## **Health Economics**

# Spring 2021

#### Instructor

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#### Time

Thursday: 1530-1820

### Place

College of Social Science, Room 507

### Office Hours

Thursday: 2-3pm or By appointment.

#### Overview

This is a health economics course for the undergraduate and Master level. The purpose of this course is to teach students to analyze the health market using the economic tools. The class will begin with some backgrounds on U.S. and Taiwan institutions, then move to the topics such as moral hazard and adverse selection in the insurance market, benefits of medical care, physician-patient interaction, and payment systems for providers. Each topic covers several selected papers, including both theoretical and empirical ones.

### Prerequisite

Students are assumed to be familiar with Master level Microeconomics Theory and Econometrics. In addition, students in this course are likely to be heavily involved with NHI data. Background in Industrial Organization and basic knowledge of statistical software (e.g. SAS, STATA) will be helpful though not required.

# Readings

Reading plays an essential part of this course. Students are expected to read all listed articles, though only articles with (\*) will be discussed in class. Articles with a ( $\Theta$ ) are more difficult. You should concentrate on the main ideas. All readings will be posted on the course web page, except chapters in the books.

# Textbooks

There is no textbook for this course; however, the following three books are helpful for understanding the backgrounds of health systems of the United States and Taiwan.

The Economics of Health and Health Care, by Sherman Folland, Allen C and Goodman, and Miron Stano (United States, hereafter FGM)

Health Economics, by Sloan, F. A. and C.R. Hsieh. 2012, Cambridge: MIT Press.

Health Economics, by Chee-Ruey Hsieh, and Rachel Ru (Taiwan, hereafter HR)

## Grading

There will be a weekly class presentation; each student takes turns to give a 45-mins presentation of an assigned paper. There will also be assignments; students are expected to work independently. There will be either an final exam or a report which students are expected to work in groups; the details will be decided in the first class. Grading will be as follows:

Presentation 40% Report 60%.

## Course Schedule

Course Introduction	Reading papers (6 hours)	• 09/23
Introduction to Health Economics	Reading papers (6 hours)	• 09/30
Optiaml Health Insurance	Reading papers (6 hours)	<ul><li>10/07</li></ul>
Optiaml Health Insurance	Reading papers (6 hours)	• 10/14
Health Insurance (Moral Hazard)	Reading papers (6 hours)	• 10/21
Health Insurance (Moral Hazard)	Reading papers (6 hours)	• 10/28
Health Insurance (Moral Hazard)	Reading papers (6 hours)	• 11/04
	Midterm Report	• 11/11
Provider Payment and Incentives	Reading papers (6 hours)	• 11/18
Provider Payment and Incentives	Reading papers (6 hours)	• 11/25
Benefits of Medical Care	Reading papers (6 hours)	• 12/02
Benefits of Medical Care	Reading papers (6 hours)	• 12/09
Selective Topics	Reading papers (6 hours)	• 12/16
Selective Topics	Reading papers (6 hours)	• 12/23
Selective Topics	Reading papers (6 hours)	• 12/30
	Final Report	• 01/06

### Course Outline

#### • Introduction to Health Economics

- \*Newhouse, J. P. (1992) "Medicare Care Cost: How Much Welfare Loss?", Journal of Economic Perspectives, 6 (3): 13-29.
- \*Michael E. Chernew and J. P. Newhouse (2012) "Health Care Spending Growth," Chapter 1 of Handbook of Health Economics II, M V. Pauly, T. G. McGuire, and P. P. Barrosa (ed) Elsevier.
- \*Summer, Lawrence H. (2004) Fourth Annual Marshall J. Seidman Lecture on Health Policy
- Chapter 1 and 2, HR

# • Optiaml Health Insurance

- Chetty, Raj and Amy Finkelstein (2013) "Social insurance: Connecting theory to data,"
  Handbook of Public Economics Volume 5: 111-193.
- \*Culter, D. M and Zeckhauser, R. (2000) "The Anatomy of Health Insurance", Chapter11 of *Handbook of Health Economics*, A.J. Culyer and J. P. Newhouse (ed) Elsevier.
- \*Thomas G. McGuire (2012) "Demand for Health Insurance," Chapter 5 of Handbook of Health Economics Volumne 2, M V. Pauly, T. G. McGuire, and P. P. Barrosa (ed) Elsevier.
- (Θ)Kenneth. J. Arrow. (1963) "The Welfare Economics of Medical Care," American Economic Review, 53, 941-973
- Pauly, M.V. (1968) "The Economics of Moral Hazard," American Economic Review, 49: 531-537.

