Consumer Driven Health Care: The Changing Role of the Patient

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Executive Summary

The latest trend in health care? Patients are managing their own care. New technologies make it possible. Legislative changes facilitate it. And financial pressures all but require it. Today, for example, patients can:

- Use the Internet to freely browse medical journals and libraries for information previously available only to professionals at a cost of thousands of dollars.
- Test children for ear or strep infections at home. Using over-the-counter do-it-yourself diagnostic kits saves unnecessary trips to the doctor.
- Obtain a battery of more than 50 blood tests for as little as $90 by leaving a blood sample at a commercial testing center.
- E-mail personal physicians to obtain a diagnosis, rather than making an in-office visit.
- Use the Internet to have test results evaluated or obtain a second opinion from a Web-based physician.
- Shop online for lower-cost prescription drugs or over-the-counter equivalents, saving up to 90 percent off the cost of brand name prescriptions.

Nearly half of Americans (45 percent) have some type of chronic condition. Patients with chronic diseases can manage their conditions and control their health care in ways unheard of only a few decades ago. For example, patients with diabetes can be trained to inject insulin, monitor and maintain a log of blood glucose levels, and use the results to adjust their dietary intake, activity levels and medicine doses.

Patients who manage their own care obtain results as good or better than those with standard physician care and can substantially lower health care costs in the process:

- Asthmatics can use a software package to monitor their condition and transmit the data over the Internet to a physician for evaluation.

- Patients with hypertension can test themselves and adjust their medications, based on a formula approved by their doctor.

Patients also have new financial incentives to manage their own care. Employers almost everywhere are raising deductibles and increasing copayments — forcing employees to manage more of their own health care dollars whether they want to or not. Health Savings Accounts (HSAs) are additional incentives that let employees (or their employers) deposit tax-free dollars into an account for current or future health care needs. HSAs are now available in principle to 250 million nonelderly Americans. As a result, the number of people with personal health accounts is expected to grow from about one percent of workers (1.5 million) in 2002 to more than 18 million by 2012.

There are legal and regulatory barriers to the fuller development of patient self-management. For instance, many state medical boards find the practice of cyber-medicine unethical if a consultation does not involve face-to-face examinations. Thus, consulting a physician online or getting a second opinion by way of the Internet (especially across state borders) is often difficult — if not illegal.

State and federal laws keep practitioners from paying nominal fees to organizations that schedule patient appointments or refer patients to them. This prevents the emergence of Internet-based medical service brokers similar to Web sites that sell airlines tickets online. It also makes it difficult to create medical auction Web sites (similar to eBay or Yahoo) where physicians compete on price and services.

Consumers also need greater access to drugs therapies over the counter. Unfortunately, the Food and Drug Administration's (FDA) recent track record of moving medications to the OTC market is decidedly mixed. Over the last two decades, for every drug switched from prescription-only to over-the-counter in the United States, Europeans have switched more than four. This includes Simvastatin, a popular cholesterol reducer, which is available over the counter in Britain (after a short pharmacist consultation) under the brand name Zocor Heart Pro.

If the obstacles to consumer driven health care were removed, health care quality would improve, and rising costs would be better contained.

Introduction

Consumer driven health care is a new paradigm for health care delivery. Defined narrowly, consumer driven health care refers to health plans in which individuals have a personal health account, such as a health savings account (HSA) or a health reimbursement arrangement (HRA), from which they pay medical expenses directly. The phrase is sometimes used more broadly to refer to defined contribution health plans, which allow employees to choose among various plans, often with a fixed dollar contribution from an employer. Those who opt for plans with rich benefits may have to contribute a significant amount of their own money in addition to an employer's contribution. Those with more basic coverage contribute less of their own money.

More choice and greater control over one's health plan are characteristics of a consumer-driven health care market place.[1] People with personal health accounts have economic incentives to better manage their own care. The reason: In addition to health benefits, they realize economic rewards for making good decisions and bear economic penalties for making bad ones. These economic incentives make patients more likely to seek information about medical conditions and treatment options, including information about prices and quality. Patients will respond to these incentives in different ways. Some will seek information about diseases, treatments and health care providers over the Internet, including comparative information about treatment outcomes of individual health care providers and the fees they charge. Some may bypass primary care physicians and directly order their own diagnostic tests or seek online consultations. Others may bypass brand name drugs and obtain less expensive generic substitutes, therapeutic substitutes and over-the-counter drugs. In general, people will consume fewer medical services, and pay less for health care in the long run when they are spending their own money.[2]

"People with personal health accounts have economic incentives to better manage their own care."

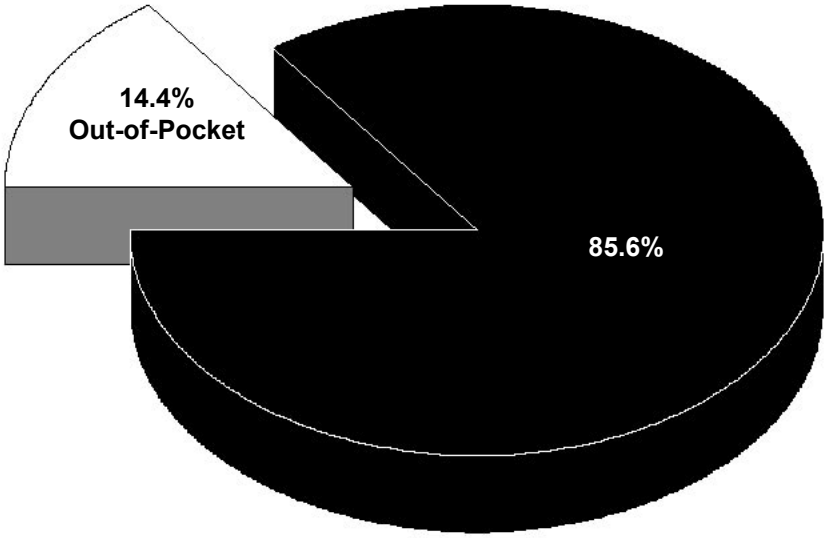
By contrast, most patients have few incentives to be prudent consumers of medical services in the current health care system. The reason: Third parties — government, employers or insurance companies — pay for about 86 percent of all health care.[3] As a result, the economic incentive for patients is to consume medical services until they are worth only 14 cents on the dollar. [See Figure I.]

Excessive physician visits is one way in which patients waste health care dollars. Up to one-quarter of physician visits are for conditions patients could easily have treated themselves, according to employee benefits experts.[4] A recent report by the Agency for Healthcare Research and Quality even suggests that an annual physical is of little value.[5] Patients also waste money through nonemergency visits to hospital emergency room. Even though these are one of the most costly ways to obtain routine treatment, 55 percent of the 103 million visits to hospital emergency rooms are judged unnecessary. Overall, the total cost of unnecessary physician office visits and unnecessary emergency department visits is just under $31 billion annually, or about $300 per American household per year.[6]

"Third parties pay for about 86 percent of all health care."

FIGURE I

Paying Directly for Medical Care



Source: Katharine Levit et al., "Trends in U.S. Health Care Spending, 2001," *Health Affairs*, Vol. 22, No. 1, January/February 2003, Exhibit 6.

If third-party payment for medical bills is so wasteful, why do Americans rely on it so heavily? The main reason is tax law. Employer payment of health insurance premiums is excluded from the taxable income of employees, a subsidy worth up to 45 cents on the dollar for many workers.[7] Yet, until recently, employer deposits to an employee owned and managed health savings account (HSA) were fully taxed — meaning government took almost half the deposit for the middle-income workers. Thus, the tax law generously subsidized third-party payment of medical bills but penalized deposits to accounts used to purchase care directly. As a result of legislation that became effective in 2004, these perverse incentives are finally changing. [See Figure II.]

Why Patients Are Managing Their Own Care

Whether they like it or not, patients are likely to manage more of their own care in the future. This is the result of several trends.

