Social Insurance II: Health Care

I don't pretend to have all the answers, but I am absolutely sure that this is a problem that America cannot let go.
BILL CLINTON, ON HEALTH CARE

The view expressed in then President Clinton's statement is widespread—many perceive the US health care system to be troubled. Much of the debate over health care concerns the appropriate role for government. This chapter uses the framework developed in earlier chapters to analyze this issue. We begin by asking what is special about health care as a commodity, focusing on why private markets might not provide it optimally. We then discuss the operation of the US health care sector and the government's role in it.

What's Special About Health Care?

The uniqueness of health care appears obvious. After all, receiving it can be a matter of life and death. But food and shelter are also crucial for survival, and the nation is not debating whether private markets are a good way to provide these commodities. Another possibly unique aspect of the health care sector is the way it has been expanding in recent years. Health expenditures were 7.1 percent of gross domestic product in 1970, and they are now about 13.2 percent [Centers for Disease Control and Prevention, 2003]. But by itself, the fact that people are spending disproportionately more on a commodity is neither unique nor alarming. Expenditures on digital cameras and DVD players have also grown dramatically in recent years, but no one is terribly upset about it.

Why should the government be involved in this market? There are several possible reasons.
Poor Information. We normally assume that consumers are fairly well informed about the commodities they purchase—when you buy an apple, you have a good idea of how it will taste and how much satisfaction it will give you. In contrast, when you are ill, you may not have much of a sense of what medical procedures are appropriate. To make things more complicated, the person on whom you are likely to rely for advice, your physician, is also the person who is selling you the commodity. True, there are other services whose purchase involve uncertainty and asymmetric information—think of home repair. However, in such situations there is generally more time to gather the relevant information than there is in the medical context.

Adverse Selection and Moral Hazard. Health care costs can be unpredictable and very large. In such a situation, people will want insurance. Most of the previous chapter's general discussion about possible problems in private insurance markets applies to health insurance in particular:

- When a health insurance company sets a price for a policy for individuals in a given class (for example, middle-aged urban females), the policy tends to be purchased by those individuals with the highest risk. For example, if Monica believes that she is at high risk for a heart attack and Rachel does not, then if they are offered insurance at the same price, Monica is more likely to purchase it. This adverse selection problem causes the average buyer of insurance to have a higher risk than the average person in his or her class. But with a lot of its policyholders becoming ill, the insurance company finds itself losing money. To break even, the company must therefore raise premiums. With higher premiums, relatively low-risk individuals leave the market. (Facing the higher premium, Monica purchases the insurance only if she really believes that she is in danger of a heart attack.) Thus, the market may underprovide health insurance, other things being the same.

- Insurance may distort people's behavior. If people know that they have insurance, they may take less care to avoid risks. Thus, people with insurance may adopt more unhealthy lifestyles (eating a lot of junk food and not exercising much) because insurance reduces the negative consequences of doing so. Further, people have incentives to overconsume health care, because the insurance pays for some or all of the cost. These incentive problems are referred to as moral hazard.

Moral hazard can be analyzed using a conventional supply-and-demand diagram. In Figure 10.1, the market demand curve for medical services is labeled $D_m$. For simplicity, assume that the marginal cost of producing medical services is a constant, $P_0$. Hence, the supply curve, $S_m$, is a horizontal line at $P_0$. As usual, equilibrium is at the intersection of supply and demand; the price and quantity are $P_0$ and $M_0$, respectively. Total expenditure on medical
services is the product of the price per unit times number of units, that is, $OP_0$ times $OM_0$, or rectangle $P_0OM_0a$ (the colored area in the diagram).

Before proceeding, we should note one possible objection to Figure 10.1—the downward sloping demand curve. When people are sick, don’t they just follow the doctor’s orders, regardless of price? Would you haggle with your surgeon in the midst of an appendicitis attack? The implication of this view is that the demand curve for medical services is perfectly vertical. Such reasoning ignores the fact that many medical procedures are discretionary. Patients make the initial decision whether to seek health care. And despite the conflict-of-interest issue referred to already, patients do not always comply with their doctor’s advice.

How does the introduction of insurance affect the market? To keep things simple, assume that the policy pays for 80 percent of health costs. Then the proportion left for the patient to pay, referred to as the coinsurance rate, is 20 percent. The key to analyzing the impact of insurance is to realize that a 20 percent coinsurance rate is equivalent to an 80 percent reduction in the price facing the patient—if the incremental cost to the hospital for a day’s stay is $800, the patient pays only $160. In Figure 10.1, the patient no longer confronts price $P_0$, but only $0.2$ times $P_0$. Given this lower price, the quantity demanded increases to $M_1$, and the patient spends area $OjiM_1$ on medical services.

At the new equilibrium, although the patient is paying $0.2P_0$ per unit, the marginal cost of providing health services is still $P_0$; the difference ($0.8P_0$) is paid by the insurance. Hence, total expenditures are $OP_0$ times $OM_1$, or
the rectangle $P_0OM_1b$, with the insurance company paying $P_0bhj$. Thus, because of the insurance, health care expenditures increase from $P_0OM_0a$ to $P_0OM_1b$, or the gray area $OM_0M_1b$.

Of course, the actual amount by which expenditures increase depends on the shape of the demand curve. Estimating the shape was one of the goals of a famous randomized experiment conducted by the RAND Corporation in the 1970s. People were randomly assigned into insurance plans with different coinsurance rates to see how their spending on health care would be affected. The results suggested that a 10 percent increase in the price of medical services reduces the quantity demanded by about 2 percent [Newhouse et al., 1993].