# • Health Insurance (Moral Hazard)

- Aron-Dine, Aviva, Liran Einav and Amy Finkelstein (2013) "The RAND Health Insurance Experiment, Three Decades Later" Journal of Economic Perspectives 27(1): 197-222.
- \*Chandra, A., Gruber, J. and McKnight, R. (2010a), "Patient cost-sharing and hospitalization offsets in the elderly', *American Economic Review* 100(1), 193-213.
- \*Liran Einav & Amy Finkelstein (2018) "Moral Hazard in Health Insurance: What We Know and How We Know It," *Journal of the European Economic Association*, 16 (4): 957-982.
- \*Manning, W.G. et al. (1987) "Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment," *American Economic Review*, 77: 251-277.
- \*Finkelstein, Amy, Sarah Taubman, Bill Wright, Mira Bernstein, Jonathan Gruber, Joseph P. Newhouse, Heidi Allen, Katherine Baicker, and the Oregon Health Study Group (2012) "The Oregon Health Insurance Experiment: Evidence from the First Year," Quarterly Journal of Economics 127(3): 1057-1106.
- \*Finkelstein, Amy, 2007, "The Aggregate Effects of Health Insurance: Evidence from the Introduction of Medicare," Quarterly Journal of Economics, 122(1), 1-37.

- Han, Hsing-Wen, Hsien-Ming Lien and Tzu-Ting Yang (2016) "Patient Cost Sharing and Healthcare Utilization in Early Childhood: Evidence from a Regression Discontinuity Design" Manuscripts
- Chandra, A., Gruber, J. and McKnight, R. (2010b), 'Patient cost sharing in low income populations', American Economic Review 100(2), 303-308
- Shigeoka, Hitoshi (2014) "The Effect of Patient Cost Sharing on Utilization, Health, and Risk Protection," *American Economic Review* 104(7): 2152-84.
- Chapter 10, Phelps

### • Provider Payment and Incentives

- \*McGuire, T. G. (2000) "Physician Agency," in Anthony J. Culyer and Joseph P. Newhouse, eds., Chapter 9 of Handbook of Health Economics, Elsevier.
- \*Newhouse, J. P. (1996) "Reimbursing Health Plans and Health Providers: Efficiency in Production versus Selection?", Journal of Economic Literature.
- \*Ellis, R. and McGuire, T.G. (1993) "Supply-Side and Demand-Side Cost Sharing in Health Care," Journal of Economic Perspectives, 7: 135-151.
- Gaynor, Martin and Paul Gertler, "Moral Hazard and Risk Spreading in Partnerships," Rand Journal of Economics, 1995, 26(4), 591-614.
- \*Gruber, J. and Owings, M. (1996) "Physician Financial Incentives and Cesarean Section Delivery," RAND Journal of Economics, 27: 99-123.
- Yip, W. (1998), "Physician Responses to Medical Fee Reductions: Changes in the Volume and Intensity of Supply of Coronary, Artery Bypass Graft (CABG) Surgeries in the Medicare and Private Sectors," Journal of Health Economics, 17 (6): 675-699.
- Han, Hsing-Wen and Hsien-Ming Lien (2010) "Can Raising the Payment of Natural Delivery Lower the Cesarean Rate?" Taiwan Journal of Public Health, 29 (3), 218-227
- Meredith B. Rosenthal, PhD; Richard G. Frank, PhD; Zhonghe Li, MA; Arnold M. Epstein, MD, MA (2005). "Early Experience With Pay-for-Performance: From Concept to Practice". JAMA 294 (14): 1788–1793
- M .B. Rosenthal and R. G. Frank (2006). "What Is the Empirical Basis for Paying for Quality in Health Care?". Medical Care Research and Review 63 (2): 135–57
- Ma, C.A. (1994) "Health Care Payment Systems: Cost and Quality Incentives," *Journal of Economics & Management Strategy*, 3(1):93-112.
- Ellis, Randall. and McGuire, T.G.. (1986), "Provider Behavior Under Prospective Reimbursement: Cost Sharing and Supply", Journal of Health Economics, 5 (2): 129-152
- \*Clemens, Jeffrey and Joshua Gottlieb (2014) "Do physicians' financial incentives affect medical treatment and patient health?" *American Economic Review* 104(4): 1320-1349.
- Dafny, Leemore (2005) "How do hospitals respond to price changes?" American Economic Review 95(5): 1525-1547.

#### • Benefits of Medical Care

- \*Card, David, Carlos Dobkin, Nicole Maestas (2009) "Does Medicare Save Lives?" Quarterly Journal of Economics, 124(2), 597–636...
- \*Currie, Janet, and Jonathan Gruber (1996), "Saving Babies: The Efficacy and Cost of Recent Expansions of Medicaid Eligibility for Pregnant Women," Journal of Political Economy, 104(6), 1263-1296.
- \*David, Cutler.(2004) "Are the Benefits of Medicine Worth What We Pay for it?", Fifth Annual Herbert Lourie Memorical Lecture on Health Policy
- \*David M. Cutler, Allison B. Rosen, and Sandeep Vijan, (2006) "The Value of Medical Spending in the United States, 1960–2000" N Engl J Med 355:920-927
- \*Douglas Almond, Joseph Doyle, Amanda Kowalski, and Heidi Williams (2010) "Estimating Marginal Returns to Medical Care: Evidence from At-risk Newborns" The Quarterly Journal of Economics
- \*Piper, Joyce, et al.(1990) "Effects of Medicaid Eligibility Expansion on Prenatal Care and Pregnancy Outcomes in Tennessee," JAMA, 264(17), 2219-2223
- Miller, Amalia, and Catherine Tucker (2011) "Can Health Care Information Technology Save Babies?" Journal of Political Economy 119 (2): 289–324.

