

## Syllabus

### Spring 2019

### Course description

In this course, we will apply the tools of economic analysis to study how medical care is produced and financed, in both the private and public sectors. Our emphasis will be on the United States, with a brief treatment of health systems in other developed and less developed countries.

The course includes three modules. In the first module, we will use economics to evaluate why the health care market is different from conventional markets. We will examine consumer demand for health and health care, discuss why health insurance exists, and learn how economists and insurers evaluate the costs and benefits of new medical technologies. In the second module, we will apply these economic tools to analyze key health care market players, including insurers, hospitals, physician organizations, pharmaceutical manufacturers, and government agencies. We will identify the important challenges each player faces through discussion of case studies and empirical research in health economics. Finally, in the third module, we will discuss contemporary issues in health care policy, including US health care reform.

### Prerequisites

You are expected to be comfortable with basic algebra and statistics. We will also draw on economics concepts from the Firms and Markets core economics course (or equivalent economics preparation).

### Lectures

Tuesdays, 6pm-9pm, in KMC 3-60

### Teaching Fellow

Tony Zou, [anthony.zou@stern.nyu.edu](mailto:anthony.zou@stern.nyu.edu)

### Course materials

- *Readings.* There is one recommended text: *Health Economics*, by Bhattacharya, Hyde, and Tu, Palgrave Macmillan, 2013. (BHT). There is also a course packet of case studies available through the NYU bookstore platform. All other required readings will be posted on NYU Classes.

- *Lecture Notes.* I will post the lecture slides on NYU Classes after each class, but keep in mind that the slides are not a complete record of all that is discussed in class. I recommend that you take notes during the class as a supplement to the slides.
- *Additional materials.* I will occasionally post additional materials on NYU Classes. This will include some useful materials for the group presentations, and potentially other newspaper articles or research papers that might be interesting and/or relevant.

## Deliverables and grades

The various “deliverables” in the course are designed to develop different skills:

- *Class participation.* It is important to integrate what you learn and be able to express it effectively. Moreover, there is a great deal of collective insight and experience in the class and we all benefit from sharing it. But the *quality* of your contributions is more important than the *quantity*. Your consistent attendance, punctuality, and overall citizenship in class are all also relevant dimensions of your participation performance.
- *Case write-ups.* We will discuss four cases over the course of the semester. In weeks in which we discuss a case, you will be asked to submit a written response to a set of discussion questions. The discussion questions may require calculation—for example, in Module 1 we’ll quantitatively assess the value of a new medical innovation. Your responses should be short—two pages at maximum--and are due electronically before the start of class.
- *Midterm.* There will be one in-class, open-book midterm exam at the end of Module 1.
- *Group project.* There will be one group project. The goal of this exercise is to use the concepts discussed in this course to think critically about how to improve healthcare delivery and to produce a tangible, final product that can be used to demonstrate to future employers how you approach real-world healthcare problems.

We will discuss the format of the group project in more detail in class. Broadly, the project will involve developing a specific proposal for making healthcare delivery more efficient. Past proposals have included: product/process innovations, a new pharmaceutical pricing policy, specific mergers between hospitals and physician group practices, and new incentive schemes to motivate physicians in a large group practice.

Every group will be asked to make a presentation to the class on the topic of the group project. The goal is to apply economic analysis to real-world situations and to hone your communication skills.

Your grade for the course will be based on your contributions to these deliverables, weighted as follows:

Class participation	20%
Case write-ups	25%
Midterm exam	25%
Group project/presentation	30%

## **Exams and re-grading**

You are responsible for checking the exam date to avoid any conflict with other commitments. Exams will not be re-administered on other dates. During an in-class exam, you are allowed to consult class notes, books, or any other material. Questions about grading must be made in writing and no more than a week after the exams are returned.

## **Honor code**

The Stern community believes that honesty and integrity are necessary for rewarding academic and professional experiences. These qualities form the basis for the strong trust among members of the academic community (students, faculty, and administrators) that is essential for excellence in education. The Honor Code requires that each student act with integrity in all academic activities and endeavor to hold his or her peers to the same standard.

In this course, you may discuss assignments with anyone, but any written work submitted for a grade should be your own. On exams, your answers should be entirely your own work.

## **Students with disabilities**

If you have a qualified disability and will require academic accommodation during this course, please contact the Moses Center for Students with Disabilities (CSD, 998-4980) and provide me with a letter from them verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the CSD, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation.

## **Getting help**

I would like each of you to learn and gain as much as you can from this course. If you are stuck, or have any difficulty with the material, please stop in to office hours or send me an email ([michael.dickstein@nyu.edu](mailto:michael.dickstein@nyu.edu)), and I will try my best to respond promptly. My regular office hours are from 1:30-3:00pm every Thursday and by appointment. Tony Zou, our teaching fellow, is also available by email ([anthony.zou@stern.nyu.edu](mailto:anthony.zou@stern.nyu.edu)) and by appointment.

