

HEALTH CARE ACROSS BORDERS: COMPARING THE US AND CANADIAN HEALTH SYSTEMS

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Case

- Mr. S is an 82 yr old gentleman examined for right shoulder pain. Onset 3 months ago, unrelated to injury and gradually increasing in intensity. Current range of motion limited and sleep disrupted by pain. Seen by PCP with normal X-ray and ultrasound. Having difficulty locating an orthopedist for consultation.
- Exam unremarkable save for limited range. No evidence inflammation.
- Suggested quick trip to Buffalo (2 hours by car) for same day consultation and CT scan....refused!

Case

- Attempts to access Orthopedist unsuccessful
- 7 weeks later admitted to Complex Continuing Care Hospital at Baycrest for unremitting pain and functional decline
- Work-up included CT of shoulder which revealed probable malignancy with extensive local bone destruction
- Patient expired 4 weeks later



Map of Canada

www.trailcanada.com

Canada Facts

- Second largest country in the world (Not the 51st state!)
- Population of 34 million of which 90% live within 200km of the US border
- 10 Provinces and 3 Territories
- Ontario is home to 38% of the Canadian population
- Toronto is the largest city in Canada and its financial center

What to do with Canada....

Emulate or
fence it in???



Outline

- Population comparison
- Who and What is covered
- Who pays for health care
- Medical care delivery
- Physician care
- Access

References

- International Profiles of Health Care Systems The Commonwealth Fund, Jan 2015
 - Commonwealthfund.org/-/media/files/publications/fund.report/2015/jan/1802_mossial/os_int_profiles_2014
- OECD Health Statistics 2015 (oecd.org)
- The Henry J Kaiser Family Foundation (kff.org)
- A System in Name Only-Access, Variation and Reform in Canada's Provinces. *N Engl J Med* 372: 497-500, 2015
- Canadian Institute for Health Information. *National Health Expenditure Trends, 1975 to 2014*. Ottawa, ON: CIHI; 2014.

My Weekly Sojourn to Canada





Village of Pittsford, NY



Crossing into Canada via Niagara Falls-
Rainbow Bridge



Rounding Lake Ontario via the QEW



Toronto



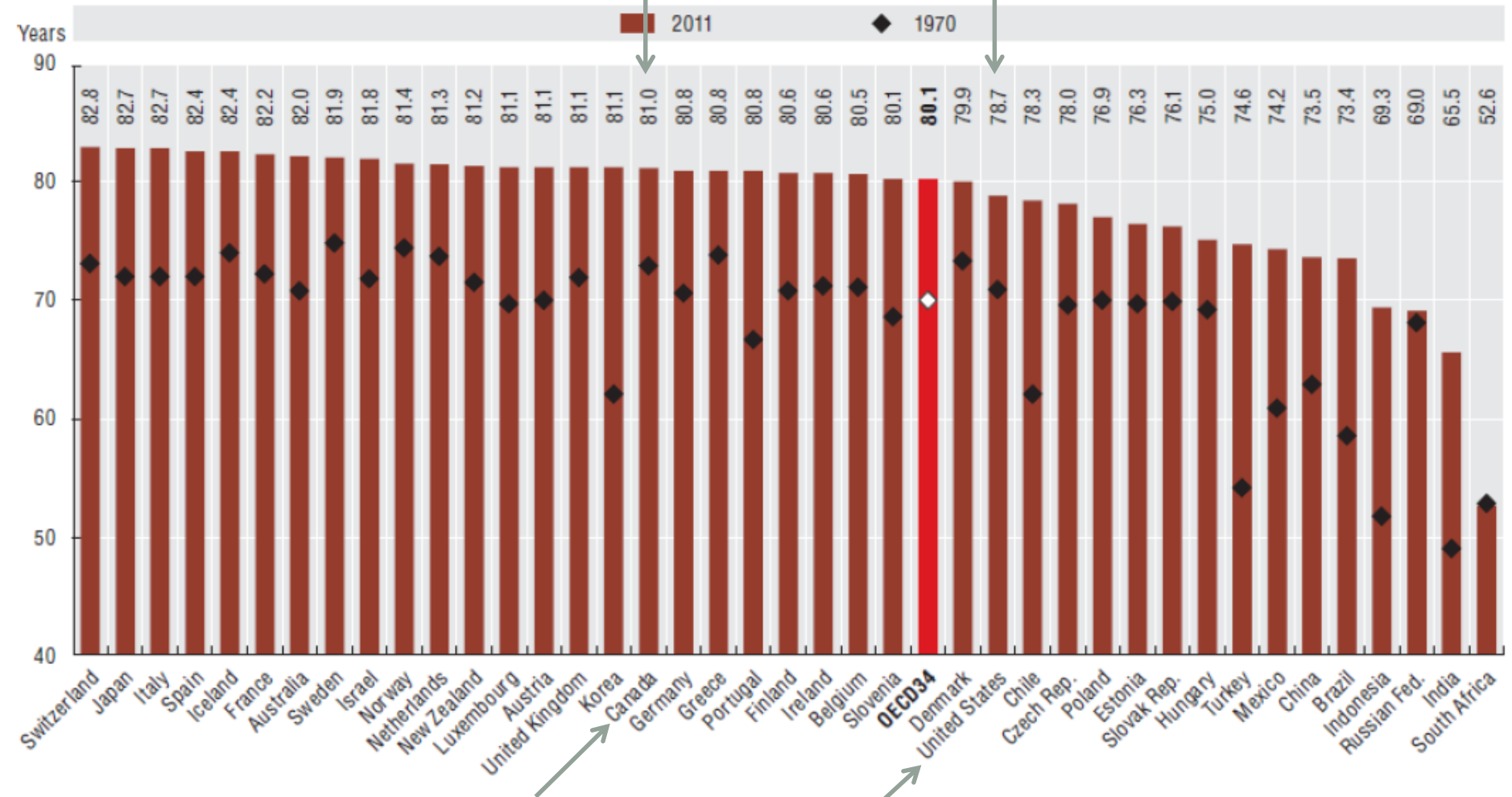
Baycrest Health Science Centre-
1000 bed senior care continuum

Personal Reflections

- Canadians are warm, caring and understated
- Taxes are high but with the understanding that they provide for needed services
- Pride for the health care system and equality
- Politics relatively subdued and low cost; Parliamentary system seems to work
- Difficulty adapting to metric system, lab values and French

Population Comparisons

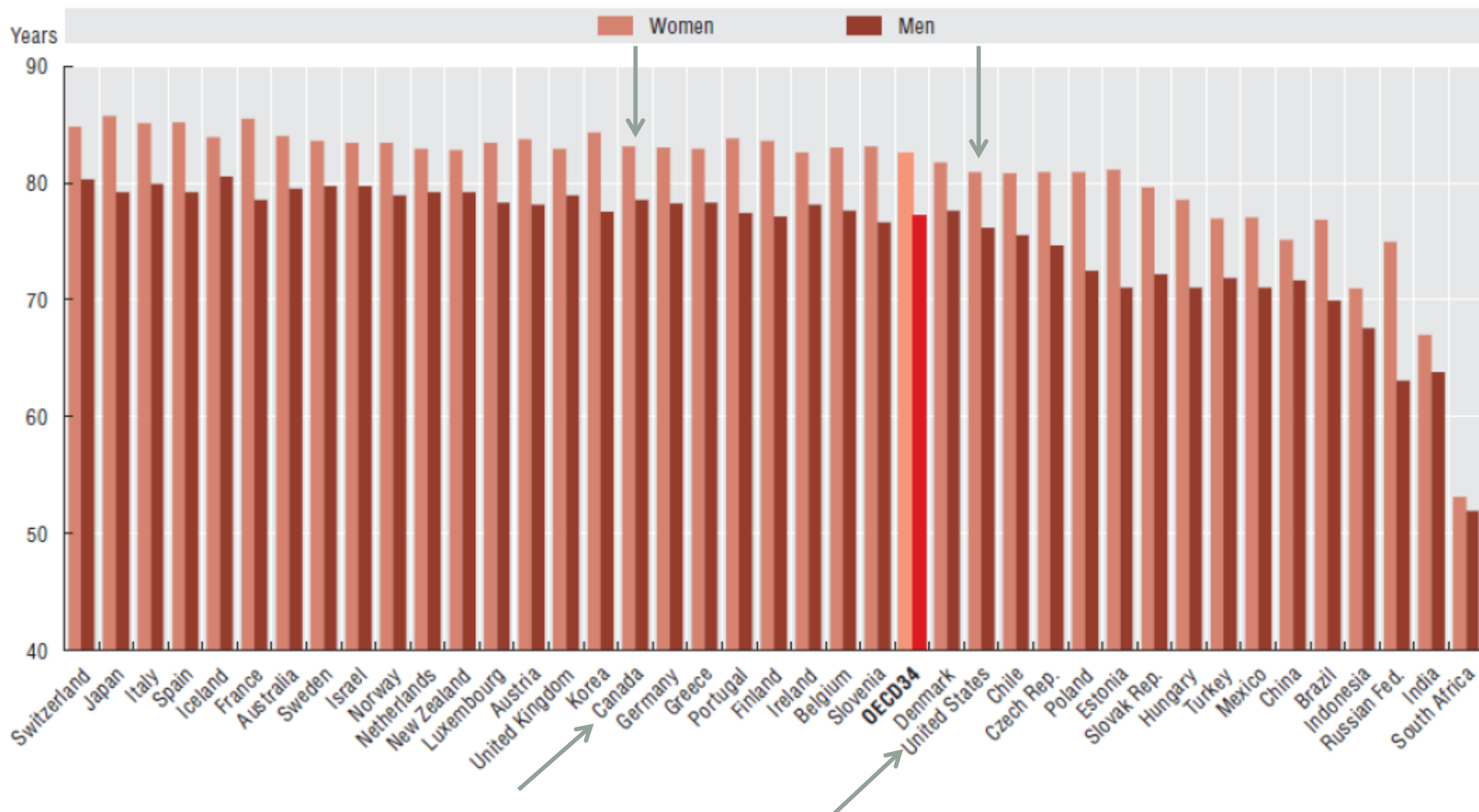
For the first time in history, life expectancy at birth exceeds 80 years on average in OECD countries in 2011 – a gain of 10 years since 1970



Source: OECD Health Statistics 2013, OECD; World Bank for non-OECD countries

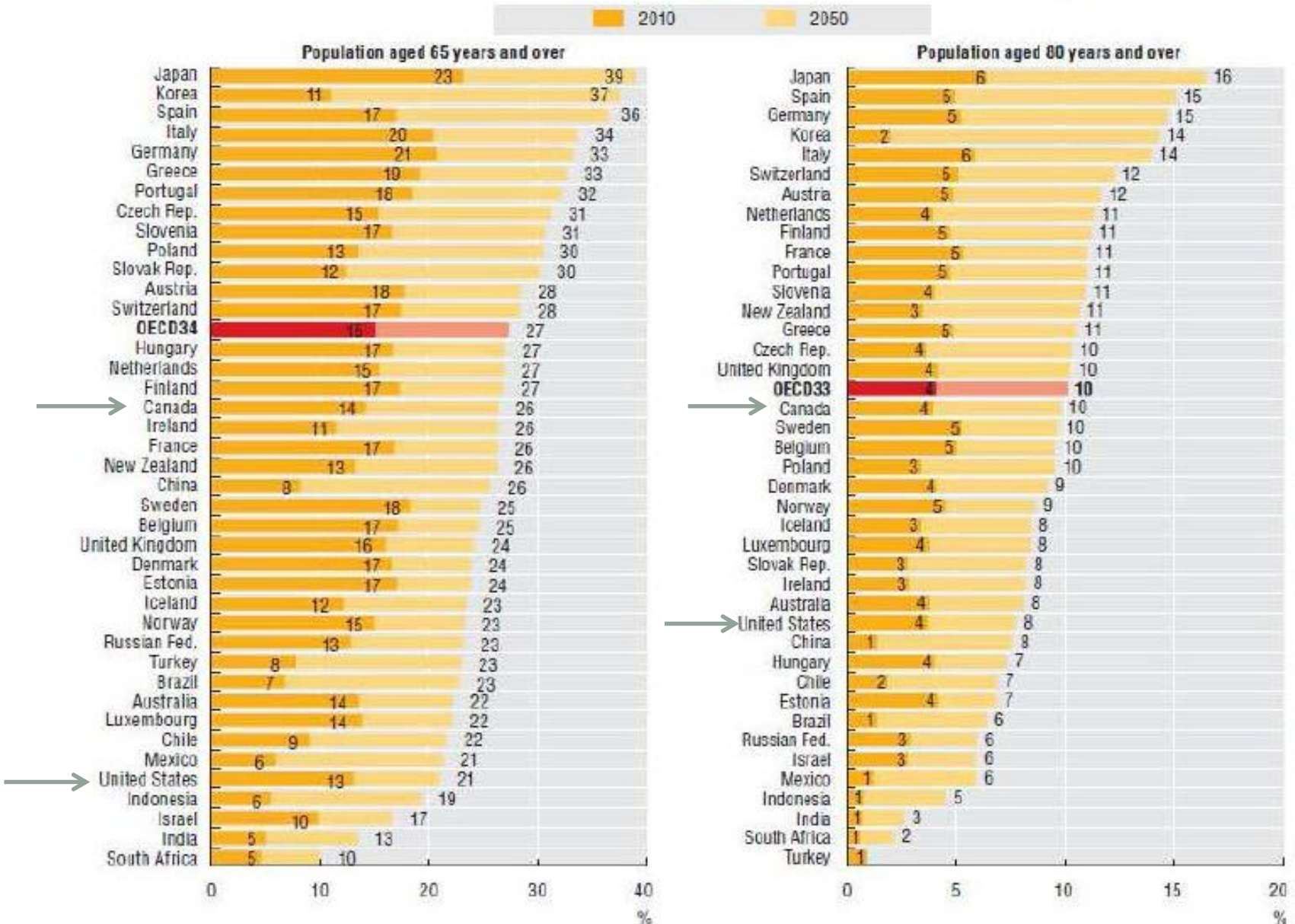
There remains large gaps in life expectancy between men and women in OECD countries: on average, men live 5.5 years less than women

2011 (or nearest year)



Source: OECD Health Statistics 2013, OECD (<http://www.oecd.org/health/healthdata>)

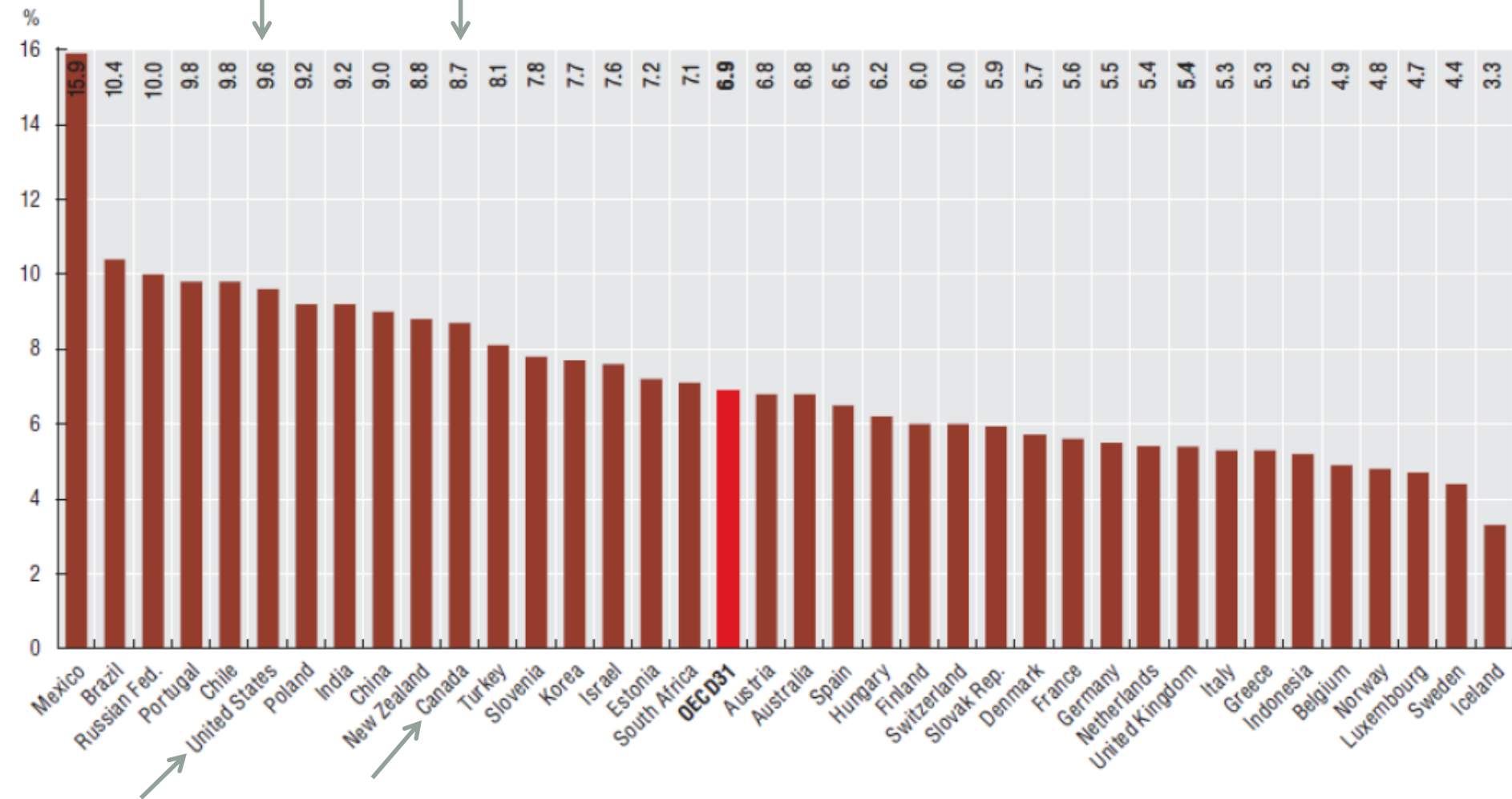
The share of population aged over 65 and 80 in OECD countries will increase sharply in the coming decades



