

MILLIMAN MEDICAL INDEX 2006

Milliman Inc. has completed its second annual study of the total annual medical costs for a “Typical American Family of Four.” The Milliman Medical Index (MMI) measures the average spending for such a family if covered by an employer-sponsored PPO program. It provides a benchmark by annually assessing the changes in those costs over a 5-year period. The MMI also examines the key drivers and the components of actual medical spending. The MMI breaks out and measures the rate of consumer (employee) spending and the rate of total spending for health care services in a given year.

Most surveys focus exclusively on “employer” cost increases. While such surveys are well-documented, the specific employer cost focus can actually serve to mask the total cost of healthcare paid

collectively by the benefit plan and by the employees. While employer cost increases are important, the MMI instead examines the total cost to deliver healthcare, and how this burden

is allocated between the employer and the employee.

The average annual medical cost for a family of four in 2006 is \$13,382. (See Figure 1.)

FIGURE 1

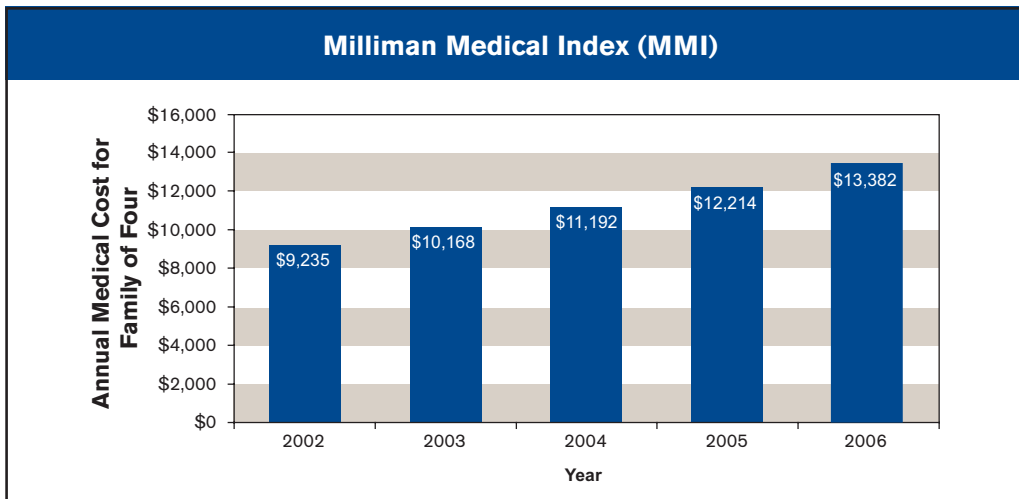
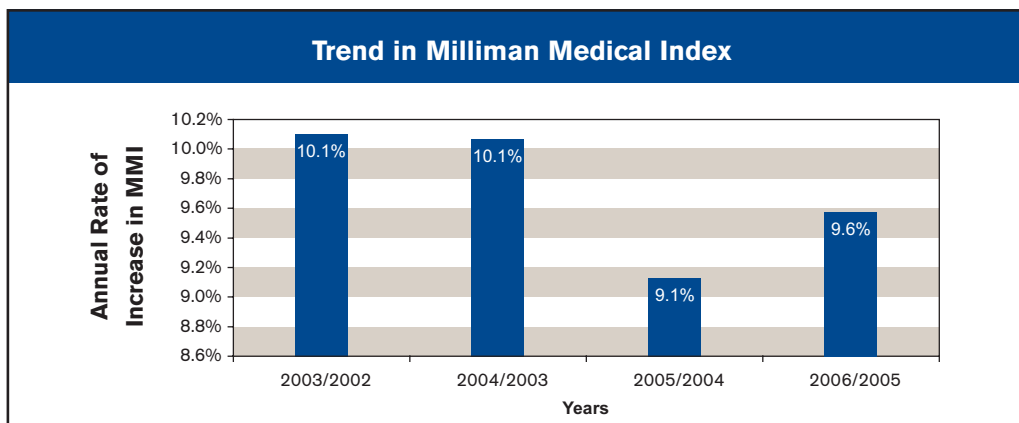


