

Behind the Numbers*

Medical Cost Trends for 2009



the 1990s, the number of people with a disability in the United States has increased by 25% (U.S. Census Bureau 2000).

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The ADA defines information as any material, regardless of the form or medium, that is used to convey information. This includes printed materials, audio recordings, video recordings, and computer files. The ADA requires that information be accessible to people with disabilities in the same way that it is accessible to people without disabilities.

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Executive summary

From one year to the next, healthcare costs for employers and their workers always go up. Yet, for the past five years, there's been some positive news. The growth rate has been dropping. However, that trend will level off in 2009, according to employers and health plans. This report looks at what to expect in medical cost growth for 2009, key influencers of that growth, and strategies for employers and payers to respond to ever higher healthcare spending.

Key Findings

- The growth in medical cost trends for the private sector is expected to level off in 2009 following five years of deceleration. Costs are expected to grow 9.6% in 2009 compared with 9.9% in 2008.
- Decelerators of cost growth in 2009:
 - Improved medical management of high-cost patients. Two-thirds of employers say they contract with disease management programs that focus on reducing and eliminating hospitalizations. For example, the number of cardiac procedures has been dropping largely due to improved adherence to medications and more coordinated discharge planning.
 - Generic substitution that continues to reduce costs. However, fewer drugs will go off patent in 2009 than in 2007 and 2008.
- Accelerators of cost growth in 2009:
 - The healthcare industry is in an era of booming construction to replace facilities and adjust to consumer demands.
 - Cost-shifting from the uninsured, Medicare and Medicaid to private payers continues to increase and will account for nearly one in every four dollars spent by private payers on hospital services in 2009.
- Employers will rely on prevention and disease management programs to temper costs in 2009 rather than shifting higher levels of cost-sharing onto workers.
 - Only 38% of employers surveyed by PricewaterhouseCoopers said they expected to increase cost-sharing through plan design changes.
 - Wellness programs have become commonplace; two-thirds of employers are using them, and nearly half say they are somewhat effective at reducing costs.
 - Wellness programs aren't merely a cost reduction tactic. Employers said these initiatives were nearly equally effective at boosting productivity, improving employee loyalty and demonstrating corporate responsibility.
 - Health plans, which are competing for a slowly eroding number of employer-based members, are increasingly focused on personalizing member experiences to attract and retain large corporate accounts. The effectiveness of consumer-driven tools and wellness programs is closely linked to maintaining those accounts and stifling cost growth.
- If there's a recession in 2009, the economy is likely to depend even more on the health industry. During past recessions, healthcare has increased its portion of gross domestic product (GDP) and medical prices have risen faster than other prices.

About the research

PricewaterhouseCoopers' Health Research Institute (HRI) reviewed the historical and prospective medical cost trends and the influences behind them through interviews, surveys and published reports. In addition to reviewing analyst reports and documents for publicly traded health plans, HRI conducted a survey of more than 500 employers and provider-based health plans. The number of covered lives for those surveyed totalled more than 11 million.

Background

Medical cost trend is the projected increase in the costs of medical services assumed in setting premiums for health insurance plans. Insurance companies use medical cost trends to estimate what the same plan would cost in the next year. For example, a 10% trend indicates that a medical plan that costs \$8,000 per employee one year would cost \$8,800 the next year. Medical cost trend is influenced primarily by:

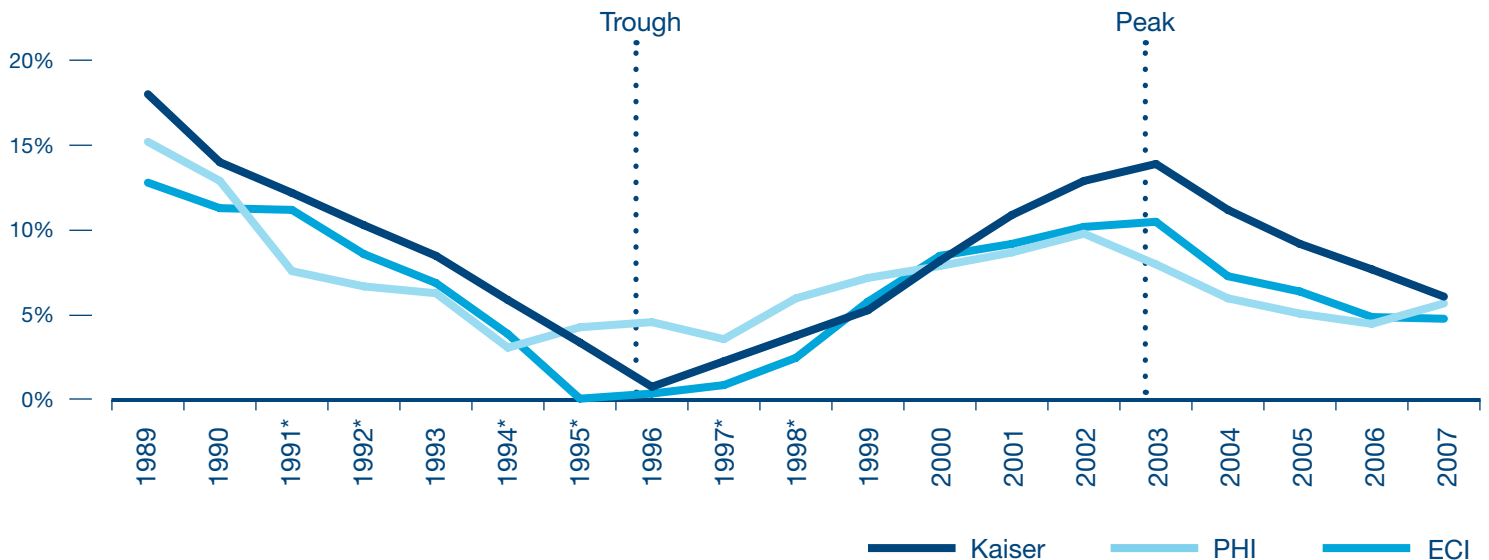
- Medical cost inflation, or change in the unit price of medical products and services
- Utilization increases, or changes in the volume of services used, which may be influenced by demographic changes, advertising, and the use of new technology

Recent trends to 2008

Pressure to reduce medical costs for employees has led to some fundamental strategies such as cost-sharing, improved medical management, and substitution of lower priced treatments. Even so, medical costs are a concern as their rate of increase remains above the general inflation rate. The growth rate has tended to be cyclical. For the past five years, according to most measurements, growth in healthcare costs has been decelerating as shown in Chart 1. The employer cost index (ECI), net cost of private health insurance per capita (PHI) and the Kaiser Family Foundation's estimate of employer premium trends have all followed a similar decline in growth since 2003.¹

Medical cost trend is not necessarily a good predictor of increase in premiums because many employers make changes to plans' benefits and cost sharing features to reduce premiums. However, medical costs and premiums tend to move in the same direction.

