
THE SHAPE OF THINGS TO COME

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Are Health Spans Rising along with Life Spans?

by

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About The Shape of Things to Come

Over the next few decades, the aging of America promises to have a profound effect on the size and shape of our government, the dynamism of our economy, and even our place in the world order. The Concord Coalition and the Global Aging Institute (GAI) have joined forces to produce a quarterly issue brief series that explores the fiscal, economic, social, and geopolitical implications of the aging of America. Although the series is U.S. focused, it also touches on the aging challenge in countries around the world and draws lessons from their experience. Concord and GAI hope that it will inform the debate over the aging of America and help to push it in a constructive direction. Concord wishes to express its gratitude to the Peter G. Peterson Foundation for the generous grant that makes the series possible.

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ARE HEALTH SPANS RISING ALONG WITH LIFE SPANS?

The aging of the United States threatens to usher in a new era of relentless fiscal pressure, economic stagnation, and growing intergenerational conflict that pits the interests of the old against those of the young. Or does it? Long-term fiscal and economic projections generally assume a continuation of today's behaviors and policies. Their purpose is to show us what is likely to happen if we stay on our current course, and they often fail to anticipate developments that could fundamentally alter the outcome.

Some optimists believe that improvements in the health of the elderly could be a potential game-changer. For one thing, better health at older ages could facilitate longer work lives, which would reduce fiscal burdens and boost economic growth. For another, it seems reasonable to assume that it could lower health-care spending beneath current projections, further mitigating the costs of population aging.

While a final verdict is still out, it is not too soon to reach some tentative conclusions. There is indeed room for optimism that improvements in the health of the elderly will facilitate longer work lives. Unfortunately, there is much less reason to believe that they alone would have much impact on health-care spending. Whatever happens to the health of the elderly, absent broader reform of the health-care financing and delivery system, spending is likely to remain on a steep upward trajectory.

Two Models of Aging and Health

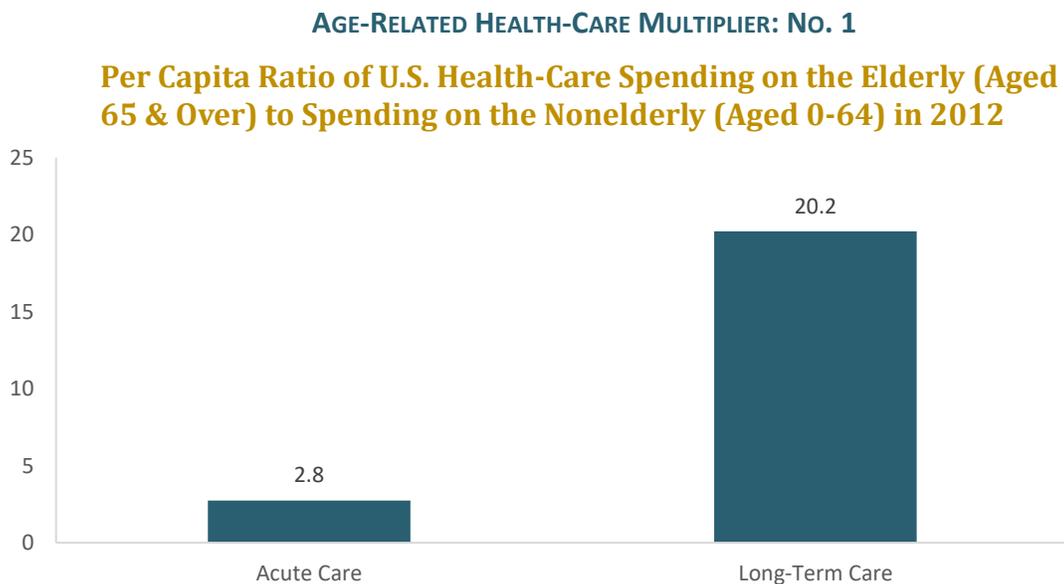
Experts have long debated whether health spans will rise along with life spans as the population ages. One school of thought, which subscribes to the "compression of morbidity" thesis, believes that health spans will rise as fast or faster than life spans until, eventually, most of the ills of old age are relegated to a relatively brief period of declining vigor at the very end of life. Another school of thought, which subscribes to what is sometimes called the "failure of success" thesis, argues that the principal effect of modern medicine is to extend people's lives without restoring them to full health—and that, as lifespans rise, so too will rates of chronic morbidity and disability.¹

