Milliman Research Report

Prepared by:
Milliman, Inc.

Milliman

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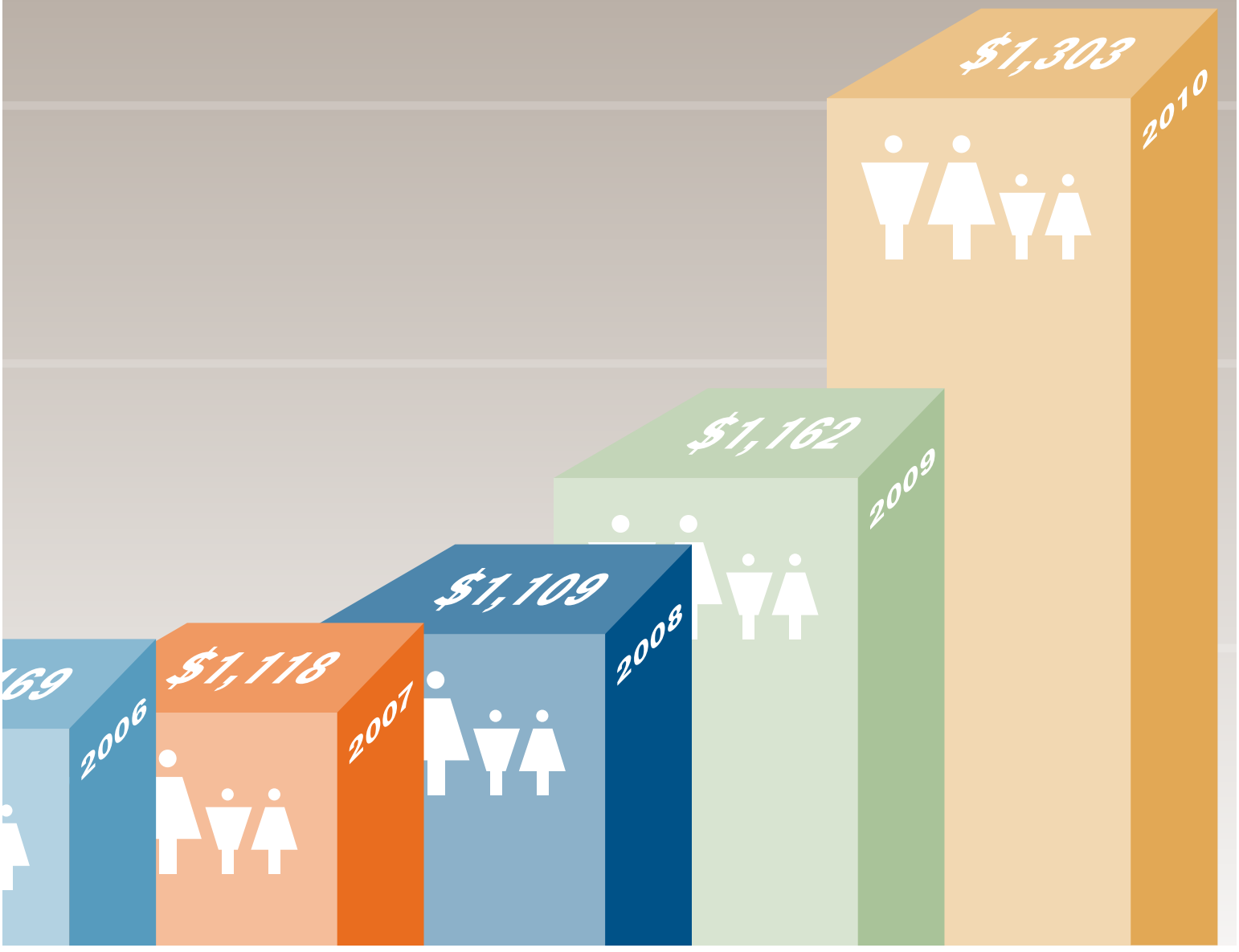
2010 Milliman Medical Index

2010 healthcare costs increase $1,303 for family of four



Milliman

2010 MMI
Summary and Observations

The annual Milliman Medical Index (MMI) reports total annual medical spending for a typical American family of four covered by an employer-sponsored preferred provider organization (PPO) program.

The MMI uses a consistent methodology to benchmark health benefit costs. We annually measure the changes in those costs over the most recent five-year period.

The MMI looks at key components of medical costs and charts the changes in these components over time, including cost changes for employers and employees. In addition to national cost trends, the MMI includes results for 14 major American metropolitan areas to illustrate how widely medical costs can vary by region.

