

# HEALTH CARE COSTS A PRIMER

AUGUST 2007

KEY INFORMATION ON  
HEALTH CARE COSTS  
AND THEIR IMPACT

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# **Health Care Costs: A Primer**

**Key Information on Health Care Costs and Their Impact**

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## Key Facts

- In 2005, the U.S. spent \$2 trillion on health care, which is 16 percent of GDP and \$6,697 per person.
- Health care costs have grown on average 2.5 percentage points faster than U.S. gross domestic product since 1970.
- Almost half of health care spending is used to treat just 5 percent of the population.
- Prescription drug spending is 10 percent of total health spending, but contributes to 14 percent of the growth in spending.
- While about 26 percent of the poor spent more than 10 percent of their income on health in 1996, the number increased to 33 percent by 2003.
- Many policy experts believe new technologies and the spread of existing ones account for a large portion of medical spending and its growth.

## Introduction

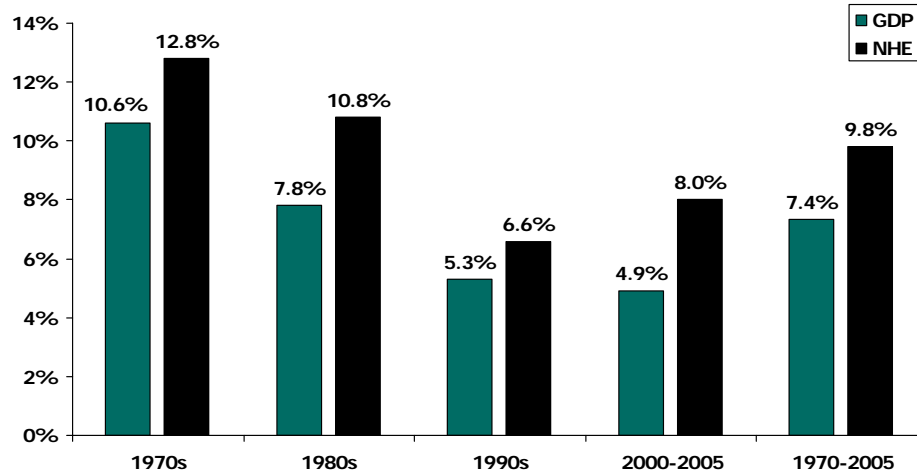
Health care accounts for a remarkably large slice of the U.S. economic pie. Each year health-related spending grows, often outpacing spending on other goods and services, meaning that the size of that slice also increases. These cost increases have a significant effect on the way households, businesses, and government agencies conduct their affairs. Among other things, health inflation puts pressure on businesses who offer insurance coverage to their employees, inhibits individuals from purchasing their own coverage, can be a major financial burden to families, and takes an increasing share of government budgets and taxpayer dollars.

This paper gives a brief glimpse of available data on health care costs, and summarizes the impact of spending growth on various parts of society. The National Health Expenditure Accounts (NHE), which is the source for several of the analyses below, present the costs of care by type, such as hospital care, physician services, or prescription drugs, and also show spending by payer, such as the amount contributed by private insurance, Medicare, Medicaid, or the individual patient. Results from both the Kaiser Family Foundation/Health Research and Educational Trust Employer Health Benefits Survey and the Medical Expenditures Panel Survey are also shown to help explain how health costs are distributed among families. Finally, we conclude by discussing some commonly-held explanations for why health care costs have grown over time.



**Health care spending has exceeded economic growth in every recent decade.** Over the last four decades, the average growth in health spending has exceeded the growth of the economy as a whole by between 1.3 and 3.1 percent (Figure 2). Since 1970, health care spending has grown at an average annual rate of 9.8 percent or about 2.5 percentage points faster than nominal GDP. The persistence of this trend suggests systematic differences between health care and other economic sectors where growth rates are typically more in line with the overall economy.