¹ For the classic formulation of the compression of morbidity thesis, see James F. Fries, "Aging, Natural Death, and the Compression of Morbidity," *New England Journal of Medicine* 303 (1980) and James F. Fries, "The Compression of Morbidity," *Milbank Memorial Fund Quarterly* (Summer 1983). For the classic formulation of the "failure of success" thesis, see E. M. Gruenberg, "The Failure of Success," *Milbank Memorial Fund Quarterly* (Summer 1977) and Lois M. Verbrugge, "Longer Life But Worsening Health?" *Milbank Memorial Fund Quarterly* (Summer 1984). For a review of the evidence, see Somnath Chatterji et al., "Health, Functioning, and Disability in Older Adults: Current

Much hinges on which thesis is correct. As populations in the traditional working years grow more slowly or contract in decades to come, aging societies will need to extend work lives, and health is a major determinant of both labor supply and labor quality. Greater health at older ages would both allow more of the elderly to work and increase the output of those who do, since healthier workers are more productive workers. Together with greater life expectancy, greater health expectancy could also increase incentives to invest in human capital, which may further boost output among workers of all ages.

Aging societies will also need to control health-care costs, and the elderly are disproportionate consumers of health-care services. As countries move through the “epidemiological transition,” chronic diseases replace infectious diseases as the primary cause of morbidity and mortality. Since the elderly are much more likely to suffer from chronic diseases than the nonelderly are, health-care consumption rises steeply with age. In the United States, the elderly consume roughly three times as much per capita in acute-care services as the nonelderly and roughly twenty times as much in long-term care services. The elderly, moreover are the fastest growing segment of the population, the older the elderly are the more health care they consume, and the oldest elderly age groups are the fastest growing of all. Together, these cost multipliers make health-care spending the most potentially explosive dimension of old-age dependency. (See figures 1-4.)

Figure 1



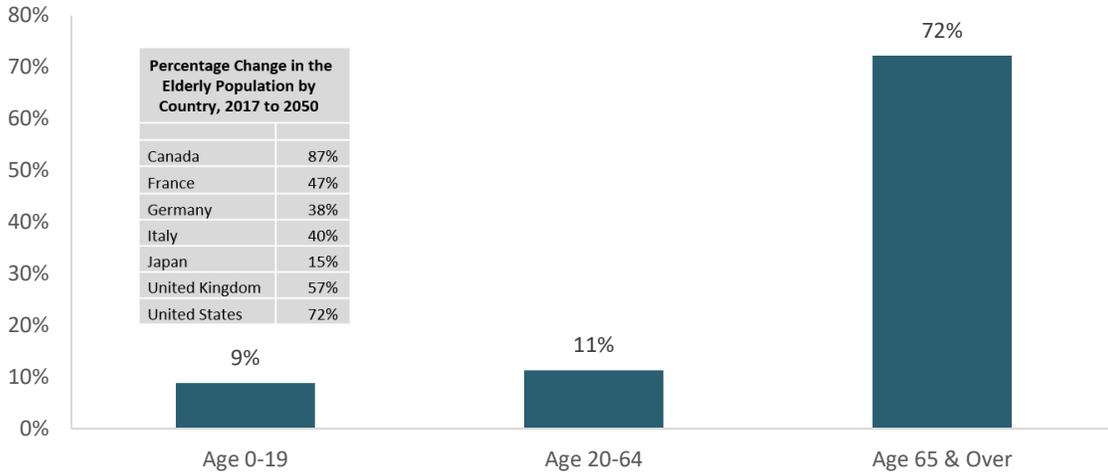
Source: Centers for Medicare and Medicaid Services (2018)

Status and Future Implications,” *The Lancet* 385, no. 9967 (February 2015) and Eileen M. Crimmins, “Lifespan and Healthspan: Past, Present, and Promise,” *The Gerontologist* 55, no. 6 (2015).

Figure 2

AGE-RELATED HEALTH-CARE MULTIPLIER: NO. 2

Percentage Change in the U.S. Population, by Age Group, 2017 to 2050

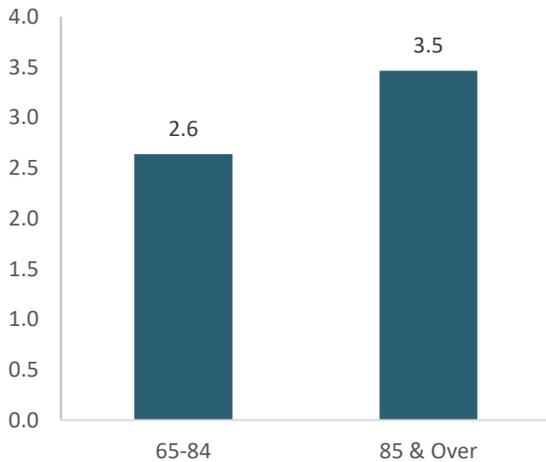


Source: UN, *World Population Prospects : The 2017 Revision* (New York: UN Population Division, 2017).

