

Health Economics and Policy

<https://sites.google.com/a/uniroma1.it/deboradigioacchino/>

- Class attendance and assignments (group and individual)
- Course material elearning - **course id 12259** (selfenrolment at <https://elearning.uniroma1.it/enrol/index.php?id=12259&lang=en>)
- Main Reference
 - ▣ Bhattacharya, Hyde and Tu “*Health Economics*” Palgrave MacMillan
 - ▣ Other readings and Data
 - OECD, World Bank, WHO ...
- Pre-requisite: Microeconomics
- Office hours: by appointment

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Health Economics and Policy

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- Exam1 (Winter session)
 - ▣ Class participation, Assignments and Presentation (40%)
 - ▣ Oral Exam (60%)
- Exam2 (Summer and Fall + non-attending students)
 - ▣ Written Exam (40%): questions and analytical problems
 - ▣ Oral Exam (60%)

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For tomorrow ...

A video to start

- Rachel Griffith 'Obesity, Poverty and Public Policy' RES Annual Public Lecture 2021

https://www.youtube.com/watch?v=7bEoD_HCZko

- Discussion about health systems

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For next week

- **Arrow, K.** Uncertainty and the Welfare Economics of Medical Care. *American Economic Review*, **1963**

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Plan of the course

□ Introduction

- ▣ Health Economics
- ▣ Health Policy: Market failures and Welfare Economics (notes + parts of chs 20, 22)

□ Health determinants and socioeconomic disparities chs 3-4

□ The Health Sector

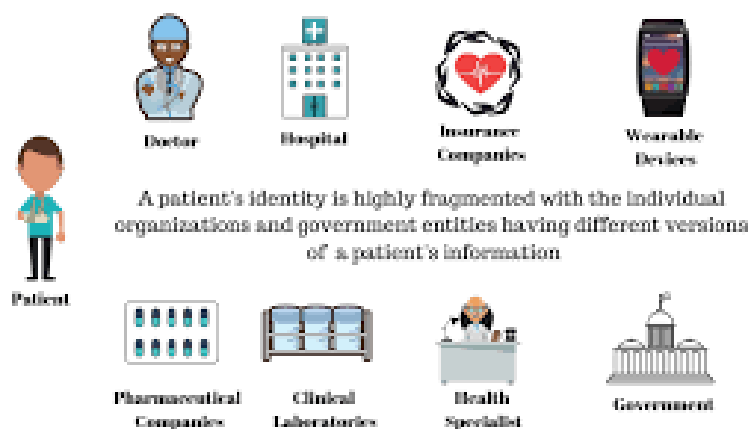
- ▣ Healthcare (demand and supply): chs 2, 5, 6 + *Add. Mat.*
- ▣ Health insurance (demand): chs 7-11
- ▣ Pharma Industry: ch 12

□ Designing a National Healthcare system (chs 15-17)

□ Topics in Behavioural Health Economics (*if time*)

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Actors in the Health Sector → w

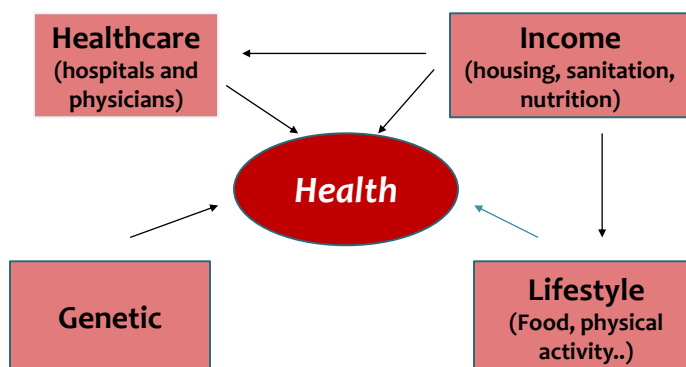


Health, healthcare and health insurance

- **What is health?** 
- **What's special about health?**
 - ▣ Uncertainty and externalities (contagious)
 - ▣ Asymmetric information and the principal-agent relationship
- **What is the relationship between health and healthcare?** 
- **What's special about healthcare?**
 - ▣ Demand is unpredictable
- **Why healthcare insurance?**
 - ▣ Uncertainty about health and healthcare needs and risk aversion → demand for insurance

