



Accounting for the cost of US health care: A new look at why Americans spend more

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McKinsey Global Institute

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Our research is conducted by a group of full-time MGI fellows based in offices in San Francisco, Washington, DC, London, and Shanghai and led by MGI's director, Diana Farrell. MGI project teams also include consultants drawn from McKinsey's offices around the world and are supported by McKinsey's network of industry and management experts and worldwide partners. In addition, MGI teams work with leading economists, including Nobel laureates and policy experts, who act as advisers to MGI projects.

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Preface

This report is the fourth publication arising out of a project by the McKinsey Global Institute (MGI) working in collaboration with our colleagues in McKinsey & Company's health care practice groups around the world. In January 2007, we published two reports. *A framework to guide health care system reform* offered seven principles that health care intermediaries can use to affect demand and supply of health care goods and services. *Accounting for the cost of health care in the United States* analyzed why the costs of the US health care system are so high. In March 2008, we published *The challenge of funding Japan's future health care needs*, which offered an analysis of the costs and financing of the Japanese health care system. In this study, we return to the US health system and update the findings of our January 2007 analysis. All four reports are available for free download from www.mckinsey.com/mgi.

In this report, we examine the trajectory of US health care spending between 2003 and 2006, using data from the Organisation for Economic Co-operation and Development and other leading sources to build a robust picture of cost in the system and to frame the principal issues that arise for health care decision makers out of our reading of these facts. Our aim is to provide a sound and unbiased fact base for use in the public debate on health care as a new US administration takes office, enabling policy makers, regulators, intermediaries, payers, providers, employers, clinicians, and patients to make more informed and, therefore, better decisions.

Bob Kocher, a partner in McKinsey's Washington, DC, office; Eric Jensen and Beth Parish, consultants in Washington, DC; and Fareed Melhem, a consultant in McKinsey's New Jersey office, worked closely with me to develop this research. We would also like to recognize Lenny Mendonca and Nick Lovegrove, who

served as senior advisers as we shaped the content and direction of this work, and Kevin Sneader, who generously provided support and resources throughout the effort.

We have benefited enormously from the extensive input received from McKinsey's global network of industry experts. We would like to acknowledge Vishal Agrawal, Carlos Angrisano, Roy Berggren, Lynn Dorsey-Bleil, Jean Drouin, Priam Dutta, Viktor Hediger, Nicolaus Henke, J. D. Hickey, Ludwig Kanzler, Nancy Killefer, Martha Laboissière, Ed Levine, Simon London, Paul Mango, Megan McDonald, Ana Mendy, Michael Miltenberger, David Nuzum, Sara Parker, Michael Patsalos-Fox, David Quigley, Vivian Riefberg, John Schilling, Shubham Singhal, Saum Sutaria, Craig Tanio, Bradley Tevelow, and Rodney Zimmel.

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Our thanks go to Alain C. Enthoven, Marriner S. Eccles Professor of Public and Private Management (Emeritus) at Stanford University; Ezekiel J. Emanuel, chairman of the Department of Clinical Bioethics at the Clinical Center of the National Institutes of Health; and Martin Baily, senior adviser to MGI, senior fellow at the Brookings Institution, and former chairman of the Council for Economic Advisers to President Clinton. All provided valuable insights on this research.

We would also like to acknowledge Brenda Wilder, Kelly McLaughlin, and Christopher Leary for the development of the interactive graphics; Janet Bush, MGI senior editor, and Marcia Kramer for their editorial help; Deadra Henderson, MGI's practice administrator; our executive assistants Suzette Sanchez, Charissa Johnson, and Kari Mochizuki; Roberta Blanco and José Carlos de Sousa for their help in report production; and Rebecca Robboy in MGI external communications, who supported the effort throughout.

This work draws on McKinsey's in-depth analytical work and understanding of health care systems around the world. As always, the findings and conclusions

draw on the unique perspectives that our colleagues are able to bring to bear through their intensive client work with the world's leading companies. Extensive interviews with leading academics, executives, and government officials provided additional input. As with all MGI research, this report is independent and has not been commissioned or sponsored in any way by any business, government, or other institution.

Diana Farrell
Director, McKinsey Global Institute
December 2008

Table of contents

Executive summary	9
1. The facts about the US health system	35
Costs within the US health system	36
Disease prevalence in the United States—impact on demand and cost	87
Evidence on value in the US health system—quality and access	89
2. Principal issues for consideration	97
Technical notes	115



Executive summary

Health care in America—who has access, whether a patient receives quality care, and what care costs—is once again demanding public attention. People across the country are voicing growing personal concern about what it costs to keep themselves and their families healthy. Political leaders from both parties and all levels of government speak frequently and often passionately about the health care crisis in America.

Despite the magnitude of the problem—or perhaps because of it—reform solutions have proved to be elusive. The efforts of decision makers in all segments of the US health care system to address rising costs over the past two decades have had little effect. In 2006, the United States spent \$2.1 trillion on health care, more than twice what the nation spent on food, and more than China’s citizens consumed on all goods and services. With growth in health care costs continually exceeding GDP growth, it begs the question: are we receiving commensurate value for the money that is spent? As a new US administration prepares to take office, this question will undoubtedly be a central component of the national discussion on health care reform.

Given the increasing importance of health care as an economic issue, we decided to update our January 2007 examination of the US health care system.¹ Our primary intent is to present a comprehensive system-wide picture of the broad economic facts about health care in the United States. In doing so, our objective is to make a constructive contribution to public debate and decision making on the issue of US health care costs. We do not seek to put forward

¹ *Accounting for the cost of health care in the United States*, McKinsey Global Institute, January 2007 (www.mckinsey.com/mgi).

a particular view about any decisions that the United States might make to reform the system.

As a joint effort by the McKinsey Global Institute (MGI) and members of McKinsey's health care practice, this paper has tapped into McKinsey & Company's experience working with the health care system in the United States and with systems around the world. We have leveraged health care data collected and compiled by the Organisation for Economic Co-operation and Development (OECD). Using data from 13 OECD peer countries, we developed a measure we call Estimated Spending According to Wealth (ESAW) that adjusts health care spending according to per capita GDP.² We have also used a variety of other data sources to build a robust picture of the facts about US health care spending and value, and to frame the principal issues that arise for health care decision makers out of our reading of these facts. We have previewed these findings with academics, think tanks, and industry stakeholders, among others, to ensure the validity of our work.

Top-line findings from our January 2007 report

Based on our analysis of US health care spending in 2003, we found that:

- \$477 billion of the \$1.7 trillion in health care spending is above expected in comparison with peer OECD countries, even when adjusting for wealth
- Population health in the United States does not explain higher health care costs
- Hospital and physician care account for nearly 85 percent of spending above expected

The facts

In 2006, we found that the United States spent nearly \$650 billion more on health care than peer OECD countries, even after adjusting for wealth. Of this amount, outpatient care, which includes same-day hospital visits and is by far the largest and fastest-growing part of the US health system, accounts for \$436 billion, or two-thirds of spending above what we would expect. Fueling this growth are a number of supply- and demand-related factors, including (1) provider capacity growth in response to high outpatient margins; (2) the judgment-based nature of physician care; (3) technological innovation that drives prices

² The 13 OECD countries are Austria, Canada, Czech Republic, Denmark, Finland, France, Germany, Iceland, Poland, Portugal, South Korea, Spain, and Switzerland.

higher rather than lower; (4) demand growth that appears to be due to greater availability of supply; and (5) relatively price-insensitive patients with limited out-of-pocket costs. Elsewhere in the US health system, drugs and health care administration represent additional areas where spending is above expected. Drug costs represent \$98 billion, or 15 percent of spending above ESAW, driven by higher prices and the use in the United States of a more expensive mix of drugs. Health administration costs represent \$91 billion, or 14 percent of total spending above ESAW, due partly to the system structure, but also on account of inefficiencies and redundancies that exist within the system.

Can we attribute this additional spending to the fact that the US population is less healthy overall than people in other developed countries? Our analysis suggests that the answer is largely no. In fact, disease prevalence in the United States is slightly lower than in peer OECD countries despite an increase in the burden of chronic disease and growth in risk factors such as obesity. Factors that contribute to this finding include the relatively younger (and therefore less disease-prone) population of the United States as well as the lower prevalence of smoking-related diseases such as chronic obstructive pulmonary disease.

The next pressing question is whether the United States delivers substantially higher-quality care and access as the result of the additional wealth-adjusted \$650 billion it spends on health care. The answer is not simple. When we ask ourselves whether the US health care system offers value for money, we find a mixed picture. Parts of the US system are world-class. The United States has some of the best hospitals in the world. Cutting-edge drugs and treatments are available earlier, and waiting times to see a physician tend to be lower. Yet the United States lags behind other OECD countries on measures of broad outcomes including life expectancy and infant mortality. Moreover, access to health care is uneven—more than 45 million Americans are uninsured. This picture suggests a clear opportunity for improvement.

Principal issues for consideration

When we ask why the United States spends so much more than expected, our analysis points to misaligned incentives and the fact that the laws of supply and demand function very differently in health care than in other industries. Demand is relatively elastic in response to supply growth and, when patients are insured, is largely price-insensitive. Furthermore, scarcity of price information in the public domain, and information asymmetry with physicians make it difficult for patients to base decisions on value for money. On the supply side, providers

of care largely dictate the quantity of services offered, and, given largely elastic and price-insensitive demand, suppliers tend to innovate at the high end of the market rather than introduce innovations that could lower cost (an exception being recent innovations to provide quick, low-cost outpatient care in retail settings). Supplier behavior—from physicians, to hospitals, to insurance companies—is highly rational in response to the set of economic incentives each faces.

Of course, these dynamics are only part of the equation. An equally important consideration is the role played by societal norms and values in shaping support for, or opposition to, any changes to the health system. The value that Americans assigns to extending life, ensuring equality in access, and having choices in the direction of their care are critical considerations in how the US health system meets the needs of its citizens. Failure on the part of stakeholders—principally policy makers—to recognize and fully understand these values is likely to result in a lack of support for change from the American public.

Against this backdrop, however, there is growing consensus among stakeholders, policy makers, and the public alike that health care reform is necessary. To bring about reform, decision makers must contend with a set of difficult and complex issues. First, they must understand the full set of reform options available to them. Second and more importantly, they must evaluate the extent to which each reform measure addresses the principal issues, such as economic incentives and social norms, that underlie spending growth. The pace of health care cost growth is unlikely to slow or reverse course unless reforms target these principal issues. Indeed, current health reform proposals that attempt to broaden health care access will drive an even more dramatic escalation of costs unless they address the underlying dynamics at work in the system.

This report presents a comprehensive picture of US health care spending and value. We hope that it provides helpful input for all stakeholders—payers, providers, employers, regulators, government, and the public—to engage in a fact-based conversation about the principal issues driving health care costs in America and how to improve the US health system.

THE FACTS ABOUT THE US HEALTH SYSTEM

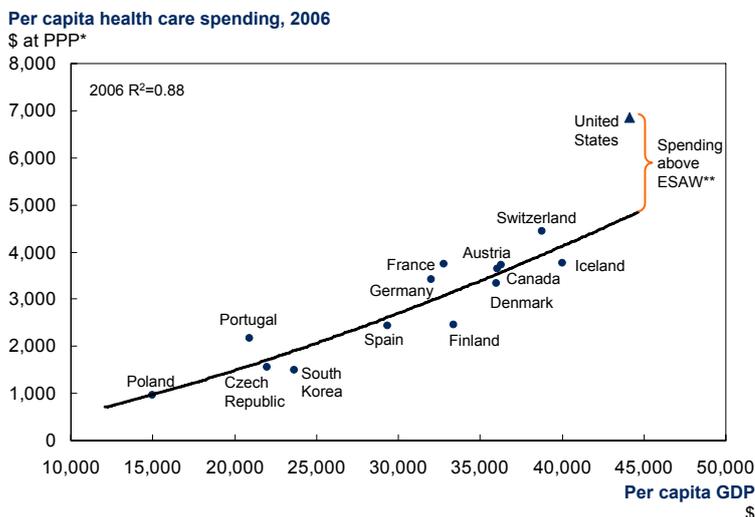
Across the world, countries with higher incomes tend to spend more—in fact, a disproportionate share of their income—on health care. However, even taking

this economic relationship into account, the United States still spends far more on health care than might be predicted. So why does the United States spend so much on health care—and are its citizens receiving value for money?

In 2006, we found that US health spending totaled \$2.1 trillion, an increase of \$363 billion since 2003, and totaled nearly \$6,800 per capita: when we compare this spending with that of other OECD countries, the amount is far more than we would expect when we adjust for relative wealth differences (Exhibit 1).

Exhibit 1

The United States spends far more on health care than expected even when adjusting for relative wealth



* Purchasing power parity.

** Estimated Spending According to Wealth.

Source: Organisation for Economic Co-operation and Development (OECD)

To put these figures in context, the United States spent twice as much on health as it did on food in 2006—and more than China’s citizens consumed altogether (Exhibit 2). In addition, the increase in US health care spending in the three-year period is more than the amount US consumers spent on oil and gasoline during all of 2006 when energy prices began to reach new highs.

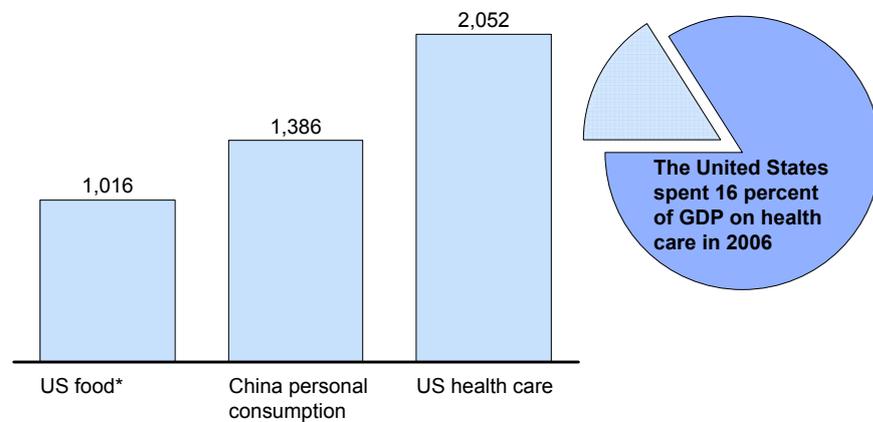
Costs within the US health system

In total, the United States spent nearly \$650 billion more than expected in 2006, given US wealth levels calculated using our ESAW measure (Exhibit 3). Outpatient care, the largest and fastest-growing cost category, accounts for \$436 billion, or two-thirds of spending above expected. Four other cost categories—drugs; health administration and insurance; investment in health; and inpatient care—are

responsible for \$279 billion in spending above expected. In the remaining two categories of long-term and home care and durable medical equipment, US spending is \$72 billion less than expected. We now turn to a discussion of the underlying trends and what we believe are the key drivers within each cost category.

Exhibit 2

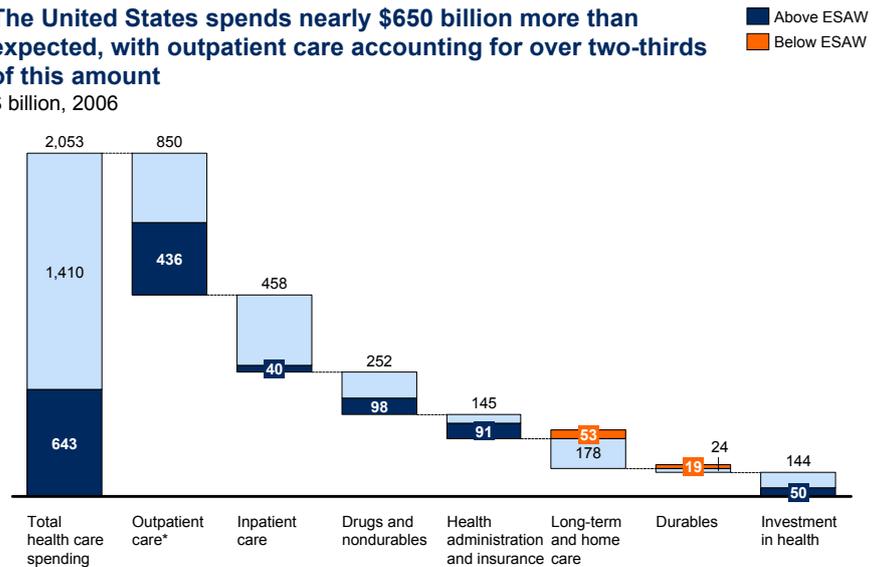
The United States spends twice as much on health care as on food, and more than Chinese consumers spend on all goods and services
\$ billion, 2006



* Excludes alcoholic beverages (\$150 billion) and tobacco products (\$92 billion).
Source: National Health Expenditure Accounts; Bureau of Economic Analysis; National Bureau of Statistics of China

Exhibit 3

The United States spends nearly \$650 billion more than expected, with outpatient care accounting for over two-thirds of this amount
\$ billion, 2006



* Outpatient care includes physician and dentist offices, same-day visits to hospitals including Emergency Departments (ED), ambulatory surgery (ASC) and diagnostic imaging centers (DIC), and other same-day care facilities.

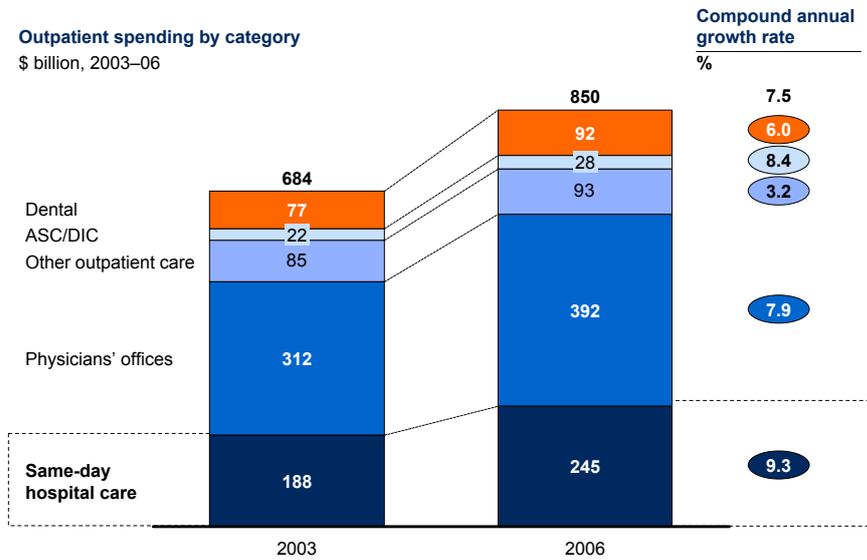
Source: OECD; McKinsey Global Institute analysis

Outpatient care

This category accounts for more than 40 percent of overall health care spending and 68 percent of spending above expected. This category expanded at 7.5 percent per annum from 2003 to 2006—a faster pace of growth than observed in any other cost category—to add more than \$166 billion in costs during this period. Breaking down total spending by provider type, we find that physician office visits account for \$392 billion in costs; same-day hospital care accounts for \$245 billion, of which \$75 billion is attributable to Emergency Department (ED) visits; dental care, \$92 billion; ambulatory surgery centers (ASC) and diagnostic imaging centers (DIC), \$28 billion; and other outpatient clinics, \$93 billion. Same-day hospital care is the fastest-growing of all outpatient cost categories at 9.3 percent per year (Exhibit 4).

Exhibit 4

Same-day hospital care and physician office visits are driving overall growth in outpatient care spending



Source: OECD; US Census; analyst reports; MedPac; Medical Expenditure Panel Survey

The significant size and growth in spending on same-day hospital care is attributable to a number of factors. First, the United States delivers a higher percentage of care on an outpatient basis than on an inpatient basis, compared with most other countries. For example, nearly 90 percent of hernia surgeries in the United States are performed on an outpatient basis, versus about 40 percent

in the United Kingdom.³ Second, US hospitals have a strong financial incentive to provide elective outpatient care, as this mode of care delivery accounts for a significant portion of hospital profits. This incentive is less strong for same-day emergency care in the ED, which has a less profitable mix of patients. Third, US hospitals are able to grow revenue through both pricing and the provision of more expensive services. Of the 9.3 percent annual increase in same-day hospital care costs from 2003 to 2006, volume growth accounted for a modest 2.1 percent. Revenue per visit grew by 7.0 percent annually as a result of a change in mix toward more expensive procedures (e.g., more diagnostics procedures such as CT and MRI scans) and absolute price increases for equivalent procedures.⁴ Taken together, these factors underpin same-day hospital care costs that are \$186 billion more than expected.

The higher cost of physician office visits in the United States is a result of higher costs per visit, rather than more frequent visits. For instance, higher physician compensation adds \$64 billion in costs to the US system, of which \$40 billion relates to care delivered in an outpatient setting. Like same-day hospital visits, physician office visit costs are growing rapidly at nearly 8 percent a year. At the same time, total office visit volumes have largely remained flat, though a slight shift in visit volume to medical specialists occurred, suggesting a correspondingly higher price for an average consultation.

A final noteworthy attribute of the US health system is the rather unique use of freestanding ASCs and DICs. The capacity of these facilities is expanding rapidly, ASCs at an annual rate of 7.6 percent and DICs at 6.5 percent. The highly attractive margins generated by these facilities—many have operating margins in excess of 25 percent—play a significant role in encouraging this growth, as does the fact that these centers serve as a more convenient alternative to hospital care for patients. This expansion corresponds with continued large increases in the number of CT and MRI machines installed in hospitals. And with growth in the installed base of these machines, testing procedure volume has increased.

3 C. A. Russo et al., *Ambulatory Surgery in U.S. Hospitals, 2003—HCUP Fact Book No. 9.*, Agency for Health Care Research and Quality, Publication No. 07-0007, January 2007 (<http://www.ahrq.gov/data/hcup/factbk9/>); *Hospital Episode Statistics, 2003-2004*, National Health Service (www.hesonline.nhs.uk/Ease/servlet/ContentServer?siteID=1937&categoryID=204).

4 CT (computerized tomography) and MRI (magnetic resonance imaging) scans are diagnostic tests that provide high-resolution pictures of the structure of any organ or area of the body requiring examination.

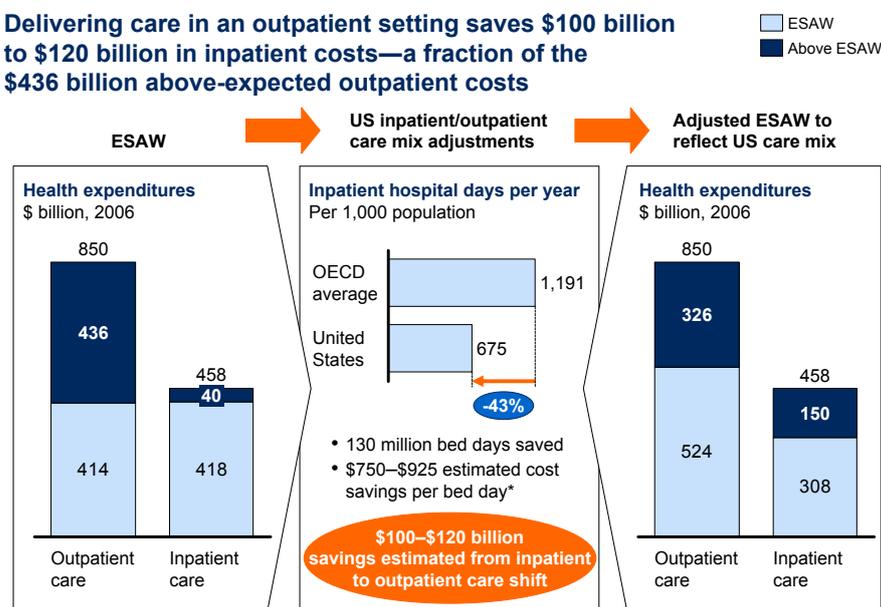
Underlying the size and growth in the costs of all outpatient care outlets (i.e., same-day hospital care, physician office care, ASCs/DICs, and other outpatient-care settings) are a number of common drivers. From the perspective of supply, outpatient care is very profitable, particularly for specialist care and diagnostic procedures, and such profits encourage growth in supply. In addition, physician judgment is involved in determining the best course of treatment for most outpatient care, and current outpatient reimbursement methods reward providers for delivering more care, or care that is higher intensity. Lastly, technological innovation tends to garner higher prices and reimbursement for providers of care. Innovative technologies that actually reduce costs to the patient are less common. From a demand perspective, the utilization of services tends to grow in line with capacity. This is most evident in evaluating diagnostic procedures, but it is also true for other types of outpatient care. A related feature is the fact that many patients are insensitive to price, creating a moral hazard in the consumption of health care. On average, patients' out-of-pocket expenses for outpatient care represent only 15 percent of total expenditures.

The last consideration, and an important one in evaluating the size and growth of outpatient care costs, is the interdependency between inpatient and outpatient care. More than is the case in any other country, the United States has effectively moved care from an inpatient setting to an outpatient setting. This shift has been highly beneficial in several respects. Outpatient care often promotes quicker recovery times, and equivalent procedures cost less. However, the migration to outpatient care has had two additional consequences. First, while the reimbursement of inpatient care tends to promote the efficient use of resources, the fee-for-service financing of outpatient care creates incentives to provide more care. Second, there is a risk of increased utilization in an outpatient setting due to its greater convenience to patients and availability of services. We saw this in the early 1990s with the introduction of laparoscopic (noninvasive) cholecystectomy surgery; cost savings from shorter lengths of stay were more than offset by an increase in procedural volume for an equivalent population set.⁵ Our estimates suggest that the United States saves \$100 billion to \$120 billion in inpatient care costs from shorter inpatient stays relative to other OECD countries. However, even if we fully attribute those savings to the US health system's capacity to provide care in an outpatient setting, this only partly defrays the \$436 billion in outpatient care costs above expected (Exhibit 5).

5 A. P. Legorreta et al., "Increased cholecystectomy rate after the introduction of laparoscopic cholecystectomy," *Journal of the American Medical Association*, September 22, 1993, Volume 270, Number 12, pp. 1429–32.

Exhibit 5

Delivering care in an outpatient setting saves \$100 billion to \$120 billion in inpatient costs—a fraction of the \$436 billion above-expected outpatient costs



* Estimated variable costs of lower acuity care shifted into an outpatient setting.

Source: OECD; McKinsey Global Institute analysis

Inpatient care

Inpatient care costs account for 25 percent of overall health care spending but only 6 percent of total spending above expected (\$40 billion). This category grew by 6.0 percent annually (trailing GDP growth), or \$73 billion, from 2003 to 2006.

US inpatient care is characterized by fewer patient admissions and shorter lengths of stay. As we have noted, the United States is able to conduct more care in an outpatient setting, thereby reducing admissions, but the United States also sets specific and comparatively stringent criteria for patient admissions and hospitalization. Moreover, inpatient reimbursement mechanisms, in which case rates are the basis for reimbursement, create incentives for providers to manage medical resources (and lengths of stay) in an efficient way. Nevertheless, higher costs in the United States—more than double that of the OECD average to support a patient bed day—offset these efficiencies, leaving average per capita costs close to the level that we would expect based on US ESAW.

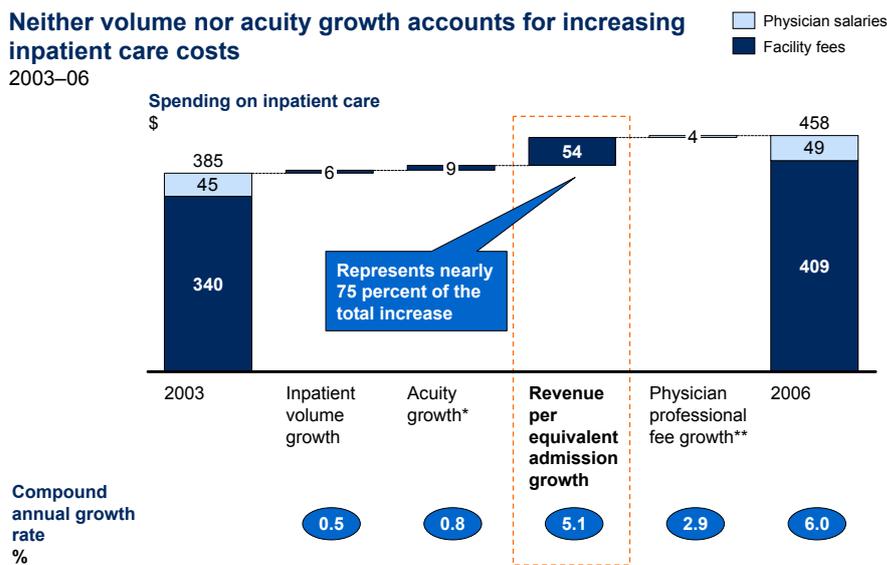
The drivers of higher costs per bed day are manifest in higher procedural volumes in an inpatient setting and higher factor costs in the form of lower nurse-to-patient ratios, higher nursing salaries, higher supply costs, and greater hospital fixed costs. Almost all the growth in inpatient spending in recent years is due to cost growth for equivalent conditions, rather than increased admission

volume associated with the aging of the population or treatment of more acute conditions. Hospital revenue per visit has increased by more than 5 percent annually since 2003 for treating the same mix of conditions (Exhibit 6). However, hospital profits have remained flat because labor, supplies, and other operational costs grew at nearly the same rate as revenue over the same period.

Exhibit 6

Neither volume nor acuity growth accounts for increasing inpatient care costs

2003–06



* Acuity growth defined as percent increase in Case Mix Index (CMI).

** Includes payments to physicians for inpatient hospital care for comparability with other OECD countries.

Source: OECD, National Center for Health Statistics (NCHS) National Hospital Ambulatory Medical Care Survey; Medical Group Management Association (MGMA); company reports; McKinsey Global Institute analysis

Drugs and nondurables

Drugs account for 12 percent of overall health care costs and 15 percent of total spending above expected (\$98 billion). This category grew by 6.9 percent annually from 2003 to 2006, resulting in a \$45 billion increase in costs. This rise was due almost equally to volume (3.5 percent a year prescription growth) and net price growth (4.5 percent annual growth), offset by a trend toward a less expensive drug mix (negative 0.9 percent net annual impact on prices).

Higher US drug spending is the result of lower usage rates coupled with higher prices and a more expensive drug mix. On a standard unit basis, the United States on average uses 10 percent fewer drugs per capita than other OECD countries. For drugs used in the United States, we found that prices are 50 percent higher than those in other countries for equivalent molecules.⁶ The

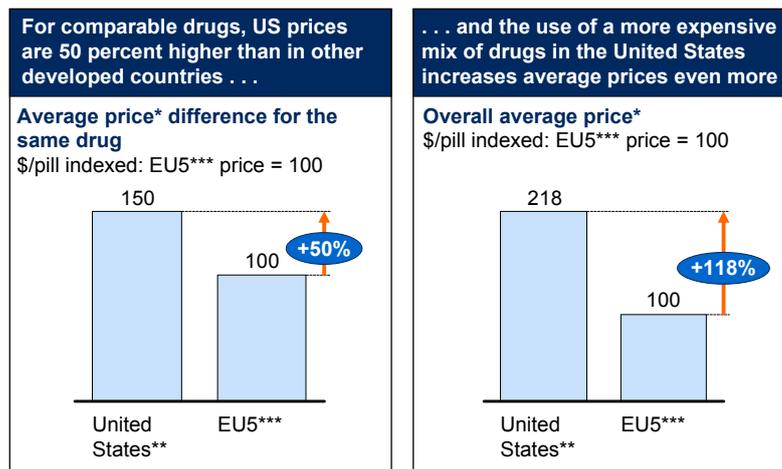
6 This estimate factors in an assumed average 15 percent manufacturer rebate. Actual rebates vary widely.

type of drug matters: branded drugs in the United States are 77 percent more expensive on a same-drug basis, biologics 35 percent more expensive, and generics 11 percent cheaper.

When we factor in the impact of the drug mix, the United States spends over 118 percent more for an “average” pill than peer OECD countries despite the country’s use of more generics (Exhibit 7). While higher US prices are a large driver of higher pharmaceutical spending, the use of a relatively more expensive mix of drugs is an even larger driver of cost. We can partly ascribe this finding to the more rapid adoption of new drugs in the United States than in other countries.

Exhibit 7

Drug prices in the United States are 50 percent higher for comparable products; average price gap is nearly 120 percent due to usage patterns



* Manufacturer price.
 ** Assumes 15 percent rebates from manufacturers to payers and Pharmacy Benefit Managers (PBMs).
 *** Average of the United Kingdom, Germany, Italy, France, and Spain.
 Source: IMS Health; McKinsey Global Institute analysis

Higher drug prices in the United States may be the result of many factors, including the fact that, as a wealthy country, the nation is able to afford more expensive drugs (in the same way as any other economically superior good); that prices in the United States need to be sufficient to subsidize R&D for the rest of the world; and that the United States spends more on marketing and sales. However, we find that none of these drivers by itself explains the gap in the higher price of branded drugs in the United States compared with other OECD countries.

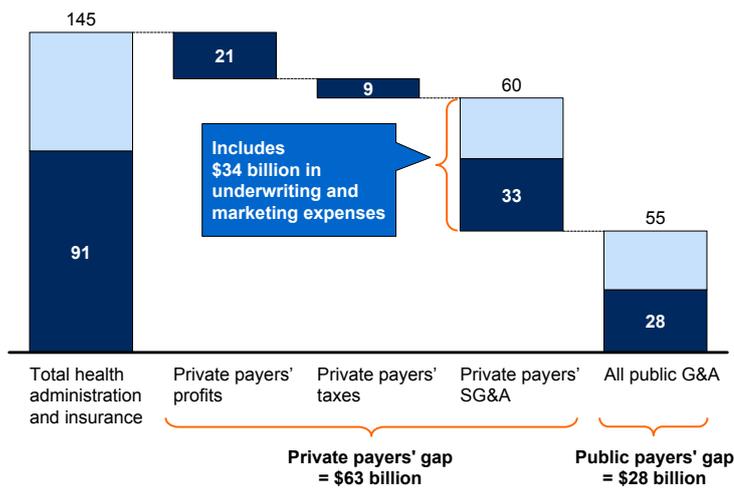
Health administration and insurance

This category accounts for 7 percent of overall health care costs and 14 percent of total spending above expected (\$91 billion). Spending on health administration

and insurance grew by 6.3 percent annually over the three-year period, resulting in a \$25 billion increase in costs. Breaking down sources of above-expected spending, we find that \$63 billion is attributable to private payers in the form of profits and taxes (\$30 billion) and selling, general, and administrative (SG&A) expenses (\$33 billion). Public administration expenses for Medicare, Medicaid, and other programs account for the remaining \$28 billion in US spending above ESAW (Exhibit 8). Public administrative costs in the United States average 6.0 percent of public health spending, compared with an average of 4.0 percent for OECD countries as a whole.

Exhibit 8

The United States spends \$91 billion more than expected for its wealth on health administration and insurance ■ Above ESAW
 \$ billion, 2006



Source: OECD; McKinsey Global Institute analysis

These higher costs are partly attributable to the structure of the payer system. In fact, we find that, given the system structure in the United States, administrative costs are somewhat lower (\$19 billion) than expected for a system that is largely privately administered with multiple payers. A multi-payer system (and a multistate regulated system) creates extra costs and inefficiencies in the form of redundant marketing, underwriting, and management overhead that other OECD countries, which have less fragmented payment systems, bear to a lesser extent.

The public, rather than the private, sector has driven cost growth in this category from 2003 to 2006. The administrative cost per Medicare enrollee grew by nearly 30 percent per year, largely reflecting payouts to private administrators

of Medicare Advantage plans and the Part D drug benefit. From 2005 to 2006 alone, administration for all Medicare programs increased by nearly \$8 billion.

