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Health Care Affordability:

A Valuable Concept in Understanding Our Health Care System Challenges

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Overview

For more than two decades, the U.S. health care system has attracted considerable attention, both by the media and by public policymakers, as health care costs continue to rise and the uninsured population continues to grow. Rapidly increasing costs and their adverse effect on premium rates and health plan profitability continue to fuel concerns about the future of the U.S. health care system and our collective ability to pay for health care. This article takes a fresh look at the affordability of health care and offers several new insights.

What Does Affordability Mean?

Much of today's health care focus centers on the rising costs of health care. Today's challenging economic situation since 9/11 and the heightened concerns about terrorism, the financial impact of the recent recession and the fallout from the decline of the "dot com" and telecom market booms and the overall lack of confidence in the post-Enron economy has redirected much of the health care discussion to affordability, not simply health care costs.

Affordability, as a generic term, can best be defined as a measure of someone's or something's ability to purchase a good or a service. It describes whether a person or organization, with limited resources, is able to make a purchase without unacceptable or unreasonable sacrifices. Similarly, health care affordability describes whether a person or organization has sufficient income to pay for or provide for health care costs. These costs could be insurance premiums or direct health care service costs.

What Factors Should Be Included?

Since individuals, other organizations (usually employers) and the government fund most of today's health care costs, all of these should be considered. Once indices are developed, they can be compared by stakeholder or by geographic area or by a variety of other parameters.

The table on the next page was extracted from a recently published article on healthcare affordability.

To reflect all health care stakeholders, the above indices reflects a weighted average of health care affordability for each of the three key health care purchasers—employers, employees and government entities. Each component of the index can be separately reviewed to measure affordability for each stakeholder.

Variability in Health Care Affordability

Note the significant variation in affordability between various states. Although today's health care woes are often assumed to be universal, the significant variation in health care affordability suggests that the issue is much more intense in some markets. Some rather interesting results emerge when each of the regions is more thoroughly analyzed. California, one of the states with some of the most expensive health care costs expressed on a per unit of service basis, is in the most affordable category demonstrating the significant difference between "expensive" and "affordable". Louisiana and West Virginia, states often thought to be low cost states, are the least affordable as defined in the study.

What Drives Affordability?

Individual metrics can be compared to the above results to attempt to define "affordability drivers." The previously referenced study developed a correlation statistic to evaluate the potential impact of a variety of metrics to health care affordability.

The results are:

- **Correlation to inpatient utilization:** Inpatient utilization levels are moderately correlated (Correlation = .37) to affordability. Although directly impacting cost, the impact on affordability is diminished although showing a strong relationship. Health care tends to be the least affordable where the health care system is the least efficient.
- **Correlation with managed care penetration:** There is a slight negative correlation between managed care penetration and health care affordability (i.e., Correlation = -.19) . There is a tendency for improved health care affordability

State	Affordability Index	State	Affordability Index
Delaware	0.65	Missouri	0.99
Colorado	0.78	Kansas	1.00
Nevada	0.80	Rhode Island	1.02
New Jersey	0.81	Indiana	1.03
Hawaii	0.83	New Hampshire	1.04
Minnesota	0.83	Wisconsin	1.04
Virginia	0.85	Texas	1.06
Washington	0.86	New York	1.07
California	0.87	Pennsylvania	1.07
Alaska	0.88	North Carolina	1.09
Wyoming	0.88	New Mexico	1.12
Georgia	0.88	Oklahoma	1.12
Connecticut	0.90	Vermont	1.15
Massachusetts	0.91	Arkansas	1.17
Illinois	0.91	Tennessee	1.19
Michigan	0.92	Florida	1.22
Oregon	0.93	Kentucky	1.23
Ohio	0.95	Montana	1.29
Utah	0.95	South Carolina	1.30
Idaho	0.96	Maine	1.33
Maryland	0.96	Alabama	1.35
Arizona	0.98	Mississippi	1.56
Iowa	0.98	Louisiana	1.64
Nebraska	0.98	West Virginia	1.69

Source: 2002 E&Y Health Care Affordability Index (HCAI™), published October, 2002

in regions with higher managed care penetration. This is similar to that shown above, except this comparison demonstrates the impact of more efficient care whether or not managed care plans exist.