Source: OECD Historical Population Data and Projections Database, 2013

The prevalence of chronic diseases such as diabetes is rising, due to changes in lifestyle and population ageing

Prevalence estimates of diabetes, adults aged 20-79 years, 2011

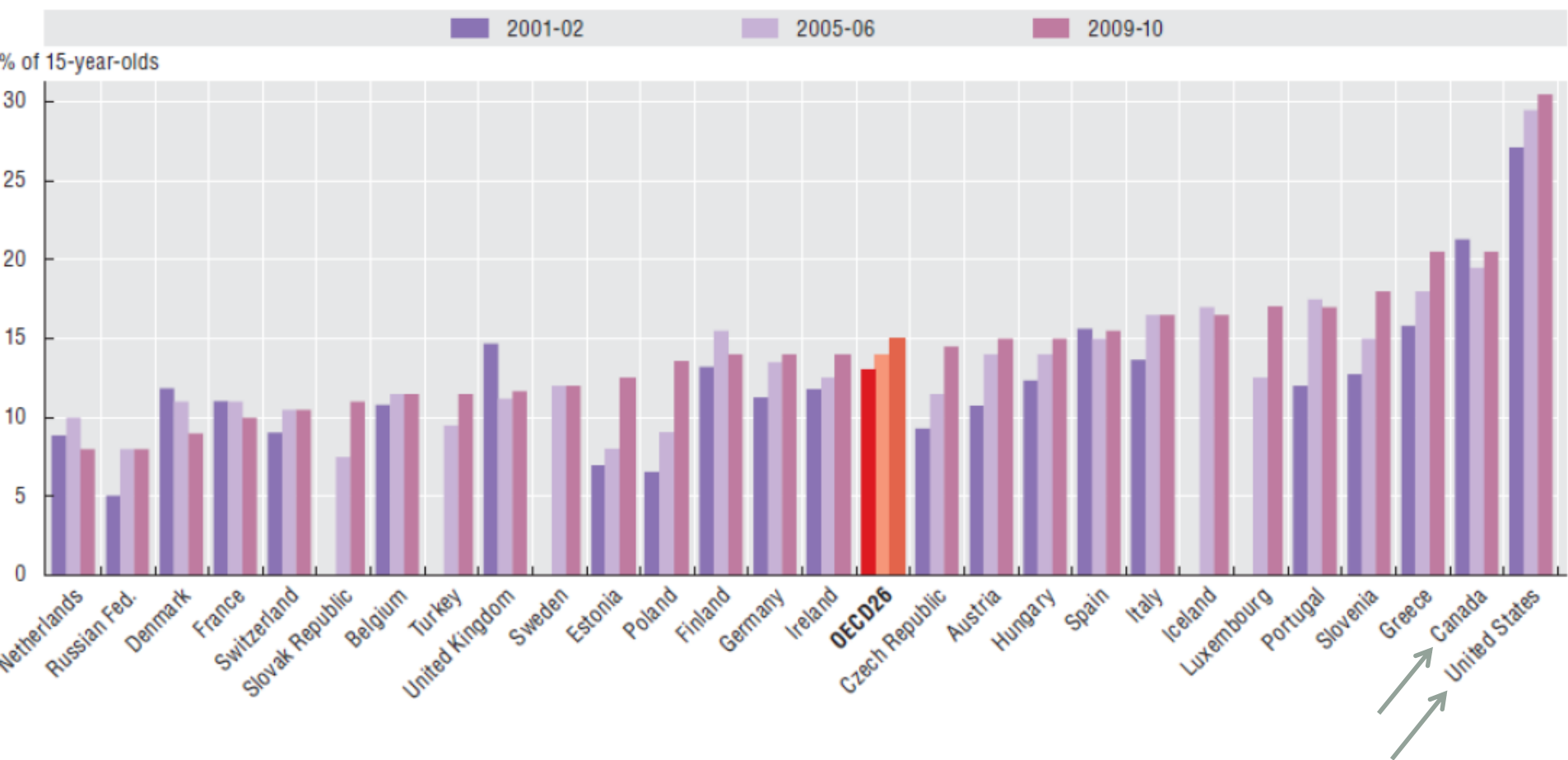


Note: The data cover both Type-1 and Type-2 diabetes. Data are age-standardised to the World Standard Population.

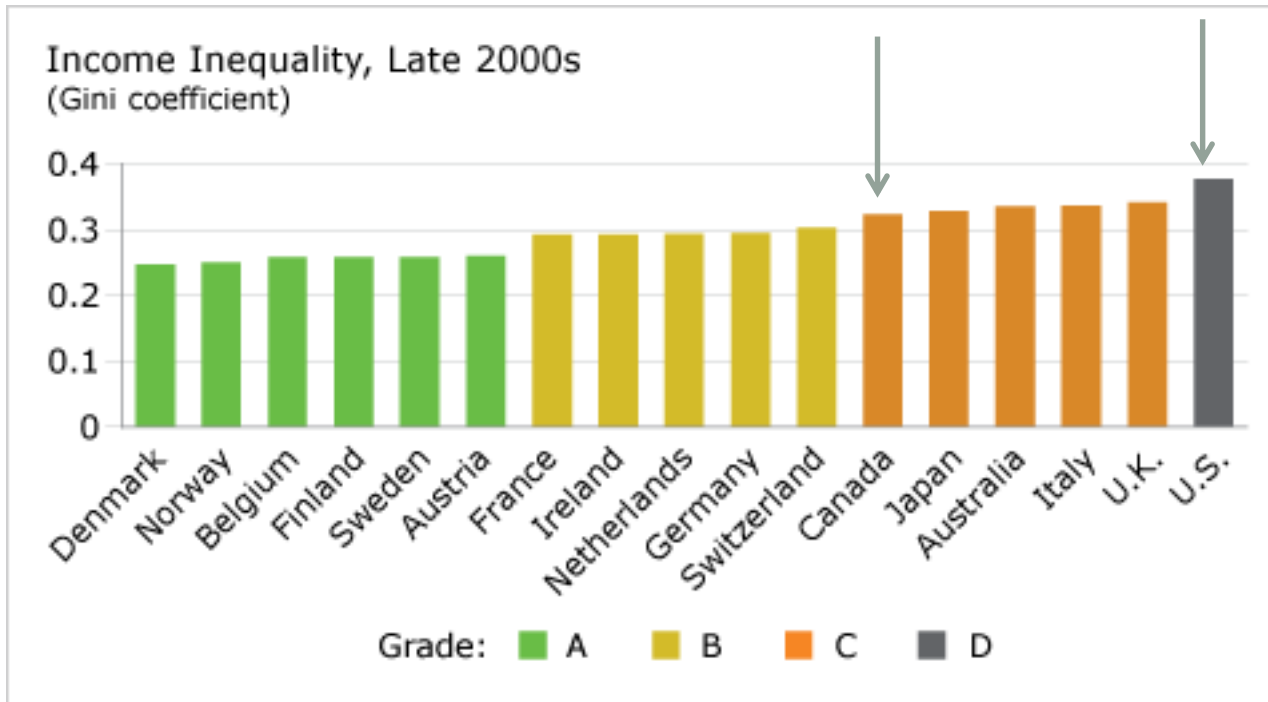
Source: International Diabetes Federation (2011)

Overweight and obesity among children have risen in most countries, increasing the risk of obesity in adulthood

Change in self-reported overweight among 15-year-olds, 2001-02, 2005-06 and 2009-10



Source: Currie et al. (2004); Currie et al. (2008); Currie et al. (2012)



Mean Wealth: US-358,000

CA-313,000

Median Wealth: US-45,000

CA-90,000

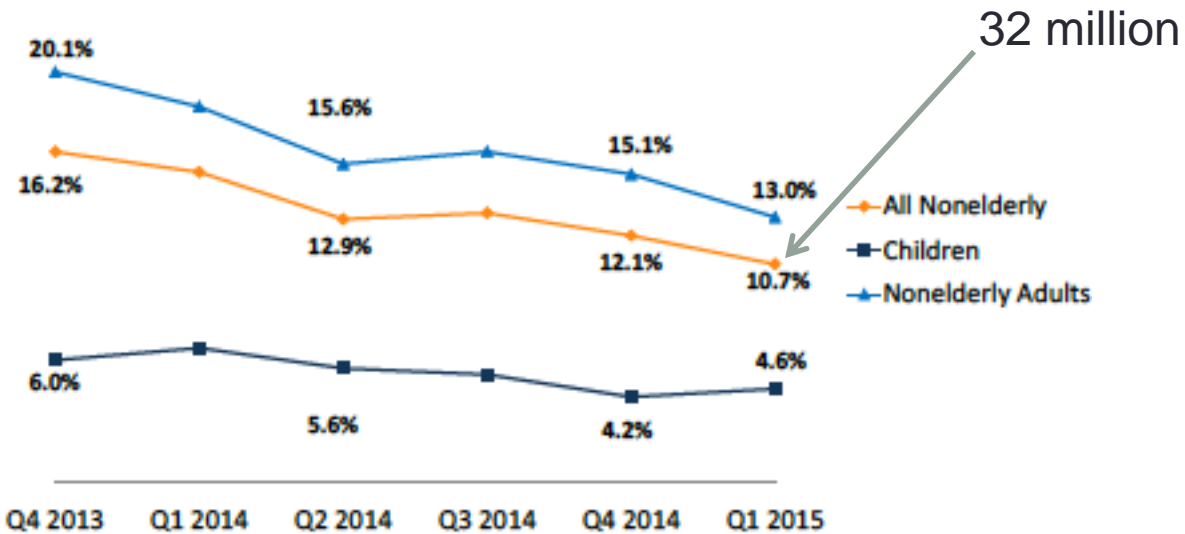
Who's Covered?

US Health Care

- The Patient Protection and Affordable Care Act (ACA) established shared responsibility between government, employers and individuals for ensuring access to affordable and quality health insurance.

Figure 2

Quarterly Uninsured Rate for the Nonelderly Population by Age, Q4 2013-Q1 2015



SOURCE: National Center for Health Statistics. *Health Insurance Coverage: Early Release of Quarterly Estimates From the National Health Interview Survey, January 2010-March 2015, August 12, 2015.* Available at: http://www.cdc.gov/nchs/data/nhis/earlyrelease/Quarterly_estimates_2010_2015_Q11.pdf.



US Health Care

- Federal programs include Medicare, Medicaid and the Veterans Administration which account for 25% of all spending
- Coverage for US residents:
 - 64% from private voluntary health insurance
 - 54% from employer-provided insurance
 - 16% from Medicare
 - 17% from Medicaid
 - 5% from military health insurance

Canadian Health Care

- The Canadian Health Act (CHA) mandates universal coverage for all “Medically Necessary” hospital and physician services (Medicare)
- Principles within the CHA state that each provincial health insurance plan needs to be:
 - Publicly administered
 - Comprehensive in coverage
 - Universal
 - Portable across provinces
 - Accessible (no user fees)

Canadian Health Care

- It does not mandate how care is organized or delivered resulting in significant variability between provinces
 - Negotiation between physicians and provinces often defines what services are “medically necessary”
- Coverage for Canadian residents:
 - 100% of provincial and territorial residents
 - 2/3 have private health insurance to cover uncovered services
 - Provinces theoretically could cover all non-physician expenses(LTC, drugs etc) but usually don't

What is Covered

US

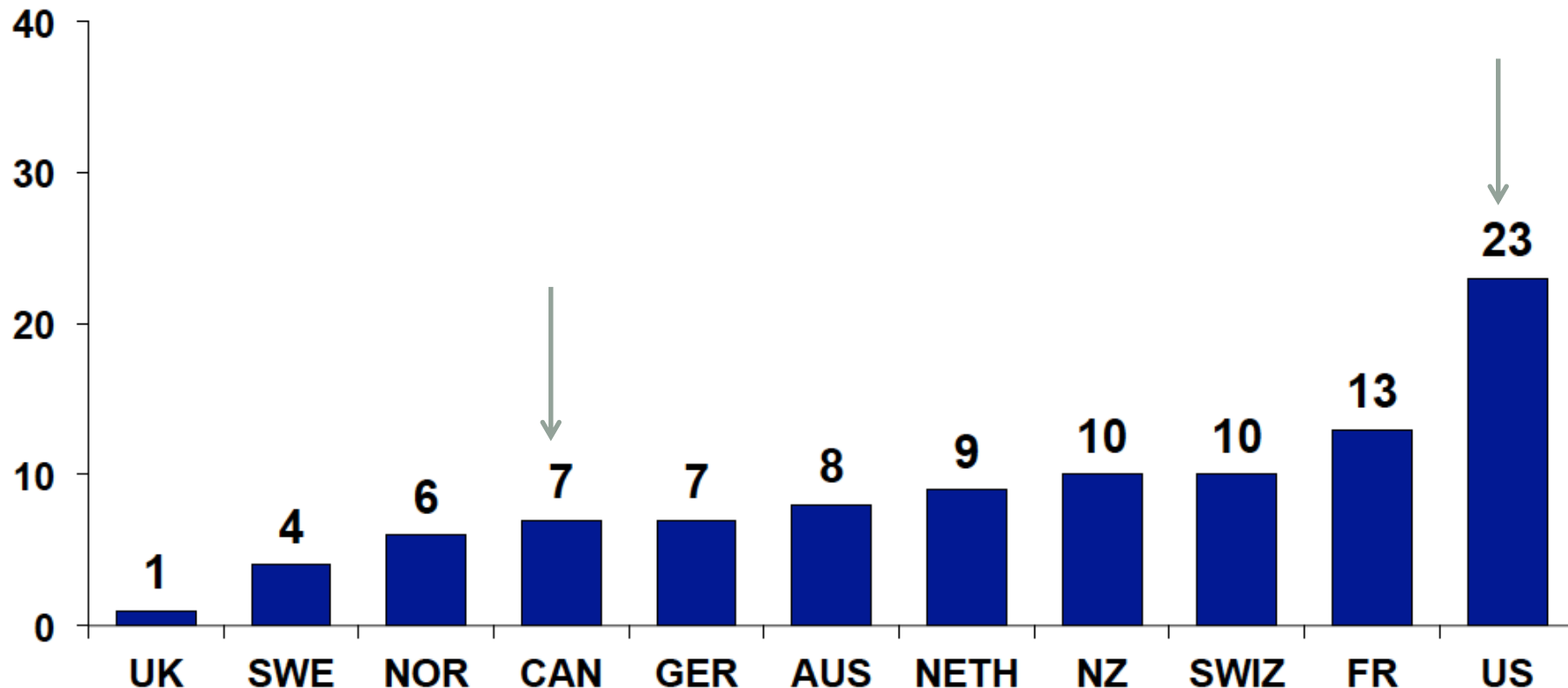
- Most private insurance plans have co-pays that vary widely for physician services, hospital services and drugs
- ACA limits deductibles but can still be high for low incomes
- Medicare requires deductibles for hospital stays and ambulatory care and co-pays for physician visits and other services
- Medicaid has minimal cost sharing

Canada

- Full coverage of medically necessary physician, diagnostic and hospital services (including inpatient drugs)
- Depending on Province, variable coverage for outpatient drugs, vision care, dental care, home health, physiotherapy and ambulance services