Long-term and home care

Long-term and home care accounts for 9 percent of overall health care costs but is \$53 billion less than expected, reducing total spending above ESAW by 8 percent. There are two reasons that spending in this category—unusually—is lower than one would expect, given the nation’s wealth. First, the United States has a relatively younger population than the OECD average. Adjusting for age, we calculate that the United States would spend \$36 billion more than expected when adjusting for wealth differences. Second, payment for long-term care is more often out of pocket than in other developed countries’ health care systems. Because individuals (unless they qualify for Medicaid) tend to rely on their own wealth to finance long-term care, nursing home facilities compete with each other on price, among other factors, to attract residents.

From 2003 to 2006, this category grew by 6.2 percent annually, resulting in a \$30 billion increase in costs. Home care, with 9.6 percent annual growth in costs since 2003, is a big driver behind growth in this category. This escalation of home care costs continues a trend dating to 2000, when states, in an effort to reduce Medicaid long-term care costs, started trying to provide alternatives to institutional care by expanding eligibility for home and community-based services (HCBS). In 2006 alone, 26 states took action to expand HCBS. From 2000 to 2004 (the last year for which data are available), Medicaid participants in home care grew by 6.3 percent annually. During the same period, Medicaid nursing home enrollment has remained flat, so this shift is arguably helping to contain cost growth.

Durable medical equipment

This category, which includes eyeglasses, contact lenses, hearing aids, wheelchairs, and similar medical goods, accounts for just over 1 percent of overall health care costs and is \$19 billion less than expected, reducing total spending above ESAW by 3 percent. Spending on durables grew by only 1.8 percent annually, or by \$2 billion from 2003 to 2006, reflecting the fact that US consumers largely pay for these items out of pocket. By contrast, many other OECD countries offer generous reimbursement.

Investment in health

This cost component comprises three subcategories—prevention and public health; public investment in R&D; and investment in medical facilities (both public and private)—and accounts for 7 percent of overall health care costs and 8 percent of total spending above expected (\$50 billion). Between 2003 and 2006, this category added \$23 billion, an annual increase of 6.1 percent that was slightly slower than growth in nominal GDP in this period.

- Prevention and public health accounted for \$59 billion in costs—\$27 billion above ESAW—in 2006, largely as a result of state-level initiatives associated with disease control, data collection, community health services, and tobacco-cessation programs. Above-expected spending on these programs is a societal choice, and, to the extent that these efforts improve health and reduce the cost of medical care, we should promote and enhance them. The critical questions to ask are whether they offer citizens a return on their investment and whether operation of the programs can be more efficient.
- Public investment in R&D accounted for \$42 billion in costs—\$16 billion above ESAW—primarily to fund the National Institutes of Health (NIH) (\$28 billion). Investment varies significantly by medical condition and does not necessarily align with those diseases that have the highest prevalence (e.g., obesity, heart disease).
- Investment in medical facilities in 2006 accounted for \$44 billion in costs, \$7 billion above ESAW. Private expenditures to build or update hospitals and medical buildings accounted for more than 80 percent (\$36 billion) of this spending. Compared with other OECD countries, the United States continues to have low inpatient bed utilization and higher fixed costs driven by greater investment in existing capacity.

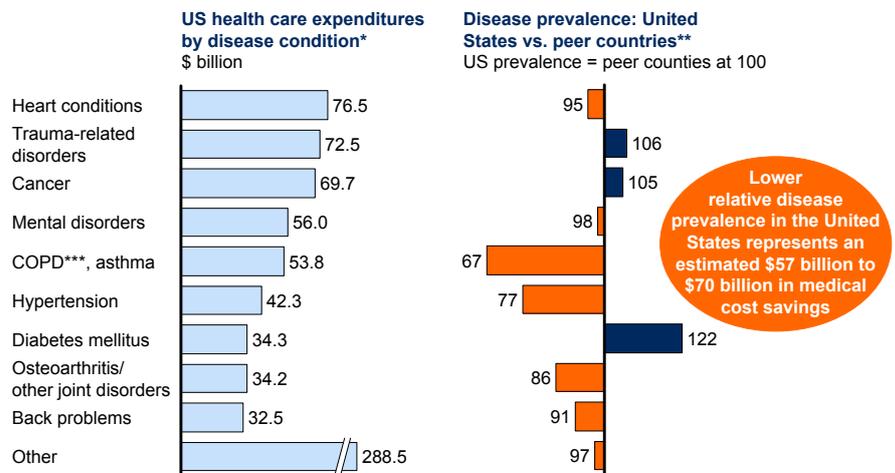
Disease prevalence in the United States—impact on demand and cost

Many might argue that higher health care spending is a consequence of demand—that Americans are sicker than people in other OECD countries. Interestingly, when looking at a large set of diseases, we do not find that to be true. We analyzed prevalence data tracked by Decision Resources across 122 diseases in the United States, France, Germany, Italy, Spain, and the United Kingdom. We mapped these diseases to 35 medical conditions tracked by the Medical Expenditure Panel Survey (MEPS) in the United States. The cost of treating these medical conditions represents 37 percent of the \$2.1 trillion spent on

health care in the United States. This analysis suggests that the citizens of the United States are collectively slightly less sick than the citizens of these peer countries (Exhibit 9). In fact, if one assumes that treatment patterns and the severity of these medical conditions are the same across countries, the United States saved \$57 billion to \$70 billion in medical costs in 2006 due to lower disease prevalence. We acknowledge that this cost estimate is imprecise, but the fact remains that disease prevalence is lower in the United States. This counterintuitive finding can be explained by three reasons: (1) disease prevalence, particularly that of chronic disease, is growing globally and not just in the United States; (2) the younger US population offsets relatively higher prevalence of certain conditions in at-risk populations (such as the over-30 population for heart disease); and (3) Americans smoke far less than OECD peers and, as a consequence, have lower health care costs for related conditions.

Exhibit 9

Disease prevalence in the United States is lower than in peer countries for most high-cost medical conditions



* Includes 35 of 60 medical conditions surveyed by US Medical Expenditure Panel Survey; the costs of these diseases represent 35 percent of total US health expenditures.

** Peer countries are France, Germany, Italy, Spain, and the United Kingdom.

*** Chronic Obstructive Pulmonary Disease.

Source: Medical Expenditure Panel Survey, 2005; Decision Resources 2006; McKinsey Global Institute analysis

Evidence on value in the US health system—quality and access

Unlike a business in which it is possible to judge cost-effectiveness and competitiveness, the health care system deals with life and death—and a big part of that is the quality of life. Discussing how well a health system performs necessarily involves some value judgments. To make our assessment as objective as possible, we looked for commonly accepted measures of quality

and access to gauge how the US health system performs relative to other OECD countries. We recognize that a vast body of literature exists on this topic, and we sought in this paper only to identify the major attributes that make the US health system unique. A mixed picture emerges.

On several dimensions, the US health system is world-class and without peer. The system offers unique support for innovation and the adoption of new technologies, products, and processes; new pharmaceutical products typically launch one to two years earlier in the United States than elsewhere. The top five US hospitals alone conduct many more clinical trials than any single OECD country. The United States is also much quicker to adopt new surgical techniques and advances in anesthesia, both of which have expanded the delivery of outpatient care and the number of patients safely able to receive such care. The United States has also led the way in innovating in the delivery and management of health care; the country is now “exporting” two such innovations—ASCs and disease management programs—to the rest of the world. “Premium” quality care is also a clear strength of the US system. Observers often cite the fact that the United States has some of the most prestigious hospitals in the world, and the fact that the United States is a net recipient of medical travelers supports this positive perception. US patients with adequate resources also have great flexibility to pursue aggressive end-of-life treatment, whether ultimately successful or not. Lastly, the US system tends to perform better than other countries on several notable measures of convenience. The United States has shorter waiting times both for visiting a specialist and for undergoing elective surgery—only Germany has comparable waiting periods—and offers alternatives to hospital-based care for many services that in most other countries are available only in hospitals.

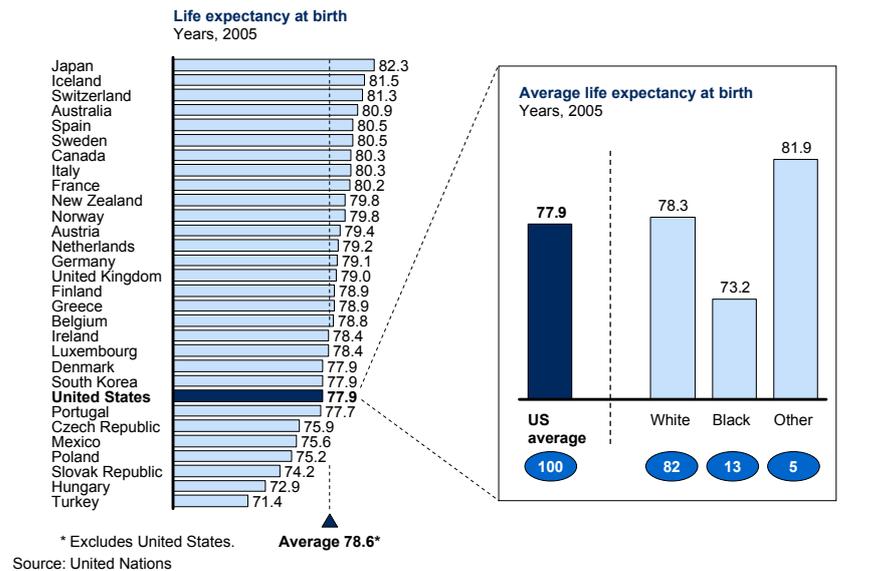
On other dimensions, the US system offers mixed results. The United States has generally performed in line with the rest of the OECD in terms of survival rates of specific diseases. Its record on cancer, because of more diligent screening and earlier detection, is superior. Cancer represents an example in which economic incentives for physicians align with better outcomes, biasing physicians to screen and diagnose cancers at a more treatable stage. With regard to technology, the United States adopts virtually all new technologies sooner than other OECD countries, although these technologies do not always result in better outcomes; in the worst cases, some of these technologies, rushed to market, may prove to be harmful and be withdrawn from the market. All new technologies tend to be more costly, and the current US system struggles to measure their value, cost, and quality.

Broad-based population level measures of health in the United States suggest weaknesses in the system. On life expectancy—the most basic measure of health—the United States compares unfavorably, with a 2005 average US life expectancy of 77.9 years, versus an average of 78.6 in peer OECD countries (Exhibit 10). It is clear that the US health system is not entirely to blame. Other factors, including lifestyle choices, violent crime, and higher incidence of transport-related deaths, play a significant role. Nonetheless, US citizens do not live as long as citizens in other developed countries (this is equally true for other outcome measures such as disease-adjusted life expectancy, a measure the World Health Organization developed to compare the number of healthy years people live across countries).

Exhibit 10

US life expectancy does not compare favorably with other OECD countries due partly to variations in outcomes

 % of US population



Infant mortality tells a similar story. These disparities are magnified among different subpopulations and regions, indicating that large variations exist within the “US health system.” Moreover, the 15 percent of the US population that has no medical insurance is a uniquely high share among OECD countries, and there is no doubt that this high rate of uninsured leads to large discrepancies in access to non-emergency care and outcomes.

To summarize, the evidence on whether the United States offers additional value for all the additional money spent on health care is mixed. Even in those areas

where the US system displays excellence, it tends to deliver superior quality for only a select group of the population.

PRINCIPAL ISSUES FOR CONSIDERATION

Our analysis of the underlying dynamics of health care economics in the United States points to seven principal issues to consider, which act in concert to produce higher costs. These forces work across the spectrum of supply, demand, and intermediation to produce a situation in which the laws of supply and demand that apply in most industries work in a very different way in the US health care system. A last—important—issue we acknowledge is the role that social norms and values play in shaping whether any reform is likely to be accepted. We now discuss each of these principal issues in turn.

Demand-related issues

Who pays for the burden of health care?

While most economists would argue that consumers pay for the high and growing cost of health care in the United States in the form of out-of-pocket expenditures, insurance premiums, taxes, and slower wage growth, the form of this payment matters in influencing the price and consumption of health care. Overall, health care consumers' average direct out-of-pocket expenditures are relatively low and indeed have declined from 47 percent in 1960 to 12 percent in 2006. Conversely, private health insurance's share of total costs increased from 21 to 35 percent and government's share of health care expenditures doubled during the same period, from 25 percent to nearly 50 percent.

Although average figures don't tell the whole story—out-of-pocket health care costs vary by person—for consumers with low out-of-pocket expenditures the price of health care services or the amount of care consumed is not a concern. These consumers have no incentive to consider trade-offs between higher- or lower-cost treatments or between spending disposable income on medical care instead of on other goods and services. Generous health insurance thus creates a moral hazard in the consumption of health care, particularly for health care services that are predictable and recurrent in nature. We identify five broad categories of health care risk: (1) low-dollar expenses; (2) expenses related to chronic conditions; (3) high-dollar discretionary expenses; (4) catastrophic expenses; and (5) end-of-life care expenses (Exhibit 11). It is important for payers, employers, and policy makers to evaluate how, to what extent, and for whom, traditional insurance plans should cover these types of expenses.

Exhibit 11

There are five broad categories of health care risks

Medical expense type	Details
Low-dollar	<ul style="list-style-type: none">• Medical expenses for routine medical care, preventive care, discretionary spending
Chronic condition care	<ul style="list-style-type: none">• Medical expenses related to chronic diseases/conditions• Risk of uninsurability once chronic disease is diagnosed
High-dollar discretionary	<ul style="list-style-type: none">• Medical expenses for elective procedures (e.g., back surgery, bariatric surgery, cosmetic surgery, laser eye surgery)
Catastrophic	<ul style="list-style-type: none">• Medical expenses driven by acute event or accident• Related nonmedical expenses (palliative or long-term care)
End-of-life care	<ul style="list-style-type: none">• Medical expenses typically related to terminal illnesses and experimental treatments or nonmedical expenses (e.g., caregiver)

Source: McKinsey Global Institute analysis

Information asymmetry in the health system

Two factors hinder patients' ability to make appropriate and value-conscious health care decisions. First, despite recent trends to expand consumer access to health information, we still see a significant lack of transparency in the cost and quality of health care that is arguably unrivaled in any other industry involving consumers. Second, even if the first issue is addressed, consumers still face a huge knowledge gap compared with care providers and are therefore highly reliant—and understandably so—on the advice and guidance of their physicians. In the absence of evidence to the contrary, patients may often assume that more care, or more expensive care, will lead to better outcomes. If the United States wants patients to become more value-conscious consumers of health care, policy makers will have to devise solutions that address the problem of price opacity and mitigate the medical knowledge gap with physicians. Even then, however, behavioral economics suggests information may not be enough to address this issue.

Declining health of the population

Although disease prevalence in the United States is no higher than in peer OECD countries, the general health of the US population is declining, and this is contributing to cost growth. Our analysis of MEPS data suggests that growth in

medical events from 2003 to 2005 (the last year for which data are available) accounts for \$20 billion to \$40 billion in medical cost growth. Growth in other risk factors, such as obesity, exacerbates the impact of these trends.

In response to these trends, disease management programs have become increasingly popular among payers and employers. While a recent McKinsey survey found that many employers are happy with the results of such programs, thus far these efforts have not had a material impact in terms of disease prevalence or macroeconomic cost growth.⁷ In the long term, health care stakeholders need to monitor, improve, and expand these programs to ensure their effectiveness in containing costs.

Supply-related issues

Technology-driven cost inflation

In many industries—consumer electronics is a prime example—technological innovation drives prices down. But the opposite occurs in US health care. Innovation in health care actually leads to higher prices across a wide spectrum of medical technologies, from imaging, to surgical equipment, to angioplasty devices. This is partly due, as we have noted, to lack of patient price sensitivity, but it is also due to the role of physicians in the health system, the lack of comparative data or other mechanisms to establish market prices, and possibly the value that society places on fairness in terms of access to care. A combination of these factors means that low prices do not necessarily drive equipment sales (or usage) and may even create the perception of low quality.

In addition, care providers and technology manufacturers benefit from higher reimbursement rates associated with cutting-edge technology. Utilizing the latest medical equipment also serves as a marketing tool to attract patients as well as, in the case of hospitals, physicians. Few hospitals direct capital expenditures toward expanding general medical capacity, focusing instead on the expansion of specialty medical services and advanced testing equipment such as CTs and MRIs. While there is no doubt that advances in medical technology have improved the quality of health care in a number of instances (such as minimally invasive surgical techniques and HIV medications), in other cases (e.g., CT angiography) the benefits are less clear. It is understandable that health care stakeholders are cautious about reforms that would stifle innovation. At the

⁷ Vishal Agrawal, Paul D. Mango, and Kimberly O. Packard, “What employers think about consumer-directed health plans,” *McKinsey Quarterly* Web exclusive, July 2007 (http://www.mckinseyquarterly.com/What_employers_think_about_consumer-directed_health_plans_2023).

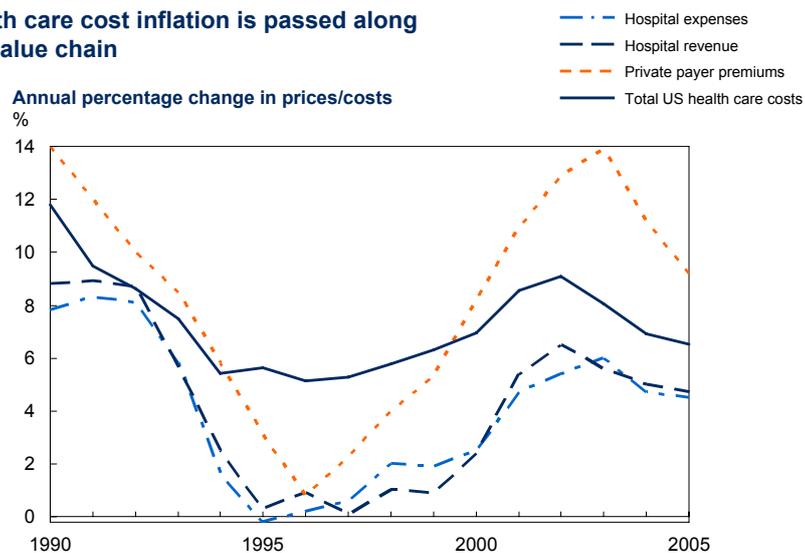
same time, if they are to address technology-driven cost inflation, stakeholders will need to assess the value received from technological innovation on a case-by-case basis and determine whether it is worth the price.

Cost inflation along the supply chain

Related to the first supply-side issue, we see costs rippling through the health system with no apparent restraints on spending growth. From health products and equipment manufacturers, to physicians and hospitals, to payers, and ultimately to employers and patients, each stakeholder absorbs a share of these cost increases and then attempts—if possible—to pass on even greater cost increases to the next player in the chain (Exhibit 12). In the case of the health system, it appears that stakeholders are either unwilling or unable to resist cost increases that are passed along to them. Unless the US health system addresses this dynamic, medical inflation cannot help but continue.

Exhibit 12

Health care cost inflation is passed along the value chain



Source: National Health Expenditures; Avalere Health analysis of American Hospital Association Annual Survey 2005 data for community hospitals; The Henry J. Kaiser Family Foundation and Health Research and Educational Trust Survey of Employer-Sponsored Health Benefits, 1999–2007

Intermediation-related issues

Payment for more care rather than more value

In the United States and across the world, there is a range of reimbursement mechanisms in health care: capitation, global fees or episode-based reimbursement, per diems, pay-for-performance, and fee-for-service. The most

fundamental difference among these mechanisms is the extent to which they require care providers to bear the risk of adverse events or treating patients with more acute conditions. Fee-for-service reimbursement, the primary method of payment for outpatient care, requires providers to bear relatively little risk in treating patients and creates financial incentives to provide more care, and care that is more costly. More visits, more tests, more procedures all add up to more pay for providers and higher costs to the system.

Fee-for-service reimbursement, combined with the significant discretion enjoyed by US physicians and a risk-averse culture encouraged by fear of litigation for medical malpractice, produces a bias toward comprehensive treatment. It is the physician who decides whether a simple in-office examination is sufficient or whether more tests are necessary to diagnose a specific condition—tests that both generate higher reimbursement and may help to limit a physician's personal risks of malpractice. Although the direct costs of malpractice lawsuits are limited—\$30.3 billion in 2006—research using data from 1984 to 1990 suggests that the practice of defensive medicine could produce extra costs of up to \$50 billion per year.⁸ Given today's health care costs, that would imply a potential annual saving of \$150 billion to \$190 billion.

Other reimbursement mechanisms present implementation and execution-oriented challenges, too, albeit different ones from those the case of fee-for-service. However, it is clear that addressing health care costs will require multiple stakeholders to home in on the issue of health care reimbursement in an effort to determine how to encourage providers to deliver care in a value-conscious way.

Pricing mechanisms in the market

The way pricing of health care goods and services works is different from most other industries and tends to encourage growth in health care costs over time. Medicare, the largest payer in the US market, plays an important role in shaping industry pricing. Medicare uses a cost-plus-based formula and updates its pricing by service and geography every one to five years. This approach has two major shortcomings. First, care providers do not materially benefit from productivity gains in the long run and therefore have a limited incentive to manage costs. Second, this approach creates “sticky” prices in the short run that do not dynamically adjust to reflect market trends.

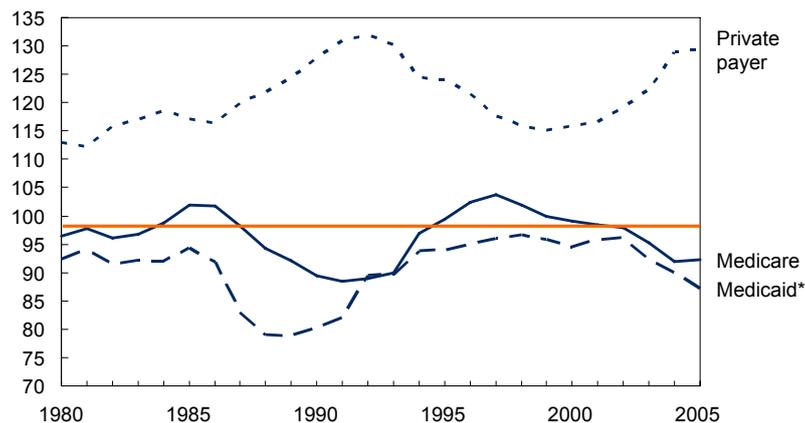
⁸ Daniel P. Kessler and Mark B. McClellan, “Do doctors practice defensive medicine?” *Quarterly Review of Economics and Finance*, May 1996, Volume 111, Number 2, pp. 353–90.

Medicare’s influence extends beyond its own pricing decisions into private payer coverage and pricing levels. More often than not, private payers follow Medicare’s lead when deciding whether to reimburse for new procedures or technologies. Likewise, Medicare’s pricing levels set a benchmark price for any given procedure or service in any given location. Trends in private payer reimbursement rates are highly correlated to Medicare pricing trends but inversely so: when Medicare pricing growth slows, private payer price growth accelerates (Exhibit 13). This finding implies that care providers have significant leverage in negotiating prices with private insurers, forcing them to pick up the slack if public payment growth slows.

Exhibit 13

Private payer reimbursement grows when Medicare price growth slows

Aggregate hospital payment-to-cost ratios for private payers, Medicare, and Medicaid
1980–2005



* Includes Medicaid Disproportionate Share payments.

Source: Avalere Health analysis of American Hospital Association Annual Survey 2005 data for community hospitals

Given Medicare’s influence in shaping coverage and pricing decisions within both the public and private domain, it is important for health care stakeholders to understand and regularly assess Medicare’s impact on overall trends in the health care market, including an evaluation of potential alternatives to cost-plus-based reimbursement.

Role of social norms and values

The unique aspects of the US health system partly reflect the nation’s social norms and values. Three in particular play a role in how the US health system operates—the value society places on extending life; on individual choice; and on equality. Because societal values evolve, we suggest that stakeholders—

principally policy makers—make it their business to understand fully the values that constituents have in these three respects, especially when these are balanced against potential trade-offs associated with health care costs.

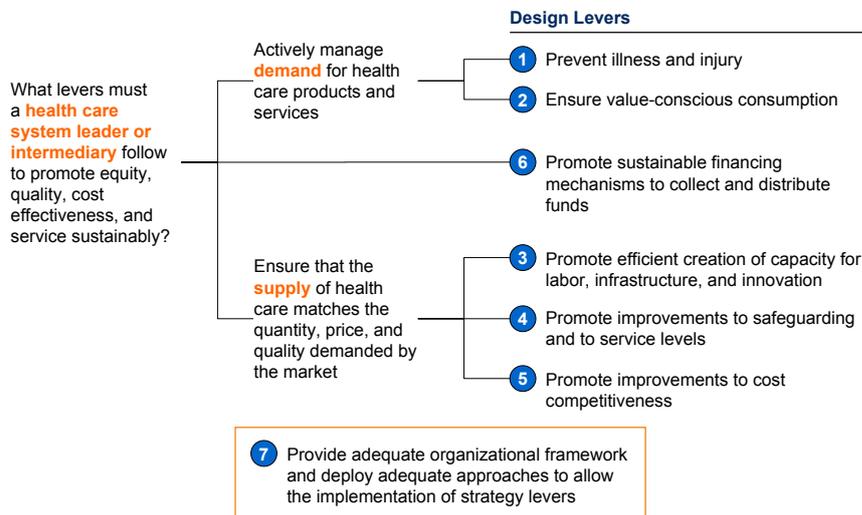
Framework for reform options

The principal issues that account for high and rising costs are widespread within the US health care system, and if they are not addressed in broad terms, health care spending growth is likely to continue unabated. Indeed, the Department of Health and Human Services projects that health spending will reach \$4.3 trillion within the next ten years.⁹

As US policy makers look at options for health care reform, they must consider action that addresses both supply and demand, focuses on the financing of health care, and ensures that any reform takes place within an effective organizational framework for implementation to be effective (Exhibit 14). Given the principal issues we have discussed, we suggest that the following critical questions must be asked—and answered.

Exhibit 14

MGI believes that to be effective, reform should focus on both supply and demand



Source: *A framework to guide health care system reform*, McKinsey Global Institute, November 2006

9 The US Department of Health and Human Services projects that US health care spending will rise to \$4.3 trillion by 2017—posting average annual growth of 6.7 percent over the next decade, all but certainly exceeding GDP growth. The Congressional Budget Office projects that, in the absence of changes in federal law, total spending on health care would increase from 16 percent of GDP in 2007 to 25 percent in 2025 and 49 percent in 2082. It also estimates that federal spending on Medicare and Medicaid would rise from 4 percent of GDP in 2007 to 7 percent in 2025 and 19 percent in 2082.

-
1. How can price sensitivity and information transparency be leveraged to foster value trade-offs from consumers?
 2. Which preventive efforts provide the largest opportunity to improve general health and thereby reduce costs?
 3. What should be the role of payers, employers, and the government in promoting innovation that will decrease costs and improve quality?
 4. What is the optimal approach to stop or slow cost inflation across the health care supply chain and to prevent overconsumption of supply-induced demand services?
 5. What is the most effective financing and payment approach to give providers the right incentives for an appropriate amount and type of care?
 6. How can public payment programs such as Medicare and Medicaid create market leadership toward desired change in the system, specifically as it relates to reimbursement approach and levels?
 7. What can the United States learn from previous reform efforts?
 8. How should the social norms and values of the American public shape reform?

While there are obvious political dimensions to these questions, the involvement of system stakeholders such as hospitals, payers, and doctors in the dialogue about these issues is critical to achieving successful system reforms.

* * *

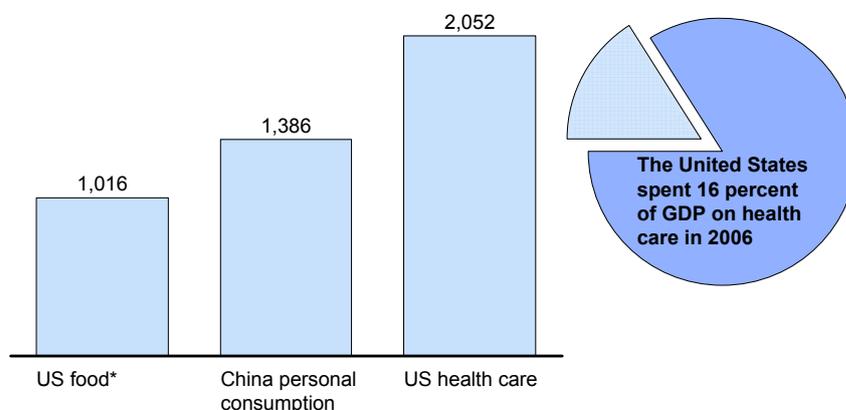
In the report that follows, chapter 1 presents our detailed findings on the breakdown of costs in the US health care system, the role that disease prevalence plays, and our high-level assessment of where, and how, the system creates value. Chapter 2 frames the seven principal issues that stakeholders in the health system should consider with respect to demand, supply, and intermediation, along with the importance of social values and norms. In this chapter, we discuss the important underlying dynamics at work within the system and present a set of potential reform options for consideration. We do not advocate any specific approach or make recommendations. Rather, we hope that our analysis will help support policy makers as they develop their response to the issue of escalating US health care costs.

1. The facts about the US health system

From 2003 to 2006, US health care spending increased by \$363 billion to reach \$2.1 trillion, or nearly \$6,800 per capita. To put this into context, during this three-year period, health care costs increased by more than what the United States spent on oil and gasoline in total during all of 2006 when energy prices began to reach new highs. In 2006 alone, the United States spent twice as much on health care as it did on food—and more than China’s citizens consumed altogether (Exhibit 1). Not only does the United States spend a great deal on health care in absolute terms, but the nation also spends far more than expected, given the relative level of wealth of the United States (Exhibit 2).

Exhibit 1

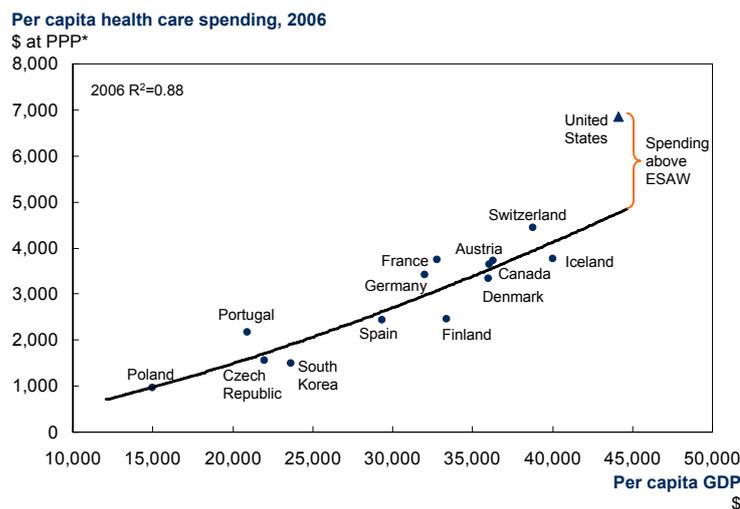
The United States spends twice as much on health care as on food, and more than Chinese consumers spend on all goods and services
\$ billion, 2006



* Excludes alcoholic beverages (\$150 billion) and tobacco products (\$92 billion).
Source: National Health Expenditure Accounts; Bureau of Economic Analysis; National Bureau of Statistics of China

Exhibit 2

The United States spends far more on health care than expected even when adjusting for relative wealth



* Purchasing power parity.

Source: Organisation for Economic Co-operation and Development (OECD)

With growing public cries in the United States to “fix” health care, it is important for policy makers, reformers, advocacy groups, and citizens to understand the facts that underpin how the US health system works and what aspects of the system contribute to health care spending that is above and beyond what we would expect.

In this chapter, we build a robust picture of the facts about US health care spending and value. We address where in the system—and why—the United States spends so much more than other developed countries on health care, both in absolute terms and for their respective levels of prosperity, and what factors have been driving increased spending over the three-year period. We also look at the relative prevalence of disease in the United States to try to determine to what extent a sicker population drives higher costs in the country. Finally, in seeking to ascertain what value the United States receives for the money spent on health care, we discuss how the US health system performs in terms of delivering quality care and offering access.

COSTS WITHIN THE US HEALTH SYSTEM

Across the world, countries with higher incomes tend to spend more on health care—in fact, a disproportionate share of their income—suggesting that health care is a “superior good.”¹⁰ Just as wealthier individuals might spend a larger

10 Uwe E. Reinhardt et al., “Cross-National Comparisons of Health Systems Using OECD Data, 1999,” *Health Affairs*, May/June 2002, Volume 21, Number 3, pp. 169–181.

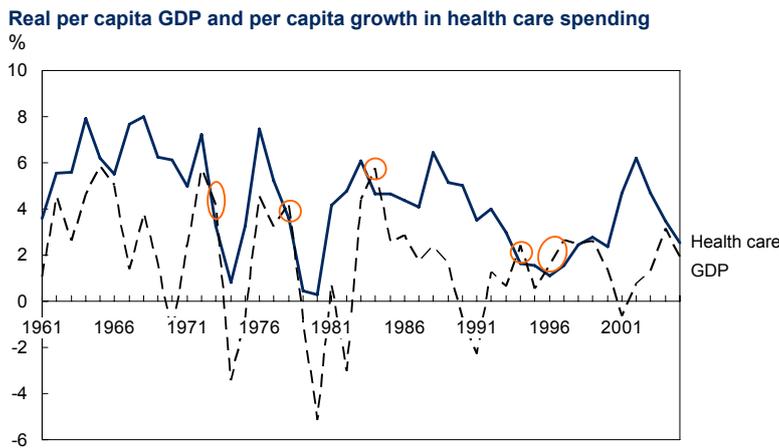
proportion of their income to buy a bigger home or one in a better neighborhood, so wealthier countries spend a larger portion of GDP on health care. However, even accounting for this economic relationship, the United States still spends far more on health care than might be predicted. So why do US citizens spend so much on health care—and is the US system providing value for money?

Since 1960, GDP growth has exceeded health care spending growth in only seven years—four of them falling from 1994 to 1998 (Exhibit 3). Furthermore, medical inflation has consistently exceeded core inflation over the past 50 years or more. MGI finds that more than \$1 trillion in spending growth from 1960 to 2006 is not attributable to macroeconomic factors such as GDP and population growth (Exhibit 4).

Exhibit 3

US health care spending growth has consistently exceeded GDP growth

○ GDP growth > health care spending growth



Source: National Health Expenditure data; McKinsey Global Institute analysis

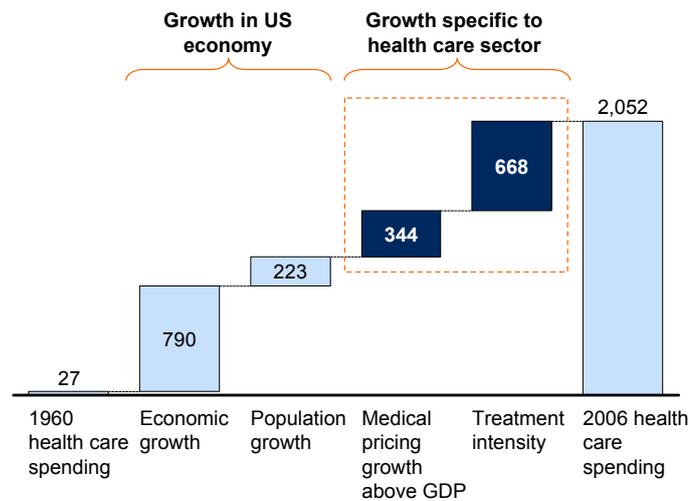
From 2003 to 2006, growth in US health care spending appears to have decelerated; the annual growth rate of 6.7 percent was only marginally faster than nominal 6.6 percent GDP growth in this period. To contextualize this growth as a share of the nation’s output, we looked at health care spending relative to total economic output in other Organisation for Economic Co-operation and Development (OECD) countries (Exhibit 5). We found a varied picture. Health care spending grew as a share of GDP in South Korea, Spain, Portugal, and France, among other countries. In contrast, health care spending fell as a share of GDP in the Czech Republic,

Iceland, Germany, and Switzerland. In the United States, health care spending growth, which largely mirrored GDP growth, continued to represent a higher share of GDP growth than in any country in the world.

