

## ECO402H1-S Topics in Health Economics - Winter 2017

Professor: Courtney Ward  
Office hours: TBA

Lectures: Wednesday	10 – 12	NL 004
Tutorials: Wednesday	12 - 1	NL 004

### Course objectives:

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This course introduces students to the role of economics in health, health care, and health policy. It comprises a survey of major topics in health economics and is designed to introduce you to the issues, theory and practice of health economics. Topics include the economic determinants of health, the role of moral hazard and adverse selection on the market for health insurance, the role of the government in health care, and health care reform.

**Prerequisites:** One of ECO200Y1/ECO204Y1/ECO206Y1; One of ECO202Y1/ECO208Y1/ECO209Y1; One of ECO220Y1/ECO227Y1/(STA220H1,STA255H1)/(STA257H1,STA261H1); At least one FCE in ECO at 300+.

### Course outline:

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Week 1: The Economics of Health and Health Care	
Week 2: Economic Evaluation	Tutorial: Econometrics workshop
Week 3: Pharmaceutical markets	Tutorial: Econometrics workshop
Week 4: Health Insurance	
Week 5: Physician Behaviour and Remuneration	
Week 6: Health Production	Tutorial: Oral summaries – group 1
Week 7: The Health Endowment	Tutorial: Oral summaries – group 2
Week 8: Choice: Business cycles, Pollution, Climate Change	Tutorial: Oral summaries – group 3
Week 9: Socioeconomic gradients in health	Tutorial: Writing workshop, peer feedback
Week 10: Health externalities	
Week 11: Choice: Smoking, Obesity or Health system comparisons	

For each course topic you will find lecture slides, discussion questions, and a detailed reading list posted on the course Blackboard page. Please check the website frequently for new announcements.

Tutorials are reserved for reviewing econometric and theoretical tools and discussion of the term project (oral presentations, peer review workshop), although it may also be used to cover course materials (if time constraints bind).

There is no required textbook for the course, but you may find the following useful introductory material:

- Sherman Folland, Allen Goodman and Miron Stano, *The Economics of Health and Health Care* (Prentice Hall), 7<sup>th</sup> edition.
- Jeremiah Hurley, *Health Economics* (McGraw-Hill Ryerson), 2<sup>nd</sup> edition.
- Jones, Andrew, *Applied econometrics for health economists: a practical guide*, Radcliff Publishing.

### Course Deliverables:

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Course deliverables include two exams and a capstone project. The project is due in phases including oral presentation (brief), self-editing assignments, and peer feedback. Details are provided in full on the course website. Note that peer review marks are given for your completion of a peer review and not based on

feedback from your peers.

Additionally, there are discussion questions that draw on each lecture topic. While ungraded, these questions form a reasonable basis for exam content and participation serves as an input into exam preparation.

The overall course grade will be determined as follows:

<u>Deliverable</u>	<u>Weight</u>	<u>Due Date</u>
Midterm	30%	February 15
Review Paper	35%	
Phase 1: Topic selection (2%)		March 1
Phase 2: Oral summary (2%)		March 1, 8, 15
Phase 3: Peer review and draft (5%)		March 22
Phase 4: Final paper (26%)		April 5
Final	35%	TBA

**Remarking:** If a student believes a piece of work has not been graded correctly, the student may submit a request for re-marking no later than two weeks after the work is returned to the student. The request should explicitly state why the student believes more marks should be allocated, making direct references to the grading scheme. Please note that I will not accept a request for re-marking of a test written in pencil. In addition, keep in mind that the entire piece of work will be re-marked, therefore it is possible that the resulting overall grade may decrease relative to the original grade.

**Missed due dates:** Note that each paper Phase 1, 2, and 4 is due prior to the start of the lecture (i.e., no later than 10:10) and Phase 2 presentations are due on one of 3 assigned dates. Out of respect for those students who do submit material on time, these deadlines are strict. This means that failure to deliver material by the deadline will result in a grade of zero (no exceptions).

