

**Jonas & Kovner's**

# **Health Care Delivery in the United States**

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# Health Care Costs and Value

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## KEY WORDS

accountable care organization (ACO)	medical malpractice
centers of excellence (COE)	overconsumption
defensive medicine	rationing
electronic medical records (EMRs)	value-based purchasing (VBP)

## LEARNING OBJECTIVES

- Understand potential contributing factors to the growth in health care costs in the United States over the past 60 years
- Explain value in terms of health care
- Recognize conflicts embedded within the health care delivery system that drive up costs and reduce value
- Identify why attempts at cost control have not succeeded

## TOPICAL OUTLINE

- Why health care spending is a national concern
- The concept of value in the health sector
- The challenge of reducing costs but not value
- Technology as a driver of expenditures
- The issue of the prices of inputs in the health sector
- Initiatives to address expenditure/value tradeoffs

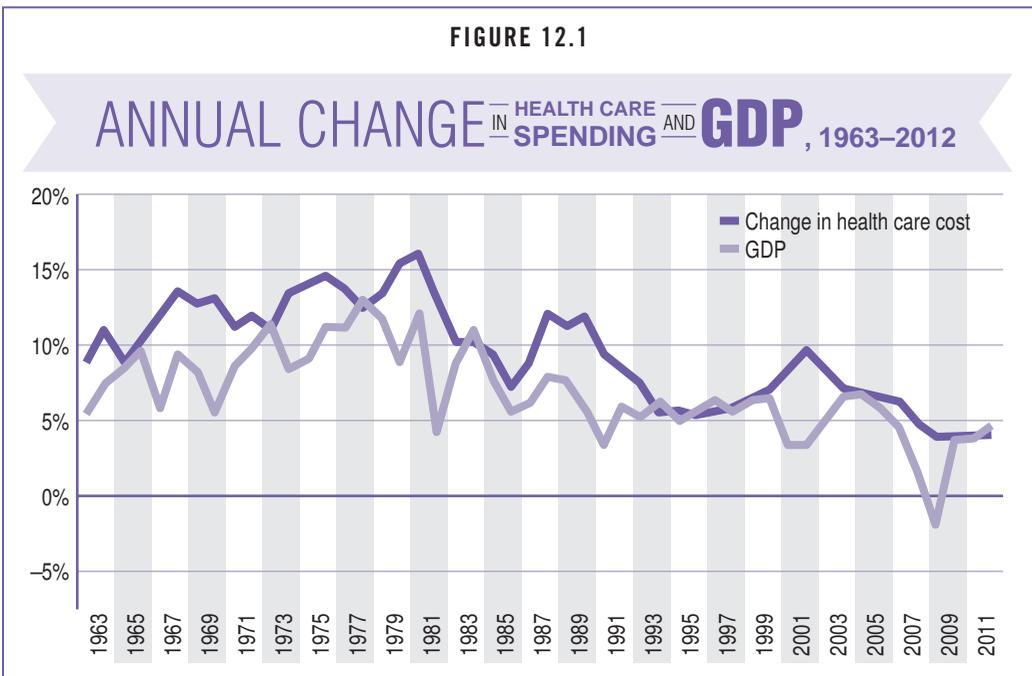
This chapter focuses on health care costs and value—concepts that are inextricably linked yet routinely analyzed separately. In 2015, Americans will spend nearly \$3.2 trillion on health care, nearly one fifth of all economic activity in the United States and equal to nearly \$9,000 per person. If we as a society perceived that we were extracting value at least equal to this spending, it is unlikely that concerns about the “crisis” in health care spending would be so commonplace. For example, in other sectors, such as cable television and Internet service, the United States also has seen huge growth in expenditures. But, in this case growth is based on individual consumers deciding that these expenditures have value that is worth the cost. In the case of health care, this assessment is more difficult to make because of the role of insurance in paying for medical care. As a result, there is a growing sense that our massive spending on health care is not leading to value

worth this spending. This chapter explores the relationship between costs and value and considers ways to improve the payoffs from our health spending.

### ■ The Issue of Health Care Spending Growth

In 1963, before the implementation of our major public insurance programs (see Chapter 3), national spending on health care totaled about \$261 billion in current dollars. (Actual spending in 1963 was \$34.7 billion, but there has been natural inflation in the economy over time. At today's inflation-affected prices, this \$34.7 billion is equivalent to \$261 billion. We present the inflation-adjusted figures when referring to 1963 expenditures in order to focus on "real" changes in spending.) On a per capita basis, this 1963 spending equaled \$1,440 per person in inflation-adjusted dollars. Per capita spending grew more than 550% in real terms between 1963 and 2012, reaching nearly \$9,000 per person in 2012. Importantly, the average annual growth in health care spending between 1963 and 2012 was nearly 9.5%, whereas nominal gross domestic product (GDP) growth during this period was 6.8%—meaning that health care spending grew faster than other economic activity over the past five decades. The implication of these trends is that health care is an increasing share of all spending in the economy. Trying to understand why this is occurring is important.

Figure 12.1 shows how expenditure growth follows the pattern of GDP growth but health expenditure growth relentlessly exceeds GDP growth (U.S. GDP changes come from the Bureau of Economic Analysis). Interestingly, the only time this was not true was between 1993 and 2000, when there was a substantial effort to change the organization and financing of health care during the Clinton administration. After these efforts had failed, expenditure growth spurred back up.



Why is there so much concern about the growth in health care expenditures in the United States? The important reason is that a great deal of health care expenses are paid by government and employers—and the growth greatly affects these two key sectors of our economy.