Exhibit 4

More than \$1 trillion of spending growth cannot be explained by broad-based growth in the US economy

\$ billion



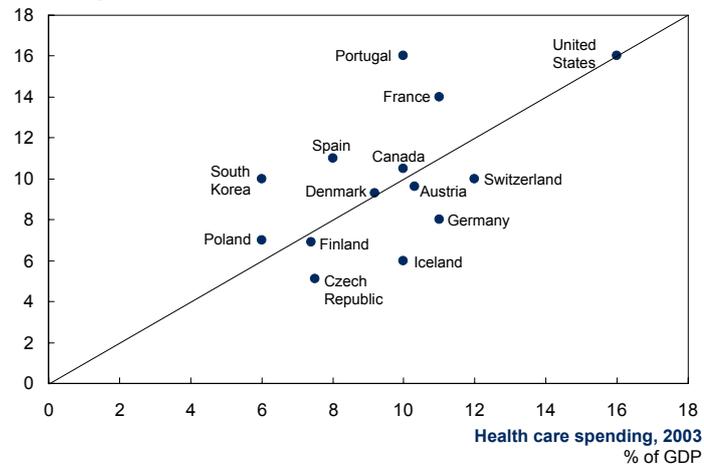
Source: Centers for Medicare & Medicaid Services; OECD; McKinsey Global Institute analysis

Exhibit 5

Growth in health care spending has varied widely among 13 selected OECD countries

Growth in health care spending, 2003–06

% of GDP growth



Source: OECD

To ascertain why the United States spends so much more on health care than would be expected for the nation's income, we broke spending down into its components. To do this, we used OECD data on national health spending, along with other public and proprietary data. We asked how much each component of the US health system costs and by what degree these costs differ from an Estimated Spending According to Wealth (ESAW) measure. We calculated this measure by evaluating per capita health care spending in 13 other OECD countries relative to per capita GDP. We also looked at how much each component of the health care system grew from 2003 to 2006. Where possible, we then sought to attribute this growth to changes in pricing, volume, or the mix of goods and services consumed.

MGI's analysis shows that, of the \$2.1 trillion the United States spends on health care, nearly \$650 billion is above what we would expect for the level of US wealth. Of this amount, outpatient care, which includes same-day hospital visits and is the fastest-growing component of the health system, accounts for \$436 billion, or two-thirds of spending above expected. Among other components of the system, drugs and health care administration costs account for \$189 billion in spending above what we would expect (see Exhibits 6 and 7 for our high-level findings). We now turn to a detailed discussion of each component of health care spending.¹¹

Outpatient care

Spending on outpatient care totaled more than \$850 billion in 2006—by far the largest source of cost in the US health system, accounting for more than 40 percent of overall spending.¹² Outpatient care costs are \$436 billion more than expected, representing 68 percent of total costs above ESAW. Breaking these costs down by provider, we find that same-day hospital care spending represents 29 percent of overall outlays in this category of care and \$186 billion of spending above ESAW. Care delivered in physicians' offices accounts for 46 percent of the total and \$151 billion in spending above expected. An additional 11 percent of care, and \$71 billion above expected, is delivered in a variety of outpatient clinics. The fourth category, ambulatory surgery centers (ASC) and diagnostic

11 There is one methodological difference from our previous report. Due to the availability and reliability of data from the OECD, we have chosen to compare inpatient and outpatient spending in the United States with that of other countries rather than hospital spending and nonhospital outpatient spending.

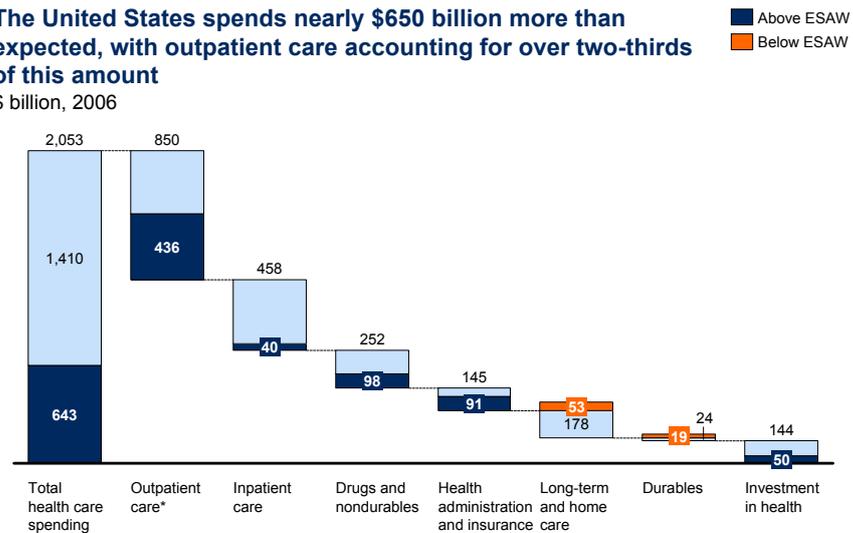
12 In this report, our definition of outpatient care includes all same-day visits within hospitals, including those within the Emergency Department (ED); all visits to physicians' offices; all care provided at ASCs or DICs; all dental care visits; and any other health care delivered on a same-day basis such as rehabilitative care or visits to family planning centers.

imaging centers (DIC), is a small but fast-growing component that accounts for \$21 billion above ESAW. Finally, the United States spends \$92 billion per year on dental care, with outlays that are \$7 billion more than we might expect given US incomes (Exhibit 8).

Exhibit 6

The United States spends nearly \$650 billion more than expected, with outpatient care accounting for over two-thirds of this amount

\$ billion, 2006



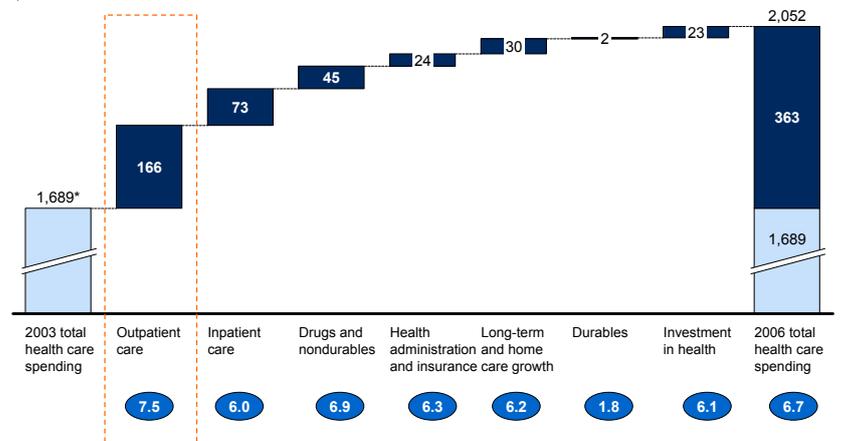
* Outpatient care includes physician and dentist offices, same-day visits to hospitals including Emergency Departments (ED), ambulatory surgery (ASC) and diagnostic imaging centers (DIC), and other same-day care facilities.

Source: OECD; McKinsey Global Institute analysis

Exhibit 7

Outpatient care is fastest-growing component of US health care system

Growth in national health spending 2003–06
\$ billion



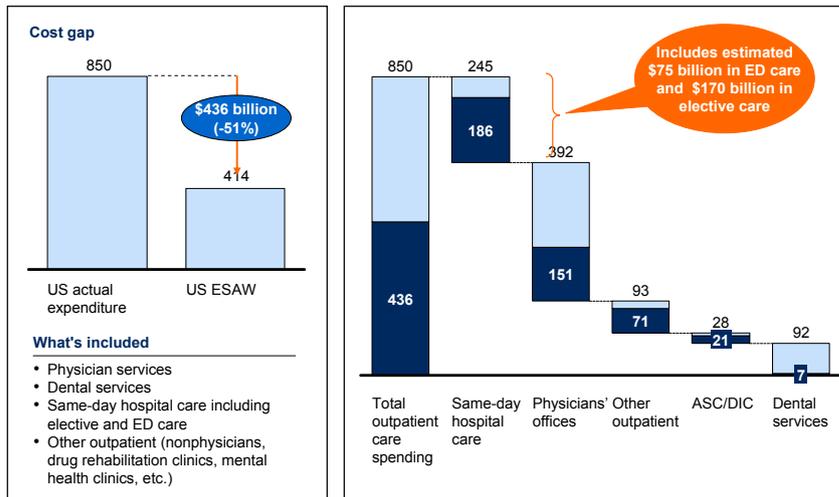
* Total spending for 2003 is \$10 billion higher than reported in MGI's previous report due to subsequent revisions to OECD data.
Source: OECD; McKinsey Global Institute analysis

Exhibit 8

Spending on outpatient care accounts for more than 40 percent of total health care spending

\$ billion, 2006

■ Above ESAW



Source: OECD; Medical Expenditure Panel Survey; MedPAC; Verispan; McKinsey Global Institute analysis

Outpatient care is also the fastest-growing component of the US health care system, expanding at 7.5 percent per annum from 2003 to 2006, during which time this category added \$166 billion to spending. Hospital-based outpatient care costs are growing most rapidly at 9.3 percent per year, followed by ASCs and DICs at 8.4 percent, physician office-based care at 7.9 percent, dental care at 6.0 percent, and other outpatient care facilities at 3.2 percent (Exhibit 9). In total, growth in outpatient care costs over the three-year period represents an additional average cost of \$550 for each American.

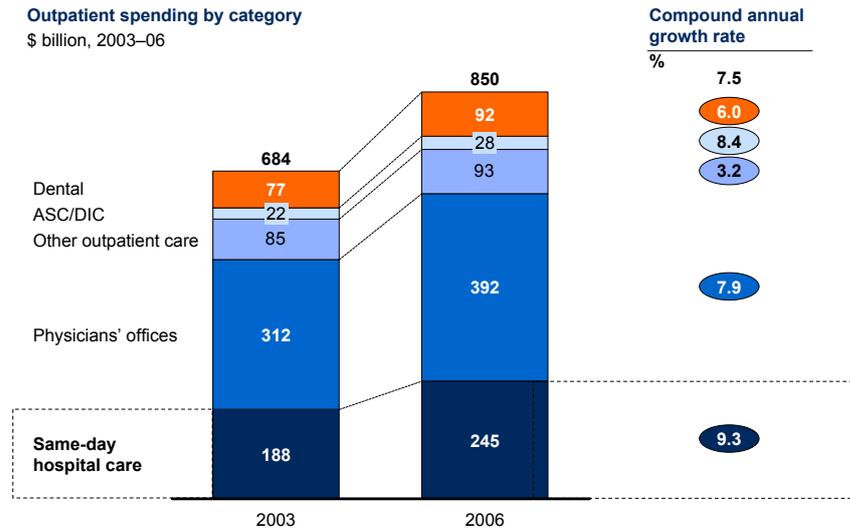
Such growth is not just a recent phenomenon—growth in outpatient spending has averaged 9.0 percent per year for the past 20 years, much higher than the expansion of inpatient spending at a rate of just 5.2 percent.

Part of the reason that spending on outpatient care in the United States is higher than expected is the fact that the United States has experienced a structural shift in the delivery of care from an inpatient to an outpatient setting to a much greater extent than have other developed countries. In fact, 65 percent of care delivery costs in the United States today are outpatient-related, compared with an OECD average of 52 percent (Exhibit 10). This shift to outpatient care has doubtless been beneficial in promoting quicker recovery times. Theoretically, one might also anticipate that this shift to outpatient care would save on costs overall, because fixed costs tend to be lower than when patients stay overnight in a hospital. We

should therefore expect a reduction of inpatient costs. Indeed, we estimate that the United States saves \$100 billion to \$120 billion a year from shorter stays by inpatients and fewer hospital admissions than in OECD peer health systems.

Exhibit 9

Same-day hospital care and physician office visits are driving overall growth in outpatient care spending

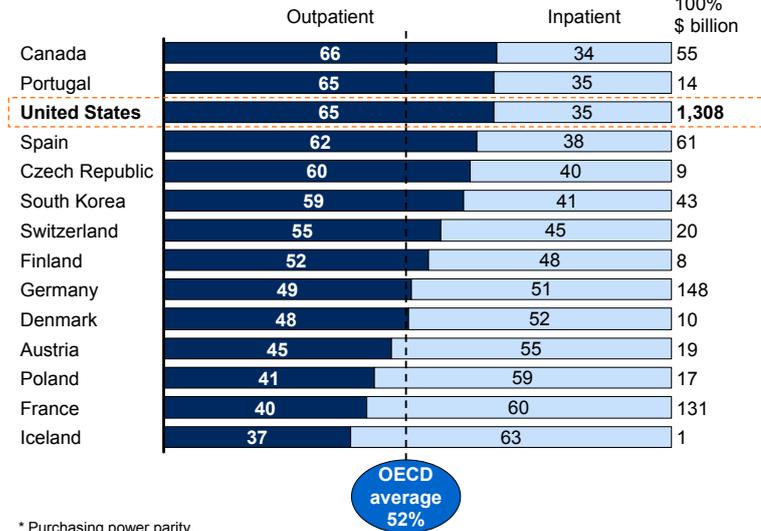


Source: OECD; US Census; analyst reports; MedPac; Medical Expenditure Panel Survey

Exhibit 10

A higher share of patients are treated as outpatients in the United States than in most other OECD countries

%, \$ billion at PPP,* 2006



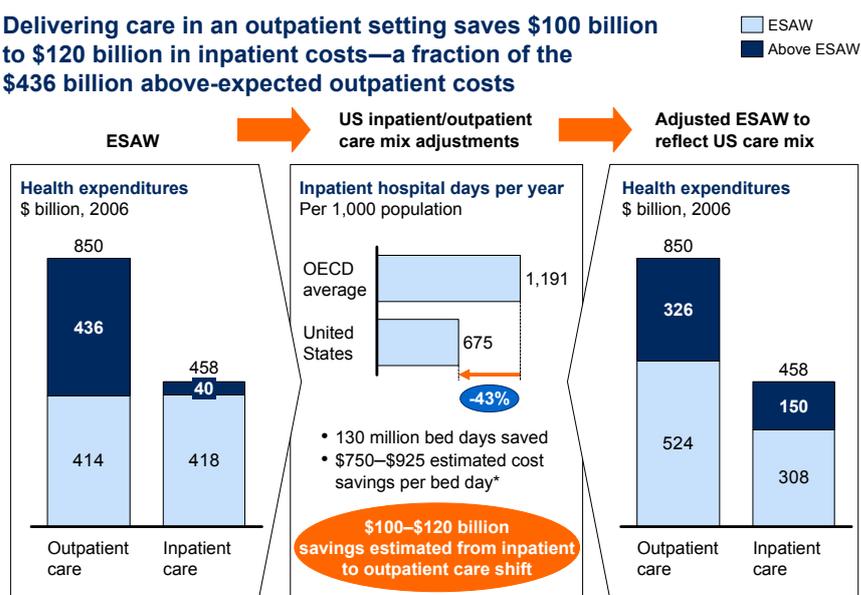
* Purchasing power parity.

Source: OECD; McKinsey Global Institute analysis

However, these savings only partly defray the \$436 billion in outpatient care costs above expected in the United States (Exhibit 11). Our analysis suggests that this shift to outpatient care has increased—not decreased—total costs. This is because of the higher utilization of services that this migration has entailed. We could observe this phenomenon in the early 1990s with the introduction of laparoscopic (noninvasive) cholecystectomy surgery. In this case, the cost savings from shorter stays were more than offset by an increase in procedural volume for an equivalent population set.¹³ The higher utilization of care may be attributable to a number of factors such as greater patient convenience and a reduction in risks associated with less-invasive surgery. It also appears likely that this increased usage relates to the fee-for-service nature of outpatient care reimbursement, which creates incentives to providers to render more care.

Exhibit 11

Delivering care in an outpatient setting saves \$100 billion to \$120 billion in inpatient costs—a fraction of the \$436 billion above-expected outpatient costs



* Estimated variable costs of lower acuity care shifted into an outpatient setting.
Source: OECD; McKinsey Global Institute analysis

Several other factors account for the size and growth in outpatient care costs in the United States. From a supply perspective, outpatient care, particularly for specialist care and diagnostic procedures, is very profitable. Outpatient care is also subject to the judgment of physicians in determining the best course of treatment and the fact that current outpatient reimbursement methods

13 A. P. Legorreta et al., "Increased cholecystectomy rate after the introduction of laparoscopic cholecystectomy," *Journal of the American Medical Association*, September 22, 1993, Volume 270, Number 12, pp. 1429–32.

reward providers for delivering more care or care that is higher intensity. Finally, technological innovation tends to garner higher prices and reimbursement for providers of care. This is in contrast to price trends observed in many other industries, such as computers, mobile phones, and other electronics.

Taking these factors together, classical economics would predict growth in the supply and provision of services to meet this profit opportunity in the short run, leading to increased competition and declining prices in the long run. We do, indeed, see growth in the capacity and complexity of care across a variety of outpatient care settings in the United States. However, we have not observed commensurate declines in costs for two demand-driven reasons. First, demand tends to grow in line with capacity. This is most evident in evaluating diagnostic procedures, but is also true for other types of outpatient care. Second is the fact that many patients are insensitive to price, creating a moral hazard in the consumption of health care. On average, patients' out-of-pocket expenses for outpatient care represent only 15 percent of total expenditures.

In the rest of this section, we turn our attention to what we believe are the underlying drivers and trends in each outpatient care setting.

Hospitals have a strong incentive to perform same-day elective outpatient care

Hospitals in the United States deliver a higher percentage of care on an outpatient basis than do hospitals in most other countries. The United States is quicker to utilize minimally invasive techniques and more advanced anesthesia options. As a consequence, outpatient care is an option for a range of patients and conditions that require inpatient care in other countries. Lower-intensity surgeries, such as hernia operations and knee replacements, are more likely to be performed on an outpatient basis in the United States than in other countries. In the United Kingdom, for instance, 58 percent of hernia surgeries were performed on an inpatient basis, compared with just 11 percent in the United States.¹⁴

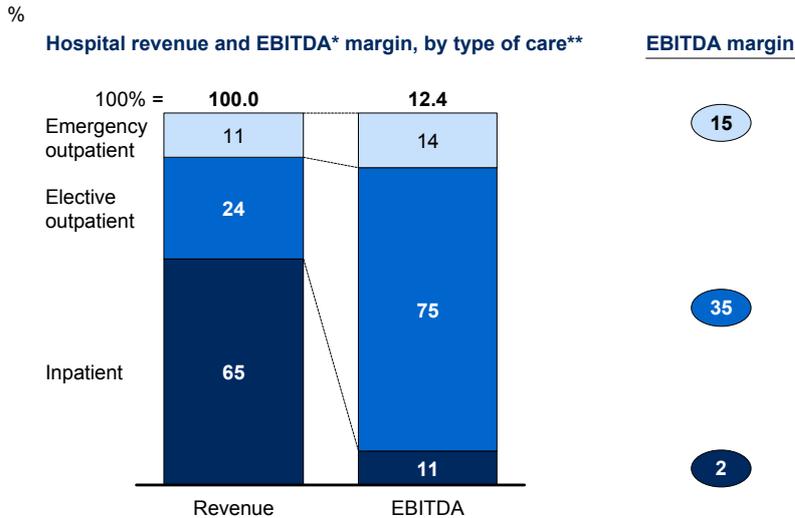
Hospitals also have strong financial incentives to provide elective outpatient care when doing so is safe and possible. For Medicare and commercial payers, hospitals typically realize a small margin on inpatient care compared with much higher margins on outpatient care (Exhibit 12). In fact, low-acuity conditions that are suited to outpatient treatment often generate losses when delivered on an

14 C. A. Russo et al., *Ambulatory Surgery in U.S. Hospitals, 2003—HCUP Fact Book No. 9*, Agency for Health Care Research and Quality, Publication No. 07-0007, January 2007 (<http://www.ahrq.gov/data/hcup/factbk9/>); *Hospital Episode Statistics, 2003-2004*, National Health Service (www.hesonline.nhs.uk/Ease/servlet/ContentServer?siteID=1937&categoryID=204).

inpatient basis. It is therefore strongly in hospitals' financial interests to invest in capacity and technologies that allow them to deliver more elective outpatient care (Exhibit 13).

Exhibit 12

Inpatient care generates lower margins for hospitals than does outpatient care



* Earnings before interest, taxes, depreciation, and amortization. ** Represents average margins across a variety of hospital types and settings and may not be representative of margins for any individual hospital.

Source: Hospital annual reports; hospital cost data; McKinsey Global Institute analysis

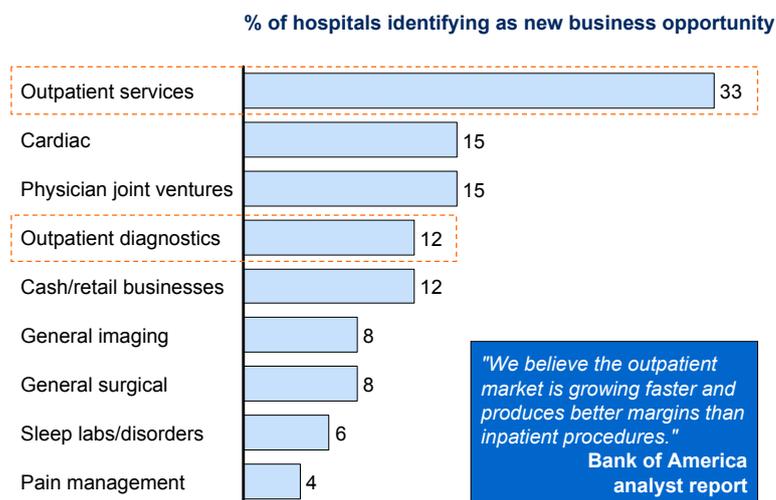
Care delivered in emergency rooms is also a critical component of same-day hospital care spending. Nationwide, we estimate that visits to the Emergency Department (ED) accounted for \$75 billion in annual costs and up to 56 percent of total outpatient visits.¹⁵ Although not as profitable as elective outpatient care—we estimate that on average elective outpatient care has profit margins two to three times as high as ED care—ED care is nonetheless important to hospitals' financial strength for two reasons. First, margins on care delivered in the ED are important in covering hospitals' fixed costs; second, the ED is a major source of referrals for more profitable elective care.

Turning to the growth in spending in this category, same-day hospital care costs increased by 9.3 percent per year from 2003 to 2006—the fastest of any outpatient care setting—primarily because of rising revenue per visit. While patient visits grew at a modest 2.1 percent per year during this three-year period, revenue per visit increased 7.0 percent a year. This increase is most likely a result of both a change in mix toward more expensive procedures (such as CT

15 The National Ambulatory Medical Care Survey (NAMCS), 2007.

Exhibit 13

Hospitals focus on outpatient care for new business opportunities



Source: Bank of America LLC Annual Hospital Survey

and MRI scans and other diagnostic procedures) and absolute price increases for equivalent procedures.¹⁶

A visit to the physician's office costs more in the United States

The higher cost of visits to US physicians' offices, rather than the volume of these visits, lies behind higher spending on this category relative to other OECD countries. This suggests that US physicians are delivering more complex care or that they are charging higher prices for equivalent care, or both.

It is true that US physicians are more highly paid than their counterparts in other developed countries (Exhibit 14). US generalists make 4.1 times per capita GDP, compared with 2.8 times per capita GDP in other OECD countries. Specialists make 6.5 times per capita GDP, compared with an OECD average of 3.9. As we noted in our prior report, higher average physician compensation is not because of a higher concentration of specialists in the United States—specialists represent 64 percent of all physicians in the United States, compared with an OECD average of 66 percent. Across all US physicians, higher earnings add \$64 billion in costs to the US system, about \$40 billion of which is for care delivered in an outpatient

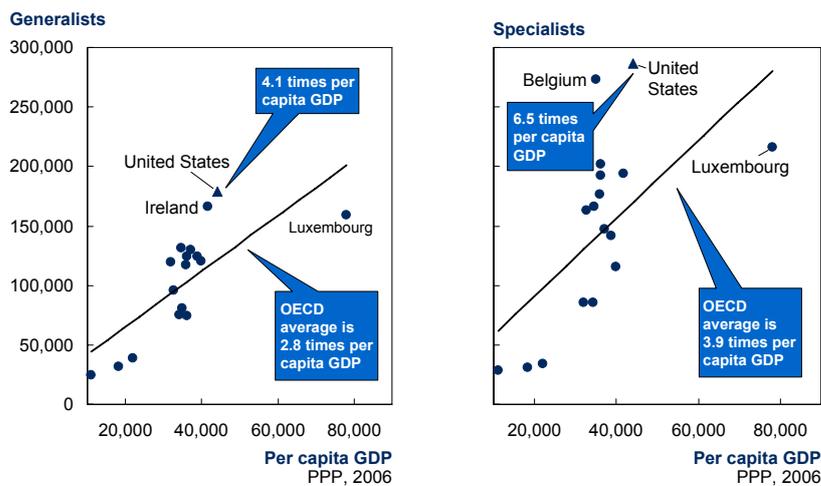
¹⁶ CT (computerized tomography) and MRI (magnetic resonance imaging) scans are diagnostic tests that provide high-resolution pictures of the structure of any organ or area of the body requiring examination.

setting (Exhibit 15). This difference may be explained by such factors as a higher cost of medical education in the United States, as well as the opportunity cost of not entering other higher-paying professions (e.g., law, business). However,

Exhibit 14

US physicians are more highly paid than their counterparts in other developed countries

\$ PPP, annual, 2006

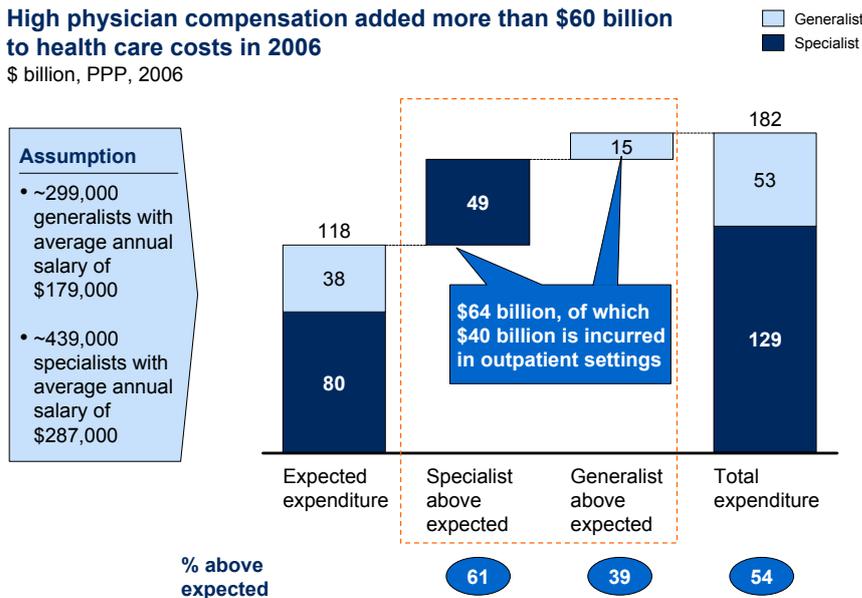


Source: OECD; Medical Group Management Association; McKinsey Global Institute analysis

Exhibit 15

High physician compensation added more than \$60 billion to health care costs in 2006

\$ billion, PPP, 2006



Source: OECD; McKinsey Global Institute analysis

such factors cannot explain all of the difference in the earnings of US physicians compared with their OECD counterparts.¹⁷

In addition to the fees they earn for professional services, physicians can receive compensation in the form of facility fees for diagnostic procedures performed in their practices. Stark Laws, designed to prevent physicians from self-referring patients, provide explicit exceptions as long as a referral occurs within the practice. As a result, physicians who refer patients to their own imaging equipment, for example, may legally profit from doing so.¹⁸

In terms of spending growth, the expenses incurred by physicians' offices increased by 8 percent a year from 2003 to 2006, primarily due to growth in the cost per visit. Visits remained flat during this time, declining for primary care and surgical specialists while increasing 1.6 percent per year for medical specialists. Data from the National Center for Health Statistics suggests a shift in visit volume to specialists is part of a longer-term trend (primary care visits increased 1.5 percent per year from 1996 to 2006 while specialist volumes increased 2.9 percent per year) (Exhibit 16). A shift to a higher percentage of specialist visits suggests a corresponding increase in the cost of an average consultation as specialists are reimbursed at higher rates and after provide higher intensity care.

ASC and DIC capacity continues to grow

The extensive use of freestanding surgical and diagnostic imaging centers is fairly unique to the US market and appears to suit most stakeholders in the US health care system that prefer care being delivered this way, rather than in hospitals. For patients, freestanding centers may represent a more convenient and pleasant alternative to a hospital. These centers are also attractive to payers because of their lower operating costs for equivalent procedures and correspondingly lower prices. Such facilities are quite profitable—top public ASC and DIC chains earned EBITDA (earnings before interest, taxes, depreciation,

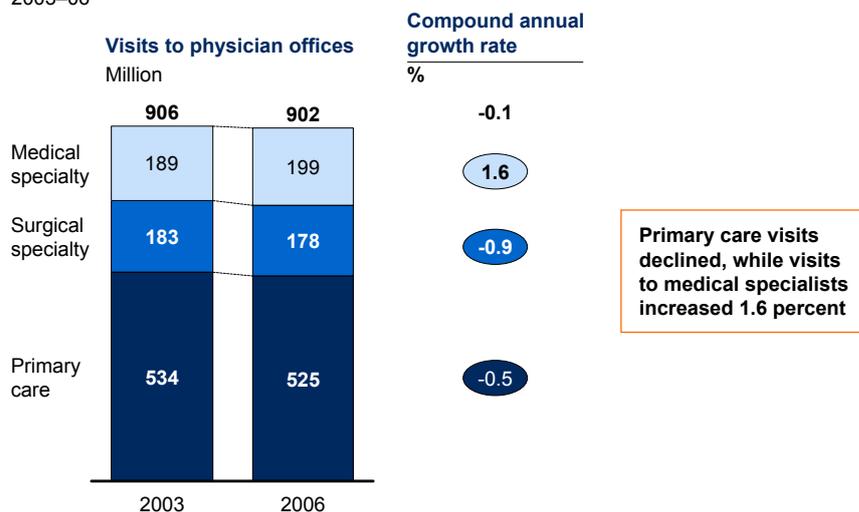
17 The average US private medical school annual tuition fee in 2004 was \$32,488 (Association of American Medical Colleges Report 2004), while a sample of several British medical schools revealed tuition fees of \$10,000 to \$11,000 (University of Sussex and London College), and the average Canadian medical school charges \$12,000 (Canadian Medical Association).

18 Stark Laws, which went into effect in 1992, are intended to prohibit physicians from referring patients for services to entities in which they have a financial stake. The law has been clarified and updated since its original passage, identifying the types of services for which referrals are prohibited and carving out exceptions, including referrals to physicians within the same group practice, in-office ancillary services, and referrals to entities in which the physician is invested.

Exhibit 16

Overall increase in volume of visits to physicians' offices is driven by growth in visits to specialists

2003–06



Source: National Ambulatory Medical Care Survey (National Center for Health Statistics); McKinsey Global Institute analysis

and amortization) margins of 28 to 39 percent in 2007.¹⁹ Many physicians also have an ownership stake in the ASCs in which they perform surgery. One major ASC chain reports ownership of only 51 percent in most of its facilities, with the remaining equity held by the physicians who practice in them.²⁰ This gives physicians an incentive to refer patients to their ASCs to capture a portion of the facility charges as ASC profits.

As a result of the multiple incentives to expand freestanding diagnostic capacity (at the same time that hospitals are expanding their own diagnostic testing capacity), the United States has developed per capita imaging capacity that is well above the OECD average (Exhibit 17). The United States also conducts more imaging procedures and provides significantly higher reimbursement for imaging services (Exhibit 18).

In terms of cost growth, the ASC market has grown by 12.9 percent annually since 2000, tapering off to a rate of 9.6 percent per year between 2003 and 2006 (Exhibit 19). This rise in spending mirrored a continuing shift in surgical volumes from hospitals to freestanding centers and physicians' offices (Exhibit 20). Unlike growth in hospital spending during this period, growth in ASCs was almost entirely

¹⁹ 2007 company annual 10-K reports.

²⁰ 2007 company annual 10-K report for AMSURG.

Exhibit 17

US scanner capacity is higher than in most other OECD countries

Scanners per million population, 2005 (or latest year available)

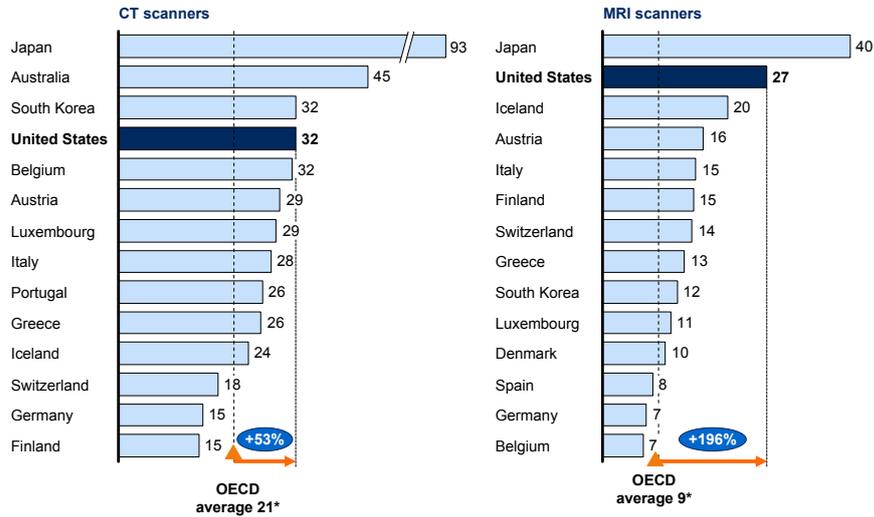
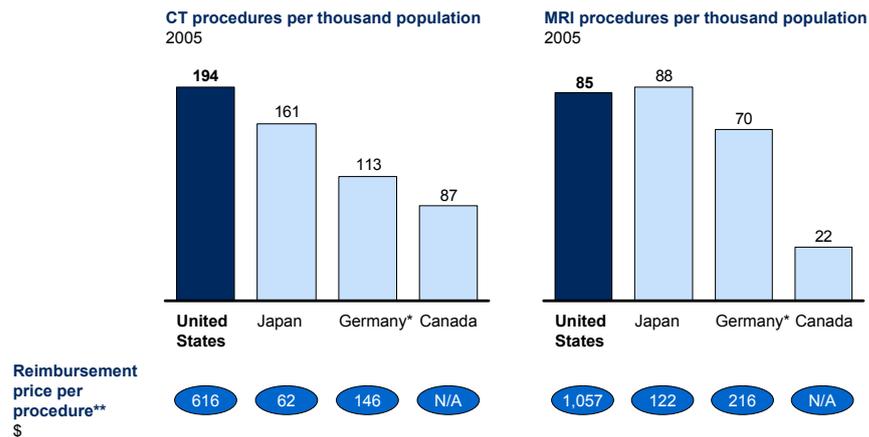


Exhibit 18

The United States conducts more diagnostics per capita than other OECD countries and reimburses more favorably



* Data from 2004.