Externalities. People's consumption of medical services can create externalities, both positive and negative. If you get a flu vaccination, there is a positive externality, because it reduces the probability that others will become infected by the disease. On the other hand, if you overuse antibiotics so that new strains of immune bacteria develop, then others become worse off. According to the usual arguments (see Chapter 5), in the presence of externalities, government intervention can enhance efficiency.

Paternalism. People may not understand how insurance works, or they may lack the foresight to purchase it. Paternalistic arguments suggest that people should be forced into a medical insurance system for their own good. There does indeed appear to be a strong societal consensus that everyone should have access to at least basic medical services.

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**The US Health Care Market**

The US health care industry is massive. It includes hospitals, nursing homes, doctors, nurses, and dentists, as well as producers of eyeglasses, prescription and nonprescription drugs, artificial limbs, and other equipment. It employs about 10 million people and accounts for about 13.2 percent of GDP. The two largest components of spending are on hospitals (about 32 percent) and physician services (about 22 percent). With the theory of health care markets from the previous section as background, we are now ready to discuss the key features of this market.

**Private Insurance**

Consumers pay only about 17 percent of health expenses out of pocket. The rest is paid for by "third parties"—private health insurance pays for 35 percent; the government pays for 43 percent; and the remainder is from philanthropy and other sources. In short, consumers do not directly confront most of the costs for health care. In this section we discuss the provision of private health insurance.

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Employer-Provided Insurance. An important peculiarity of private insurance in the United States is that most of it—about 93 percent for those under 65—is provided through employers as a benefit to their employees. We don't purchase food or clothing through our employers, so why do we do it for health insurance? This phenomenon seems to be an inadvertent byproduct of government wage and price controls instituted during World War II. Nonwage components of the compensation package such as health care were exempt from the controls. Predictably, employers started offering these nonwage benefits to attract workers. The popularity of employer-provided insurance has been fueled by certain provisions of the income tax law, which are discussed later.

An implication of employer-provided health insurance is that when you lose your job, you also lose your health insurance. However, in 1996, Congress enacted legislation to help people who change jobs hold onto their health insurance. Under the Health Insurance Portability and Accountability Act (known as the Kennedy-Kassenbaum Act, after its legislative sponsors), an employer must include a new employee (who previously had insurance) in the company's group insurance plan within 12 months, even if the employee has a preexisting medical condition that will be quite expensive to treat and thereby increase the firm's insurance premiums. Further, the law requires insurance companies to make coverage available (at a price) to individuals who leave group plans. One of the motivations for the Kennedy-Kassenbaum Act was to improve the efficiency of the labor market. Without such legislation, the argument goes, individuals who happened to be undergoing expensive medical treatment would be locked into their current jobs, because prospective employers would not want to incur the higher insurance costs associated with hiring them. Interestingly, although there were many anecdotal accounts of this "job-lock" phenomenon, the econometric evidence that it was important prior to the Kennedy-Kassenbaum Act is mixed [Holtz-Eakin, 1994]. In any case, some policymakers believe that the law has been stymied because insurers charge individuals very high prices for policies. This is not a very surprising outcome; because of both adverse selection issues and administrative costs one would expect policies sold to individuals to be quite expensive.

Another labor market issue also relates to adverse selection. It might appear that employer-provided insurance solves this problem—because insurance is purchased by the employer on behalf of a group of employees, the insurer knows that on average the costs of providing insurance should not be too high. However, this ignores the fact that the workers at a particular firm may not be a random group with respect to their health care needs. To see why, recall that health insurance is just one component of a worker's compensation. Other things being the same, a firm can pay

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its workers higher wages if it offers a less generous package of insurance benefits. Workers with lower than average risks of illness or who are covered through their spouses' insurance plans have incentives to select employers whose packages include a high proportion of wages and little or no insurance. The flip side of this phenomenon is that firms with relatively generous insurance benefits will find themselves with a work force that has higher risks than average. To pay the insurance premiums for this high-risk group, the employer has to lower the wage component of compensation, which makes the job appealing only to people with even higher risks, and so on. This is a typical adverse selection phenomenon, which may result in fewer firms offering insurance than is efficient, particularly smaller firms.

Diversity in Provision. Our discussion of employer-provided insurance has focused on the trade-off between the amount of health insurance and the level of wages. However, employers can also vary how health care is provided under the policies they offer. Until the early 1980s, most insurance policies provided for payments to health care providers on the basis of the actual costs of treating a patient, a system called cost-based reimbursement or fee-for-service. Cost-based systems provide little incentive to economize on methods for delivering health care; to the contrary, the more resources devoted to a patient, the more money the health care provider receives.

In response to high and growing health care costs, employers have turned to arrangements that limit utilization and keep prices down on the supply rather than demand side of the market. Under such arrangements, generically referred to as managed care, patients face little or no cost sharing, so there is no incentive to economize on health care on the demand side. Rather, health care suppliers are given incentives to keep costs down. One example of such an incentive is capitation-based reimbursement, under which providers receive annual payments for each patient in their care, regardless of the services used by that patient. There are a variety of managed care arrangements. With Health Maintenance Organizations (HMOs), a group of physicians work only for a particular plan and patients can see doctors only in that plan. With Preferred Provider Organizations (PPOs), a group of physicians accept lower fees for access to a network; patients can go outside the network but at a greater cost. There are many variations on these themes. Today about 95 percent of insured Americans are in some kind of managed care arrangement.

Has managed care helped to contain health costs? During much of the 1990s, this appeared to be the case—the rate of increase in health care costs and insurance premiums fell considerably. But this success at controlling costs turned out to be short-lived, and costs are on the rise again. The possible causes for this phenomenon are discussed later in this chapter.

