Life Spans, Health Spans, and Productive Aging

Perspectives on the Global Aging Challenge

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February 11, 2015

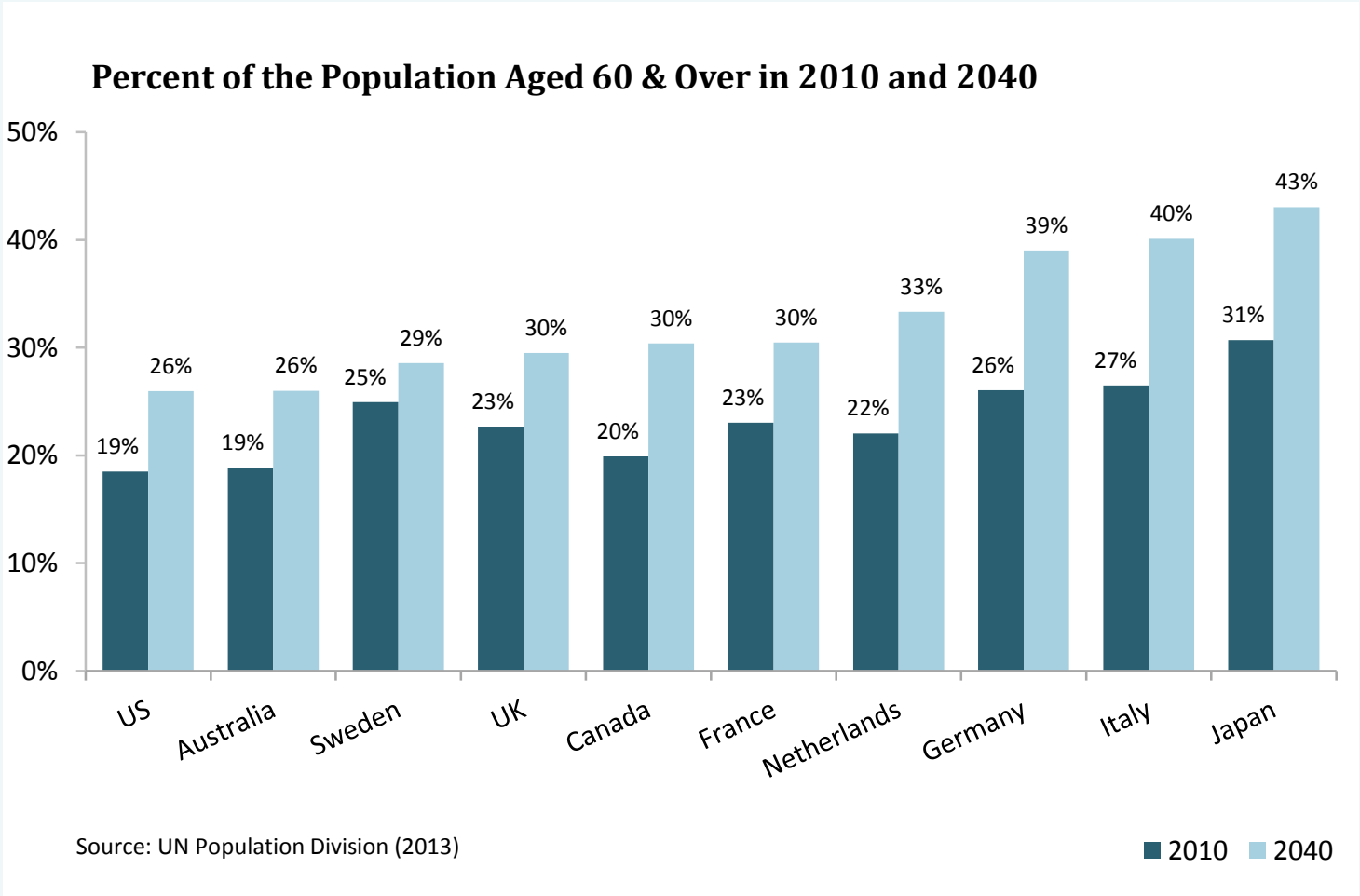
The First Imperative: Extending Work Lives

Two Forces behind the Aging of the Population: Falling Fertility and Rising Longevity

	Total Fertility Rate			Life Expectancy at Birth		
	1960-65	1980-85	2005-10	1960-65	1980-85	2005-10
Australia	3.3	1.9	1.9	69.3	75.1	81.7
Canada	3.7	1.6	1.6	69.0	75.8	80.5
France	2.9	1.9	1.9	70.7	74.7	81.2
Germany	2.5	1.5	1.3	70.3	73.8	79.9
Italy	2.5	1.5	1.4	69.6	74.7	81.2
Japan	2.0	1.8	1.3	68.9	76.9	82.7
Netherlands	3.2	1.5	1.7	73.4	76.1	80.0
Sweden	2.3	1.6	1.9	73.5	76.3	80.9
UK	2.8	1.8	1.8	70.8	74.0	79.4
US	3.3	1.8	2.1	70.0	74.3	79.2

Source: UN Population Division (2013)

The developed world is being overtaken by an unprecedented age wave.



Source: UN Population Division (UN, 2013)

Along with rapidly aging populations, the developed countries will also have stagnant or contracting working-age populations.