The federal government, each state government, and many local governments spend a great deal of their tax revenues on health care. The federal government finances (a) the Medicare program, which provides insurance for elderly Americans; (b) more than half of the Medicaid program, which pays for health care received by low-income Americans; (c) Veterans Affairs and Department of Defense health care expenses; and (d) the costs of extensive research, public health, and training activities. State governments pay for as much as half of the Medicaid program directly, as well as for extensive activities in public health and regulation. Local governments generally support public health expenditures and some safety-net medical care.

***The large share of tax dollars allocated to health care is crowding out expenditures on other important needs in our economy, such as expenditures on education and infrastructure.***

In 1963, federal, state, and local governments financed only about \$6 billion (equivalent to about \$46 billion today) of total health care spending. This spending represented about 3% of total public spending. By 2012, governments were spending nearly \$1.2 trillion (of the \$2.8 trillion total) on health care, comprising more than 19% of total public spending. There are two key concerns with this growth in government costs. First, these costs are putting a great strain on taxes paid by workers and employers, and this strain is seen by many as decreasing the vibrancy of our economy. Second, the large share of tax dollars allocated to health care is crowding out expenditures on other important needs in our economy, such as expenditures on education and infrastructure. This is especially true at the state and local levels, where government spending on health has increased by 154% over the past 40 years but expenditures on education have been “crowded out” and increased by just 74% over the same period.

Health care costs are not purely a public finance issue, however. Private businesses—which purchase health insurance for employees and their families—frequently cite increasing costs as problematic. For example, the cost of health insurance was cited as the top concern of small business owners in 2008 and 2012 (Wade, 2012). As a result, as health insurance costs have increased, employers provide fewer salary increases because resources are instead devoted to increased health insurance costs (again, health expenditures are “crowding out” expenditures on salaries). Additionally, fewer employers continue to offer group health insurance to employees—or they limit dependents of employees who can access coverage. For example, in August, 2013, United Parcel Service began excluding health insurance coverage for spouses with access to health insurance at their own places of employment. Buchmueller, Carey, and Levy (2013) found that even though employers offered health insurance to more than 112 million employees in 2000, this number had declined to 108 million employees in 2011, or 4% fewer workers covered in one decade.

Beyond simple financial costs, studies find that increasing health insurance costs decreases full-time employment and also decreases hours worked for employees that

work part time (Baicker & Chandra, 2005; Sood, Ghosh, & Escarce, 2009). Health care costs are implicitly part of national discussions about unemployment and job creation.

Of course, health spending also is a burden on American families, which—despite the large expenditures by government and employers—also pay a sizable amount for health care in their family budgets.

Table 12.1 analyzes how a typical family allocates its income across different types of expenditures. In 2012, total health care spending actually paid by the typical family was \$3,556, which ranks it only the sixth largest item consumed, behind housing, transportation, and food costs (see Table 12.1). According to the Bureau of Labor Statistics, the average household spent more on gasoline purchases in 2012 (\$2,549) than on health insurance (\$2,061). But, the typical family is not every family. Families without insurance coverage and families that include someone with a chronic disease tend to spend a much larger share of after-tax income on health care.

These expenditure patterns explain a large part of the difficulty in making sure we, as a nation, are not spending too much on health care. A typical American might not realize how much he or she ultimately pays for health care (or the protection against health care costs afforded by insurance) because so much of this cost is paid by government and employers. In the end, however, these government and employer payments markedly affect the total after-tax incomes of families.

A final consideration related to American health care spending is that our health care spending far outpaces other western developed nations (see Chapter 4). In 1980, the United States devoted more of its GDP to health care spending (9%) than other western developed nations, but the difference was not extraordinary. By 2011, however, U.S. spending as a share of GDP far exceeded other comparable nations (see Table 12.2). Certainly other nations have experienced increased health care spending,

**TABLE 12.1 AVERAGE ANNUAL AFTER-TAX EXPENDITURES BY CONSUMER UNITS/HOUSEHOLDS, 2012**

	Average Annual Expenditures in Dollars, 2012	Change from Previous Year
Housing	16,887	0.5%
Transportation	8,998	8.5
Personal Insurance and Pensions	5,591	3.1
Food, at Home	3,921	2.2
All Other Expenditures	3,557	5.2
<b>Health Care</b>	<b>3,556</b>	<b>7.3</b>
Food, Away From Home	2,678	2.2
Entertainment	2,605	1.3
Cash Contributions	1,913	11.2
Apparel and Services	1,736	-0.2
Total	51,442	

Source: U.S. Department of Labor, Bureau of Labor Statistics.

**TABLE 12.2 HEALTH CARE SPENDING AS A PERCENTAGE OF GDP FOR OECD COUNTRIES**

	1980	2011	Increase	Rank
United States	9.0%	17.7%	8.7%	1
Sweden	8.9	9.5	0.6	21
Denmark	8.9	10.9	2.0	19
Germany	8.4	11.3	2.9	14
Ireland	8.2	8.9	0.7	20
Netherlands	7.4	11.9	4.5	4
Austria	7.4	10.8	3.4	11
Switzerland	7.3	11.0	3.7	10
Norway	7.0	9.3	2.3	18
France	7.0	11.6	4.6	3
Canada	7.0	11.2	4.2	7
Japan	6.5	9.6	3.1	13
Iceland	6.3	9.0	2.7	16
Finland	6.3	9.0	2.7	16
Belgium	6.3	10.5	4.2	6
Australia	6.1	8.9	2.8	15
New Zealand	5.9	10.3	4.4	5
Greece	5.9	9.1	3.2	12
United Kingdom	5.6	9.4	3.8	9
Portugal	5.3	10.2	4.9	2
Spain	5.3	9.3	4.0	8

Sources: 1980 data (Chandra & Skinner, 2012); 2011 data (OECD, year).

but the United States is unique in the degree of its increase—far outpacing even the nation with the second largest growth.