Figure 3

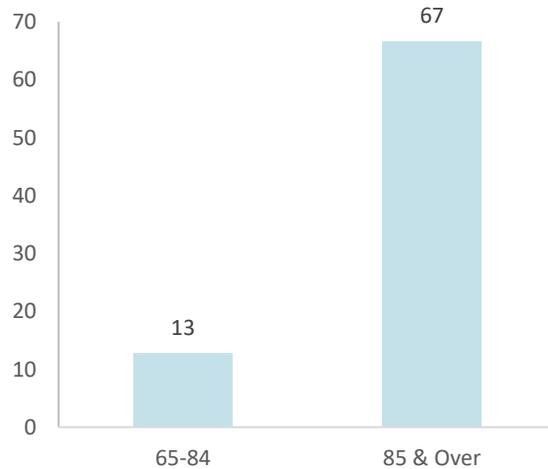
AGE-RELATED HEALTH-CARE MULTIPLIER: NO. 3

Per Capita Ratio of U.S. ACUTE CARE Spending on the Elderly (Aged 65 & Over) to Spending on the Nonelderly (Aged 0-64), by Elderly Age Group in 2012



Source: Centers for Medicare and Medicaid Services (2018)

Per Capita Ratio of U.S. LONG-TERM CARE Spending on the Elderly (Aged 65 & Over) to Spending on the Nonelderly (Aged 0-64), by Elderly Age Group in 2012

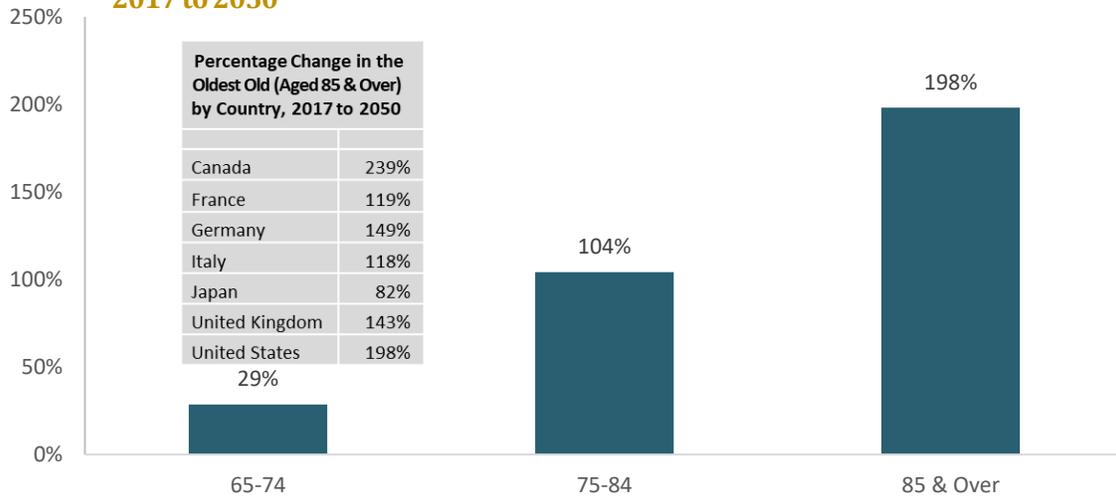


Source: Centers for Medicare and Medicaid Services (2018)

Figure 4

AGE-RELATED HEALTH-CARE MULTIPLIER: NO. 4

Percentage Change in the U.S. Elderly Population, by Elderly Age Group, 2017 to 2050



Source: UN Population Division (2017)