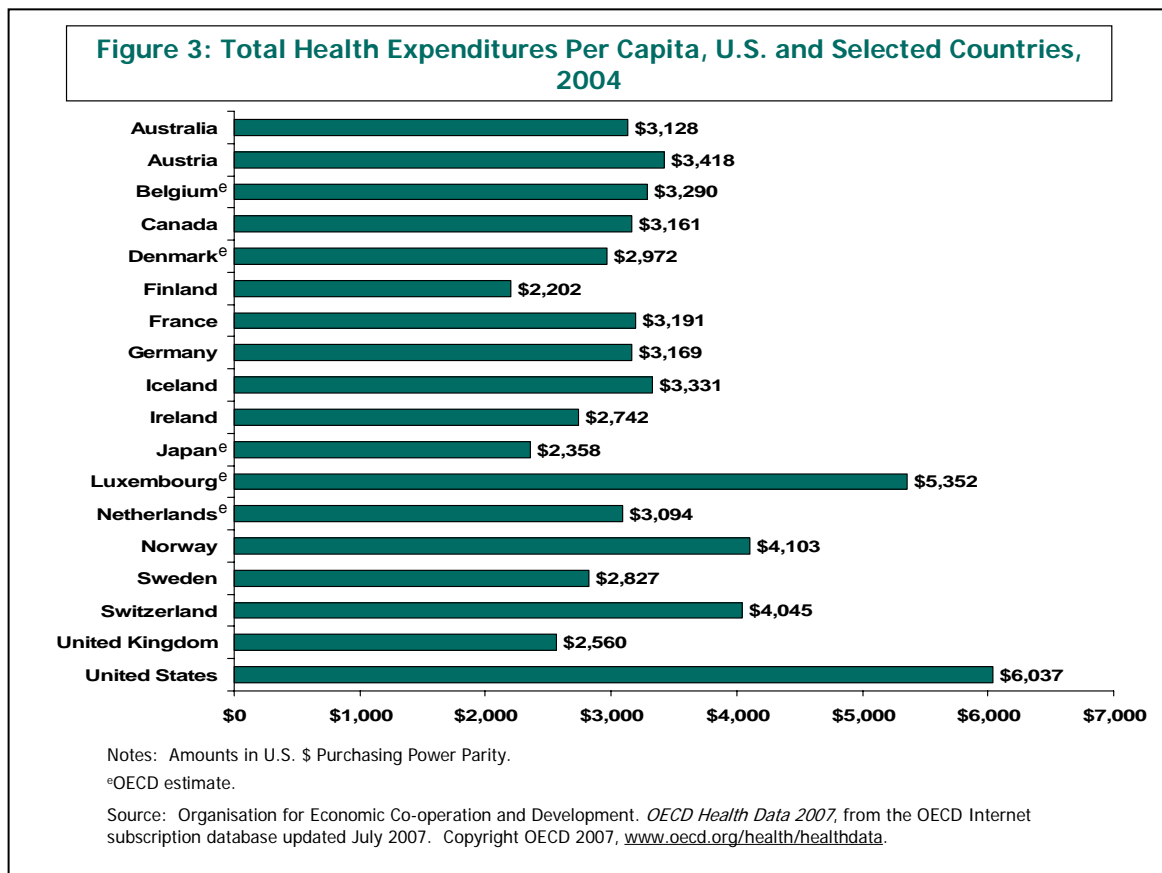
**Figure 2: Average Annual Growth Rates for Nominal NHE and GDP for Selected Time Periods**



Source: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, at <http://www.cms.hhs.gov/NationalHealthExpendData/> (see Historical; NHE summary including share of GDP, CY 1960-2005; file nhegdp05.zip).

## How Does U.S. Health Spending Compare with Other Countries?

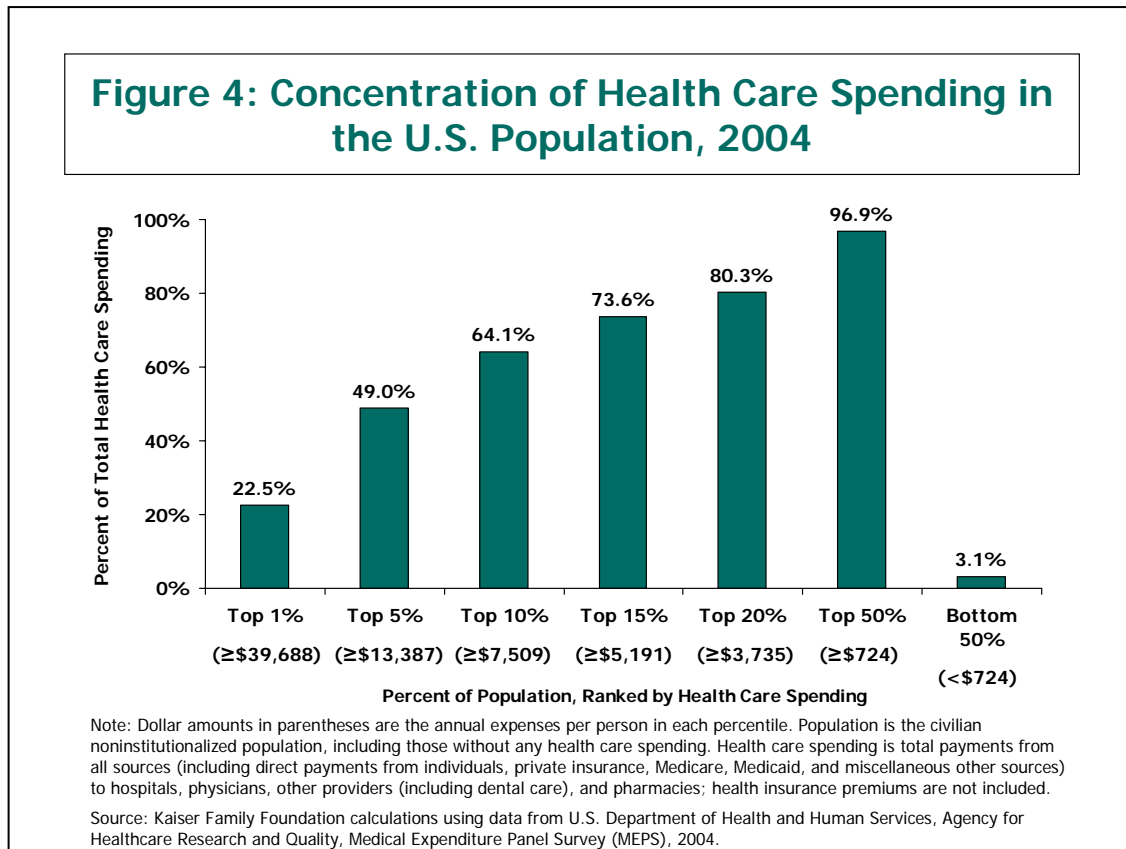
**The U.S. spends substantially more on health care than other developed countries.** Figure 3 shows per capita health expenditures in 2004 U.S. dollars for Organisation for Economic Co-operation and Development (OECD) countries with above-average per capita national income. According to OECD data, health spending in the United States was \$6,037 in 2004.<sup>ii</sup> This amount was about 13 percent higher than in the next highest spending country, and about 90 percent higher than in many other countries that we would consider global competitors. As a share of GDP, health care spending in the United States also exceeds that of any of its European counterparts by several percentage points.<sup>iii</sup> Despite this relatively high level of spending, the United States does not appear to achieve substantially better health benchmarks compared to other developed countries.<sup>iv</sup>