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

	1980s	1990s	2000s	2010s	2020s	2030s	2040s
Canada	1.9%	1.2%	1.4%	-0.1%	-0.1%	0.4%	0.2%
France	1.1%	0.4%	0.8%	0.0%	0.0%	0.0%	0.3%
Germany	1.2%	0.2%	-0.3%	-0.3%	-1.1%	-1.1%	-0.9%
Italy	0.9%	0.2%	0.4%	-0.2%	-0.6%	-1.1%	-0.8%
Japan	0.8%	0.4%	-0.4%	-0.9%	-0.7%	-1.3%	-1.3%
UK	0.7%	0.4%	0.6%	0.2%	0.0%	0.1%	0.2%
US	1.4%	1.3%	1.1%	0.4%	0.1%	0.5%	0.5%

Source: UN Population Division (2013)

In many developed countries, labor-force participation rates for older workers have begun to rise.

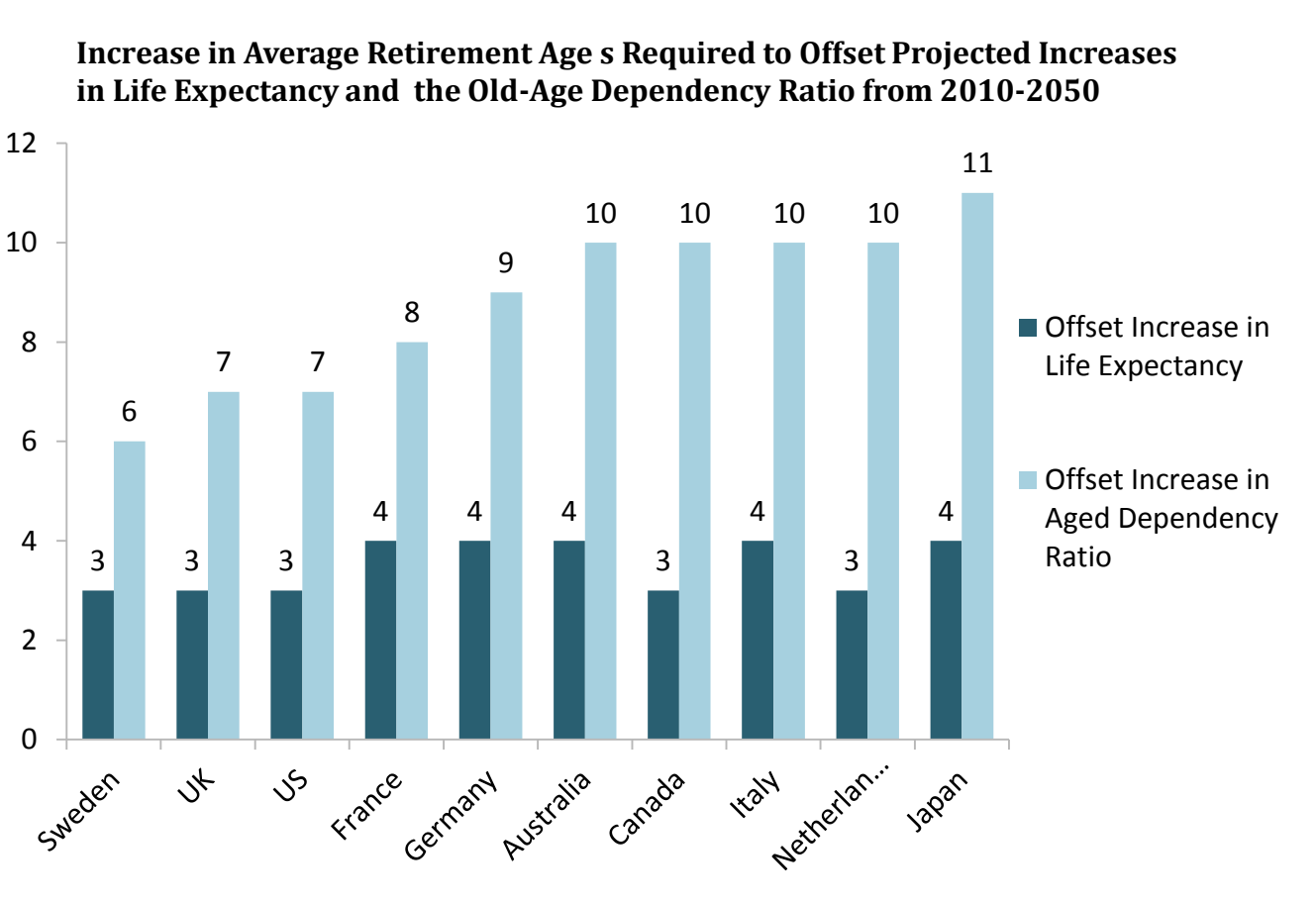
Elderly Labor-Force Participation Rate by Age Group, 1990-2010

	Aged 60-64			Aged 60-74		
	1990	2000	2010	1990	2000	2010
Australia	33%	34%	52%	22%*	25%*	40%*
Canada	37%	36%	51%	20%	19%	32%
France	14%	11%	19%	8%	5%	10%
Germany	21%	22%	44%	12%	11%	18%
Italy	22%	19%	21%	12%	10%	11%
Japan	56%	56%	61%	44%	41%	44%
Netherlands	15%	19%	39%	8%	10%	23%
Sweden	58%	53%	65%	25%	26%	34%
UK	38%	38%	46%	19%	19%	27%
US	45%	47%	55%	27%	30%	39%

*Data refer to population aged 60-69.