**University disclaimer concerning turnitin.com:** "Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site"

**Missed exams:** Students who miss a term test should inform me via email, with the subject line ECO402 - missed test prior to the test. The email should contain the student's name, student number, and the reason for missing the test. Medical notes, if applicable, must be submitted no later than one week after the missed test. If a student misses a term test, a cumulative make-up test will be given no later than two weeks after the term test. No accommodation will be provided for missing the make-up test, and a grade of 0 will be assigned.

Medical note are accepted only where they satisfy the criteria below:

- the note is a fully completed University of Toronto Medical Certificate
- the note is from the day of the test
- the note is original (not a photocopy and not scanned)
- the note is completed by a qualified medical doctor (e.g., not an acupuncturist, chiropractor, or other health care professional)
- the note contains doctor's OHIP registration number

**E-mail Policy:** Since this course encourages discussion of issues in health economics, it is more fruitful if we save questions for the lecture period or by reserving a meeting time during my office hours. You should feel free to e-mail me, but please keep in mind that for most cases I will respond by setting an office meeting with you or addressing your question in the next lecture.

## **Eco 402 - Reading List (\* indicates required)**

### **Tutorials**

#### **Methods and interpretation of results in health research (Jan 18, Jan 25)**

\* Goldacre, B. (2011 July). *Ben Goldacre: Battling bad science* [Video file].  
Retrieved from [http://www.ted.com/talks/ben\\_goldacre\\_battling\\_bad\\_science](http://www.ted.com/talks/ben_goldacre_battling_bad_science)

Jones, Andrew, *Applied econometrics for health economists: a practical guide*, Radcliff Publishing.  
Chapter 1

Angrist, Joshua D. & Jörn-Steffen Pischke, *Mostly Harmless Econometrics: An Empiricist's Companion*.  
(Princeton University Press). Chapter 1, 2

#### **Writing and presenting workshop (Mar 1 to Mar 22)**

Dudenhefer, P. 2009. A Guide to Writing in Economics. Retrieved from  
<http://lupus.econ.duke.edu/ecoteach/undergrad/manual.pdf>

Neugeboren, R and Mireille Jacobson. 2006. Writing Economics. Retrieved from  
<https://writingproject.fas.harvard.edu/files/hwp/files/writingeconomics.pdf>

### **Lectures**

#### **Topic 1: The Economics of Health and Health Care (Jan 11)**

\* Arrow, Kenneth (1963) "Uncertainty and the Welfare Economics of Medical Care" American Economic Review December 1963

Fuchs, Victor (2000) "The Future of Health Economics" Journal of Health Economics 19.

David Cutler, Angus Deaton and Adriana Lleras-Muney "The Determinants of Mortality"  
The Journal of Economic Perspectives Vol. 20, No. 3 (Summer, 2006), pp. 97-120

#### **Topic 2: Economic Evaluation (Jan 18, Jan 25)**

\* Wishart A. (2009 June). BBC Documentary: Price of Life [Video file].  
Retrieved from <http://www.bbc.co.uk/programmes/b00l9dmw>  
Alternative: <https://vimeo.com/4796083>

\* Chandra, Amitabh, Anupam B. Jena and Jonathan S. Skinner. 2011. "The Pragmatist's Guide to Comparative Effectiveness Research." Journal of Economic Perspectives, 25(2): 27-46. DOI: 10.1257/jep.25.2.27

Drummond MF, Sculpher MJ, Torrance GW, O'Brien BJ, Stoddart GL. *Methods for economic health evaluation of health care programmes*. 3rd ed. Oxford: Oxford University Press; 2005.

### **Topic 3: Pharmaceutical markets (Jan 25)**

\* Howard, David H., Peter B. Bach, Ernst R. Berndt and Rena M. Conti. 2015. "Pricing in the Market for Anticancer Drugs." *Journal of Economic Perspectives*, 29(1): 139-62.  
DOI: 10.1257/jep.29.1.139

\* Hollis, Aidan, and Paul Grootendorst. 2016. "A comparison of mechanisms for setting generic drug prices in Canada." *Journal of Generic Medicines*, 1741134316669967.

