

**PhD C781
Advanced Topics in Economic Evaluation in Health Care
Fall 2020 Course Outline**

**Health Policy and Management Area
DeGroote School of Business
McMaster University**

COURSE OBJECTIVE

The goal of doctoral seminar course is to provide students with an advanced understanding of topics, in this instance related to economic evaluation, in health care. The intent is to discuss current topics in economic evaluation and their practical relevance for health care managers/policy makers. The small group seminar format will assist in developing a deep theoretical understanding of the frameworks for analysis used in the economic evaluation field, with each student taking turns on leading a portion of the seminar. It will require that each student produces a conference abstract, and a journal article on one of several selected topics which will be targeted to specific journals.

INSTRUCTOR AND CONTACT INFORMATION

Section 1:
Christopher J. Longo, PhD.
Instructor
cjlongo@mcmaster.ca

Office: RJC 422
Office Hours: 11:00-12:30
Tel: (905) 525-9140 x 23896
Class Location: ON-LINE
Class Time: 11:30 to 2:20 pm
(Zoom calls 6pm-7pm ish)

COURSE ELEMENTS

Credit Value: 3	Leadership: Yes	IT skills: Yes	Global view: Yes
Avenue: Yes	Ethics: Yes	Numeracy: Yes	Written skills: Yes
Participation: Yes	Innovation: Yes	Group work: Yes	Oral skills: Yes
Evidence-based: Yes	Experiential: Yes	Final Exam: No	Guest speaker(s): No

COURSE DESCRIPTION

This seminar format course is designed to provide an advanced understanding of economic evaluation in healthcare to help prepare doctoral students for careers in management roles. The course examines the field of health related economics with emphasis on government (public), administrative and pharmaceutical industry related issues. Both theoretical and practical concepts will be covered. The overarching perspective will be that of the decision maker, including some of the challenges associated with putting these economic analyses to work in the decision making process. In addition, recent and controversial methods will be examined that can be used when undertaking or reviewing economic evaluations. Specific evaluation topics and applications will include a brief review of basic concepts in economic evaluation in health care, and an in depth examination of: utility measures, discrete choice experiments, productivity losses, maximizing health, determining cost-effectiveness thresholds, handling of uncertainty, probabilistic analyses and their collective impact on decision making in government and the private sector. As a summative piece a case study that incorporates/reviews each of these topics will be discussed to illustrate the strengths and weaknesses of the various approaches. Students will identify an evaluation topic that they wish to pursue for in-depth analysis in their final assignment. Over the course of the semester they will develop a conference abstract, and a peer reviewed journal article that can be submitted at the end of the semester. To develop their leadership and peer review skills, students will take turns leading a portion of the seminars, providing constructive critique to each others' analyses of economic evaluation issues. Group discussions, will develop skills in conducting and communicating economic evaluation analysis through experiential learning.

LEARNING OUTCOMES

Upon completion of this course, students will be able to complete the following key tasks:

- Demonstrate an advanced understanding of the fundamental concepts and methods for economic evaluation in healthcare;
- Identify key barriers that affect economic evaluation uptake in decision making
- Explain why adoption of economic evaluations are not always considered or assist decision making;
- Communicate effectively in the economic evaluation environment (for health);
- Effectively and constructively provide peer review feedback;
- Draft a conference abstract;
- Draft and potentially submit a journal article to a peer reviewed journal.

REQUIRED COURSE MATERIALS AND READINGS

Avenue registration for course content, readings and case materials

➤ <http://avenue.mcmaster.ca>

\$ FREE

Note that as a PhD level seminar course – there is one textbook (see below). In addition I have appended a **draft**-reading list and will post most materials on A2L. You will see that there are required readings each week, as well as recommended readings (optional) and applications in some cases. You are not expected to read everything on the list – use your judgement. The required readings are HIGHLY recommended. You are free to explore other readings according to your interest.

Recommended Textbooks (required purchase, new and used copies available):

Drummond, M.F., Sculpher, M.J., Claxton, K., Stoddard G.L., and Torrance, G.W. (2015) Methods for the economic evaluation of health care programmes. 4th Edition. Oxford University Press. (\$76 new, \$50-\$55 used, Amazon, Chapters Indigo, etc)

EVALUATION

Learning in this course comes from readings, lectures, in-class discussion, small group work and participation, preparation of assignments, and out-of-class analysis. All work will be evaluated on an individual basis except where group work is expected. In these cases group members will share the same grade, unless all group members agree to an adjustment. Participation grades may be redistributed to “leading sessions” and “article commentaries” at the discretion of the student no later than one week before the end of the term.

