Behind the numbers
Medical cost trends for 2007*

PricewaterhouseCoopers' Health Research Institute

*connectedthinking

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Contents

Medical costs increase because of numerous societal, economic, behavioural and demographic issues that overlap and intertwine.

Executive summary

Increases in health spending have become a continuing source of pressures on business results and a frequent source of debate and finger-pointing. Employers' only hope is to slow them down. So, each year benefit executives work with insurers to design health benefits that pay for the right care at the right time in the year ahead. They do this through trend analysis of both historical and projected costs. The purpose of this report is two-fold: first, to report carriers' estimates of the 2007 medical cost trend, and second, to reflect how various inflators and deflators affect these trends.

PricewaterhouseCoopers surveyed major health plans and insurance carriers to determine the medical cost trends that they're expecting for 2007. For 2007, average medical cost trends estimated by these organizations were reported as 11.9% for PPOs, 11.8% for HMO/POS/EPO, and 10.7% for consumer-driven health plans. These numbers are considerably higher than many medical cost increases recently released by others (e.g. the Kaiser Foundation report). This report offers insights into the factors and differences behind the numbers.

Unlike the Kaiser Foundation and similar reports which are focused on a retrospective view of premium increases, the trend figures presented here are carrier-developed prospective estimates of the growth in healthcare costs in the absense of any plan changes or other general cost containment strategies. As prospective estimates, they may also contain contingency margins to protect against unforeseen upward turns in cost drivers. In any event, individual employers' actual experiences will vary, depending on multiple factors such as covered services, cost-sharing, industry experience and general health management strategies.

Although medical cost trends may be a driving factor in premium increases for subsequent years, these projections should not be thought of as premium increase estimates. Medical cost trends are one component that determines premium trends. Comparable information on premium growth in 2007 will not be available until later in 2007.

Medical costs increase because of numerous societal, economic, behavioural and demographic issues that overlap and intertwine. Rather than assigning values to those factors, PricewaterhouseCoopers has identified inflators and deflators that contribute to medical cost trends. Employers might consider these as they design benefit plans and incent workers, providers and insurers. Those include:

Inflators

- New Treatments, New Prescription Drugs and Increased Use of New Diagnostic Technologies — early diagnosis and defensive medicine are prompting physicians to order more tests.
- Increased Demand — workers have largely been shielded from the cost of medical care, which may lead to overutilization or inappropriate utilization.
- Cost-shifting — when reimbursement from other payers doesn't keep up with costs at hospitals, private insurance fills the gap.
- Declining Health Status — rising obesity and general aging of the population is leading to more expensive medical conditions.

Deflators

- Cost Sharing — when workers absorb more of the cost of care, they respond by using fewer or less expensive services and drugs.
- Price Transparency — when consumers see prices, they may reduce costs by shopping around for better values.
- Digital Backbone — electronic records can lower administrative costs and duplicative testing.
- Health & Wellness Programs — employers are starting to see a return on investment in health promotion activities that address costly health conditions.

Background

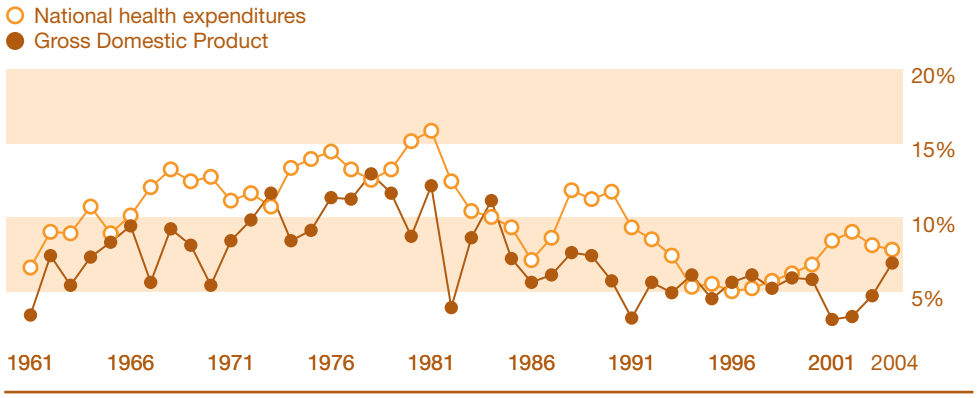
Health spending has consistently been on an upward curve, and the steepness of that trajectory continues to concern both employers and their workers.