Source: Labor Force Statistics Database (OECD, 2013)

Very large additional increases in average retirement ages would be required to offset the aging of the population.



Source: UN Population Division (2013) and author's calculations.

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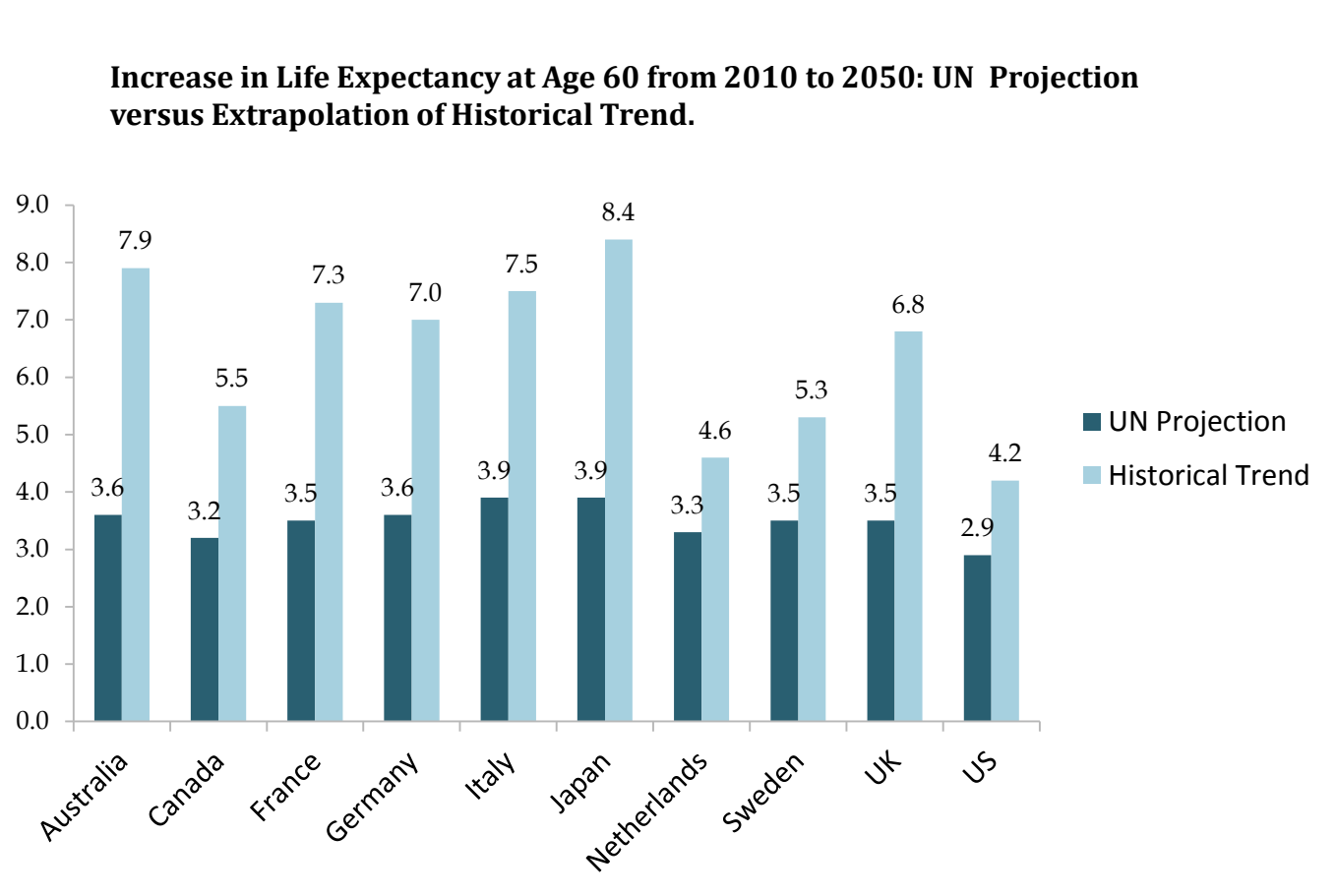
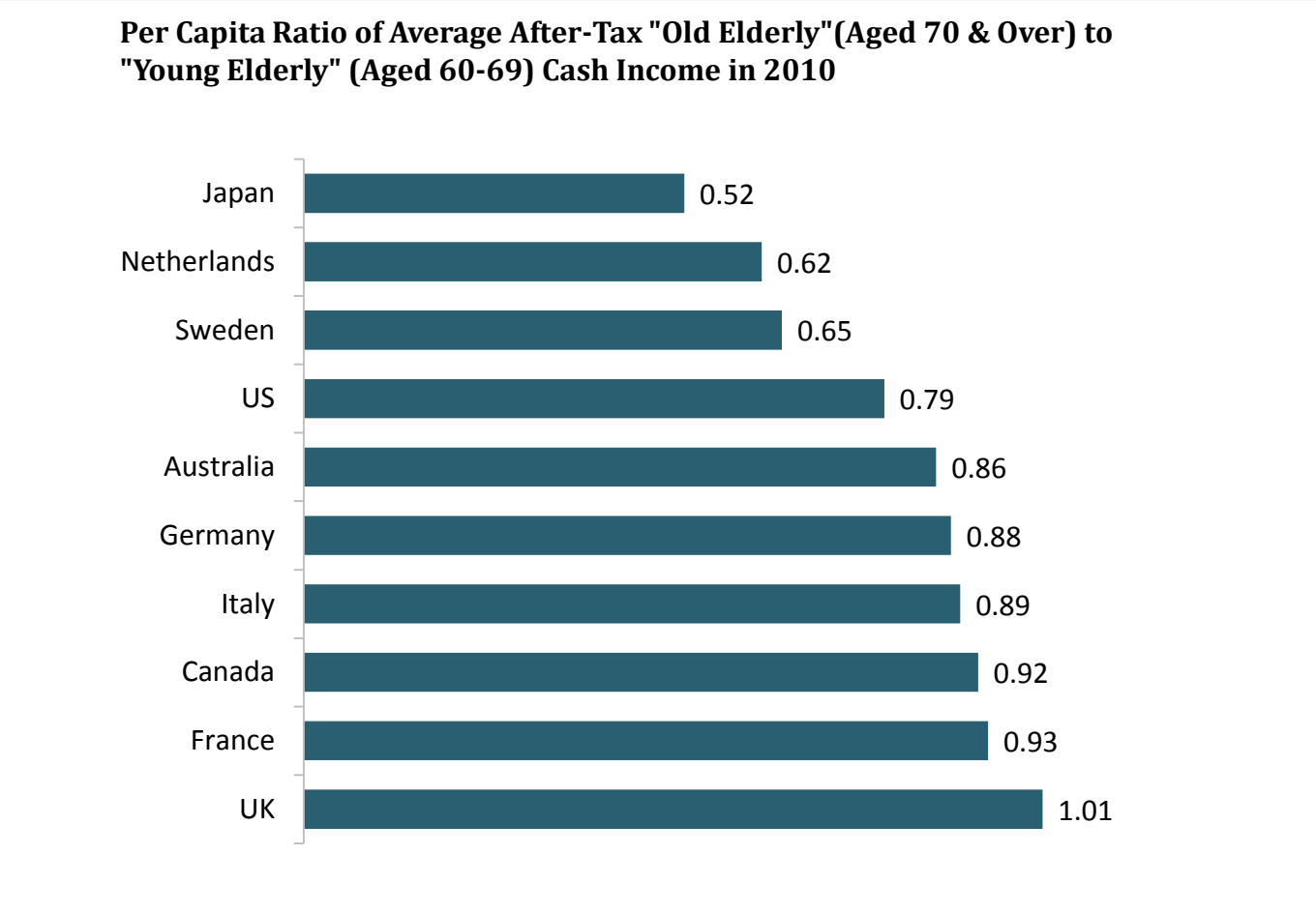
Most official projections assume that increases in life expectancy will slow.