Patients Can Access More Medical Information. With the advent of the Internet and the ease of access to medical information, patients no longer have to rely on physicians to answer every question. They can obtain medical information directly. The growth of the Internet and the vast amount of information it makes available are leading to dramatic changes in information delivery.[8] About 80 percent of adult Internet users (estimated at 93 million people) have searched for health information online.[9] Estimates vary, but by most accounts there are approximately 20,000 health-related Web sites.[10] These activities constitute a sharp break with the tradition of doctors as the

sole source of health related information. In the past, much of the medical literature was available only at large libraries, medical schools or by subscription to expensive scholarly medical journals. Now, much of this literature is readily available to anyone with Internet access.[11]

According to a recent survey of patients visiting an internal medicine practice, more than half (54 percent) had used the Internet to gather health information. Of these, about six-in-ten (59 percent) rated the information "the same as" or "better than" information they got from their doctors. An equal number (60 percent) did not discuss the findings with their physician.[12]

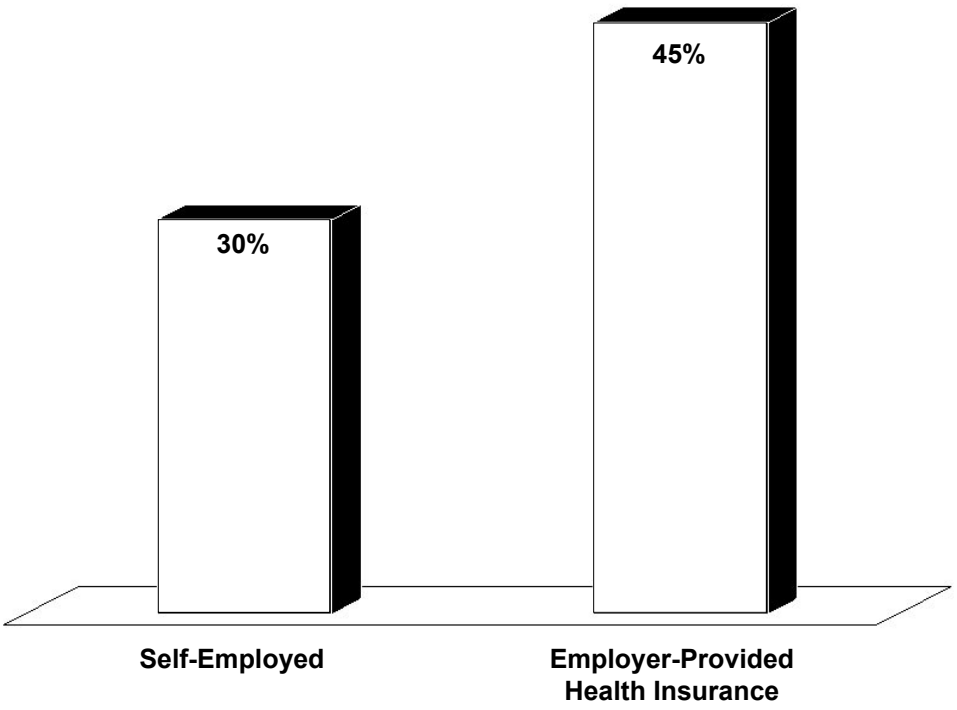
Another way patients find out about medicine is *direct-to-consumer* advertising, which is mostly about drug therapies. Drug advertising benefits patients because it educates them about new treatments and often prompts them to seek care for previously untreated medical problems.[13] In 2000, drug manufacturers spent $2.5 billion on direct-to-consumer advertising; about $1.5 billion dollars was spent to promote a mere 20 drugs.[14]

There Are More Treatment Options. Medical science has made enormous advances in the past few decades, increasing the range of therapies available to patients. Prescription drug therapy is an area where consumers

"Federal tax law subsidizes third-party payments."

FIGURE II

Federal and State Tax Subsidies for Health Insurance



Note: Assumes taxpayer is in the 25 percent federal income tax bracket, faces a 15.3 percent payroll (FICA) tax and a 5 percent state and local income tax.

have the most choices. For example, U.S. companies developed 370 new medicines within the last decade alone, according to the Pharmaceutical Research and Manufacturers of America.[15]

Take heart disease, for example.[16] Most experts suggest patients reduce the risks of heart disease using behavior modification involving diet and exercise.[17] Patients with high cholesterol may select from any number of cholesterol-reducing drugs from a class known as "statins." Patients with hypertension can use beta-blockers, calcium channel blockers and angiotensin-converting enzyme (ACE) inhibitors to lower blood pressure.

When patients develop heart disease they often can choose between invasive surgery or various drug treatments. For instance, heart disease may be treated with surgery, such as angioplasty with stents to open clogged arteries or coronary bypass grafts where arteries are too clogged to reopen. Drug treatments include virtually all of the same drugs use to prevent heart conditions. In addition, most cardiac patients are prescribed diuretics and a small daily dose of aspirin to reduce the risk of heart attack.[18]

"Having more choices, patients want to make more decisions."

Having more choices available, patients increasingly want to participate in decisions about which treatments they receive.

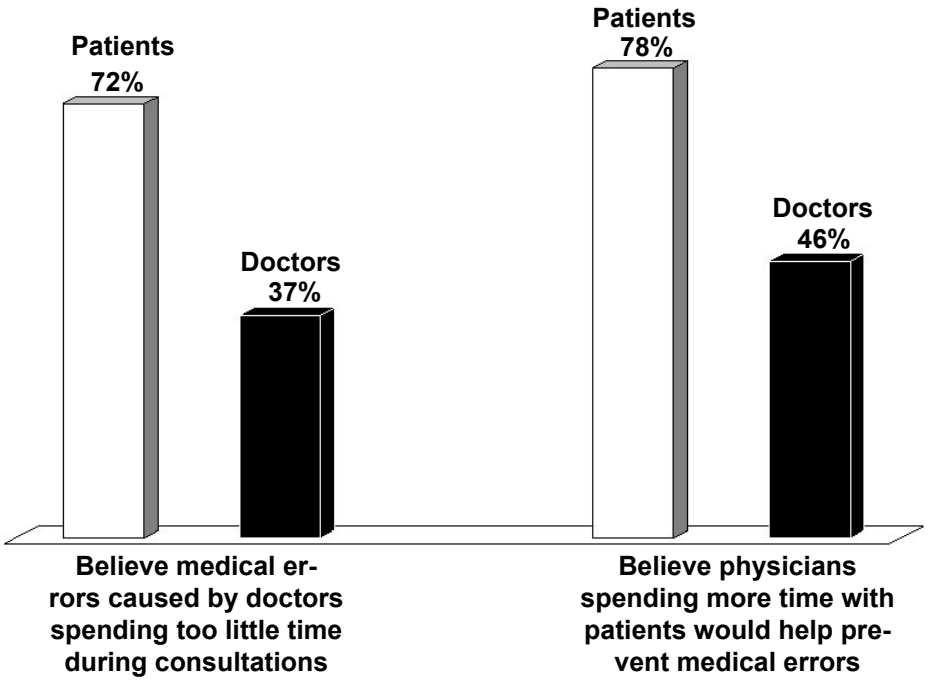
Doctors Can't Manage Patients' Care. In the past, many patients had a "personal" physician who met most of their health needs. In addition to examinations and treatments, doctors also were responsible for patient education.[19] The ongoing relationship between the physician and patient was an information exchange, in which patients told their doctors about their symptoms and doctors provided diagnoses and recommended treatments.[20] This trusting relationship has changed for a number of reasons. Among them: 1) Increasing medical specialization means that no single physician can provide all the information patients need, and 2) Physicians do not have enough time to give their patients complete information on their health. As medical knowledge has grown, an increasing proportion of doctors have specialized so that no individual physician can provide all the care a patient may need. Even within their specialties, doctors have trouble staying current in their field. About 10,000 clinical studies occur every year, and by some accounts, medical knowledge doubles every 42 months.[21]

All specialty boards in the American Board of Medical Specialties require their members to take periodic exams to maintain their certification but most experts admit it is not enough to keep physicians current in their field. Many older doctors are exempt from periodic testing and don't stay current.[22] There is also a problem in the allocation of the physician's time. A recent study in the *American Journal of Public Health* estimates that physicians would spend seven hours a day providing preventive care counseling to patients if they followed all of the recommendations of the U.S. Preventive Services Task Force.[23] Although the average time physicians spend with individual patients has not fallen significantly, because of the increasing amount of information to be conveyed, and preventive and treatment measures to discuss,

FIGURE III

Preventable Medical Errors

(percent agreeing)



Source: Robert J. Blendon, et al., "Views of Practicing Physicians and the Public on Medical Errors," *New England Journal of Medicine*, Vol. 347, No. 24, December 12, 2002, pages 1933-40.

"More than three-fourths of patients think medical errors could be reduced if physicians spent more time with patients."

the proportion of physicians saying they do not have enough time to spend with patients rose nearly 24 percent between 1997 and 2001, from 28 percent to 34 percent of doctors surveyed.[24] Patients are less likely to trust a diagnosis made by a specialist who spends only a few minutes with them.[25] According to a recent article in the *Journal of the American Medical Association*, patients usually want more information about their medical condition than they receive from their doctors. For instance, during a 20-minute office visit physicians spend less than one minute discussing planning and treatment, on the average. Doctors discuss options and help patients arrive at a treatment based on their preferences during fewer than one in 10 office visits. About half the time, doctors fail to ask patients if they have questions.[26]

"Physicians spend less than one minute per office visit, on average, discussing planning and treatment."

A Harris Poll found that even when physicians offer to answer patients' questions, 60 percent of patients forget some of the questions they mean to ask.[27] Moreover, patients retain only a fraction of the information they receive from their physician during an office visit.[28] People think this lack of communication affects the quality of patient care. For instance, more than two-thirds of the public (72 percent) thinks "insufficient time spent by doctors with patients" is one cause of preventable medical errors, and three-fourths (78 percent) think that the occurrence of medical errors could be reduced if physicians spent more time with patients.[29] [See Figure III.]