Historically, health spending often increases faster than the rest of the economy. (See Chart 1.) An exception was the economic boom in the U.S. in the late 1990s when the growth in medical costs and general inflation were roughly equal. Since then, health spending has grown faster although recently the gap has narrowed a bit.

Health insurance premiums have risen faster than the rest of the economy in recent years.(See Chart 2.) Premiums grew at double digit rates during 2001-2004 but the growth rate has declined since 2003. While this is an improvement for employers and workers alike, it isn't necessarily a cause of rejoicing. The 7.7% average increase in health insurance premiums in 2006 was twice the rate of overall inflation and wage gains, a situation that many have described as unsustainable.

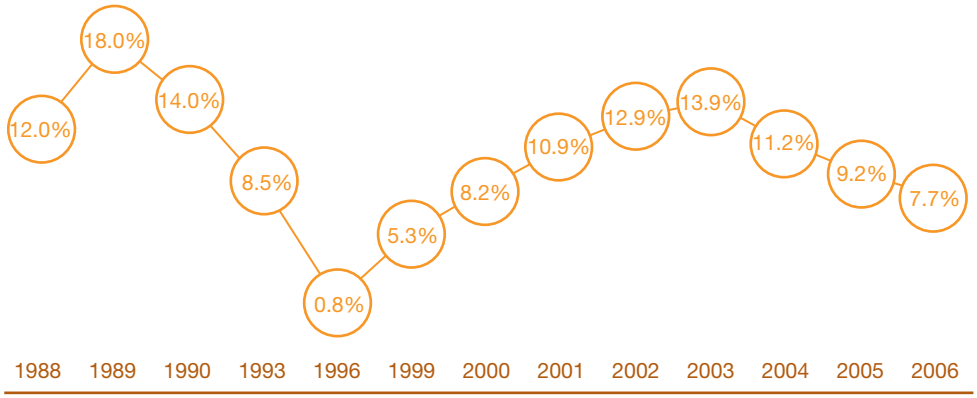
Comparable information on premium growth in 2007 will not be available until later in 2007. This report presents early information on developments in 2007 in the form of medical cost trend and discusses the forces that are shaping healthcare costs, trends, and premiums in 2007.[1]

Chart 1: Percent growth of GDP and national health expenditures



Source: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group

Chart 2: Percentage Increase in Health Insurance Premiums, 1988–2006



Source: The Kaiser Family Foundation and Health Research and Educational Trust

Medical cost trend and other measures of growth in health spending

Growth in health spending is measured in many different ways depending on which aspect of healthcare is of interest. The focus of this paper is on medical cost trend, which is defined as follows:

Medical cost trend

Projected increase in costs of medical services assumed by carriers in setting premiums for health insurance plans.

In general, medical cost trends will track at a higher percentage than health insurance premiums. That's because medical cost trends are just one factor used by health insurers to determine premiums. For example, not all employers experienced the 7.7% premium increase for 2006 reported by Kaiser Family Foundation. Employers that made no changes in their plan design, such as higher deductibles or co-pays, likely experienced higher premium increases. Theoretically, if an insurance plan does not change benefit design, the plan's costs would rise by the medical cost trend. For example, if the medical cost trend were 10 percent in a given year then the health plan's premiums would rise by 10 percent. A specific health plan, however, might increase costs sharing and reduce premium growth to only 7 percent. The medical cost trend used by employers is an estimate based on full risk.

Health insurance premiums are priced by insurers. On the insurer side, the rate of increase is affected by the underwriting cycle, which tends to go in three-year cycles. Within this cycle, insurers consider premium pricing lags, claim payment lags, expectations of cost trends for the coming year, administrative and marketing costs and in some cases, expected profit. On the employer side, higher co-pays and deductibles –which the industry calls "buy-downs"– lead to lower premium increases. Larger employers may receive better rates because of their negotiating leverage. Premium increases also are affected by external forces, such as provider pricing and rising uninsured.