Components and Weights

Leading Sessions	Effectiveness in presenting discussion questions to guide discussion of weekly readings (1 x 15%)	15%
Class Participation	Class discussion and discussion board participation and preparedness	15%
Article Commentaries/Analytic	Series of 2 Analytic Notes/Article Commentaries (2 x 10%)	20%
Final Econ Analysis	Conference Abstract (Final Project Outline) - (10%) Presentation (15%)	50%
Total		100%

Grade Conversion

At the end of the course your overall percentage grade will be converted to your letter grade in accordance with the following conversion scheme:

LETTER GRADE	PERCENT	POINTS
A+	90-100	12
A	85-89	11
A-	80-84	10
B+	75-79	9
B	70-74	8
B-	60-69	7
F	00-59	0

Communication and Feedback

Students that are uncomfortable in directly approaching an instructor regarding a course concern may send a confidential and anonymous email to the respective Area Chair or Associate Dean:

<http://mbastudent.degroote.mcmaster.ca/contact/anonymous/>

Students who wish to correspond with instructors or TAs directly via email must send messages that originate from their official McMaster University email account. This protects the confidentiality and sensitivity of information as well as confirms the identity of the student. Emails regarding course issues should NOT be sent to the Administrative Assistant. **Please include the course number ‘C781’ in all emails to facilitate timely responses.**

Instructors are encouraged to conduct an informal course review with students by Week #4 to allow time for modifications in curriculum delivery. Instructors should provide evaluation feedback for at least 10% of the final grade to students prior to Week #8 in the term.

Component #1 – Leading Sessions

The first component of your mark will reflect your work in leading a portion of the seminar for a specific week. This will involve developing and presenting a PowerPoint presentation that captures:

1. Your key takeaways/lessons learned from the readings - these should go beyond the material that the instructor will present which will be posted on A2L;
2. Clarifying questions (your own and those of your classmates). You will raise these and lead a discussion to answer them collectively. You will need to reach out to fellow students to obtain their questions about the readings – these should be sent to student

who is leading the session by 4pm on Friday, to allow the student sufficient time to prepare for Monday's class; and

- 3. If available** a current health economics issue from the media (newspaper articles, online sources such as gray literature, etc.) where you see the ideas from the readings apply. You will present your analysis of the issue and discuss with the class. **NOTE: One possible source for media articles is Lexis Nexis via library services.**

In order to develop your knowledge of a range of economic evaluation topics, we request that the current issue be on a different topic than your final assignment topic. You will be asked to identify:

- The major evaluation issue and why it is important.
- What level of government(s) and jurisdiction plays a key role.
- How insights from the readings help to understand the issue as outlined in your source(s).

You will be graded on both the context and quality of your presentation of the material and effectiveness in leading a discussion (15 - 20 minutes) that draws out how the course concepts apply to the economics issue. (Note that just a general topic of the discussion is not the goal here).

You will be required to submit your power point slides (include references) on Avenue to Learn by the start of class.

The purpose of this assignment is to get you grappling with and applying the concepts from the readings, to discuss and clarify questions that you and your classmates have, and to encourage your classmates to do the same, and to apply theory/concepts to current issues that are being discussed in Canada or elsewhere.

Component #2 – Class Participation

15% of the grade will be for class participation based on an assessment by the instructor. **Since this is a graduate course using a seminar-style structure, active participation, each week, is expected and this requires preparation.** Students are expected to do the assigned readings, to raise questions and share with the session lead no later than end of day Monday, to prepare their article summary/commentaries or session lead PowerPoint and come prepared to discuss. They are also expected to continue to advance their work toward their final assignment each week and to offer constructive criticisms to peers (see Component #5). Students are also expected to attend all classes including specified sessions of C711 (if needed), and to participate in the entire class. **Students will be granted permission to miss one class with advanced notice to the instructor and instructor approval without losing participation marks assuming ALL required activities are submitted for that week on time.**

Component #3 – Article Commentaries/Analytic Notes

Each week that you are not the seminar leader, you will submit a 500 word article commentary/analytic note where you will comment on at least one of the week's core reading (i.e. a major conceptual or theoretical paper or an application of a theory or empirical analysis). This should include:

- A summary of the main argument developed in the paper;

- It's relevance to the week's topic;
- How the theory/concept or its application improved your understanding of a current health economics/economic evaluation issue (this may or may not pertain to your final assignment).

