

Department of Economics, Carleton University
ECON 4460 A – Health Economics
Winter 2023

Professor: Gaëlle Simard-Duplain
Office: B845 Loeb Building
Office hours: By appointment
Email: gaelle.simardduplain@carleton.ca

TA: There is no TA for this course.

Course delivery: In person
Course Brightspace page: <https://brightspace.carleton.ca/d2l/home/221292>

ALGONQUIN TERRITORY ACKNOWLEDGMENT

Carleton University acknowledges the location of its campus on the traditional, unceded territories of the Algonquin nation. In doing so, Carleton acknowledges it has a responsibility to the Algonquin people and a responsibility to adhere to Algonquin cultural protocols.

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USE OF GENERATIVE ARTIFICIAL INTELLIGENCE TOOLS

The use of Generative Artificial Intelligence tools (e.g., ChatGPT) is not permitted unless explicitly specified.

COURSE DESCRIPTION

This course aims to give students an in-depth understanding of the contribution of theoretical and empirical economics to the study of health and health care. We will consider the application of economic theory to policy-relevant questions pertaining to the demand for and production of health and health care. Building on this, we will examine how health economists take theory to the data, the empirical challenges they face in doing so, and the econometric methods they use to address these challenges and meet their research objectives. In particular, we will discuss and critically assess research findings in light of these methods. Throughout the course, students will read seminal and more recent peer-reviewed academic journal articles in the field of health economics.

COURSE OBJECTIVES

Content objectives:

- To develop an in-depth understanding of the contribution of economics to the study of health and health care, including:
 - The application of economic theory to the study of health and health care, and the limitations of this application.
 - The use of economic theory to guide data-driven (empirical) work.
 - The challenges faced by empirical economists in answering policy-relevant questions.
 - The solutions that health economists have identified to address these challenges.

Skills objectives:

- To develop the ability to discuss and critically assess research findings in health economics.
- To develop competence and confidence exchanging with colleagues about these topics.

PREREQUISITES AND PRECLUSIONS

Prerequisite(s): ECON 2030 with a grade of C- or higher, and ECON 2220 (or equivalent) with a grade of C- or higher. Students who believe they can be exempted from the listed prerequisites should contact the Department of Economics Undergraduate Administrator, Renée Lortie.

Preclusion(s): N/A.

TEXTBOOK

There is no textbook for this course. Classes will be based on mandatory and optional readings (listed below). For students who wish to refer to a textbook treatment of some of the concepts that will be discussed throughout the semester, *Health Economics* by Jeremiah Hurley (2010) is recommended.

COURSE EVALUATION

The course will be graded as follows:

Evaluation	Grade %	Date	Delivery
Quizzes	30	See description below	In-person
Presentation	15	See description below	In-person
Paper summary	15	Feb. 12	Take-home
Participation	10	See description below	In-person
Final exam	30	Apr. 13-25	In-person

Quizzes: Starting in the second week of class, there will be one quiz per week, to be completed during class time, based on assigned readings. Out of the 12 quizzes that students will answer throughout the semester, their grade on the quiz portion of the course will be calculated using their results on their ten (10) best quizzes. Failure to answer a quiz will result in a grade of zero (0) for that quiz.

Presentation: Starting after the winter break, students will be responsible for presenting a paper and leading the class discussion on that paper. Students will work in groups of two (2) to three (3) students (depending on final enrollment). Each group will be asked to pick one paper from the reading list, to be presented in the corresponding week. Alternatively, students may contact the instructor if they wish to present a paper that is not included in the reading list.

Time slots for presentations will be allocated on a first-come, first-served basis starting in the second week of class. If there is more demand than availabilities for particular time slots, the instructor will randomly select students for the popular time slot and ask others to pick a different time. Students who have a valid reason to expect a scheduling conflict should communicate with the instructor as soon as possible. Additional information will be provided about the modalities for scheduling presentations in the first week of class.

There will be no make-up presentations. For students who cannot present on the scheduled date due to valid and documented circumstances (e.g., serious illness/emergency), the weight of the presentation will be placed on the final exam.

Paper summary: Ahead of their presentation, students will be asked to submit a short report on the paper they will be presenting. They will then receive feedback to be integrated in their presentation.

