# **Health Economics and Policy**

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

- □ Timetable: Tuesday to Thursday 12-2pm. Room 1D (6^floor)
- □ Class attendance and assignments (group and individual)
- □ <u>Course material</u> elearning **course id 12259** (selfenrolment at <a href="https://elearning.uniroma1.it/enrol/index.php?id=12259&lang=en">https://elearning.uniroma1.it/enrol/index.php?id=12259&lang=en</a>)
- 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 partecipation, Assignments and Presentation (40%)
  - Oral Exam (60%)
- □ Exam2 (Summer and Fall + non-attending students)
  - Written Exam (40%): questions and analytical problems
  - Oral Exam (60%)

#### 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

#### Plan of the course

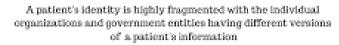
- Introduction
  - Health Economics
  - Health Policy: Market failures and Welfare Economics (notes + parts of chs 20, 22)
- □ Health determinants and socioeconomic disparities chs 3-4
- The Health Sector
  - Healthcare (demand and supply): chs 2, 5, 6 + Add. Mat.
  - Health insurance (demand): chs 7-11
  - □ 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

















Pharmacontical Communics

Clinical Laboratories



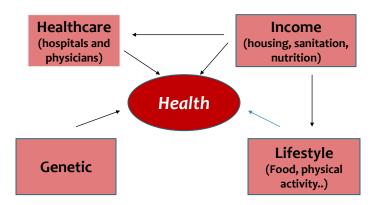
## Health, healthcare and health insurance

- What is health? w
- 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**





#### **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 → w

#### 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

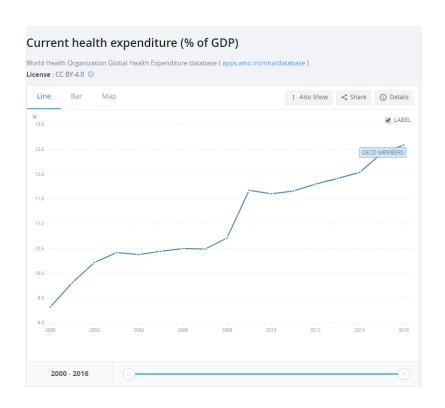
- How much would it cost to provide free checkups and drugs for everyone in a population?
- Do strict patent protections for new drugs spur innovation?
- How much would consumers save if doctors were not required to have medical degrees or medical licenses?
- Would a tax on saturated fat make a nation healthier?
- Economic reasoning cannot answer normative questions, but it can answer positive questions, and that can help us form **opinions** about normative questions.

#### **Countries**



https://www.oecd.org/health/health-data.htm and https://k.data.worldbanorg/

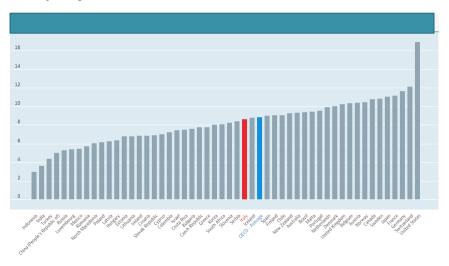
- In 2018, health expenditures as a share of GDP in the OECD was 8.8% (17% in the US); in Italy 8.7% and in your country?
- In the 1970 the OECD\* average was 4.6% (6% in the US). In 1988 in Italy was 6.6% and in your country?
- In 2018, Government health expenditures as a share of GDP in OECD was 6.6%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





 $Health\ spending\ \ {\tt Total}, {\tt \%\ of\ GDP,\ 2019\ or\ latest\ available}$ 

Source: Health expenditure and financing: Health expenditure indicators

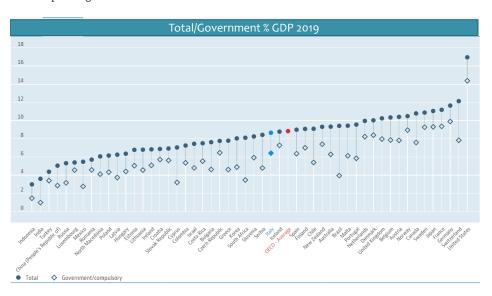


Source: OECD

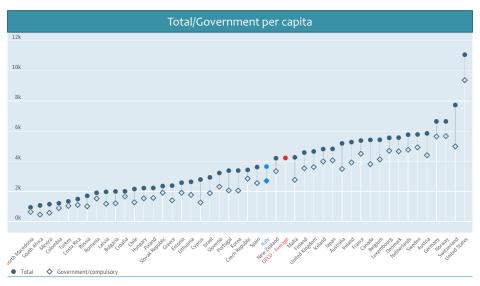


 $Health\ spending\ \ {\it Total\ /\ Government/compulsory}, \%\ of\ {\it GDP,\ 2019\ or\ latest\ available}$ 