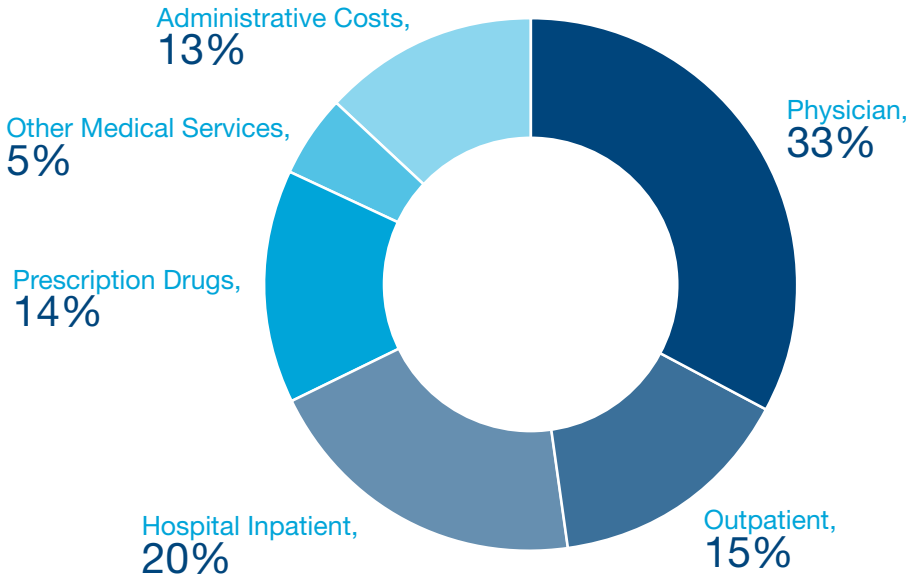
Chart 1: Trends in Premiums (1989 - 2007)



Source: Kaiser: Kaiser Employer Health Benefits 2007 Annual Survey, PHI : Centers for Medicare and Medicaid Services, Office of the Actuary, ECI: Bureau of Labor Statistics, National Compensation Survey, Note: Years with asterisk indicate PwC estimated trends for Kaiser

According to PricewaterhouseCoopers' analysis, 87% of the average health insurance premium pays for medical costs and 13% pays for administrative expenses. For the past 40 years, administrative costs have stayed fairly stable as a component of health insurance premiums.² Physician services are the largest portion of medical cost at 33% (see Chart 2). Inpatient services are the second largest component at 20%, and outpatient services are third at 15%. The impact of each component on medical cost trends is determined by the combination of that component's share of total costs and its rate of increase in the cost by component. Changes in spending on physician services will tend to have a larger impact on medical cost trend because of its share of spending. However, the rate of growth is higher in outpatient services as more procedures and services are performed in less intensive settings.

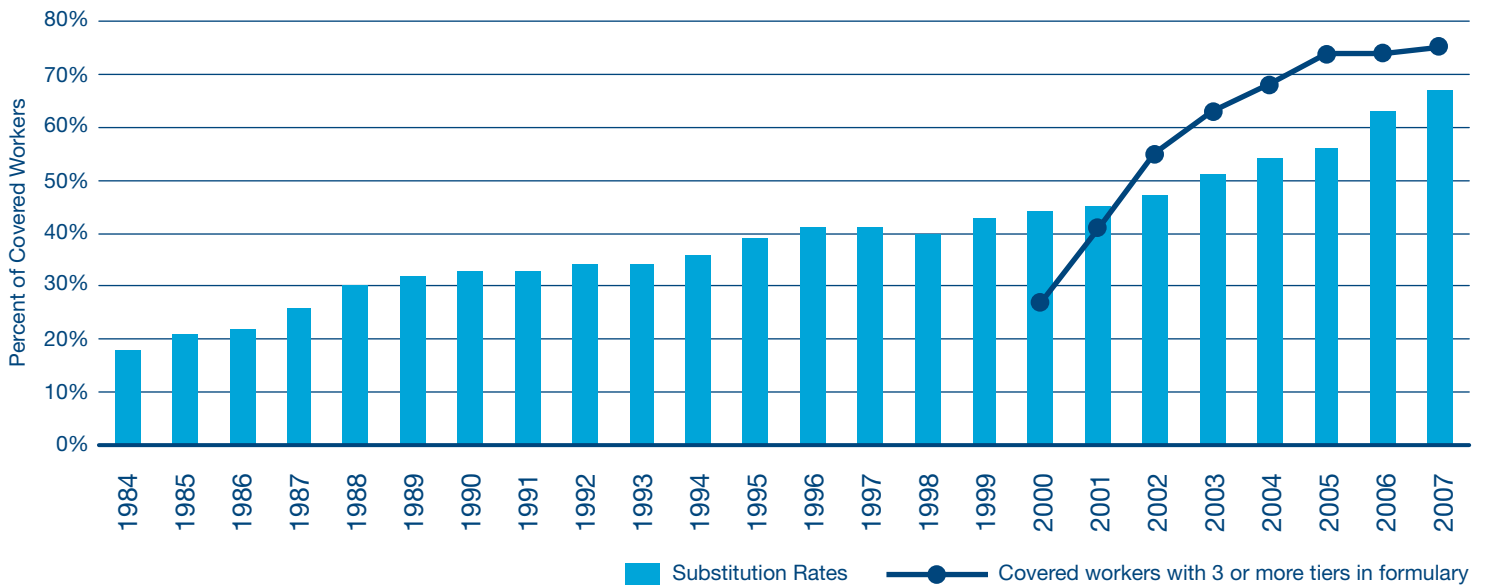
Chart 2: 2007 Share of Benefit Premiums



Source: PricewaterhouseCoopers' estimates

Different forces affect the trends for each component of medical care. For inpatient and outpatient hospital services, rate of increases is due primarily to new technology, increased utilization, new construction, and cost-shifting from government payers and the uninsured. One of the key components in the recent deceleration is the drop in drug spending growth. Nearly two-thirds of all prescriptions are generic, as shown in Chart 3. Health plan design has influenced this trend. For example, tiered pricing provides incentives for consumers to choose lower priced generic or formulary listed drugs in exchange for lower co-payments. The percentage of workers enrolled in three-tiered drug plans rose from 27% in 2000 to 68% in 2007. In addition, 7% of workers were enrolled in four-tier plans in 2007.³

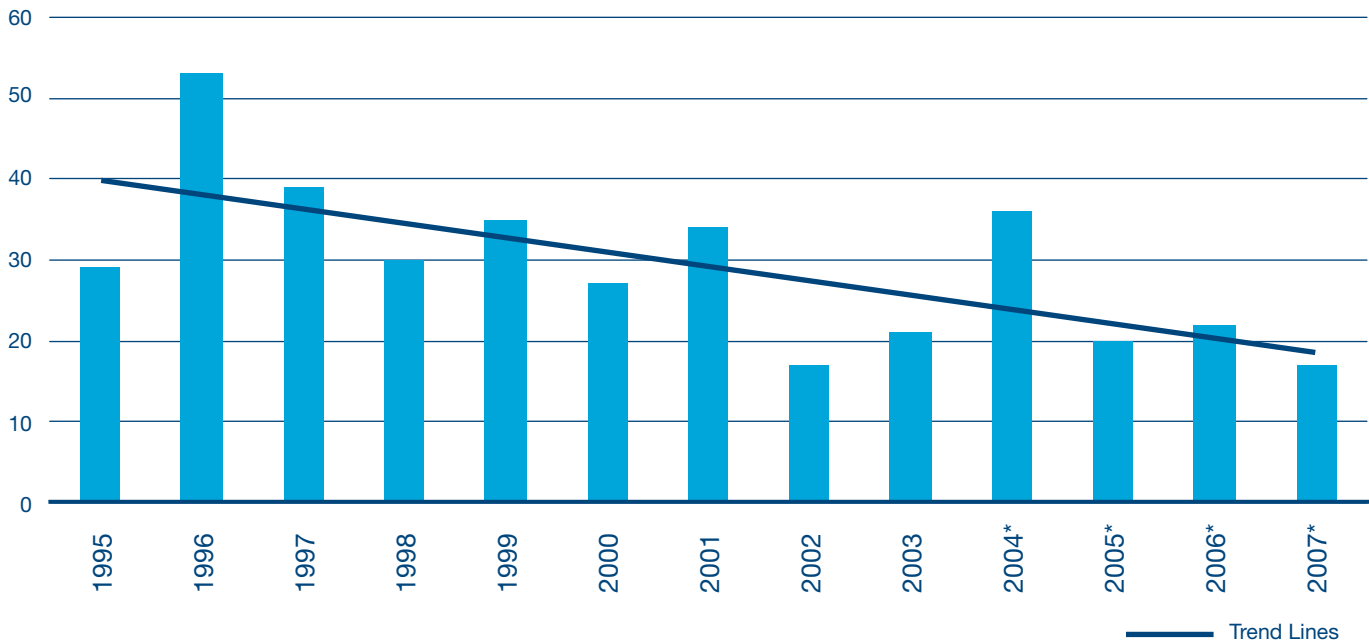
Chart 3: Tiered Formularies and Percentage of Generics



