



The Economics of Health Care and Policy
HCMG 903
Spring 2021

Contact Information

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Office hours: By appointment

Lectures

Zoom lectures: Wednesday 9:00-12:00 pm (a link is available on the course website)

Course Overview

This is a graduate course in health care management. The course will focus on the economic analysis, both theoretical and empirical, of health care markets. Topics include health capital and health behaviors, the economics of insurance in health care markets, payments systems and provider incentives, and provider competition.

Course Materials

Slides will be available before every lecture on the course website at <https://canvas.upenn.edu/>. There is a reading list at the end of this document. I have indicated the required readings for each lecture. The supplemental readings are important and you will benefit greatly by reading them.

Course Requirements

There will be a 1.5-hour final exam, which will be worth 25% of your grade. There will be three problem sets, which will each be worth 15% of your grade. A research paper proposal (worth 20% of your grade) will be due on April 28. A presentation based on your proposal will determine the remaining 10% of your grade.

Your research proposal should have the potential to be turned into a dissertation chapter. Your research proposal should do the following: 1) give a clear and precise statement of the research question; 2) provide motivation for the research question (why is it important and how will you contribute?); 3) review relevant theoretical and empirical research; 4) describe a strategy for answering the research question; 5) discuss challenges that you anticipate. If you have access to data related to your research proposal, then you should use it!

Lecture 1 (1/20): Health Measurement and Health Capital

- Costa, Dora L (2015). "Health and the Economy in the United States from 1750 to the Present". *Journal of economic literature* 53.3, pp. 503–70.
- Fogel, Robert W (1994). "Economic Growth, Population Theory, and Physiology: The Bearing of Long-Term Processes on the Making of Economic Policy". *The American Economic Review* 84.3, pp. 369–395.
- Grossman, Michael (2000). "The human capital model". *Handbook of health economics*. Vol. 1. Elsevier, pp. 347–408.**
- Hall, Robert E and Charles I Jones (2007). "The value of life and the rise in health spending". *The Quarterly Journal of Economics* 122.1, pp. 39–72.
- Honoré, Bo E and Adriana Lleras-Muney (2006). "Bounds in competing risks models and the war on cancer". *Econometrica* 74.6, pp. 1675–1698.
- Mokdad, Ali H et al. (2004). "Actual causes of death in the United States, 2000". *Jama* 291.10, pp. 1238–1245.
- Murphy, Kevin M and Robert H Topel (2006). "The value of health and longevity". *Journal of political Economy* 114.5, pp. 871–904.
- Oster, Emily, Ira Shoulson, and E Dorsey (2013). "Limited life expectancy, human capital and health investments". *American Economic Review* 103.5, pp. 1977–2002.
- Song, Yunjie et al. (2010). "Regional variations in diagnostic practices". *New England Journal of Medicine* 363.1, pp. 45–53.

Lecture 2 (1/27): Health Gradients

- Case, Anne, Darren Lubotsky, and Christina Paxson (2002). "Economic status and health in childhood: The origins of the gradient". *American Economic Review* 92.5, pp. 1308–1334.
- Clark, Damon and Heather Royer (2013). "The effect of education on adult mortality and health: Evidence from Britain". *American Economic Review* 103.6, pp. 2087–2120.
- Currie, Janet and Enrico Moretti (2003). "Mother's education and the intergenerational transmission of human capital: Evidence from college openings". *The Quarterly journal of economics* 118.4, pp. 1495–1532.
- Cutler, David M and Adriana Lleras-Muney (2010). "Understanding differences in health behaviors by education". *Journal of health economics* 29.1, pp. 1–28.**

Lleras-Muney, Adriana (2005). “The relationship between education and adult mortality in the United States”. *The Review of Economic Studies* 72.1, pp. 189–221.

McCrary, Justin and Heather Royer (2011). “The effect of female education on fertility and infant health: Evidence from school entry policies using exact date of birth”. *American economic review* 101.1, pp. 158–95.