Students who hand in the summary late due to valid and documented circumstances (e.g., serious illness/emergency) will be given up to one (1) week to hand in the assignment and receive the corresponding marks. If the circumstances which caused them to hand in the assignment late persist past this point, the weight of the corresponding assignment will be placed on the final exam.

Students who hand in the summary late without providing justification/documentation will be immediately docked 10% for that assignment, with an additional 10% for each subsequent day late, up to a maximum of three (3) days, including weekends. After three (3) days all outstanding assignments will be given a grade of zero (0).

Participation: Every student will be asked to participate as a discussant for two (2) presentations by other teams. Each participation will be worth five (5) percent of their final grade. For this role, students will need to come to class prepared to discuss the limitations of the paper. The presenting team will

then have a chance to respond to these comments. The objective is for these exchanges to form the basis of a broader class discussion about each presented paper.

Final exam: The final exam will be held during the university's final examination period, based on the material covered during the entire semester (cumulative exam). The final exam will include a combination of multiple choice and short-answer questions.

In cases of serious illness/emergency or other circumstances that cause students to miss the final exam, students may petition the Registrar's Office to write a deferred exam. Students must make this petition no later than three (3) working days after the original final examination. In the interim, they will receive a grade of zero (0) for the final examination. If granted by the Registrar's Office, the deferred exam will take place during the time designated in Carleton University's calendar.

Final grade: Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

RE-MARKING

Any request for re-marking must be submitted in writing within two (2) weeks of the evaluation being returned to the class. Students should include in that request a detailed explanation of why they feel they should receive a higher mark. Re-marking will apply to the entire evaluation, not just the contentious part(s). As a result, the revised mark may be higher than, lower than, or the same as the original mark.

SATISFACTORY PERFORMANCE CRITERIA

Students must fulfill all of the course requirements, including the final exam, in order to achieve a passing grade (D- or higher).

TENTATIVE COURSE CALENDAR

The course calendar below is subject to change. Depending on time and interest, more or less class time may be dedicated to different topics. Any changes to the course calendar will be communicated in class and through Brightspace.

Class	Date	Topic	Evaluation
1	Jan. 8	Introduction to health economics Demand for and production of health among adults	
2	Jan. 15	Demand for and production of health among adults	
3	Jan. 22	Demand for and production of health among children	
4	Jan. 29	Demand for health care	
5	Feb. 5	Health behaviours	
6	Feb. 12	Health insurance markets	Paper summary due
	Feb. 19	Winter break	
7	Feb. 26	Health insurance markets	
8	Mar. 4	Physician decision-making and the supply of health care	
9	Mar. 11	Physician decision-making and the supply of health care	
10	Mar. 18	The pharmaceutical industry	
11	Mar. 25	Health care markets and the role of governments	
12	Apr. 1	Special topics in health economics	
13	Apr. 8	Special topics in health economics	
	Apr. 13-25	Final examination period	Final exam

READING LIST

The course draws from the reading list below. Additional readings may be added to the list. Students will be expected to complete one (1) to three (3) readings ahead of class every week and to arrive to class ready to discuss. Assigned readings for every week will be communicated to students ahead of time in class and through Brightspace. Most readings can be accessed through the Carleton library website. Other readings will be made available through Brightspace. Unless otherwise specified, students are to read the published version of papers, not working papers.

Topic 1 – Introduction to health economics

Chen, A., Oster, E., & Williams, H. (2016). Why is infant mortality higher in the United States than in Europe? *American Economic Journal: Economic Policy*, 8(2), 89-124.

Cutler, D., Deaton, A., & Lleras-Muney, A. (2006). The determinants of mortality. *Journal of Economic Perspectives*, 20(3), 97-120.

Deaton, A. (2006). The great escape: A review of Robert Fogel's the escape from hunger and premature death, 1700-2100. *Journal of Economic Literature*, 44(1), 106-114.

Fogel, R. W. (2004). *The escape from hunger and premature death, 1700-2100: Europe, America, and the Third World* (Vol. 38). Cambridge University Press.

Topic 2 – Demand for and production of health among adults

Buckles, K., Hagemann, A., Malamud, O., Morrill, M., & Wozniak, A. (2016). The effect of college education on mortality. *Journal of Health Economics*, 50, 99-114.

