

## HEALTH ECONOMICS AND POLICY

*Exploring Health Disparities, Child Health, and Health Care Spending*

**Time:** Tuesdays and Thursdays, 11:30am-1pm PDT

**Location:** [160-321](#) (Wallenberg Hall, 3<sup>rd</sup> floor)

**Instructor:** Professor Maya Rossin-Slater

**Office:** Encina Commons, Room 184

**Office Hours:** By appointment (in person or on Zoom)

**Email:** [mrossin@stanford.edu](mailto:mrossin@stanford.edu)

**Discussion Section:** Mondays 4-5pm PDT

**Teaching Assistant:** Ashley Phord-Toy ([ashleypt@stanford.edu](mailto:ashleypt@stanford.edu))

**Location:** [160-124](#) (Wallenberg Hall, 1<sup>st</sup> floor)

### Course Prerequisites:

Students must have completed the HumBio core and statistics requirements. The course will feature concepts from microeconomic theory, statistics, and econometrics. We will cover these as needed.

### Course Description:

This course addresses issues related to population health, health care, and health policy, using tools from empirical and theoretical economics. We will study topics such as the demand for health care, socioeconomic and racial/ethnic disparities in population health outcomes, health insurance design, determinants of health care spending, technological change in the health care sector, pharmaceuticals, the opioid crisis, and public health insurance policy. Throughout the course, we will learn about research methodology that will help us to distinguish correlation from causation, and think critically about the role of the government and public policy.

### Ways of Thinking / Ways of Doing Certification:

This course fulfills the **Social Inquiry** Ways requirement.

## Learning Goals:

- To gain understanding of the major concepts in health economics, including: demand and supply of health care, uncertainty and health insurance, adverse selection, moral hazard, and innovation.
- To learn about recent research on major issues in health care and policy, including: health equity, early life health, the opioid crisis, health care spending, Medicaid and Medicare.
- To learn about research methods, focusing on how to separate causation from correlation.

## Course Materials:

The reading assignments include a variety of scholarly articles published in economics and medical journals, as well as a few popular-press pieces. These are available online (through Stanford's libraries) and full citations are posted on the class schedule below. Most of these articles are at a technical level accessible to upper-level undergraduate students, and some understanding of microeconomic theory, calculus, statistics, and econometrics is needed. A few will have sections too mathematically or theoretically dense for you to be responsible for the details, but you are expected to understand the basics of the analytical approach and key results of these papers by reading the Introduction, Conclusion, and other relevant sections.

The lectures will also draw from two textbooks: (1) *The Economics of Health and Health Care* (8<sup>th</sup> edition) by Sherman Folland, Allen Goodman, and Miron Stano (ISBN:978-1-138-20804-9) and (2) *Health Economics* by Jay Bhattacharya, Timothy Hyde, and Peter Tu (ISBN-13: 978-1137029966; ISBN-10: 113702996X). You are **not required** to buy or read these books for this course, but they are recommended if you need additional help with understanding the lectures. The schedule below lists the chapters that we will cover from these textbooks (referred to as **FGS** and **BHT**, respectively).

Another recommended, but not required, text is an excellent book on empirical methods with a focus on identifying *causation* rather than correlation: *Mastering 'Metrics: The Path from Cause to Effect* by Joshua D. Angrist and Jörn-Steffen Pischke. This text is written to be accessible to upper-division undergraduate students and non-economists. I encourage you to refer to this book as we cover a variety of empirical methods in class.

A few times, you will be asked to watch short videos about health care topics from *The Healthcare Triage* YouTube channel by Dr. Aaron Carroll. You are welcome to watch any

additional videos from the channel to supplement your understanding of the course material. <https://www.youtube.com/user/thehealthcarenriage>

Lectures will present **substantial additional material** and you are responsible for anything that is covered in class. Thus, you are highly encouraged to attend all classes and to read the assigned articles and watch assigned videos for each lecture **before** class—it will enhance your understanding and make your life much simpler.

The class will also have weekly discussion sections led by **TA Ashley Phord-Toy**. It will take place on **Mondays 4-5 pm, starting with Monday, April 4**. On the schedule below, the discussion content reflects material for the prior week (i.e., you can think of each week of course material as consisting of two lectures on Tuesdays and Thursdays and the discussion on the following Monday). On weeks when problem sets are due, the solutions will be discussed during the discussion sections (and nowhere else). On other weeks, you will discuss either the articles assigned for critical papers or additional related articles (listed on the schedule below). Additionally, you may cover any material from lecture that needs more explanation or discussion. **Attendance in the discussion section counts as part of your “class discussion participation” grade component.**

### Course Requirements:

*a. Problem sets:*

There will be **two problem sets** with due dates listed on the course schedule below. These assignments will include short responses to articles, analytical problems, and research tasks involving analysis of publicly available data sources. As noted above, solutions will only be provided during discussion sections.