### **Topic 4: Health Insurance (Feb 1, Feb 8)**

\* Einav, Liran and Amy Finkelstein. 2011. "Selection in Insurance Markets: Theory and Empirics in Pictures." *Journal of Economic Perspectives*, 25(1): 115-38.  
DOI: 10.1257/jep.25.1.115

\* Manning, W. et al, 1987. "Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment," *American Economic Review*, June: 251-277.

\* 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.

Akerlof, George. 1970. "The Market for Lemons," *Quarterly Journal of Economics*, 84, August: 488-500.

Pauly, M. 1968. "The Economics of Moral Hazard," *American Economic Review*, June: 58(3).

Kaestner, Robert and Darren Lubotsky. 2016. "Health Insurance and Income Inequality." *Journal of Economic Perspectives*, 30(2): 53-78. DOI: 10.1257/jep.30.2.53

Cohen, Jessica and Pascaline Dupas. 2010. "Free Distribution or Cost-Sharing? Evidence from a Randomized Malaria Prevention Experiment" *Quarterly Journal of Economics*. CXXV: 1.

Gruber, Jonathan, 2008. "Covering the Uninsured in the United States" *Journal of Economic Literature*. 46:3, 571–606. <http://www.aeaweb.org/articles.php?doi=10.1257/jel.46.3.571>

Hackmann, Martin B., Kolstad, Jonathan T. and Kowalski, Amanda Ellen, Health Reform, Health Insurance, and Selection: Estimating Selection into Health Insurance Using the Massachusetts Health Reform (January 2012). NBER Working Paper Series, Vol. w17748, pp. -, 2012. Available at SSRN: <http://ssrn.com/abstract=1985081>

Anderson, Michael, Carlos Dobkin, and Tal Gross. 2012. "The Effect of Health Insurance Coverage on the Use of Medical Services." *American Economic Journal: Economic Policy*, 4(1): 1–27.  
DOI:10.1257/pol.4.1.1

Cutler, David. and Reber, Sara. 1998. "Paying for Health Insurance: The Trade-Off Between Competition and Adverse Selection," *Quarterly Journal of Economics*, May 1998:434- 466.

### **Topic 5: Physician Behaviour (Feb 8)**

\* Rudoler, David, Audrey Laporte, Janet Barnsley, Richard H. Glazier, and Raisa B. Deber. 2015. "Paying for primary care: A cross-sectional analysis of cost and morbidity distributions across primary care payment models in Ontario Canada." *Social Science & Medicine*, 124: 18–28.

\* Johnson, Erin M. and M. Marit Rehani. 2016. "Physicians Treating Physicians: Information and Incentives in Childbirth." *American Economic Journal: Economic Policy*, 8(1): 115-41. DOI: 10.1257/pol.20140160

\* Clemens, Jeffrey and Joshua D. Gottlieb. 2014. "Do Physicians' Financial Incentives Affect Medical Treatment and Patient Health?" *American Economic Review*, 104(4): 1320-49. DOI: 10.1257/aer.104.4.1320

Garthwaite, Craig L.. 2012. "The Doctor Might See You Now: The Supply Side Effects of Public Health Insurance Expansions." *American Economic Journal: Economic Policy*, 4(3): 190-215. DOI: 10.1257/pol.4.3.190

Kantarevic, Jasmin, Boris Kralj, Darrel Weinkauf, "Enhanced fee-for-service model and physician productivity: Evidence from Family Health Groups in Ontario", *Journal of Health Economics*, Volume 30, Issue 1, January 2011

Currie, Janet, Gruber, Jonathon, and Michael Fisher, (1995) "Physician Payment and Infant Mortality: Evidence from Medicaid Fee Policy." *American Economic Review* 85(2), 1995:106-111.

Gruber, Jonathan and Maria Owings "Physician Financial Incentives and the Diffusion of C-Section Delivery." *Rand Journal of Economics* 27 (1996) pp99-123.

