

## Health Cost Index: All Benefit Components Decrease Except Hospital Inpatient in the Second Quarter

We continue to present the two Health Cost Index series. In keeping with the previous notation used, the current series with the original benefit weights is referred to as the “Pre-2005 HCI” and the new series with the revised benefit weights as the “2005 HCI”. We still continue to work on a new Beta HCI series, which is intended to replace both the Pre-2005 HCI and 2005 HCI.

Based on our HCI Beta model work, Medicare Advantage enrollment is affecting observed trends, and is also likely affecting our original models. In most years the impact of this is small. However, in the

Beta HCI these shifts require nearly a 1% trend increase for 2003, and about a 1% trend decrease in each of the years 2006, 2007 and 2008 to account for this shift.

The Pre-2005 benefit weighted **All Benefits** 12-month moving average trends ended the second quarter of 2008 at 7.7%, after a decrease of 0.2% from the first quarter of 2008. The new 2005 HCI series ended the second quarter of 2008 at 8.7%, a decrease of 0.2% from the previous quarter. Note that the All Benefits 2005 HCI series reflects the effects of leveraging due to fixed copayments and deductibles. On a three month moving average basis, the Pre-2005 All Benefits series ended the

### The Health Cost Index Highlights

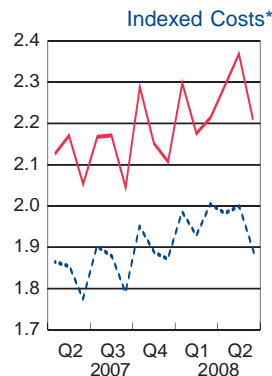
#### Health Cost Index

##### Pre-2005 HCI Series

2nd Quarter 2007 (Avg.): 1.8251  
2nd Quarter 2008 (Avg.): 1.9521

##### 2005 HCI Series

2nd Quarter 2007 (Avg.): 2.1166  
2nd Quarter 2008 (Avg.): 2.2893

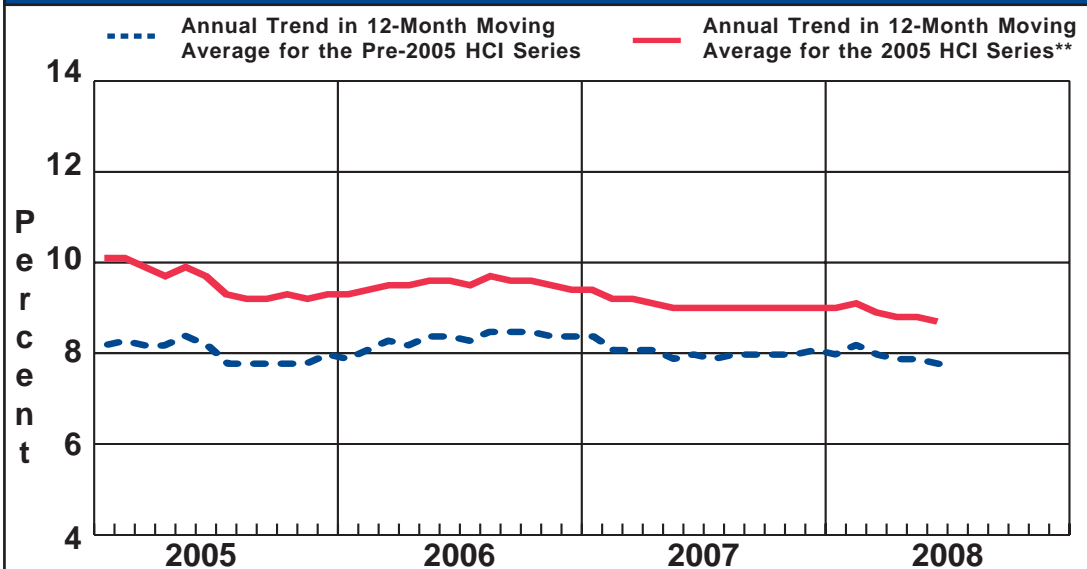


\*Indexed at 1/00

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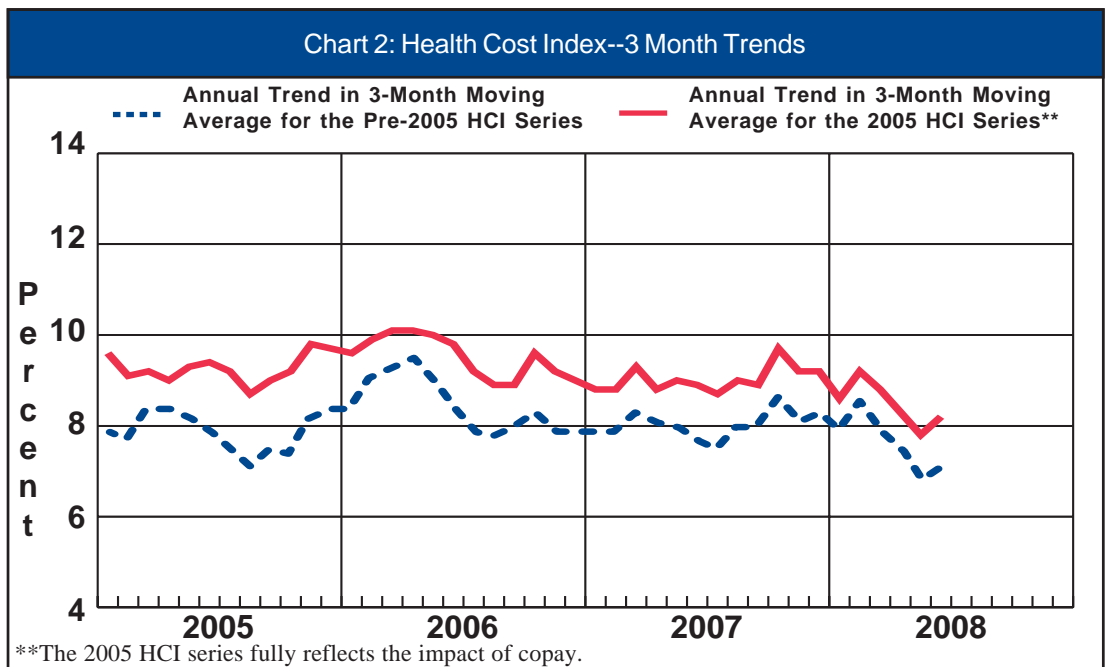
Chart 1: Health Cost Index--12-Month Trends



\*\*The 2005 HCI series fully reflects the impact of copay.

## Health Cost Index

*“Utilization trends ended the second quarter of 2008 at 2.3%, a 0.5% decrease from the first quarter.”*



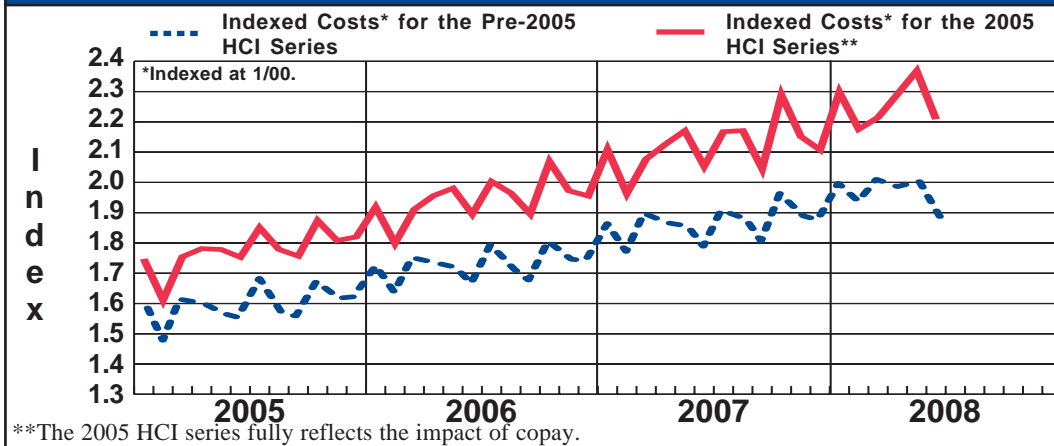
second quarter at 7.0%, a 0.8% decrease from the first quarter. The new 2005 HCI All Benefits series' three month trends decreased by 0.6%, from 8.8% to 8.2%.

