Health Economics
HPAM-GP 4830-001
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Class will meet January 25th to March 7th on seven Mondays:
January 25, February 1, February 8, February 15, February 22, February 29, March 7

Syllabus

The purpose of this course is to extend students' understanding of economic theory and empirical research in key areas of health economics and enable students to leverage that knowledge and apply it to timely issues in health policy and management.

Academic Integrity: Students are reminded that they have signed an Academic Oath at NYUWagner and they are bound by this oath and the principles of the academic code of the school. More details can be found here: http://wagner.nyu.edu/current/policies/

Late Assignment Policy: Extensions will be granted *only in case of emergency*, out of respect to those who abide by deadlines despite equally hectic schedules. Late submissions without extensions will be penalized 10% per 24-hour period.

Students with disabilities: Any students requiring accommodations should contact me to make proper arrangements. Please be prepared to share your documentation from the NYU disabilities office regarding appropriate accommodations.

Prerequisites: Microeconomics, Statistics I. Proficiency in Excel expected.

Requirements:
- Please do all required readings before class and be prepared to discuss the policy reading assigned each week.
- Assignments (75% of grade – 35%, 25%, 15%)
- Final exam – (25% of grade) – online – week of March 7

Required Text:
Title   Health Economics
Authors   Jay Bhattacharya, Peter Tu, Timothy Hyde
Publisher Palgrave Macmillan, 2013
ISBN   113702996X, 9781137029966

Assignments: All papers are to be submitted via the NYU Classes course site before the start of class on their due date. ***Be sure your name is part of the document file name.***

Competencies and Grades:

Assignments and tests in this course will be used to assess progress against the competencies listed below. No student will receive a B or higher without demonstrating satisfactory progress toward mastery of each competency. The level of competency expected to be achieved is denoted in brackets according to the following key:

[1] = Basic: Foundational understanding of knowledge/skill/competency

[2] = Intermediate: Student demonstrates greater depth of understanding of this knowledge/skill/competency and can use this ability to analyze a problem

[3] = Advanced: Student demonstrates expertise in this knowledge/skill/competency and can use this ability to evaluate, judge, and synthesize information

- The ability to understand how policy and delivery processes work, and to consider the demographic, cultural, political and regulatory factors involved in and influencing health policy and management decision-making. (A1, T) [2]
- The ability to synthesize evidence, and apply statistical financial, economic and cost-effectiveness tools/techniques in organizational analysis. (A1, A2, A3, T) [3]
- The ability to present convincingly to individuals and groups the evidence to support a point of view, position or recommendation. (A1, A3, T) [2]
- The ability to communicate and interact productively (via listening, speaking and writing) on matters of healthcare with a diverse and changing industry, work force and citizenry. (A1, A3) [2]

Grading:

Assignments 1 and 2 will ask you to examine a policy/management issue and to use data to support your answer. Each paper will be graded out of 50. In your response, you should:
   (1) Compose a clear, coherent, concise argument [20 points]
   (2) Apply theories learned in class [10 points]
   (3) Relate your analysis to at least one idea mentioned in the readings [5 points]
   (4) Analyze data accurately [5 points]
   (5) Use data to support your argument [10 points]

Session 1: January 25, 2015

Demand for Health, Health Production
Objectives:
- Understand how economic models can be used to structure thinking around health policy issues
- Be able to use Grossman's model of the production of health to analyze issues
- Become familiar with the literature on the relationship between income and health
- Learn approaches to addressing causal inference

[Textbook discussion of Grossman model matches mine, but with more graphs p. 28-46]
Text Chapters 1, 3, 4

Jack, W. (2011) The Promise of Health: Evidence of the Impact of Health on Income and Well-Being in S.Glied & P.C. Smith, *Oxford Handbook of Health Economics*. USA: Oxford University Press.

Cutler, D. et al. (2006) The Determinants of Mortality," The Journal of Economic Perspectives, 20(3): 97-120.

Krugman, Paul. http://krugman.blogs.nytimes.com/2016/01/02/making-and-using-models/?smid=nytcore-ipad-share&smprod=nytcore-ipad

Policy Issue Income and life expectancy
>   Case, Anne, and Angus Deaton. "Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century." Proceedings of the National Academy of Sciences 112.49 (2015): 15078-15083.

>   Deaton, A. Health in an Age of Globalization. Brookings Trade Forum, Globalization, Poverty, and Inequality (2004), p. 83-110.
>   http://www.jstor.org/stable/25063191

Assignment 1--Due before the start of class on February 1st: Use Grossman's model of the production of health to evaluate how NYC's new sick leave law is likely to affect emergency room use. Use the articles and data on the course site to provide evidence in support of your hypothesis.