### **Topic 6: Health Production (Mar 1)**

\* Grossman, Michael. 1972. "On the Concept of Health Capital and the Demand for Health" *Journal of Political Economy*

\* Costa, Dora L.. 2015. "Health and the Economy in the United States from 1750 to the Present." *Journal of Economic Literature*, 53(3): 503-70. DOI: 10.1257/jel.53.3.503

### **Topic 7: The Health Endowment (Mar 1, Mar 8)**

\* Currie, Janet, Douglas Almond, David Card, and Orley Ashenfelter. 2011. "Chapter 15 - Human capital development before age five\*." *Handbook of Labor Economics Vol. Volume 4, Part B*, 1315–1486. Elsevier.

\* Almond, Douglas (2006) "Is the 1918 Influenza Pandemic Over? Long-term Effects of In Utero Influenza Exposure in the Post-1940 U.S. Population" *Journal of Political Economy*.

\* Almond, Douglas, Chay, Ken and David Lee (2005) "The Costs of Low Birth Weight" *Quarterly Journal of Economics*: 1031-1083.

Evans, William N., Helen Levy and Kosali I. Simon.(2000) "Data Watch: Research Data in Health Economics" *Journal of Economic Perspectives*: Volume 14, Issue 4, Article DOI: 10.1257/jep.14.4.203

Hanratty, Maria J. (1996) "Canadian National Health Insurance and Infant Health" *The American Economic Review*, Vol. 86, No. 1 (Mar., 1996), pp. 276-284

Currie, Janet, Mark Stabile, Phongsack Manivong, and Leslie L. Roos "Child Health and Young Adult

Outcomes” *Journal of Human Resources* June 20, 2010 45:517-548

Oreopoulos, Philip, Mark Stabile, Randy Walld, and Leslie L. Roos. 2008. “Short-, Medium-, and Long-Term Consequences of Poor Infant Health: An Analysis Using Siblings and Twins.” *Journal of Human Resources* 43(1): 88–138.

Florencia Torche, 2011. “The Effect of Maternal Stress on Birth Outcomes: Exploiting a Natural Experiment” *DEMOGRAPHY* Volume 48, Number 4, 1473-1491, DOI: 10.1007/s13524-011-0054-z

Almond, Douglas, and Janet Currie. 2011. "Killing Me Softly: The Fetal Origins Hypothesis." *Journal of Economic Perspectives*, 25(3): 153–72.  
DOI:10.1257/jep.25.3.153

Black, Sandra E., Paul J. Devereux, and Kjells G. Salvanes. 2005. “From the cradle to the labor market? The effect of birth weight on adult outcomes.” *Quarterly Journal of Economics*.

Currie, Janet and Enrico Moretti. (2007) “Biology as Destiny? Short- and Long-Run Determinants of Intergenerational Transmission of Birth Weight” *Journal of Labor Economics*

Almond, Douglas, and Bhashkar Mazumder. 2011. "Health Capital and the Prenatal Environment: The Effect of Ramadan Observance during Pregnancy." *American Economic Journal: Applied Economics*, 3(4): 56–85.

Case, Anne, and Christina Paxson. 2009. "Early Life Health and Cognitive Function in Old Age." *American Economic Review*, 99(2): 104–09.

Almond, Douglas Vincent, Currie, Janet and Herrmann, Mariesa, From Infant to Mother: Early Disease Environment and Future Maternal Health (December 2011). NBER Working Paper Series, Vol. w17676, pp. -, 2011. Available at SSRN: <http://ssrn.com/abstract=1973887>

Royer, Heather 2009. "Separated at Girth: US Twin Estimates of the Effects of Birth Weight." *American Economic Journal: Applied Economics*, 1(1): 49–85.

### **Topic 8: Business Cycles, Pollution, Climate Change (Mar 15)**

\* Chay, Kenneth and Michael Greenstone. 2003. “ The Impact of Air Pollution on Infant Mortality: Evidence from Geographic Variation in Pollution Shocks Induced by a Recession” August 2003, *Quarterly Journal of Economics*, 118(3)

\* Graff Zivin, Joshua and Matthew Neidell. 2013. "Environment, Health, and Human Capital." *Journal of Economic Literature*, 51(3): 689-730. DOI: 10.1257/jel.51.3.689

\* Ruhm, Christopher (2000) “Are Recessions Good for Your Health?” *Quarterly Journal of Economics*.