Source: IMS Health; Henry J. Kaiser Foundation, Employer Health Benefits: 2007 Annual Survey

As shown in Chart 4, there's been a drop in the number of new drugs coming to market, as measured by the FDA's patent approvals of new molecular entities (NMEs) and therapeutic biologic license applications (BLAs). The number of patent approvals has remained low in the past five years, 2001 through 2006, at an average of 25 per year, compared to the average annual approvals of 36 in the previous five-year period, 2001 through 2006.

Chart 4: Number of New Molecular Entities Approved by the FDA (1995 - 2007)



Source: FDA Center for Drug Evaluation and Research (Years with an asterick includes therapeutic biologic license applications.)

Looking ahead to 2009 – Flat growth trend expected

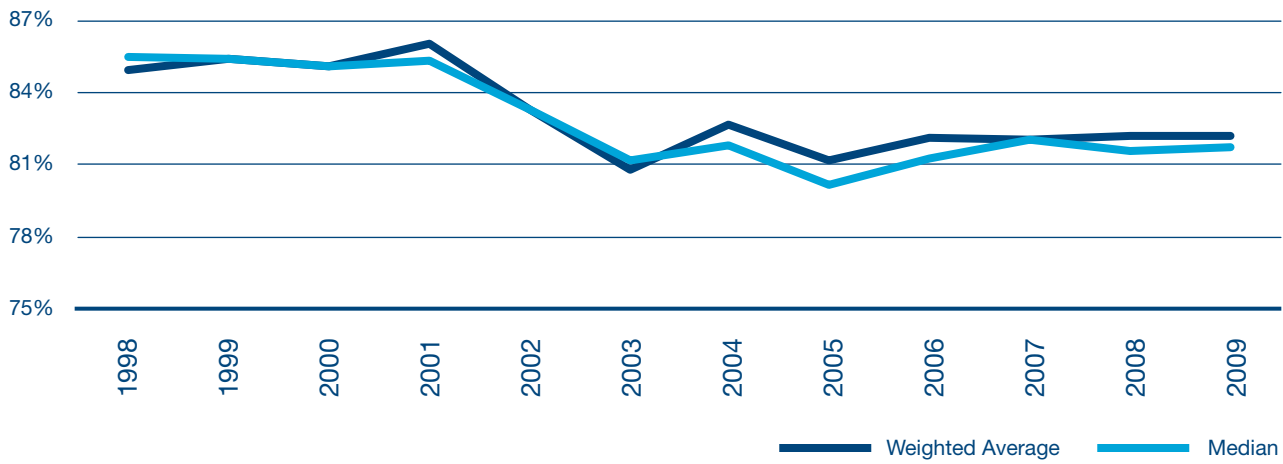
The growth in medical cost trends is expected to drop slightly from 9.9% in 2008 to 9.6% in 2009 (see Chart 5). The numbers used to estimate these trends were gathered from analyst reports for publicly held national health insurers, and a PricewaterhouseCoopers HRI survey of more than 500 employers and private not-for-profit health plans.

Chart 5: Medical Cost Trend for 2008 - 2009

Year	2008	2009
Medical Cost Trend	9.9%	9.6%

One indication of the stabilization of cost trends is through medical loss ratios (MLRs), which are reported by health insurers to show the percentage of premiums spent on medical care and treatments. The ratio factors in both the price of the premium and medical costs. Premiums are based on an estimate of expected medical costs for the year ahead. As shown in Chart 6, the medical loss ratio of health plans has been relatively steady since 2003. A steady medical loss ratio indicates that health plans haven't seen unexpected changes in medical costs. It also may point to greater accuracy by health plans to predict cost trends through faster collection and analysis of costs by using health information technology. In recent years, health plans have been employing a whole suite of medical management tools, such as predictive modeling and disease management, that are designed to be more effective at estimating future cost increases.

Chart 6: Health Plans' MLR (1998 - 2009)



Source: PricewaterhouseCoopers' estimates (2005 - 2006), Managed Care - 2008 Outlook (2007 - 2009)

For 2009, offsetting trends are expected to keep the cost growth steady. They are:

- Tighter medical management of high-cost cases
- Brand name drugs going off patent
- Healthcare construction booming
- Cost-shifting by hospitals

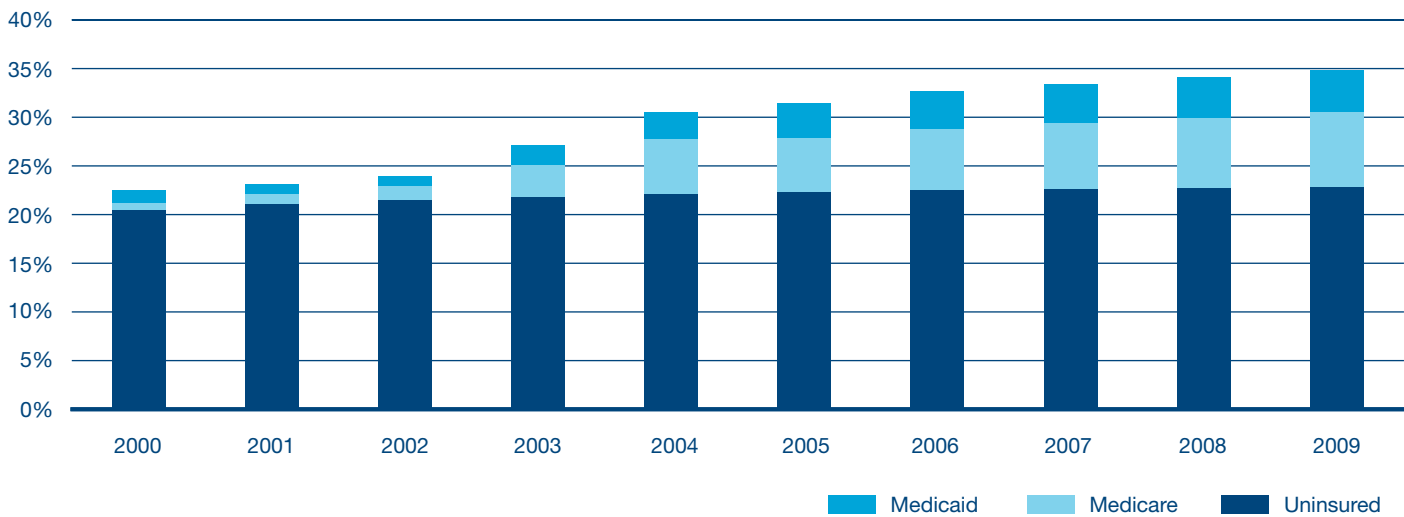
Hospitals shift rising uncompensated costs from Medicare, Medicaid and uninsured to private sector

