



Health(care) Economics

Rotary Club of The Villages
June 17th, 2021

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National Economic Education Delegation

- **Vision**

- One day, the public discussion of policy issues will be grounded in an accurate perception of the underlying economic principles and data.

- **Mission**

- NEED unites the skills and knowledge of a vast network of professional economists to promote understanding of the economics of policy issues in the United States.

- **NEED Presentations**

- Are **nonpartisan** and intended to reflect the consensus of the economics profession.

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Who Are We?

• Honorary Board: 49 members

- 2 Fed Chairs: Janet Yellen, Ben Bernanke
- 6 Chairs Council of Economic Advisers
 - o Furman (D), Rosen (R), Bernanke (R), Yellen (D), Tyson (D), Goolsbee (D)
- 3 Nobel Prize Winners
 - o Akerlof, Smith, Maskin

• Delegates: 500+ members

- At all levels of academia and some in government service
- All have a Ph.D. in economics
- Crowdsource slide decks
- Give presentations

• Global Partners: 45 Ph.D. Economists

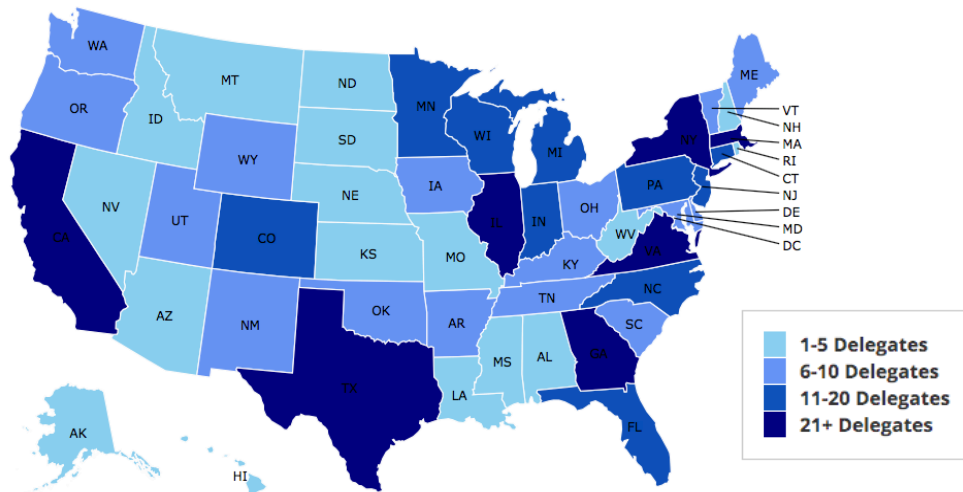
- Aid in slide deck development



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Where Are We?



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Credits and Disclaimer

- **This slide deck was authored by:**
 - Veronika Dolar, SUNY Old Westbury
- **Disclaimer**
 - NEED presentations are designed to be nonpartisan.
 - It is, however, inevitable that the presenter will be asked for and will provide their own views.
 - Such views are those of the presenter and not necessarily those of the National Economic Education Delegation (NEED).



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Outline

- What is Health(care) Economics?
- Taking the Pulse of the Health Economy
- Health Care Systems and Institutions
- Health Insurance and Reform
- Pharmaceuticals – Big Pharma



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What is Health(care) Economics?

- Health Economics is a special field of (applied) microeconomics that focuses on the health care industry.
- Examples of other subfields of microeconomics are labor economics, industrial organization, economics of education, public economics, and urban economics.



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Health Economics is part of Microeconomics

- Although health economics is part of “micro-” economics, it is actually very big:
- In 2019, U.S. national health expenditure was 17.8% of GDP, which is equivalent to around \$3,427 billions.
- For comparison, the entire GDP of Germany in 2019 was \$3,845 billions (4th largest economy), GDP of UK was \$2,827 billions (6th largest economy), and \$2,715 billions in France (7th largest economy).



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What is Health Economics?

- Health economics studies health care resources markets and health insurance.
- Healthcare is the biggest industry and the largest employer in the US.

What is a Market?

- A **market** is a group of buyers and sellers of a particular product in the area or region under consideration. The area may be the earth, or countries, regions, states, or cities.
- The concept of a market is any structure that allows buyers and sellers to exchange any type of goods, services and information.
- Markets can be physical and non-physical.
- There are **many different types of markets** and depending on the type a different rules should be set up for eliciting the best results for the **society**.

Markets studied in health economics

- **Markets for:**

- Physicians
- Nurses
- Hospital facilities
- Nursing homes
- Pharmaceuticals
- Medical supplies (such as diagnostic and therapeutic equipment)
- **Health Insurance**



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Market Economies

- In market economies, prices adjust to balance supply and demand.
- These equilibrium prices are the signals that guide economic decisions and thereby allocate scarce resources.
- The invisible hand works through the price system:
 - The interaction of buyers and sellers determines prices.
 - Each price reflects the good's value to buyers and the cost of producing the good.
 - Prices guide self-interested households and firms to make decisions that, in many cases, maximize society's economic well-being.



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When does “free market does it better” hold?

Two very important assumptions need for this to hold are:

1. Perfectly Competitive Market
2. No Market Failure

What is a Perfectly Competitive Market?

- Many (numerous) buyers – price takers
- Many (numerous) sellers – price takers
- Identical (homogeneous) product
- Free entry and exit
- Both buyers and sellers have perfect information about the price, utility, quality, and production methods of products.

What is Market Failure?

Market Failure is a situation in which the allocation of goods and services by a free market is not efficient, often it leads to a net social welfare loss.

Examples of Market Failure:


- Externalities
- Public Goods
- Asymmetric Information



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What types of markets are there?




More Competition ←

Less Competition

Perfect Competition Monopolistic Competition Oligopoly Duopoly Monopoly Monopsony

Less Concentration → More Concentration



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Hospital Monopolization

- Market consolidation among and between health systems, hospitals, medical groups, and health insurers has surged over the last decade.
- Over an 18-month period between July 2016 and January 2018, hospitals acquired 8,000 more medical practices, and 14,000 more physicians left independent practice to become hospital employees, according to an analysis.

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Hospital Monopolization: California

- A large Northern California hospital system used its size and influence to achieve a "domination of the market."
- Sutter Health grew into a behemoth hospital system and then, like a classic monopoly, used its dominance in Northern California to raise hospital prices.
- Sutter used its windfall from excessive pricing to acquire more entities and grew into a conglomerate of 24 hospitals, 12,000 doctors and several cancer, cardiac and other specialty centers.
- In some counties, Sutter was the sole hospital for a thousand square miles.

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Hospital Monopolization: Florida

- Consolidation among health insurance companies drove a 12% rise in profits for health maintenance organization insurance plans, or HMOs, and South Florida hospitals reported 8% average profit margins, their highest in recent years, according to the Florida Health Market Review. (January 2020)
- Hospital systems grew through new construction and acquisitions.
- The Tennessee-based **Hospital Corporation of America, or HCA**, one of the nation's largest for-profit systems, and **AdventHealth**, a nonprofit healthcare system, led the charge in Florida, acquiring hospitals from Community Health Systems, which was once the seventh-largest system in the state.

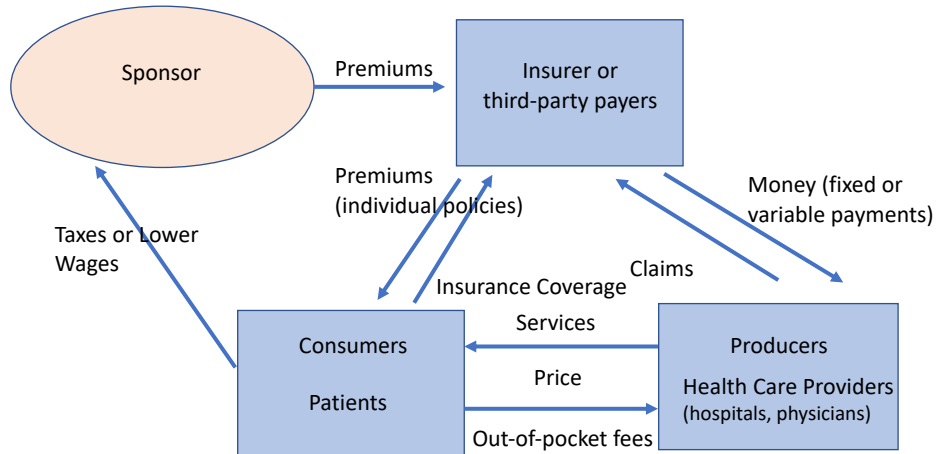


Hospital Monopolization: Florida

- South Florida hospitals recorded combined profits of nearly \$1.3 billion in 2018 and have posted combined profits above \$1 billion for four of the past five years.
- HCA hospitals were the most profitable, with a net income of \$363.6 million, according to the report.
- Baptist Health, a nonprofit and the largest system in the Miami area, had a net income of \$142.8 million and Memorial Healthcare System in Broward County, a nonprofit hospital network, had a net income of \$158.6 million.



Health Care Markets are Different



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Is there something special about Health Care Markets?

- Market Structure
- Type of products and services
- Principal-Agent Problem
- Asymmetric Information
- Moral Hazard



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Pulse of the Health Economy

- **Health economy involves activities related to population health:**
 - Production and consumption of goods and services
 - Distribution of those goods to consumers
- **Performance indicators of medical care**
 - Costs
 - Quality
 - Access



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Tradeoffs

Tradeoffs take place among the three legs:


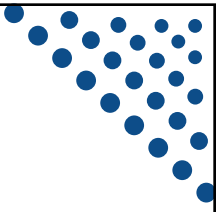
- By increasing quality health care this leads to higher health care costs, which means that some individuals might not be able to afford it and the access may be more limited.
- By increasing access, the costs and/or quality may suffer.
- By decreasing costs, access and/or quality may suffer.



