Economics 307 - *Economics of Medical Care*
Northwestern University
Department of Economics
Fall 2019

Course Syllabus

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Overview: This course applies theoretical and empirical tools of microeconomics to the study of health insurance and the health care sector. We will consider topics such as the demand for health care, the design and financing of health insurance, the behavior of non-profit and for-profit hospitals, the role of competition in the health care market, the determinants of health care spending and the sources of technological change in the health care sector, and the effects of government regulations on the health care market. We will also study in depth the role of adverse selection and moral hazard in health care markets, both theoretically and empirically. The course will conclude with applications to recent health care policy debates in the United States.

Honor Code: Students in my class are required to adhere to the standards of academic integrity as outlined by the Office of the Provost at Northwestern University (see "Principles of Academic Integrity" available here: http://www.northwestern.edu/provost/policies/academic-integrity/index.html).

Textbook: The textbook for this course is *Health Economics* by Bhattacharya, Hyde, and Tu (ISBN: 978-1137029966). You may either purchase the print paperback copy or you can purchase the e-book. All class notes (i.e., lecture slides) will contain references to chapters in the textbook. This is a fairly fast-paced course, so the textbook is very useful for filling in background information that I do not cover in class.

Web Page: The course webpage is on Canvas with the following course identifier:
2019FA_ECON_307-0_SEC20

Lecture Slides: The Lecture Slides for each lecture will be made available on the course webpage before class. The Lecture Slides are intended to provide an outline of what I will cover in class, as well as some important tables and figures. I will also be solving problems on blackboard; those will often NOT be included in slides. If you miss a class, please get notes from a classmate, and also please visit the course webpage for any announcements you may have missed.

Grading: Grades will be determined by one of the following formula:

	Percent of Final Grade
Midterm	25%
Problem Sets	25%
Final Exam	50%

Problem Sets: There will be <u>seven</u> graded problem sets. The problem sets are <u>required</u>. Your grade will be based on the remaining problem set grades after dropping the lowest problem set grade. Because of this policy, no late problem sets will be accepted under any circumstances. If an emergency prevents you from handing in a problem set assignment, then that will count as your dropped problem set grade.

You are allowed and encouraged to work with your classmates on the problem sets. However, you must hand in your own set of answers with explanations in your own words. If a problem requires calculations or math, you must show your own work. Identical copies of joint work are not acceptable.

Review Sessions: There will be a weekly "review session / office hours" led by the Teaching Assistant (TA) to go over the previous week's problem set and answer other questions about the course. The sessions will be run by the TA (Kelly Gail Strada <kellystrada2022@u.northwestern.edu>). The time/location of the weekly review sessions are the following:

Friday, 10:00am-11:20am, 555 Clark, Room B01 (CLRKB01)

These review sessions are <u>NOT</u> required. In general, no new material will be presented at the sessions; the sessions are designed to go over the solutions to the problem set from the previous week, provide statistical programming assistance, and allow students to discuss any material from the course with the TA that they would like to understand better. The sessions will not cover the current problem sets, and I will look very poorly on student efforts to get current problem set answers from the TAs.

Exams: The midterm exam will be held on TUESDAY, OCTOBER 29 <u>IN CLASS</u>. The final exam will be held in the assigned final exam slot (WEDNESDAY, DECEMBER 11 in same classroom). There is no scheduled make-up time for either exam. Both exams will be CLOSED-BOOK (i.e., no notes, books, etc.). If you anticipate a potential medical emergency (e.g., you are due to give birth on day of final) please talk to me as soon as possible. Under no circumstances will I allow any student to take either the midterm exam or the final exam before the scheduled date. I reserve the right to give an alternative version of the exam if a student takes the exam outside of the scheduled time slot.

Mathematical Requirements: If necessary, you should refresh your memory of elementary algebra and basic calculus. For example, you should be comfortable with the following mathematical techniques:

- Graph an equation (especially a linear equation) on a two-dimensional graph.
- Solve a system of N equations and N unknowns.
- Compute derivatives and integrals of simple equations.
- Use derivatives to find the maximum/minimum values of arbitrary nonlinear functions.

This course is about Health Economics, not mathematics. However mathematical tools will be useful for communicating the economic intuition and for solving real-world economic problems. The mathematical tools described above are not difficult, but they are important for understanding concepts in the class.

