

Mental Health Policy and Economics

5-day Ph.D. Course, July 10-14, 2023 at the [University of Lucerne](https://www.unil.ch/)

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Description:

The complexity and chronicity of mental health conditions, particularly serious mental illness, pose significant policy challenges. In this course we will examine economic considerations in the prevention of mental illness, and in the provision, organization and use of services for mental disorders in several countries. We further discuss empirical strategies, data and causal identification, and incorporate a data analytic exercise. The course consists of five lectures, two mock referee reports of recent papers, class participation, a group presentation and an in-class data analytic exercise.

Course objectives:

- Offer students an understanding of unique characteristics of mental health conditions, including their prevention and their treatment, relative to other health conditions and implications for economic analysis and policy development
- Understand advantages and disadvantages of different types of data
- Provide an overview of modern economic research on key mental health policy issues.
- Motivate students to study the economics of mental health and policy with a clear understanding of causal relationships.

Grading: The final grade is based on two referee reports, an in-class data analytic exercise, one joint presentation, and class participation. The weight for each component in the final grade is as follows:

- Referee reports, both combined: 40%
- In-class data analytic exercise: 20 %
- Class presentation: 10%
- Class participation: 30%

Readings. Our discussions will be richer if you read the articles in advance. I'll highlight which readings are optional.

Class presentation: Working in pairs, students will give short presentations and comment on an assigned reading.

Referee reports: We will go over the specifics of this assignment on Day 1. Your first referee report is due before class on Day 3. The second is due before class on Day 5. You will select your own paper to review on a mental health topic from NBER, IZA, The Labour Institute for Economic Research LABORE, EHEC <https://www.ehealthecon.org/seminars.html> or similar).

Grading scale:

- A: (90-100) B: (80-89) C: (70-79) D: (60-69) E: (50-59) F:(0-49)

Day 1. Mental Health: Burden of Illness, Prevention, and Cost-Effectiveness Analysis of Treatment Approaches. The Basics of Reviewing and Referee Reports.

A review of mental disorders included in the World Health Organization (WHO)'s Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2019 found that mental disorders remained among the top ten leading causes of burden worldwide. We begin with an overview of this evidence, along with evidence from Germany, as an introduction to mild, moderate, and serious forms of mental illness, treatment modalities, and major comorbidities. We will also discuss the major sources of economic costs (health care, work disability, and other). We will interpret analyses conducted on Finnish data together in class.

- a. OECD/EU (2018), "Chapter 1: Promoting Mental Health in Europe, why and how?" in *Health at a Glance: Europe 2018: State of Health in the EU Cycle*, OECD Publishing, Paris. https://doi.org/10.1787/health_glance_eur-2018-en
- b. GBD 2019 Mental Disorders Collaborators. Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet Psychiatry*. 2022 Feb;9(2):137-150. doi: 10.1016/S2215-0366(21)00395-3. {skim this reading}
- c. König, H., König, HH., Gallinat, J. *et al.* Excess costs of mental disorders by level of severity. *Soc Psychiatry Psychiatr Epidemiol* (2022). <https://doi.org/10.1007/s00127-022-02298-8>

Next, we discuss how policy has tackled mental health improvement via both universal and targeted approaches, and highlight some examples. We then examine the economic evidence base supporting investment in the *prevention* of mental illness. We will look at evidence across the life course and internationally.

- a. McDaid, D., Park, A. L., & Wahlbeck, K. (2019). The economic case for the prevention of mental illness. Annual Review of Public Health. <https://doi.org/10.1146/annurev-publhealth-040617-013629> (open access)
- b. National Mental Health Commission. (2019). The economic case for investing in mental health prevention, Summary. {Read only the summary}
<https://www.mentalhealthcommission.gov.au/getmedia/ffbf9cc5-f815-4034-b931-dfc0c1ecb849/The-economic-case-for-investing-in-mental-health-prevention.PDF>

Next, we examine selected examples of CEA studies for treatment alternatives, as well as sources of data used in cost measurement. In many countries a central body, i.e, government or insurer, makes treatment coverage decisions based in part on economic evaluations of alternative treatment. Cost-effectiveness analysis (CEA) in mental health has involved adapting measurement and statistical approaches to mental health system data, such as the EQ-5D vs. PANSS data to generate QALYs for schizophrenia; estimation strategies in the face of skewed distributions in service use and cost data.

- c. Grupp H, Köenig HH, Konnopka A. Cost measurement of mental disorders in Germany. *J Ment Health Policy Econ*. 2014 Mar;17(1):3-8. PMID: 24864116.

- d. Garabedian LF, Chu P, Toh S, Zaslavsky AM, Soumerai SB. Potential Bias of Instrumental Variable Analyses for Observational Comparative Effectiveness Research. *Annals of Internal Medicine*. 2014; 161(2):131-138. PMID: 25023252.

On Day 1, we will go over some basic guidelines when it comes to reviewing academic working papers or manuscripts, and referee reports. Recall that your first review assignment is due before class on Day 3. The second is due before class on Day 5.

