The Long-Term Outlook for Healthcare Spending in Developed Countries

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PRESENTATION GOALS & SCOPE OF ANALYSIS

PRESENTATION GOALS

❑ Identify and analyze the long-term drivers of healthcare spending.

❑ Assess whether the recent slowdown in healthcare spending is likely to be lasting.

❑ Explore possible scenarios for the future direction of healthcare spending.

SCOPE OF ANALYSIS

❑ Our analysis is limited to high-income OECD countries with mature welfare states.

❑ Ten countries are included: Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the UK, and the United States.

❑ We examine historical trends from 1970 to the present. Our projections extend to 2060.

❑ Our analysis focuses on aggregate personal healthcare spending, which in principle includes all categories of healthcare consumption. However, LTC is missing for some countries.

HISTORICAL SPENDING TRENDS

Since the Great Recession, the upward trend in healthcare spending as a share of the economy has moderated in most developed countries.
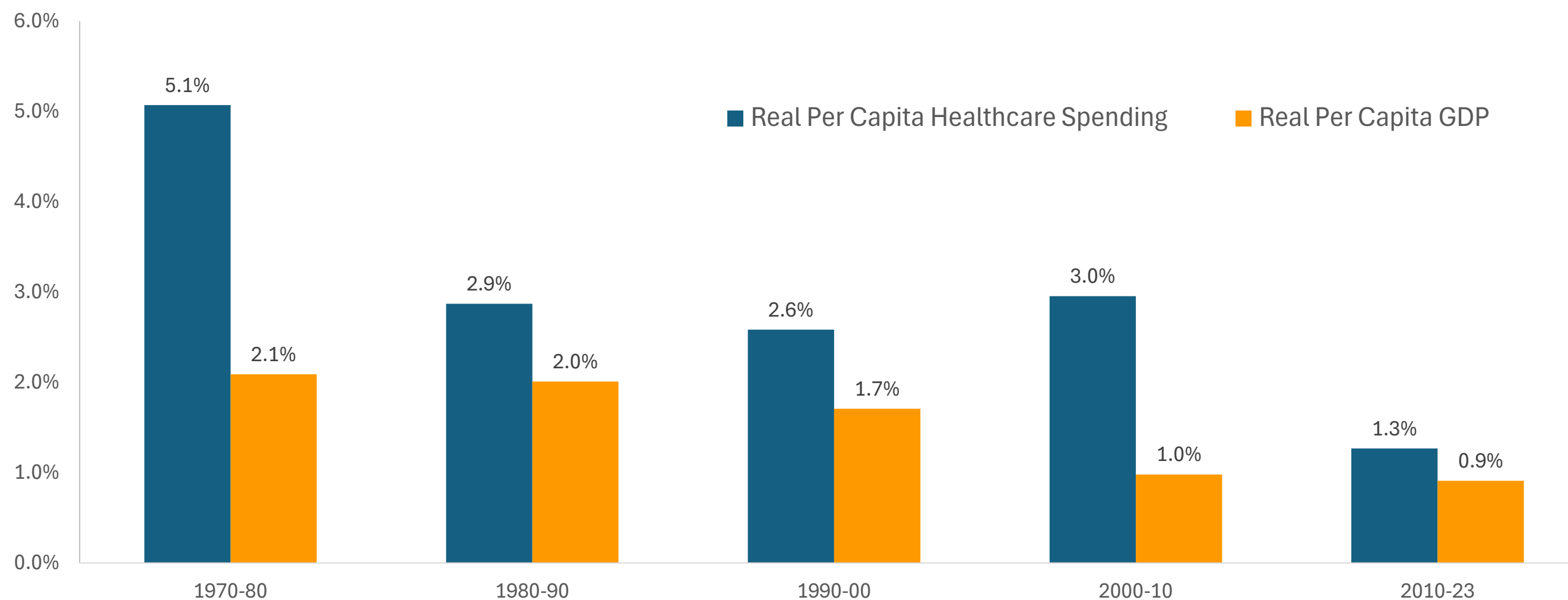
Personal Healthcare Spending as a Share of GDP, by Country, 1970-2023