As the landscape for healthcare financing changes following the passage of healthcare reform, the 2010 MMI provides a reminder that healthcare costs continue to increase at rates exceeding wages and the Consumer Price Index (CPI).

MILLIMAN MEDICAL INDEX KEY FINDINGS

The total 2010 medical cost for a typical American family of four is $18,074. Compared to the 2009 amount of $16,771, this is an increase of 7.8%.

This is the third year in a row where the annual rate of increase has been below 8%; however, the dollar increase of $1,303 is still the highest we have seen in the last 10 years and since the inception of this index.

The cost trend for a facility, both inpatient and outpatient, accelerated this year while it decelerated for physician, pharmacy, and other services.

Employers and employees alike shared the increase in cost this year, with employers total costs increasing 8.0% and employees total costs increasing 7.4%. The employee portion includes both out-of-pocket cost sharing at time of service and payroll contributions for medical coverage. Increasing healthcare costs remain a challenge for both employers and employees and are largely driven by increases in the underlying cost of care.[1]

At $10,744, the average employer's share of the cost nationwide for the typical family of four now surpasses $10,000 for the first time.

Healthcare reform introduces new dynamics with potential implications for the annual rate of increase in the years to come. A few observations stand out in particular that may affect the cost of care for our family of four:

- Required benefit changes under healthcare reform will tend to shift costs from employees to employers.
- Many employees, such as the family of four measured by the Milliman Medical Index, will see limited change in their benefits.
- Reform will affect different areas of the country in different ways due to local cost characteristics and the existing regulatory environment prior to the Patient Protection and Affordable Care Act (PPACA) in any given state.
- The long-term cost trend will be affected by the possibility of different provider/insurer dynamics, including network composition and provider incentives. This may be fertile ground for innovation. These innovations may be necessary to affect cost trends for the various components of care.

FIGURE 1

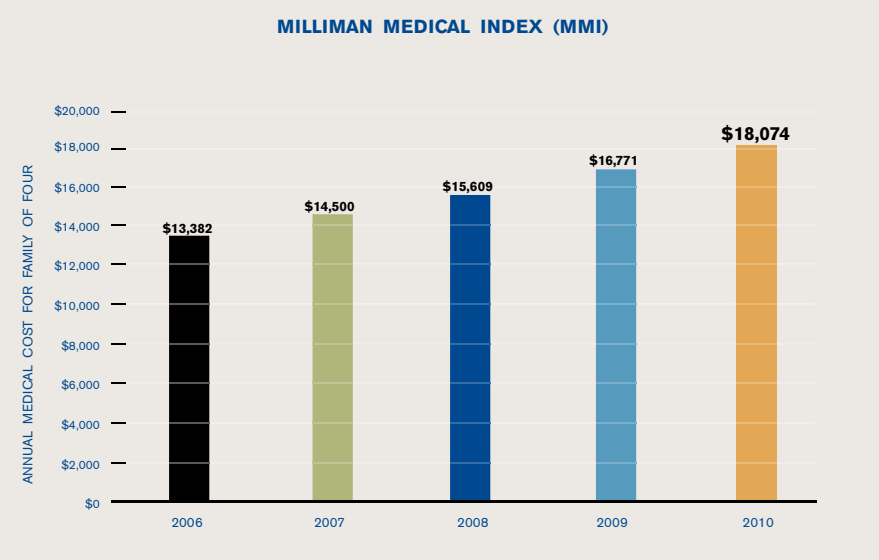
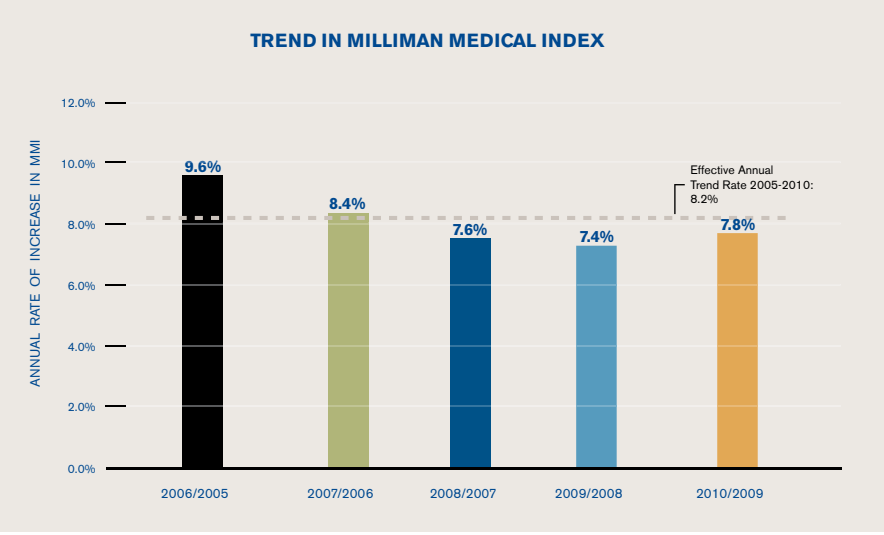


FIGURE 2



1 For more information, see Harris, R., Rifkin, B., and Snook, T., Cost control: Manage the causes, not the effect. Available at http://www.milliman.com/perspective/healthreform/pdfs/healthcare-cost-manage-causes.pdf.