The vexing problem with certain managed care arrangements is that they create incentives for health care providers to skimp on the quality of care.
After all, the same payment is received regardless of the services provided. However, while the evidence is mixed, the work surveyed by Cutler [2002] suggests that health is not worse for individuals in managed care arrangements, other things being the same.

The Role of Government

Government plays a large role in health care. It licenses physicians, monitors health threats in the environment, owns some hospitals, sponsors research on disease prevention, and runs childhood immunization programs, to name a few activities. Our focus here, however, is the federal government's role in providing health insurance. There are three key programs: Medicaid, Medicare, and the implicit subsidy for private insurance embodied in the federal income tax system. Medicaid, a federally supported health insurance program for certain low-income individuals and particularly children, was covered in Chapter 8. We now discuss the other two programs.

Medicare

The Medicare program, enacted in 1965, provides health insurance for people aged 65 and older and the disabled. Its purpose is to increase access to quality health care by the elderly without an undue financial burden. Expenditures for Medicare in 2002 were $254 billion. It is the second-largest domestic spending program; only Social Security is larger.

Before discussing the details of the Medicare program, we might ask why the government should be involved so extensively in the market for health insurance for the elderly. After all, it is foreseeable that eventually both earnings capacity and health are likely to decline. The discussion of the health care market at the beginning of this chapter is relevant here. Because of adverse selection, insurance may not be provided in efficient amounts. By forcing everyone to purchase insurance, this problem can be avoided. In addition, purchase of health insurance involves high administrative and sales costs. People have to search for the right policy, physical exams may be required, and so on. By forming the aged into a single group, a government program may economize on such costs. Of course, a drawback of this "one-size-fits-all" approach is that it ignores differences in individuals' preferences for insurance.

The Structure of Medicare. Medicare covers nearly the entire population aged 65 and older. There are about 39.6 million enrollees. The program is administered by the federal government, and eligibility standards are uniform across the states. Unlike Medicaid, the program of health care for the poor, Medicare is not means-tested. Claimants do not need to establish that their incomes fall below a certain level to participate.

Benefits. Once the government decides to become involved in the medical sector, it must make a fundamental decision: Will health care services
be produced by the government or by the private sector? Different countries have made quite different decisions. In the United Kingdom, for example, the government owns and runs hospitals. In contrast, in the United States, health care is primarily provided by the private sector. Thus, Medicare is a system of government finance for health care, not government production of health care.

The Medicare program is divided into three parts, A, B, and C. Part A, which accounted for $131 billion in expenditures in 2000, is hospital insurance (HI). Participation in HI is compulsory. It covers 90 days of inpatient medical care per year and up to 100 days of care in a skilled nursing facility per lifetime. (In both cases, the patient is responsible for some portion of the costs.) HI does not cover long-term institutional services. Part B of Medicare is supplementary medical insurance (SMI), which pays for physicians, supplies ordered by physicians, and medical services rendered outside the hospital. Unlike HI, SMI is voluntary. Enrollees must pay a monthly premium that varies over time and is currently about $59. About 99 percent of the eligible population chooses to enroll in SMI. Part C, referred to as Medicare+Choice, allows individuals to enroll in certain managed care arrangements. All Medicare+Choice plans are required to provide the current Medicare benefit package, except for hospice services. The monthly premium for Medicare+Choice generally exceeds the Part B premium; in return, it may cover items such as prescription drugs, which are not covered by standard Medicare. Like conventional managed care, Medicare+Choice restricts individuals' choice of health care providers. Further details about Medicare premiums and benefits are available at the Web site of the Centers for Medicare and Medicaid Services, https://www.cms.hhs.gov/medicare/.

As just noted, Medicare generally provides no benefits for prescription drugs. This reflects the fact that Medicare was designed back in the 1960s, before the revolutionary developments in pharmaceutical technology that have made drugs central to the treatment of everything from heart disease to arthritis. Spending on prescription drugs is the fastest growing component of health care costs in the United States. Medicare beneficiaries spent almost $87 billion in outpatient prescription drugs in 2002, and this figure is expected to rise to $128 billion by 2005 [Congressional Budget Office, 2002, p. ix]. We will discuss later some issues involved in adding a prescription drug benefit to Medicare.

Financing. HI is financed by a payroll tax on the earnings of current workers. The rate is 1.45 percent on the employer and employee each, for a total of 2.90 percent. The tax is applied to all earnings; there is no ceiling. The tax proceeds are deposited in the HI trust fund, from which disbursements to health care providers are made. Medicare runs on a pay-as-you-go basis. The medical bills of current retirees are paid by today's workers, not by drawing on money accumulated in the HI trust fund. Like the Social Security trust fund discussed in the last chapter, the HI
trust fund is primarily an accounting device, and does not increase the real ability of society to meet future health care bills.

Unlike HI, SMI relies on general revenues for financing, not on a payroll tax. In addition, SMI receives funds from the monthly premium mentioned earlier. Currently, about 82 percent of SMI financing is from general revenues and 18 percent from premiums, so the federal subsidy is heavy.

Putting Medicare on a Sounder Financial Footing. Table 10.1 shows Medicare expenditures over time, both in dollars and as a proportion of GDP. In 1967, Medicare outlays were $3.2 billion, or about 0.4 percent of GDP. By 2002, the figure was $253.7 billion, or 2.2 percent of GDP. For the last decade or so, Medicare has grown at a faster rate than federal revenues, and there is now substantial policy interest in alleviating the stress that Medicare puts on the federal budget. As suggested by the cartoon on the next page, people are quite aware of Medicare’s financial problems, and a substantial amount of thought has been given to dealing with them. The approaches include the following options.