FIGURE 2



Medical costs for a family are determined by the number of healthcare services they utilize and the amounts that the employee’s health plan pays medical providers for each service. Utilization of medical services for a particular family varies significantly based on the family’s ages, geographic area, health status and, to some extent, random fluctuations due to unpredictable events. The MMI is based on analysis of claims costs for millions of members in a wide variety of areas of the country. The average cost of a particular healthcare service depends on the contract between the health plan and the individual healthcare provider. The MMI is based on estimated US average provider payment rates and Milliman’s analysis of historical claim data and understanding of trends in provider contracting.

The average annual medical cost for a family of four will increase by 9.6% from 2005 to 2006. The annualized rate of increase for the four year period 2002-2006 was 9.7%. (See Figure 2.)

Figure 2 on page 1 illustrates that trends have been fairly level over the last 4 years, in the 9.1%-10.1% range. While the 2006 trend doesn't continue the decline we saw in 2005, we do not believe this is a sign of a significant upturn in future trends.

Medical costs are categorized into the following major groupings:

inpatient hospital services, outpatient hospital services, physician services, prescription drugs, and other services, which includes ambulance, durable medical equipment, private duty nursing, and home health.

Figure 3 shows the distribution of total medical costs consumed by the typical American family of

four. It contains both the portion of the costs paid by an employer's benefit plan and the portion paid by the consumer in the form of cost sharing. In 2006, inpatient and outpatient hospital services combined represent 46% of the total annual medical costs, physician services represents about 36%, prescription drugs about 14%, and other miscellaneous services represent 4%. Miscellaneous services are reported slightly higher than in 2005, due to a reallocation of all home health-related services to this category.

Medical costs are increasing at different rates from year to year. (See Figure 4.)

For 2005 to 2006, the MMI shows a hospital inpatient trend of 9.3%, a hospital outpatient trend of 12.6%, a physician trend of 5.9%, and a pharmacy trend of 8.3%.

Pharmacy trends have received widespread attention over the past several years. The prescription drug component increased 11-13% in each of the years 2003-2005. We attribute the decline in pharmacy trends in 2006 to:

- Increased use of generic and mail order drugs, due to 3- or 4-tier copay structures that encourage these drug types through lower copays.
- Significant name-brand drugs going off-patent, and generic versions becoming available.

Increases in dollars of spending can show a different picture than trend rates. (See Figure 5.)

