Week 1: Introduction to Health Economics

HPM 6503
Spring 2026
Nada Boualam, PhD

Week 1: Outline

- Teaching team introductions
- Course overview
- Course policies
- Break
- Today's material
  - I - What is health economics?
  - II - Why **health** economics?
  - III - Opportunity cost & scarcity
  - IV - Thinking on the margin
  - V - Rational thinking

Teaching Team Introductions

Instructor: Nada Boualam, PhD

- Adjunct Professor, Columbia Mailman SPH
- Full time work at Flatiron Health as an Associate Research Scientist
- PhD in Health Economics (pharmaceutical policy focus)
- Talk to me about: pharma/biotech, causal inference in industry work, HEOR

TAs: Julia, Salome (Sally), Devon

- If your last name starts with A-H, your lead TA is Julia
- If your last name starts with I-P, your lead TA is Salome (Sally)
- If your last name starts with R-Z, your lead TA is Devon

Course Overview

At the end of the course, you should be able to use economic theory and analysis to identify, understand, assess, anticipate and respond to developments in the healthcare marketplace.

→ Learn to think about health using a microeconomic framework.

What classes have you taken?

Course Policies

Readings: posted in modules ~1 week prior to class

Slides: uploaded after class

Problem Sets: there will be 5 problem sets throughout the semester to help you master the material. Your top 4 grades will be averaged, worth 5% each

Exams: there will be 2 midterms and a final exam, worth 25% each

Attendance: Participate in class, & check in using the quizzes on the slides, 5%

Course Policies

Course evaluations: Please use course evaluations to help us improve the course, & come to use with any questions / comments / concerns throughout the semester

Review Sessions: there will be at least one TA-led review session prior to each exam

Late Assignments: Problem Sets will be assigned after class and due at 5pm the following Wednesday. No problem set will be accepted after 5pm.

Office hours: Before or after class, or by appointment on Zoom

Which office hours work best for you? Choose one per TA.

Break

Material for today's class

I - What is health economics?

II - Why **health** economics?

III - Opportunity cost & scarcity

IV - Thinking on the margin

V - Rational thinking

I. What is health economics?

[Economics]
Economics is the study of scarcity, of how people use resources and respond to incentives, and of decision-making. [AEA]

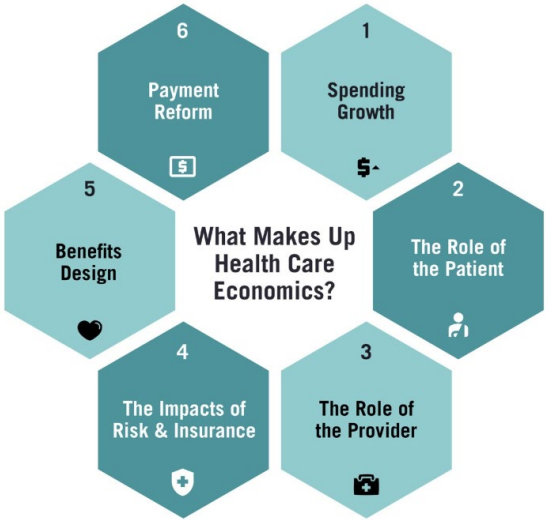
- Broad discipline that helps us understand historical trends, interpret today's headlines, and make predictions about the coming years.

Branches of economics:

- Microeconomics focuses on individual stakeholders (individuals, firms)
- Macroeconomics focuses on the economy as a whole
- Econometrics focuses on the statistical toolkit needed to study economics questions.

What is health economics?