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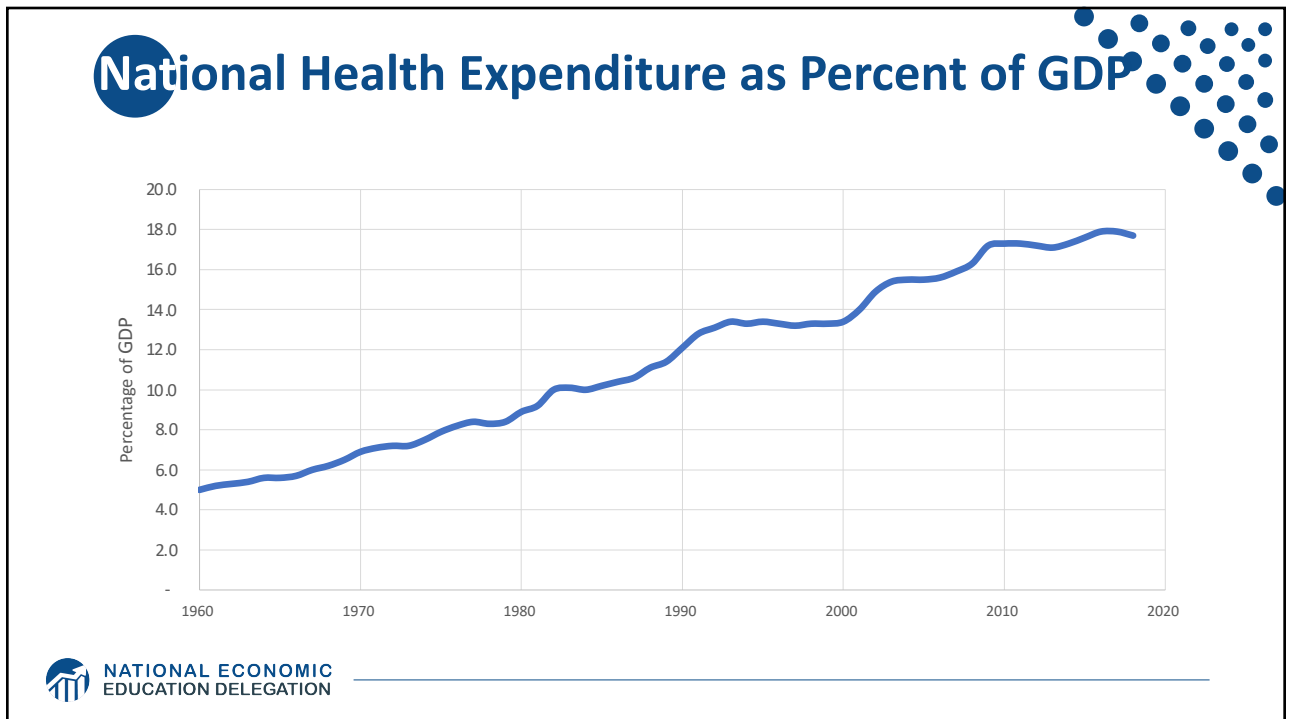
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Costs

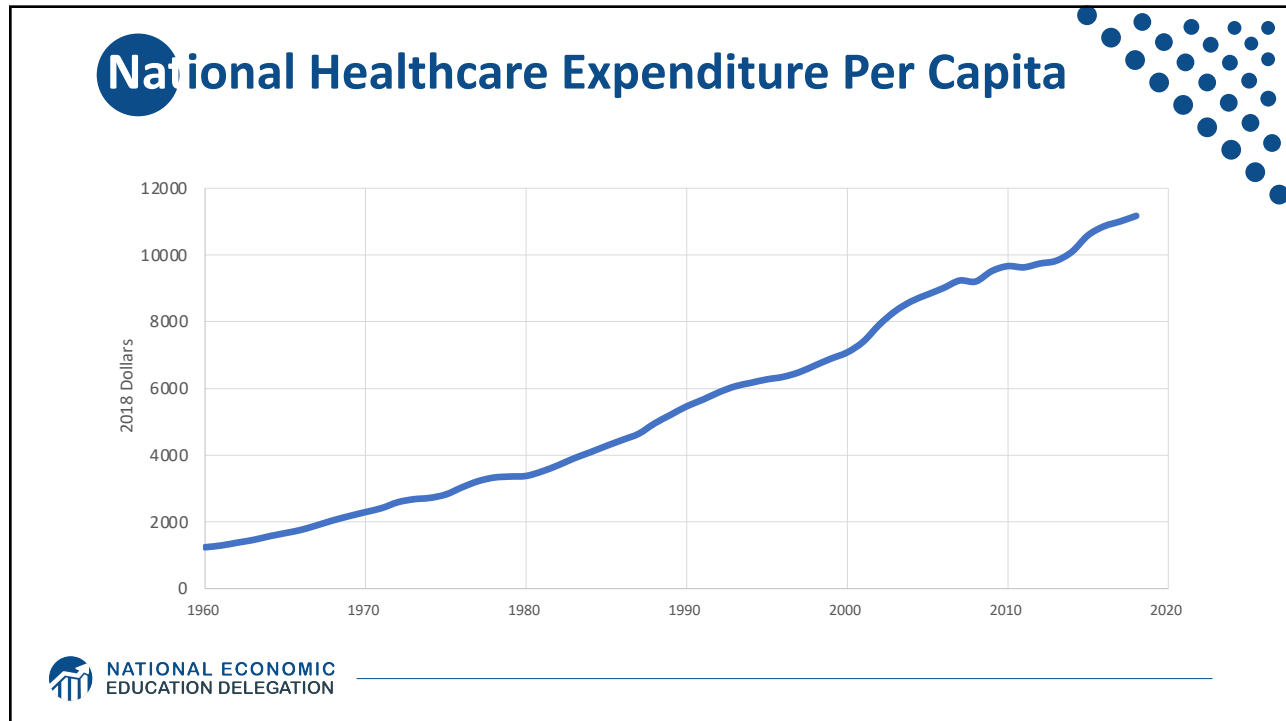


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Amount of Medical Care Spending

- **Costs of health care are high and continually rising**
 - U. S. spent 17.7% of GDP or \$11,172 per person in 2018
 - Compared to 5.0% of GDP and \$1,239 per person in 1960
- **Trade-offs may be involved**
 - High health care costs implies lower amounts of other goods produced and consumed.

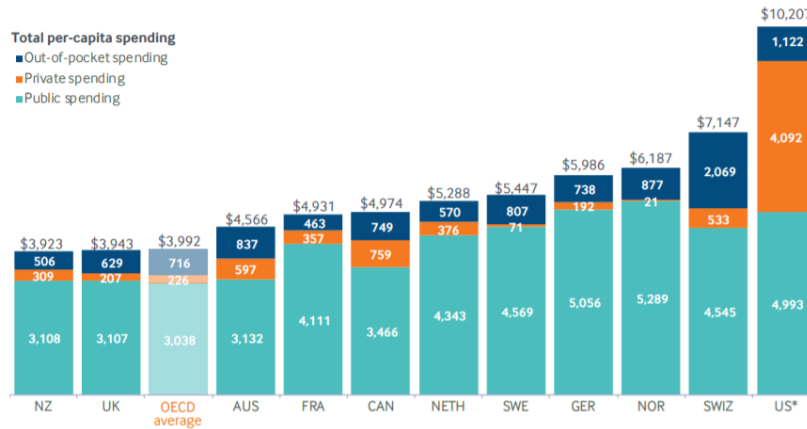
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International Per Capita Healthcare Spending

Dollars (US\$), adjusted for differences in cost of living

Total per-capita spending
 ■ Out-of-pocket spending
 ■ Private spending
 ■ Public spending



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Source: Roosa Tikkanen and Melinda K. Abrams, *U.S. Health Care from a Global Perspective, 2019: Higher Spending, Worse Outcomes* (Commonwealth Fund, Jan. 2020).

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International Comparison

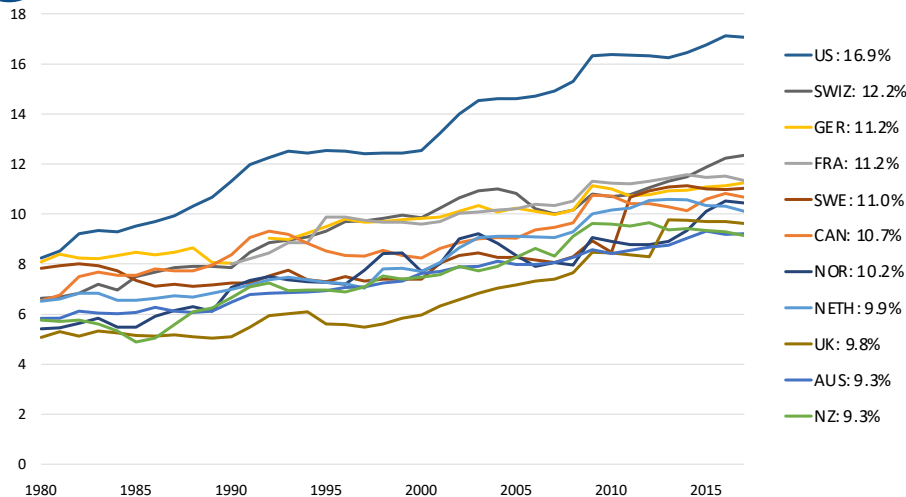
- Per capita health spending in the U.S. exceeded \$10,000, more than two times higher than in Australia, France, Canada, New Zealand, and the U.K.
- At \$4,092 per capita, U.S. private spending is more than five times higher than Canada, the second highest spender.
- In Sweden and Norway, private spending made up less than \$100 per capita. As a share of total spending, private spending is much larger in the U.S. (40%) than in any other country (0.3%–15%).