FIGURE 3

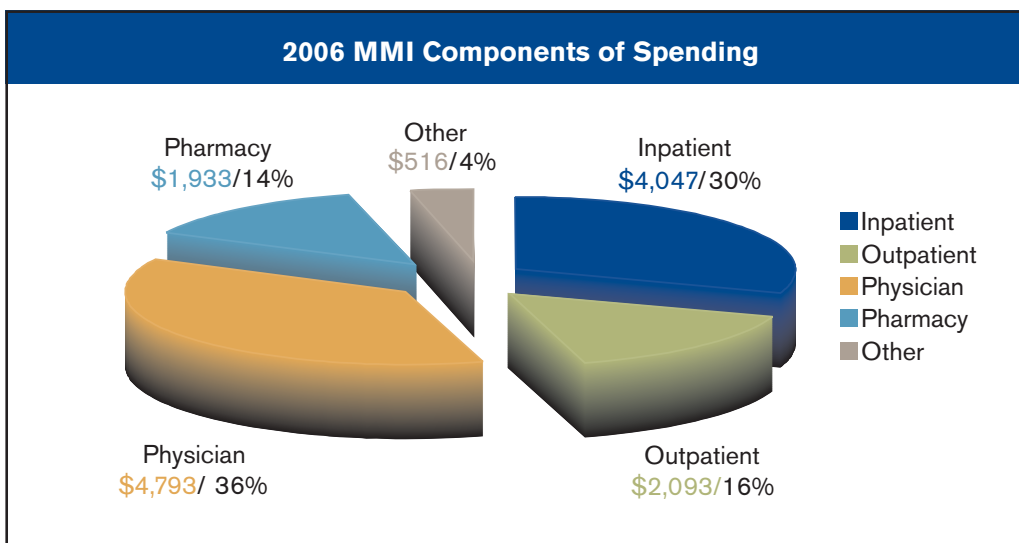
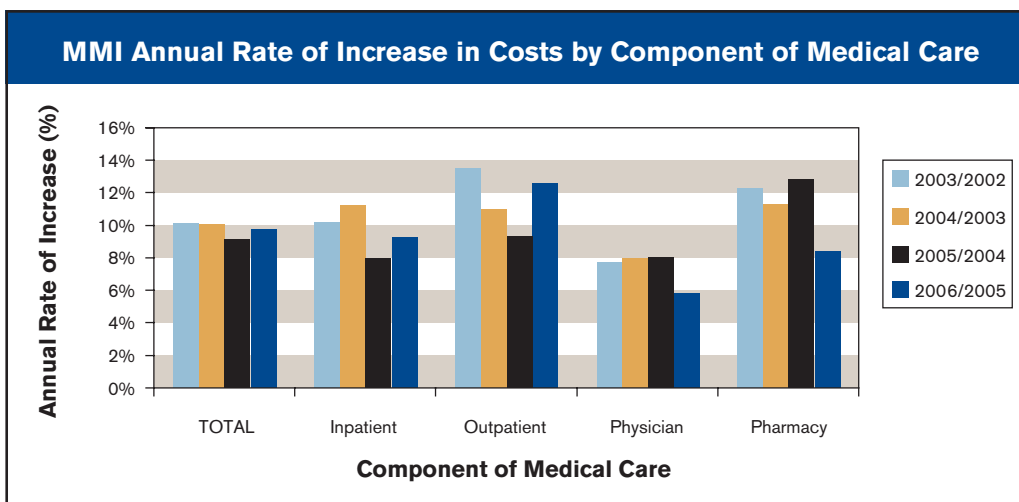


FIGURE 4



On a dollar basis, hospital services and physician services contributed \$578 and \$266 respectively to the increase in total medical costs between 2005 and 2006, while pharmacy's contribution was \$148.

Different drivers affect the trends for each component of medical care.

For inpatient hospital services, trends are due to some or all of the following:

- New technology, often requiring larger expenditures by the hospital.
- Flat trends in admission rates and lengths of stay, in part due to changes in health plan medical management as a response to consumer and provider expectations.
- The need for hospitals to generate sufficient revenue from all sources combined to cover the increasing costs of opera-

tions, while revenue increases from some sources, such as government programs and uninsured patients, do not keep pace with these increased costs.

- An increased ability by hospitals to negotiate more successfully with health plans. During the 1990s, health plans were generally very successful in keeping contracted rate trends low. This appears to have changed in the early 2000s for a variety of reasons.
- Increased utilization of specific procedures. While not a big component of the total trend, health plans are more frequently covering new and highly visible procedures such as bariatric surgery.