Serious Problems Paying or Unable to Pay Medical Bills in the Past Year

Percent

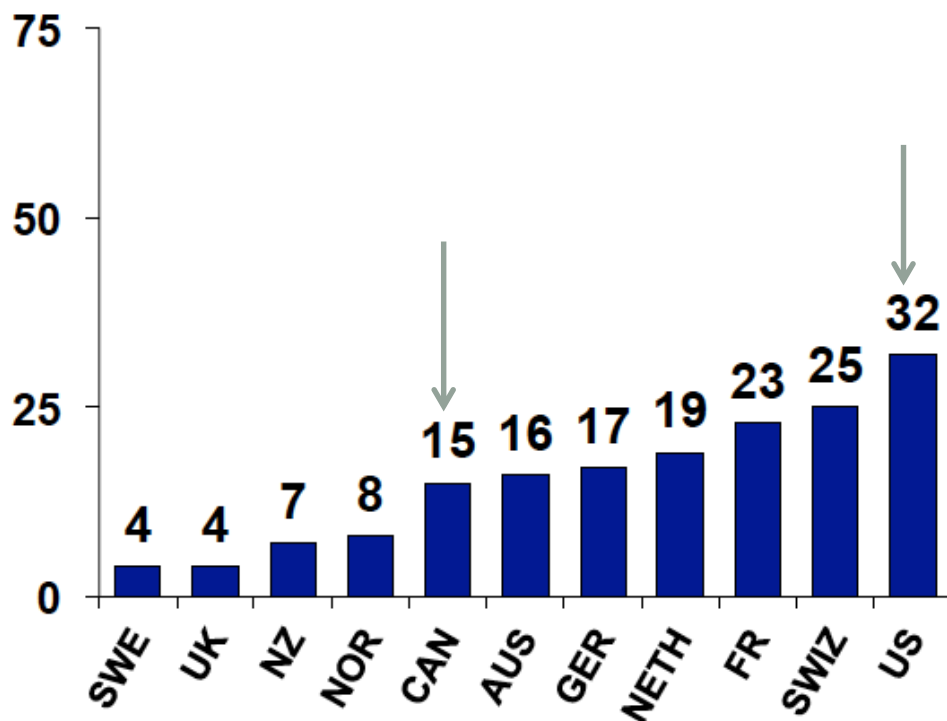


Insurance Complexity and Restrictions Create Concerns for Patients and Doctors

Adults, 2013

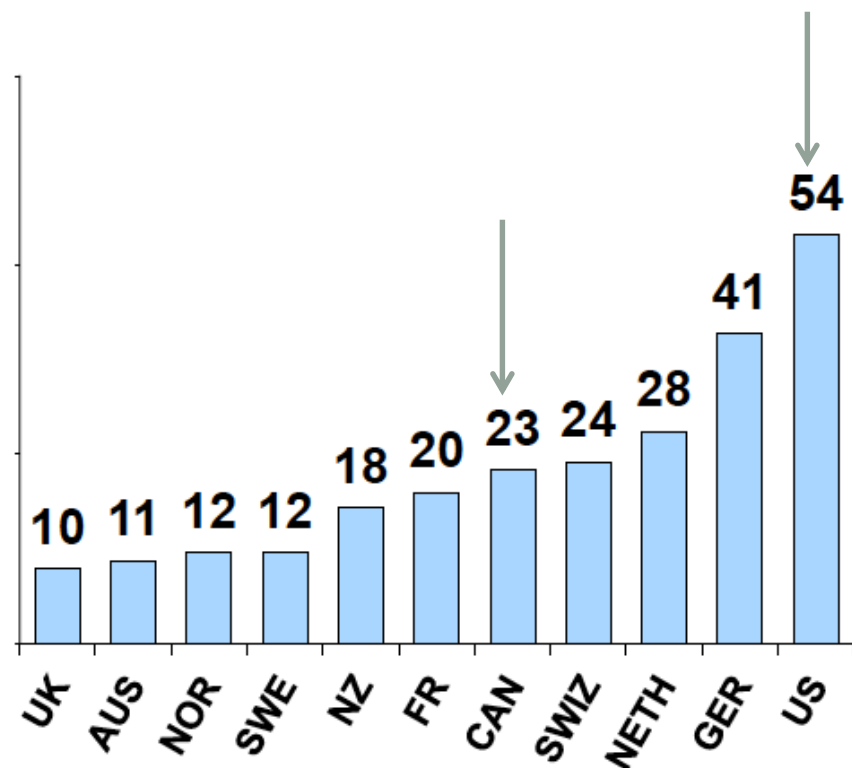
Insurance did not cover as expected/
spent a lot of time on paperwork in
past year*

Percent



Primary care physicians, 2012

Insurance coverage restrictions
pose *major* time concern**



* Adults spent a lot of time on paperwork or disputes over medical bills and/or insurance denied payment or did not pay as much as expected in the past year.

** Amount of time doctor or staff spend getting patients needed medications/treatments because of coverage restrictions is a major problem.

Source: 2012 and 2013 Commonwealth Fund International Health Policy Surveys.



Safety Net

US

- Public hospitals, local health departments, federally funded community health centers, free clinics, Medicaid and Children's Health Insurance Plan offer care to uninsured and low income patients
- Some state and local governments cover undocumented immigrants

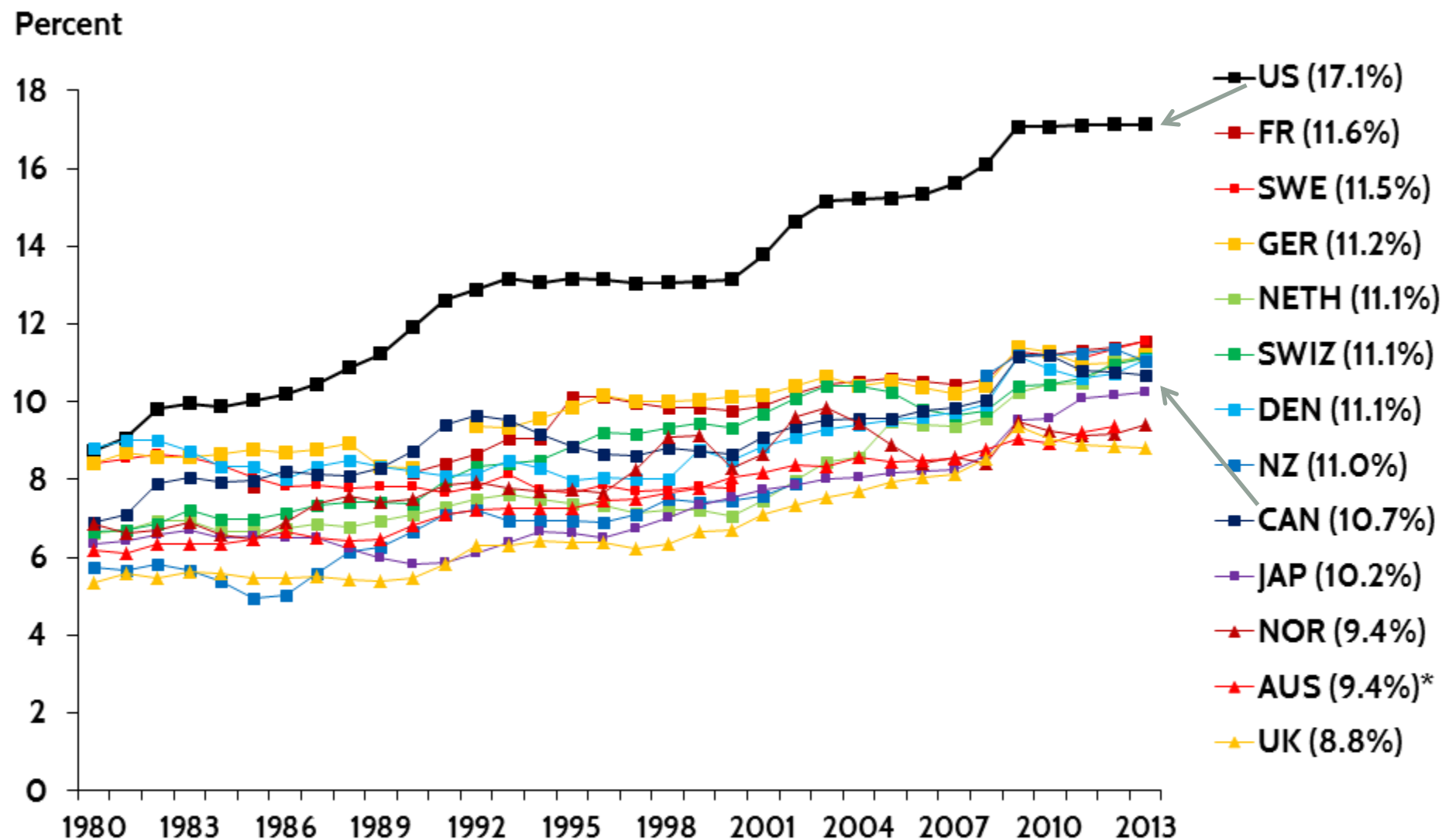
Canada

- Cost sharing varies by Province with equivalent of catastrophic insurance plans often offered based on income.
- No caps on out of pocket spending but tax credits offered.
- Undocumented immigrants are not covered

Who Pays for Health Care?

- Canada:
 - Federal spending accounts for 20% total public spending on health care
 - Provinces spend 30-50% of budgets on health care
- US
 - States spend 5-26% of their own budgets on Medicaid (avg 16.2%)
 - Medicare, Medicaid and the VA account for 28% of the federal budget

Exhibit 1. Health Care Spending as a Percentage of GDP, 1980–2013



* 2012.

Notes: GDP refers to gross domestic product. Dutch and Swiss data are for current spending only, and exclude spending on capital formation of health care providers.

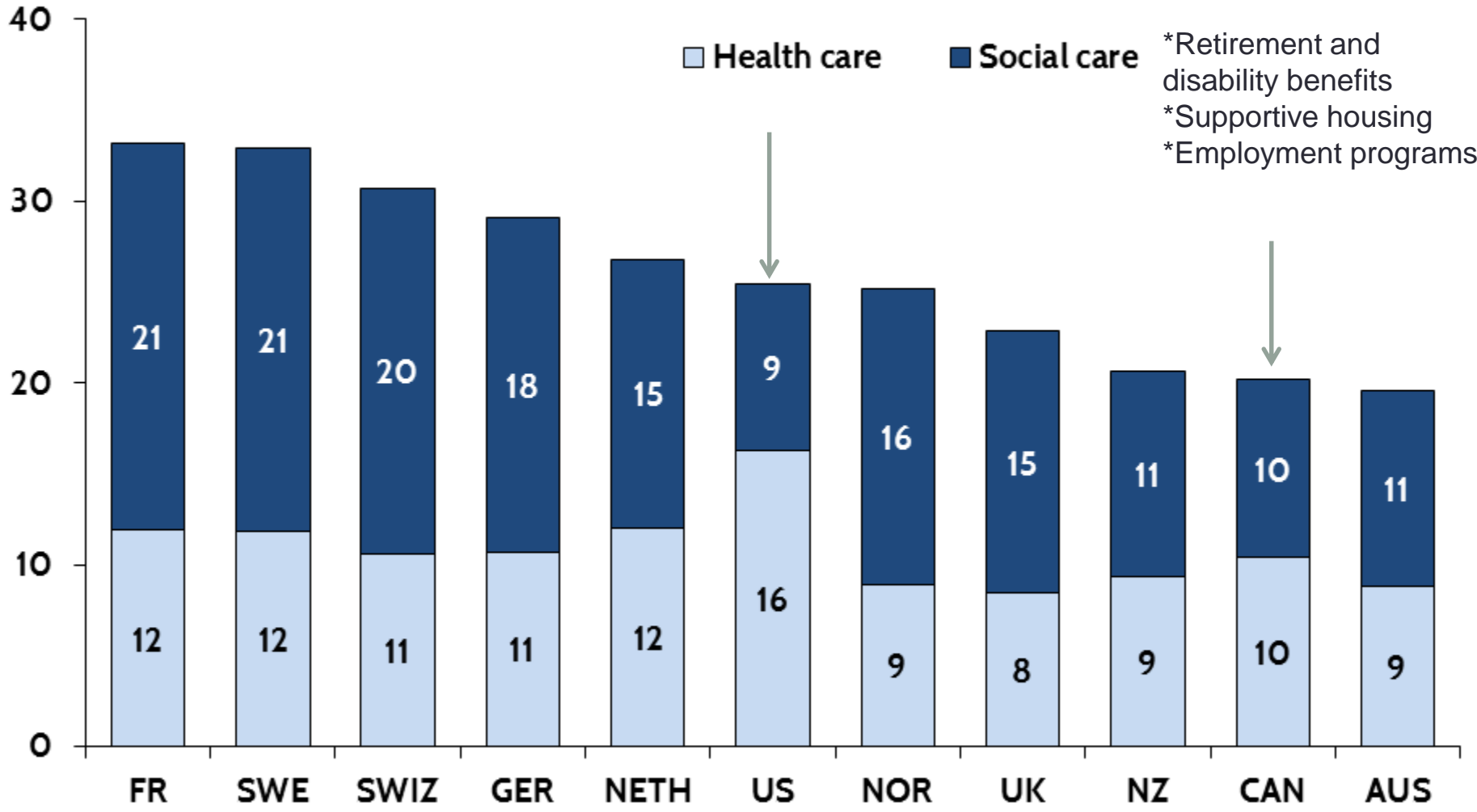
Source: OECD Health Data 2015.

Per Capita Spending

- US \$9086
- Switzerland \$6325
- Norway \$6170
- Sweden \$5153
- Netherlands \$5131
- Germany \$4920
- Denmark \$4847
- Canada \$4569
- France \$4361
- Australia \$4115
- NZ \$3855
- Japan \$3713
- OECD median \$3661
- UK \$3364

Exhibit 8. Health and Social Care Spending as a Percentage of GDP

Percent

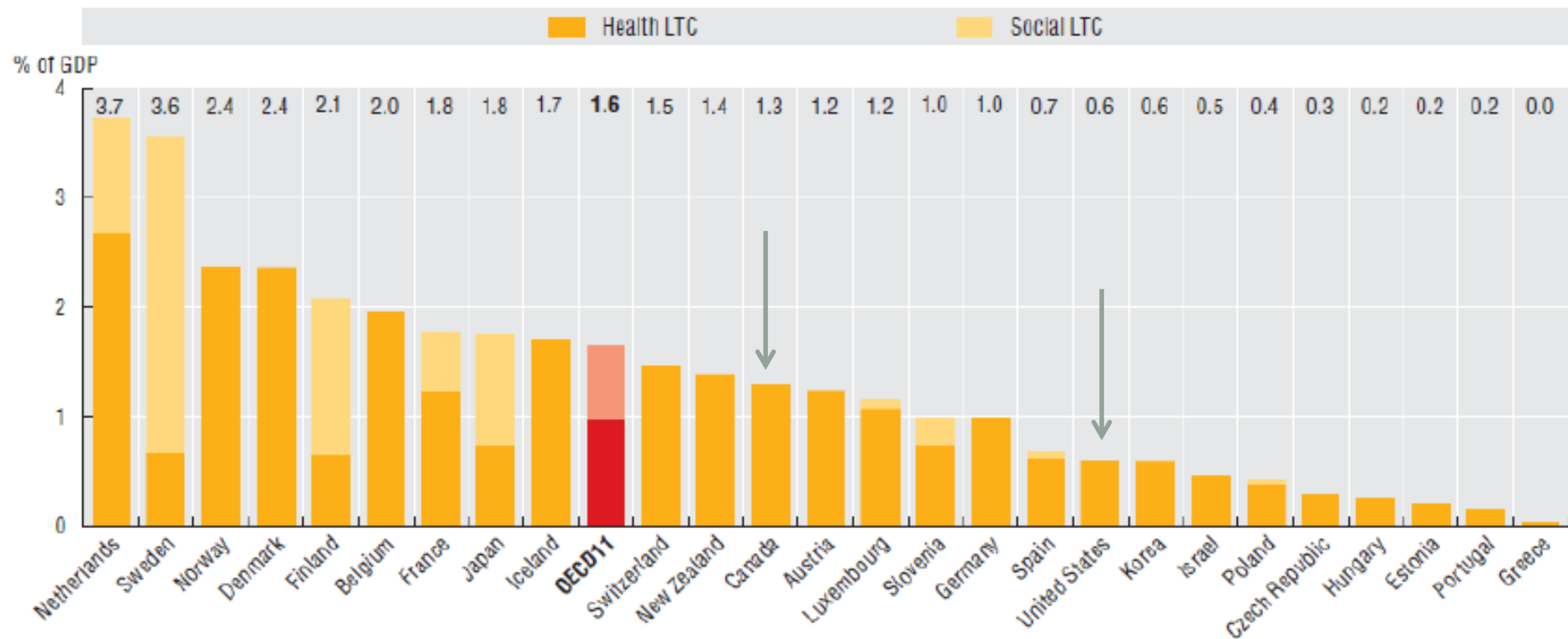


Notes: GDP refers to gross domestic product.

Source: E. H. Bradley and L. A. Taylor, *The American Health Care Paradox: Why Spending More Is Getting Us Less*, Public Affairs, 2013.