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Health Care Spending as % of GDP, 1980–2018



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Source: Roosa Tikkanen and Melinda K. Abrams, *U.S. Health Care from a Global Perspective, 2019: Higher Spending, Worse Outcomes* (Commonwealth Fund, Jan. 2020).

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International Comparison

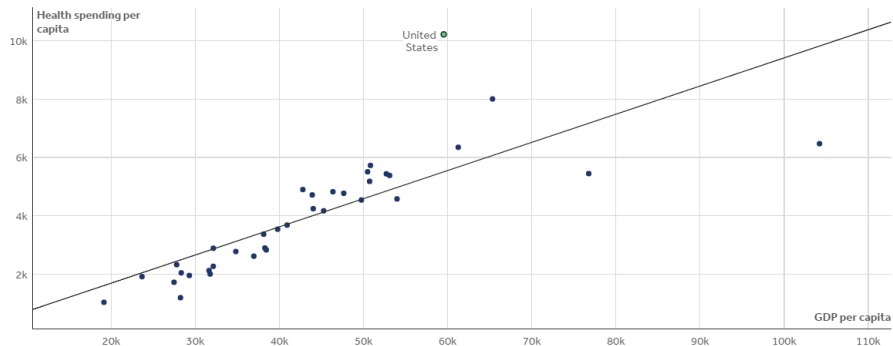
- In 1960, the U.S. was spending a higher percent of GDP on health care compared to other OECD countries, but was still part of the pack.
- In 2018, the U.S. spent 16.9 percent of gross domestic product (GDP) on health care, nearly twice as much as the average OECD country.
- The second-highest ranking country, Switzerland, spent 12.2 percent.
- At the other end of the spectrum, New Zealand and Australia devote only 9.3 percent, approximately half as much as the U.S. does.



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GDP per capita and health consumption spending per capita, 2017



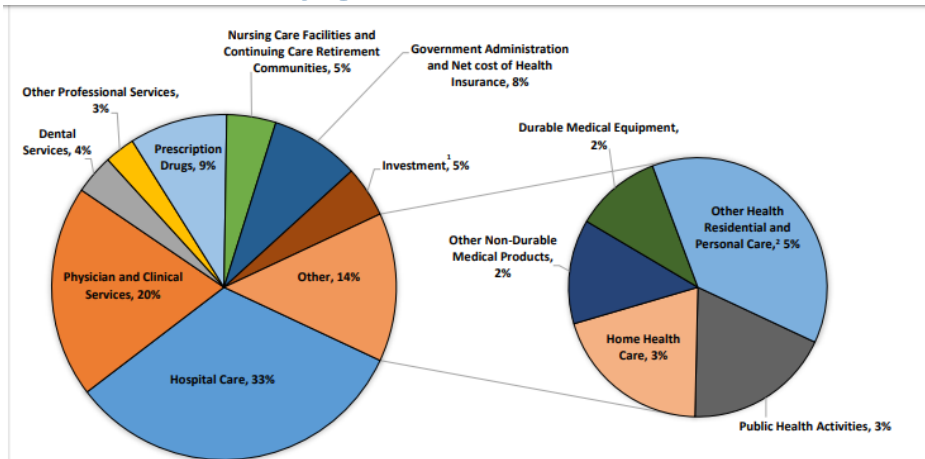
Notes: U.S. value obtained from National Health Expenditure data. Health consumption does not include investments in structures, equipment, or research.

Source: KFF analysis of OECD and National Health Expenditure (NHE) data • Get the data • PNG

Peterson KFF
Health System Tracker

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Where the money goes?



¹ Includes Noncommercial Research and Structures and Equipment.

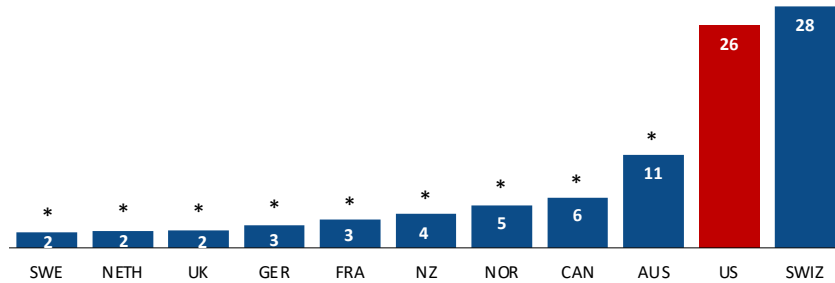
² Includes expenditures for residential care facilities, ambulance providers, medical care delivered in non-traditional settings (such as community centers, senior citizens centers, schools, and military field stations), and expenditures for Home and Community Waiver programs under Medicaid. Note: Sum of pieces may not equal 100% due to rounding.

SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

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Out-of-Pocket Costs

Percent of women ages 18–64 with out-of-pocket costs of \$2,000 or more



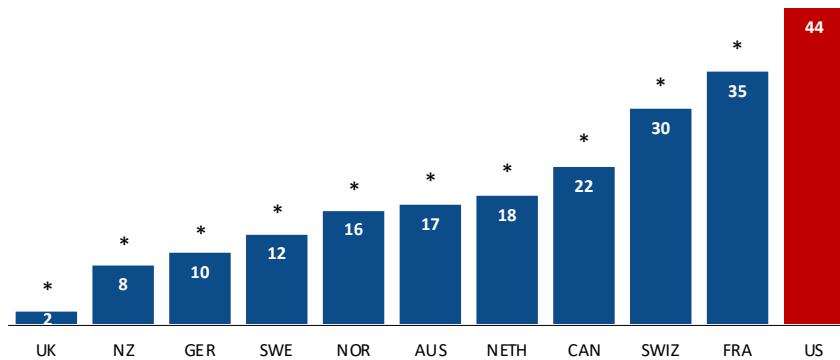
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Source: Munira Z. Gunja et al., *What Is the Status of Women's Health and Health Care in the U.S. Compared to Ten Other Countries?* (Commonwealth Fund, Dec. 2018).

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Medical Bill Problems

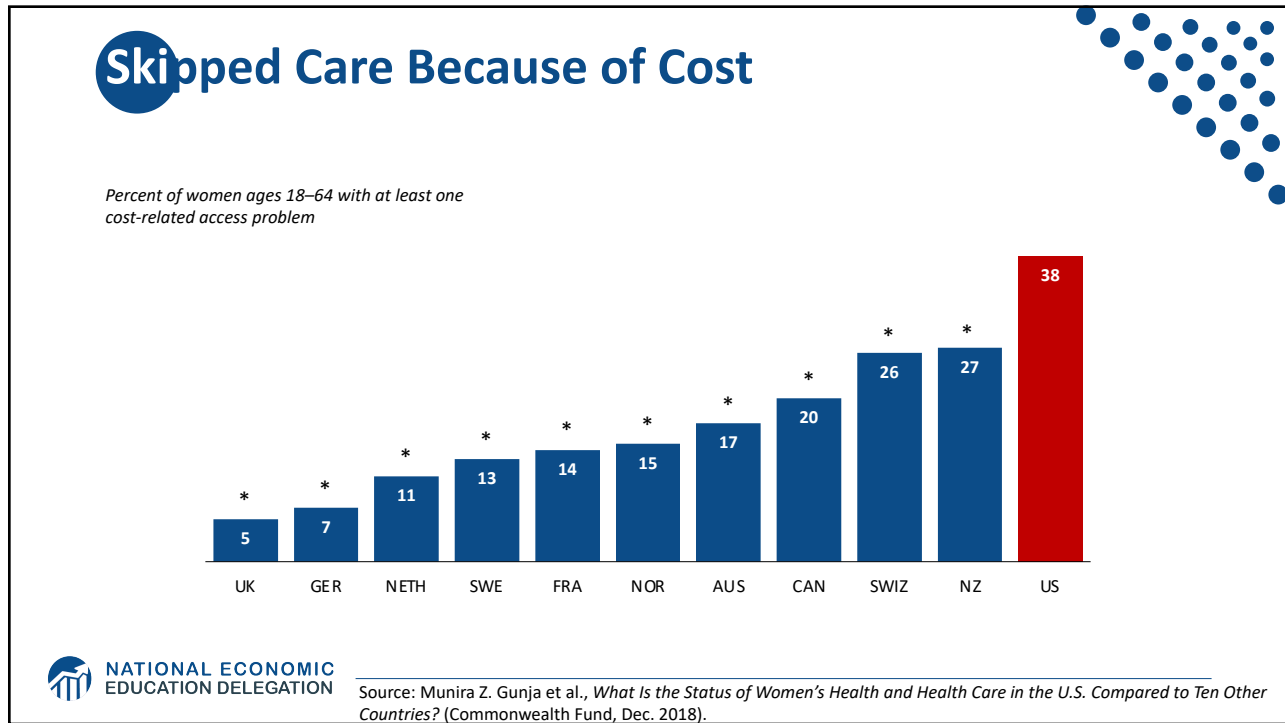
Percent of women ages 18–64 with at least one medical bill problem