**Increase the burden on current beneficiaries.** Monthly premiums could be raised, the coinsurance rate could be increased, and the age of eligibility for benefits could be raised. Such proposals received serious consideration in 1997, but none survived the legislative process.

**Price controls.** Since the early 1980s, the favored strategy for cutting Medicare costs has been controlling the prices received by service providers. In 1984, for example, Medicare Part A moved from cost-based reimbursement to prospective reimbursement, in which HI pays the hospital an amount per patient that depends on his or her illness and is determined before treatment is received. Medicare Part B has frozen physicians’ fees for extended periods and put in place volume performance
standards that set an acceptable growth rate for spending on doctors' services each year, with penalties if the target is breached. Price controls are always complicated to administer (there are over 100,000 pages of Medicare regulations), and tend to have undesirable side effects. In this context, one major concern is that the controls make health care providers less disposed to treat Medicare patients. For example, after Medicare announced a 5.4 percent across-the-board reduction in physician reimbursements in 2002, a substantial number of medical practices simply stopped taking Medicare patients, including the Mayo Clinic's branch in Jacksonville, Florida (Rosenberg, 2002, p. 11). In any case, as Table 10.1 documents, Medicare has continued to grow rapidly despite the presence of the various controls.

Managed care. As noted earlier in this chapter, there has been a virtual revolution in the way health care is provided in the US private sector. Managed-care options now dominate the traditional fee-for-service approach, and they are also of growing importance in the Medicaid program. Legislation passed in 1997 created new inducements for Medicare beneficiaries to enroll in managed care arrangements. However, this option does not seem to be very popular; only about 15 percent of the Medicare population has picked it up (Cutler, 2002, p. 11). Further, a number of
HMOs have been dropping out of Medicare because of insufficiently high reimbursements. In any case, as noted earlier, it is not clear that, in the long run, managed care is effective at holding down the growth rate of health care costs.

**Hospice and home health care.** Medicare beneficiaries tend to use relatively large amounts of health care as death approaches. Expenditures during the last year of life account for about 27 percent of Medicare costs. Some have suggested that, when patients are facing terminal illnesses, the goal of health care should be relief of suffering rather than possibly painful and expensive procedures to extend life. In this spirit, the Medicare rules allow terminal patients to obtain access to alternatives such as hospices. However, according to Garber, Macurdy, and McClellan (1999), this change has not slowed the growth in expenditures at the end of life. They found that while use of hospitals for dying beneficiaries did decline, the associated increase in the use of hospices and other services rose enough to wipe out any expenditure savings.

**Medical Savings Accounts (MSAs).** Most of the attempts to restrain Medicare costs have focused on the providers of health care. An alternative approach is to give the consumers stronger incentives to economize on purchases of health care. Most Medicare patients face little or no charge on the margin for covered expenses. In contrast, under a *catastrophic insurance policy*, individuals pay for their own health care expenses unless they are very large, at which point the insurer takes over. Thus, the individual has an incentive to control routine costs, but is covered in the event of a catastrophic illness.

Part C of Medicare allows a limited number of beneficiaries to enroll in a *Medical Savings Account*, which in effect is a catastrophic insurance policy. The government uses part of the money that would have been spent to enroll the individual in a managed care arrangement to purchase an insurance policy with a high deductible (about $6,000). The remainder of the money is deposited into an account. After the deductible is met, remaining payments come out of the account. Subject to certain requirements, any money left over in the account goes into the individual’s pocket—it can be used for non-medical purchases. This provides an incentive to economize on health care spending.

In effect, MSAs are intended to deal with the moral hazard associated with insurance. They reduce the incentive to consume “excessive” medical care because the expenditure has an opportunity cost to the patient. However, we would expect adverse selection to be an important issue—a policy with a big deductible would be attractive primarily to people who are in good health and therefore anticipate low expenses. This would leave the other parts of Medicare to deal with the relatively ill (and expensive) patients. In any case, MSAs have been in effect only since 1997, and are
The Implicit Subsidy for Health Insurance

currently available only to a limited number of participants, so at this time not much is known about their effects.

A perhaps depressing closing thought is that there may be no feasible policy that can stem the long-term increase in Medicare costs. As we will see later in this chapter, some believe that increases in the cost of health care are driven by forces that are beyond the control of conventional remedies.

One of the government’s largest impacts on the health care market comes through a provision of the federal tax law. This provision states that an individual’s wages are subject to the Social Security payroll and the personal income taxes, but employer contributions to medical insurance plans are not. For example, if your employer increases your wages by $2,000, you have to pay taxes on that amount. But if your employer uses the $2,000 to purchase health insurance for you, then your tax bill does not go up by a penny. To understand the implications of this provision, suppose that the combined tax rate on your wages is 38 percent. For each dollar your employer pays you, you can buy 62 cents worth of goods and services. In contrast, each dollar spent by your employer on insurance buys a full dollar’s worth of insurance. In effect, then, this provision of the tax code subsidizes the purchase of health insurance by lowering its opportunity cost in terms of other commodities. In practical terms, the size of the subsidy is quite large. According to Gruber and Poterba (1996, p. 149), it reduces the relative cost of employer-provided health insurance by about 32 percent. The exclusion of health insurance benefits from the tax base costs the US Treasury about $75 billion per year in forgone tax revenues.

Because of the implicit subsidy, workers want a larger share of their compensation paid in the form of health insurance than otherwise would have been the case. Thus, health insurance packages become more generous. Similarly, the subsidy induces employers to expand insurance policies to include items such as vision and routine dental benefits.