Hospitals have relied on cost-shifting for decades to bridge the gap when some payers don't pay for the full costs of treatment. Since 2000, the proportion of costs shifted to the private sector has gone up by a factor of one and half (see Chart 7). In 2009, the amount of spending shifted to privately insured patients is expected to be nearly 36%. This includes underpayments by the uninsured, Medicare and Medicaid. The level of cost-shifting to private payers varies, depending on the ability hospital systems have to negotiate higher rates in their markets. Hospital systems with strong market position are more apt to demand and get higher prices from private health plans and employers.

On a national level, several factors in 2009 could result in greater cost-shifting to private payers. Medicare is now moving toward pay-for-performance, leaving poor performers to turn to private payers to make up the difference. Medicare rate increases have generally not kept up with hospital costs, but the government believes that Medicare should push hospitals to control their costs rather than "accommodate the current rate of cost growth."⁴ Medicare has been focusing on improving quality, and will no longer pay for eight "never events" that may occur as part of a patient's hospital stay, beginning in October 2008. These rare-but costly events, such as wrong-site surgery, are likely to decrease in number, but historically when they occur, the costs were passed on to other payers. Some private health plans also have said they will not pay for these events. Another factor for hospitals is a new Congress and administration in January 2009, and the likelihood that they'll address the growing budget deficit and expected insolvency of the Medicare Trust Fund in 2019.

On the other hand, the election could bring sweeping changes in 2009, including initiatives to cover the uninsured, which would positively impact both providers and payers and potentially reduce cost-shifting.

Chart 7: Private Payer Additional Burden (2000 - 2009)



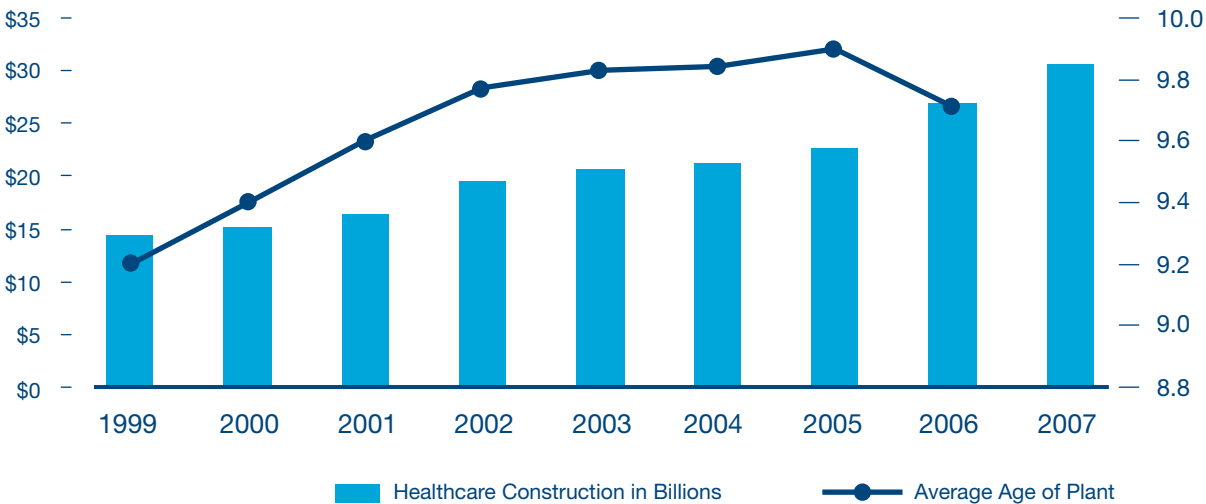
Source: "Uninsured - Paying a Premium - The Added Cost of Care for the Uninsured" - Families USA Publication No. 05-101 - © 2005 by Families USA Foundation," and "Medicare & Medicaid - American Hospital Association (www.AHA.org)", PricewaterhouseCoopers' Health Research Institute analysis

Healthcare construction still booming

More than 40 years ago, the hospital industry went through a building boom, financed by a government program called Hill-Burton and sustained by the new government entitlement called Medicare. In recent years, hospitals have been replacing and renovating their facilities, resulting in healthcare construction levels at their highest since the 1960s.⁵ Healthcare construction has been increasing rapidly, fueled by low interest rates, patient preference for private hospital rooms, aging facilities, and the move to outpatient venues.

Chart 8 shows the steady increase in healthcare construction, which is adding to the growth in medical costs. The chart also shows that average age of plant, an important financial indicator for hospitals, declined in 2006 for the first time in two decades. MedPAC, the agency that advises Congress on Medicare, reported that spending on hospital construction has risen nearly 20% in 2006 and 2007, and that a 20% increase in capital costs increased hospital costs by 2%. Because capital costs tend to be financed over a number of years, the multi-year construction boom will affect costs in 2009 and beyond. When hospital costs increase because of higher capital spending, they attempt to pass along those increases to payers.

Chart 8: Hospital Construction and Average Age of Plant



Source: Medicare Payment Advisory Committee (MEDPAC) Report to the Congress, Medicare Payment Policy, March 2008; Ingenix Almanac of Hospital and Operating Indicators

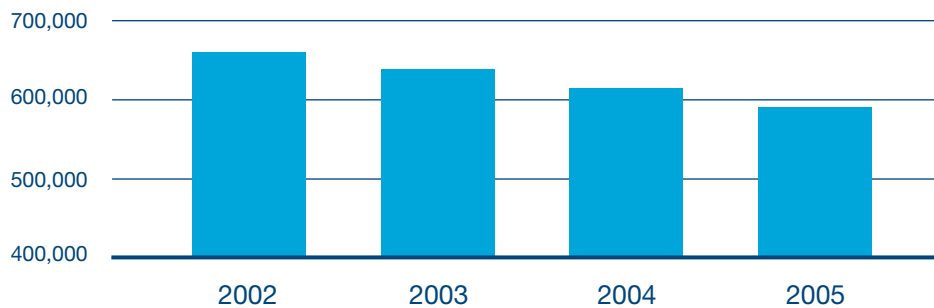
High-cost chronic patients getting more attention and management

Nearly two-thirds (63%) of employers surveyed by HRI said they are using disease management programs. Designed to focus on high-cost patients with chronic diseases, disease management has become a common cost control strategy for employees with asthma, cancer, diabetes, cardiac disease and diabetes. In many cases, employers are asking health plans to “carve in” disease management programs and tools; in others, payers are contracting with a variety of vendors, including specialty pharmacy providers and patient activation companies. The tools of disease management, such as online education, telephonic care management and physician education, have become increasingly sophisticated and personalized.