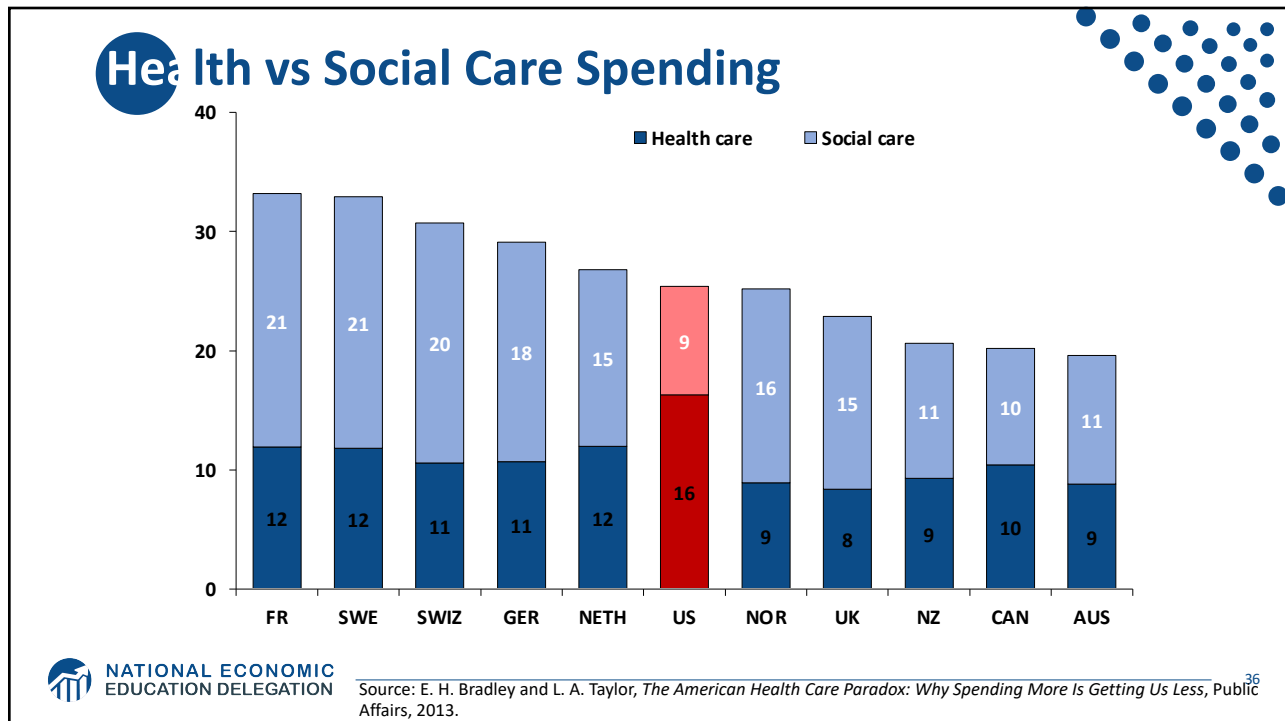
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Source: Munira Z. Gunja et al., *What Is the Status of Women's Health and Health Care in the U.S. Compared to Ten Other Countries?* (Commonwealth Fund, Dec. 2018).

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Health vs Social Care Spending

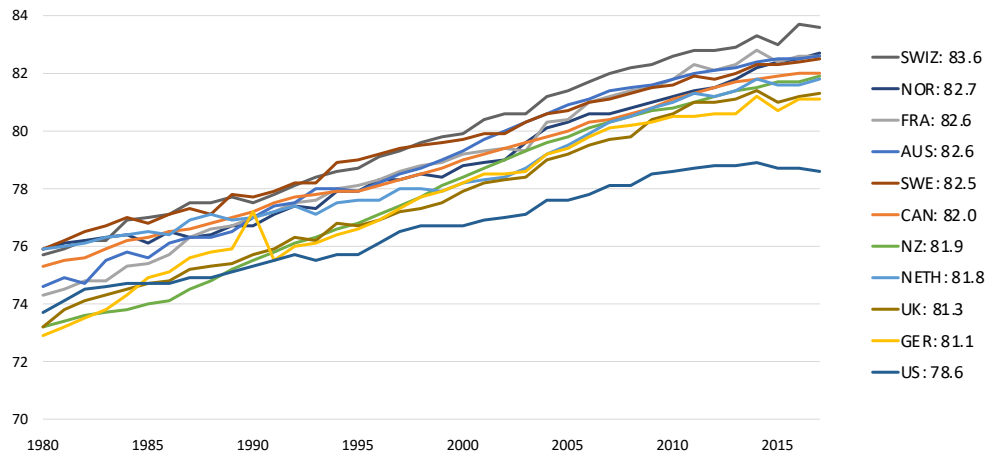
- A 2013 study by Bradley and Taylor found that the U.S. spent the least on social services—such as retirement and disability benefits, employment programs, and supportive housing—among the countries studied in this report, at just 9 percent of GDP.
- From 2000 to 2011, for every dollar the US spent on health care, the country spent another \$1.00 on social services, whereas across the OECD, for every dollar spent on health care, countries spend an additional \$2.50 on social services

Why this increase in healthcare spending?

- The share of the economy spent on health care has been steadily increasing for all countries because
 - health spending growth has outpaced economic growth.
- Also because of
 - advances in medical technologies
 - increased demand for services
 - rising prices in the health sector – why?

Quality

Life Expectancy



Source: Roosa Tikkanen and Melinda K. Abrams, U.S. Health Care from a Global Perspective, 2019: Higher Spending, Worse Outcomes (Commonwealth Fund, Jan. 2020).

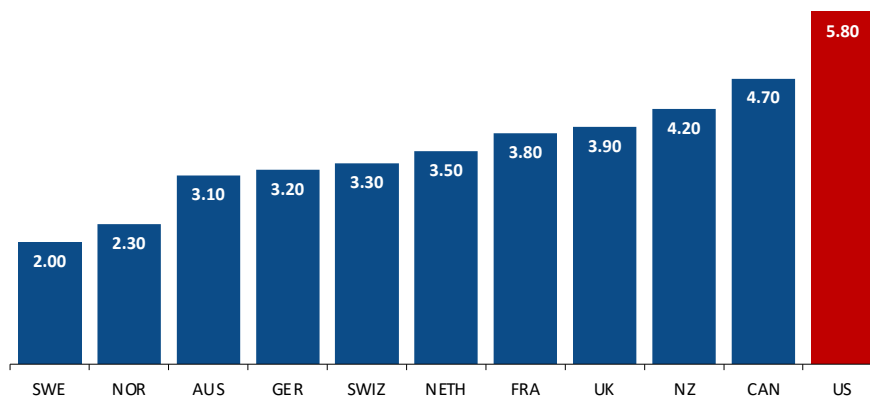
Life Expectancy by Race

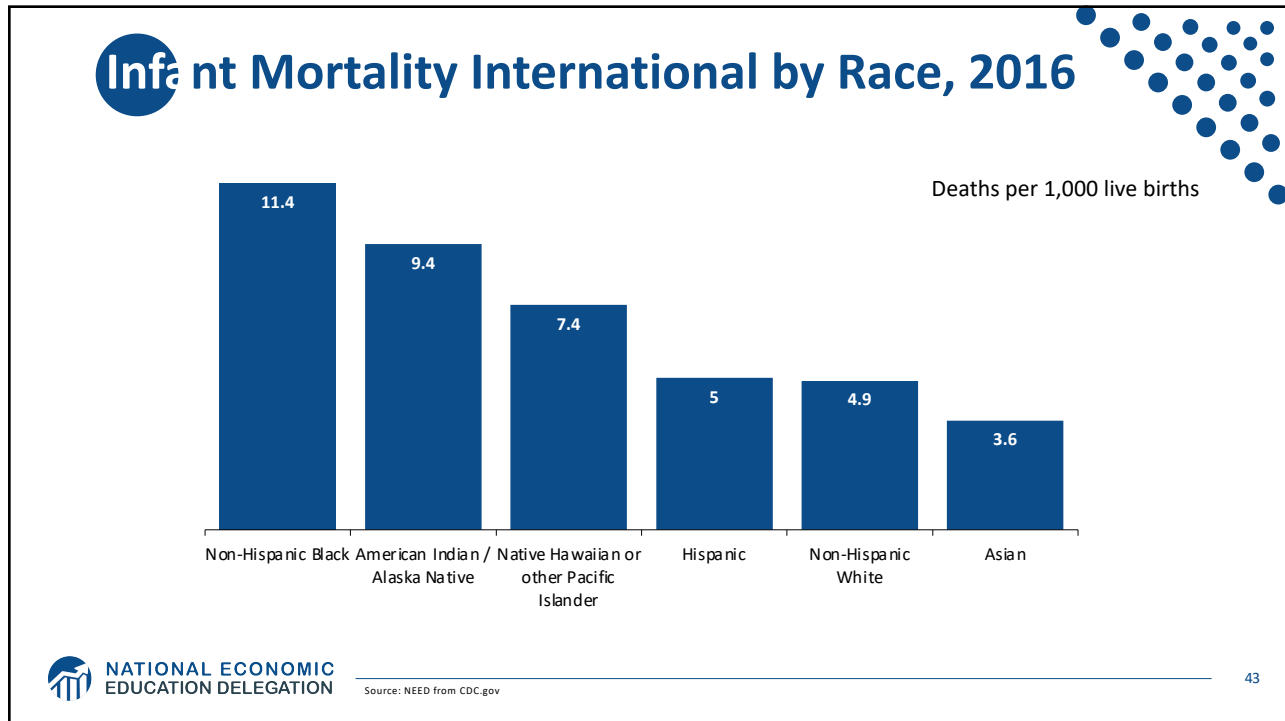
All Races	78.6
White	78.8
Black	75.3
Hispanic	81.8
Non-Hispanic white	78.5
Non-Hispanic black	74.9

