

Econ 410: Economics of Health and Healthcare

University of Southern California
Spring 2024

Instructor First Half: Silvia H. Barcellos
Office: VPD 505 F
Office Hours: By appointment.
Contact: sbarcell@usc.edu

Instructor Second Half: Maria J. Prados
Office: VPD 505
Office Hours: By appointment.
Contact: prados@usc.edu

Class Time: Mon/Wed 2:00-3:20pm VPD 116 (classes will be in-person **only**; lectures will **not** be streamed or posted online)

Course Description

This course is an introduction to the field of health economics. Health economics is an active field of microeconomics with a large and growing literature. In the past three decades, some of the most controversial policies considered by state and federal governments have involved issues that have been analyzed by health economists, including policies related to the COVID-19 Pandemic. In addition to COVID-19, in the course we will study uninsurance and the Affordable Care Act (ACA). We will also cover topics such as measurement and determinants of health, health disparities, unhealthy behaviors and health insurance. The goal of this course is twofold. One is to better understand the economic theory of health and healthcare. We will study several economic models in detail, including models of health, addiction, demand for healthcare and demand for insurance. The emphasis will be on key economic concepts that health economists use to analyze health and healthcare markets. The second goal of the class is to learn to evaluate and interpret empirical findings in health economics. We will read some of the papers to understand the findings reported in those papers.

Learning Objectives

By the end of the course, the students will be able to understand the economic principles behind the supply and demand of medical care, the components of the main health care systems around the world, and the challenges faced by health care policy. The students will be able to understand the main findings and basic methodology of research papers in health economics.

Prerequisite(s): Intermediate Microeconomics (ECON 303)

The course is appropriate for junior and senior students who are familiar with microeconomic methods and basic calculus.

Recommended Preparation: If your recollection of intermediate microeconomics is rusty, I strongly recommend you read the chapters on consumer demand theory in any good intermediate microeconomics textbook (such as Hal Varian's *Intermediate Microeconomics: A Modern Approach*)

Course Notes

Copies of lecture slides and other class information will be posted on Blackboard. It is forbidden to repost this material in any way or form.

Textbook and Readings

Textbook: *Health Economics* by Bhattacharya, Hyde and Tu (2013).

Besides the textbook (which I encourage you to buy or rent) we will read some academic papers. Required readings are listed under each topic. These readings will be available on Blackboard or online. In addition to the required readings, optional readings are also listed. These can be found online. Adequately citing optional readings in the exams, problem sets or class discussion will result in extra credit.

For both the required and optional papers you should focus on the motivation behind the analysis and the main findings, as well as how they complement what we discuss in class. Skimming or skipping the more technical parts of these readings is fine.

Description and Assessment of Assignments

Assessment in the first half of this course will take place in form of 2 problem sets, in-class participation, and 2 in-class midterm examinations.

Assessment in the second half of this course will consist of two problem sets, in-class participation, a group presentation about a policy case study, and a final examination.

Assignment Submission Policy: Problem sets must be submitted via Blackboard on the due date/time. Late problem sets will not be accepted. The solutions to the problem sets will be posted on Blackboard after the due date.

Class Participation: Class discussion is important for both individual and collective learning. The following points characterize effective participation:

- Do comments draw on the text and materials from this and other courses?
- Do they show evidence of analysis?
- Does the student distinguish between opinion and well-supported analysis? Normative and positive issues?
- Are the points made substantive? Do they advance or deepen the discussion/analysis?
- Do comments clarify and highlight the important aspects of earlier comments and lead to a clearer statement of the concepts being considered? Is there an attempt to synthesize the discussion?

Grading Breakdown

Part 1 – 50% of total course grade:

Problem Sets: 20%

Midterm Exam 1: 30%

Class Participation: 10%

Midterm Exam 2: 40%

Part 2 – 50% of total course grade:

Class Participation: 10%

Problem Sets: 15%

Group Presentation: 30%

Midterm Exam 2: 45%

Regrade Policy

The material covered on the examinations will come from the lecture notes, problem sets and required reading. If a student requests that some question on an examination be re-graded, the professor will review the entire examination. Makeup exams will be offered only under extenuating circumstances (e.g. serious injuries), so please **plan ahead**.

