Are Health Spans Rising Along with Life Spans?

Richard Jackson
President
Global Aging Institute

Geneva Association
Health & Ageing Conference
October 26-27, 2020

GAI Global Aging Institute

Longevity Pessimists, Optimists, and Visionaries

- The **pessimists** argue that there is a fixed limit to the human life span. As life expectancy increases and more people bump up against the limit, the potential for additional improvements will necessarily diminish.

- The **optimists** argue that if there were a fixed limit to the human life span, improvements in life expectancy at the very oldest ages should be slowing relative to those at somewhat younger ages. Differences in life expectancy by country, region, and socioeconomic status should also be narrowing. Yet there are few indications any of this is happening.

- The **visionaries** argue that biomedicine is about to unlock the secrets of the aging process, ushering in a brave new world of "post-mortal" societies.

GAI Global Aging Institute

Two Models of Aging and Health

- According to the "compression of morbidity" model, health spans will rise at least as fast as life spans—until, eventually, most of the ills of old age are relegated to a brief period of declining vigor at the very end of life.

- According to the "failure of success" model, the principal effect of modern medicine is to extend people's lives without restoring them to full health. As lifespans rise, so too will rates of chronic morbidity and disability.

- Which model is correct could have profound implications for the ability of aging societies to extend work lives and control health-care costs, two of the most pressing challenges in the decades to come.

GAI Global Aging Institute

The Importance of Extending Work Lives

- Across the developed world, working-age populations will be growing more slowing or contracting as large postwar generations retire and relatively smaller generations take their place.
- Slower growth in employment will translate into slower GDP growth. Many developed countries face a future of secular stagnation–that is, zero growth in real GDP across the business cycle.
- The single most important step that the developed countries can take to offset the demographic drag on economic growth is boost labor-force participation at older ages.

Average Annual Growth Rate in the Working-Age Population (Aged 20-64), by Decade

	1980s	1990s	2000s	2010s	2020s	2030s	2040s
Canada	1.7%	1.1%	1.3%	0.5%	-0.1%	0.3%	0.2%
France	1.0%	0.4%	0.6%	-0.2%	0.0%	0.0%	0.1%
Germany	1.1%	0.3%	-0.5%	-0.1%	-1.1%	-0.8%	-0.5%
Italy	0.9%	0.2%	0.2%	-0.4%	-0.7%	-1.2%	-0.6%
Japan	0.7%	0.4%	-0.4%	-1.0%	-0.7%	-1.2%	-1.1%
UK	0.7%	0.4%	0.7%	0.3%	0.0%	0.1%	0.2%
US	1.3%	1.2%	1.1%	0.4%	0.1%	0.3%	0.4%

Source: UN Population Division (2015)

Employment Rate by Age Group in 2017

	25-55	55-59	60-64	65-69	70-74	75+
Canada	82%	72%	51%	26%	13%	4%
France	81%	72%	29%	7%	3%	1%
Germany	84%	80%	58%	16%	7%	2%
Italy	69%	63%	40%	11%	4%	1%
Japan	84%	81%	66%	44%	27%	9%
UK	84%	74%	52%	21%	11%	2%
US	79%	70%	55%	31%	19%	8%