Legend: Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, UK, US
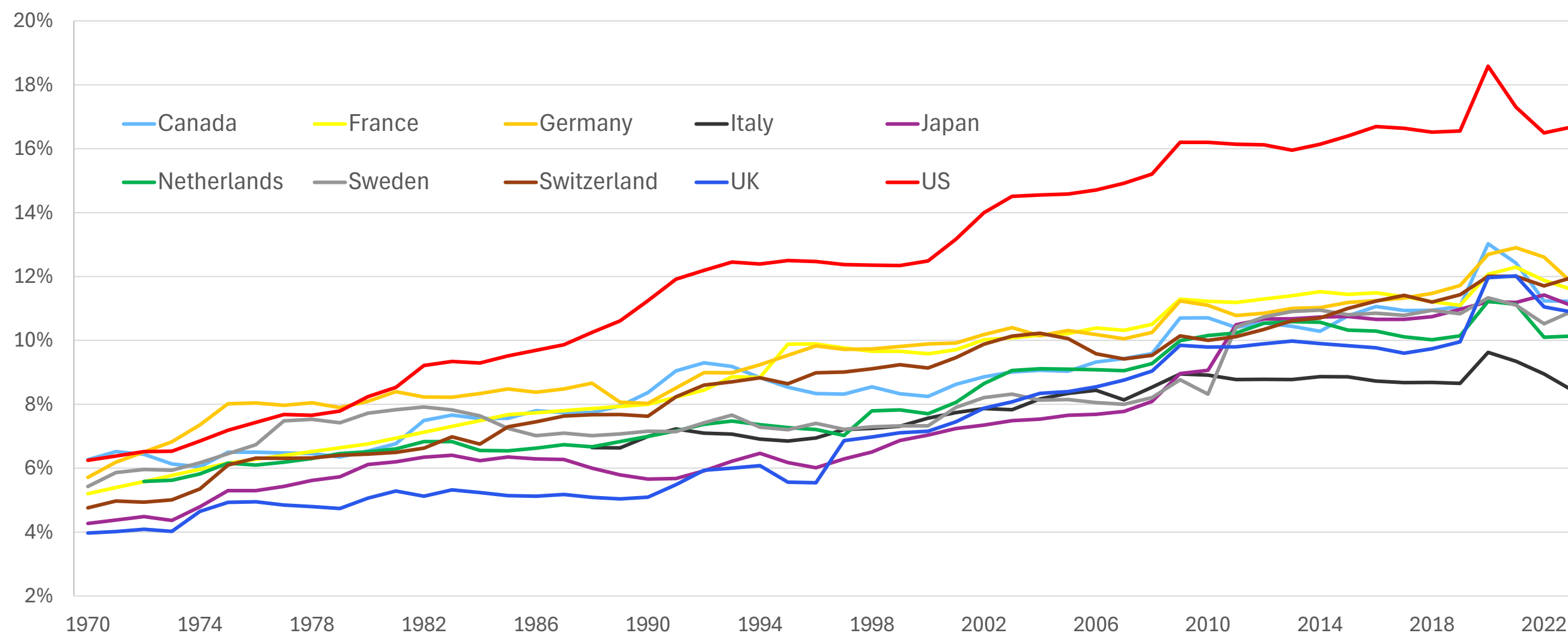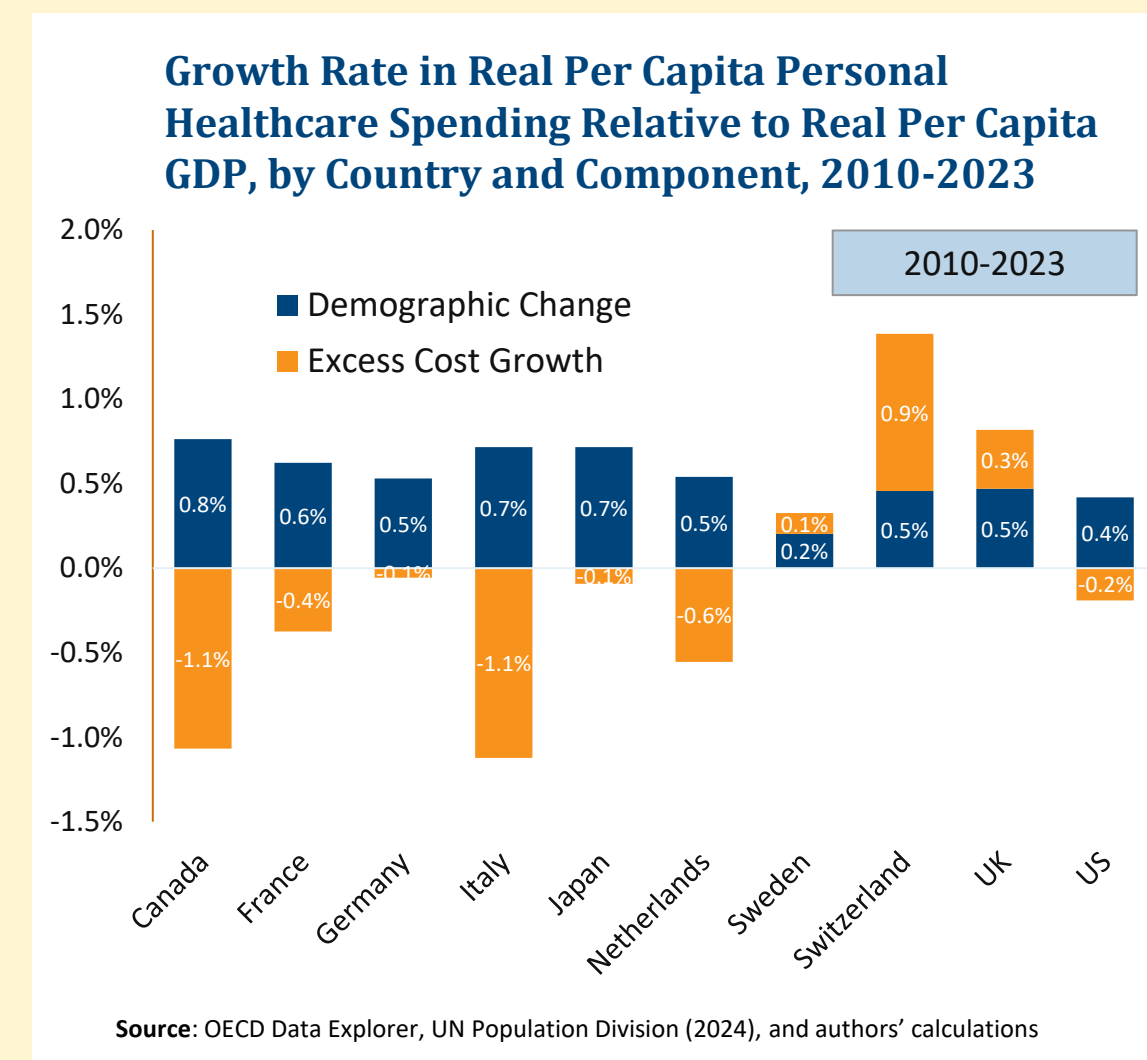
Source: OECD Data Explorer

The growth in per capita healthcare spending has slowed relative to the growth in per capita GDP.

Growth Rate in Real Per Capita Personal Healthcare Spending and Real Per Capita GDP, Average for 10 OECD Countries, by Period, 1970-2023

Legend: ■ Real Per Capita Healthcare Spending ■ Real Per Capita GDP

Period	Real Per Capita Healthcare Spending	Real Per Capita GDP
1970-80	5.1%	2.1%
1980-90	2.9%	2.0%
1990-00	2.6%	1.7%
2000-10	3.0%	1.0%
2010-23	1.3%	0.9%

Source: OECD Data Explorer and UN Population Division (2024)

The growth in real healthcare spending as a share of GDP can be divided into two components: Growth due to demographic change and "excess cost growth."

Growth Rate in Real Per Capita Personal Healthcare Spending Relative to Real Per Capita GDP, by Country and Component, 1970-2010

1970-2010

- ■ Demographic Change
- ■ Excess Cost Growth

Country	Demographic Change	Excess Cost Growth
Canada	0.6%	0.8%
France	0.4%	1.3%
Germany	0.5%	0.6%
Italy	0.8%	0.4%
Japan	1.0%	0.9%
Netherlands	0.4%	0.9%
Sweden	0.2%	0.9%
Switzerland	0.5%	1.2%
UK	0.3%	1.4%
US	0.3%	2.1%

Source: OECD Data Explorer, UN Population Division (2024), and authors' calculations

Growth Rate in Real Per Capita Personal Healthcare Spending Relative to Real Per Capita GDP, by Country and Component, 2010-2023

2010-2023

- ■ Demographic Change
- ■ Excess Cost Growth

Country	Demographic Change	Excess Cost Growth
Canada	0.8%	-1.1%
France	0.6%	-0.4%
Germany	0.5%	-0.1%
Italy	0.7%	-1.1%
Japan	0.7%	-0.1%
Netherlands	0.5%	-0.6%
Sweden	0.2%	0.1%
Switzerland	0.5%	0.9%
UK	0.5%	0.3%
US	0.4%	-0.2%

Source: OECD Data Explorer, UN Population Division (2024), and authors' calculations

Note: "Excess Cost Growth" is a residual. It is the amount by which the growth in real per capita spending exceeds the growth in real per capita GDP after taking into account the impact of demographic change.

