



# Health(care) Economics

OLLI – UC, Davis  
December 7, 2022

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*NEED*



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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: 54 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: 652+ 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: 49 Ph.D. Economists

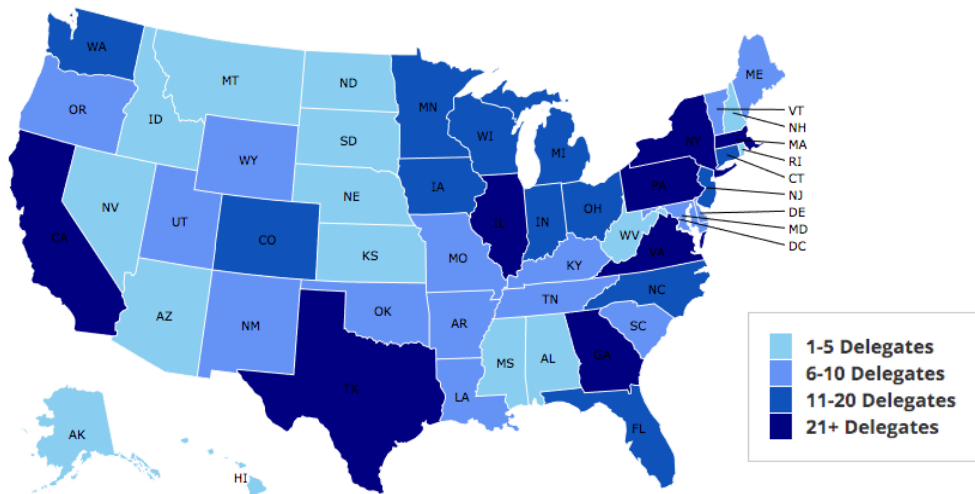
- Aid in slide deck development



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# Where Are We?



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## Available NEED Topics Include:

- US Economy
- Healthcare Economics
- Climate Change
- Economic Inequality
- Economic Mobility
- Trade and Globalization
- Minimum Wages
- Immigration Economics
- Housing Policy
- Federal Budgets
- Federal Debt
- Black-White Wealth Gap
- Autonomous Vehicles
- US Social Policy



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  - Veronika Dolar, SUNY Old Westbury
  - Jon Haveman, NEED
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## Outline

- What is Health(care) Economics?
- Health Insurance and Outcomes
- Health Care Systems and Institutions



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## What is Health(care) Economics?

- Health Economics is a field of **MICRO**economics that focuses on the health care industry.
- Examples of other subfields of microeconomics include:
  - 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 expenditures were **17.7% of GDP**, which is equivalent to around **\$3.8 trillion**.
  - U.S. Healthcare is the 5<sup>th</sup> largest economy in the world.
- For comparison, GDP in each country in 2019:
  - Germany:       \$3,845 trillion (4<sup>th</sup> largest economy)
  - UK:               \$2,827 trillion (6<sup>th</sup> largest economy)
  - France :         \$2,715 trillion (7<sup>th</sup> largest economy)



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## 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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## Why Are We Talking About the Market for Health Insurance?



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## The Three Legs of the Healthcare Stool

- The market for Health Insurance is where they all come together.
  - Access
  - Quality
  - Cost
- We will discuss metrics of performance for each.

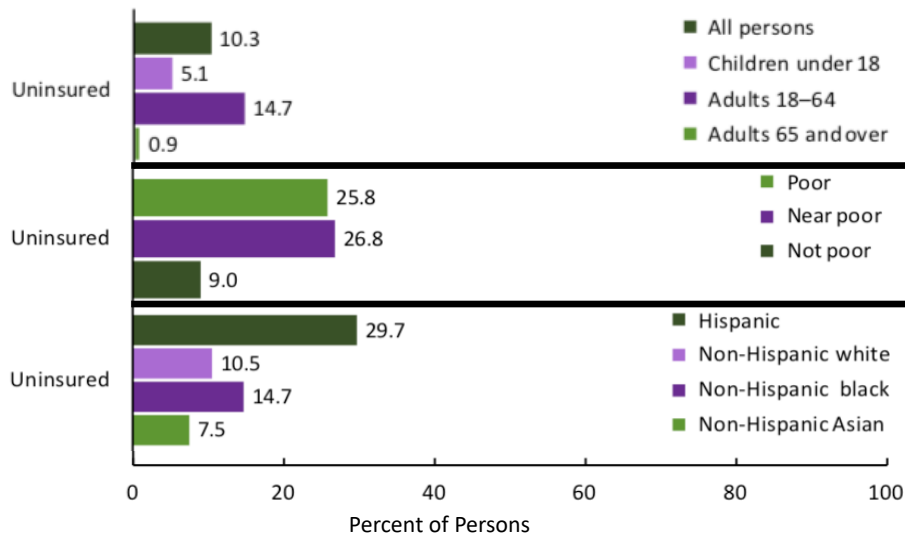


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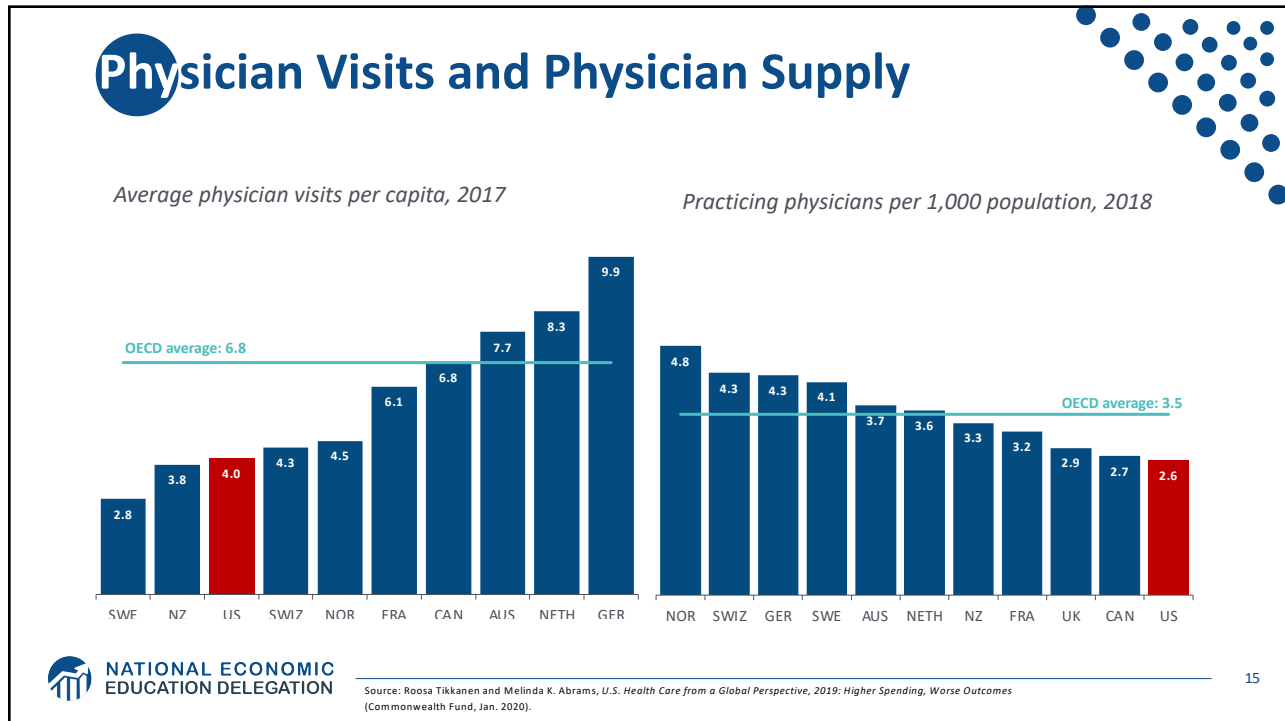
# Access

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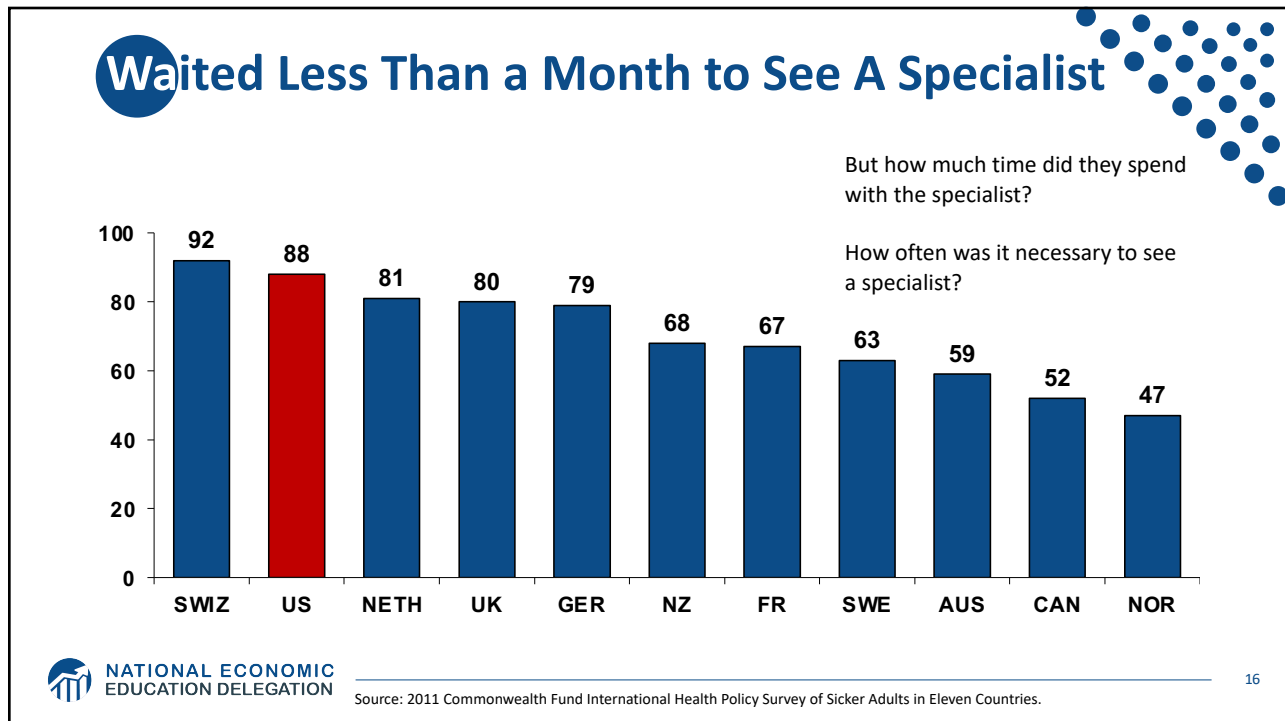
## Health Insurance Coverage, 2019 - 92%



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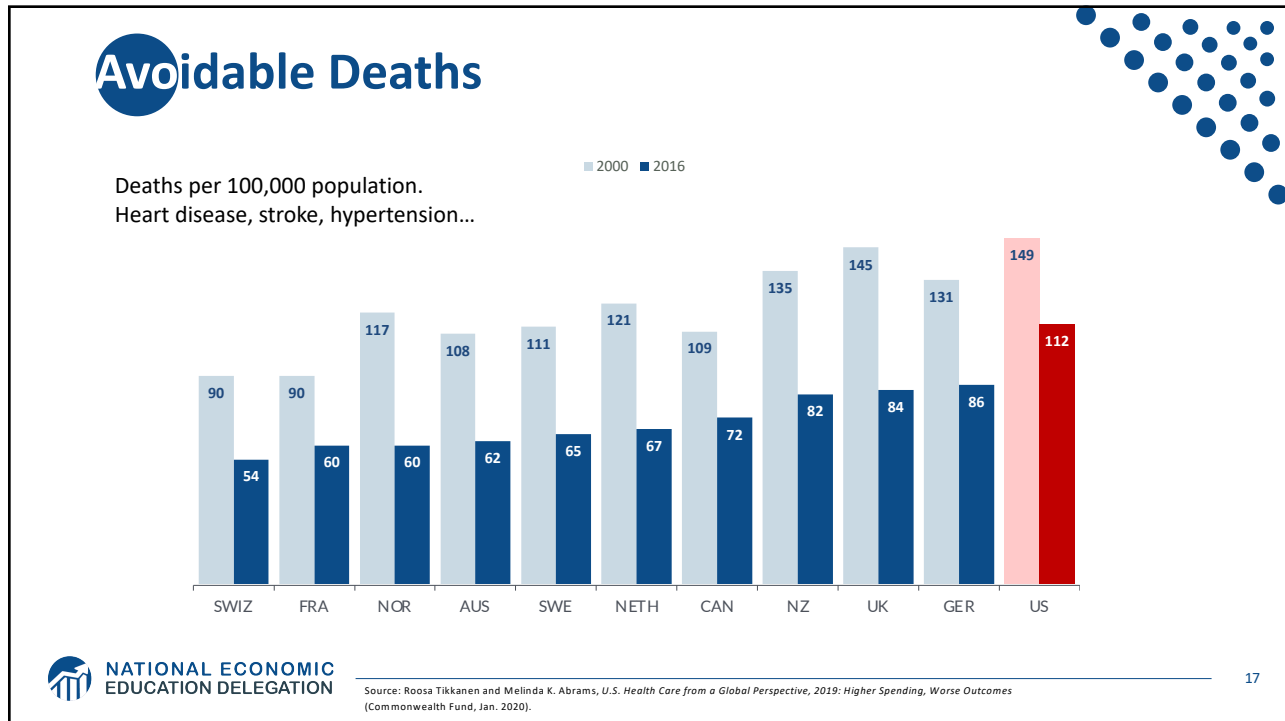