*b. Short critical papers and class discussions:*

You will be writing **three short (3 pages max, double-spaced) critical papers**, each focused on one of the assigned journal articles (see below). These papers should describe the analytical approach and briefly summarize the results but also assess the significance of the research for our understanding of health economics or policy and the article’s strengths and possible weaknesses. After these papers are due, there will be a class discussion of the article, the implications of its findings, and related issues. The class discussion will occur both in lecture and in the discussion section.

*c. “Learning by Teaching” final project:*

In lieu of a final exam, you will have the opportunity to do a final project for this course. In this project, you will be able to pick a policy or concept that you have learned about in class, and then use a medium of your choice to teach others about it. You are able to use any medium of your choice (e.g., recording a podcast, writing a magazine article or blog post, developing an animation or video). The final week of the course will be dedicated to sharing these projects with your classmates. More detailed instructions are on Canvas.

**Grading:** Three short critical papers (30%), two problem sets (20%), final project (30%), class discussion participation (20%).

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### Class Schedule, Assignments, and Required Reading:

**\*\*\* The following articles are assigned for response in a short critical paper. These critical papers should be no more than 3 pages, double-spaced, in size 12 font.**

- 1) **DUE Thursday, April 7, 11:30am PDT:** Bor, Jacob, Venkataramani, Atheendar, Williams, David R., and Tsai, Alexander C. "Police Killings and Their Spillover Effects on the Mental Health of Black Americans: A Population-Based Quasi-Experimental Study," *The Lancet*, 392: 302–10 (2018).
- 2) **DUE Thursday, April 28, 11:30am PDT:** Obermeyer, Ziad, Powers, Brian, Vogeli, Christine, and Mullainathan, Sendhil. "Dissecting Racial Bias in an Algorithm Used to Manage the Health of Populations," *Science*, 366: 447–453 (2019).
- 3) **DUE Thursday, May 19, 11:30am PDT:** Alsan, Marcella, Garrick, Owen, and Graziani, Grant. "Does Diversity Matter for Health? Experimental Evidence from Oakland," *American Economic Review*, 109(12): 4071–4111 (2019).

**\*\*\* Problem Sets:**

**Problem Set 1: DUE Thursday, April 21, 11:30am PDT**

**Problem Set 2: DUE Thursday, May 5, 11:30am PDT**

**\*\*\* Final Project: DUE Tuesday, May 31, 11:30am PDT**

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<b>Week 1: 3/29, 3/31</b> <i>TOPICS:</i>	<i>READING:</i> <ul style="list-style-type: none"><li>• Oster, E. 2018. "Here's Why It's So Impossible to Get Reliable Diet Advice from the News," <i>Slate</i>. Available</li></ul>
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<ul style="list-style-type: none"> <li>• What is health economics?</li> <li>• Economic tools and empirical methods</li> <li>• The demand for health and health care</li> </ul>	<p>here: <a href="https://slate.com/technology/2018/08/heres-why-its-so-impossible-to-get-reliable-diet-advice-from-the-news.html">https://slate.com/technology/2018/08/heres-why-its-so-impossible-to-get-reliable-diet-advice-from-the-news.html</a></p> <ul style="list-style-type: none"> <li>• Finkelstein, A, Taubman, S., Wright, B., Bernstein, M., Gruber, J., Newhouse, J.P., Allen, H., Baicker, K., &amp; Oregon Health Study Group. 2012. "The Oregon Health Insurance Experiment: Evidence from the First Year," <i>Quarterly Journal of Economics</i>, 127(3): 1057-1106.</li> </ul> <p><i>Recommended Textbook Chapters: FGS 1- 3 / BHT 1-2</i></p> <p><b>Discussion Section Reading:</b> Freedman, S., Goodman-Bacon, A. and Hammarlund, N., 2021. Observational studies of the effect of Medicaid on health: Controls are not enough. <i>Journal of Labor Economics</i>, 39(S2), pp.S619-S650. [PLEASE READ ABSTRACT, INTRODUCTION, &amp; CONCLUSION]</p>
<p><b>Week 2: 4/5, 4/7</b></p> <p><b>TOPICS:</b></p> <ul style="list-style-type: none"> <li>• The demand for health and health care</li> <li>• Socioeconomic and racial/ethnic disparities in health</li> <li>• Health equity</li> </ul>	<p><b>READING:</b></p> <ul style="list-style-type: none"> <li>• Currie, J. 2011. "Inequality at Birth: Some Causes and Consequences," <i>American Economic Review: Papers and Proceedings</i>, 101(3): 1-22.</li> <li>• Chetty, R., Stepner, M., Abraham, S., Lin, S., Scuder, B., Turner, N., Bergeron, A., Cutler, D. 2016. "The Association Between Income and Life Expectancy in the United States, 2001-2014," <i>JAMA</i>, 315(16): 1750-1766.</li> <li>• Braveman P. 2014. "What are Health Disparities and Health Equity? We Need to Be Clear." <i>Public Health Reports</i>; 129(Suppl2); 5-8.</li> </ul> <p><i>Recommended Textbook Chapters: FGS 7 / BHT 4-5</i></p> <p><b>*** CRITICAL PAPER 1 DUE on THU, APRIL 7, 11:30am ***</b></p> <p>Bor, Jacob, Venkataramani, Atheendar, Williams, David R., and Tsai, Alexander C. "Police Killings and Their Spillover Effects on the Mental Health of Black Americans: A Population-Based Quasi-Experimental Study," <i>The Lancet</i>, 392: 302—10 (2018).</p> <p>*Discussion Section will continue discussion of this paper.</p>