[Health Economics]
Application of economic theory and methods to health and healthcare questions. HE seeks to understand the role that individuals, health care providers, insurers, government agencies, and public and private organizations play in driving these costs. [HBS]



II. Why health economics?

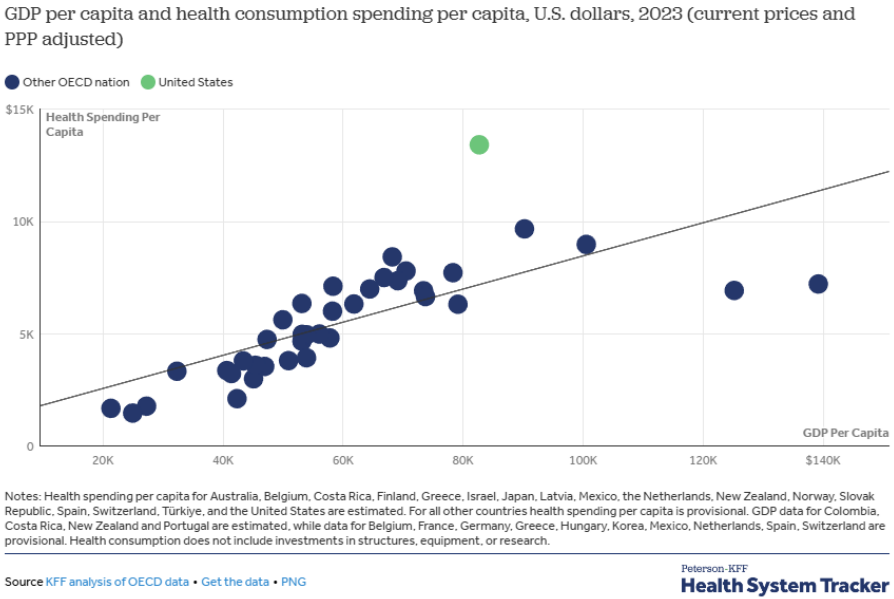
Unique setting due to a combination of factors:

1. **Derived Demand** → Demand is really for health
2. **Insurance** → prices are not directly felt by consumers, about half of healthcare spending was paid for out of pocket (cms.gov)
3. **Uncertainty** → diagnosis is not always accurate, the "right" treatment may not work, provider quality
4. **Asymmetric information** → physicians-patients, patient-employer-insurance relationships
5. **Government involvement** → education funding, pharmaceutical development, insurance subsidies, drug oversight, provider licensure
6. **Externalities** → positive or negative (e.g. infectious disease transmission)
7. **Non-profit firms** → many hospitals are non profit
8. **Equity** → health as a "right" not a luxury (positive vs. normative analyses)

Insurance Primer: Physicians order, Insurance pays, Patient eats

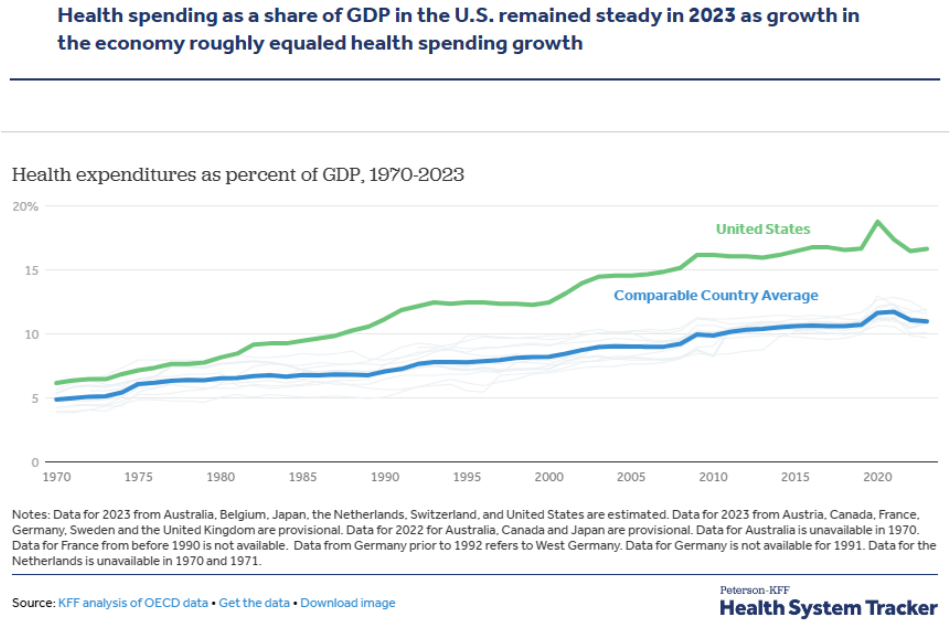
Why health economics?