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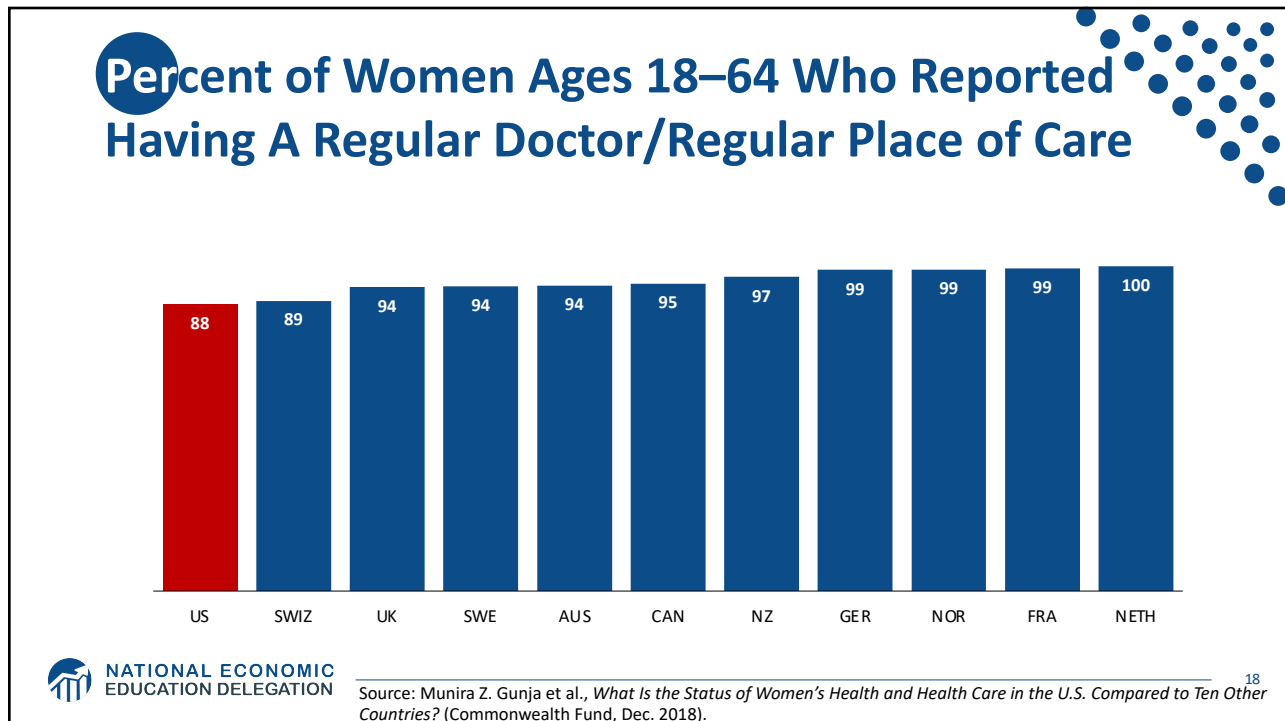


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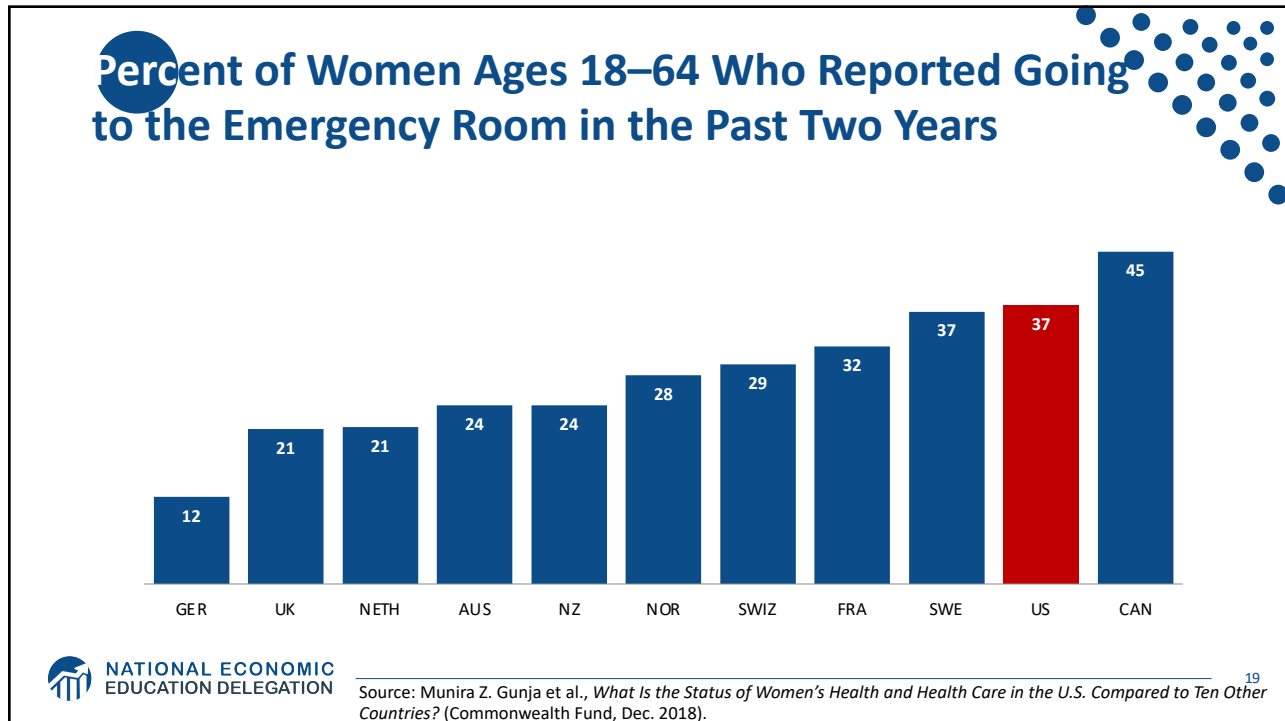




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### Access Notes

- Insurance coverage in the U.S. is not universal.
- Supply of medical personnel and equipment may be lower than elsewhere.
- Avoidable (amenable) deaths are higher, perhaps indicating less access to care.
- Emergency room use is higher in the U.S. than elsewhere.
- Specialized medicine is more accessible.

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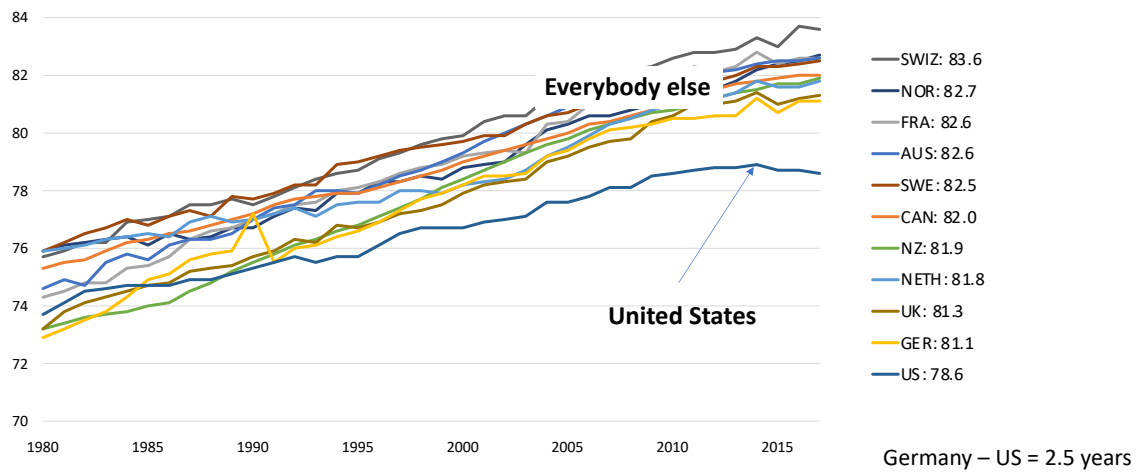
# Quality



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## Life Expectancy: How Does the US Compare?



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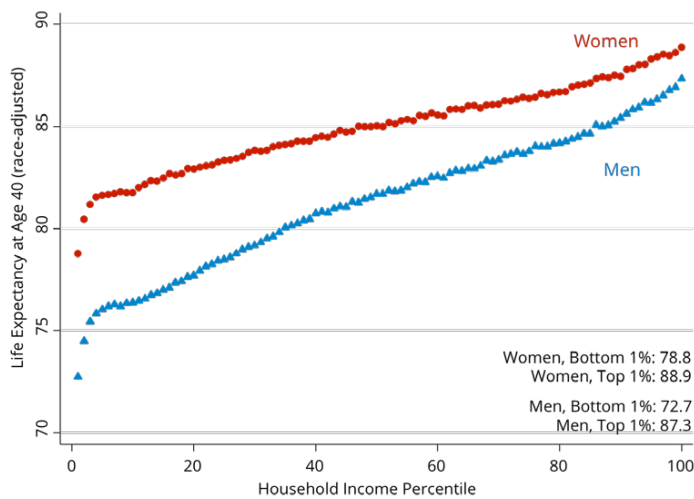
Source: Roosa Tikkanen and Melinda K. Abrams, U.S. Health Care from a Global Perspective, 2019: Higher Spending, Worse Outcomes (Commonwealth Fund, Jan. 2020).

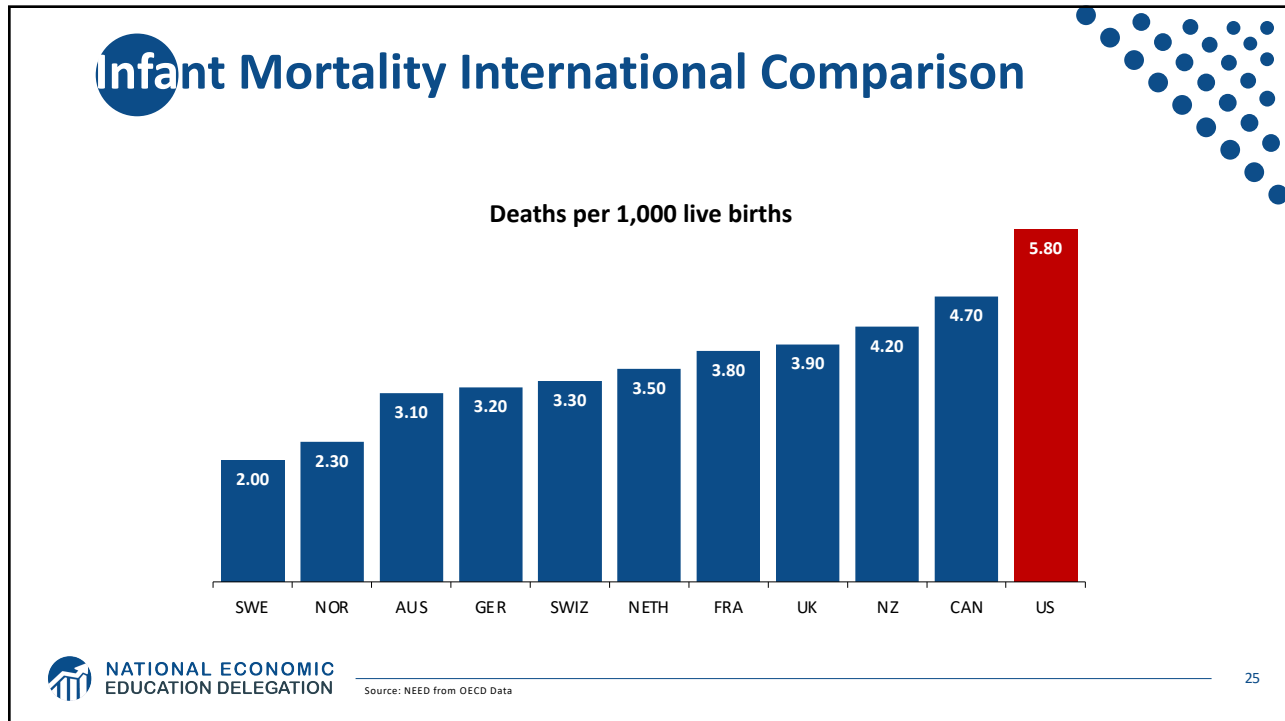
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## Life Expectancy at Birth by Race, 2017

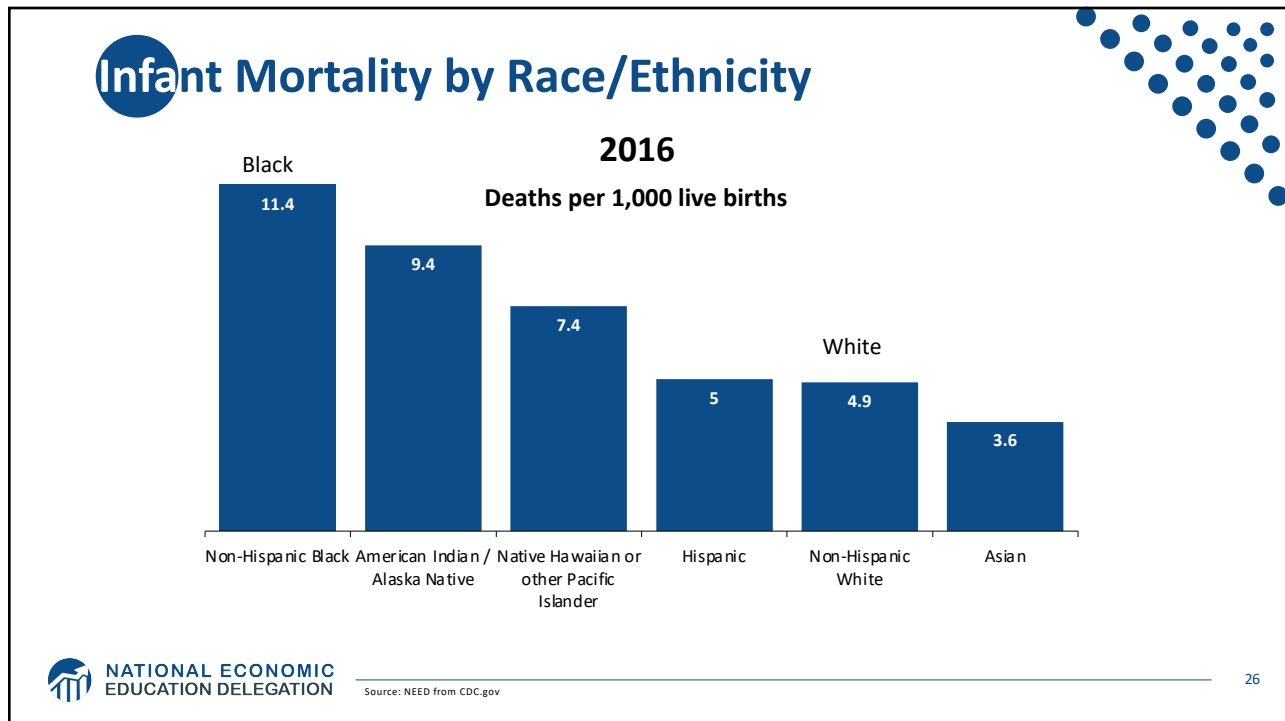
Race/Ethnicity	Life Expectancy (Years)
All Races	78.6
White	78.8
Black	75.3
Hispanic	81.8