Academic Conduct

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism SCampus, Section 11, Behavior Violating University Standards <https://policy.usc.edu/student/scampus/part-b>. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct/>.

Discrimination, sexual assault, intimate partner violence, stalking, and harassment are prohibited by the university. You are encouraged to report all incidents to the Office of Equity and Diversity/Title IX Office <http://equity.usc.edu> and/or to the Department of Public Safety <http://dps.usc.edu>. This is important for the health and safety of the whole USC community. Faculty and staff must report any information regarding an incident to the Title IX Coordinator who will provide outreach and information to the affected party. The sexual assault resource center webpage <http://sarc.usc.edu> fully describes reporting options. Relationship and Sexual Violence Services <https://engemannshc.usc.edu/rsvp> provides 24/7 confidential support.

Support Systems

A number of USC’s schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more.

Students whose primary language is not English should check with the American Language Institute <http://ali.usc.edu>, which sponsors courses and workshops specifically for international graduate students.

The Office of Disability Services and Programs <http://dsp.usc.edu> provides certification for students with disabilities and helps arrange the relevant accommodations. Please keep in mind that delay in getting a disability certification for the current semester may hinder the availability or facilitation of those accommodations in a timely manner. Therefore, it is in your best interest to

get your certification as early in the semester as possible and communicate your accommodation needs to your professor.

If an officially declared emergency makes travel to campus infeasible, USC Emergency Information <http://emergency.usc.edu> will provide safety and other updates, including ways in which instruction will be continued by means of Blackboard, teleconferencing, and other technology.

Course Schedule

1. Introduction to Health Economics

1.1. The economic way of thinking about health

BHT, Ch. 1

Fuchs, Victor R. "What is Health?" In *The Future of Health Policy*. Boston: Harvard University Press, pp. 27-40.

Optional Readings:

Baker, M., Stabile, M., and Deri, C. "What Do Self-Reported Objective Measures of Health Measure?" *Journal of Human Resources*, 39(4), pp.1067-1093

Fuchs (1996) "Economics, Values, and Health Care Reform," *American Economic Review* 86(1):1-24

1.2. Health care spending – some facts

Fuchs, Victor R. "Health Care Is Different—That's Why Expenditures Matter." *JAMA* 303.18 (2010): 1859-1860.

Aaron, H. and P. Ginsburg. 2009. "Is Health Spending Excessive? If So, What Can We Do About it?" *Health Affairs*, 28(5): 1260-1275.

Optional Readings:

NIHCM Data Brief, July 2012. *The Concentration of Health Care Spending*.

Kaiser Family Foundation, May 2012. *Health Care Costs: A Primer*.

1.3. Health determinants and long run trends

Cutler, David, Angus Deaton and Adriana Lleras-Muney, "The Determinants of Mortality," *Journal of Economic Perspectives*, Vol 20, Number 3, Summer 2006.

Optional Readings:

Angus Deaton. 2013. *The Great Escape*, Princeton University Press. Chapter 1.

2. Economic Models of Health

2.1. Demand for Health Care

BHT, Ch. 2

Optional Readings:

Finkelstein, Amy, Sarah Taubman, Bill Wright, Mira Bernstein, Jonathan Gruber, Joseph P. Newhouse, Heidi Allen, Katherine Baicker, and the Oregon Health Study Group. 2012. The Oregon Health Insurance Experiment: Evidence from the First Year. *Quarterly Journal of Economics*. 127(3): 1057-1106.

Keeler EB, Rolph JE. The demand for episodes of treatment in the health insurance experiment. *Journal of health economics*. 1988 Dec 1;7(4):337-67.

Card D, Dobkin C, Maestas N. The impact of nearly universal insurance coverage on health care utilization: evidence from Medicare. *American Economic Review*. 2008 Dec;98(5):2242-58.

Card D, Dobkin C, Maestas N. Does Medicare save lives?. *The quarterly journal of economics*. 2009 May 1;124(2):597-636.

Taubman SL, Allen HL, Wright BJ, Baicker K, Finkelstein AN. Medicaid increases emergency-department use: evidence from Oregon's Health Insurance Experiment. *Science*. 2014 Jan 17;343(6168):263-8.