Public spending on long-term care varies a lot across countries, reflecting differences in the development of public programmes

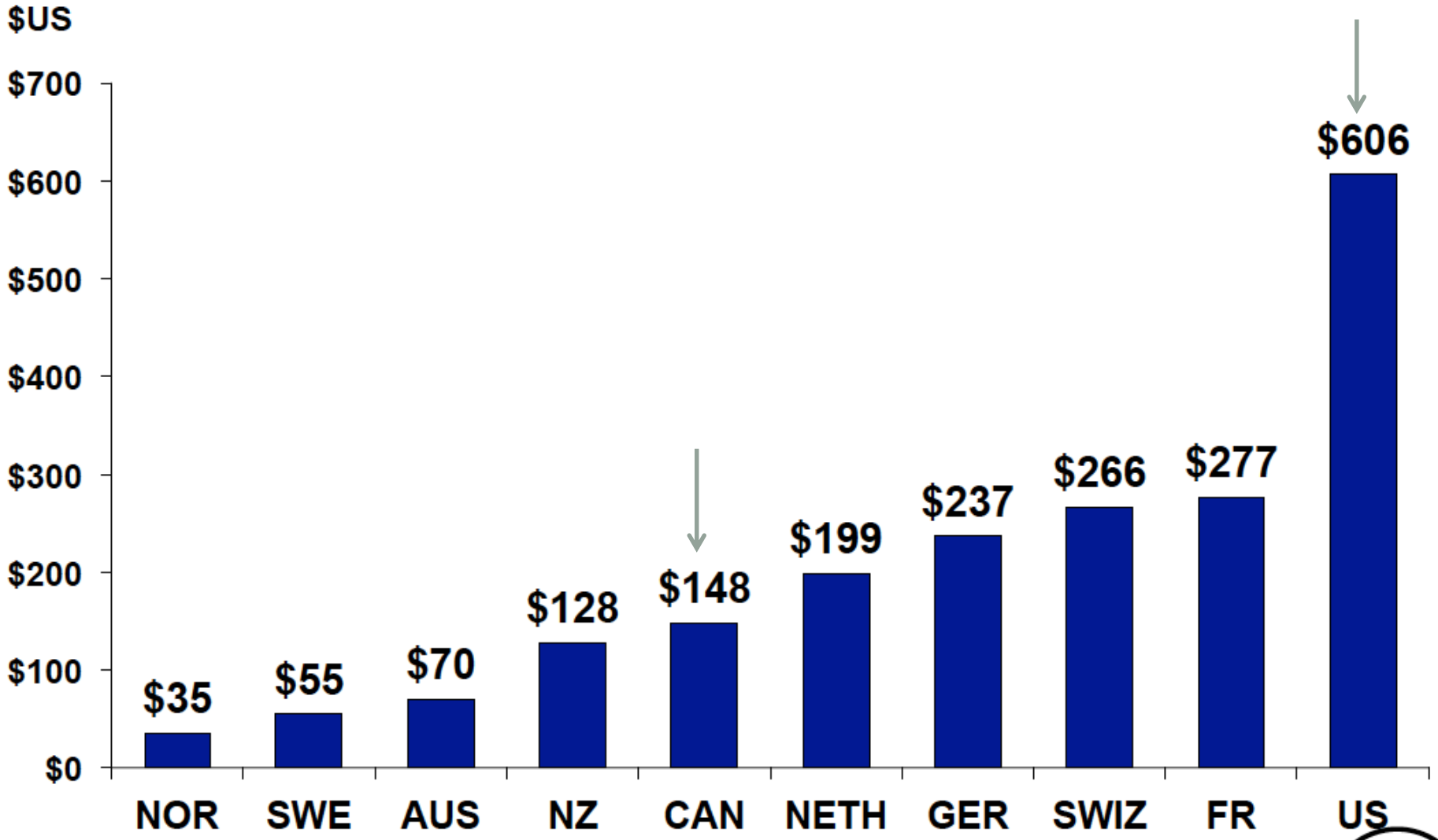
Long-term care public expenditure (health and social components), as share of GDP, 2011 (or nearest year)



Note: The OECD average only includes the 11 countries that report health and social LTC.

Source: OECD Health Statistics 2013, OECD (<http://www.oecd.org/health/healthdata>)

Spending on Health Insurance Administration per Capita, 2011¹⁸ Adjusted for Differences in Cost of Living



* 2010.
Source: OECD Health Data 2013.



Exhibit 5. Diagnostic Imaging Supply and Use, 2013

	Magnetic resonance imaging		Computed tomography		Positron emission tomography	
	MRI machines per million pop.	MRI exams per 1,000 pop.	CT scanners per million pop.	CT exams per 1,000 pop.	PET scanners per million pop.	PET exams per 1,000 pop.
Australia	13.4	27.6	53.7	110	2.0	2.0
Canada	8.8	52.8	14.7	132	1.2 ^a	2.0
Denmark	–	60.3	37.8	142	6.1	6.3
France	9.4	90.9	14.5	193	1.4	–
Japan	46.9 ^b	–	101.3 ^b	–	3.7 ^b	–
Netherlands	11.5	50.0 ^b	11.5	71 ^b	3.2	2.5 ^a
New Zealand	11.2	–	16.6	–	1.1	–
Switzerland	–	–	36.6	–	3.5	–
United Kingdom	6.1	–	7.9	–	–	–
United States	35.5	106.9	43.5	240	5.0 ^a	5.0
OECD median	11.4	50.6	17.6	136	1.5	–

^a 2012. ^b 2011. ^c 2010.

Source: OECD Health Data 2015.

Exhibit 7. Prices for Hospital and Physician Services, Pharmaceuticals, and Diagnostic Imaging

	Total hospital and physician costs, 2013 ^a		Diagnostic imaging prices, 2013 ^a		Price comparison for in-patient pharmaceuticals, 2010 (U.S. set to 100) ^b
	Bypass surgery	Appendectomy	MRI	CT scan (abdomen)	
Australia	\$42,130	\$5,177	\$350	\$500	49
Canada	–	–	–	\$97	50 ←
France	–	–	–	–	61
Germany	–	–	–	–	95
Netherlands	\$15,742	\$4,995	\$461	\$279	–
New Zealand	\$40,368	\$6,645	\$1,005	\$731	–
Switzerland	\$36,509	\$9,845	\$138	\$432	88
United Kingdom	–	–	–	–	46
United States	\$75,345	\$13,910	\$1,145	\$896	100 ←

^a Source: International Federation of Health Plans, 2013 Comparative Price Report.

^b Numbers show price indices for a basket of in-patient pharmaceuticals in each country; lower numbers indicate lower prices.

Source: P. Kanavos, A. Ferrario, S. Vondoros et al., "Higher U.S. Branded Drug Prices and Spending Compared to Other Countries May Stem Partly from Quick Uptake of New Drugs," *Health Affairs*, April 2013 32(4):753–61.

Medical Care Delivery

Hospital Care

US

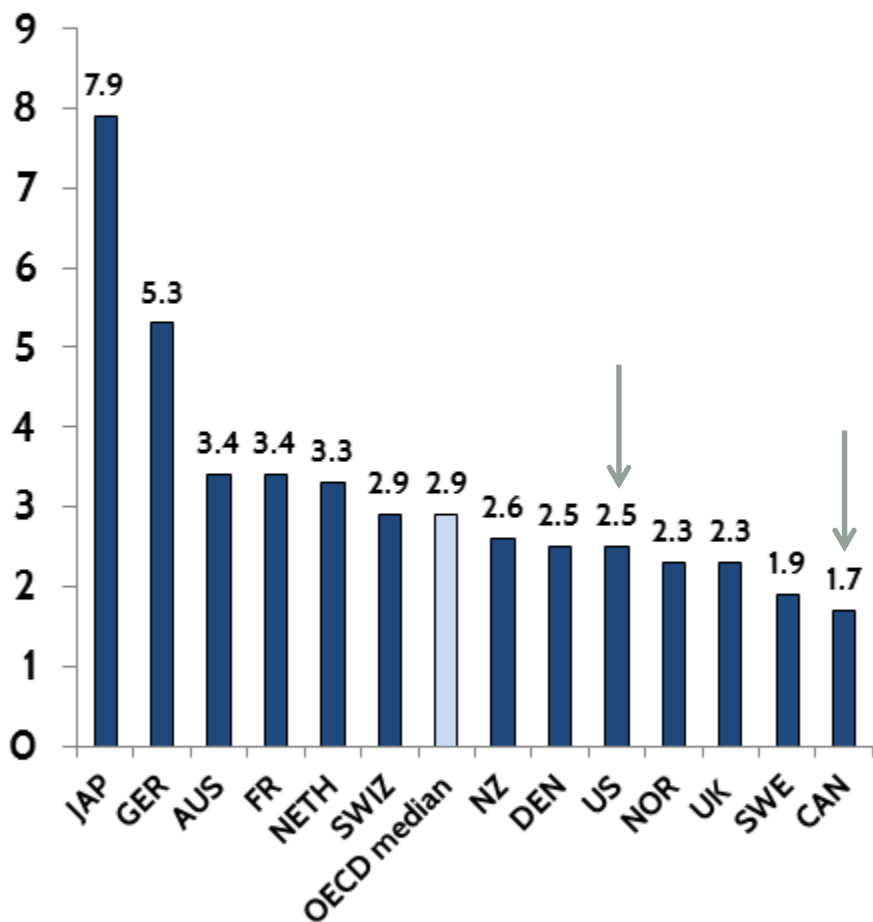
- 70% of hospital beds are nonprofit; 15% profit and 15% public
- Financed through per-service or per-diem charges, per-case payments and bundled payments

Canada

- Publicly owned (run by regional authority or community based hospital boards) or run by private nonprofit corporations
- Financed traditionally under annual global budgets with recent move to activity based/prospective funding

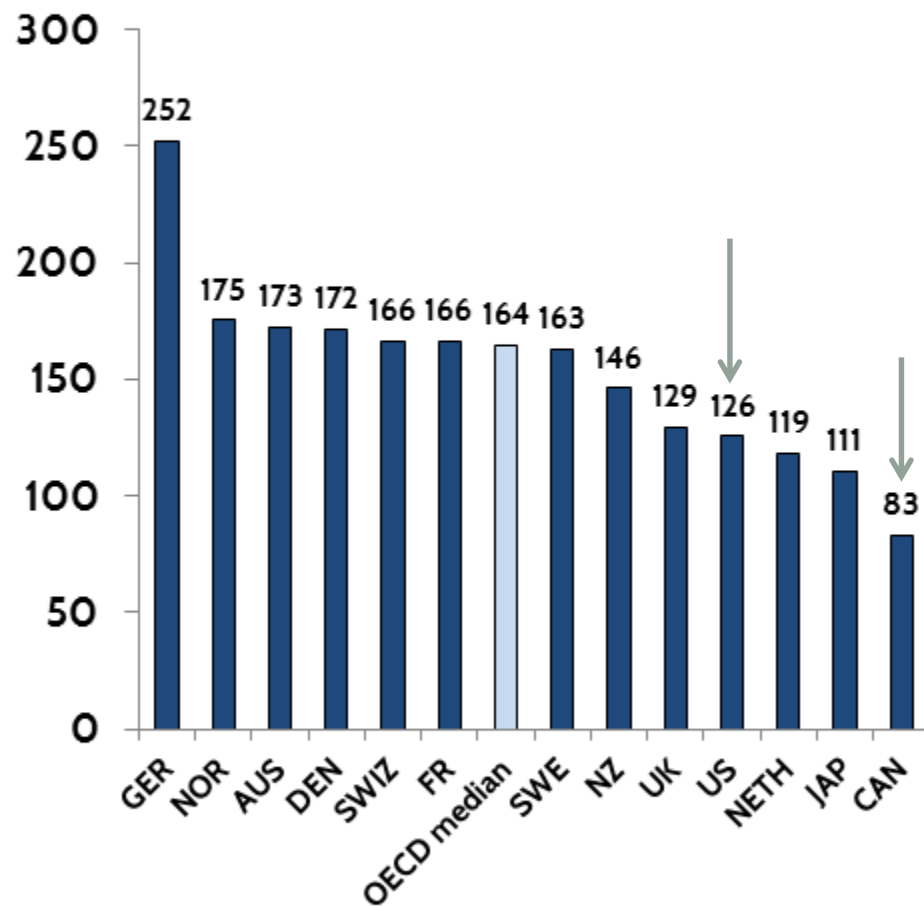
Exhibit 4. Hospital Supply and Use, 2013 or Nearest Year

Acute care hospital beds per 1,000 population



Note: Data from 2012 in Australia, Canada, the Netherlands, and the U.S.

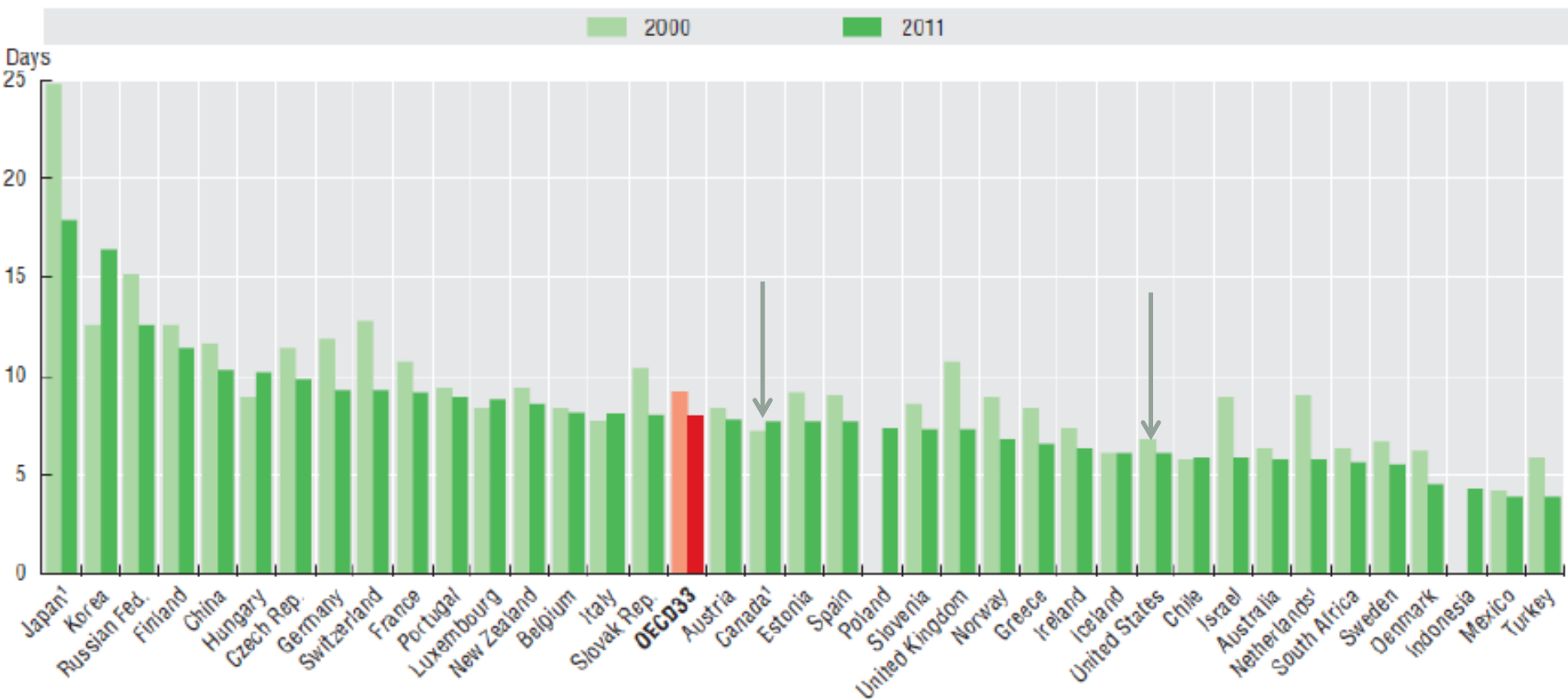
Hospital discharges per 1,000 population



Note: Data from 2012 in Australia, Canada, the Netherlands, and Switzerland; 2011 in Japan; and 2010 in Denmark, Norway, Sweden, and the U.S.