## Income Also Matters – Reflecting Access?

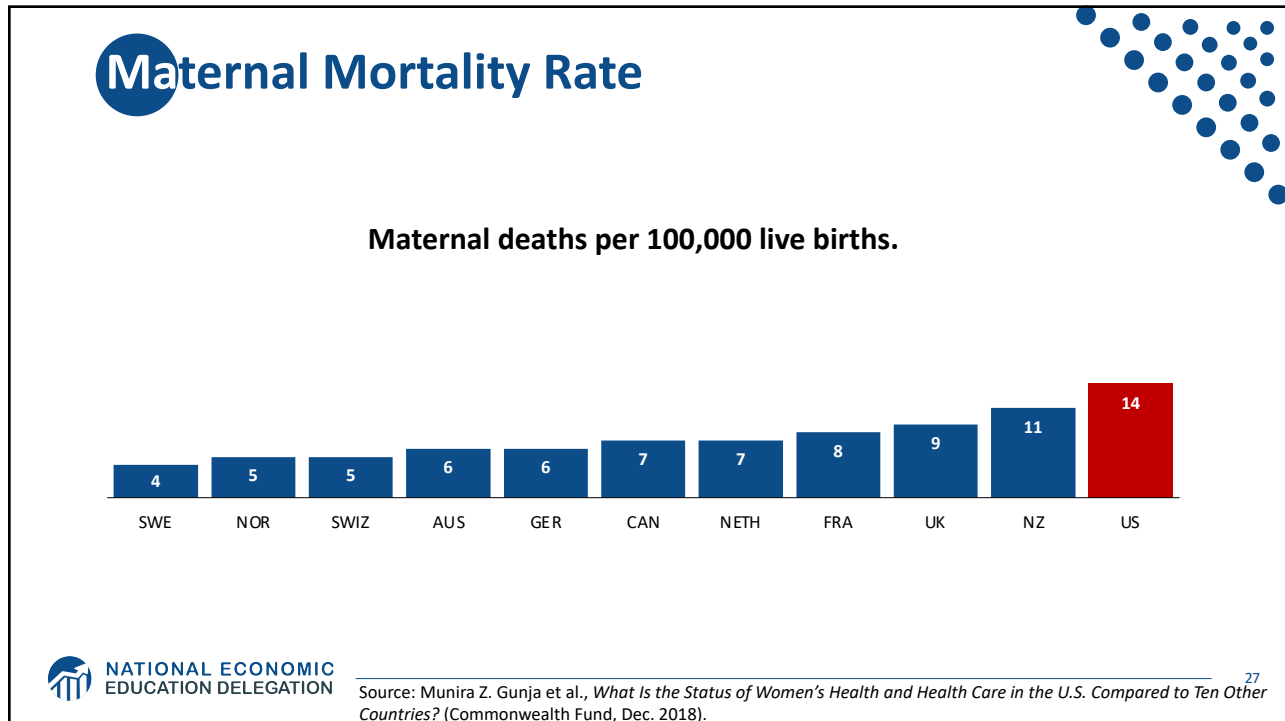




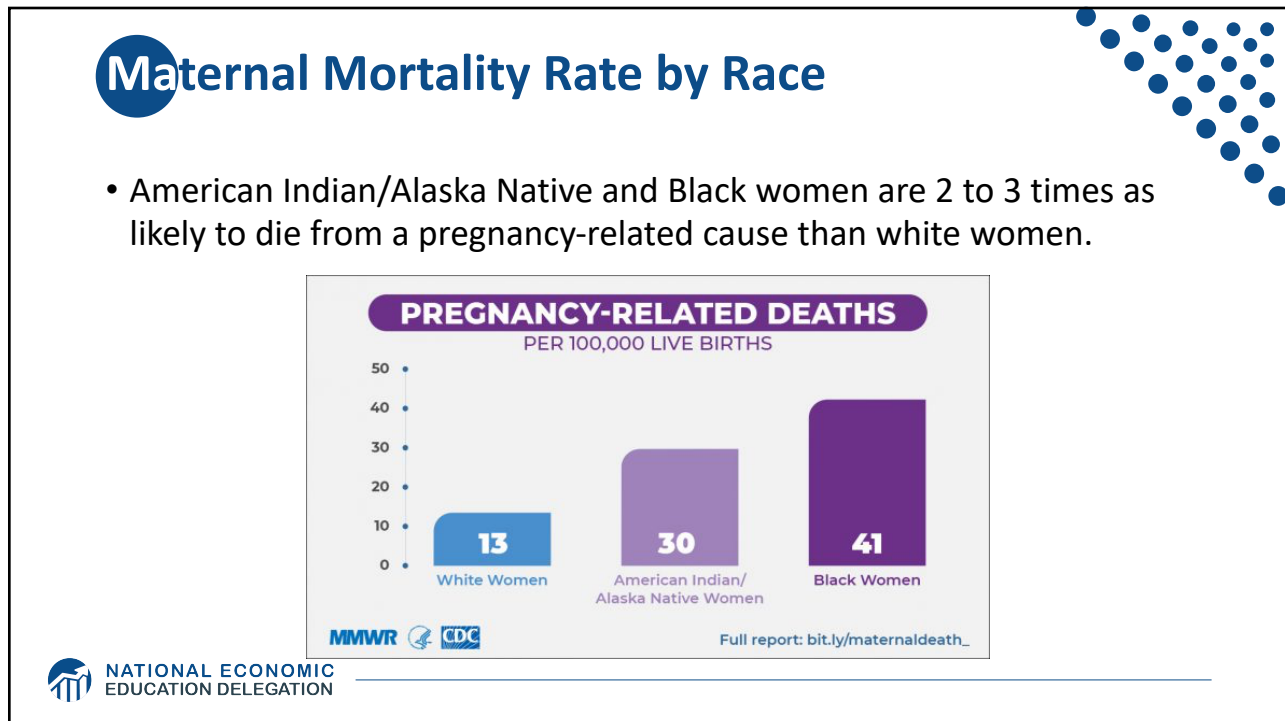
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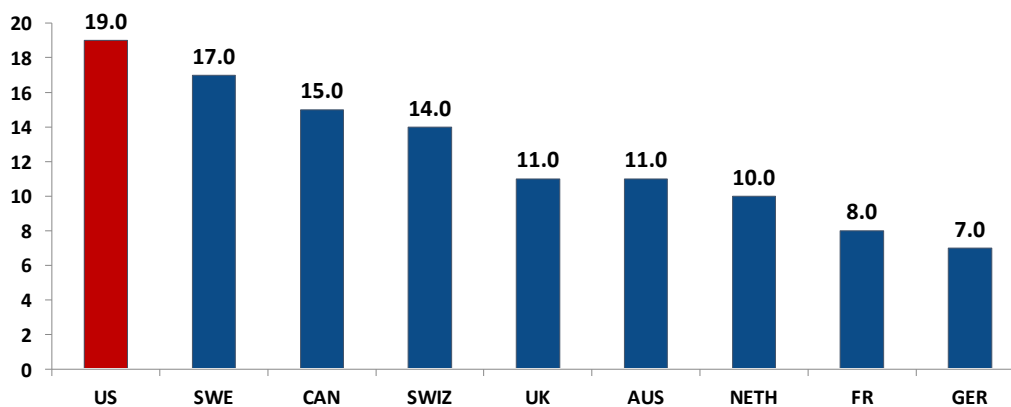


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## Percent of adults who have experienced medical, medication, or lab errors or delays



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Source: 2016 Commonwealth Fund International Health Policy Survey.

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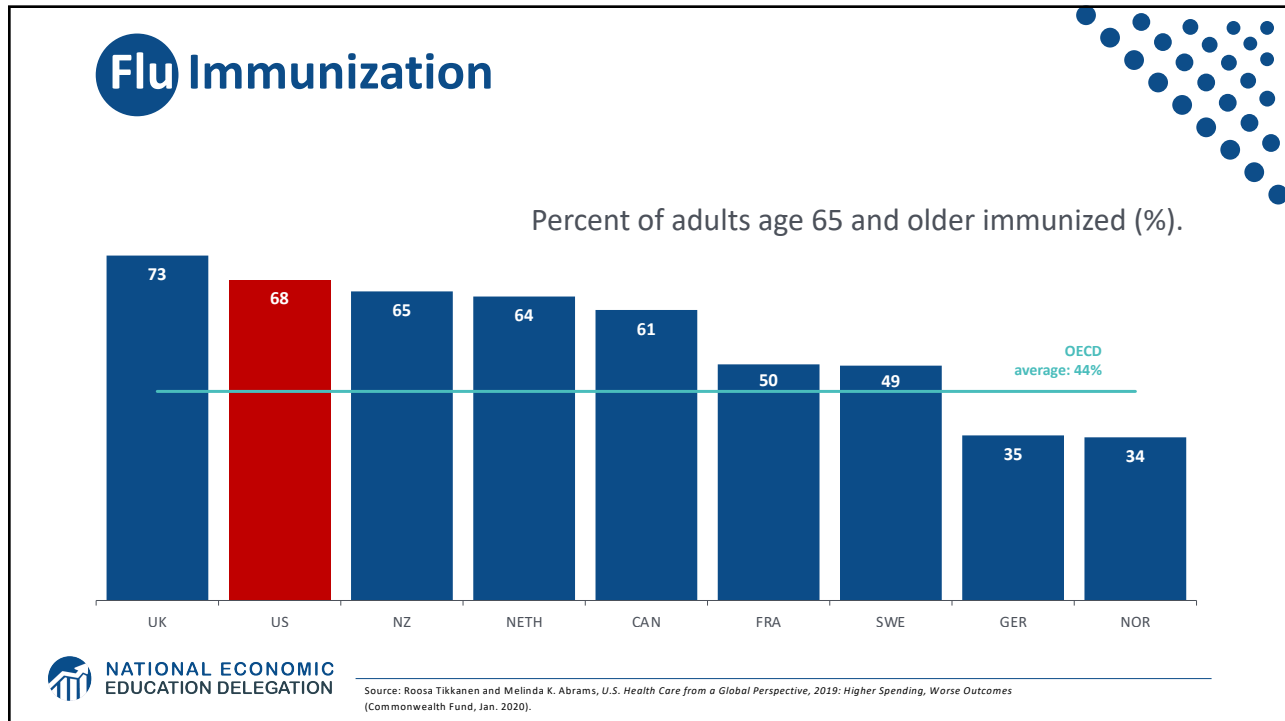
## Prevention and Screening

- The U.S. excels in **some** prevention measures, including flu vaccinations and breast cancer screenings.
- The U.S. has the highest average five-year survival rate for breast cancer, but the Lowest for cervical cancer.