REASONS FOR THE SLOWDOWN

❑ The recent slowdown in healthcare spending is almost entirely due to reductions in "excess cost growth."

❑ Several developments appear to have contributed to lower excess cost growth, including slower growth in incomes, more efficient use of healthcare technologies, improvements in healthcare sector productivity, and more effective government cost-control measures.

❑ There is no consensus among healthcare economists about whether the slowdown in healthcare spending will be lasting.

LONG-TERM COST DRIVERS

The drivers of healthcare spending differ in the short term, medium term, and long term.

SHORT-TERM PROJECTIONS (1-3 years)

Short-term spending projections are based on such factors as provider/insurance contracts, healthcare budgets, case mix, utilization patterns, and government regulation.

MEDIUM-TERM PROJECTIONS (3-10 years)

Medium-term spending projections may also take into account the business cycle, changes in healthcare sector labor supply, and other industry trends.

LONG-TERM PROJECTIONS (10-30+ years)

Long-term spending projections are based on demographic trends and an assessment of the underlying factors contributing to "excess cost growth."

Demographic Drivers: Population Aging and Population Health

Excess Cost Growth Drivers: Income Elasticity, Healthcare Productivity, Technological Change, Public Expectations, and Government Healthcare Policy
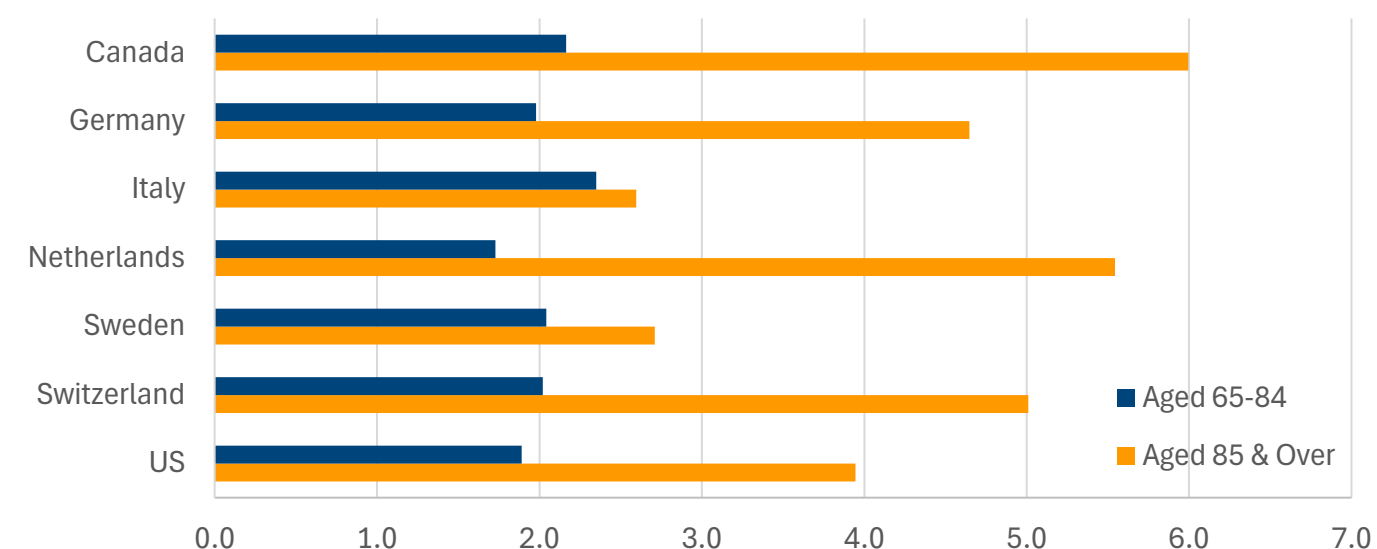
Demographic Drivers: POPULATION AGING

❑ The four age-related healthcare multipliers:

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

- ➤ The elderly are the fastest growing segment of the population.

- ➤ The older the elderly are, the more healthcare they consume.

- ➤ The oldest elderly age brackets are the fastest growing of all.

❑ As population aging has accelerated—and "excess cost growth" has slowed—demographic trends have become a relatively more important long-term driver of healthcare spending.

Relative Per Capita Cost of Healthcare Spending by the Elderly, by Elderly Age Group and Country, 2018 or Most Recent Available Year

Legend: ■ Aged 65-84 ■ Aged 85 & Over

Source: Morgan and Mueller (OECD, October 2023)