<p><b>Week 3: 4/12, 4/14</b></p> <p>TOPICS:</p> <ul style="list-style-type: none"> <li>• Early childhood health and life course trajectories</li> <li>• Fetal origins hypothesis</li> <li>• Policies targeting child health</li> </ul>	<p>READING:</p> <ul style="list-style-type: none"> <li>• Almond, D. &amp; Currie, J. 2011. "Killing Me Softly: The Fetal Origins Hypothesis," <i>Journal of Economic Perspectives</i>, 25(3): 153-72.</li> <li>• Currie, J. &amp; Rossin-Slater, M. 2015. "Early-Life Origins of Life-Cycle Well-Being: Research and Policy Implications," <i>Journal of Policy Analysis and Management</i>, 34(1): 208-242.</li> <li>• Miller, S. and Wherry, L.R., 2019. The long-term effects of early life Medicaid coverage. <i>Journal of Human Resources</i>, 54(3), pp.785-824.</li> </ul> <p><b>Discussion Section Reading:</b> Aizer, A. and Currie, J., 2014. "The Intergenerational Transmission of Inequality: Maternal Disadvantage and Health at Birth. <i>Science</i>, 344(6186), pp.856-861.</p>
<p><b>Week 4: 4/19, 4/21</b></p> <p>TOPICS:</p> <ul style="list-style-type: none"> <li>• Economics of uncertainty and risk</li> <li>• Demand for health insurance</li> <li>• Akerlof's "Market for Lemons" and adverse selection</li> </ul>	<p>READING:</p> <ul style="list-style-type: none"> <li>• Healthcare Triage: "What is Health Insurance, and Why Do You Need It?: Health Care Triage #2" <a href="https://www.youtube.com/watch?v=dF3Dcol5XLg">https://www.youtube.com/watch?v=dF3Dcol5XLg</a></li> </ul> <p><i>Recommended Textbook Chapters: FGS 8, 10 / BHT 7-8</i></p> <p><b>*** PROBLEM SET 1 DUE on THU, APRIL 21, 11:30am ***</b></p> <p>Solutions provided in Discussion Section.</p>
<p><b>Week 5: 4/26, 4/28</b></p> <p>TOPICS:</p> <ul style="list-style-type: none"> <li>• Rothschild-Stiglitz model of adverse selection</li> <li>• Empirical evidence of</li> </ul>	<p>READING:</p> <ul style="list-style-type: none"> <li>• Cliff, Betsy Q., Sarah Miller, Jeffrey T. Kullgren, John Z. Ayanian, and Richard A. Hirth. "Adverse Selection in Medicaid: Evidence from Discontinuous Program Rules." <i>American Journal of Health Economics</i> 8, no. 1 (2022). <a href="https://www.journals.uchicago.edu/doi/full/10.1086/716464">https://www.journals.uchicago.edu/doi/full/10.1086/716464</a></li> </ul>