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Health and healthcare



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Health and economics

- **What is economics?**
 - ▣ Economics is about trade-offs.
 - ▣ Individuals and collective choices under constraint.
- **Why health economics?**
 - ▣ Is health economics unethical?
 - ▣ Opportunity cost.
- **The economics of health**
 - ▣ Health: determinants and effects.
- **The economics of healthcare**
 - ▣ Demand and Supply.
- **The health insurance market**

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Positive vs normative questions →

- **Normative questions**
 - ▣ Does everyone deserve access to health care, even if they cannot pay?
 - ▣ Should people be compelled to purchase insurance?
 - ▣ When is it ethical to deny care to a dying patient?
 - ▣ Should the government ban certain unhealthy foods?
- **Positive questions**
 - ▣ How much would it cost to provide free checkups and drugs for everyone in a population?
 - ▣ Do strict patent protections for new drugs spur innovation?
 - ▣ How much would consumers save if doctors were not required to have medical degrees or medical licenses?
 - ▣ Would a tax on saturated fat make a nation healthier?
- Economic reasoning *cannot* answer normative questions, but it can answer positive questions, and that can help us form **opinions** about normative questions.

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Countries



<https://www.oecd.org/health/health-data.htm> and <https://k.data.worldbank.org/>

- In 2018, health expenditures as a share of GDP in the OECD was 8.8% (17% in the US); in Italy 8.7% and **in your country?**
- In the 1970 the OECD* average was 4.6% (6% in the US). In 1988 in Italy was 6.6% and **in your country?**
- In 2018, Government health expenditures as a share of GDP in OECD was 6.6% (14.3% in the US); in Italy 6.4% and **in your country?**
- In 2018, Government health expenditures as a share of current health expenditures in OECD was around 75%, in Italy 74% and **in your country?**

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Current health expenditure (% of GDP)

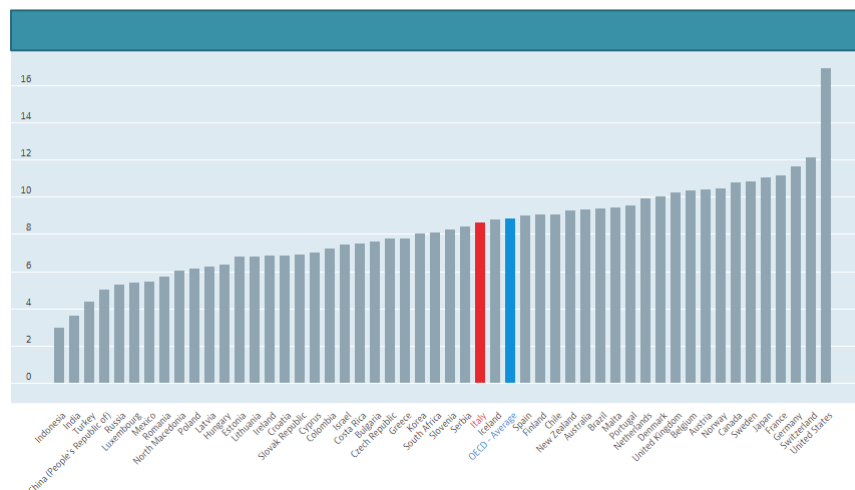
World Health Organization Global Health Expenditure database (apps.who.int/nha/database).

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Health spending Total, % of GDP, 2019 or latest available