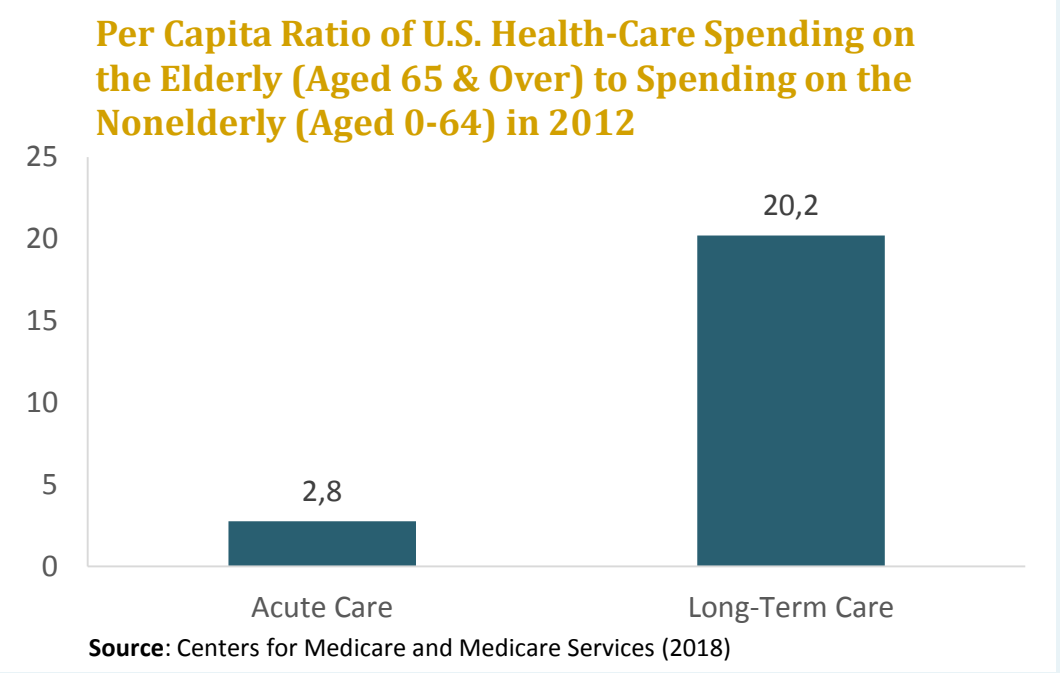
Source: OECD and BLS (2018)

GAI Global Aging Institute

Age-Related Health-Care Multiplier: No. 1

The elderly consume more in health-care services than the nonelderly.

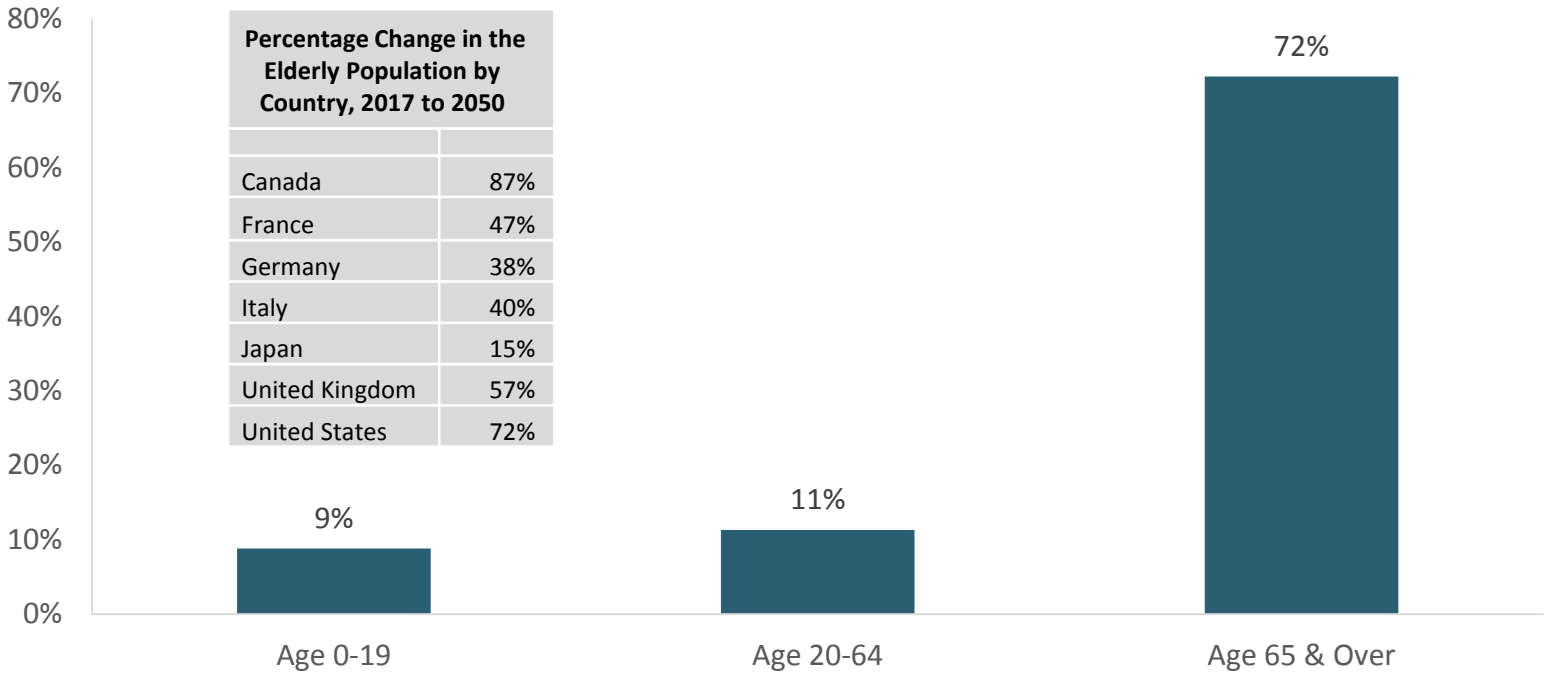
- As countries move through the "epidemiological transition," chronic diseases replace infectious diseases as the primary cause of morbidity and mortality.
- Since the elderly are much more likely to suffer from chronic diseases than the nonelderly are, health-care consumption rises steeply along with 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.



