

Health Economics

BC3050 (Spring 2022)

Instructor: Professor Morgan C. Williams, Jr.

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Office Hours: MW 2:35 PM – 3:35 PM (Appointment Only)

Office Hours Scheduling: All office hours appointments can be made, at least 24 hours in advance, using the Calendly: <https://calendly.com/mcwillia/officehourspring2022>

Course Information

Class Meeting Times: MW, 10:10 AM – 11:25 AM

Class Location: TBD

Notes: This syllabus is subject to change as we approach and move forward with the Spring 2022 semester. This course intends on meeting in-person throughout the Spring 2022 semester unless public health conditions or Barnard College suggests otherwise. I strongly suggest that all students review the College's [Health & Safety](#) guidance well before the first day of classes.

Course Description

Health economics is an expansive and growing field within the larger microeconomic literature. From examining the impact of Medicaid on health care utilization to the public health consequences of marijuana legalization, health economics offers a variety of profound economic insights and policy recommendations. This course uses many familiar concepts from microeconomic theory and econometrics in order to better understand health and healthcare—with students engaging economic models describing the demand for health, addiction, medical care, health insurance, and risky behaviors in addition to interpreting important empirical evidence within these spaces.

Prerequisites

The main prerequisites for this course are Intermediate Micro Theory (BC 3035 or UN 3211) and at least an undergraduate statistics course.

Learning Objectives

Through this course, students will be able to:

1. Apply fundamental microeconomic techniques to a diverse set of issues related to health and health care markets.
2. Demonstrate their proficiency of important institutions and policies playing an influential role in the determination of health and economic behavior within healthcare markets.
3. Evaluate empirical evidence using familiar techniques statistics and econometrics.

Course Materials

Course Textbook: Bhattacharya, Jay, Timothy Hyde, and Peter Tu. *Health Economics* (BHT). Macmillan International Higher Education, 2013 (ISBN: 113702996X; 978-1137029966).

Academic Integrity

Academic integrity is a vital component of the scholastic experience at Barnard College. All students enrolled in this class required to read, and strictly abide by, the [Honor Code](#) which states the following:

We, the students of Barnard College, resolve to uphold the honor of the College by engaging with integrity in all of our academic pursuits. We affirm that academic integrity is the honorable creation and presentation of our own work. We acknowledge that it is our responsibility to seek clarification of proper forms of collaboration and use of academic resources in all assignments or exams. We consider academic integrity to include the proper use and care for all print, electronic, or other academic resources. We will respect the rights of others to engage in pursuit of learning in order to uphold our commitment to honor. We pledge to do all that is in our power to create a spirit of honesty and honor for its own sake.

Information for Students with Disabilities at Barnard College

Academic accommodations are available for students with documented disabilities. Please visit the [Center for Accessibility Resources & Disability Services \(CARDS\) website](#) for more information. Students can also reach them directly at (212)-854-4634 or send an email to cards@barnard.edu. Students requesting accommodations *must* first meet with a CARDS staff member. Upon registering, students are required to request accommodation letters each semester in order to notify faculty and are encouraged to do so very early in the semester in order to ensure access to the necessary accommodations. For students who are already registered with CARDS, please schedule a time to meet with me outside of class in order to discuss your accommodations for the course and bring your faculty notification letter at that time.

Barnard College Policy on Religious Holidays

[Barnard College's Policy on religious holidays](#) states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. Please notify me in advance of religious holidays that might coincide with course obligations in order to schedule mutually acceptable alternatives.

Grading Policy and Assignments

1. Class Attendance and Participation (10%)
2. Problem Sets (30%)
3. Midterm Exam (Online) (30%)
4. Final Exam (30%)

Course Deliverables

Class Attendance and Participation:

Students are expected to attend, and be active participants in, all lectures. In order for us all to contribute to a lively classroom environment throughout the semester, students are **fully** expected to have completed all of the required readings and should come prepared to answer questions throughout that week's lecture.