To return to the primary issue—if the United States spent significantly more on health care and received significantly better health outcomes, then health care cost growth might not be considered problematic. However, according to the Organisation for Economic Co-operation and Development (OECD), the United States ranks 26th out of 36 member countries for life expectancy, and just below the OECD average for life expectancy (see Figure 2.5 in Chapter 2). When fatal injuries are removed, U.S. life expectancy rankings improve dramatically, but they are still only comparable with other OECD nations. Further outcomes (such as infant mortality) are also at best only comparable with other nations, despite our spending. On these measures of outcomes, therefore, it does not appear the U.S. system is getting results for its increased spending.

A more nuanced view of U.S. health care spending, however, is to consider that our increased costs are related to quality of life issues rather than just to life extension. For example, in the United States it is not uncommon for patients in their 70s to have expensive surgeries (such as knee or hip replacements) so that they can maintain or return to physical activities, whereas such procedures would not be as common abroad. Hence, health care value relative to outcomes largely tied to longevity in these international comparisons is frequently defined in a very limited way.

### THE VALUE OF HEALTH CARE SPENDING

One major problem with discussions about health care spending is that *value* is difficult to define, let alone measure. Very often, people mistakenly think that cutting cost is the central way of producing value. Third-party payers often argue that the “value” they add is reducing payments to health care providers, thereby reducing the cost of health care to the employer, taxpayer, or individual who is the actual payer. Many health care professionals who think and work on quality issues, by contrast, focus on ensuring that consumers get the best treatment available at the correct time (Robert Wood Johnson Foundation, 2013).

*Value is best defined as the best patient outcomes relative to the amount of money we as individuals or as a society are able and/or willing to pay to stay healthy or to recover from illness.*

Yet value is not just about cost or just about patient outcomes; rather, value is best defined as the best patient outcomes relative to the amount of money we as individuals or as a society are able and/or willing to pay to stay healthy or to recover from illness. This conception of value focuses on results and not merely on the inputs used to achieve these results. It is possible to increase value by improving the quality, outcomes, and patient experience of medical care, and it is possible to increase value by achieving the same quality, outcomes, and experience at a lower total cost by improving efficiency.

So what has been our experience with improving value? Across some dimensions, the quality of medical care and outcomes are improving markedly in the United States (see Chapter 13). Deaths associated with stroke and heart disease are down substantially, and most would agree this is due to improvements in medical know-how, pharmaceuticals, and emerging technology. Cancer mortality also is improving due to better treatment approaches. Longevity after age 75 is higher in the United States than in many other countries, again perhaps due to the health services associated with medical care. Disparities in health outcomes between people of color and White Americans decrease after age 65, and most experts associate this with the near-universal accessibility of medical care that happens when people become eligible for Medicare.

In addition, beginning around 2008, health care expenses did increase more slowly than in previous years. This trend seems to have started with the deep recession at the beginning of this period but also seems to be related to a flurry of efforts among health care providers to restructure their approaches to health care delivery (see Chapter 11).

This slowdown, however, may be temporary. Health care costs increased significantly at the end of 2013 (increasing nearly 6% in the final quarter) and at the beginning of 2014 (increasing nearly 10% in the first quarter).

In other dimensions, there are serious concerns about the value of medical care. Most importantly and as mentioned earlier, despite our spending vast sums of money on medical care, the health of Americans is not very good compared with that of residents of other developed countries. If we are not getting health and longevity as outcomes associated with our large medical care investment, why are we spending so much on medical care?

The best answer to this question from a value perspective is that Americans seem to strongly value “getting better” after they become seriously ill, even at advanced ages and even when the value of treatments is highly uncertain—or when treatment has a chance of ending up hurting more than helping a condition. However, we cannot really prove that Americans value medical care as much as it appears because—as economists emphasize—we can only really be sure that value exceeds costs when people actually pay the costs to get a service.

What must be kept in clear focus is that spending on medical care does not address the key determinants of the overall health of a population. The best way to keep people healthy is through public health initiatives, prevention initiatives, and social policies that make healthy choices possible and likely. These strategies are not what the medical care enterprise is about; medical care restores health more than it ensures that a population is healthy over its life span. A key question for public policy is to think through how much should be spent to create population health and how much should be spent on recovery-oriented medical care (see Chapter 5).

Emerging data show that many other developed countries spend more per capita than the United States on social programs that encourage health and well-being and less per capita on medical care. These developed countries end up with higher health status over the life cycle than the United States.

### ADDRESSING THE CHALLENGE OF REDUCING HEALTH CARE EXPENDITURES THAT DO NOT HAVE VALUE

A first step in efforts to increase the ratio of value to costs in medical care delivery is to consider what expenditures do not create value and what steps might eliminate or reduce these expenses. We consider three broad categories of expenses: (a) waste in production, (b) overconsumption of services, and (c) high prices of labor and inputs.