- US healthcare spending reached 5.3 Trillion USD (18% of GDP) in 2024 (cms.gov)
- Per capita spending was over $13,000 per year in 2023



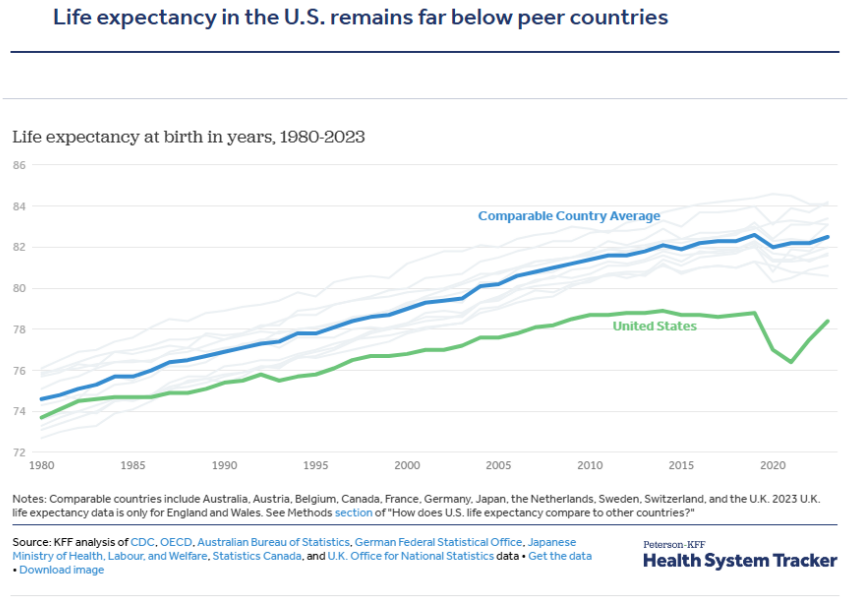
So, was it worth it?

- Investments in early development of new drugs, devices, treatments
- Higher health spending in the US than comparable countries (GDP-wise)



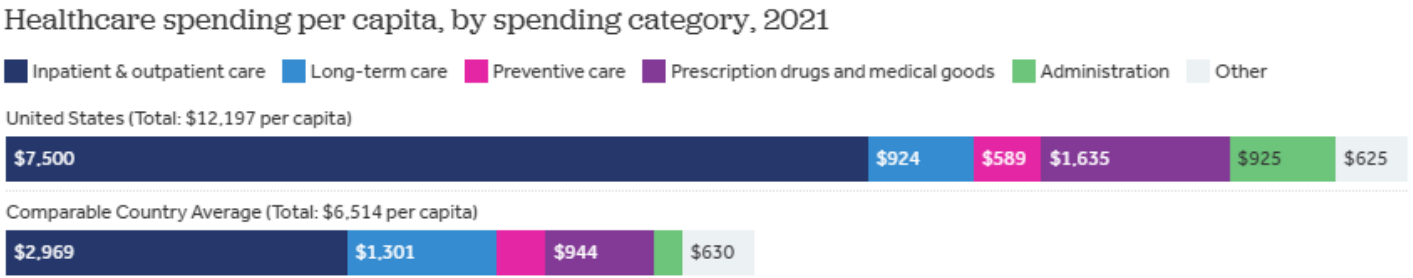
So, was it worth it?

- Lower life expectancy, higher child mortality in the US vs. comparable country (~192 vs 71 per 100,000), higher maternal mortality



What's the money spent on anyway?

The U.S. spends twice as much as comparable countries do on health, driven mostly by higher payments to hospitals and physicians.



Note: Comparable countries include Austria, Belgium, Canada, France, Germany, the Netherlands, Sweden, Switzerland, and the United Kingdom. Australia and Japan are excluded due to lack of 2021 data.

Source: KFF analysis of OECD Health Statistics • Get the data • PNG

Peterson-KFF
Health System Tracker

Attendance Question: How much do Americans spend per capita on healthcare approximately?