**Elderly (Aged 65 & Over) as a Share of the Population, by Elderly Age Group and Country, 2025 and 2060**

1st bar in pair = 2025
2nd bar in pair = 2060

Legend: ■ Aged 65-84 ■ Aged 85 & Over
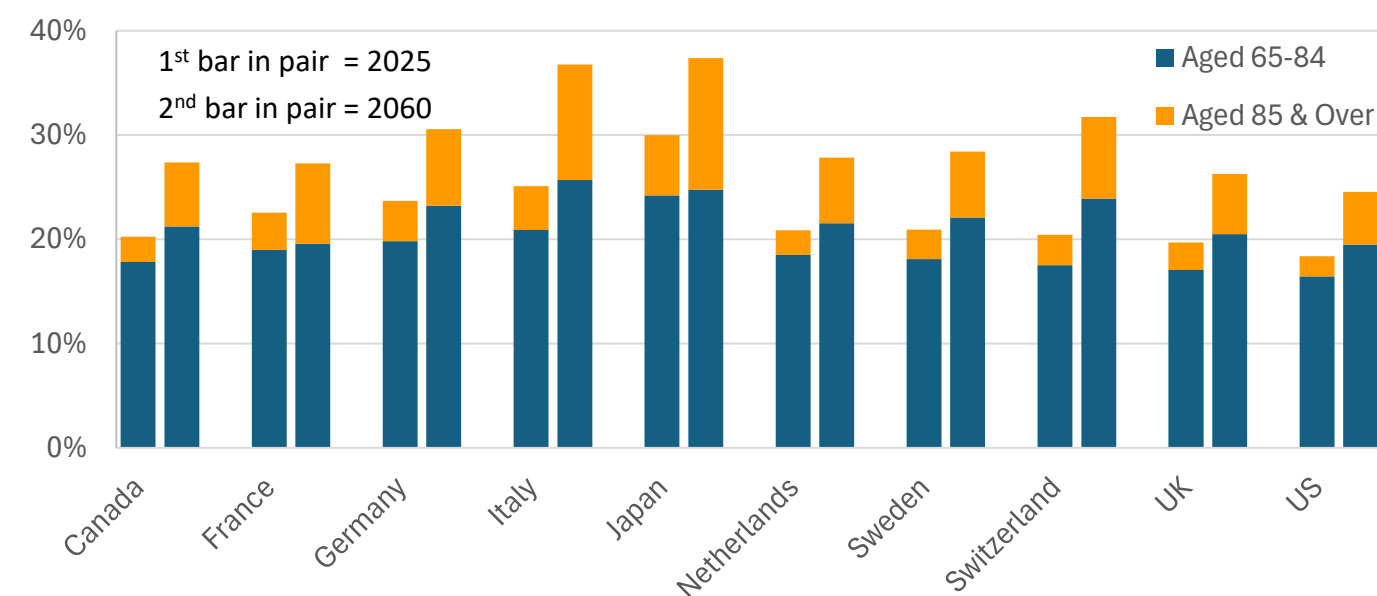

Source: UN Population Division (2024)

❑ Trends in health at older ages can mitigate or exacerbate the impact of population aging.

❑ Three possible future scenarios:

➢ Expansion of Morbidity: Life expectancy rises faster than health expectancy, increasing the number of high-cost years.

➢ Constant Morbidity: Health expectancy grows in tandem with life expectancy, leaving the number of high-cost years unchanged.

➢ Compression of Morbidity: Healthy aging and/or biomedical advances cause health expectancy to rise faster than life expectancy, reducing the number of high-cost years.

Average Personal Healthcare Spending of U.S. Medicare Beneficiaries in Their Last Year of Life, by Month from Death and Funding Source, Average for 1992-1999
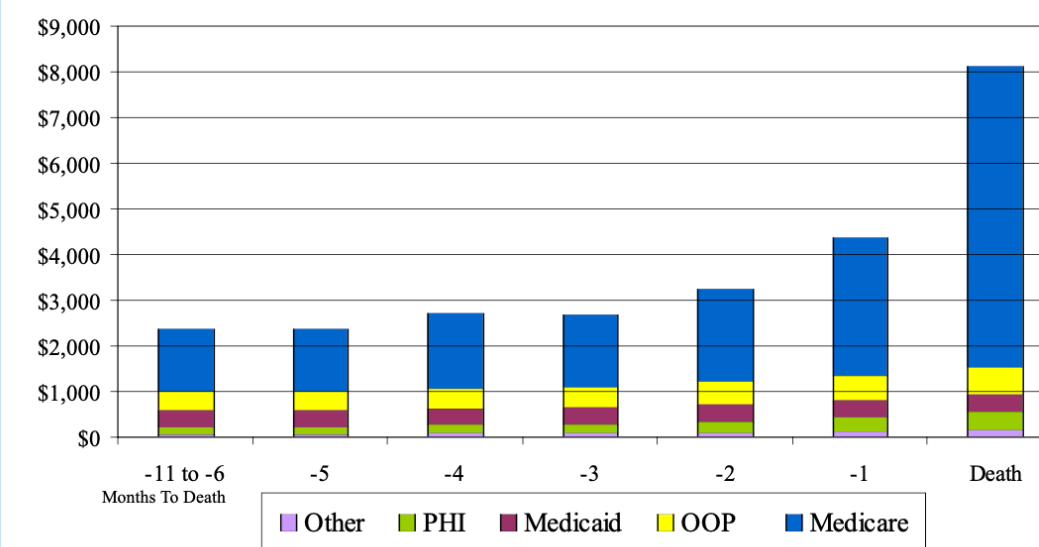
Source: MCBS Profiles (CMS, May 2003)

Decedent/Survivor Personal Healthcare Spending Ratios of U.S. Medicare Beneficiaries, by Age in 1999

Age	Ratio
Age 65-69	12.1
Age 70-74	9.2
Age 75-79	7.1
Age 80-84	5.5
Age 85-89	4.4
Age 90 & Over	3.9
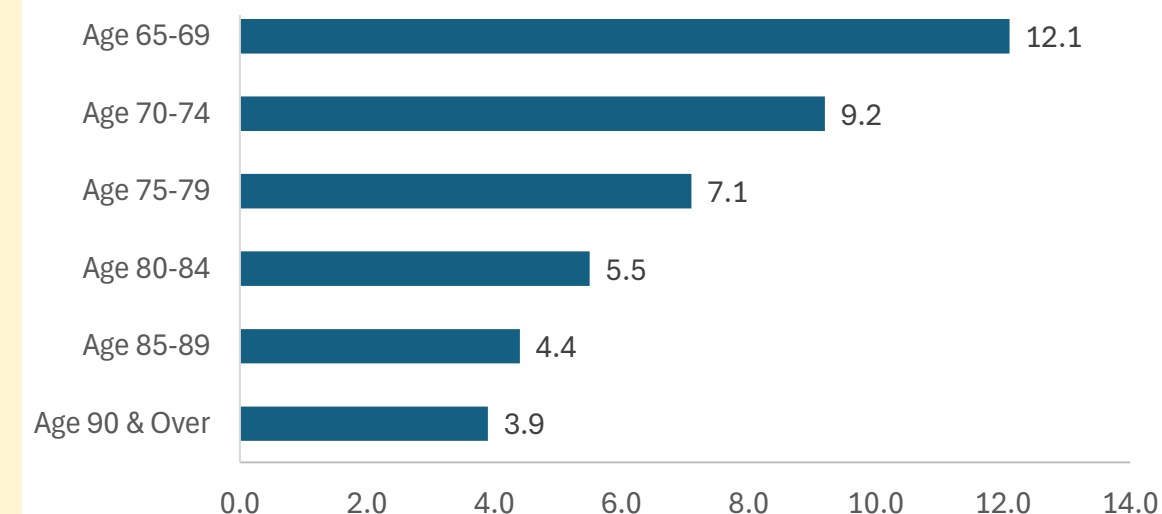
Source: Calfo et al., *Last Year of Life Study* (CMS, 2003)

Excess Cost Growth Drivers: INCOME ELASTICITY

❑ It is well established that there is a close relationship between a society's income level and how much it spends on healthcare.

