

HEALTH CARE

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Health care costs: A market-based view

Over the past 50 years, spending on health care has consistently outpaced broader economic growth. What will happen if that trend persists? What forces might accelerate or slow it?

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**Article
at a
glance**

Throughout the world, leaders of government health agencies, heads of health care companies, and even patients—collectively, the shapers of the modern health care system—behold the growth of health care spending with alarm. For almost 50 years, spending has grown by 2 percentage points in excess of GDP growth across all Organisation for Economic Co-operation and Development (OECD) countries. As a result, health care has become a much bigger part of most of these economies.

If current trends persist to 2050, most OECD countries will spend more than a fifth of GDP on health care. By 2080 Switzerland and the United States will devote more than half of GDP to it—and by 2100 most other OECD countries will reach this level of spending.

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It is set to become bigger still. If current trends persist to 2050, most OECD countries will spend more than a fifth of GDP on health care. By 2080 Switzerland and the United States will devote more than half of GDP to it—and by 2100 most other OECD countries will reach this level of spending. While such a scenario is difficult to conceive, observers in 1960 would have viewed as far-fetched any forecast that in 40 years Western Europe would spend about 9 percent of GDP on health care. Of course, that prediction came true.

Health care leaders fervently hope that the projections are off the mark. What will have to change to prevent health care from devouring half of a national economy? There are a few possibilities. Younger people may eventually balk at paying for older people's health care. The competition for public funds will become keener, as governments must also cope with rising demand for education, defense, and, especially, pensions. And health care spending might taper off as the benefit derived from the marginal dollar or euro declines. The present "health care century" will probably see some progress in reducing the economic burden of health care. However, even if the excess growth of health care spending over GDP is somehow cut in half, health care will by 2100 be the world's largest economic sector—and in many countries, the largest economic problem.

To vanquish the problem, health system leaders will need to shape a coherent, prioritized vision of reform. One critical input to this vision is a market-driven sense of the fundamental drivers of demand for and supply of health care. Our review suggests that four of these drivers—wealth, technology, lifestyles, and longevity—have propelled the remarkable growth in health care spending.

A market model

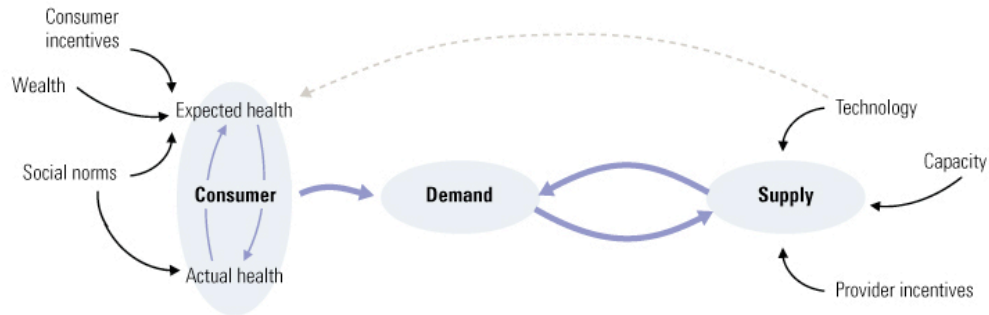
To understand any complex system, a model of some kind is desirable. Health care is no exception, but health care systems around the world vary so widely that no single model can adequately account for all of them. We can, however, create a simplified illustration to identify the main forces at work, while explicitly recognizing that some of the finer points may be lost. The central observation driving our model is that health care, for all of its confusing elements, is a market. For political reasons, it is not usually structured as an entirely free market, but regardless of configuration, fundamental economic forces drive the demand for and supply of health care. There

is one caveat: because of the peculiarities of a market in which true costs are not borne by consumers, the line between supply and demand is sometimes blurred. For example, factors that mainly affect supply can have immediate and near-direct effects on demand.

We see three influencers (or drivers) of demand and three of supply (Exhibit 1).

EXHIBIT 1

A supply–demand model for health care



Demand

Health care demand is amazingly subjective. Two people have the flu; why does one go to the doctor and the other go to work? Someone else will go to the doctor for a persistent headache but not for a pain in the stomach. Why?

Expectations, and the way life tends to come up short against them, have a lot to do with the demand for health care. We believe that three fundamental factors determine these expectations, and thus determine demand. The first is wealth. When people can afford to do so, they will spend almost any amount on health. Nothing drives national health care demand more than this does. Exhibit 2 illustrates the point: per capita spending on health care strongly correlates with national GDP.

