GETTING VALUE FOR HEALTH CARE
WEDNESDAYS 6:30 – 9:00PM
ROOM 150 SANFORD INSTITUTE

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Office Hours: 5:30 – 6:30pm Wed and by appointment

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Course Summary
A variety of technological and environmental factors are fueling continued increases in health care expenditures in the United States and elsewhere. As a result, both public and private payers of health care have instituted various measures of cost containment, including the economic evaluation of health care interventions. In this course, we will review decision making tools such as cost-effectiveness and cost-benefit analysis and discuss their application to resource allocation, how these tools are used in practice, and what factors limit their use or interpretation. While our focus will be on decision making in the US, we will also examine health care policy making in other countries and in regard to specific health priorities (e.g., HIV/AIDS, cancer).

Objectives
By the end of this course, students should have a working understanding of the tools for economic evaluation of health care and their use in decision making, including

- the fundamental concepts behind rationing and economic evaluation of health care,
- the multi-disciplinary aspect of outcomes research,
- current methodological issues in economic evaluation, and
- relevant health policy and decision making literature, its use and interpretation.

Students will be prepared to constructively participate in the debate on health care rationing and contribute to economic analyses of health care as part of a multi-disciplinary research team.

Course Structure
In general, class meetings will be comprised of a didactic lecture (approximately 75 minutes) and a general discussion of assigned readings (approximately 60 minutes), with a short break in between. Some discussion sessions will be led by an individual student who will provide a critique of a published economic evaluation or a current methodological issue. The last ten minutes of class will be used to summarize important concepts.
Assignments and Grading
Written assignments will include an exercise on cost-utility analysis and decision making, two critical appraisals of published works evaluating health care interventions or programs (approximately 5 pages each), one of which will be discussed in class, and a literature review of technology assessment on a topic of the student’s choice approved by the instructor. Class participation will comprise the remainder of the grade.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
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<tr>
<td>Decision making exercise (Due: 26 March)</td>
<td>20%</td>
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<tr>
<td>Critical appraisals (see below for due dates)</td>
<td>2 @ 15% each = 30%</td>
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<tr>
<td>Literature review (Due: 23 April)</td>
<td>35%</td>
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<td>Class participation</td>
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Decision making exercise: This exercise will require you to develop a decision tree model of a specific health care intervention, based on data and information that will be provided. You will then evaluate the model and provide recommendations on the use of the intervention. The exercise can be done on paper, in Microsoft Excel or other spreadsheet program, or with decision analysis software such as Decision Analysis by TreeAge (DATA). You will need to provide a written report describing your calculations and/or an electronic copy of your model to be eligible for partial credit. You are permitted to work on this exercise in groups; however, each student should submit a report and an interpretation of the results independently. NOTE: If you plan to submit an electronic model, please ensure system compatibility ahead of time.

Critical appraisals: First appraisal is due 19 February. Due dates for the second appraisal will be randomly assigned. On the class meeting prior to their due dates, students should indicate their article choices to the group and place two copies on reserve in the course binders. Students should bring their written analyses and be prepared to lead a class discussion on the due date.

Literature review: This paper should provide a thorough examination of the existing literature on the topic (e.g., cost-effectiveness of needle exchange programs for preventing HIV infection) and offer specific recommendations for additional research, health care policy, etc. The paper should be about 10-12 pages in length. Alternatively, this project can be used to develop an economic model to address a previously unanswered question (e.g., how effective would a vaccine for human papillomavirus (HPV) have to be in order to make mass vaccination of women to prevent cervical cancer cost-effective or cost-saving?). The goal of this project is a publishable manuscript, but this is not a requirement.

Readings
One copy of course readings is on reserve in the Sanford Institute reserve area. The binder may be removed for copying; please return promptly for others’ use. Most readings are available online via electronic journal access and/or Medline at http://www.lib.duke.edu/. Readings that are available via online sources (e.g., electronic journal website, ProQuest) are indicated by “O” in the syllabus; articles available via
Medline are indicated by “M”. HINT: Search for the journal title in the Duke library catalog first.