The Case for Optimism

The good news is that rates of disability among the U.S. elderly have declined dramatically over the past few decades, prompting some experts to conclude that a compression of morbidity is under way. According to the landmark study, the share of U.S. adults aged 65 and over with a disability fell from 26.5 to 19.0 percent between 1982 and 2005, a drop of more than one-quarter. (See figure 5.) At least in part as a result, the rate of nursing home residence also fell over the same period, from 7.5 to 4.0 percent.² A large body of research establishes that many other developed countries have also experienced significant declines in elderly disability since the 1980s.³ According to the WHO, healthy life expectancy at age 60, as measured by years of remaining life lived free from disability, rose by four to five years between 1990 and 2015 in most developed countries, from France, Italy and Sweden to Germany and Japan. (See table 1.) In all of these countries,

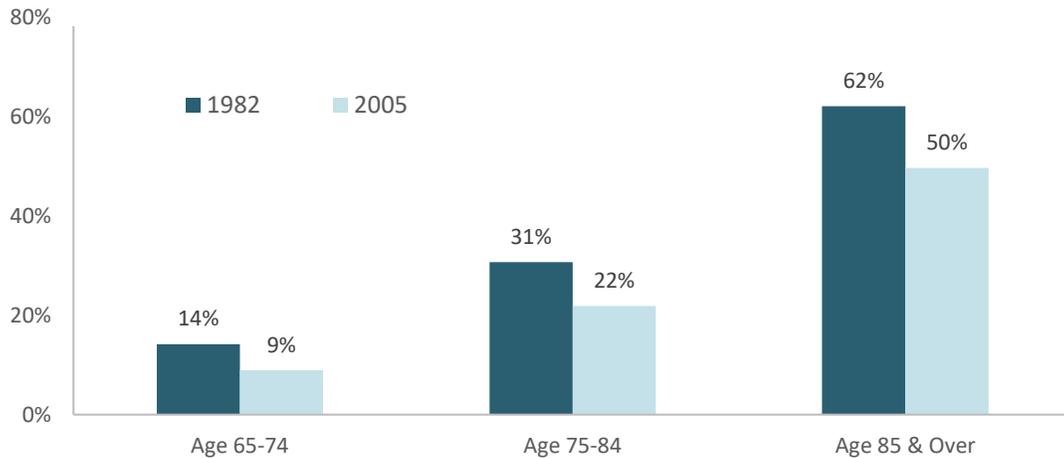
² Kenneth G. Manton, Xi-Liang Gu, and Vicki L. Lamb, "Change in Chronic Disability from 1982 to 2004-2005 as Measured by Long-Term Changes in Function and Health in the U.S. Elderly Population," *Proceedings of the National Academy of Sciences* 103, no. 48 (November 2006). Many other studies have also documented declines in disability rates among the U.S. elderly. See, for instance, David M. Cutler, Kaushik Ghosh, and Mary Beth Landrum, "Evidence for Significant Compression of Morbidity in the Elderly U.S. Population," NBER Working Paper no.19268 (Cambridge, MA: National Bureau of Economic Research, July 2013) and Eric Stallard, "Compression of Morbidity and Mortality: New Perspectives," *North American Actuarial Journal* 20, no. 4 (2016).

³ See Danan Gu, Rosa Gomez-Redondo, and Matthew E. Dupre, "Studying Disability Trends in Aging Populations," *Journal of Cross-Cultural Gerontology* 30, no. 1 (November 2014).

moreover, the increase in healthy life expectancy was greater than the increase in total life expectancy.

Figure 5

Share of the U.S. Elderly with a Disability, by Elderly Age Group, 1982 and 2005



Source: Manton et al. (2006)

Table 1

Healthy Life Expectancy (HALE) at Age 60, 1990-2015

	1990	2000	2015
Canada	14.9	17.6	19.7
France	15.2	18.2	20.3
Germany	14.2	16.9	18.6
Italy	14.8	17.9	19.9
Japan	16.1	19.5	21.1
Netherlands	14.6	17.1	19.3
Sweden	14.9	17.4	19.1
United Kingdom	14.0	16.6	18.8
United States	14.6	16.5	18.1

Source: WHO (various years)

Three Big Caveats

This good news, however, comes with three big caveats, the first being that past trends in disability may not be a good predictor of future trends. Just because disability is declining among today's elderly does not mean that it will be declining among tomorrow's, who will belong to a different generation with different lifetime experiences. The best predictor of the health of 75 year-olds thirty years from now may not be the health of today's 75 year-olds, but the health of today's 45 year-olds. And here the trends are worrisome. In recent years, the obesity epidemic, along with other destructive lifestyle choices, has put a growing share of the midlife population in the United States at risk of premature morbidity, disability, and death. If the health of midlife adults continues to deteriorate, the downward trend in elderly disability rates could stall or even reverse as younger cohorts begin to cross the threshold of old age. Indeed, some recent U.S. evidence suggests that this is already happening.⁴