GEOGRAPHIC DIFFERENCES IN HEALTHCARE COSTS

Figure 3 shows the 2010 Milliman Medical Index for 14 major metropolitan areas selected from across the country to illustrate the geographic variation in costs. The costs vary from low to high by more than 35%, with the lower-cost areas generally being in the West and across some parts of the South. The variations from city to city result from a complex array of regional factors, including costs per service, physician treatment patterns, and patient demand.

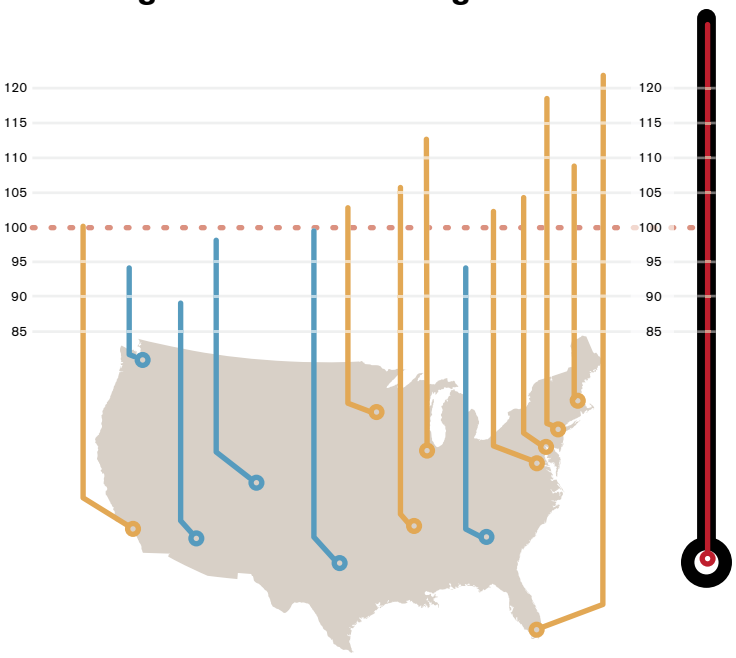
The geographic index was developed on a consistent basis across areas using standard actuarial principles and consistent family-of-four demographics for each of the 14 areas. While the range across the 14 cities is substantial, costs in other cities may fall outside the illustrated range.

Similar to 2009, three cities (Miami, New York City, and Chicago) continue to have costs at least 10% higher than the national average; all three now exceed $20,000 for our family of four, with Miami topping out at $22,089. Phoenix and Seattle continue to experience costs much lower than the national average, with costs $5,000 to $6,000 lower than the highest cities.

We expect the new healthcare reform act may have a variety of different cost implications from one region to another. For example, plans in high-cost areas are much more likely to be affected when the exise tax on high-cost "Cadillac" plans comes becomes effective in 2018. These areas may, however, have potential to decrease costs through adopting "best practices" of medical care and innovative reimbursement models. On the other hand, plans in low-cost areas may be more likely to struggle with minimum loss ratios prescribed by the new law. When limited to no more than 15% or 20% of premium, the dollars available for administrative expenses, investment in information technology, and margins for risk and profit are lower in these low-cost areas. In addition, state exchanges, risk pools, and certain regulations could develop with substantial differences from state to state. In particular, states will have some discretion in how they structure the exchanges, how they promote the exchanges, and whether they complement basic information about cost and benefits with other consumer information that can help inform better consumer choices.[2]

FIGURE 3

Percentage of National Average



City	MMI	National Percentage
Miami	$22,089	122.2%
New York City	$21,477	118.8%
Chicago	$20,412	112.9%
Boston	$19,654	108.8%
Memphis	$19,146	105.9%
Philadelphia	$18,933	104.7%
Minneapolis	$18,666	103.3%
Washington DC	$18,548	102.6%
Los Angeles	$18,098	100.1%
Nationwide	$18,074	100.0%
Dallas	$18,030	99.8%
Denver	$17,817	98.6%
Atlanta	$17,122	94.7%
Seattle	$17,007	94.1%
Phoenix	$16,071	88.9%