Physicians will always serve an important role advising patients about their medical needs. But patients need other options. Patients seeking medical information on their own are partially substituting for the service of physicians.[30] A few hours spent on the Internet may substitute for a costly face-to-face office visit.

Managed Care Created Distrust of Insurers. In the 1980s and 1990s, employers began replacing fee-for-service health plans with managed care in an attempt to reduce their health care costs. Managed care organizations tried to hold costs down by negotiating deeply discounted fees with providers and by limiting access to services they deemed unnecessary. They often limited doctor discretion and replaced it with protocols for managing patient care. In many cases physicians were directly employed by health insurers and given financial incentives to withhold or limit access to types of care the insurance companies considered wasteful or costly.[31] Even today, nearly one-third (31 percent) of U.S. physicians report they sometimes do not discuss useful treatments that are not covered by insurers.[32]

Practices like these led to a consumer backlash in the 1990s, as patients saw managed care as a threat to their health and well-being.[33]

Employers Are Requiring Workers to Share More Costs. Employers are increasingly shifting health care costs and risks to employees.[34] For instance, during the period from 1993 to 2004, the average annual deductible workers with conventional health plans had to pay before insurance began to pay rose an average of 86 percent from $222 to $414. For family plans, the deductibles rose by 74 percent ($495 to $861).[35] Over the past 10 years PPOs with higher deductibles have been replacing first-dollar HMO plans.[36] PPO coverage has risen from 27 percent of all covered employees to 58 percent. PPO plans have higher deductibles and 31 percent of PPOs used by small employers now feature in-network deductibles of $1,000 or more.[37]

"The number of people with health savings accounts could grow to 18 million by 2012."

More employers are offering consumer-driven health plans, which usually include high deductible health insurance coupled with personal health accounts which workers use to pay for their incidental medical spending.[38] A recent Milliman employer survey found that almost all (98 percent) employers are considering offering high deductible health plans, whereas in 2003 less than half (48 percent) considered offering them.[39] In 2002, only about one percent of workers (1.5 million people) had health plans featuring personal health accounts.[40] According to a new estimate by Forrester Research, the number of people with health savings accounts could grow to 18 million, with $35 billion in assets, by 2012.[41] [See the sidebar "Personal Health Accounts."]

How Patients Are Managing Their Care

Americans have a powerful new tool with which to educate themselves and manage their own health care needs: the World Wide Web.[46] The Internet

Personal Health Accounts

Health Savings Accounts (HSAs).[42] As of January 1, 2004, 250 million nonelderly Americans, at least in principle, have access to HSAs, provided they are combined with catastrophic insurance coverage. HSAs allow individuals and employers to make annual deposits up to the health insurance deductible. The health insurance policy accompanying an HSA must have an overall deductible of at least $1,000 for an individual or $2,000 for a family policy. A typical plan works like this: When individuals enter the medical marketplace, they spend first from their HSA. If they exhaust their HSA funds before reaching the deductible, they then pay out-of-pocket. Once they reach their deductible, insurance pays all remaining costs.

Annual HSA tax-free deposits typically cannot exceed $2,650 for individuals and $5,250 for families.[43] The account balances can be invested in stocks and bonds and other financial assets, and they grow tax free. Thus a young person could accumulate hundreds of thousands of dollars by the time he or she retires.[44]

HSA balances belong to the individual account holders and remain theirs if they switch jobs, become unemployed or retire. The funds can be used to pay expenses not covered by insurance, insurance premiums while unemployed and health expenses during retirement. In the event of death, HSAs may be bequeathed to a spouse, or (like an IRA) the funds may flow to other heirs.

Flexible Spending Accounts (FSAs).[45] Flexible spending accounts allow employees to set aside money tax-free for anticipated medical needs. FSAs are strong in areas where HSAs are weak — and vice versa. Though FSAs have no insurance requirement and no funding limits, they may be used only for medical expenses. Moreover, employees forfeit any funds left in the FSA at year's end or when they leave their job. This use-it-or-lose-it rule encourages workers to spend in wasteful ways. FSAs would be more attractive to workers (and would come closer to leveling the playing field) if they were made portable from year to year, and from job to job.

Health Reimbursement Arrangements (HRAs). A June 2003 IRS Revenue Ruling clarified that HRAs funds could be rolled over tax free. They are similar to FSAs, with important exceptions. Unlike FSAs, only employers may contribute to HRAs. At an employer's discretion, workers may roll over unspent HRA balances from year to year and may have access to leftover balances after they leave a job. Although HRAs are more flexible than FSAs, in the long run they too are governed by a use-it-or-lose-it rule. The funds can be spent only on health care or insurance premiums and can never be withdrawn as cash.

is a portal to medical libraries and Web sites with disease-specific information, and it gives patients direct access to prescription drugs, direct laboratory testing services, and therapeutic alternatives.

"Two-thirds of people who seek health information on the Internet search for data on specific diseases."

Obtaining Information on Conditions and Treatments. The Internet allows access to medical information that was unavailable to ordinary Americans only a decade ago. And people are responding. In 1997 the National Library of Medicine eliminated fees to search its "MedlinePlus" Web site, the world's largest medical library,[47] and the number of searches rose from about seven million a year to 180 million — about 60 million of which were by the general public rather than medical professionals.[48] The American College of Physicians Foundation encourages doctors to send patients to MedlinePlus,[49] a practice referred to as writing prescriptions for "information therapy."[50] Although physicians have been slow to embrace the trend, patients who obtain information from the Internet potentially save physicians time when they arrive for an office visits more fully informed.[51]

Two-thirds of people who seek health information on the Internet search for information on specific diseases. A survey indicates the information sources they are using.[52]

- Most people (83 percent) search for medical studies**.**
- Seventy-one percent go to the Web sites of medical societies.
- About 39 percent go to the Web site of nonprofit organizations, such as patient advocacy organizations and disease research groups.
- Thirty-eight percent search Web sites for information about clinical trials for new therapies.
- Almost one-third (32 percent) go to commercial health Web sites, such as product-specific sites maintained by drug companies.

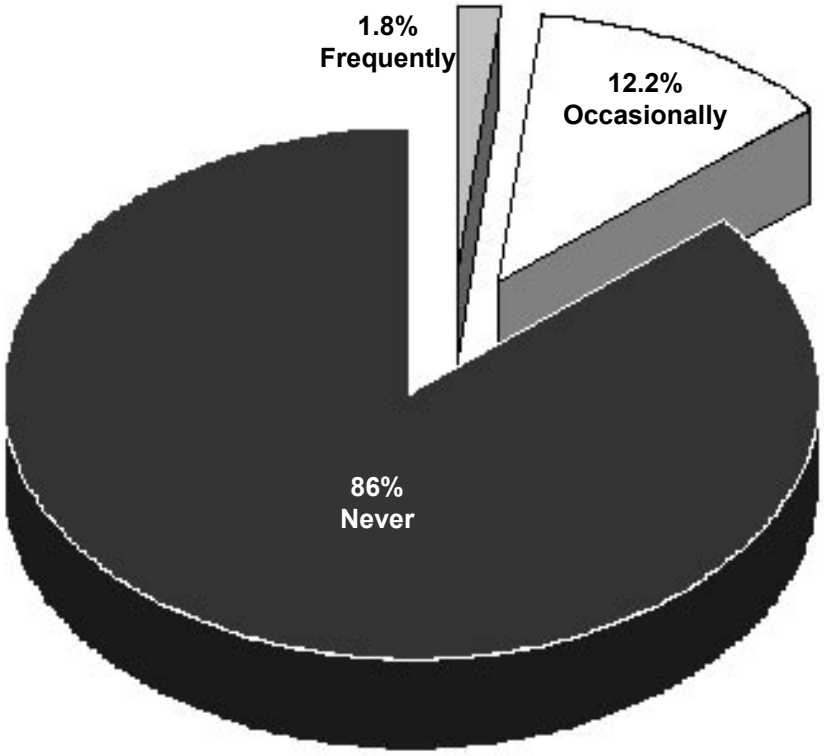
Obtaining Advice from Physicians. Most patients with Internet access (90 percent) would like the ability to consult their physician by e-mail, according to a Harris Interactive poll.[53] However, only a few doctors offer patients the ability to request services or prescriptions by e-mail.[54] According to a 2001 survey, only about 14 percent of patients exchange e-mail with their physicians and only a tenth of these do so on a frequent basis.[55] [See Figure IV.]

One obstacle to e-mail consultations is that few insurance companies will reimburse physicians for this service.[56] Some health plans will not compensate doctors for e-mail exchanges unless the patient has first been examined in an office.[57] Other insurers reimburse less for e-mail exchanges than for in-person visits.[58] However, this is changing. For example, Blue Shield of California pays physicians the same for an e-mail consultation ($25) as it does for an office visit.[59] Furthermore, in January 2004, the American Medical Association created a reimbursement code for online consultation patients, making it easier for physicians to get paid.[60]

"About 14 percent of patients exchange e-mail with their physicians."

