



University of Missouri

Economics 4357/7357: Health Economics Spring II Term 2022 (March 14 – May 13)

INSTRUCTOR Kelly D. Edmiston, Ph.D.
Adjunct Instructor
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FORMAT Asynchronous, online

TEXT **Required:**
[Health Economics](#)
Jay Bhattacharya, Timothy Hyde, and Peter Tu, 2014
Palgrave MacMillan
\$64.36 on [publisher website](#)
MU bookstore: \$93.25 new | \$74.60 used | rentals may be available

The textbook has a [companion website](#).

Recommended:
Intermediate Microeconomics Textbook
On Reserve (Ellis Library): Varian, [Intermediate Microeconomics with Calculus: A Modern Approach](#)

Note: *All hyperlinks are in blue.*

PREREQUISITES Managerial Economics (ECONOM 3251) or
Intermediate Microeconomics (ECONOM 4351/7351) or
Permission of instructor

I assume you understand the theory of consumer choice, elasticity concepts, and ideally, the *basics* of differential calculus and statistics. I will provide a brief review of consumer theory and elasticity concepts at the beginning of the course, as well as a brief introduction to derivatives and regression analysis. Calculus is not pervasive in the course, and the review should suffice to keep you on track. The background in basic statistics and regression analysis aids in understanding the journal articles that I assign as readings, most of which are empirical (they analyze real-world data).

I assume you are familiar with Microsoft Office/365 or a similar product (e.g., Google). The University has training resources available. See [Office Online](#) for training in Microsoft Office/365 applications. Microsoft also has its own [training/tutorials](#). We may do some work in Excel. The University offers [Microsoft 365](#) free for student use.

COURSE BACKGROUND This eight-week course is an introduction to the field of health economics. Health economics is an active field of applied microeconomics with a large and growing literature. In the past 40-50 years, some of the most controversial policies considered by state and federal governments have involved issues that have been analyzed by health economists. We will cover the demand for and supply of healthcare; optimization of investments in *health*; risk and insurance; health innovations; health policy; and introductions to economic evaluation in healthcare, epidemiology, and behavioral economics. The emphasis will be on key economic concepts that health economists use to analyze health and healthcare markets. Secondary goals of the course are to learn to evaluate and interpret empirical findings in health economics and interdisciplinary health services research and to develop a set of practical analytical tools.

STUDENT LEARNING OBJECTIVES By the end of this course, you should be able to:

- Construct and use formal theoretical and conceptual models
- Read empirical research and explain the research question, evidence, and conclusions
- Write a clear, informative literature review that makes a thesis statement, builds a case for the thesis statement using evidence from research literature, and draws meaningful conclusions
- Conduct a simple cost-effectiveness analysis (CEA) of a medical treatment and interpret the findings
- Explain some significant contributions of economics to epidemiology
- Manipulate an elementary SIR epidemiological model and interpret the results
- Compare and contrast the demand for healthcare with the demand for other goods and services
- Provide a detailed explanation of the trade-offs between investments in health and other goods and services and apply this theoretical framework to a variety of health-related questions
- Explain the concepts of adverse selection and moral hazard and their implications for insurance and healthcare costs
- Compare and contrast the American healthcare system with socialized and nationalized healthcare systems
- Explain the major components of the Affordable Care Act and its primary implications
- Knowledgeably discuss ongoing issues and recent developments in health policy
- Knowledgeably discuss the social determinants of health
- Explain the distinguishing features of behavioral economics vis-à-vis mainstream economics
- Explain time-inconsistent preferences, bounded rationality, and prospect theory and their implications for health

DISABILITY SERVICES If you anticipate barriers related to the format or requirements of this course, please let me know as soon as possible. If disability-related accommodations are necessary, please register with the [Office of Disability Services](#) [(573) 882-4696] and notify me of your eligibility for accommodations. For other University of Missouri resources for persons with disabilities, see “[Disability Resources](#).”

ACADEMIC INTEGRITY Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, and to disciplinary sanctions from the University ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor. See [Standard of Conduct for Academic Integrity](#).

I have accounts on Chegg, Course Hero, and similar “study help” sites. Of course, copying or paraphrasing material from these sites on an assignment would constitute academic dishonesty. Moreover, I have discovered some material on these sites that is simply incorrect. *Caveat Emptor*.

INTELLECTUAL PLURALISM The University of Missouri community welcomes intellectual diversity and respects student rights. Students who have questions or concerns regarding the atmosphere in this class (including respect for diverse opinions) may contact the Departmental Chair or Divisional Director; or the [Office for Civil Rights & Title IX](#) [email; (573) 882-3880 (Heinkel Office); (573) 882-2824 (Jesse Hall Office)]. All students will have the opportunity to submit an anonymous evaluation of the instructor at the end of the course.

DISCUSSIONS PAGE The *Discussions* forum will serve as the primary communications hub for this course. For *each course segment*, I will start a discussion for questions and answers. Please put any questions about the material *or assignments* for that course segment *in that discussion thread*. If you have a question about a problem set, please post in the discussion thread before contacting me individually (if appropriate) so others may benefit from the response or may contribute a response. I will actively monitor the *Discussions* page and will offer my input, but I will likely give other students time to respond. My experience is that student responses tend to stop once the instructor responds.

Proper titling of posts will allow other students with similar or related questions (and me) to easily find the relevant discussion and, thus, will help to reduce redundant material. Please post in the appropriate thread. If you post your question elsewhere, it may not be addressed, or at least not in a timely fashion.

COURSE FORMAT

READINGS Each week of the term there will be assigned readings from the textbook (**BHT**) and/or assigned supplemental readings such as journal articles, research institution publications, government documents, newspaper and magazine articles, or articles from websites. I will provide supplementary materials on [Canvas](#) or otherwise ensure you have access to them. You are expected to read all of the assigned material, and assignments may draw material from supplemental readings as well as the textbook, *even if the material is not covered specifically in the lectures*. The point of the lectures is to elucidate and expand the material, not to regurgitate what is in the readings. Anything from the lectures is also fair game for assignments, *even if not covered in the readings*.

Additional readings are not “busy work” or a repeat of material in the textbook. Rather, they are intended to either (1) explain topics I think are important but are not in the textbook; (2) expand on topics in the textbook; (3) make application of topics in the textbook; or (4) to “freshen” the textbook, as it was published in 2014 (Jay Bhattacharya tells me he is working on a second edition). The readings should be treated with the same seriousness as assignments.

I will at times also provide additional readings that are optional. Often these readings will present material we do not cover in class and may include readings from **BHT**. While optional, I recommend that you read them, or at least skim through them, particularly for students in the class who intend to further pursue work in health economics. In the end, what you get out of the class is a function of what you put into it. Finally, I will provide a copy of all the articles I reference in the lectures on [Canvas](#), with rare exceptions (e.g., material from a printed book).

LECTURES In addition to assigned readings, I will record lectures using PowerPoint and [Panopto](#). There will be, in most cases, 4 – 6 “mini lectures” broken into subtopics for the week. I may post material I have written myself in lieu of a recorded lecture. I am likely to stray from the textbook at times if I think there is some critical concept that is not covered in the textbook or could be presented with more clarity. Viewing the lectures is required. As with the readings, the lectures should be treated with the same seriousness as assignments.

TIMING Each week, instructional materials will become available on **Monday at 11:00 am** for that week. Problems sets will become available by **Tuesday at 11:00 am** the week it is due. Generally, work will be due on **Saturday by 11:59 pm**. *I reserve the right to change the timing, including due dates, as necessary, with appropriate notice (usually this would involve extending a due date)*. Students should read, study, and review all of the posted material *before* completing any assignments. At my discretion, graduate students *may* be given a limited set of additional or different questions. Late assignments may receive up to a 10 percentage-point (not 10 percent) deduction for every 24-hour period in which the assignment is late, at my discretion (students will be treated equitably in this regard).

