

ECON 43565
Health Economics
Department of Economics
University of Notre Dame

Fall 2013
MW, 3:30pm – 4:45pm
204 DeBartolo Hall

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Class web page: http://www3.nd.edu/~wevans1/health_econ.html

Text and Readings:

There is no textbook for the course. Instead, the course will be focused around mandatory readings of academic articles that highlight important topics in health economics. The readings are available for download in PDF format from the class web page. For download, the readings require your netid. Students are expected to have read the papers in advance and be able to substantively discuss the work in class.

If you want to buy a textbook to assist you with the readings, I recommend Folland, Goodman and Stano, *The Economics of Health and Health Care*, Seventh Edition, Prentice Hall.

Office Hours: Mondays, 9:00am – 11:00am, Tuesdays, 2:00pm – 4:00pm, and by appointment.
I am never far from email. If you have a question, please feel free to contact me at wevans1@nd.edu.

Course Rationale:

Health care spending currently consumes over \$2.6 trillion dollars which is 18 percent of gross domestic product. To give you some frame of reference, GDP in the manufacturing sector was about \$1.8 trillion and \$1.9 trillion in real estate, making the health care sector one of the largest in the US economy. These numbers are expected to escalate as the baby boom generating retirees. Health care spending is also a large fraction of federal and state spending and again, these numbers are expected to grow over time as well. We have also embarked on an ambitious federal reform of the health care sector which is expected to cost \$1 trillion over a 10-year period. Given these costs, it is imperative to understand the structure, conduct and performance among actors in this industry.

Course Theme:

The course is designed to illustrate how *economists* analyze topics related to the production of health and the delivery of health care. In many cases, economists think very differently about topics than health care professionals and other social scientists. Economists have time and time again demonstrated the importance of incentives in decision making and throughout the semester, we will demonstrate how incentives play an important role in this sector.

Course Objective:

The course is an advanced undergraduate course in economics and students are expected to have completed a course in intermediate micro economic theory. The course will provide students with a broad overview of important topics in health care, indicate current gaps in research, and

demonstrate successful research programs in the field. The bulk of the readings are empirical in nature and the course will stress how to test economic hypotheses. The course will however use extensively the tools of intermediate micro, so students must be familiar with the theoretical as well as empirical techniques in the discipline.

Expectations:

Students are expected to attend class, to read the assigned articles prior to class, to NOT be late to class, to participate in classroom discussions, to hand in assignments when due, to take tests when expected, and to NOT engage in academic dishonesty.

Evaluations:

Grades for the course will be based the maximum of your mid-term and your final exam, (25 percent of the course grade), five short précis which are short summaries of journal articles (5 percent each and 25 percent in total), class participation (25 percent of the course grade), and an original research paper (25 percent of the course grade).

Examinations: The mid-term examination will be held Wednesday, October 16th in the regular class room. The final exam is Thursday, December 19th from 4:15pm to 6:15pm. Note that if you are happy with your midterm exam grade, you can take a zero on the final since the grade is the max of the two scores.

Makeup exams will only be given for students who have a valid University excuse, applied for in writing and adequately documented. I must receive documentation within 48 hours of the missed exam. Please familiarize yourself with student responsibilities concerning missed exams, missed assignments, etc.

Précis: A précis is a short synopsis. The key source of information for this class will be a series of academic articles on health economics. An important skill for the job market is being able to distill a large block of information into its key components so that is understandable for another person. During the semester, you will be required to write five précis (two pages, double spaced, 11 point type, one inch margins) that summarize one of the academic readings in class. The précis will be assigned one to three weeks ahead of time. Once assigned, you must turn them in or you will get a zero for the assignment. A complete description of the assignment is on the class web page under assignments. The first précis is due next Monday.