Nothing is wrong with buying insurance; it fills an important need in people’s lives. However, efficiency requires that when consumers purchase insurance, they make their decisions based on its marginal cost (see Chapter 3). The subsidy lowers the price to consumers below its marginal cost and induces them to consume insurance in more than efficient amounts. Consequently they consume too much medical care. Many analysts believe that this has contributed to the increase in medical costs and that employer-provided health benefits should be subject to taxation.

There is an important qualification to this argument that the tax subsidy leads to “too much” insurance. To some extent, technological change in the health care industry has been driven by the generosity of insurance—health insurance allows people to afford expensive new procedures, which gives producers the incentive to create them. But this just pushes the question back another level—perhaps the tax subsidy leads to too much innovation. The
theory of public goods (Chapter 4) suggests that private markets underprovide innovation. Research on medical innovation produces valuable knowledge that has public-good characteristics—it is nonrival in consumption and nonexcludable. If that is so, then a subsidy may in fact be appropriate. In fact, some evidence suggests that the social return to medical innovation exceeds the private return [Cutler and McClellan, 2001]. In short, on balance it is not clear that the implicit tax subsidy does in fact reduce efficiency.

The Twin Issues: Access and Cost

Access

Much of the current health care debate has been driven by two related concerns—access to health care and the costs of obtaining it. This section discusses these two key issues in more detail.

Eighty-three percent of Americans under the age of 65 have some form of health insurance. This leaves 17 percent, or about 41 million people, uninsured. The percentage of the population under age 65 without insurance has been growing over time. In 1979, it was only 14.7 percent. Much of the anxiety over the state of US health care is due to concern for the uninsured.

The uninsured are a rather diverse group. For example, 31 percent of those with incomes below the poverty level are uninsured, but so are 7.7 percent of those whose incomes exceed $75,000. With respect to employment status, about 22 percent of part-time workers are uninsured, but so are 16 percent of full-time workers [US Census Bureau, 2002b]. Indeed, most of the uninsured are employed or the family member of someone who is employed. The probability of having health insurance rises with the size of the firm for which one works. Presumably, this difference is because the cost of insurance depends on firm size. As the number of employees increases, the per-employee administrative costs of running an insurance plan fall. Moreover, firms with many employees spread the risk of serious health care problems over a larger number of people, and hence can obtain better rates.

It is crucial to realize that the absence of health insurance and the absence of health care are not the same thing. Some people pay for their health care out-of-pocket, although on average, the uninsured pay for only 44 percent of the medical services they use. The free (to them) care is provided, primarily through hospitals. In 2001, US hospitals provided almost $24 billion worth of uncompensated care, which was financed by increasing the bills paid by other parties [Hadley and Holahan, 2003]. Nevertheless, people without health insurance generally consume fewer health care services than those with similar health problems who are insured. Surprisingly, it is not clear how this lack of care translates into health outcomes. As Meer and Rosen [2003] note, some studies find that extending insurance to the uninsured improves their health, but other studies do not.

Why has the proportion of people without insurance been increasing? Cost is the key factor. As health insurance becomes more expensive, people
Table 10.2 National health expenditures (selected years)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Expenditures (in billions of dollars)</th>
<th>Percent of GDP</th>
<th>Public Share as Percent of Total Health Expenditure†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>$73</td>
<td>7.0%</td>
<td>37.8%</td>
</tr>
<tr>
<td>1980</td>
<td>246</td>
<td>8.8</td>
<td>42.7</td>
</tr>
<tr>
<td>1990</td>
<td>696</td>
<td>12.0</td>
<td>40.6</td>
</tr>
<tr>
<td>1997</td>
<td>1,091</td>
<td>13.1</td>
<td>46.0</td>
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<tr>
<td>2000</td>
<td>1,300</td>
<td>13.2</td>
<td>45.2</td>
</tr>
<tr>
<td>2011*</td>
<td>2,800*</td>
<td>17.0*</td>
<td>---</td>
</tr>
</tbody>
</table>

*Projections.
†Includes federal, state, and local.


Table 10.3 Real health expenditures per capita in selected countries*

<table>
<thead>
<tr>
<th>Country</th>
<th>Amount (US dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>$2,535</td>
</tr>
<tr>
<td>Germany</td>
<td>2,748</td>
</tr>
<tr>
<td>Japan</td>
<td>2,012</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1,763</td>
</tr>
<tr>
<td>United States</td>
<td>4,631</td>
</tr>
</tbody>
</table>

*2000 US dollars.

have to give up more of their wages in order to receive a given set of health benefits; at some point, obtaining the insurance just isn’t worth it. Indeed, only about 89 percent of workers who have access to employment-related health insurance take up the option [Cooper and Schone, 1997]. Low-income workers are particularly likely not to take up employer-provided insurance. Their personal tax rates are low so that the benefit of excluding health benefits from taxation is relatively small. Hence, the issue of declining access to health care is intimately related to the problem of increasing costs.

Table 10.2 documents the breathtaking rate at which health care costs have been increasing in the United States. In 1970, health care expenditures were 7.1 percent of GDP. They are now about 13.2 percent, and according to government projections, they will be 17 percent by 2011. Table 10.3 puts US expenditures in an international context. It shows that the United States has much higher per capita expenditures on health care than Canada, Germany, Japan, or the United Kingdom. Interestingly, although the
United States has a higher level of expenditure than these countries, over the long-term, its rate of growth in these expenditures has not been out of line with theirs. This observation is documented in Figure 10.2, which plots their health expenditures relative to GDP over time. These four countries have very different systems for financing health care than the United States has. In particular, health care coverage is not provided by employers as it is in the United States, and the government plays a much larger role in setting prices. Thus, as we seek explanations for the growth rate of health care expenditures in the United States, we should not focus exclusively on factors that are idiosyncratic to the US system. The following discussion is based on the work of Newhouse [1992a], who attempted to calculate how much each of the following factors has contributed to this growth rate.