#### Waste

A large part of what leads to high health care costs in the United States is caused by the uncoordinated approach we use to take care of people with medical problems and the lack of attention to efficiency in producing care to make people better. “Waste” in this context is most frequently defined as those health care services that do not benefit patients. For example, Berwick and Hackbarth (2012) estimate that 20% of all health care expenditures are wasted. They identify several primary sources of waste, including overtreatment, lack of care coordination (which may lead to hospital readmission, medical complications, or duplicate tests), failure to execute best practices (which might lead, for example, to less than optimal outcomes),

administrative complexity (such as incompatible health information systems, third-party payers requiring different insurance forms for similar procedures, and so on), and outright fraud and abuse (which includes money devoted to determining and stopping such efforts). The Institute of Medicine (IOM; 2012) estimates waste at one third of all health care spending, citing unneeded procedures that actually reduce the quality of life. If these estimates are correct, the United States wastes between \$560 billion and \$950 billion (or between \$1,700 and nearly \$3,000 per capita) annually on health care—waste that could be eliminated with no harm to consumers. The IOM estimates that administrative complexity alone costs in excess of \$360 billion annually.

Statistics suggest that the lack of coordination of care for patients with the most complex medical conditions affects our health care spending significantly. Just 5% of the total population incurs half of all costs, and 20% of the total population is responsible for 80% of total spending (Commonwealth Fund, 2013). Chronically ill patients might have heart conditions, mental health issues, or diabetes (as some examples)—and frequently have multiple diagnoses. As these patients move among various specialists, hospitals, outpatient providers, long-term care facilities, home care, and so on, there often is not an effective way to make sure these services are all needed or delivered efficiently.

Emerick and Lewis (2013) cite overscreening and treatment as a fundamental aspect of waste in health care. As advances in technology and medical condition diagnoses have made detection of potential health problems easier and less invasive, the likelihood of detecting nonthreatening medical conditions, which pose little risk to the patient, also increases. For example, screenings may find lesions or potentially cancerous cells on organs—leading the medical provider to treat the patient (with surgery, medicine, and so on). Yet, these medical conditions may not be problematic or lead to health complications. As such, they lead to increased costs with no certainty of an accompanying increase in value. As one example, U.S. patients receive heart surgeries and angioplasties at more than twice the rate of patients in other countries, yet our health outcomes are identical (OECD, 2013). Hospital visits for chronic health conditions are far more frequent in the United States, as well; hospitalization rates for diabetes and asthma, for example, are nearly twice as high as those in other nations (OECD, 2013).

### Overconsumption

In a normally functioning marketplace, the costs of these additional services would be borne by consumers. Hence, if the consumer valued the services, he or she would choose to purchase them. Health care spending, however, is not like other goods or services bought and sold in a competitive marketplace. Importantly, consumers in health care do not make most of the decisions about which services to consume—doctors do. Most doctors want to do everything to help a patient, which increases the health care services consumed. In addition, because third-party insurance programs cover the vast majority of consumers (patients), the goods and services consumed by patients are largely financed by these insurers. As a result, patients may consume more health care than is optimal because they do not face the total cost of the good or service. This moral hazard (as economists refer to it) leads to overconsumption of health care or to patients not taking sufficient care to prevent incurring health care costs—because they do not bear the costs.

*Defensive Medicine.* If overdiagnosis and treatments drive up health care spending with uncertain increase in health benefits, why do they occur? Although these practices may not improve health outcomes, health care providers may want to protect themselves from medical malpractice claims that they did not do enough to help patients. One study estimates that malpractice and defensive medicine cost approximately \$56 billion annually—or less than 3% of total health care spending (Mello, Chandra, Atul, Gawande, & Studdert, 2010), whereas another estimates that it costs between \$120 billion and \$216 billion—or 5% to 9% of total spending (Kessler & McClellan, 1996). These costs include not just the insurance premiums paid by doctors and health care providers, but also the legal fees, settlements, and judgments of such suits. However—and what the monetary figures fail to capture—is that even the hint of malpractice is enough to ruin the careers of medical providers and the reputations of health care institutions. For most health care providers, the fear of a lawsuit is greater than the fear of lost revenue for providing a noncovered service or test. Providers will default to increasing services as a result. Hence, defensive medicine may be perfectly rational from the perspective of a provider.

Given the potential for malpractice lawsuits, it seems logical for primary care physicians to refer patients to specialists to protect themselves professionally from malpractice exposure and also to ensure patient health outcomes. This referral itself drives up health care spending. Furthermore, we have a system in place that pays these specialists more than primary care physicians—even for the same services. The Relative Value Scale Update Committee (RUC) is an American Medical Association (AMA) panel that recommends to Medicare the relative values of health procedures. The federal government (through the Centers for Medicare & Medicaid Services [CMS] and, in the past, through the Health Care Financing Administration) uses these recommendations in the setting of payments for Medicare patients; however, these rates also influence non-Medicare payers and, as a result, have a large effect on payments to physicians. The RUC has largely advocated for (and the federal government has accepted) payment increases to specialists. Thus, referrals to specialists lead to patient visits that are more costly compared with primary care physician visits, driving up health care spending as a result.

*Fee-for-Service Rather Than Fee-for-Value.* Providers and institutions are largely paid on a fee-for-service basis. Hence, more procedures lead to more revenue. When third-party insurers—especially public insurers—reduce or limit the price they will pay for procedures—which has become an almost annual ritual for Medicare and Medicaid—providers can partially offset this constraint (a declining or flat price) by increasing volume. Again, as costs will tend to increase over time (due to salary increases, the need to replace fixed assets, and so on), the need to increase revenues is rational to ensure financial sustainability. As a result, increasing procedures is an avenue providers can take to maintain their own fiscal health.