** Reimbursement prices are for 2008 for all countries. All prices are for public reimbursement for an abdominal CT or MRI.

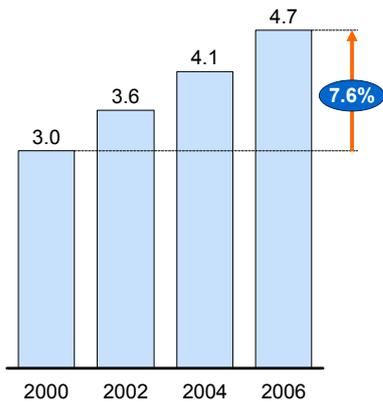
Source: IMV; Japanese Ministry of Health, Labour and Welfare; German Federal Office for Radiation Protection; National Fee Analyzer; EMB; Igakutushin (Japanese medical news agency)

Exhibit 19

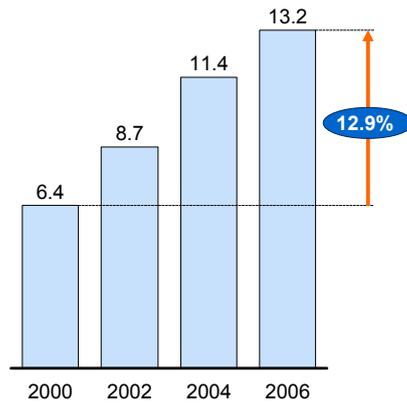
The US Ambulatory Surgery Center market continues to grow

● Compound annual growth rate, %

ASC facilities
Number of facilities, thousand



ASC market revenue*
\$ billion



* Estimated payment to facility based on Medicare spending on ASCs and extrapolation using United Surgical Partners International percentage of Medicare in 2006 as industry proxy.

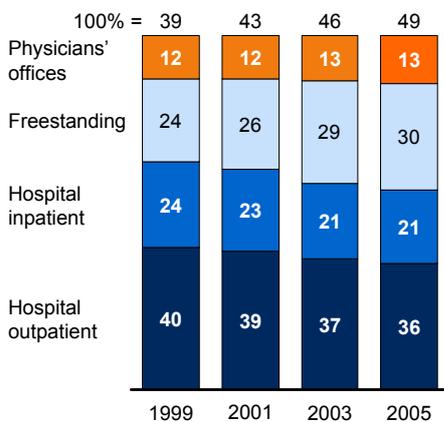
Source: MedPAC; Verispan; McKinsey Global Institute analysis

Exhibit 20

ASCs and physicians' offices are capturing an increasing portion of surgery volume

Change in venue
Million procedures

Compound annual growth rate
%



Growth in ASC and physicians' office volume driven by:

- Migration from inpatient facilities
- Financial incentives for physicians
- Regulatory changes
- Improved anesthesia
- Enhanced instrumentation (e.g., endoscopy, minimally invasive surgery)

Source: Verispan; American Hospital Association; McKinsey Global Institute analysis

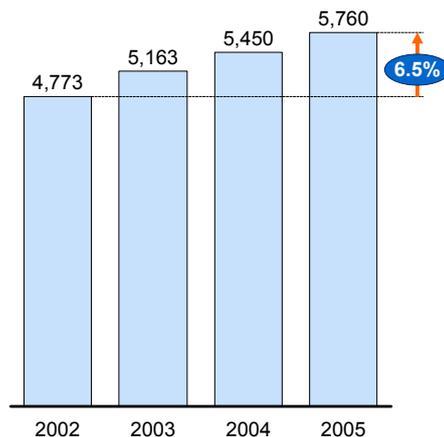
volume-driven; price growth played a limited role. Growth in revenue per case for one major ASC chain grew in line with inflation at just under 3 percent per year, while case volume per freestanding center grew at 6 percent per year.²¹

DICs also continued to expand over this period, with new centers opening at a rate of 6.5 percent per year (Exhibit 21). Certificate of Need laws that require proof of unmet demand to install new health care capacity have restricted the growth of such centers in some states; states with no such laws have accounted for a significant portion of capacity growth in recent years. This growth corresponded with large, continuing increases in the number of CT and MRI machines which is not surprising, given the profitability of installing these machines. At assumed per procedure contribution margins of \$150 for a CT scan and \$240 for an MRI, and capital equipment costs of \$800,000 for a CT scanner and \$1.5 million for an MRI machine, imaging equipment can recoup investment costs in one year with just 10 to 15 procedures a day. Physicians may also avoid the risk and capital investment of purchasing their own equipment by establishing leasing relationships with imaging centers on a part-time or “per click” basis, allowing physicians to collect facility fees for procedures they refer to the centers.

Exhibit 21

US Diagnostic Imaging Center capacity continues to grow Compound annual growth rate, %

Number of DICs in the United States
2002–05



- Four of the five top-growth states—California, Texas, Pennsylvania, and Arizona—have no Certificate of Need laws
- Imaging centers in those states grew at 15 percent per year and represent 33 percent of total US growth

Source: Verispan Diagnostic Imaging Center Market Report, 2005

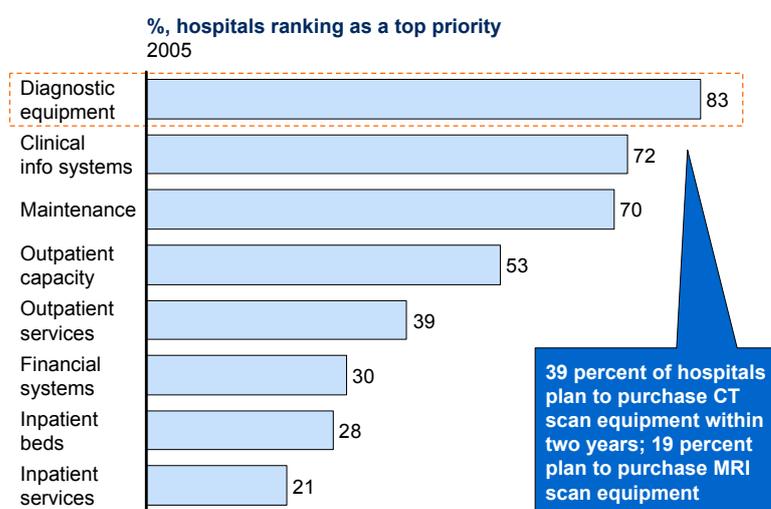
21. Company annual 10-K report for United Surgical Partners International, 2007.

Growth in diagnostic capacity increases demand

The installation of new imaging capacity therefore remains profitable and has resulted in the rapid growth in new imaging centers even as hospitals place a high priority on adding to their own imaging capacity (Exhibit 22).

Exhibit 22

Hospitals rank diagnostic capacity as their top capital spending priority



Source: Bank of America Annual Hospital Survey

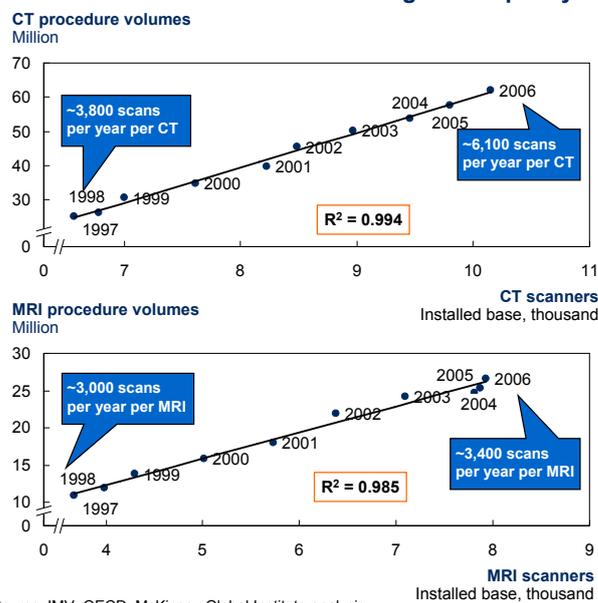
As the capacity of the installed base increases, the volume of testing procedures has also increased (Exhibit 23). The usual market reaction to large increases in supply is greater competition, leading ultimately to lower prices. However, the health care market in the United States hasn't worked that way. Even as the supply of imaging equipment has increased, Medicare reimbursements for imaging procedures have continued to increase by 1 percent a year and commercial reimbursements have increased even more quickly.

Growth in imaging capacity and procedures is likely to continue because the incentives in the system encourage such growth. This is particularly true with the in-office "safe harbor" exception to Stark Laws referrals for imaging equipment. Research has found that one-third of physicians billing for MRIs, and almost a quarter of those billing for CT scans, had self-referred, and that facilities in which physicians could self-refer experienced significantly greater

increases in the use of advanced imaging equipment.²² Patients, who rarely see the full cost of the diagnostic procedures that their physicians prescribe, are unlikely to object to additional testing. Physicians have little incentive to consider cost—to the contrary, many of them profit from high-end diagnostic tests because they own or lease the testing capacity. There is every prospect of imaging capacity continuing to expand, given that the threshold for doctors to order tests will fall even further as increasing numbers of centers reduce time and travel inconvenience to the patient.

Exhibit 23

The number of scans has risen along with capacity



- Demand grows in lockstep with a larger installed base
- Improvements in technology result in even greater scan volume per MRI/CT
- Despite increasing supply, Medicare reimbursements grew at 1 percent a year over this period

Source: IMV; OECD; McKinsey Global Institute analysis

With some exceptions, “other outpatient care” is growing slowly

Other outpatient settings in the United States include traditional clinics such as family planning centers, outpatient mental health centers, HMO (health maintenance organization) centers, and dialysis centers. This category also includes specialty options that are fairly unique to the United States, including “executive” physicals—daylong examination and testing that can often cost \$2,000 to \$3,000, paid out of pocket either by the executives or their employers.²³ Overall, the “other outpatient care” category is growing rather

22 Jean M. Mitchell, “The prevalence of physician self-referral arrangements after Stark II: Evidence from advanced diagnostic imaging,” *Health Affairs*, April 2007, Volume 26, Number 3; Jean M. Mitchell, “Do financial incentives linked to ownership of specialty hospitals affect physicians’ practice patterns?” *Medical Care*, July 2008, Volume 46, Number 7, pp. 732–7.

23 Tara Parker-Pope, “The annual physical gets a makeover: New blood tests and imaging techniques prompt revamp; doing it a la carte,” *Wall Street Journal*, September 14, 2004.

slowly at 3.2 percent a year. However some newer outpatient settings are growing significantly more quickly, including “retail” clinics such as those in supercenters and drugstores where spending posted a compound annual growth rate (CAGR) of 132 percent from 2001 to 2006 to stand at \$121 million at the end of this period.²⁴

Dental care costs are constrained by the out-of-pocket nature of its funding

Dental care is the only category of outpatient spending in which US spending is in line with what we might expect for the level of US wealth. This is probably because of the low rate of dental insurance coverage in the United States. Medicare does not include dental coverage; states are not obliged to offer Medicaid dental coverage to adults; and only 50 percent of employers that offer health insurance coverage also offer dental benefits.²⁵ For these reasons, nearly 45 percent of dental care is paid for out of pocket (compared with 10 percent of physician care). That means that patients are more likely to forgo or postpone treatment or to shop around for more affordable care.

If we look at growth in this cost category, we see that spending on dental care increased by 6.0 percent a year from 2003 to 2006. Much of this growth was probably attributable to the rapid expansion of the cosmetic dentistry industry, whose volume increased at a CAGR of 12.5 percent from 1999 to 2004.²⁶ This kind of dental care is paid largely out of pocket, often with financing assistance from providers. Patients are price-sensitive and have to decide whether the value of the care justifies the cost. We can therefore consider growth in this type of care as a “lifestyle choice” made by value-conscious patients, rather than a cost burden on the whole health care system.

Inpatient care

From 2003 to 2006, inpatient care costs have increased by \$73 billion, or 6.0 percent annually (trailing growth in GDP), to reach more than \$450 billion. This is the second-largest category of US spending on health care, accounting for 25 percent of the total. However, when adjusting for wealth differences, US

24 “Retail Clinics—The Emerging Market for Convenience Clinics and In-Store Healthcare,” Kalorama Information, 2007.

25 Centers for Medicare and Medicaid Services (CMS) Medicare and Medicaid Dental Coverage Overviews (<http://www.cms.hhs.gov/MedicareDentalCoverage/> and <http://www.cms.hhs.gov/MedicaidDentalCoverage/>); *Employer Health Benefits 2006 Annual Survey*, The Henry J. Kaiser Family Foundation, *Employer Health Benefits*. (<http://www.kff.org/insurance/7527/upload/7527.pdf>).

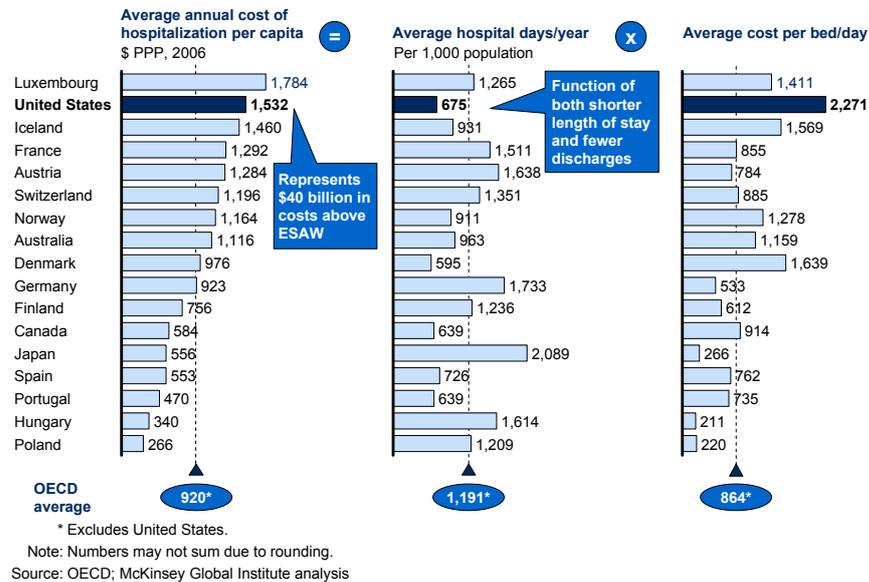
26 *North American survey: The state of cosmetic dentistry*, a Levin Group study commissioned by the American Academy of Cosmetic Dentistry, 2004 (<http://www.aacd.com/press/releases/2004%20National%20Survey.pdf>).

spending on inpatient care is only \$40 billion more than expected and only 6 percent of total costs above ESAW.

As we have noted, the US capacity to provide care in an outpatient setting reduces inpatient care costs to an extent (our estimates suggest savings of \$100 billion to \$120 billion). Compared with hospitals in other developed economies, those in the United States admit fewer patients (121 hospital admissions per 1,000 population per year, compared with an average of 179 in the OECD) and US patients are in the hospital for less time (an average 5.6 days versus 6.9). As a result, the United States delivers 675 days of inpatient care per 1,000 of population each year, just over half the OECD average. However, significantly higher costs per bed day (\$2,271 versus the OECD average of \$920) offset these efficiencies, leaving average per capita costs close to the level that we would expect based on US ESAW (Exhibit 24).

Exhibit 24

Lower US hospital admissions and shorter stays are offset by significantly higher costs per bed day



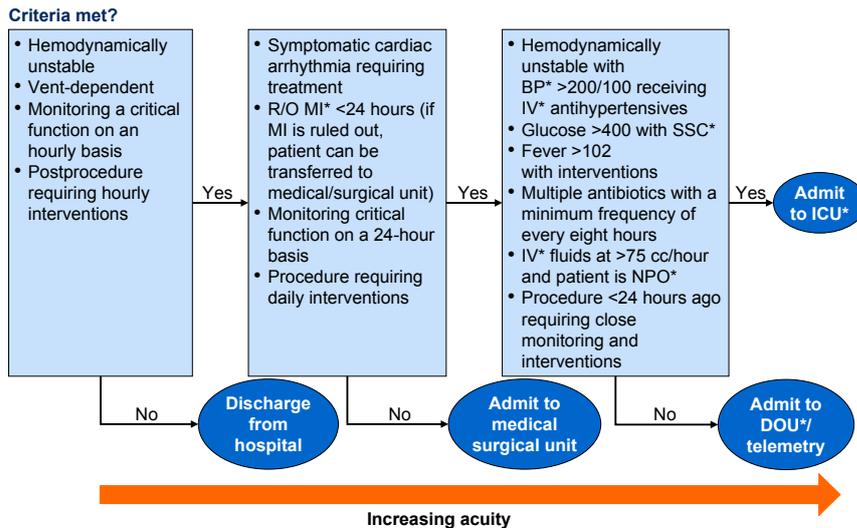
Fewer admissions are due to strict criteria and expanded outpatient care

Several factors drive lower admission rates in the United States. First, US payers reimburse hospitals only for admissions that meet comparatively high-acuity clinical criteria (Exhibit 25). In comparison, other countries (including Japan, Canada, and France) rely entirely on physician judgment to determine whether to admit patients to the hospital. In countries that do employ some criteria, the criteria function as unenforced guidelines, as in the United Kingdom, or

allow common “override” exceptions, as in Germany. Also, as we have noted, the United States tends to utilize less-invasive techniques and more advanced anesthesia options, allowing many more people to be treated as outpatients.

Exhibit 25

US hospitals adhere to specific admissions criteria



* R/O MI = rule out myocardial infarction; BP = blood pressure; SSC = sodium chloride/sodium citrate buffer; IV = intravenous; NPO = nothing by mouth; ICU = intensive care unit; DOU = definitive observation unit.

Source: Interqual

Strict inpatient care cost management leads to shorter stays

Shorter US average hospital stays are the result of a reimbursement system that creates strong financial incentives for the strict management of medical resources. Since the introduction of DRG-based (diagnosis related group) payments in the mid-1980s, Medicare, Medicaid, and many commercial insurers now reimburse inpatient care using a flat rate for the entire admission based on a patient’s diagnosis. Because longer stays incur additional costs for hospitals without an accompanying increase in payment (unless a stay qualifies for outlier payments), shorter inpatient stays for a given illness are more profitable. Some commercial payers do reimburse hospitals on a per diem basis—which would create the opposite incentive for hospitals. However, in these cases, payers themselves have an incentive to reduce costs by providing hospital oversight that manages the length of inpatient stays.

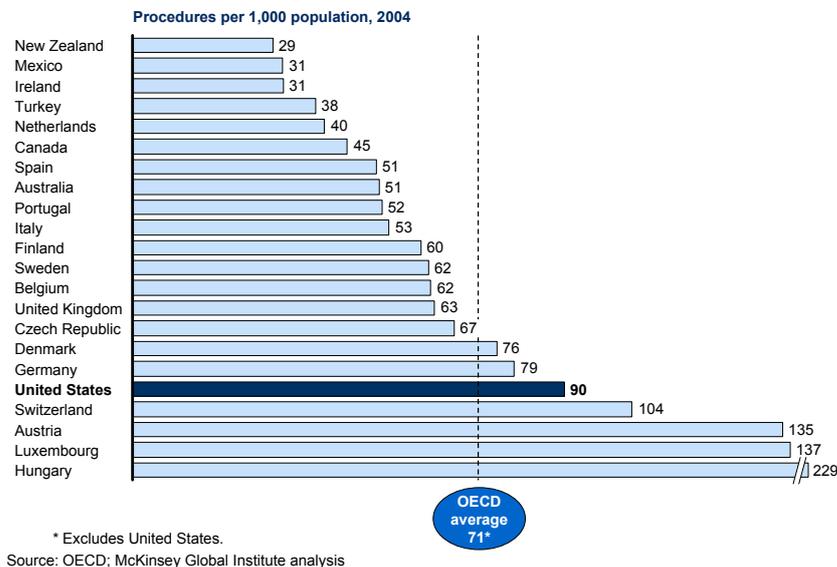
Procedural intensity and expensive inputs drive per bed day costs higher

Two factors drive higher costs per bed day in the United States: higher procedural intensity for inpatient care and higher factor costs. The United States performs 90 procedures per 1,000 of population, compared with an OECD average of 71

(Exhibit 26). The United States carries out 40 to 90 percent more PCIs, knee replacements, coronary bypasses, and cardiac catheterizations than other OECD countries, even when adjusting for prevalence (Exhibit 27).²⁷ Above-average volume of these four procedures alone accounts for an estimated \$21 billion in additional inpatient care costs.

Exhibit 26

Higher cost per bed day is partly driven by higher volumes of inpatient surgical procedures

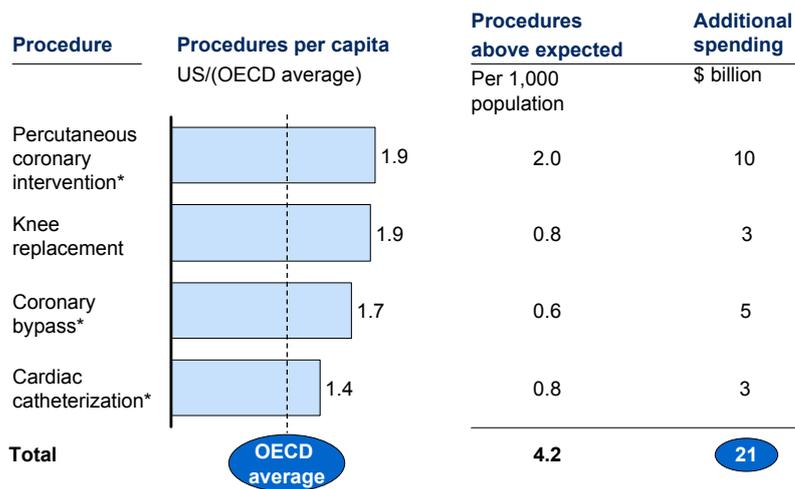


The United States also pays more for inputs into hospital care than do other OECD countries. US hospitals spend more on nursing because of the use of more nurses per bed day and higher nurse salaries. Relative to other countries, US hospitals employ 40 percent more nurses per bed day, due partly to higher average patient acuity in US hospitals and partly to US regulations dictating higher staffing ratios. With regard to compensation, nursing salaries in the United States average 1.5 times per capita GDP compared with 1.1 in other countries (Exhibit 28). On supplies, the United States also spends more than other countries. Higher volumes of procedures drive demand for devices associated with those surgical procedures—and US prices for the devices are higher than in other countries. In total, the United States spends \$26 billion more than expected on medical devices (Exhibit 29).

27 A PCI, or percutaneous coronary intervention, is a procedure that unblocks narrowed coronary arteries without performing surgery.

Exhibit 27

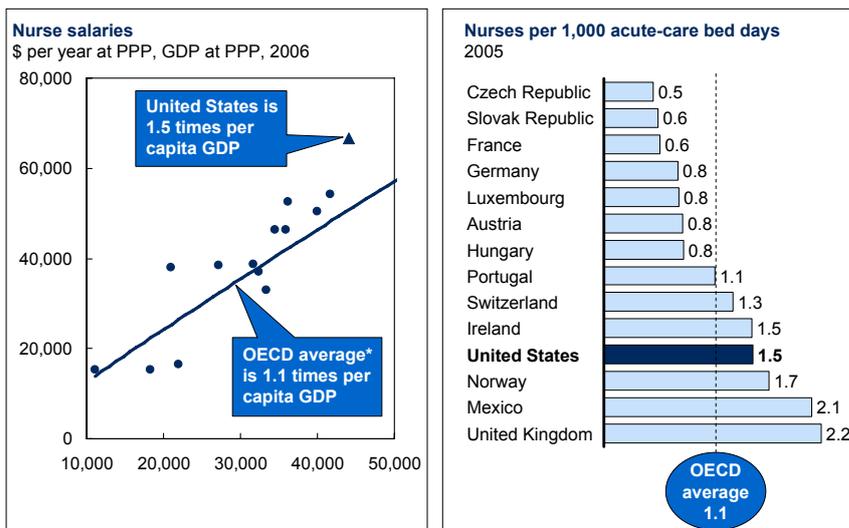
Cardiac procedures and knee replacements alone represent \$21 billion in spending above expected in the United States



* Adjusted for disease prevalence by country.
Source: OECD; McKinsey Global Institute analysis

Exhibit 28

High staffing ratios and salaries drive above-expected nursing costs in US hospitals

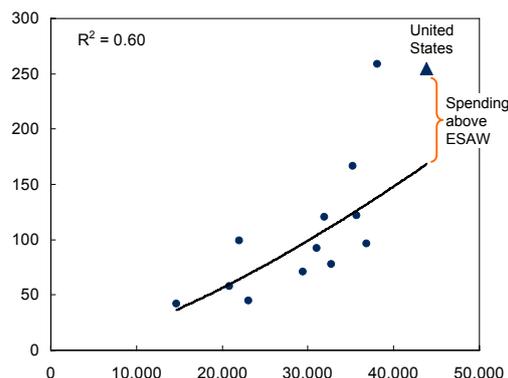


* United States includes nurses involved in patient care only.
Source: OECD; McKinsey Global Institute analysis

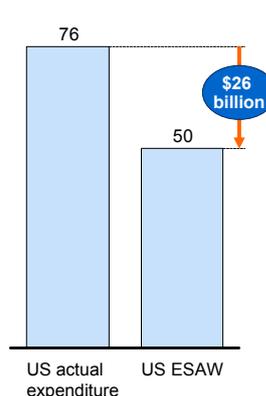
Exhibit 29

The United States spends \$26 billion above expected on medical devices; costs concentrated in implantable cardiac and orthopedic devices

Medical supplies spending
\$ per year at PPP, GDP at PPP, 2006



Medical supplies cost gap
\$ billion, 2006



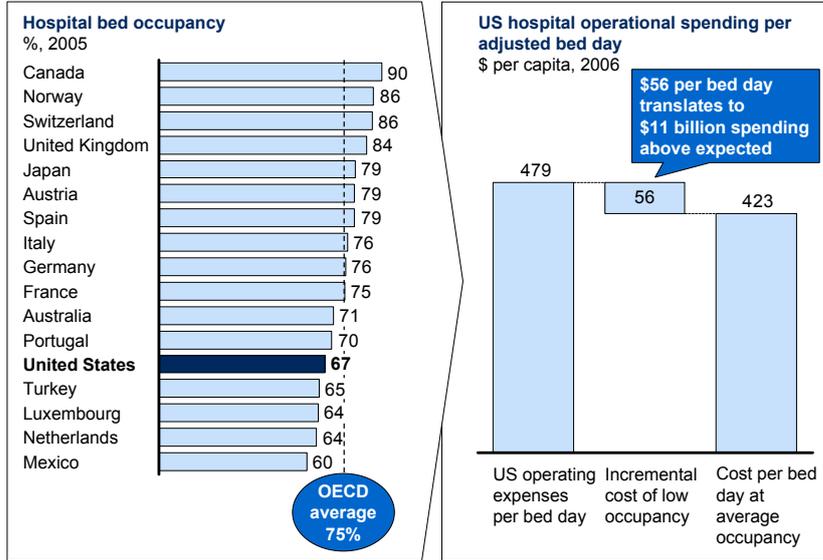
Source: Medical Markets Forecast, Espicom Business Intelligence; Frost & Sullivan Medical Device Outlook 2008; McKinsey Global Institute analysis

The smaller average size of US hospitals and relatively lower hospital utilization also play a role in driving up US inpatient costs. The United States has 23 percent fewer beds per hospital than the OECD average, reflecting the fact that capacity is distributed over more hospitals in the United States than it is in other countries. Because many fixed costs, such as high-cost machinery and administrative functions, must be incurred in each hospital regardless of size, being subscale increases US fixed costs per bed. In addition, US hospitals have average bed occupancy of 67 percent, compared with 75 percent in the OECD (Exhibit 30). This spreads the fixed costs of operating a hospital over fewer total bed days, resulting in higher costs per day. The United States incurs an extra \$11 billion in hospital costs because of this higher bed capacity.

A final interesting dynamic exists between for-profit and not-for-profit hospitals. Counter to the public perception that not-for-profit hospitals are struggling financially due to the burden of delivering charity care to the uninsured, we estimate that average not-for-profit hospital EBITDA margins, at 11.7 percent, are only slightly lower than the 15 percent EBITDA margins of for-profit hospitals. When we take into account the different tax treatment of for-profit and not-for-profit hospitals, we see that average net incomes are virtually identical (Exhibit 31). These earnings for not-for-profit hospitals are typically retained by hospitals in the form of capital investments (new equipment, better facilities, and the like) or investments in endowment funds.

Exhibit 30

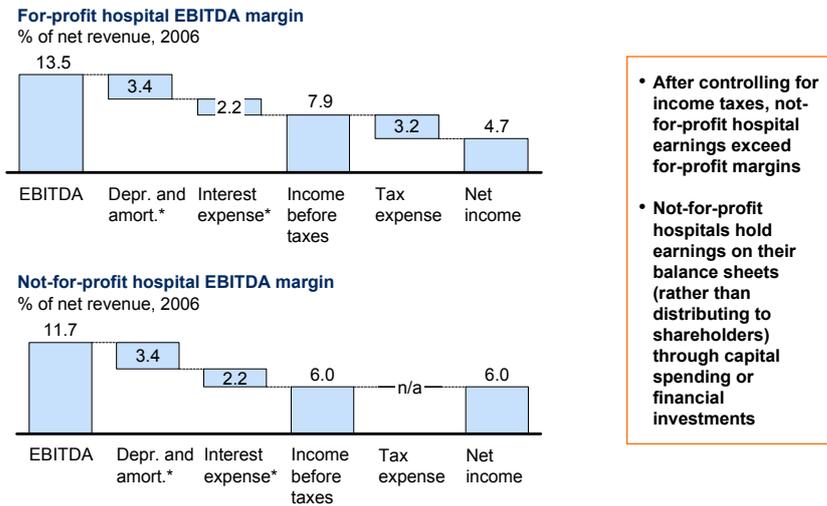
Low hospital occupancy drives higher fixed costs per bed day



Source: OECD; McKinsey Global Institute analysis

Exhibit 31

Not-for-profit hospital margins are higher than those of for-profit hospitals after tax



- After controlling for income taxes, not-for-profit hospital earnings exceed for-profit margins
- Not-for-profit hospitals hold earnings on their balance sheets (rather than distributing to shareholders) through capital spending or financial investments

* Not-for-profit interest expense assumed based on for-profit ratios; EBITDA ratios in this analysis expressed as a percent of total revenue, without excluding bad debt.

Source: Bank of America 5th Annual Nonprofit Hospital Survey; annual reports; McKinsey Global Institute analysis

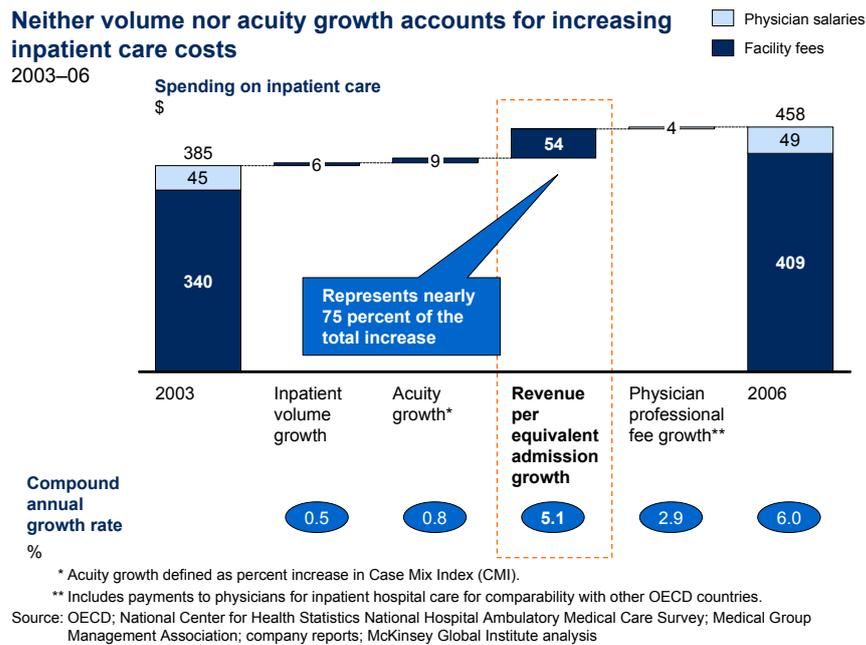
Increasing revenue per equivalent admission accounts for growing costs

Since 2003, inpatient spending has grown at 6 percent per year. Some observers might attribute this growth to the aging of US baby boomers, resulting in higher

patient volumes or case acuity. However MGI's research does not bear this out. We find that admissions grew by just 0.5 percent and that acuity grew at less than 1 percent per year during this period.

Growth in the revenue per equivalent admission is a far more important driver of higher costs. After adjusting for acuity, the average revenue per admission rose by 5.1 percent a year from 2003 to 2006 (Exhibit 32).²⁸ Commercial payers incurred larger increases in reimbursement per equivalent admission than public payers over this period. Cost per comparable admission grew at 4.2 percent for Medicare and just 2.0 percent for Medicaid. In stark contrast, commercial payer reimbursement grew at 7.3 percent per year, evidence that the commercial payers bore the brunt of the cost increases during this time.

Exhibit 32



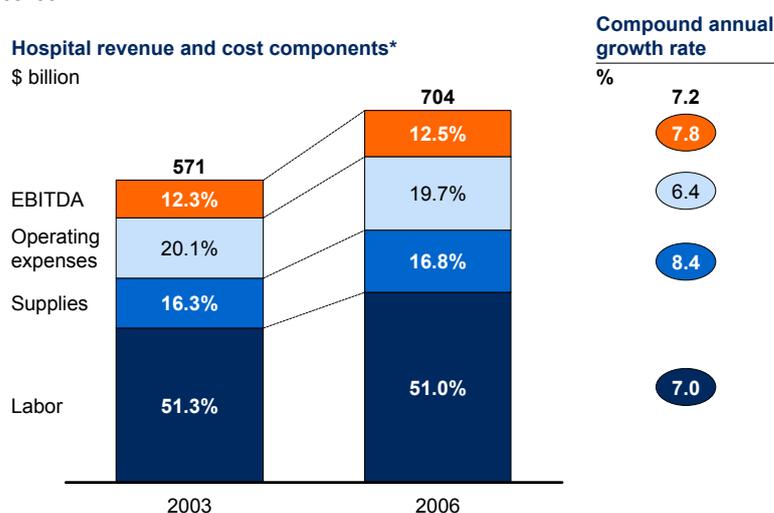
Despite hospitals' ability to increase revenue on an equivalent admission basis, hospital profitability increased only marginally in the period from 2003 to 2006 because, at the same time, hospital cost bases grew at a similar rate. Salary and administrative costs, as well as supply costs and other operating expenses, grew along with revenue growth. On average, EBITDA remained essentially flat at 12 to 13 percent over this period (Exhibit 33). Spending

28 Acuity changes were analyzed using diagnosis related group (DRG) case weight measures.

on new medical technologies, in particular, accelerated. Spending on the six highest-cost medical devices in dollar terms grew at an average of 16 percent a year, driven by increases in both price and volume (Exhibit 34). Hospital spending on pharmaceuticals grew at 14 percent a year, with two-thirds of that growth coming from spending on branded drugs.

Exhibit 33

Higher revenue per admission is offset by rising salary and supply costs 2003–06



* Includes both inpatient and outpatient hospital care. Revenue excludes bad debt. Revenue and labor costs include the portion of physician salaries for inpatient care.

Source: Annual reports; Fitch Market Research; McKinsey Global Institute analysis

Drugs and nondurables

In 2006, the US health care system spent \$252 billion on drugs, accounting for 12 percent of total spending, and \$98 billion more than we would estimate adjusting for US wealth. This amount represents 15 percent of total costs above expected in the US health system. Over the past three years, spending on drugs has increased at 6.9 percent a year—making this category the only component of the system apart from outpatient care in which costs grew more quickly than GDP during this time.