# • Early Life Health, Schooling, and Productivity

- Douglas Almond and Janet Currie (2011) "Killing Me Softly: The Fetal Origins Hypothesis". Journal of Economic Perspectives, 25 pp 153-172
- Douglas Almond, Kenneth Chay and David Lee (2005) "The Costs of Low Birth Weight" Quarterly Journal of Economics, 120, 1031-1084.
- Almond, Doug, Lena Edlund, and Marten Palme, "Chernobyl's Subclinical Legacy: Prenatal Exposure to Radioactive Fallout and School Outcomes in Sweden," *Quarterly Journal of Economics*, 2009, 124(4), 1729-1772.
- Almond, Doug and Kenneth Chay, "The Long Run and Intergenerational of Poor Infant Health: Evidence from Cohorts Born during the Civil Rights Era," mimeo, 2006.
- \*Bleakley, Hoyt (2007) "Disease and Development: Evidence from Hookworm Eradication in the American South," Quarterly Journal of Economics, 122(1), 73-117.
- \*Bleakley, Hoyt (2010) "Malaria Eradication in the Americas: A Retrospective Analysis of Childhood Exposure," American Economic Journal: Applied Economics, 2(2), 1-45.
- \*Douglas Almond, "Is the 1918 Influenza Pandemic Over? Long-Term Effects of In Utero Exposure in the Post-1940 US Population," Journal of Political Economy, 2006, 114(4), 672-712.
- Cutler, David 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.
- Lucas, Adrienne (2010) "Malaria Eradication and Educational Attainment: Evidence from Paraguay and Sri Lanka," American Economic Journal: Applied Economics, 2(2), 46-71.
- Thomas, Duncan, et al., "Iron Deficiency and the Well-Being of Older Adults: Early Results from a Randomized Nutrition Intervention," mimeo, 2003.

 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.

## • Pharmaceuticals

- Fiona Scott Morton, Margaret Kyle, "Markets for Pharmaceutical Products," Chapter
  12 of Handbook of Health Economics II, M V. Pauly, T. G. McGuire, and P. P. Barrosa
  (ed) Elsevier.
- \*Toshiaki Iizuka (2012) "Physician Agency and Adoption of Generic Pharmaceuticals,"
  American Economic Review, 102(6): 2826-2858
- Toshiaki Iizuka (2007) "Experts' Agency Problems: Evidence from the Prescription Drug Market in Japan," RAND Journal of Economics, 38(3), pp. 844-862
- \*Liu, Ya-Ming, Yea-Huei Kao Yang and Chee-Ruey Hsieh (2009) "Financial Incentives and Physicians' Prescription Decisions on the Choice between Brand-name and Generic Drugs: Evidence from Taiwan." *Journal of Health Economics* 28(2), 341-349.
- Liu, Y.M., Y.H. Kao Yang and C.R. Hsieh (2012). "Regulation and Competition in the Taiwanese Pharmaceutical Market under National Health Insurance." *Journal of Health Economics* 31(3), 471-483.
- Cutler, David (2008) "Are We Finally Winning the War on Cancer?" Journal of Economic Perspectives 22(4): 3-26.
- Cutler, David, Allison Rosen, and Sandeep Vijan (2006) "Value of Medical Innovation in the United States: 1960-2000," New England Journal of Medicine 355 (9): 920-927.
- Finkelstein, Amy (2004) "Static and dynamic effects of health policy: Evidence from the vaccine industry." Quarterly Journal of Economics 119(2): 527-64.
- Duggan, Mark, and Fiona Scott Morton (2010) "The Effect of Medicare Part D on Pharmaceutical Prices and Utilization," *American Economic Review* 100(1): 590-607.

### • Causes and Consequences of Geographic Variation

- \*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): 103-40.
- Chandra, Amitabh, Amy Finkelstein, Adam Sacarny, and Chad Syverson. (2016). "Health Care Exceptionalism? Performance and Allocation in the US Health Care Sector."
  American Economic Review 106(8): 2110-44.
- \*Finkelstein, Amy, Matthew Gentzkow, and Heidi Williams (2016) "Sources of Geographic Variation in Health Care: Evidence from Patient Migration," Quarterly Journal of Economics Forthcoming. http://www.nber.org/papers/w20789.
- \*Skinner, Jonathan (2011) "Causes and consequences of regional variations in health care," Handbook of Health Economics Volume 2, Mark Pauly, Thomas McGuire, and Pedro Barros (editors), New York NY: Elsevier
- Song, Yunjie, Jonathan Skinner, Julie Bynum, Jason Sutherland, John E. Wennberg, and Elliot Fisher (2010) "Regional variations in diagnostic practices," New England Journal of Medicine 363(1): 45-53.