Day 2: Expenditure discussion (wrap up); Human Capital Formation and Policy Implications

In this session we close out our in-depth discussion of expenditure data, addressing the distribution of health care expenditures and implications for measuring disparities. We will also cover some basic methods used in economic evidence reviews.

- a. Le Cook B, Manning W, Alegria M. Measuring disparities across the distribution of mental health care expenditures. *J Ment Health Policy Econ*. 2013 Mar;16(1):3-12.
- b. Jessica Acolin, Economic Evaluation of Dialectical Behavioral Therapy Versus Cognitive Behavioral Therapy for Suicide Prevention *J Ment Health Policy Econ* 25, 123-131 (2022)

We then take a closer look at economic theory and relate it to studies of human capital formation vs. studies that examine the contemporaneous effects of mental illness and outcomes vs. studies that examine policies and mental health. We look at examples relating to adults, pregnant women, and children, and discuss policy implications. We will also incorporate implications for disability insurance and workplace interventions.

- a. Buyi Wang, Richard G. Frank, and Sherry A. Glied. [Lasting Scars: The Impact of Depression in Early Adulthood on Subsequent Labor Market Outcomes](#), NBER Working paper #30776, December 2022
- b. Conti, Rena M, Ernst R. Berndt, and Richard G. Frank. 2006. "Early Retirement and Public Disability Insurance Applications: Exploring the Impact of Depression." NBER Working Paper 12237. Accessed on Jan 1st 2021. doi: 10.3386/w12237
- c. Frank RG. Reflections on the Link Between Income During Childhood and Risk of Developing Schizophrenia. *JAMA Psychiatry*. 2020;77(1):11–12. {*This is a short economic commentary on* Hakulinen C, Webb RT, Pedersen CB, Agerbo E, Mok PLH. Association Between Parental Income During Childhood and Risk of Schizophrenia Later in Life. *JAMA Psychiatry*. 2020;77(1):17–24. doi:10.1001/jamapsychiatry.2019.2299 and doi:10.1001/jamapsychiatry.2019.2968}
- d. Salm, M., & Schunk, D. (2012). The Relationship between Child Health, Developmental Gaps, and Parental Education: Evidence from Administrative Data. *Journal of the European Economic Association*, 10(6), 1425–1449. <https://doi-org.mutex.gmu.edu/https://academic.oup.com/jeea/issue> {optional reading}

- e. Baranov, Victoria, Sonia Bhalotra, Pietro Biroli, and Joanna Maselko. 2020. "Maternal Depression, Women's Empowerment, and Parental Investment: Evidence from a Randomized Controlled Trial." *American Economic Review*, 110 (3): 824-59.
- f. Persson, Petra, and Maya Rossin-Slater. 2018. "Family Ruptures, Stress, and the Mental Health of the Next Generation." *American Economic Review*, 108 (4-5): 1214-52. {Optional reading is a commentary by Matsumoto who explains challenges with respect to measuring birth outcomes based on actual vs. expected birth dates. This issue will be presented in class, but feel free to read about it more closely: Commentary by Matsumoto, Brett. 2018. "Family Ruptures, Stress, and the Mental Health of the Next Generation: Comment." *American Economic Review*, 108 (4-5): 1253-55. If you want you can also read the response to this critique in Persson, Petra, and Maya Rossin-Slater. 2018. "Family Ruptures, Stress, and the Mental Health of the Next Generation: Reply." *American Economic Review*, 108 (4-5): 1256-63.}
- g. Luca Braghieri, Ro'ee Levy, and Alexey Makarin "Social Media and Mental Health" *American Economic Review* 2022, 112(11): 3660–3693. <https://doi.org/10.1257/aer.20211218>

Day 3: Moral Hazard; Patient Out-of-Pocket Costs & Mental Health Parity; Student Presentations of Referee Reports; In-class Data Exercise

We now examine evidence of moral hazard in insurance for mental disorders. Insurance coverage of mental health services across OECD countries will be described in class. Further, we will examine economic estimates from 3 studies of the US expansion of health insurance on utilization. This includes a lottery to determine insurance coverage, exogenous insurance coverage stemming from variation in US state policies related to coverage of college students, and a US federal policy change impacting all low-income elderly. We also assess the introduction of a policy called "mental health parity" in insurance.

- a. Glied S, Frank RG. Economics and the Transformation of the Mental Health System. *J Health Polit Policy Law*. 2016 Aug;41(4):541-58. doi: 10.1215/03616878-3620809.
- c. Baicker K, Allen HL, Wright BJ, Taubman SL, Finkelstein AN. The Effect of Medicaid on Management of Depression: Evidence From the Oregon Health Insurance Experiment. *Milbank Q*. 2018 Mar;96(1):29-56. doi: 10.1111/1468-0009.12311
- d. Cowan BW, Hao Z. Medicaid expansion and the mental health of college students. *Health Econ*. 2021 Jun;30(6):1306-1327. doi: 10.1002/hec.4256. Epub 2021 Mar 19. PMID: 33740278.
- e. Fung V, Price M, Nierenberg AA, Hsu J, Newhouse JP, Cook BL. Assessment of behavioral health services use among low income Medicare beneficiaries after reductions in coinsurance fees. *JAMA Netw Open*. 2020;3(10):e2019854. doi:[10.1001/jamanetworkopen.2020.19854](https://doi.org/10.1001/jamanetworkopen.2020.19854)

Next we examine spillovers to other social sectors

- a. Fry CE, McGuire TG, Frank RG. Medicaid Expansion's Spillover to the Criminal Justice System: Evidence from Six Urban Counties. *RSF*. 2020 Jul;6(2):244-263. doi: 10.7758/rsf.2020.6.2.11

Time permitting, we will begin an in-class data exercise, replicating a published study on mental health parity.