Problems Sets:

Four problem sets will be graded based on the completion of each exercise in its entirety. You are strongly encouraged to solve for the correct solutions given that you will be asked to do so on the midterm exam. I will drop the lowest grade among these submissions. You must submit these assignments online via Courseworks by the beginning of the specified lecture as outlined in the course schedule (see the Semester Overview Section below for assignment dates). All solutions will be posted under the appropriate Courseworks tab after the specified due date. As a friendly reminder, I **unambiguously do not accept late submissions** and providing any form of unoriginal work (e.g., copying the work of others or work from previous semesters) will result in a zero for that assignment.

Midterm Exam:

An *in-class* exam will be given on March 10, 2022. Additional details will be provided on the format early in the semester.

Final Exam:

An *in-class* exam will be given during May 12, 2022. Additional details will be provided on the format early in the semester.

Semester Overview

Week Of:	Topic	Assignment Due
January 20, 2022	Demand for Health: The Grossman Model	• Student Info. Form
January 27, 2022	Health and Education	
February 3, 2022	The Demand for Health Insurance	• Problem Set 1
February 10, 2022	Adverse Selection	
February 17, 2022	Moral Hazard	
February 24, 2022	The Hospital Industry	• Problem Set 2

March 3, 2022	Physician Labor Markets and Behavior	
March 10, 2022	Midterm	
March 24, 2022	Infant Health	
March 31, 2022	Health Externalities in Theory and Practice	• Problem Set 3
April 7, 2022	Gun Violence in the U.S.	
April 14, 2022	Lead Exposure and Crime	
April 21, 2022	Economics of Substance Abuse	• Problem Set 4
April 28, 2022	Marijuana Legalization	
May 12, 2022	Final Exam	

Detailed Course Overview

Week One: Demand for Health: The Grossman Model

Required Reading:

- BHT, Chapters 1-3

Supplemental Reading:

- Grossman, Michael. 1972. "On the Concept of Health Capital and the Demand for Health." *Journal of Political Economy* 80 (2): 223–255.
- Cutler, David, Angus Deaton, and Adriana Lleras-Muney. "The Determinants of Mortality." *Journal of Economic Perspectives* 20, No. 3 (2006): 97-120.
- Fuchs, Victor R. "What is Health Economics?" In *The Future of Health Policy*. Boston: Harvard University Press, pp. 27-40.
- Hall, Robert E., and Charles I. Jones. "The Value of Life and the Rise in Health Spending." *The Quarterly Journal of Economics* 122, No. 1 (2007): 39-72.

Week Two: Health and Education

Required Reading:

- BHT, Chapter 4

Supplemental Reading:

- Lleras-Muney, Adriana. "The Relationship Between Education and Adult Mortality in the United States." *The Review of Economic Studies* 72, No. 1 (2005): 189-221.
- Currie, Janet, and Enrico Moretti. "Mother's Education and the Intergenerational Transmission of hHuman Capital: Evidence from College Openings." *The Quarterly Journal of Economics* 118, No. 4 (2003): 1495-1532.
- Clark, Damon, and Heather Royer. "The Effect of Education on Adult Mortality and Health: Evidence from Britain." *American Economic Review* 103, No. 6 (2013): 2087-2120.
- Barcellos, Silvia H., Leandro S. Carvalho, and Patrick Turley. "Education Can Reduce Health Differences Related to Genetic Risk of Obesity." *Proceedings of the National Academy of Sciences* 115, No. 42 (2018): E9765-E9772.
- Glied, Sherry, and Adriana Lleras-Muney. "Technological Innovation and Inequality in Health." *Demography* 45, No. 3 (2008): 741-761.
- Kaestner, Robert, Cuiping Schiman, and Jason Ward. "Education and Health Over the Life Cycle." *Economics of Education Review* 76 (2020): 101982.