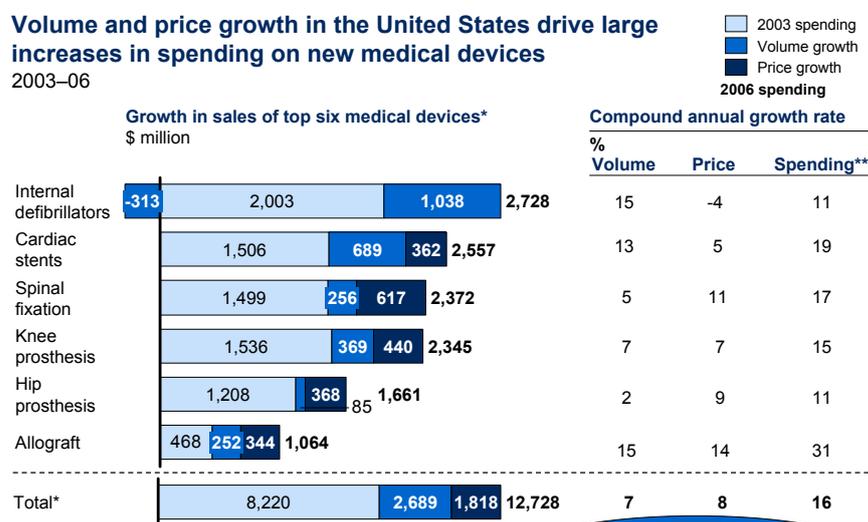
Drug usage rates are lower while prices are higher

In 2006, the United States spent \$844 per capita on drugs, 35 percent more than Canada, the next highest spender, and nearly twice the OECD average. Yet the United States actually uses 10 percent fewer drugs per capita than do other OECD countries (within this total, 40 percent fewer branded drugs in comparison

Exhibit 34

Volume and price growth in the United States drive large increases in spending on new medical devices

2003–06



* Top six devices represent 25 percent of spending on medical devices in 2006.

** Annual spending growth rates may not be the sum total of volume growth and price growth rates.

Source: IMS Health

with OECD peers but 12 percent more generic drugs) (Exhibit 35).²⁹ While research suggests that standard-unit comparisons don't tell the whole story (differences in cross-country dosages play a role), we are still left to conclude that higher-than-expected spending on drugs in the United States is due largely to higher prices.³⁰

Our analysis confirms that greater-than-expected spending on drugs in the United States is due to higher prices. To isolate the effect of differences in the mix of drugs employed by a particular country's health system, we compared prices of equivalent drugs and found that US prices are at an average premium of some 50 percent (Exhibit 36).³¹ The type of drug matters: we find that small-molecule branded drugs cost an average of 77 percent more on a same-drug basis; biologics are 35 percent more expensive; and generics, interestingly, are 11 percent cheaper (Exhibit 37). Research

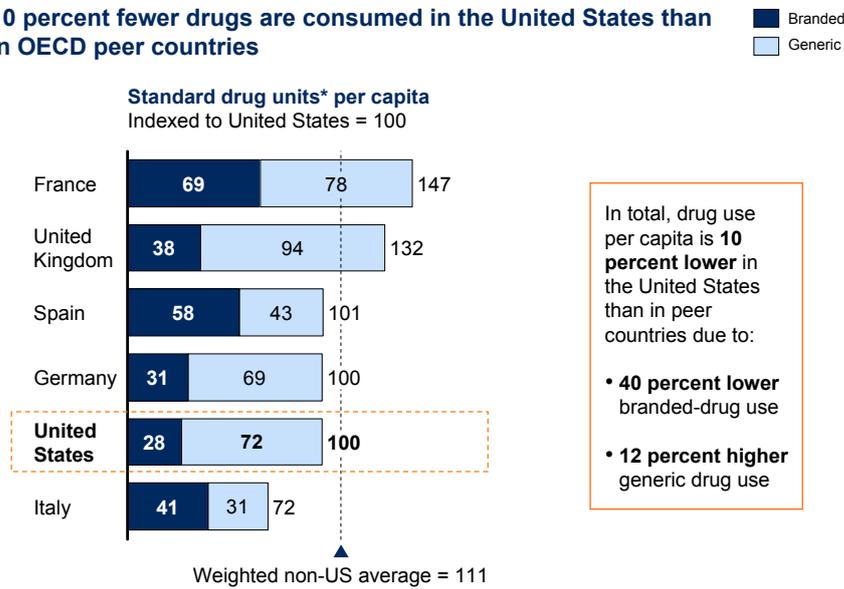
29 A standard unit represents an individual dose of a drug (e.g., a tablet, capsule, or pill).

30 P. M. Danzon, *Price Comparisons for Pharmaceuticals: A Review of U.S. and Cross-National Studies*, Washington, DC: AEI Press, 1999.

31 To compare like drugs, we used a basket of 347 branded drugs and 354 generic drugs that were available in the United States and other OECD countries. We used these drugs to create a weighted average price for the United States and comparison countries weighted for US volumes. For the United States, MGI discounted the price of branded drugs to account for an average estimated 15 percent manufacturer rebate that generally does not exist elsewhere. While actual rebates vary widely and can be higher or lower than 15 percent, we believe that 15 percent is a reasonable estimate.

Exhibit 35

10 percent fewer drugs are consumed in the United States than in OECD peer countries



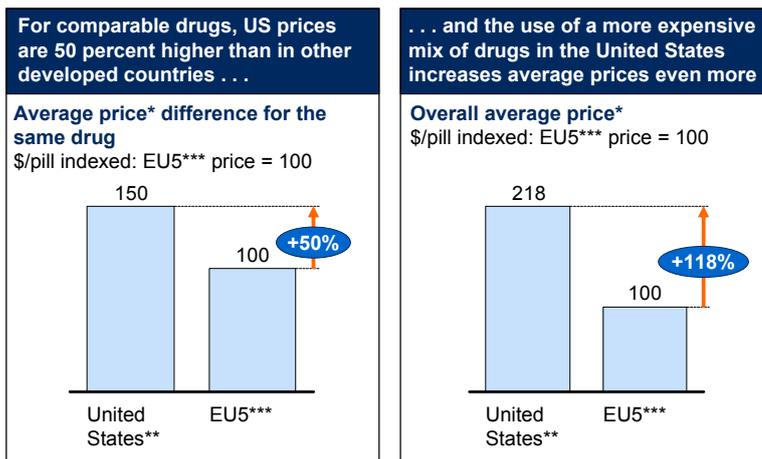
In total, drug use per capita is **10 percent lower** in the United States than in peer countries due to:

- **40 percent lower** branded-drug use
- **12 percent higher** generic drug use

* Represents a typical dose (e.g., a pill, tablet, capsule).
 Source: IMS Health; McKinsey Global Institute analysis

Exhibit 36

Drug prices in the United States are 50 percent higher for comparable products; average price gap is nearly 120 percent due to usage patterns



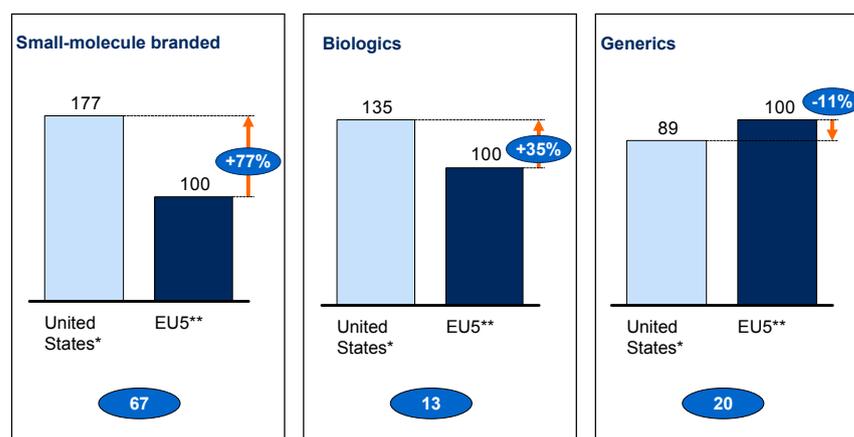
* Manufacturer price.
 ** Assumes 15 percent rebates from manufacturers to payers and Pharmacy Benefit Managers (PBMs).
 *** Average of the United Kingdom, Germany, Italy, France, and Spain.
 Source: IMS Health; McKinsey Global Institute analysis

Exhibit 37

Pricing varies widely according to drug type

\$/pill indexed: EU5** price = 100

● \$ share of US sales, %



* Assumes 15 percent rebates from manufacturers to payers and PBMs for small molecule and biologics; no rebate assumed for generics.

** Average of the United Kingdom, Germany, Italy, France, and Spain.

Source: IMS Health; McKinsey Global Institute analysis

suggests that higher prices for generics in Europe are largely a consequence of highly regulated pricing in those markets.³²

An equally important driver of higher-than-expected spending is that the United States uses a more expensive mix of drugs. Despite the fact that the United States uses a higher share of generics, the price of an “average” pill in the United States is 118 percent higher than OECD peers. Regulatory differences between the United States and other countries may help explain this discrepancy in drug mix. The US drug approval process is more rapid, with drugs typically launching one to two years earlier in the United States than in Europe (Exhibit 38). Because new drugs often command a price premium, it is not surprising that the United States uses a more expensive mix of drugs.

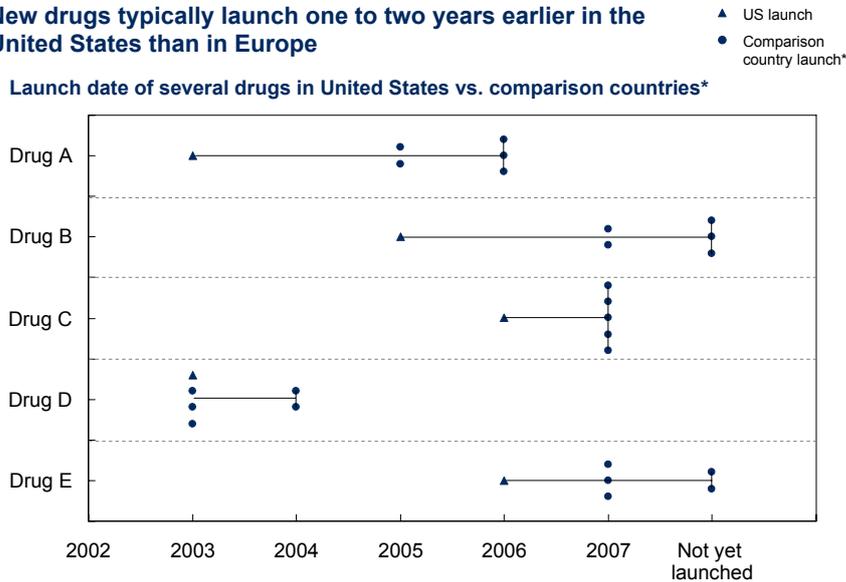
Turning to branded drugs, observers tend to pose a variety of explanations for the price gap between the United States and other developed countries for these medicines (Exhibit 39). Some observers suggest that it is appropriate that drugs should cost more in the United States because it is a relatively wealthier

32 Laura Magazzini et al., “Dynamic competition in pharmaceuticals: Patent expiry, generic penetration, and industry structure,” *European Journal of Health Economics*, May 2004, Volume 5, Number 2, pp. 175–82(8); P. M. Danzon and L. W. Chao, “Does price regulation drive out competition in pharmaceutical markets?” *Journal of Law and Economics*, October 2000, Volume 43, Number 2, pp. 311–57.

Exhibit 38

New drugs typically launch one to two years earlier in the United States than in Europe

Launch date of several drugs in United States vs. comparison countries*

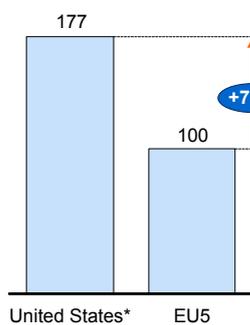


* Comparison countries are the United Kingdom, Germany, France, Spain, and Italy.
Source: IMS Health; McKinsey Global Institute analysis

Exhibit 39

Three reasons are often cited for higher drug prices in the United States

Average small-molecule branded drug price* difference
\$/pill indexed: EU5** price = 100



Potential drivers

Impact on price difference

US consumers can afford to pay more	~30%
US consumers pay for global R&D***	23–28%
US consumers pay for higher drug marketing spending in the United States	17–23%

* Assumes 15 percent rebates from manufacturers to payers and PBMs.
** Average of the United Kingdom, Germany, Italy, France, and Spain.
*** Global R&D estimated at \$40 billion to \$50 billion in 2006.
Source: Company 10-Ks; analyst reports; McKinsey Global Institute analysis

country and drugs are often a social welfare and monopoly good. To test the extent to which the United States is simply paying “its fair share,” we performed a regression analysis of per capita GDP and the average price of selected drugs using the same five comparison countries as in our pricing analysis. We find that US branded-drug prices would be approximately 30 percent higher than average prices in comparison countries if the United States paid its fair share rather than the 77 percent premium paid today.

Another often-cited explanation for higher US drug prices is that US prices subsidize pharmaceutical R&D for the rest of the world. However, a simple analysis shows that the R&D “subsidy effect” cannot fully account for the disparity in prices. Global pharmaceutical R&D spending was estimated at \$40 billion to \$50 billion in 2006. Funding this entire amount through higher branded-drug prices would require a price premium of 23 to 28 percent over comparison countries, significantly less than the 77 percent price premium that actually exists.

We can employ a similar analysis to calculate the effect of sales and marketing on total US drug prices. Other countries generally restrict marketing outlays on pharmaceuticals and prohibit large sales forces and direct-to-physician or consumer advertising. We can therefore largely assume that these countries’ spending on sales and marketing of drugs is very low. In contrast, pharmaceutical companies in the United States spent \$30 billion to \$40 billion on sales and marketing in 2006. This expense represents 17 to 23 percent of current US prices.

In summary, we find that none of these drivers by itself fully explains the gap between US and OECD drug pricing.

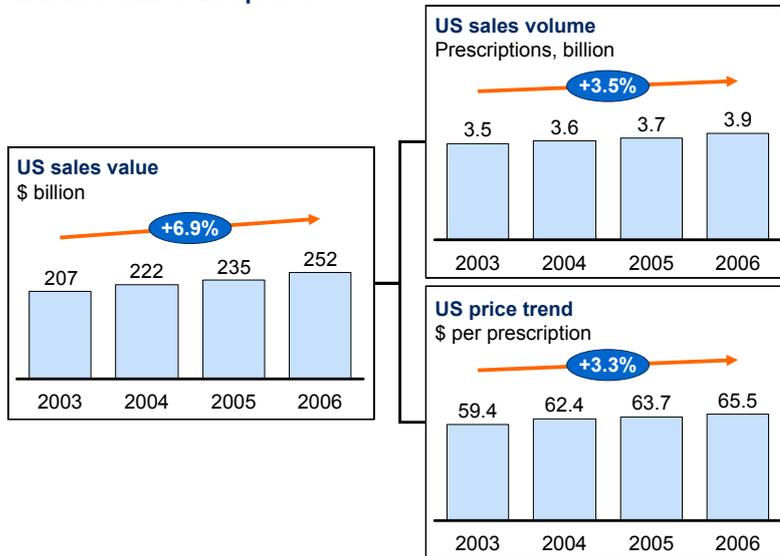
Pharmaceutical company profits have grown, but financial pressures are mounting

US spending on drugs increased by 6.9 percent a year from 2003 to 2006 because of moderate growth in both volumes and prices. Prescription volume grew by 3.5 percent a year, while the price per prescription increased by 3.3 percent per annum (Exhibit 40). On the basis of examining equivalent drugs, prices overall grew by 4.5 percent a year. This suggests that a shift in the drug mix had a negative 0.9 percent effect on price annually due in part to the increased use of generics in the United States (Exhibit 41).

In this context, we observe that pharmaceutical companies’ revenue grew by 8.5 percent per annum from 2003 to 2006, with profits growing by \$35 billion (Exhibit 42). A growing presence by these companies outside the United States

Exhibit 40

From 2003 to 2006, US spending growth on drugs was driven by moderate growth in volumes and prices



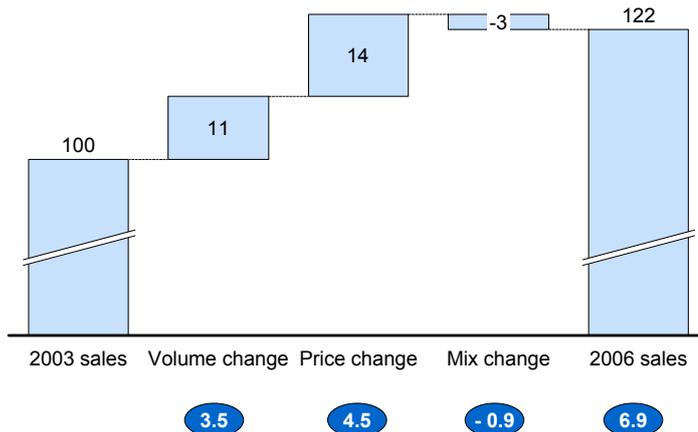
Source: OECD; IMS Health; McKinsey Global Institute analysis

Exhibit 41

Drug prices and volumes increased, but a shift to generics mitigated cost growth

Compound annual growth rate, 2003–06, %

Drivers of growth in US drug costs, 2003–06
Indexed to 2003 US sales = 100



Source: IMS Health; McKinsey Global Institute analysis

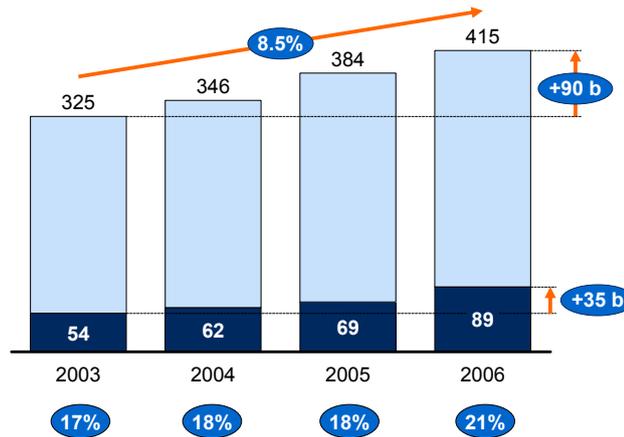
is clearly a factor because revenue growth rates exceeded cost growth in the United States. However, within the United States, the introduction of Medicare Part D in 2006 extended coverage to more than 33 million Medicare enrollees

Exhibit 42

Pharmaceutical company profits and margins increased by \$35 billion from 2003 to 2006

Global revenue and profits for top 20 pharmaceutical companies
\$ billion, compound annual growth rate 2003–06, %

■ Revenue
■ Net Income
● Net margin



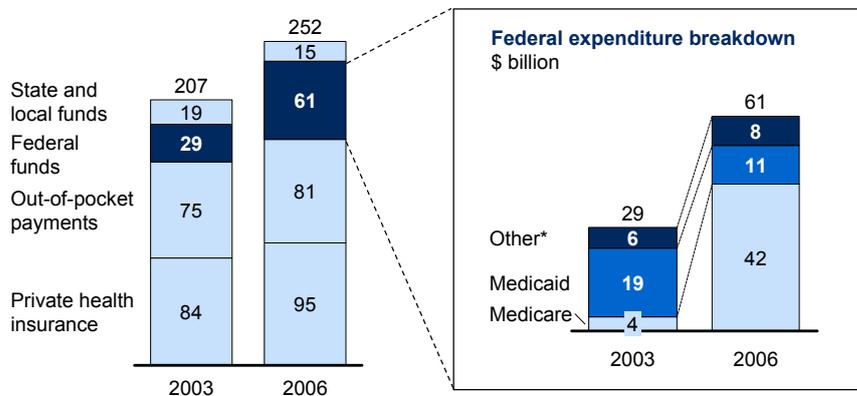
Source: Evaluate Pharma

and expanded the market for pharmaceuticals to a larger insured population (Exhibit 43). In the space of just three years, Medicare spending jumped from 2 to 17 percent of total drug expenditures.

Exhibit 43

The launch of Medicare Part D coincided with a significant increase in spending

Spending on prescription drugs and other nondurables
\$ billion

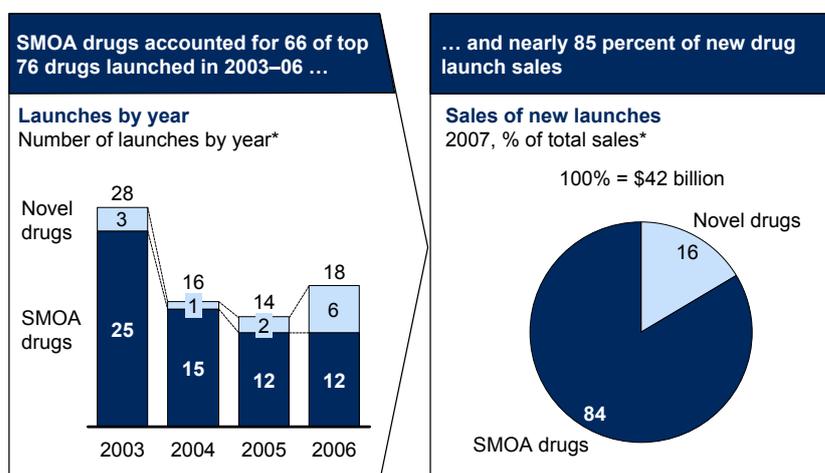


* Primarily Department of Veterans Affairs and Department of Defense spending.
Source: Centers for Medicare & Medicaid Services National Health Expenditure data

During this period, the launch of similar mechanism of action (SMOA) drugs was a prominent feature. These drugs are similar to existing drugs on the market but have slightly different chemical formulas. Of the 76 drugs launched in 2003 to 2006 that have achieved at least \$100 million in sales in the United States, our analysis suggests that 66 qualified as SMOA drugs and accounted for nearly 84 percent of sales by 2007, compared with only 16 percent earned from novel drugs (Exhibit 44).

Exhibit 44

Majority of new drug launches had similar mechanism of action (SMOA) to preexisting drugs



* Includes all drugs launched between 2003 and 2006 that achieved \$100 million in US sales by 2007.

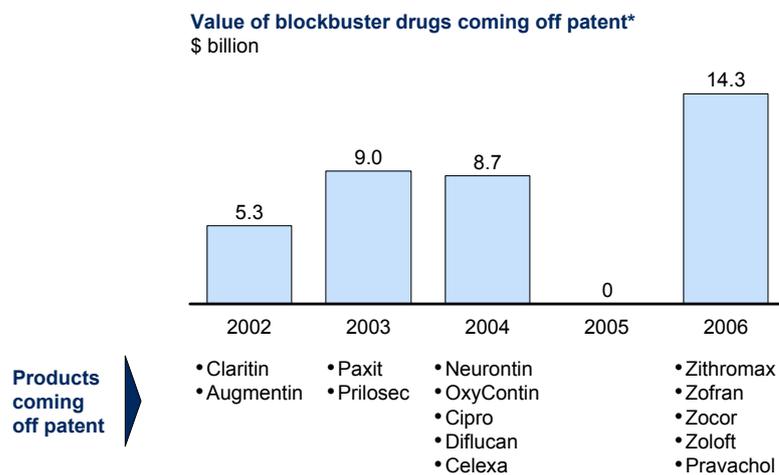
Source: IMS Health; McKinsey Global Institute analysis

Over the coming years, several factors are likely to create financial pressures within the pharmaceutical industry. The first source of acute pressure will be the result of the expiration of a number of drug patents and the drugs' subsequent conversion to generic status. Among the blockbuster drugs that went generic between 2002 and 2006 were Claritin, Prilosec, OxyContin, Zocor, and Zolofl (Exhibit 45).

At the same time, drug pipelines have been drying up—the industry has not introduced new blockbuster drugs to replace revenue from the ones going off patent. The number of drug launches has declined since 1997, hitting a low in 2003. Although there was a slight rebound in 2003 to 2006, levels of launches are still below what the levels were a decade ago (Exhibit 46). No newly launched drug has attained blockbuster status since 2004.

Exhibit 45

Many branded blockbuster drugs have gone generic in recent years



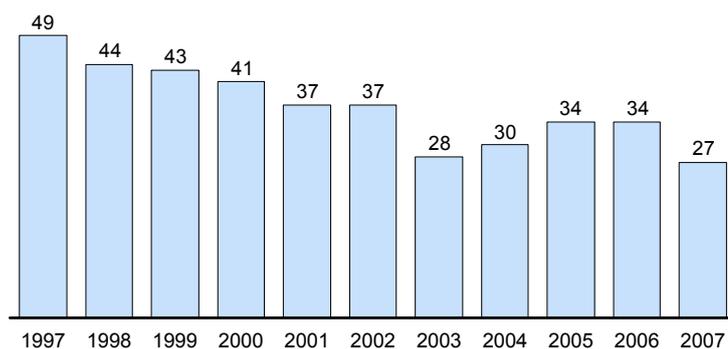
* Global sales in last full year.

Source: IMS Health; company press releases; McKinsey Global Institute analysis

Exhibit 46

The number of new drug launches has declined since 1997

Global new chemical-entity drug launches, 1997–2007
Number of launches



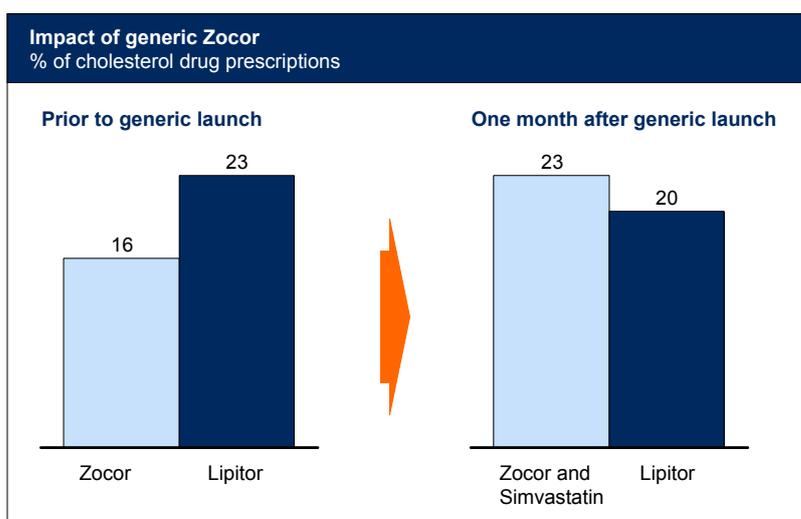
Source: IMS Health R&D Focus and New Product Focus

Lastly, we see a continued shift toward generic drugs in the United States (and in other parts of the world). When Zocor lost its patent in 2006, for instance, sales of generic Zocor (Simvastatin) rapidly took market share not only from Zocor itself but also from the wider statin market. Lipitor's share of the category

dropped from 23 to 20 percent in just one month (Exhibit 47). The overall share of generics in drug sales in the United States grew from 11 percent in 2000 to 14 percent in 2007, reflecting an increase in the share of total generic volume from 54 to 67 percent during the same period (Exhibit 48).³³

Exhibit 47

PBM drove generic Zocor (Simvastatin) to a significant share of the statin market after launch in June 2006



Source: *The Wall Street Journal*, July 14, 2006; McKinsey Global Institute analysis

Health administration and insurance

Health administration and insurance, which includes public administration of Medicare, Medicaid, and other programs, as well as private payer profits, taxes, and selling, general, and administrative (SG&A) expenses, is a medium-sized cost category displaying moderate growth. Spending on this category totaled \$145 billion in 2006, accounting for some 7 percent of total spending (Exhibit 49). Adjusted for wealth differences, the United States spends \$91 billion more than expected on this category or 14 percent of total costs above expected in the system. From 2003 to 2006, spending grew slightly more slowly than GDP at 6.3 percent annually, a rise over this period of \$25 billion.

The structure of the US health care financing system has an impact on costs

The United States spent \$486 per capita on this cost category in 2006. That is nearly twice the per capita outlay of the next highest spender, France (\$248),

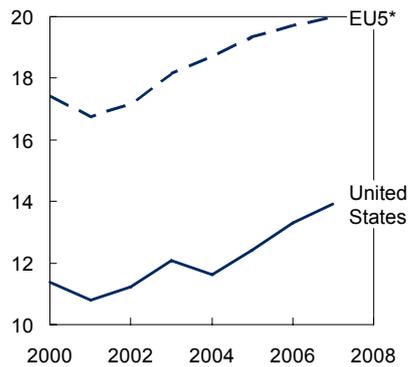
³³ Statins are a class of drugs that reduce cholesterol in patients with a risk of cardiovascular disease.

Exhibit 48

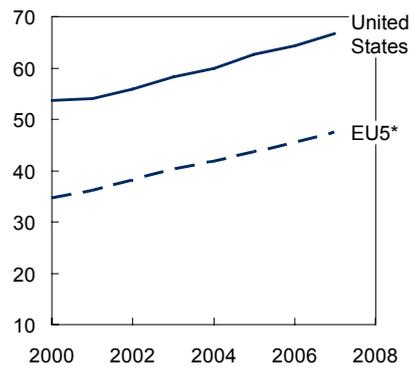
Generic presence has been growing in the United States and other OECD health systems

%

Generics' share of dollar sales



Generics' share of standard unit volume



* Average of the United Kingdom, Germany, Italy, France, and Spain.

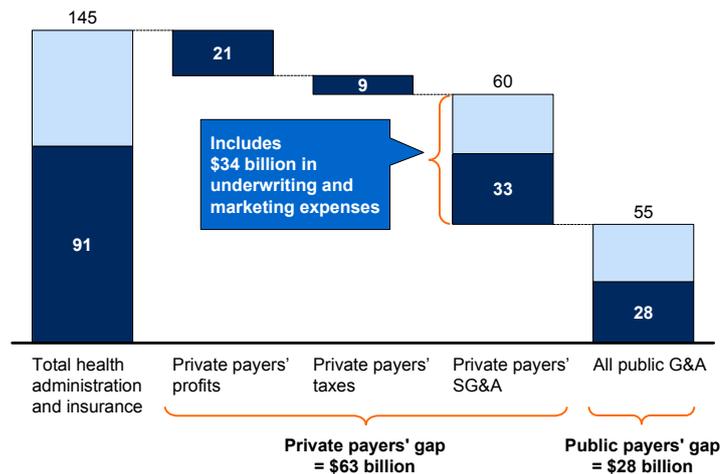
Source: IMS Health R&D Focus and New Product Focus

Exhibit 49

The United States spends \$91 billion more than expected for its wealth on health administration and insurance

\$ billion, 2006

■ Above ESAW



Source: OECD; McKinsey Global Institute analysis

and nearly five times the OECD average (\$103). Private payers, which control 80 percent of the insured lives in the United States, account for \$63 billion of

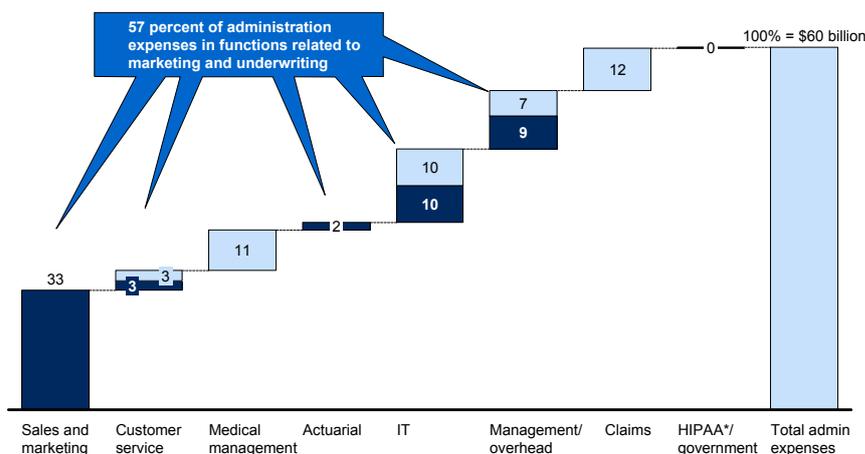
the \$91 billion of cost above ESAW.³⁴ In addition to profit and taxes (which are negligible in comparison countries), \$33 billion of above-expected spending is attributable to private payer SG&A. Of the \$60 billion spent on private SG&A in the United States, we estimate that 57 percent, or \$34 billion, is attributable to costs that the OECD countries with single-payer systems incur to a lesser extent, such as underwriting and marketing (Exhibit 50). The cost of public administration accounts for the remaining \$28 billion in US spending above ESAW. The United States spends roughly six times the OECD average on public spending on administration and insurance per public life covered.³⁵ In the United States, average administrative costs account for an estimated 6 percent of public health spending, compared with an average of 4 percent for the OECD countries.

Exhibit 50

Sales and marketing alone accounts for one-third of total health administration expenses

%, 2006

■ Associated with marketing and underwriting



* Health Insurance Portability and Accountability Act.

Source: Industry reports on Blue Cross Blue Shield payers; McKinsey Global Institute analysis

In addition to analyzing spending in this category against ESAW, we attempted to quantify the effect of the unique payer market structure in the United States, in which multiple private payers play a much larger role than in most OECD countries. We conducted a univariate analysis to assess the effect of the system structure (as estimated by the share of total expenditures covered by private payers) on administration expenditures. In the countries we assessed,

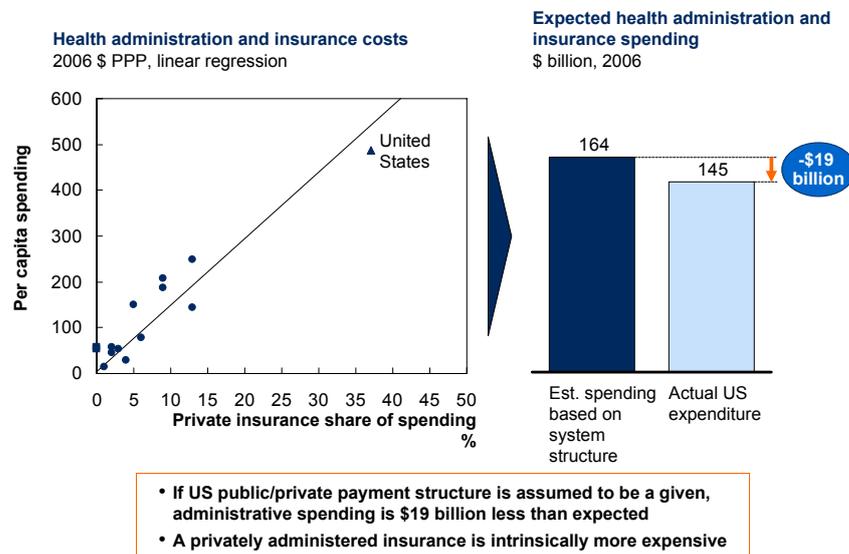
34 We include 41 million lives that are covered by both private and government plans. Excluding dual-covered lives, private insurers cover 64 percent of those with insurance.

35 OECD Health Data, 2008.

this analysis revealed a strong correlation between spending and the private-insurance share of expenditure. This approach yielded an important insight. Based on this analysis, the United States actually spends \$19 billion less on health care administration than expected if we take the structure of the system into account (Exhibit 51).

