

Credits: Three
Meeting Days: Tuesday and Thursday
Meeting Time: 9:45-11:00 AM
Classroom: Mayo 1250

Instructor: **Hannah T. Neprash, PhD**
E-mail: hneprash@umn.edu
Office Address: 15-229 Phillips-Wangensteen Building (PWB)
Office Hours: By appointment (<https://hannahneprash.youcanbook.me/>) on Wednesday and Thursday, 3-4:40 PM
Course Website: Canvas

Teaching Assistant: **Laura Smith, PhD Student**
E-mail: smit4351@umn.edu
Office Hours: Tuesday 12-1:30 PM in Mayo D-330 (walk-in) or by appointment

Course Description

This course applies the principles of microeconomics to health care. Economic concepts underpin many features of our health care system and we must understand these concepts if we aim to create evidence-based and effective policy. In this course, students will learn to analyze and contribute intelligently to health policy debates through an economic lens. Specific topics include: health behaviors; the relationship between education, income, and health; information asymmetries between health care providers and patients; demand for medical care, health care spending growth; insurance theory and selection issues; competition in health care markets; the role of public and private insurers; reform of payment and delivery systems; physician decision-making; technology and innovation; pharmaceutical pricing; and applications of behavioral economics to medicine.

Course Prerequisites

An introductory economics or microeconomic theory course or permission of the instructor.

Course Goals and Objectives

1. Develop familiarity with the fundamental theoretical concepts of health economics.
2. Build the ability to read and analyze empirical scholarship in health economics, as presented in peer-reviewed economics, health policy, and medical journals.
3. Apply the core concepts and foundational empirical results of health economics to current policy debates surrounding health care.

Course Requirements

1. Answer the following questions (via [Google Form](#)) by 5pm of the day before each class:
 - a. What in the reading did you find most interesting (and why)?
 - b. What in the reading did you find most puzzling?
2. Complete three in-class quizzes (one at the end of each unit) designed to test your comprehension of the material covered during that unit's readings and lectures. Quizzes will include true/false, multiple-choice, and/or (very) short answer questions.
3. Prepare and present "congressional testimony", taking a position for or against a policy that is relevant to the material we cover in class – and informing that position with economic theory and/or empirical evidence. This includes a written component (<1200 words) and a brief (1 minute), in-class summary of your main point, after which you will answer questions from the congressional committee (i.e., your classmates).
4. In addition to writing your own testimony, everyone will read the testimonies of 10 other students and prepare one question for each author ("the witness"). The TA and I will select specific questions (~2) to be asked during the in-class presentation. While you will not know which questions we have selected, you will know the list of ten possible questions in advance and have an opportunity to prepare an answer to each.
5. Complete a two hour final exam on Tuesday, December 18th, from 1:30-3:30 PM (location TBD), per this [schedule](#). This will be a closed-book exam, though you may create and bring in a "cheat sheet" consisting of one double-sided 8.5x11" piece of paper.

Evaluation and Grading

Grades will depend upon:

1. (20%) Your attendance and participation in class - and the questions that you submit for each class session;
2. (20%) Your performance on quizzes at the end of each topic unit (3 total);
3. (30%) The testimony exercise, including the quality of your questions for others and your answers to the questions on your own testimony;
4. (30%) Your performance on the final exam.

Use of Personal Electronic Devices in the Classroom

[Research](#) suggests that students learn less when they use computers or tablets during lecture. For this reason, computers/tablets are prohibited during class. (Individual accommodations for students registered with the Disability Resource Center should be discussed with the instructor.) I encourage you to take notes with a pen/pencil. To facilitate this, I will provide print-outs of the slides at the start of each class. Please refrain from using other devices (e.g., smartphones) and set everything to silent or vibrate prior to each session.

Text and Readings

Bhattacharya, J., Hyde, T., & Tu, P. (2014). [Health Economics](#).

NOTE: This is available free-of-charge, as an e-book from the UMN library website (login required) – with permitted downloads of 10 pages at a time.