\* Miller, Douglas L., Marianne E. Page, Ann Huff Stevens, and Mateusz Filipinski “Why Are Recessions Good for Your Health?” *American Economic Review: Papers & Proceedings* 2009, 99:2, 122–127  
<http://www.aeaweb.org/articles.php?doi=10.1257/aer.99.2.122>

Deschênes, Olivier, Michael Greenstone, and Jonathan Guryan “Climate Change and Birth Weight” *American Economic Review: Papers & Proceedings* 2009, 99:2, 211–217

Sullivan, Daniel and Till Von Wachter, "Average Earnings and Long-Term Mortality: Evidence from Administrative Data" *American Economic Review: Papers & Proceedings* 2009, 99:2, 133–138. <http://www.aeaweb.org/articles.php?doi=10.1257/aer.99.2.133>

Ward, Courtney J. forthcoming. "It's An Ill Wind: The Effects of Fine Particulate On Respiratory Hospitalizations," *Canadian Journal of Economics*.

Sullivan, Daniel and Till Von Wachter "Job Displacement And Mortality: An Analysis Using Administrative Data" *Quarterly Journal of Economics*. 2009.

Charles, Kerwin Kofi and Philip DeCicca . "Local labor market fluctuations and health: Is there a connection and for whom?" *Journal of Health Economics* 27 (2008) 1532–1550

Stevens, Ann Huff , Miller, Douglas L., Page, Marianne and Filipowski, Mateusz J., *The Best of Times, the Worst of Times: Understanding Pro-Cyclical Mortality* (December 2011). NBER Working Paper Series, Vol. w17657, pp. -, 2011. Available at SSRN: <http://ssrn.com/abstract=1973868>

Neidell, Matthew (2009) "Information, avoidance behavior, and health: the effect of ozone on asthma hospitalizations" *Journal of Human Resources*.

Moretti, Enrico and Matthew Neidell "pollution, health, and avoidance behavior: evidence from the ports of los angeles" NBER Working Paper 14939 <http://www.nber.org/papers/w14939>

### **Topic 9: Socioeconomic gradients in Health (Mar 22)**

\* Case, Anne , Lubotsky, Darren and Christina Paxson "Economics Status and Health in Childhood: The Origins of the Gradient" *American Economic Review*, vol 92, no 5, 2002

\* Janet Currie, Mark Stabile, "Socioeconomic Status and Child Health: Why Is the Relationship Stronger for Older Children?" *The American Economic Review*, Vol. 93, No. 5 (Dec., 2003), pp. 1813-1823.

\* Case, Anne C. and Paxson, Christina H., *Causes and Consequences of Early Life Health* (January 2010). NBER Working Paper Series, Vol. w15637, pp. -, 2010.

McCrary, Justin, and Heather Royer. 2011. "The Effect of Female Education on Fertility and Infant Health: Evidence from School Entry Policies Using Exact Date of Birth." *American Economic Review*, 101(1): 158–95.

Chay, Kenneth Y., Guryan, Jonathan and Mazumder, Bhashkar, *Birth Cohort and the Black-White Achievement Gap: The Roles of Access and Health Soon after Birth* (June 2009). NBER Working Paper Series, Vol. w15078, pp. -, 2009.

Cutler, David M. and Lleras-Muney, Adriana, *Education and Health: Insights from International Comparisons* (January 2012). NBER Working Paper Series, Vol. w17738, pp. -, 2012. Available at SSRN: <http://ssrn.com/abstract=1981146>

Currie, Shields & Price *Journal of Health Economics*, 2007 and Case, Lee & Paxson *Journal of Health Economics*, 2008

Currie, Janet, "Healthy, wealthy, and wise: Socioeconomic status, poor health in childhood, and human capital development" *Journal of Economic Literature*, 2009

Case, Anne, Christina Paxson. "The Long Reach of Childhood Health and Circumstance: Evidence from the Whitehall II Study" NBER Working Paper No. 15640  
Issued in January 2010

Currie, Janet and Enrico Moretti "Mother's Education and the Intergenerational Transmission of Human Capital: Evidence from College Openings" Quarterly Journal of Economics, November 2003.