This assignment will help you develop your economic evaluation skills and gain a better understanding of the theories/concepts being discussed in the readings. Come to class prepared to discuss your analysis. The 500 word count is a STRICT maximum, aimed at sharpening your writing skills. Keep your introductions short and the bulk of the word count should be focused on your own analysis using the theoretical constructs from the article. Please indicate the name of the relevant article. **Due at the start of the relevant class on Avenue to Learn. Please bring a hard copy to class.**

Component #4 – Peer Review Skills

You will be graded based on your ability to offer constructive and helpful feedback to improve the quality of economic evaluation assessment conducted by your peers over the course of the semester. This will occur during informal discussions each week where students are encouraged to raise issues pertaining to their final assignments. You will receive an overall mark for this based on the instructor's assessment over the course of the semester.

Component #5 – Final Evaluation Analysis

The final course assignment consists of students selecting their own evaluation issue (subject to final approval from the instructor) and creating a manuscript for submission. If you prefer to study the topic as it pertains to a jurisdiction other than Canada that is fine. The topic must include one or more of the issues/concepts discussed during the term, for example:

- How do the use of probabilistic methods and different methods of valuing lost productivity affect decision makers willingness to adapt a new program in mom and baby health?

This portion of the assignment will be presented as a short Powerpoint (or equivalent) of 20 minutes. Please meet with the instructor to seek approval of the general topic and journal choice for the analysis by **Oct. 15th**.

The outline should be presented in the form of a **conference abstract** for the Canadian Association for Health Services and Policy Research (**CAHSPR**) **Conference** which is the annual Health Services and Policy Research Conference in Canada. The abstract must identify the evaluation topic you propose to analyze, the audience, why the topic is important, and what issues from the course will be used. Your abstract must correspond with CASPHR guidelines.

For your assignment outline submission, you should also have begun to populate the framework (as a supplementary table using bullet points for each element of your framework analysis) and list references (at least 6 references), both as appendices to the abstract. The abstract is intended to make sure students are on the right-track and to be a submission to the 2020 CAHSPR conference which will be due in late October 2020.

**Final Paper – Submission ready manuscript to *Value in Health* OR
Social Science and Medicine OR *Journal of Health Services Research and Policy***

Your final paper will expand upon the economic evaluation topic for your manuscript in order to conform with the requirements of the chosen Journal. This may be an editorial piece or a review of current literature as an example. The last 30-45 minutes of most of the later seminars will provide time for group discussion of your final assignment to help advance your research and thinking.

The instructor must approve the outline materials BEFORE they are fully completed. You must submit final versions of these materials on Avenue to Learn along with your journal submission/final paper on Avenue to Learn as they will form part of your final grade.

ACADEMIC DISHONESTY

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at:

www.mcmaster.ca/academicintegrity

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations

ONLY IF APPLICABLE

In this course we will be using a web-based service (Turnitin.com) to reveal plagiarism. Students will be expected to submit their work electronically to Turnitin.com and in hard copy so that it can be checked for academic dishonesty. Students who do not wish to submit their work to Turnitin.com must still submit a copy to the instructor. No penalty will be assigned to a student who does not submit work to Turnitin.com. All submitted

work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, etc.). To see the Turnitin.com Policy, please go to;

<http://www.mcmaster.ca/academicintegrity/turnitin/students/>

Language for Use in Courses with an On-Line Element

In this course we will be using Avenue to Learn. Students should be aware that when they access the electronic components of this course, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure.

If you have any questions or concerns about such disclosure, please discuss this with the course instructor.

MISSED ACADEMIC WORK

Missed Mid-Term Examinations / Tests / Class Participation

Where students miss a regularly scheduled mid-term or class participation for legitimate reasons as determined by the Student Experience – Academic (MBA) office, the weight for that test/participation will be distributed across other evaluative components of the course at the discretion of the instructor. Documentation explaining such an absence must be provided to the Student Experience – Academic (MBA) office within five (5) working days upon returning to school.