Lecture 3 (2/3): Health Behaviors

Alpert, Abby, David Powell, and Rosalie Liccardo Pacula (2018). “Supply-side drug policy in the presence of substitutes: Evidence from the introduction of abuse-deterrent opioids”. *American Economic Journal: Economic Policy* 10.4, pp. 1–35.

Becker, Gary S and Kevin M Murphy (1988). “A theory of rational addiction”. *Journal of political Economy* 96.4, pp. 675–700.

Gruber, Jonathan and Botond Köszegi (2001). “Is addiction “rational”? Theory and evidence”. *The Quarterly Journal of Economics* 116.4, pp. 1261–1303.

Handel, Benjamin and Joshua Schwartzstein (2018). “Frictions or mental gaps: what’s behind the information we (don’t) use and when do we care?” *Journal of Economic Perspectives* 32.1, pp. 155–78.

Oster, Emily, Ira Shoulson, and E Dorsey (2013). “Optimal expectations and limited medical testing: evidence from Huntington disease”. *American Economic Review* 103.2, pp. 804–30.

Lecture 4 (2/10): Productivity

Almond, Douglas et al. (2010). “Estimating marginal returns to medical care: Evidence from at-risk newborns”. *The quarterly journal of economics* 125.2, pp. 591–634.

Chandra, Amitabh, Amy Finkelstein, et al. (Aug. 2016). “Health Care Exceptionalism? Performance and Allocation in the US Health Care Sector”. *American Economic Review* 106.8, pp. 2110–44.

Chandra, Amitabh and Jonathan Skinner (2012). “Technology growth and expenditure growth in health care”. *Journal of Economic Literature* 50.3, pp. 645–80.

Chandra, Amitabh and Douglas O Staiger (2007). “Productivity spillovers in health care: evidence from the treatment of heart attacks”. *Journal of Political Economy* 115.1, pp. 103–140.

- Cutler, David et al. (2019). “Physician beliefs and patient preferences: a new look at regional variation in health care spending”. *American Economic Journal: Economic Policy* 11.1, pp. 192–221.
- Doyle Jr, Joseph J, Steven M Ewer, and Todd H Wagner (2010). “Returns to physician human capital: Evidence from patients randomized to physician teams”. *Journal of health economics* 29.6, pp. 866–882.
- Finkelstein, Amy, Matthew Gentzkow, and Heidi Williams (2016). “Sources of geographic variation in health care: Evidence from patient migration”. *The quarterly journal of economics* 131.4, pp. 1681–1726.
- Garber, Alan M and Jonathan Skinner (2008). “Is American health care uniquely inefficient?” *Journal of Economic Perspectives* 22.4, pp. 27–50.
- Garthwaite, Craig L (2012). “The economic benefits of pharmaceutical innovations: The case of cox-2 inhibitors”. *American Economic Journal: Applied Economics* 4.3, pp. 116–37.
- Lichtenberg, Frank R (2007). “The impact of new drugs on US longevity and medical expenditure, 1990–2003: evidence from longitudinal, disease-level data”. *American Economic Review* 97.2, pp. 438–443.
- McClellan, Mark, Barbara J McNeil, and Joseph P Newhouse (1994). “Does more intensive treatment of acute myocardial infarction in the elderly reduce mortality?: analysis using instrumental variables”. *Jama* 272.11, pp. 859–866.
- Skinner, Jonathan (2011). “Causes and consequences of regional variations in health care”. *Handbook of health economics*. Vol. 2. Elsevier, pp. 45–93.

Lecture 5-7 (2/17, 2/24, 3/3): Health Insurance

- Abaluck, Jason and Jonathan Gruber (2011). “Choice inconsistencies among the elderly: evidence from plan choice in the Medicare Part D program”. *American Economic Review* 101.4, pp. 1180–1210.
- Arrow, Kenneth J. (1963). “Uncertainty and the Welfare Economics of Medical Care”. *The American Economic Review* 53.5, pp. 941–973.
- Baicker, Katherine et al. (2013). “The Oregon experiment—effects of Medicaid on clinical outcomes”. *New England Journal of Medicine* 368.18, pp. 1713–1722.
- Barnett, Michael L et al. (2019). “Two-year evaluation of mandatory bundled payments for joint replacement”. *New England Journal of Medicine* 380.3, pp. 252–262.
- Barseghyan, Levon et al. (2013). “The nature of risk preferences: Evidence from insurance choices”. *American Economic Review* 103.6, pp. 2499–2529.