2 Studebaker, B. and Leonardo, P., Healthcare Data Pooling: Coming Soon to a Community Near You? Journal for Healthcare Quality Web Exclusives. Available at http://www.milliman.com/expertise/healthcare/publications/published/healthcare-data-pooling-coming-PA02-06-08.php

DISSECTING HEALTHCARE COSTS

Figure 4 shows the distribution of the $18,074 total medical costs paid by and on behalf of the typical American family of four. This distribution includes both the portion of costs paid by an employer's benefit plan and the portion paid by the family in the form of out-of-pocket cost sharing. Inpatient and outpatient facility services combined represent 48% of the total annual medical costs, which is up from 47% last year. Physician services represent 33%, down from 34% last year. Prescription drugs represent 15%, and other miscellaneous services represent 4%. Over the past five years, pharmacy care and facility costs, particularly outpatient facility costs, have increased at a higher average annual rate than physician services. The largest dollar increase this year was for inpatient facility care, which increased by $498 annually.

The increase includes both change in utilization and change in average unit cost. "Average unit cost" reflects the negotiated charge for each service, as well as the mix of services delivered.

The 2009 to 2010 hospital inpatient annual rate of increase grew from 7.7% to 9.8%. Most of the inpatient annual rate of increase is driven by average unit costs; we are seeing very little change in utilization. The hospital outpatient annual rate of increase grew from 10.2% to 11.6%, mostly because of increased average unit costs. Hospital outpatient care is the area of highest growth for the second year in a row.

The physician annual rate of increase declined from 6.0% to 5.2%. Although physician costs are the biggest single piece of the healthcare cost pie (Figure 5), their 2010 annual rate of increase is lower than that of other healthcare cost components. As a result, the share of medical expense that is the result of direct physician costs continues to decrease.

Most of the hospital and physician cost increases identified in this year's MMI have been driven by average unit cost, not utilization, which frames the coming effort to control costs. Provider/payor negotiations will be more visible and intense in the reform environment and as regulators put more pressure on the premium rate-setting process.

At 6.1%, the pharmacy annual rate of increase is also less than the overall cost trend of 7.8%. Once again, average unit costs seem to be a more significant driver than utilization: Only about 17% of this year's increase in pharmacy spending is due to increased utilization, and the other 83% of the increase is due to average unit cost increases. Pharmacy spending is affected by several factors:

- The mix of drugs that are dispensed
- The general trend to increased utilization of generics over the last several years
- The transition of existing drugs off patent
- The introduction of new drug therapies

On a dollar basis, hospital services and physician services contributed $820 and $301, respectively, to the increase in total annual medical costs between 2009 and 2010, while pharmacy's contribution totaled $151.