Life expectancy at birth 2017

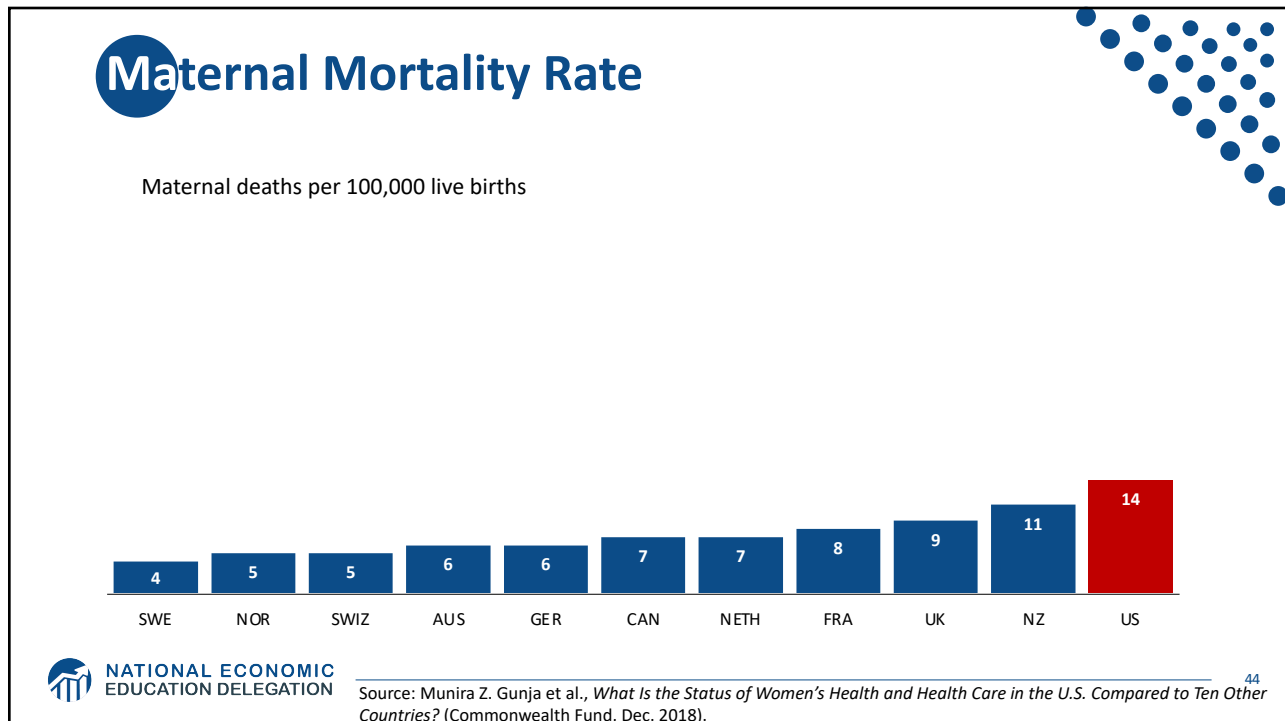
Infant Mortality International Comparison

Deaths per 1,000 live births





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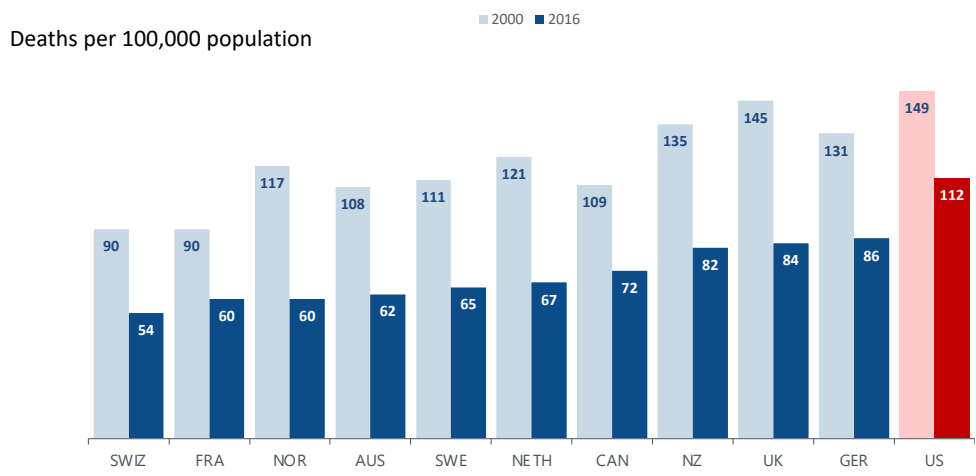


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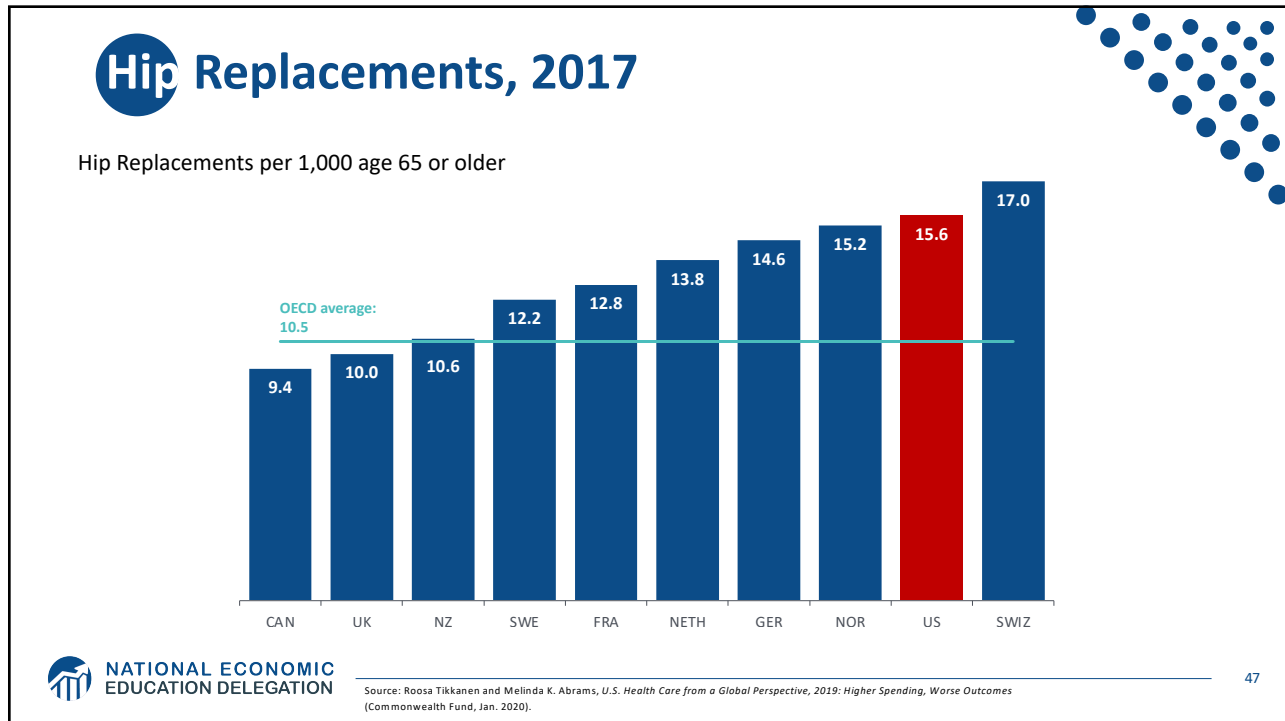
Maternal Mortality Rate

- American Indian/Alaska Native and Black women are 2 to 3 times as likely to die from a pregnancy-related cause than white women.