Cesarini, D., Lindqvist, E., Östling, R., & Wallace, B. (2016). Wealth, health, and child development: Evidence from administrative data on Swedish lottery players. *The Quarterly Journal of Economics*, 131(2), 687-738.

Clark, D., & Royer, H. (2013). The effect of education on adult mortality and health: Evidence from Britain. *American Economic Review*, 103(6), 2087-2120.

Deaton, A. (2003). Health, inequality, and economic development. *Journal of Economic Literature*, 41(1), 113-158.

Frijters, P., Haisken-DeNew, J. P., & Shields, M. A. (2005). The causal effect of income on health: Evidence from German reunification. *Journal of Health Economics*, 24(5), 997-1017.

Grossman, M. (1972). On the Concept of Health Capital and the Demand for Health. *The Journal of Political Economy*, 80(2): 223–255.

Lleras-Muney, A. (2005). The relationship between education and adult mortality in the United States. *The Review of Economic Studies*, 72(1), 189-221.

Ruhm, C. J. (2000). Are recessions good for your health? *The Quarterly Journal of Economics*, 115(2), 617-650.

Topic 3 – Demand for and production of health among children

- Almond, D., & Currie, J. (2011). Killing me softly: The fetal origins hypothesis. *Journal of Economic Perspectives*, 25(3), 153-72.
- Almond, D., Currie, J., & Duque, V. (2018). Childhood circumstances and adult outcomes: Act II. *Journal of Economic Literature*, 56(4), 1360-1446.
- Barker, D. J. (1995). Fetal origins of coronary heart disease. *British Medical Journal*, 311(6998), 171-174.
- Case, A., Lubotsky, D., & Paxson, C. (2002). Economic status and health in childhood: The origins of the gradient. *American Economic Review*, 92(5), 1308-1334.
- Condliffe, S., & Link, C. R. (2008). The relationship between economic status and child health: evidence from the United States. *American Economic Review*, 98(4), 1605-18.
- Currie, J. (2009). Healthy, wealthy, and wise: Socioeconomic status, poor health in childhood, and human capital development. *Journal of Economic Literature*, 47(1), 87-122.
- Currie, J., & Schwandt, H. (2013). Within-mother analysis of seasonal patterns in health at birth. *Proceedings of the National Academy of Sciences*, 110(30), 12265-12270.
- Currie, J., & Stabile, M. (2003). Socioeconomic status and child health: why is the relationship stronger for older children? *American Economic Review*, 93(5), 1813-1823.
- Currie, J., & Stabile, M. (2006). Child mental health and human capital accumulation: the case of ADHD. *Journal of Health Economics*, 25(6), 1094-1118.
- Hjort, J. (2017). Universal investment in infants and long-run health: evidence from Denmark's 1937 home visiting program. *American Economic Journal: Applied Economics*, 9(4), 78-104.
- Hoynes, H., Miller, D., & Simon, D. (2015). Income, the earned income tax credit, and infant health. *American Economic Journal: Economic Policy*, 7(1), 172-211.
- Hoynes, H., Schanzenbach, D. W., & Almond, D. (2016). Long-run impacts of childhood access to the safety net. *American Economic Review*, 106(4), 903-34.
- Milligan, K., & Stabile, M. (2011). Do child tax benefits affect the well-being of children? Evidence from Canadian child benefit expansions. *American Economic Journal: Economic Policy*, 3(3), 175-205.
- Persson, P., & Rossin-Slater, M. (2018). Family ruptures, stress, and the mental health of the next generation. *American Economic Review*, 108(4-5), 1214-52.

Topic 4 – Demand for health care

- 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), 2242-58.
- Currie, J., & Gruber, J. (1996). Health insurance eligibility, utilization of medical care, and child health. *The Quarterly Journal of Economics*, 111(2), 431-466.

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. *The Quarterly Journal of Economics*, 127(3), 1057-1106.

Grossman, M. (1972). On the concept of health capital and the demand for health. *Journal of Political Economy*, 80(2), 223-255.

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. *American Economic Review*, 251-277.