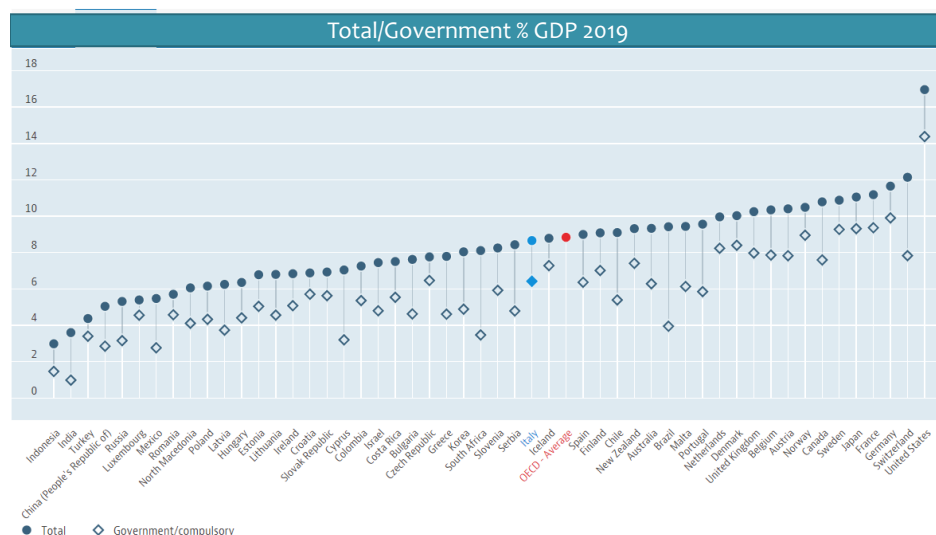
Source: Health expenditure and financing: Health expenditure indicators



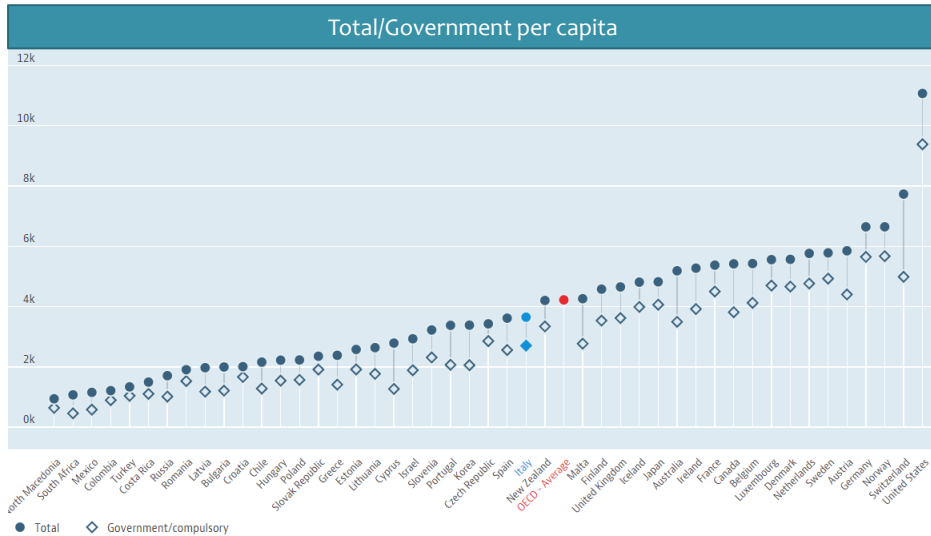
Source: OECD

Health spending Total / Government/compulsory, % of GDP, 2019 or latest available

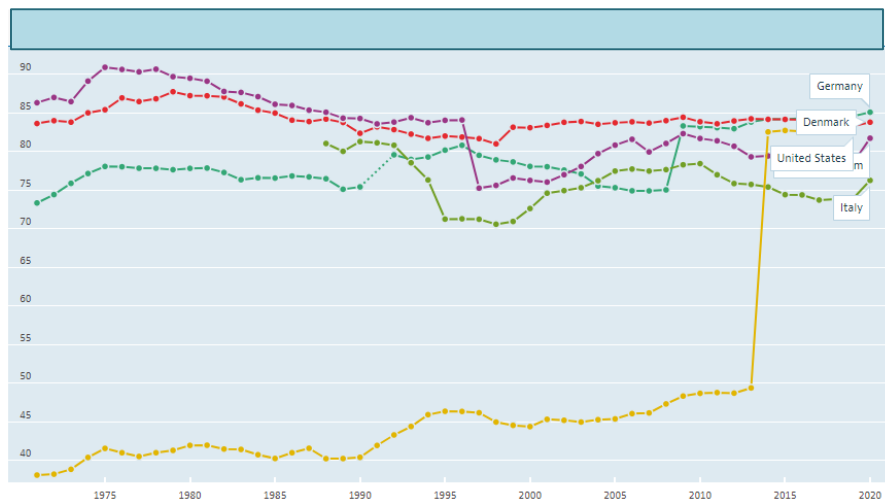
Source: Health expenditure and financing: Health expenditure indicators



