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A Brief Introduction to Comparative Health Policy

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Our U.S. healthcare system is unique among almost 200 healthcare systems across the world. Reflecting our individualistic mores and characteristics of our political system, private health insurance is far more widespread. And, our healthcare delivery system is less government managed and more entrepreneurial than those of other nations. Not surprisingly, our system also has its own unique problems and institutions. For example, no other developed country has a large group of uninsured citizens, and managed care is far more advanced here than in other countries. So, do we have anything to learn from studying other healthcare systems? The answer to me is a resounding "yes," which I hope to demonstrate through one very interesting graph.

The graph, entitled "Health (HALE) vs. Spending, 2002," relates population health outcomes to healthcare spending for the 191 member countries of the World Health Organization (WHO). WHO and its researchers have developed a large and very useful database (*www.who.org*) that is often used by health policy analysts. Our measures of population health and healthcare spending are data for 2002 from this source. Health Adjusted Life Expectancy (HALE) at birth is our population health measure and Total healthcare Expenditure Per Capita (THE), in U.S. dollars at purchasing power parity, is our measure of total public, private and out-of-pocket healthcare spending.

HALE is an actuarial calculation of expected years of life lived in good health. It can be thought of as life expectancy adjusted downwards for expected years in less than full good health, with the downward adjustments varying based on the degree of disability. For most countries, other than the poorest nations, HALE is broadly 85 percent to 90 percent of life expectancy.

The Graph

Not surprisingly, countries that spend more on healthcare have generally better population health outcomes. Our graph includes a trend line fitted to the data. The trend in HALE increases from about 30 years for the poorest nations to a bit more than 70 years for those nations that spend the most on healthcare. For the large number of Third World Countries (see graph in right column), a little spending goes a long way. As spending increases from a meager $11 per capita (Liberia) to about $800 per capita, HALE increases from around 30 years to 65 years. There is a second group of Developing Countries, whose healthcare spending ranges from as low as $500 to about $1,100 per capita. This very interesting group of 18 developing countries has population HALE of 65 years or more. Lastly, there are 28 Developed Countries, which include pre-expansion EU, North America, Japan, Australia and New Zealand, that spend at least $1,500 THE per capita and have HALE of around 70 years. These 28 countries set the world standard for what healthcare systems can deliver in terms of population health outcomes.

Developed Countries

One country outspends all others by a wide margin. This is none other than our United States. In 2002, we spent an average of $5,274 per person on healthcare, which exceeded the number two spender, Monaco ($4,258), by 24 percent and the number three spender, Switzerland ($3,446), by 53 percent. Our nearest large country rival is Germany at $2, 817. The full range of spending among these 28 developed countries ranges from a low of $1,547

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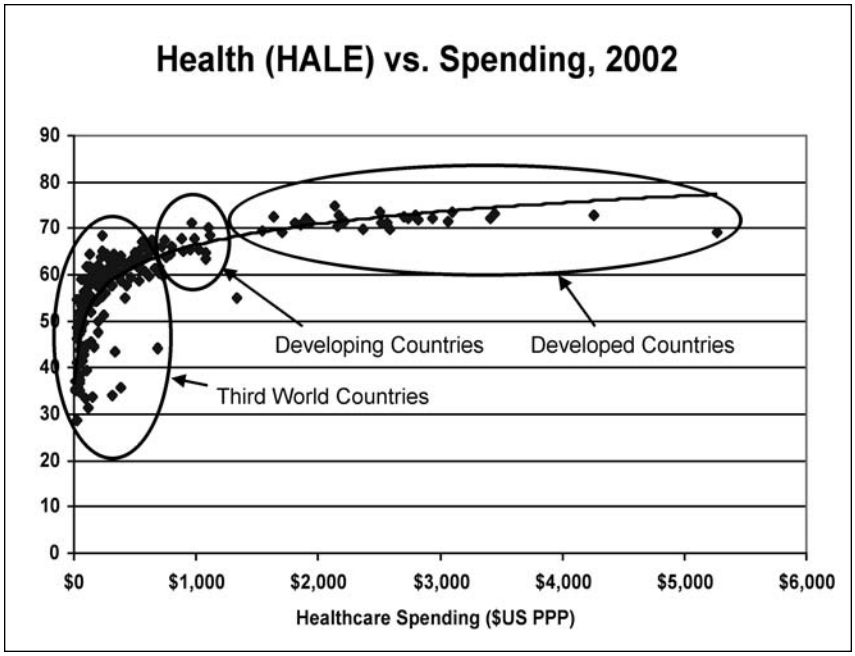

in Slovenia to the U.S. high-water mark, which is a range of 3.4:1. No other country is really in the running, The United States is the world's unrivaled healthcare spending champion.

We clearly spend huge amounts on healthcare, and we are quite proud about the technological miracles produced by our researchers and performed daily by our physicians. However, putting aside our pride and looking at objective statistics, our extra spending does not appear to buy us the most important outcome—better health. Among this group of countries, HALE ranges from a low of 69.2 in Portugal (THE of $1,702) to a high of 75.0 in Japan (THE of $2,133). The United States actually fairs very badly: Our population HALE, at 69.3, ranks 27th of the 28 countries in the group.

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Within this group, comparing the U.S. to the U.K. National Health Insurance system (NHI) is quite informative. NHI is a true "social insurance system." It is funded by taxes and healthcare is run by the government. We often read negative stories about the U.K. system and the "need" for U.K. citizens with adequate financial resources to buy Private Medical Insurance in order to jump lengthy queues and to avoid poor service and "rationing" in NHI. What we generally do not know, though, is the U.K. healthcare system costs only 41 percent of ours ($2,160 versus our $5,274) and yet, it produces population HALE of 70.6 versus our 69.3, which is actually better than ours with little variation across population segments measured by area and income. This "bad" U.K. healthcare system, then, performs quite well when objectively compared to ours!