**Price** trends ended the second quarter of 2008 at 5.8%, an increase of 0.3% from the first quarter of 2008. Price trends have increased by 1.0% over the past three quarters. **Mix/Intensity** trends increased by 0.1% to -1.1% during the past three months. **Utilization** trends ended the second quarter of 2008 at 2.3%, a 0.5% decrease from the first quarter. **Leverage** trends are unchanged since the first quarter of 2008, and remain at 0.7%.

Unlike the All Benefits trends, the benefit component trends do not reflect the effect of leveraging due to fixed copayments or deductibles. **Hospital Inpatient** trends increased by 0.2% to 6.7% in the Pre-2005 HCI and increased by 0.2% to 6.3% in the 2005 HCI. Hospital Inpatient trends for both the Pre-2005 and 2005 HCI increased steadily over the past twelve months. In the second quarter of 2008, **Hospital**

**Outpatient** trends decreased by 0.2% to 9.5% in the Pre-2005 HCI and decreased by 0.3% to 9.2% in the 2005 HCI. This decrease in Hospital Outpatient trends comes after increasing trends during each of the preceding three quarters. Both the Pre-2005 HCI and the 2005 HCI saw a decrease in **Physician** trends. The Pre-2005 Physician HCI ended the second quarter of 2008 at 6.6%, following a 0.1% decrease and the 2005 Physician HCI decreased by 0.1%, ending the second quarter at 7.4%. Like the Hospital Outpatient and Physician components, **Prescription Drug** trends declined during the second quarter of 2008. Drug trends have decreased during each quarter in the past year. During the most recent quarter, drug trends decreased by 0.5% to 5.4%, for both the Pre-2005 and the 2005 HCI. Prescription Drug trends have decreased by more than 3.0% over the past four quarters. Prescription Drug trends continue to exhibit more trend variation than the other benefit components as discussed in the Commentary from the previous quarterly HCI update. ■

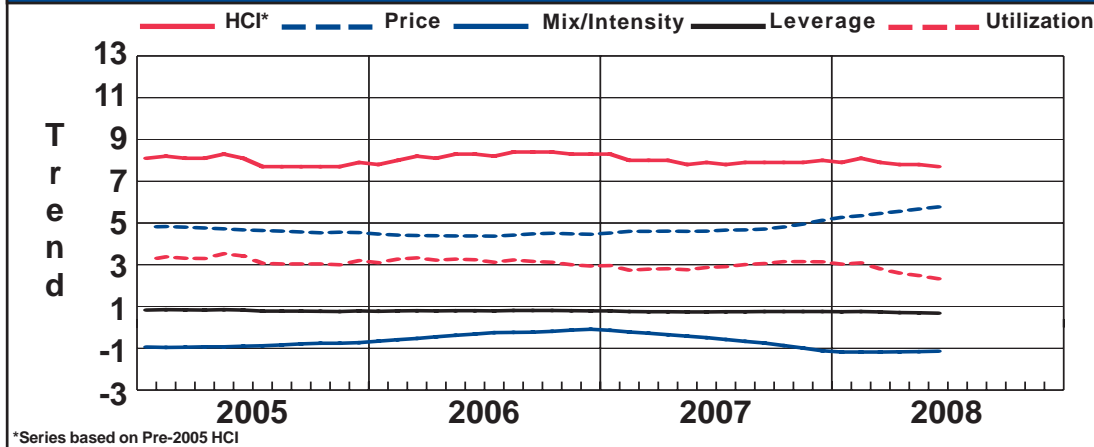
Chart 3: Health Cost Index



Health Cost Index

*“Drug trends have decreased during each quarter in the past year.”*

Chart 4: HCI Trend Components--12-Month Moving Average



The following table looks at the 12-Month Moving Average benefit components (not reflecting the effect of leveraging due to fixed copayments or deductibles):