The federal government also publishes measures of growth in healthcare costs. For example, the Centers for Medicare and Medicaid Services publishes information on private, third-party payers as part of its National Health Accounts. This is an aggregate number that is measured annually by CMS and includes all spending by private sources. It excludes spending by federal and state government programs. The CMS estimates of private spending include Medigap insurance and other payers that are not usually part of other industry surveys. The growth in third party spending tends to follow the same pattern as growth in health insurance premiums but the actual per capita growth rates have been lower than growth in premiums in recent years.

Survey methodology

In suveying the expected increases in medical cost trend, PricewaterhouseCoopers conducted interviews during the summer of 2006 with health plan officials, asking a series of questions about the trends on which they are basing premiums for 2007. PwC collected information on both third-party administrators and commercial businesses as well as PPOs, HMOs/POS/EPO plans and consumer-driven health plans.

PricewaterhouseCoopers also reviewed publicly available reports from firms that survey employers and their health plan costs.[2] Finally, PwC incorporated extensive analysis done for employers and health plans. See for example, *The Factors Fueling Rising Healthcare Costs 2006.*

Medical cost trend for 2007

PricewaterhouseCoopers surveyed insurance carriers to determine the medical cost trends that they're expecting for 2007. Medical cost trend increases are an important factor for employers designing health benefits for the coming year. However, medical cost trends are exclusive of changes in plan design; as such, they tend to be higher than actual costs. Individual employers' actual experiences will vary, depending on multiple factors such as covered services, cost-sharing, industry experience and geography. For 2007, medical cost trends expected by insurers were reported as an average of 11.9% for PPOs, 11.8% for HMO/POS/EPO, and 10.7% for consumer-driven health plans.

These numbers provide a glimpse at the projected medical trend for the newest version of health benefits, consumer-directed health plans, which are expected to have a lower medical cost trend. Consumer-directed health plans are highly customized by employers. However, they typically are high-deductible plans that include an account out of which the workers pay medical expenses. Most consumer-directed plans include educational resources to assist workers when making choices about the medical services and products they use.

The figures are the anticipated spending increases that preferred provider organizations (PPOs), health maintenance organizations (HMOs), point of service (POS), exclusive provider organizations (EPOs), and consumer-driven health plans will sustain in the coming year. As mentioned earlier, these projections should not be thought of as premium increase estimates.

While only 3 million Americans are in consumer-directed health plans — compared to 240 million in other private plans — such benefit designs represent an important shift in private insurance coverage. Today's traditional benefit plan models, such as HMOs and PPOs, provide limited flexibility for cost-sharing with employees. While it's too early to determine

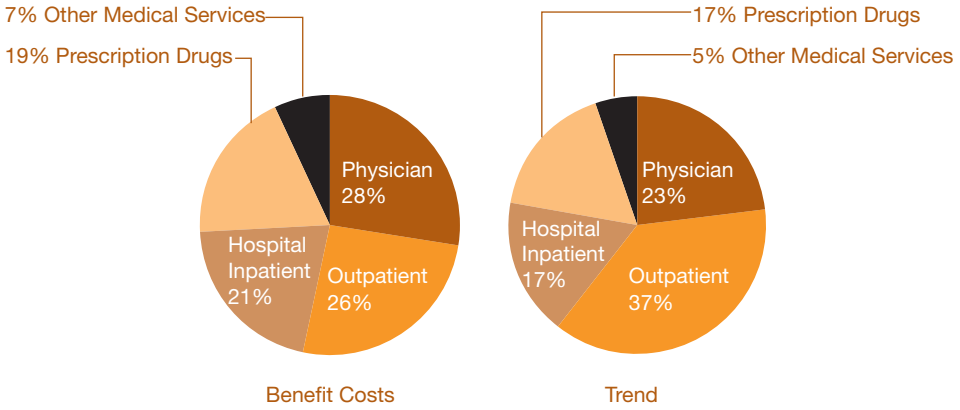
whether consumer-directed plans will lower overall health spending, they are viewed as offering a more flexible framework for employees to influence the steepness of the rise in medical costs. In addition, the lower cost trend is only part of the story, since the level of premiums for these plans also may be lower.

