Economics 483: Cross-Sectional Methods (Fall 2020)
Topic: Patient Care under Uncertainty

The prerequisite for this Ph.D. field course is Economics 480-1. Students taking the course for credit will write research papers, due at the beginning of winter quarter. There are no problem sets or examinations.


Tentative Syllabus

Introduction to Course

Clinical Guidelines and Clinical Judgment
Topics: Adherence to Guidelines or Exercise of Judgment?; Degrees of Personalized Medicine; Optimal Care Assuming Rational Expectations; Psychological Research Comparing Evidence-Based Prediction and Clinical Judgment; Second-Best Welfare Comparison of Adherence to Guidelines and Clinical Judgment


Wishful Extrapolation from Clinical Trials to Patient Care
Topics: From Study Populations to Patient Populations; From Experimental Treatments to Clinical Treatments; From Measured Outcomes to Patient Welfare; From Hypothesis Tests to Treatment Decisions; Wishful Meta-Analysis of Disparate Studies; Sacrificing Relevance for Certitude


Credible Use of Evidence to Inform Patient Care
Topics: Identification of Treatment Response; Studying Identification; Identification with Missing Data on Patient Outcomes or Attributes; Partial Personalized Risk Assessment; Credible Inference with Observational Data; Identification of Response to Testing and Treatment; Prediction Combining Multiple Studies


**Reasonable Care under Uncertainty**

Topics: Qualitative Recognition of Uncertainty; Formalizing Uncertainty; Optimal and Reasonable Decisions; Reasonable Decision Criteria; Reasonable Choice Between Surveillance and Aggressive Treatment; Uncertainty about Patient Welfare


**Reasonable Care with Sample Data**

Topics: Principles of Statistical Decision Theory; Recent Work on Statistical Decision Theory for Treatment Choice; Designing Trials to Enable Near-Optimal Treatment Choice


**Population Health Perspective on Reasonable Care**

Topics: Treatment Diversification; Adaptive Diversification; The Practicality of Adaptive Diversification


Student Presentations of Papers in Progress

Recording by the Instructor: This class or portions of this class will be recorded by the instructor for educational purposes. These recordings will be shared only with students enrolled in the course in Canvas and will be deleted at the end of the quarter. Note that this applies to recording of synchronous class components and not to pre-recorded lectures by the instructor and not featuring student contributions.

Recording by Students: Unauthorized student recording of classroom or other academic activities (including office hours) is prohibited. Unauthorized recording is unethical and may also be a violation of University policy and state law. Students requesting the use of assistive technology as an accommodation should contact AccessibleNU.

Copyright of Class Materials and Recordings: Unauthorized use of classroom recordings – including distributing or posting them – is also prohibited. Under the University’s Copyright Policy, faculty own the copyright to instructional materials – including those resources created specifically for the purposes of instruction, such as syllabi, lectures and lecture notes, and presentations. Students cannot copy, reproduce, display, or distribute these materials. Students who engage in unauthorized recording, unauthorized use of a recording, or unauthorized distribution of instructional materials will be referred to the appropriate University office for follow-up.
483 Tentative Detailed Class Schedule

Introduction to Course
9/17: PCU_intro slides

Clinical Guidelines and Clinical Judgment
9/22: PCU_1 slides. PCU_Complement 1B

Wishful Extrapolation from Clinical Trials to Patient Care
9/29: PCU_2 slides. PCU_Complement 2A.

Credible Use of Evidence to Inform Patient Care
10/6: PCU_3 slides.

Reasonable Care under Uncertainty
10/20: PCU_4 slides. PCU_Complement 4A.

Reasonable Care with Sample Data

Population Health Perspective on Reasonable Care

Managing Uncertainty in Drug and Vaccine Approval
11/10, 11/12: PCU_7 slides.

Student Presentations of Papers in Progress (11/17, 11/19, 11/24, 12/1)