

SPPH 581T: Ethics of Evidence-Based Medicine and Public Health (DRAFT)

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Course Description

Since the early 1990s, Evidence-Based Medicine (EBM) has emerged as a highly influential movement that has impacted almost all health related disciplines, including population and public health. At the core of EBM is a set of beliefs about what constitutes good evidence for the effectiveness of health interventions. Consequently, it is an excellent example of what some philosophers refer to as a coupled ethical-epistemic issue. That is, what makes something good evidence for the effectiveness of a health intervention is not only a scientific or statistical question, but is also linked to the deeply value-laden aim of improving health in both clinical and population settings. This course, then, focuses on coupled ethical-epistemic issues arising from EBM, and their implications for population and public health. Specific topics to be addressed include:

- Ethical and value aspects of the concept of evidence.
- Potential rationales and shortcomings of evidence hierarchies commonly used in EBM.
- The role of evidence-based approaches in population health, wherein randomized clinical trials are often infeasible.
- Susceptibility of EBM approaches to phenomena such as sponsorship bias and disease mongering, and approaches for countering these.

Text

Jeremy Howick, *The Philosophy of Evidence-Based Medicine*, Wiley-Blackwell, 2011.

(All course readings are available electronically through the UBC library.)

Course Objectives

A successful student in this course will:

- Gain knowledge of major positions, concepts, and approaches in philosophy of EBM, and their relevance to population and public health.
- Improve critical reasoning, writing, and presentation abilities, and especially their ability to write a research paper that addresses philosophical issues related to population and public health.
- Be able to provide ethically and philosophically informed reasons for decisions about how to apply concepts from EBM to cases from population and public health.

Grades

Grades in this class will be based upon two regular presentations (15% each), an outreach presentation (15%), and a research paper (55%). *Prior meeting with me is a required part of all class presentations; class presentations without a prior meeting will not be permitted.* Please see the course website for a detailed grading rubric for all presentations.

- Regular Presentations (15% each): Each student will be required to give two regular presentations, each of which will focus on one article or book chapter assigned for class on that day. Regular presentations should have two chief components: (1) an exposition of the central argument (or arguments) of the target article, and (2) a critical analysis of that argument. Both parts should be equally significant aspects of your presentation. In developing a critical analysis of the focus article, presenters are encouraged to make connections with earlier readings from class or with materials not assigned in the course (such as articles listed as “further readings” for that week). Presenters should avoid giving a section-by-section summary of the focus article or chapter (assume that your fellow students have done the reading). A number of presentation formats are acceptable, including power point and handouts. Whatever their format, presentations should be designed to generate discussion among the seminar participants, and interactive approaches are encouraged. The minimum length of a presentation is 30 minutes, while the maximum is 1 hour. How long each presentation lasts will depend to a large extent on how much discussion it generates. Plan on a presentation interspersed with discussion rather than a block of uninterrupted speaking (so a 1 hour lecture would not be an appropriate presentation format!).
- Research Presentation (15%): Each student will give a presentation at the final class of the semester. The purpose of this presentation is to help you get a head start and early feedback on your research paper. Your presentation should explain the central ideas of research paper. What is the topic you will address? What is the specific research question you wish to answer? What is the relevant literature on this topic, and how does your paper aim to contribute to this discussion? Presentations should be 15 to 30 minutes in length. See the grading rubric for the research paper presentation posted on the course website for more details.
- Research Paper (55%): The final assignment for the class is a research paper. Research papers can be on any topic addressed in the course, and should be between 5,000 to 7,500 words in length including references and footnotes. Research papers must be submitted by (date TBD). See the Research Paper folder on the course website for guidelines and a grading rubric.

Course Schedule

Week 1: What makes some types of Evidence better than others?

- Howick, “Chapter 1: The Philosophy of Evidence-Based Medicine.”

Week 2: What is Evidence-Based Medicine and Public Health?

- Howick, “Chapter 2: What is EBM?”
- Solomon, “Just a Paradigm: Evidence-Based Medicine in Epistemological Context.”
- Brownson et al., “Evidence-Based Public Health: A Fundamental Concept for Public Health Practice.”