Exhibit 51

The US health system payment structure has a strong impact on the cost of health administration and insurance



Source: OECD; McKinsey Global Institute analysis

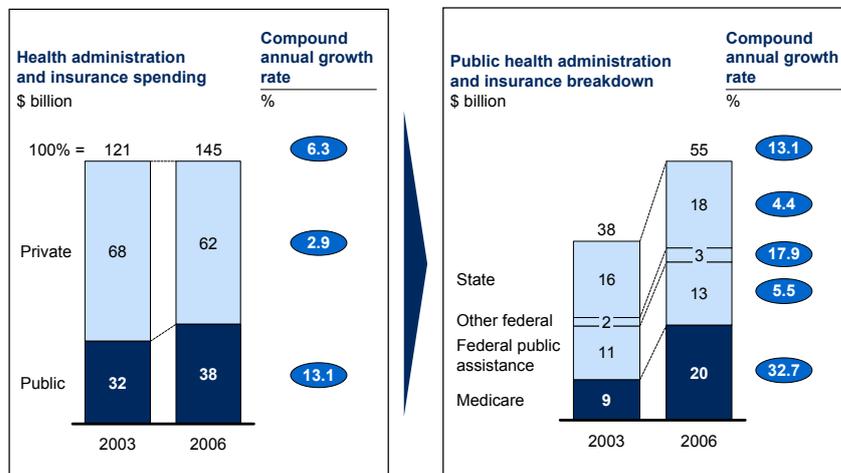
While a multi-payer system (and a multistate regulated system) creates extra costs and inefficiencies in the form of redundant marketing, underwriting, and management overheads, private payers also create value in the US health system. A multi-payer, privately administered market is valuable to the extent that private payers effectively do any or all of the following: (1) actively develop health promotion and disease prevention programs that improve outcomes; (2) compete on price resulting in declining market prices; (3) innovate to generate valuable or significant improvements in customer service or benefit design. Additionally, private payers create greater choice through their portfolio of products for employers and consumers. Given the larger health care administrative burden in the United States, this calls into question whether these net benefits exceed the cost of that burden and, furthermore, to what extent the United States can reduce these costs within the system's current structure.

Public payouts to private administered health plans driving cost growth

The 6.3 percent a year rise in health administration and insurance spending from 2003 to 2006 was largely in line with overall expenditure. However, public spending in this category grew significantly faster at 13.1 percent a year, driven by the administrative costs of the Medicare system, which grew by 32.7 percent per annum over the period (Exhibit 52).

Exhibit 52

Administration of public programs has largely driven growth in health administration costs

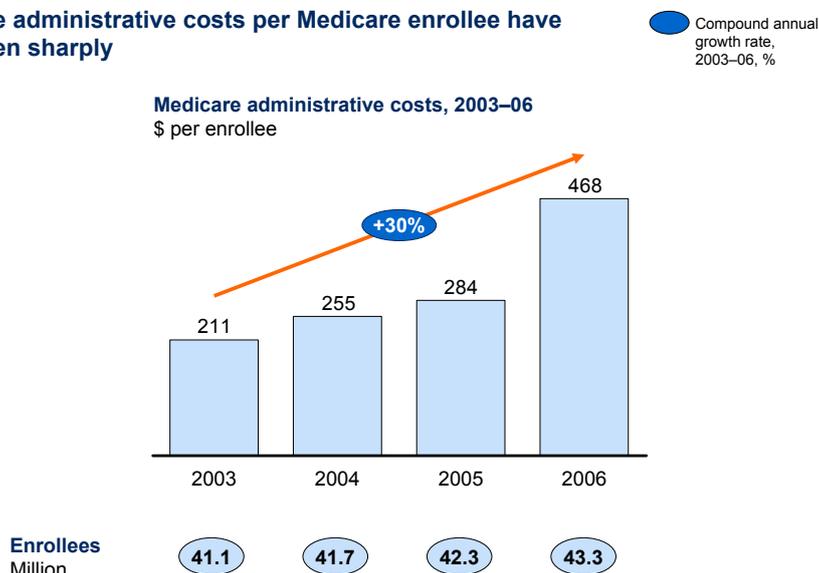


Source: Centers for Medicare & Medicaid Services; McKinsey Global Institute analysis

Most of the growth in Medicare administration occurred from 2005 to 2006, when spending increased from \$12 billion to \$20 billion. The launch of Medicare Part D accounts for \$5.3 billion of this increase. Of the \$5.3 billion, some \$300 million is attributable to one-time government administration expenses, while \$5 billion represents annual payouts for the administration of private plans. With 24 million Part D enrollees in December 2006, this \$5 billion annual cost implies a per capita administrative cost of close to \$210. The remaining \$3 billion in increased spending observed in 2005 and 2006 is attributable to the administration of Medicare Advantage plans. These costs grew from \$5.5 billion to \$8.5 billion largely because of increased enrollment, which jumped by 25 percent from 6.1 million to 7.6 million. Administration of traditional fee-for-service Medicare fell slightly from \$6.5 billion in 2005 to \$6.4 billion in 2006. Overall, Medicare administrative spending per enrollee grew from \$211 in 2003 to \$468 in 2006 (Exhibit 53).

Exhibit 53

The administrative costs per Medicare enrollee have risen sharply



Source: Centers for Medicare & Medicaid Services; McKinsey Global Institute analysis

Long-term and home care

Long-term and home care, which includes freestanding nursing homes and home care provided by independent home health agencies, is a medium-sized, medium-growth cost category. Costs in this category totaled \$178 billion in 2006, accounting for some 9 percent of total spending. Of this total, the United States spent \$128 billion on nursing home care and \$50 billion on home care. When compared with other OECD countries, the United States spends less than expected to the tune of \$53 billion annually, reducing total costs above expected by 8 percent (Exhibit 54). Over the period of 2003 to 2006, long-term care and home care has increased by \$30 billion, with annual growth rates of 6.2 percent.

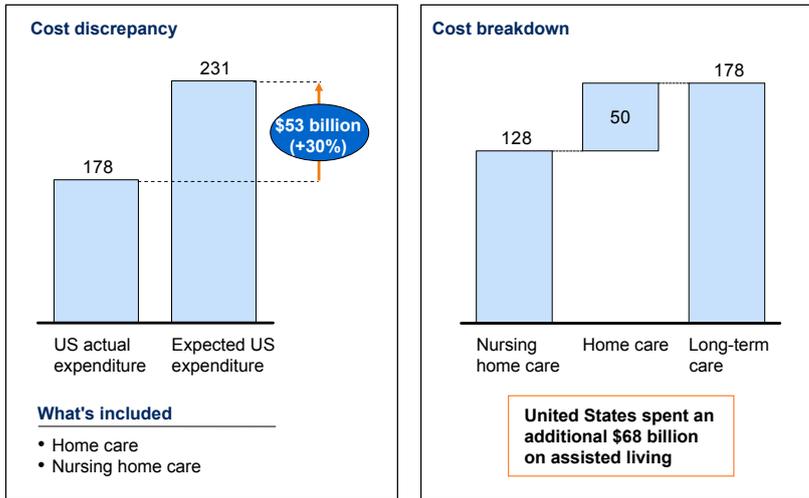
The younger US population and the US payment system account for lower costs

There are two main factors behind the fact that this category of spending—unusually—is lower in the United States than one would expect, given the nation's wealth. First, the United States has a relatively younger population; 12.4 percent of the US population is over the age of 65, compared with 19.2 percent in Germany and an OECD average of 14.9 percent. Adjusting for age, we calculate that the United States would spend \$36 billion more than expected when adjusting for wealth differences (Exhibit 55).

Exhibit 54

The United States spends \$53 billion less than expected on long-term and home care

\$ billion, 2006

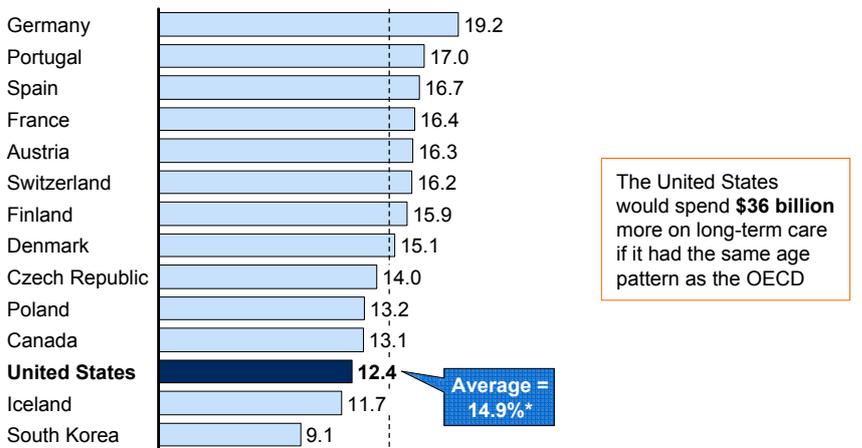


Source: OECD; McKinsey Global Institute analysis

Exhibit 55

The relatively younger US population partly accounts for lower-than-expected spending on long-term and home care

% of population over 65, 2005



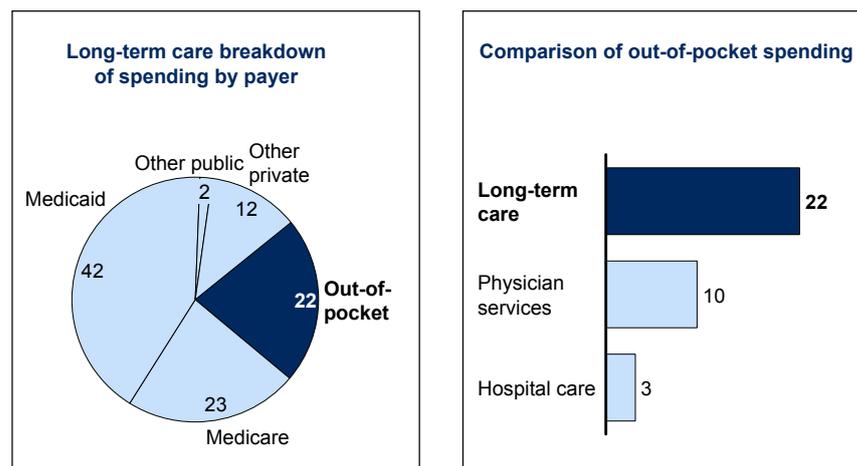
* Excluding the United States.

Source: OECD; National Center for Health Statistics National Nursing Home Survey; McKinsey Global Institute analysis

Second, the United States spends relatively less because of the payment system for long-term care. While long-term care is included in basic health care coverage in many OECD countries, this is not the case in the United States. Private insurance in general does not cover long-term care, and Medicare covers only temporary nursing home care for patients rehabilitating from conditions diagnosed in a hospital. That means that unless, or until, individuals qualify for Medicaid, they are responsible for financing long-term care on their own. In fact, out-of-pocket spending accounts for 22 percent of total outlays on this category—compared with 10 percent for physician services and just 3 percent for hospital care (Exhibit 56).

Exhibit 56

A relatively large share of US long-term and home care is paid for out of pocket
%



Note: Numbers may not sum due to rounding.
Source: National Health Expenditure data

Care is shifting into a home setting

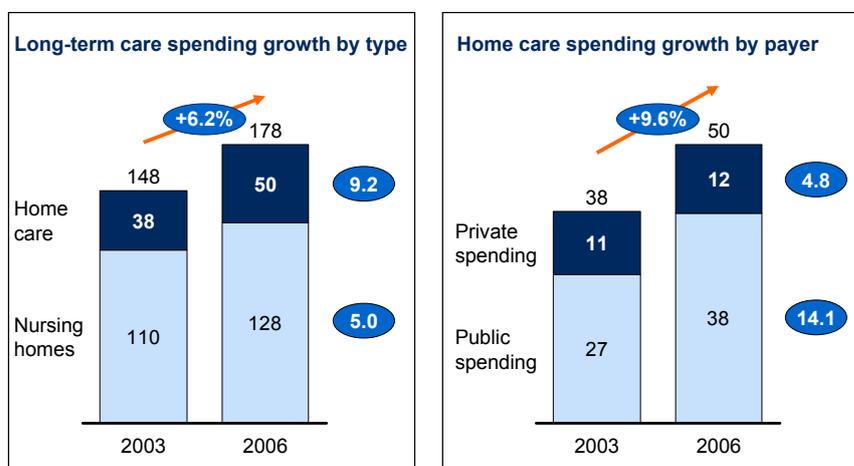
The 6.3 percent annual growth in this category from 2003 to 2006 was driven by 9.6 percent annual growth in home care (Exhibit 57). This escalation of home care costs continues a trend dating to 2000 when states, in an effort to reduce Medicaid long-term care costs, started to provide alternatives to institutional care, primarily by expanding eligibility for home and community-based services (HCBS). In 2006 alone, 26 states took action to expand HCBS.³⁶ These changes

³⁶ Vernon Smith et al., *Low Medicaid spending growth amid rebounding state revenues: Results from a 50-state Medicaid budget survey, state fiscal years 2006 and 2007*, Kaiser Commission on Medicaid and the Uninsured, October 2006.

have led to an increase in demand for home care—from 2000 to 2004 (the last year for which data are available), Medicaid recipient participation in home care grew 6.3 percent annually.³⁷ During this same period, Medicaid nursing home enrollment remained flat, so this shift to home care is arguably helping to contain cost growth.

Exhibit 57

Growth in this category has been driven by an escalation of costs in home care ● Compound annual growth rate, %
\$ billion, 2006



Source: OECD; McKinsey Global Institute analysis

Durable medical equipment

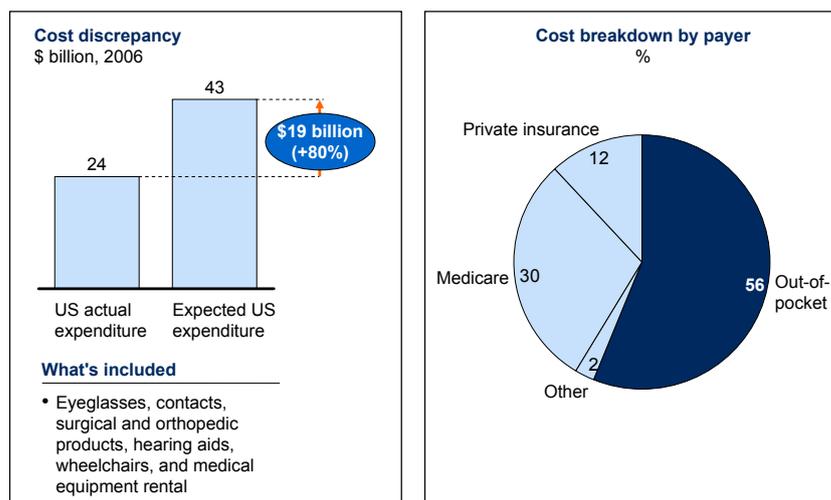
Durable medical equipment is a small, slow-growth cost category. Spending on this segment, which includes eyeglasses and contact lenses, surgical and orthopedic products, hearing aids, wheelchairs and medical equipment rentals, totaled \$24 billion in 2006. That is more than \$19 billion less than expected when adjusting for US wealth, effectively reducing total costs above expected by 3 percent. Durable costs have increased by only \$2 billion, or 1.8 percent annually from 2003 to 2006, the slowest growth of any category.

Spending and spending growth on durables are constrained by the largely out-of-pocket nature of reimbursements (Exhibit 58). As with long-term care, this situation in the United States is in stark contrast to many other OECD countries that have more generous reimbursement for eyeglasses, contact lenses, and other durables and largely explains why spending was so much lower than ESAW.

³⁷ *Medicaid Home and Community-Based Service Programs: Data Update*, Kaiser Commission on Medicaid and the Uninsured, December 2007.

Exhibit 58

US spending on durables is much lower than expected likely due to high consumer out-of-pocket contributions



Note: Numbers may not sum due to rounding.
Source: OECD; McKinsey Global Institute analysis

While detailed cost data are limited, it is likely that individuals in countries with more generous reimbursement replace eyeglasses more frequently.

We should note that the large proportion of out-of-pocket spending on this category in the United States makes determining the exact amount of spending difficult. BCC Research puts the size of the durables market at \$32 billion in 2006, \$8 billion higher than the estimate provided by the OECD (Exhibit 59).³⁸

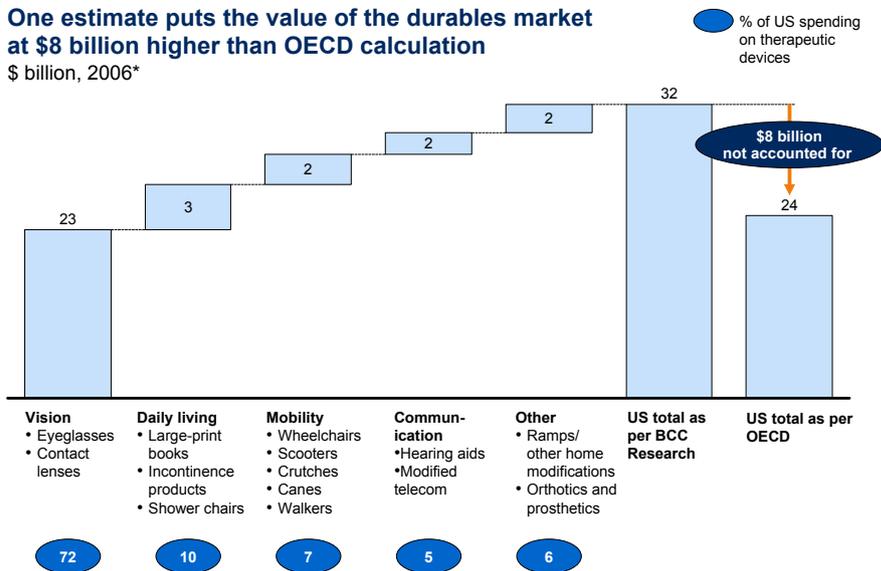
Investment in health

Investment in health is a medium-sized, medium-growth cost category, composed of three subcategories: prevention and public health; public investment in R&D; and investment in medical facilities (both public and private). Spending in this category is the equivalent to the capital investments that a private business might make to increase its assets and capacity to operate in the future. In 2006, spending totaled \$144 billion, some 7 percent of total spending. When adjusted for wealth differences, this total was \$50 billion more than expected, or 8 percent of total costs above ESAW in the system (Exhibit 60). From 2003 to 2006, investment in health has grown by \$23 billion—a rate of 6.1 percent a year.

³⁸ 2007 Health Care Research Review, BCC Research (<http://www.bccresearch.com/report/index.php?rcode=hlc&page=1&showdiv=&sorttype=>).

Exhibit 59

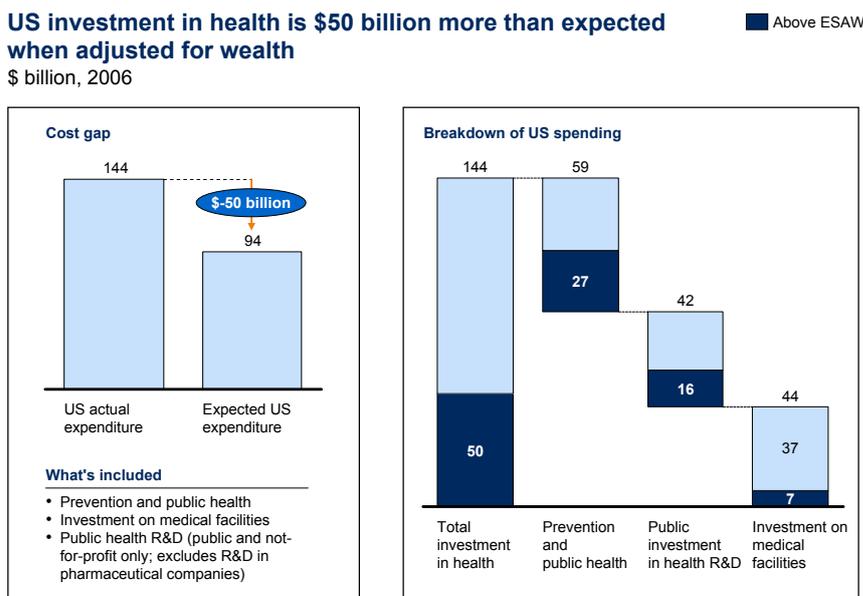
One estimate puts the value of the durables market at \$8 billion higher than OECD calculation
 \$ billion, 2006*



* 2006 estimated from 2005 totals using projected growth rates.
 Note: Numbers may not sum due to rounding.
 Source: BCC Research

Exhibit 60

US investment in health is \$50 billion more than expected when adjusted for wealth
 \$ billion, 2006



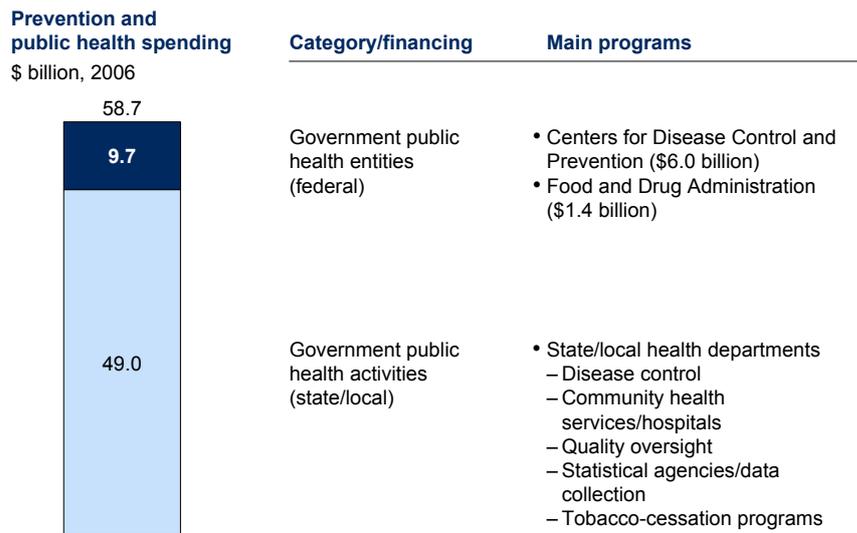
Source: OECD; McKinsey Global Institute analysis

US state initiatives drive prevention and public health spending

The United States spent close to \$59 billion on prevention and public health in 2006—\$27 billion above ESAW. Of the OECD countries we examined for comparison, only Canada spends more on a per capita basis than the United States. Of the total costs in this subcategory, states and local governments accounted for \$49 billion, spent on a variety of initiatives including disease control, data collection, community health services, and tobacco-cessation programs. The federal level spent the remaining amount, nearly \$10 billion, primarily to fund the Centers for Disease Control and Prevention (\$6 billion) and the Food and Drug Administration (\$1.4 billion) (Exhibit 61).

Exhibit 61

The majority of prevention and public health spending is at state level



Source: Centers for Medicare & Medicaid Services Office of the Actuary; Budget of the United States

Above-expected spending on these programs is largely a societal choice. To the extent that these efforts improve the health of individuals and reduce the cost of care, we should promote and enhance these initiatives. Yet we still need to ask the critical question whether these programs offer citizens a return on investment and whether these programs can be operated in a more efficient way.

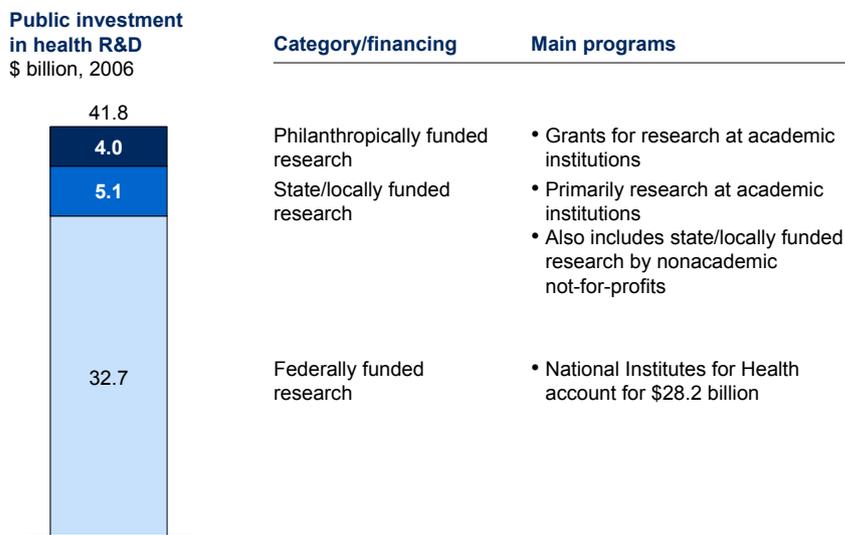
National Institutes of Health (NIH) lead the way in public investment in R&D

Public investment in R&D includes public and philanthropically funded R&D and excludes any private expenditure on R&D by pharmaceutical companies. The United States spent \$42 billion on public investment in R&D in 2006, \$16 billion

above ESAW, primarily to fund NIH (\$28 billion). Total spending in this category also includes a small state-level component, largely providing financing for research at academic institutions, as well as \$4 billion in philanthropic funding for research (Exhibit 62). While public investment in research should certainly advance public welfare, investment varies significantly by medical condition and does not necessarily align with those diseases of high prevalence such as obesity and heart disease (Exhibit 63).

Exhibit 62

The lion's share of public spending on R&D comprises federal funding of the National Institutes of Health



Source: Centers for Medicare & Medicaid Services Office of the Actuary; Budget of the United States

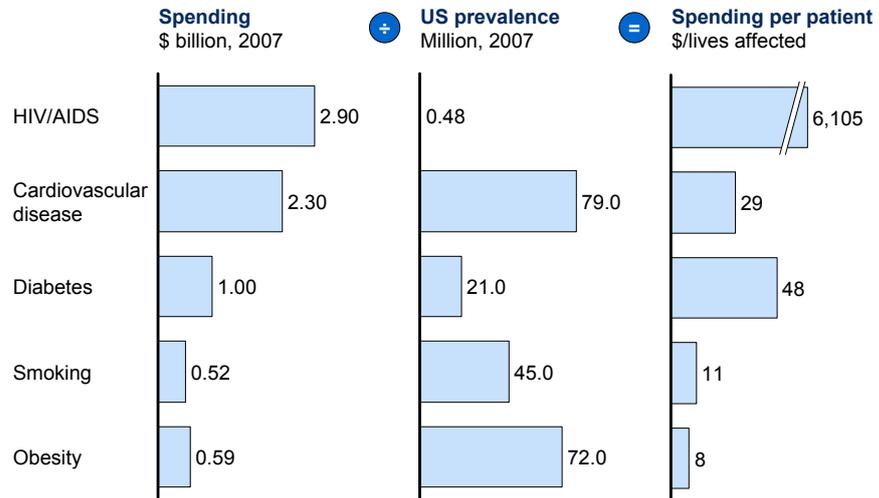
The private sector leads investment in medical facilities

The United States spent \$44 billion on investment in medical facilities in 2006, \$7 billion above ESAW. Private expenditure accounted for more than 80 percent (\$36 billion) of this total. Of this private spending, 69 percent went toward building new hospitals or extending existing hospitals; 22 percent toward medical buildings, including physicians' offices, clinics, and laboratories; and 9 percent toward special-care facilities including nursing homes and rehabilitation clinics (Exhibit 64).

Building of facilities accounted for more than half of growth in the investment in health category from 2003 to 2006. Private construction of hospitals accounts for the majority of spending on medical construction, although the total number

Exhibit 63

NIH funding does not necessarily correspond to disease prevalence

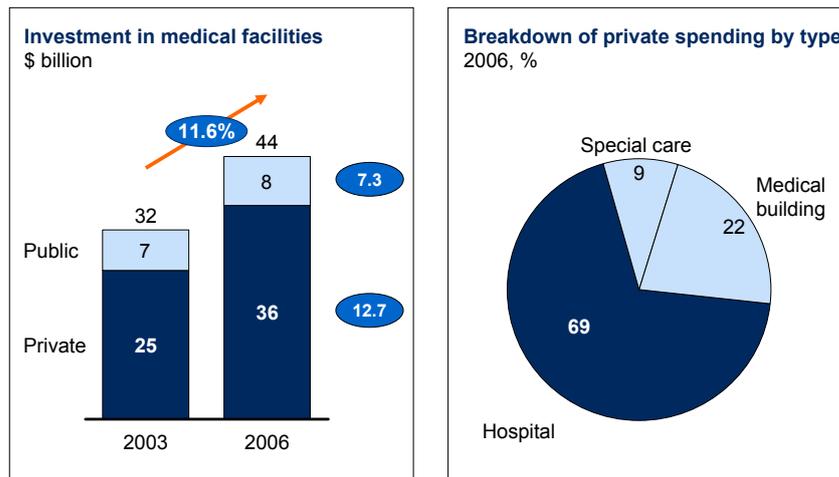


Source: National Institutes of Health; Centers for Disease Control and Prevention; American Heart Association; American Diabetes Association

Exhibit 64

Investment on medical facilities is driven by private spending on hospitals

● Compound annual growth rate, %

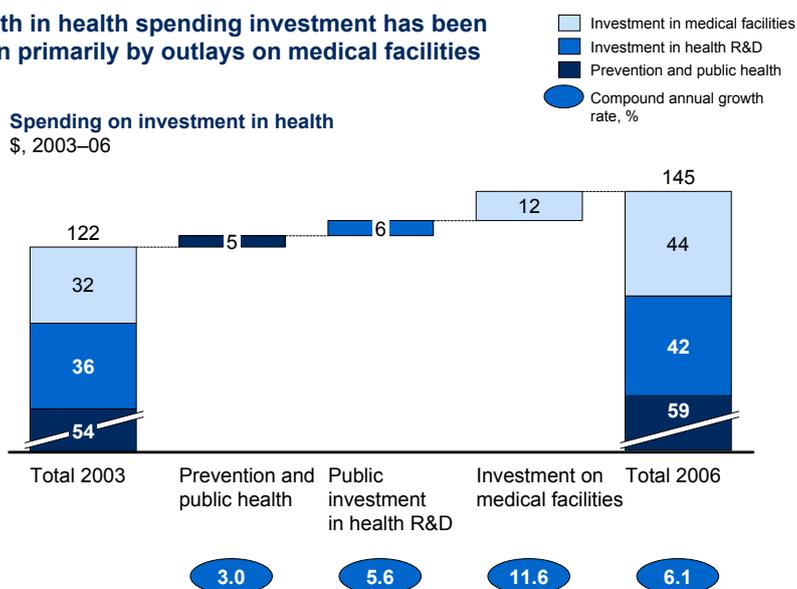


Source: Centers for Medicare & Medicaid Services Office of the Actuary, 2006 C-30 Survey of New Construction; McKinsey Global Institute analysis

of beds in private hospitals grew minimally over this period.³⁹ Instead, money was spent to replace existing beds and upgrade facilities (Exhibit 65).

Exhibit 65

Growth in health spending investment has been driven primarily by outlays on medical facilities



Source: OECD; McKinsey Global Institute analysis

DISEASE PREVALENCE IN THE UNITED STATES—IMPACT ON DEMAND AND COST

One hypothesis to partially explain the spending gap between the United States and its peers is that the US population is less healthy than people in other OECD countries. However, of 122 diseases within 35 medical conditions representing 37 percent of total US health care spending—including heart conditions, trauma, cancer, mental disorders, and diabetes—the United States has a lower prevalence of disease than France, Germany, Italy, Spain, and the United Kingdom, whose populations were used for comparison.

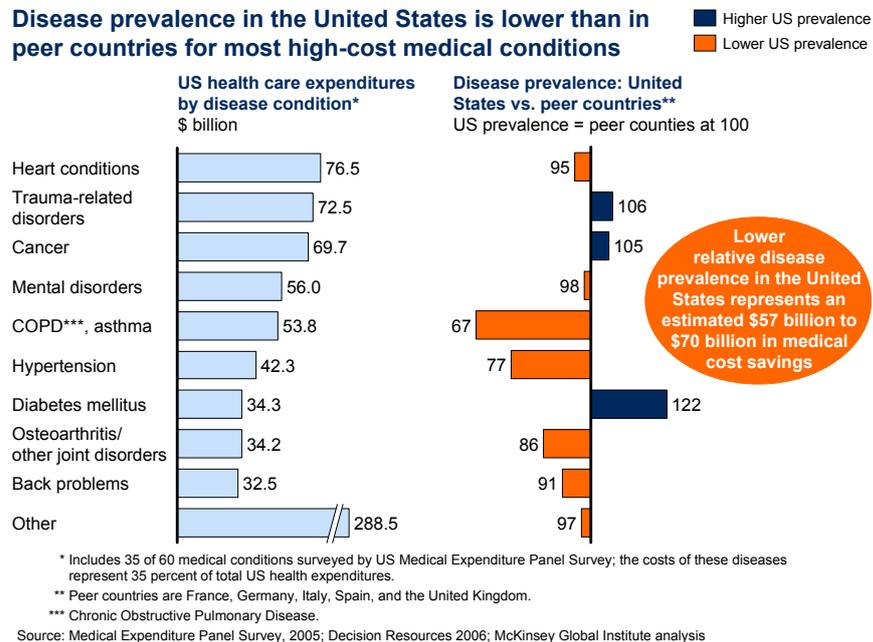
To determine the financial impact of these prevalence findings on US health care spending, we cross-referenced incidence figures for the 122 diseases, obtained from Decision Resources, with expenditure reports from the 2005 Medical Expenditure Panel Survey (MEPS). We mapped these disease conditions as appropriate, using the clinical codes that MEPS references to each medical

39 2006 C30 Survey Report, US Census Bureau; 5th Annual Nonprofit Hospital Survey, Bank of America Securities LLC, June 2006.

condition. With the Decision Resources and MEPS data aligned, we determined the average case discrepancy between the United States and comparison countries based on relative prevalence for each category. We subsequently calculated the total cost impact of relative incidences of disease by multiplying that difference by the average cost of treatment per case for each of the 35 disease groupings.

Our analysis concludes that the US disease prevalence does not explain any portion of the nation's \$650 billion in spending above expected. In fact, we calculate that the lower US prevalence in 21 of the 35 medical conditions netted against higher prevalence in 14 conditions translates into cost savings of between \$57 billion and \$70 billion (Exhibit 66). Of course, disease prevalence doesn't tell the whole story, since we were unable to measure cross-country differences in either the average severity of disease or in treatment patterns. We acknowledge that these factors may play a role in explaining variations in treatment costs, but it does not appear that these factors would materially explain the \$650 billion in spending above expected.

Exhibit 66



While the conclusion that the US population is slightly less sick than its European counterparts may seem counterintuitive to some observers, there are several factors to account for these findings. First, while it is true that the US population is progressively getting sicker, the populations in other developed countries are also becoming less healthy and not at a materially lower rate than

in the United States. Second, smoking figures in the United States are far lower than in the comparison countries. Treatment of chronic obstructive pulmonary disease is expensive, and with a third fewer of those cases, the United States avoids approximately \$25 billion in health care expenditures. Finally, the United States benefits from a younger population with an overall lower prevalence of conditions associated with age, such as heart disease, even though incidence rates may actually be higher for some segments of the population.

EVIDENCE ON VALUE IN THE US HEALTH SYSTEM—QUALITY AND ACCESS

The next important question is whether the US public is getting value for money for the extra \$650 billion the nation spends for its level of wealth. We by no means are able, nor do we attempt, to address this question of value in an exhaustive manner—there are literally thousands of other studies on this topic. Our intent is simply to provide the reader with a high-level overview of some of the defining characteristics of the US health system in terms of quality and access.