Source: UN Population Division (2013) and author's calculations.

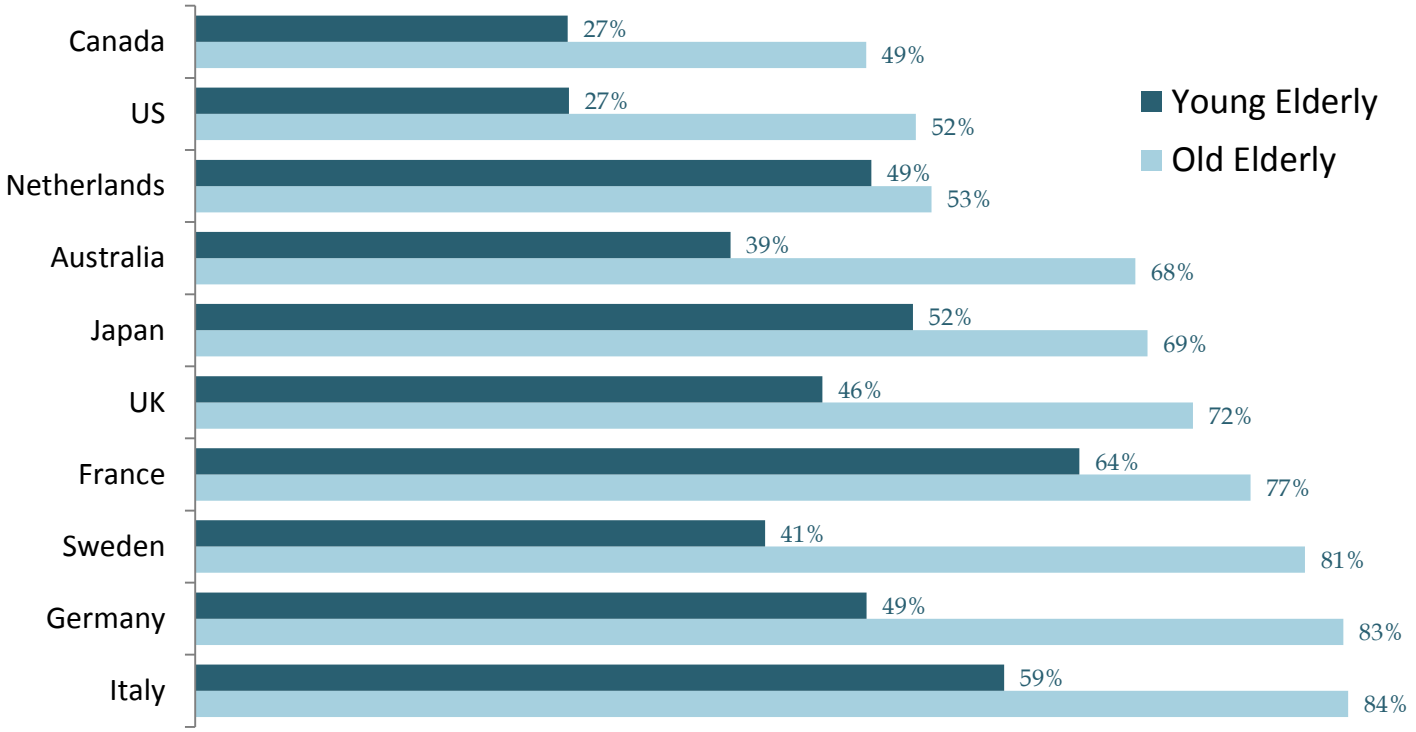
In most developed countries, the "young elderly" have higher incomes than the "old elderly."