Office Hours / Getting Help: My office hours are on Wednesdays 8:30am-10:00am in my office, and by appointment (set up through email). The TA will also be holding office hours, on Wednesdays 1:30pm-3:30pm in Kellogg Global Hub Room 3411. The office hours are good place to get help on current problem sets.

Course Schedule **(* indicates required reading; all other assigned readings are optional and will not be covered in detail in the class.)**

Week 1:

What is Health Economics?
Introduction to Health Care in the United States
The Demand for Health Care

Assigned Readings:
(*) Textbook: Chapters 1, 2, and 18
(*) Brill, S. 2013. "Bitter Pill: Why Medical Bills Are Killing Us", *Time*.
(*) Finkelstein, A, Taubman, S., Wright, B., Bernstein, M., Gruber, J., Newhouse, J.P., Allen, H., Baicker, K., & Oregon Health Study Group. 2012. "The Oregon Health Insurance Experiment: Evidence from the First Year," *Quarterly Journal of Economics*, 127(3): 1057-1106.
Gawande, A. 2009. "The Cost Conundrum," *The New Yorker*.
Card, D., Dobkin, C., & Maestas, N. 2008. "The impact of nearly universal insurance coverage on health care utilization: Evidence from Medicare." *American Economic Review*, 98(5): 2242-2258.
Card, D., Dobkin, C., & Maestas, N. 2009. "Does Medicare save lives?" *The Quarterly Journal of Economics*, 124(2): 597-636.
Dorn, S. 2008 "Uninsured and Dying Because of It", Urban Institute Report.
LoSasso, A.T., & Buchmueller, T.C. 2002. "The effect of the state children's health insurance program on health insurance coverage." NBER Working Paper.

Week 2:

The Demand for Health
Incorporating the Demand for Health into Economic Models

Assigned Readings:
(*) Textbook: Chapter 3
(*) Viscusi, W. K. and Joseph E. Aldy. 2003. "The Value of a Statistical Life: A Critical Review of Market Estimates Throughout the World," *The Journal of Risk and Uncertainty*, 27(1): 5-76.
Hall, R.E., & Jones, C.I. 2007. "The Value of Life and the Rise in Health Spending." *Quarterly Journal of Economics,* 122(1): 39-72
Jones, C.I. 2014. "Life and Growth." *Journal of Political Economy*, forthcoming.
Murphy, K.M., & Topel, R.H. 2006. "The Value of Health and Longevity." *Journal of Political Economy*, 114(5):871-904.

Week 3:

Introduction to Information Economics
The Economics of Uncertainty
The Demand for Health Insurance

Assigned Readings:
(*) Textbook: Chapter 7
Sydnor, J. 2010. "(Over)insuring Modest Risks." *American Economic Journal: Applied Economics*, 2(4):177-199..

Week 4:

Introduction to Adverse Selection
Akerlof's "Market for Lemons"

Assigned Readings:
(*) Textbook: Chapter 8
(*) Einav,L., & Finkelstein, A. 2011. "Selection in Insurance Markets: Theory and Empirics in Pictures." *Journal of Economic Perspectives*. 25(1): 115-138.

Week 5:

Adverse Selection in Insurance Markets – The Rothschild-Stiglitz Model
Adverse Selection: Empirical Evidence
The Welfare Consequences of Adverse Selection

Assigned Readings:
(*) Textbook: Chapters 9 and 10
Einav, L, Finkelstein, A & Levin, J. 2010a. "Beyond Testing: Empirical Models of Insurance Markets." *Annual Review of Economics*, 2: 311-336.
Chiappori.P-A, & Salanie, B. 2000. "Testing for Asymmetric Information in Insurance Markets." *Journal of Political Economy*, 108(1): 56-78.
Oster, E, Shoulson, I. & Dorsey, E.R.., 2010. "Genetic Adverse Selection: Evidence from Long-Term Care Insurance and Huntington Disease", *Journal of Public Economics*, 94: 1041-1050.
Hendren, N. 2013. "Private Information and Insurance Rejections." *Econometrica*, 81(5), 1713-1762.
Einav, L., Finkelstein, A. & Cullen, M.R. 2010. "Estimating Welfare in Insurance Markets Using Variation in Prices," *Quarterly Journal of Economics*, 125(3): 877-921.