FIGURE 4

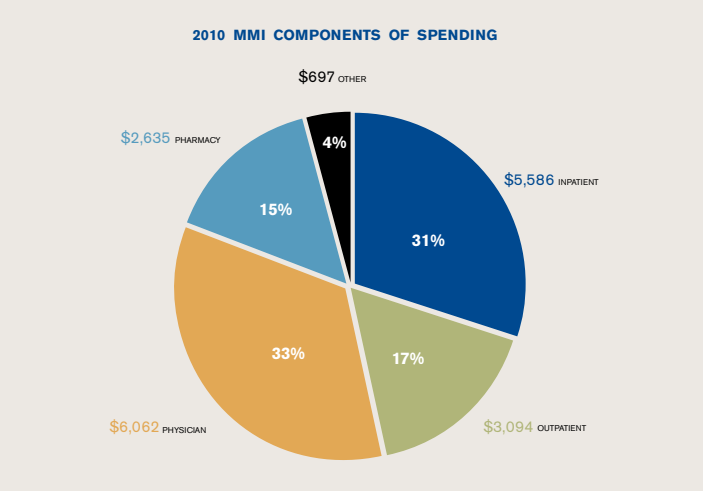


FIGURE 5

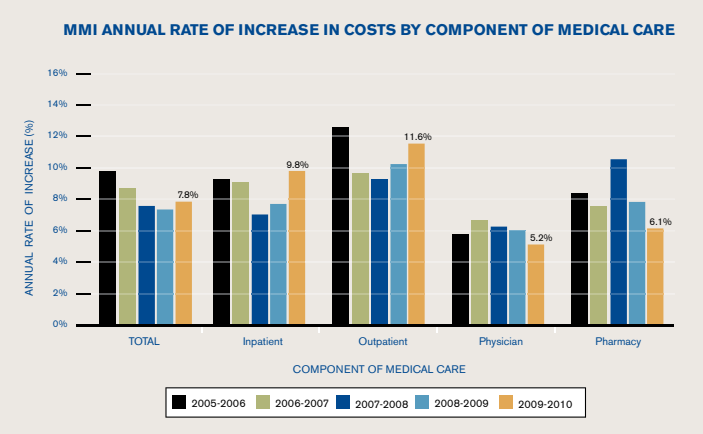
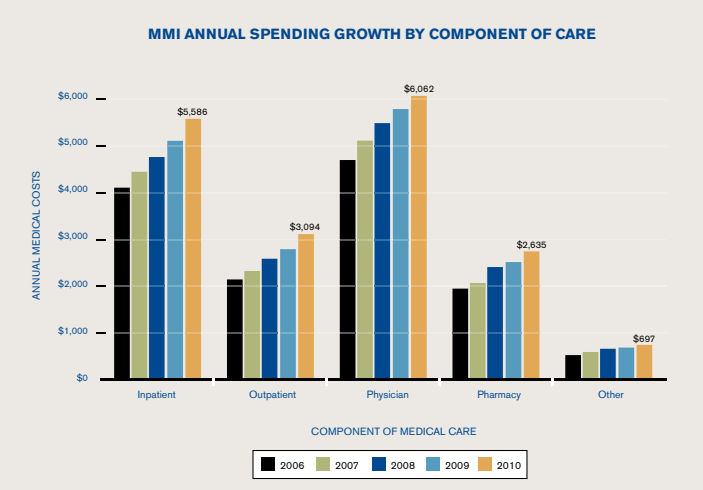


FIGURE 6



EMPLOYEES' SHARE OF HEALTHCARE COSTS

In the last year, employers picked up a slightly larger share of the healthcare cost increase, a reversal from three previous years that saw employees taking on more of the increase. Many employers expected healthcare reform would bring wide-scale changes to the healthcare landscape and preferred a wait-and-see approach before making changes to their program that might disadvantage them in the new legislative environment. With reform in place, many near-term reforms will shift costs from employees to employers (see sidebar below).

In order to understand the drivers behind the employer and employee portions, it is necessary to clearly define each source of payment for medical care. For the MMI, we use three main categories:

- **Employer subsidy.** Employers subsidize a portion of the monthly premium costs for their employees' coverage.
- **Employee contributions.** Employees who choose to participate in the plan pay the remainder of the monthly premium costs, usually through payroll deductions.
- **Employee out-of-pocket cost at time of service.** Employees who receive care may have copays, deductibles, and other design elements that are paid out of pocket at the time of service.

Figure 7 shows the relative proportions of each of these three categories for 2010. Of the $18,074 total medical cost for a family of four, the employer pays about $10,744 in employer subsidy (59%) while the employee pays $4,325 (24%) in employee contributions and $3,005 (17%) in employee out-of-pocket costs. The proportion of out-of-pocket costs to insured costs gets at the idea of "plan richness."[3] [4]

3 The MMI plan design was developed with reference to the Milliman Midmarket Survey and the Kaiser Family Foundation Survey. http://ehbs.kff.org/?CFID=19915252&CFTOKEN=80377269&jsessionid=6030892875bbd25a2f6d63502c7e766572c7

4 The new law tries to standardize plan richness by offering several different minimum benefit levels. For more on these benefit minimums, See Dobson, B., Harris, R., and Snook, T., Understanding healthcare plan costs and complexity. Available at http://www.milliman.com/expertise/healthcare/publications/rr/pdfs/understanding-healthcare-plan-costs-rr06-15-09.pdf.

Near-term reforms that will shift costs from employees to employers

We now know that several near-term provisions will shift costs from employees to employers:

Expand dependent coverage for adult children up to age 26: For families such as the MMI typical family of four, with no adult dependents, this change may go completely unnoticed. There are, however, people with adult children that have found it difficult or impossible to obtain healthcare coverage. The uniform requirement for plans to allow coverage up to age 26 will provide these persons with affordable insurance options

Remove lifetime and annual limits: Some plans currently have lifetime or annual limits on the dollar amount of benefits payable by the plan. These limits are more common in small group and individual plans but can also be found in some large group and Taft-Hartley plans. If an employee or employee's family member has claims in excess of these limits, then they are currently responsible for the costs. Phase-out of these limits would shift those costs from the individual to the plan, thereby increasing the plan's cost.

Restrict cost sharing for preventive care: Coverage of certain preventive services without any cost sharing would also shift costs from the individual to the plan for any employees that are currently covered by plans that require out-of-pocket cost sharing for such services. The implications of this change in terms of utilization will vary, but it seems likely that this elimination of cost sharing for preventive services may lead to increased use of these and other services.