Miller S, Johnson N, Wherry LR. Medicaid and mortality: new evidence from linked survey and administrative data. *The Quarterly Journal of Economics*. 2021 Aug;136(3):1783-829.

2.2. Demand for Health: the Grossman Model

BHT, Ch. 3

Optional Readings:

Becker, Gary S., Tomas J. Philipson, and Rodrigo R. Soares. 2005. The Quantity and Quality of Life and the Evolution of World Inequality. *American Economic Review*. 95(1): 277-91.

Heckman, James J. 2007. The economics, technology, and neuroscience of human capability formation. *Proceedings of the National Academy of Sciences, USA*. 104(33):13250-5. Epub 2007 Aug 8. (see also <https://www.aft.org/sites/default/files/periodicals/Heckman.pdf> for a summary)

Grossman, Michael. 1972. On the Concept of Health Capital and the Demand for Health. *Journal of Political Economy* 80 (2): 223–255.

3. Health Disparities

BHT, Ch. 4

Smith, James P. 1999. Healthy Bodies and Thick Wallets: The Dual Relation Between Health and Economic Status. *Journal of Economic Perspectives*. 13(2):145-167.

Couillard B, Foote C, Gandhi K, Meara E, Skinner J. 2021. Rising Geographic Disparities in US Mortality. *Journal of Economic Perspectives* 35(4), pp. 123–146.

Deryugina T, Molitor D. 2020. Does When You Die Depend on Where You Live? Evidence from Hurricane Katrina. NBER Working Paper 24822, revised December 2019, and *American Economic Review* 110(11), November 2020, pp. 3602–3633.

Finkelstein A, Gentzkow M, Williams H. 2019. Place-Based Drivers of Mortality: Evidence from Migration. NBER Working Paper 25975, June 2019, and *American Economic Review* 111(8), August 2021, pp. 2697–2735.

Optional Readings:

Case, Anne, Darren Lubotsky, and Christina Paxson. 2002. Economic Status and Health in Childhood: The Origins of the Gradient. *American Economic Review*. 92(5): 1308-34.

Lleras-Muney, Adriana. 2005. "The Relationship between Education and Adult Mortality in the United States," *Review of Economic Studies*, 72(1): 189-221.

Clark, Damon, and Heather Royer. "The effect of education on adult mortality and health: Evidence from Britain." *The American Economic Review* 103.6 (2013): 2087-2120.

Barcellos, S.H., Carvalho, L.S. and Turley, P., 2018. Education can reduce health differences related to genetic risk of obesity. *Proceedings of the National Academy of Sciences*, 115(42), pp.E9765-E9772.

4. Health Insurance

4.1. Demand for Health Insurance

BHT, Ch. 7

Optional Readings:

Manning, Willard; Newhouse, Joseph; Naihua, Duan; Keeler, Emmett; and Leibowitz, Arleen. "Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment." *American Economic Review* 77 (June, 1987): 251-277.

Aron-Dine, Aviva, Liran Einav, and Amy Finkelstein. "The RAND Health Insurance Experiment, Three Decades Later." *The Journal of Economic Perspectives* 27.1 (2013): 197-222.

Cutler and Zeckhauser (1999) "The Anatomy of Health Insurance" NBER Working Paper #7176

4.2. Moral Hazard

BHT, Ch. 11

4.3. Adverse Selection: Akerlof's Market for Lemons

BHT, Ch. 8

Krugman, Paul, "Health Economics 101," New York Times, November 14, 2005.

Gruber, Jonathan, "Why We Need the Individual Mandate," Center for American Progress Report, April 8, 2010.

Optional Readings:

Akerlof, George. "The Market for Lemons," *Quarterly Journal of Economics*, 84, August 1970: 488-500.

4.4. Adverse Selection: the Rothschild-Stiglitz Model

BHT, Ch. 9

Optional Readings:

Michael Rothschild and Joseph Stiglitz, "Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information," *Quarterly Journal of Economics*, 90 (4), November 1976, pp. 630-649.

4.5. Adverse Selection in Real Markets

BHT, Ch. 10

Optional Readings:

Cutler, D. and Reber, S. "Paying for Health Insurance: The Trade-Off Between Competition and Adverse Selection," *Quarterly Journal of Economics*, May 1998:434-466.