- Brot-Goldberg, Zarek C et al. (2017). “What does a deductible do? The impact of cost-sharing on health care prices, quantities, and spending dynamics”. *The Quarterly Journal of Economics* 132.3, pp. 1261–1318.
- Card, David, Carlos Dobkin, and Nicole Maestas (May 2009). “Does Medicare Save Lives?*”. *The Quarterly Journal of Economics* 124.2, pp. 597–636.
- Chandra, Amitabh, Jonathan Gruber, and Robin McKnight (2010). “Patient cost-sharing and hospitalization offsets in the elderly”. *American Economic Review* 100.1, pp. 193–213.
- Chiappori, Pierre-André and Bernard Salanie (2000). “Testing for asymmetric information in insurance markets”. *Journal of political Economy* 108.1, pp. 56–78.
- Cutler, David M and Jonathan Gruber (1996). “Does public insurance crowd out private insurance?” *The Quarterly Journal of Economics* 111.2, pp. 391–430.
- Cutler, David M, Mark McClellan, and Joseph P Newhouse (2000). “How does managed care do it?” *The Rand journal of economics*, pp. 526–548.
- Cutler, David M and Sarah J Reber (1998). “Paying for health insurance: the trade-off between competition and adverse selection”. *The Quarterly Journal of Economics* 113.2, pp. 433–466.
- Dalton, Christina M, Gautam Gowrisankaran, and Robert J Town (2020). “Salience, myopia, and complex dynamic incentives: Evidence from Medicare Part D”. *The Review of Economic Studies* 87.2, pp. 822–869.
- Decarolis, Francesco, Maria Polyakova, and Stephen P Ryan (2020). “Subsidy Design in Privately Provided Social Insurance: Lessons from Medicare Part D”. *Journal of Political Economy* 128.5, pp. 1712–1752.
- Einav, Liran and Amy Finkelstein (2011). “Selection in insurance markets: Theory and empirics in pictures”. *Journal of Economic Perspectives* 25.1, pp. 115–38.
- Einav, Liran, Amy Finkelstein, and Mark R Cullen (2010). “Estimating welfare in insurance markets using variation in prices”. *The quarterly journal of economics* 125.3, pp. 877–921.**
- Feldstein, Martin S (1973). “The welfare loss of excess health insurance”. *Journal of Political Economy* 81.2, Part 1, pp. 251–280.
- Finkelstein, Amy (2007). “The aggregate effects of health insurance: Evidence from the introduction of Medicare”. *The quarterly journal of economics* 122.1, pp. 1–37.**
- Finkelstein, Amy, Nathaniel Hendren, and Erzo FP Luttmer (2019). “The value of medicaid: Interpreting results from the oregon health insurance experiment”. *Journal of Political Economy* 127.6, pp. 2836–2874.