Week Three: The Demand for Health Insurance

Required Reading:

- BHT, Chapter 7

Supplemental Reading:

- Chandra, Amitabh, Jonathan Gruber, and Robin McKnight. "The Importance of the Individual Mandate—Evidence from Massachusetts." *New England Journal of Medicine* 364, No. 4 (2011): 293-295.
- Gruber, Jonathan. *Health Care Reform: What it is, Why it's Necessary, How it Works*. Macmillan, 2011.
- Buchmueller, Thomas C., Zachary M. Levinson, Helen G. Levy, and Barbara L. Wolfe. "Effect of the Affordable Care Act on Racial and Ethnic Disparities in Health Insurance Coverage." *American Journal of Public Health* 106, No. 8 (2016): 1416-1421.
- Kaiser Family Foundation. [Summary of the Affordable Care Act](#), April 25, 2013.
- Cutler, David M. "The Simple Economics of Health Reform." *The Economists' Voice* 7, No. 5 (2010).
- Gruber, Jonathan. "Covering the Uninsured in the United States." *Journal of Economic Literature* 46, No. 3 (2008): 571-606.
- Finkelstein, Amy, and Robin McKnight. "What did Medicare do? The Initial Impact of Medicare on Mortality and Out-of-Pocket Medical Spending." *Journal of Public Economics* 92, No. 7 (2008): 1644-1668.
- Card, David, Carlos Dobkin, and Nicole Maestas. "The Impact of Nearly Universal Insurance Coverage on Health Care Utilization: Evidence from Medicare." *American Economic Review* 98, No. 5 (2008): 2242-58.

Week Four: Adverse Selection

Required Reading:

- BHT, Chapters 8-10

Supplemental Reading:

- Cutler, David M., and Richard J. Zeckhauser. "Adverse Selection in Health Insurance." In *Forum for Health Economics & Policy*, Vol. 1, No. 1. De Gruyter, 1998.
- Glied, Sherry A., and Dahlia K. Remler. "What Every Public Finance Economist Needs to Know About Health Economics: Recent Advances and Unresolved Questions." *National Tax Journal* 55, No. 4 (2002): 771-788.
- Geruso, Michael, and Timothy J. Layton. "Selection in Health Insurance Markets and its Policy Remedies." *Journal of Economic Perspectives* 31, No. 4 (2017): 23-50.
- Akerlof, George. "The Market for Lemons." *Quarterly Journal of Economics* 84, (1970): 488-500.
- Finkelstein, Amy, Sarah Taubman, Bill Wright, Mira Bernstein, Jonathan Gruber, Joseph P. Newhouse, Heidi Allen, Katherine Baicker, and Oregon Health Study Group. "The Oregon Health Insurance Experiment: Evidence From the First Year." *The Quarterly journal of economics* 127, No. 3 (2012): 1057-1106.
- Baicker, Katherine, Sarah L. Taubman, Heidi L. Allen, Mira Bernstein, Jonathan H. Gruber, Joseph P. Newhouse, Eric C. Schneider, Bill J. Wright, Alan M. Zaslavsky, and Amy N. Finkelstein. "The Oregon Experiment—Effects of Medicaid on Clinical Outcomes." *New England Journal of Medicine* 368, No. 18 (2013): 1713-1722.
- Rothschild, Michael and Joseph Stiglitz. "Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information" *Quarterly Journal of Economics* 90 (4), (1976): 630-649.
- Cutler, David M., and Sarah J. Reber. "Paying for Health Insurance: The Trade-Off Between Competition and Adverse Selection." *The Quarterly Journal of Economics* 113, No. 2 (1998): 433-466.

Week Five: Moral Hazard

Required Reading:

- BHT, Chapter 11

Supplemental Reading:

- Manning, Willard G., Joseph P. Newhouse, Naihua Duan, Emmett B. Keeler, and Arleen Leibowitz. "Health Insurance and the Demand for Medical Care: Evidence From a Randomized Experiment." *American Economic Review* (1987): 251-277.
- Pauly, Mark V. "Taxation, Health Insurance, and Market Failure in the Medical Economy." *Journal of Economic Literature* 24, No. 2 (1986): 629-675.

