide reasons to believe the product actually works, or works better than an alternative?

> 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?)

Then compare the benefit and harm claims. Ask yourself if you have enough information to challenge your doctor's prescription expertise.

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, while suggesting that a specific drug or treatment can help.[80] 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. [81]

- 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

[80] 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.

[81] Ibid. The data in the bullet points come from that article.

for ***hundreds of millions of dollars*** or is currently under investigation for possible health care fraud.[82]

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."* [83]

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.

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 based on better or poorer outcomes
- But if you don't communicate comfortably, or you ask the *wrong* questions, then you expose yourself to excessive risks
    - Poor communications, and poor questioning of your doctor, can lead to 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 questioning doesn't mean better questioning and more treatment doesn't mean better outcomes.

Better questions lead to better care.

I hope this book helps you ask better questions, get better care, save some money in the process and enjoy better outcomes from your medical interventions.

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?

[82] Side Effects May Include Lawsuits, Duff Wilson, New York Times, October 2, 2010, emphasis added

[83] Ibid.

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?
Can I have a second opinion referral to a different intensity region?

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?

I welcome reader feedback.

Please send your comments to gfradin@HealthInsuranceCE.com.