Tips:
>   (a) Be concise! Don't throw in extra information

>   (b) There are (at least) three ways that sick leave could affect the use of emergency rooms. Be sure to explain all of them and note and explain why one of these is likely more important than the others. The Policy will change the cost of time spent sick, the cost of certain preventive care (delivered by a doctor) , and the cost of certain kinds of care received when you are sick (which?). Remember that not all prevention requires doctors and that not all illness can be prevented. Consider all the cases in your thinking.

(c) Do not use graphs or letters to describe the Grossman model. Do all the work in your own words and in terms sensible for a layperson. Imagine that you are writing to the mayor or to the chair of an emergency department. Use Grossman's model to inform your own thinking - but your audience won't want to see the algebra.

(d) In doing the data analysis, be sure to use the right denominator.

Session 2: February 1, 2015 –*Assignment 1 due before class starts*

Infectious disease, Externalities
Objectives:
- Become familiar with the problems of externalities in health
- Understand basic models of infectious disease transmission
- Learn to apply the Coase theorem

Text Chapters 20-21

[Textbook discussion on externalities, Coase theorem very similar to class discussion p.428-440
Textbook discussion on economic epidemiology very similar to class discussion p. 449-456. Laxminarayan chapter in readings is also very good on this.]

Laxminarayan, R. & Malani, A. (2011). Economics of Infectious Diseases in S.Glied & P.C. Smith, *Oxford Handbook of Health Economics* (189-196 only). USA: Oxford University Press.

Philipson, T. (1996) "Private Vaccination and Public Health: an Empirical Examination for US Measles, Journal of Human Resources, 31(3); 611-630

Policy Issue: Hospital Management of Antibiotics
http://online.wsj.com/articles/SB10001424052702304585004579419493198620498

Session 3: February 8, 2015

Distribution of health spending/ Demand for insurance/adverse selection
Objectives:
- Understand the sources of demand for health insurance
- Be able to apply the idea of utility maximization to potential states of the world
- Understand the idea of a separating equilibrium

Text Chapters 7, 8, 9, 10
[Textbook discusses demand for insurance p. 126-233 – a little more notation than I used, but graphs are the same as are concepts
Textbook does the same adverse selection model, but uses a somewhat different notation – p. 170-178. Pages 1-5 in the Cutler and Zeckhauser article lay out the theory

and implications of selection among plans.   It discusses the Cochrane lifetime contract at p. 179]

Cutler, D. & Zeckhauser, R. (1998). Adverse Selection in Health Insurance. *Frontiers in Health Policy Research, 1*, 11-22.

Glied, S. & Remler, D. (2002). What Every Public Finance Economist Needs to Know about Health Economics. *National Tax Journal, 55*(4), 779-782.

Policy Issue: Voluntary Insurance
> 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.

> Kruk, M., Goldmann, E., & Galea, S. (2009). Borrowing and Selling to Pay for Health Care in Low- and Middle-Income Countries. *Health Affairs.* July/August, 28(4) 1056-1066.

Assignment 1b will be handed out and is due February 15th before the start of class.

Session 4: February 15, 2015 – *Assignment 1b due before the start of class.*

Adverse selection continued/moral hazard
Objectives:
- Understand strategies for addressing adverse selection
- Be familiar with the model of efficient moral hazard

Text Chapters 2, 11

Glied, S. & Remler, D. (2002). What Every Public Finance Economist Needs to Know about Health Economics. *National Tax Journal, 55*(4), 771-777.

Policy Issue: Responding to Adverse Selection
> http://www.nuffieldtrust.org.uk/talks/videos/wynand-van-de-ven-use-risk-adjustment-netherlands [home page and first 5 minutes]

> Healthcare Benefits in India: https://www.towerswatson.com/en-IN/Insights/IC-Types/Survey-Research-Results/2010/04/Healthcare-Benefits-in-India

Session 5: February 22, 2015

Moral Hazard-What Services Should Health Insurance Cover?
Objectives:
- Understand the use of randomized experiments in health economics
- Recognize the welfare losses associated with moral hazard

Text Chapters 2, 11

[Textbook discusses moral hazard clearly at p. 203-209, 213-217 and the contingent claims approach slightly at p. 222-223.
P. 774-777 in the article by Glied and Remler cover the complete contingent claims approach
Manning et al. describes the RAND experiment and provides results.
Pauly p. 639-641 gives an overview of the tax treatment issues.]

Pauly, M. (1986). Taxation, Health Insurance, and Market Failure in the Medical Economy. *Journal of Economic Literature,* 24(2), 638-665.