Prohibit preexisting condition exclusions for children's coverage: In some instances, employees and their families have found that coverage for certain existing conditions is limited when they take a new job and obtain coverage after a period of being uninsured. There will be prohibitions against such restriction for children's coverage. Again, a cost of care now borne by the employee would shift to the plan.

FIGURE 7

ANNUAL INCREASE IN SPENDING SPLIT BY EMPLOYER AND EMPLOYEE PORTIONS

	2006/2005	2007/2006	2008/2007	2009/2008	2010/2009
TOTAL MEDICAL COST (EMPLOYER & EMPLOYEE)	9.6%	8.4%	7.6%	7.4%	7.8%
EMPLOYEE OUT-OF-POCKET COST SHARING	8.6%	9.5%	10.5%	5.4%	6.6%
EMPLOYEE PAYROLL DEDUCTION	5.4%	12.8%	10.1%	14.7%	8.0%
EMPLOYER PORTION	11.3%	6.5%	6.0%	5.4%	8.0%

Figures 8 and 9 show the historical growth in these three cost sharing categories. Over the past year, the total cost increase in the MMI was more for employers than employees. Employer subsidies have increased about $797 while the employees have seen increases of about $506, including $321 for employee contributions and $185 for employee out-of-pocket costs.

We continue to see employers and employees taking on different proportions of the cost increase over the last six years. From 2004 to 2006, more of the cost increase was borne by the employer. In 2007 to 2009, the employees took a larger percentage share.

In terms of absolute dollars, the total MMI has increased about $6,881 since 2004. Employers have absorbed $3,995, a 59% increase, while employees have taken on an additional $2,886, a 65% increase.

Employee contributions are more visible because they affect all participants, not just those who visit a healthcare provider. Based on Milliman's national survey of more than 4,000 employers as well as data from the Kaiser Family Foundation, we estimate that the employee's portion of the premium was 28.7%, similar to last year. Employee contributions for our typical family of four have grown to $4,325, a significant portion of wages–using a representative household income of $50,000, the total cost to participate in the plan (even with no claims) would be 8.7% of income.

FIGURE 8

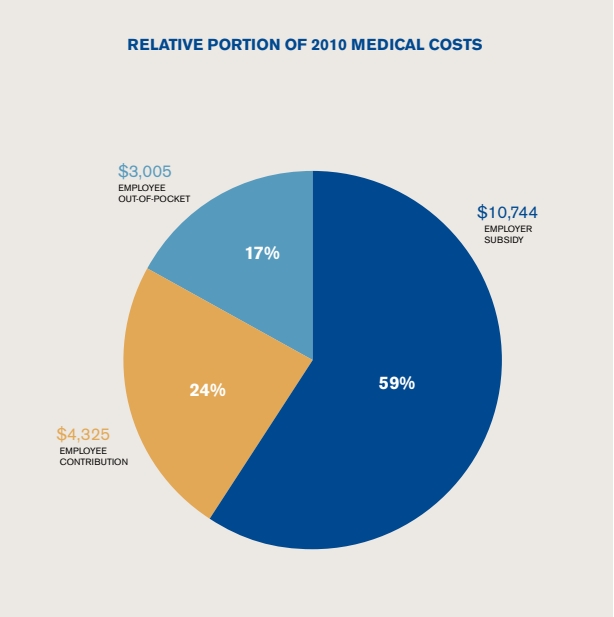
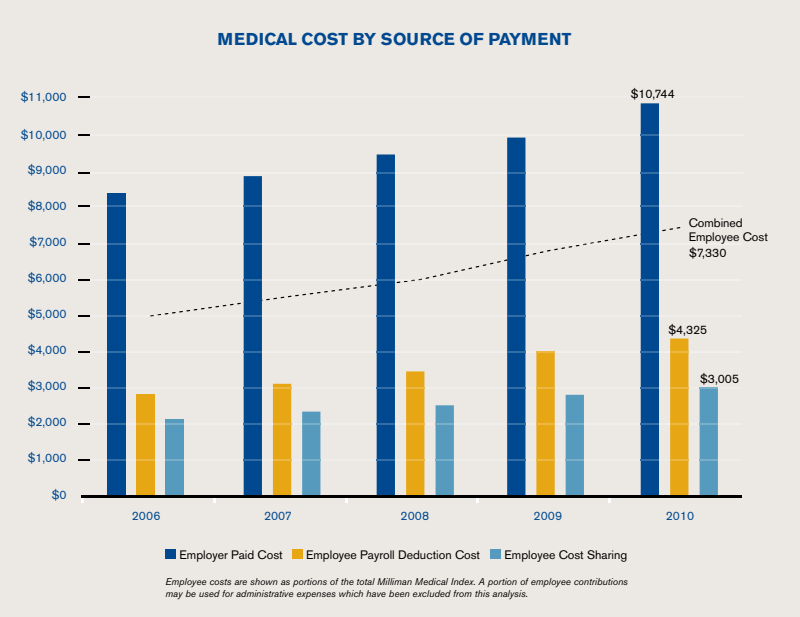