The second factor driving demand is social norms, which are distinct from, but related to, wealth. The evidence suggests that the people around any given individual shape his or her expectations. If a person’s friends, neighbors, and colleagues smoke, drink, and overeat (or exercise regularly and eat well), that person will probably do the same. His or her expectations of health will be adjusted accordingly—the expectation of having the same medical problems as friends and neighbors, going to the doctor as often, and receiving the same level of care.

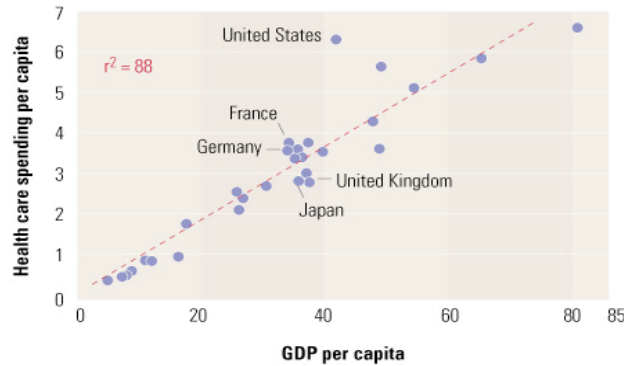
All other things being equal, social norms dictate the frequency with which people consume health care products and services. We see this in the highly variable demand

for health care across countries. In Denmark or the United Kingdom, people do not go to doctors much, we suggest, because their friends, neighbors, and colleagues do not go much. Conversely, in France or the United States, people see those around them visiting specialists, acupuncturists, or nutritionists—and they go too.

EXHIBIT 2

A strong correlation

For member countries of OECD,¹ \$ thousand



r^2 is the proportion of variance explained by a regression

¹Organisation for Economic Co-operation and Development; 24 of 30 OECD countries; mean = 9% (unweighted), standard deviation = 2 percentage points. Data for Australia, Hungary, Japan, Luxembourg, and Netherlands were extrapolated from 2004

Source: OECD; McKinsey analysis

Consumer incentives are the third factor. In most cases, when economic constraints are placed on consumers, demand falls. In 2004, Germany initiated a €10 fee for visits to physicians. Across the nation, visits to general practitioners dropped by 7 percent, to ophthalmologists by 11 percent, and to dermatologists by 17 percent. Over the long term, however, the behavior of patients reverted to earlier patterns. The importance of economic constraints is also borne out by the fact that while the developed countries' fully funded systems are susceptible to overuse by consumers, those of developing countries are generally underutilized. China, Egypt, and India lack comprehensive health insurance, and more than 70 percent of health care spending there is out of pocket. The high proportion of costs that consumers bear suppresses demand.

While the correlation between wealth and demand is strong, social norms and consumer incentives can be equally powerful. Consider the United States and Singapore. Both countries have high GDPs; life expectancy in both is 77 years. Why,

then, does the United States spend 16 percent of GDP on health care and Singapore only 3.5 percent? In all likelihood, the combined effect of consumer incentives (powerful in Singapore, weak in the United States) and social norms (self-reliance in Singapore, help seeking in the United States) drive a remarkable and sustained difference between the two health systems.

Supply

The first factor that affects the supply of health care—the ability to treat (that is, technology)—tends to increase it by producing better outcomes in new ways. This has been the fundamental change in medicine over the past two centuries. Medicine used to be primarily a palliative discipline; the first hospitals, such as London’s medieval leprosy refuges, offered victims solace and isolated them from the healthy population. Technology has transformed medicine into a discipline in which professionals treat not only the symptoms but also the causes of disease. Researchers actively pursue treatments such as targeted therapies for cancer and applications based on genomics and proteomics. Now technology is pushing the frontier further, as new approaches are being developed to improve memory and other brain activities, sexual and motor functions, and more. If history is any guide, this movement will create a vast array of new therapies, products, and medical procedures—which will in turn set expectations at a new level, pulling up demand.

In this way, technology poses a difficult challenge for shapers of health systems. As the objective function of medicine shifts from relieving symptoms to curing diseases to incrementally improving the functions of the body, health care leaders will face a conflict. New technologies will create outstanding new opportunities, and consumers will find needs they never knew they had. But those who shape health systems will struggle to finance these newfound needs—particularly, from taxes or social insurance—as the case for doing so is less clear than it was for the earlier palliative and curative products and services.