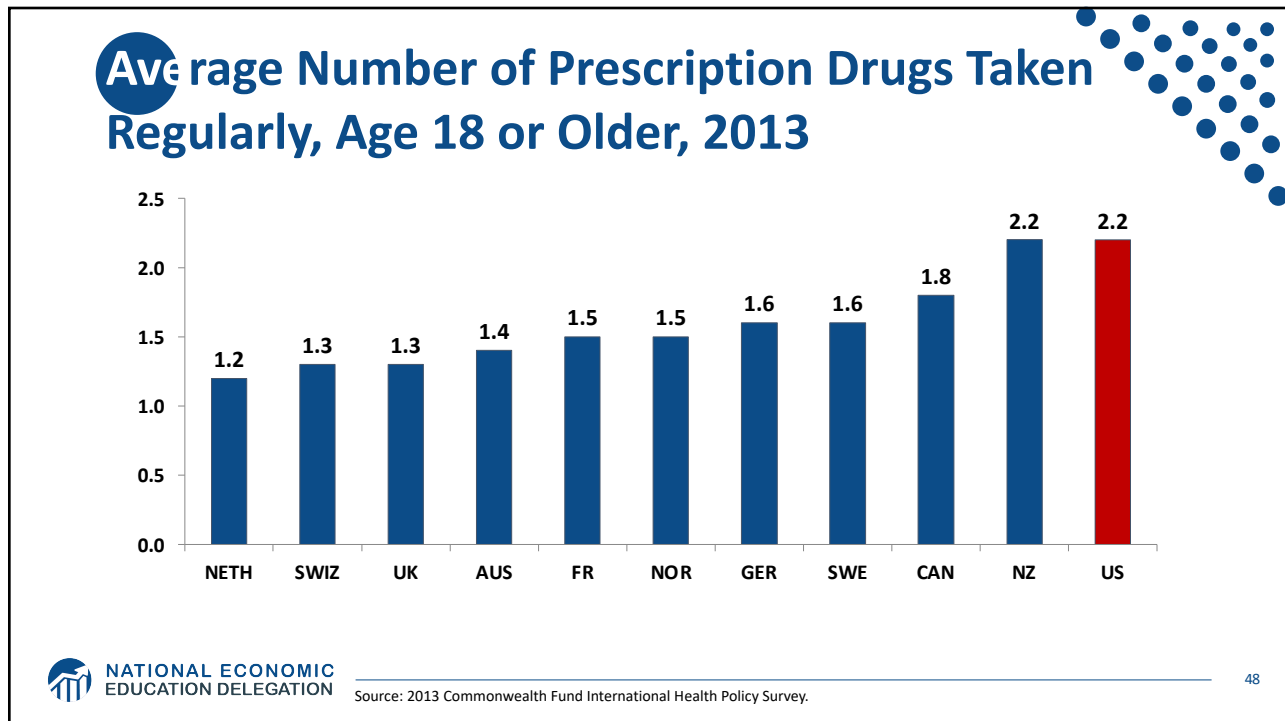
Avoidable Deaths



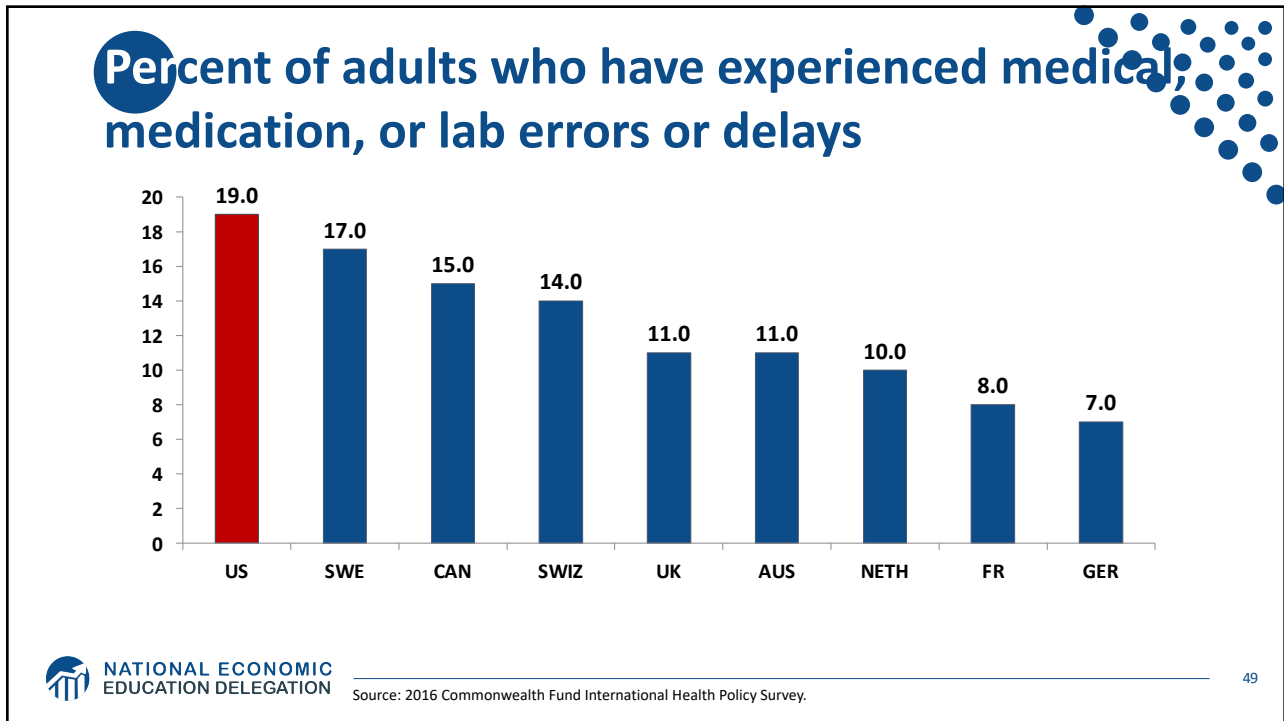
Source: Roosa Tikkanen and Melinda K. Abrams, *U.S. Health Care from a Global Perspective, 2019: Higher Spending, Worse Outcomes* (Commonwealth Fund, Jan. 2020).



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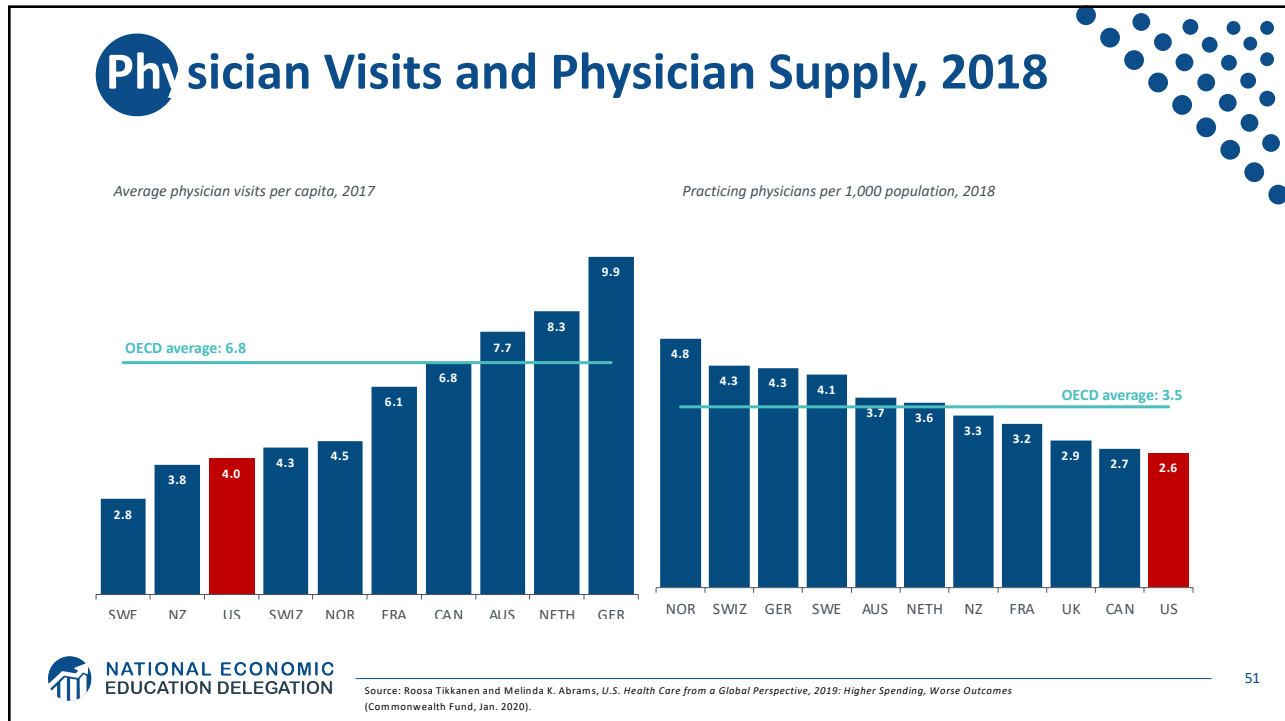