Benefit Components (not reflecting the effect of leveraging due to fixed copayments or deductibles)

	Pre-2005 HCI Series			2005 HCI Series		
	Mar-08	Jun-08	Change	Mar-08	Jun-08	Change
All Benefits*	7.9%	7.7%	-0.2%	8.9%	8.7%	-0.2%
Hospital Inpatient	6.5%	6.7%	0.2%	6.1%	6.3%	0.2%
Hospital Outpatient	9.7%	9.5%	-0.2%	9.5%	9.2%	-0.3%
Physician	6.7%	6.6%	-0.1%	7.5%	7.4%	-0.1%
Prescription Drug	5.9%	5.4%	-0.5%	5.9%	5.4%	-0.5%
All Other	N/A	N/A	N/A	5.8%	7.8%	2.0%

\*Total (All Benefits) reflects the effect of leveraging due to fixed copayments or deductibles

# Projections

*“...we expect trends for both series to increase moderately during the next twelve months.”*

The second quarter of 2008 saw a moderate decrease in trends for both the Pre-2005 Health Cost Index (HCI) and the 2005 HCI. Based on our forecast models, we expect trends for both series to increase moderately during the next twelve months. Both of these series are illustrated in the chart below, along with their respective forecasts from the second quarter of 2007.

Our forecasts are based on proprietary econometric models that exploit the fact that economic activity leads health care cost increases by three to four years. In addition, we reflect the concurrent impact of changes in overall price inflation, Medicare reimbursement policies on the non-Medicare population’s health care costs (which the HCI focuses on), and a variable intended to capture the impact of managed care on medical cost trends. Because economic activity is the only leading indicator in our models, the other factors are based on scenarios. Thus, if the scenarios we use vary from actual results, our forecasts are also likely to vary from actual results. We are using ultimate inflation forecasts in the 3% range, gradually coming

down from current levels. If inflation were to increase or decrease from this level, this would directly affect our forecasts.

**Forecast Accuracy:**

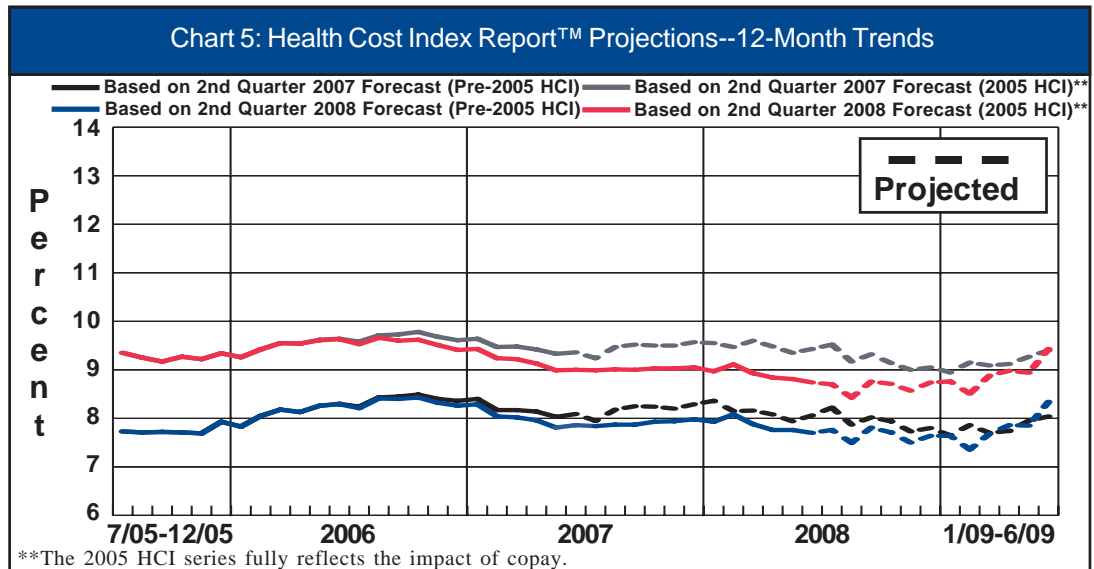
Periodic revisions in the HCI data sources and legislated Medicare and other changes, make it difficult to accurately assess our models forecast performance. Chart 5 illustrates the impact of data revisions (the difference between the solid lines) on the HCI forecast by comparing the current 12-month trend forecast to the second quarter 2007 forecast.