OFFICE HOUR Each **Thursday at 5:00 pm**, I will host a one-hour **Zoom** office hour. The password is always “**Grossman**” (no quotes). You are best off using the **meeting URL**, but my meeting ID is **428 365 2363**. Unless you have a constraint/conflict, please try to join the call at 5:00. If no one has joined the call by 5:30, I may close the session. I will schedule a separate call for the last week of class on Wednesday, May 11.

This is an **asynchronous course**, and there is **no live requirement**. The Zoom office hour is an opportunity for those who want to and *are able to* take advantage of it. Participation (or not) in the Zoom office hour has no direct bearing on your grade, either positively or negatively. I am available to answer questions by email, but please pose questions on the **Discussions** page first when appropriate. **Do not post answers to the assigned problems**, however. Just **guide** your classmates.

Please also allow me up to 24 hours to respond to emails, as I have many other responsibilities in addition to teaching this course.

ASSIGNMENTS AND GRADING Your grade will be determined by your performance on the following tasks:

Assignment	Share of Grade	Due Date
Problem Sets	72 percent	Bi-Weekly
Discussions	10 percent	Bi-Weekly
Literature Review	18 percent	Week 8

Grading This course will use a plus/minus grading system, as per the university’s grading policy. Grades will be determined as follows:

A+	98 – 100	A	92 – 97	A-	90 – 91
B+	88 – 89	B	82 – 87	B-	80 – 81
C+	78 – 79	C	72 – 77	C-	70 – 71
D+	68-69	D	62 – 67	D-	60 – 61
F	< 60				

Note that a 97.9 is not a 98. The minimum grade average for an A+ is 98.0. Grade averages are not rounded.

Grades will be posted on the **Canvas** gradebook. Graded assignments will be uploaded into **Canvas**.

Submission You are asked to complete assignments using a word processor (Word, Google Docs, etc.). The University makes **Microsoft Office 365 available for free** (it comes with 1TB OneDrive space), although if you prefer, Google’s office suite (not business G suite) is also free. **Please convert completed documents to PDF format**. I will accept hand-written work in some cases (*my discretion or approval*), but it must be sent to me in PDF format (I grade with a computer pen on PDF documents). If I cannot read or understand something, including graphs, it will be marked incorrect. Drawing graphs on the computer (using whatever application) is preferred and usually more accurate. The exception is discussion assignments, which will be *text entry*.

Assignments should be submitted via the Canvas portal. Based on past experience, it is very difficult for me to keep track of assignments submitted to me by email. If you miss the assignment close date, which will likely be a few days after the due date, you may email me with a request to accept the late assignment, which is at my discretion (again, all students will be treated equitably).

Problem Sets Problem sets are like mini exams. They will be mostly of the short answer variety, although there may be some free response questions.

Discussion Assignments Because the class is asynchronous, which precludes traditional class discussions, *your participation through the discussion forum will be a significant part of your grade (10 percent)*. Each week in which there is not a problem set, I will post one or more questions or provide one or more articles for comment. To earn full participation points, you are required to post a thoughtful, meaningful comment on the material. Comments should relate to material in the assigned readings and lectures and/or apply economic concepts. Your score will be determined by (a) having made the post [on time] (b) the quality of the post (c) the relevance of the post and (d) the appropriate use of class material and/or economic theory in the post. Brevity will be rewarded not penalized, but the comment must be substantive. The ability to make a point concisely is an important life and career skill.

Students are free, and indeed encouraged, to engage in lively debate, and comments are certainly not limited to one. In responses to others' comments, please treat others as you would like to be treated. Efforts to demean or vilify other students will result in a subtraction of points and will not be tolerated. Students who *regularly* contribute additional material may receive a modest increase in their discussions grade. The determination of "regularly contribute" is at my discretion and will be determined at the end of the course (all students will be treated equitably).

I will post directions and a scoring rubric for the literature review assignment later in the course but with more than sufficient time to complete the assignment.

ABOUT YOUR INSTRUCTOR I am delighted to be your instructor at the University of Missouri, and especially to be teaching Health Economics, which is my intellectual and professional passion. I also teach State and Local Public Finance (4316/7316) at MU and will be offering the course next term (Summer 2022). I began my career in state and local finance and have published numerous articles in that area. My primary research and teaching interests are health economics, health services research, applied econometrics, and public economics.

My primary professional position is *Policy Research Manager (Assistant Director)* in the [Center for Insurance Policy & Research \(CIPR\)](#) at the [National Association of Insurance Commissioners \(NAIC\)](#). There I engage in research and policy analysis on health, healthcare, and health insurance; socioeconomic and demographic disparities, particularly as they apply to health; investment finance, and [macroprudential risk assessment](#). I am also an *Adjunct Assistant Professor* at the [University of Kansas School of Medicine](#), where I teach [Health Services Research Methods](#) and a practitioner-oriented course in health economics. I spent two years as a paramedic before pursuing study in economics, so my interest in health has been life-long. Previously I was a *senior economist* at the Federal Reserve and *Assistant Professor of Economics* at Georgia State University (Atlanta). I have also worked extensively with the [World Bank](#) and some with [USAID](#). I hold a Ph.D. in Economics from the University of Tennessee and spent one year in post-doctorate study and research at the University of Kansas School of Medicine (in 2020).

You may find the following websites to be useful resources for the class (in no particular order):

MU Student Assistance

[Tutoring from MU Learning Center](#)

[MU Writing Center](#)

[MU Division of Information Technology](#) (free training to students on basic computer applications like Office)

[Writing Center at the University of North Carolina: Tips & Tools](#)

Health News Sites, Blogs, and Research Aggregation

[Becker's Healthcare](#) (various newsletters)

[Centers for Disease Control and Prevention \[CDC\]](#) (news, research, data)

[HealthCareDive](#) (healthcare news)

[The Health Care Blog](#) (healthcare news and commentary)

[Kaiser Family Foundation](#) (health news, facts, and data; a great site for health information and trends)

[PubMed](#) (healthcare research literature search) (many articles are open access)

[medRxiv](#) (health sciences journal article pre-print service) (the very latest in health and medicine research)

National Bureau of Economic Research (NBER) Health Economics Program (research)
NBER Health Care Program (research)
NBER Center for Aging and Health Research (research)
World Health Organization [WHO] (news, research, data)

Healthcare Data

NBER Health Datasets Public Use Archive (106 datasets; very comprehensive)
HealthData.gov (data; very comprehensive)
The Dartmouth Atlas of Health Care (research and data; very comprehensive)
Centers for Disease Control and Prevention [CDC] (news, research, data)
CDC/National Center for Health Statistics [NCHS] (data)
National Institutes of Health [NIH] (data, research)
EconData.Net (wealth of economic data and data links, non-health)
Centers for Medicare and Medicaid Services [CMS] (data, consumer site)
Missouri Department of Health & Senior Services (data, consumer site)
Partners . . . the Public Health Workforce (data aggregator; very comprehensive)

This list is by no means exhaustive. Use your favorite search engine, [Google Scholar](#), and the services of the [University of Missouri Libraries](#) (they want to help you!) (get this **proxy link** to access journals off campus).

(continued)

COURSE SCHEDULE (SUBJECT TO CHANGE)

Note: The syllabus may be updated periodically with referenced literature and assigned readings.