Course Outline

- I. *Introduction to Health Economics (September 4th)*
- II. *Demand-Side (Consumers)*
 - Demand for Medical Care (September 6th)
 - Health Insurance Theory (September 11th and 13th)
 - Alternative Health Insurance Theory (w/ Prof. John Nyman on September 18th)
 - Health Insurance and Health (September 20th)
 - Selection Issues in Health Insurance (September 25th and 27th)
- III. *Supply-Side (Payers and Providers)*
 - Health Systems and Provider Payment (October 2nd*)
 - Physician Services (October 4th)
 - Health Care Workforce (w/ Laura Smith on October 9th)
 - Hospital and Post-Acute Care (October 11th and 16th)
 - Pharmaceuticals (October 18th)
- IV. *Equilibrium*
 - Health Care Spending Growth*
 - Geographic Variations
 - Competition in Health Care Markets
 - The Economics of Single-Payer
 - Quality of Care
 - Health Care Innovation
- V. *Economics of Public Health*
 - Externalities in Health Care*
 - Economics of the Opioid Epidemic
 - THANKSGIVING (No class on November 22nd)
 - Education and Health
 - Economics of Health Disparities
- VI. *Congressional Testimony (December 4th and 6th)*
- VII. *Review Session (December 11th)*

*Indicates a quiz on material covered in the previous unit

Readings

Syllabus + Introduction to Health Economics (September 4th)

Cutler, D. M. (2018). What Is The US Health Spending Problem? Health Affairs, 37(3), 493-497.

I. Demand

Demand for Medical Care (September 6th)

RAND Health Issue Brief: "The Health Insurance Experiment"
https://www.rand.org/pubs/research_briefs/RB9174.html

Taubman, S. L., et al. (2014). "Medicaid Increases Emergency-Department Use: Evidence from Oregon's Health Insurance Experiment." Science 343(6168): 263.

Aron-Dine, A., Einav, L., & Finkelstein, A. (2013). The RAND Health Insurance Experiment, three decades later. J Econ Perspect, 27(1), 197-222.

NOTE: Read pg. 197-212.

Health Insurance Theory, Part I (September 11th)

Chapter 7 ('Demand for Insurance') from Bhattacharya, J., et al. (2014). Health Economics, Palgrave Macmillan.

Health Insurance Theory, Part II (September 13th)

Chapter 11 ('Moral Hazard') from Bhattacharya, J., et al. (2014). Health Economics, Palgrave Macmillan.

Brot-Goldberg, Z. C., Chandra, A., Handel, B. R., & Kolstad, J. T. (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), 1261-1318.

NOTE: Read pg. 1261-1298.

Alternative Health Insurance Theory w/ Professor Nyman (September 18th)

Nyman, John A., Cagatay Koc, Bryan E. Dowd, Ellen McCreedy, Helen Markelova Trezn. "Decomposition of Moral Hazard," Journal of Health Economics, vol. 57, no. 1, 2018, pp. 168-178.

Nyman, John A. "Moral and other hazards of economic analysis of health insurance," in Research Handbook on the Economics of Insurance Law, Daniel Schwarcz and Peter Siegelman, eds., Cheltenham, UK: Elgar, 2015, pp. 71-93.

Health Insurance and Health (September 20th)

Sommers, B. D., Gawande, A. A., & Baicker, K. (2017). Health Insurance Coverage and Health — What the Recent Evidence Tells Us. New England Journal of Medicine, 377(6), 586-593.

Baicker, K., Taubman, S. L., Allen, H. L., Bernstein, M., Gruber, J. H., Newhouse, J. P., . . . Oregon Health Study, G. (2013). The Oregon experiment--effects of Medicaid on clinical outcomes. New England Journal of Medicine, 368(18), 1713-1722.

Card, D., Dobkin, C., & Maestas, N. (2009). Does Medicare Save Lives? The Quarterly Journal of Economics, 124(2), 597-636.

Selection Issues in Health Insurance, Part I (September 25th)

Einav, L., & Finkelstein, A. (2011). Selection in Insurance Markets: Theory and Empirics in Pictures. Journal of Economic Perspectives, 25(1), 115-138.