Deaton, Angus. "Income, Aging, Health and Well-Being around the World: Evidence from the Gallup World Poll" NBER Book Series - The Economics of Aging. Editor David Wise (p. 235-267)

### **Topic 10: Health Externalities (Mar 29)**

\* Miguel, Edward and Michael Kremer, "Worms: Identifying Impacts On Education And Health In The Presence Of Treatment Externalities," *Econometrica*, 2004, v72(1,Jan), 159-217.)

\* Bleakley, Hoyt, "Disease and Development: Evidence from Hookworm Eradication in the American South" Quarterly Journal of Economics 2007 122:1, 73-117

Ward, Courtney J. 2014. "Influenza Immunization Campaigns: Is an Ounce of Prevention Worth a Pound of Cure?" *American Economic Journal: Applied Economics*. 6(1).

Philipson, Tomas (1996) "Private vaccination and public health: an empirical examination for US measles" *Journal of Human Resources*. 31 (3).

Jose G. Montalvo, Marta Reynal-Querol. "Fighting against Malaria: Prevent Wars while Waiting for the "Miraculous" Vaccine" *Review of Economics and Statistics* 2007 89:1, 165-177

Bleakley, Hoyt "Malaria Eradication in the Americas: A Retrospective Analysis of Childhood Exposure" *American Economic Journal: Applied Economics*, Volume 2, Number 2, April 2010 , pp. 1-45(45)

### **Topic 11: Determined by class preferences and time constraints (Apr 5)**

#### **Smoking, Obesity**

\* Simon, David. 2016. "Does Early Life Exposure to Cigarette Smoke Permanently Harm Childhood Welfare? Evidence from Cigarette Tax Hikes." *American Economic Journal: Applied Economics*, 8(4): 128-59. DOI: 10.1257/app.20150476

\* Cutler, D., Glaeser, E., Shapiro, J., 2003. "Why Have Americans Become More Obese?" *Journal of Economic Perspectives*, 17(3),

\* Bhattacharya, Jay and Neeraj Sood. 2011. "Who Pays for Obesity?" *Journal of Economic Perspectives*, 25(1): 139-58. DOI: 10.1257/jep.25.1.139

Manning, W. et al. "The Taxes of Sin," *JAMA* Mar. 17, 1989, 1604-1609.

Dana Goldman, Darius Lakdawalla, Yuhui Zheng "Food Prices and the Dynamics of Body Weight" Chapter in forthcoming NBER book *Economic Aspects of Obesity*, Michael Grossman and Naci H. Mocan, editors

Christian A. Gregory, Christopher J. Ruhm "Where Does the Wage Penalty Bite?"



Chapter in forthcoming NBER book Economic Aspects of Obesity, Michael Grossman and Naci H. Mocan, editors

Robert Sandy, Gilbert Liu, John Ottensmann, Rusty Tchernis, Jeffrey Wilson, O.T. Ford “Studying the Child Obesity Epidemic with Natural Experiments” Chapter in forthcoming NBER book Economic Aspects of Obesity, Michael Grossman and Naci H. Mocan, editors

Chaloupka, F. et al. “Price, Tobacco Control Policies and Smoking Among Young Adults,” Journal of Health Economics 16, 1997.

Gary Becker, Michael Grossman, Kevin Murphy. “An Empirical Analysis of Cigarette Addiction,” American Economic Review, 84 (3), 1994.

**OR**

### **Health Systems Comparison**

\* Sanders, B. March 2014. Health Care: U.S. vs. Canada. Retrieved from <https://www.youtube.com/watch?v=iYOf6hXGx6M>

\* PBS. 2008. Frontline Sick around the World. Retrieved from: <http://www.pbs.org/wgbh/pages/frontline/sickaroundtheworld/>

Institute of Health Economics. 2014. IHE In Your Pocket 2014. A Handbook of Health Economics Statistics. Retrieved from: <http://www.ihe.ca/publications/ihe-in-your-pocket-2014-a-handbook-of-health-economics-statistics>