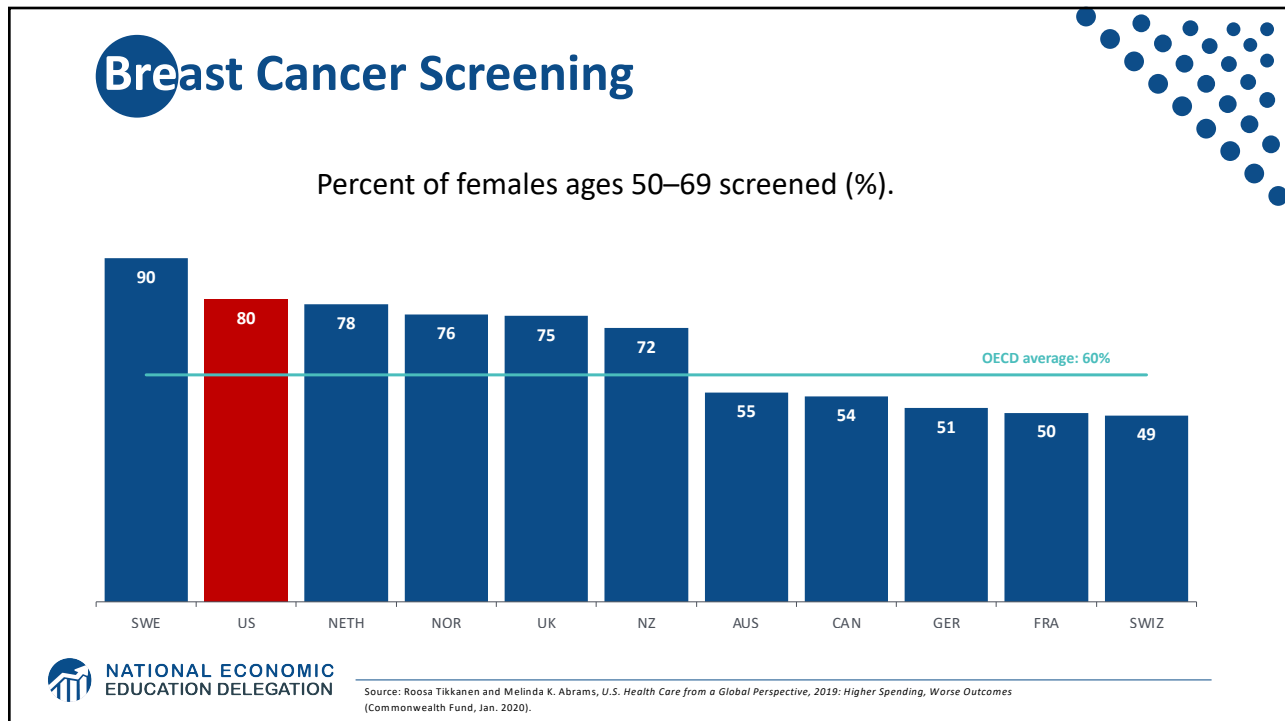


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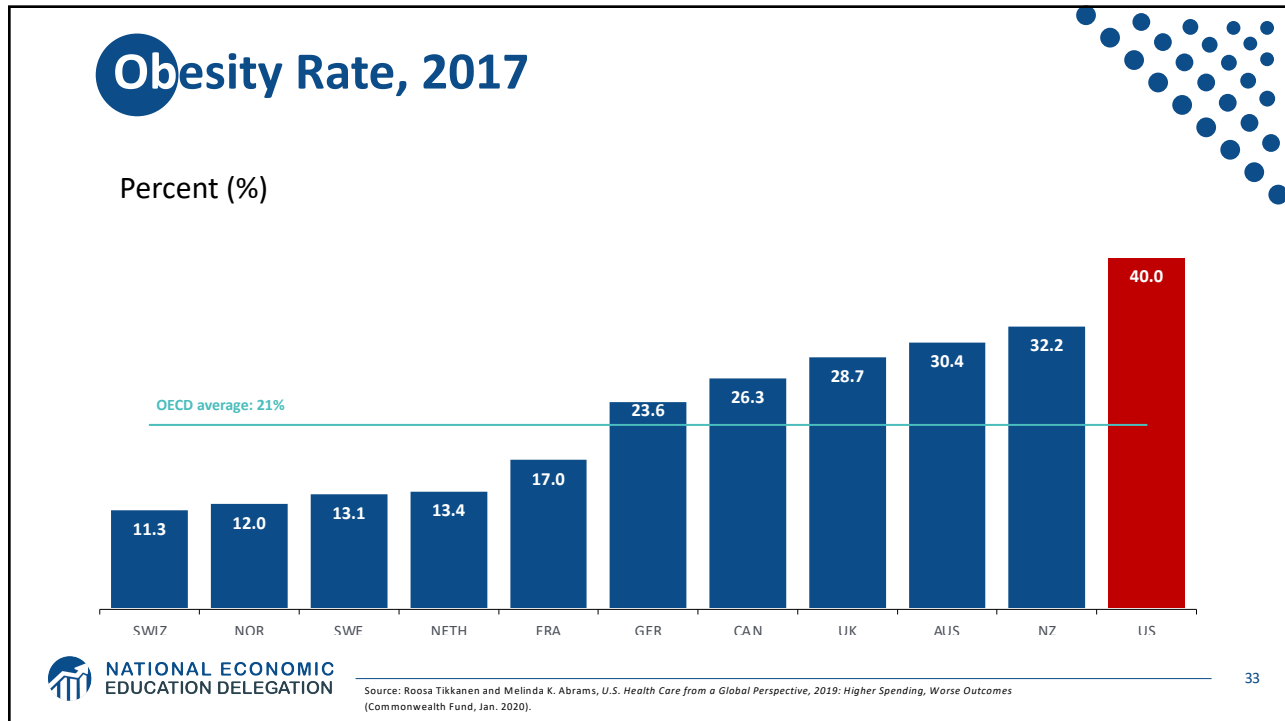


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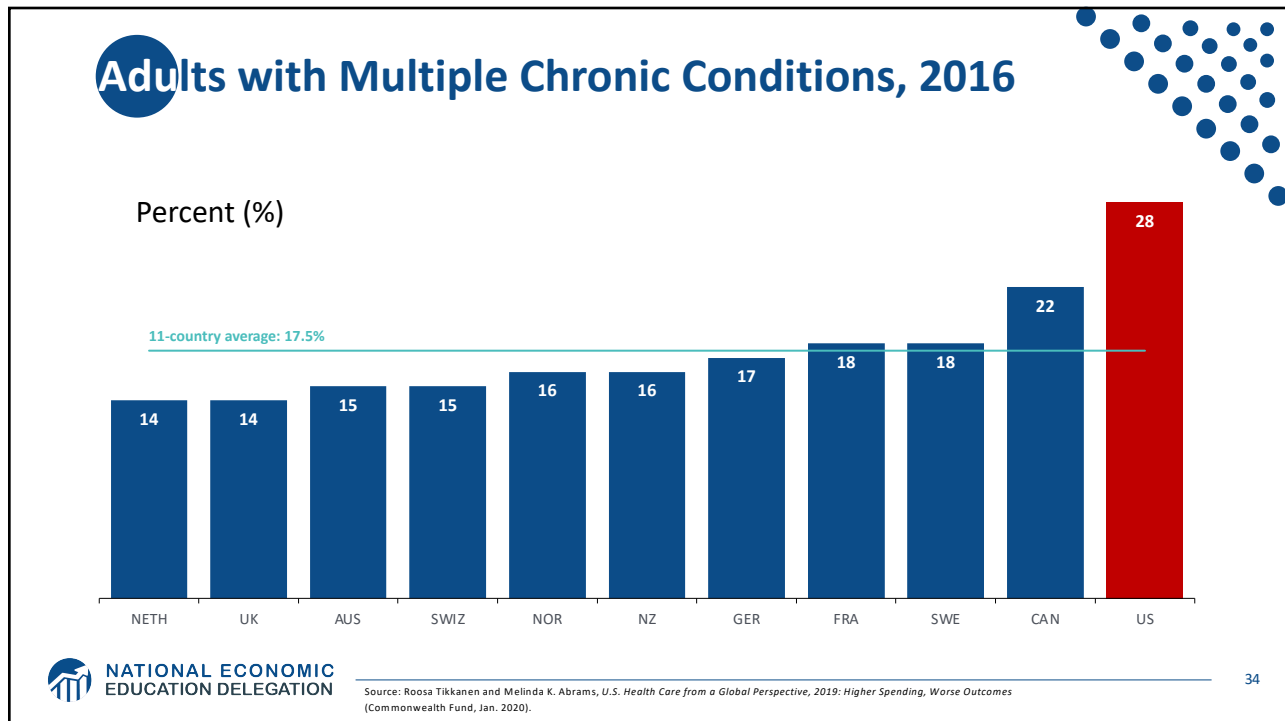


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## The World Health Report 2000, *Health Systems: Improving Performance*

	Overall Ranking
1.	France
2.	Italy
3.	San Marino
4.	Andorra
5.	Malta
6.	Singapore
7.	Spain
8.	Oman
9.	Austria
10.	Japan

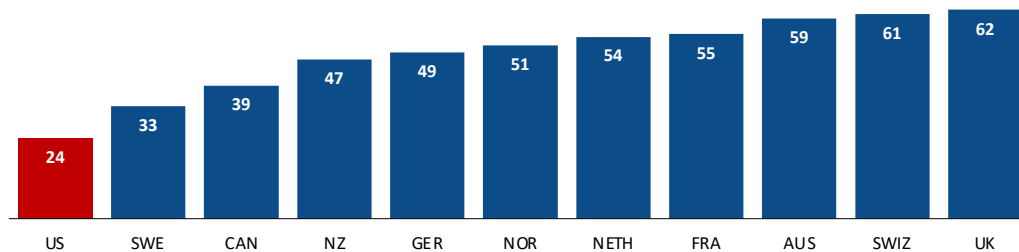
	Overall Ranking
30.	Canada
31.	Finland
32.	Australia
33.	Chile
34.	Denmark
35.	Dominica
36.	Costa Rica
37.	United States
38.	Slovenia
39.	Cuba



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## Perception of Quality of Medical Care

Percent of women ages 18–64 who rated their quality of medical care as *excellent or very good*.



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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## Quality of Care Notes

- **Metrics of quality in the U.S. are not very good.**
- **Quality of care is not considered very good in the U.S.**
- **The system has challenges: obesity/lifestyle.**
- **The system has bright spots!**

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## A Bit About Quality

- The U.S. has the **highest chronic disease burden.**
  - and an obesity rate that is two times higher than the OECD average.
- Americans had **fewer physician visits** than peers in most countries.
  - which may be related to a low supply of physicians in the U.S.
- The U.S. has among the highest # of **hospitalizations from preventable causes.**
  - and the highest rate of avoidable deaths.
- Americans use some **expensive technologies more often than our peers.**
  - MRIs, and specialized procedures, such as hip replacements.
- The U.S. outperforms its peers in terms of **preventive measures.**
  - One of the highest rates of breast cancer screening among women ages 50 to 69.
  - Second-highest rate (after the U.K.) of flu vaccinations among people age 65 and older.

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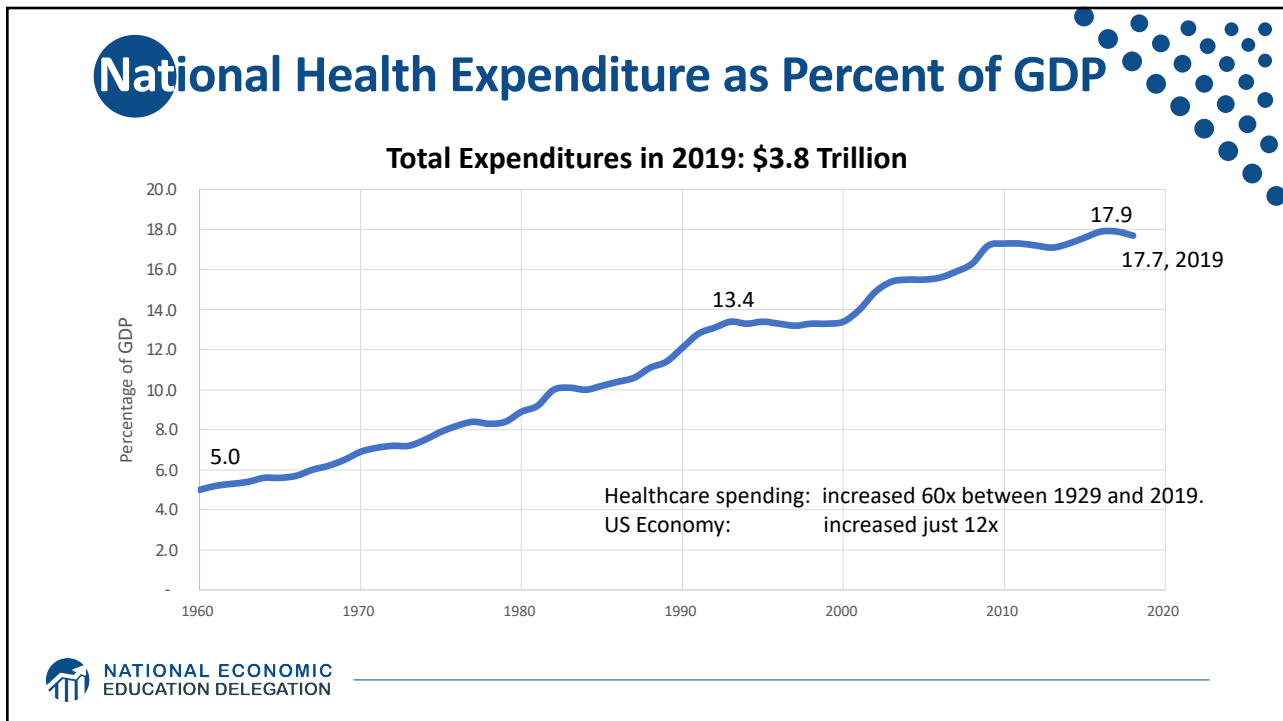
# Costs