❑ Poor societies spend little on healthcare as a share of GDP, developing ones spend more, and affluent ones spend most of all.

❑ There also appears to be a close relationship between income growth and healthcare spending growth. Several studies have concluded that slower GDP growth has contributed to slower healthcare spending growth since the Great Recession.

❑ The developed world's aging societies will likely continue to have slow-growth economies, which in turn suggests that income elasticity is likely to remain a negative driver in the future.

Estimated Income Elasticity of Healthcare Spending, by Country Income Level

Income Level	Value
Low Income	1.17
Lower-Middle Income	1.22
Upper-Middle Income	0.63
High Income	0.62
World Average	0.88

Source: Baltagi et al. (*Health Economics*, July 2017)
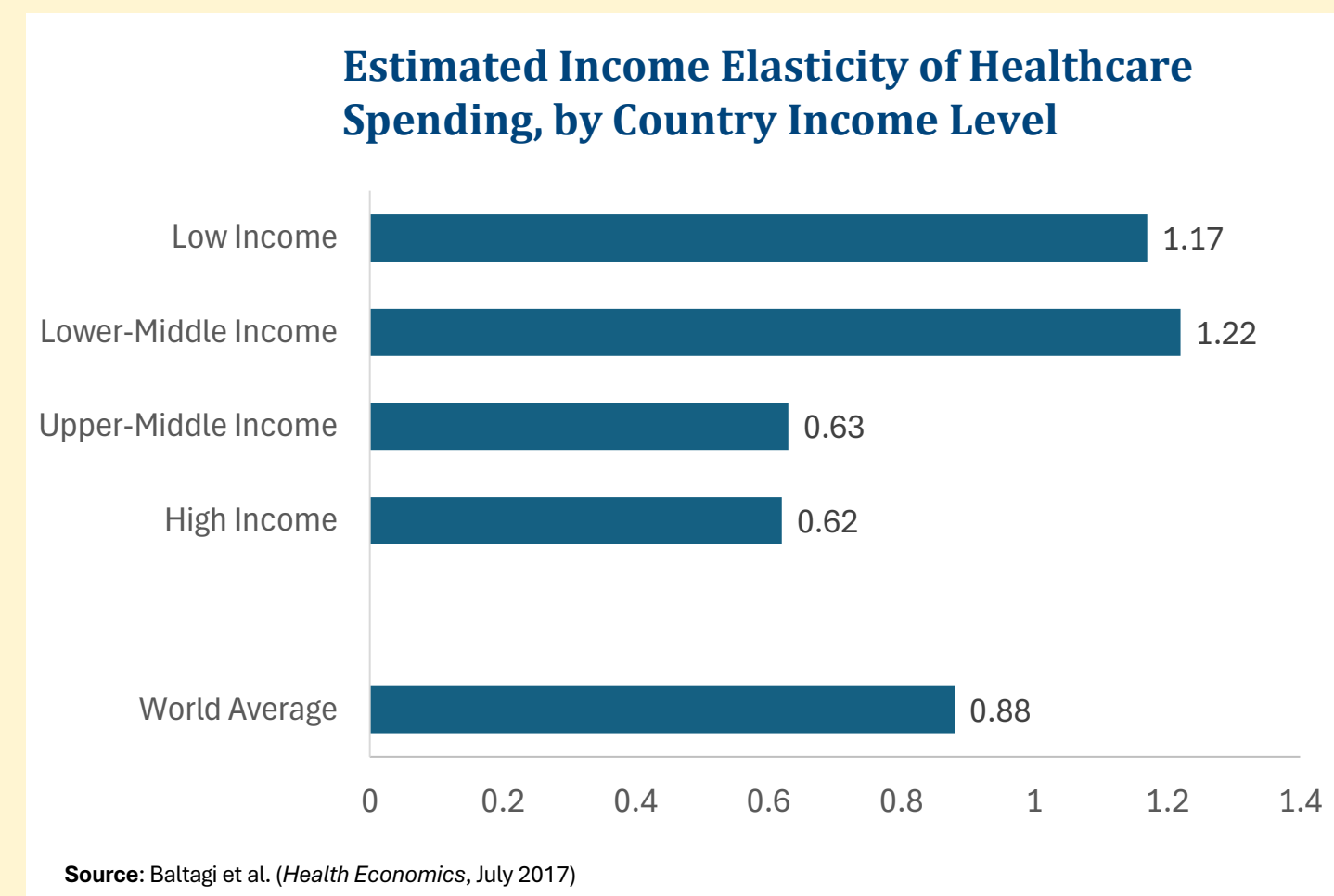
- ❑ Industries with lower-than-average productivity growth tend to grow as a share of the economy. The dynamic is known as "Baumol's cost disease."

- ❑ Historically, healthcare sector productivity has been unusually resistant to productivity improvements. Most healthcare economists agree that this resistance has been a significant driver of "excess cost growth."

- ❑ There is some evidence that this may be changing due to such developments as the adoption of EMR systems and the substitution of lower-cost healthcare professionals for physicians. It is possible that AI could also raise productivity growth in the future.

Estimate of Baumol's Cost Disease Coefficient

$$\Delta \log(C^{NP}) = \lambda[\Delta \log(W) - \Delta \log(Y)]$$

$\Delta\log(C^{NP})$ = the change in unit costs in the non-productive sector (e.g., healthcare)