The Graying of America. In 1980, 11.1 percent of the US population was over 65; currently the figure is 12.4 percent. During the same period, the proportion of the population over 85 increased from 1.0 percent to 1.5 percent [US Bureau of the Census, 2002, p. 13]. As the population ages, one expects health care expenditures to increase as well. To what extent can this phenomenon explain the rise in health care expenditures? To obtain a rough answer to this question, Newhouse calculated how much total spending would have changed if the per capita expenditures in each age group of the population had stayed the same between 1950 and 1987 and only the proportions of the population in each age group changed. He found that the
change in age structure accounts for just a tiny fraction of the increase in expenditure.

**Income Growth.** To the extent that the demand for medical care increases with income, then income growth may drive the increase in health care expenditures. On the basis of econometric analyses of medical demand, Newhouse estimated that the income elasticity of demand for medical care is between 0.2 and 0.4—a 10 percent increase in income leads to a 2 to 4 percent increase in the demand for health care. Multiplying this elasticity by the actual percentage increase in income over time, Newhouse concluded that increased in income account for less than 10 percent of the growth in health care expenditures. Richer societies want more health care, but not enough more to explain the increase in health expenditures.

**Third-Party Payments.** We saw in Figure 10.1 how insurance increases the level of medical care demanded. Recall, however, that our task is to explain the continual growth in health expenditures over time. For third-party payments to be the reason for the growth in health care expenditures, it is necessary for insurance coverage to have been growing. The number of insured people has been increasing, but according to Newhouse's calculations, not by enough to account for more than about one-eighth of the growth of expenditures. Indeed, the average rate at which hospital expenditures were covered was essentially unchanged during the 1980s, while real expenditures on hospitals rose by over 50 percent [p. 7].

**Improvements in Quality.** Newhouse concluded that if all the preceding factors are considered, and a few others (such as the practice of defensive medicine, administrative costs, etc.) are thrown in as well, it explains less than half of the increase in expenditures. He argued that the rest of the increase is due to technological improvements. Physician training, medical techniques, and equipment have all improved over time. The last several decades have witnessed breathtaking developments in medical technology. As a result, the quality of health care has improved—diagnostic techniques, surgical procedures, and therapies for a wide range of medical problems get better all the time. Treatment of a heart attack today is simply not the same "commodity" as treatment of a heart attack in 1970. In fact, although innovations like coronary bypass surgery and cardiac catheterization have raised expenditures per heart patient, they have actually reduced the prices of obtaining various health outcomes, such as surviving hospitalization due to a heart attack [Newhouse, 2001].

Now, some improvements in medical technique are quite inexpensive. Prescribing aspirin for heart attack victims leads to a substantial improvement in their survival probabilities. But new medical technologies are often costly. For example, it costs about $2 million to acquire a PET (positron emission tomography) machine, which can detect changes in cells before
they form a tumor large enough to be spotted by x-rays or MRI. Hence, even in the absence of the factors already noted, medical expenditures would be growing.

This technology-based theory also helps explain why countries with different health care financing and delivery systems have all experienced increases in health care expenditures. (See Figure 10.2.) These societies have at least one thing in common—they have all been exposed to the same expensive innovations in technology.

This technology-based explanation puts the debate over cost containment in a new light. If costs are rising mostly because of quality improvements, is it a bad thing? A key question in this context is whether people value these innovations at their marginal social cost. No one knows for sure, but Newhouse offers a provocative insight: “If many consumers felt that new technology wasn’t worth the price, it seems odd that we do not observe some firms trying to enter and offer at least some aspects of 1960s medicine at 1960s prices” (p. 16).

Butressing this argument is a calculation by Murphy and Topel [2000] that improvements in life expectancy added about $2.8 trillion (in 1992 dollars) per year to US national wealth between 1970 and 1990. Any such calculation must be regarded as just a rough approximation for several reasons. First, how does one put a dollar value on added years of life? Murphy and Topel use measures derived from statistical estimates of the increased wages that workers require in order to compensate them for taking jobs that require relatively high risks of dying on the job; this approach is described in the next chapter. Second, it is not clear that all the improvement in life expectancy was due to changes in health care. They note, though, that “about $1.5 trillion of the overall $2.8 trillion annual increase was due to the reduction in mortality from heart disease—an area in which medical advances in both prevention and acute care have been significant” (p. 24). Third, although increases in life expectancy are very important, advances in medical care have also improved the quality of life, and these are valuable as well. Just think of hip replacements, Viagra, Cox-2 inhibitors such as Vioxx to relieve arthritis pain, and arthroscopic surgery. While it is difficult or impossible to attach a dollar value to these improvements, the benefits must be substantial. Hence, even allowing for the roughness of the Murphy-Topel calculation, its basic message that there are enormous benefits to spending on health care is compelling.

The focus of this discussion has been on whether medical expenditure is driven by technological change. An intriguing possibility, however, is that at least to some extent, causation runs in the other direction—increases in spending increase the profitability of medical innovations and therefore encourage technological change. This is a difficult proposition to test, but some evidence suggests there is something to it. Finkelstein [2003] noted that in 1993, Medicare began covering the cost of flu vaccinations for all Medicare recipients, without any copayments or
deductibles. She found that after this change in policy, pharmaceutical firms invested significantly more money on research and development for new flu vaccines.