- Lagarde, Mylene, and Natasha Palmer. "The Impact of User Fees on Access to Health Services in Low- and Middle-Income Countries." *Cochrane Database of Systematic Reviews* 4 (2011).
- Arrow, Kenneth. "Uncertainty and the Welfare Economics of Medical Care" *American Economic Review* 53, No. 5 (1963): 941-973.
- Pauly, Mark V. "The Economics of Moral Hazard: Comment." *American Economic Review* 58, No. 3 (1968): 531-537.
- Feldstein, Martin S. "The Welfare Loss of Excess Health Insurance." *Journal of Political Economy* 81, No. 2, Part 1 (1973): 251-280.
- Gladwell, Malcolm. "[The Moral Hazard Myth](#)," *The New Yorker*, August 29, 2005.

Week Six: The Hospital Industry

Required Reading:

- BHT, Chapter 6

Supplemental Reading:

- Duggan, Mark G. "Hospital Ownership and Public Medical Spending." *The Quarterly Journal of Economics* 115, No. 4 (2000): 1343-1373.
- Horwitz, Jill R. "Making Profits and Providing Care: Comparing Nonprofit, For-Profit, and Government Hospitals." *Health affairs* 24, No. 3 (2005): 790-801.
- Ho, Katherine. "Insurer-Provider Networks in the Medical Care Market." *American Economic Review* 99, No. 1 (2009): 393-430.
- Dafny, Leemore S. "How do Hospitals Respond to Price Changes?." *American Economic Review* 95, No. 5 (2005): 1525-1547.
- Baicker, Katherine, and Douglas Staiger. "Fiscal Shenanigans, Targeted Federal Health Care Funds, and Patient Mortality." *The Quarterly Journal of Economics* 120, No. 1 (2005): 345-386.
- Dranove, David, Mark Shanley, and Carol Simon. "Is Hospital Competition Wasteful?" *The Rand Journal of Economics* (1992): 247-262.

Week Seven: Physician Labor Markets and Behavior

Required Reading:

- BHT, Chapter 5
- Balsa, Ana I., and Thomas G. McGuire. "Statistical Discrimination in Health Care." *Journal of Health Economics* 20, No. 6 (2001): 881-907.

Supplemental Reading:

- McGuire, Thomas G. "Physician Agency." *Handbook of Health Economics* 1 (2000): 461-536.

- Loury, Glenn C. *The Anatomy of Racial Inequality*. Harvard University Press, 2009, pp. 1-54.
- Kleinberg, Jon, Jens Ludwig, Sendhil Mullainathan, and Ziad Obermeyer. "Prediction Policy Problems." *American Economic Review* 105, No. 5 (2015): 491-95.
- Chandra, Amitabh, and Douglas O. Staiger. "Productivity Spillovers in Health Care: Evidence From the Treatment of Heart Attacks." *Journal of political Economy* 115, No. 1 (2007): 103-140.
- Barnato, Amber E., F. Lee Lucas, Douglas Staiger, David E. Wennberg, and Amitabh Chandra. "Hospital-Level Racial Disparities in Acute Myocardial Infarction Treatment and Outcomes." *Medical Care* 43, No. 4 (2005): 308.
- Dubay, Lisa, Robert Kaestner, and Timothy Waidmann. "The Impact of Malpractice Fears on Cesarean Section Rates." *Journal of Health Economics* 18, No. 4 (1999): 491-522.
- Currie, Janet M., and W. Bentley MacLeod. "Understanding Doctor Decision Making: The Case of Depression Treatment." *Econometrica* 88, No. 3 (2020): 847-878.
- Kessler, Daniel, and Mark McClellan. "Do Doctors Practice Defensive Medicine?." *The Quarterly Journal of Economics* 111, No. 2 (1996): 353-390.