In looking at medical cost trends, it's important to review the sectors of spending. For example, the elderly are more likely to be hospitalized, meaning that a higher percent of spending goes to hospitals. However, employers spend more on outpatient and physician services. As such the medical cost trend is more heavily influenced by these factors, and benefit design often focuses on influencing them as well. As shown in Chart 4, in 2005, outpatient services accounted for more than a quarter of the increase in health premiums and nearly 20% of the overall spending on care.[3]

Chart 3: 2007 expected medical cost trend

Payer	Anticipated spending increases
PPOs	11.9%
HMO/POS/EPO	11.8%
Consumer-driven health plans	10.7%

Chart 4: 2005 Share of Premiums and Growth Trends



Source: PricewaterhouseCoopers estimates, The Factors Fueling rising Healthcare Costs 2006, prepared for America's Health Insurance Plans

Inflators and deflators on the medical cost trends

A myriad of factors impact medical costs. Some factors inflate spending while others deflate it. Following are key inflators and deflators that employers may consider in designing health benefits.

Inflators

New Treatments, New Prescription Drugs and Increased Use of New Diagnostic Technologies.

Thanks to modern diagnostics, illnesses are diagnosed earlier than ever. However, the explosion in new tests and technologies creates additional costs, before and after diagnosis.

For example, new imaging technologies have revolutionized a physician's ability to diagnose tumors and other anomalies, but again there is a cost associated. According to the Medicare Payment Advisory Commission, the growth in imaging services may be driven by a variety of factors, among them improved physicians' ability to diagnose disease; patients' desire to receive diagnostic tests in more convenient settings, a benefit of newer imaging technologies; as well as the practice of defensive medicine.[4] With medical liability premiums rising along with jury awards, physicians may be increasingly practicing "defensive medicine," ordering more expensive tests to ensure that all bases are covered on a patient's treatment. The costs of litigation and defensive medicine have been estimated to increase healthcare spending by 10%.[5]

The number of MRI scans, used to diagnose a patient's injury or disease, has been steadily increasing over the past decades.[6]

New technologies often are more expensive than existing technologies. Newer biologics, for example, tend to replace older drugs or treat conditions that previously were untreatable. At the same time, newer less invasive surgical techniques lower the threshold for intervention, allowing patients that are older and frailer to receive treatment that would have been too risky in the past. In many cases, medical technology reduces morbidity and mortality. Research has shown that in many cases, the increased spending has been worth the cost.[7]

Increased Demand

Workers have largely been shielded from the cost of medical care, which can lead to overutilization or inappropriate utilization. Even though more workers are sharing in the cost of health insurance premiums, the pain of this spending hasn't hit them yet. In terms of consumer spending, medical care consumed 6% of consumer expenditures in 2004 — the exact same percentage as in 1960. (See Chart 5). In fact, the percent of consumer expenditures on medical care has varied little in the interim. While healthcare spending has accelerated considerably, the amount consumers spend relative to other items, such as cars, clothing or housing, has increased about the same amount in their budgets. The difference has been paid by employers and government.

As Chart 6 shows, the ratio of private out-of-pocket spending to private health insurance payments has dropped during the past decade. That means that in spite of increased cost-sharing, consumers' share of private health spending has been dropping.

Cost-shifting

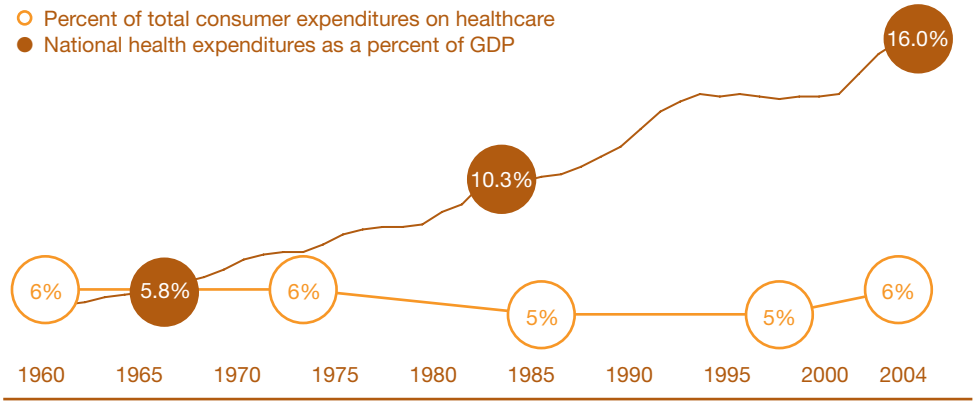
Hospitals are required by federal regulations to provide emergency care to indigent patients. To cover those costs, hospitals must shift these uncollectible bills to patient with insurance. Rising uninsured levels mean that more patients are unable to meet their obligations for healthcare services. Hospitals are also not being fully reimbursed by certain government payers. As the largest single payer, Medicare has a significant influence on provider pricing. Since 2000, the payment-to-cost ratios for Medicare and Medicaid, which were already below the break-even point of 100%, have declined even further. As a result, private payer payment-to-cost ratios have increased to 122% in 2003.[8] (See Chart 7).