FIGURE 9



ECONOMIC EFFECTS ON HEALTHCARE COSTS FOR PEOPLE WITH INSURANCE

The unemployment rate remains high. When workers lose their jobs and lose their insurance coverage, the financial effects can be devastating to laid-off workers and their families. Less well understood is the way layoffs can create upward pressure on healthcare cost for people who continue to be insured under employer plans. Here are two examples of how this happens:

Example #1 – Increase in COBRA[5] participants

Layoffs can increase costs for employees who do not lose their jobs or their insurance coverage. For example, when a group of employees is laid off, it is usually only the least healthy laid-off workers who elect to continue their insurance coverage, as allowed by COBRA, creating built-in adverse selection against the employer's plan. Even though the COBRA participant must pay the full cost of coverage for an average employee, COBRA participants' healthcare costs are usually much higher than the premiums due to this adverse selection. This cost will be borne by the employer or the insurer, increasing the average cost per participant. Although the employer's total healthcare expenses may have dropped due to the layoff, some portion of the increase in per-employee costs may be passed on to employees at the next plan anniversary, in addition to any normal annual increases.

Example #2 – Increase in covered lives per employee

The MMI describes market cost dynamics for a "typical family of four." For a given employer or family, however, actual costs may be much different. For example, consider the case of a childless couple, where both adults work full-time and have health insurance through their own employer's health plan. If the husband loses his employer coverage and then joins his wife's plan, premium expenses for the wife's employer will increase. Furthermore, the couple's premium contribution will also probably increase, since employers tend to pay a lower percentage of spousal premium than employee premium. So, although the total cost of care for the couple did not change, the funding of that care was shifted completely to the wife's employer and to the couple.

It is noteworthy that the upward pressure on healthcare costs illustrated in both of these examples is temporary. Once the COBRA participant's eligibility period ends, per-person costs for the remaining employees may drop back down. Additionally, in both examples, once the economy improves and the employer starts hiring again, it is possible that the growth in per-employee costs will moderate.

5 The Consolidated Omnibus Budget Reconciliation Act of 1986 granted qualified workers the right to continue their health insurance under their employer's plan when they might have otherwise lost coverage due to certain events, such as being laid off. Employees who elect COBRA coverage must pay the full premium. In response to the economic downturn, the federal government provided a temporary 65% subsidy on those premium rates.

COST IMPLICATIONS OF HEALTHCARE REFORM ON FAMILY OF FOUR

While employers are making the immediate changes required to their benefit plans and adapting their longer-term benefit strategy to the new regulatory environment, healthcare costs continue to increase at rates exceeding most other costs of doing business. Debate continues on the extent to which the changes from healthcare reform have potential to bend the long-term cost curve; however, for the near term, the underlying drivers of increasing healthcare costs are not expected to immediately change.

Efforts to enforce insurance rate controls may have indirect impact on the growth in healthcare costs but still do not address the underlying cost of care.[6] For now, the onus of control remains with insurers, who will attempt to put pressure on providers to lower costs to a level that approved premium rates can support. There may be more extensive shifts in market dynamics in 2014, when the government takes on an even larger proportion of payment responsibility due to expansion in Medicaid, the creation of exchanges, and the availability of subsidies for certain lower-income individuals.

While underlying cost drivers as yet remain relatively unchanged, there are some changes that will have a predictable effect on cost. The most immediate changes, such as increasing dependent coverage up to age 26 and elimination of lifetime and annual benefit maximums, will cause a direct shift in costs from employees to employers. Other options that will be implemented later, such as federally-mandated state health exchange plans, require much deeper analysis before an employer can make an informed decision. Because the practical implementation of this new legislation has not yet been defined, many employers are choosing to delay changes to their benefit plans for future annual benefit cycles, although it is very possible that those changes could be dramatic.

Looking into the future for the "typical family of four" represented by this analysis, the cost implications of reform are unclear. Much depends on the underlying medical cost that is dissected in this report. When it comes to cost control, the status quo is not encouraging. If reform or some other factors[7] can motivate a reduction in this underlying cost of care, it will have important implications for the future cost of care for American families.

Milliman is developing various analyses of these changes. Visit this library of research at www.milliman.com/hcr, or visit www.healthcaretownhall.com.