III. Opportunity cost & scarcity

Avastin: expensive cancer drug made by Genentech in the US, prescribed with chemotherapy for metastatic colorectal cancer.

Cost: 70,000 USD per 2-3 week course of treatment
Benefit: additional ~ 10 weeks in overall survival

Should medicare cover it?
Should taxpayers pay for it?
What are taxpayers not getting if they pay for this?
Where do we draw the line? What if the drug cost $200,000?

III. Opportunity cost & scarcity

Sovaldi: expensive drug made by Gilead in the US, prescribed for the cure of hepatitis C.

Cost: 90,000 USD per treatment
Benefit: cure, no need for continuous treatment

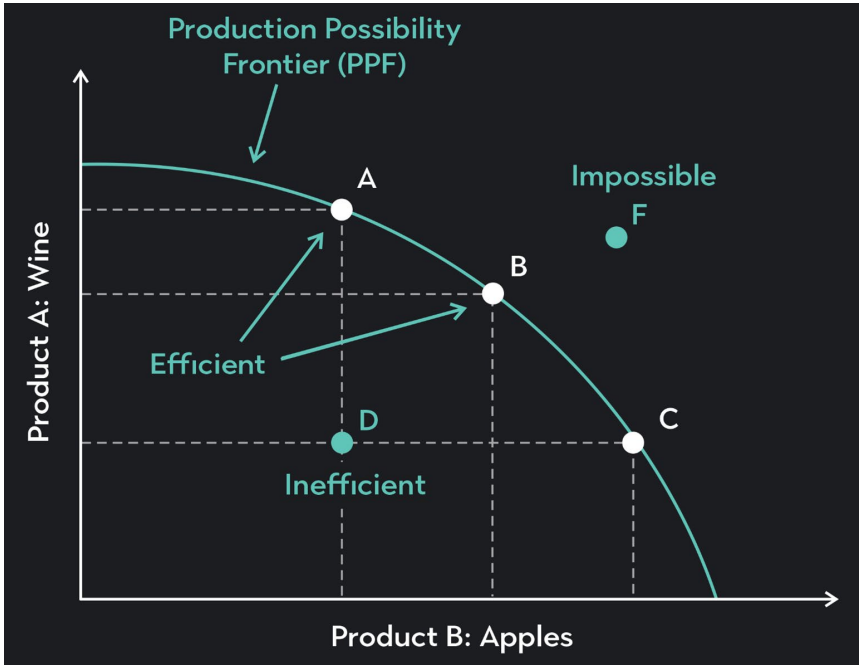
Should insurance cover it?
Should taxpayers pay for it?
What are taxpayers not getting if they pay for this?
Where do we draw the line? What if the drug cost $200,000?

III. Opportunity cost & scarcity

Opportunity cost is the value of the best alternative that must be forgone when the action is taken.

- Cost can be price
- … but encompasses all value
- “No free lunch”

PPF is a formalization of opportunity cost.



III. Opportunity cost & scarcity

Talk to your neighbor: What was the opportunity cost of your degree?

IV. Thinking on the margin

“What does the additional increase in consumption mean for the cost”?

→ Will your 4th friend fit in the uber?
→ 3rd kid → 2 taxi vs. 1 taxi family
→ extra 30 min of studying vs. going to sleep

V. Rational thinking

We assume that individuals abide by the following principles when making decisions:

- Completeness: there is always a preference
- Transitivity: A>B, B>C → A>C
- Responding to Incentives: allocation of resources follows value maximization
- No Requirement of Perfect Information
- Room for Mistakes, but mistakes don’t dominate behavior

Closing thoughts: not all economists see things the same way

They may have disagreements on underlying values

They may have disagreements on assumptions

They may have disagreements on interpretation of findings and scientific judgments

→ They use the same frameworks, but may not get to the same conclusions

The goal of this class is to teach you how to think rigorously about health using a microeconomic framework.

Next week

The demand for health care

Readings will be uploaded to canvas after class today

Problem set 1 will be assigned next week