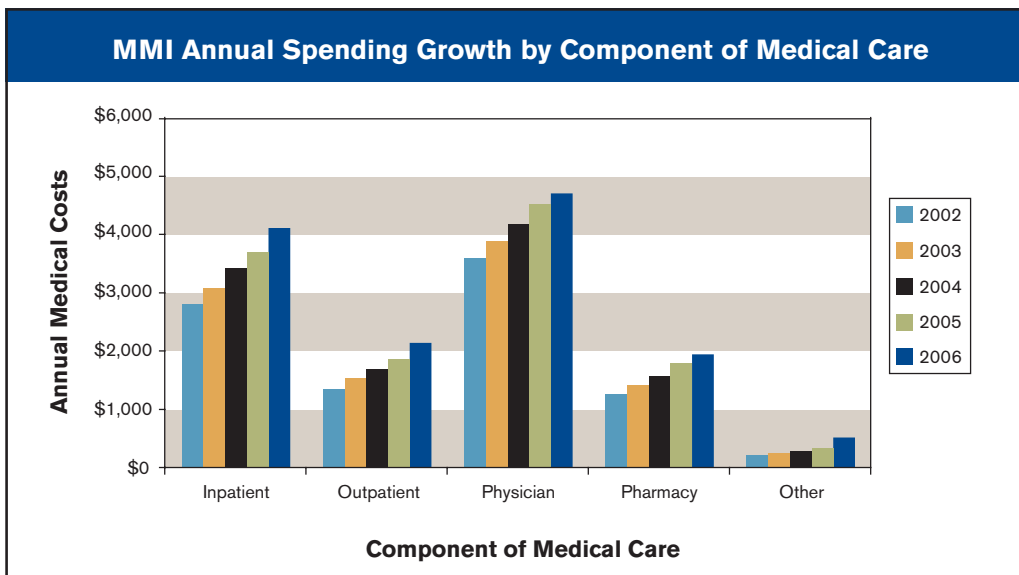
Hospital outpatient services have also been affected by new technology, allowing more services to be performed outpatient versus inpatient. This has caused a continuing shift of surgeries from inpa-

tient to outpatient, moderating an otherwise higher inpatient trend.

Hospital outpatient services are often paid on a percentage of charges basis, and hospitals have continued to increase their charge levels significantly in the early 2000s. In recent years some health plans have amended their hospital contracts to adopt a prospective payment system (PPS) similar to the one used by Medicare. The purpose of a PPS is to define a payment based on the diagnosis or procedures needed by the patient, not on the hospital's billed charges. This has the potential to moderate future trends in outpatient hospital costs.

Health plans have been fairly successful in maintaining relatively moderate trends for physician services. For many network health plans, physician reimbursement is defined as a percentage of Medicare reimbursement. In recent years, scheduled decreases in Medicare reimbursement have been avoided just

FIGURE 5



before they were to become effective, but the increases have ranged from very small to non-existent. The final 2006 physician Medicare fee schedule represents no increase over the 2005 fee schedule. Physician utilization has been driven by increases in office visits, surgeries, and radiology costs.

Prescription drug trends have been widely discussed. Contributors to the recent moderation of drug trends are discussed above. The drivers for future trends continue to be the high cost of new drugs that are not available as generics; increased utilization, in part due to direct-to-consumer advertising; and the advent of new drugs to

cover medical conditions that did not previously have a pharmaceutical treatment option.

Employers and employees share the total cost of healthcare.

Employees pay their share of healthcare costs through cost sharing at time of service and also through monthly payroll deductions.

As medical costs have increased, employees have paid an increasing dollar amount of costs through cost sharing. (See Figure 6.)

When members utilize healthcare services, they pay cost sharing amounts at the point of service. There are several common structures for cost sharing, including HMO plans with dollar cost sharing, and PPO plans which typically feature dollar cost sharing for regular physician services, but require the member to pay a percentage of costs for most other services. Based on a typical PPO plan design, Milliman estimates that out of the \$13,382 total medical costs for 2006, a family would pay \$2,210 out of its own pocket through member cost sharing. Physician cost sharing comprises the largest dollar amount of the overall cost sharing: \$810, followed by inpatient hospital costs, then pharmacy costs and outpatient hospital care.

Though consumer cost sharing dollars continue to grow, their percent of total healthcare spending is not increasing.