These explanations focus on the health care provider making decisions for patients. Because of the complicated decisions to be made in health care, this may be true much of the time—and as a result, health care providers might make decisions in the best interests of themselves rather than the patient (the so-called principal-agent problem). In many cases, however, patients may advocate strongly for specific treatments, and so a health provider supplies them. For example, drug companies in the United States advertise expensive prescription drugs directly to consumers,

hoping such advertising leads patients to ask for and receive the drugs, thereby driving up sales.

**Demographics.** In 2008, nearly 34% of the U.S. population was defined as obese; other OECD nations had obesity rates of between 4% and 27%. Finkelstein, Trogdon, and Cohen (2009) estimate that obesity costs the U.S. health care system \$147 billion annually; obese patients are estimated to cost the health care system 42% more than patients of normal weight—with prescription drug costs making up the largest amount of this increase. Treating the diseases associated with obesity (such as diabetes) is a huge health care cost driver, and obesity rates are not evenly distributed through the U.S. population.

Well-intentioned government mandates also increase costs in many ways. For example, with increasing diversity comes the reality that health care providers need to communicate with an increasingly diverse population. Health care providers are required to provide certified medical translators for patients so that staff may communicate with patients; providers must also have forms and consents available in patients' languages. Certainly such government-mandated services are important to make sure that patients are fully informed about their health care, but the cost of translators is frequently not reimbursable from insurance companies despite the public mandate to provide them. This is but one example of regulations that drive up hospital costs but may not be applied equally to physician-owned or corporation-owned facilities.

**End-of-Life Care.** A final factor affecting our health care spending patterns bears discussion. End-of-life care is costly, with estimates pegging nearly 32% of Medicare spending to those patients in their last 2 years of life suffering from chronic illnesses (Dartmouth Atlas, 2014). This fraction of spending represents over \$170 billion annually. Furthermore, Hagist and Kotlikoff (2006) show that health care spending in the United States increases significantly after age 65. Just as variation exists across the country in Medicare spending, end-of-life care spending by Medicare is not evenly distributed across the country. Patients receiving more aggressive end-of-life care (and, by extension, spending more resources) do not have improved survival or better quality of life than others. For example, many terminal cancer patients choose to undergo chemotherapy during the last 10 to 30 days of life, which is expensive and only marginally extends the patients' lives (see, for example, Harrington and Smith [2008], who note that 43% of terminal lung cancer patients in the United States receive chemotherapy in the last month of life, compared with just 23% in Italy). However, patients, families, and doctors likely feel more satisfied that they tried everything.

### The Role of High Input Prices in Driving Health Expenditure Levels

A popular health policy article has the provocative title, "It's the Prices, Stupid: Why the United States Is so Different From Other Countries" (Anderson, Reinhardt, Hussey, & Petrosyan, 2003). In addition to the complexity of costs and value calculations in U.S. health care is this simple fact: Almost every actor in the health sector has managed to command very high prices for the role he or she plays. U.S. physicians earn higher salaries than in almost every other country (Laugesen & Glied, 2011), pharmaceutical prices are much higher in the United States than in other countries, hospital prices are much higher, and hospital administrators earn more in the United States than

elsewhere. Even professors in health policy and management programs tend to have higher salaries than professors of history or English literature.

*Because of the high stakes involved in medical care, patients often find price to be an irrelevant consideration.*

Why have actors in the health system been able to charge such high prices for their services? Because of the high stakes involved in medical care, patients often find price to be an irrelevant consideration. In addition, insurance and extensive government contributions to financing medical care mean that consumers (i.e., patients) have not exerted market power as usually happens for other goods and services in the U.S. economy.

Another factor is the barriers to entry in health care. Because of federal regulations, there are a limited number of slots in medical schools and residency training programs, which helps maintain high input prices. Even if building more hospitals were possible and could drive down prices through increased competition, federal reimbursements are already below costs. For most of the past 20 years, Medicaid and Medicare reimbursements have been below hospital costs; as these public payers make up an increasing share of providers' revenues, the implication is obvious—private payers must make up the difference. In 2012, Medicaid paid about 89% of hospital costs to treat its beneficiaries, whereas Medicare paid only 86% (American Hospital Association, 2012). Private insurers must make up the difference through increased payments, which drives up costs further.

It is more difficult to explain why employers who pay for their employees' health insurance do not bargain more for lower prices through the insurance companies they use. To date, employees have placed a great deal of value on having access to all or most providers in a community so that they have as much choice as possible. This preference, however, impedes the ability of their employers to negotiate prices with local health care providers. Employers have spent more energy in recent years adding copayments and premium sharing for employees to attempt to address their ever-rising costs for insurance.

### TECHNOLOGICAL COSTS AS A DRIVER OF HEALTH CARE SPENDING

Not all of the rising expenditures on health care are due to overspending on items that do not create value. In fact, new pharmaceuticals, new technology, and ever-emerging new medical know-how are constantly identifying better ways to address illness and disease. These inventions and innovations are impressive and the United States (both the private and public sectors) has been a leader in sponsoring the research that has expanded our ability to solve more and more medical challenges. With emerging understanding of genes and bioengineering and new ways of using big data to test new approaches in medical procedures, it is likely that more and more possibilities for expanding the tools we have to address illness and disease will continue to grow for the foreseeable future (see Chapter 16).