Source: Health expenditure and financing: Health expenditure indicator



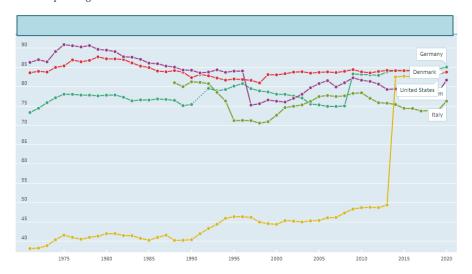


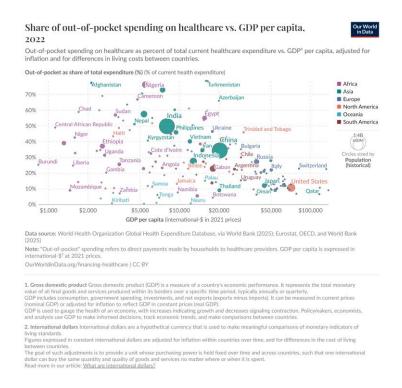




 $Health\ spending\ \ {\it Government/compulsory, \% of health spending, 1971-2020}$ 

Source: Health expenditure and financing: Health expenditure indicators





# **Healthcare Spending**

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

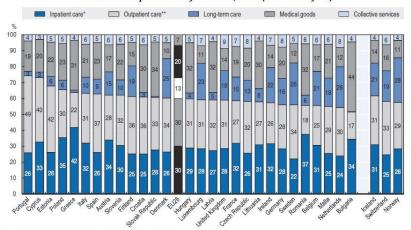


## https://data.oecd.org/healthres/healthspending.htm#indicator-chart

- 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.

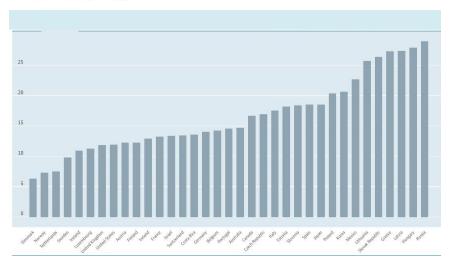
\*\* Includes home care and ancillary services.

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





# **Health expenditures**



- Expenditure % PIL
- Expenditure per-capita
- Composition of health expenditures
- Financing: pubblic 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)

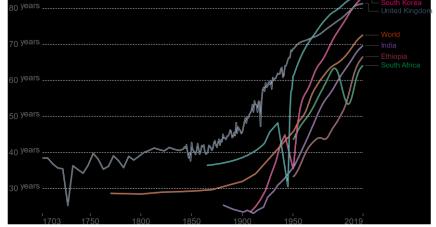
- □ Two famous (randomised experiments): RAND HIE and OREGON
- □ The results of the two random experiments suggest that healthcare demand is price-sensitive, but more healthcare not always translates into better health.

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# **Countries**







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

OurWorldInData.org/life-expectancy • CC BY 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.

## https://data.oecd.org/healthstat/lifeexpectancy-at-birth.htm#indicator-chart



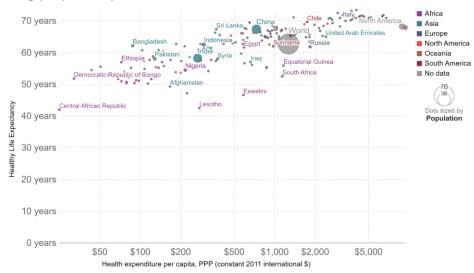
- Life expectancy at birth Men / Total / Women, Years, 2021 or latest available
- https://data.oecd.org/chart/6Onk
- Potential years of life lost Total, Per 100 000 inhabitants aged 0-69, 2020 or latest available
- https://data.oecd.org/chart/6Onl
- Deaths from cancer Total, Per 100 000 persons, 2020 or latest available
- https://data.oecd.org/chart/60nm
- 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

Our World in Data

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-\$.



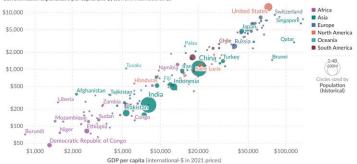
Source: IHME (2017), World Bank - WDI

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Current healthcare expenditure per capita is adjusted for differences in living costs between countries but not for inflation. GDP<sup>1</sup> 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

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

OurWorldinData.org/financing-healthcare | CC BY

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?

### Life expectancy vs. health expenditure Our World in Data From 1970 to 2018 South Korea Australia France UK Expectancy 73 \$0 \$1000 \$5000 \$6000 \$7000 \$8000 Health Expenditure per capita adjusted for inflation and price differences between countries (PPP)

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.

Shown is total health expenditure (financed by public and private sources). Licensed under CC-BY by the author Max Roser.

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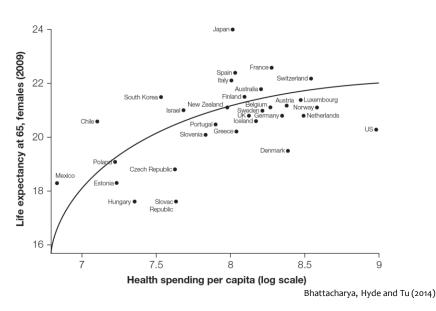
# Why is life expectancy in the US lower than in other rich countries?

- 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





# **Differing inherent levels of health**