The average length of stay in hospital has fallen in nearly all OECD countries, reflecting efficiency gains

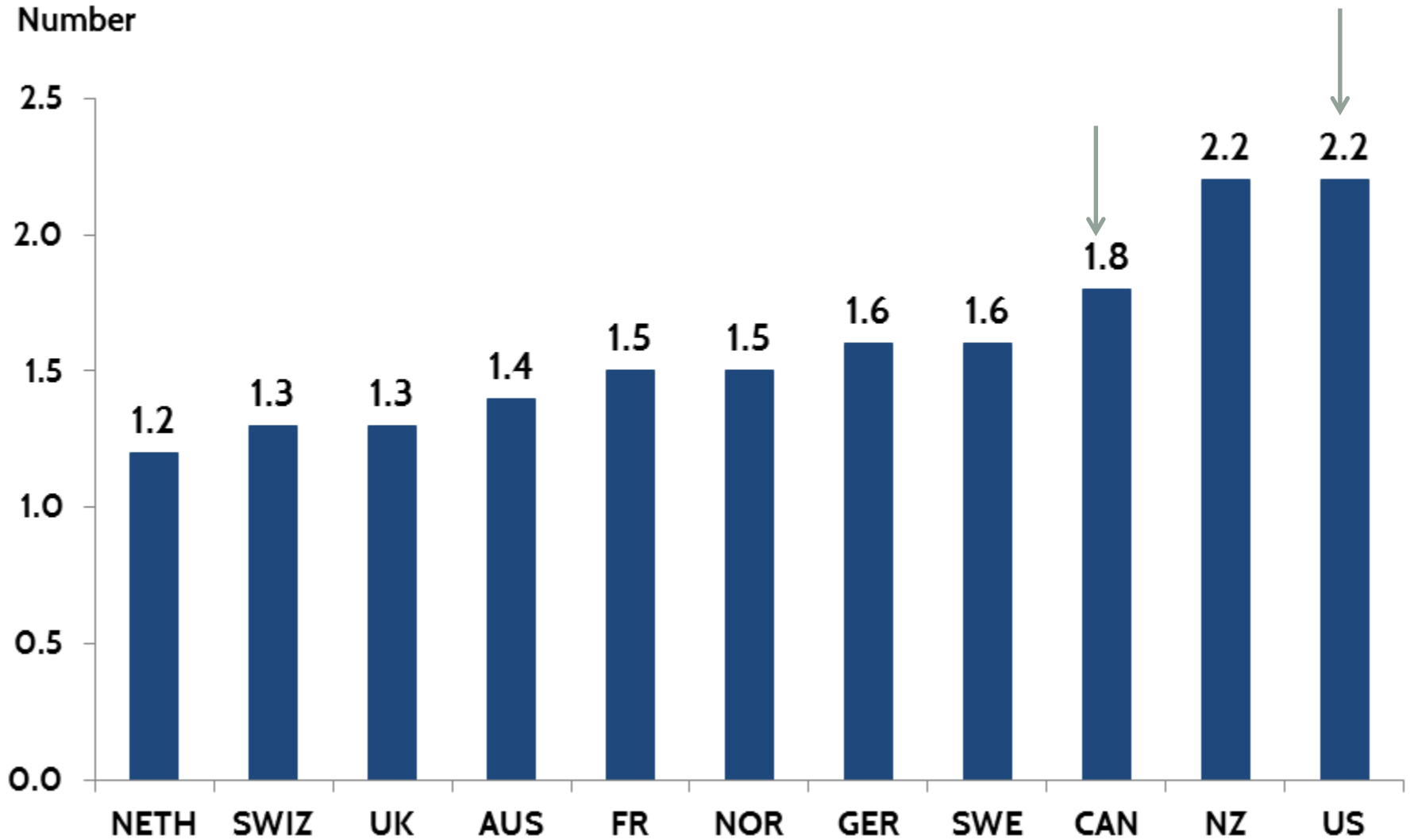
Average length of stay in hospital, 2000 and 2011 (or nearest year)



1. Data refer to average length of stay for curative (acute) care (resulting in an under-estimation).

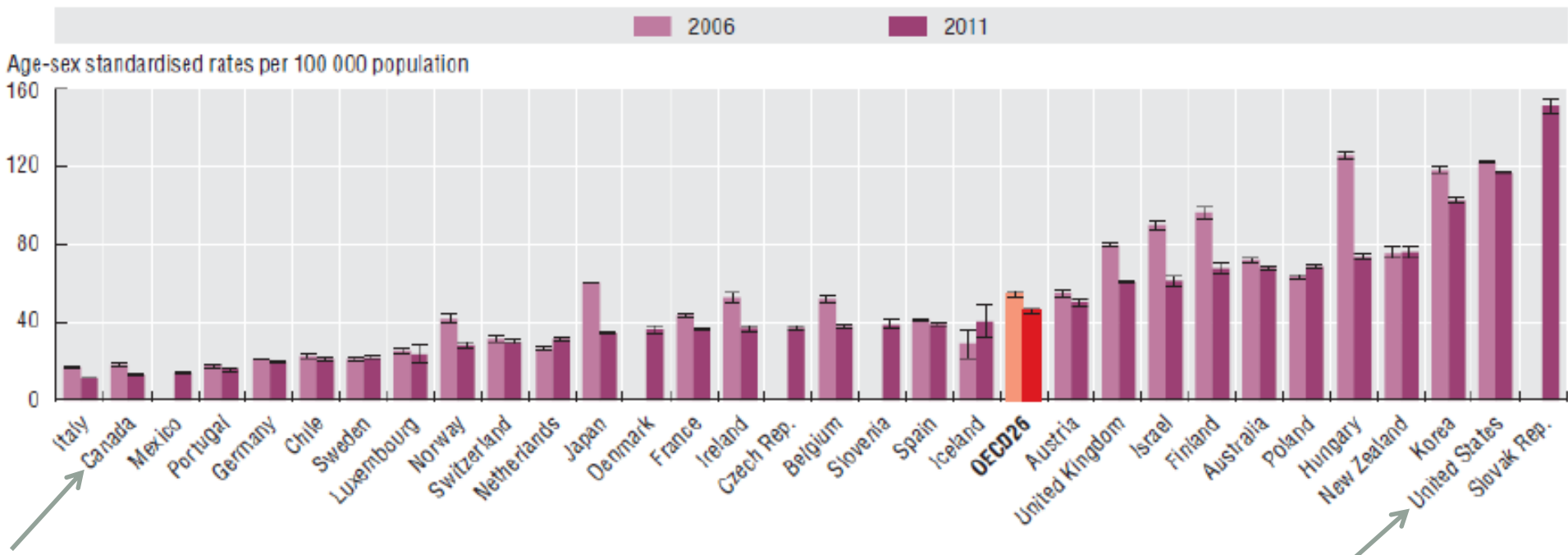
Source: OECD Health Statistics 2013, OECD (<http://www.oecd.org/health/healthdata>)

Exhibit 6. Average Number of Prescription Drugs Taken Regularly, Age 18 or Older, 2013



Treatment for chronic diseases is not optimal. Too many persons are still admitted to hospitals for asthma ...

Asthma hospital admission in adults, 2006 and 2011 (or nearest year)



Note: 95% confidence intervals represented by |—|.

Source: OECD Health Statistics 2013, OECD (<http://www.oecd.org/health/healthdata>)

... and too many persons are admitted to hospitals for uncontrolled diabetes, highlighting the need to improve primary care

Diabetes hospital admission in adults, 2006 and 2011 (or nearest year)

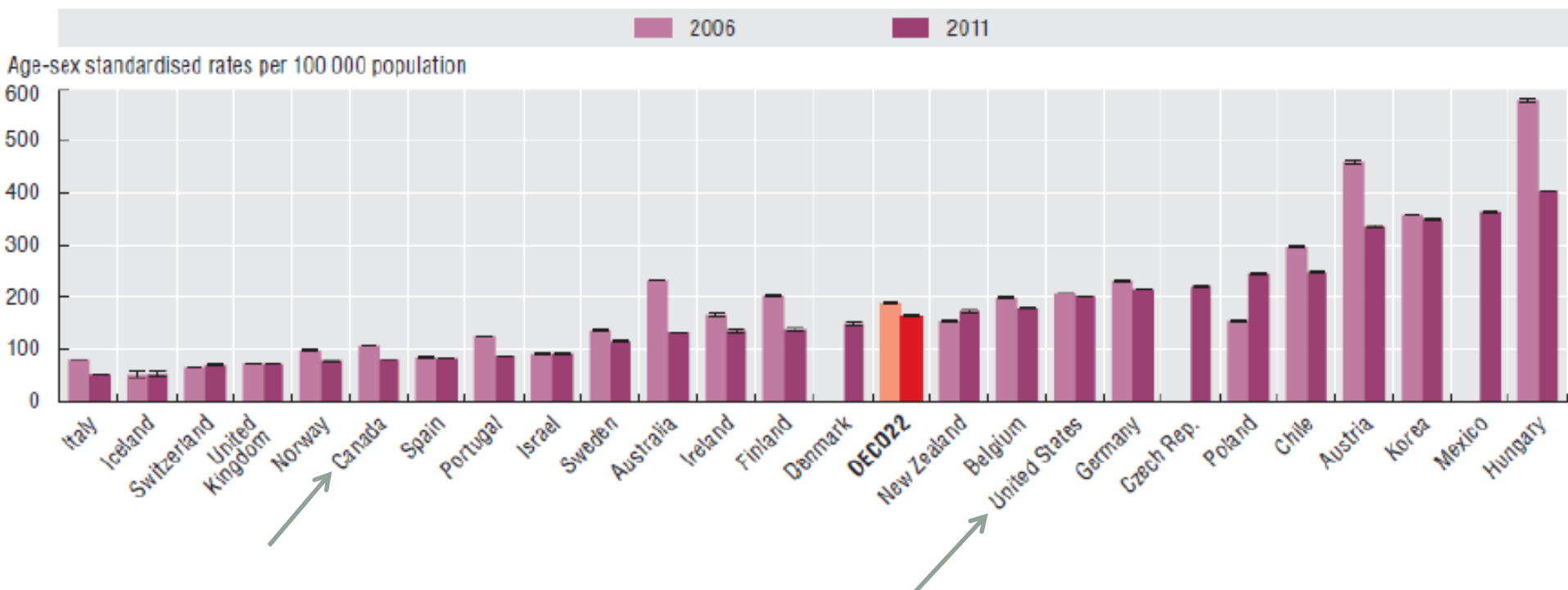
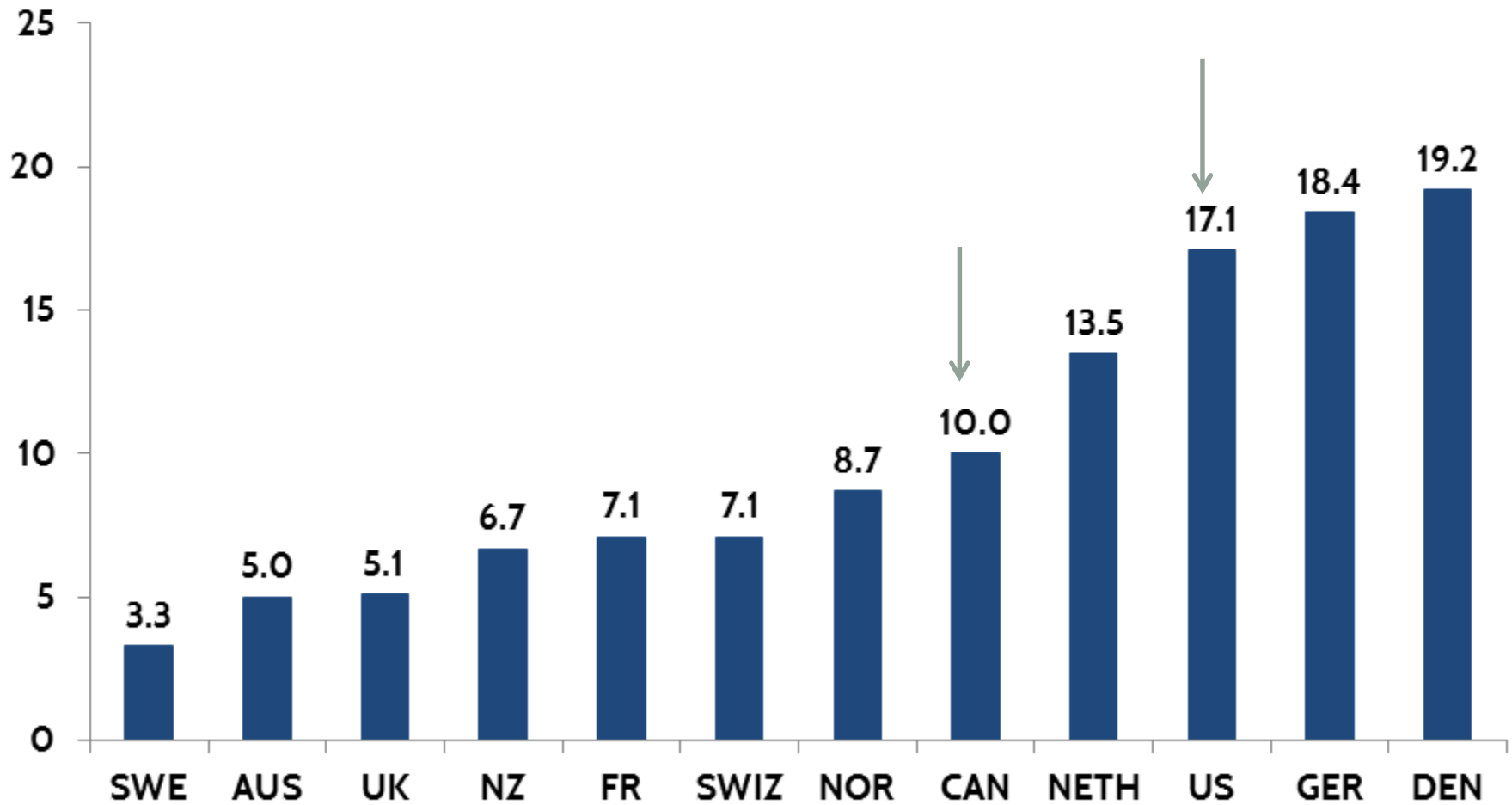


Exhibit 12. Lower Extremity Amputations as a Result of Diabetes, 2011

Amputations per 100,000 population

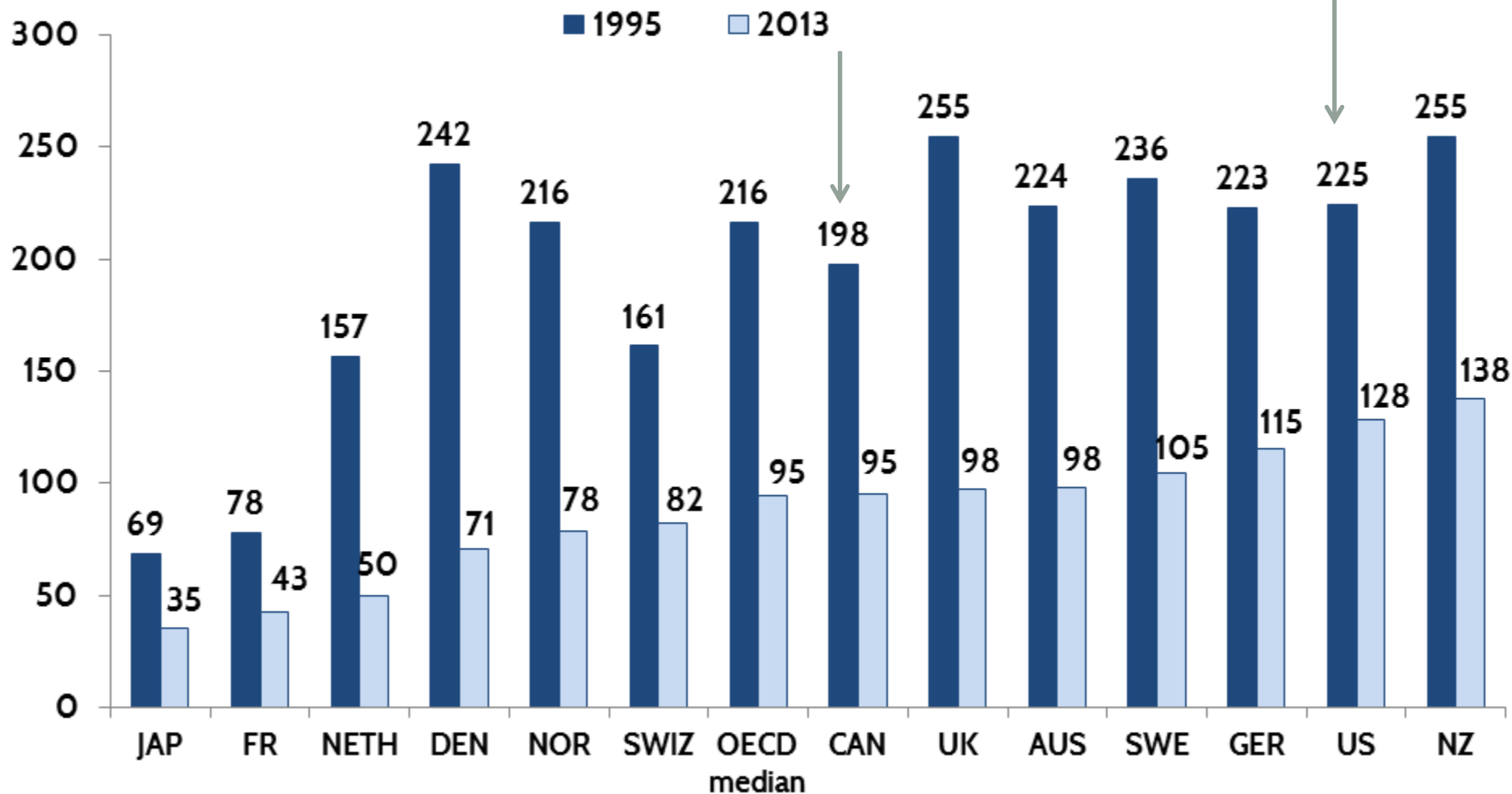


* Data from 2010 for the Netherlands, Switzerland, and the U.S.; and 2009 for Denmark.