Employers have found that the risk factors that lead to chronic disease are cumulative, as are the costs, and that a holistic focus on workers can lead to improvements in productivity and retention. For example, these programs frequently employ nurses and other practitioners who emphasize drug adherence and care coordination. A common goal is to decrease unnecessary hospital days.

For example, medical management may be related to the drop-off in hospitalizations from acute myocardial infarction (AMI). (see Chart 9) This has been related to a number of developments, such as adoption of drug-eluting stents and preventive medications such as aspirin and statins.⁶ In addition, many hospitals have improved discharge planning of cardiac patients, which decrease the rate of readmissions.⁷

Chart 9: Annual Hospitalizations for AMI (2002 - 2005)



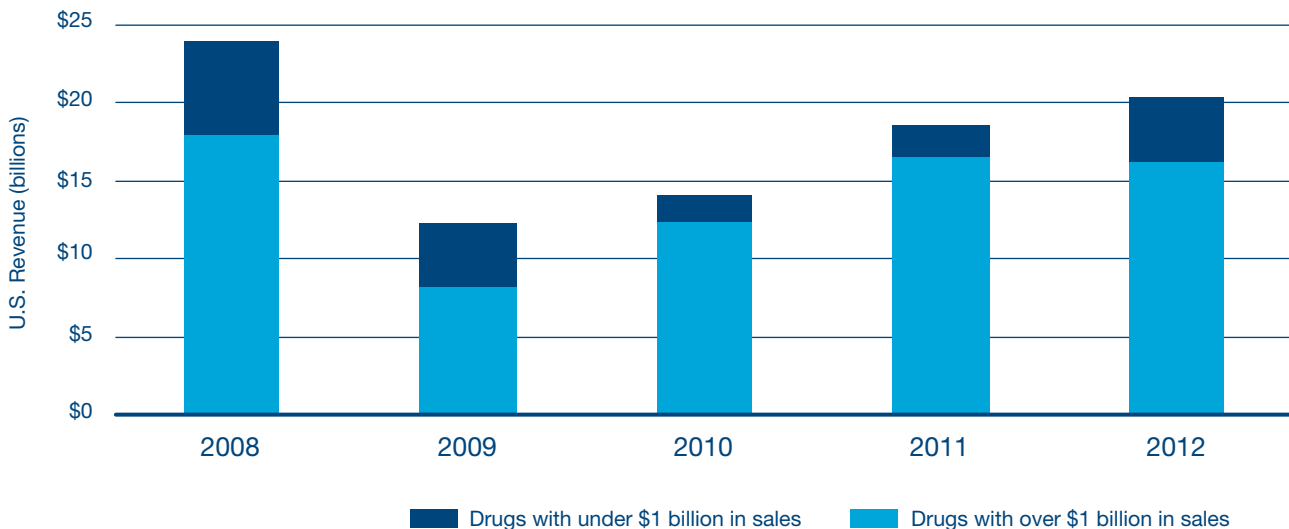
Source: American Journal of Cardiology, 2007

More generics being used, although fewer brand name drugs will be expiring in 2009

Information tools have enabled pharmacy benefit managers to switch patients quickly to generic drugs. The trend toward less expensive drugs will continue in 2009 although fewer brand name drugs will be going off patent than in recent years. (See Chart 10.)

The increase in generics is offset to some degree by new and more expensive biologic drugs coming to market. These drugs, which tend to have exclusivity, are gaining more attention for treating cancer and other conditions. Between 2007 and 2010, the compound annual growth rate for biologics is expected to grow 13% compared to 1% for small molecule drugs, according to Datamonitor.⁸

Chart 10: Drugs Exclusivity Expiring 2008 - 2012 by 2007 U.S. Sales



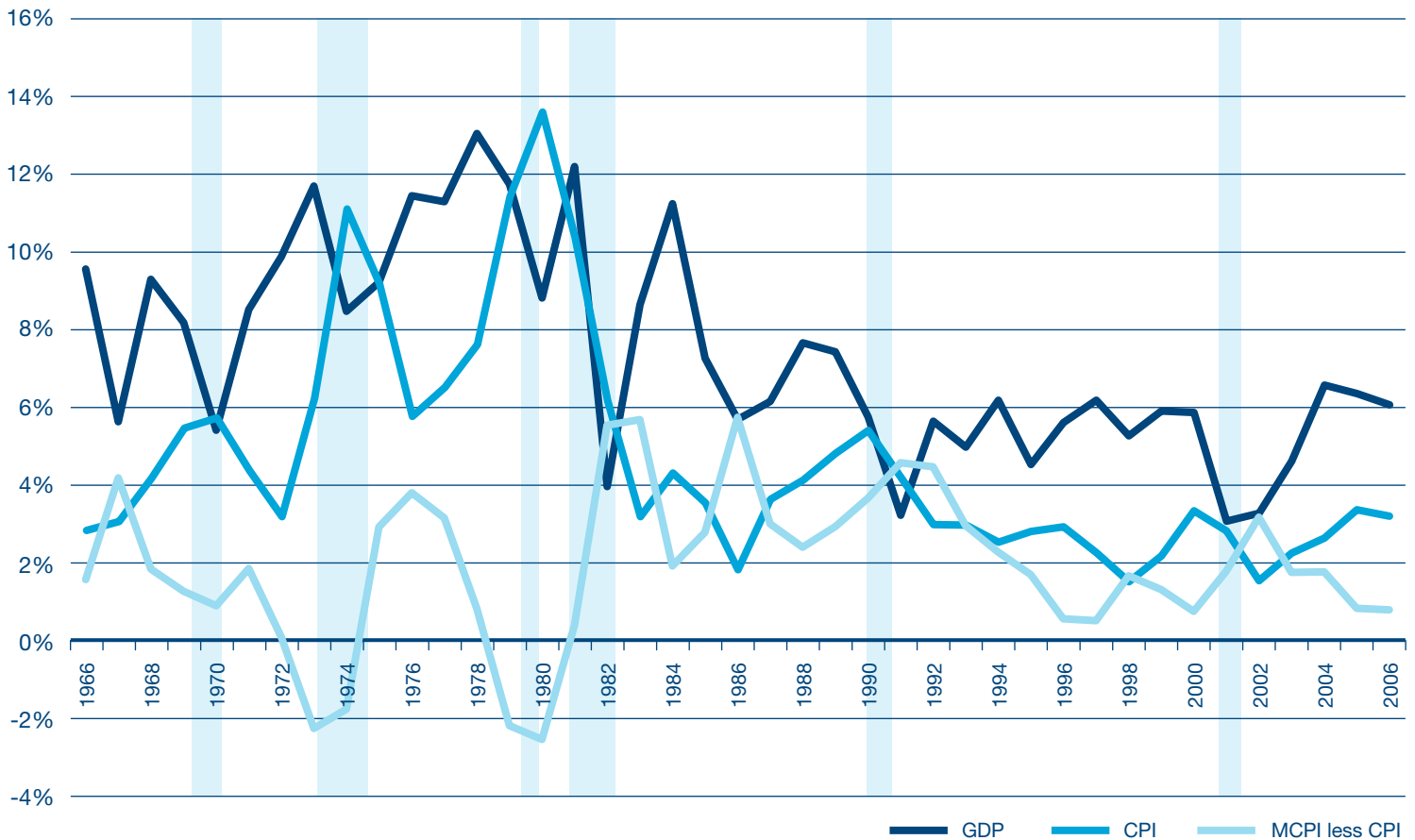
Source: Pharmaceutical companies documents, PricewaterhouseCoopers' analysis

Possible recession in 2009 unlikely to affect healthcare, except to increase its share of GDP

By the first quarter of 2008, the U.S. economy was in the midst of a downturn, which could be the beginning of a recession. This raises concerns about how a downturn would affect the healthcare sector of the economy.⁹ To answer this question, PricewaterhouseCoopers analyzed the relationship between the economy and healthcare indicators during the past six recessions.