● Total ◆ Government/compulsory


Health spending Government/compulsory, % of health spending, 1971 – 2020

Source: Health expenditure and financing: Health expenditure indicators

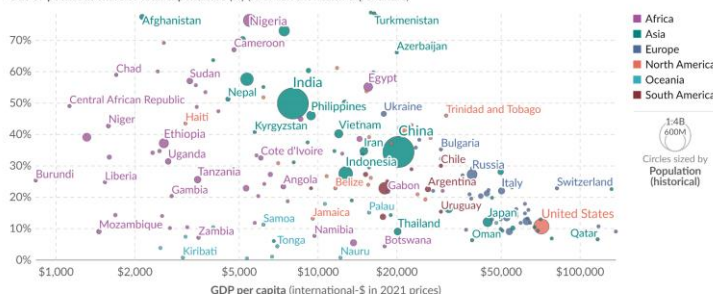


Share of out-of-pocket spending on healthcare vs. GDP per capita, 2022

Our World in Data

Out-of-pocket spending on healthcare as percent of total current healthcare expenditure vs. GDP¹ per capita, adjusted for inflation and for differences in living costs between countries.

Out-of-pocket as share of total expenditure (%) (% of current health expenditure)



Data source: World Health Organization Global Health Expenditure Database, via World Bank (2025); Eurostat, OECD, and World Bank (2025)

Note: "Out-of-pocket" spending refers to direct payments made by households to healthcare providers. GDP per capita is expressed in international-\$¹ at 2021 prices.

OurWorldinData.org/financing-healthcare | CC BY

1. **Gross domestic product** Gross domestic product (GDP) is a measure of a country's economic performance. It represents the total monetary value of all final goods and services produced within its borders over a specific time period, typically annually or quarterly. GDP includes consumption, government spending, investments, and net exports (exports minus imports). It can be measured in current prices (nominal GDP) or adjusted for inflation to reflect GDP in constant prices (real GDP). GDP is used to gauge the health of an economy, with increases indicating growth and decreases signaling contraction. Policymakers, economists, and analysts use GDP to make informed decisions, track economic trends, and make comparisons between countries.

2. **International dollars** International dollars are a hypothetical currency that is used to make meaningful comparisons of monetary indicators of living standards. Figures expressed in constant international dollars are adjusted for inflation within countries over time, and for differences in the cost of living between countries.

The goal of such adjustments is to provide a unit whose purchasing power is held fixed over time and across countries, such that one international dollar can buy the same quantity and quality of goods and services no matter where or when it is spent. Read more in our article: [What are international dollars?](#)

Healthcare Spending

- How is healthcare financed? How much do we spend on it? What are the returns?
- <https://ourworldindata.org/financing-healthcare>

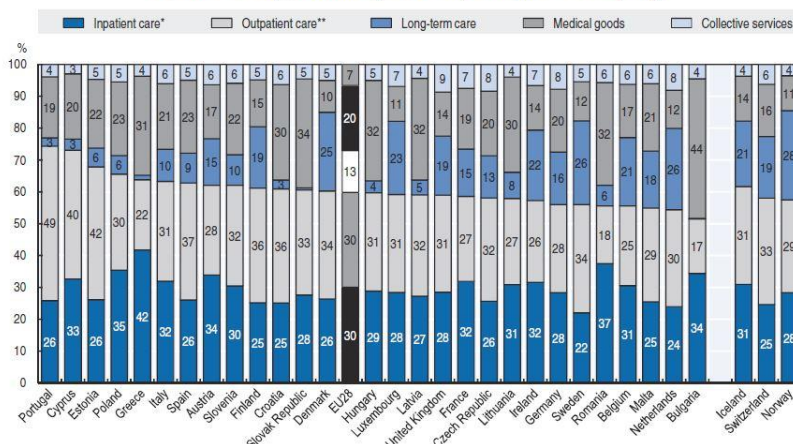
<https://data.oecd.org/healthres/health-spending.htm#indicator-chart>