WEEK (START)	TOPICS AND READINGS	ASSIGNMENTS
<p>Week 1 (03/14/2022)</p>	<p><u>Topics</u> Introduction to Health Economics Review of Tools of Applied Microeconomics Demand for Healthcare/Medical Care</p> <p><u>Slide Decks/Lecture Videos</u> Introduction to Health Economics[1A] Consumer Choice Theory [Review] [1B] Demand Elasticity [Review] [1C] Regression Analysis [Brief Introduction] [1D] Brief Overview of Derivatives [1E] Demand for Healthcare [1F] <i>[Week One is a heavier load than most weeks due to the review of tools]</i></p> <p><u>Required Reading</u> BHT, Chs. 1, 2 Mankiw (2017) [a thorough overview of health economics[†]]</p> <p><u>Referenced Articles</u> Aron-Dine et al. (2013) [RAND Health Insurance Experiment] Arrow (1963) [article effectively “started” health economics as a field] Baicker et al. (2013) [Oregon Medicaid Experiment] Card et al. (2009) [empirical study, demand for healthcare] Cockx and Brasseur (2003) [empirical study, demand for healthcare] Culyer and Newhouse (2000) [Handbook intro to health economics] Finkelstein et al. (2012) [Oregon Medicaid Experiment] Goldman et al. (2004) [empirical study, demand for prescriptions] Gwartney et al. (2008) [microeconomics textbook; <i>unavailable on Canvas</i>] Hearst et al. (1986) [natural experiment, military draft; mortality rates] Imbens and Rubin (2010) [Rubin Causal Model (econometrics)] Joyce et al. (2002) [empirical study, demand for prescriptions] Keeler and Rolph (1988) [RAND health insurance experiment] Kobayashi et al. (2019) [empirical, price transparency, demand] Newhouse (1993) [RAND experiment; book; <i>unavailable on Canvas</i>] Sloan and Hsieh (2011) [health economics text; <i>unavailable on Canvas</i>] Whaley et al. (2014) [effects of price transparency on demand]</p> <p><u>Recommended Reading</u> Barr (2016), Ch. 2 [health and healthcare] [full access to Ch. 2 on Google Books] [full text is <i>on reserve, Ellis Library</i>] Cochrane (2017) [comment on Mankiw op-ed in <i>New York Times</i>] Ewing (2012) [student grades and teacher evaluations] [general interest]</p> <p>[†]This piece is intended to be a chapter in Greg Mankiw’s bestselling (and my favorite by far) Principles of Economics textbook. This textbook is expensive (about \$200), but a good investment for students of economics, including graduate students.</p>	<p>Introductions (required, not graded)</p> <p>Discussion Question 1 Due March 19 11:59 pm (2.5 grade points)</p>

WEEK (START)	TOPICS AND READINGS	ASSIGNMENTS
<p>Week 2 (03/21/2022)</p>	<p><u>Topics</u> Demand for Health Literature Reviews</p> <p><u>Slide Decks/Lectures Videos</u> Demand for Health (Grossman Model) [2A, 2B, 2C] Literature Reviews [2D]</p> <p><u>Required Reading</u> BHT, Ch. 3 Wagstaff (1986) [empirical test of GM] Snyder (2009) [literature review as a methodology and step-by-step]</p> <p><u>Referenced Articles</u> Burgraff et al. (2016) [empirical reformulation and test of GM] Card et al. (2009) [empirical test of GM] Ewing (2012) [course grade and teacher evaluations] Grossman (1972) (GM) [the seminal article] Kaestner (2013) [comment on Zweifel] Wagstaff (1993) [empirical reformulation and test of GM] Zimmerman et al. (2021) [exercise and health stock] Zweifel (2012) [critique of GM]</p> <p><u>Recommended Reading</u> Grossman (2000), Sec. 6 [commentary on empirical tests of GM] Machi and McEvoy (2016) [literature review guide] [<i>on reserve</i>]</p>	<p>Problem Set 1 (covers weeks 1 and 2) Due March 26 11:59 pm (18 grade points)</p>
<p>03/26/2022-04/03/2022</p>	<p>Spring Break</p>	<p>None</p>

WEEK (START)	TOPICS AND READINGS	ASSIGNMENTS
<p>Week 3 (04/04/2022)</p>	<p><u>Topic</u> Health Insurance and Insurance Issues</p> <p><u>Slide Decks/Lecture Videos</u> Uncertainty and Risk [3A] Demand for Health Insurance [3B] Adverse Selection [3C] Moral Hazard [3D]</p> <p><u>Required Reading</u> BHT, Chs. 7, 8, 10, 11 (pp. 203-217) American Academy of Actuaries (2021) [<i>ex ante</i> moral hazard]</p> <p><u>Referenced Articles</u> Akerlof (1970) [seminal “market for lemons” paper] Akerlof (2003) [reflections on the market for lemons] Barsky et al. (1997) [empirical measures of risk tolerance] Edmiston and AlZuBi (2022) [alternative payment models]</p> <p><u>Recommended Reading</u> BHT, Ch. 9 [formal Rothschild-Stiglitz model] Barr (2016), Ch. 5 [HMOs] [<i>on reserve, Ellis Library</i>] Riley (2020) [reference: health insurance terminology]</p>	<p>Discussion Question 2 Due April 9 11:59 pm (2.5 grade points)</p>

WEEK (START)	TOPICS AND READINGS	ASSIGNMENTS
<p>Week 4 (04/11/2022)</p>	<p><u>Topics</u> Pharmaceutical Industry Health Economics and Outcomes Research [HEOR]</p> <p><u>Slide Decks/Lecture Videos</u> Innovation in the Pharmaceutical Industry [4A, 4B] Cost and Outcomes Assessment [4C, 4D]</p> <p><u>Required Reading</u> BHT, Chs. 12, 14 Culyer (2018) [thorough description of HTA and key issues] McQueen (2021) [blog entry, challenges to measuring effectiveness]</p> <p><u>Referenced Articles</u> Dewey (1921) [aspirin overdose, 1918-19 Influenza epidemic] Dolan (2000) [measuring health-related quality-of-life] Gidron (2013) [health outcomes research] Goldman et al. (1991) [example, CEA analysis] Goldman et al. (2011) [data exclusivity for pharmaceutical companies] Gray et al. (2011) [book, CEA analysis] [not available on Canvas] Holtorf et al. (2012) [use of HEOR in healthcare decision-making] JaChuck (1982) [it does matter whose perspective you take] <i>JAMA</i> (1918) [aspirin overdose, 1918-19 Influenza pandemic] Le Count (1919) [aspirin overdose, 1918-19 Influenza pandemic] O'Rourke et al. (2020) [new definition of Health Technology Assessment] Sachs and Bagley (2021) [aducanumab (Alzheimer's drug) and its cost] Starko (2009) [aspirin overdose, 1918-19 Influenza pandemic]</p> <p><u>Recommended Reading</u> BHT, Ch. 13 Banta and Jonsson (2009) [history of HTA] Edmiston and AlZuBi (2022) [technology; telehealth]</p>	<p>Problem Set 2 (covers weeks 3 and 4) Due April 16 11:59 pm (18 grade points)</p>