Cochrane (1995) "Time-Consistent Health Insurance," *Journal of Political Economy*, 103(3):445-473.

4.6. Public Insurance: Medicaid and Medicare

BHT, Ch.18

Optional Readings:

Finkelstein, Amy and Robin McKnight. 2008. What Did Medicare Do? The Initial Impact of Medicare on Mortality and Out of Pocket Medical Spending. *Journal of Public Economics*. 92(7): 1644-1668.

Barcellos, Silvia Helena and Mireille Jacobson. 2015. The Effects of Medicare on Medical Expenditure Risk and Financial Strain. *American Economic Journal: Economic Policy*.

Iglehart (1999) "The American Health Care System: Medicaid," *New England Journal of Medicine* 340(5): 403-8

Currie, Janet and Gruber, Jonathan. "Saving Babies: The Efficacy and Cost of Recent Changes in the Medicaid Eligibility of Pregnant Women," *Journal of Political Economy*, 104, (6), December 1996.

Finkelstein, Amy, "The Aggregate Effects of Health Insurance: Evidence from the Introduction of Medicare," *Quarterly Journal of Economics*. February 2007.

5. Unhealthy Behavior: Evidence and Policy Issues

BHT, Ch. 22

Cutler, Glaeser, and Shapiro (2003) "Why Have Americans Become More Obese?" NBER Working Paper #9446

Lakdawalla, Philipson, and Bhattacharya (2005) "Welfare-Enhancing Technological Change and the Growth of Obesity" *American Economic Review* 95(2):253-7.

Optional Readings:

Fenelon, Andrew and Samuel H. Preston. 2012. Estimating Smoking-Attributable Mortality in the United States. *Demography*. 49: 797-818.

Manning W. G., E.B. Keeler, J. P. Newhouse, E. M. Sloss and J. Wasserman, "Taxes of Sin: Do smokers and Drinkers pay their way?" *Journal of the American Medical Association* 261(11), 1989

Bhattacharya J and Sood N (2010) "Who Pays for Obesity" *Journal of Economic Perspectives*

6. Supply of Health Care

BHT, Ch. 5 & 6

Optional Readings:

McClellan and Kessler (2000) "Medical Liability, Managed Care, and Defensive Medicine," National Bureau of Economic Research Working Paper #7537

Bhattacharya (2005) "Specialty Selection and Lifetime Returns to Specialization within Medicine" *Journal of Human Resources* 40(1):115-43.

Currie & MacLeod (2008) "First do no harm? Tort reform and birth outcomes" *The Quarterly Journal of Economics*.

Chan, David and Yiqun Chen (2022, NBER wp 30608) "The Productivity of Professions: Evidence from the Emergency Department"

Gaynor, Rebitzer & Taylor (2004)

Gaynor, Ho and Town (2015) “The industrial organization of health-care markets” *Journal of Economic Literature*

Fischer, Royer, White (2022 NBER wp 30141) “Health Care Centralization: The Health Impacts of Obstetric Unit Closures in the US”

7. Pharmaceuticals and Innovation

BHT, Ch. 12 - 14

Cutler and McClellan (2001) “Is Technological Change in Medicine Worth It?” *Health Affairs*, 20(5):11-29.

Optional Readings:

Weisbrod, Burton A. 1991. "The Health Care Quadrilemma: An Essay on Technological Change, Insurance, Quality of Care, and Cost Containment." *Journal of Economic Literature*, 29 (1991): 523-552.

Fisher, Elliot, Jonathan Skinner and Douglas Staiger, “Is Technological Change in Medicine Always Worth It? The Case of Acute Myocardial Infarction,” *Health Affairs*, Web Exclusive, February 7, 2006.

Kremer, Michael, “Pharmaceuticals and the Developing World,” *Journal of Economic Perspectives*, 16(4): 67–90, 2002.

8. Health Policy

BHT, Ch. 15-18

Kaiser Family Foundation, April 2013. “Summary of the Affordable Care Act”

Optional Readings:

Baicker, Katherine and Chandra, Amitabh, 2008. “Myths and Misconceptions about U.S. Health Insurance,” *Health Affairs*, Web Exclusive: w533-w543.

