Health, Wealth and Wisdom—Living Long, Living Well: An Actuary Muses on Longevity

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Abstract

Living well has been the holy grail of philosophers for millennia. Living long as an ideal, though, has more recent provenance. With the greatest historic advances in human longevity having taken place in the 20th century, alarms are now sounding that the expense implications of these two goals will be ignored by successful societies throughout the world at their economic peril.

The United States leads all other industrialized nations in the share of economic output devoted to what, for want of a better description, is labeled health care. In 2007, approximately $2.25 trillion—one-sixth of America's GDP, and more than the entire economy of all other countries save Japan and Germany—was spent on this endeavor. By one account, over 90 percent of it was spent on trying to get people well and less than 10 percent on keeping them healthy in the first place. At the margin, additional health care expenditure appears to have limited effects on aggregate measures of longevity.

A worldview reveals high statistical correlations of physical wellness to wealth and, to some extent, to education. These same relationships also hold within the United States. Better educated and higher income segments of society are healthier—hardly a surprise—and live longer. Though far less likely to smoke, they are only marginally more successful in maintaining healthy weight. Geography also turns out to be important. Certain areas in the United States have average life expectancies 8 to 10 years greater than others. However, as one researcher points out, it is not so much physical environment, rather social and cultural differences that define habits such as diet and exercise. His study specifically attributes these mortality differences to smoking, obesity, alcohol use and related diseases of the heart and lungs—diabetes, cirrhosis of the liver and cancer, which are among the leading causes of death.

Other researchers, looking to genetics as an explanation for why some people live much longer than others, point to the tendency of long-lived people to cluster in families.

The author attempts to weave together these biological and environmental explanations into the mathematical approaches developed over the past two centuries so as to, in the words of two earlier authors from the actuarial profession, reground the relationship of actuarial science with cellular biology and gerontology. Also examined is the extent to which increasing wealth and higher standards of education and health contribute to happiness.

The paper concludes with the author's views on the implications of not reining in runaway costs—of substituting legalized entitlements to "care" in place of people taking personal responsibility for their health—and with his personal approach to aging and wellness.