A second force affecting supply is capacity. Since health care is free or heavily subsidized at the point of care for many patients, the mere presence of health care products and services affects the rate of their consumption. To take only one of many examples, when we compared the number of general practitioners working in different regions across England, we found a consistently positive correlation between the number of GPs in a region and the number of referrals those GPs made to hospitals. More doctors equaled more services.

We see the effect of capacity on consumption in every country. More supply creates expectations (thus affecting demand) in an industry in which patients often neither bear nor understand the full costs of service and in which the provider is better placed than the consumer to judge whether a particular additional service is needed.

The third factor affecting supply is the incentives offered to providers. A classic example of the power of these incentives is the differing effects of activity-based pay and capitated pay. Activity-based systems, in which providers are paid for each unit of activity they deliver, tend to overproduce (as many charge-based hospitals do, for example). Capitated pay systems, in which providers are given a set fee per patient, tend to underproduce (as evidenced by the waiting lists for primary care and hospital services in Spain and the United Kingdom).

The next 100 years

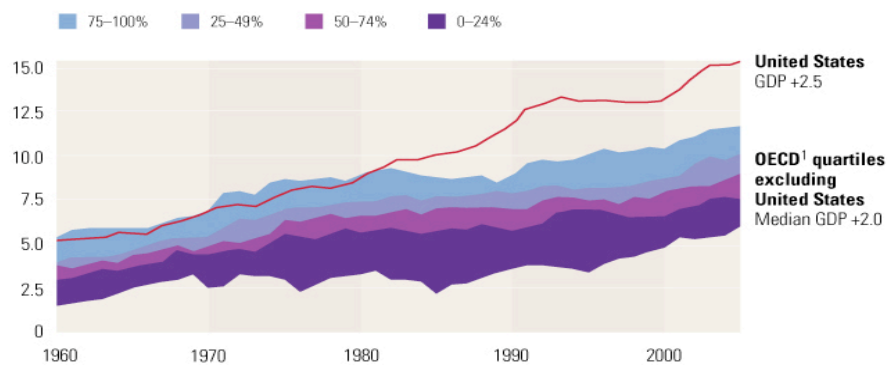
How have these market forces affected health care spending in the past? Can history tell us what is to come?

We examined health care spending in OECD countries over the past 50 years and found a startling relationship between GDP and health care expenditures (Exhibit 3). As we have already noted, the median increase in health care spending has been two percentage points above GDP for nearly 50 years in all OECD countries, with only minor fluctuations. The trend is remarkable for its consistency. Although particular countries may have seen fluctuations for short periods, in the long run, the trend is remarkably consistent across all countries and periods.

EXHIBIT 3

Health care outstripped GDP

Health care spending as % of GDP



¹ Organisation for Economic Co-operation and Development; data reflect fluctuating number of member countries—eg, 13 countries in 1960, 30 in 2004.
Source: OECD; McKinsey analysis

What would happen if this trend continued for the next 100 years? We analyzed the history of health care spending in the 30 OECD countries and for each mapped a trajectory with two scenarios: the base case (GDP plus two percentage points) and a hypothetical best case (GDP plus one percentage point). No OECD country has sustainably contained health care costs at the best-case level, however. The conclusions are unsettling (Exhibit 4). At the historic growth rate, health care will consume an ever-growing proportion of the developed nations' wealth, reaching 30 percent of GDP in the United States in 2040 and 30 percent of the median OECD GDP by 2070. If health care spending is left unchecked, by 2100 it could take up 97 percent of GDP in the United States and more than half of GDP in most other OECD countries—astonishing proportions. Government forecasts do not extend that far into the future, but a 2008 forecast from the US Centers for Medicare and Medicaid Services puts the rate of growth through 2017 at 1.9 percentage points over GDP.

Will health care spending accelerate or slow? Again, the answer lies in the forces of supply and demand, especially the dynamic forces of wealth, technology, and social norms—all of which originate outside the health care market. To these we must add a fourth force: the aging of the population, which is especially pronounced in some Western countries, will accelerate the growth in spending.