For further perspective on how the Milliman Medical Index fits in the evolving healthcare system, visit our blog at

http://www.healthcaretownhall.com/?tag=milliman-medical-index

6 Ibid Harris, Rifkin, and Snook.

7 For more on upstream cost drivers, see Harris, R., Rifkin, B., and Snook, T., Manage the causes, not the effects. Available at: http://www.milliman.com/perspective/healthreform/pdfs/healthcare-cost-manage-causes.pdf.

TECHNICAL APPENDIX–MILLIMAN MEDICAL INDEX

The Milliman Medical Index is a byproduct of Milliman's ongoing research in healthcare costs. The MMI is derived from Milliman's flagship health cost research tool, the Health Cost Guidelines™, as well as a variety of other Milliman and industry data sources, including Milliman's MidMarket Survey and Milliman's Group Health Insurance Survey™.

The MMI represents the projected total cost of medical care for a hypothetical American family of four (two adults and two children) covered under an employer-sponsored PPO health benefit program, and reflects the following:

- Nationwide average provider fee levels negotiated by insurance companies and preferred provider networks
- Average PPO benefit levels offered under employer-sponsored health benefit programs[8]
- Utilization levels representative of the average for the commercially insured (non-Medicare, non-Medicaid) U.S. population

Variation in costs

While the MMI measures cost for a typical family of four, any particular family or individual could have significantly different costs. Variables that impact costs include:

- **Age and gender.** There is wide variation in costs by age, with older people generally having higher average costs than younger people. Variation also exists by gender.
- **Individual health status.** Tremendous variation also results from health status differences. People with chronic conditions are likely to have much higher average healthcare costs than people without these conditions.
- **Geographic area.** Significant variation exists among healthcare costs by geographic areas because of differences in healthcare provider practice patterns and average costs for the same services.
- **Provider variation.** The cost of healthcare depends on the providers used. Costs also vary widely because of differences in both billed charge levels and discounts that payers negotiate.
- **Insurance coverage.** The presence of insurance coverage and the amount of required out of pocket cost sharing also affects healthcare spending.

8 For example, for 2010, average benefits are assumed to have an in-network deductible of $535, various copays (e.g., $75 for emergency room visits, $22 for physician office visits, $10/25%/30% for generic/formulary brand/non-formulary brand drugs), coinsurance of 15% for non-copay services, etc.

ABOUT THE MILLIMAN MEDICAL INDEX

The MMI includes the cost of services paid under an employer health benefit program as well as costs borne by employees in the form of deductibles, coinsurance, and copayments. The MMI represents the total cost of payments to healthcare providers, the most significant component of health insurance program costs, and excludes the non-medical administrative component of health plan premiums. The MMI includes detail by provider type (e.g., hospitals, physicians, and pharmacies), for utilization, negotiated charges, and per capita costs, as well as how much of these costs are absorbed by employees in the form of cost sharing.

The 2010 report marks the sixth year of the MMI. The MMI incorporates proprietary Milliman studies to determine representative provider reimbursement levels by years, as well as other reliable sources, including the Kaiser Family Foundation/Health Research and Educational Trust 2009 Annual Employer Health Benefit Survey (Kaiser/HRET) to assess changes in health plan benefit level by year.

Launched more than 50 years ago, the Milliman Health Cost Guidelines is an industry standard, now used by more than 100 leading insurers to estimate expected health insurance claim costs. The seven-volume publication includes utilization rates for specific services and variations in costs in different parts of the country—critical data used by traditional health carriers and managed care organizations for product pricing. In addition, the Guidelines provide utilization benchmarks for managed care arrangements. The Guidelines is updated annually from core data sources, which contain the complete annual health services of more than 17 million lives as well as various specialized proprietary databases. Milliman invests more than $2 million annually in updating the Guidelines.

Milliman's Group Health Insurance Survey (formerly HMO Intercompany Rate Survey), launched in 1992, provides the industry's only annual survey measuring rate levels and experience for a uniform population and benefit design for HMOs, PPOs, and consumer-driven health plans from across the nation. Survey results are provided by metropolitan statistical area, state, region, and nationwide. The survey is used by managed care organizations nationwide to compare their rate levels and experience with those of their competitors, and includes utilization rates, costs of care for physician and hospital services, and various rate levels.

Milliman is among the world's largest independent actuarial and consulting firms. Founded in Seattle in 1947 as Milliman & Robertson, the company currently has 52 offices in key locations worldwide. Milliman employs more than 2,400 people. The firm has consulting practices in healthcare, employee benefits, property & casualty insurance, life insurance and financial services. Milliman serves the full spectrum of business, financial, government, union, education and nonprofit organizations.

For further information, visit milliman.com.