FIGURE IV

Patients Exchanging E-mail with Doctor



Source: Data from survey "Evolution of Internet Use for Health Purposes - Feb/ Mar 2001," Health on the Net Foundation, 2001.

Physicians who exchange e-mail with their patients find it often replaces telephone consultations. But patients who send e-mail messages tend to spend more time composing their thoughts and create more focused messages than they do for phone conversations.[61] An example of this new paradigm is Alan Dappen, M.D., who practices medicine almost entirely by telephone and e-mail contact. His time is billed in 5-minute increments and ranges from $25 for in-office visits to $15 phone consultations with patients who have set up prepaid accounts.[62]

Obtaining Diagnoses. Patients have access to an increasing number of medical tests to assess the state of their health and diagnose their ailments. They can now order a variety of tests directly that were once exclusively available only at a physician's request. But they often have to pay for these tests of pocket. Many tests are offered by pharmacies and other retailers over the counter.[63] Sales of self-diagnostic over-the-counter tests[64] tripled from $750 million in 1992 to $2.8 billion in 2002.[65] [See Figure V.]

Home pregnancy-testing kits have been available for years. In fact, they have become so ubiquitous that they are sold in grocery stores everywhere. In some cases, they can be purchased at inexpensive "dollar stores" for $1 a piece.[66] High quality pregnancy test strips are available in bulk on

eBay.com for 50 cents apiece. Pregnancy tests were followed on to retail store shelves by ovulation predictor tests.

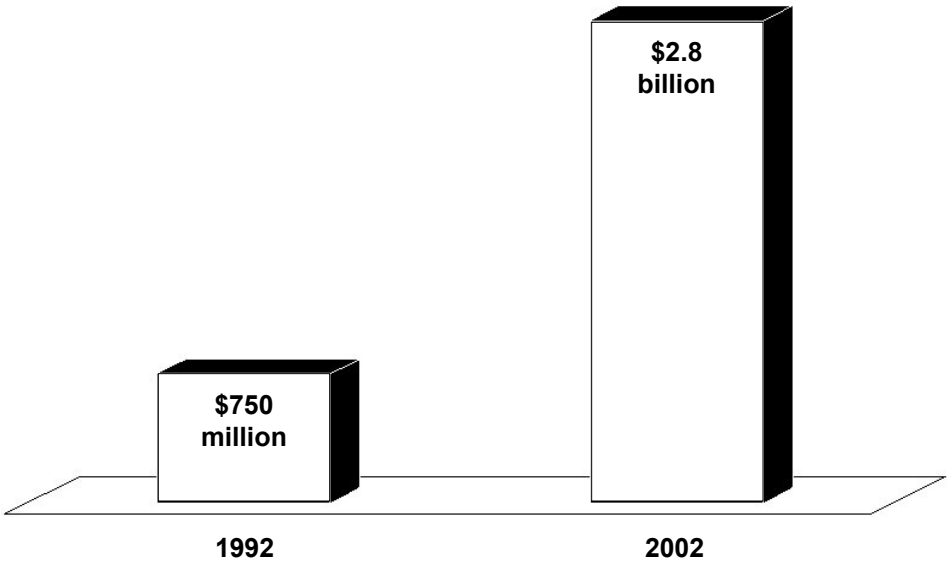
Do-it-yourself tests are proliferating, making self-diagnosis easier than ever before.[67] These include tests for HIV, prothrombin time (clotting) for bleeding disorders and hepatitis C infections.[68] For example, ear infections are the number one reason children see a doctor — accounting for 20 million office visits annually.[69] The EarCheck Middle Ear Monitor is a home testing device for inner ear infections that uses sonar to check behind the eardrum for fluids that may indicate ear infection.[70] The monitor costs about $50, an amount roughly equal to the fee for a single office visit. Likewise, children often get sore throats —which usually don't require a physician visit. Families can buy a QuickVue Strep Test, which costs $90 for 25 tests. Each test helps differentiate strep infections (that require a physician visit) from viral infections (that do not require physician care). The test is simple to use — swab the back of the throat with the applicator, then add a reagent. The color change determines the diagnosis.[71]

The FDA recently approved a Menopause Home Test as the newest entrant into the field of OTC home diagnostics. The kit contains two pads for measuring the serum FSH level (which indicates the onset of menopause). The test is designed to make women aware of the possible onset of menopause

"Sales of self-diagnostic over-the-counter tests more than tripled from $750 million in 1992 to $2.8 billion in 2002."

FIGURE V

Sales of Over-the-Counter Diagnostic Tests



Source: Pan Demetrakakes, "Health Kit Packaging Helps Consumers Feel at Home with Self-Care: Packaging for Home Health Monitoring Devices Combines Health-Care Concerns with Appeal to both Consumers and Retailers," *Food & Drug Packaging*, February 2003.

without the inconvenience and cost of a physician visit. (Some physicians question the benefit of this test, mostly because they don't understand how much patients value this knowledge.[72])

Numerous tests can now be done on blood, and many of these are readily available to patients without a doctor's prescription. Another option that may soon be available to patients is screening storefronts or kiosks that offer lab tests in a convenient setting and provide results quickly, without consulting a physician. The results of a typical physician-ordered blood test are delayed at least a day when they are sent out to a lab. Follow up consultations and/or playing "phone tag" can add more time. However, a Culver City, California-based company (Careside, Inc.) sells a much smaller blood testing machine that can provide results for the 36-most commonly-ordered blood chemistry tests in about 15 minutes.[73] It costs about $10,000, a fraction of the price of most laboratory testing machines, making it affordable for testing centers or individual physician practices.

"Patients can order a blood work up for about $95."

One firm, Quest Diagnostics, has aggressively moved into the field of patient-ordered medical testing.[74] The Web site QuesTest.com features a health library that patients can use to learn more about the tests Quest offers. Another medical testing laboratory, HS Labs (BloodWorksUSA.com), allows patients to pay a fee online, then stop by one of a nationwide network of collection points where a lab technician can draw a blood sample. HS Labs offers a complete blood work special for about $95 that examines numerous metrics.[75]

A competing laboratory service, Direct Laboratory Services, Inc. (DirectLabs.com), offers a similar battery of tests priced at $89.[76] This blood profile provides a thorough biochemical assessment of health based on more than 50 individual tests including blood count, thyroid profile, lipid profile, liver profile, kidney panel, profile of minerals and bone, fluids and electrolytes and tests on diabetes. The company works with more than 5,000 labs so the service is available in most parts of the country.

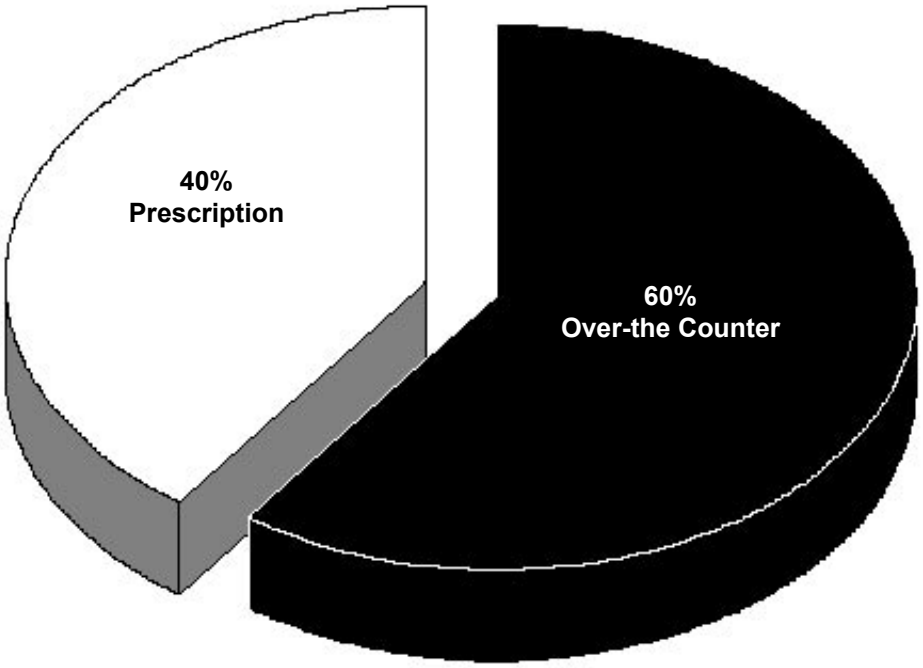
Patients can also order genetic tests to determine their risk for cancer or heart disease and diagnostic imaging to discover if disease is present. Prices for patient-ordered genetic testing for susceptibility to breast and ovarian cancer range from $586 for a single point mutation to $3,312 for a complete sequence.[77] Patients can also order "virtual exams" using MRI or PET technologies to detect cancer, heart disease and other conditions.[78] Many physician groups oppose the use of patient-ordered body scans in asymptomatic patients because these often yield ambiguous results that require patients to spend money on follow-up tests.[79] However, medical societies support doctor-ordered preventive screening tests for various conditions at ages called for in medical protocols. Patients who are aware of the recommended screenings can order many of those tests themselves, for less than a doctor would charge. The difference: Patients typically have to pay for scans they seek out

"Patients can order genetic tests to determine their risk for cancer or heart disease and diagnostic imaging to discover if disease is present."