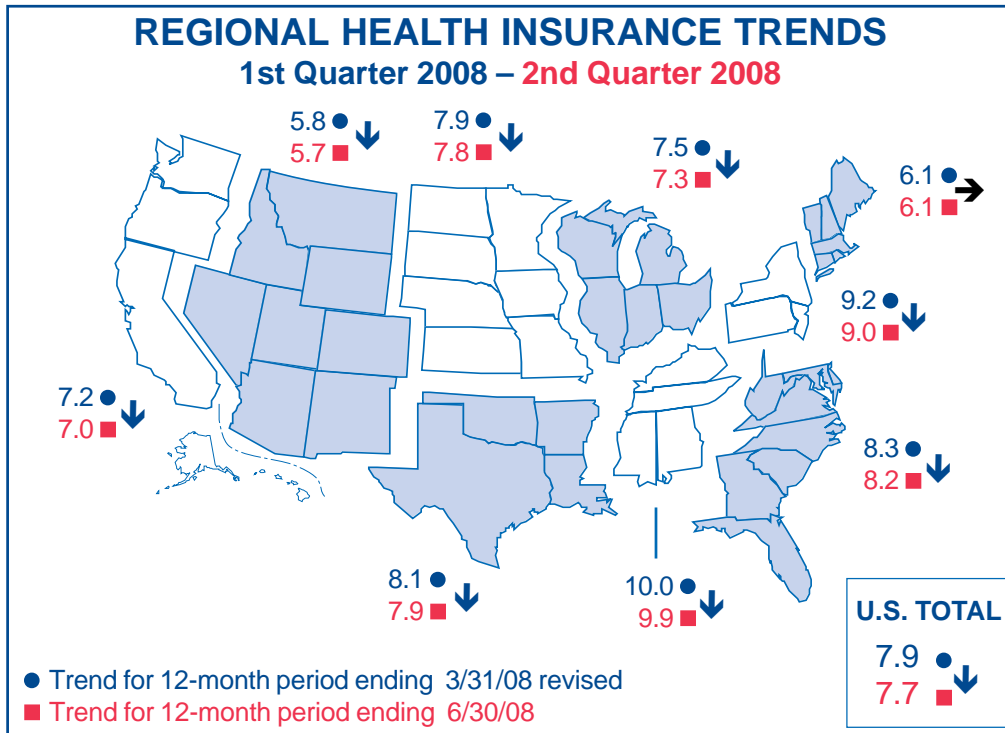
**Caveats:**

Because of the data revisions, scenarios, and legislative changes mentioned above, Milliman, Inc. in no way warrants the accuracy of these forecasts and accepts no responsibility for any damages or losses that may be incurred from their use or misuse. Like any other forecast these have substantial uncertainty and unanticipated factors can affect their accuracy.

**More Information:**

Please see this quarter's Commentary on the effects of recession for additional information. ■