Manning, W.G, Newhouse J.P., Duan, N., Keeler E.B. & Leibowitz, A. (1987). Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment *The American Economic Review*, 77(3), 251-277.

Policy issues: Mental Health Parity and User Fees

>   Melek, S. (2005). The Costs of Mental Health Parity. *Health Section News*, 49

>   Waiswa, WP. The impact of user fees on access to health services in low- and middle-income countries.
>   http://apps.who.int/rhl/effective_practice_and_organizing_care/cd009094_waiswaw_com/en/

Assignment 2: *dental coverage – due on February 29th before the beginning of class.*
Write a 2-3 page memorandum recommending whether (and what type) dental coverage should be included in an essential health benefits requirement for adults. That means that every health insurance plan will be <u>mandated</u> to include the dental benefit – there will be no choice about whether to buy it or not. In developing your recommendation, consider the price elasticity of demand for health insurance as well as the other theories discussed in class. The excel spreadsheet on the course site contains information on dental coverage and utilization from the 2011 Medical Expenditure Panel Survey. Use these data to buttress your argument.

You should not need to read anything except assigned readings and textbook. Do not do additional research. Types of dental coverage you might consider include preventive, restorative, catastrophic, orthodontic etc. and low or high cost-sharing or deductibles. Or invent a benefit.   Here's a description of the NYU Faculty Dental benefit, to give you a sense of the kind of thing you might invent:

Coverage Type	Plan Covers
TYPE A: Diagnostic and Preventive • Routine oral exams, cleanings, fluoride treatments, X-rays, space maintainers • One application of sealant every five years (restricted to non-restored/non-decayed first and second molars, dependent children up to age 19)	100%* (Not subject to deductible. Limited to two covered visits per calendar year.)
TYPE B: Basic Restorative • Fillings, simple extractions, crowns, dentures and bridge repairs, endodontics (root canal), oral surgery, periodontics	80%*
TYPE C: Major Restorative • Bridges and dentures, crowns, inlays, and onlays • Temporomandibular Joint Syndrome (TJS)	50%*
TYPE D: Orthodontia (per person)	50%*
Annual Deductible	• Individual: $50 • Family: $150
Annual Maximum Benefit	$2,000 per person
Orthodontia Lifetime Maximum	$1,500
Periodontal Lifetime Maximum	$2,500
TMJ Lifetime Maximum	$1,500

Session 6: February 29, 2015 - Assignment 2 due before start of class, Assignment 3 handed out

Watch all videos before class!!!

Economic Evaluation of Health Interventions
Objectives:
- Understand the basic methods of economic evaluation of health interventions
- Recognize the difference between cost-saving and cost-effective
- Be able to discuss the problems of cost-effectiveness analysis

Text Chapter 14
[Textbook cost-effectiveness – focus on p. 278-282, 285-292. The readings are likely to be more useful than the textbook.]

Five-Part Webcast on Economic Evaluation:
http://www.cdc.gov/dhdsp/programs/nhdsp_program/economic_evaluation/

Policy issue: Sovaldi
   http://www.medicaldaily.com/pricey-sovaldi-ends-being-cost-effective-hep-c-treatment-prisoners-bitter-pill-swallow-307540

Assignment 3: Cost effectiveness analysis assignment. You may do this assignment in groups of up to 3 people. Due date: March 7th before start of class.

Session 7: March 7, 2015 - Assignment 3 due before the start of class.

Agency – How Should Health Professionals be Paid?
Objectives:
- Understand the problem of agency and its application to health care
- Recognize the different ways of compensating health care providers and the incentives these generate

Text Chapter 5
[The textbook does not give a good overview of agency issues. The Christianson and Conrad book chapter will help and Ellis and McGuire gives a good overview of demand and supply cost-sharing.]

Randall, E.P. & McGuire, T.G. (1993) Supply-side and Demand-side cost sharing in Health Care. *Journal of Economic Perspectives*, *7*(4), 135-151.

Christianson, J.B. & Conrad, D.(2011). Provider Payment and Incentives in S.Glied & P.C. Smith, *Oxford Handbook of Health Economics* (624-648). USA: Oxford University Press.

Kolstad, Jonathan T. 2013. *"Information and Quality When Motivation Is Intrinsic: Evidence from Surgeon Report Cards."* American Economic Review, 103(7): 2875-2882. http://pubs.aeaweb.org/doi/pdfplus/10.1257/aer.103.7.2875

Policy issue:

Mitchell, Jean M. "Urologists' use of intensity-modulated radiation therapy for prostate cancer." *New England Journal of Medicine* 369.17 (2013): 1629-1637.