Source: OECD Health Data 2015.

Exhibit 11. Mortality as a Result of Ischemic Heart Disease, 1995 to 2013

Deaths per 100,000 population

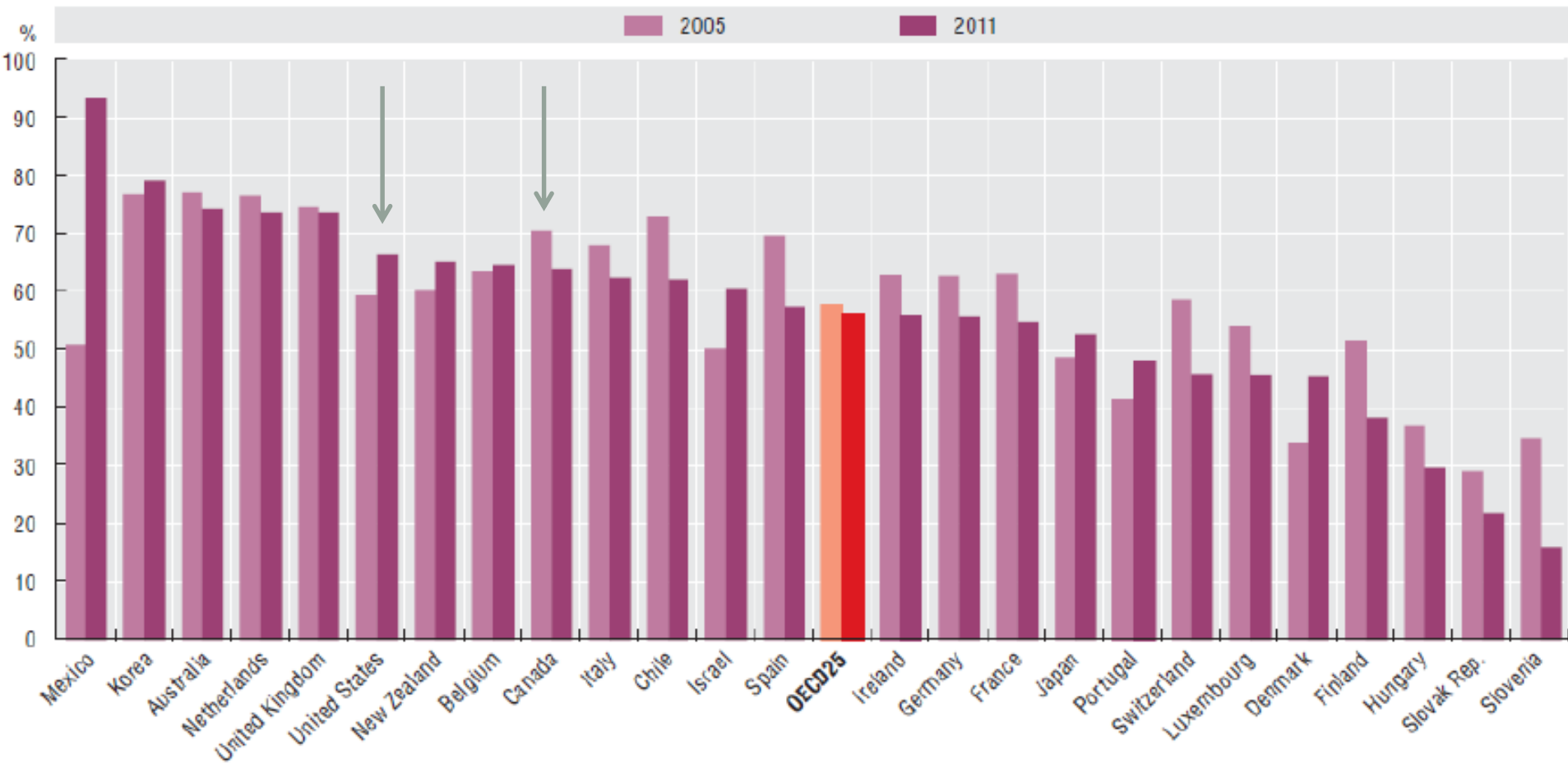


* Data from 2012 for Denmark and Switzerland; 2011 for France, Canada, Australia, and New Zealand; and 2010 for the U.S.

Source: OECD Health Data 2015.

Vaccination rates against influenza among people aged 65 and over have fallen in many countries, increasing the risks of hospitalisation and death

Influenza vaccination coverage, population aged 65 and over, 2005-11 (or nearest year)



After Hours Care

US

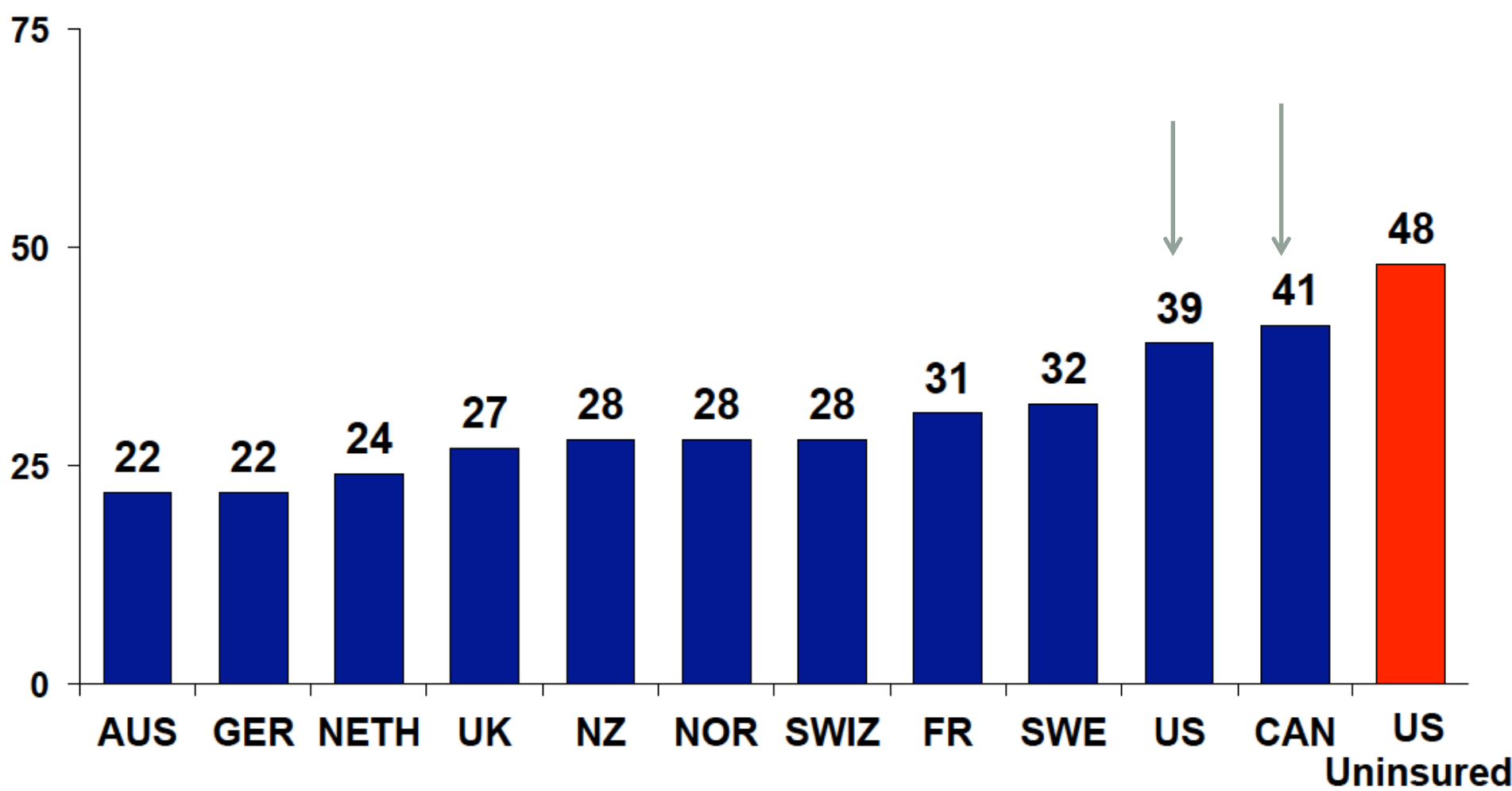
- 34% of primary care physicians reported having after hours arrangements in 2012
- Care often shunted to emergency rooms or urgent care centers (75% physician owned)
- Some insurance companies offer after hours phone advice

Canada

- 46% of physician practices in Canada have arrangements for after hour care (2012)
- Care often shunted to privately owned walk in clinics or emergency rooms
- Free telephone service (nurse) for advice usually available 24 hrs/day

Used the Emergency Department in Past Two Years

Percent



US Uninsured



Source: 2013 Commonwealth Fund International Health Policy Survey in Eleven Countries.

Long Term Care

US

- Regulations primarily federal
- 68% of facilities are for profit
- Funding through Medicare (short term rehabilitation and hospice), Medicaid and private pay
- No single entry point
- LTC insurance available but uptake low
- Wait times dependent on funding source

Canada

- Regulations primarily provincial
- For profit status varies between provinces, highest in Ontario at 60%
- LTC and end of life care provided in nonhospital facilities and in community are not insured
- Private pay common but is often capped
- Single point of entry common
- Long wait times common

System Integration and Care Coordination

US

- Patient Centered Medical Home
- Accountable Care Organizations
- Medicare payments for coordination of care
- Bundled Payment models

Canada

- Incentivizing movement from solo to team based, multidisciplinary practices
- Testing new models of care linking acute and long term care (i.e. Health Links-ON)
- Capitation
- Telehealth linking specialists to primary care

Quality

US

- Public reporting (acute/LTC)
- Center for Medicare and Medicaid Innovation (CMMI)
 - tests new models that enhance efficiency/quality
- Patient-Centered Outcomes Research Institute (PCORI)
 - Research on clinical effectiveness
- AHRQ study of guidelines, practice outcomes, patient experience and safety
- Joint Commission (hospitals) and State Health Department (LTC) surveys

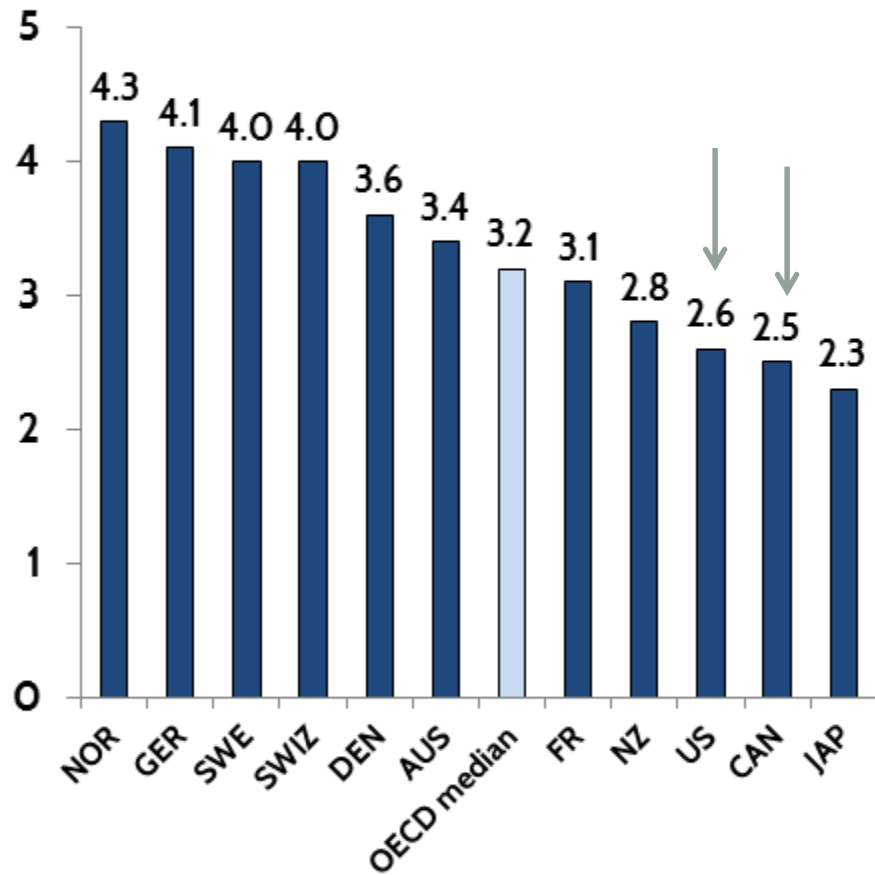
Canada

- Canadian Patient Safety Institute promotes best practices and standards
- Canadian Institute for Health Information reports on health system performance
- Provincial agencies monitor local performance and design quality initiatives (i.e. Health Quality Ontario)
- Accreditation Canada (hospitals) and Provincial Ministries of Health (LTC) surveys

Physicians

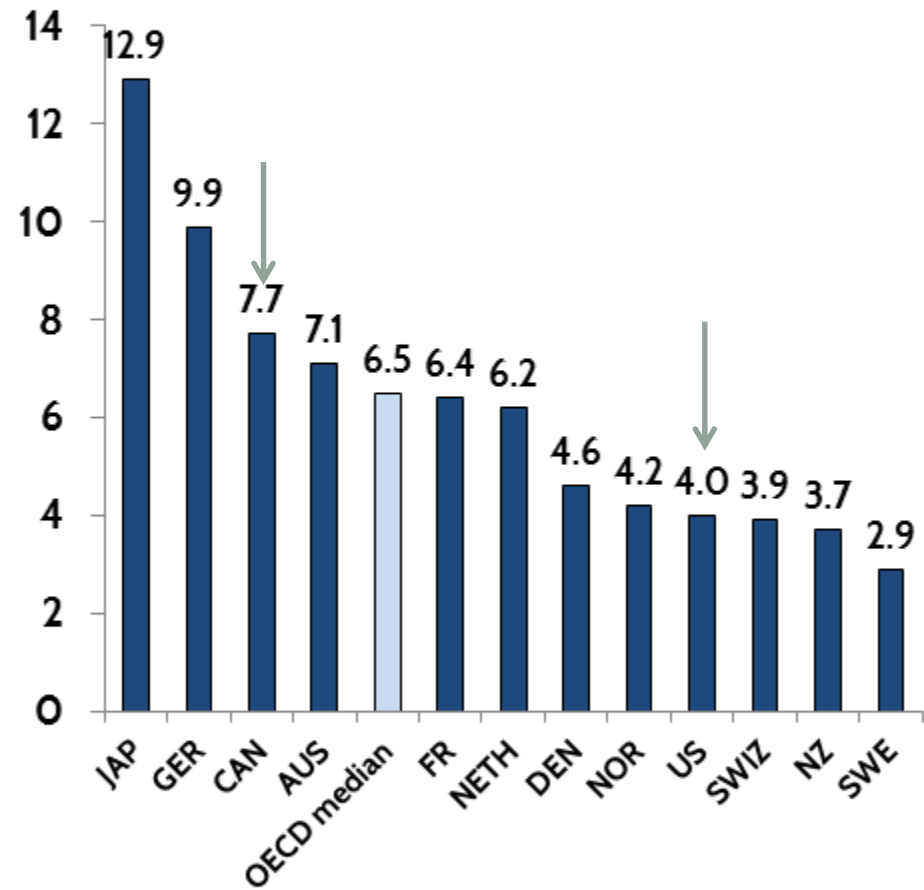
Exhibit 3. Physician Supply and Use, 2013 or Nearest Year

Practicing physicians
per 1,000 population



Note: Data from 2012 in Canada, Denmark, Japan, and Sweden.

Annual physician visits
per capita



Note: Data from 2012 in Canada, Japan, Sweden, and Switzerland; and 2010 in the U.S.