## How Does Health Care Spending Vary by Person?

**A small share of people accounts for a significant share of expenses in any year.** In 2004, almost half of all health care spending was used to treat just 5 percent of the population, which included individuals with health expenses at or above \$13,387 (Figure 4).<sup>v</sup> Just under a quarter of health spending (22.5 percent) went towards the treatment of the 1 percent of the population who had total health expenses above \$39,688 in 2004. Because the onset of disease is unpredictable and can require intensive technology and time to treat, the distribution of health spending is highly concentrated.



**Health care spending also varies by factors such as age and sex.** Adults aged 65 and older have the highest health care spending, averaging \$8,647 per person in 2004. Average spending increased with age, although children and young adults (those aged 24 and younger) spent roughly the same amount per person in 2004 (Figure 5). Women are reported to have higher average spending than men (\$3,715 vs. \$2,836, respectively).

**Figure 5: Distribution of Average Spending Per Person, 2004**

	Average Spending Per Person
<i>Age (in years)</i>	
<5	\$1,245
5-17	1,108
18-24	1,282
25-44	2,277
45-64	4,647
>64	8,647
<i>Sex</i>	
Male	\$2,836
Female	3,715

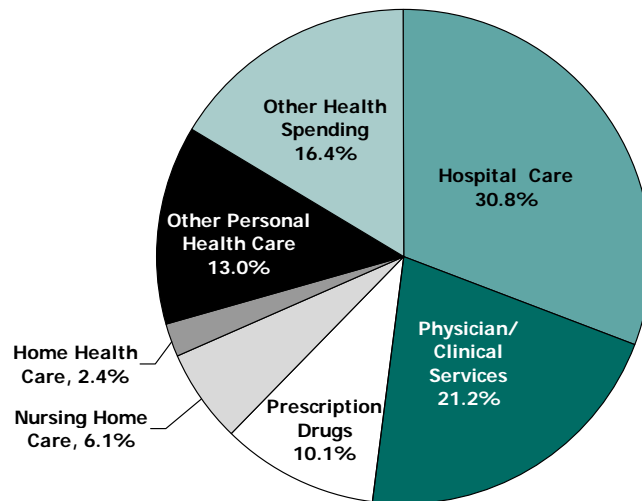
Notes: Includes individuals without any spending in 2004.

Source: Kaiser Family Foundation calculations using data from U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey (MEPS), 2004.

## What Do Health Expenditures Pay for and Who Pays for Them?

**Most health care spending is for care provided by hospitals and physicians.** Health care spending encompasses a wide variety of health-related goods and services, from hospital and prescription drug spending to dental services and medical equipment purchases. Figure 6 illustrates spending on health by type of expense in 2005. Spending on hospital care and physician services makes up just over one-half of health care expenditures. While spending on prescription drugs accounts for about 10 percent of total health expenditures, its rapid growth in the last decade (not shown) has received considerable public attention.