- Health Spending, Total / Government/compulsory / Out-of-pocket, % of GDP, 2021 or latest available
- <https://data.oecd.org/chart/6Onc>
- Health Spending, Total, % of GDP, 1988 – 2021
- <https://data.oecd.org/chart/6OwD>
- Pharmaceutical spending Total, % of health spending, 2021 or latest available
- <https://data.oecd.org/chart/6Onf>
- Pharmaceutical spending Total, % of health spending, 1970 – 2021
- <https://data.oecd.org/chart/6Ong>

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5.6. Health expenditure by function, 2016 (or nearest year)



* Refers to curative-rehabilitative care in inpatient and day care settings.

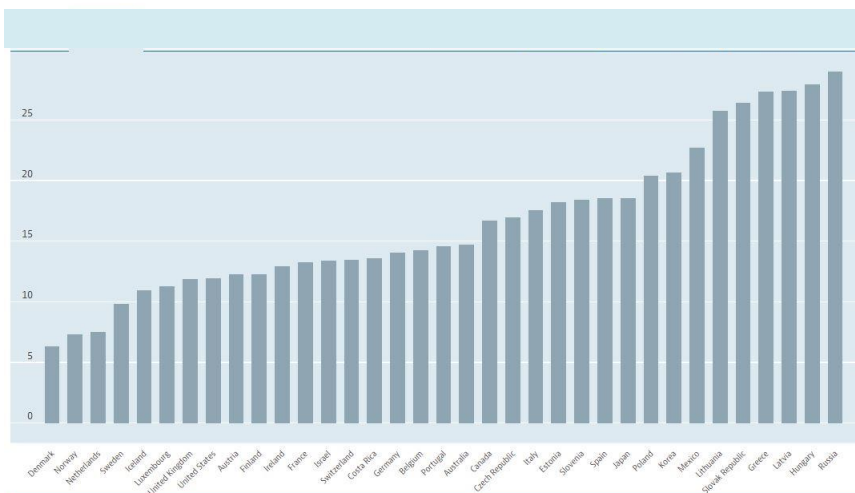
** Includes home care and ancillary services.

Note: Countries are ranked by the sum of inpatient and outpatient care as a share of current health expenditure.

Source: OECD Health Statistics 2018, <https://doi.org/10.1787/health-data-en>; Eurostat Database.

StatLink <http://dx.doi.org/10.1787/888933835440>

Pharmaceutical spending Total, % of health spending, 2018 or latest available Source: Health expenditure and financing: Health expenditure indicators



Health expenditures



- Expenditure % PIL
- Expenditure per-capita
- Composition of health expenditures
- Financing: public vs private
 - Share of public expenditure and provision

Does more **Health Spending** result in better **Health Outcomes**?

Health outcomes

- System level
 - ▣ E.g. longevity
- Disease level
 - ▣ E.g. survival rates for specific cancers
- Sub-sector level
 - ▣ E.g. number of hospital dispatches

Individuals (next week)

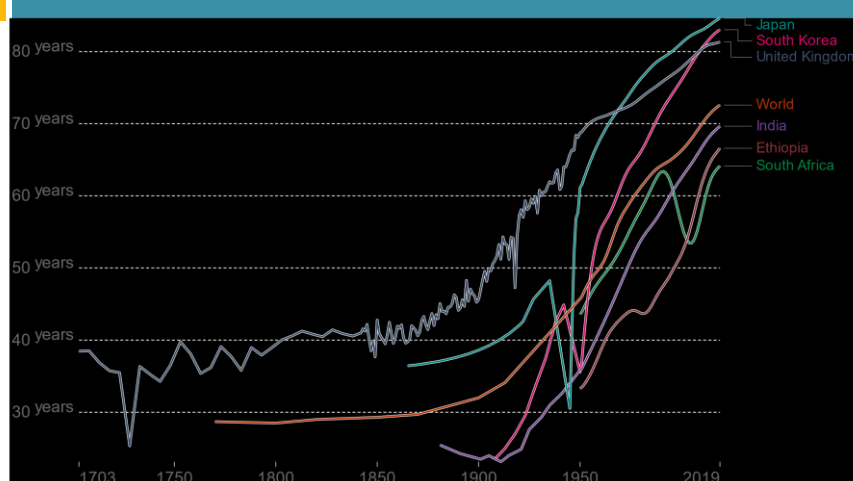
- Two famous (randomised experiments): RAND HIE and OREGON
- The results of the two random experiments suggest that healthcare demand is price-sensitive, but more healthcare not always translates into better health.