Paper: This class is restricted in enrollment because it satisfies the college's requirement for a writing-intensive course. Because undergraduate econometrics is required, I am requiring that students write an original empirical research paper. This is something that will take a considerable amount of time and it may not be what you had in mind for your senior year, but in the end, it is a lot more rewarding than taking another exam. The papers will be due the last day of class. I am hoping that the students that write the best paper will continue to work on them throughout the spring semester and submit the papers to the annual Bernoulli Awards contest that is run by the department. <http://economics.nd.edu/undergraduate-program/bernoulli-awards/>. The award was established by a Notre Dame alum who thought his most valuable undergraduate course was one that required an original research paper. They established the prize to encourage student participation in research. Since I also believe my senior honors thesis was the most important class I took, I agree with this assessment. With prize money ranging from \$1000 to \$5000, this is a reasonable goal. Three students from the Spring 2013 Health Economics class won Bernoulli awards, including one student that won \$2,500.

To complete an original research report in one semester, you need to find a topic and data soon.

Topics must ask an answer a specific question. Given the time frame, topics must be tightly scripted and finite. I am NOT looking for a paper like “Devising a Fair and Just Health Care System.” To be honest, no one in their right mind would ask a 21 year old to answer that question. Instead, look for questions like “Did the Massachusetts Health Care Reform Lead to More Part Time Work?” or “The Impact of the ACA on Uninsurance Rates for Young Adults.”

Grades will be a function of the soundness of your econometric model and the quality of the exposition. The paper will be a minimum of 20 pages (including title page, text, figures, tables and references), double spaced, 11 point type, 1 inch margins.

Please familiarize yourself with the Undergraduate Academic Code of Honor:
<http://www.nd.edu/~hnr/code/docs/handbook.htm>.

Office hours for the STATA consultant:

Because this is a writing intensive course, you will be required to complete an original empirical research paper on some aspect of health economics for this course. Students can use any statistical software package to write their papers but I can support SAS and STATA. I know some of you may have used R in econometrics but you can pick up STATA quite quickly.

The university recently hired an Economics Librarian. His name is James Ng and he has a PhD in economics. One of his tasks is to be a resource for undergraduates engaged in research. James can assist you in many aspects of your empirical research including finding data, reading data into STATA from another source, recoding variables, merging two data sets together, constructing the appropriate econometric model, etc.

James is available to answer you data and STATA questions during his office hours, which are 2:45pm – 4:45pm on Tuesday afternoons. James’s office is 114 Hesburgh Library and his email is james.ng@nd.edu.

I will be running an introduction to STATA class Friday, August 23rd from 2:00pm-3:15pm (room TBD) if anyone wants to brush up on their STATA skills.

As always, I can answer your data and STATA questions as well.

Problem sets:

Seven problem sets will be assigned during the semester. These problem sets are designed to gauge your understanding of the concepts discussed in class. Collaboration and discussion are encouraged in your work. Problem sets will not be graded or collected but I will distribute detailed answer keys. The problem sets will be indicative of what I will ask on the midterm exam.

Reading List
Health Economics/Evans/Fall 2013

All readings are required. Articles with a (#) are articles you can use for a precis.

I. Introduction – How do economists think about health issues

II. The production of health

a. Statistics detour – difference-in-difference models

b. An historical perspective

Folland, Goodman and Stano, Chapter 5.

#McKeown, Thomas, *The Role of Medicine: Dream, Mirage or Nemesis*, London, England: Nuffield Provincial Hospitals Trust; 1976, pages 29-65.

#Fogel, Robert, *The Escape from Hunger and Premature Death, 1700-2100*, Cambridge, UK :Cambridge University Press, 2005, 1-42.

#Cutler, David and Grant Miller, “The Role of Public Health Improvements in Health Advances: The Twentieth-Century United States.” *Demography* 42(1), 2005, 1-22.

c. Health and development: macro and micro perspectives

Bloom, David E. and David Canning, “The Health and Wealth of Nations,” *Science*, 2000, 287(5456), 1207-1208.

Sachs, Jeffrey, and Pia Malaney, “The Economic and Social Burden of Malaria,” *Nature*, 2002, 415(6872), 680-685.