GAI Global Aging Institute

The elderly are the fastest growing segment of the population.

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



Percentage Change in the Elderly Population by Country, 2017 to 2050

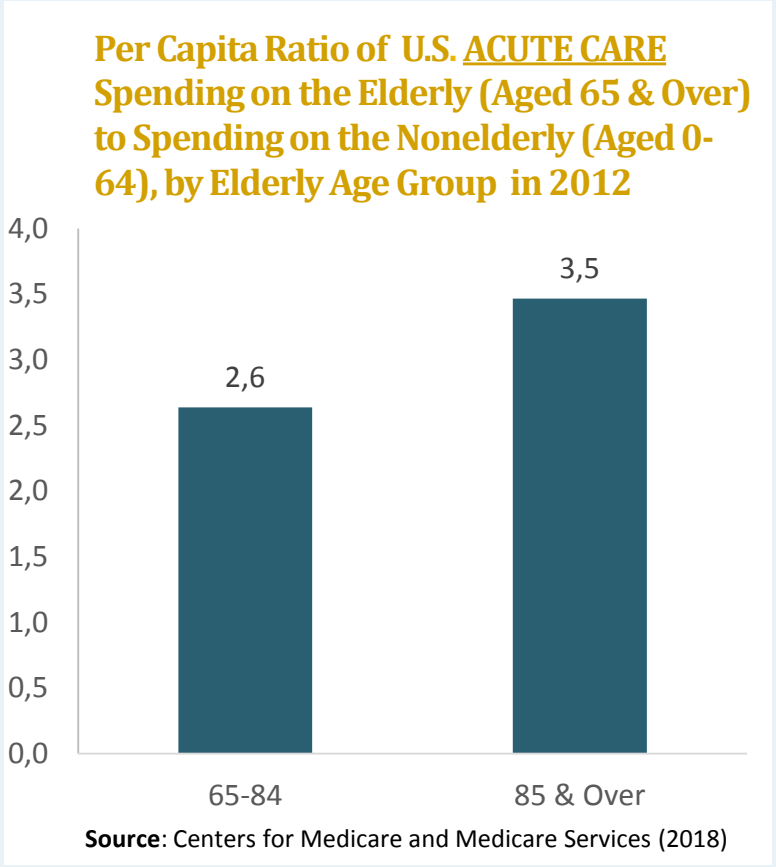
Canada	87%
France	47%
Germany	38%
Italy	40%
Japan	15%
United Kingdom	57%
United States	72%

Source: UN Population Division (2017)