WEEK (START)	TOPICS AND READINGS	ASSIGNMENTS
<p>Week 5 (04/18/2022)</p>	<p><u>Topics</u> Health Policy</p> <p><u>Slide Decks/Lecture Videos</u> Health Policy [5A, 5B, 5C, 5D, 5E, 5F]</p> <p><u>Required Reading</u> BHT, Chs. 15, 18 Arrow (2008) [impossibility theorem; academic encyclopedia entry] Bhattacharya (2018) [Affordable Care Act supplement to textbook] Ridic (2012) [nationalized, socialized, and American-style HC systems]</p> <p><u>Referenced Articles</u> Arrow (1950) [impossibility theorem] Bergson [Burk] (1936) [concept of social welfare function] Bhattacharya and Bundorf (2009) [obesity and wages] Biddle and Hamermesh (1998) [beauty and wages] Bourdreaux et al. (2017) [ACA, consumer finances] Coleman (1966) [social decisions possible if intensity of preferences differ] Courtemanche et al. (2018) [ACA, health effects] Dobkin et al. (2018) [medical bills and bankruptcy] Dolan and Tsuchiya (2011) [an empirical SWF for use in health policy] Dranove et al. (2016) [ACA, uncompensated care payments] Farrell et al. (2018) [family healthcare spending] Frean et al. (2017) [ACA, multiple issues] Gruber (1994) [wage effects of maternity leave legislation] Gruber (2011) [ACA, general] Hamilton & Bramley-Harker (1999) [effect of NHS queues on health] Himmelstein et al. (2005) [medical bills and bankruptcy] Hoffman (2020) [consumer choice under the ACA] Hu et al. (2018) [ACA, consumer finances] KFF (2013) [ACA, original provisions] Kennedy (2020) [subjective well-being, behavioral, discount rate] Lindahl (2005) [effect of income and wealth on mortality; lottery winners] Marra et al. (2021) [ACA, insurance, adverse selection] Neal et al. (2015) [effect of delays in cancer diagnosis on outcomes] Obama (2016) [ACA, general examination, health effects] Propper (1995) [cost of waiting in NHS (UK) queues] Rasmussen and Anderson (2021) [ACA, consumers buy dominated plans] Schultz (2002) [height and wages] Soni et al. (2020) [ACA, health effects] Young et al. (2016) [millionaires moving to avoid taxes]</p> <p><u>Recommended Reading</u> BHT, Ch, 16 [The Beveridge Model of nationalized healthcare] BHT, Ch. 17 [The Bismarck Model of socialized medicine]</p>	<p>Discussion Question 3 Due April 23 11:59 pm (2.5 grade points)</p>

WEEK (START)	TOPICS AND READINGS	ASSIGNMENTS
<p>Week 6 (04/25/2022)</p>	<p><u>Topics</u> Externalities Epidemiology I</p> <p><u>Slide Decks/Lecture Videos</u> Health Externalities [6A] Traditional Epidemiology [6B, 6C (Obesity), 6D (Aging)]</p> <p><u>Required Reading</u> <i>BHT</i>, Chs. 20 (pp. 428-437), 21 (pp. 454-460) Mokdad et al. (2004) ["actual" causes of death in the United States]</p> <p><u>Referenced Articles</u> Edmiston et al. (2021) [SIR application, COVID-19 in North Dakota] Kermack and McKendrick (1927) [SIR epidemiological model] Philipson (2000, § 2) [SIR epidemiological model]</p>	<p>Problem Set 3 (covers weeks 5 and 6) Due April 30 11:59 pm (18 grade points)</p>

WEEK (START)	TOPICS AND READINGS	ASSIGNMENTS
<p>Week 7 (05/02/2022)</p>	<p><u>Topics</u> Epidemiology II</p> <p><u>Slide Decks/Lecture Videos</u> Economic Epidemiology [7A] Social Epidemiology [7B, 7C]</p> <p><u>Required Reading</u> BHT, Chs. 21 (pp. 449-453, 459-467), 4 (all), 5 (pp. 94-96) Murray (2020) [need for economic epidemiology]</p> <p><u>Referenced Articles</u> Almond (2006) [evidence, “thrifty phenotype,” 1918 influenza pandemic] Belfield et al. (2006) [Perry Preschool Project] Bhattacharya and Lakdawalla (2006) [evidence of SES and health] Barr (2019) [SES and health] [<i>not available on Canvas</i>] Braveman et al. (2010) [evidence of SES and health] Campbell et al. (2002) [Abecedarian project] Card (1994) [education and wages] Card (2001) [education and wages] Case et al. (2002) [relationship childhood SES and adulthood SES] Chapman and Coups (1999) [time preferences and preventive care] Chesson et al. (2006) [discount rates and adolescent sexual behavior] Currie and Stabile (2003) [SES and health in Canada] Cutler and Lleras-Muney (2010) [explaining the education gradient] Dickson (2013) [education and wages] Edmiston (2020) [diagram] [summary of social epidemiology] Ettner (1996) [income and health] Fiscella and Williams (2004) [evidence of SES and health] Frijters et al. (2015) [stock market windfalls and health outcomes] Glymour (2014) [education and health] [<i>not available on Canvas</i>] Goldman and Smith (2002) [efficient producer] Lindahl (2005) [income and health; Swedish lottery winners] Lleras-Muney (2005) [education and mortality] Lundberg (2005) [SES, stress in utero, and health] Marmot et al. (1991) [Whitehall II] McLaughlin et al. (2007) [Abecedarian project] Meer et al. (2003) [inheritance windfalls and health outcomes] Muennig et al. (2009) [Perry Preschool Project] Roseboom et al. (2001) [evidence, “thrifty phenotype,” Dutch blockade] Sapolsky (1983) [neuroendocrine responses to stress in baboons] Schwandt (2018) [stock market windfalls and health] van Rossum et al. (2000) [Whitehall I follow-up]</p> <p><u>Recommended Reading</u> See syllabus, Social Epidemiology (KU School of Medicine)</p>	<p>Discussion Question 4 Due May 07 11:59 pm (2.5 grade points)</p>

WEEK (START)	TOPICS AND READINGS	ASSIGNMENTS
Week 8 (05/09/2022)	<p><u>Topics</u> A Brief Introduction to Behavioral Economics</p> <p><u>Slide Decks and Lecture Videos</u> Behavioral Economics I, II [8A, 8B]</p> <p><u>Required Reading</u> BHT, Chs. 23 (pp. 496-511, 517-520); 24 (pp. 525-534)</p> <p><u>Referenced Articles</u> Bendor (2015) [bounded rationality] Bernheim and Rangel (2004) [hot brain and cold brain] Cartwright (2018) [book; <i>not available on Canvas</i>] Eckles and Schaffner (2010) [framing in healthcare reform debate] Green et al. (2004) [time-inconsistent preferences; experiments] Gruber and Kőszegi (2004) [rational addiction] Kahneman and Tversky (1979) [Prospect Theory] Simon (2000) [bounded rationality] Thaler (1981) [discounting; empirical evidence] Thaler (1990) [general behavioral economics concepts] Tversky and Kahneman (1983) [misjudging probabilities]</p> <p><u>Recommended Reading</u> Thaler (1990) [general behavioral economics concepts]</p>	<p>Problem Set 4 (covers weeks 7 and 8) Due May 13 (Friday) 11:59 pm (18 grade points)</p> <p>Literature Review Project Due May 10 (Tuesday) 11:59 pm (18 grade points)</p>

All Work is due by 11:59 pm, Friday, May 13. No work can be accepted after that point per University of Missouri regulations.

SUPPLEMENTARY READINGS

Akerlof, George A. (1970). The Market for “Lemons”: Quality Uncertainty and the Market Mechanism. *Quarterly Journal of Economics*, 84(3), 488-500. doi:10.2307/1879431.

Akerlof, G. A. (2003). *Writing the “The Market for ‘Lemons’”: A Personal Interpretive Essay*. NobelPrize.org. Retrieved June 19, 2021.

Almond, D. (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*, 114(4), 672-712. doi:10.1086/507154.

American Academy of Actuaries (2021). **Consumer Cost of Automobile Insurance**. *Issue Brief*. April.

Aron-Dine, A., Einav, L., and Finkelstein, A. (2013). The RAND Health Insurance Experiment, Three Decades Later. *Journal of Economic Perspectives*, 27(1), 197-222. doi:10.1257/jep.27.1.197.

Arrow, K. J. (1950). A Difficulty in the Concept of Social Welfare. *Journal of Political Economy*, 58(4), 328-346.

Arrow, K. J. (1963). Uncertainty and the Welfare Economics of Medical Care. *The American Economic Review*, 53(5), 941-973.