Fredric Blavin, Stephen Zuckerman, and Michael Karpman, 2014. “Who Has Been Looking for Information in the ACA Marketplaces? Why? And How?” Urban Institute Health Reform Monitoring Survey Brief.

Aaron, Henry J. and Kevin W. Lucia, 2013. “Only the Beginning — What's Next at the Health Insurance Exchanges?” *New England Journal of Medicine* 369:1185-1187

Jonathan Gruber (1994) "The Incidence of Mandated Maternity Benefits," *American Economics Review* 84(3):622-41.

David Cutler (2010) "How Health Care Reform Must Bend the Cost Curve" *Health Affairs* 29(6): 1131-35.

Douglas Holtz-Eakin and Michael J. Ramlet (2010) "Health Care Reform is Likely to Widen Federal Budget Deficits, Not Reduce Them" *Health Affairs* 29(6):1136-41.

Gruber, Jonathan, 2008. "Covering the Uninsured in the United States," *Journal of Economic Literature*, 46(3): 571-606.

Currie, Janet and Gruber, Jonathan. "Saving Babies: The Efficacy and Cost of Recent Changes in the Medicaid Eligibility of Pregnant Women," *Journal of Political Economy*, 104, (6), December 1996.

Wherry, Laura, Sarah Miller, Robert Kaestner, and Bruce Meyer "Childhood Medicaid Coverage and Later Life Health Care Utilization." 2015, NBER Working Paper No. 20929

Ashenfelter, Orley and Michael Greenstone, "Using Mandated Speed Limits to Measure The Value of a Statistical Life," *Journal of Political Economy*, vol 112, no. S1, February 2004.

Sen, Amartya "The Discipline of Cost-Benefit Analysis," *The Journal of Legal Studies*, Vol 29, No.2 June 2000, pp. 931-952.

9. Economic Epidemiology

BHT, Ch. 21

Acemoglu, D., Chernozhukov, V., Werning, I. and Whinston, M.D., 2021. "Optimal targeted lockdowns in a multigroup SIR model." *American Economic Review: Insights*, 3(4), pp.487-502.

Optional Readings:

Ahituv et al. (1996) "The Responsiveness of the Demand for Condoms to the Local Prevalence of AIDS," *Journal of Human Resources*, 31(4):869-897.

Philipson, (1996) "Private Vaccination and Public Health: An Empirical Examination for U.S. Measles," *Journal of Human Resources*, 31(3): 611-630.

Philipson (1999) "Economic Epidemiology and Infectious Diseases," NBER Working Paper #7037.

Philipson and Posner (1995) "A Theoretical and Empirical Investigation of The Effects of Public Health Subsidies for STD Testing," *Quarterly Journal of Economics*, 110(2):445-474.

Geoffard and Philipson (1996) "Rational Epidemics and Their Public Control," *International Economic Review*, 37(3):603-624.

Geoffard and Philipson (1997) "Disease Eradication: Private versus Public Vaccination," *American Economic Review*, 87(1): 222-230.

Dow et al. (1995) "Disease Complementarities and the Evaluation of Public Health Interventions," NBER Working Paper #5216.

Goldman, Lakdawalla, and Sood (2004) "HIV Breakthroughs and Risky Sexual Behavior," NBER Working Paper #10516

10. The Behavioral Economics of Health

BHT, Ch. 23 & 24

Royer, Heather, Mark Stehr, and Justin Sydnor. "Incentives, Commitments and Habit Formation in Exercise: Evidence from a Field Experiment with Workers at a Fortune-500 Company." *AEJ: Applied*

Bhargava, Saurabh, George Loewenstein, and Justin Sydnor. Do Individuals Make Sensible Health Insurance Decisions? Evidence from a Menu with Dominated Options. No. 21160. National Bureau of Economic Research, Inc, 2015.

Optional Readings:

Gruber and Kosegi (2001) "Is Addition 'Rational'? Theory and Evidence," *Quarterly Journal of Economics* 116(4):1261-1303

Bhattacharya J, Goldman D, and Sood N, "Market Evidence of Misperceived Prices and Mistaken Mortality Risks," (2009) *Journal of Economics, Behavior, and Organization*.