"Over-the-counter drug products account for 60 percent of drugs used by Americans."

FIGURE VI

Drugs Used by Americans



Source: "Fact Sheet: The Use of Over-the-Counter Medicines," National Council on Patient Information and Education, January 2002.

themselves out of pocket, whereas doctor-ordered tests are more likely to be reimbursed by insurers.[80]

Self-Treatment. According to an article in the *British Medical Journal*, only one out of every 40 symptoms results in a patient making an office visit for a medical consultation.[81] For example, it has been estimated that, at some point in their lives, between 15 percent and 40 percent of the general population experiences gastrointestinal symptoms such as rectal bleeding, irritable bowel syndrome, and dyspepsia (chronic indigestion). Yet only a quarter to a third of people experiencing these symptoms ever consults a practitioner.[82] The information they obtain on the Internet often allows patients to make their own decisions about which symptoms require consultations.[83]

For most medical conditions, people initially self diagnose and treat symptoms, usually with OTC drug remedies. OTC drug products account for 60 percent of drugs used by Americans.[84] [See Figure VI.] Estimates vary, but according to Rottenberg, Americans buy OTC drugs about 12 billion times a year. If only two percent of them sought professional care, rather than treating themselves, the increase in office calls would require 50 percent more primary care physicians than are currently available. If everyone using OTC drugs sought the advice of a physician, the number of primary care physicians needed would be 25 times greater than the number we currently have.[85]

"Eighty-nine prescription drugs, including specific-strength doses of some drugs, have been switched to over-the-counter since 1975."

Eighty-nine prescription drugs, including specific-strength doses of some drugs, have been switched to over-the-counter since 1975.[86] Millions of Americans use these drugs. For example, first generation antihistamines are a popular class of drugs sold over the counter with 14 different formulations available since 1975.[87] It is estimated that 20 million allergy suffers were self-treating with OTC (sedating) antihistamines in 2002, almost half of the total number of Americans suffering from allergies.[88] Claritin, a second-generation antihistamine, one of the best-selling allergy medications, was moved to the OTC market in December 2002.[89] Claritin is an improvement over earlier allergy drugs due to its nonsedating characteristics. The 20 million that were treating themselves with other OTC remedies (and the millions whose symptoms go untreated) are candidates for Claritin or its generic equivalent Loratadine.[90] Virtually all patients on a second-generation prescription antihistamine are candidates for OTC Claritin. Prescription antihistamines generated about $4.7 billion in sales in 2002.[91]

Another example of a popular prescription drug recently moved to the OTC market is the antiulcer drug Prilosec — which was the second best-selling drug in 2001.[92] When it became available over the counter in the fall of 2003, it sold for around 70 cents per capsule compared to almost $4 for the prescription version. Access to popular prescription drugs, such as Claritin and Prilosec, make it both easier and cheaper for consumers to obtain treatment. Not only are these two drugs top sellers, they are both from classes of drugs that have been among the most widely sold. Patients taking any of the other prescriptions drugs in their respective classes might be able to switch to the OTC version of Prilosec or Claritin and save a bundle. [See Figure VII.]

Giving consumers access to medical technology also helps patients since doctors may not be readily available when patients need them. For instance, about 70 percent of heart attacks occur in the home. Philips Electronics now offers a FDA-approved defibrillator for home use that does not require a doctor's prescription.[93] For less than two thousand dollars, consumers can be prepared to treat a cardiac emergency themselves.[94] (See the discussion below on Monitoring and Treating Chronic Conditions.)

Shopping. Consumers have never had more opportunities to obtain price information about drugs. A patient with a prescription can find a range of prices by clicking on a few Internet pharmacy Web sites. The Internet makes it easy to look up information on government and private programs to assist elderly, low-income and disabled patients. Additionally, Web-based services help patients find comparable medications that are cheaper than their current prescriptions. Patients can cut costs substantially by becoming aggressive consumers. In fact, seniors can reduce the cost of some common drug therapies by more than 90 percent if they use the same buying techniques they routinely use when shopping for other goods and services.[95]

Case Study: Cardiovascular Drugs. Patients prescribed 50mg of Tenormin daily can save money by comparison shopping for the best price and quantity. [See Table I.] For instance:

"A patient with a prescription can find a range of prices by clicking on a few Internet pharmacy Web sites."

TABLE I

Case Study: Cardiovascular Medications

Tenormin (brand) 50mg	**Cost of 100 doses[1]**
Drugstore.com (buying 30 tablets at a time)	$149.93
Drugstore.com (buying 100 tablets at a time)	$134.37
Costco.com (buying 100 tablets at a time)	$133.19
RxUSA.com (buying 100 tablets at a time)	$130.49
Tenormin (brand) 100mg split in half	
Costco.com (buying 30 tablets at a time)	$105.78
Costco.com (buying 100 tablets at a time)	$98.44
RxUSA.com (buying 100 tablets at a time)	$97.89
Drugstore.com (buying 100 tablets at a time)	$96.63
Atenolol (generic) 50mg	
RxUSA.com (buying 30 tablets at a time)	$21.67
AARP (buying 100 tablets at a time)	$14.75
Drugstore.com (buying 100 tablets at a time)	$12.21
Costco.com (buying 100 tablets at a time)	$7.99
Atenolol (generic) 100mg split in half	
RxUSA.com (buying 30 tablets at a time)	$12.50
AARP (buying 100 tablets at a time)	$9.95
Drugstore.com (buying 100 tablets at a time)	$7.77
RxUSA.com (buying 100 tablets at a time)	$6.87

[1] One dose = 50mg

Source: Author's Web site surveys in spring 2005.

"Seniors can reduce the cost of some common drug therapies by more than 90 percent with the same techniques they use when shopping for other goods and services."

- Our survey found that the price of 100 (50mg) doses of Tenormin ranged from $149.93 at Drugstore.com to $130.49 RxUSA.com.
- But patients could save at least 75 percent over the lowest cost brand-name drug by switching to the generic alternative Atenolol.
- One hundred doses of the generic drug ranged $21.67 at RxUSA.com to $7.99 at Costco.com.
- Finally, consumers could save another 45 percent (from $12.50 to $6.87) by buying larger pills (100mg) and splitting them in half.

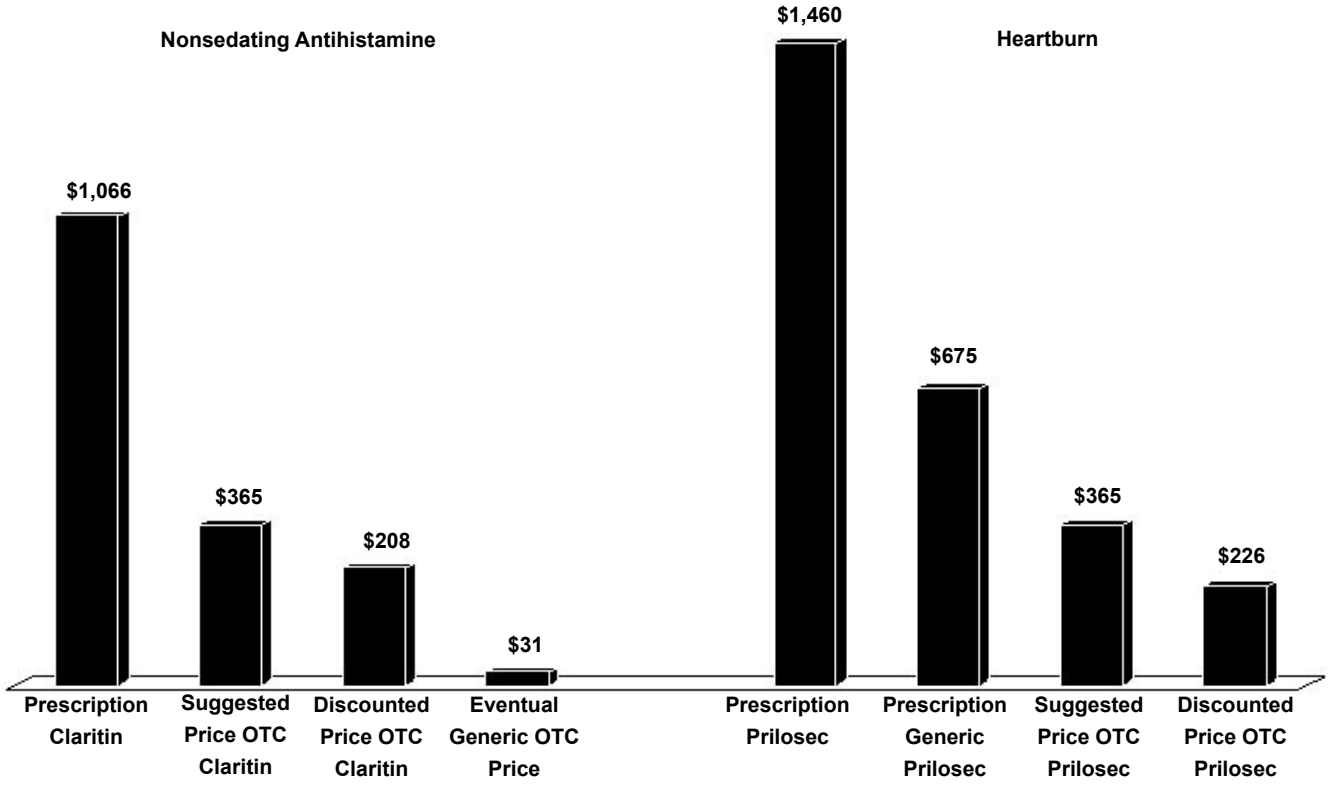
Smart buying of this drug lowered the potential overall cost by 95 percent — from a high of $149.93 to a low of $6.87.