General economic conditions respond strongly to recession. Chart 11 shows that GDP generally declines during a recession and prices, as measured by the Consumer Price Index (CPI), usually fall during or near the end of a recession. Unemployment also begins to rise during recessions (not shown in Chart 11) as would be expected from the decline in output. However, medical prices tend to rise. As shown in the chart, medical CPI (MCPI) – when inflation is subtracted – usually increases during recessions.

Chart 11: Growth in GDP, CPI and additional medical price inflation (Recessions represented by shaded areas.)

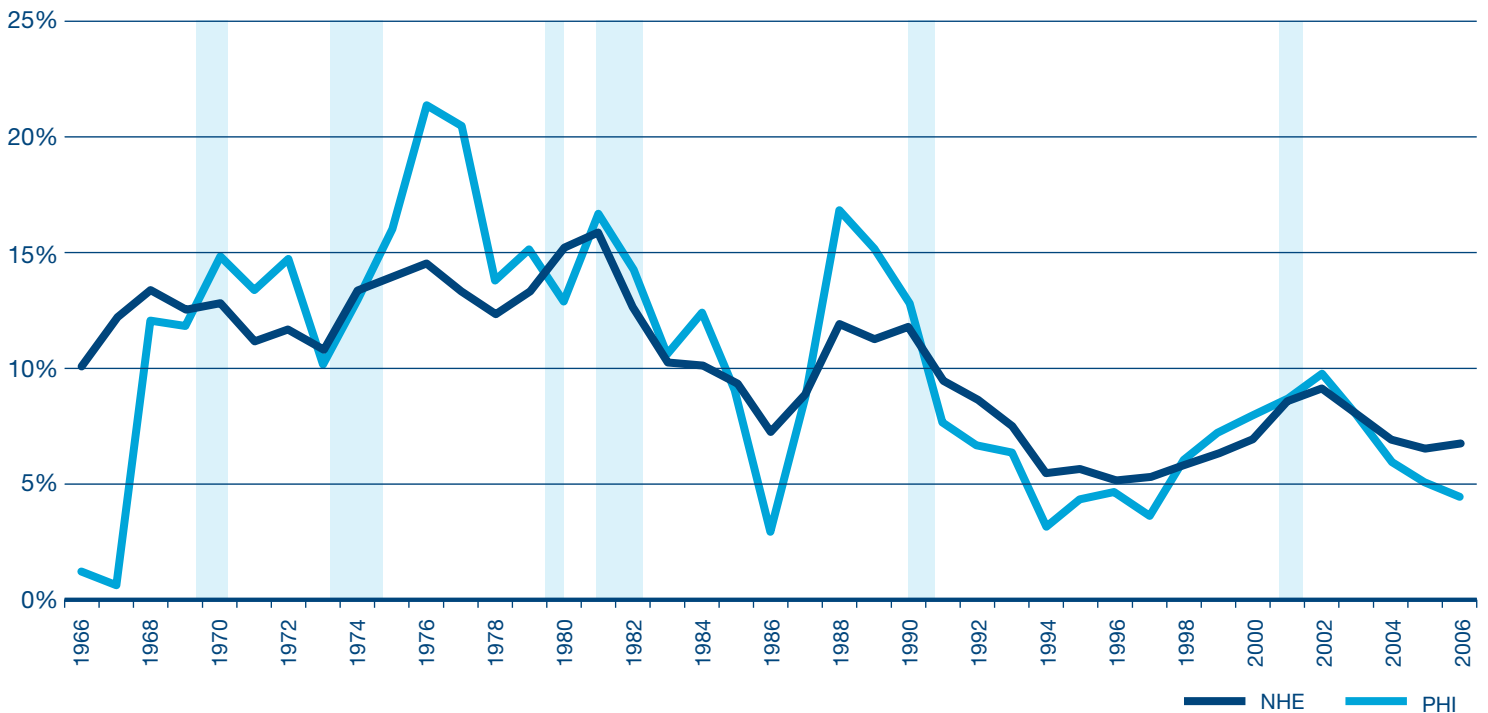


Source: Public Information Office, National Bureau of Economic Research, Inc., Business Cycle Expansions and Contractions; Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics group; Bureau of Labor Statistics; Census Bureau

We found that the health industry is much less closely aligned with the business cycle and the impact, if it occurs at all, tends to show up with a lag of a year or more.¹⁰ As shown in Chart 12, National Health Expenditures (NHE) and the Net Cost of Private Health Insurance (PHI) do not always fall during a recession. NHE rose during recessions in 1970, 1974, 1980, and 2002. NHE tended to decline about one or two years after the recession. PHI rose during the recessions in 1970, 1974, and 2002 but fell during 1980, 1982, and 1990. Interestingly, the number of uninsured does not follow the recession very closely, increasing during some recessions and decreasing during others. (Note that the uninsured is not in Chart 12.)

Other healthcare indicators such as Medical CPI are more closely related to similar economic variables (in this case CPI) but the correlation with general economic activity and recessions is not nearly as strong. For this reason, the most consistent relationship between recessions and the economy is the impact on overall GDP. The health industry's portion of the economy has been growing steadily and accounted for nearly 16% of GDP in 2006. Since the mid 1960s, the biggest jumps in that percentage have taken place during and leading up to recessions. During a recession, other industries lag but health spending continues strongly, taking a larger share of the overall economy. As shown in Chart 13, the ratio of health spending to GDP always increased

Chart 12: Growth in national health spending and private health insurance premiums (Recessions represented by shaded areas.)



Source: Public Information Office, National Bureau of Economic Research, Inc., Business Cycle Expansions and Contractions; Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics group; Bureau of Labor Statistics; Census Bureau