An even more vivid analysis of the fact that our additional spending does not buy us better health was recently published in the *Journal of the American Medical Association*. The *JAMA* study assessed the relative health of representative samples of individuals between ages 40 and 70 in the United States and United Kingdom, with particular attention to differences by socioeconomic status. The research demonstrates that Americans of all level of socioeconomic status are in worse health than their U.K. counterparts, despite Americans having uniformly better lifestyle health risk characteristics. Differences between the two countries are large enough so that the richest third of the U.S. sample had medically measured health status equivalent to levels experienced by the lowest third of the U.K. population.

Our poor showing on HALE is the result of many reasons, including two obvious population characteristics. First, there are large numbers of uninsured Americans who do not have regular access to healthcare. And second, our lowest income citizens have relatively poor health and more limited access to healthcare resources. Both populations, therefore, suffer from relatively poor health outcomes.

Even taking these characteristics into account, it is very difficult to explain why we outspend other nations by so much. In trying to understand this problem, it is interesting to note that the United States often has fewer medical resources per capita (e.g., hospital beds, physicians, healthcare professionals, etc.) and we are often relatively more efficient in delivering much of our medical care (e.g., fewer hospital days per thousand) than other developed nations. Thank you, managed care! However, these relative resource efficiencies do not translate into lower costs.

Exploring reasons for our relatively poor results is beyond the scope of this brief article. But, this inquiry can be a very fruitful exercise to help us better understand our healthcare system and, potentially, to help us manage its evolution. Possible explanations for further exploration include: faster introduction and more widespread use of new, expensive technology; higher relative pay for healthcare professions than in other countries; a larger portion of the workforce employed in healthcare, particularly due to relatively inefficient administration; and a personal healthcare ethic that believes more healthcare is always better. Adding items to this list is relatively easy; identifying objective causative factors though, is much more difficult.

Developing Countries

The group of 18 developing countries that spend between $500 and $1,100 THE per capita and have population HALE of 65 years or more is very interesting to study, and shed further light on health and healthcare systems. Major nations in this group include Mexico (65.4 HALE and $550 THE),

Argentina (65.3 HALE and $956), South Korea (67.8 HALE and $982), and Poland (65.8 HALE and $657). Just below this level is another very interesting healthcare system, China's, which has 64.1 years of HALE and $201 THE.

From this group of healthcare systems, I am most familiar with those of Mexico and China. Both of these countries are characterized by a large population that is quite poor and living in margin conditions, and a small, and growing portion of the population with developed-country income levels and healthcare expectations. Countries with these population and income profiles are faced with an enormous healthcare financing problem. Public resources are not sufficient to fund more than minimal care for most citizens, and their richer citizens demand healthcare at levels familiar to us.

What is fascinating to consider is that despite meager healthcare resources aimed at the large percentage of poorer citizens, population HALE in these countries is not far from the 70-year level attained in developed countries. The lesson to us from these facts is that relatively rudimentary healthcare, including prenatal and postnatal care, appropriate vaccinations, prompt attention to communicable diseases and decent access to low-technology healthcare are sufficient to move a nation into this class of developing countries that are "almost as good as the best." This observation would seem to indicate that the health benefits of developed nations' enormous spending on high-technology healthcare, which is usually aimed at managing and sometimes curing chronic diseases of aging, are relatively small.

Third World Countries

Most countries fall into the group with low THE per capita and low population HALE. These countries have a burden of disease that is entirely different than in developing and developed countries. Their populations are rife with communicable and environmental disease. In general, people do not live long enough to develop the chronic diseases of aging that dominate the burden of disease in developed countries.

Research into the enormous healthcare problems faced by people living in third world countries has shown the public health measures we take for granted, such as clean water, safe food and minimal sanitation standards, combined with very rudimentary healthcare, can improve population health at very low cost. HALE can be improved to roughly 50 years for a cost of less than $50 per year.

While the burden of disease and extremely low levels of healthcare spending in third world countries is so far from our experience as to make their problems practically irrelevant to our healthcare systems, there is a lesson to be learned: Public health programs are needed to eliminate the worst health ravages of the environment. Public health is a low cost, integral part of every developed and developing country's healthcare system, and their importance to good health of these programs should never be overlooked.

In nations with solid traditional public health programs though, a new public health challenge is clearly emerging. Epidemiological studies increasingly demonstrate the strong relationship between good health and leading healthy lifestyles. Smoking, lack of exercise, poor diet, excessive use of alcohol, illegal drug use and lack of control of high blood pressure and high blood cholesterol are strong causative factors for a large proportion of chronic diseases of aging, which dominate the burden of disease in developed countries. Programs aimed at encouraging people to lead healthy lifestyles are a "new public health" direction for these countries.

Concluding Thoughts

Health and healthcare spending characteristics vary widely among countries. It is helpful to group differing systems into three classes: Developed Countries with world-class population health outcomes measured by HALE; Developing Countries that spend much less and attain population health results close to world standard levels; and Third World Countries that are struggling to remove themselves from the almost overwhelming burden of environmental and communicable disease. Our brief look at these different groups and some characteristics of their burden of disease and healthcare systems has provided us with a number of important observations that should be helpful to all of us who are interested in understanding the U.S. healthcare system and in doing our jobs as healthcare actuaries better. This brief introduction to comparative health policy can only hint at the wealth of insights available to actuaries and researchers interested in this most fascinating area of inquiry.

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