Monitoring and Treating Chronic Conditions

Treatment of chronic diseases is one of the factors driving up health care costs. Nearly half (45 percent) of all Americans have a chronic condi-

FIGURE VII

Prescription Drugs Switched to Over-the-Counter
(Claritin and Prilosec cost per year)



Source: Author's calculations using Web site prices.

tion, and half of those (60 million) have multiple chronic conditions.[96] A Yale University study found that one-quarter of Americans have one or more of five chronic conditions: mood disorders, diabetes, heart disease, high blood pressure and asthma. Moreover, patients with these conditions account for almost half of all health care spending.[97]

"Nearly 45 percent of all Americans have a chronic condition, and half of those (60 million) have multiple chronic conditions."

Patients with chronic illnesses can use the Internet to obtain information on specific medical conditions, clinical trials and the latest drugs. They can also share their experiences with and learn from others suffering from the same conditions. Once patients inform themselves, they can manage their conditions and control their health care in ways unheard of only a few decades ago. Following are some examples of how patients with some common chronic conditions can take a more active role in their own care.

Heart Disease. Heart disease, the most common chronic condition, is America's number one killer. According to the American Heart Association, 65 million Americans have high blood pressure, resulting in 5.4 million strokes per year.[98] In 2005, hypertension will cost nearly $60 billion ($59.7 billion). The cost of strokes, which are frequently a complication of hypertension, costs an additional $56.8 billion. The average cost, in present value dollars, of treating cardiovascular disease for the duration of life for the average 45-year old is $30,000.[99]

Patients with high blood pressure have opportunities to reduce their cost of treatment by shopping. For example, those on the anti-hypertensive drug Cardura (Doxazosin) can split double-strength tablets for a savings of 46 percent.[100] In addition, research has found that an inexpensive "water pill" (diuretic) is more effective than many newer, higher-priced antihypertensive medications such as ACE inhibitors and calcium channel blockers.[101] For this reason, experts say low-cost diuretics should be a hypertensive patient's first step in controlling high blood pressure.[102]

"Some 65 million Americans have high blood pressure, resulting in 5.4 million strokes per year."

In addition to shopping, patients with hypertension can take a more active role by administering their own tests. A controlled study of more than 300 patients with high blood pressure found that patients who monitored their own blood pressure and adjusted their own medications had 27 percent fewer physician office visits than those who did not.[103] Those who self-medicated were given a $40 blood pressure monitoring device and a formula to adjust their medication. They achieved blood pressure control similar to those who depended on a physician to adjust their medication.

There are also cheaper medication options many hypertensive patients can use to reduce the risk of stroke, a major complication of hypertension. A recent study in the *Journal of the American Medical Association* found two daily aspirins were as effective at preventing recurrent strokes in African Americans as a daily 500mg dose of the drug Ticlopidine.[104] This is a significant finding, given the fact that Ticlopidine can easily cost patients almost $65 per month.[105]

"Nearly $2.5 billion in annual hospital costs for diabetes complications could be averted with appropriate care."

Diabetes. More than 16 million Americans have diabetes — the sixth-leading cause of death by disease in the United States.[106] The mortality rate for people with diabetes is 11 times the rate for those without the disease.[107] In addition, diabetics spend four times more money on health care than nondiabetics.[108] There is much to be gained from better disease management. By one estimate, nearly $2.5 billion in annual hospital costs for diabetes complications could be averted with appropriate care.[109] Numerous studies have shown considerable benefit from self-management training for Type 2 diabetes.[110] Patients can be trained to inject insulin, monitor and maintain a log of blood glucose levels, and use the results to adjust their dietary intake, activity levels and medicine doses.[111]

There are approximately 20 different monitors to test blood glucose available in a variety of shapes and sizes.[112] Occasionally monitors are given away free — but some only work with a proprietary brand of glucose test strips and therefore are more costly in the long run.[113] Costs for test strips vary considerably. A diabetic patient could pay $69.99 for 100 Ascensia Microfill Blood Glucose Test Strips at Devine Medical's Web site.[114] However, the same 100 count box is sold on eBay for $59.95.[115] If patients who check their blood sugar four times a day could save 25 cents per test strip, the savings would add up to $365 for the year.

In the past few years several new oral medications for diabetes became available.[116] Savvy consumers will also find the price of diabetic medications vary considerably.[117] Some are available in generic form while some are not. In addition, many diabetics can reduce reliance on medications and control their diabetes completely by adhering to a meal plan, losing weight and exercising.[118]

Asthma Self-Management. From four to six percent of the population of Western countries has been diagnosed with asthma. Uncontrolled asthma imposes economic costs on society.[119] The Asthma and Allergy Foundations of America estimates nearly 20 million Americans suffer from asthma — resulting in 500,000 hospital stays each year.[120] More than 2.5 million school-age children suffer from asthma, missing nearly 15 million school days per year. The economic loss averages out to nearly $800 per child per year.[121] A Dutch study comparing self-management to usual care found that those monitoring their own asthma achieved a savings of about 7 percent the first year and a 28 percent savings the second year compared to those in standard care with a primary physician.[122]

Patients should develop a self-management plan with their physician or asthma nurse. An asthma plan is essentially a list of established guidelines indicating which actions to take in response to various symptoms.[123]

Asthmatics can use a software package called Asthma Assistant to monitor their condition.[124] This computer program helps patients measure

their condition on a daily basis, including peak air flow, medication and events that may trigger symptoms. Such biometric data can be transmitted over the Internet from a patient's computer to a physician's office computer for evaluation by a doctor or technician (a process called telemonitoring). The software program analyzes airway obstruction data gathered by the patient using a spirometer, which measures the speed and volume of exhalations. A recent study of asthma patients trained to perform in-home asthma telemonitoring found that the results of self-testing were consistent and met established guidelines. Moreover, participation in telemonitoring did not require that patients have extensive computer knowledge.[125] Some 87 percent of patients in the study were "strongly interested" in continuing to use this method.

Bleeding and Clotting Disorders. A variety of conditions cause patients to bleed too freely or their blood to clot too readily. A study of Veteran's Administration patients found that home self-monitoring of prothrombin time (clotting) while taking Coumadin (Warfarin) to reduce the formation of blood clots is superior to standard monitoring by physicians. The "bleeding rate" was 11 percent for patients monitored monthly at a clinic, but only 4.5 percent for patients who monitored their own prothrombin time at home on a weekly basis. The rate of blockages caused by blood clots, known as thromboembolism, was four times higher with standard follow-up therapy than with self-monitoring (3.6 percent each year versus 0.9 percent). Serious cases of bleeding (and/or thromboembolic events) occurred in 2.7 percent of cases per year in the standard-monitoring group but there were none in the home-monitoring group.[126]

Migraine Headaches. The National Headache Foundation estimates that 28 million Americans suffer from migraine headaches each year, resulting in the loss of 157 million workdays.[127] The cost of migraine headaches on the economy is estimated in the billions of dollars.[128] One of the ways patients can help doctors with migraine management is by keeping detailed records, including a diary to identify triggers of migraines, time, duration, frequency and severity of attacks.[129] Some patients find they can effectively treat themselves using low-cost over-the-counter drugs. For instance, a multicenter trial of an over-the-counter therapy containing acetaminophen/aspirin/caffeine (AAC) provided significantly better (more rapid and more sustained) relief than the prescription drug sumatriptan.[130] Sumatriptan, sold under the brand name Imitrex, costs around $16 per tablet, regardless of the strength of the dose (25mg, 50mg or 100mg).[131] Individuals suffering from the onset of a migraine headache can take up to 200mg of Sumatriptan per day.[132] Patients who try AAC treatment may find they can save hundreds per year, and possibly see the doctor less frequently.

"Self-monitoring saved asthma patients about 7 percent the first year and 28 percent the second year compared to physician monitoring."

Economic Incentives. Because chronic disease is so costly, insurers and public health advocates hope that chronic disease management (CDM) will reduce costs and improve quality of life in chronically ill patients.[133] The goal is

to identify expensive-to-treat patients and reduce costs through better management of their disease before costly complications occur.