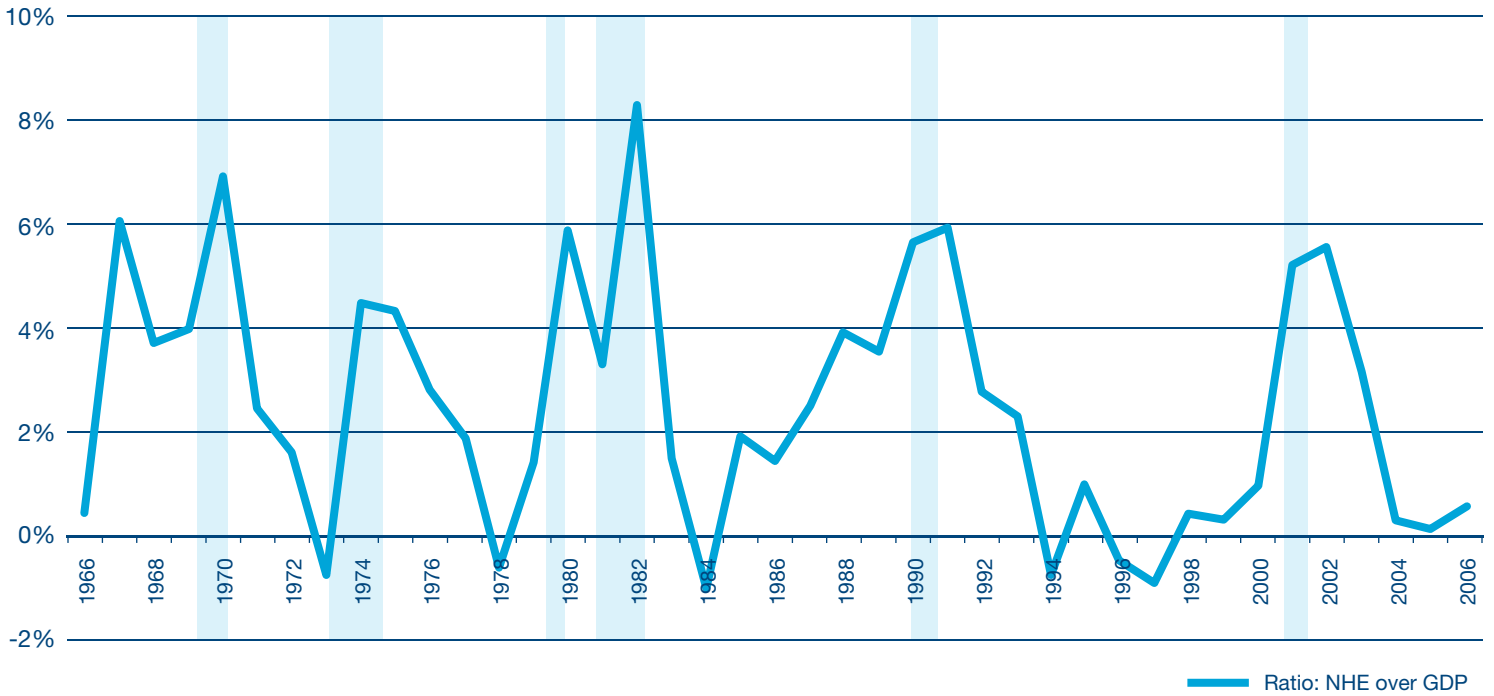
during a recession. From an employer and government point of view, this implies that healthcare becomes more of a burden during recession years.

Do these statistics indicate that healthcare spending does not respond to changes in income? Economists argue that this is not the case at all. The growth in health spending does appear to be related to income but with a lag of a year or two. This complicated relationship may be due to the slow response of health insurance coverage to general economic activity. When unemployment rises, as it usually does in a recession, many people who lose jobs are able to keep health insurance coverage. Some employers extend current benefits for some period after employment, most employers have to offer Consolidated

Omnibus Budget Reconciliation Act (COBRA) coverage to those who are laid off, many workers get coverage from spouses, and government programs pick up some of the uninsured people and their families. Similarly, employers change their benefit programs slowly over a period of years. These factors tend to push the impact of changes on healthcare a few years into the future and to smooth out short-term changes.

In 2009, the impact of a short recession on the healthcare sector is likely to be extremely mild, or nonexistent, with the exception of the availability of credit. The most likely change would be a spike in the ratio of health spending to GDP.

Chart 13: Growth in the percent of GDP spent on healthcare (Recessions represented by shaded areas.)



Source: Public Information Office, National Bureau of Economic Research, Inc., Business Cycle Expansions and Contractions; Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics group; Bureau of Labor Statistics; Census Bureau

Health plans, employers will focus on member satisfaction, wellness, specialized disease management, limited cost-sharing in 2009

Health plans, which are competing for a slowly eroding number of privately insured, are increasingly focused on keeping coverage affordable for their large corporate accounts. Keeping cost growth in check is always important, but plans must balance member satisfaction with cost-control strategies.

- *Cost-sharing continues to be important, but employers are wary of too much.*

Co-pays and deductibles are universal tools among employers that view cost-sharing as an important way to control medical costs. However, most employers surveyed by HRI said that they will not increase cost-sharing in 2009. Only 38% of employers surveyed said they expected to increase cost-sharing through plan design changes. In contrast to more cost sharing, some employers are adopting plan designs that help workers “earn” discounts or bonuses for behaviors that keep them healthy or monitor their health. Keeping employees healthy and on the job can boost productivity. Productivity losses related to workers with chronic diseases are as much as four times the cost of treating chronic diseases, according to PricewaterhouseCoopers’ research.¹¹

- *Health plans increasingly focus on member satisfaction of their big accounts, particularly regarding administrative and customer services functions.*

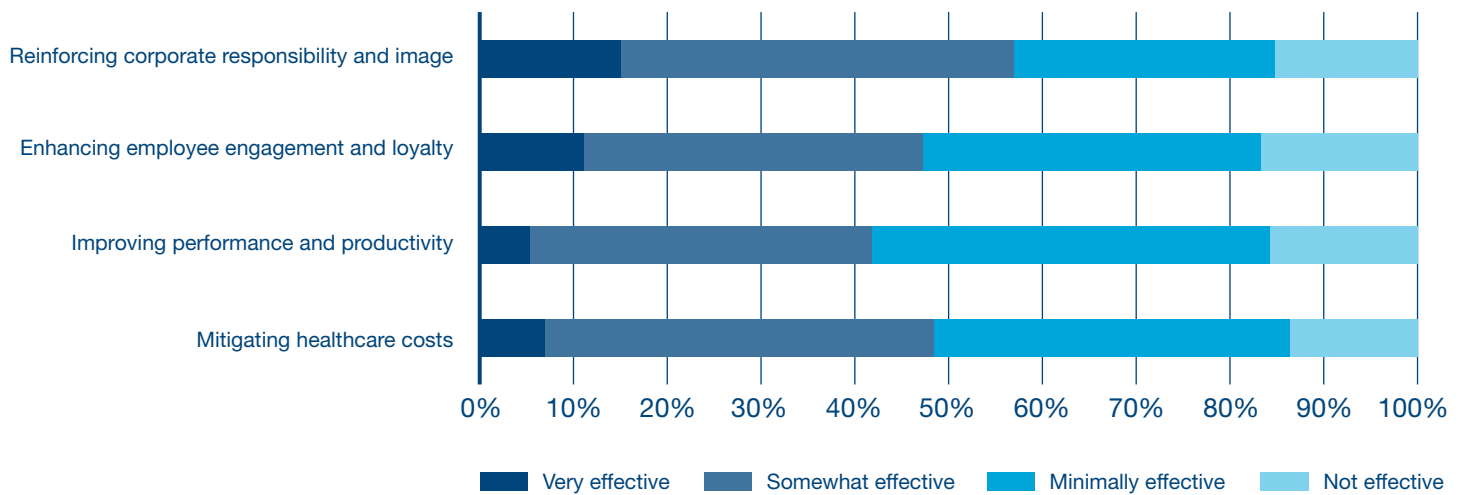
As the level of deductibles has increased, members have become more aware of the administrative complexity of claims processing. The use of online tools to make claims processing more transparent and effective is becoming standard. Some health plans are using estimator tools that help workers understand the costs of procedures and treatments.

- *Wellness is being worked into employers’ overall people strategies.*

Two-thirds of employers are using wellness programs, according to the HRI survey, although the perceived effectiveness of those programs is uneven. Nearly 50% said that their wellness programs were somewhat effective. However, effectiveness is measured in broader terms than costs. As Chart 14 shows, wellness programs are almost equally effective at engaging employees and boosting productivity, corporate responsibility, and corporate image.