**Figure 6: Distribution of National Health Expenditures, by Type of Service, 2005**

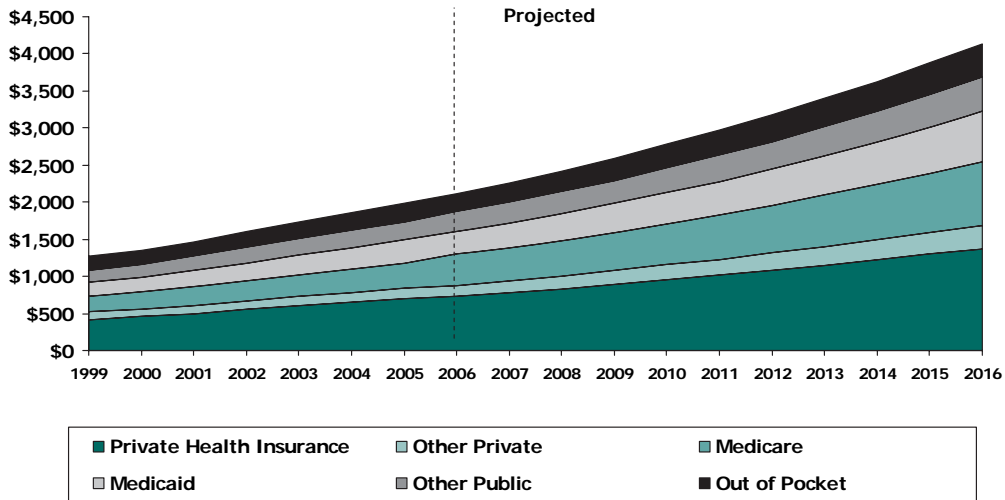


Note: Other Personal Health Care includes, for example, dental and other professional health services, durable medical equipment, etc. Other Health Spending includes, for example, administration and net cost of private health insurance, public health activity, research, and structures and equipment, etc.

Source: Kaiser Family Foundation calculations using NHE data from Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, at <http://www.cms.hhs.gov/NationalHealthExpendData/> (see Historical; National Health Expenditures by type of service and source of funds, CY 1960-2005; file nhe2005.zip).

**Private funds pay for about 55 percent of total health spending.** When health goods and services are used, someone pays for them – either directly or indirectly. Private health insurance is the largest source of health spending, accounting for about 36 percent of health spending in 2005. Public programs, including Medicare, Medicaid, and the State Children’s Health Insurance Program, etc., pay for about 45 percent of health spending. Figure 7 shows actual and projected cost increases by source of payment, including private, public, and out-of-pocket (individual) payments. As this figure shows, health cost growth is an issue for both private and public third-party payers – with each sector facing similar growth patterns into the future.