Physicians in Canada

- Primary care physicians (50% of all practicing docs) act primarily as gatekeepers
- Most are self employed and paid fee for service (50% FFS in Ontario;86% in BC)
- Recent movement toward alternative forms of payment such as capitation, salary and blended funding
- New interdisciplinary models based on shared resources and are salary/capitation based (i.e. Primary Care Networks in Alberta and Family Health Teams in Ontario)

Physicians in Canada

- Majority of specialist care is provided in hospitals
- Paid fee for service (lower fee if not referred by primary care physician)
- Specialists not allowed to receive payment from private patients for publicly insured services
- Few formal multispecialty clinics

Physicians Bill the Provincial Government Directly



Physicians in US

- Primary care physicians make up 1/3 of all practicing physicians and generally do not act as gatekeepers (except for managed care plans)
- Majority work in small self or group owned practices. Larger practices with employed interdisciplinary staff becoming more common

Physicians in US

- Pay for performance now mandated
- Specialists practice in both inpatient and outpatient settings (multispecialty and single-specialty groups common)
- Access to specialist depends on type of plan (HMO vs PPO)
- Medicaid and uninsured patients may have difficulty accessing specialists who refuse to see

Physicians paid by combination of private and public insurance



Physician Remuneration

Salaried/Self Employed (US\$ PPP, 2011)

General Practitioners

- Australia NA/84
- Belgium NA/105
- Canada NA/136
- Spain NA/76
- Israel 66/NA
- Netherlands 89/143
- UK 86/156
- US 180/188
- France NA/82

Specialists

- Australia NA/207
- Belgium NA/278
- Canada NA/213
- Spain NA/87
- Israel 103/NA
- Netherlands 143/254
- UK 108/NA
- US 284
- France 85/138



Physician Perceptions of Quality of Care, Professional Autonomy and Job Satisfaction in Canada, Norway and the US

- Tyssen et al. BMC Health Services Research 2013, 13:516
 - Survey of practicing physicians
 - Canadian Physician Health Study (N=3213/8100 = 40% response rate)
 - US Community Tracking Study Physician Survey (N=6628/12,648 = 52% response rate)

Physician Perceptions

US

- “I have adequate time to spend with my patients during a typical patient visit”
 - Strongly agree/agree
 - 67%
 - Disagree/strongly disagree
 - 31%

Canada

- “I have adequate time to spend with my patients during a typical patient visit”
 - Strongly agree/agree
 - 46%
 - Disagree/strongly disagree
 - 37%

Physician Perceptions

US

- “I have the freedom to make clinical decisions that meet my patients’ needs”
 - Strongly agree/agree
 - 88%
 - Disagree/strongly disagree
 - 11%

Canada

- “I have the freedom to make clinical decisions that meet my patients’ needs”
 - Strongly agree/agree
 - 72%
 - Disagree/strongly disagree
 - 11%

Physician Perceptions

US

- “ It is possible to provide high quality care to all of my patients”
 - Strongly agree/agree
 - 79%
 - Disagree/strongly disagree
 - 18%

Canada

- “It is possible to provide high quality care to all of my patients ”
 - Strongly agree/agree
 - 46%
 - Disagree/strongly disagree
 - 32%

Physician Perceptions

US

- “ On the whole, how satisfied are you with your job”
 - Very/somewhat satisfied
 - 84%
 - Very/somewhat dissatisfied
 - 15%

Canada

- “ On the whole, how satisfied are you with your job”
 - Very/somewhat satisfied
 - 90%
 - Very/somewhat dissatisfied
 - 11%

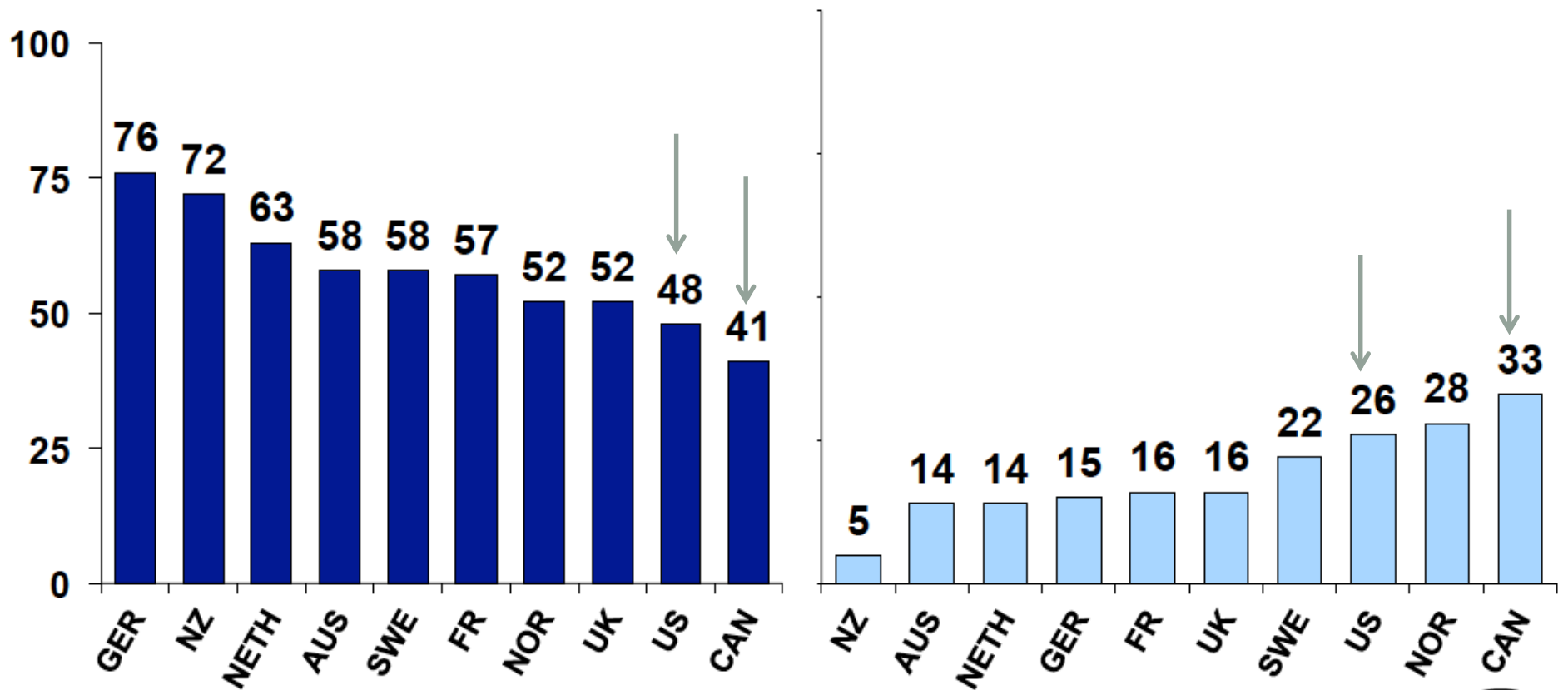
Access

Access to Doctor or Nurse When Sick or Needed Care

Same-day or next-day appointment

Waited six days or more for appointment

Percent



Note: Question asked differently in Switzerland.

Source: 2013 Commonwealth Fund International Health Policy Survey in Eleven Countries.

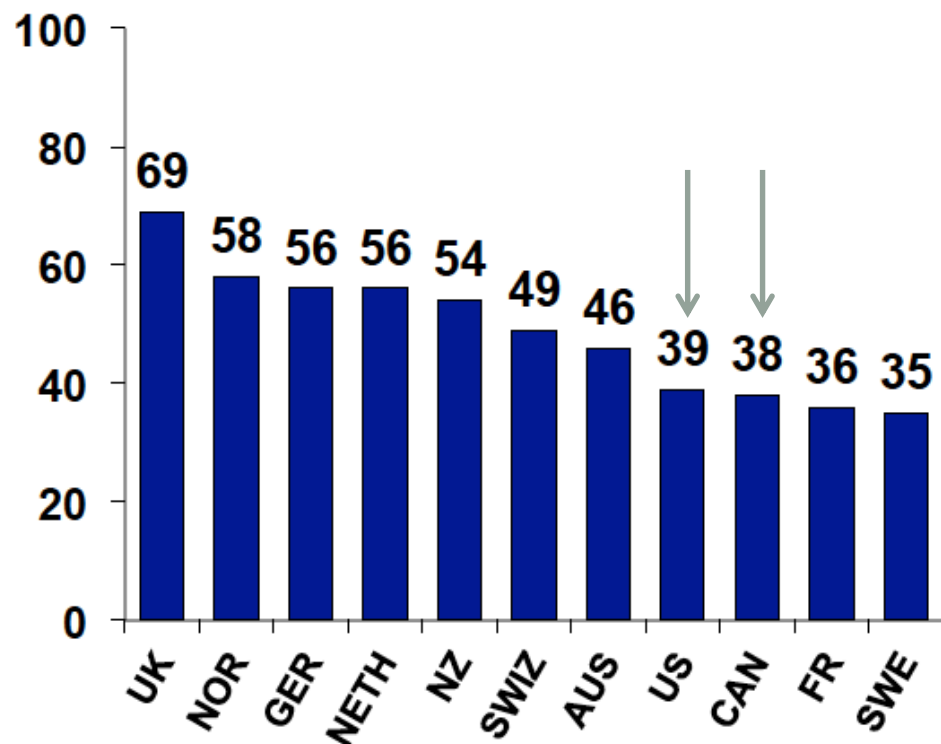


Access to After-Hours Care

Adults, 2013

**Easy getting after-hours care
without going to the ER**

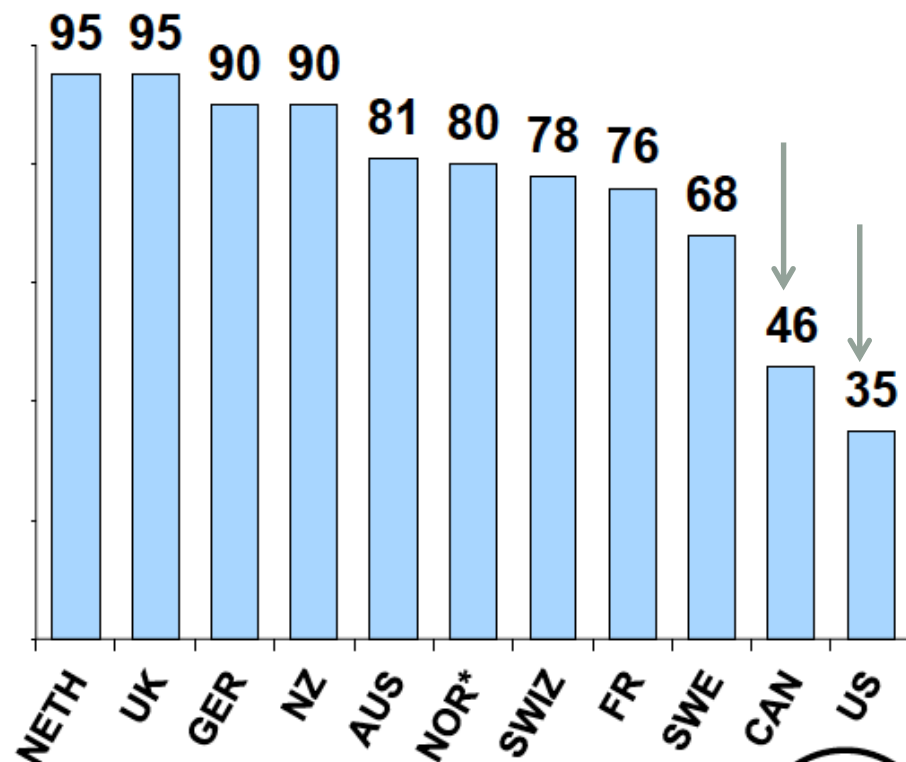
Percent



Base: Needed care after hours.

Primary care physicians, 2012

**Practice has arrangement for
patients' after-hours care
to see doctor or nurse**



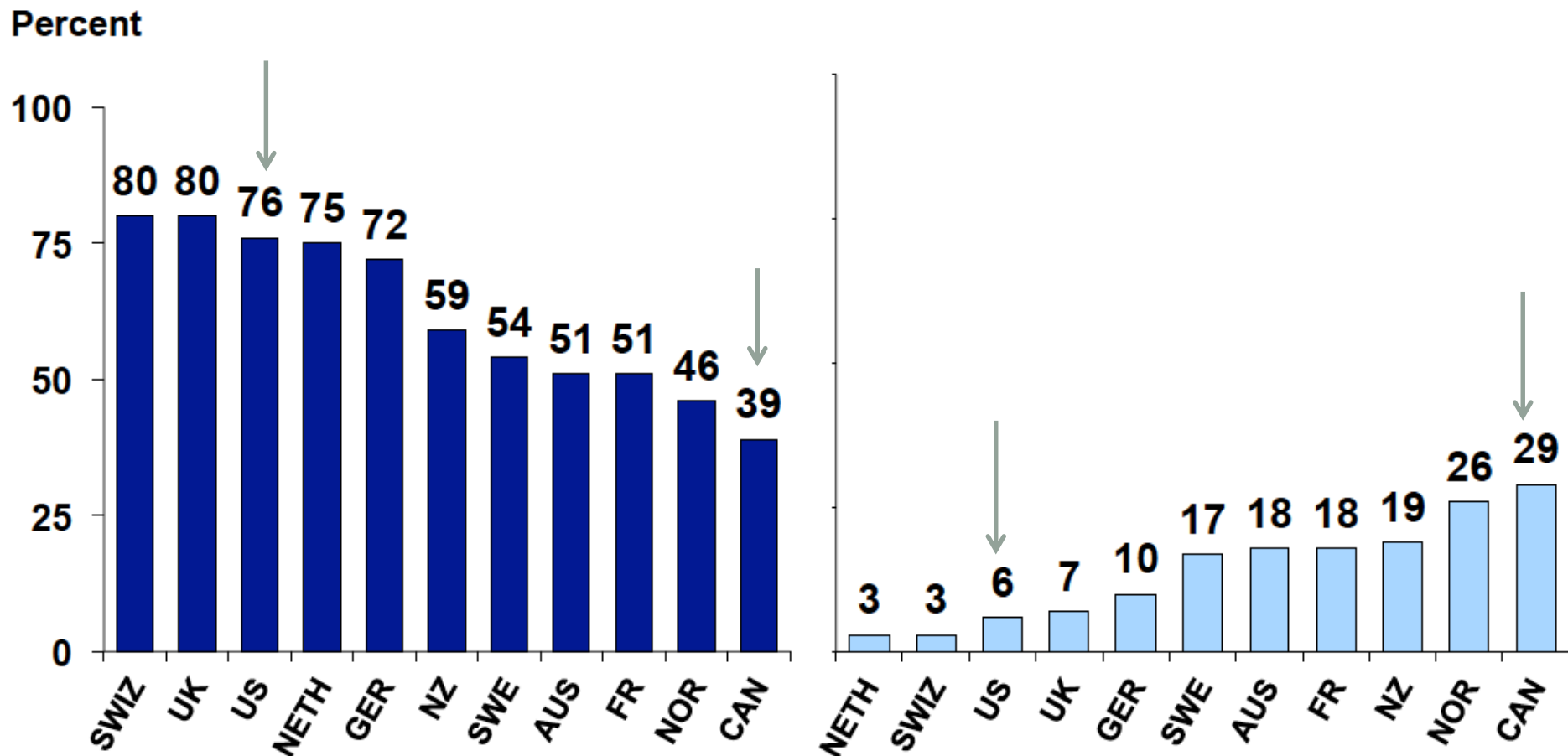
* In Norway, doctors asked whether their practice had arrangements or there were regional arrangements.