#Maccini, Sharon and Dean Yang, 2009. “Under the Weather: Health, Schooling and Socioeconomic Consequences of Early Life Rainfall,” *American Economic Review*, 99(3), 1006, 1026.

#Cutler, David M., Winnie Fung, Michael Kremer, Monica Singhal, and Tom Vogl, 2010. “Early-life Malaria Exposure and Adult Outcomes: Evidence from Malaria Eradication in India,” *American Economic Journal: Applied Economics*, 2(2), 72-94.

#Baird, Sarah, John Hicks, Michael Kremer, and Edqard Miguel. 2011. “Worms at Work: Long-Run Impacts if Child health Gains.” Working paper.

Acemoglu, Daron, and Simon Johnson, 2007. "Disease and Development: The Effect of Life Expectancy on Economic Growth," *Journal of Political Economy*, 115 (6), December, 925-985.

d. Statistics detour – Regression Discontinuity Design

e. Modern correlates of health

Cutler, David, Angus Deaton, and Adriana Lleras-Muney, 2006. "The Determinants of Mortality." *Journal of Economic Perspectives*, 20(3), 97-120.

#Clark, Damon, and Heather Royer. 2012. "The Effect of Education on Adult Mortality and Health: Evidence from Britain." *NBER Working Paper #16013* (Forthcoming, *American Economic Review*).

#Sullivan, Daniel and Till von Wachter, 2009. "Job Displacement and Mortality: An Analysis Using Administrative Data." *Quarterly Journal of Economics* 124(3), 1265-1306.

#Gardner, Jonathan, and Andrew J. Oswald. 2007. "Money and Mental Well-Being: A Longitudinal Study of Medium-Sized Lottery Winners." *Journal of Health Economics* 27(1), 49-60.

III. The Government control of unhealthy behavior

a. Pigouvian taxes

Folland, Goodman and Stano, Chapter 24.

Gruber, J., Chapter 6 of *Public Finance and Public Policy*, 2005, New York: Worth Publishers, p.144-168.

b. Do smokers and drinkers pay their way?

#Gruber, J, "Tobacco at the Crossroads: The Past and Future of Smoking Regulation in the United States" *Journal of Economic Perspectives*, 15, 2001, 193-212.

#Manning, WB, EB Keeler, JP Newhouse, EM Sloss, J Wasserman. 1989. "The taxes of sin. Do smokers and drinkers pay their way?" *JAMA* Mar 17, 261(11):1604-1609.

(these next two articles should be reviewed in one précis)

#Viscusi, W. Kip, 2008. "How to Value a Life." *Journal of Economics and Finance*, 32: 311-323.

#Viscusi, W. Kip, "Value of Life." *The New Pelgrave Dictionary of Economics Online*

c. Explaining the rise on obesity and can taxes work again?

#Cutler, David, Edward Glaeser and Jesse Shapiro, 2003. "Why Have Americans Become More Obese?" *Journal of Economic Perspectives*, 17(3). 93-118.

#Fletcher, Jason M., David Frisvold, and Nathan Tefft. 2010. "The Effect of Soft Drink Taxes on Child and Adolescent Consumption and Weight Outcomes." *Journal of Public*

Economics 94(11-12), 967-974.

#Schanzenbach, D.W., "Do School Lunches Contribute to Childhood Obesity?" 2009. *Journal of Human Resources* 44(3), 684-709.

IV. Health insurance and the demand for medical care

a. Choices under uncertainty and the role of insurance

Nicholson, Walter, *Microeconomic Theory: Basic Principles and Extensions*, 7th edition, Dryden press, 1998. Chapters 8 and 10, p 209-259.

b. Moral hazard

Folland, Goodman and Stano, Chapters 8 and 9.

Gladwell, Malcolm, "The Moral Hazard Myth" *The New Yorker*, August 29, 2005.

#Newhouse, Joseph, *Free for All*, Cambridge, MA: Harvard University Press, 1993, p. 3-28, 31-49, 338-345.