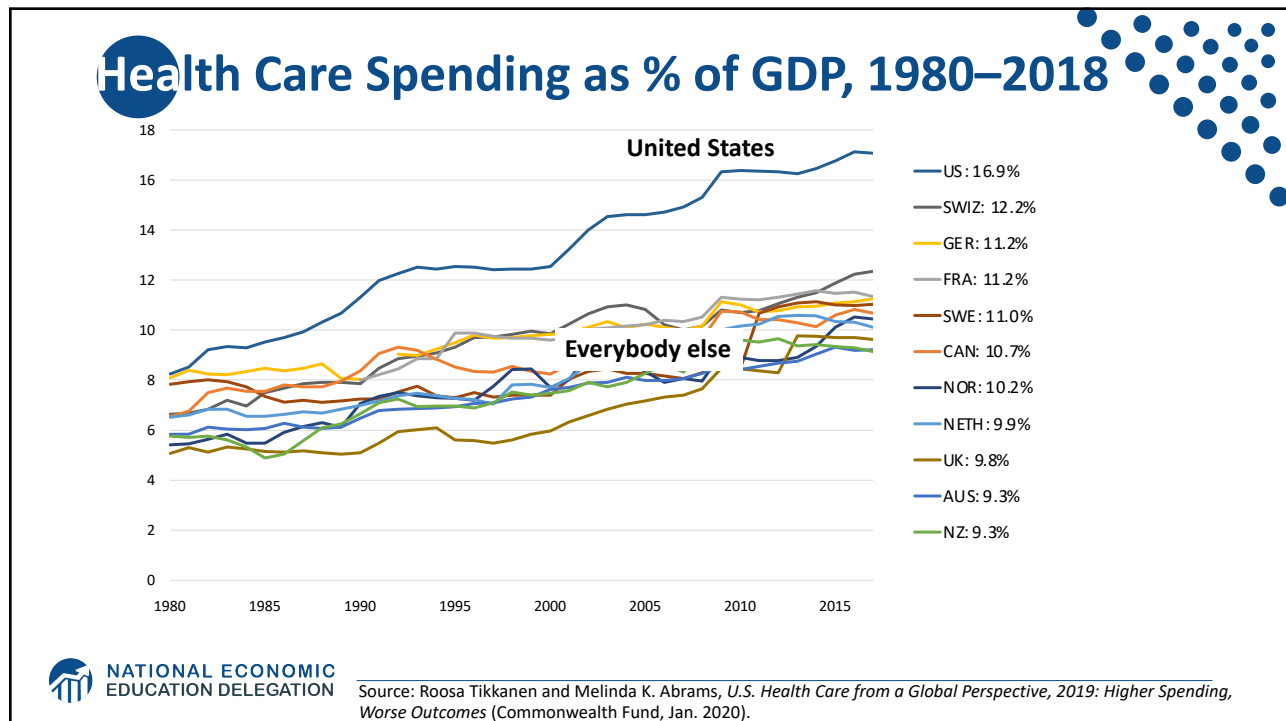
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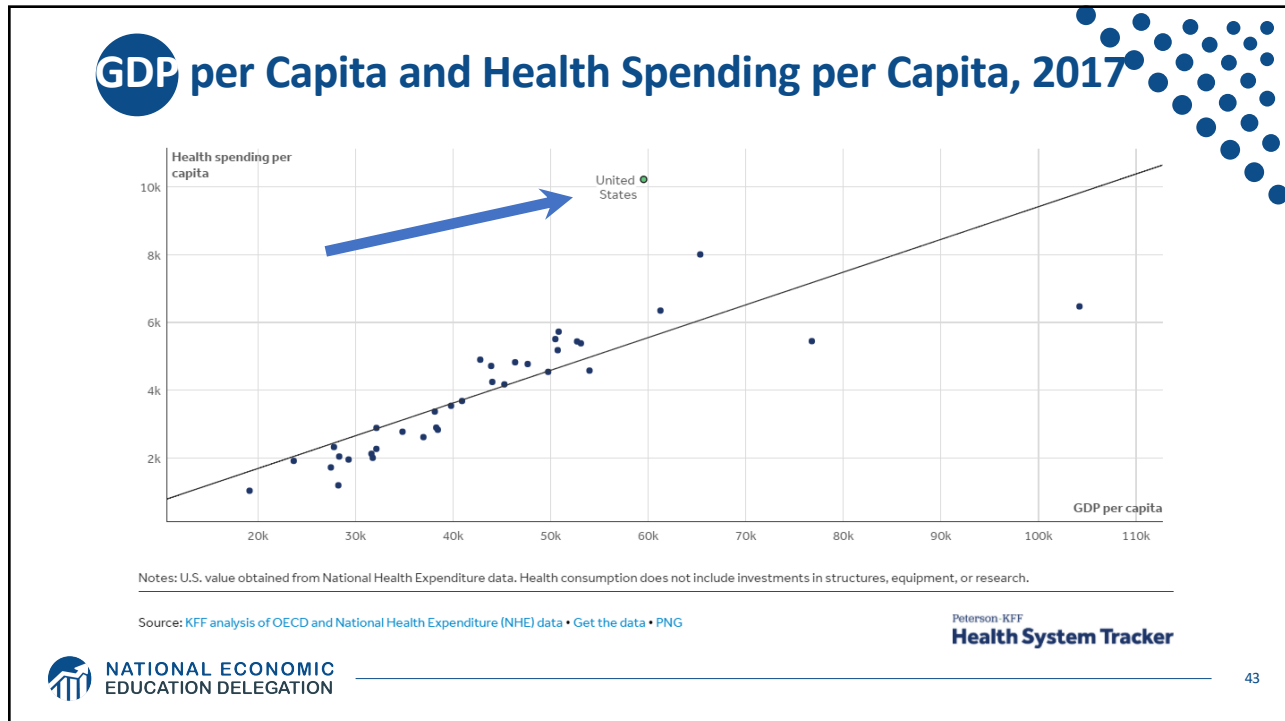
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## Why is Healthcare Spending Increasing?

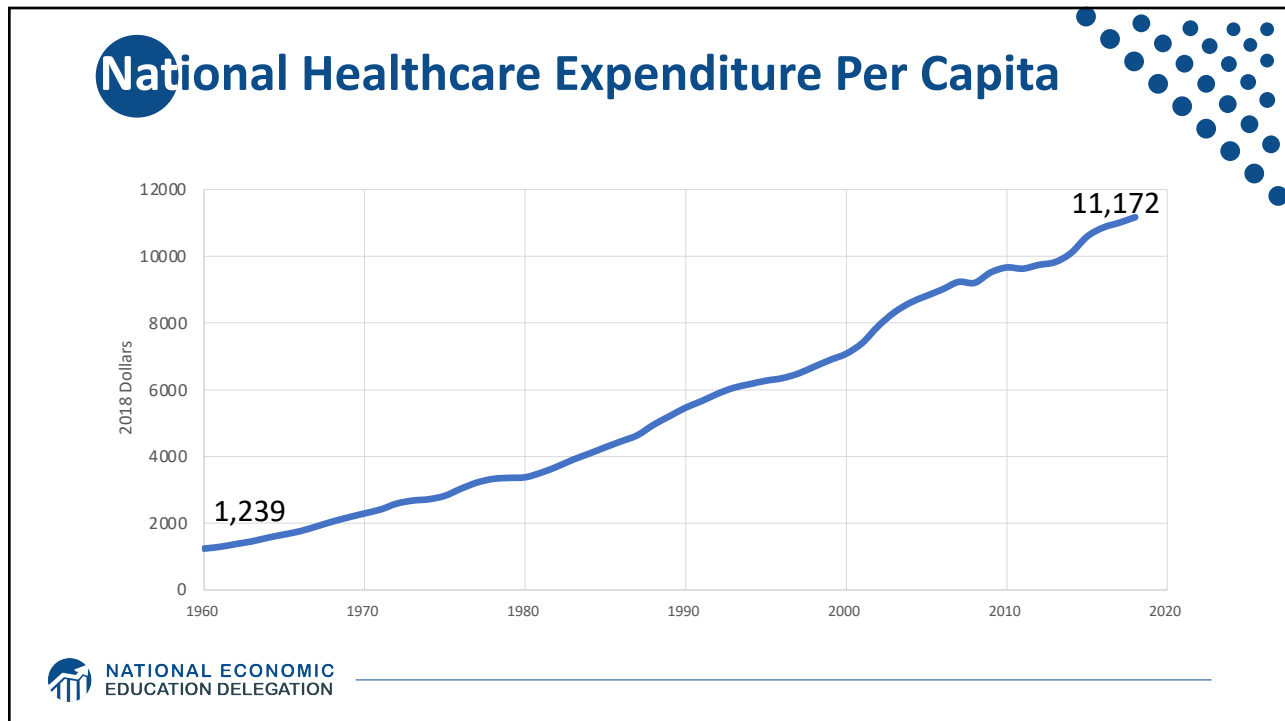
- Costs in the United States, and elsewhere are increasing rapidly.
- The share of economic spending on health care has been steadily increasing for all countries because:
  - Health spending growth has outpaced economic growth.
  - Richer countries demand more services, like attention to health.
- Also because of
  - Advances in medical technologies.
  - Increased demand for services.
  - Rising prices in the health sector – why?

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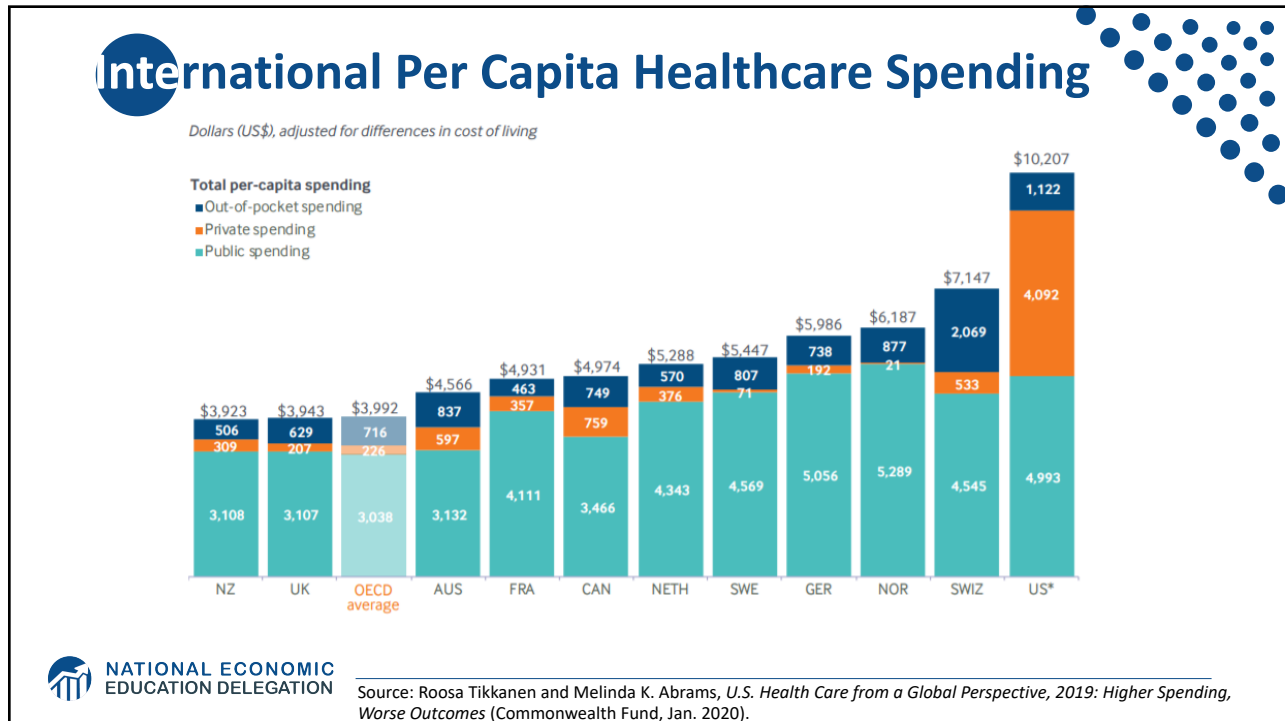
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## Why Are Costs so High in the US?

**One Reason:**

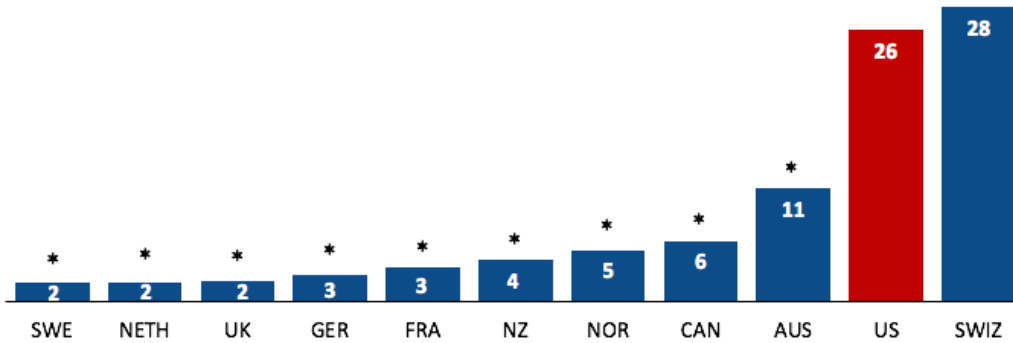
**The United States is the only profit-motivated healthcare system in the world.**

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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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## Markets Matter for Costs



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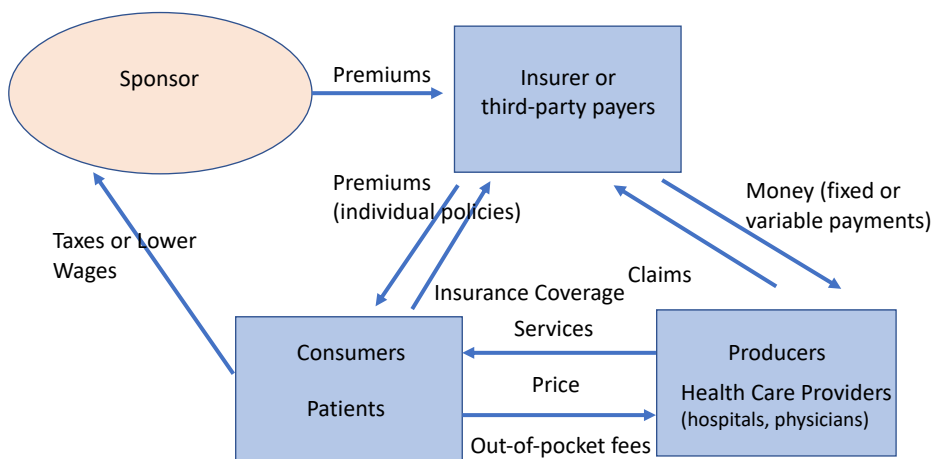


# Are Health Care Markets Special?

- Market Structure
- Type of products and services
- Principal-Agent Problem
- Asymmetric Information
- Moral Hazard
- Moral Imperative (?)