Less disability, moreover, does not necessarily mean less morbidity. People are classified as disabled if they are unable to perform one or more "activities of daily living" (such as bathing or dressing) or one or more "instrumental activities of daily living" (such as shopping or managing money). Even as the share of the elderly with such limitations declines, the share with expensive medical conditions could be rising. There is evidence that this is exactly what is happening. Although disability rates among the U.S. elderly have fallen over the past few decades, the share of the elderly with serious chronic conditions, from diabetes to hypertension and heart disease, has been flat or rising. (See table 2.) Researchers have also documented the same divergent trends—falling disability and flat or rising chronic morbidity—in a number of other developed countries.⁵

It would appear that what we have been experiencing is not so much a compression of morbidity as a compression of disability. If so, the implications for future health-care spending may be precisely the opposite of what the optimists assume. While

⁴ See Shih-Fan Lin et al., "Trends in Older Adult Disability: Exploring Age, Period, and Cohort Effects," *American Journal of Public Health* 102, no. 11 (November 2010) and Yiqun Chen and Frank A. Sloan, "Explaining Disability Trends in the U.S. Elderly and Near-Elderly Population," *Health Services Research* 50, no. 5 (October 2015).

⁵ See, among others, Eileen M. Crimmins, "Trends in the Health of the Elderly," *Annual Review of Public Health* 25 (2004); Eileen M. Crimmins and Hiram Beltrán-Sánchez, "Mortality and Morbidity Trends: Is There Compression of Morbidity?" *Journal of Gerontology: Social Sciences* 66B, no.1 (January 2011); Dörte Heger and Ingo W. K. Kolodziej, "Changes in Morbidity over Time: Evidence from Europe," Ruhr Economics Papers no. 640 (Bochum, Germany: Ruhr-Universität Bochum, 2016); and Björn Lindgren, "The Rise in Life Expectancy, Health Trends among the Elderly, and the Demand for Health and Social Care," Konjunktur Institute Working Paper no. 142 (Stockholm: National Institute of Economic Research, March 2016).

it may seem reasonable to suppose that falling rates of elderly disability would lead to lower health-care spending, perhaps it is the high and rising volume of health-care services the elderly consume that is the very reason they have become less disabled. In other words, Grandma may be getting around better these days, but she is doing so because she is seeing the doctor as often or more often than before.

Table 2

Share of the U.S. Elderly with a Specified Disease, by Elderly Age Group, 1998 and 2006

	MEN		WOMEN	
	<u>1998</u>	<u>2006</u>	<u>1998</u>	<u>2006</u>
<u>HEART DISEASE</u>				
Age 60-69	13%	15%	6%	6%
Age 70-79	17%	19%	11%	12%
Age 80 & Over	19%	26%	13%	14%
<u>CANCER</u>				
Age 60-69	11%	11%	10%	11%
Age 70-79	15%	20%	16%	16%
Age 80 & Over	16%	28%	16%	20%
<u>DIABETES</u>				
Age 60-69	13%	19%	14%	15%
Age 70-79	14%	20%	14%	20%
Age 80 & Over	10%	20%	12%	14%

Source: Crimmins and Sánchez (2011)

Finally, other cost drivers may be more important than the health of the elderly. If falling disability really did portend slower future cost growth, we might expect it to have moderated past cost growth as well. Yet real per capita health-care spending has continued to rise rapidly even as rates of elderly disability have declined. (See figure 6.) Clearly, there are other forces at work, from the continuous introduction of new medical technologies to the public’s rising expectations about care and cure. “Good health,” moreover, is not a fixed goal. It is a subjective standard that rises over time as societies become more affluent, less tolerant of bad health or risk, and more secular—that is, more apt to see happiness in the here and now as life’s ultimate goal. As this expanding concept of health interacts with medical advances, it is transforming the practice of medicine.

While once it meant an occasional visit to the doctor or hospital, it is fast becoming a lifelong process of diagnostics and fine-tuning in which any extra dollar, euro, or yen spent is likely to confer some perceived benefit.

Figure 6

Average Annual Growth Rate in Real Age-Adjusted Per Capita Health-Care Spending, 1985-2019



Source: Centers for Medicare and Medicaid Services (2018); OECD (various years); and GAI calculations.