Most of these new possibilities in treating medical conditions, however, are expensive and will add to the burden of health care in our economy. We will be drawn to spend more and more on health care as new possibilities emerge. Some of the new approaches will have value that exceeds costs, and some will not. Deciding how to measure the value of new approaches relative to cost will be key.

Our experience to date in making choices about what new procedures to cover and what not to cover has been troubling. In many ways, we often seem to allow almost unlimited access to new technologies and procedures. For example, studies find that the United States has more magnetic resonance imaging (MRI) machines, computed tomography (CT) scanners, positron emission tomography (PET) scanners, and mammographs than other developed countries; importantly, the United States utilizes these more expensive technologies relative to other nations, which increases costs (Squires, 2012).

Although referring doctors do not receive any revenues from referring patients to specialists, fear of malpractice claims (discussed earlier) is a potential driver of this increased usage. Furthermore, patients in many cases request these tests even though doctors might not otherwise order them, leading to consumer-driven waste.

Chandra and Skinner (2012) developed a typology of medical technology based on average cost-effectiveness:

- *Category I technologies* are “home runs” that are cost-effective for nearly every relevant patient. Examples of Category I technologies include antibiotics, improved health behaviors (surgeons washing hands, for example), and most vaccines.
- *Category II technologies* are potentially cost-effective, but the benefits vary by patient. For example, angioplasty is beneficial to some, but not to other patients; imaging technologies may not be cost-effective for all patients, and so on.
- *Category III technologies* have modest or uncertain effectiveness. Examples include surgeries designed to treat quality of life rather than acute health conditions.

Unsurprisingly, most studies find that Category II and III technologies have spread through the U.S. system more widely than in other countries. This helps explain why the United States spends more—on technology and health care in general—but some outcomes are no better, because we tend to adopt ineffective technologies (from a cost-effectiveness perspective) more frequently than many other countries.

### ATTEMPTS TO CONTROL HEALTH CARE COSTS

Most agree that attempts to control health care costs too often have either modest or no success. The current system tends to reward increased volume of services, but the services may not be justified when one examines the value-added of the service. This issue ties back to Emerick and Lewis's (2013) discussion about overscreening and overdiagnosis by providers; it also relates to employers paying for an increasing amount of health insurance benefits for employees that may not add health value but do add costs.

Other countries have managed to control costs by limiting or rationing some services. Although the United States will treat “marginal” patients who are ill, Europe rations such treatments based on age, gender, and other health factors. For example,

the U.S. health care system accepts twice as many end stage renal disease (ERSD) patients for treatment as Europe and 40% more than Canada (USRDS, 1999). With dialysis treatments costing more than \$70,000 annually per patient, the U.S. health care system spends significantly more on this service than other nations simply because we do not ration care. Limitless care becomes expensive, and Americans are uncomfortable limiting such care.

Other attempts to control costs involve reducing payments to doctors and providers. As Medicaid has exploded as a share of state budgets, public officials have increasingly turned to limiting reimbursements as a means of controlling public spending. As a result, some doctors have begun refusing new Medicaid patients. This is especially true among more expensive specialist doctors (Jackson Healthcare, 2012). As a result, many patients do not have access to medical professionals despite expensive public insurance, which does not pay enough for practitioners to take on new patients. These patients either end up using the more expensive option of the emergency department or fail to get treatment for treatable chronic conditions. In both cases, the ultimate costs of health care increase. A recent study finds that people in Oregon who received Medicaid benefits did use doctors more than those without health insurance, but these same people also used the emergency department more—thereby driving up health costs (Taubman, Allen, Wright, Baicker, & Finkelstein, 2014).

Finally, attempts to address demographic factors have had mixed success at best. Although public health campaigns and increased taxation have reduced tobacco consumption in the United States, we still have a significant population that smokes; furthermore, public efforts to address obesity through diet restrictions (such as New York City's attempt to limit sales of "supersize" sodas) or increased exercise have not been very successful because obesity rates continue to increase nationally. This is even as health insurance coverage has frequently added wellness programs (and, as a result, added costs) designed to change unhealthy behaviors. However, such programs are used by only a fraction of the covered populations or often are not cost-effective. It is estimated that less than half of eligible employees partake in offered wellness programs and, even though health outcomes apparently improve, cost savings do not seem to materialize as expected (Huang, Van Busum, Khodyakov, & Shier, 2013).

## REDUCING COSTS AND INCREASING VALUE

So far, this chapter has explained why health care costs have increased significantly over time without producing the better outcomes and more value that one might expect from our investments in the health system. We now turn to some options that might address this ongoing dilemma.

### Reforming Medical Malpractice

Medical malpractice reform could result in providers reducing the level of defensive medicine, leading to fewer tests and consultations, which would in turn reduce costs. Furthermore, malpractice insurance costs would not decrease evenly for all medical providers. Capping noneconomic damages is estimated to reduce insurance premiums by more than 25% for obstetrics doctors, 21% for general surgeons, and nearly 18% for internal medicine doctors (Robert Wood Johnson Foundation, 2007). To the

extent that that these specialists are more expensive service providers, reducing malpractice costs will reduce health care spending.

### Choosing Less Costly Treatments

One option that is frequently discussed as a source of savings is a move from more expensive procedures to less expensive treatments that do not negatively affect health outcomes. However, determining what these expensive procedures are and what the equally effective cheaper alternatives are is not easy (if it were, we would have done it already). For example, new beta blocker drugs are frequently as effective as stents for treating chronic heart disease; physical therapy frequently leads to superior outcomes over back surgery. Many health care providers disagree that these alternative treatments, however, are equally effective.