FIGURE 6

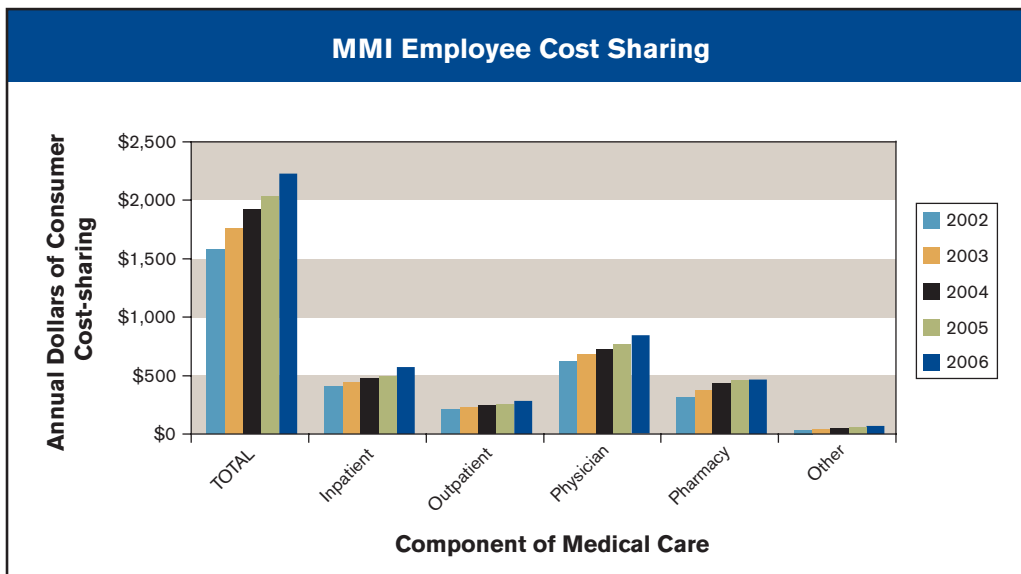
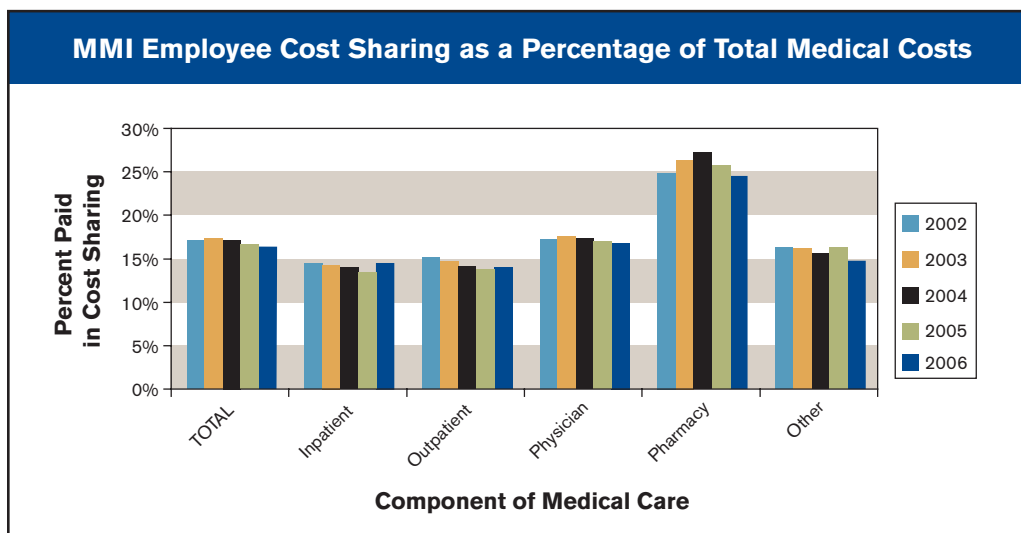


FIGURE 7



While the dollar amounts paid by families for cost sharing have increased over the last five years, they have not kept pace with the increase in total medical costs. In fact, the consumer's share of the medical cost dollar has increased at a slower rate than the total except in 2003.

Viewed as a percent of the cost for medical services, consumers are being asked to bear a larger share of the total cost of pharmacy services than other components of care. Figure 7 on page 4 shows that the consumer share of pharmacy costs is about 24%, compared to an overall average cost sharing around 17%. As mentioned earlier, consumers often reduce their copays by requesting generic or formulary drugs.