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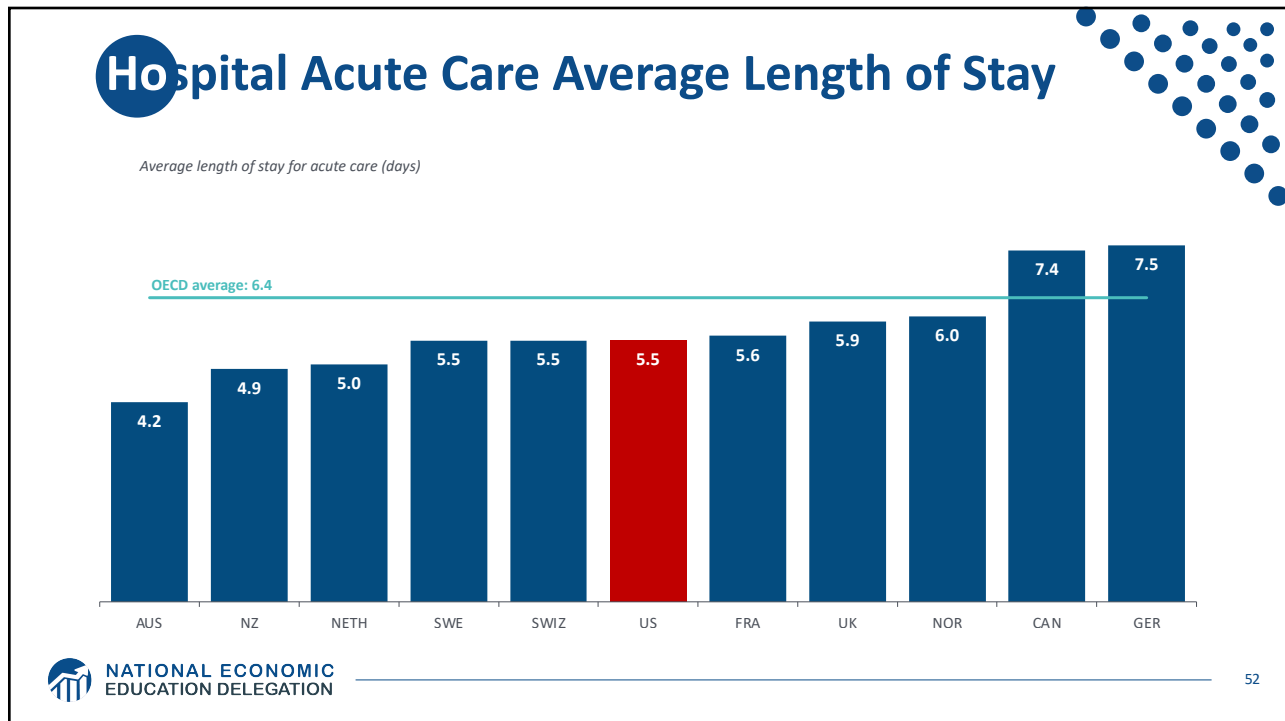
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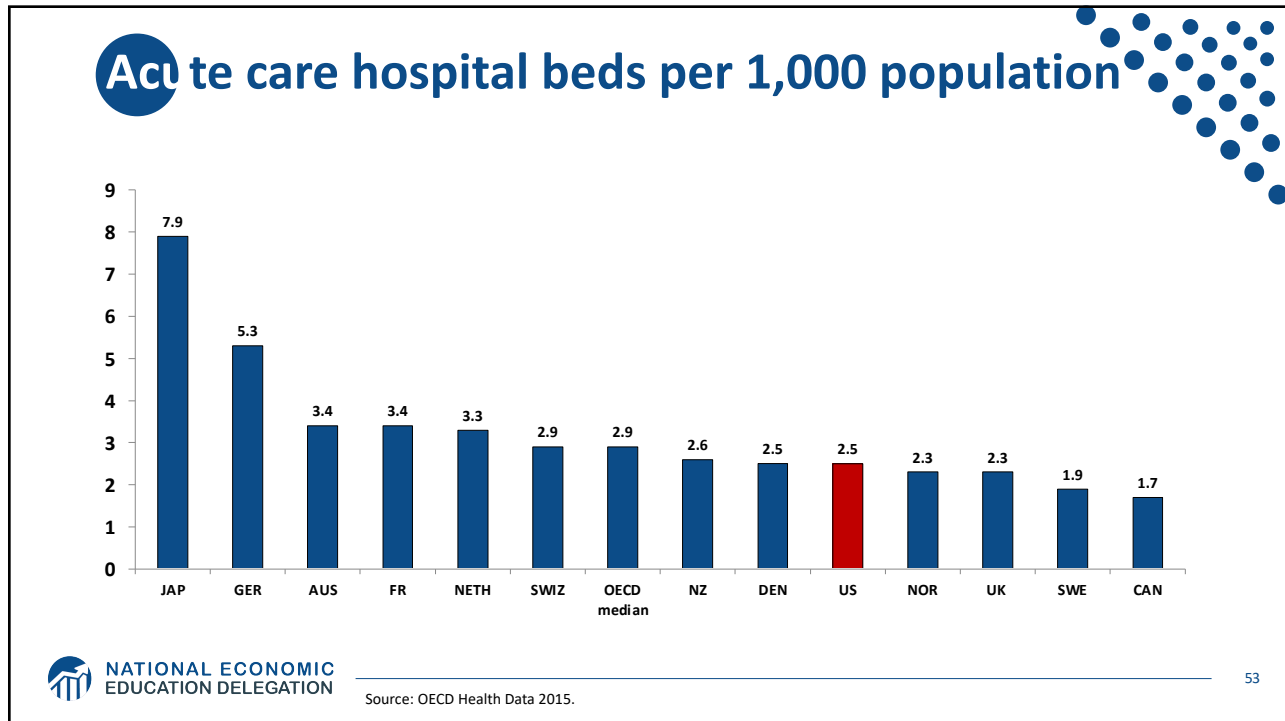
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Health Care Systems and Institutions

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Health System Classification

- **Developed countries of the world have each taken a different approach for their health care delivery systems**
- **5 basic models:**
 - National health insurance (Canada)
 - Bismarck (France, Germany, Japan, Switzerland)
 - Beveridge – socialized medicine (United Kingdom)
 - Out of pocket model – you pay yourself
 - Mixed (United States)



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US Health Care System

- **Medicare – National Health Insurance**
- **Military Veteran Care – Beveridge model (socialized medicine)**
- **Employer-sponsored insurance – Bismarck model**
- **Individual market health plans - Bismarck model**
- **Uninsured - Out of pocket model**



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Health Insurance and Reform



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Definitions

- **Universal coverage** refers to health care systems in which all individuals have insurance coverage.
- Generally, this coverage includes access to all needed services and benefits while protecting individuals from excessive financial hardships.



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Single Payer

- **Single-payer** refers to financing a health care system by making one entity solely and exclusively responsible for paying for medical goods and services.
- It is only the financing component that is necessarily socialized.
 - The money for the payment can be either collected by
 - Taxes collected by the government
 - Premiums collected by National or Public Health Insurance



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Socialize Medicine

- **Socialized medicine:** this model actually takes the single-payer system one step further.
- In a socialized medicine system, the government not only pays for health care but operates the hospitals and employs the medical staff.
- This has NOT been proposed by any presidential hopeful and is not part of the current debate in the US.



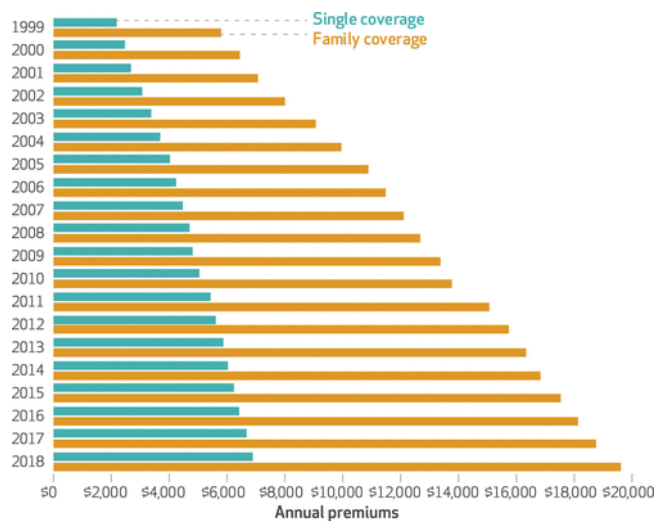
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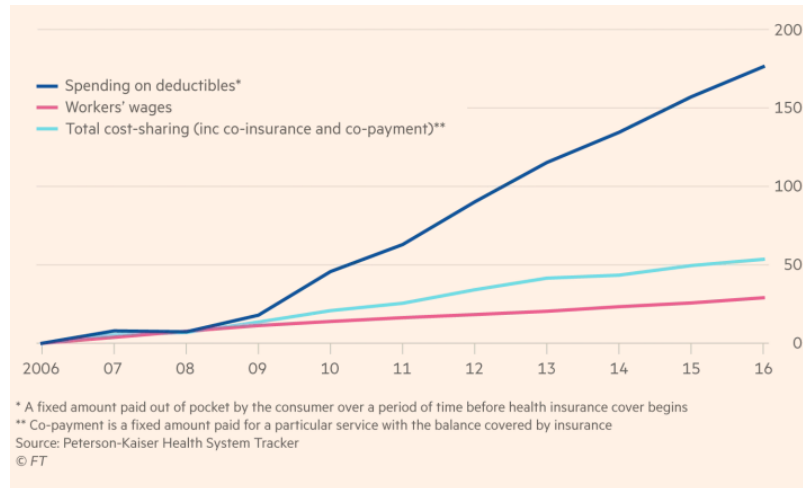
Third-Party Payer

- A **third-party payer** is an entity that pays medical claims on behalf of the insured. Examples of third-party payers include government agencies, insurance companies, health maintenance organizations (HMOs), and employers.
 - Employer-sponsored health plans
 - Individual market health plans
 - National health insurance

Average annual premiums for single and family coverage, 1999–2018



Spending on Deductibles



Reason for Higher Health Insurance Rates

- Advances in medical technologies
- Rising prices in the health sector (Why?)
- Increased demand for services
- Concentration of insurance companies!

Monopolization of Health Insurance Market

- As of 2011, there were close to 100 insurers in Switzerland competing for consumer health care dollars, forcing firms to compete by setting prices to just cover costs.
- In the United States, markets are state specific and consumers may choose from plans available in the state in which they reside.
- In 2014, of the 50 states and the District of Columbia, 11 had only 1 or 2 insurers, 21 had 3 or 4, and only 19 states had 5 or more.
- As of July 2019, the number of states with only 1 or 2 insurers had increased from 11 to 20, indicating a growing divide between ACA exchanges and competitive markets.



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Big Pharma



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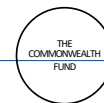
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Drug Prices for 30 Most Commonly Prescribed Brand-Name and Generic Drugs, 2006–07
 US is set at 1.00

	AUS	CAN	FR	GER	NETH	NZ	SWITZ	UK	US
Brand-name drugs	0.40	0.64	0.32	0.43	0.39	0.33	0.51	0.46	1.00
Generic drugs	2.57	1.78	2.85	3.99	1.96	0.90	3.11	1.75	1.00



Source: IMS Health; analysis by Gerard Anderson, Johns Hopkins University.