All announcements regarding the course will be made on NYU Classes. Besides administrative issues, I may post clarifications on the class material. You are responsible for checking NYU Classes for announcements on a regular basis (i.e., at least a couple of times a week).

## List of Topics

### Module 1: Economics of Medical Care

1. Introduction
  - a. Are health care markets unique? An economist's view.
2. Health demand and health production
  - a. Demand for health care
  - b. Technological change and the value of innovation
3. Health insurance
  - a. Health insurance provision and moral hazard
  - b. Information asymmetries and classification risk

### Module 2: Health Care Delivery

4. Payers
  - a. Medicare, Medicaid, Private Insurers
  - b. International Comparison
5. Health Care Supply
  - a. Physicians and the medical work force
  - b. Hospitals, surgery centers, urgent care
  - c. Accountable care organizations and group practices
  - d. Pharmaceuticals

### Module 3: Topics in Health Care Policy

6. Information and Quality in Health Care
  - a. Physician report cards and quality scores
  - b. Defensive medicine and malpractice risk
  - c. Price transparency
7. Options for reform and the Affordable Care Act (ACA)
  - a. Provisions of the ACA
  - b. Early experience of enrollees and insurers in ACA marketplaces

**Schedule**  
**(Required readings appear with an asterisk below)**

**Module 1: Economics of Medical Care**

Week 1: Feb 12 – Introduction and Demand for Medical Care

Are health care markets unique? An economist's view  
Demand for medical care

Discussion Questions:

- What makes health care markets distinct from other markets?
- How does the amount of medical care demanded respond to changes in the price of medical care? What factors influence pricing in healthcare markets?
- Describe the key findings of the RAND health insurance experiment. How might private insurers/public payers use this experimental evidence to forecast the costs of covering enrollees' health expenditures?

Readings:

- \*Background: BHT, Ch. 1-2
- \*Aron-Dine, Aviva, Liran Einav and Amy Finkelstein, "The RAND Health Insurance Experiment, Three Decades Later," *Journal of Economic Perspectives*, 2013. Read only 197 to middle of page 208.
- D. Cutler, *Your Money or Your Life*, Chapter 2: "Pricing the Priceless"
- Garber and Skinner (2008) "Is American Health Care Uniquely Inefficient?" *Journal of Economic Perspectives* 22(4): 27-50.
- Rand Experiment Summary:  
[http://www.rand.org/pubs/research\\_briefs/RB9174/index1.html](http://www.rand.org/pubs/research_briefs/RB9174/index1.html)

Week 2: Feb 19 – Health and Technological change

Valuing health  
Technological change and its contribution to health and costs  
Case study 1: "Medicare and Drug-eluting Stents"

Discussion Questions:

- Is too much money spent on healthcare? How do you expect health care cost growth to change in the future? Will it accelerate/decelerate/remains the same?
- How do we use cost effectiveness analysis to value the benefits against the costs of a medical treatment? Of the inputs into cost effectiveness analysis, are some easier to collect, easier to manipulate?
- What is the economic rationale for covering drug eluting stents within Medicare?

Readings:

- \*Background: BHT, Ch. 14
- \*Case: Medicare And Drug Eluting Stents, HBS Case #905M53-PDF-ENG
- Gawande, Atul. "The Cost Conundrum." *The New Yorker*. Conde Nast, 1 June 2009. Web.  
<http://www.newyorker.com/magazine/2009/06/01/the-cost-conundrum>.
- Cutler, D. and M. McClellan. "Is Technological Change Worth It?" *Health Affairs* Sept/Oct. 2001.

### Week 3: Feb 26 – Health Insurance

Insurance preliminaries: risk aversion and moral hazard

Health insurance provision in the US

Health plan design

Discussion Questions:

- You are an employer. You can, (a) offer your employees a single generous health plan, (b) offer your employees a choice between a more and less generous health plan, or (c) offer your employees a choice between many plans with different levels of generosity, some of which include savings accounts. Which do you do and why? Use the findings of the Oregon Health Insurance Experiment and the RAND experiment as support for your conclusions.
- Oregon Experiment: What do you think explains the results on health care usage and health outcomes under the Medicaid expansion? For example, why do you think ER visits increased? Use evidence where possible to support your arguments.
- Oregon Experiment: How did the experiment operate in Oregon? Are you more confident in the findings relative to prior studies (observational or experimental) that focused on health insurance expansions? Explain.