To document absences for health related reasons, please provide to Student Experience – Academic (MBA) office the Petition for Relief for MBA Missed Term Work and the McMaster University Student Health Certificate which can be found on the DeGroot website at <http://mbastudent.degroot.mcmaster.ca/forms-and-applications/>. Please do not use the online McMaster Student Absence Form as this is for Undergraduate students only. University policy states that a student may submit a maximum of three (3) medical certificates per year after which the student must meet with the Director of the program.

To document absences for reasons other than health related, please provide Student Experience – Academic (MBA) office the Petition for Relief for MBA Missed Term Work and documentation supporting the reason for the absence.

Students unable to write a mid-term at the posted exam time due to the following reasons: religious; work-related (for part-time students only); representing university at an academic or varsity athletic event; conflicts between two overlapping scheduled mid-term exams; or other extenuating circumstances, have the option of applying for special exam arrangements. Such requests must be made to the Student Experience – Academic (MBA) office at least ten (10) working days before the scheduled exam along with acceptable documentation. Instructors cannot themselves allow students to unofficially write make-up exams/tests. Adjudication of the request must be handled by Student Experience – Academic (MBA).

If a mid-term exam is missed without a valid reason, students will receive a grade of zero (0) for that component.

Missed Final Examinations

A student who misses a final examination without good reason will receive a mark of 0 on the examination.

All applications for deferred and special examination arrangements must be made to the Student Experience – Academic (MBA) office. Failure to meet the stated deadlines may result in the denial of these arrangements. Deferred examination privileges, if granted, must be satisfied during the examination period at the end of the following term. There will be one common sitting for all deferred exams.

Failure to write an approved deferred examination at the pre-scheduled time will result in a failure for that examination, except in the case of exceptional circumstances where documentation has been provided and approved. Upon approval, no credit will be given for the course, and the notation N.C. (no credit) will be placed on the student's transcript. Students receiving no credit for a required course must repeat the course. Optional or elective courses for which no credit is given may be repeated or replaced with another course of equal credit value.

Requests for a second deferral or rescheduling of a deferred examination will not be considered.

Any student who is unable to write a final examination because of illness is required to submit the Application for Deferred MBA Final Examination and a statement from a doctor certifying illness on the date of the examination. The Application for Deferred MBA Final Examination and the McMaster University Student Health Certificate can be found on the DeGroot website at <http://mbastudent.degroot.mcmaster.ca/forms-and-applications/> Please do not use the online McMaster Student Absence Form as this is for Undergraduate students only. Students who write examinations while ill will not be given special consideration after the fact.

In such cases, the request for a deferred examination privilege must be made in writing to the Student Experience – Academic (MBA) office within five business days of the missed examination.

Special examination arrangements may be made for students unable to write at the posted exam time due to compelling reasons (for example religious, or for part-time students only, work-related reasons):

- Students who have religious obligations which make it impossible to write examinations at the times posted are required to produce a letter from their religious leader stating that they are unable to be present owing to a religious obligation.
- Part-time students who have business commitments which make it impossible to write examinations at the times posted are required to produce a letter on company letterhead from the student's immediate supervisor stating that they are unable to be present owing to a specific job commitment.

In such cases, applications must be made in writing to the Student Experience – Academic (MBA) office at least ten business days before the scheduled examination date and acceptable documentation must be supplied.

If a student is representing the University at an academic or athletic event and is available at an overlapping scheduled time of the test/examination, the student may write the test/examination at an approved location with an approved invigilator, as determined by the Student Experience – Academic (MBA) office.

In such cases, the request for a deferred examination privilege must be made in writing to the Student Experience – Academic (MBA) office within ten business days of the end of the examination period.

Note: A fee of \$50 will be charged for a deferred exam written on campus and a fee of \$100 for deferred exams written elsewhere. In cases where the student's standing is in doubt, the Graduate Admissions and Study Committee may require that the student with one or more deferred examination privileges refrain from re-registering until the examination(s) have been cleared.

STUDENT ACCESSIBILITY SERVICES

Student Accessibility Services (SAS) offers various support services for students with disabilities. Students are required to inform SAS of accommodation needs for course work at the outset of term. Students must forward a copy of such SAS accommodation to the instructor normally, within the first three (3) weeks of classes by setting up an appointment with the instructor. If a student with a disability chooses NOT to take advantage of an SAS accommodation and chooses to sit for a regular exam, a petition for relief may not be filed after the examination is complete. The SAS website is:

<http://sas.mcmaster.ca>

POTENTIAL MODIFICATION TO THE COURSE

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

ACKNOWLEDGEMENT OF COURSE POLICIES

Your registration and continuous participation (e.g. on A2L, in the classroom, etc.) to the various learning activities of MBA C711 (if needed) will be considered to be an implicit acknowledgement of the course policies outlined above, or of any other that may be announced during lecture and/or on A2L. **It is your responsibility to read this course outline, to familiarize yourself with the course policies and to act accordingly.**

Lack of awareness of the course policies **cannot be invoked** at any point during this course for failure to meet them. It is your responsibility to ask for clarification on any policies that you do not understand.