<p>adverse selection</p>	<p><i>Recommended Textbook Chapters: FGS 10 / BHT 9</i></p> <p><b>*** CRITICAL PAPER 2 DUE on THU, APRIL 28, 11:30am ***</b></p> <p>Obermeyer, Ziad, Powers, Brian, Vogeli, Christine, and Mullainathan, Sendhil (2019). "Dissecting Racial Bias in an Algorithm Used to Manage the Health of Populations," <i>Science</i>, 366: 447–453 (2019).</p> <p>*Discussion Section will continue discussion of this paper.</p>
<p><b>Week 6: 5/3, 5/5</b></p> <p>TOPICS:</p> <ul style="list-style-type: none"> <li>• Understandig moral hazard</li> <li>• Moral hazard: empirical evidence</li> </ul>	<p>READING</p> <ul style="list-style-type: none"> <li>• Healthcare Triage: "RAND and the Moral Hazard: Healthcare Triage #10" <a href="https://www.youtube.com/watch?v=q0OtUbDYdxw">https://www.youtube.com/watch?v=q0OtUbDYdxw</a></li> <li>• Gawande A. "Overkill." <i>The New Yorker</i>. 11 May 2015. <a href="http://www.newyorker.com/magazine/2015/05/11/overkill-atul-gawande">http://www.newyorker.com/magazine/2015/05/11/overkill-atul-gawande</a></li> <li>• Baicker, K, Taubman, S.L., Allen, H.L., Bernstein, M., Gruber, J.H., Newhouse, J.P., Schneider, E.C., Wright, B.J., Zaslavsky, A.M., &amp; Finkelstein, A, 2013. "The Oregon Experiment – Medicaid’s Effects on Clinical Outcomes," <i>New England Journal of Medicine</i>, 368: 1713-1722.</li> </ul> <p><i>Recommended Textbook Chapters: FGS 8 / BHT 10-11</i></p> <p><b>*** PROBLEM SET 2 DUE on THU, MAY 5, 11:30am ***</b></p> <p>Solutions provided in Discussion Section.</p>
<p><b>Week 7: 5/10, 5/12</b></p> <p>TOPICS:</p> <ul style="list-style-type: none"> <li>• Pharmaceutica ls and the economics of innovation</li> <li>• The opioid crisis</li> </ul>	<p>READING:</p> <ul style="list-style-type: none"> <li>• Alpert, Abby E., William N. Evans, Ethan MJ Lieber, and David Powell. 2020. "Origins of the opioid crisis and its enduring impacts." <i>Quarterly Journal of Economics</i>, 2020: 1-41.</li> <li>• Schnell, M. &amp; Currie, J. 2018. "Addressing the Opioid Epidemic: Is There a Role for Physician Education?" <i>American Journal of Health Economics</i>, 4(3): 383-410.</li> <li>• Doleac, J., Mukherjee, A., and Schnell, M. 2018. "Research Roundup: What Does the Evidence Say About How to Fight the Opioid Epidemic?" <i>Brookings Institution</i>. <a href="https://www.brookings.edu/blog/up-">https://www.brookings.edu/blog/up-</a></li> </ul>

	<p><a href="https://www.fda.gov/news-events/press-announcements/front/2018/12/07/research-roundup-what-does-the-evidence-say-about-how-to-fight-the-opioid-epidemic/">front/2018/12/07/research-roundup-what-does-the-evidence-say-about-how-to-fight-the-opioid-epidemic/</a></p> <p><b>Discussion Section Reading:</b> Ruhm, C.J., 2019. "Drivers of the fatal drug epidemic." <i>Journal of Health Economics</i>, 64, pp.25-42.</p>
<p><b>Week 8: 5/17, 5/19</b>  <b>TOPICS:</b></p> <ul style="list-style-type: none"> <li>• Technological progress, health care spending</li> <li>• Over-use and under-use of health care</li> </ul>	<p><b>READING:</b></p> <ul style="list-style-type: none"> <li>• Healthcare Triage: "Innovation in a Changing US Health System"  <a href="https://www.youtube.com/watch?v=EkccNDpy_1A">https://www.youtube.com/watch?v=EkccNDpy_1A</a></li> <li>• Garber, A. &amp; Skinner, J. 2008 "Is American Health Care Uniquely Inefficient?" <i>Journal of Economic Perspectives</i> 22(4): 27-50.</li> <li>• Cutler, David M., Kaushik Ghosh, Kassandra L. Messer, Trivellore Raghunathan, Allison B. Rosen, and Susan T. Stewart. "A Satellite Account for Health in the United States." <i>American Economic Review</i> 112, no. 2 (2022): 494-533.</li> </ul> <p><i>Recommended Textbook Chapters: FGS 6 / BHT 13</i></p> <p><b>*** CRITICAL PAPER 3 DUE on THU, MAY 19, 11:30am ***</b></p> <p>Alsan, Marcella, Garrick, Owen, and Graziani, Grant. "Does Diversity Matter for Health? Experimental Evidence from Oakland," <i>American Economic Review</i>, 109(12): 4071–4111 (2019).</p> <p>*Discussion Section will continue discussion of this paper.</p>
<p><b>Week 9: 5/24, 5/26</b>  <b>TOPICS:</b></p> <ul style="list-style-type: none"> <li>• Brief overview of structure of U.S. health care system</li> <li>• Medicaid and Medicare</li> <li>• Affordable Care Act</li> </ul>	<p><b>READING:</b></p> <ul style="list-style-type: none"> <li>• Card, D. Dobkin, C. &amp; Maestas, N. 2009. "Does Medicare Save Lives?" <i>Quarterly Journal of Economics</i>, 124(2): 597-636.</li> <li>• Kuziemko, I., Meckel, K. and Rossin-Slater, M., 2018. Does managed care widen infant health disparities? Evidence from Texas Medicaid. <i>American Economic Journal: Economic Policy</i>, 10(3), pp.255-83.</li> <li>• Miller, Sarah, Norman Johnson, and Laura Wherry. "Medicaid and Mortality: New Evidence from Linked</li> </ul>