Patients may not be able to rely on their health insurers for disease management.[134] The reason is that, for the most part, insurers and providers don't benefit from the results. The efforts of health insurers to use disease management generally don't pay off because patients do not stay enrolled in their plans long enough to recoup the investment. Furthermore, a recent study in *Health Affairs* found that when disease management was provided to broad populations of patients with chronic disease, overall costs generally rose rather than fell. The only group who benefited from disease management was the small subset of patients not following treatment protocols.[135] For patients already adhering to protocols, additional expenditures to better manage their conditions generally result in higher marginal costs with little marginal benefit. But when patients control their own expenditures, and benefit from any savings they realize, they have an economic incentive to adhere to treatment protocols.

Patients also may not be able to rely on their doctors to manage their conditions. Physicians' compensation is based on the services they render, rather than evaluations of their performance based on patient outcomes.[136] Consequently, physicians have little incentive to counsel patients on disease management and follow up to see if recommendations were followed.

"When patients manage their own health care dollars, they have an economic incentive to adhere to treatment protocols."

Patients benefit the most from disease management in terms of better health. If patients tend to reap most of the benefits, they should bear the cost and control the funds necessary to manage their chronic conditions. Since chronic conditions increase patients' out-of-pocket costs, controlling the funds to manage their conditions is a step towards motivating them.[137] Patients with health savings accounts would reap financial rewards (beside the reward of good health) since they would be at liberty to use fund for prevention rather than acute care.

Legal Obstacles

State and federal regulation of medical care has not kept up with the technology now available to patients. Neither has it kept up with patients' ability to easily participate in their own medical decisions.

Needed Reform: Laws on Physician Practice. In the United States, physicians are licensed by a state medical board to practice medicine. Many state medical boards find the practice of cyber-medicine unethical if a consultation does not involve face-to-face examinations.[138] This makes practicing medicine online and across state borders difficult — if not illegal. Even rendering second opinions by way of the Internet is sometime problematic.[139] For example, physicians working for the Web-based service MyDoc.com faced the threat of legal action for treating patients after having online consultations.[140] However, 43 percent of Internet-using patients report seeking, in effect, a sec-

ond opinion on a medical Web site. About one-third of patients on the Internet have sought the advice online of a physician other than their own.[141]

State medical licensing also restricts trade. A patient receiving a mammogram or body scan could request that the results be sent electronically to a high-tech facility in India to be interpreted by a highly trained Indian physician at a fraction of the cost of an American radiologist. Likewise, it would cut costs if a patient receiving comprehensive blood tests through a direct testing facility could choose a physician anywhere in the country (or world) to interpret the results. A few hospitals have arrangements with high-tech facilities staffed with Indian radiologists who interpret X-rays and scans at night when an American radiologist is not available. However, various state laws make this arrangement difficult unless the Indian radiologist is licensed in the state where the hospital is located or unless a state-licensed American physician signs off on the results.[142]

Needed Reform: Laws on Referrals. Regulation also affects how medical referrals are made. State and federal laws prevent practitioners from paying fees in return for patient referrals. Although this sounds like a good policy, it also has some negative ramifications. Blocking all referral fees makes it difficult to connect patients with providers of medical services.

Imagine a medical services auction Web site similar to eBay. Sellers could offer package deals for various medical services available at given time slots. Potential buyers could read feedback left by previous patients to ensure the service provider's quality and honesty. Shady practitioners would be essentially blacklisted by accumulated negative feedback and no one would be willing to patronize them. But, because they are not able to charge physicians a referral fee, medical auction Web sites have to trust consumers to pay for completed services (although the patients have little incentive to do so after they have connected with a physician). And consumers are often difficult to track down since they likely only purchase services occasionally. Neglecting to report the purchase of the service to the Web site could save them $20 to $95 depending upon the procedure purchased. For this reason, most Web sites advertising medical services are promoting the services of individual medical practices rather than bringing together numerous physicians to compete on price to earn patients' business. As a result, the online market for connecting buyers and sellers of medical services is small and uncompetitive compared to the numerous auction Web sites like eBay and Yahoo.

"Blocking all referral fees makes it difficult to connect patients with medical service providers."

One medical auction Web site that does exist, BidForSurgery.com, connects cosmetic surgery providers with potential patients. Physicians compete for business on both quality and price. Patients are free to consider any offer made by a physician and schedule a complimentary consultation. Since cosmetic surgery is paid for out-of-pocket, patients are free to pick the physician of their choice. However, it is difficult for the Web site to collect fees for their

services. Whereas Web sites selling airline tickets receive nominal fees from the airline whose ticket is sold (usually $5 to $10) — and the air traveler often also pays a nominal fee — BidforSurgery.com cannot make similar arrangements as easily. Since surgery is ultimately an arrangement between doctor and patient after a consultation, it is difficult to track and bill a patient whose services were successfully arranged. The most logical party to pay a "finder's fee" would be physicians, since they stand to gain from performing numerous procedures, but they are not legally allowed to pay for referrals.

Like other Web sites, BidforSurgery.com earns revenue by displaying commercial advertising. However, selling advertising is not as lucrative as physicians paying referral fees per completed transaction. Thus the market for medical auction Web sites is not very competitive.

Needed Reform: Drug Regulation. Two-thirds of office visits to physicians result in prescription drug therapy because it is among the most efficient methods to treat illnesses.[143] But only a licensed medical practitioner can prescribe prescription drugs. The only drugs that consumers can obtain without a prescription are those approved for sale over the counter. The process of moving a drug from prescription-only status to OTC status is called Rx-to OTC switching. Drug manufacturers usually request this switch when their patent protection is about to expire. In other words, OTC drugs are usually older therapies that have been replaced by a newer medicine. In many cases newer drugs are more effective than older, less expensive drugs.[144]

"Two-thirds of office visits to physicians result in prescription drug therapy because it is among the most efficient methods to treat illnesses."

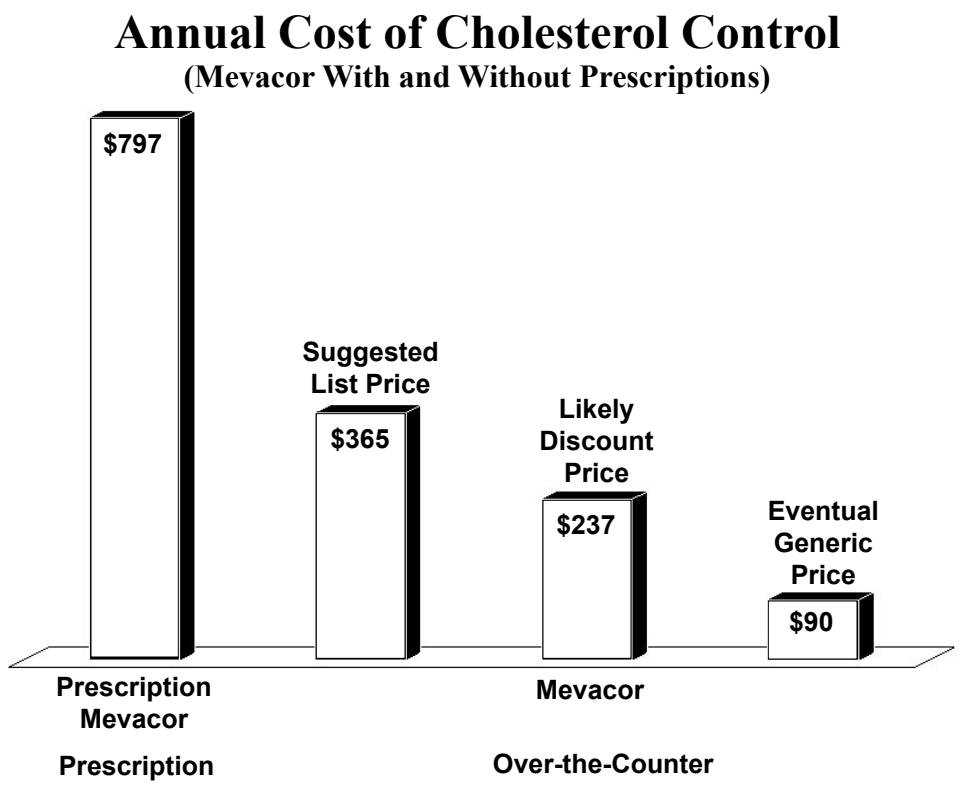
Restricting patent medications to the prescription-only market drives up consumers' costs. Likewise, denying consumers access to any safe drug drives up treatment costs.[145] The Food and Drug Administration (FDA) has recently shown a greater willingness to consider increasing patients' access to formerly prescription-only drugs.[146] Consequently, the number of drugs switched to OTC status is expected to increase 50 percent over the next few years.[147] The FDA recently held public hearings to discuss possible changes in the criteria or inclusion of classes of drugs to consider for OTC status.[148] A request initiated by WellPoint Health Networks (which manages health plans) to move second generation antihistamines (Claritin, Allegra and Zyrtec) from prescription-only status to over the counter was the first time an FDA panel voted to recommend OTC status when manufacturers hadn't requested it and were opposed to the switch.[149]

Unfortunately, the FDA's recent track record of moving medications to the OTC market is decidedly mixed. Europe approves far more drugs for OTC sales. Over the last two decades, for every drug switched from RX to OTC in the United States, Europeans have switched more than four.[150] The FDA missed a chance to approve two power cholesterol-lowering drugs, Mevacor (Lovastatin) and Pravacol (Pravastatin), for OTC use in 2000.[151] In January 2005 an FDA advisory panel again voted overwhelmingly against

"Europe has approved four times as many prescription drugs as the United States for over-the-counter sale."