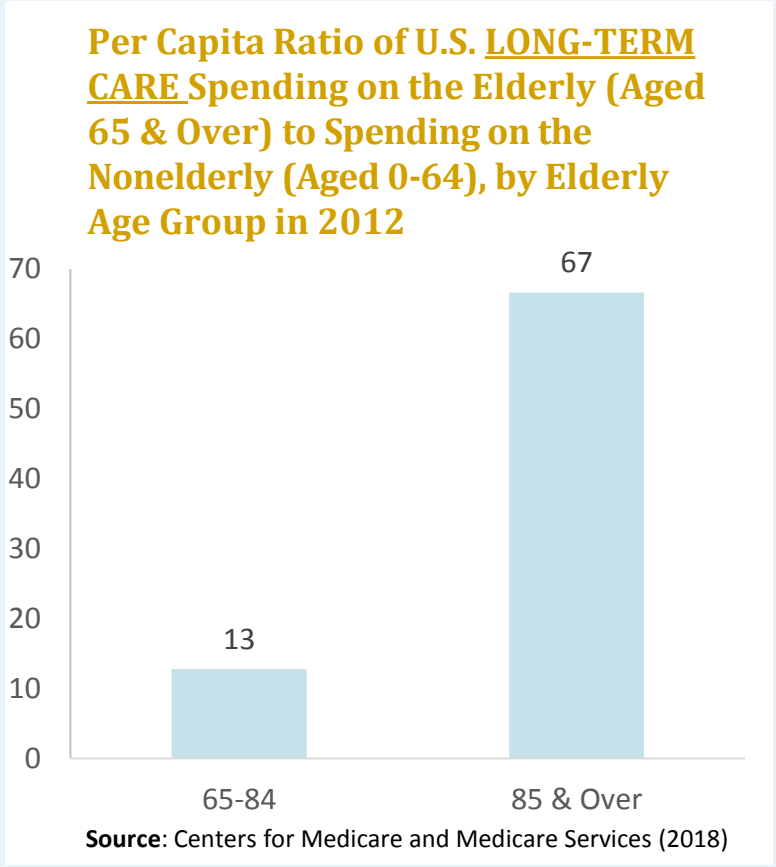
GAI Global Aging Institute

Age-Related Health-Care Multiplier: No. 3

The older the elderly are the more health care they consume.



Source: Centers for Medicare and Medicare Services (2018)