Readings:

- \*Background: BHT, Ch. 7.1-7.4, 11.1-11.3
- \*Expanding Health Insurance to Millions: Learning from the Oregon Health Insurance Experiment
- M. Gladwell, “The Moral Hazard Myth.” *The New Yorker*, August 29, 2005.
- Finkelstein, Amy et al., “The Oregon Health Insurance Experiment: Evidence from the First Year,” *Quarterly Journal of Economics*, 2012.
- Taubman, Sarah L., et al. "Medicaid increases emergency-department use: evidence from Oregon's Health Insurance Experiment." *Science* 343.6168 (2014): 263-268.

### Week 4: March 5–Health Insurance (continued)

Adverse selection and classification risk

Understanding the ‘death spiral’: theory and evidence

Experiment: Selecting a health insurance plan

Discussion Questions:

- Describe the market for ‘Lemons’ problem. Is this a phenomenon unique to health insurance? What are some examples of markets subject to adverse selection?
- How might the presence of adverse selection and classification risk affect managers’ decisions on insurance plan premiums? On the characteristics of plans they offer to consumers?

Readings:

- \*Background: BHT Chapter 8.1-8.3, 10.2-10.5
- Akerlof (1970) “The Market for “Lemons”: Quality Uncertainty and the Market Mechanism,” *Quarterly Journal of Economics*, 84(3): 488-500.
- Cutler, David M., and Richard J. Zeckhauser. "Adverse Selection in Health Insurance." *Forum for Health Economics & Policy*. Vol. 1. No. 1. De Gruyter, 1998.

Week 5: March 12 – Midterm/The US Model

Midterm exam (1 hour 30 min)

Policy discussion: Latest news in health insurance reform

Discussion Questions:

- Discuss the trade-offs from designing a market where insurance is provided alternately by employers, private insurers outside of the employment relationship, or by the government.

Spring Break – March 18-22

**Module 2: Health Care Delivery**

Week 6: March 26 – International Comparison

[Group project feedback]

Health insurance in the United States

Health insurance abroad: Bismarckian and Beveridgian systems

Discussion Questions:

- How do Bismarckian and Beveridgian systems compare to the US model? In what ways are each more/less successful? Evaluate the performance of alternative systems on measures including spending in the health economy, health outcomes for consumers, administrative costs/burdens, etc.

Readings:

- \*BHT, Ch. 16-17, skim
- Frank, Richard G., and Richard J. Zeckhauser, “Health Insurance Exchanges: Making the Markets Work”, New England Journal of Medicine, 2009, 361, 1135-1137

Week 7: April 2 – Hospitals

Hospital competition

New delivery methods: ambulatory surgery centers, specialty hospitals

Guest Lecture:

Mary Enquist, Assistant VP, Strategy, Planning, and Business Development

Karim Habibi, Senior VP, Managed Care and Payment Reform

NYU Langone Health

Case Study 2: Dartmouth Hitchcock Medical Center

Discussion Questions:

- How might the entry of specialty hospitals and ambulatory surgery centers affect the profitability of traditional acute care hospitals, or affect spending in the health economy?
- Consider the Spine Care program at Dartmouth Hitchcock Medical Center. How does the program create value for patients?
- Consider the Spine Care program at Dartmouth Hitchcock Medical Center. Can this model be used beyond spine care? Which clinical areas would benefit most from such a model? Should this model be extended to other areas of Dartmouth-Hitchcock?

Readings:

- \*Case: Dartmouth Hitchcock Medical Center: Spine Care

- \*E. Munnich and S. Parente, “Procedures Take Less Time At Ambulatory Surgery Centers, Keeping Costs Down And Ability To Meet Demand Up,” *Health Affairs*, vol. 33, no. 5, May 2014.
- BHT, Ch 6
- J. Horwitz “Making Profits And Providing Care: Comparing Nonprofit, For-Profit, And Government Hospitals” *Health Affairs*, 24, no. 3 (2005): 790-801
- “Examination of Health Care Cost Trends and Cost Drivers,” Massachusetts Attorney Generals’ Office, March 16, 2010.

#### Week 8: April 9 - Physicians

Physician training and quality

Accountable Care Organizations (ACOs) and group practices

Case study 3: “Transforming Care at Unitypoint Health—Fort Dodge”

Discussion Questions:

- Briefly describe the process for a trainee to become a practicing primary care physician or specialist. How might the requirements for licensure affect the supply of physicians, the quality of outcomes or the price of services?
- How would you design or re-design physician payment schemes to achieve the highest value outcomes in medicine? What are the relevant trade-offs?
- Unitypoint Health: Should UPFD drop out of the ACO program?