COURSE SCHEDULE

C781 Advanced Topics in Economic Evaluation in health: Fall 2020 Schedule

Week	Date	Location	Topic/Activities
1	Mon. Sept. 14th	ON-LINE	Seminar: Introductions and Review of economic principles Discuss: Class Outline, Schedule, Participation, Readings, Assignments Lead: Instructor
2	Mon. Sept. 21th	ON-LINE	Seminar: Review, economic analysis basics Lead: Instructor
3	Mon. Sept. 28th	ON-LINE	Seminar: Utility measures, which ones and why? Lead: Vito Buonsante (focus Berezniak) Article Summary due: Saina S (Robberstad article)
4	Mon. Oct. 5th	ON-LINE	Seminar: DCE methods for utility scoring. Another (informative) way forward? Lead: Instructor/Guest speaker Article Summary Due: Stuart D. (Lanscar article); Salam (Clarke article)
5	Week of . Oct. 12 th	ON-LINE	Seminar: Project/paper related discussions (one on one or group if a common date can be agreed upon) STOP, GO, CONTINUE (Informal Course Feedback delivered anonymously, you can hand this in to An Kuye at the 4 th floor reception) NOTE: All students should have approval from Instructor re. Final Assignment and have had a discussion of how you will address it.
6	Mon. Oct. 19th	ON-LINE	Seminar: Measuring productivity losses. Where does this fit in with evaluation? Methods and controversies. Lead: Mercy Gichuki Article Summary Due: Stuart D. (Berger article); Alena L (Lensburg article) Abstract for Final Assignment Due on A2L Oct 19th.

7	Mon. Oct 26th	ON-LINE	<p>Seminar: Determining thresholds, maximizing health. Challenges and solutions</p> <p>Lead: Alena Lukich Article summary Due: Vito B (Cuyler article); Alena L (Neuman article); Salam (Johnson article); Mercy (Paulden)</p>
8	Mon. Nov. 2nd	ON-LINE	<p>Seminar: Uncertainty, how best to deal with it. Some practical considerations.</p> <p>Lead: Saina Sehatkar Langrodi Article Summary Due: Vito B (Bojke article)</p>
9	Mon. Nov. 9th	ON-LINE	<p>Seminar: Probabilistic Analysis and real world cost-effectiveness, the new standard in economic evaluation</p> <p>Lead: Stuart Davidson Article Summary Due:</p>
10	Mon Nov. 16th	ON-LINE	<p>Seminar: Decision making with limited budgets, public and private sector issues (include role of moral hazard)</p> <p>Lead: Salam Zoha Article Summary Due: Saina S (Merlo article); Mercy (McGregor)</p>
11	Mon. Nov. 23th	ON-LINE	<p>Seminar: Alzheimer’s OR pediatric cancer? A case study What are the unique challenges for each (applying concepts from term work), and are their better and worse ways to address them?</p> <p>Lead: Class discussion, instructor as moderator Time permitting: Meet with Instructor to discuss assignments</p>
12	Mon. Nov. 30th	ON-LINE	<p>Open discussion, one-on-one or group (optional)</p>
NA	Mon. Dec. 7rd	ON-LINE	<p>Draft paper presentations today; Final paper due December 14th</p>

Reading List:

Week 1 – Review of economic principals

Scarcity and what is economic evaluation in health:

1. Drummond textbook (2015), pp Chapters 1, 2 and 7 (skip 7.22 to 7.24).
2. Cape, J.D., Becca, J.M., & Hoch, J.S. (2013). Introduction to cost-effectiveness analysis for clinicians. *Health Policy Economics*, 90(3), 103-105.
3. Palmer, S., Torgerson, D.J. (1999). Definitions of efficiency. *British Medical Journal*, 318, 1136

Week 2 – Basics in economic evaluation

1. Drummond textbook (2015), Chapters 5, 6 (skip pg 199-211 which is covered in Week 4) and 11(skip pg 399-408, covered in week 9).