Integration of wellness into other efforts is still in its infancy, however. The HRI survey found that few have taken a holistic approach to wellness by combining it with related programs. Only 34% said their wellness strategy had been integrated with occupational health, 28% with a return-to-work program, 26% with absence management, 18% with workers' compensation, and 15% with talent management.

Chart 14: How effective is your health and wellness program?

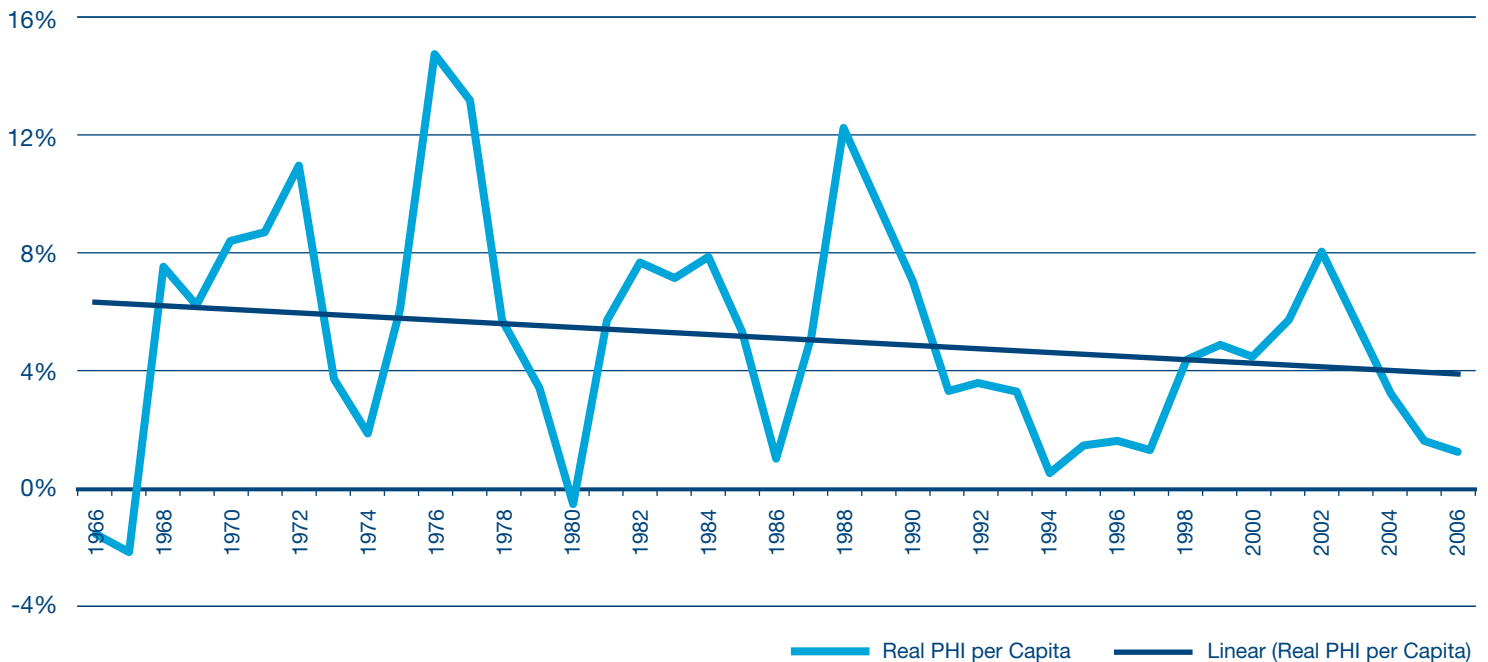


Source: PricewaterhouseCoopers' Health Research Institute

Conclusion: Anticipate medical costs to outpace CPI in next five and 10 Years

Because health spending tends to be cyclical, it's instructive to look at how history may provide guidance for long-term planning. First, both healthcare spending and private insurance premiums have been subject to a regular cycle of both increasing and decreasing trends. Chart 15 shows that the trend in private health insurance has a cycle, which has resulted in five major peaks, with corresponding troughs, over 40 years. Roughly the same peaks and troughs can be seen in private insurance premiums as well. The next trough followed by a rising trend should be expected in the near future, given the falling costs and premiums since 2003.

Chart 15: Real Growth in Private Health Insurance (1966 - 2006)



Source: PricewaterhouseCoopers' calculations of the CMS, National Health Expenditure Accounts, 2008

Second, over the longer haul, private healthcare spending has been increasing faster than GDP and CPI and is expected to continue to do so for at least the next decade. At the same time, the trend in private healthcare spending has been slowing slightly. Chart 15 shows that the trend in real, per capita dollars, private healthcare spending has been decreasing a percentage point every decade or two. If we extend the trendline, private per capita spending will increase at roughly 2.5% more than CPI in 2018 compared to 3.3% in 2008. The downward trend is consistent with economic theory as well. As healthcare grows faster than other components of spending, an increasing share of income is devoted to healthcare and resistance to further increases begins to slow down the growth.

Another long-term trend in the healthcare system is the growth in the government's share of overall spending. Since the government tends to underfund healthcare, more cost-shifting to private plans may be in store.

In summary, payers and employers should assume the following features of our healthcare system for the next five to 10 years:

- The trend in costs and premiums can be expected to increase again, possibly soon.
- The long-term trend in real healthcare costs may be lower than it has been in the past.
- The lack of policy solutions for the uninsured and underpayments by Medicare and Medicaid could accelerate premium increases higher than medical cost growth.

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PricewaterhouseCoopers' Health Research Institute provides new intelligence, perspectives, and analysis on trends affecting all health related industries, including healthcare providers, pharmaceuticals, health and life sciences and payers. The Institute helps executive decision-makers and stakeholder navigate change through a process of fact-based research and collaborative exchange that draws on a network of more than 3,000 professionals with day-to-day experience in the health industries. The Institute is part of PricewaterhouseCoopers' larger initiative for the health-related industries that brings together expertise and allows collaboration across all sectors in the health continuum.

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- 8 Big Pharma turns to Biologics for growth to 2010 - Datamonitor PLC London, May 2006.
- 9 The National Bureau of Economic Research defines a recession as "a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales." Most, but not all, of the recessions identified by NBER consist of two or more quarters of declining real GDP. NBER usually does not officially declare that the economy has entered a recession until 6 to 18 months after the fact. The last recession was fairly short, beginning in March 2001 and ending eight months later in November 2001.
- 10 Charts 11, 12 and 13 show recessions as shaded bars separated by areas that are expansions. The recession begins at the peak of an expansion and the next expansion begins at the trough of the recession. In other words, the recession begins when the economy begins to decline and ends exactly when it begins to recover.
- 11 Working Towards Wellness: The Business Rationale, The World Economic Forum in cooperation with PricewaterhouseCoopers, January 2008.

the 1990s, the number of people in the UK who are aged 65 and over has increased from 10.5 million to 13.5 million (13.5% of the population).

There is a growing awareness of the need to address the needs of older people, and the Government has set out a strategy for the 21st century in the White Paper on *Ageing Better: The Government's Strategy for Older People* (Department of Health 2000). This strategy is based on the following principles:

- Older people should be able to live independently and actively in their own homes.
- Older people should be able to live in their own communities.
- Older people should be able to live in their own homes and communities for as long as possible.

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