Source: GAP Index, 2nd Edition (CSIS, 2013)

The "young elderly" are also far less dependent on public benefits than the "old elderly."

Public Benefits as a Percent of the Cash Income of the Median-Income Young Elderly (Aged 60-69) and Median-Income Old Elderly (70 & Over) in 2010*



* Data refer to the third quintile of the elderly income distribution.

Source: GAP Index, 2nd Edition (CSIS, 2013)

The Second Imperative: Reducing Health-Care Cost Growth

The aging of the population will exert enormous pressure on health-care costs.

Health Benefits to the Elderly (Aged 60 & Over), as a Percent of GDP, 2010-2040

	2010	2020	2030	2040
Australia	3.0%	3.9%	4.7%	5.5%
Canada	4.3%	5.5%	7.3%	9.0%
France	4.7%	6.2%	7.8%	9.0%
Germany	4.7%	5.6%	7.4%	8.9%
Italy	3.9%	4.9%	6.3%	7.9%
Japan	5.2%	6.8%	8.3%	9.8%
Netherlands	3.4%	4.8%	6.7%	8.3%
Sweden	5.2%	5.5%	6.6%	7.3%
UK	4.6%	5.9%	7.4%	8.7%
US	5.1%	7.2%	9.4%	11.0%

Source: GAP Index, 2nd Edition (CSIS, 2013)

The Age Related Health-Care Multiplier

The elderly consume much more health care per capita than the nonelderly.

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

Canada	4.9
France	3.0
Germany	2.7
Italy	3.2
Japan	4.9
Netherlands	3.9
Spain	3.2
Sweden	2.8
UK	3.4
US	3.7

•Data refer to public health-care spending, except for the United States, where they refer to total personal health-care spending.
Source: OECD Health Data (various years); and Centers for Medicare & Medicaid Services (2007)