In short, there is no reason to believe that all the growth in health care expenditures is a bad thing, or that there is some magic percentage of GDP that is the right percentage to devote to health care. Cost-containment measures that impede technological improvements may make society worse off.

HEALTH CARE REFORM

This chapter has discussed various efforts in the United States to attain the twin goals of expanding access to health insurance and controlling the costs of health care. We have also demonstrated that these efforts frequently conflict with the goal
of efficiency, therefore presenting society with difficult trade-offs. Despite the various policy changes, many commentators believe that costs are still growing too rapidly, not enough people have insurance, and that, in general, the system is inefficient and inequitable. One approach to increasing coverage is to expand existing programs. For example, one could expand Medicaid and SCHIP eligibility even further, and at the same time extend Medicare to people in their 50s. However, such an approach would likely lead to substantial crowding out of private insurance, thus limiting its effectiveness. Some critics of the status quo believe that these incremental reforms are not enough, and that more fundamental changes to the health care system are required. We now turn our discussion to some prominent ideas for major reforms.

**Individual Mandates**

Most states require their residents to purchase automobile insurance. Why not, then, similarly require every person to buy basic health insurance? One version of this idea has been proposed by the Heritage Foundation, a public policy institute in Washington, DC. Under the Heritage plan, the Medicare and Medicaid programs would be kept in place. However, the exclusion from taxation of employer-provided health care benefits would be ended. Instead, employers would be required to provide to their employees vouchers for health insurance, which the employees would use to purchase insurance on their own, or through some other organization, such as a church or fraternal group. Variants of this plan include government providing the vouchers or perhaps subsidizing the vouchers for low-income people.

According to its proponents, “Costs would be controlled by using the best device ever found to hold down costs without sacrificing quality and efficiency: consumer choice within a competitive market” [Butler, 1992, pp. 42–43]. The plan would require relatively little in the way of new bureaucracy, and it would preserve consumer choice. However, it is not clear that the vouchers would be large enough to induce most people to purchase insurance, and government subsidization of the vouchers could be costly and crowd out privately funded insurance. Further, like other market-driven approaches to reform, adverse selection might occur on the supply side of the market—insurers would have a tendency to reject high-risk customers. Either insurance companies would have to be allowed to charge higher premiums to such customers or some mechanism for forcing them to provide coverage would be needed. Finally, there are questions about how the mandate would be enforced. Would people who failed to buy insurance be thrown in jail? Is there any sufficiently large yet feasible financial penalty that would induce everyone to buy insurance?

**Health Savings Accounts**

A recent market-oriented reform has sought to reduce inefficiencies in health care due to moral hazard. The moral hazard problem arises because today’s third-party systems generally charge patients very little or nothing on the margin for covered medical expenses. One way to reduce this problem is to encourage people to buy **catastrophic insurance policies**, which entail individuals paying out of pocket for their health care expenses unless the expenses become large, at which point the insurer takes over. This provides the individual with an incentive to control routine costs, but still reduces the risk of high costs from a catastrophic illness.
Health Savings Accounts (HSAs), introduced by Congress in 2003, represent a move in this direction. With an HSA, a person (or his employer on his behalf) purchases a catastrophic insurance policy. He then sets up a savings account out of which to pay the deductible and the copayments throughout the year. His employer can likewise contribute funds to this account. The legislation provided an important tax incentive to adopt HSAs: All the money put into the account is excluded from the income tax, whether the deposit is made by the individual himself or the employer. Further, any money in the HSA not spent on out-of-pocket medical costs can roll over to the next year, and any interest earned on the account is not taxed. Upon retirement, all funds remaining in the account can be used for medical services or for non-health-related expenditures, but in the case of non-health expenditures, tax is due when the money is withdrawn.

Proponents of HSAs see them as an effective way for dealing with moral hazard and bringing down the rate of growth of health expenditures [Feldstein, 2005]. Opponents believe that HSAs pose an adverse selection issue. They argue that HSAs are more attractive to people who are in relatively good health and therefore anticipate low expenses. This could leave the government or private group insurance to deal with the relatively ill (and expensive) patients. Additionally, while HSAs increase the incentive to buy high-deductible insurance, by lowering the relative price of health care, they may also increase expenditures. Ultimately, these are empirical questions. At this point, HSAs simply have not been available long enough to know whether their proponents or detractors will turn out to be correct.

Single Payer

Another reform option would scrap the current health insurance market and replace it with a single provider of health insurance. The single-payer system would be funded by taxes and provide all citizens, regardless of income or health status, with a determined set of health care services, at no (or low) direct cost to the insured. While the main focus of the individual mandate proposal is on moral hazard, the single-payer approach goes after adverse selection: by definition, forcing everyone into the system solves the adverse selection problem. Variants of this approach are used in Canada and several European countries. In Canada, health care services are produced by the private sector, with the reimbursements negotiated by the government. In the United Kingdom, health services are produced by the public sector through the National Health Service. Perhaps the easiest way to think about implementing a single-payer system in the United States is extending Medicare to the entire population.

The fact that single-payer systems do not confront individuals with the incremental cost of their own care is a major virtue to its proponents and a major flaw to its critics. Proponents believe that market-driven approaches are unethical—sick people should not be forced to have to make cost-benefit decisions about receiving health care. Proponents also admire the universal-access feature of the program. This position embraces commodity egalitarianism, which holds that everyone should have access to medical services, no matter the cost. However, because patients pay little

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6 As a precursor to HSAs, Congress introduced a similar approach, known as Medical Savings Accounts (MSAs), in 1996. However, these were only made available to a limited number of people and the legislation placed severe restrictions on who could enroll. In 1997, Congress also made MSAs available to Medicare recipients, but this too was only available to a limited number of people.
or nothing for care, critics note that the system provides no incentives to reduce costs—moral hazard problems loom large.