**Figure 7: Relative Contributions to NHE By Source of Funds, 1999 to 2016 (in Billions)**



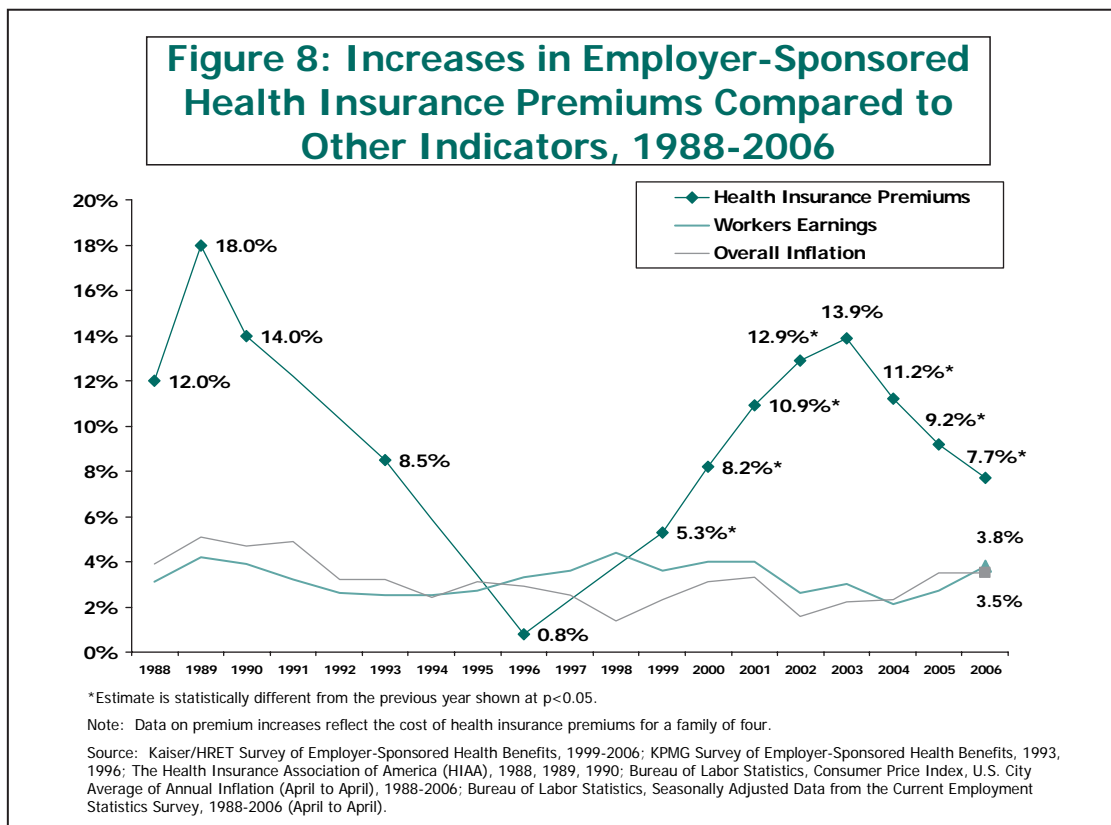
Note: First projected year is 2006

Source: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, at <http://www.cms.hhs.gov/NationalHealthExpendData/> (see Historical; NHE summary including share of GDP, CY 1960-2005; file nhegdp05.zip).

## How Do Health Care Costs Impact Families and Employers?

As health care costs increase, it becomes increasingly difficult for families and businesses to purchase coverage because the price of coverage (the premium) typically increases. Employers, as purchasers of insurance, may also decide to increase the amount covered workers must pay to visit the doctor or go to the hospital, which can put pressure on family budgets when family members become ill. Further, when employers face increasing costs of coverage, they may reduce wages or limit wage increases to offset these increases. The figures below paint a more detailed picture of the costs that individuals and businesses face when covered by or considering the purchase of private plans.

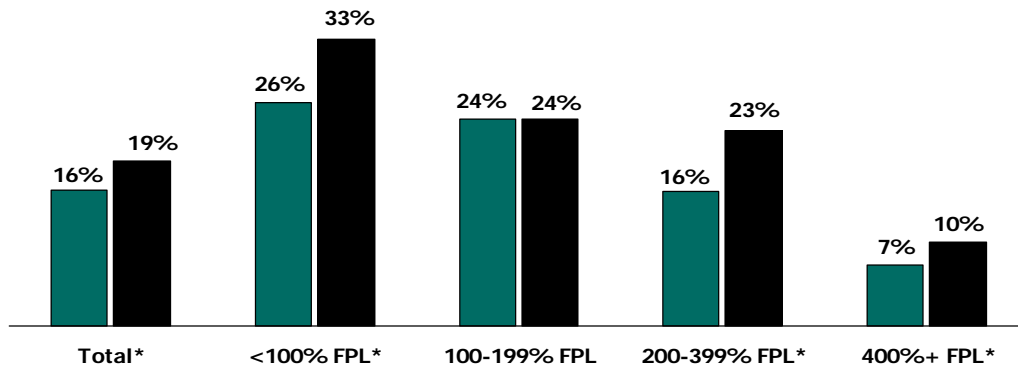
**Health insurance premium increases consistently outpace inflation and the growth in workers' earnings.** The growth in health insurance premiums is a straightforward way to measure changes in the cost of private health insurance. Figure 8 compares the annual increase in employer premiums to both worker earnings growth and overall inflation. Premium growth has outpaced the growth in workers' earnings almost every year except for a brief respite in the mid-1990s. Whereas premium increases have been between 8 and 14 percent per year since 2000, inflation and changes in workers' earnings are typically in the 3 to 4 percent range. This usually means that workers have to spend more of their income each year on health care to maintain coverage. Again, these effects may either be direct – through increased worker contributions for premiums or reduced benefits – or indirect – such as when employers forgo wage increases to offset increases in premiums.



**Families are paying more out-of-pocket for health care.** Another useful way of gauging the burden of rising health costs on households is to look at payments for health insurance premiums and cost sharing for health usage, as a percentage of family income.<sup>vi</sup> Figure 9 shows that the percentage of non-elderly individuals whose family out-of-pocket expenses for health care exceeded 10 percent of income increased from 16 percent in 1996 to 19 percent in 2003. Not surprisingly, the increase in the burden of premiums and out-of-pocket costs for care was even larger for those below the federal poverty level (FPL). For those below the FPL, the number burdened by health expenses has increased from 26 percent in 1996 to 33 percent in 2003.

**Figure 9: Prevalence of High Out-of-Pocket Burdens among the Non-elderly, By Poverty Level, 1996 vs. 2003**

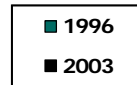
Percent with Total Burden >10% of Income



\* Statistically significant change between 1996 and 2003 ( $p \leq .05$ ).