- Finkelstein, Amy and Kathleen McGarry (2006). “Multiple dimensions of private information: evidence from the long-term care insurance market”. *American Economic Review* 96.4, pp. 938–958.
- Finkelstein, Amy, Sarah Taubman, et al. (2012). “The Oregon health insurance experiment: evidence from the first year”. *The Quarterly journal of economics* 127.3, pp. 1057–1106.
- Hadel, B, I Hendel, and M Whinston (2017). “Equilibria in Health Exchanges: Adverse Selection vs. Reclassification Risk”. *Econometrica* 83, p. 1261.
- Handel, Benjamin R (2013). “Adverse selection and inertia in health insurance markets: When nudging hurts”. *American Economic Review* 103.7, pp. 2643–82.
- Hendren, Nathaniel (2013). “Private information and insurance rejections”. *Econometrica* 81.5, pp. 1713–1762.
- Ketcham, Jonathan D, Claudio Lucarelli, Eugenio J Miravete, et al. (2012). “Sinking, swimming, or learning to swim in Medicare Part D”. *American Economic Review* 102.6, pp. 2639–73.
- Ketcham, Jonathan D, Claudio Lucarelli, and Christopher A Powers (2015). “Paying attention or paying too much in Medicare Part D”. *American economic review* 105.1, pp. 204–33.
- Loewenstein, George and Justin Sydnor (2017). “Choose to Lose: Health Plan Choices from a Menu with Dominated Options”. *Quarterly Journal of Economics* 132.3, p. 1319.
- Marone, Victoria R and Adrienne Sabety (2019). *Should There be Vertical Choice in Health Insurance Markets?* Tech. rep. Working Paper.
- Marzilli Ericson, Keith M (2014). “Consumer inertia and firm pricing in the Medicare Part D prescription drug insurance exchange”. *American Economic Journal: Economic Policy* 6.1, pp. 38–64.
- Rothschild, Michael and Joseph Stiglitz (1978). “Equilibrium in competitive insurance markets: An essay on the economics of imperfect information”. *Uncertainty in economics*. Elsevier, pp. 257–280.
- Shepard, Mark (2016). *Hospital network competition and adverse selection: evidence from the Massachusetts health insurance exchange*. Tech. rep. National Bureau of Economic Research.
- Starc, Amanda and Robert J Town (2020). “Externalities and benefit design in health insurance”. *The Review of Economic Studies* 87.6, pp. 2827–2858.
- Taubman, Sarah L et al. (2014). “Medicaid increases emergency-department use: evidence from Oregon’s Health Insurance Experiment”. *Science* 343.6168, pp. 263–268.

Spring–Term Break (3/10)

No class.

Lecture 8-9 (3/17, 3/24): Provider Incentives and Competition

Agarwal, Nikhil (2015). “An empirical model of the medical match”. *American Economic Review* 105.7, pp. 1939–78.

Clemens, Jeffrey and Joshua D Gottlieb (2014). “Do physicians’ financial incentives affect medical treatment and patient health?” *American Economic Review* 104.4, pp. 1320–49.

— (2017). “In the shadow of a giant: Medicare’s influence on private physician payments”. *Journal of Political Economy* 125.1, pp. 1–39.

Cutler, David M (1995). “The Incidence of Adverse Medical Outcomes Under Prospective Payment”. *Econometrica* 63.1, pp. 29–50.

Dafny, Leemore S (2005). “How do hospitals respond to price changes?” *American Economic Review* 95.5, pp. 1525–1547.

Dranove, David, Daniel Kessler, et al. (2003). “Is more information better? The effects of “report cards” on health care providers”. *Journal of political Economy* 111.3, pp. 555–588.

Dranove, David, Mark Shanley, and Carol Simon (1992). “Is hospital competition wasteful?” *The Rand journal of economics*, pp. 247–262.

Duggan, Mark and Fiona Scott Morton (2010). “The effect of Medicare Part D on pharmaceutical prices and utilization”. *American Economic Review* 100.1, pp. 590–607.

Duggan, Mark and Fiona M Scott Morton (2006). “The distortionary effects of government procurement: evidence from Medicaid prescription drug purchasing”. *The Quarterly Journal of Economics* 121.1, pp. 1–30.

Gaynor, Martin, Carol Propper, and Stephan Seiler (2016). “Free to choose? Reform, choice, and consideration sets in the English National Health Service”. *American Economic Review* 106.11, pp. 3521–57.

Grennan, Matthew (2013). “Price discrimination and bargaining: Empirical evidence from medical devices”. *American Economic Review* 103.1, pp. 145–77.

Gupta, Atul (Forthcoming). “Impacts of performance pay for hospitals: The readmissions reduction program”. *American Economic Review*.

Kessler, Daniel and Mark McClellan (1996). “Do doctors practice defensive medicine?” *The Quarterly Journal of Economics* 111.2, pp. 353–390.