There are no required textbooks for this course. However, the Gold et al text (Cost-Effectiveness in Health and Medicine, Oxford 1996) is highly recommended as a standard reference book in the field. Several chapters from this book will be covered in class; these are indicated by “G”. Chapters from the book are included in the readings binder on reserve at the Institute, and there is a copy of the book on reserve at Perkins.

We will also rely on a couple of chapters from Frank Sloan’s book, Valuing Health Care: Costs, Benefits, and Effectiveness of Pharmaceuticals and Other Medical Technologies (Cambridge, 1996); these chapters are indicated with “S”. This is also an excellent reference book.

Optional readings are listed in the syllabus for most topics. These are not required readings but often will be included in lectures and discussions. Please refer to these articles if you have a particular interest in a topic and desire additional background information or if you cannot access a required reading. NOTE: These readings are not included in the reserve binder.
Course Schedule

15 January

*Introduction to the Course*

**Review of the syllabus**—Course structure, expectations, questions and answers about the course.

Discussion

**Rationing in Health Care**—What is rationing? Why do we ration goods? How is health care different from other goods? How is health care rationed in the US?


Optional


Optional


22 January

*Lecture*

**Health Care Resource Allocation in Other Countries**—What types of rationing systems are used in other countries? Have these been successful? How should health care be rationed?


- Rawlins MD. The failings of NICE. Reply from chairman of NICE.[comment]. BMJ 2001; 322(7284):489. [see also additional comments in the same issue]


Optional Coast J. The rationing debate: Rationing within the NHS should be explicit: The case against. BMJ 1997; 314(7087):1118-22.


Discussion

Is Spending on Medical Technology Worth It?—Health as an outcome; defining and measuring health; valuing population health.


29 January

Lecture

Introduction to Cost-Effectiveness Analysis—Definitions, concepts, and issues.


**Discussion**

**Legal Perspectives on Rationing**—Insurance regulations, emergency care, early hospital discharge.

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**5 February**

**Lecture**

**Cost-Effectiveness Ratios**—Calculating ratios, average vs incremental ratios, interpreting results.

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**Discussion**

**Cost-Effectiveness Thresholds and League Tables**—Decision making using cost-effectiveness ratios, comparing alternative interventions.


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**12 February**

**Lecture**

**Theoretical Foundations of Cost-Effectiveness Analysis**—Welfare economics, issues in measuring costs.

**G**  

19 February
Lecture Costs and Costing—Opportunity cost, direct vs indirect costs, future costs, numerator vs denominator issues, discounting.


26 February
Lecture Measuring Health State Utilities—Types of health outcome measures, methods of measurement, issues.


Discussion The Ethics of Resource Allocation—Patient autonomy, distributive justice.


5 March

**Lecture**

**Decision trees and Markov models—Graphical representations of health states, modeling health care decision making.**


S


G


19 March

**Lecture**

**Uncertainty—Sensitivity analysis and probability, simulations.**

G


**Discussion**

**Managed Care as a Rationing Device—Rationing in managed care organizations, use of economic evaluations by managed care; applications of rationing in managed care.**

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26 March

Lecture  
**Introduction to Cost-Benefit Analysis**—Definition and history of CBA, CEA vs CBA, methods used to value health.

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Discussion  
Applications of CBA


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Optional  

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Optional  

Optional  

2 April

Lecture  
**Revealed Preferences and Contingent Valuation**—Principles of revealed preference and contingent valuation, strengths and limitations.


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Optional  

Optional  

Discussion  
Review of Decision Making Exercise
9 April
Lecture  Assessing the Effectiveness of Health Interventions—Outcomes research, study design, establishing causality, evidence-based medicine.


Discussion  Student Presentations—Topics TBA.

16 April
Discussion  Case Study: Oregon—Structure of the Oregon plan, political economy, lessons learned.


Discussion  Student Presentations—Topics TBA.

23 April
Lecture  Loose Ends

Discussion  Student Presentations—Topics TBA.

Course End  Concluding Thoughts