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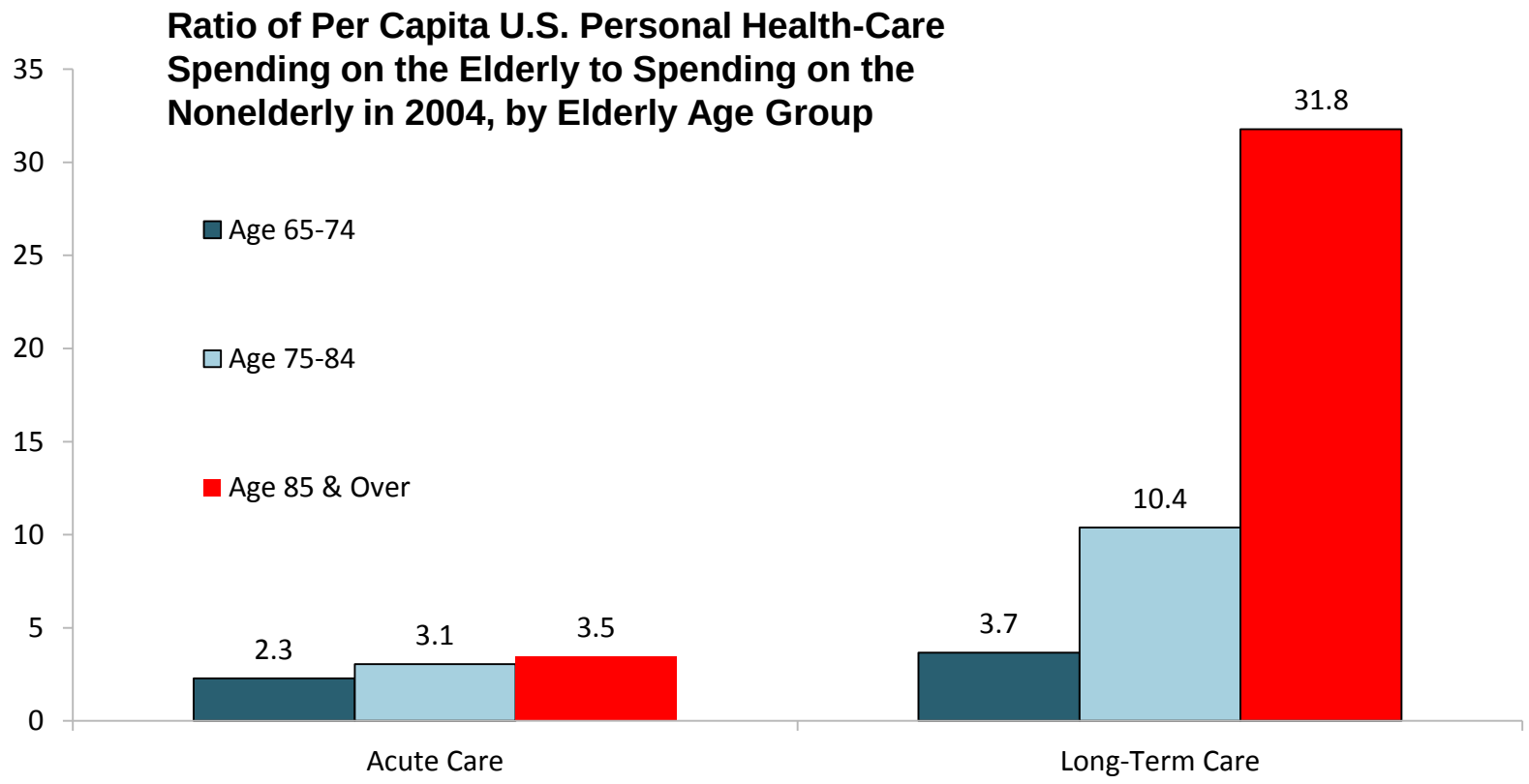
The Age Related Health-Care Multiplier

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



Source: Centers for Medicare & Medicaid Services (2007)

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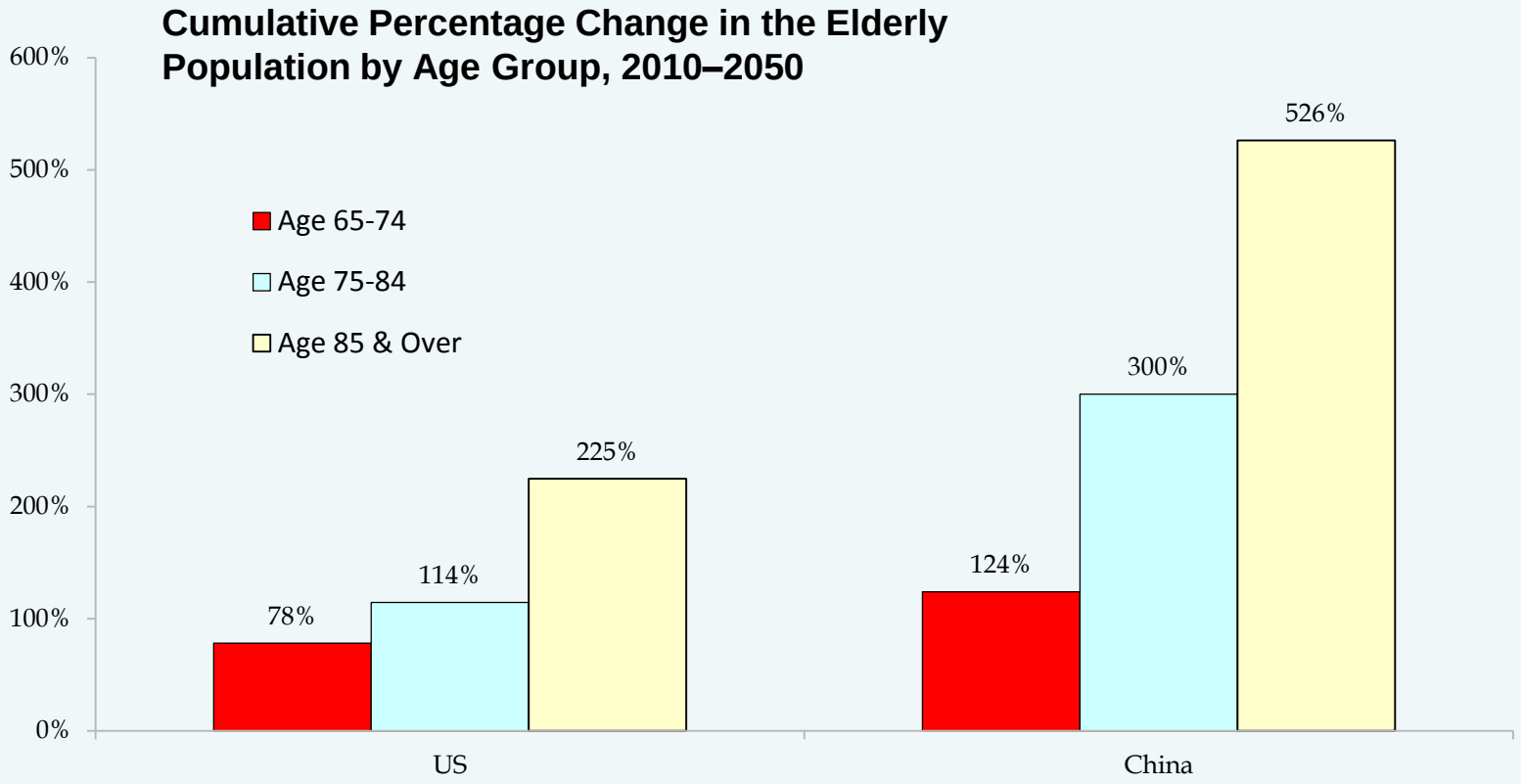
The Age Related Health-Care Multiplier

The oldest elderly age brackets will be the fastest growing of all.