Miller, S., & Wherry, L. R. (2019). The long-term effects of early life Medicaid coverage. *Journal of Human Resources*, 54(3), 785-824.

Topic 5 – Health behaviours

Adda, J., & Cornaglia, F. (2010). The effect of bans and taxes on passive smoking. *American Economic Journal: Applied Economics*, 2(1), 1-32.

Becker, G. S., & Murphy, K. M. (1988). A theory of rational addiction. *Journal of Political Economy*, 96(4), 675-700.

Chou, S. Y., Grossman, M., & Saffer, H. (2004). An economic analysis of adult obesity: results from the Behavioral Risk Factor Surveillance System. *Journal of Health Economics*, 23(3), 565-587.

Powell, D., Pacula, R. L., & Jacobson, M. (2018). Do medical marijuana laws reduce addictions and deaths related to pain killers? *Journal of health economics*, 58, 29-42.

Topic 6 – Health insurance markets

Akerlof, G. (1970). The market for lemons. *Quarterly Journal of Economics*, 84, 488-500.

Arrow, K. J. (1963). Uncertainty and the welfare economics of medical care. *American Economic Review*, 53(5), 941-73.

Cutler, D. & Reber, S. (1998). Paying for health insurance: the trade-off between competition and adverse selection. *Quarterly Journal of Economics*, 113(2), 433-466.

Einav, L., & Finkelstein, A. (2018). Moral hazard in health insurance: what we know and how we know it. *Journal of the European Economic Association*, 16(4), 957-982.

Einav, L., Finkelstein, A., & Cullen, M. R. (2010). Estimating welfare in insurance markets using variation in prices. *The Quarterly Journal of Economics*, 125(3), 877-921.

Einav, L., Finkelstein, A., Ryan, S. P., Schrimpf, P., & Cullen, M. R. (2013). Selection on moral hazard in health insurance. *American Economic Review*, 103(1), 178-219.

Madrian, B. (1994). Employment based health insurance and job mobility: is there evidence of job-lock? *Quarterly Journal of Economics*, 109(1), 27-54.

Stabile, M. (2001). Private insurance subsidies and public health care markets: evidence from Canada. *Canadian Journal of Economics*, 34(4), 921-42.

Topic 7 – Physician decision-making and the supply of health care

- Clemens, J., & Gottlieb, J. D. (2014). Do physicians' financial incentives affect medical treatment and patient health? *American Economic Review*, 104(4), 1320-49.
- Crossley, T. F., Hurley, J., & Jeon, S. H. (2009). Physician labour supply in Canada: a cohort analysis. *Health Economics*, 18(4), 437-456.
- Currie, J., & MacLeod, W. B. (2008). First do no harm? Tort reform and birth outcomes. *The Quarterly Journal of Economics*, 123(2), 795-830.
- Currie, J., & MacLeod, W. B. (2017). Diagnosing expertise: Human capital, decision making, and performance among physicians. *Journal of Labor Economics*, 35(1), 1-43.
- Dalsgaard, S., Humlum, M. K., Nielsen, H. S., & Simonsen, M. (2012). Relative standards in ADHD diagnoses: the role of specialist behavior. *Economics Letters*, 117(3), 663-665.
- Dumont, E., Fortin, B., Jacquemet, N., & Shearer, B. (2008). Physicians' multitasking and incentives: Empirical evidence from a natural experiment. *Journal of Health Economics*, 27(6), 1436-1450.
- Dranove, D., & Wehner, P. (1994). Physician-induced demand for childbirths. *Journal of Health Economics*, 13(1), 61-73.
- Finkelstein, A., Gentzkow, M., & Williams, H. (2016). Sources of geographic variation in health care: Evidence from patient migration. *The Quarterly Journal of Economics*, 131(4), 1681-1726.
- Fischer, K. E., Koch, T., Kostev, K., & Stargardt, T. (2018). The impact of physician-level drug budgets on prescribing behavior. *The European Journal of Health Economics*, 19(2), 213-222.
- Frank, R. G., & Zeckhauser, R. J. (2007). Custom-made versus ready-to-wear treatments: Behavioral propensities in physicians' choices. *Journal of Health Economics*, 26(6), 1101-1127.
- Grant, D. (2009). Physician financial incentives and cesarean delivery: new conclusions from the healthcare cost and utilization project. *Journal of Health Economics*, 28(1), 244-250.
- Gruber, J., Kim, J., & Mayzlin, D. (1999). Physician fees and procedure intensity: the case of cesarean delivery. *Journal of Health Economics*, 18(4), 473-490.
- McGuire, T. G. (2000). Physician agency. *Handbook of Health Economics*, 1, 461-536.