THE
COMMONWEALTH
FUND

Wait Times for Specialist Appointment

Less than four weeks

Two months or more

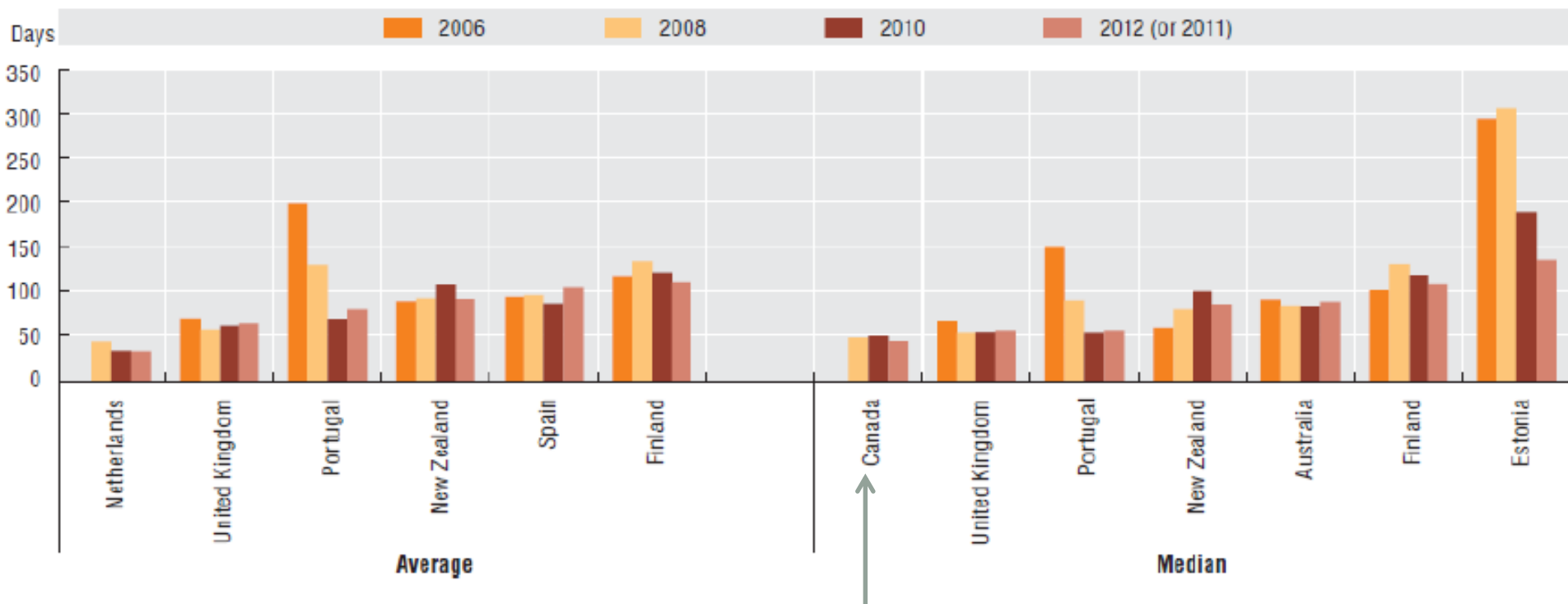


Base: Needed to see specialist in the past two years.

Source: 2013 Commonwealth Fund International Health Policy Survey in Eleven Countries.

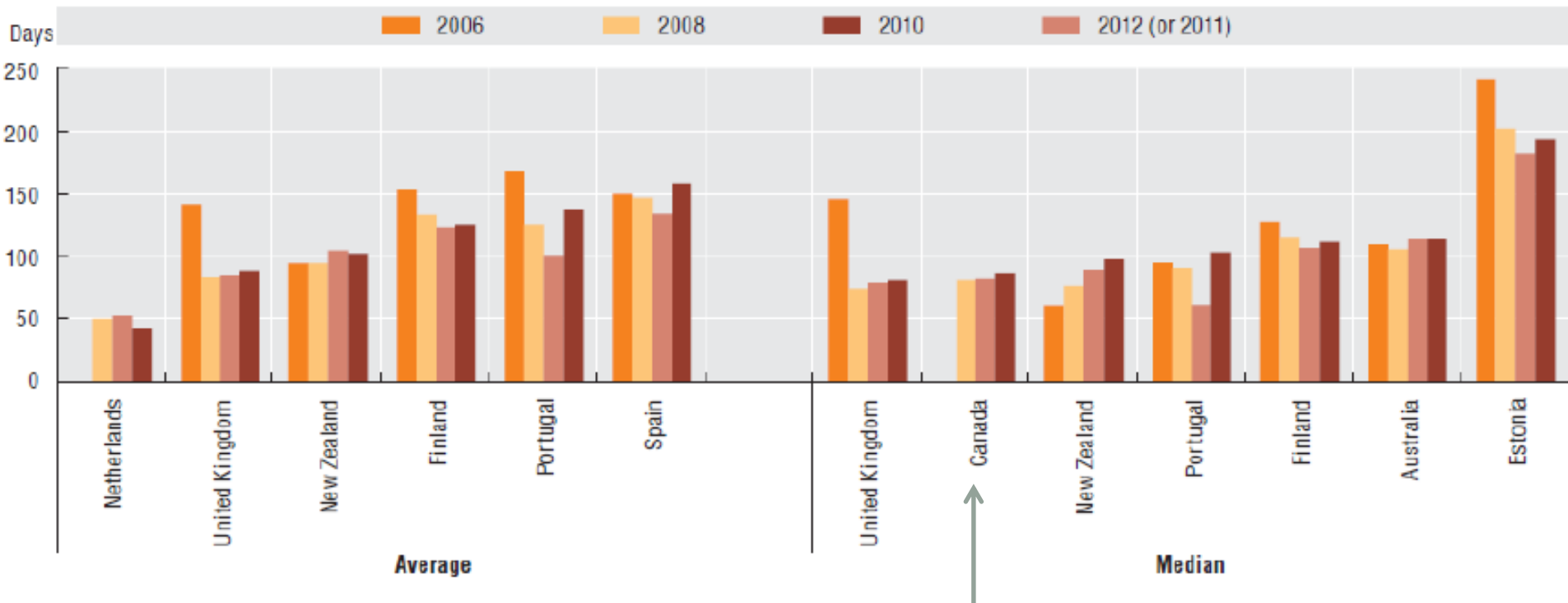
Waiting times for cataract surgery have decreased in several countries, although the trend has reversed slightly following the economic crisis

Cataract surgery, waiting times from specialist assessment to treatment, 2006 to 2012 (or 2011)



Waiting times for hip replacement have also decreased prior to the economic crisis but have gone up in some countries since then

Hip replacement, waiting times from specialist assessment to treatment, 2006 to 2012 (or 2011)



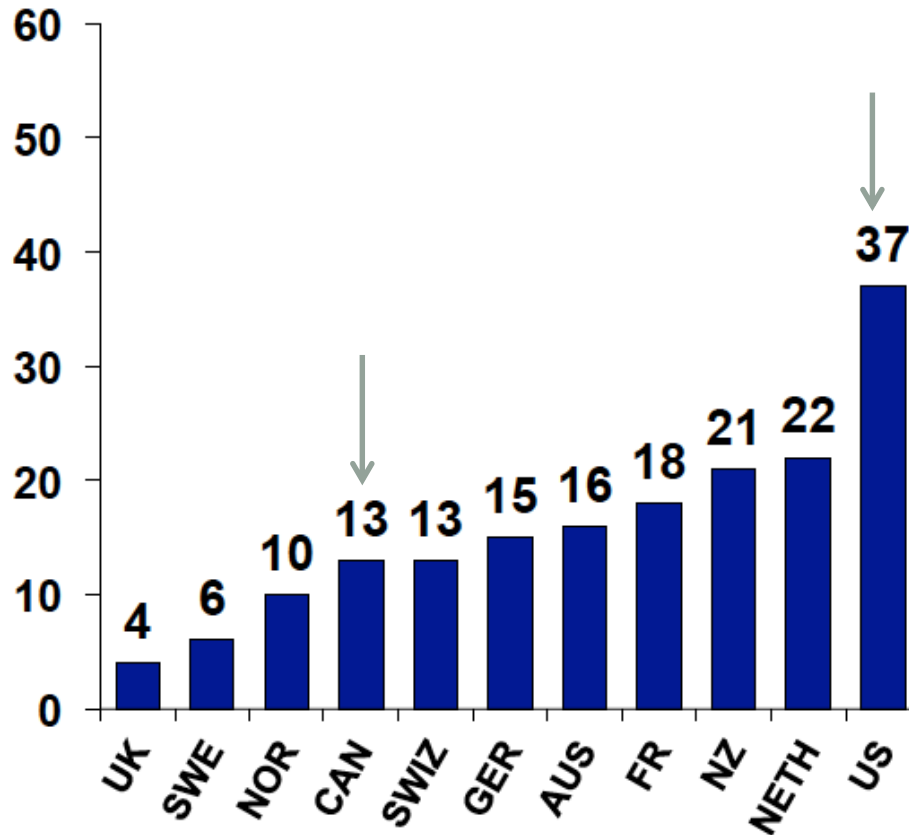
Nursing Home Access

- Wait list management varies between provinces and may be prioritized by chronology or individual needs
- In Ontario median time to nursing home placement is 113 days; mean = 4 months (in some provinces waiting time may be up to a year)
- First available bed options also exist which limits choice and contributes to multiple moves

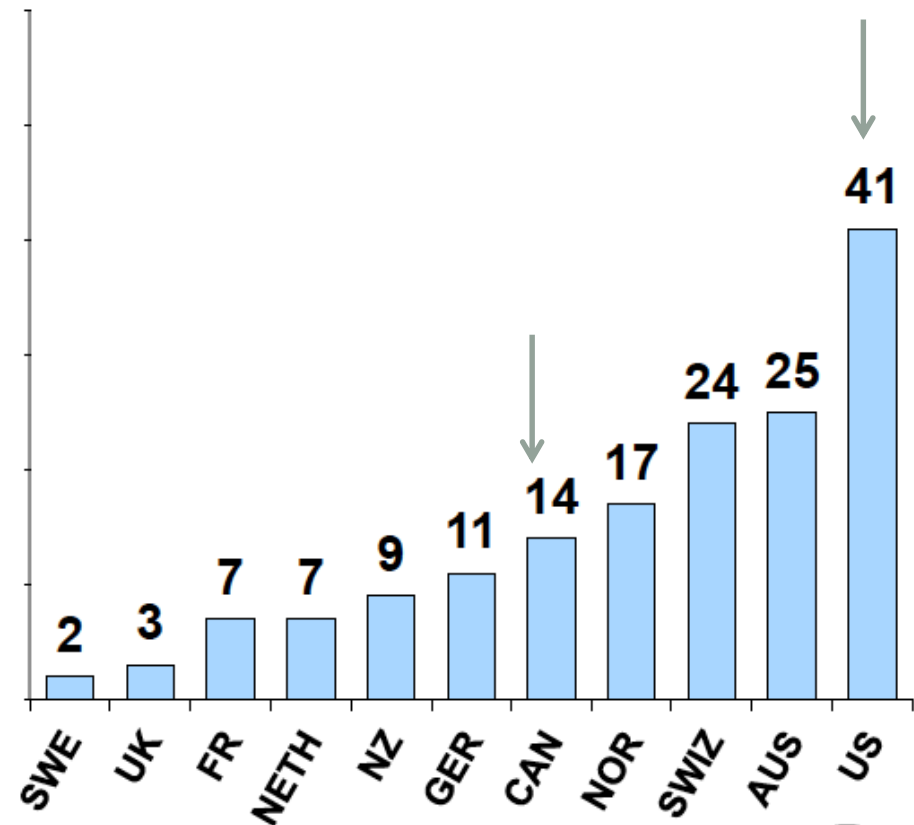
Cost-Related Access Barriers and Out-of-Pocket Costs in the Past Year

Experienced cost-related access problem*

Percent



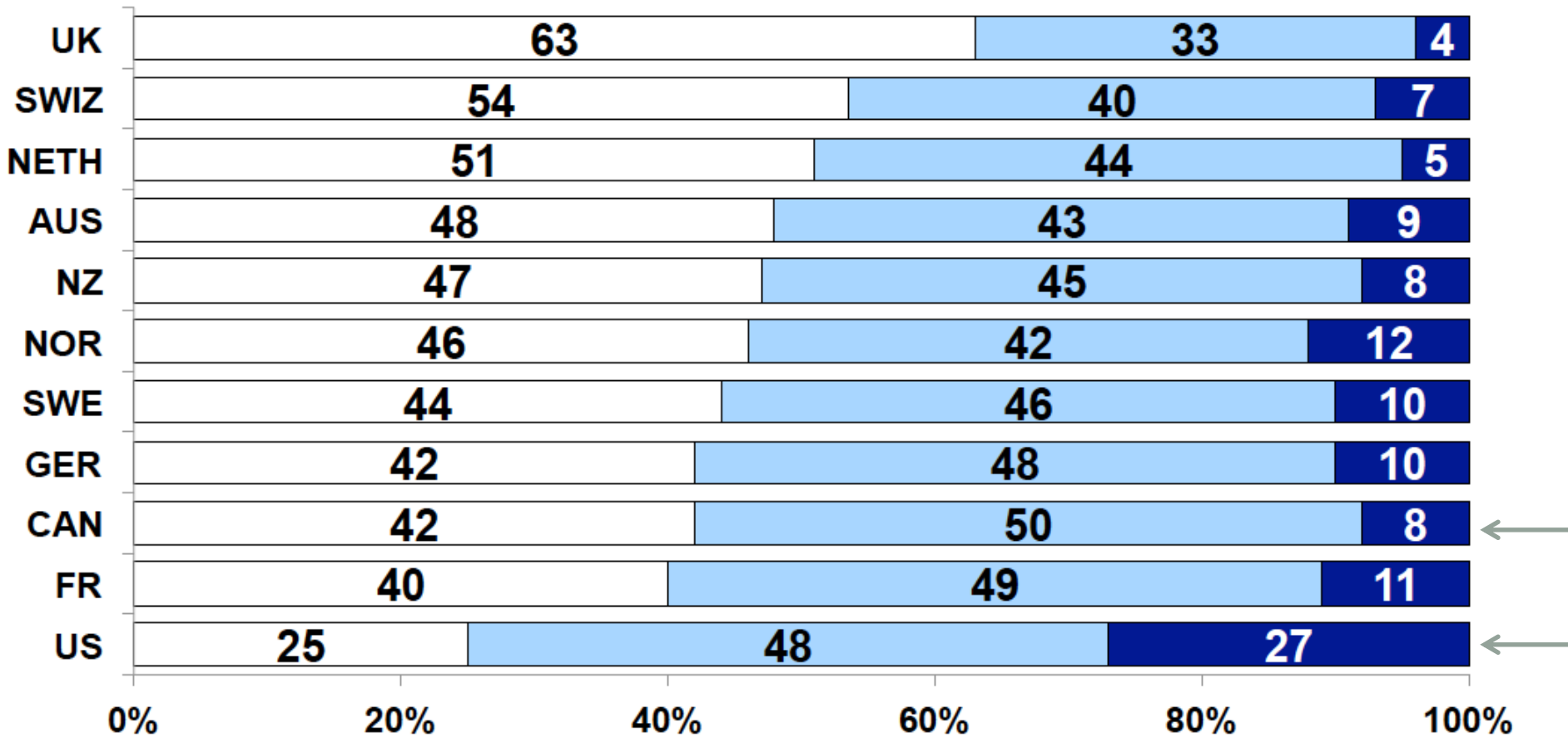
Spent US\$1,000 or more out-of-pocket



* Did not fill/skipped prescription, did not visit doctor with medical problem, and/or did not get recommended care.
Source: 2013 Commonwealth Fund International Health Policy Survey in Eleven Countries.

Overall Views of Health Care System, 2013

Works well, only minor changes
 Fundamental changes
 Completely rebuild



Percent



Source: 2013 Commonwealth Fund International Health Policy Survey in Eleven Countries.

Summary

- US

- Federal centric
- Millions remain uninsured
- High cost and use of technology/medications
- Less reliance on primary care
- Treatment of chronic illness suboptimal
- Access to services if insured

- Canada

- Provincial centric
- Universal coverage for hospital/physicians
- Less overall cost but still out-of-pocket expenses
- Greater emphasis on primary care
- Higher life expectancy
- Access issues despite insurance

EXHIBIT ES-1. OVERALL RANKING

COUNTRY RANKINGS

Top 2*
Middle
Bottom 2*



	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
OVERALL RANKING (2013)	4	10	9	5	5	7	7	3	2	1	11
Quality Care	2	9	8	7	5	4	11	10	3	1	5
Effective Care	4	7	9	6	5	2	11	10	8	1	3
Safe Care	3	10	2	6	7	9	11	5	4	1	7
Coordinated Care	4	8	9	10	5	2	7	11	3	1	6
Patient-Centered Care	5	8	10	7	3	6	11	9	2	1	4
Access	8	9	11	2	4	7	6	4	2	1	9
Cost-Related Problem	9	5	10	4	8	6	3	1	7	1	11
Timeliness of Care	6	11	10	4	2	7	8	9	1	3	5
Efficiency	4	10	8	9	7	3	4	2	6	1	11
Equity	5	9	7	4	8	10	6	1	2	2	11
Healthy Lives	4	8	1	7	5	9	6	2	3	10	11
Health Expenditures/Capita, 2011**	\$3,800	\$4,522	\$4,118	\$4,495	\$5,099	\$3,182	\$5,669	\$3,925	\$5,643	\$3,405	\$8,508

Notes: * Includes ties. ** Expenditures shown in \$US PPP (purchasing power parity); Australian \$ data are from 2010.

Source: Calculated by The Commonwealth Fund based on 2011 International Health Policy Survey of Sicker Adults; 2012 International Health Policy Survey of Primary Care Physicians; 2013 International Health Policy Survey; Commonwealth Fund *National Scorecard 2011*; World Health Organization; and Organization for Economic Cooperation and Development, *OECD Health Data, 2013* (Paris: OECD, Nov. 2013).

Remember the Case of Mr. S

- 82yo with shoulder pain and delay in obtaining definitive imaging of shoulder
- Would he have fared better in the US?
 - Would likely have received more timely diagnostic workup
 - Might have obtained CT faster through the ED
 - Delays impacted quality of care but probably did not change disease trajectory

Questions