Source: UN (2011)

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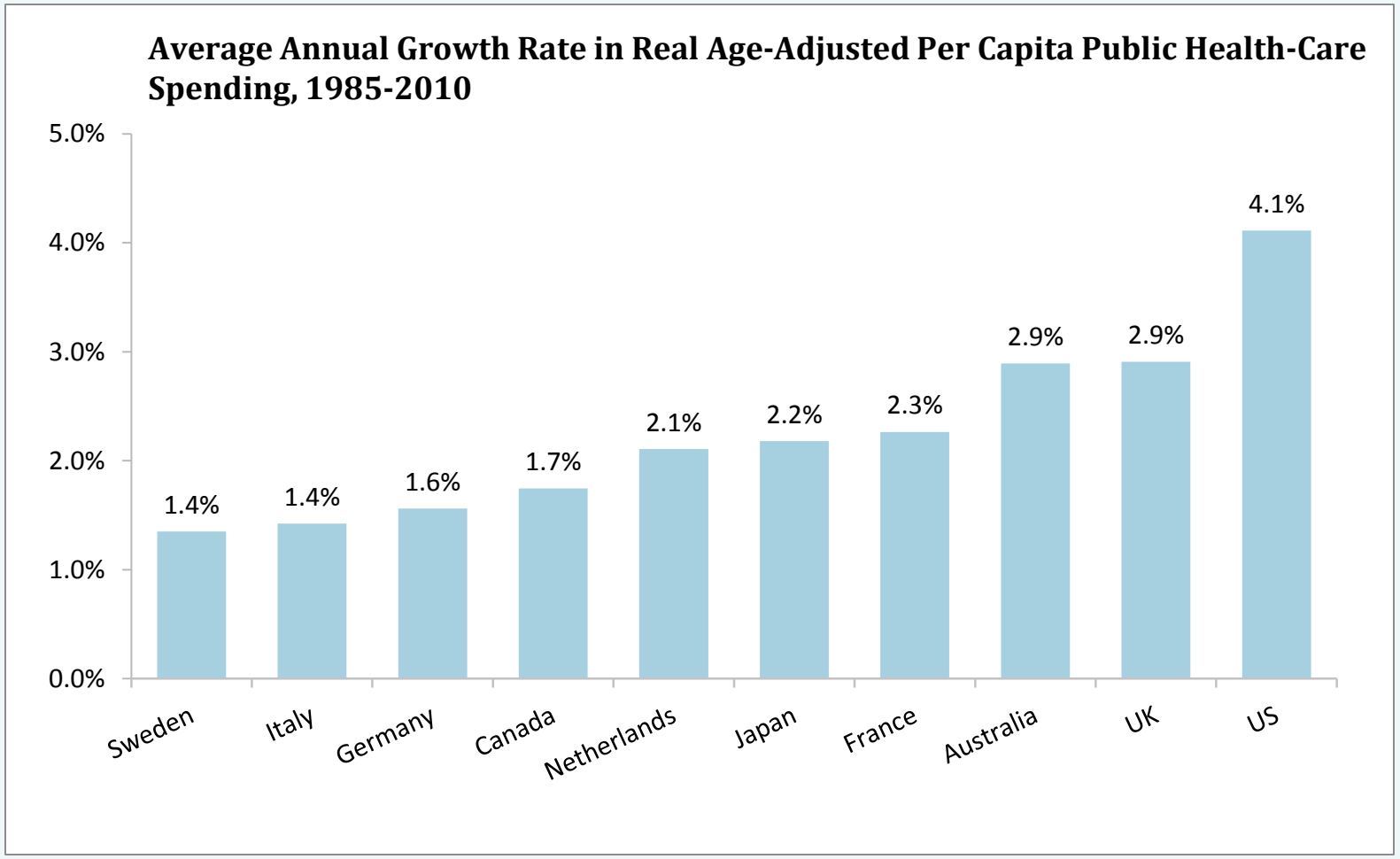
Beyond the age-related health-care multiplier, real per capita costs are rising for everyone.



Source: OECD Health Data 2012 (OECD, 2012)

Behind "Excess Cost Growth"

- New technologies continuously create new demand for medical services.
- "Good health" is a subjective standard that rises over time.
- Medicine is a probabalistic science in which no extra dollar, euro, or pound spent might not have some extra benefit.
- As people become more knowledgeable about treatment options, limits are harder to set.

Health Spans and Life Spans

Two Models of Aging and Health

- The "compression of morbidity" model predicts that health spans will rise along with life spans.