Topic 8 – The pharmaceutical industry

- Brekke, K. R., Grasdal, A. L., & Holmås, T. H. (2009). Regulation and pricing of pharmaceuticals: reference pricing or price cap regulation? *European Economic Review*, 53(2), 170-185.
- Budish, E., Roin, B. N., & Williams, H. (2015). Do firms underinvest in long-term research? Evidence from cancer clinical trials. *American Economic Review*, 105(7), 2044-2085.
- Kaiser, U., Mendez, S. J., Rønne, T., & Ullrich, H. (2014). Regulation of pharmaceutical prices: evidence from a reference price reform in Denmark. *Journal of Health Economics*, 36, 174-187.

Kyle, M. K., & McGahan, A. M. (2012). Investments in pharmaceuticals before and after TRIPS. *Review of Economics and Statistics*, 94(4), 1157-1172.

Lopez-Casasnovas, G., & Puig-Junoy, J. (2000). Review of the literature on reference pricing. *Health Policy*, 54(2), 87-123.

Moser, P. (2013). Patents and innovation: evidence from economic history. *Journal of Economic Perspectives*, 27(1), 23-44.

Scherer, F. M. (1993). Pricing, profits, and technological progress in the pharmaceutical industry. *Journal of Economic Perspectives*, 7(3), 97-115.

Scherer, F. M. (2000). The pharmaceutical industry. In *Handbook of Health Economics*, A.J. Culyer, & J.P. Newhouse (eds). Amsterdam: Elsevier Science B.V., 1297-1336.

Vernon, J. A. (2005). Examining the link between price regulation and pharmaceutical R&D investment. *Health Economics*, 14(1), 1-16.

Topic 9 – Health care markets and the role of governments

Allin, S., & Hurley, J. (2009). Inequity in publicly funded physician care: what is the role of private prescription drug insurance? *Health Economics*, 18(10), 1218-1232.

Cutler, D. M., & Gruber, J. (1996). Does public insurance crowd out private insurance? *The Quarterly Journal of Economics*, 111(2), 391-430.

Gaynor, M., Ho, K., & Town, R. J. (2015). The industrial organization of health-care markets. *Journal of Economic Literature*, 53(2), 235-84.

Stabile, M. (2001). Private insurance subsidies and public health care markets: evidence from Canada. *Canadian Journal of Economics*, 921-942.

Stabile, M., & Thomson, S. (2014). The changing role of government in financing health care: an international perspective. *Journal of Economic Literature*, 52(2), 480-518.

Topic 10 – Special topics in health economics

The last lecture of the term will be set aside to explore special topics in health economics that are of particular interest to students (e.g., environment/climate change and health, use of artificial intelligence in health care and health economics, mental health and substance use, access to health care for underrepresented or marginalized groups, long-term care and long-term care insurance, non-physician health care providers, etc.). This possibility will be discussed in the first few weeks of class.

CENTRE FOR INDIGENOUS SUPPORT AND COMMUNITY ENGAGEMENT (CISCE)

The Centre for Indigenous Support and Community Engagement (CISCE), formerly known as the Centre for Indigenous Initiatives, supports First Nations (status and non-status), Inuit, and Métis students, staff, and faculty by providing culturally safe spaces for dialogue and learning. The Centre provides weekly, monthly and annual programming for students and also develops and delivers resources and training to educate the Carleton community about Indigenous histories, worldviews and perspectives. To learn

more about the services offered, please visit <https://carleton.ca/indigenous/cisce/students/>. If you have any questions, you can email Indigenous@carleton.ca

PLAGIARISM, RESOURCES AND MENTAL HEALTH, AND ACADEMIC ACCOMMODATIONS

You are responsible for reading and knowing the information about plagiarism, Carleton University resources, and academic accommodations found [here](#).