Strengths of the US health system

Four key strengths of the US health care system are worth highlighting. First is its unique support for the innovation and adoption of new technologies, products, and processes. As we have noted, new pharmaceutical products typically launch one to two years earlier in the United States than they do in the rest of the world, and the United States is much quicker to adopt new surgical techniques and advances in anesthesia that have expanded the delivery of outpatient care. The top five US hospitals alone conduct many more clinical trials than any single OECD country (Exhibit 67).⁴⁰ The US system has also led the way in innovating in the delivery and management of health care. For example, ASCs, a rapidly growing segment of outpatient care, as we have discussed, and disease management programs, an industry worth nearly \$2 billion, are US innovations now being “exported” to the rest of the world.⁴¹

Second, the US system has built up a vast infrastructure of “premium” health care institutions. Observers often cite the fact that the United States has some of the most prestigious hospitals in the world, and data from the medical tourism industry support this assertion. Globally, a significant majority of medical tourists who seek higher-quality care choose to come to the United States.⁴² Beyond

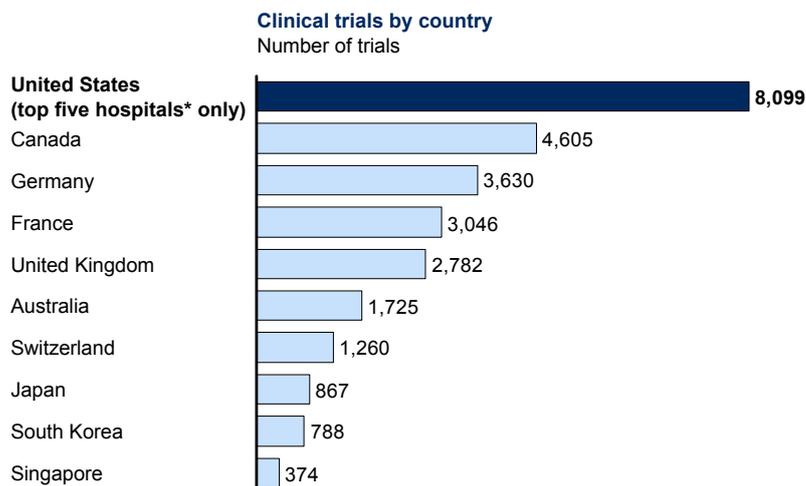
40 See ranking of top five hospitals by *U.S. News & World Report*; National Institutes of Health.

41 Disease Management Purchasing Consortium (DMPC); Health Industries Research Companies (HIRC).

42 Tilman Ehrbeck, Ceani Guevara, and Paul D. Mango, “Mapping the market for medical travel,” *The McKinsey Quarterly*, May 2008 (<http://www.mckinseyquarterly.com/>).

Exhibit 67

The top five US hospitals conduct many more clinical trials than any OECD country



* Top five US hospitals ranked by U.S. News & World Report 2007.
Source: National Institutes of Health; *US News & World Report*

such top-tier institutions as Johns Hopkins and the Mayo Clinic, the United States boasts a range of other academic medical centers that conduct research and offer specialized treatment. US teaching hospitals, accounting for a large share of premium-quality care, often provide higher-quality care and produce superior outcomes than nonacademic institutions.⁴³

Third, across the entire US system, cancer survival rates are superior to those in other OECD countries. Among men, the United States has a five-year survival rate of 66 percent, compared with 47 percent in the European Union (EU). Among women, the rate is 63 percent in the United States, compared with 56 percent in the EU.⁴⁴ US survival rates are higher for all but a few solid tumors, largely thanks to earlier detection and more diligent screening. Taking breast cancer as an example, a survey conducted by the Commonwealth Fund revealed that women in the United States were more likely than women in other developed countries to have undergone a mammogram. Because, in part, of early detection, the US survival rate for breast cancer is 90 percent compared with 79 percent in the EU (Exhibit 68). We should note, however, that in terms of survival rates for

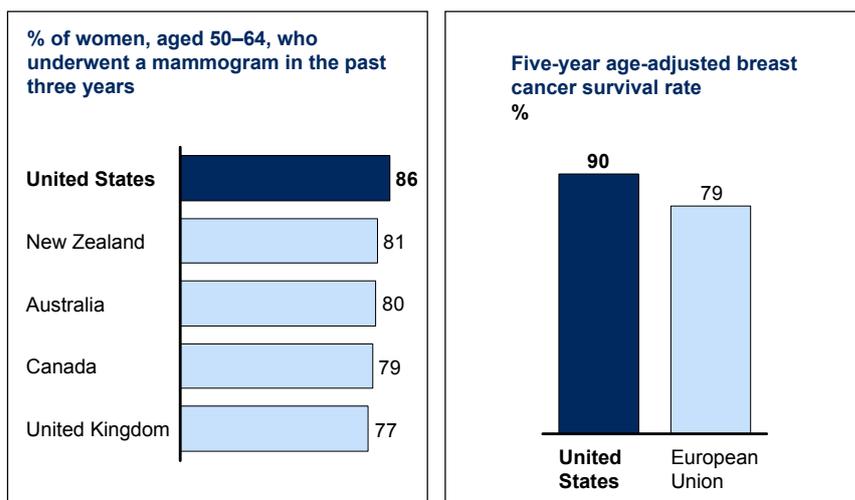
43 J. Allison et al., "Relationship of hospital teaching status with quality of care and mortality for Medicare patients with acute MI," *Journal of the American Medical Association*, September 13, 2000, Volume 284, Number 10, pp. 1256–62.

44 Zosia Chustecka, "Cancer survival rates improving across Europe, but still lagging behind United States," *Medscape Medical News*, August 22, 2007.

other diseases, the United States generally achieves outcomes that are similar to those in the rest of the OECD.

Exhibit 68

The United States screens more for cancer and has higher survival rates



Source: The Commonwealth Fund 2004 International Health Policy Survey of Primary Care in Five Countries; MedScape Medical News

Lastly, the US system performs better than other countries on several notable measures of convenience. The United States has shorter waiting times, both for visiting a specialist and for undergoing elective surgery, according to research by the Commonwealth Fund. In the set of countries surveyed, only Germany had comparable waiting periods. In contrast, patients in the United Kingdom experience long waiting times—60 percent of British patients wait more than four weeks to see a specialist, compared with 23 percent of US patients who wait that long. And UK patients are five times as likely as US patients to wait more than four months for elective surgery (Exhibit 69).

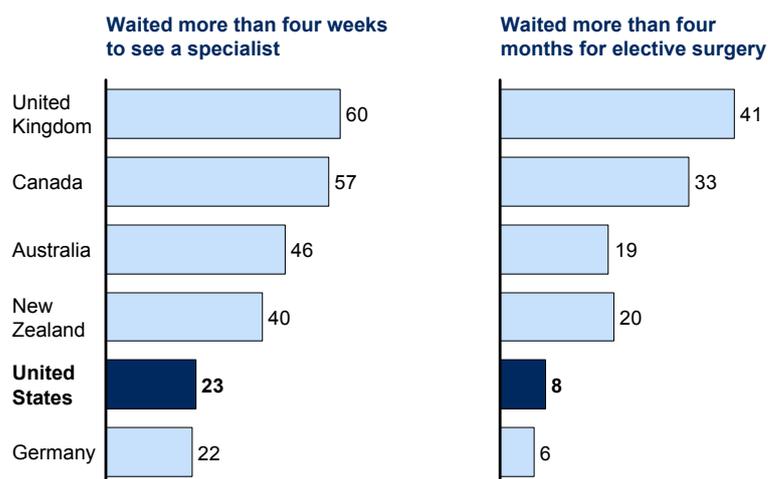
Mixed results on US health system performance

The rapid adoption of new technology and drugs has both positive and negative implications for quality. Many new technologies significantly improve patient care, but others may offer only marginal improvements. Moreover, the rapid approval of new technology increases the risk that safety issues may not emerge until after a product is approved for use. A prominent example of this problem was the rapid clinical adoption in the 1990s of high-dose chemotherapy followed by bone marrow transplants for breast cancer patients. Initial studies for this

Exhibit 69

US system provides quicker access to specialists and elective surgery than most other countries

% of respondents



Source: 2005 Commonwealth Fund International Health Policy Survey; McKinsey Global Institute analysis

procedure in the United States looked promising, and there was a rush to adopt the treatment. A more complete and statistically rigorous study published in 1999 showed the treatment to be less effective than mild chemotherapy. This haste in implementing an unproven procedure cost the United States around \$3.4 billion and caused about 9,000 deaths. Other examples of advanced procedures that the US system has adopted before their efficacy was fully established include prostate-specific antigen (PSA) testing, lumbar spinal fusions, bone marrow transplants for solid tumors, cardiac CT angiography, bone grafts, and molecular diagnostic tests.⁴⁵

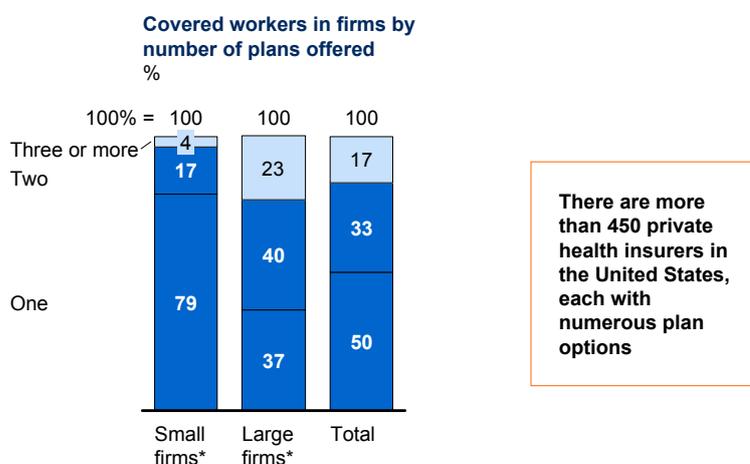
Commentators often cite choice in terms of insurance coverage or an available choice of physicians as a benefit of the US system. However, despite the existence of more than 450 private health insurers in the United States, each with a variety of plan design options (many more than in other developed countries), the fact is that most individuals are restricted to the choice of plans offered by their employers. A survey by the Henry J. Kaiser Family Foundation showed that more than half of Americans insured through their employers have no choice of plan and that another one-third of Americans can only choose

45 Shannon Brownlee, *Overtreated—Why Too Much Medicine Is Making Us Sicker and Poorer*, first edition, New York, NY: Bloomsbury, 2007.

between two plans (Exhibit 70).⁴⁶ Nor does the United States perform markedly better than other countries on patients' ability to select a physician. One study found that countries including the United Kingdom, Denmark, and Portugal offer 85 to 97 percent of the population a personal choice of physician, in line with the situation in the United States.⁴⁷

Exhibit 70

Despite a high number of health plans, US employees have a limited choice of health coverage



Note: Numbers may not sum due to rounding.

* Small firms: 3–199 workers; large firms: >199 workers.

Source: *Employer Health Benefits 2006 Annual Survey*, The Henry J. Kaiser Family Foundation and HealthResearch and Educational Trust; HealthLeaders Inc.

Weaknesses of the US health system

Despite the significant level of care innovation in the system and the presence of premium-care facilities, the United States still lags behind other OECD countries on key population-level outcome measures. On life expectancy—the most basic measure of health care quality and outcomes—the United States compares unfavorably with the OECD. In 2005, US life expectancy at birth was 77.9 years, compared with an OECD average of 78.6 (Exhibit 71).⁴⁸ It is clear that the US health system is not entirely to blame. Other factors, including lifestyle choices, violent crime, and a higher incidence of transport-related deaths in the United

46 *Employer Health Benefits 2006 Annual Survey*, The Henry J. Kaiser Family Foundation (<http://www.kff.org/insurance/7527/upload/7527.pdf>).

47 R. Kalda et al., "Patient satisfaction with care is associated with personal choice of physician," *Health Policy*, April 2003, Volume 64, Number 1, pp. 55–62(8).

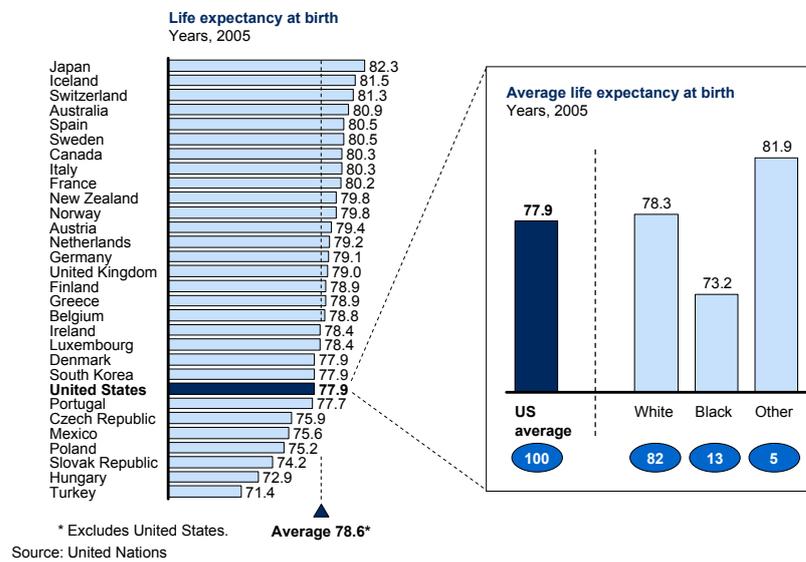
48 US life expectancy has increased to 78.1, according to 2006 estimates from the National Center for Health Statistics; estimates for 2006 are not yet available for the United States through OECD Health Data but were available for many other countries.

States all play a significant role. Nonetheless, US citizens do not live as long as citizens in other developed countries (this is equally true for other outcome measures such as disease-adjusted life expectancy, a measure the World Health Organization developed to compare the number of healthy years that people in different countries live).

Exhibit 71

US life expectancy does not compare favorably with other OECD countries due partly to variations in outcomes

● % of US population



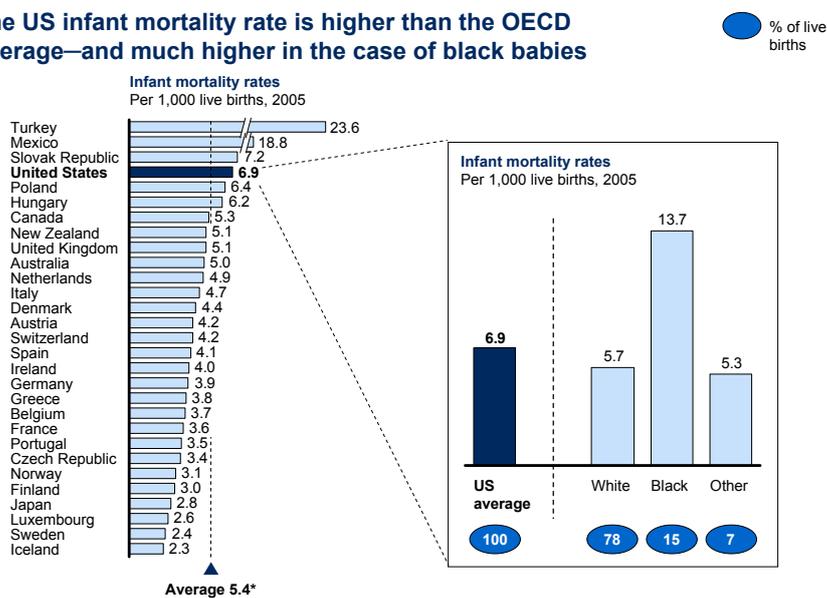
The US infant mortality rate is another measure suggesting that the US health system is underperforming for certain segments of the population. The United States has an overall infant mortality rate of 6.9 per 1,000 live births, compared with an OECD average of 5.4, and an average of just 3.9 for the countries in our sample set (Exhibit 72). And there is a large disparity in these rates among races in the United States. Black infant mortality is 13.7 per 1,000 live births, more than twice the rate among whites and other races. In fact, the US black infant mortality rate is worse than the rate in all OECD countries except Turkey and Mexico.

Lastly, access to the US health system is far more uneven than in other countries. The 15 percent of the US population that has no medical insurance is a uniquely high percentage among OECD countries. As a result of this and other factors, the United States comes in 54th on the World Health Organization's

international “fairness and equality” ranking.⁴⁹ Discrepancies in access clearly lead to differences in outcomes. One study found that for 10 out of 12 avoidable hospital conditions, people who lack insurance are far more likely than those who are privately insured to be admitted.⁵⁰ And once admitted to the hospital, uninsured individuals were 2.3 times as likely to suffer an adverse event as their insured counterparts.⁵¹

Exhibit 72

The US infant mortality rate is higher than the OECD average—and much higher in the case of black babies



* Excludes United States.

Source: OECD; Centers for Disease Control and Prevention; McKinsey Global Institute analysis

* * *

In summary, the US health care system costs more than \$650 billion over and above what we might expect for the nation’s wealth, nearly two-thirds of the amount associated with outpatient care. Any reform intended to prevent the continued escalation of cost, therefore, will need to address outpatient care. Furthermore, we find that the additional expenditure generated by the US system cannot be justified on the grounds that the US population has a higher prevalence of disease or that the system is delivering superior value for the money expended.

49 *The World Health Report 2000—Health systems: Improving performance*, World Health Organization, June 2000.

50 J. S. Weissman et al., “Rates of avoidable hospitalization by insurance status in Massachusetts and Maryland,” *Journal of the American Medical Association*, November 4, 1992, Volume 268, Number 17, pp. 2388–94.

51 H. R. Burstin et al., “Socioeconomic status and risk for substandard medical care,” *Journal of the American Medical Association*, November 4, 1992, Volume 268, Number 17, pp. 2383–7.



2. Principal issues for consideration

We have established that the US health care system is expensive and growing more so—both in absolute terms and when adjusted for US wealth—compared with the systems in other countries. Many politicians, system stakeholders, and citizens may have an emotional response to these costs and to efforts to increase value for spending. However, if the United States is to address the issue of high health care costs effectively, policy makers, regulators, and participants in the system need to understand the underlying dynamics that dictate how the economics of health care work in the United States. These dynamics, which lie at the root cause of why costs continue to escalate, range from incentives that individual stakeholders face, to pricing mechanisms at work in the market, to information asymmetry in decision making. In evaluating these underlying dynamics, it becomes clear that the laws of supply and demand that apply in most industries work in a very different way in the US health care system.

Our investigation into the cost of health care in the United States reveals seven principal issues for consideration associated with the demand, supply, and intermediation of health care. A final—important—issue we acknowledge is the role that social norms and values play in shaping the acceptability of any reform. We do not prioritize these issues or attempt to quantify the impact of addressing any one of them. Rather our intent is to ensure that these issues are considered as part of any health reform agenda to improve value.

DEMAND-RELATED ISSUES

Who pays for the burden of health care costs?

Who pays for the consumption of health care has important implications for how much health care is consumed and at what prices. In countries where

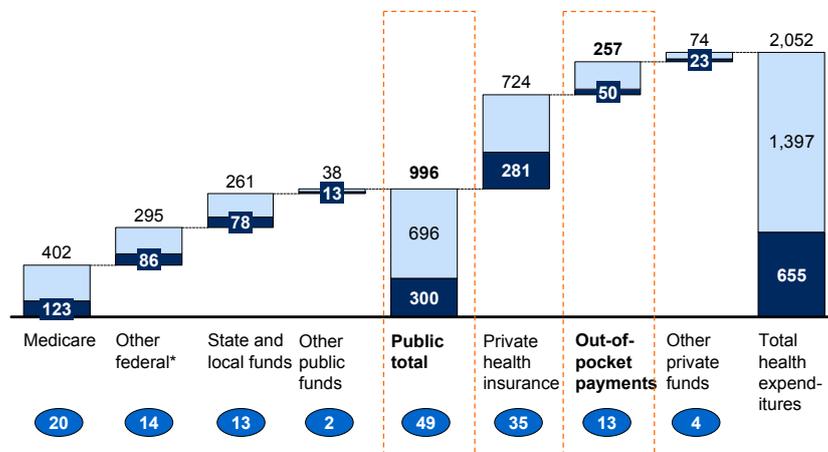
consumers receive gasoline subsidies, for instance, it is not surprising that people use more gasoline than they would at actual market prices. In the US health care system, patients—the end-consumers of health care—also receive “subsidies” in the form of health insurance from private health insurers, state governments, or the federal government for Medicare. There are, of course, good reasons for offering this insurance—chief among them, to promote the general health of the public. And consumers actually do pay for insurance either directly through premium payments or indirectly in the form of reduced wage growth. Nevertheless, such coverage has important implications for the price and consumption of health care.

In total, the average consumer pays out of pocket for very little of his or her health care. Although average figures don’t tell the whole story, recent trends toward increased cost-sharing in the form of higher co-payments and deductibles have not materially affected the average patient’s share of total health care costs. In fact, between 1960 and 2006, the share of personal health expenditures paid directly out of pocket by consumers fell from about 47 to 13 percent. In addition, according to MEPS data, the share of \$724 billion in health insurance premiums paid by consumers to their employers remained relatively constant at \$0.25 for every \$1 of premium in the decade to 2006. Conversely, the government’s share of health care expenditures rose from 25 percent to nearly 50 percent from 1960 to 2006 (Exhibit 73).

Exhibit 73

Public spending accounts for nearly 50 percent of total spending; consumers' out-of-pocket expenses represented only 13 percent of costs
 \$ billion, 2006

■ Share of spending above ESAW
 ● % of total costs



* Includes federal payments to states for Medicaid, Department of Defense, and Department of Veterans Affairs.
 Source: OECD; McKinsey Global Institute analysis

For consumers with generous insurance coverage, the price of health care services or the amount of care consumed is not a concern because these patients bear little, if any, of the costs, and therefore have no incentive to consider trade-offs between higher- or lower-cost treatments. These consumers do not have to make the conscious choice between spending disposable income on medical care instead of other goods and services.

Interestingly, health care “insurance” as it is currently structured creates a greater risk of moral hazard for the consumption of health care than do other insurance products. Although individuals with car or homeowners’ insurance may engage in more risky behavior due to moral hazard (such as speeding or building homes in areas prone to natural disasters), these insurance policies generally only cover random events that are unpredictable in nature. By contrast, health care insurance covers both unpredictable events (an unexpected hospitalization, cancer treatment) and predictable events (well child care, annual checkups). We identify five broad categories of health care risks: (1) low-dollar expenses; (2) expenses related to chronic conditions; (3) high-dollar discretionary expenses; (4) catastrophic expenses; and (5) end-of-life care expenses (Exhibit 74). It is important for payers, employers, and policy makers to evaluate how, to what extent, and for whom, these different types of expenses should be covered by traditional insurance plans.

Exhibit 74

There are five broad categories of health care risks

Medical expense type	Details
Low-dollar	<ul style="list-style-type: none"> • Medical expenses for routine medical care, preventive care, discretionary spending
Chronic condition care	<ul style="list-style-type: none"> • Medical expenses related to chronic diseases/conditions • Risk of uninsurability once chronic disease is diagnosed
High-dollar discretionary	<ul style="list-style-type: none"> • Medical expenses for elective procedures (e.g., back surgery, bariatric surgery, cosmetic surgery, laser eye surgery)
Catastrophic	<ul style="list-style-type: none"> • Medical expenses driven by acute event or accident • Related nonmedical expenses (palliative or long-term care)
End-of-life care	<ul style="list-style-type: none"> • Medical expenses typically related to terminal illnesses and experimental treatments or nonmedical expenses (e.g., caregiver)

Source: McKinsey Global Institute analysis

Information asymmetry in the health system

Patients are currently at an information disadvantage on two fronts when it comes to making appropriate and value-conscious health care decisions. First, we see a lack of transparency of prices in US health care that is unrivaled in any other consumer-oriented industry. This makes it extremely difficult to make health choices that account for differences in price. In the case of auto repair, consumers are not always armed with sufficient information about the cost of repairs, but they can and do shop around for estimates. However, in health care, it is extremely difficult to do comparison shopping by price (although health insurance companies are increasingly publishing some pricing information). Most patients choose their physicians, not the care they receive. Pricing information is also limited when choosing health insurance plans—consumers tend not to be aware of the total cost of their insurance policies, because most employers subsidize the premiums to some extent, and fewer than 10 percent of people purchase health insurance on the individual market.⁵²

Second, consumers face a huge knowledge gap in health care compared with care providers. Despite the widespread availability of medical information on the Internet, when it comes to the appropriate course of treatment, consumers of health care are still highly reliant on the advice and guidance of their physicians. Moreover, health care is of inestimable importance to consumers—and their well-being can even be a matter on which their livelihoods depend. In the absence of evidence to the contrary, patients may often assume that more care, or more expensive care, will lead to better outcomes. For patients to become more value-conscious consumers of health care, solutions will need to be devised that address the problem of price opacity and mitigate the medical knowledge gap with physicians. Even if greater information transparency is achieved, behavioral economics suggests this will only be part of the solution.

Declining health of the population

As we have noted, disease prevalence in the United States is not higher than in peer OECD countries. However, the decline in the general health of the US population does play a role in growing health care costs. We would note two pieces of evidence to support this. First, we assessed changes in population health as evidenced by reported medical conditions in the MEPS from 2003 to 2006. Our analysis suggests that growth in medical condition events during that period accounts for \$20 billion to \$40 billion in expenditure growth. To the

⁵² The Henry J. Kaiser Family Foundation, 2004.

extent that medical condition severity increased during this period, the impact of declining population health might be even larger. A second important factor to evaluate is the role of obesity in driving up health care costs. Obesity in the US population has grown substantially in the last 15 years, and this places greater burdens on the health care system in the form of higher costs.

In light of the declining health of the US population, both payers and employers have increasingly focused their efforts on managing health care demand through consumer-oriented health and wellness programs. These programs are designed to provide incentives to live healthier lives, to give participants tools to help in making decisions related to health care, and to offer new benefit structures. Healthy living programs—including smoking cessation courses, healthier food options at attractive prices in company cafeterias, and mandatory breaks for exercise—have been instituted by a variety of employers. In the long term, such programs may help to bear down on medical costs. A McKinsey survey of employers that have implemented such programs found employers were generally satisfied with their effectiveness in controlling costs, particularly if they employ several levers at the same time.⁵³ However, thus far we have not seen a significant macroeconomic impact on costs. Ultimately, it will be important to assess and improve the effectiveness of these disease management programs in targeting populations with the greatest health care risks and in helping to modify individual behaviors.

SUPPLY-RELATED ISSUES

Technology-driven cost inflation

In most industries, producers (or suppliers) offer several product segments. They offer a few products at a high price point and compete by offering innovative or luxury benefits to the customer. Most other products compete on price or value, extending to consumers a functional offering at a lower price point. Suppliers generate profits either by pioneering new premium products or by innovating to reduce product costs. Over time, yesterday's premium products decline in price and become mainstream as customers buy "behind the curve" to capture the value of slightly older technology, fashions, or other goods at lower prices. In the consumer electronics industry, for example, technological innovation tends to drive market prices down over time.

53 Vishal Agrawal, Paul D. Mango, and Kimberly O. Packard, "What employers think about consumer-directed health plans," *The McKinsey Quarterly Web exclusive*, July 2007 (http://www.mckinseyquarterly.com/What_employers_think_about_consumer-directed_health_plans_2023).

In contrast, technological innovation in the health care industry tends to drive prices up. There are four main reasons for this. First, health care is one of our most basic needs and, as such, the idea of a market segmented by willingness to pay, in which some patients receive a lower standard of care, violates social norms as well as individuals' preferences for their own care. Second, as we have discussed, most consumers bear such a small fraction of their costs out of pocket that they are largely insensitive to price. Third, as we have also noted, health care consumers typically follow the advice of their physicians rather than make their own value-based trade-offs about their treatment. Finally, there is a scarcity of quality comparisons among treatments that would allow patients or physicians to make value-based comparisons of the treatment options.

Because low prices do not necessarily drive sales and may even create the perception of low quality, the factors that we have described, taken together, reduce the normal market incentive for health care suppliers to create innovative low-cost treatments. Instead of bringing less expensive products to market, innovation focuses primarily on the development and introduction of new (and more expensive) products or techniques. This is evident across a wide spectrum of medical technologies, from imaging, to surgical equipment, to angioplasty devices (Exhibit 75). For example in the case of stents, the new technology of drug-eluting stents rapidly captured market share at premium prices, yet reimbursement rates for existing technology largely remained stable (Exhibit 76).⁵⁴

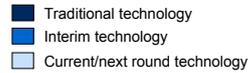
High-priced technologies benefit hospitals as well as manufacturers, and, as a result, care providers demand these higher-priced, cutting-edge products and deem them critical to their financial survival. An assessment of hospital capital expenditures suggests that hospitals direct most of their investments toward expanding specialty medical services and advanced testing equipment such as CTs and MRIs rather than increasing general medical bed capacity. Some analysts deem such capital investments essential if hospitals are to compete successfully for market share (Exhibit 77).

Where cost innovation in health care does exist, it occurs in services that are more retail-oriented—situations in which patients select and purchase their own care directly and therefore in which providers can compete directly on the basis of price. For example, retail clinics in drugstores—such as those in Wal-Mart stores that sell low-cost generic drugs—offer primary care at a lower price

⁵⁴ A drug-eluting stent is a coronary stent placed into coronary arteries that slowly releases a drug.

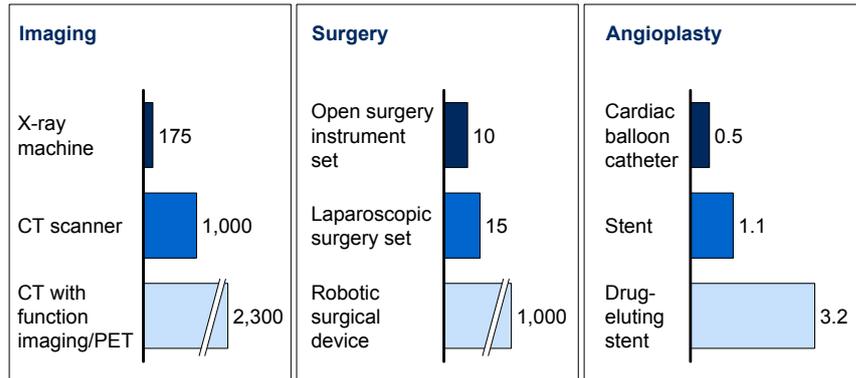
Exhibit 75

Technological innovations are driving costs higher



Medical equipment costs

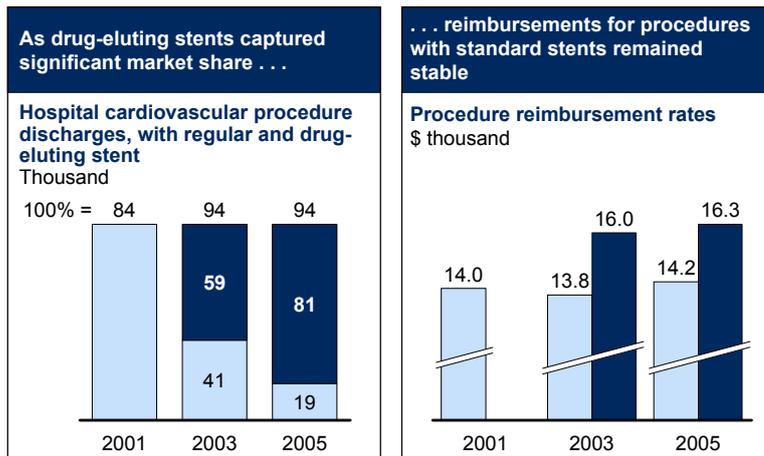
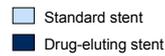
\$ thousand



Source: *Cracks in the Foundation: Averting a Crisis in America's Hospitals*, American Hospital Association, 2002

Exhibit 76

More expensive stent technology rapidly captured the market, but standard stent reimbursements remained stable

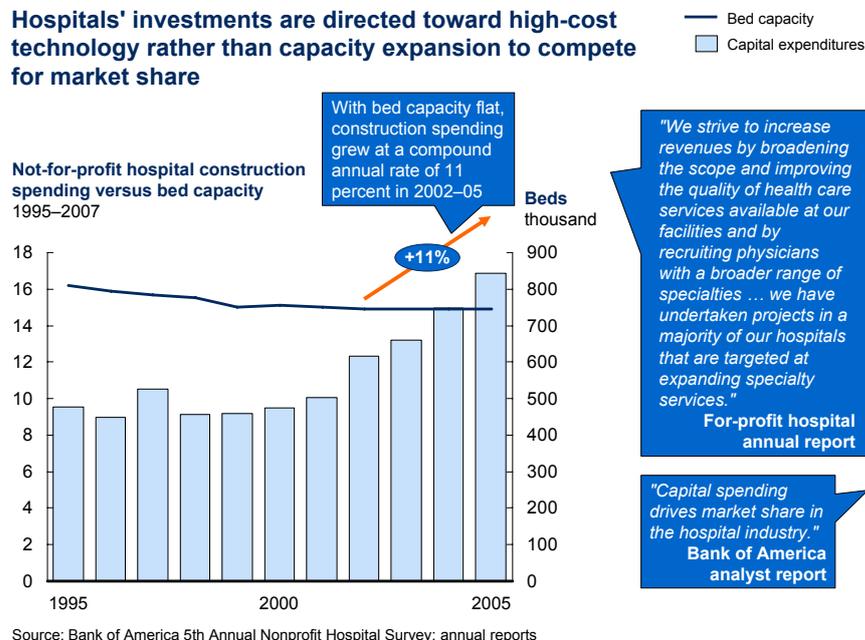


* Discharges reimbursed by Medicare for percutaneous cardiovascular procedures (without acute myocardial infarction) with non-drug-eluting and drug-eluting stents. Price is average Medicare reimbursement to hospitals, including the cost of the device.

Source: National Fee Analyzer; McKinsey Global Institute analysis

Exhibit 77

Hospitals' investments are directed toward high-cost technology rather than capacity expansion to compete for market share



point than is offered in physicians' offices. However, because out-of-pocket costs remain a small piece of total health care spending, these cost-saving retail interventions have a limited impact on total spending. As we have noted, despite recent growth, the total retail clinic market was still valued at just \$121 million in 2006.⁵⁵

There is no doubt that advances in medical technology have had a beneficial effect on the quality of health care. Minimally invasive surgical techniques and medications that treat HIV are just two examples of recent technological advances that have improved the quality of health care and the quality and length of patients' lives. The threat of stifling this type of innovation has reasonably made reformers cautious of changes that might reduce returns to technological innovation. Addressing technologically driven cost inflation, while preserving the true, high-quality innovation that dramatically improves patient outcomes, will require stakeholders to begin to assess the value received from technological innovation in health care and whether it is worth the price.

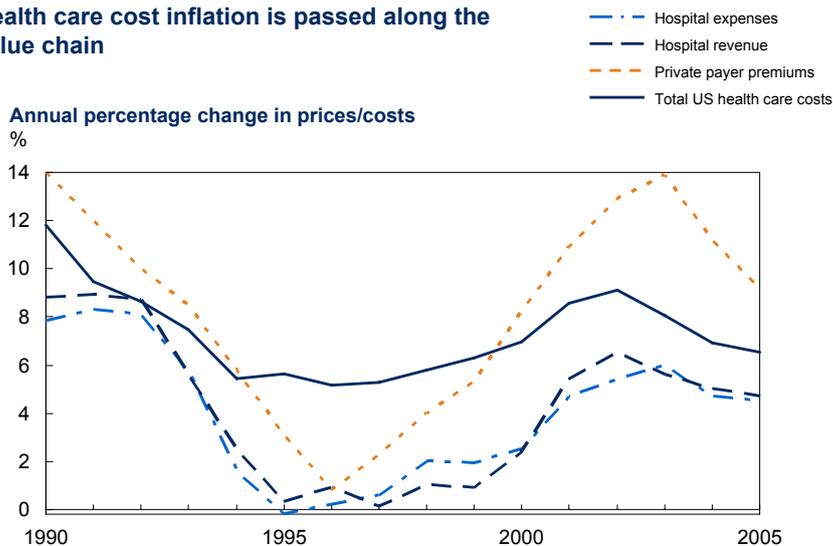
55 "Retail Clinics—The Emerging Market for Convenience Clinics and In-Store Healthcare," Kalorama Information, 2007.