Readings:

- \*Case: Transforming Care at Unitypoint Health – Fort Dodge: 615052-Pdf-Eng
- \*[Focus on introduction only] Doyle, Joseph J., Steven M. Ewer, Todd H. Wagner, “Returns to Physician Human Capital: Analyzing Patients Randomized to Physician Teams” *Journal of Health Economics*, 2010.
- \*L. Baker, “Acquisition of MRI Equipment by Doctors Drives Up Imaging Use and Spending,” *Health Affairs*, December 2010 29(1) 2252-2259.
- N. Agarwal, “Does the medical residency match lower salaries for residents?” *Microeconomic Insights*, March 2016.
- Atul Gawande, *The Checklist Manifesto: How to Get Things Right*.

#### Week 9: April 16 – Pharmaceuticals

Research and development process, evidence on pricing

Drug adherence

Guest Speaker:

Prasun Subedi

Senior Director, Global Health and Value

Innovation Center at Pfizer

Discussion Questions:

- Describe the R&D process for new drug innovations. If a drug manufacturer hired you to advise on R&D investments, what types of innovations would you target? How might the current patent system and exclusivity rules affect your investment decisions?
- How are prices determined for pharmaceutical drugs? What role, if any, might the government play in regulating these prices?

Readings:

- \**“Follow the Pill: Understanding the U.S. Commercial Pharmaceutical Supply Chain”* Kaiser

Family Foundation

- J. Rockoff and E. Silverman, “Pharmaceutical Companies Buy Rivals’ Drugs, Then Jack Up the Prices: List prices soar on Valeant’s heart medications and other firm’s drugs, driving up costs,” Wall Street Journal, 4/26/15.
- BHT, Ch. 12

### **Module 3: Health Care Policy**

#### Week 10: April 23 - Information and quality in health care

Price transparency in health care

Defensive medicine and malpractice risk

Guest speaker:

Sunita Desai

Assistant Professor, Department of Population Health

NYU School of Medicine

Discussion Questions:

- Does offering price information impact consumer decision-making and spending in health care? What other strategies do payers use to encourage consumerism in health care? What do we know about how those strategies impact spending, provider choice, and health?
- How much does malpractice concern or “defensive medicine” explain the patterns of health care spending and utilization?

Readings:

- \*Mehrotra, A., Chernew, M. E., & Sinaiko, A. D. (2018). The Promise and Reality of Price Transparency, *New England Journal of Medicine*, 378(14), 1348-1353.
- \*Sinaiko, A. D., Mehrotra, A., & Sood, N. (2016). Cost-sharing obligations, high-deductible health plan growth, and shopping for health care: enrollees with skin in the game. *JAMA internal medicine*, 176(3), 395-397
- \*Jena, Anupam B., Seth Seabury, Darius Lakdawalla, and Amitabh Chandra, “Malpractice Risk According to Physician Specialty,” *The New England Journal of Medicine*, 2011, 365, 629-36.
- Kessler, Daniel P., “Evaluating the Medical Malpractice System and Options for Reform,” *Journal of Economic Perspectives*, 2011, 25(2), 93-110.
- Jena, Anupam B., Lena Schoemaker, Jay Bhattacharya, and Seth A. Seabury, “Physician spending and subsequent risk of malpractice claims: observational study” *BMJ*, 2015, 351.
- Mello, Michelle M., Amitabh Chandra, Atul A. Gawande, David M. Studdert, “National Costs of the Medical Liability System” *Health Affairs*, 2010, 29 (9) 1569-1577.

#### Week 11: April 30 - The Affordable Care Act (ACA) and Health Reform

Key provisions of the ACA

Evidence: early experience of enrollees and insurers in ACA marketplaces

Case study 4: Health insurance design

Discussion Questions:

- What were the key goals of the Affordable Care Act? From the initial evidence, evaluate how well the legislation achieved its promised changes to health care access, coverage, and spending.
- What are the trade-offs in (re)designing the US health care system in 2017 and beyond? Discuss the policy considerations for public insurance and private insurance, in the individual marketplace and in employer-based coverage. How should insurers respond?

Readings:

- \*Case: Medicare reform proposal [posted on NYU Classes]
- \*L. Levitt et al., “Assessing ACA Marketplace Enrollment,” Kaiser Family Foundation.
- M. Dickstein, SIEPR policy brief on ACA participation
- B. Herman, “Centene Profiting from ACA Plans, Medicaid Expansion,” Modern Healthcare, Apr 26, 2016.
- C. Cox, “Analysis of UnitedHealth Group’s Premiums and Participation in ACA Marketplaces,” Kaiser Family Foundation
- Point/Counterpoint: “What Can Massachusetts Teach Us About National Health Insurance Reform?” Journal of Policy Analysis and Management, 30(1): 177-195 (2011). Jon Gruber and Doug Holtz-Eakin.

Week 12: May 7 – Course wrap-up

Group presentations