#Finkelstein, Amy, et al., 2012. "The Oregon Health Insurance Experiment: Evidence from the First Year." *Quarterly Journal of Economics* 127(3), 1057-1106.

#Baicker, Katherine, et al. 2013. "The Oregon Experiment – Effects of Medicaid on Clinical Outcomes." *New England Journal of Medicine* 368(18), 1712-1722.

#Chandra, Amitabh, Jonathan Gruber, and Robin McKnight. 2010. "Patient Cost-Sharing and Hospitalization Offsets in the Elderly," *American Economic Review* 100(1), 1-24.

c. Adverse selection

Folland, Goodman and Stano, Chapter 10.

Rothschild, Michael and Joseph Stiglitz, 1976. "Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information," *Quarterly Journal of Economics*, 90(4): 629-650.

Akerlof, George A., 1970. "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism." *Quarterly Journal of Economics*, 84(3): 488-500. Read pages 488-490 only.

#Cutler, David M., and Sarah J. Reber, "Paying for Health Insurance: The Tradeoff Between Competition and Adverse Selection," *Quarterly Journal of Economics*, 113(2), pp. 433-466.

#Simon, Kosali, "Adverse Selection in Health Insurance Markets? Evidence from State Small-Group Health Insurance Reforms," *Journal of Public Economics*, 89, 2005, 1865-1877.

d. Employer-provided health insurance

Folland, Goodman and Stano, Chapter 11.

For this section, it might be useful for you to review your class notes from intermediate micro economics on income and substitution effects.

DeNavas-Walt, Carmet, Bernadette D. Proctor and Jessica Smith, 2012. *Income, Poverty, and Health Insurance Coverage in the United States: 2011*, U.S. Census Bureau, Washington, DC. <http://www.census.gov/prod/2012pubs/p60-243.pdf>

Please look over this document and come to class with five interesting facts about the uninsured.

#Thomasson, Melissa. 2002. "From Sickness to Health: The 20th Century Development of US Health Insurance." *Explorations in Economic History*, 39(3), 233-253. Focus on Pages 233-241.

#Shiels, J., Haight, R., "The Cost of Tax-Exempt Health Benefits in 2004," *Health Affairs*, Web exclusive, February 24, 2004.

#Reinhardt, Uwe, 1999. "Employer-Based Health Insurance: A Balance Sheet," *Health Affairs*, 18(6), 124-132.

e. The health benefits of insurance coverage

#Card, David, Carlos Dobkin, Nicole Maestas, 2009. "Does Medicare Save Lives?" *Quarterly Journal of Economics*, 124(2), 597-636.

#Finkelstein, Amy, 2008. "What Did Medicare Do? The Initial Impact of Medicare on Mortality and out of Pocket Spending." *Journal of Public Economics*, 92 (2008), 1644-1668. (only read though page 1653).

#Doyle, Joseph J. Jr. 2005. "Health insurance, Treatment and Outcomes: Using Auto Accidents as Health Shocks." *Review of Economics and Statistics* 87(2), 256-270.

#Hadley, Jack. 2007. "Insurance Coverage, Medical Care Use, and Short-term Health Changes Following an Unintentional Injury or the Onset of a Chronic Condition." *JAMA* 297(10), 1073-1084.

f. How health insurance interacts with the job market

#Summers, Lawrence, 1989. "Some Simple Economics of Mandated Benefits," *American Economic Review*, May 177-183.

#Krueger, Alan, and Uwe Reinhart, "The Economics of Employer versus Individual Mandates," *Health Affairs*, Spring (II) 1994, 34-53.

#Gruber, J., 1994. "The Incidence of Mandated Maternity Benefits," *American Economic Review*, 84(3), 622-641.

#Cutler, David, Jonathan Gruber, 1996. "Does Public Insurance Crowd Out Private Insurance," *Quarterly Journal of Economics*, 111, 391-430.

Gruber, Jonathan, and Kosali Simon. 2008. "Crowd-Out 10 Years Later: Have Recent Public Insurance Expansions Crowded Out Private Health Insurance." *Journal of Health Economics* 27(2), 201-217.