Declining Health Status

Obesity, physical inactivity, and drug abuse are among the issues that contribute to declining health status and increased utilization of health services. For example, the percentage of Americans overweight by more than 20% has nearly tripled since 1983.[9] The costs associated with this condition are staggering. Obesity-related expenditures are estimated to have accounted for one-fourth of the increase in health spending between 1987 and 2001.[10]

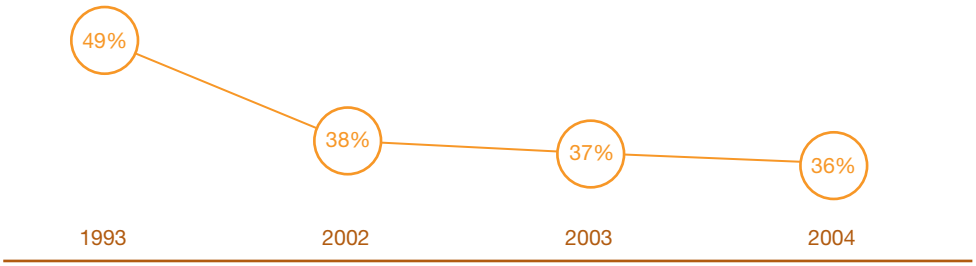
Obese Americans are twice as likely to have heart disease.[11] That translates into rising demand for more expensive procedures, drugs and medical services. In addition, aging contributes to high health spending because older Americans use more health services. In terms of heart disease, procedures such as coronary artery bypass graft, cardiac catheterization, and implantable defibrillators have been

Chart 5: National health expenditures vs. consumer health expenditures



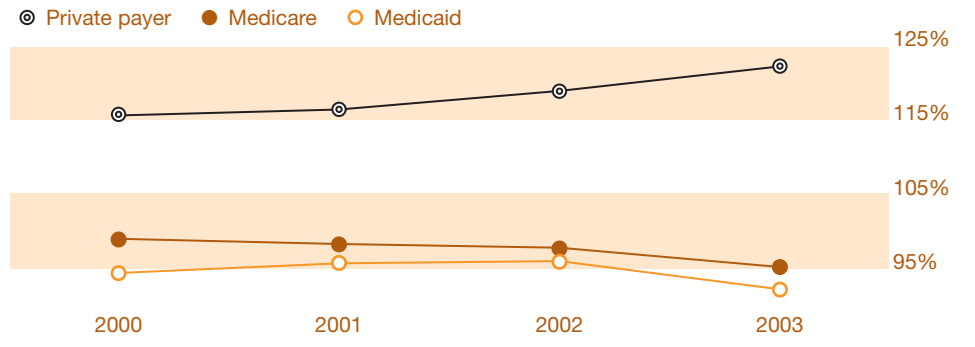
Source: Consumer Expenditure Data—Bureau of Labor and Statistics; National Health Expenditure Data— Census Bureau

Chart 6: Ratio of out of pocket payments to expenditures by private health insurance



Source: Centers for Medicare and Medicaid Services

Chart 7: Aggregate hospital payment to cost ratios for Medicare, Medicaid and private payers



Source: The Lewin Group Analysis of American Hospital Association Annual Survey data, 1980-2003, for community hospitals.

