Overview

This course provides an overview of economic evaluation in health care. We focus on learning the following: 1) basic health economics (as it relates to medicine and public health) 2) economic evaluation methods (focusing on cost-effectiveness analysis) and 3) considerations around the use of economic evaluation in setting policy and other decision-making.

This is an introductory course that builds on basic knowledge of population health politics/policy, epidemiology and statistics. It is a good preparatory course for those who may go on to participate in research that involves economic evaluation of health interventions.

Goals

By the end of this course, students will have accomplished the following:

1. Understand the meaning of “value” in health care and basic economic principles that relate to assessing value.

2. Describe (and know it when you see it) the different types of economic analyses (e.g., cost-benefit analysis vs. cost-utility analysis).

4. Understand the methodology used to conduct a cost-effectiveness analysis. This includes understanding the meaning of analytic “perspective”, understand basic modeling (what it is and how it is done), understand the range of outcomes reported in economic analyses (e.g., DALY, QALY), understand how to read a “cost-effectiveness” plane and define “willingness to pay.”


6. Describe the ethical (and political) controversies related to considering “value” or economic analyses in various levels of decision-making: healthcare policy (or public health funding), clinical-practice guidelines and individual patient-provider encounters.

Requirements

- **You really must attend class.** If you have to be absent, please send me a quick note before that session (see below under “evaluation”).

- **Textbook: I strongly encourage you to purchase “Cost-effectiveness in health and medicine: second edition”** (see below). This book is newly published and I have not designated it as “required.” All required reading will be posted on Sakai at least one week in advance, however, having your own copy of this book as a reference will be helpful. For all required readings, I expect that you have read and could answer questions (or ask questions) about these readings in class.

- **You do not need to know how to use modeling software** or any other statistical software to succeed in this course, nor will we learn how to use modeling software. The technical details related to this are beyond the scope of this course. However, the methodology we learn would be key to understanding how to use various types of modeling software.
Evaluation

1. Participation (40%) - This is primarily a discussion class, not a lecture and memorization class; although for most sessions there will be a short lecture. If you are not present, then you can’t truly participate. “Participation” means that you have read and thought about the readings before class and are prepared to ask questions (to me, to guest speakers, and to each other in small groups). Participation is not assessed by the quantity of your comments, but more so by the consistency and quality of your participation (e.g., you really listen to other comments, make relevant points about the topic and ask good questions, and don’t stare at your computer screen for entire class sessions….). Offering lots of opinions that are not backed by solid rationale may not be very helpful.

We will have a brief “health-economics in the news” session at the beginning of each class (similar to the Prevention course). There will be no sign-up; the expectation is that one or two students will provide a very brief description of a health economics related issue reported in the “news” (e.g., NY times, NPR, any journal) during the first 15 minutes or so. This counts as participation. Given recent events surrounding potential changes to our national health care policies, you shouldn’t have trouble finding interesting news about health economics.

2. Group Work (30%) - After the first session, we will form informal learning groups. For some sessions, groups may consider questions related to political or methodological controversies surrounding economic analyses, and report “answers” to questions to the class. Groups may also work together to complete risk-of-bias assessments for assigned cost-effectiveness articles or create short presentations on a particular topic. Towards the end of the semester, groups will also prepare and present results of a cost-effectiveness article during the last class session that addresses a particular topic. Each group will consider a particular intervention/program and then we will “rank” the interventions in terms of relative value (i.e., create a cost-effectiveness league table). All group work will be explained in class and/or posted on Sakai as a “Lead-in” to the session.

3. Cost-effectiveness paper (“research protocol”) 30% - Students will pair up with a partner to develop a “research protocol” – i.e., a proposal to conduct a cost-effectiveness study of any health intervention you find interesting. Detailed instructions related to this will be provided during the second or third class session (e.g., format, references, timeline, helpful hints, etc.). Briefly, this will involve choosing a public health or clinical problem (and “base-case”) and two alternative interventions to address this problem; you will then propose a set of methods that can be used to determine which intervention is the better “value.” I will ask you to start thinking of a potential topic early in the course; however, it is not efficient to start diving into this paper until we’ve discussed the basic methods of cost-effectiveness analyses. The format will be (roughly) similar to a research protocol that is published in a journal or developed for a grant proposal. The paper will have three sections (outlined below); detailed instructions will be provided in class and posted on Sakai.

**Part 1: Introduction:** Background on the topic/intervention (e.g., burden of disease, burden of costs related to natural history of the disorder and to the available interventions; clear and concise identification of the controversies surrounding the interventions; rationale for how the proposed analysis might inform decision-making).

**Part 2: Outline of proposed Methods:** For the proposed methods, you can provide an outline or a nearly completed draft. The methods must include the following information: perspective of the analysis, plan for identifying data related to model inputs, very crude preliminary model (hand drawn or computer assisted).

**Part 3:** One to two paragraph “summary” that highlights potential problems/ limitations and how the proposed analysis will address these.

**Grading:** I will let you know if I have concerns about your participation or quality of your work, and provide you with suggestions or support as needed. You may also ask for more specific feedback in or out of class. Possible grades include: H, P, LP, F. You will pass if you accomplish the “goals” for this course (described above), which are assessed via class participation, group work and your paper. To receive Honors, one must: (1) participate actively, demonstrating that you have read all required readings and have thought about them; (2) attend all class sessions (unless we have discussed unavoidable absences); and (3) write an outstanding
research protocol for a cost-effectiveness analysis; and (4) find ways to make further contributions to the class’s understanding of “value” in health care (examples: “in the news” comments, commenting thoughtfully in class, reading “recommended” as well as “required” papers, looking up and reporting to class on questions that come up, etc.).

**Strongly recommended Text**

   ISBN-10: 0190492937

The only reason I have not listed this as “required” is that it has just been published and I have not read the entire text yet. This book represents an update of a key 1996 text with the same title: Gold MR, Siegel JE, Russell LB, Weinstein MC. Cost-effectiveness in health and medicine. 1996. This was considered the “gold standard” in terms of methodology and theoretical basis for cost-effectiveness analyses. The 1996 version was quite dated and the revised version has just been released. Some of the sections related to theory are quite dense; students with a background in undergraduate economics have liked these sections in the older edition.

**Other Recommended Texts (for those of you who just like books or find health economics/policy particularly interesting…)**


This book is not so much an “introductory” text; however, it does give a good overview of methods related to various types of economic analyses. This would be a good text for those who intend to participate in research that includes economic analyses and want additional preparation for some “hands-on” experience.


This is an excellent book; it is very readable and not too technical. Most examples seem to be focused on clinical scenarios and so this may be less accessible to students who do not have a clinical background. It also covers some topics that most of you have had in epidemiology and other courses (e.g., overview of probabilities and interpreting diagnostic test performance). I have just purchased this new second edition and will be reading this throughout the course and considering whether it should be “required” next year.