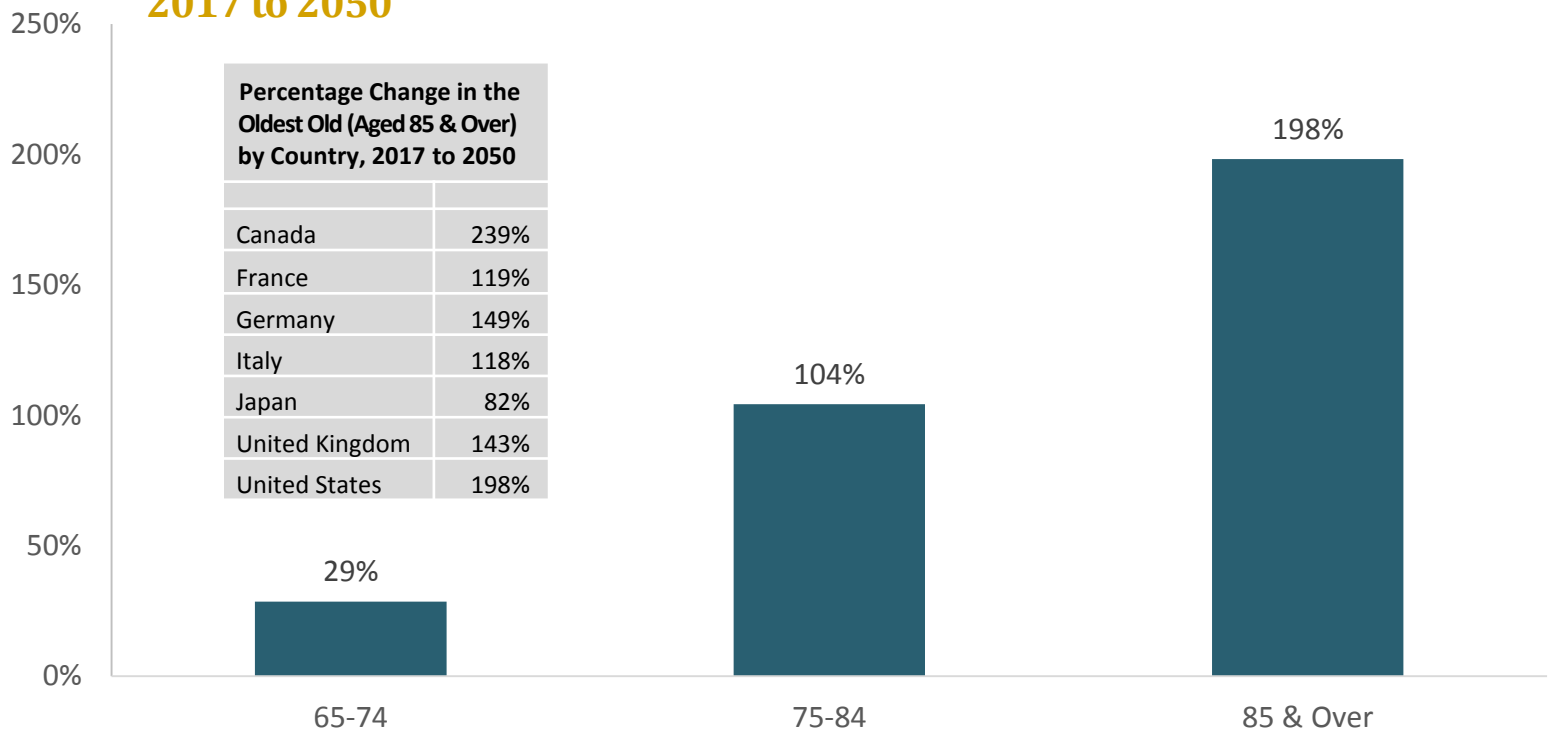


Source: Centers for Medicare and Medicare Services (2018)

GAI Global Aging Institute

The oldest elderly age groups are the fastest growing of all.

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



Percentage Change in the Oldest Old (Aged 85 & Over) by Country, 2017 to 2050

Canada	239%
France	119%
Germany	149%
Italy	118%
Japan	82%
United Kingdom	143%
United States	198%

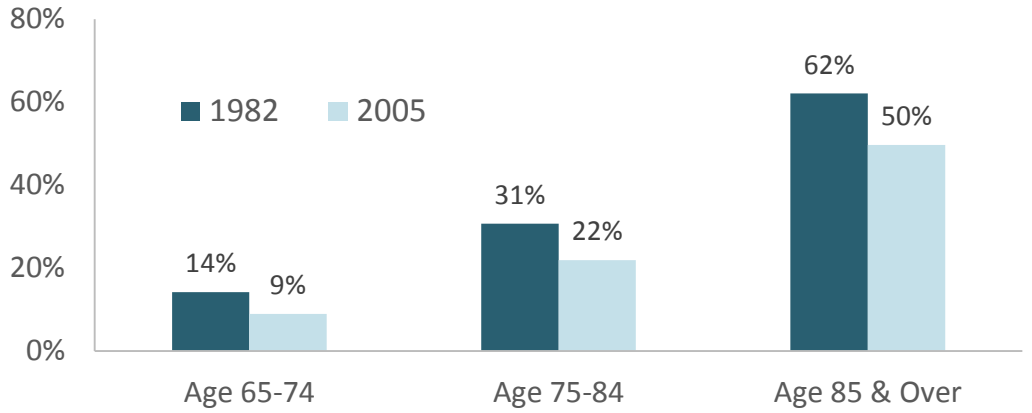
Source: UN Population Division (2017)

GAI Global Aging Institute

The Case for Optimism

- The share of U.S. elderly who are disabled has fallen sharply over the past few decades.
- According to the WHO, healthy life expectancy (HALE), a measure of years of life lived free from disability, has also been rising at older ages in most developed countries.
- These trends should help to facilitate longer work lives. According to some experts, they also mean that future health-care spending may be far lower than projections based on current patterns of age-specific health-care consumption seem to suggest.