Week 8: MIDTERM EXAM

Week Nine: Infant Health

Required Reading:

- Almond, Douglas Vincent and Chay, Kenneth Y. and Greenstone, Michael. "Civil Rights, the War on Poverty, and Black-White Convergence in Infant Mortality in the Rural South and Mississippi," (December 31, 2006). MIT Department of Economics Working Paper No. 07-04, SSRN.

Supplemental Reading:

- Currie, Janet, and Reed Walker. "Traffic Congestion and Infant Health: Evidence from E-ZPass." *American Economic Journal: Applied Economics* 3, No. 1 (2011): 65-90.
- Chen, Alice, Emily Oster, and Heidi Williams. "Why is Infant Mortality Higher in the United States than in Europe?." *American Economic Journal: Economic Policy* 8, No. 2 (2016): 89-124.
- Goodman-Bacon, Andrew. "Public insurance and mortality: evidence from Medicaid implementation." *Journal of Political Economy* 126, no. 1 (2018): 216-262.
- Gruber, Jonathan, Nathaniel Hendren, and Robert M. Townsend. "The Great Equalizer: Health Care Access and Infant Mortality in Thailand." *American Economic Journal: Applied Economics* 6, No. 1 (2014): 91-107.
- Currie, Janet. "Inequality at Birth: Some Causes and Consequences." *American Economic Review* 101, No. 3 (2011): 1-22.

Week Ten: Health Externalities in Theory and Practice

Required Reading:

- BHT, Chapters 20-21

Supplemental Reading:

- Laxminarayan, Ramanan, and Anup Malani. "Economics of Infectious Diseases." In *The Oxford Handbook of Health Economics*. 2006, pp. 189-196.
- Ahuja, Amrita, Sarah Baird, Joan Hamory Hicks, Michael Kremer, Edward Miguel, and Shawn Powers. "When Should Governments Subsidize Health? The Case of Mass Deworming." *The World Bank Economic Review* 29, (2015): S9-S24.
- Pichler, Stefan, Katherine Wen, and Nicolas R. Ziebarth. "Positive Health Externalities of Mandating Paid Sick Leave." *Journal of Policy Analysis and Management* 40, no. 3 (2021): 715-743.
- Philipson, Tomas. "Economic Epidemiology and Infectious Diseases." *Handbook of Health Economics* 1 (2000): 1761-1799.
- Almond, Douglas. "Is the 1918 Influenza Pandemic Over? Long-Term Effects of In Utero Influenza Exposure in the Post-1940 US Population." *Journal of Political Economy* 114, No. 4 (2006): 672-712.
- Mankiw, G. "Pay People to Get Vaccinated." *New York times* (2020).

Week Eleven: Gun Violence in the U.S.

Required Reading:

- Ludwig, Jens, and Philip J. Cook. "Homicide and Suicide Rates Associated with Implementation of the Brady Handgun Violence Prevention Act." *Jama* 284, No. 5 (2000): 585-591.

Supplemental Reading:

- Cook, Philip J., Jens Ludwig, Sudhir Venkatesh, and Anthony A. Braga. "Underground Gun Markets." *The Economic Journal* 117, No. 524 (2007): F588-F618.
- O'Flaherty, Brendan, and Rajiv Sethi. *Shadows of Doubt: Stereotypes, Crime, and the Pursuit of Justice*. Harvard University Press, 2019, Chapter 4.
- Williams Jr., Morgan C. (2021). "Gun Violence in Black and White: Evidence from Policy Reform in Missouri". Working Paper
- Levine, Phillip B., and Robin McKnight. "Firearms and Accidental Deaths: Evidence from the Aftermath of the Sandy Hook School Shooting." *Science* 358, No. 6368 (2017): 1324-1328.