$\Delta\log(W)$ = the growth rate in wages in the overall economy

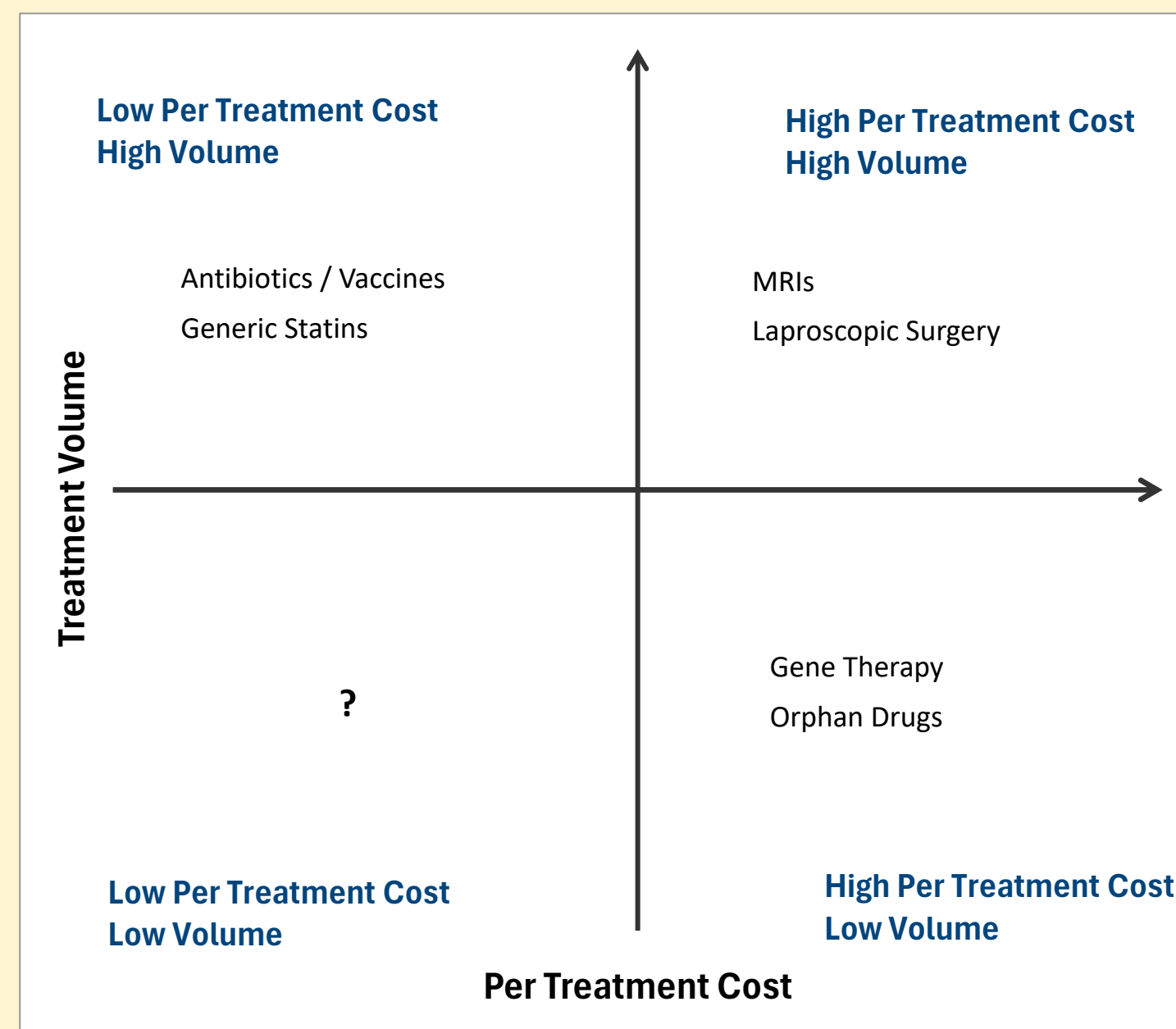$\Delta\log(Y)$ = the growth rate in labor productivity (output per worker) in the overall economy

❑ Historically, technological change in the healthcare sector has usually added to costs.

- New technologies tend to be additive rather than to substitute for old technologies.

- Even when new technologies reduce per treatment costs, they may increase treatment volume by allowing earlier detection of disease, treatment of subtler degrees of morbidity, and/or less invasive procedures.

- Advances in biomedicine allow ever-greater customization of medical interventions.

❑ In recent years, there is some evidence that the more efficient use of new technologies, along with government policies that limit the diffusion of those technologies, may be making technological change a less potent cost driver.

Technological Change & Healthcare Costs

Low Per Treatment Cost
High Volume

High Per Treatment Cost
High Volume

Antibiotics / Vaccines

MRIs

Generic Statins

Laproscopic Surgery

Treatment Volume

?

Gene Therapy

Orphan Drugs

Low Per Treatment Cost
Low Volume

High Per Treatment Cost
Low Volume

Per Treatment Cost

PUBLIC EXPECTATIONS

❑ Good health is not a fixed goal, but a subjective standard that rises over time as societies become more affluent, better educated, and less tolerant of risk or "bad health."

❑ Widespread patient access to information about the latest tests and treatments makes it more difficult for providers or governments to set limits.

❑ As growing public expectations interact with medical advances, healthcare is becoming a lifelong process of diagnostics and finetuning in which any extra dollar or euro or yen spent is likely to confer some perceived benefit.

❑ All of this is likely to put upward pressure on future healthcare spending.

GOVERNMENT HEALTHCARE POLICY

❑ Most studies agree that government cost-control efforts have played an important role in the recent slowdown in healthcare spending growth. These efforts include:

- Shifting to reimbursement policies that reward the "value" rather than volume of services

- Encouraging greater efficiency through reductions in hospital re-admissions, emergency room utilization, etc.

- Making more effective use of global budgeting enforced by price controls and/or volume controls

- Stressing prevention and healthy lifestyles

❑ Such cost-control efforts are likely to intensify as aging societies with slow-growth economies face increasing fiscal constraints. They may also collide with rising public expectations.

PROJECTION SCENARIOS

All other things being equal, population aging alone will drive up healthcare spending as a share of GDP.

ASSUMPTIONS

Demographics:

Constant morbidity scenario

Excess Cost Growth:

Income Elasticity:	1.0
Healthcare Productivity:	0
Technological Change, Expectations & Policy	0