Arrow, K. J. (2008). Arrow’s Theorem. In M. Vernengo, E. P. Caldentey, and B. J. Rosser Jr. (Eds.), The New Palgrave Dictionary of Economics (Second ed., pp. 1-6). Palgrave Macmillan UK. doi:10.1057/978-1-349-95121-5_137-2.

- Baicker, K., Taubman, S. L., Allen, H. L., Bernstein, M., Gruber, J. H., Newhouse, J. P., . . . Finkelstein, A. N. (2013). The Oregon Experiment — Effects of Medicaid on Clinical Outcomes. *New England Journal of Medicine*, 368(18), 1713-1722. doi:10.1056/nejmsa1212321.
- Banta, D. and Jonsson, E. (2009). History of HTA: Introduction. *International Journal of Technology Assessment in Health Care*, 25(S1), 1-6. doi:10.1017/s0266462309090321.
- Barr, D. A. (2016). Introduction to Health Policy: The Organization, Financing, and Delivery of Health Care in America (Fourth ed.). Johns Hopkins University Press. [**not available on Canvas**] [**e-book on reserve**]
- Barr, D. A. (2019). Health Disparities in the United States: Social Class, Race, Ethnicity, and the Social Determinants of Health (Third ed.). Johns Hopkins University Press. [**not available on Canvas**]
- Barsky, R. B., Juster, F. T., Kimball, M. S., and Shapiro, M. D. (1997). Preference Parameters and Behavioral Heterogeneity: An Experimental Approach in the Health and Retirement Study. *Quarterly Journal of Economics*, 112(2), 537-579. doi:10.1162/003355397555280.
- Belfield, C. R., Nores, M., Barnett, S., and Schweinhart, L. (2006). The High/Scope Perry Preschool Program. *Journal of Human Resources*, XLI(1), 162-190. doi:10.3368/jhr.xli.1.162.
- Bendor, J. (2015). Bounded Rationality. In J. D. Wright (Ed.), International Encyclopedia of the Social & Behavioral Sciences (Second Edition) (pp. 773-776). Oxford: Elsevier.
- Bernheim, B. D. & Rangel, A. (2004). Addiction and Cue-Triggered Decision Processes. *American Economic Review*, 94(5), 1558-1590. doi:10.1257/0002828043052222.
- Bhattacharya, J. (2018). The Affordable Care Act. Additional Chapter, Health Economics (London, UK: Palgrave MacMillan).
- Bhattacharya, J., T. Hyde, and P. Hu (2014). Health Economics (London, UK, Palgrave Macmillan).
- Bhattacharya, J. and Bundorf, M. K. (2009). The Incidence of the Healthcare Costs of Obesity. *Journal of Health Economics*, 28(3), 649-658. doi:10.1016/j.jhealeco.2009.02.009.
- Bhattacharya, J. & Lakdawalla, D. (2006). Does Medicare Benefit the Poor? *Journal of Public Economics*, 90(1-2), 277-292. doi:10.1016/j.jpubeco.2005.01.001.
- Biddle, J. E. and Hamermesh, D. S. (1998). Beauty, Productivity, and Discrimination: Lawyers' Looks and Lucre. *Journal of Labor Economics*, 16(1), 172-201. doi:10.1086/209886.
- Boudreaux, M. H., Gonzales, G., and Saloner, B. (2017). Medical Financial Burden Declined For Consumers In The Nongroup Market. *Health Affairs*, 36(5), 833-837. doi:10.1377/hlthaff.2016.1480.
- Braveman, P. A., Cubbin, C., Egerter, S., Williams, D. R., and Pamuk, E. (2010). Socioeconomic Disparities in Health in the United States: What the Patterns Tell Us. *American Journal of Public Health*, 100(S1), S186-S196. doi:10.2105/ajph.2009.166082.
- Buchmueller, T. C., Fiebig, D. G., Jones, G., & Savage, E. (2013). Preference Heterogeneity and Selection in Private Health Insurance: The Case of Australia. *Journal of Health Economics*, 32(5), 757-767. doi:10.1016/j.jhealeco.2013.05.001.
- Burggraf, C., Glauben, T., & Greckseh, W. (2016). New Impacts of Grossman's Health Investment Model and the Russian Demand for Medical Care. *Journal of Public Health*, 24, 41-56. doi:10.1007/s10389-015-0692-5
- Burk, A. (1938). A Reformulation of Certain Aspects of Welfare Economics. *Quarterly Journal of Economics*, 52(2), 310-334. doi:10.2307/1881737.
- Campbell, F. A., Ramey, C. T., Pungello, E., Sparling, J., & Miller-Johnson, S. (2002). Early Childhood Education: Young Adult Outcomes From the Abecedarian Project. *Applied Developmental Science*, 6(1), 42-57. doi:10.1207/S1532480XADS0601_05.

- Card, D. (1994). Earnings, Schooling, and Ability Revisited. *NBER Working Paper No. 4832*. doi:10.3386/w4832.
- Card, D. (2001). Estimating the Return to Schooling: Progress on Some Persistent Econometric Problems. *Econometrica*, 69(5), 1127-1160. doi:10.1111/1468-0262.00237.
- Card, D., Dobkin, C., and Maestas, N. (2009). Does Medicare Save Lives? *Quarterly Journal of Economics*, 124(2), 597-636. doi:10.1162/qjec.2009.124.2.597.
- Cartwright, E. (2018). *Behavioral Economics* (Third ed.). Routledge. [*not available on Canvas*]
- Case, A., Lubotsky, D., and Paxson, C. (2002). Economic Status and Health in Childhood: The Origins of the Gradient. *American Economic Review*, 92(5), 1308-1334. doi:10.1257/000282802762024520.
- Cave, D., E. Bubola, and C. Sang-Hun (2021, May 22). [Long Slide Looms for World Population, With Sweeping Ramifications](#). *New York Times*.
- Chapman, G. B. and Coups, E. J. (1999). Time Preferences and Preventive Health Behavior. *Medical Decision Making*, 19(3), 307-314. doi:10.1177/0272989x9901900309.
- Chesson, H. W., Leichter, J. S., Zimet, G. D., Rosenthal, S. L., Bernstein, D. I., and Fife, K. H. (2006). Discount Rates and Risky Sexual Behaviors Among Teenagers and Young Adults. *Journal of Risk and Uncertainty*, 32(3), 217-230. doi:10.1007/s11166-006-9520-1.
- Cochrane, J. (2017, September 25). [Health Care Policy Isn't so Hard](#). The Grumpy Economist (blog).
- Cockx, B. and Brasseur, C. (2003). The Demand for Physician Services. *Journal of Health Economics*, 22(6), 881-913. doi:10.1016/s0167-6296(03)00047-x.
- Coleman, J. S. (1966). The Possibility of a Social Welfare Function. *The American Economic Review*, 56(5), 1105-1122.
- Courtemanche, C., Marton, J., Ukert, B., Yelowitz, A., and Zapata, D. (2018). Early Effects of the Affordable Care Act on Health Care Access, Risky Health Behaviors, and Self-Assessed Health. *Southern Economic Journal*, 84(3), 660-691. doi:10.1002/soej.12245.
- Culyer, A. J. (2018). Health Economics and Health Technology Assessment. *Medicine*, 46(7), 379-382. doi:10.1016/j.mpmed.2018.04.002.
- Culyer, A. J. & Newhouse, J. P. (2000). Introduction: The State and Scope of Health Economics. In A. J. Culyer & J. P. Newhouse (Eds.), *Handbook of Health Economics* (First ed., Vol. 1A). Amsterdam: Elsevier Science B. V.
- Currie, J. and Stabile, M. (2003). Socioeconomic Status and Child Health: Why Is the Relationship Stronger for Older Children? *American Economic Review*, 93(5), 1813-1823. doi:10.1257/000282803322655563.
- Cutler, D. M. and Lleras-Muney, A. (2010). Understanding Differences in Health Behaviors by Education. *Journal of Health Economics*, 29(1), 1-28. doi: 10.1016/j.jhealeco.2009.10.003.
- Dewey, W. A. (1921). Homeopathy in Influenza – A Chorus of Fifty in Harmony. *Journal of the American Institute of Homeopathy*, 13, 1028-1043.
- Dickson, M. (2013). The Causal Effect of Education on Wages Revisited. *Oxford Bulletin of Economics and Statistics*, 75(4), 477-498. doi:10.1111/j.1468-0084.2012.00708.x.
- Dobkin, C., Finkelstein, A., Kluender, R., and Notowidigdo, M. J. (2018). Myth and Measurement — The Case of Medical Bankruptcies. *New England Journal of Medicine*, 378(12), 1076-1078. doi:10.1056/nejmp1716604.