Day 4: Mental Health Delivery Systems; Payment and Supply Response, Network Adequacy; Prescription Drug Payment

Today we will cover the major components of mental health delivery systems drawing on examples from several countries. We will focus on multi-component treatment services for individuals with serious mental illness in this discussion, as well as services such as targeted housing and employment supports and more recently telehealth.

- a. OECD. "Chapter 1: Key findings and recommendations." in *A New Benchmark for Mental Health Systems: Tackling the Social and Economic Costs of Mental Ill-Health*. Free online at <https://www.oecd-ilibrary.org/sites/4ed890f6-en/1/3/1/index.html?itemId=/content/publication/4ed890f6-en& csp =8fad1a77c24615fd7aca72507e5fc2f9&itemIGO=oecd&itemContentType=book>
- b. Gilmer TP, Stefancic A, Ettner SL, Manning WG, Tsemberis S. Effect of full-service partnerships on homelessness, use and costs of mental health services, and quality of life among adults with serious mental illness. *Arch Gen Psychiatry*. 2010 Jun;67(6):645-52. doi: 10.1001/archgenpsychiatry.2010.56. PMID: 20530014.
- c. "Housing First" Models (no reading)
- d. Busch SH, McGinty EE, Stuart EA, Huskamp HA, Gibson TB, Goldman HH, Barry CL. Was federal parity associated with changes in out-of-network mental health care use and spending? *BMC Health Serv Res*. 2017 May 2;17(1):315. doi: 10.1186/s12913-017-2261-9.
- e. Golberstein E, Busch SH. Mental Health Insurance Parity and Provider Wages. *J Ment Health Policy Econ*. 2017 Jun 1;20(2):75-82. PMID: 28604354.

We discuss "carve outs" of mental health in insurance contracts, discussing economic incentives, advantages and disadvantages, as well as payment incentives and evidence on provider response.

- a. Meredith B Rosenthal, "Risk sharing and the supply of mental health services," *Journal of Health Economics*, 19: 6, 2000

Next we switch topics and examine prescription drug coverage and payment strategies.

- a. Faden L, Vialle-Valentin C, Ross-Degnan D, Wagner A. Active pharmaceutical management strategies of health insurance systems to improve cost-effective use of medicines in low- and middle-income countries: A systematic review of current evidence. *Health Policy*. 2011;100(2-3):134-143. PMID:21185616.
- b. Huskamp HA, Deverka PA, Epstein AM, Epstein RS, McGuigan KA, Frank RG. The effect of incentive-based formularies on prescription-drug utilization and spending. *N Engl J Med*. 2003 Dec 04; 349(23):2224-32.

We will then continue our in-class data exercise, replicating a published study on mental health parity.

Day 5: Neighborhoods and Mental health; Macroeconomic Conditions and Health System Shock; Student Presentations of Referee Reports

We take a look at neighborhood and school conditions and assess their impacts, including on mental health across age groups, and policy implications.

- a. Fryer, Roland, G. Jr., and Lawrence F. Katz. 2013. "Achieving Escape Velocity: Neighborhood and School Interventions to Reduce Persistent Inequality." *American Economic Review*, 103 (3): 232-37.
- b. Stephen B. Billings, Mark Hoekstra, and Gabriel Pons Rotger. 2022. [The Scale and Nature of Neighborhood Effects on Children: Evidence from a Danish Social Housing Experiment](#); NBER Working Paper #30764

We then close by examining the literature on macroeconomic conditions and health system shocks on mental health, including some recent newer evidence from the COVID-19 pandemic.

- h. Pádraic Fleming, Catherine O'Donoghue, Arianna Almirall-Sanchez, David Mockler, Conor Keegan, Jon Cylus, Anna Sagan, Steve Thomas, Metrics and indicators used to assess health system resilience in response to shocks to health systems in high income countries—A systematic review, *Health Policy*, Volume 126, Issue 12, 2022, Pages 1195-1205, ISSN 0168-8510, <https://doi.org/10.1016/j.healthpol.2022.10.001>
- i. Cuellar A, Mark TL, Sharfstein SS, Huskamp HA. How to Mitigate the Mental Health Care Consequences of the COVID-19 Financial Crisis. *Psychiatr Serv*. 2020 Dec 1;71(12):1317-1319. doi: 10.1176/appi.ps.202000329.
- j. Lanlan Chu and Lufei Teng. Does Stimulus Check Payment Improve People's Mental Health in the COVID-19 Pandemic? Evidence from U.S. Household Pulse Survey. *J Ment Health Policy Econ* 25, 133-142 (2022)