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# Health Care Markets are Different



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# Policy Matters for Costs



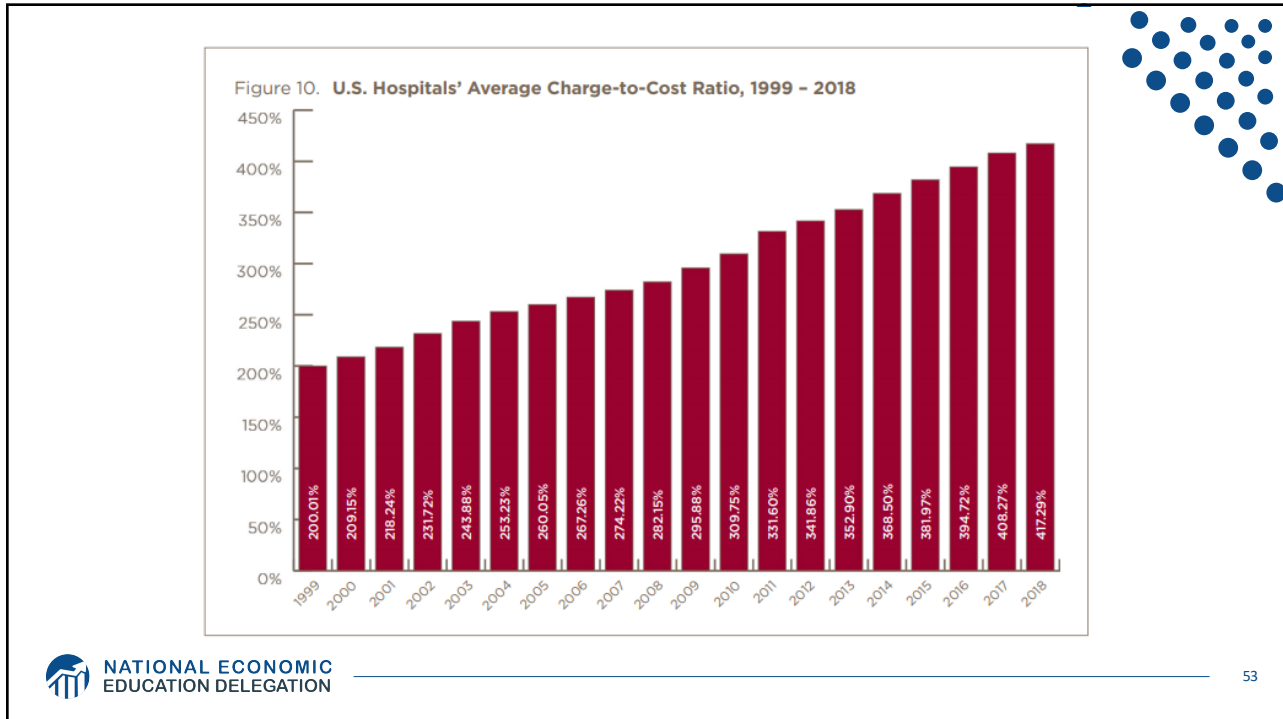
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## Hospital Monopolization

- 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.
  - 14,000 more physicians left independent practice to become hospital employees.



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## Drug Price Comparisons

**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
<b>US Higher</b>									
<b>Brand-name drugs</b>	0.40	0.64	0.32	0.43	0.39	0.33	0.51	0.46	1.00
<b>US Lower</b>									
<b>Generic drugs</b>	2.57	1.78	2.85	3.99	1.96	0.90	3.11	1.75	1.00

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

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## Medicare Modernization Act

- Prescription Drug Component
- Medicare Part D, **by law**, cannot negotiate drug prices like other governments do.
- 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**.



## Concentration in Pharmaceutical Companies

- The number of mergers and acquisitions involving one of the top 25 firms more than doubled:
  - 29 in 2006 to 61 in 2015
- Between 1995 and 2015, 60 drug companies merged into 10.

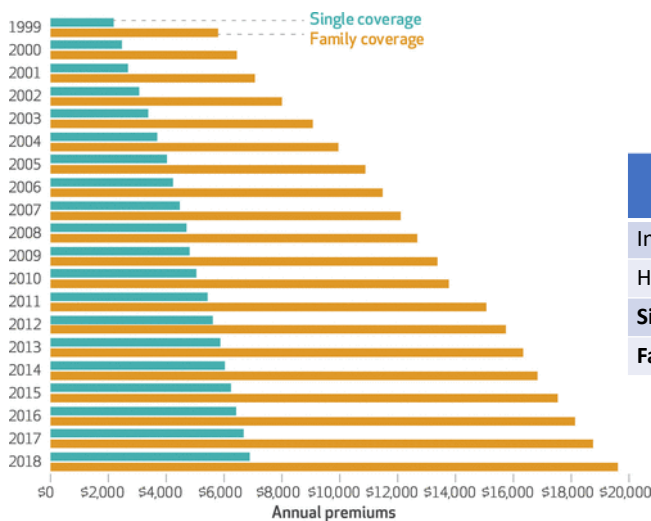


## Monopolization of Health Insurance Market

- 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. (CA has 11)
- As of July 2019, the number of states with only 1 or 2 insurers had increased from 11 to 20.

## Average Annual Insurance Premiums, 1999-2018

Employer provided, Not Adjusted for Inflation



Single: ~\$2,000 to ~\$7,000  
 Family: ~\$5,900 to ~\$19,500

	Average Annual Rate of Change
Inflation	2.19
Health Care CPI	3.68
<b>Single coverage</b>	<b>6.51</b>
<b>Family coverage</b>	<b>6.52</b>

## Reason for Higher Health Insurance Rates

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

## Health Care Systems and Institutions

## 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, Spain, New Zealand)
  - Out of pocket model – self insurance
  - 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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## Definition: Universal Coverage

- **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.
  - Protects individuals from excessive financial hardships.
    - Medical indebtedness is the #1 cause of bankruptcies in the United States.
- Canada has universal coverage, the United States does not.



## Definition: 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 socialized.
  - The money for the payment can be either collected by:
    - Taxes collected by the government
    - Premiums collected by National or Public Health Insurance
- **Single-payer systems: 17 countries**
  - Norway, Japan, United Kingdom, Kuwait, Sweden, Bahrain, Brunei, Canada, United Arab Emirates, Denmark, Finland, Slovenia, Italy, Portugal, Cyprus, Spain, and Iceland.





## Definition: Socialized Medicine

- **Socialized medicine** – this model actually takes the single-payer system one step further.
  - Government not only pays for health care but operates the hospitals and employs the medical staff.
- This has NEVER been a part of the debate in the United States.



## Definition: 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



## Tradeoffs

Tradeoffs take place among the three legs:

- Increasing quality in health care may lead to higher health care costs.
  - This means a compromise in access (affordability).
- I.e., with increasing quality, access may suffer.
- By increasing access, quality may suffer.
- By decreasing costs, quality may suffer.



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## Summary

- US HealthCare system is not performing well.
  - Very expensive with low quality and access.
- One of the main reasons for very high costs is the monopolization of healthcare markets.
  - Hospitals, health insurance, big pharma, physicians, etc.
- A few simple solutions could drastically reduce costs:
  - Enforcement of antitrust laws in this sector.
  - Introduction of a public option in the health insurance market.
  - Ability for the US government to negotiate drug prices like most every other nation.
- Universal health insurance would increase access and perhaps also reduce costs.
- But there are always tradeoffs: you can pick two, but the third may suffer.



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**Thank you!**

## Any Questions?

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## What is Health Economics?

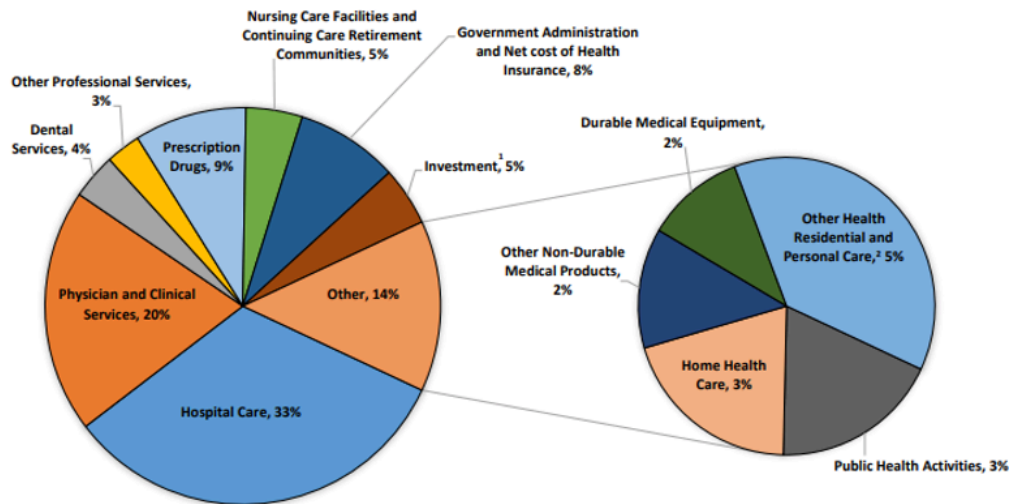
- Health economics studies health care resource **markets** and **health insurance**.
- Healthcare is the biggest industry and the largest employer in the US.



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## Where the money goes?



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

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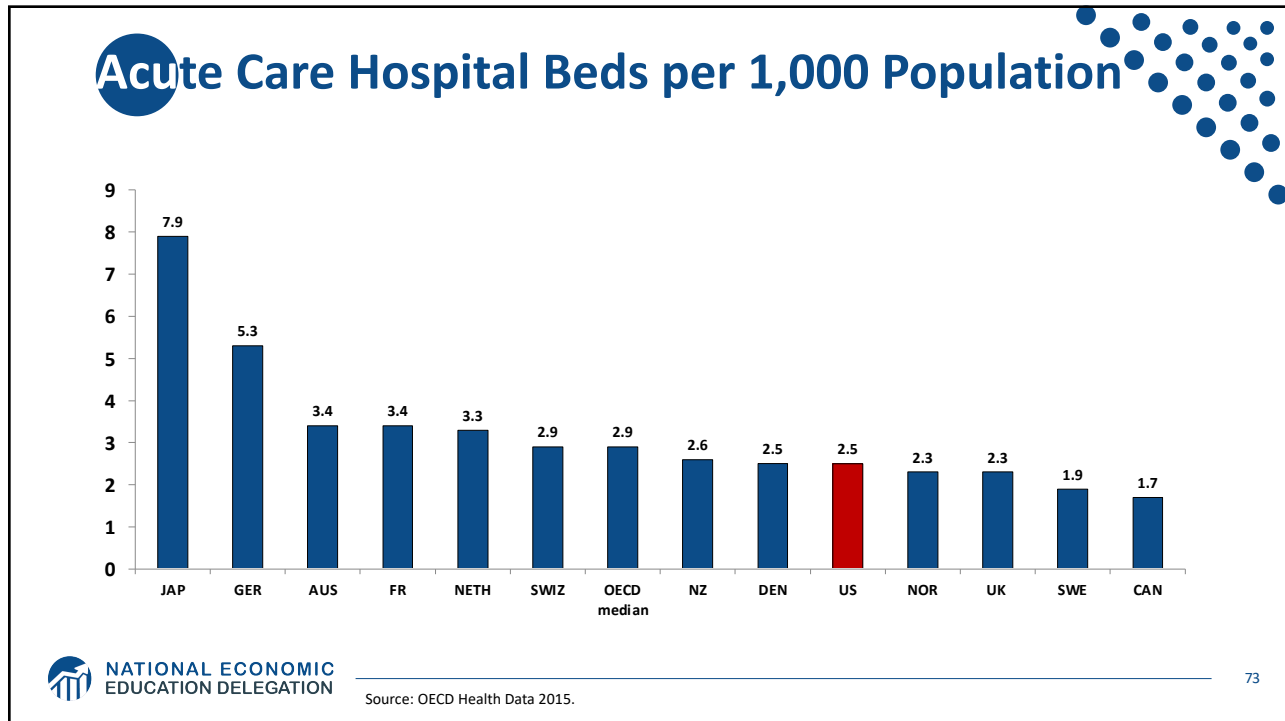
## What is a Market?

- 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, different rules should be set up to achieve the best results for **society**.