Cost inflation across the supply chain

As higher-cost technology is introduced to the market and standard technology reimbursements remain stable, costs tend to ripple through the supply chain, passing from health products and equipment manufacturers, to physicians and hospitals, to payers, and ultimately to employers and patients (Exhibit 78). At each step in the process, stakeholders absorb a portion of these cost increases and attempt to pass (ideally even greater) price increases through to the next stakeholder. This finding suggests that each stakeholder in the health system is either unwilling or unable to “push back” materially on previous stakeholders as costs grow. Unless the US health care system addresses this dynamic, medical inflation is likely to continue unabated.

Exhibit 78

Health care cost inflation is passed along the value chain



Source: National Health Expenditures; Avalere Health analysis of American Hospital Association Annual Survey 2005 data for community hospitals; The Henry J. Kaiser Family Foundation and Health Research and Educational Trust Survey of Employer-Sponsored Health Benefits, 1999–2007

INTERMEDIATION-RELATED ISSUES

Payment for more care rather than more value

A variety of mechanisms exist to reimburse patient care. Capitation, global fees or episode-based reimbursement, per diems, pay-for-performance, and fee-for-service all represent different approaches to reimbursing physicians and hospitals for their services. The fundamental way in which these payment mechanisms differ is the extent to which care providers bear the risk of adverse events or treating patients with more acute conditions. Episode- or DRG-based

reimbursement, utilized by Medicare and many commercial payers to reimburse inpatient care, requires care providers to bear part of the risk of treating a patient and, in large part, creates incentives to use resources efficiently.

In contrast, fee-for-service reimbursement, the predominant payment method for outpatient care, requires care providers to bear little of the risk of patient treatment. In fact, fee-for-service creates strong financial incentives for care providers to provide more, and more costly, care to patients. More visits, more tests, more procedures all add up to more pay. Take the case of a patient suffering from knee pain. A physician might earn \$80 for a simple 30-minute in-office examination and an additional \$25 for an X-ray. If an MRI is performed in-office or within the same physician practice, a physician might earn up to \$500 in professional fees and a \$350 facility fee.⁵⁶ Variation in practice is widespread in the treatment of this and many other conditions.⁵⁷

Because physicians largely determine most courses of treatment, the combination of fee-for-service reimbursement and the practice of defensive medicine to avoid malpractice suits reinforces comprehensive approaches to care. For the patient with knee pain, it is at the physician's discretion whether a simple in-office examination is sufficient or whether more diagnostic tests such as X-rays or MRIs should be conducted to confirm the findings of a physical examination. Now, let's say our patient, a 55-year-old non-active male, had torn his ACL, a major ligament in the knee. It is up to the physician's discretion whether to recommend arthroscopic surgery or another treatment option, such as physical therapy, exercise, or watchful waiting.

To complicate matters further, care providers have a disincentive to provide less care, particularly in the case of diagnostic tests, because of the fear of malpractice litigation. While research suggests that the direct costs of malpractice lawsuits are limited—\$30.3 billion in 2006—the risk of litigation creates an incentive to err on the side of caution. Precautionary tests limit a physician's personal risks and, at the same time, generate higher reimbursements when treating any individual patient.⁵⁸ In their assessment of relative physician practice patterns among various US states with different malpractice laws, Kessler and McClellan suggested that reducing the incentives that drive the practice of defensive

56 Ingenix national fee analyzer, Centers for Medicare & Medicaid Services.

57 W. Pete Welch et al., "Geographic variation in expenditures for physicians' services in the United States," *New England Journal of Medicine*, March 4, 1993, Volume 328, Number 9, pp. 621–27.

58 Robert P. Hartwig, *Medical professional liability & the p/c insurance industry*, Insurance Information Institute, 2006.

medicine could save up to \$50 billion per year with minimal, if any, effect on the quality of care provided.⁵⁹ This estimate, derived on the basis of data from 1984 to 1990, would imply potential savings of \$150 billion to \$190 billion if extrapolated to current total costs in the US system.

Care providers clearly have an ethical interest and a professional obligation to deliver care that is in their patients' best interests. However, given that many patients are not particularly price sensitive and that there is a wide range of effective treatment options, care providers have a great deal of flexibility in their response to the financial incentives embodied in fee-for-service reimbursement to deliver more care while still serving these patients effectively.

Other reimbursement mechanisms also present implementation and execution-oriented challenges, albeit different ones from in the case of fee-for-service. It is clear, however, that addressing health care costs will require multiple stakeholders to engage in the issue of care reimbursement and in determining how to encourage providers to deliver care in a value-conscious way.

Pricing mechanisms in the market

The pricing of health care goods and services is also different from the way it works in most other industries and tends to encourage growth in health care costs over time. To understand the dynamics that influence industry pricing, one needs to understand how Medicare pricing works. Medicare, by far the largest payer in the national market, essentially determines reimbursement rates using a cost-plus-based formula. Care providers are required to submit information on an annual basis about the costs they incur in providing various types of inpatient and outpatient care. On the basis of this information, Medicare then determines reimbursement rates. The relative reimbursement rate for any given service or procedure is updated periodically (annually for acute hospital care and at least every five years for physician services) using relative value units (RVU). Prices are then adjusted for each of 89 local market geographies to reflect localized costs that hospitals or physicians are likely to incur. Although other exceptions and complexities exist, the nature of Medicare's reimbursement approach suggests that, in the long term, care providers do not materially benefit from productivity gains. In the short term, this reimbursement approach also means that prices tend to be "sticky" and do not adjust dynamically to reflect market trends.

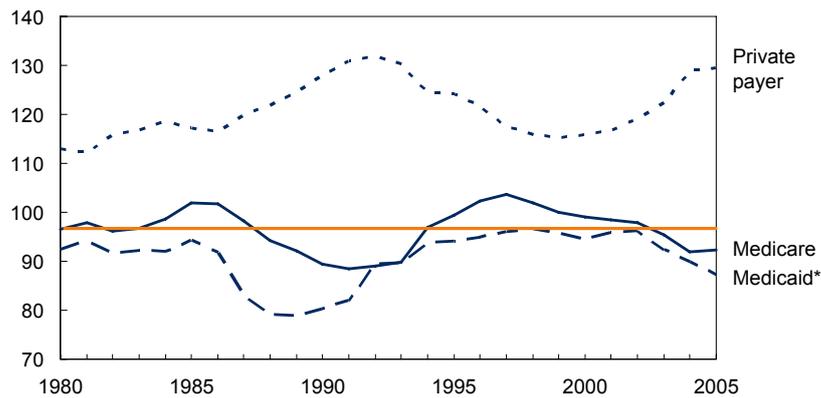
⁵⁹ Daniel P. Kessler and Mark B. McClellan, "Do doctors practice defensive medicine?" *Quarterly Review of Economics and Finance*, May 4, 1996, Volume 111, Number 2, pp. 353–90.

Medicare’s influence extends beyond its own pricing decisions. Medicare serves as a critical benchmark for private payers as they make coverage decisions about which new procedures and technologies to reimburse; more often than not, they follow Medicare’s lead. Moreover, Medicare’s pricing decisions set a reference price within the broader health care system. Commercial payer reimbursement rates are highly correlated, but inversely to Medicare pricing trends (Exhibit 79). This suggests that care providers have a significant amount of pricing power with private insurers, obtaining higher price increases from commercial payers when Medicare reimbursements grow more slowly.

Exhibit 79

Private payer reimbursement grows when Medicare price growth slows

Aggregate hospital payment-to-cost ratios for private payers, Medicare, and Medicaid
1980–2005



* Includes Medicaid Disproportionate Share payments.

Source: Avalere Health analysis of American Hospital Association Annual Survey 2005 data for community hospitals

These two factors—Medicare’s cost-plus reimbursement approach and the significant relationship between Medicare and commercial payer payment rates—seem to play a role in contributing to cost growth. It is therefore important to fully understand, periodically review, and seek to reduce the influence that cost-plus reimbursement has on the market.

ROLE OF SOCIAL NORMS AND VALUES

The features of the US system are also partly a function of the country’s social norms and values. Over time, these norms help shape how a health system operates through a series of decisions made by federal and state legislatures that are eventually beholden to voters.

National norms in any country may differ on any number of dimensions, but three in particular play a role in how the US health system operates: the value society places on extending life, on equality, and on individual choice. Because societal values evolve, we suggest that stakeholders—principally policy makers—seek to understand constituents’ values along these dimensions, especially when balanced against the potential trade-offs of reforms oriented toward reducing costs or cost growth.

Value on life

The value different societies place on incremental days, weeks, or years of life plays a role in shaping the cost of health care. National and state laws reflect this value in the approaches they take to decisions whether to end life, withhold care, withdraw life support, or allow physician-assisted suicide. We can also see this value reflected in limitations that countries might place on care that has a low probability of success (such as chemotherapy to treat advanced cancer cases) and care that is intended to prolong the lives of the elderly (such as an age limit or health status at which someone is no longer eligible for a transplant). Using data from Dartmouth Atlas showing the cost of care in the last six months of a person’s life, we estimate that, in 2006, the United States spent \$60 billion to \$80 billion on end-of-life care. To the extent that a country like the United States places a high value on extending life, and creates laws to support that value, it will incur higher health care costs.

Value on equality

There is also variation in the degree to which social norms in developed countries emphasize equal treatment for all. This variation is reflected in a wide range in the percentage of GDP that national tax systems redistribute. In a society that values equality highly, the health system will likely require equal treatment of all patients, necessarily putting certain limitations on its well-off citizens who cannot “opt out” to purchase an improved quality of care or level of service. By contrast, a society in which equality is less highly valued is more likely to allow many citizens to receive minimal coverage or no coverage, and to have a “premium” health care market in which wealthy individuals receive higher-cost care. A health care system that reflects a strong belief in equality will not necessarily have higher or lower costs than one in which care and outcomes vary dramatically. Rather, the cost implications vary depending on the level of care that “equal” coverage supports.

Value on individual choice

Countries also differ in the degree to which they value the freedom of individual choice, compared with the value they place on making “social” decisions that are designed to further the common good but that may restrict some individuals. In the United States, the decline of HMOs, which somewhat effectively managed costs in the mid-1990s but placed greater restrictions on patient choice, suggests that Americans value choice highly. But does the value placed on choice change if individuals become overburdened with health expenses? The rationing of health care, particularly through a government budget process as in many single-payer systems, reflects norms that value collective decision making. A country’s elected representatives determine an appropriate expenditure level and set limits in the system to ensure that spending does not exceed that level. By contrast, a fee-for-service system reflects norms that value individual decision making, by either the patient or the doctor. The trade-off between individual and collective decision making does not have clear implications for cost. A government-rationed system can be a tool for controlling total expenditures but may lack the leverage to provide incentives for productivity-related cost savings. Meanwhile, a system built on individual choices may have strong or weak incentives depending on the type of insurance system in place.

Because social norms vary somewhat within any given country and because the political process is a fairly blunt instrument, we would certainly not expect a health care system to be a perfect reflection of national values at any given point. However, we would expect—and, indeed, observe this to be the case—health care systems to differ somewhat in their reflection of various national norms, and any attempt to reform health care needs to take this into account. Reforms that fail to heed prevailing social norms and values are likely to fail to gain political traction or encounter substantial backlash upon implementation.

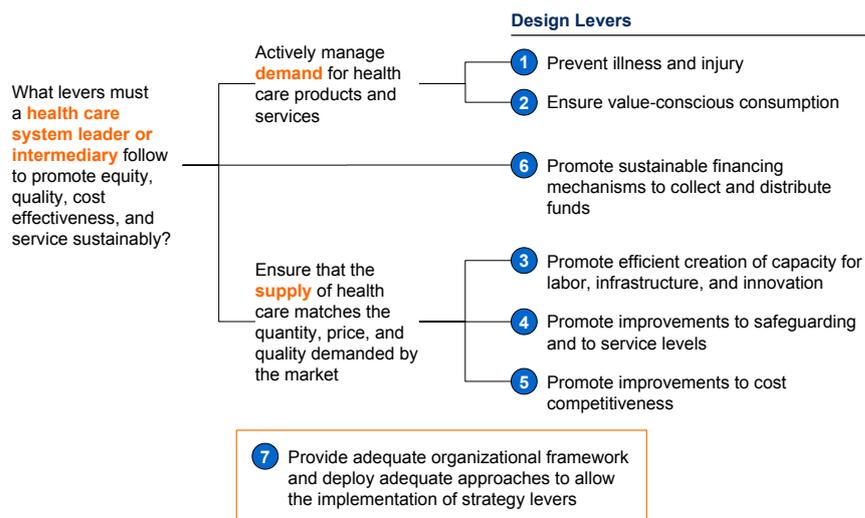
FRAMEWORK FOR REFORM OPTIONS

In the face of the challenges that we have discussed in this report, the pressure to reform health care in the United States is growing. Numerous views exist on how to approach that and the levers that need to be part of the design of the reform framework. However, it is clear that to be effective, any action taken must address each of the drivers of cost, quality, and access. To achieve that, it will be necessary to manage demand while ensuring that supply keeps pace with demand. The United States also needs to address the financing of health care and to ensure that any reform take place within an effective organizational

framework for its implementation to succeed (Exhibit 80). In all areas of reform, the United States has critical questions to answer.

Exhibit 80

MGI believes that to be effective, reform should focus on both supply and demand



Source: *A framework to guide health care system reform*, McKinsey Global Institute, November 2006

To manage demand for health care products and services, the health care system needs to work hard on the two levers of preventing illness and ensuring that consumers or purchasers of health care become value-conscious. Within the context of the principal issues that we have outlined, health care stakeholders must determine:

- How can price sensitivity and information transparency be leveraged to foster value trade-offs from consumers?
- Which preventive efforts provide the largest opportunity to improve general health and thereby reduce costs?

To ensure that the supply of health care matches the quantity, price, and quality demanded by the market, the system must work on three levers: the efficient creation of capacity for labor, infrastructure, and innovation; the promotion of investments that safeguard health and increase service levels; and the improvement of cost competitiveness. Critical questions include:

- What should be the role of payers, employers, and the government in promoting innovation that will decrease costs and improve quality?

-
- What is the optimal approach to stop or slow cost inflation across the health care supply chain and to prevent overconsumption of supply-induced demand services?

In addition to issues of supply and demand, health care intermediaries need to promote sustainable financing mechanisms to collect and distribute funds. Within the context of the principal issues we have discussed, policy makers must determine:

- What is the most effective financing and payment approach to align provider incentives with giving an appropriate amount and type of care?
- How can public payment programs such as Medicare and Medicaid create market leadership toward desired change in the system, specifically as it relates to reimbursement approach and levels?

Finally, the system must provide an adequate organizational framework that ensures the effective implementation in the areas that we have described:

- What can the United States learn from previous reform efforts?
- How should the social norms and values of the American public shape reform?

As the stakeholders in the US health system attempt to answer these critical questions, we see four broad approaches to implementation of reform, which appear along a spectrum from indirect to direct interventions (Exhibit 81):

1. Raising public awareness
2. Creating appropriate incentives
3. Mandating desired behavior
4. Taking direct action to achieve the desired results

Health care system reforms could use any combination of these four approaches to implementation on the seven principal issues that we have summarized relating to demand, supply, and intermediation. Some examples of these approaches might include raising public awareness for wellness and prevention behaviors; economic incentives to create greater value consciousness through tiered benefit designs; regulatory action to mandate appropriate capacity of the health care infrastructure by requiring approval for the development of new facilities; and direct investment to improve the quality, safety, and service of publicly funded hospitals.

Exhibit 81

Different implementation approaches shape demand and supply EXAMPLES

	Implementation Approach			
	Contextual	Indirect		Direct
	Awareness	Incentives	Mandates	Direct action
Prevention	<ul style="list-style-type: none"> Educate public on diet, exercise, smoking, safe sex 	<ul style="list-style-type: none"> Contribute to HSAs* based on lifestyle changes 	<ul style="list-style-type: none"> Restrict air pollution that is harmful to the public health 	<ul style="list-style-type: none"> Create public water and sewage systems
Value consciousness	<ul style="list-style-type: none"> Publish hospital quality metrics on the Internet 	<ul style="list-style-type: none"> Tier benefit designs to encourage use of select providers 	<ul style="list-style-type: none"> Exclude coverage for high-cost providers or procedures 	<ul style="list-style-type: none"> N/A
Capacity	<ul style="list-style-type: none"> Conduct public needs assessments to inform private investment 	<ul style="list-style-type: none"> Forgive loans for physicians practicing in underserved areas 	<ul style="list-style-type: none"> Require regulatory approval based on demonstration of need 	<ul style="list-style-type: none"> Build public hospitals in underserved communities
Quality, safety, and service	<ul style="list-style-type: none"> Publish guidelines for evidence-based medicine 	<ul style="list-style-type: none"> Pay bonuses to providers for implementing EBM** 	<ul style="list-style-type: none"> License/credential providers based on minimum standards 	<ul style="list-style-type: none"> Improve the quality of publicly run hospitals
Cost competitiveness	<ul style="list-style-type: none"> Document and disseminate best practices in lean operations 	<ul style="list-style-type: none"> Negotiate preferred vendor agreements with low-cost providers 	<ul style="list-style-type: none"> Impose standard pricing for all MDs, set at low level to drive cost reductions 	<ul style="list-style-type: none"> Increase the efficiency of publicly run hospitals
Financing	<ul style="list-style-type: none"> Educate consumers about the need to save for long-term care 	<ul style="list-style-type: none"> Offer tax subsidy for purchase of employer-sponsored coverage 	<ul style="list-style-type: none"> Mandate insurance coverage for all not covered by public entitlement program 	<ul style="list-style-type: none"> Offer tax-financed entitlement program

* Health Savings Accounts.

** Evidence-Based Medicine.

Source: McKinsey Global Institute analysis

The choices among these different implementation approaches in each design area will largely depend upon the involvement and incentives of the vital stakeholders in the health care system. There are obvious political dimensions to each of these choices, but the involvement of stakeholders—hospitals, payers, doctors, and patients—is critical to achieving successful system reforms. The stakeholders in US health care need to be more involved in the drafting and implementation of any reforms. They also need to have the right incentives to function within the reformed system so they will throw their weight behind change rather than resist it. Only by including them as an integral part of the reform effort, and addressing supply, demand, and intermediation simultaneously, can the United States begin to address these difficult issues of health care costs and cost growth. We hope this report facilitates a positive step in this direction.



Technical notes

We have evaluated US spending in the context of health care spending in other countries and the relative wealth of the United States, as we did in our previous report on the cost of US health care.

To make comparisons among developing country health care systems, we again leveraged data published by OECD, which was compiled and analyzed for quality to ensure continuity across countries to the greatest extent possible.

To assess potential discrepancies between the United States and other OECD countries in per capita spending in each of the cost categories we analyzed, we correlated each nation's spending against its per capita GDP and adjusted both of these metrics by dollars at purchasing power parity (PPP) (Exhibit 1). We see that per capita GDP is a strong predictor of per capita health care spending and that, as a "superior good," health care is consumed in higher proportions as GDP increases.⁶⁰

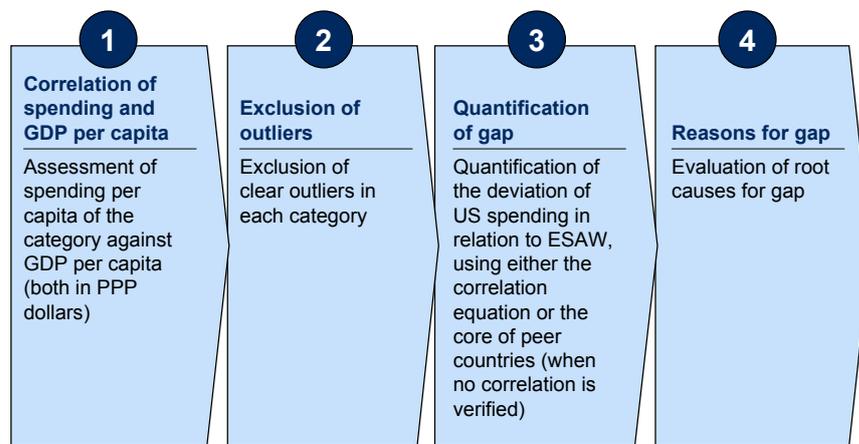
We then used this relationship to draw a correlation line that allowed us to measure the ESAW for the United States. We excluded outlier countries such as Norway and Luxembourg that would have skewed this line downward. Lastly, we evaluated the numerical spending gap between actual health care spending in the United States and ESAW. After calculating this gap, we further analyzed

60 Uwe E. Reinhardt et al., "U.S. health care spending in an international context: Why is U.S. spending so high, and can we afford it?" *Health Affairs*, May/June 2004, Volume 23, Number 3, pp. 10–25 (<http://content.healthaffairs.org/cgi/reprint/23/3/10.pdf>). In this paper, the authors note that no single factor explains the levels or rates of increase in health spending among industrialized countries. However, ability to pay, as measured by per capita GDP, has repeatedly been shown to be one of the most important factors. About 90 percent of the observed cross-national variation in health spending across the OECD countries in 2001 can be explained simply by per capita GDP, the authors note.

each category of the health system and its elements—both quantitative and qualitative—to better understand what root causes explained the deviation. Exhibits 2 to 11 show the regression curve by health care cost category and subcategory.

Exhibit 1

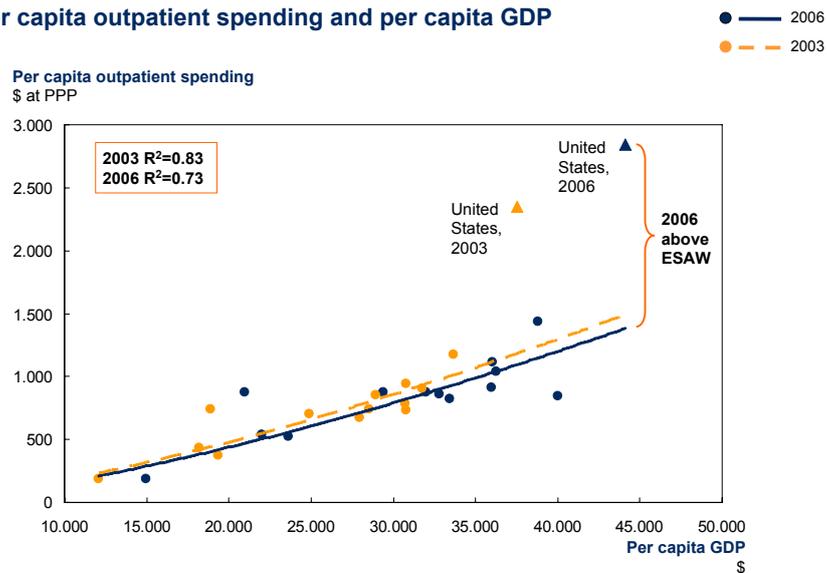
Methodology used to quantify additional US health care spending



Source: McKinsey Global Institute

Exhibit 2

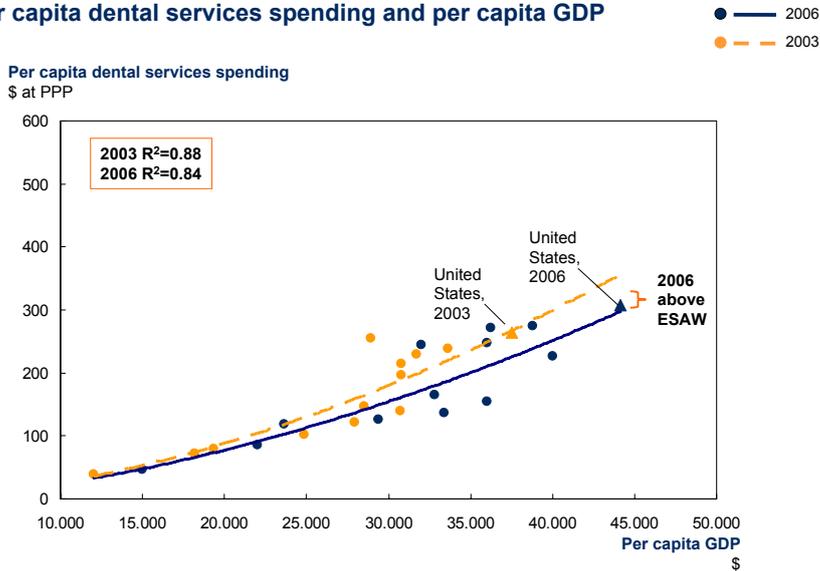
Per capita outpatient spending and per capita GDP



Source: OECD; McKinsey Global Institute analysis

Exhibit 3

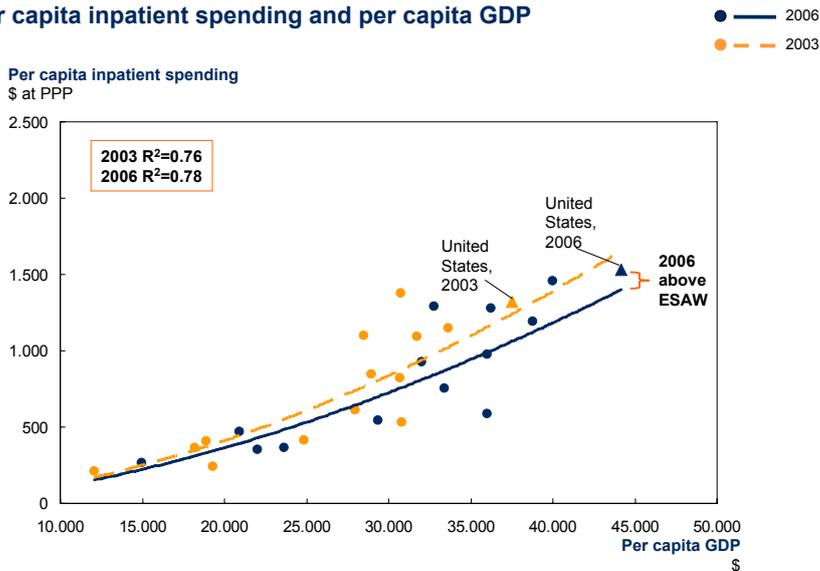
Per capita dental services spending and per capita GDP



Source: OECD; McKinsey Global Institute analysis

Exhibit 4

Per capita inpatient spending and per capita GDP

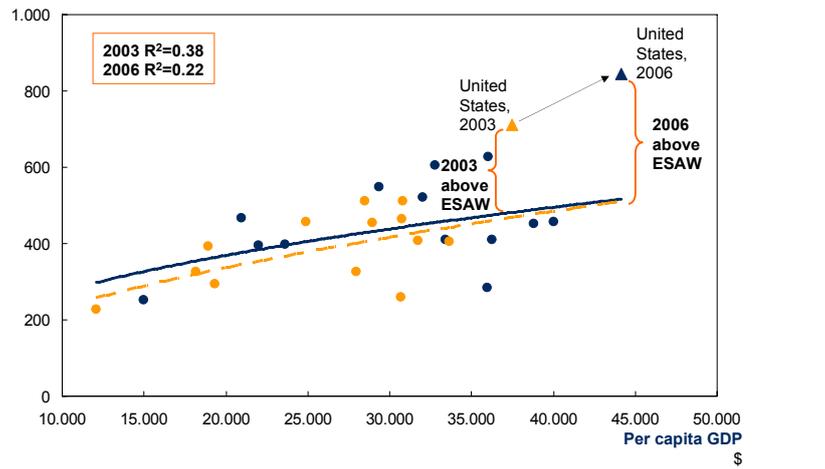


Source: OECD; McKinsey Global Institute analysis

Exhibit 5

Per capita spending on drugs and nondurables and per capita GDP

Per capita drug and nondurables spending
\$ at PPP

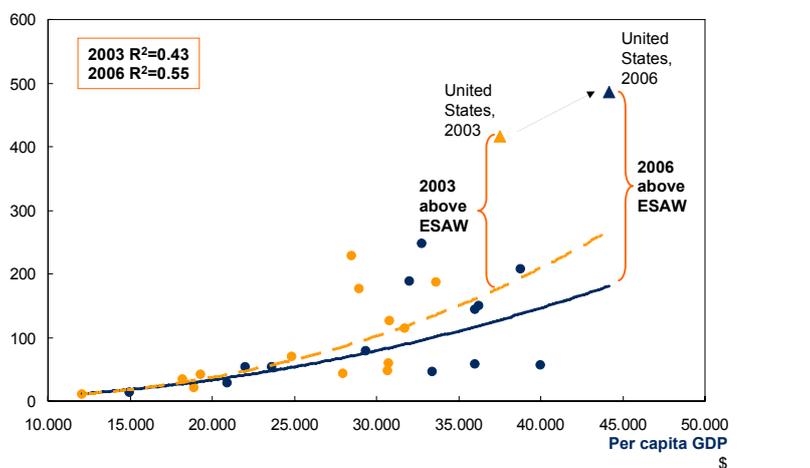


Source: OECD; McKinsey Global Institute analysis

Exhibit 6

Per capita spending on health administration and insurance and per capita GDP

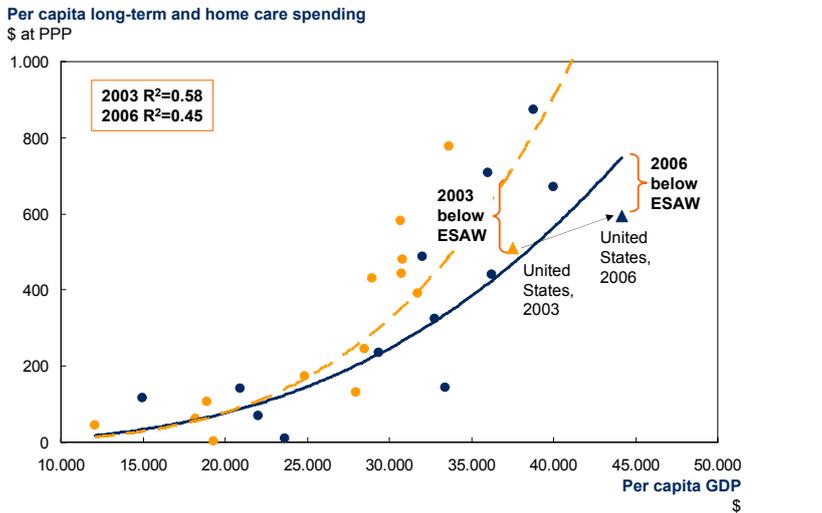
Health administration and insurance
\$ at PPP



Source: OECD; McKinsey Global Institute analysis

Exhibit 7

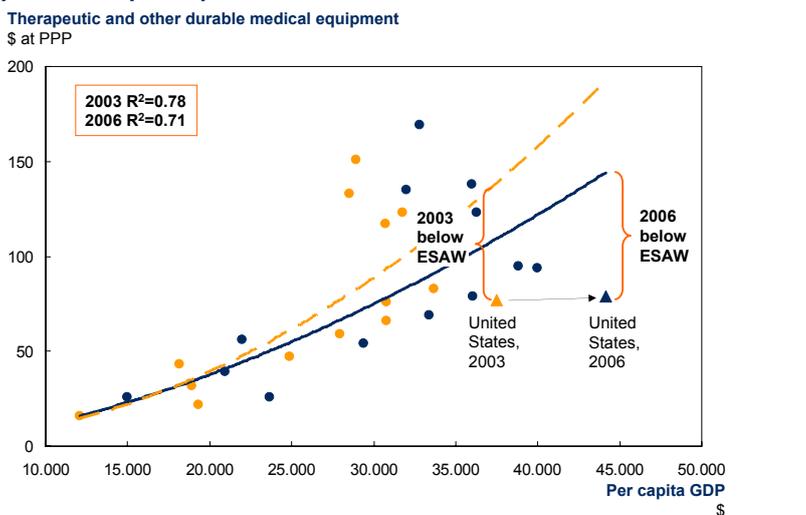
Per capita spending on long-term and home care and per capita GDP



Source: OECD; McKinsey Global Institute analysis

Exhibit 8

Per capita spending on therapeutic and other durable medical equipment and per capita GDP



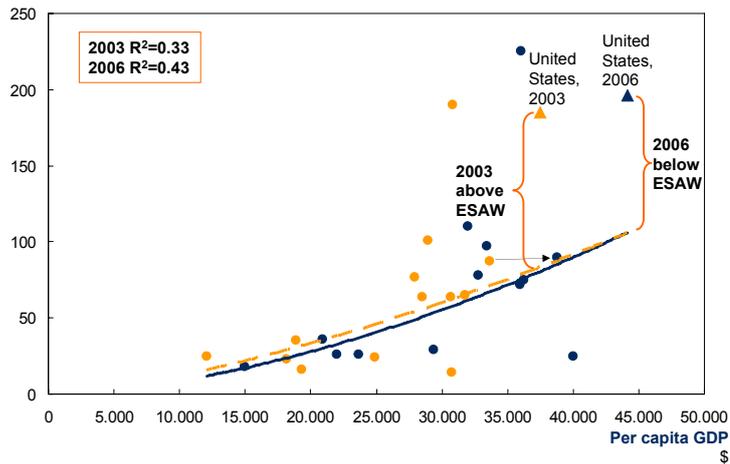
Source: OECD; McKinsey Global Institute analysis

Exhibit 9

Per capita spending on prevention and public health programs and per capita GDP

Per capita prevention and public health spending
\$ at PPP

● — 2006
● - - 2003



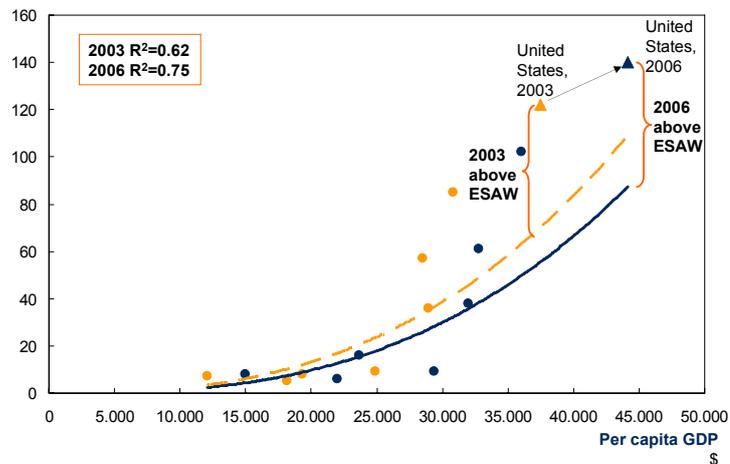
Source: OECD; McKinsey Global Institute analysis

Exhibit 10

Per capita public spending on R&D and per capita GDP

Per capita public spending on R&D
\$ at PPP

● — 2006
● - - 2003



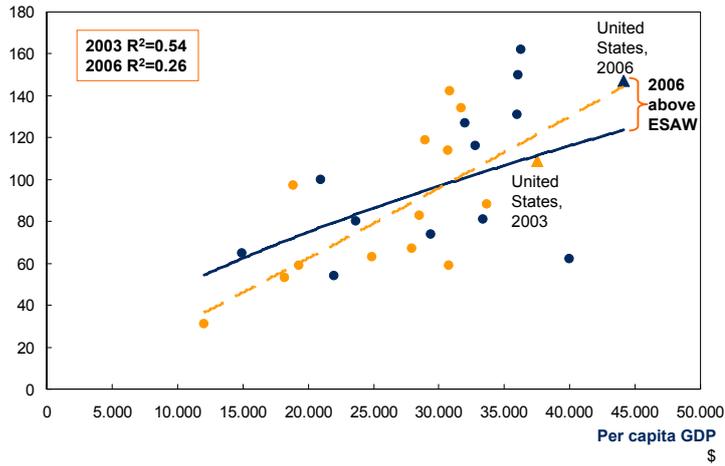
Source: OECD; McKinsey Global Institute analysis

Exhibit 11

Per capita investment on medical facilities spending and per capita GDP

Per capita spending on medical facilities

● — 2006
● - - 2003



Source: OECD; McKinsey Global Institute analysis

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