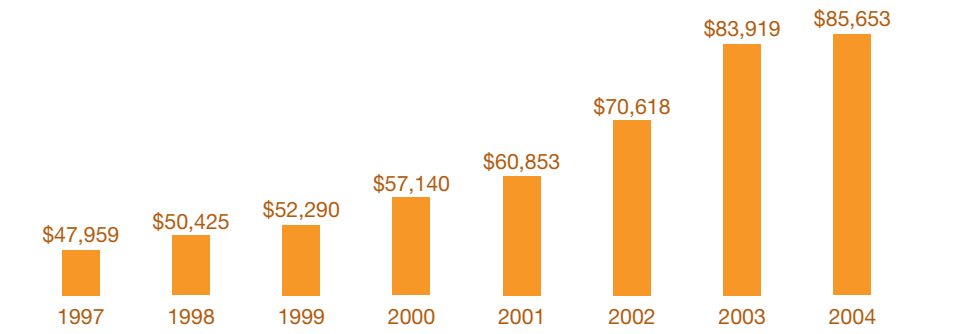
increasing, and these procedures are more likely to be performed on adults age 45 and over. The cost of these procedures has increased as well. Between 1997 and 2004, the cost of a coronary artery bypass graft has increased an average of 8% a year. (See Chart 8).

Deflators

Cost Sharing

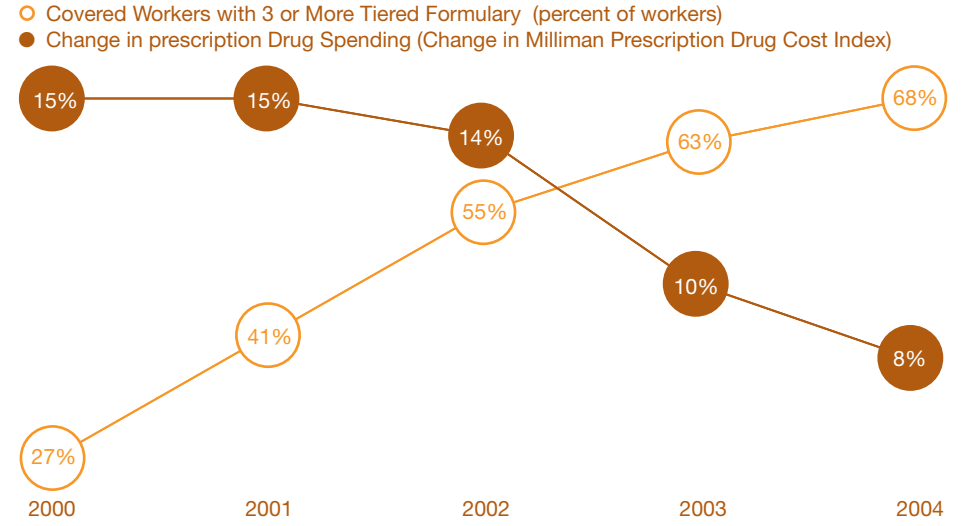
Cost sharing can be in the form of health insurance premiums, deductibles, co-payments, and coinsurance. According to one study, cost sharing consistently reduced spending on medical services by as much as two-thirds in some cases when compared to free care.[12] Health plans are increasingly gravitating towards higher deductibles. For example, within the last three years the average annual deductibles for covered workers with single coverage has increased 42% for HMOs, 85% for PPOs, and 51% for POS plans.[13] In regards to prescription drug formularies, one study finds that increased patient cost sharing and formulary restrictions causes consumers to use fewer medications and less-expensive drugs. However, the study also showed that higher co-payments do cut costs, but the majority of these savings are passed on to the health insurance plans, not the consumer.[14] Whomever the beneficiary of the cost savings, Chart 9 depicts that as the percentage of workers covered with a three or more -tiered formulary increases, the growth in spending on prescription drugs has declined.

Chart 8: Average charges for coronary artery bypass procedure



Source: Agency for Healthcare Research and Quality (AHRQ)

Chart 9: Comparison of tiered prescription drug formularies with increases in prescription drug spending, 2000-2004



Source: Kaiser Family Foundation, "Employer Health Benefits 2004 Annual Survey," September 2005; Strunk, B.C. et al., "Tracking Health Care Costs: Declining Growth Trend Pauses in 2004," Health Affairs Web Exclusive, June 21, 2005.

Price Transparency

The healthcare industry is shifting towards greater pricing transparency, which is likely to lead to a natural decrease in utilization and spending. Insured consumers are frequently shielded from the actual price of their medical services, but as Chart 10 shows, medical price inflation frequently is 1% to 2% higher than general inflation. Even a 2% difference means that medical prices to consumers are more than 20% higher than other goods compared to 10 years ago. The lack of information may be the result of the complexity of the pricing of health services, or may also be the by-product of consumers being insulated by their insurance from the financial implications of their treatment.[15] (However, CPI only tells part of the story since it only measures what consumers are spending out-of-pocket, not what employers or government are contributing.)