Adding employee payroll deductions to cost sharing payments produces the total amount paid by the family. (See Figure 8.)

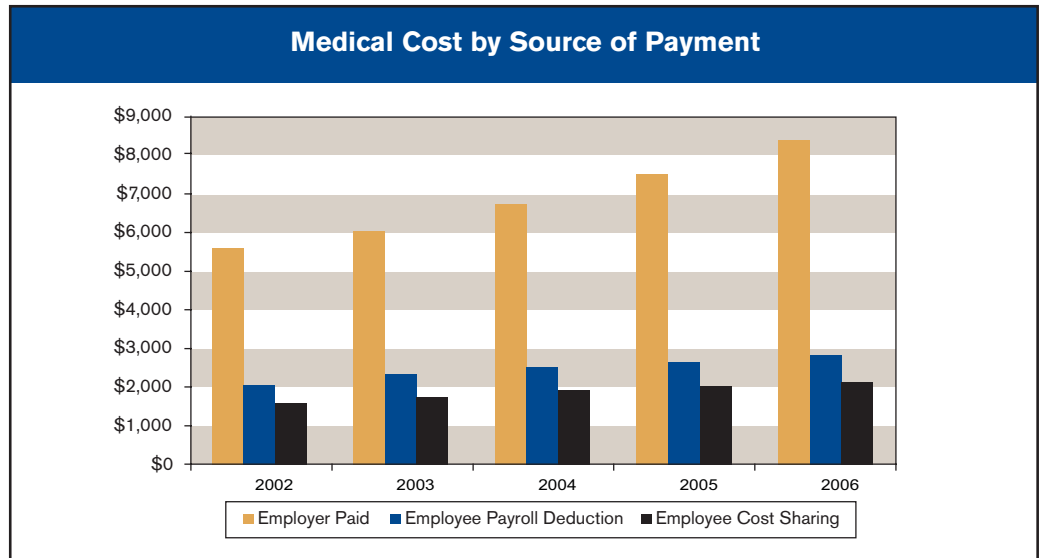
To consider the portion of the benefit plan medical costs paid through employees' payroll deductions, we referred to the Kaiser Family Foundation Employer Health Benefits Survey, which tracks employee contributions for a family of four for most years tracked by the MMI.

Figure 8 shows that of the \$13,382 total medical cost for a family of four, the employer pays about \$8,362 (62%), and the employee pays about \$5,020 (38%), \$2,810 in payroll deductions and \$2,210 in cost sharing.

The trends in the employee and employer shares of total medical costs are shown in Figure 9.

Figure 9 shows the trends in the cost sharing amounts paid by employees. Also shown are the trends in the employer and employee paid costs, where employee costs include both payroll deductions and cost sharing. (Employee costs include both payroll deductions and cost sharing.) When both types of employee costs are considered, the employee share five-year cost trends are lower than the five-year employer share trends.

FIGURE 8



Note: Employee costs are shown as portions of the total Milliman Medical Index. A portion of employee contributions may be used for administrative expenses which have been excluded from this analysis.

FIGURE 9

| | 2003/2002 | 2004/2003 | 2005/2004 | 2006/2005 |
|--|-----------|-----------|-----------|-----------|
| Total Medical Cost | 10.1% | 10.1% | 9.1% | 9.6% |
| Cost Sharing | 11.4% | 9.1% | 6.0% | 8.6% |
| Medical Cost Including Cost Sharing | | | | |
| Employee Share | 13.2% | 8.0% | 5.8% | 6.8% |
| Employer Share | 8.1% | 11.5% | 11.3% | 11.3% |

GEOGRAPHIC VARIATION OF HEALTH COSTS

The estimated average annual medical cost for a family of four in 2006 shown above, \$13,382, is a nationwide average. Practice patterns, utilization, and costs per service vary by geographic region. To illustrate this point, Figure 10 shows consistently developed 2006 Milliman Medical Indices for six major cities in the United States.