- **Correlation to provider supply:** There is a reasonably strong correlation (Correlation = .51) with provider supply. The greater the supply of providers, the less affordable the resulting healthcare system. This is consistent with the belief that health care generally does not follow traditional supply/demand economics. Generally the communities with the highest concentration of providers have the highest health care system use rates. Many health care experts believe that an oversupply of health care providers actually increases health care costs. If true this helps to explain the affordability and provider supply relationships.

- **Correlation to average size of hospital:** The analysis shows a slight negative correlation (i.e., Correlation = -.20) to size. Many believe that the average size of a hospital can impact the overall level of its own health care costs. The smaller a facility, the less its ability to spread fixed costs and also the less equipped it could be to handle certain more complex cases. If true, one might be able to link average size of facility to health care affordability. This suggests improved affordability for communities with larger average sized facilities. Most of the states have smaller than average sized facilities, with wide dispersion of affordability.

- **Correlation to business climate:** There was a stronger negative correlation between business climate and affordability (Correlation = -.35) suggesting more affordable care where business growth and profitability is higher. Historically, there is a tendency for utilization and health costs to increase as unemployment increases and the general economic situation becomes uncertain. As the economic strength increases, it appears there is an improvement in affordability.

- **Correlation to health care affordability components:** Strong correlations of individual affordability indices with the aggregated statistics might be of interest. There was a fairly strong correlation to the employer affordability index (i.e., Correlation = .40) suggesting a connection between the employer's affordability and the overall affordability. A much stronger correlation was observed with the employee

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index (i.e., Correlation = .86) . This is somewhat unexpected since a good portion of the health-care costs are paid for by the employer. It suggests that affordability at the employee level provides a good proxy for overall health care affordability. This provides a simplifying assumption, which can be more carefully derived at a local level. However, the strongest correlation occurs between the government index and the combined index (i.e., Correlation = .95). The government index is the most difficult to determine at a local level but can be readily derived at the state and federal level. This tends to suggest that government ability to spend tax dollars on health care services is the most direct way to measure health care affordability. As the government goes, so do we all.

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Where is Affordability Headed?

Based upon best estimate assumptions for the next five years, health care affordability is expected to increase 29 percent over that same five year period. The private sector component increases by nearly twice that. Assuming a scenario of no significant shift in the allocation of employer/employee financial responsibility, this projected increase in affordability results in significant reductions in corporate earnings to pay for increased healthcare costs (i.e., 3 percent of revenues in five years). At some point, corporations may no longer be able to fund future health care costs.

However, a more likely scenario is corporations passing more of their cost to the employees. Even a minor shift to the employee significantly impacts the overall affordability of health care. Under the assumption that an average corporation pays 80 percent of the total cost of a health care program, a transfer of half of the projected increase in affordability over the next five years more than doubles the employee affordability index. The net impact to overall health care affordability is significant.

If the projected 29 percent increase in affordability occurs in five years, all but one studied state will be above today's national average. This suggests a serious affordability issue within the next five years.

So What's Next?

First, looking back at the presented analysis:

- Provider supply has a strong correlation with health care affordability. Matching provider supply to our appropriate health care needs will likely improve our ability to pay for health care in the future.

- Business climate has a strong reverse correlation with health care affordability. A healthier economy improves our ability to pay for health care. A weakened economy quickly leads to serious health care concerns. Our health care concerns are partially resolved by an improvement in our general economy.

- Although less dramatic, the efficiency of health care providers and their relative average size, particularly of hospitals, impacts health care affordability. Elimination of unnecessary variation and inefficiencies in the way health care services are provided improves the affordability of health care and our ability to preserve the system as we know it.

As solutions to the affordability crisis are developed and considered, it is important to recognize the relationships described above. Appropriate distribution of health care providers with an appropriate supply of providers will help improve the affordability of care. An improvement in the general economy will likely lead to improved healthcare affordability. Effective managed care principles and/or their successors will also have a positive impact on healthcare affordability. Wisely spending our limited health care resources improves the affordability of care, improves the quality of care, and helps maintain a long-term viable health care system.

The health actuary needs to be involved in identifying a solution to our affordability problem. No other discipline has the breadth of knowledge it takes to find an acceptable solution. Understanding health care affordability and communicating it to our publics is just one of many issues where we can add value to the dialog.

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