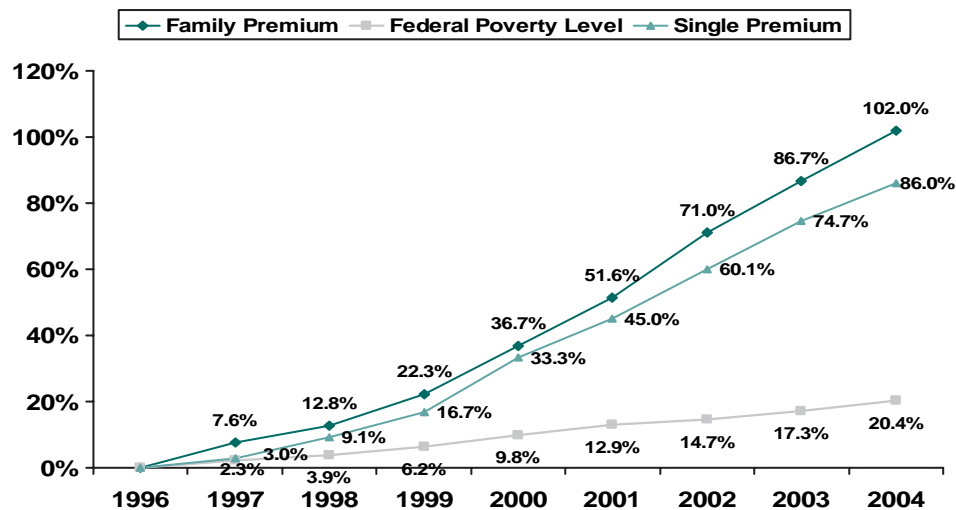
Note: Total financial burden includes all out-of-pocket payments for health care, including premiums.

Source: Jessica S. Banthin and Didem M. Bernard, "Changes in Financial Burdens for Health Care," *Journal of the American Medical Association*, vol. 296, no. 22, December 13, 2006, pp. 2712-2719.



**Eligibility standards for public programs such as Medicaid and SCHIP do not keep pace with rapid increases in the cost of health coverage.** Public programs provide health insurance coverage to people who are considered too poor to afford the full cost of coverage on their own. Eligibility for these programs is generally restricted to people in families with incomes at or below some multiple of the FPL. (E.g., in 26 states, SCHIP is restricted to children in families with incomes below 200 percent of FPL and in 15 others the cutoff is higher).<sup>vii</sup> The cost of health insurance, however, has risen substantially faster than the increase in FPL over time (Figure 10). For people whose income just exceeds the eligibility standards for public coverage, the share of family income required to pay for private health insurance increases substantially (see example at <http://www.kff.org/insurance/snapshot/chcm021507oth.cfm>).

**Figure 10: Cumulative Change in Single and Family Health Insurance Premiums and Federal Poverty Threshold, 1996 - 2004**



Source: Premium data from Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, 1996-2004, at <http://www.meps.ahrq.gov/mepsweb/>; Federal Poverty Level based on HHS Federal Poverty Guidelines (1996 through 2004) at <http://aspe.hhs.gov/poverty/figures-fed-reg.shtml>. Rate of growth based on change for one person (change for a four-person family would be 20.8% rather than 20.3% over the period).

## Why are Health Care Costs Growing Faster Than the Economy Overall?

As shown in Figure 1, the portion of the economy devoted to health care has risen steadily for at least 40 years, rising from just over 5 percent of GDP in 1960 to 16 percent of GDP in 2005. CMS estimates that nearly one-fifth of GDP will be devoted to health care by the year 2016. So why does spending on health care grow so much faster than overall economic growth?

**Wealthier countries can afford to spend more on health care technologies.** Studies looking at the United States and other economies have found a strong correlation between wealth and health care spending – as nations become wealthier, they chose to spend more of their wealth on health care.<sup>viii</sup> Nations can spend more because the health care community continues to learn more every day about human health and health care conditions and, with that knowledge, is constantly expanding the inventory of health care products, techniques, and services that are available to address those conditions. Health care experts point to the development and diffusion of medical technology as primary factors in explaining the persistent difference between health spending and overall economic growth, with some arguing that new medical technology may account for about one-half or more of real long-term spending growth.<sup>ix</sup>

**The U.S. population is getting older and disease prevalence has changed.** Other factors also influence spending growth. The U.S. population is aging, and because older people have more health problems and use more health care than younger people, population aging will have a small but persistent impact on cost growth in the years to come.<sup>x</sup> Changes in disease prevalence, such as increasing levels of diabetes related to obesity, also may be influencing cost growth, but other population trends, such as lower levels of smoking and alcohol consumption, may be moderating growth.<sup>xi</sup>