FUTURE TRENDS, INCLUDING CONSUMER DRIVEN HEALTH PLANS.

The 2005 MMI discussed the market trend towards consumer driven health plans (CDHPs). Since that time, interest in CDHPs as a potential vehicle for controlling costs has heightened. Due to its importance as an emerging trend, we have included an update on the effects of this trend in benefit plan strategy.

According to a recent report from the United States Government Accountability Office, participation in CDHPs increased from about 3 million in 2005 to over 5 million in 2006. While the percentage increase is impressive, it is important to note that this still represents only about 3% of the 177 million Americans with private health insurance coverage.

Whether CDHPs will continue to grow and ultimately affect the overall trend in healthcare costs for American families depends on a number of key factors:

Will CDHPs improve the efficiency of healthcare consumption? For proponents of CDHPs, a key assumption is that consumers with a greater economic stake in their healthcare decisions will take a more active role and be more prudent consumers. To date, however,

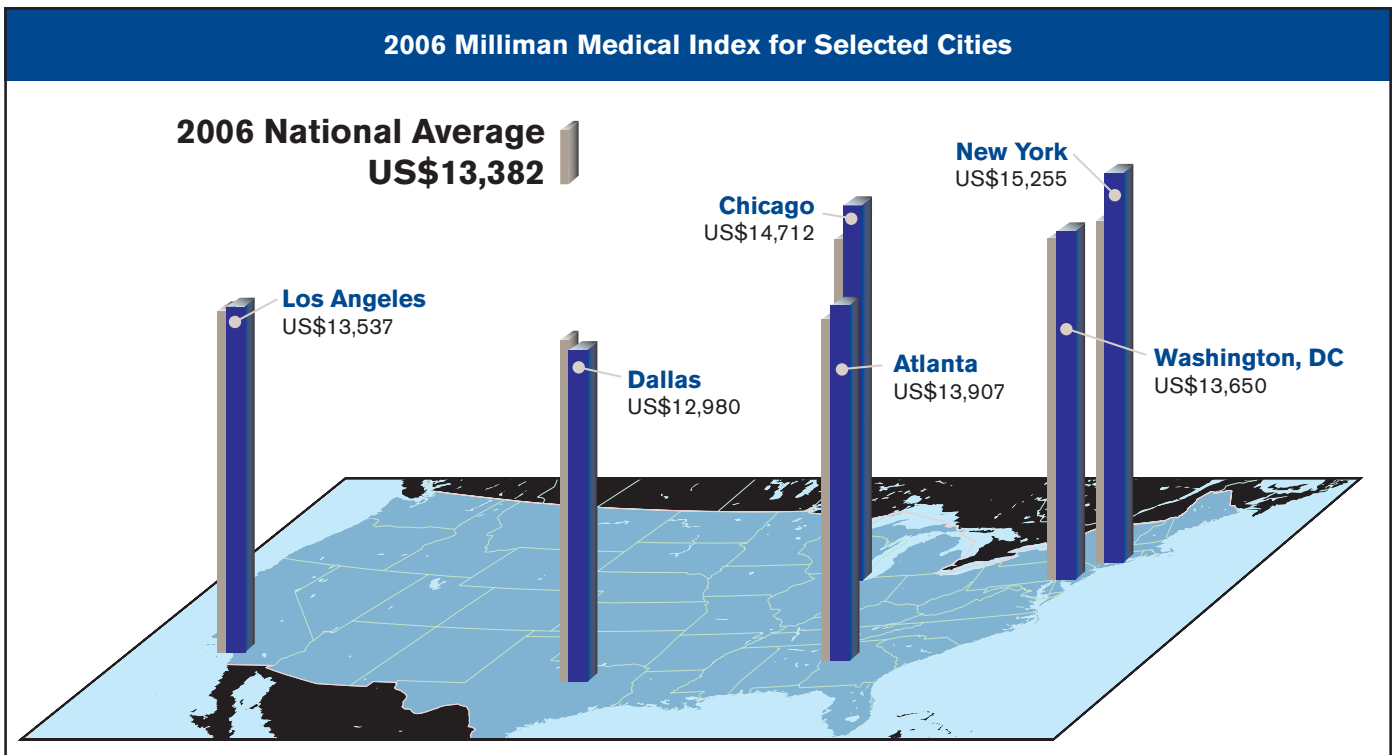
few statistically valid studies have successfully separated the behavior effects due to consumer education and plan design from utilization differences that are due solely to the selection of consumers who tend to elect coverage through a CDHP plan. Milliman is undertaking research that we expect to add clarity to this issue.