Week 6:

OCTOBER 29 – MIDTERM EXAM (IN CLASS)

Introduction to Moral Hazard
Combining Adverse Selection and Moral Hazard

Assigned Readings:
(*) Textbook Chapter 11
(*) "The Moral-Hazard Myth", Malcolm Gladwell, *The New Yorker*.
Einav, L. Finkelstein, A., Ryan, S.P., Schrimpf, P., & Cullen, M.R. 2013 "Selection on Moral Hazard," *American Economic Review*, 103(1): 178-219.

Week 7:

Moral Hazard: Empirical Evidence
Supply of Health Care, Labor Market of Physicians, and Hospital Markets

Assigned Readings:

(*) Textbook Chapters 5 and 6

(*) 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., & Finkelstein, A, 2013 "The Oregon Experiment – Medicaid's Effects on Clinical Outcomes," *New England Journal of Medicine*, 368: 1713-1722.

(*) Taubman, S.L., Allen, H.L., Wright, B.J., Baicker, K, & Finkelstein, A. 2014. "Medicaid Increases Emergency Department Use," *Science*, 343: 263-268.

Aron-Dine, Aviva, Einav, L., Finkerlstein, A. 2013. "The RAND Health Insurance Experiment, Three Decades Later," *Journal of Economic Perspectives*, 27(1): 197-222.

Anderson, M., Dobkin, C., & Gross, T. 2012. "The Effect of Health Insurance Coverage on the Use of Medical Services," *American Economic Journal: Economic Policy*, 4(1): 1-27.

Garthwaite, C.. 2012 "The Doctor Might See You Now: Supply Side Effects of Public Health Insurance Expansions," *American Economic Journal: Economic Policy*, 4(3): 190-215

Garthwaite, C., Gross, T., & Notowidigdo, M.J. 2012 "Hospitals as Insurers of Last Resort," Working Paper.

Week 8:

Technological Progress, Health Care Spending, and the "Flat of the Curve"

Overuse and Underuse in Health Care

Learning-by-Doing in Health Care

Assigned Readings:

(*) Textbook Chapter 13

(*) Chandra, A., & Staiger, D. 2007. "Productivity Spillovers in Health Care: Evidence from the Treatment of Heart Attacks," *Journal of Political Economy*, 115(1): 103-140.

Newhouse, J.P. 1992, "Medical Care Costs: How Much Welfare Loss?", *Journal of Economic Perspectives*, 6(3): 3-21.

Chandra, A., & Staiger, D. 2011. "Expertise, Underuse, and Overuse in Health Care," Working Paper.

Finkelstein, A., Gentzkow, M., & Williams, H. 2016. "Sources of Geographic Variation in Health Care: Evidence from Patient Migration" *Quarterly Journal of Economics*, 131(4): 1681-1726.

Week 9:

Health Inequality and Socioeconomic Disparities in Health

Health Policy Topics: Non-Health Outcomes (Labor Market, Consumer Finances, Etc.)

Assigned Readings:

(*) Textbook Chapter 4

(*) Deaton, A. 2002 "Policy Implications of the Gradient of Health and Wealth," *Health Affairs*, 21(2): 13-30.

(*) Himmelstein, D.U., Warren, E., Thorne, D., & Woolhandler, S.. 2005. "Illness and Injury as Contributors to Bankruptcy," *Health Affairs.*, 5: 63-73.

(*) Mazumder, Bhashkar, and Sarah Miller. 2016. "The Effects of the Massachusetts Health Reform on Household Financial Distress." *American Economic Journal: Economic Policy*, 8(3): 284-313.

Gross, T., & Notowidigdo, N.J. 2011. "Health insurance and the consumer bankruptcy decision: Evidence from expansion of Medicaid." *Journal of Public Economics*, 95: 767-778.

Garthwaite, C., Gross, T., & Notowidigdo, N.J. 2014. "Public health insurance, labor supply, and employment lock." *Quarterly Journal of Economics*, 129(2): 653-696

Week 10:

Health Policy Topics: TBD

Assigned Readings:
TBD