If prices are not used to ration health care, some other mechanism is needed. In single-payer countries, rationing is done by imposing constraints on the supply side of the system. A predetermined global budget for health care may be set and enforced by price controls and regulations with respect to what treatments can be used. While these may control costs, in some cases they may result in lengthy waits for some types of care and the denial of certain treatments. In the United Kingdom, for example, patients over 65 years of age generally do not receive kidney dialysis.

Perhaps the major criticism of single-payer systems is that they take the choice about how much should be spent on health care out of the hands of individuals and throw it into the political arena. For example, in Canada all "medically necessary" health services are supposed to be publicly financed, but the definition of medical need differs across provinces depending, in part, on their political environments. Another critical issue is whether the introduction of new technologies takes longer in single-payer than in decentralized systems. Deaton and Paxson [2001] note that decreases in mortality in the United States are mirrored by decreases in mortality in the United Kingdom, but only after four years. They speculate that this is because the centralized United Kingdom system impedes the adoption of expensive new technologies.

There now seems to be some anecdotal evidence that the single-payer systems of Canada and Western Europe may require substantial changes in the long run. As noted in Chapter 9, health care costs are increasing there as well as in the United States. A recent article about the health care system in Canada noted that "growing complaints about long lines for diagnosis and surgery . . . are eroding public confidence in Canada’s national health care system." As a consequence, there are "growing moves toward privately managed medical services and user fees in return for quicker service" [Krauss, 2003, p. A3]. Indeed, in 2005 the Canadian Supreme Court struck down the law banning private medical insurance. The ruling stated that the waiting time for some medical services in Canada had become so long that it violated patients’ "life and personal security, inviolability and freedom." However, defenders of the Canadian system point out that while some Americans have easier access to physicians and do not have to put up with long waiting times, life expectancy is about the same in the two countries. This observation reminds us that health outcomes depend on factors in addition to health care spending.

Final Thoughts
As one contemplates the debate over the future of health care reform, several points are worth emphasizing:

- Developing a solution is bound to be difficult because of the same dilemma that arises in the design of all social insurance programs—due to moral hazard, the goal of providing security is likely to conflict with the goal of efficiency.

- There is no free lunch. The goals of universal coverage and cost containment are at odds with each other. We cannot bring 46 million people into the health care system and expect costs to go down. In the same way, we cannot expect to achieve universal coverage without increasing regulation, because certain high-risk groups of people simply cannot obtain insurance in private
markets. The only way one can imagine them getting insurance is a set of
government rules that forces someone to insure them. This does not mean
that universal coverage is an inappropriate goal, but one must be realistic
about what is needed to achieve it.

- Although our focus has been primarily on health care expenditures, what we
ultimately care about is people’s health. The two are linked, although the
statistical evidence on this matter is more tenuous than one might guess.
Many commentators have argued that more spending on medical services in
developed countries is unlikely to improve health, or at least the mortality
rate. Lifestyle considerations such as smoking, diet, and exercise may be
more important [Fuchs, 2000].

Summary

- US health care spending amounts to
  $1.7 trillion per year, which is 15 percent of
  Gross Domestic Product.
- Consumers pay only 13 percent of health
  expenses out of pocket. Private insurance and
  private sources pay 42 percent, and govern-
  ment pays 46 percent. Approximately
  84 percent of the US population has some
  form of health insurance.
- Most private medical insurance in the United
  States is provided through employers as a
  benefit to the employees.
- Under federal tax law, employer-provided
  health insurance is not subject to taxation.
  This provides an implicit subsidy (worth
  about $126 billion per year in foregone tax
  revenues) for health insurance.
- The advantage of employer-provided health
  insurance rather than individual coverage is
  that it may increase the risk pool, reduce
  adverse selection, and lower administrative
  costs.
- Employer-provided health insurance might
  inhibit job mobility, a phenomenon known as
  job lock.
- Health maintenance organizations attempt to
  keep costs down by offering a comprehensive
  health care system in which patients choose
  from a network of providers working under a
  capitation-based reimbursement system.
- The Medicare program provides health insur-
  ance for people aged 65 and older. The
  major components of the system are hospital
  insurance (HI) and supplementary medical
  insurance (SMI), which pays for physicians
  and associated medical care.
- HI is financed by a payroll tax on the earn-
  ings of current workers at a rate of 1.45 per-
  cent on employers and employees each. SMI
  is financed out of general revenues. If current
  trends continue, Medicare expenditures are
  soon likely to outpace revenues.
- A prescription drug benefit was added to
  Medicare starting in 2006.
- Over the years, the government has
  attempted to control Medicare costs by
  switching from a retrospective to a prospec-
  tive payment system and by introducing
  managed care to Medicare.
- The Medicare program has not improved the
  health status of the elderly very much, but it
  has led to significant benefits in the form of
  reducing the risk of facing major reductions
  in consumption due to medical expenses.
- The Medicaid program provides health insur-
  ance for the poor. In the past few decades,
  Medicaid eligibility has been expanded to
  include children in low-income two-parent
  families, and other children and pregnant
  women who are above the poverty line.
- The Medicaid expansions have induced
  crowding out of private insurance. However,
  on balance, Medicaid has improved the
  health of low-income people.