Share of the U.S. Elderly (Aged 65 & Over) with a Disability, by Elderly Age Group, 1982 and 2005



Source: Manton et al. (2006)

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

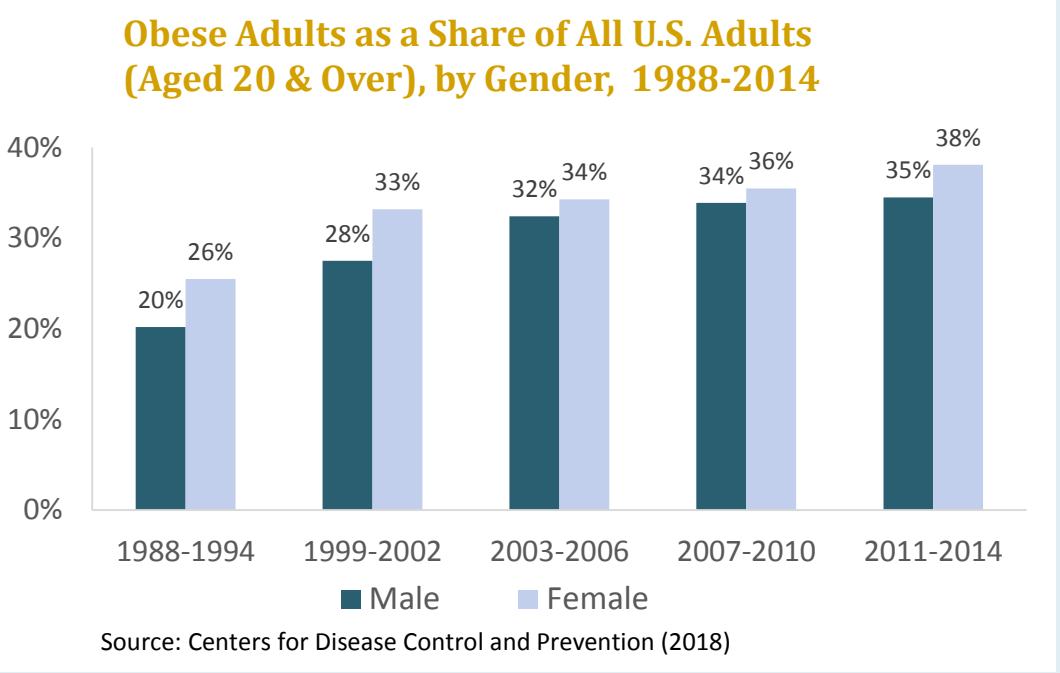
Source: WHO (various years)

GAI Global Aging Institute

CAVEAT 1

Past trends in disability may not be a good predictor of future trends.

- The best indicator of the health of tomorrow's elderly may not be the health of today's elderly but the health of today's young and midlife adults.
- In recent years, the obesity epidemic, along with substance abuse and other adverse lifestyle choices, has put a rising share of the population in the United States and a growing number of other countries at risk of premature morbidity, disability, and death.
- If the health of younger adults continues to deteriorate, the downward trend in elderly disability could stall or even reverse as younger cohorts begin to cross the threshold of old age.



Source: Centers for Disease Control and Prevention (2018)

GAI Global Aging Institute

CAVEAT 2

Less disability does not necessarily mean less morbidity.

- Even as elderly disability rates have fallen, the share of the elderly with serious chronic conditions has been flat or rising in the United States and most developed countries.
- Rather than a compression of morbidity, the data suggest we have seen a compression of disability.
- It is possible that the relationship between falling disability rates and health-care cost growth is precisely the reverse of what the optimists believe. Perhaps it is the high and rising volume of health-care services the elderly consume that is the very reason the elderly have become less disabled.