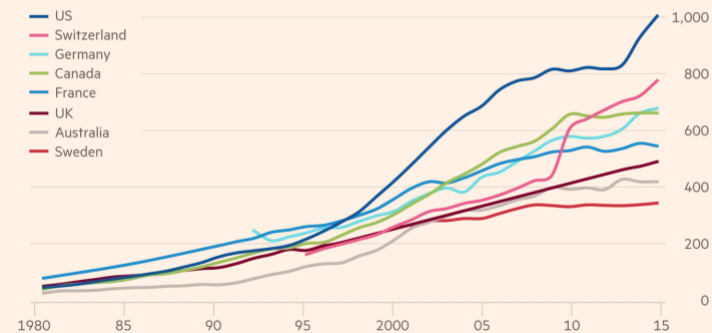


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Drug Prices

US prescription drug spending per capita has increased faster than in other countries*

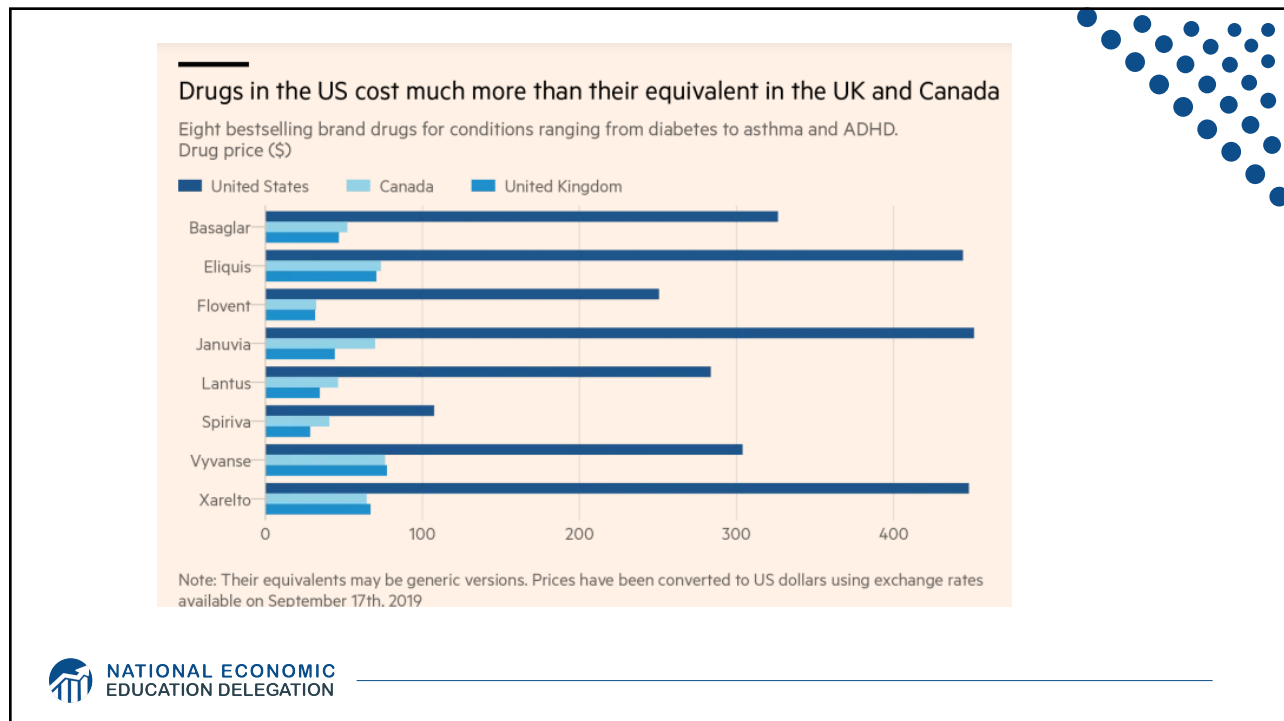
Selected countries (\$)



* Figures relate to prescription drugs, not hospital spending
 Source: The Commonwealth Fund



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Price Hikes

- Turing Pharmaceuticals' 5,555% price increase of Daraprim® in 2015 and Mylan's 500% increase of EpiPen®...
- More than 3,400 drugs have boosted their prices in the first six months of 2019, an increase of 17% in the number of drug hikes from a year earlier.
- The average price hike is 10.5%, or 5 times the rate of inflation.
- About 41 drugs have boosted their prices by more than 100% in 2019.
- Over the course of a decade, the net cost of prescription drugs in the United States rose more than three times faster than the rate of inflation.

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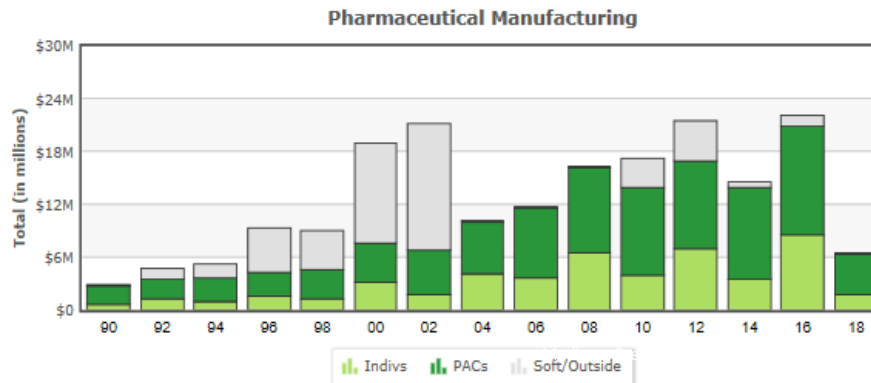
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Reasons for higher drug prices

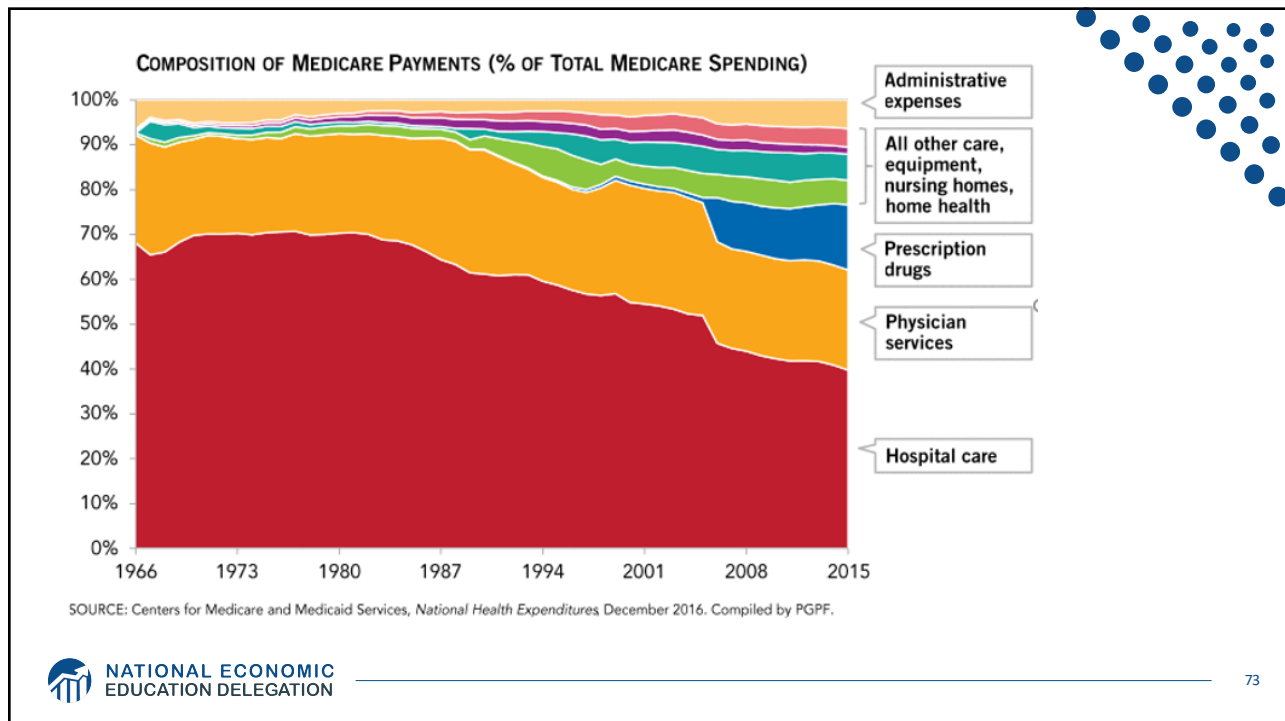
- The **Medicare Prescription Drug, Improvement, and Modernization Act**, also called the **Medicare Modernization Act** or MMA, is a federal **law** of the United States, enacted in 2003.
- Concentration of pharmaceutical companies and increase in prices.

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Contribution Trends, 1990-2018



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Impact of Medicare Modernization Act

- Medicare Part D, by law, cannot negotiate drug prices like other governments do.
- The study found that in 2017, Medicare spent nearly \$8 billion on insulin. The researchers said that if Medicare were allowed to negotiate drug prices like the U.S. Department of Veterans Affairs (VA) can, Medicare could save about \$4.4 billion *just* on insulin.

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Concentration in Pharmaceutical Companies

- The number of mergers and acquisitions involving one of the top 25 firms more than doubled from 29 in 2006 to 61 in 2015, in part due to lax merger review.
- Between 1995 and 2015, 60 pharmaceutical companies merged into 10.
- In 2010, R&D returned 10.1%. In nearly every year since, that figure has dropped. In 2017, the return was 3.7%, and in 2018, 1.9%.



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Summary

- US HealthCare system is not performing well (very expensive and low quality and access)
- One of the main reasons for very high costs is the monopolization of healthcare markets (hospitals, health insurance, big pharma, etc.)
- In addition, the Medicare Modernization Act of 2003 by law prevents government to negotiate drug prices.
- Few simple solutions could drastically decrease the costs:
 - Enforcement of antitrust laws in this sector
 - Introduction of a public option in health insurance market
 - Ability for the US government to negotiate drug prices like most every other nation
- Universal health insurance would increase the access and potentially also reduce the costs



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Thank you!

Any Questions?

www.NEEDelegation.org
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- Autonomous Vehicles
- US Social Policy

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