"Drugs for high blood pressure and cholesterol control are good candidates for over-the-counter status."

FIGURE VIII



Note: Annual cost does not include physician visits or lab tests. Doctor vists required for prescriptions might cost $200 per year. Necessary lab tests would likely cost $50 to $200 per year depending upon whether they are mail-ordered from a lab or performed in a doctor's office.

Source: Author's calculations using Web site prices.

recommending Mevacor for over-the-counter sales.[152] This is unfortunate because recent studies have shown how beneficial these drugs are in reducing coronary heart disease and heart attacks.[153] Analysts hoped the FDA would eventually approve OTC sales of Lovastatin. However, Merck, the maker of Lovastatin, may not be willing to bear the cost of satisfying all the FDA's queries. For instance, in the latest attempt to convince the FDA to switch Mevacor, Merck conducted trials with mock storefronts where observers studied consumers' ability to self-diagnose high cholesterol, read product labels and follow directions. Despite an extensive study, the FDA did not think Merck had proved their case. The expense of submitting an RX-to-OTC petition to the FDA is high. And once the patent expires, opportunities to extend a drug's profits quickly diminish over time.[154] As a result, American consumers are denied OTC access to drugs that could significantly reduce treatment costs.[155] [See Figure VIII.]

Regulations are not so restrictive in some other developed countries. For example, the British have approved the OTC sale of a low-dose version of Merck's newer drug Simvastatin under the brand name Zocor Heart Pro, with a short pharmacist consultation.[156] The British Committee on Safety of Medicines recommended selling Simvastatin OTC after studies showed that

Simvastatin can reduce LDL cholesterol (e.g. bad cholesterol) by 27 percent and the risk of heart attack of death from coronary heart disease by one-third after three years of treatment.[157] Interestingly, European medical publications address the issue of "self-care" more frequently (and openly) than journals based in the United States. This may be one reason why Europe has switched far more prescription drugs to OTC status during the past two decades.[158]

Another consumer choice was effectively thwarted — some say for political reasons — when the FDA declined to allow sales of Plan B (emergency contraception) for OTC use.[159] Both the FDA's reproductive health drugs advisory committee and nonprescription drugs committee voted in favor of the OTC switch for Plan B in a joint meeting.[160] However, 49 House Republican legislators sent a letter to President Bush voicing their view that it should not be made available without a prescription.[161] Since this medication must be started within 72 hours of unprotected intercourse, requiring a doctor's prescription effectively prevents access by women.

The FDA needs to make more medications available to the public over the counter — including those for chronic conditions. Easier access to drugs like statins for cholesterol, medications for high blood pressure and cardiac drugs to treat heart conditions all are good candidates for over-the-counter.

Some critics argue that self-treatment based upon information obtained from the Internet is not in patients' best interest.[162] However, patients could discuss treatment protocols with their physicians. They could also discuss the cost of various treatments and the trade-offs they are willing to make. [163]

Needed Reform: Legal Liability. Physicians usually counsel patients on treatments and therapies in person and then write relevant information in the medical records based on the physicians' observations. Whereas there is usually no complete documentation of phone conversations or examination room visits, an e-mail exchange is often an unfiltered transcript of patient and physician exchanges.[164] Physicians may risk lawsuits if an e-mail exchange in the medical record is not concise in its explanation of patient treatments plans and does not conform to standards of accepted care protocols. A bigger problem is that there is no examination on which advice is given. The American Medical Association recommends that physicians establish guidelines for situations when e-mail correspondence is appropriate and when in-person office visits are preferred.[165] A different malpractice standard for e-mail consultations (compared to in-person consultations) is needed so that physicians are not afraid to use e-mail with patients out of fear of malpractice suits. Legal reform should protect physicians following appropriate guidelines on patient/physician e-mail communication such as those established by the American Medical Informatics Association.[166]

"A different malpractice standard for e-mail (compared to in-person) consultations is needed."

Conclusion

Consumers now have numerous avenues to become smart shoppers of medical services. Research has shown that employees are more satisfied when they have a greater choice of plans and consumer-driven health care offers them the ultimate choice. With these new plans comes the opportunity to manage our own care.

An important byproduct is that the quality of health care and service improves when patients control the checkbook, rather than third-party insurers. Another important result is that costs will rise more slowly. Over 250 million consumers holding a tight rein on health care spending will do more to control costs than a few third-party bureaucrats working for HMOs.

Notes

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About the NCPA

The NCPA was established in 1983 as a nonprofit, nonpartisan public policy research institute. Its mission is to seek innovative private sector solutions to public policy problems.

The center is probably best known for developing the concept of Medical Savings Accounts (MSAs), now known as Health Savings Accounts (HSAs). The *Wall Street Journal* and *National Journal* called NCPA President John C. Goodman "the father of Medical Savings Accounts." Sen. Phil Gramm said MSAs are "the only original idea in health policy in more than a decade." Congress approved a pilot MSA program for small businesses and the self-employed in 1996 and voted in 1997 to allow Medicare beneficiaries to have MSAs. In 2003, as part of Medicare reform, Congress and the President made HSAs available to all nonseniors, in principle, potentially revolutionizing the entire health care industry. A series of NCPA publications and briefings for members of Congress and the White House staff helped lead to this important legislation.

The NCPA also outlined the concept of using tax credits to encourage private health insurance. The NCPA helped formulate a bipartisan proposal in both the Senate and the House, and Dr. Goodman testified before the House Ways and Means Committee on its benefits. Dr. Goodman also helped develop a similar plan for then presidential candidate George W. Bush.

The NCPA shaped the pro-growth approach to tax policy during the 1990s. A package of tax cuts, designed by the NCPA and the U.S. Chamber of Commerce in 1991, became the core of the Contract With America in 1994. Three of the five proposals (capital gains tax cut, Roth IRA and eliminating the Social Security earnings penalty) became law. A fourth proposal — rolling back the tax on Social Security benefits — passed the House of Representatives in summer 2002.

The NCPA's proposal for an across-the-board tax cut became the focal point of the pro-growth approach to tax cuts and the centerpiece of President Bush's tax cut proposal. The repeal by Congress of the death tax and marriage penalty in the 2001 tax cut bill reflects the continued work of the NCPA.

Entitlement reform is another important area. With a grant from the NCPA, economists at Texas A&M University developed a model to evaluate the future of Social Security and Medicare. This work is under the direction of Texas A&M Professor Thomas R. Saving, who was appointed a Social Security and Medicare Trustee. Our online Social Security calculator, found on the NCPA's Social Security reform Internet site (www.TeamNCPA.org) allows visitors to discover their expected taxes and benefits and how much they would have accumulated had their taxes been invested privately.

Team NCPA is an innovative national volunteer network committed to educating average Americans about the problems with the current Social Security system and the benefits of personal retirement accounts.

In the 1980s, the NCPA was the first public policy institute to publish a report card on public schools, based on results of student achievement exams. We also measured the efficiency of Texas school districts. Subsequently, the NCPA pioneered the concept of education tax credits to promote competition and choice through the tax system. To bring the best ideas on school choice to the forefront,

the NCPA and Children First America published an *Education Agenda* for the new Bush administration, policy makers, congressional staffs and the media. This book provides policy makers with a road map for comprehensive reform. And a June 2002 Supreme Court ruling upheld a school voucher program in Cleveland, an idea the NCPA has endorsed and promoted for years.

The NCPA's E-Team program on energy and environmental issues works closely with other think tanks to respond to misinformation and promote commonsense alternatives that promote sound science, sound economics and private property rights. A pathbreaking 2001 NCPA study showed that the costs of the Kyoto agreement to halt global warming would far exceed any benefits. The NCPA's work helped bolster the argument that the treaty would be bad for America. Subsequently, the Bush administration rejected it.

NCPA studies, ideas and experts are quoted frequently in news stories nationwide. Columns written by NCPA scholars appear regularly in national publications such as the *Wall Street Journal*, the *Washington Times*, *USA Today* and many other major-market daily newspapers, as well as on radio talk shows, television public affairs programs, and in public policy newsletters. According to media figures from Burrelle's, nearly 3 million people daily read or hear about NCPA ideas and activities somewhere in the United States.

The NCPA home page (www.ncpa.org) links visitors to the best available information, including studies produced by think tanks all over the world. Britannica.com named the ncpa.org Web site one of the best on the Internet when reviewed for quality, accuracy of content, presentation and usability.

What Others Say about the NCPA

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