Share of the U.S. Elderly (Aged 60 & Over) with a Specified Disease, by Elderly Age Group, 1998 and 2006

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

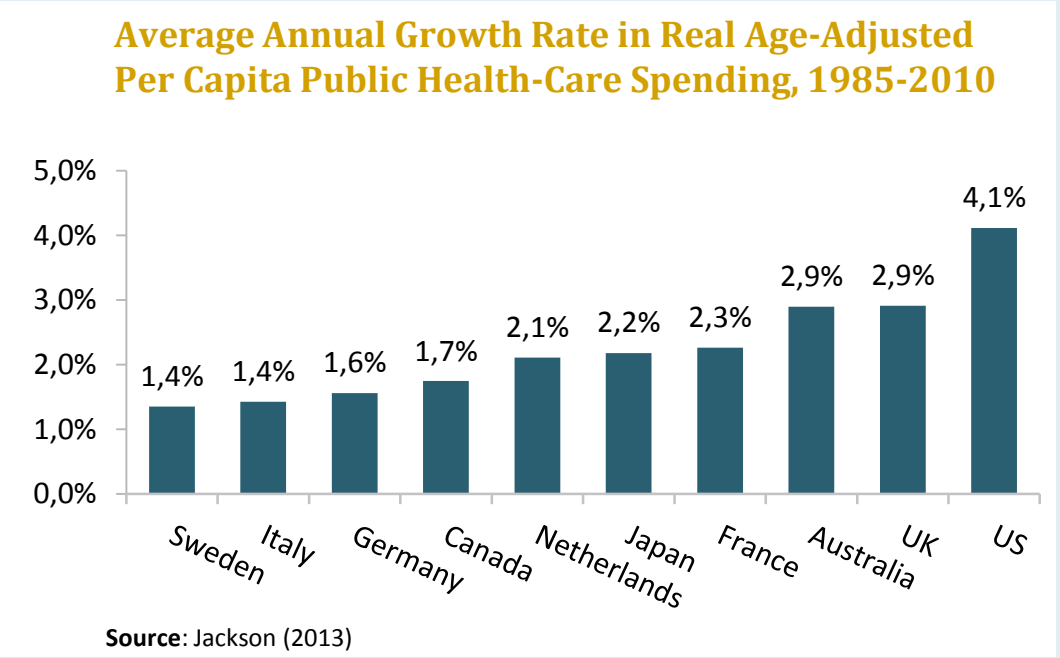
Source: Crimmins and Sánchez (2011)

GAI Global Aging Institute

CAVEAT 3

Other cost drivers may be more important than the health of the elderly.

- If falling disability rates 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 risen rapidly even as elderly disability has declined.
- Clearly, other forces are at work, from the introduction of new medical technologies to growing 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 risk, and more secular—that is, more apt to see happiness in the here and now as life's ultimate goal.