- Dolan, P. (2000). The Measurement of Health-Related Quality of Life for Use in Resource Allocation Decisions in Healthcare. In A. J. Culyer & J. P. Newhouse (Eds.), *Handbook of Health Economics* (Vol. 1A, pp. 1723-1760). Elsevier.
- Dolan, P. and Tsuchiya, A. (2011). Determining the Parameters in a Social Welfare Function Using Stated Preference Data: An Application to Health. *Applied Economics*, 43(18), 2241-2250. doi:10.1080/00036840903166244.
- Dranove, D., Garthwaite, C., and Ody, C. (2016). Uncompensated Care Decreased At Hospitals In Medicaid Expansion States But Not At Hospitals In Nonexpansion States. *Health Affairs*, 35(8), 1471-1479. doi:10.1377/hlthaff.2015.1344.
- Eckles, D. L. and Schaffner, B. F. (2010). Loss Aversion and the Framing of the Health Care Reform Debate. *The Forum*, 8(1). doi:10.2202/1540-8884.1359.
- Edmiston, K. D. (2020a). Social Epidemiology in One Bite [diagram]. University of Kansas School of Medicine.
- Edmiston, K. D. (2020b). Social Epidemiology [syllabus]. University of Kansas School of Medicine.
- Edmiston, K.D., Campbell, E. and Czajkowski, J. (2021). Racial Vaccine Equity: A Brief Review of the Evidence and Literature. Center for Insurance Policy & Research, National Association of Insurance Commissioners, July.
- Edmiston, K.D. and AlZuBi, J. (2022). “Trends in Telehealth and Its Implications for Health Disparities.” Center for Insurance Policy & Research, National Association of Insurance Commissioners. Working paper. January.
- Edmiston, K.D. and AlZuBi, J. (2022). “Alternative Payment Models and Health Disparities.” Center for Insurance Policy & Research, National Association of Insurance Commissioners. Working paper. January.
- Edmiston, K.D., Harms, P. H., and Czajkowski, J. R. (2021). “Projecting Healthcare and Insurance Costs in a Pandemic: A Case Study of COVID-19 in North Dakota.” National Association of Insurance Commissioners. Working paper.
- Ettner, S. L. (1996). New Evidence on the Relationship Between Income and Health. *Journal of Health Economics*, 15(1), 67-85. doi:10.1016/0167-6296(95)00032-1.
- Ewing, A. M. (2012). Estimating the impact of relative expected grade on student evaluations of teachers. *Economics of Education Review*, 31(1), 141-154. doi:10.1016/j.econedurev.2011.10.002.
- Farrell, D., Greig, F., and Hamoudi, A. (2018, December 13). “Cash Flow Dynamics And Family Health Care Spending: Evidence From Banking Data.” *Health Affairs Health Policy Brief*. doi:10.1377/hpb20181105.261680.
- Finkelstein, A., Taubman, S., Wright, B., Bernstein, M., Gruber, J., Newhouse, J. P., . . . Oregon Health Study, G. (2012). The Oregon Health Insurance Experiment: Evidence from the First Year. *The Quarterly Journal of Economics*, 127(3), 1057-1106.
- Fiscella, K. and Williams, D. R. (2004). Health Disparities Based on Socioeconomic Inequities: Implications for Urban Health Care. *Academic Medicine*, 79(12).
- Frean, M., Gruber, J., and Sommers, B. D. (2017). Premium Subsidies, the Mandate, and Medicaid Expansion: Coverage Effects of the Affordable Care Act. *Journal of Health Economics*, 53, 72-86. doi:10.1016/j.jhealeco.2017.02.004.
- Frijters, P., Johnston, D. W., Shields, M. A., and Sinha, K. (2015). A Lifecycle Perspective of Stock Market Performance and Wellbeing. *Journal of Economic Behavior & Organization*, 112, 237-250. doi:10.1016/j.jebo.2015.02.004.

- Gidron, Y. (2013). Health Outcomes Research. In M. D. Gellman & J. R. Turner (Eds.), Encyclopedia of Behavioral Medicine (pp. 924-925). Springer New York. doi:10.1007/978-1-4419-1005-9_1412.
- Glymour, M. M., Avendano, M., and Kawachi, I. (2014). Socioeconomic Status and Health. In L. F. Berkman, I. Kawachi, and M. M. Glymour (Eds.), Social Epidemiology (pp. 17-62). London, UK: Oxford University Press. [**not available on Canvas**]
- Goldman, D. P. (2004). Pharmacy Benefits and the Use of Drugs by the Chronically Ill. *JAMA*, 291(19), 2344. doi:10.1001/jama.291.19.2344.
- Goldman, D. P., Lakdawalla, D. N., Malkin, J. D., Romley, J., & Philipson, T. (2011). The Benefits From Giving Makers Of Conventional ‘Small Molecule’ Drugs Longer Exclusivity Over Clinical Trial Data. *Health Affairs*, 30(1), 84-90. doi:10.1377/hlthaff.2009.1056.
- Goldman, D. P. & Smith, J. P. (2002). Can Patient Self-Management Help Explain the SES Health Gradient? *Proceedings of the National Academy of Sciences*, 99(16), 10929-10934. doi:10.1073/pnas.162086599.
- Goldman, L., Weinstein, M. C., Goldman, P. A., and Williams, L. W. (1991). Cost-effectiveness of HMG-CoA Reductase Inhibition for Primary and Secondary Prevention of Coronary Heart Disease. *JAMA*, 265(9), 1145-1151. doi:10.1001/jama.1991.03460090093039.
- Gray, A. M., Clarke, P. M., Wolstenholme, J. L., and Wordsworth, S. (2011). Applied Methods of Cost-Effectiveness Analysis in Health Care (Vol. 3). Oxford University Press. [**not available on Canvas**]
- Green, L., Fristoe, N., & Myerson, J. (1994). Temporal Discounting and Preference Reversals in Choice Between Delayed Outcomes. *Psychonomic Bulletin & Review*, 1(3), 383-389. doi:10.3758/bf03213979.
- Grossman, M. (1972). On the Concept of Health Capital and the Demand for Health. *Journal of Political Economy*, 80(2), 223-255. doi:10.1086/259880.
- Gruber, J. (1994). The Incidence of Mandated Maternity Benefits. *The American Economic Review*, 84(3), 622-641.
- Gruber, J. (2011). The Impacts of the Affordable Care Act: How Reasonable Are the Projections? *National Tax Journal*, 64(3), 893-908. doi:10.17310/ntj.2011.3.06.
- Gruber, J., & Köszegi, B. (2001). Is Addiction “Rational”? Theory and Evidence. *The Quarterly Journal of Economics*, 116(4), 1261-1303. doi:10.1162/003355301753265570.
- Gwartney, J. D., Stroup, R., Sobel, R., & MacPherson, D. (2008). Economics: Private and Public Choice (Eleventh ed.). Boston: Cengage Learning. [**not available on Canvas**]
- Hamilton, B. H. and Bramley-Harker, R. E. (1999). The Impact of the NHS Reforms on Queues and Surgical Outcomes in England: Evidence From Hip Fracture Patients. *The Economic Journal*, 109(457), 437-462. doi:10.1111/1468-0297.00456.
- Hearst, N., Newman, T. B., & Hulley, S. B. (1986). Delayed Effects of the Military Draft on Mortality. *New England Journal of Medicine*, 314(10), 620-624. doi:10.1056/nejm198603063141005.
- Himmelstein, D. U., Warren, E., Thorne, D., and Woolhandler, S. (2005). Illness And Injury As Contributors To Bankruptcy. *Health Affairs*, 24(2), 570. Accession Number: 204638596.
- Hoffman, A. K. (2020). The ACA's Choice Problem. *Journal of Health Politics, Policy and Law*, 45(4), 501-515. doi:10.1215/03616878-8255445.
- Holtorf, A-P., Brixner, D., Bellows, B., Keskinaslan, A., Dye, J., & Oderda, G. (2012). Current and Future Use of HEOR Data in Healthcare Decision-Making in the United States and in Emerging Markets. *American Health & Drug Benefits*, 5(7), 428-438. PMID: PMC4031700.