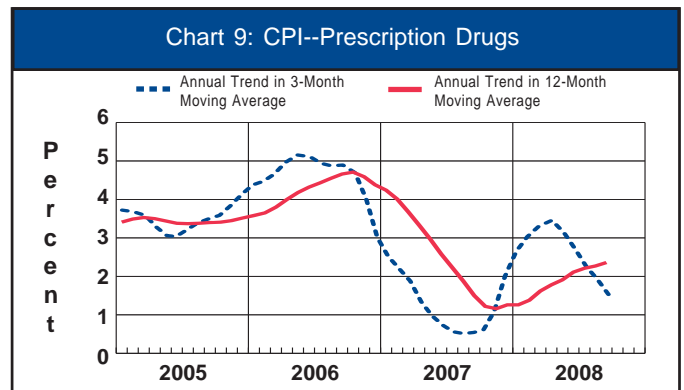
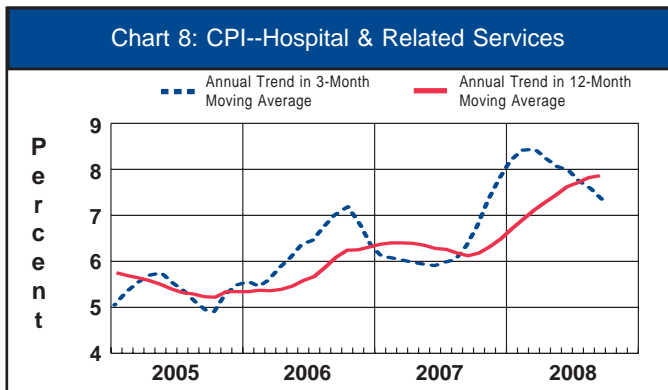
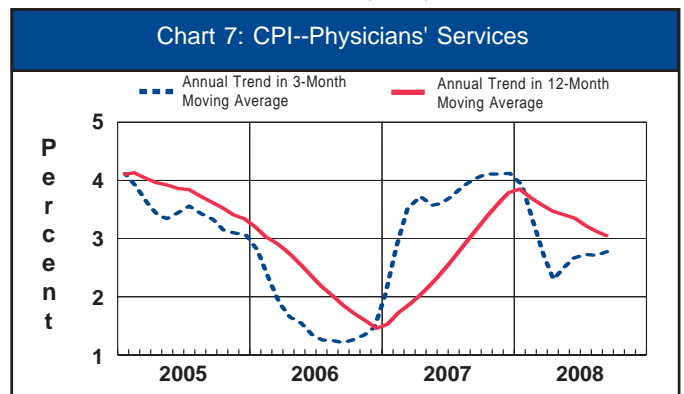
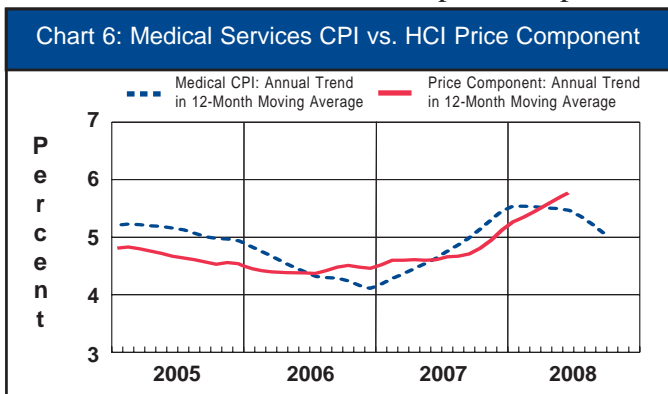




The above Chart shows the regional Pre-2005 Health Cost Index trends for the most recent and prior quarters.

## Economy Highlights - Graphs

The following Charts illustrate recent trends in various components of the CPI, as well as the price component of the Pre-2005 Health Cost Index (HCI).