Fanning the fire

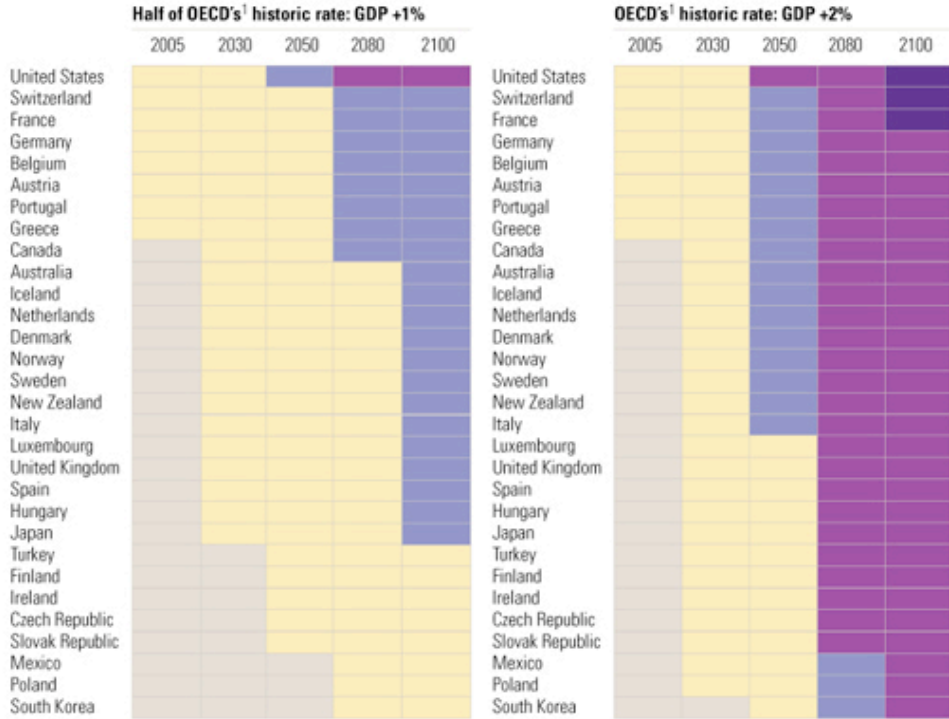
We have already seen the overwhelming correlation between GDP and health care spending; as the one rises and falls, so too will the other. In this sense, GDP growth is the engine that determines the bulk of the change in health care spending. Together, the other three forces determine the position of the health care spending curve relative to GDP—stuck for 50 years at a premium of two percentage points.

Let us consider each force, starting with technology. Some analysts, looking at the way it has lowered costs in other industries (semiconductors, auto making, financial services, and many others), hope that the same thing might happen in health care. It might, but only up to a point. Although technology reduces some health care costs, it also expands the range of possibilities, as research shifts from palliative to curative to incremental applications. Even within any category of cures, costs are rising: although work continues on problems such as cancer and heart disease, researchers and drug makers are devoting more of their energy to finding cures for diseases that affect smaller populations. Costs per unit for drugs and therapies in these areas will be much higher than those for earlier work done to treat diseases that afflict large populations. And since technology creates supply (and demand, in systems where consumption is subsidized), it drives up costs—and not always in proportion to the improvement in care that a given technology aims to deliver. Inevitably, the progress of technology will raise the cost of health care.

EXHIBIT 4

Two scenarios for future spendin

Projected health care spending as % of GDP for member countries of OECD¹



¹ Organisation for Economic Co-operation and Development; forecasts assume real GDP growth of 2%, with health care spending growing at 1 or 2 percentage points above that.

Source: Global Insights; Ignazio Visco, "Policy implications of the new economy," speech delivered on May 16, 2001, at the Organisation for Economic Co-operation and Development Forum 2001, *Sustainable Development and the New Economy*, in Paris; McKinsey analysis

Social norms, as we have seen, exert a powerful influence on demand. But they undergo constant change, as the history of smoking in developed nations shows. Today many workplaces, restaurants, hotels, stadiums, and even whole towns and cities have declared themselves smoke-free—something unimaginable 25 years ago. If social norms were to shift dramatically so that overeating and underexercising became truly abhorrent, demand for health care could fall. More likely, though, as incomes rise and as people see friends and neighbors consulting their doctors for obscure and perhaps even trivial health problems, demand will continue to rise.

Finally, the aging of the population in many developed countries will affect the market for health care. However, while the elderly do consume a disproportionate

amount of it, a population ages slowly, so aging explains only a relatively small part (we estimate 10 to 30 percent) of the excess of health care spending growth over GDP growth.

Recent work by the US-based National Center for Policy Analysis confirms the point: researchers designed a model that breaks out the contribution of aging and other factors to the recent growth in government health care costs in several developed nations. They then combined this model with an expert view of demographic changes and concluded that over the next 50 years, aging will likely account for about 20 percent of the growth in health care spending. These researchers think that “benefit expansion” (in our model, changes caused by wealth, technology, and social norms) has been responsible for more of the rise in spending.