**Insurance coverage has increased.** Government subsidies for health coverage also affect cost levels and potentially cost growth. Tax subsidies for health insurance and public coverage for certain groups (poor, disabled, and elderly) reduce the cost of health care, encouraging people to use more of it. Some argue that the high prevalence of health insurance encourages health technology development because those developing new technologies know that insurance will bear a substantial share of any new costs.<sup>xii</sup>

**Americans pay a lower share of health expenses than they used to.** Another factor that may help explain rising health spending is the falling share of health care expenditures that Americans pay out-of-pocket.<sup>xiii</sup> Between 1970 and 2005, the share of personal health expenditures paid directly out-of-pocket by consumers fell from about 40 percent to 15 percent. Although consumers faced rising health insurance premiums over the period which affected their budgets, lower cost sharing at the point of service likely encouraged consumers to use more health care, leading to expenditure growth.



## What Can Be Done To Address Rising Costs?

The information presented above shows that the United States faces two issues with health care costs: (1) the amount the U.S. spends per person on health care is high, particularly when compared with the amounts peer nations pay for care; and (2) health care expenditures grow rapidly relative to the economy overall, and have consistently done so for decades. Policymakers considering policy interventions related to costs need to distinguish between factors that affect how much health care costs at a point in time and factors that affect long-term cost growth.

**Some approaches for dealing with health care costs may reduce the level of spending but not the rate of growth.** Many of the policies under discussion in health policy circles to address costs – such as increasing the use of electronic medical records and other information technology, promoting evidence-based medicine, provider pay-for-performance, consumer-directed health care, or disease management – are aimed at improving the efficiency with which care is delivered. Successfully implementing these policies, which is not an easy task, would likely reduce the amount that we pay on average for care, but they are likely not a longer-run solution for addressing the rate of cost growth.

For example, medical errors and other quality lapses very likely increase the amount that we pay for health care, but to influence long-term cost growth, the prevalence or severity of errors and poor quality would need to be an increasing share of expenditures each year, which is probably not the case. Policies that reduce medical errors may well reduce the amount that we pay for care (and are important even if they do not). But assuming that errors can be reduced to more optimal levels, costs would likely continue to grow, albeit from a lower level, at previously observed rates. Other interventions intended to make the health system more efficient, such as reducing the disparities in health care practices across regions and providers or increasing the use of electronic medical records, are likely to have similar effects. These are important initiatives that could make the health care system cheaper (compared to what we would spend without them) and better. By themselves, however, these types of initiatives are unlikely to address the long-term pattern that we have observed of health care's growth as a share of economy.

**Policies focusing on new and expanding technologies may have success in reducing the rate of growth, but can be difficult to implement.** Over the long run, bringing health spending growth closer to the rate of overall economic growth would likely require finding ways to slow the development and diffusion of new health care technologies and practices. Developing ways to explicitly assess and weigh the costs and benefits of new technologies is one promising approach, although such interventions present serious practical and philosophical challenges. Practically, the sheer volume and pace of medical advance would make it difficult to actually assess many important changes before they were incorporated into medical practice. Focusing on the most expensive new treatment options is more practical and could have a meaningful impact on cost growth.<sup>xiv</sup> Philosophically, medical assessment requires people to make difficult decisions about whether a medical benefit is worth the cost. For example, the National Institute for Clinical Excellence (NICE), the U.K. authority charged with approving medical treatments, received widespread criticism

when it excluded beta interferon to treat multiple sclerosis from the list of publicly-covered treatments.<sup>xv</sup> Other ways of potentially reducing the development and diffusion of new health care technologies, such as much higher cost sharing that could reduce the ability of many to afford expensive treatments (which in turn would dissuade their development), are no less controversial.

## Conclusion

Policymakers face significant challenges, short and longer term, as they think about how the nation will pay for the growing cost of health care. Successfully improving the efficiency and quality with which care is delivered is an enormous challenge; one that will require substantial investment in research, new information systems, performance incentives, and education, with the hope of transforming how health care is delivered by thousands and thousands of providers dispersed across our largely disaggregated health care system. Coming to terms with the potential of medical technology and its long-run influence on costs is a different type of challenge, but one that is also important. The advances in health care that have occurred over the past half-century have increased how long we live and have reduced the burden of disease for countless people. Developing the philosophical, ethical, and political framework necessary to balance the benefits of future advances with our ability to pay for them is one of the next great challenges for health policy.

## Notes

<sup>i</sup> U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, "National Health Expenditure Projections 2006-2016," January 2007. Available online at: [http://www.cms.hhs.gov/NationalHealthExpendData/03\\_NationalHealthAccountsProjected.asp](http://www.cms.hhs.gov/NationalHealthExpendData/03_NationalHealthAccountsProjected.asp).