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Countries

Life expectancy, 1703 to 2019

Our World
in Data



Source: Riley (2005), Clio Infra (2015), and UN Population Division (2019)

Note: Shown is period life expectancy at birth, the average number of years a newborn would live if the pattern of mortality in the given year were to stay the same throughout its life.

OurWorldInData.org/life-expectancy • CC BY

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<https://data.oecd.org/healthstat/life-expectancy-at-birth.htm#indicator-chart>



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- Life expectancy at birth Men / Total / Women, Years, 2021 or latest available
- <https://data.oecd.org/chart/6Onk>
- Potential years of life lost Total, Per 100 000 inhabitants aged 0-69, 2020 or latest available
- <https://data.oecd.org/chart/6Onl>
- Deaths from cancer Total, Per 100 000 persons, 2020 or latest available
- <https://data.oecd.org/chart/6Onm>
- Alcohol consumption Total, Litres/capita (aged 15 and over), 2021 or latest available
- <https://data.oecd.org/chart/6Ono>

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Healthy life expectancy vs. health expenditure per capita, 2014

Healthy life expectancy, defined as the average number of years lived free from disability or disease burden, versus average per capita health expenditure measured in 2011 international-\$.
Our World in Data



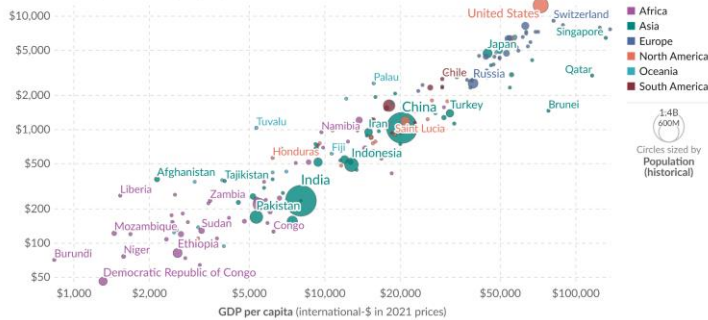
Source: IHME (2017), World Bank – WDI

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Healthcare spending vs. GDP per capita, 2022

Current healthcare expenditure per capita is adjusted for differences in living costs between countries but not for inflation. GDP¹ per capita is adjusted for inflation and differences in living costs between countries.

Current health expenditure per capita (int-\$) (current international \$)



Data source: World Health Organization Global Health Expenditure Database, via World Bank (2025); Eurostat, OECD, and World Bank (2025)

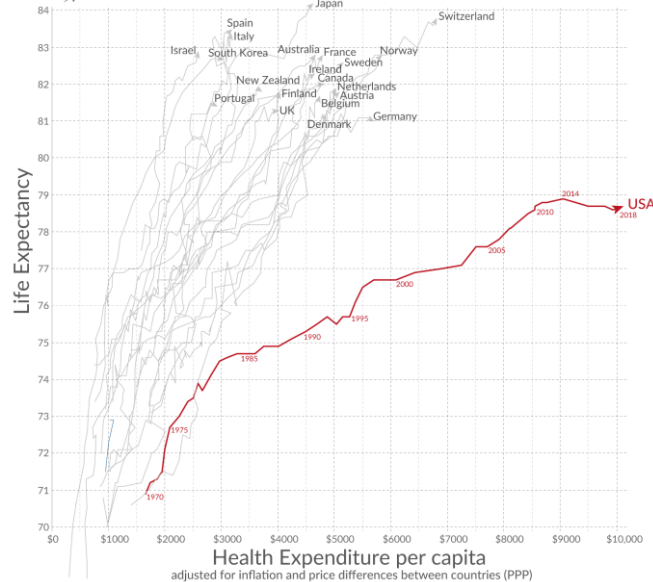
Note: GDP per capita is expressed in international-\$² at 2021 prices.