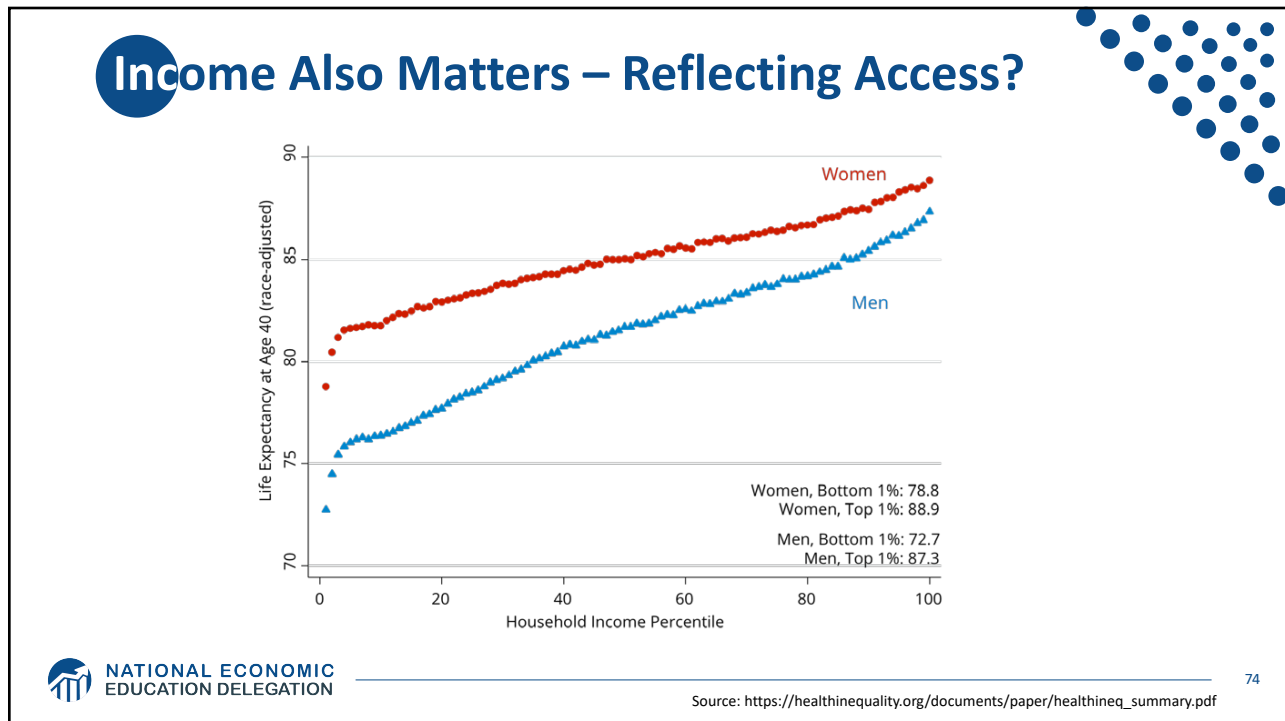


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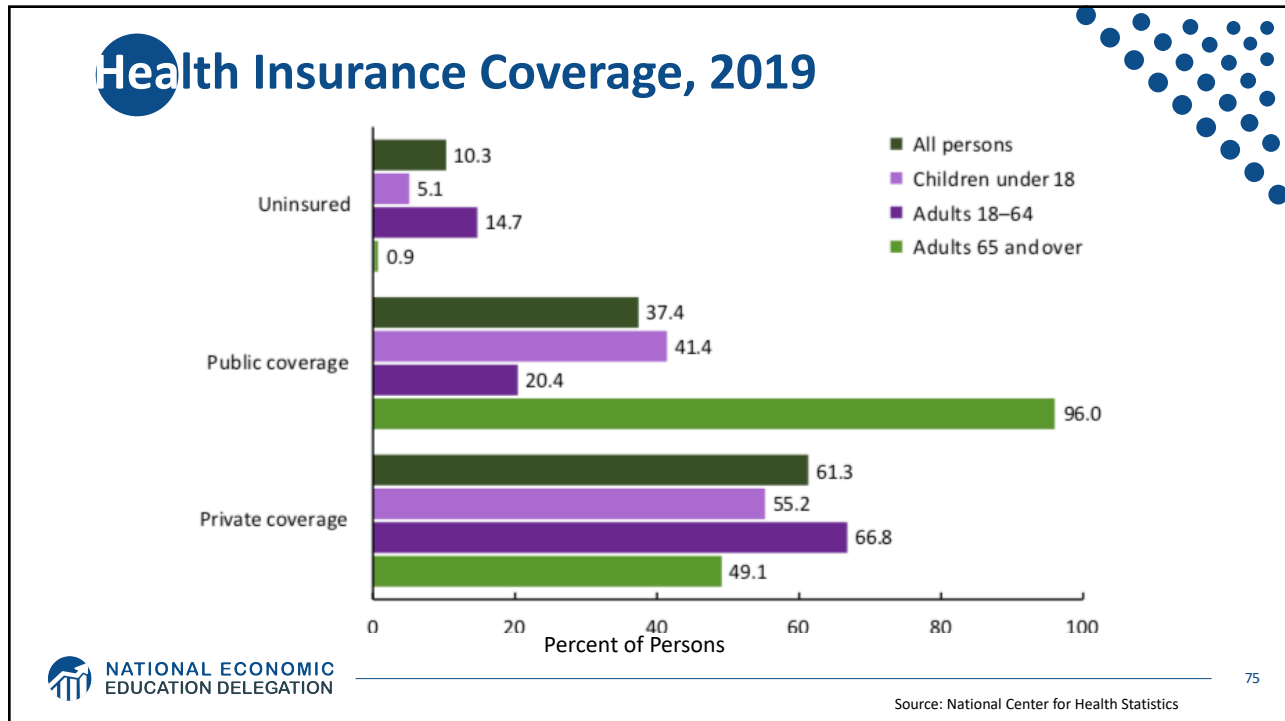
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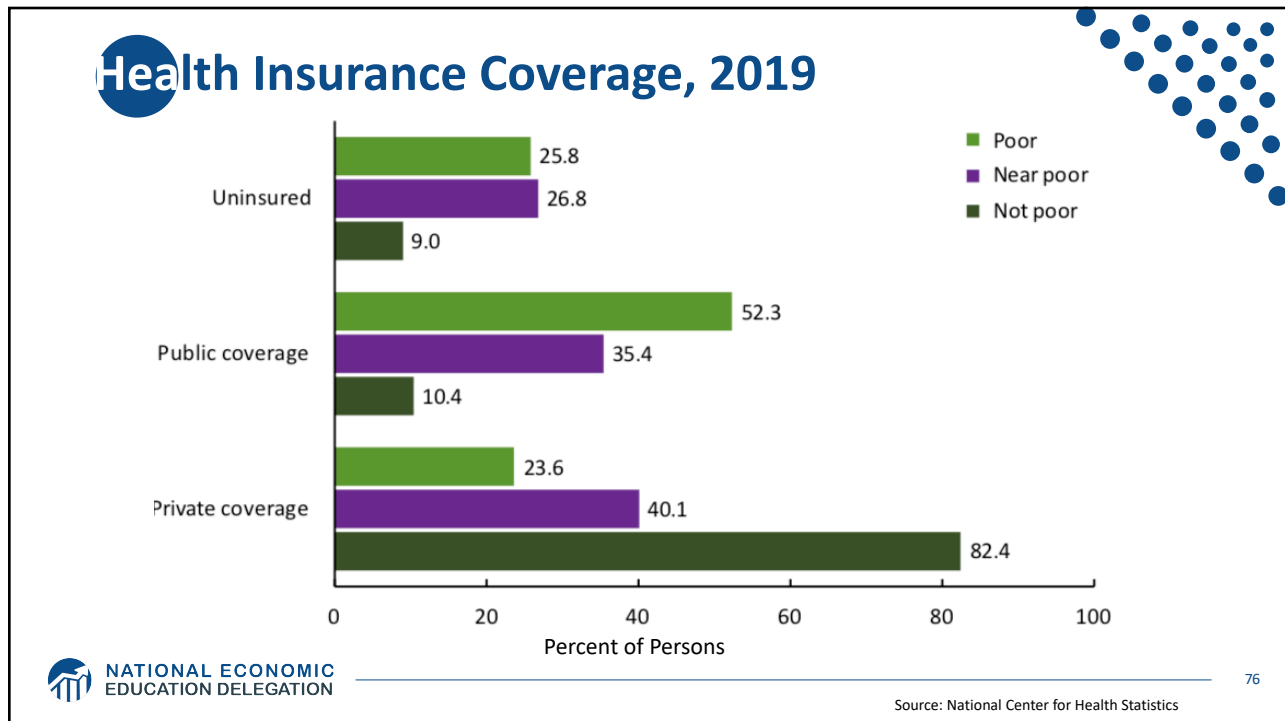
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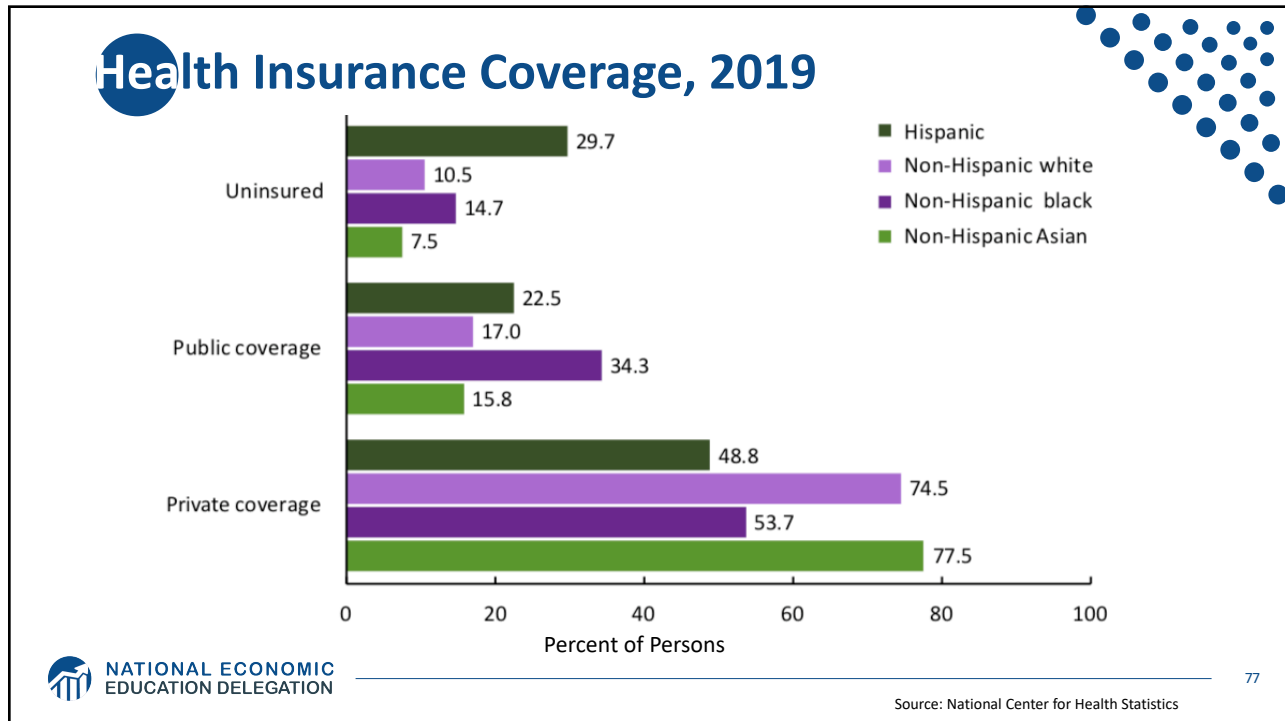
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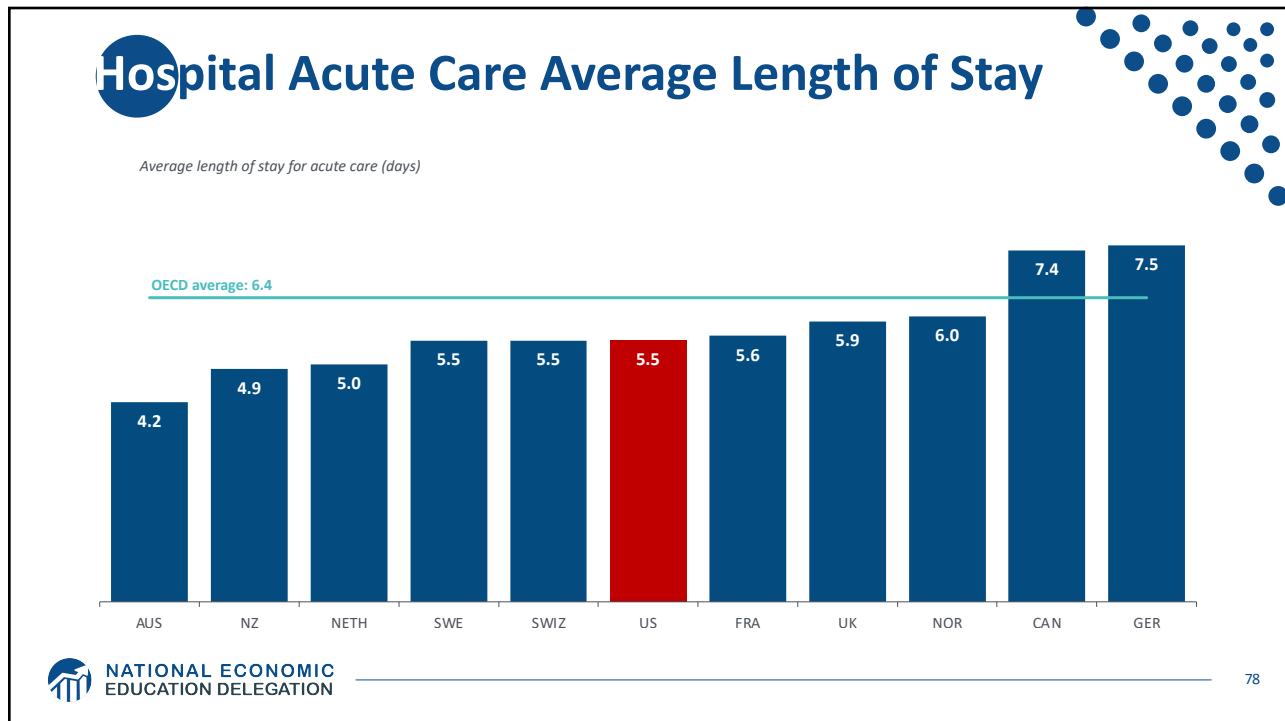
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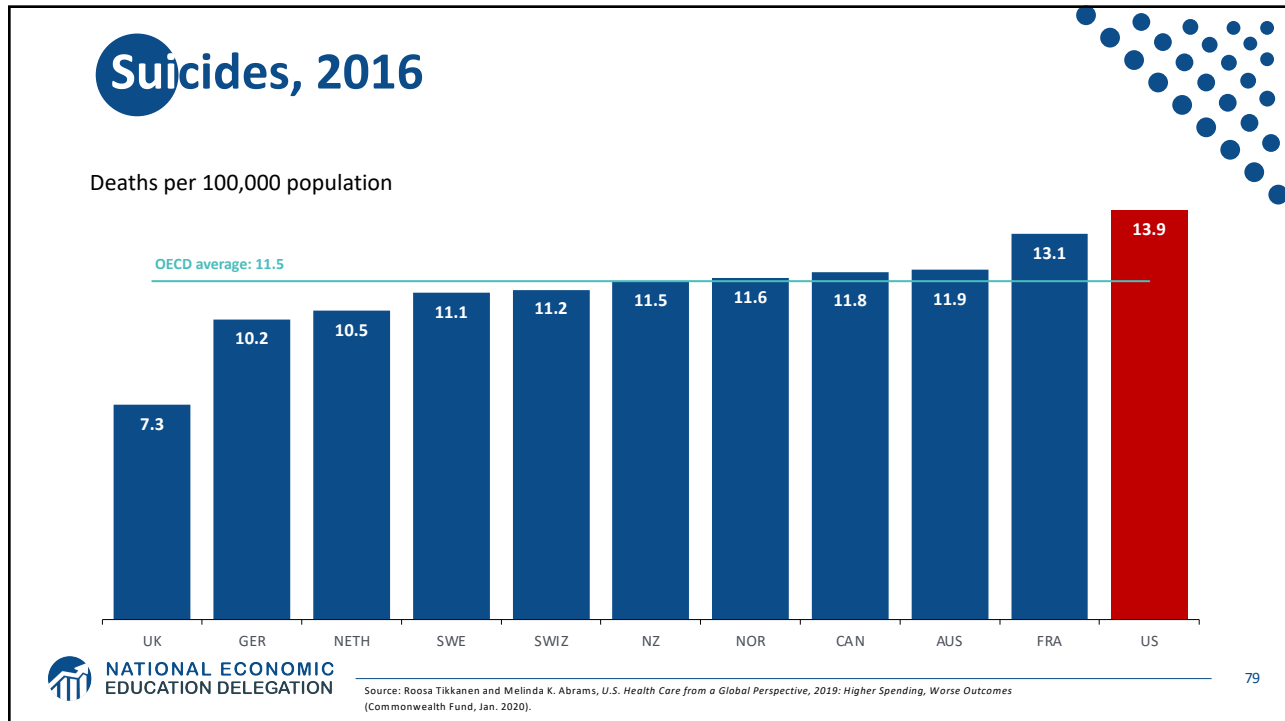
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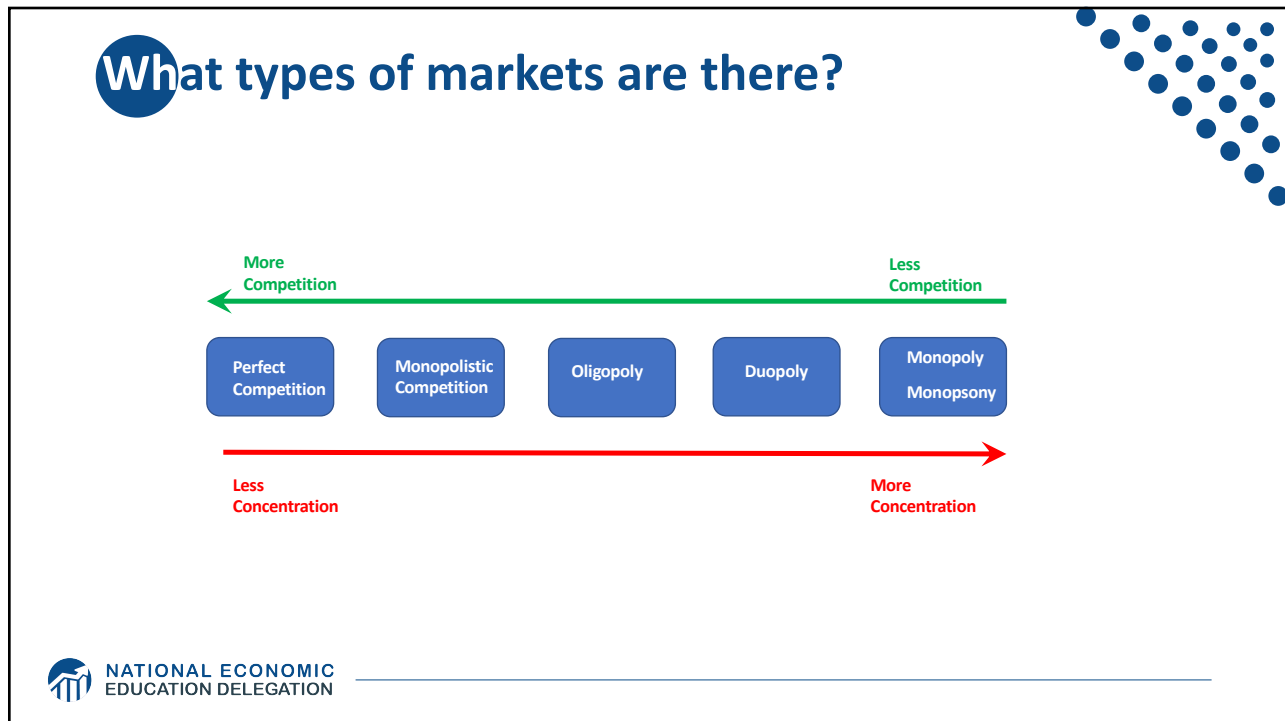
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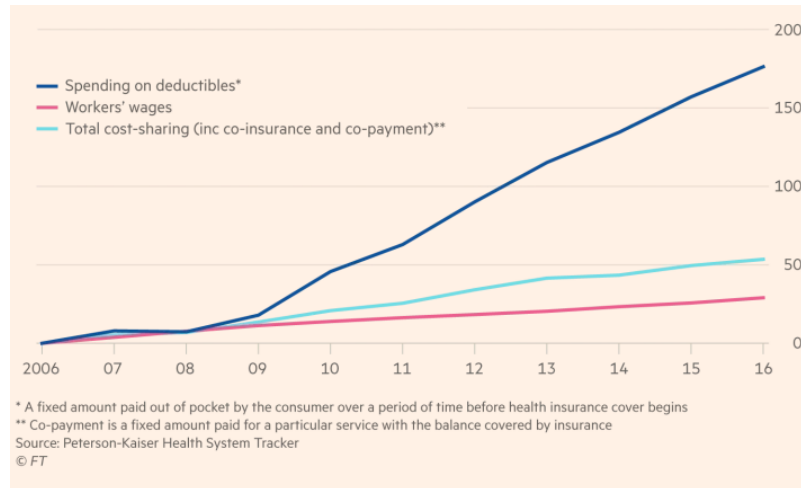
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## Spending on Deductibles