Importantly, both of these examples rely on patients following a medical protocol whereas the more expensive options put the doctor in control of ensuring that a protocol is followed. To the extent that less expensive options rely on patients following through on tasks, we risk not getting value or cost savings because patients are notorious for failing to follow doctors' orders. Furthermore, the cost-effective nature of stents (and other treatments for that matter) usually rests on a limited number of studies (Rosenbaum, 2013). Medical trials—with free medications and services, dedicated medical providers, and close monitoring of patients—do not resemble the day-to-day realities of health care practice. In other words, despite the apparent ease of controlling overtreatment or expensive treatment, achieving this control is in fact difficult.

### Paying Fixed Amounts for Procedures

Another option is for insurers to pay only a certain fixed amount for a procedure. This fixed amount might be the average cost in an area, perhaps controlled for quality. If the cost of the procedure exceeds the amount the insurer will pay, the patient (the insured) pays the difference. The insurance company provides the insured with a list of providers who charge at or below the fixed amount. In doing so, the insured is more likely to choose the less expensive providers with no negative implications for quality. In fact, such a program was implemented in California for public employees; as a result, health care costs were reduced by 19%. By providing consumers (patients) with information and giving them incentives to keep costs down (fewer out-of-pocket costs), such an approach could potentially reduce health care costs.

### Using Electronic Medical Records

Electronic medical records (EMRs) hold promise for reducing duplicate tests and improving the quality of care. National policy currently expects savings from EMRs. However, one study (McCormick et al., 2012) actually found that physicians were *more* likely to order additional tests in the presence of EMRs. This study focused on office-based doctors, whereas most other studies that found cost savings focused on large medical centers. The cost outcome for EMRs is likely to be mixed, based on the type of provider.

However, if EMRs can push the overall health care system toward greater standardization of computer interfaces, part of the administrative complexities that cost hundreds of billions of dollars annually might also be saved. The federal government could incentivize such standardization through the Affordable Care Act (Cutler et al., 2012).

## Using Value-Based Purchasing

*Unlike fee-for-service payments, which effectively reward volume regardless of cost or quality, value-based purchasing is meant to encourage specific quality and cost outcomes based on agreed-on performance measures.*

Value-based purchasing (VBP) might also help to generate savings while increasing value. In VBP, payers (including governments) hold providers accountable for cost and quality of care. For example, a physician group might share generated savings with payers if spending growth is kept below some agreed-upon threshold; or a hospital might receive bonus payments for high-quality or increasing quality performance. Unlike fee-for-service payments, which effectively reward volume regardless of cost or quality, VBP is meant to encourage specific quality and cost outcomes based on agreed-on performance measures. One way to accomplish this, advocates argue, is to bundle payments so that outcomes rather than volume drives reimbursements to health care providers. Furthermore, VBP should publicize provider performance so that patients may select high-value providers.

However, VBP requires systems to measure and report performance—that is, it requires spending to achieve future cost reductions and value improvements. The key to whether VBP can be successful is whether we can achieve value from this spending or, alternatively, whether we can reallocate current health care spending to VBP and get more value. One option is to replace Medicare’s sustainable growth rate (SGR) formula with a value-based formula (Guterman, Zezza, & Schoen, 2013; Schroeder and Frist, 2013). Given the difficulty in measuring performance in health care, VBP is not an easy solution, despite its obvious appeal.

### Reducing the Cost of End-of-Life Care

Changing how we spend on end-of-life care is also critical. One reform is to increase the use of hospices to provide low-cost, high-quality end-of-life care. Currently, most patients and families do not avail themselves of hospices; however, even though a majority of patients say they would prefer to die at home, most actually die in hospitals—suggesting that less aggressive treatments and hospice care at life’s end might be possible for and even preferred by patients.

### Taking Responsibility for One’s Own Health

Personal responsibility to maintain one’s health is a critical factor to controlling health care costs. Citizens should exercise, avoid tobacco products, receive proper vaccinations, and maintain healthy body weights. Personal choices such as using tanning beds—which are known to increase incidents of skin cancer—should be discouraged. The U.S. health care system suffers from these self-inflicted costs that are, in many respects, reflective of our nation’s economic success. This is perhaps the greatest source of savings, and the hardest to deliver.

Some employers have begun to take matters into their own hands. For example, the Cleveland Clinic will no longer hire workers who smoke tobacco and monitors

employees' blood levels; Proctor & Gamble, United Parcel Service, and several state governments (such as Wisconsin and Washington) charge smokers if they do not complete a smoking-cessation program (Kingsbury, 2013). As health costs continue to climb, employers apparently are determined to bring these costs under control.

### The Cost of Value

One potential problem with any attempt to control costs, however, is whether the intervention lowers costs simply by lowering standards. If quality controls are eliminated, costs will decline but quality will suffer. If we make consumers more aware of prices and more responsible for their choices in consuming health care services, will they choose lower-quality health care now that simply drives up health care costs later? For example, if MRI costs are greater at a particular hospital because two radiologists read the same film, will patients choose to have MRIs at private practices where only a single radiologist reads the film? This option would certainly be cheaper, but will quality suffer as a result of losing the second radiologist's evaluation?