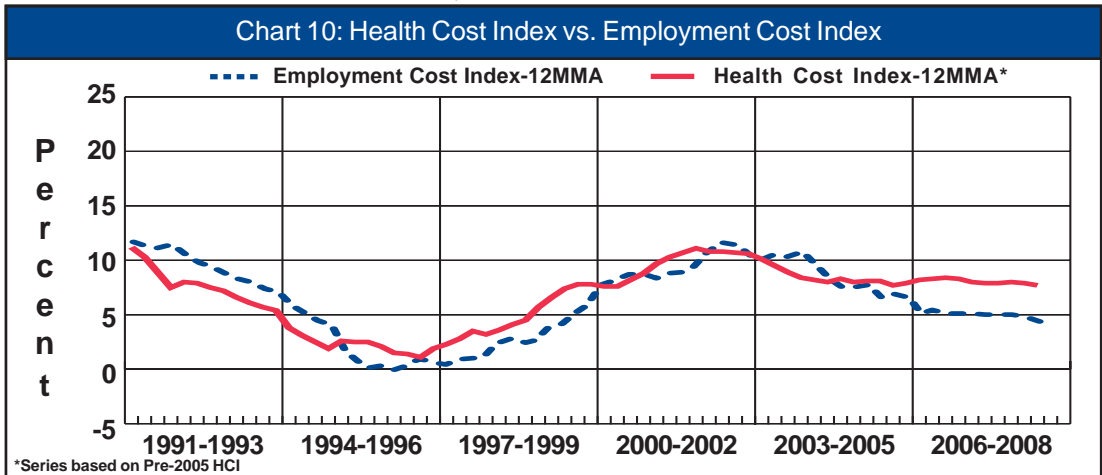


# Underwriting Cycle Watch

**D**uring the second quarter of 2008, health insurance premium trends declined to just above 4%. Chart 10 depicts 12-month moving average trends of the HCI vs the Health Insurance sub-index of the Employment Cost Index (ECI), published by the BLS. For the year ending June 2008, ECI health insurance premiums increased 4.2%. The gap between the two series continues to be wider than historical averages. However, Medicare Advantage enrollment shifts are affecting observed trends. Most years the impacts are small. But we estimate these shifts, if adjusted for, would add nearly a 1% HCI trend increase for 2003, and

about a 1% trend decrease in each year for 2006, 2007 and 2008 to account for this shift. This ECI vs HCI difference may also signal that employers are targeting closer to multi-year average GDP growth for their health cost increases and reducing costs through benefit buydowns.

The ECI reflects premiums paid by employers, and can be lower than insurer's requested rates due to benefit reductions, shifting a greater share of premiums to employees, shifting more employees to lower cost options, and lower trends on the administrative expense portion of premiums. The ECI also reflects swings in competitiveness in the market. ■



## Health Cost Index Description

The Health Cost Index™ is derived for a typical \$250 deductible PPO Medical Plan with office visit, drug, and ER copays.

The Health Cost Index™ (HCI) is Milliman's proprietary measure of health care cost increases. The HCI is based on a proprietary model which uses data gathered from the providers of health care (hospitals, physicians, pharmacies, etc.) to capture changes in health care costs per capita for the overall population (excluding Medicare).

Thus, the Health Cost Index™ estimates the underlying pattern of revenue trends that health care providers are generating from the non-Medicare population. The HCI can act as an independent measure of health care cost increases or as a benchmark/modeling tool for insurers, employers or health care providers.

Because the HCI captures market average forces affecting trends, certain factors which can affect an individual insurer, employer or provider will cause actual trends to differ from the HCI.

For example, actual trends will vary according to geographic location, type and mix of business, underwriting, demographics, reimbursement mechanisms, health care cost controls, government mandates, etc. Further, the HCI does not reflect the impact on trends of anti-selection due to HMO/PPO penetration, other enrollment changes, flexible benefits, or other related factors, and does not reflect statistical fluctuations

resulting from the limited size of a group. The HCI also does not reflect the impact on trends of durational effects from preexisting conditions limits, health statement underwriting, or effects from changes in new sales or termination rates.

Because of these and other factors, we could expect trends for aggressively managed Managed Care Organizations to be below the HCI. Likewise, insurers whose programs resemble traditional indemnity insurance are likely to experience cost trends substantially higher than the HCI. For most large insurers we would expect to find trends ranging from 1% to 3% above the HCI. Actual experience for insurers, employers and health care providers may vary substantially over six months to multi-year time frames due solely to statistical fluctuations with the magnitude depending on the size of the group. Please refer to the Health Cost Index Report™ Companion for more information.

### For More Information About The Health Cost Index Report™

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