Week Twelve: The Consequences of Lead Exposure

Required Reading:

- Aizer, Anna, and Janet Currie. "Lead and Juvenile Delinquency: New Evidence from Linked Birth, School, and Juvenile Detention Records." *Review of Economics and Statistics* 101, No. 4 (2019): 575-587.

Supplemental Reading:

- Billings, Stephen B., and Kevin T. Schnepel. "Life After Lead: Effects of Early Interventions for Children Exposed to Lead." *American Economic Journal: Applied Economics* 10, No. 3 (2018): 315-44.
- Feigenbaum, James J., and Christopher Muller. "Lead Exposure and Violent Crime in the Early Twentieth Century." *Explorations in Economic History* 62 (2016): 51-86.
- Reyes, Jessica Wolpaw. "Environmental Policy as Social Policy? The Impact of Childhood Lead Exposure on Crime." *The BE Journal of Economic Analysis & Policy* 7, No. 1 (2007).
- Grönqvist, Hans, J. Peter Nilsson, and Per-Olof Robling. "Understanding How Low Levels of Early Lead Exposure Affect Children's Life Trajectories." *Journal of Political Economy* 128, No. 9 (2020): 3376-3433.

Week Thirteen: Economics of Substance Abuse

Required Reading:

- Grossman, Michael, and Frank J. Chaloupka. "The Demand for Cocaine by Young Adults: A Rational Addiction Approach." *Journal of Health Economics* 17, no. 4 (1998): 427-474.

Supplemental Reading:

- Becker, Gary S., and Kevin M. Murphy. "A Theory of Rational Addiction." *Journal of Political Economy* 96, No. 4 (1988): 675-700.
- Gruber, Jonathan, and Botond Köszegi. "Is Addiction "Rational"? Theory and Evidence." *The Quarterly Journal of Economics* 116, No. 4 (2001): 1261-1303.
- Fryer Jr, Roland G., Paul S. Heaton, Steven D. Levitt, and Kevin M. Murphy. "Measuring Crack Cocaine and its Impact." *Economic Inquiry* 51, No. 3 (2013): 1651-1681.
- Dave, Dhaval, Monica Deza, and Brady Horn. "Prescription Drug Monitoring Programs, Opioid Abuse, and Crime." *Southern Economic Journal* 87, No. 3 (2021): 808-848.
- Cawley, John, and Christopher J. Ruhm. "The Economics of Risky Health Behaviors." In *Handbook of Health Economics*, Vol. 2, pp. 95-199. Elsevier, 2011.

Week Fourteen: Marijuana Legalization

Required Reading:

- Hansen, Benjamin, Keaton Miller, and Caroline Weber. "Federalism, Partial Prohibition, and Cross-Border Sales: Evidence from Recreational Marijuana." *Journal of Public Economics* 187 (2020): 104159.

Supplemental Reading:

- Becker, Gary S., Kevin M. Murphy, and Michael Grossman. "The Market for Illegal Goods: The Case of Drugs." *Journal of Political Economy* 114, No. 1 (2006): 38-60.
- DiNardo, John, and Thomas Lemieux. "Alcohol, Marijuana, and American Youth: The Unintended Consequences of Government Regulation." *Journal of health economics* 20, no. 6 (2001): 991-1010.
- Wen, Hefei, Jason M. Hockenberry, and Janet R. Cummings. "The Effect of Medical Marijuana Laws on Adolescent and Adult Use of Marijuana, Alcohol, and Other Substances." *Journal of Health Economics* 42 (2015): 64-80.
- Chu, Yu-Wei Luke. "The effects of medical marijuana laws on illegal marijuana use." *Journal of health economics* 38 (2014): 43-61.
- Dobkin, Carlos, and Nancy Nicosia. "The War on Drugs: Methamphetamine, Public Health, and Crime." *American Economic Review* 99, No. 1 (2009): 324-49.

Week Fifteen: FINAL EXAM