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- Gross domestic product** Gross domestic product (GDP) is a measure of a country's economic performance. It represents the total monetary value of all final goods and services produced within its borders over a specific time period, typically annually or quarterly. GDP includes consumption, government spending, investments, and net exports (exports minus imports). It can be measured in current prices (nominal GDP) or adjusted for inflation to reflect GDP in constant prices (real GDP). GDP is used to gauge the health of an economy, with increases indicating growth and decreases signaling contraction. Policymakers, economists, and analysts use GDP to make informed decisions, track economic trends, and make comparisons between countries.
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Life expectancy vs. health expenditure

From 1970 to 2018



Data source: OECD — Note: Health spending measures the consumption of health care goods and services, including personal health care (curative care, rehabilitative care, long-term care, ancillary services, and medical goods) and collective services (prevention and public health services as well as health administration), but excluding spending on investments. Licensed under CC-BY by the author Max Roser.

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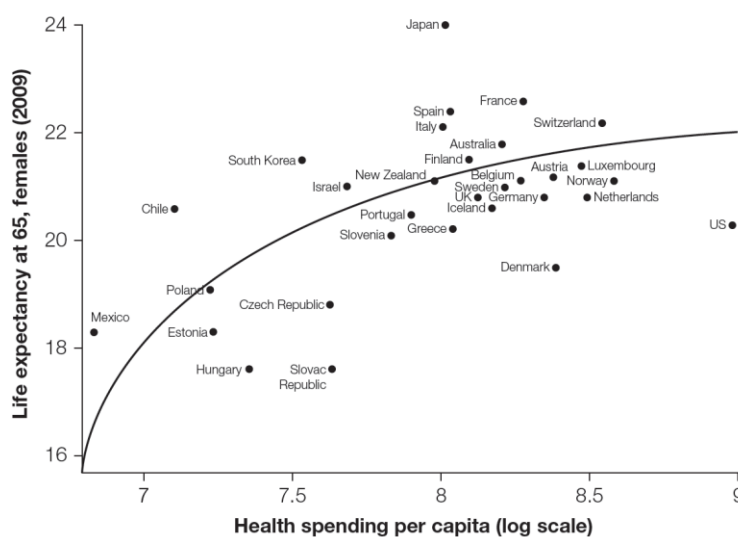
Why is life expectancy in the US lower than in other rich countries?

- Americans have a lower life expectancy than people in other rich countries despite paying much more for healthcare. What factors may explain this?
- ▣ <https://ourworldindata.org/us-life-expectancy-low>

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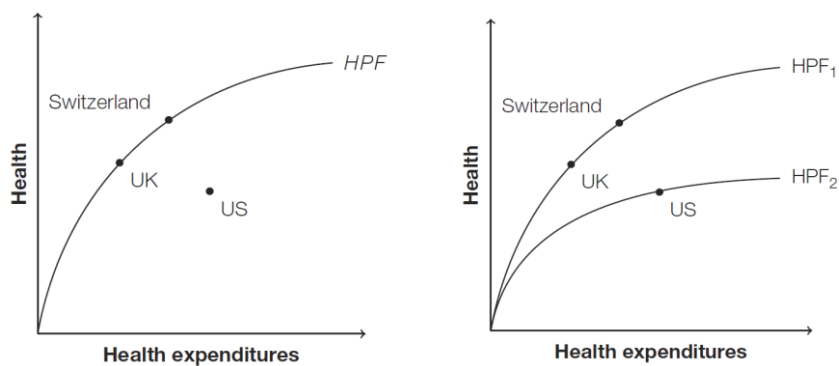


Life expectancy and health spending



Bhattacharya, Hyde and Tu (2014)

Differing inherent levels of health



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