Personal Healthcare Spending as a Share of GDP, by Country, 2023 and Projection for 2060 Assuming No Excess Cost Growth
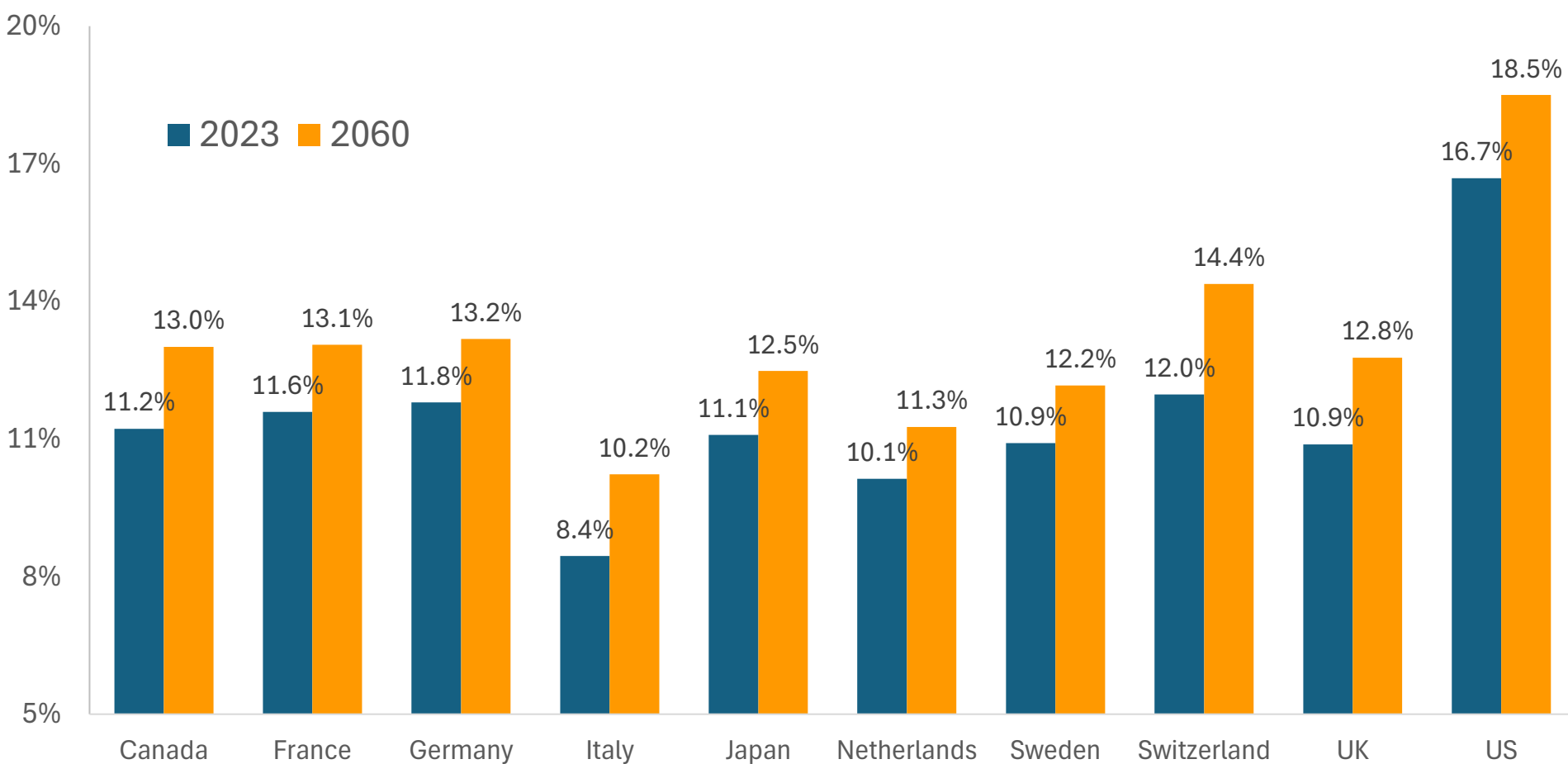
Legend: ■ 2023 ■ 2060

Country	2023	2060
Canada	11.2%	13.0%
France	11.6%	13.1%
Germany	11.8%	13.2%
Italy	8.4%	10.2%
Japan	11.1%	12.5%
Netherlands	10.1%	11.3%
Sweden	10.9%	12.2%
Switzerland	12.0%	14.4%
UK	10.9%	12.8%
US	16.7%	18.5%

Source: Authors' calculations

ASSUMPTIONS

Demographics:

Effective Cost Control:	Compression of Morbidity
Moderate Cost Pressure:	Constant Morbidity
High Cost Pressure:	Expansion of Morbidity

Excess Cost Growth:

Effective Cost Control:

Income Elasticity	0.73
Healthcare Productivity	0.2
Technological Change, Expectations & Policy	0.0025

Moderate Cost Pressure:

Income Elasticity	0.73
Healthcare Productivity	0.265
Technological Change, Expectations & Policy	0.005

High Cost Pressure:

Income Elasticity	0.73
Healthcare Productivity	0.4
Technological Change, Expectations & Policy	0.0075

Personal Healthcare Spending as a Share of GDP in 2060, by Country and Projection Scenario