<sup>ii</sup> We report OECD data for the United States where the comparison to other countries is of interest. Note that accounting for national health expenditures used by the OECD and CMS are largely but not entirely in accordance. For example, CMS accounting of national health spending includes the value of health-related research whereas OECD-reported data exclude this amount. Further, OECD accounting makes adjustments for the export and import of health services while CMS does not. For more information, see: Eva Orosz, "The OECD System of Health Accounts and the US National Health Account: Improving Connections through Shared Experiences," draft paper prepared for the conference "Adapting National Health Expenditure Accounting to a Changing Health Care Environment," Centers for Medicare & Medicaid Services, April 2005. Available online at: <http://www.cms.hhs.gov/NationalHealthExpendData/downloads/confpaperorosz.pdf>.

<sup>iii</sup> For a comparison based on 2003 OECD data, see, Kaiser Family Foundation, "Health Care Spending in the United States and OECD Countries," January 2007. Available online at: <http://www.kff.org/insurance/snapshot/chcm010307oth.cfm>.

<sup>iv</sup> Gerard F. Anderson, Bianca K. Frogner, Roger A. Johns, and Uwe E. Reinhardt, "Health Care Spending And Use of Information Technology in OECD Countries," *Health Affairs*, vol. 25, no. 3, May/June 2006, pp. 819-831.

<sup>v</sup> The source for this information is the Medical Expenditure Panel Survey (MEPS), conducted by the Agency for Health Care Research and Quality, U.S. Department of Health and Human Services. The survey collects information on the U.S. civilian, noninstitutionalized population. Spending for people in the military or in longer-stay institutions, such as nursing homes, is not included in the totals or the spending distributions calculated from the survey. This means that some of the spending that is measured by the National Health Accounts, which is the data source for the national total and per capita spending discussed above, is not accounted for in the tables based on MEPS.

<sup>vi</sup> Jessica S. Banthin and Didem M. Bernard, "Changes in Financial Burdens for Health Care," *Journal of the American Medical Association*, vol. 296, no. 22, December 13, 2006, pp. 2712-2719.

<sup>vii</sup> Center for Children and Families, Georgetown University Health Policy Institute, "Children's Eligibility for SCHIP," October 2006. Available online at: <http://ccf.georgetown.edu/pdfs/eligibilityprimer.pdf>.

<sup>viii</sup> Joseph P. Newhouse, "Medical Care Costs: How Much Welfare Loss?" *The Journal of Economic Perspectives*, vol. 6, no. 3, 1992, pp. 3-21.

<sup>ix</sup> Ibid.; Richard A. Rettig, "Medical Innovation Duels Cost Containment," *Health Affairs*, vol. 13, no. 3, pp. 7-27.

<sup>x</sup> Bradley C. Strunk, Paul B. Ginsburg, and Michelle I. Banker, "The Effect Of Population Aging On Future Hospital Demand," *Health Affairs*, vol. 25, no. 3, 2006, pp. w141-w149.

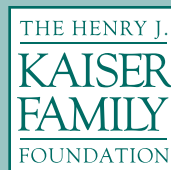
<sup>xi</sup> Kenneth E. Thorpe, Curtis S. Florence, David H. Howard, and Peter Joski, "The Rising Prevalence Of Treated Disease: Effects On Private Health Insurance Spending," *Health Affairs*, web exclusive, pp. w5-317 - w5-325. On trends in mortality rates, see, e.g., David M. Cutler, Edward L. Glaeser, and Allison B. Rosen, "Is the U.S. Population Behaving Healthier?" National Bureau of Economic Research, NBER Working Paper No. 13013, April 2007, available online at: <http://www.nber.org/papers/w13013>; and David M. Cutler, *Your money or your life: strong medicine for America's health care system*, (New York: Oxford University Press, 2004).

<sup>xii</sup> See, e.g., Newhouse, 1992; and Burton A. Weisbrod, "The Health Care Quadrilemma: An Essay on Technological Change, Insurance, Quality of Care, and Cost Containment," *Journal of Economic Literature*, vol. 29, no. 2, 1991, pp. 523-552.

<sup>xiii</sup> John F. Cogan, R. Glenn Hubbard, and Daniel P. Kessler, "Evaluating Effects of Tax Preferences on Health Care Spending and Federal Revenues," National Bureau of Economic Research, NBER Working Paper No. 12733, December 2006. Available online at: <http://www.nber.org/papers/w12733>.

<sup>xiv</sup> Peter R. Orszag, "Health Care and the Budget: Issues and Challenges for Reform," Congressional Budget Office, presentation before the Committee on the Budget, United States Senate, June 21, 2007.

<sup>xv</sup> NICE argued that, based on models of beta interferon's potential long-term benefits, about which evidence was not widely available, the high cost of the treatment did not justify its inclusion into the national benefits formula.



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