	<p>Survey and Administrative Data." <i>Quarterly Journal of Economics</i>, 136, no. 3 (2021): 1783-1829</p> <p><i>Recommended Textbook Chapters: FGS 20,22 / BHT 18</i></p> <p><b>Discussion Section Reading:</b> Meinhofer, A. and Witman, A.E., 2018. "The Role of Health Insurance in Treatment for Opioid Use Disorders: Evidence from the Affordable Care Act Medicaid Expansion," <i>Journal of Health Economics</i>, 60, pp.177-197.</p>
<p><b>Week 10: 5/31</b></p>	<p>Student Presentations on Last Day of Class</p> <p><b>**** FINAL PROJECT DUE ON TUES, MAY 31, 11:30am****.</b></p>

**Honor Code**

As with all courses at Stanford University, students and faculty are bound to uphold the [Honor Code](#). If a question arises regarding what constitutes permitted and unpermitted aid or a possible Honor Code violation, please contact me. Please be advised that potential Honor Code violations will be pursued through the Office of Community Standards.

**Students with Documented Disabilities**

Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is being made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 650-723-1066, URL: <http://oea.stanford.edu>).

**Affordability of Course Materials**

All students should retain receipts for books and other course-related expenses, as these may be qualified educational expenses for tax purposes. If you are an undergraduate receiving financial aid, you may be eligible for additional financial aid for required books and course materials if these expenses exceed the aid amount in your reward letter. For more information, review your award letter or visit the Student Budget website: <https://financialaid.stanford.edu/undergrad/budget/index.html>

**Masking Policies for Spring 2022 In-Person Instruction**

In compliance with Santa Clara County policies [effective March 2, 2022](#), Stanford University is no longer mandating the use of masks indoors in most circumstances. However, masks continued to be strongly encouraged, and will continue to be mandated in classroom settings through the start of the Spring 2022 quarter. This means that whenever we spend time together indoors - in class, sections, and labs - we are required to wear a mask, until notified otherwise. Individuals will be permitted to remove their masks while speaking, and we will determine together as a class which situations are covered under this clause. In addition, some of us might feel more comfortable wearing masks even when not required, such as when we are speaking or outdoors. All of our preferences are reasonable, and it is important that we treat each others' preferences with respect and care. In the first couple of weeks of class, we will formulate community commitments for how we will interact with one another. One of the issues we will explicitly discuss is honoring our respective preferences for COVID-19 health and safety beyond the bare requirements, so that we each feel comfortable and prepared to learn in class. You can find the most current policies on campus masking requirements on the [COVID-19 Health Alerts](#), and policies on student testing before Spring 2022 instruction [here](#).

### **Course Policies In Case of Illness or Quarantine**

As vaccination rates increase and case numbers drop, all of us remain hopeful that the worst of the COVID-19 pandemic is behind us. However, an element of unpredictability remains, including the possibility that you, your peers, or we, the teaching team, might wake up one morning not feeling too well, or might need to quarantine or isolate for the safety of everyone. In light of these considerations, we request that you:

- Skip class / section if you're feeling unwell.
- Review material posted on Canvas for class sessions you miss.
- Complete asynchronous assignments posted on Canvas for class sessions you miss.
- Participate in Zoom office hours with your primary instructor and/or TA as you are able to ask questions and get caught up.
- Rest assured that the teaching team will work with you to make sure that your grade in the course is not adversely affected by your illness or quarantine-related absence.