Since one insurer launched its price transparency program in Cincinnati in August of 2005, between 600 and 1,000 consumers have accessed the pricing data of physicians each month.[16] When price transparency is coupled with cost sharing mechanisms such as high deductible plans, consumers are given greater incentives to evaluate their medical spending more closely.[17]

Over 80% of companies surveyed believed that employers could help reduce costs by providing employees with more information about healthcare prices and quality.[18] (See Chart 11).

Digital Backbone

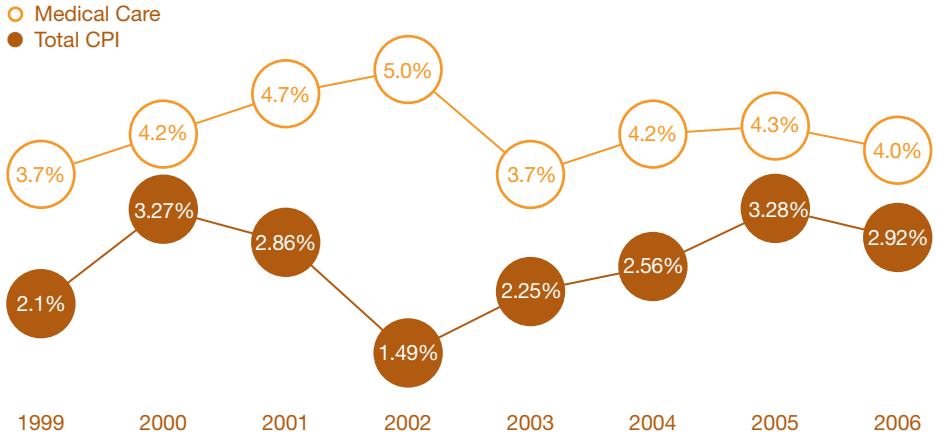
Much of health spending is allocated to administration and duplicative testing, dollars which could be more efficiently spent with a digital infrastructure. Health insurers that use electronic claims and auto-adjudication have seen drops in administrative costs. In addition, these electronic functions allow insurers to more accurately predict medical cost trends and price their product.

As healthcare organizations migrate to a digital backbone, inefficiencies and unnecessary care subside. However, this may be a long-term proposition. For example, in July 2005, the Institute of Medicine reported that at least 1.5 million adverse drug events occur in the U.S. each year, and that e-prescribing could reduce that number. The IOM reported that each adverse drug event adds $8,750 to the cost of a hospital stay. If e-prescribing cut the number of adverse events in hospitals by 500,000 per year, that would save $4.4 billion.

Wellness Programs

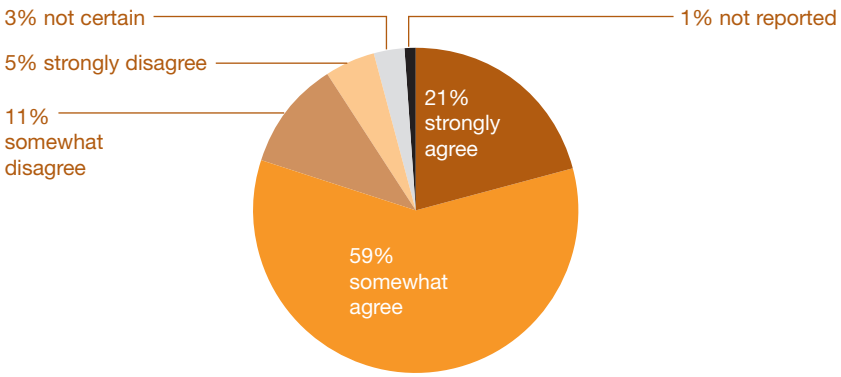
Health promotion programs have been shown to reduce the prevalence of unhealthy lifestyles among participants, and therefore have the potential to decrease healthcare costs. Consumer-directed health plans address the initial out-of-pocket costs of employees, but the larger costs of hospitalization are largely unaddressed through these plans. According to one study, the past 10 years has shown an annual return on investment of $6 saved to $1 spent on employee-wellness programs, reducing health plan costs, sick leave, disability pay, and workers' compensation.[19] Adopting a wellness program is transitioning from a reactive approach, where the majority of healthcare costs are spent on disease management, to a proactive approach, in which the opportunity exists to reduce risk factors as well as medical costs. Successfully shifting one individual from a high-risk to a lower-risk category can save more than $3,000 per year.[20] Only one in five companies said the health status of their workforce had improved during the past two years, according to a PricewaterhouseCoopers' survey of 135 top executives at large U.S.-based multinational companies. However, of those companies, two-thirds said they offered employee programs or incentives for a healthy lifestyle.[21]