- The "failure of success" model predicts that rising life spans will mean a rising incidence of chronic morbidity among the elderly.

The Good News:
Rates of elderly disability are declining.

Percent of U.S. Elderly with a Disability or in an Institution

With a Disability	1982	1989	1999	2005
Age 65-74	14.2	11.9	10.7	8.9
Age 75-85	30.7	29.9	23.4	21.9
Age 85+	62.1	61.4	55.6	49.7

In an Institution	1982	1989	1999	2005
Age 65-74	2.0	1.9	1.4	0.9
Age 75-85	8.1	7.0	4.3	4.1
Age 85+	27.2	26.1	19.5	15.6

Source: Manton, Gu & Vicki (2006)

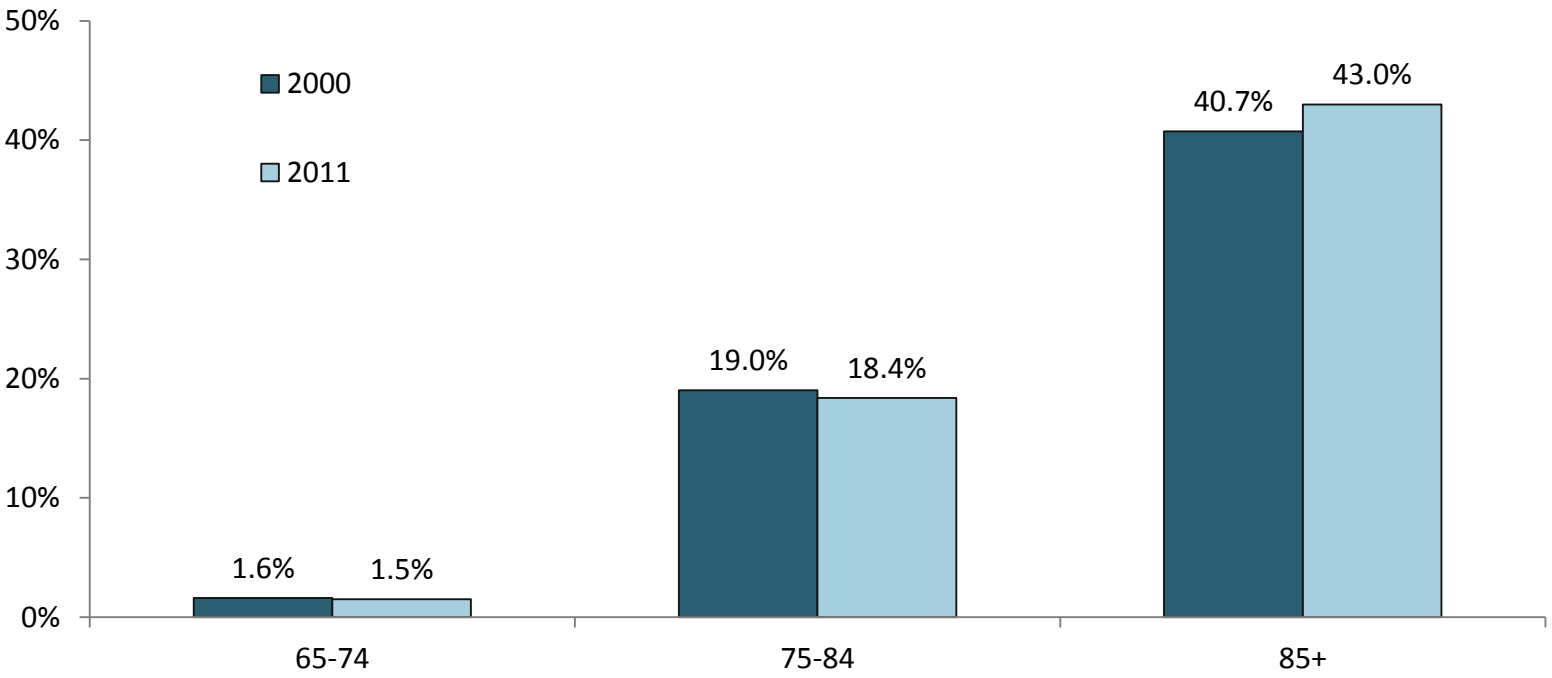
The Bad News:
Morbidity rates among the elderly are flat or rising.

Percent of U.S. Elderly with Selected Medical Conditions

	1998-2000	2004-2006	2007-2009
Heart Disease			
Age 65-74	17.6	18.6	17.4
Age 75-84	22.2	24.8	24.6
Age 85+	24.0	28.6	27.2
Stroke			
Age 65-74	6.5	6.9	6.3
Age 75-84	10.1	11.0	11.2
Age 85+	10.4	15.1	13.8
Cancer			
Age 65-74	17.0	18.3	20.5
Age 75-84	21.8	25	25.9
Age 85+	21.4	25	27.7
Diabetes			
Age 65-74	14.5	18.4	19.9
Age 75-84	13.4	17.6	19.0
Age 85+	9.3	12.6	13.7

Source: NHIS (various years)

Most ominously, the incidence of Alzheimer's shows little sign of falling.



Source: Herbert et al. (2003) and Alzheimer's Association (2011)