Will the collective force of consumers affect meaningful and positive change in the healthcare marketplace? One current barrier to greater consumer effect is the lack of sufficient actionable consumer information.

Consumers find it difficult to make prudent decisions regarding their own health maintenance and care without—

- useable information on their own health risks and support in improving those risks;

FIGURE 10



- understandable information on healthcare options when care is needed; and
- accurate information on the price of those healthcare options.

Even with this information, the sum of individual consumer decisions does not easily leverage to replace the buying power of large healthcare organizations. Mechanisms to maintain efficient market forces and provider partnerships in efficient care delivery will continue to be important.

Will CDHP products evolve to meet consumer's needs? Different consumers have different needs from their health plans. Young families may need ready access to care and a predictable health cost budget. Individuals with chronic conditions may need support in managing their conditions efficiently and a continuing subsidy to cover their higher-than-average annual costs. Aging workers may be interested in tax-advantaged savings toward medical costs in retirement. Existing CDHPs address some, but not all, of these market needs. As a result,

CDHP plans are not currently attractive to all consumers. Whether CDHPs continue to grow and ultimately cover a significant portion of American families will depend on whether the plans, and the laws that govern those plans, evolve to encompass the diverse needs of American families.

The Milliman Medical Index report is available on our website, www.milliman.com.

For additional information contact:

Marjorie Taylor

Tel: +1 202 292.1195

Email: marjorie.taylor@milliman.com

Marla Bryant

Tel: +1 206 504.5766

Email: marla.bryant@milliman.com

TECHNICAL APPENDIX—MILLIMAN MEDICAL INDEX

The Milliman Medical Index (MMI) is a by-product 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 *Group Health Insurance Survey*.

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

- nationwide average provider fee levels negotiated by insurance companies and preferred provider networks,
- average PPO benefit levels offered under employer-sponsored health benefit programs¹ and
- utilization levels representative of the average for the commercially insured (non-Medicare, non-Medicaid) US population.

The MMI includes both 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 health-care 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 (hos-

pitals, physicians, and pharmacies), both in terms of 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.

2006 is the second year of the MMI. For historical context, we have used the MMI methodology and prior research data to create MMI values for the period 2002-2004.

The MMI incorporates proprietary Milliman studies to determine representative provider reimbursement levels by year, and utilizes *The Kaiser Family Foundation/Health Research and Educational Trust 2005 Annual Employer Health Benefits Survey (Kaiser/HRET)* to assess health plan benefit level changes by year.

Launched more than 40 years ago, the *Health Cost Guidelines* are an industry standard, now used by more than 90 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 and within the same state—critical data used by traditional

health carriers and managed care organizations for product pricing. In addition, the *Guidelines* provide utilization benchmarks for managed risk arrangements. The *Guidelines* are updated annually from core data sources which contain the complete annual health services of more than 15 million lives as well as various specialized proprietary databases. Milliman invests more than \$2 million annually updating the *Guidelines*.

Milliman’s *Group Health Insurance Survey* (formerly the 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 trends in rate levels.

1. e.g., for 2006, in-network deductible of \$320, various copays (e.g., \$50 for emergency room visits, \$18 for physician office visits, \$10/25/35 for generic/formulary brand/non-formulary brand drugs), coinsurance of 15% for non-copay services, etc.