Some Tentative Conclusions

When it comes to the prospects for extending work lives, trends in the health of the elderly suggest that there is room for optimism. It is certainly possible to imagine a future in which increases in disability-free life expectancy lead to later retirement ages and longer work lives, offsetting much of the demographic drag of population aging on economic growth. If what is sometimes called “productive aging” becomes the rule rather than the exception, this alone would be a game-changer. However, there is also cause for concern, especially in the United States, where the worsening health profile of midlife adults threatens to reverse recent declines in elderly disability rates. New investments in the health of the elderly, and perhaps more importantly of the future elderly, may be needed to ensure a happy outcome. So too may a wide range of economic and social policy responses that reach well beyond the traditional realm of health policy.

As for health-care spending, there is little evidence that improvements in the health of the elderly can do much to slow its growth. Despite significant variations in healthy life expectancy across the developed countries, the per capita ratio of acute-care spending on the

old to spending on the young is remarkably similar. (See table 3.) This is not to say that the United States cannot substantially reduce future health-care spending beneath current projections. However, it does suggest that doing so would require addressing the underlying cost drivers that are pushing up real age-adjusted per capita spending for everyone, old and young alike. This in turn would likely require broader reform of the health-care financing and delivery system, and in particular the imposition of some sort of budget constraint that compels patients and providers to make meaningful cost-benefit tradeoffs.

Table 3

Per Capita Ratio of Public Acute Care Spending* on the Elderly to Spending on the Nonelderly in Most Recent Year Available

	65 & Over	65-84	85 & Over
France	2.9	2.7	4.0
Germany	3.0	2.9	4.0
Italy	2.9	2.9	2.9
Netherlands	2.8	2.7	3.6
Sweden	2.8	2.8	3.4
United Kingdom	3.1	2.7	5.8
United States	2.8	2.6	3.5

*U.S. data refer to total acute-care spending.

Source: Centers for Medicare and Medicaid Services (2018) and OECD (2006 and 2013)

The prospects for savings in long-term care may be better than in acute care, but are still far from assured. Improvements in the health of the elderly would clearly slow the growth in demand for long-term care. Whether that slower growth will in turn translate into a lower burden on government budgets is much less certain. After all, the demand for formal long-term care services is highly sensitive to a host of broader socioeconomic factors, and especially the strength of extended families. Today’s elders typically have several surviving children. But tomorrow’s elders will be much more likely to have only one child or no child—or to be never-married, widowed, or divorced. As family size shrinks in the decades to come, the burden on family caregivers could rise even if the overall demand for long-term care falls. Countries like the United States that rely heavily on families to provide long-term care are likely to see growing pressure for government to assume greater responsibility.

It is sometimes said that sixty is the new forty in the developed world. Looking to the future, it is even possible that eighty will someday be the new sixty. Such a development should be hoped for and welcomed for the potential benefits to individual elders and their families as well as to government budgets and the national economy. It is a fantasy, however, to suppose that improvements in the health of the elderly can erase the cost of the coming age wave. Difficult choices will still be required.

About the Global Aging Institute

The Global Aging Institute (GAI) is a nonprofit research and educational organization dedicated to improving our understanding of global aging, to informing policymakers and the public about the challenges it poses, and to encouraging timely and constructive reform. GAI's agenda is broad, encompassing everything from retirement security to national security, and its horizons are global, extending to aging societies worldwide.

GAI was founded in 2014 and is headquartered in Alexandria, Virginia. Although GAI is relatively new, its mission is not. Before launching the institute, Richard Jackson, GAI's president, directed a research program on global aging at the Center for Strategic and International Studies which, over a span of fifteen years, played a leading role in shaping the debate over what promises to be one of the defining challenges of the twenty-first century. GAI's Board of Directors is chaired by Thomas S. Terry, who is CEO of the Terry Group and past president of the International Actuarial Association and the American Academy of Actuaries. To learn more about GAI, visit us at www.GlobalAgingInstitute.org.

About The Concord Coalition

The Concord Coalition is a nationwide, non-partisan, grassroots organization advocating generationally responsible fiscal policy. It was founded in 1992 by former Senator Paul E. Tsongas (D-Mass.), former Senator Warren B. Rudman (R-N.H.), and former U.S. Secretary of Commerce Peter G. Peterson with a non-partisan mission to confront the nation's long-term fiscal challenges and build a sound economy for future generations. The Concord Coalition's national field staff, policy staff, and volunteers carry out the organization's public education mission throughout the nation.



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