- Hu, L., Kaestner, R., Mazumder, B., Miller, S., and Wong, A. (2018). The Effect of the Affordable Care Act Medicaid Expansions on Financial Wellbeing. *Journal of Public Economics*, 163, 99-112. doi:10.1016/j.jpubeco.2018.04.009
- Imbens, G. W. and Rubin, D. B. (2010). Rubin Causal Model. In S. N. Durlauf and L. E. Blume (Eds.), *Microeconometrics* (pp. 229-241). London: Palgrave Macmillan UK.
- Jachuck, S. J., Brierley, H., Jachuck, S., & Willcox, P. M. (1982). The Effect of Hypotensive Drugs on the Quality of Life. *Journal of the Royal College of General Practitioners*, 32(235), 103-105.
- JAMA (1918). Therapeutics. *JAMA: The Journal of the American Medical Association*, 71(14), 1136. doi:10.1001/jama.1918.02600400036011.
- Joyce, G. F., Escarce, J. J., Solomon, M. D., & Goldman, D. P. (2002). Employer Drug Benefit Plans and Spending on Prescription Drugs. *JAMA*, 288(14), 1733-1739. doi:10.1001/jama.288.14.1733.
- Kaestner, R. (2013). The Grossman Model after 40 years: A Reply to Peter Zweifel. *The European Journal of Health Economics*, 14(2), 357-360. doi:10.1007/s10198-012-0451-2.
- Kahneman, D. and Tversky, A. (1979). Prospect Theory: An Analysis of Decision Under Risk. *Econometrica*, 47(2), 263-291. doi:10.2307/1914185.
- Kaiser Family Foundation [KFF]. (2013). [Summary of the Affordable Care Act](#). April 23.
- Keeler, E. B., & Rolph, J. E. (1988). The Demand for Episodes of Treatment in the Health Insurance Experiment. *Journal of Health Economics*, 7(4), 337-367. doi:10.1016/0167-6296(88)90020-3.
- Kennedy, J. (2020). Subjective Wellbeing and the Discount Rate. *Journal of Happiness Studies*, 21(2), 635-658. doi:10.1007/s10902-019-00096-9.
- Kennedy, P. (2008). *A Guide to Econometrics* (6 ed.). Malden, MA: Blackwell.
- Kermack, W. O. and McKendrick, A. G. (1927). A Contribution to the Mathematical Theory of Epidemics. *Proceedings of the Royal Society of London. Series A, Containing Papers of a Mathematical and Physical Character*, 115(772), 700-721. doi:10.1098/rspa.1927.0118.
- Kobayashi, D., Goto, R., and Tsugawa, Y. (2019). Impact of Improved Price Transparency on Patients' Demand of Healthcare Services. *Social Science & Medicine*, 235, 112390. doi:10.1016/j.socscimed.2019.112390.
- Le Count, E. R. (1919). The Pathologic Anatomy of Influenza Bronchopneumonia. *Journal of the American Medical Association*, 72(9), 650. doi.org:10.1001/jama.1919.02610090034009.
- Lindahl, M. (2005). Estimating the Effect of Income on Health and Mortality Using Lottery Prizes as an Exogenous Source of Variation in Income. *Journal of Human Resources*, XL(1), 144-168. doi:10.3368/jhr.xl.1.144
- Lleras-Muney, A. (2005). The Relationship Between Education and Adult Mortality in the United States. *Review of Economic Studies*, 72(1), 189-221. doi:10.1111/0034-6527.00329.
- Lundberg, U. (2005). Stress Hormones in Health and Illness: The Roles of Work and Gender. *Psychoneuroendocrinology*, 30(10), 1017-1021. doi:10.1016/j.psyneuen.2005.03.014.
- Machi, L. A. & McEvoy, B. T. (2016). [The Literature Review: Six Steps to Success](#) (Third ed.). Thousand Oaks, CA: Corwin/Sage.
- Mankiw, N. G. (2017). *The Economics of Healthcare* (forthcoming chapter, [Principles of Economics](#)).
- Marmot, M. G., Stansfeld, S., Patel, C., North, F., Head, J., White, I., Brunner, E., Feeney, A., Marmot, M. G., and Smith, G. D. (1991). Health Inequalities Among British Civil Servants: The Whitehall II Study. *The Lancet*, 337(8754), 1387-1393. doi:10.1016/0140-6736(91)93068-K.