NOTE: Read pg. 115-122

Geruso, M. and T. J. Layton (2017). "Selection in Health Insurance Markets and Its Policy Remedies." Journal of Economic Perspectives 31(4): 23-50.

NOTE: Read pg. 23-32 and 37-45

Selection Issues in Health Insurance, Part II (September 27th)

Geruso, M. and T. J. Layton (2017). "Selection in Health Insurance Markets and Its Policy Remedies." Journal of Economic Perspectives 31(4): 23-50.

NOTE: Read pg. 32-37 and 45-47

Chandra, A., Gruber, J., & McKnight, R. (2011). The Importance of the Individual Mandate — Evidence from Massachusetts. New England Journal of Medicine, 364(4), 293-295.

Scott, D. A Requiem for the Individual Mandate. Vox. April 13, 2018.

<https://www.vox.com/policy-and-politics/2018/4/13/17226566/obamacare-penalty-2018-individual-mandate-still-in-effect>

Gasteier, A. M. With the Individual Mandate Gone, States Might Step Up: Lessons from Massachusetts. Health Affairs Blog. January 16, 2018.

<https://www.healthaffairs.org/doi/10.1377/hblog20180108.464274/full/>

II. Supply

Health Systems and Provider Payment + QUIZ (October 2nd)

Burwell, S. M. (2015). "Setting value-based payment goals--HHS efforts to improve U.S. health care." New England Journal of Medicine 372(10): 897-899.

Clemens, J. and J. D. Gottlieb (2016). "In the Shadow of a Giant: Medicare's Influence on Private Physician Payments." Journal of Political Economy **125**(1): 1-39.

Carroll, C., et al. (2018). "Effects of episode-based payment on health care spending and utilization: Evidence from perinatal care in Arkansas." Journal of Health Economics **61**: 47-62.

Song, Z., et al. (2014). "Changes in health care spending and quality 4 years into global payment." N Engl J Med **371**(18): 1704-1714.

Physician Services (October 4th)

Clemens, J., & Gottlieb, J. D. (2014). Do Physicians' Financial Incentives Affect Medical Treatment and Patient Health? American Economic Review, 104(4), 1320-1349.
doi:10.1257/aer.104.4.1320

Jacobson, M., Earle, C. C., Price, M., & Newhouse, J. P. (2010). How Medicare's payment cuts for cancer chemotherapy drugs changed patterns of treatment. Health Affairs (Millwood), 29(7), 1391-1399. doi:10.1377/hlthaff.2009.0563

Medicare Payment Advisory Commission. (2016). Physician and Other Health Professional Payment System. Retrieved from http://www.medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_16_physician_final.pdf?sfvrsn=0:

Health Care Workforce w/ Laura Smith (October 9th)

Gudbranson, E., et al. (2017). "Reassessing the data on whether a physician shortage exists." Journal of the American Medical Association **317**(19): 1945-1946.

Kirch, D. G. and K. Petelle (2017). "Addressing the physician shortage: The peril of ignoring demography." Journal of the American Medical Association **317**(19): 1947-1948.

Chandra, A., et al. (2014). "The Economics of Graduate Medical Education." New England Journal of Medicine **370**(25): 2357-2360.

Schnell, M. and J. Currie (2017). "Addressing the opioid epidemic: Is there a role for physician education?" American Journal of Health Economics: 1-37.

Barnes, H. et al. (2018). "Rural and Nonrural Primary Care Physician Practices Increasingly Rely On Nurse Practitioners." Health Affairs **37**(6): 908-914.

Hospitals and Post-Acute Care, Part I (October 11th)

Chapter 6 ('The Hospital Industry') from Bhattacharya, J., et al. (2014). Health Economics, Palgrave Macmillan.

Note: Only read sections 6.4 and 6.5

Medicare Payment Advisory Commission (2018). Report to the Congress: Medicare and the Health Care Delivery System. Chapter 1: The effects of the Hospital Readmissions Reduction Program. Washington, DC, MEDPAC.