V. Medical technology and health care costs

Newhouse, Joseph, "Medical Care Costs: How Much Welfare Loss?" *Journal of Economic Perspectives*, 6(3), 1992, 3-31.

Pauly, Mark. "Should We Be Worried About High Real Medical Spending Growth in the US?" *Health Affairs*, Web Exclusive, Jan 8, 2003, w3-15.

#Cutler, D., M. McClellan, "Is Technological Change in Medicine Worth it?" *Health Affairs*, 20(5), 2001, 11-29.

#Cutler, David, Allison B. Rosen, and Sandeep Vijan, 2006. "Value of Medical Innovation in the United States: 1960-2000," *New England Journal of Medicine*, 355(9), 920-927.

VI. Physician Behavior

Folland, Goodman and Stano, Chapters 15-16.

Please check out the Dartmouth Atlas, <http://www.dartmouthatlas.org/>, which is a fascinating graphical presentation of small-area variation. If you do not waste 3 hours looking at these graphs, you are not interested in health economics.

#Gruber, Jonathan and Maria Owings, 1996. "Physician Incentives and Cesarean Section Delivery," *RAND Journal of Economics*, 27(1), 99-123.

Fisher, Elliott S., et al., "The Implications of Regional Variations in Medicare Spending. [Part 1](#): The Content, Quality, and Accessibility of Care," *Annals of Internal Medicine*, 138(4), February 18, 2003, pp. 273-287.

Fisher, Elliott S., et al., "The Implications of Regional Variations in Medicare Spending. [Part 2](#): Health Outcomes and Satisfaction with Care," *Annals of Internal Medicine*, 138(4), February 18, 2003, pp. 288-298.

#Hillman, B.J., et al., "Frequency and Costs of Diagnostic Imaging in Office Practices—A comparison of Self-Referring and Radiologist Referring Physicians," *New England Journal of Medicine*, 323, December 6, 1990, 1604-1608.

#Doyle, Joseph, Jr. 2011. "Returns to Local Area Healthcare Spending: Evidence from Health Shocks to Patients Far from Home ." Working Paper.

VII. Hospitals

Folland, Goodman and Stano, Chapter 21.

#Cutler, D., 1995. "The Incidence of Adverse Medical Outcomes under Prospective Payment," *Econometrica*, 63, 1995, 29-50. Please read pages 29-33.

#Rogers, William H., et al. 1990. "Quality of Care Before and After Implementation of the DRG-Based Prospective Payment System: A Summary of Effects," *JAMA*, 264(15), October 17, 1990, 1989-1994.

#Dafny, L., 2005. "How do Hospitals Respond to Price Changes," *American Economic Review*, 95(5), December 2005, 1525-1547.

VIII. Health Care Reform

a. Some general comments on full scale reform

Cutler, David. *Your Money or Your Life: Strong Medicine for America's Health Care System*. Oxford University Press, 2004. pp. 100-123.

Dranove, David. *Code Red: An Economist Explains How to Revive the Healthcare System without Destroying It*. Princeton: Princeton University Press. 2008. 205-234.

b. The Massachusetts experiment

Kaiser Family Foundation, Massachusetts Health Care Reform: An Update, June 2007. <http://www.kff.org/uninsured/upload/7494-02.pdf>

Kaiser Family Foundation, Massachusetts Health Care Reform: Two Years Later, June 2009. <http://www.kff.org/uninsured/upload/7777.pdf>

#Gruber, Jonathan, 2008. "Massachusetts Health Care Reform: The View from One Year Out," *Risk management and Insurance*, 11(1), 51-63.

#Long, Sharon, Karen Stockley, and Alyshadye Yemane, "Another Look at the Impacts of health Reform in Massachusetts: Evidence Using New Data and a Stronger Model." *American Economic Review Papers and Proceedings* 99(2), 508-511.

c. The Affordable Care Act

The best synopsis of the ACA is found on the website of the Kaiser Family Foundation, <http://healthreform.kff.org/>