Upon seeing projections indicating that health care will consume 50 percent or more of the GDPs of developed nations, most people conclude that the growth is unsustainable. There is an alternative view, however: that greater spending on health care is tolerable or even desirable provided that wealth continues to grow strongly. If a given country’s per capita GDP is €150,000, the argument goes, its people might be satisfied to spend €75,000 on health care. If people have enough money to meet their basic needs, there is no inherent reason for them not to spend discretionary income on anything they like, including health care.

Hitting the brakes

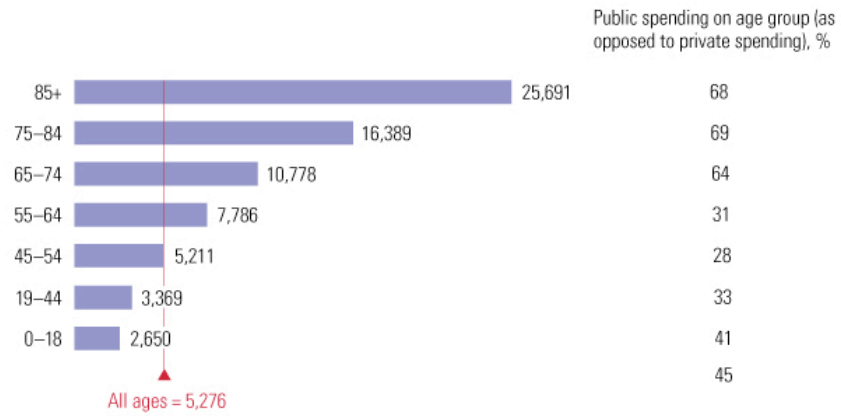
Will we get a chance to find out if this alternative view is correct—that is, will health care spending continue to grow at rates higher than GDP growth? Three major factors work against the historic trend: an approaching limit to the willingness of younger people to pay for the health care system, vigorous competition for funds, and potential diminishing returns. All of these, especially the first, are likely to dampen growth in spending.

A significant part of an average person’s health care spending throughout life occurs in its second half, especially the last two years. In many countries, the tax-financed part of health care represents a massive transfer from young taxpayers to older health care users (Exhibit 5). How long will these taxpayers and other sources of socially contributed funds be willing to transfer their wealth to older generations? Many younger people now believe that little money for health care services will be available to them in their old age. Current trends suggest that they may be right, especially in rapidly aging countries such as Italy and Japan. If younger people become unwilling to sustain current systems, incentives for consumers and producers would fall, which would in turn cut the volume of health care activity.

EXHIBIT 5

The public burden

Annual health care spending per capita in United States by age group, 2004, \$




Source: US Centers for Medicare and Medicaid Services

Competition for funds between health care and other uses is the second factor working against the growth in health care spending. In most countries, more than half of the money for health care comes from taxes or similar social contributions. These funds are limited. Increases in health care financing compete with other government priorities, such as education, defense, domestic security, and, especially in aging societies, pensions. Governments cannot easily expand the sources of funds; most countries are actively working to reduce the overall tax burden. The pressure to contain tax-financed spending, particularly on health care, will only increase as the share of tax revenues devoted to health care grows.

The third factor constraining growth is diminishing returns. The marginal dollar or euro put into any enterprise is less effective than the first one dollar or euro. Given ongoing progress in health care, it is hard to imagine that in 30 or 50 years, the marginal dollar will be nearly as attractive, by measures of outcomes and opportunity costs, as it is today. If national economies are devoting more than half or even three-quarters of GDP to health care, diminishing returns will certainly be a problem. So far, we do not see any challenge to the value of marginal investment, but it is fair to assume that such a challenge could eventually arise.

Perhaps, too, some of the accelerants of health care spending might slow or reverse—a kind of braking force. Technology might surprise us and raise productivity to an extent that more than makes up for rising costs. Birth rates might increase in countries that are currently aging. While the past has shown that

technology, birthrates, and the like have a strong tendency to accelerate health care spending, the future may well bring different lessons.

We believe that some or all of the brakes will be applied. But although the excess of health care spending over GDP will probably shrink, health care will almost certainly become an even larger sector of economic activity, and the already acute economic pressures it places on society will grow. Those who shape health systems are well advised to consider the tenacity of these underlying drivers of health care demand and supply when designing reforms—and to wonder if reform efforts will bring about the right combination of changes. 

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