Darden, M., et al. (2018). "Hospital Pricing and Public Payments." NBER Working Paper 24304.

Hospitals and Post-Acute Care, Part II (October 16th)

Ackerly, D. C. and D. C. Grabowski (2014). "Post-Acute Care Reform — Beyond the ACA." New England Journal of Medicine **370**(8): 689-691.

McWilliams, J. M., et al. (2017). "Changes in Post-acute Care in the Medicare Shared Savings Program." JAMA Internal Medicine **177**(4): 518-526.

Pharmaceuticals (October 18th)

Medicare Payment Advisory Commission. Payment Basics: Part D Payment System. October 2017.

Duggan, M., & Scott Morton, F. M. (2006). The Distortionary Effects of Government Procurement: Evidence from Medicaid Prescription Drug Purchasing. Quarterly Journal of Economics, *121*(1), 1-30.

Additional Policy Statements

Student Conduct Code

The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community.

As a student at the University you are expected adhere to Board of Regents Policy: *Student Conduct Code*. To review the Student Conduct Code, please see: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf.

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

Scholastic Dishonesty

You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. (Student Conduct

Code: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf) If it is determined that a student has cheated, the student may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see: <http://policy.umn.edu/education/instructorresp>.

The Office for Community Standards has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: <https://communitystandards.umn.edu/avoid-violations/avoiding-scholastic-...>. If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

Makeup Work for Legitimate Absences

Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances.

Such circumstances do not include voting in local, state, or national elections. For complete information, please see: <http://policy.umn.edu/education/makeupwork>.

Appropriate Student Use of Class Notes and Course Materials

Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes beyond the classroom community or accepting compensation for taking and distributing classroom notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community. For additional information, please see: <http://policy.umn.edu/education/studentresp>.

Grading and Transcripts

The University utilizes plus and minus grading on a 4.000 cumulative grade point scale in accordance with the following:

A	4.000 - Represents achievement that is outstanding relative to the level necessary to meet course requirements
A-	3.667
B+	3.333
B	3.000 - Represents achievement that is significantly above the level necessary to meet course requirements
B-	2.667
C+	2.333
C	2.000 - Represents achievement that meets the course requirements in every respect
C-	1.667
D+	1.333
D	1.000 - Represents achievement that is worthy of credit even though it fails to meet fully the course requirements
S	Represents achievement that is satisfactory, which is equivalent to a C- or better.

For additional information, please refer to: <http://policy.umn.edu/education/gradingtranscripts>.

Sexual Harassment

"Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the University setting. For additional information, please consult Board of Regents

Policy: https://regents.umn.edu/sites/regents.umn.edu/files/policies/Sexual_Harassment_Sexual_Assault_Stalking_Relationship_Violence.pdf

Equity, Diversity, Equal Opportunity, and Affirmative Action

The University provides equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents

Policy: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Equity_Diversity_EO_AA.pdf.

Disability Accommodations

The University of Minnesota views disability as an important aspect of diversity, and is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

- If you have, or think you have, a disability in any area such as, mental health, attention, learning, chronic health, sensory, or physical, please contact the DRC office on your campus (UM Twin Cities - [612.626.1333](tel:612.626.1333)) to arrange a confidential discussion regarding equitable access and reasonable accommodations.
- Students with short-term disabilities, such as a broken arm, **can** often work with instructors to **minimize** classroom barriers. In situations where additional assistance is needed, students should contact the DRC as noted above.
- If you are registered with the DRC and have a disability accommodation letter dated for this semester or this year, please contact your instructor early in the semester to review how the accommodations will be applied in the course.
- If you are registered with the DRC and have questions or concerns about your accommodations please contact your (access consultant/disability specialist).

Additional information is available on the DRC website: <https://diversity.umn.edu/disability/>) or e-mail (drc@umn.edu) with questions.

Mental Health and Stress Management

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website: <http://www.mentalhealth.umn.edu>.

Academic Freedom and Responsibility: *for courses that do not involve students in research*

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve

judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.*

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

** Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students".*