- Marra, G., Radice, R., & Zimmer, D. (2021). Did the ACA's "Guaranteed Issue" Provision Cause Adverse Selection into Nongroup Insurance? Analysis Using a Copula-Based Hurdle Model. *Health Economics*. doi:10.1002/hec.4372.
- McLaughlin, A. E., Campbell, F. A., Pungello, E. P., and Skinner, M. (2007). Depressive Symptoms in Young Adults: The Influences of the Early Home Environment and Early Educational Child Care. *Child Development*, 78(3), 746-756. doi:10.1111/j.1467-8624.2007.01030.x.
- McQueen, R. Brett. "Measuring Effectiveness of Health Service Interventions: Challenges and Potential Solutions." Health Affairs Blog 2021. December 10.
- Meer, J., Miller, D. L., and Rosen, H. S. (2003). Exploring the Health–Wealth Nexus. *Journal of Health Economics*, 22(5), 713-730. doi:10.1016/s0167-6296(03)00059-6.
- Mokdad, A. H., Marks, J. S., Stroup, D. F., and Gerberding, J. L. (2004). Actual Causes of Death in the United States, 2000. *JAMA*, 291(10), 1238-1245. doi:10.1001/jama.291.10.1238.
- Muennig, P., Schweinhart, L., Montie, J., and Neidell, M. (2009). Effects of a Prekindergarten Educational Intervention on Adult Health: 37-Year Follow-Up Results of a Randomized Controlled Trial. *American Journal of Public Health*, 99(8), 1431-1437. doi:10.2105/ajph.2008.148353.
- Murray, E. J. (2020). Epidemiology's Time of Need: COVID-19 Calls for Epidemic-Related Economics. *Journal of Economic Perspectives*, 34(4), 105-120. doi:10.1257/jep.34.4.105.
- Neal, R. D., Tharmanathan, P., France, B., Din, N. U., Cotton, S., Fallon-Ferguson, J., Hamilton, W., Hendry, A., Hendry, M., Lewis, R., Macleod, U., Mitchell, E. D., Pickett, M., Rai, T., Shaw, K., Stuart, N., Tørring, M. L., Wilkinson, C., Williams, B., Williams, N., and Emery, J. (2015). Is Increased Time to Diagnosis and Treatment in Symptomatic Cancer Associated with Poorer Outcomes? Systematic Review. *British Journal of Cancer*, 112(S1), S92-S107. doi:10.1038/bjc.2015.48.
- Newhouse, J. P. & Insurance Experiment Group. (1993). *Free for All? Lessons from the RAND Health Insurance Experiment*: Harvard University Press.
- Obama, B. (2016). United States Health Care Reform. *JAMA*, 316(5), 525. doi:10.1001/jama.2016.9797.
- O'Rourke, B., Oortwijn, W., and Schuller, T. (2020). Announcing the New Definition of Health Technology Assessment. *Value in Health*, 23(6), 824-825. doi:10.1016/j.jval.2020.05.001.
- Patel, N. (2014). Learning Lessons. *Journal of the American College of Cardiology*, 64(25), 2802-2804. doi:10.1016/j.jacc.2014.11.007.
- Philipson, T. (2000). Chapter 33 Economic epidemiology and infectious diseases. In Handbook of Health Economics (Vol. 1, pp. 1761-1799). Elsevier. doi:10.1016/S1574-0064(00)80046-3.
- Philipson, T. J. (2008). Economic Epidemiology. In S. N. Durlauf & L. E. Blume (Eds.), The New Palgrave Dictionary of Economics (Second ed., pp. 1-4). London: Palgrave Macmillan UK.
- Propper, C. (1995). The Disutility of Time Spent on the United Kingdom's National Health Service Waiting Lists. *The Journal of Human Resources*, 30(4), 677. doi:10.2307/146227.
- Rasmussen, P. W. and Anderson, D. (2021). When All That Glitters Is Gold: Dominated Plan Choice on Covered California for the 2018 Plan Year. *The Milbank Quarterly* [early view release]. doi:10.1111/1468-0009.12518.
- Rich-Edwards, J. W., Kleinman, K., Michels, K. B., Stampfer, M. J., Manson, J. E., Rexrode, K. M., . . . Willett, W. C. (2005). Longitudinal study of birth weight and adult body mass index in predicting risk of coronary heart disease and stroke in women. *BMJ*, 330(7500), 1115. doi:10.1136/bmj.38434.629630.e0.

- Ridic, G., Gleason, S., and Ridic, O. (2012). Comparisons of Health Care Systems in the United States, Germany and Canada. *Materia Socio-Medica* [Socio-Medical Matter, Journal of the Academy of Medical Sciences in Bosnia and Herzegovina], 24(2), 112-120. doi:10.5455/msm.2012.24.112-120.
- Riley, Ellie (2020, May 19). [A Guide to Health Insurance Terminology](#). GoodRx.
- Roseboom, T. J., Van Der Meulen, J. H. P., Ravelli, A. C. J., Osmond, C., Barker, D. J. P., and Bleker, O. P. (2001). Effects of Prenatal Exposure to the Dutch Famine on Adult Disease in Later Life: An Overview. *Molecular and Cellular Endocrinology*, 185(1-2), 93-98. doi:10.1016/s0303-7207(01)00721-3.
- Sachs, R. E. & Bagley, N. (2021). Medicare Coverage of Aducanumab — Implications for State Budgets. *New England Journal of Medicine*, 385(22), 2019-2021. doi:10.1056/nejmp2115297.
- Sapolsky, R. M. (1983). Endocrine Aspects of Social Instability in the Olive Baboon (*Papio Anubis*). *American Journal of Primatology*, 5(4), 365-379. doi:10.1002/ajp.1350050406.
- Schultz, T. P. (2002). Wage Gains Associated with Height as a Form of Health Human Capital. *American Economic Review*, 92(2), 349-353. doi:10.1257/000282802320191598.
- Schwandt, H. (2018). Wealth Shocks and Health Outcomes: Evidence from Stock Market Fluctuations. *American Economic Journal: Applied Economics*, 10(4), 349-377. doi:10.1257/app.20140499.
- Simon, H. A. (2000). Bounded Rationality in Social Science: Today and Tomorrow. *Mind & Society*, 1(1), 25-39. doi:10.1007/bf02512227.
- Sloan, F. A. & Hsieh, C.-R. (2012). [Health Economics](#). Cambridge, MA: MIT Press.
- Snyder, H. (2019). Literature Review as a Research Methodology: An Overview and Guidelines. *Journal of Business Research*, 104, 333-339. doi:10.1016/j.jbusres.2019.07.039.
- Soni, A., Wherry, L. R., and Simon, K. I. (2020). How Have ACA Insurance Expansions Affected Health Outcomes? Findings From The Literature. *Health Affairs*, 39(3), 371-378. doi:10.1377/hlthaff.2019.01436.
- Starko, K. M. (2009). Salicylates and Pandemic Influenza Mortality, 1918–1919 Pharmacology, Pathology, and Historic Evidence. *Clinical Infectious Diseases*, 49(9), 1405-1410. doi:10.1086/606060.
- Thaler, R. (1981). Some Empirical Evidence on Dynamic Inconsistency. *Economics Letters*, 8(3), 201-207. doi:10.1016/0165-1765(81)90067-7.
- Thaler, R. H. (1990). Anomalies: Saving, Fungibility, and Mental Accounts. *Journal of Economic Perspectives*, 4(1), 193-205. doi:10.1257/jep.4.1.193.
- Tversky, A. and Kahneman, D. (1983). Extensional versus Intuitive Reasoning: The Conjunction Fallacy in Probability Judgment. *Psychological Review*, 90(4), 293-315. doi:10.1037/0033-295X.90.4.293.
- Van Rossum, C. T. M. (2000). Employment Grade Differences in Cause Specific Mortality. A 25 year Follow Up of Civil Servants from the first Whitehall Study. *Journal of Epidemiology & Community Health*, 54(3), 178-184. doi:10.1136/jech.54.3.178.
- Varian, H. R. (2020). [Intermediate Microeconomics with Calculus: A Modern Approach: Media Update](#) (First ed.). New York, NY: W. W. Norton & Company.
- Wagstaff, A. (1986). The Demand for Health: Some New Empirical Evidence. *Journal of Health Economics*, 5(3), 195-233. doi:10.1016/0167-6296(86)90015-9.
- Wagstaff, A. (1993). The Demand for Health: An Empirical Reformulation of the Grossman Model. *Health Economics*, 2(2), 189-198. doi:10.1002/hec.4730020211.

- Whaley, C., Schneider Chafen, J., Pinkard, S., Kellerman, G., Bravata, D., Kocher, R., and Sood, N. (2014). Association Between Availability of Health Service Prices and Payments for These Services. *JAMA*, 312(16), 1670-1676. doi:10.1001/jama.2014.13373.
- Wolfe, B. (2008). Health Economics. In M. Vernengo, E. P. Caldentey, & B. J. Rosser Jr. (Eds.), *The New Palgrave Dictionary of Economics* (pp. 1-10). London: Palgrave Macmillan UK.
- Young, C., Varner, C., Lurie, I. Z., and Prisinzano, R. (2016). Millionaire Migration and Taxation of the Elite. *American Sociological Review*, 81(3), 421-446. doi:10.1177/0003122416639625.
- Zimmerman, A., Planek, M. I. C., Chu, C., Oyenu, O., Paner, A., Reding, K., . . . Okwuosa, T. M. (2021). Exercise, Cancer and Cardiovascular Disease: What Should Clinicians Advise? *Cardiovascular Endocrinology & Metabolism*, 10(2).
- Zweifel, P. (2012). The Grossman Model after 40 Years. *The European Journal of Health Economics*, 13(6), 677-682. doi:10.1007/s10198-012-0420-9.