## Hospital Monopolization Across the Nation

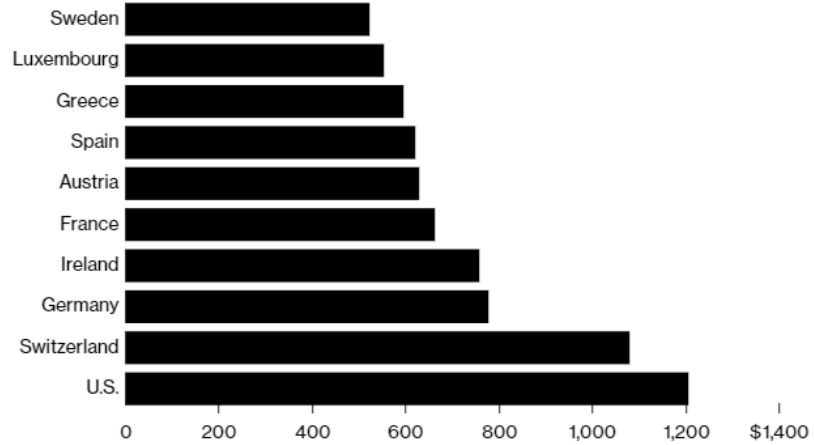
- Most of the top 100 most expensive hospitals are located in states in the west and south.
  - Florida had the highest number, with 40 hospitals.
  - Other top states included Texas with 14 hospitals, Alabama with eight, Nevada with seven, and California with six.
- Hospitals Charge Patients More Than Four Times the Cost of Care
- The most expensive hospitals cost of care range from 1,808 % at the high end to 1,129 % at the low end.

# Big Pharma

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## Spending on Pharmaceuticals

Top spenders per capita on drugs in 2016, in U.S. dollars



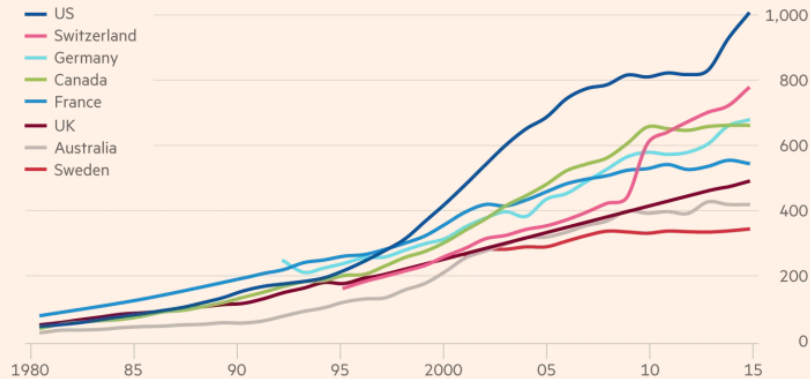
Source: Organisation for Economic Co-operation and Development

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## Drug Prices: Trends Over Time

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

Selected countries (\$)



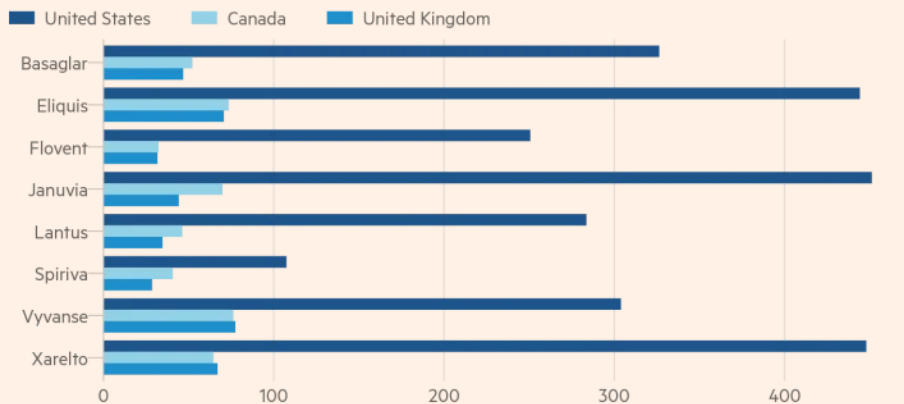
\* Figures relate to prescription drugs, not hospital spending



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## Drugs in the US cost much more than their equivalent in the UK and Canada

Eight bestselling brand drugs for conditions ranging from diabetes to asthma and ADHD. Drug price (\$)



Note: Their equivalents may be generic versions. Prices have been converted to US dollars using exchange rates available on September 17th, 2019



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## Price Hikes

- Turing Pharmaceuticals' 5,555% price increase of Daraprim in 2015 and Mylan's 500% increase of EpiPen prices...
- More than 3,400 drugs 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 boosted their prices by more than 100% in 2019.
- Over 10 years, the net cost of prescription drugs in the United States rose more than **THREE TIMES FASTER** than the rate of inflation.



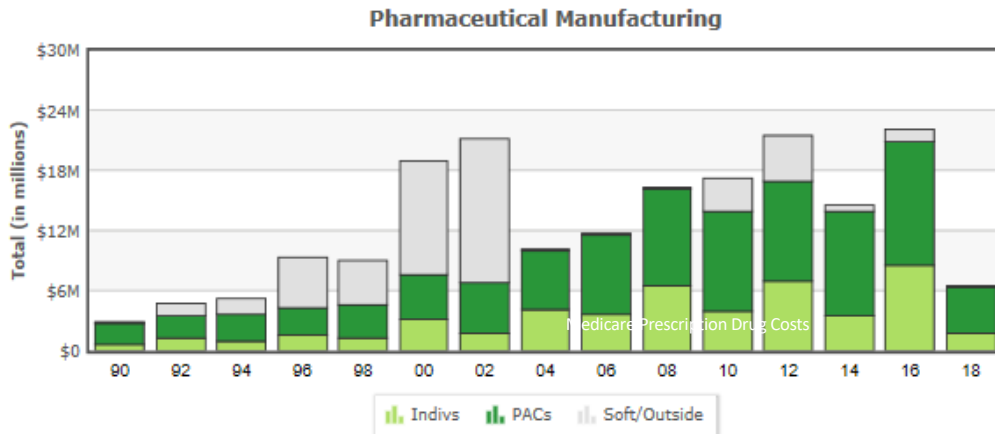
## Reasons for higher drug prices

- 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.
  - Prohibits government negotiation of lower prices.
- Growing concentration of pharmaceutical companies.



# Lobbying

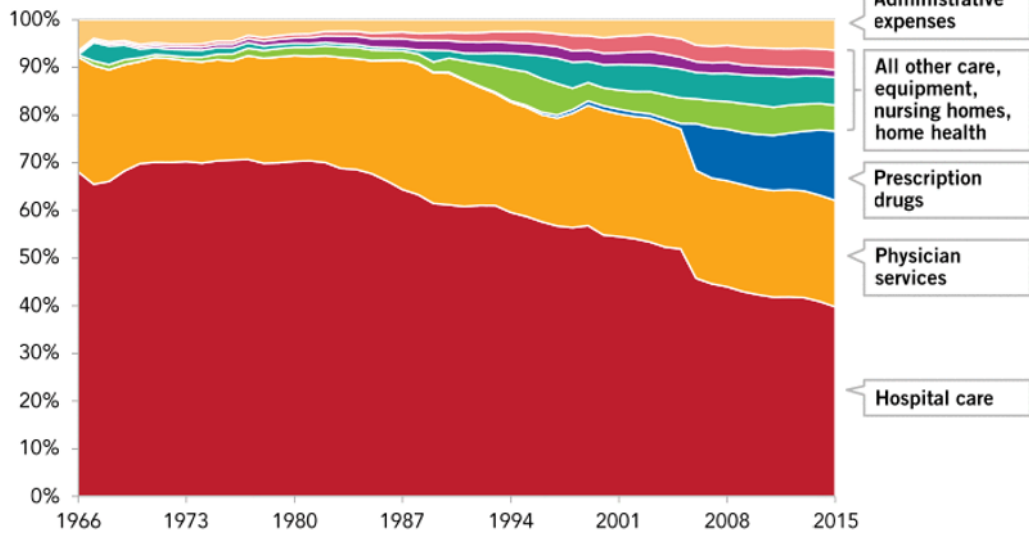
## Contribution Trends, 1990-2018



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### COMPOSITION OF MEDICARE PAYMENTS (% OF TOTAL MEDICARE SPENDING)



SOURCE: Centers for Medicare and Medicaid Services, National Health Expenditures December 2016. Compiled by PGPF.

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# Prescription Drug Savings in Build Back Better

## CBO's Estimates of Prescription Drug Policies in the Build Back Better Act

Policy	Ten-Year Savings
Medicare Drug Price Negotiations	\$76 billion
Part B and D Inflation Rebates (Medicare and Medicaid)	\$49 billion
Commercial Drug Inflation Rebates	\$34 billion
Part D Benefit Formula Redesign	\$2 billion*
Medicare Insulin and Cost Sharing Cap	-\$1 billion
Repeal of Rebate Rule	\$143 billion
<b>Total Savings of Prescription Drug Proposals</b>	<b>\$303 billion</b>

Sources: Congressional Budget Office and Committee for a Responsible Federal Budget.  
\*Includes payments for biosimilar biological products



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