Week 3: What is the Best Evidence?

- Howick, “Chapter 3: What is Good Evidence for a Clinical Decision?”
- Douglas, “Inductive Risk and Values in Science.”
- de Melo-Martín and Intemann, “Feminist Resources for Biomedical Research: Lessons from the HPV Vaccines.”

Week 4: Questions about RCTs as the Gold Standard

- Worrall, “*What Evidence in Evidence-Based Medicine?*”
- Howick, “Chapter 4: Ruling out Plausible Rival Hypotheses and Confounding Factors,” and “Chapter 5: Resolving the Paradox of Effectiveness.”
- Victora et al., “Evidence-Based Public Health: Moving Beyond Randomized Trials.”

Week 5: Double-Blinding (Masking) and Placebos

- Howick, “Chapter 6: Questioning Double Blinding as a Universal Methodological Virtue of Clinical Trials,” “Chapter 7: Placebo Controls: Problematic and Misleading Baseline Measures of Effectiveness,” and “Chapter 8: Questioning the Methodological Superiority of “Placebo” over “Active” Controlled Trials.”
- Cook-Chaimowitz, “Ethical Considerations in the Use of Placebo-Controlled Trials in Psychiatry.”

Week 6: Meta-Analyses

- Bohlin, “Formalizing Syntheses of Medical Knowledge: The Rise of Meta-Analysis and Systematic Reviews.”
- Stegenga, “Is Meta-Analysis the Platinum Standard of Evidence?”
- Pickett and Wilkenson, “Income Inequality and Health: A Causal Review.”

Week 7: Mechanistic Evidence

- Howick, “Chapter 9: Transition to Part III,” and, “Chapter 10: A Qualified Defence of the EBM Stance on Mechanistic Reasoning.”
- Clarke et al., “Mechanisms and the Evidence Hierarchy.”
- Hatzenbuehler, et al., “Stigma as a fundamental cause of population health inequalities.”

Week 8: Expert Judgment

- Howick, “Chapter 11: Knowledge That versus Knowledge How: Situating the EBM Position on Expert Clinical Judgment,” and, “Chapter 12: Conclusions.”
- Goldenberg, “How can Feminist Theories of Evidence Assist Clinical Reasoning and Decision-making?”
- Solomon, “A Developing, Untidy, Methodological Pluralism” (Chapter 9 of *Making Medical Knowledge*)

Week 9: Heterogeneity, Extrapolation, and External Validity

- Rol and Cartwright, “Warranting the Use of Causal Claims: A Non-Trivial Case for Interdisciplinarity.”
- Steel, “Extrapolation, Uncertainty Factors, and the Precautionary Principle.”
- Tanenbaum, “Improving the Quality of Medical Care: The Normativity of Evidence-Based Performance Standards.”

Week 10: Sponsorship Bias and Proposed Solutions

- Bes-Rastrollo et al., “Financial Conflicts of Interest and Reporting Bias Regarding the Association between Sugar-Sweetened Beverages and Weight Gain: A Systematic Review of Systematic Reviews.”
- Lexchin, “Those who have the Gold make the Evidence: How the Pharmaceutical Industry Biases the Outcomes of Clinical Trials of Medications.”
- Reiss, “In Favour of a Millian Proposal to Reform Biomedical Research.”

Week 11: Disease Mongering and Overdiagnosis

- Spielmans and Parry, “From Evidence-based Medicine to Marketing-based Medicine: Evidence from Internal Industry Documents.”
- Moncrief, “The Pharmaceutical Industry and the Construction of Psychiatric Diagnoses.”
- Bulliard and Chioloro, “Screening and Overdiagnosis: Public Health Implications.”

Week 12: Readings Suggested by Students

- Students will choose the readings for this week. Final decisions will be made in the Week 10 class.

Week 13: Research Paper Presentations

- This class will be devoted to student presentations of their research paper topics.

Research Paper Due Date: TBD. Please submit research papers via drop box on course website.