- Kolstad, Jonathan T (2013). “Information and quality when motivation is intrinsic: Evidence from surgeon report cards”. *American Economic Review* 103.7, pp. 2875–2910.
- Lakdawalla, Darius and Wesley Yin (2015). “Insurers’ negotiating leverage and the external effects of Medicare part D”. *Review of Economics and Statistics* 97.2, pp. 314–331.
- Newhouse, Joseph P (1996). “Reimbursing health plans and health providers: efficiency in production versus selection”. *Journal of economic literature* 34.3, pp. 1236–1263.
- Song, Zirui et al. (2012). “The ‘Alternative Quality Contract,’ based on a global budget, lowered medical spending and improved quality”. *Health Affairs* 31.8, pp. 1885–1894.

Lecture 11 (3/31): Insurer–Provider Relationships

- Dafny, Leemore, Kate Ho, and Robin S Lee (2016). *The price effects of cross-market hospital mergers*. Tech. rep. National Bureau of Economic Research.
- Gaynor, Martin, Kate Ho, and Robert J Town (2015). “The industrial organization of health-care markets”. *Journal of Economic Literature* 53.2, pp. 235–84.
- Gaynor, Martin, Rodrigo Moreno-Serra, and Carol Propper (2013). “Death by market power: reform, competition, and patient outcomes in the National Health Service”. *American Economic Journal: Economic Policy* 5.4, pp. 134–66.
- Ghili, Soheil (2016). “Network formation and bargaining in vertical markets: The case of narrow networks in health insurance”. Available at SSRN 2857305.
- Gowrisankaran, Gautam, Aviv Nevo, and Robert Town (2015). “Mergers when prices are negotiated: Evidence from the hospital industry”. *American Economic Review* 105.1, pp. 172–203.
- Ho, Kate and Robin S Lee (2019). “Equilibrium provider networks: Bargaining and exclusion in health care markets”. *American Economic Review* 109.2, pp. 473–522.**
- Ho, Katherine (2009). “Insurer-provider networks in the medical care market”. *American Economic Review* 99.1, pp. 393–430.
- Olssen, Alexander L. and Mert Demirer (2020). “Drug Rebates and Formulary Design: Evidence from Statins in Medicare Part D”.

Lecture 12 (4/7): Innovation

Acemoglu, Daron and Joshua Linn (2004). “Market size in innovation: theory and evidence from the pharmaceutical industry”. *The Quarterly journal of economics* 119.3, pp. 1049–1090.

Budish, Eric, Benjamin N Roin, and Heidi Williams (2015). “Do firms underinvest in long-term research? Evidence from cancer clinical trials”. *American Economic Review* 105.7, pp. 2044–85.

Clemens, Jeffrey, Joshua D Gottlieb, and Tímea Laura Molnár (2017). “Do health insurers innovate? Evidence from the anatomy of physician payments”. *Journal of health economics* 55, pp. 153–167.

Dubois, Pierre et al. (2015). “Market size and pharmaceutical innovation”. *The RAND Journal of Economics* 46.4, pp. 844–871.

Finkelstein, Amy (2004). “Static and dynamic effects of health policy: Evidence from the vaccine industry”. *The Quarterly Journal of Economics* 119.2, pp. 527–564.

Hemphill, C Scott and Bhaven N Sampat (2012). “Evergreening, patent challenges, and effective market life in pharmaceuticals”. *Journal of health economics* 31.2, pp. 327–339.

Lakdawalla, Darius N (2018). “Economics of the pharmaceutical industry”. *Journal of Economic Literature* 56.2, pp. 397–449.

Sampat, Bhaven and Heidi L Williams (2019). “How do patents affect follow-on innovation? Evidence from the human genome”. *American Economic Review* 109.1, pp. 203–36.

Williams, Heidi L (2013). “Intellectual property rights and innovation: Evidence from the human genome”. *Journal of Political Economy* 121.1, pp. 1–27.

Lecture 13 (4/14): COVID–19

Papers to be determined.

Proposal Presentations (4/21)

No class.

Final Exam (4/28)

No class.