Projection Results for 2060

Legend:
- Effective Cost Control
- Moderate Cost Pressure
- High Cost Pressure

Country	Effective Cost Control	Moderate Cost Pressure	High Cost Pressure
Canada	13.3%	15.6%	20.3%
France	13.4%	15.7%	19.2%
Germany	13.8%	15.8%	19.0%
Italy	11.0%	12.3%	14.0%
Japan	13.1%	15.0%	17.1%
Netherlands	11.6%	13.5%	17.6%
Sweden	12.6%	14.6%	18.1%
Switzerland	14.7%	17.3%	21.7%
UK	12.9%	15.3%	18.8%
US	19.0%	22.2%	28.4%
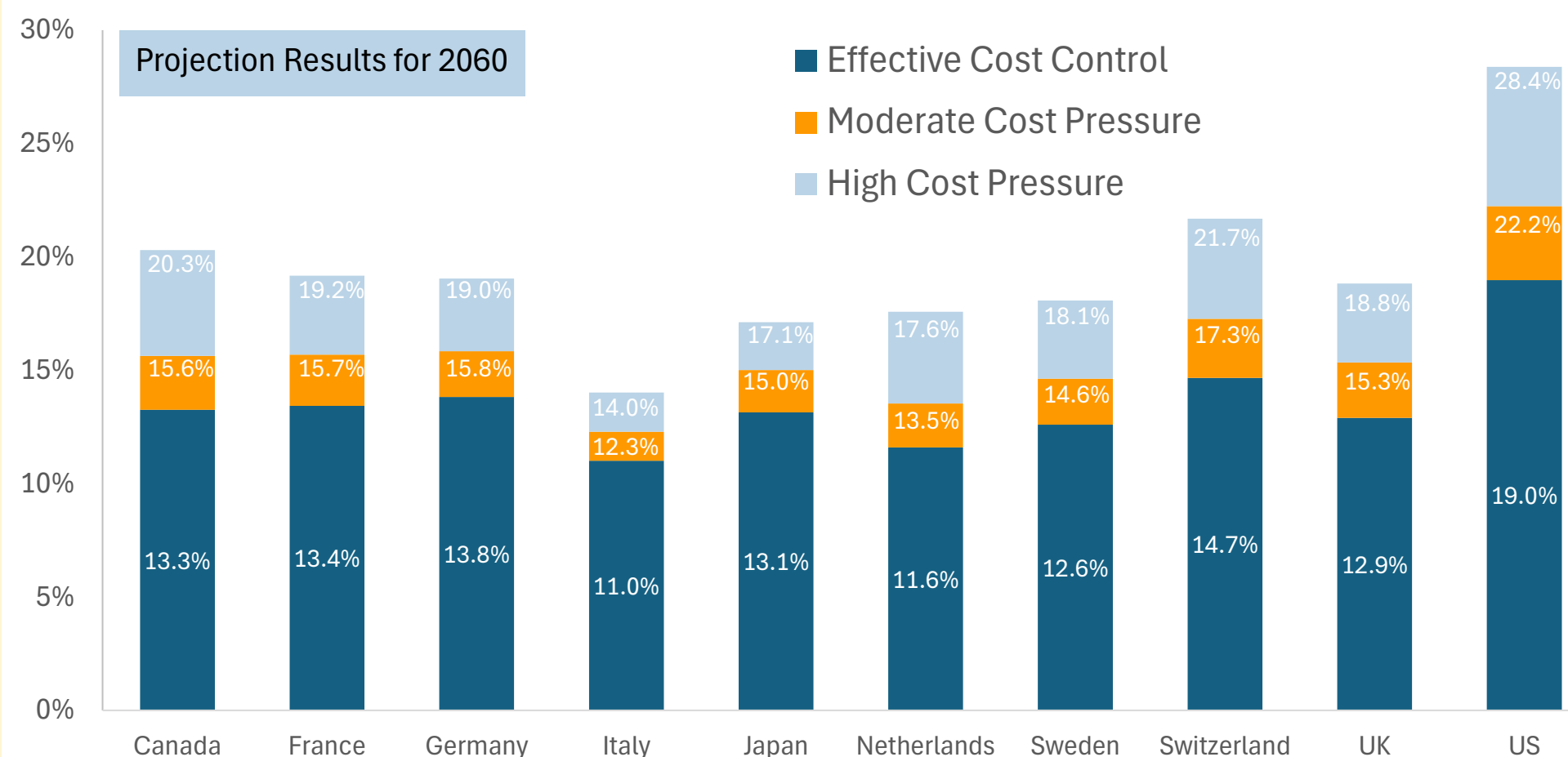
Source: Authors' calculations

Personal Healthcare Spending as a Share of GDP, by Country and Scenario, 2023-2060

	2023	2030	2040	2050	2060
CANADA					
No Excess Cost Growth	11.2%	11.9%	12.4%	12.7%	13.0%
Effective Cost Control	11.2%	11.8%	12.4%	12.8%	13.3%
Moderate Cost Pressure	11.2%	12.3%	13.4%	14.5%	15.6%
High Cost Pressure	11.2%	12.8%	15.3%	18.0%	20.3%
FRANCE					
No Excess Cost Growth	11.6%	12.2%	12.8%	13.0%	13.1%
Effective Cost Control	11.6%	12.2%	12.8%	13.1%	13.4%
Moderate Cost Pressure	11.6%	12.6%	13.9%	14.8%	15.7%
High Cost Pressure	11.6%	13.1%	15.3%	17.3%	19.2%
GERMANY					
No Excess Cost Growth	11.8%	12.5%	13.1%	13.2%	13.2%
Effective Cost Control	11.8%	12.5%	13.2%	13.6%	13.8%
Moderate Cost Pressure	11.8%	12.9%	14.3%	15.1%	15.8%
High Cost Pressure	11.8%	13.3%	15.2%	17.4%	19.0%
ITALY					
No Excess Cost Growth	8.4%	9.0%	9.9%	10.2%	10.2%
Effective Cost Control	8.4%	9.1%	10.2%	10.8%	11.0%
Moderate Cost Pressure	8.4%	9.3%	10.7%	11.7%	12.3%
High Cost Pressure	8.4%	9.5%	11.4%	12.8%	14.0%
JAPAN					
No Excess Cost Growth	11.1%	11.4%	11.9%	12.4%	12.5%
Effective Cost Control	11.1%	11.5%	12.1%	12.8%	13.1%
Moderate Cost Pressure	11.1%	11.8%	12.9%	14.1%	15.0%
High Cost Pressure	11.1%	12.2%	13.7%	15.5%	17.1%

	2023	2030	2040	2050	2060
NETHERLANDS					
No Excess Cost Growth	10.1%	10.5%	10.9%	11.0%	11.3%
Effective Cost Control	10.1%	10.5%	11.0%	11.2%	11.6%
Moderate Cost Pressure	10.1%	10.9%	11.9%	12.6%	13.5%
High Cost Pressure	10.1%	11.3%	13.4%	15.5%	17.6%
SWEDEN					
No Excess Cost Growth	10.9%	11.2%	11.6%	11.7%	12.2%
Effective Cost Control	10.9%	11.3%	11.8%	12.1%	12.6%
Moderate Cost Pressure	10.9%	11.6%	12.6%	13.4%	14.6%
High Cost Pressure	10.9%	12.1%	13.9%	15.7%	18.1%
SWITZERLAND					
No Excess Cost Growth	12.0%	12.7%	13.7%	14.1%	14.4%
Effective Cost Control	12.0%	12.7%	13.6%	14.2%	14.7%
Moderate Cost Pressure	12.0%	13.2%	14.9%	16.2%	17.3%
High Cost Pressure	12.0%	13.6%	16.2%	19.0%	21.7%
UNITED KINGDOM					
No Excess Cost Growth	10.9%	11.3%	12.0%	12.3%	12.8%
Effective Cost Control	10.9%	11.3%	11.9%	12.3%	12.9%
Moderate Cost Pressure	10.9%	11.7%	13.0%	14.1%	15.3%
High Cost Pressure	10.9%	12.2%	14.3%	16.6%	18.8%
UNITED STATES					
No Excess Cost Growth	16.7%	17.4%	17.8%	18.1%	18.5%
Effective Cost Control	16.7%	17.4%	18.0%	18.4%	19.0%
Moderate Cost Pressure	16.7%	18.0%	19.4%	20.7%	22.2%
High Cost Pressure	16.7%	18.7%	21.9%	25.0%	28.4%

Thank you! Obrigado!

Questions?

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