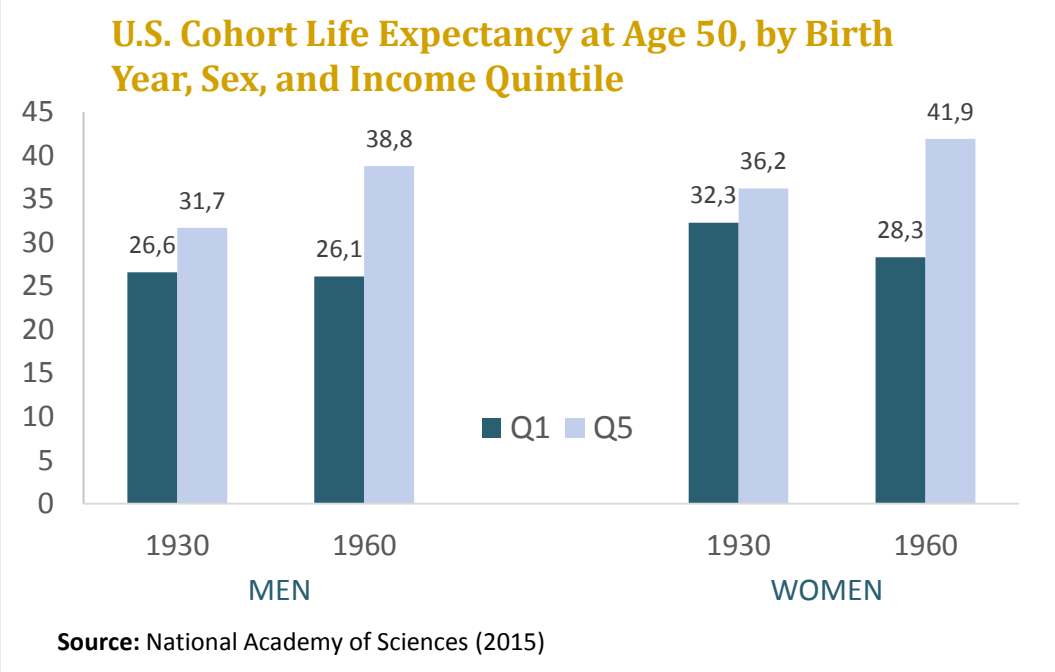


Source: Jackson (2013)

GAI Global Aging Institute

Implications for Longer Work Lives

- There is room for optimism that improvements in the functional health of the elderly will continue to facilitate longer work lives.
- However, there is also ample cause for concern, especially in the United States.
- The worsening health profile of younger and midlife adults in the United States threatens to reverse recent declines in elderly disability rates.
- The huge and growing divergence in U.S. life expectancy and health expectancy by income and educational attainment means that longer work lives may have the unwelcome effect of worsening income inequality.



Source: National Academy of Sciences (2015)

GAI Global Aging Institute

Implications for Acute-Care Spending

- There is little evidence that improvements in the health of the elderly will significantly slow the growth in acute-care spending.
- 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.
- Large savings in acute care will likely require lowering the growth rate in real age-adjusted per capita spending, which in turn would require broader reform of health-care financing and delivery systems.

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 Medicare Services (2018) and OECD (2006 and 2013)

GAI Global Aging Institute

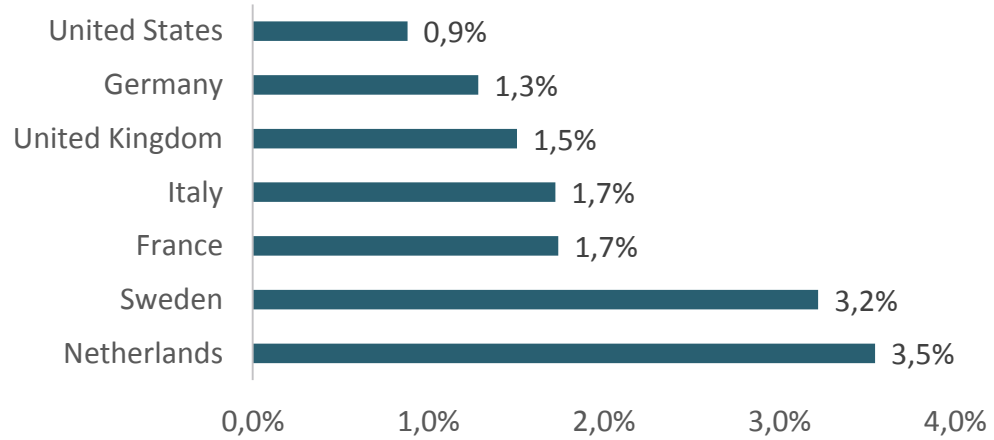
Implications for Long-Term Care Spending

- 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.

- The demand for formal long-term care services is highly sensitive to broader socioeconomic factors, and especially the strength of extended families. As family size shrinks, the burden on family caregivers could rise even as the overall demand for long-term care falls.

- Countries like the United States that still rely heavily on family caregivers are likely to see growing pressure for government to assume greater responsibility for long-term care.

Public Spending on Long-Term Care, as a Percent of GDP in 2016



Source: Centers for Medicare and Medicaid Services (2018) and European Commission (2017)

GAI Global Aging Institute

GLOBAL AGING INSTITUTE

www. GlobalAgingInstitute.org