Ensuring quality and value costs money. Popular press accounts of markups by health care providers are increasingly common. Rosenthal (2013) notes, for example, that a California health care provider charges nearly \$37 for Tylenol with codeine when the market price of each pill is only 50 cents. In the case of dispensing a simple over-the-counter medicine to patients, the following steps occur:

1. A doctor orders the patient pain reliever.
2. A registered nurse (RN) receives the order from the doctor.
3. The RN forwards the pain reliever order to the pharmacist.
4. The pharmacist enters the order into the electronic information system.
5. The pharmacist then analyzes the patient's drug profile to reduce the likelihood of drug interactions and complications.
6. A pharmacy technician retrieves the pain reliever drug.
7. The pharmacist verifies it is the correct drug and scans it into an electronic information system.
8. The technician delivers pain reliever to patient's medication drawer and delivers it to the RN.
9. The RN retrieves the drug and brings it to the patient.
10. The RN verifies the patient's identity to ensure the correct patient is receiving the drug.
11. The RN scans the drug so information is captured by the electronic information system.
12. The RN verifies the order in the electronic system.
13. The RN administers the drug to the patient.
14. The RN records and documents drug administration in the electronic system.

In this very simple example, if each step takes on average 4 minutes, nearly 1 hour of labor is consumed simply to dispense a simple pain reliever. If average labor costs are approximately \$50 per hour, this 50 cents' worth of drugs can actually cost \$50 to dispense—in large part due to (valid) quality and value concerns of patient treatments.

## ■ Conclusion

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Over the past several decades, health care spending in the United States has increased faster than general economic growth. Part of this trend is attributable to our system of health care financing, in which third-party payers, rather than consumers, pay the bulk of the costs. This upward trend is also influenced by citizen demand for limitless health care services and well-intentioned but costly regulations on providers. Furthermore, personal behavioral choices (poor diet, lack of exercise, drug abuse, and so on) also drive up health care costs.

Attempts at slowing cost growth have largely focused on reducing payments to providers or on restraining services covered by insurance companies. These attempts ultimately end up being undone or result in patients' being unable to use their insurance because providers opt out of accepting it.

There are no easy structural fixes—or large pot of money to be found—that will solve the issue of health care cost growth. Importantly, we need to gather data on ongoing programs designed to address the issue. Whether it is accountable care organizations (ACOs), company-sponsored Centers of Excellence (COEs), or the use of technology to reduce unnecessary treatments and procedures, data can provide insights into what saves money without sacrificing value and what does not. Organizations such as Kaiser Permanente, in which the provider is the employer and the insurer, have led to cost reductions and improved outcomes for patients; such models of care should be analyzed for sustainability and scalability. New models of care could be phased in over a 5-year period, gradually replacing traditional fee-for-service reimbursement with more value-based reimbursements (Schroeder & Frist, 2013). Such efforts take time and cannot be implemented rapidly. But research and data will move us closer to aligning providers' and payers' incentives—something the current system still fails to do.

Much potential cost saving comes from changing individuals' behaviors, or perhaps from rationing care given in certain cases (at the end of life, for babies born very prematurely with significant health problems, for health problems brought on by obesity, and so on). Americans have a strong aversion to such limits on health care, however, and such changes are not amenable to public policy options or acceptable to our culture at large. Finding a way to change our culture of health and finding transformative approaches to rethinking our health care system remain key challenges facing the health sector and those who lead it.

## ■ Discussion Questions

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1. Is the growth in health care costs a real concern for the United States? Why or why not?
2. Comment on the claim that “the U.S. health care delivery system is the finest in the world.”
3. If obesity and the inability or unwillingness of patients to follow good health protocols are two drivers of health care costs, what are the implications of shifting more costs to consumers who are obese or who do not follow medical protocols? Would such a shift be ethical? Would this shift change behavior, or would it simply make these populations seek less medical treatment (potentially driving up future health costs)?

4. Recent legislation requires insurance companies that offer coverage for mental health or substance abuse to provide the same level of benefits as they do for medical treatments. What are the implications of this requirement for health care costs? What are the implications for value?
5. Pharmaceutical companies frequently advertise drugs to the public that require a doctor's prescription. Consider how such advertising might affect drug costs and utilization of services by patients.
6. An August 4, 2013, a *New York Times* article described the role of nonmedical costs in driving up health care. European health care centers are described as "Spartan"—for example, a Belgian clinic was described as having metal folding chairs, bland wall colorings, and no gift shop. This was contrasted with a U.S. hospital that had a comfortable waiting room, a fancy lobby, and even newsstands to sell conveniences to patients and visitors. Discuss these differences in light of cost and value. What barriers might the United States face in making a transition to a more European-style system?
7. In India, doctors are usually consulted only for very difficult and complicated procedures. Routine procedures are typically handled by lower-skilled health care workers such as nurse practitioners, nurses, or paramedics. What barriers might the United States face in making a transition to a more Indian-style system?
8. Discuss three interventions at the provider level and at the state level (where much regulation occurs) that will increase value for costs in health care. Explain why the interventions will work. If they will work, why haven't we implemented them already?

## CASE STUDY

You are a senior manager at a major health care provider in a competitive environment. The CEO of the medical center informs you that the board of directors has asked that monthly reporting not be limited to financial projections and budget-to-actual reports. Rather, they are becoming concerned with evaluating the medical center's performance on value. The board still has a fiduciary responsibility to ensure the financial health of the organization, but members are increasingly concerned with value provided and not just cost. The CEO asks you to advise her on what she should propose to the board for such monitoring of value.

As you draft your recommendations, consider the following questions:

1. Why might the board of directors want to monitor value?
2. What indicators would you recommend to the CEO?
3. How would you gather data and evidence that might suggest increasing value for cost?
4. How would you measure success in these value-for-cost efforts?

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