Chart 10: Changes in medical care inflation compared to changes in the consumer price index



Source: Bureau of Labor Statistics

Chart 11: To what extent do you agree with the following statement: "Employers that provide good information on healthcare prices and quality can change their employees behavior and reduce healthcare costs."



Source: "The Trends and Benefits of Providing Healthcare Quality Data," PricewaterhouseCoopers Health Research Institute, Management Barometer Survey.

Conclusion

No one knows exactly how much medical costs will increase in 2007. However, our research shows that the carriers are expecting double-digit increases. Average premium increases will be lower as employers incorporate increased cost-sharing and other strategies to temper the growth in spending.

In the past, cost-sharing with employers has not kept pace with the increased medical spending trends. However, greater acceptance of consumer-directed health plans, especially those that incorporate patient education and information tools, could have a strong impact on future medical costs. Higher adoption rates in wellness programs also could help stem the tide by reducing costly chronic conditions.

Footnotes

1 "CPI Summary," Bureau of Labor Statistics.

2 "Employer Health Benefits, 2004," Kaiser Family Foundation and Health Research and Educational Trust, September 2004; "US health benefit cost rises 7.5% in 2004, lowest increase in five years," Mercer Human Resource Consulting, November 2004; "2005 Segal Health Plan Cost Trend Survey," The Segal Group, Inc., August 2004; "2005 Health Care Cost Survey," Towers Perrin HR Services, December 2004.

3 "The Factors Fueling Rising Healthcare Costs," prepared for America's Health Insurance Plans, PricewaterhouseCoopers, 2006.

4 "MedPAC recommendations on imaging services", Medicare Payment Advisory Commission, July 18, 2006.

5 "The Factors Fueling Rising Healthcare Costs," prepared for America's Health Insurance Plans, PricewaterhouseCoopers, 2006.

6 "Magnetic Resonance in Medicine in 2020," Robert A. Bell, PhD, Imaging Economics, 2004.

7 "Is the Technological Change in Medicine Worth It?", David Cutler, Mark McClellan, Health Affairs, September/October 2001.

8 "The Lewin Group analysis of American Hospital Association Annual Survey data," 1980-2003.

9 Harris Interactive, Healthcare News, Volume 6, Number 2, March 28, 2006.

10 "The Impact of Obesity on Rising Medical Spending," Health Affairs, w4-480, 2004.

11 "The Rise in Prevalence of Treated Disease: Effects on Private Health Insurance Spending," Health Affairs, June 2005.

12 "Effects of Cost Sharing on Use of Medical Services and Health," Keeler, Emmett B. Ph.D., RAND Health, 1992.

13 "Kaiser/HRET Survey of Employer-Sponsored Health Benefits," The Kaiser Family Foundation and Health Research and Educational Trust, 2005.

14 "Cost Sharing Cuts Employers' Drug Spending—but Employees Don't Get the Savings," RAND Health, 2002.

15 "Improving Healthcare: A Dose of Competition," Department of Justice and Federal Trade Commission, July 2004.

16 "Aetna Expands Efforts To Provide Consumers With A Transparent View Of Health Care Costs And Quality," Aetna, June 13, 2006.

17 "Insurer Reveals What Doctors Really Charge," Fuhrmans, Vannessa, Wall Street Journal, August 18, 2005.

18 Barometer Survey, Health Research Institute, PricewaterhouseCoopers, 2005.

19 "Employee wellness programs can help trim medical costs," Chamber Report, May 3, 2006.

20 "Small steps through a wellness program can lead to big benefits," Faist, Allyson, Houston Business Journal, July 7, 2006.

21 "The trends and benefits of providing health-care quality data," Health Research Institute, PricewaterhouseCoopers, Management Barometer Survey, June 2006.

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