Week 3 – QALYs and Utility measures, which one and why

1. Drummond textbook (2015), pp 136-161
2. Schwappach, D.B.L. (2002). Resource allocation, social values, and the QALY: a review of the debate and empirical evidence. *Health Expectations*, 5, 210-222.
3. Beresniac, A., Dupont, D. (2016). Is there an alternative to quality adjusted life years for healthcare decision making? *Exp Rev Pharmacoeconomics and Outcome Research*, 16(3), 351-357.
4. Nord, E., Richardson, J., Street, A., Kuhse, H., Singer, P. (1995). Maximizing health benefits vs. egalitarianism: An Australian survey of health issues. *Soc Sci Med*, 41(10), 1429-1437.
5. Robberstad, B. (2005) QALYs vs DALYs vs Lys gained: What are the differences, and what difference do they make for health care priority setting? *Norsk Epidemiologi* 15(2), 183-191.

Week 4 – DCE methods for utility scoring. Another informative way forward

1. Drummond textbook (2015), Chapter 6, pp 199-211.
2. Bansback, N., Brazier, J., Tsuchiya, A., Anis, A. (2012) Using a discrete choice experiment to estimate health state utility values. *J Health Econ*, 31, 306-318.
3. Bridges, J.F.P., Hauber, A.B., Marshall, D., Lloyd, A., Prosser L.A., Regier, D.A., Johnson, F.R., Mauskopf, J. (2011) Conjoint analysis applications in health – A checklist: A

report of the ISPOR good research practices for conjoint analysis task force.
Value in Health, 14, 403-13.

4. Clark, M.D., Determann, D., Petrou, S., Moro, D., de Bekker-Grob, E.W. (2014). Discrete choice experiments in health economics: A review of the literature. *Pharmacoeconomics*, 32, 883-902 (VB)

5. Johnson, F.R., Lanscar, E., Marshall, D., Kilambi, V., Muhlbacher, A., Regier, D.A., Bresnahan, B.W., Kanninen, B., bridges, J.F.P. (2013). Constructing experimental designs for discrete-choice experiments: Report of the ISPOR conjoint analysis experimental design good research practices task force. *Value in Health*, 16, 3-13.

6. Lanscar, E & Louviere, J. (2008). Conducting discrete choice experiments to inform healthcare decision making. A user's guide. *Pharmacoeconomics*, 26, 661-77 (VB*)

7. Potoglou, D., Burge, P., Flynn, T., Netten, A., Malley J., Forder, J., Brazier, J.E. (2011). Best-worst scaling vs. discrete choice experiments: An empirical comparison using social care data. *Soc Sci Med*, 72, 1717-27.

Week 5 – Discussions regarding abstract and final paper

1. TBD

Recommended (optional)

TBD

Week 6 – Measuring productivity losses. Methods and controversies

1. Drummond textbook (2015), pp 247-250

2. Berger, M.L., Murray, J.F., Xu, J., Pauly, M. (2001). Alternative valuations of work loss and productivity. *JOEM*, 43(1), 18-24 (VB*)

3. Zhang, W., Bansback, N., Anis, A.H. (2011). Measuring and valuing productivity loss due to poor health: A critical review. *Soc Sci Med*, 72, 185-192. (VB)

4. Goeree, R., O'Brien, B.J., Blackhouse, G., Agro, K., Goering, P. (1999). The valuation of productivity costs due to premature mortality: A comparison of the human-capital and friction-cost methods for schizophrenia. *Can J Psychiatry*, 44, 455-463. (An illustration in schizophrenia)

5. Hanley, P., Timmons, A., Walsh, P.M., Sharp, L. (2012). Breast and prostate cancer productivity costs: A comparison of the human capital approach and the friction cost approach. *Value in Health*, 15, 429-436. (An illustration in breast and prostate cancers)
6. Lensberg, B.R., Drummond, M.F., Danchenko, N., Despiegel, N., Francois, C. (2013) Challenges in measuring and valuing productivity costs and their relevance in mood disorders. *Clinicoeconomics and outcomes research*, 5, 565-573. (An illustration in mood disorders)

Week 7 - Determining thresholds, and maximizing health? Challenges and solutions?

1. Drummond textbook (2015), pp. 83-90, 99-102
2. Drummond, M., Brixner, D., Gold, M., Kind, P., McGuire A., Nord, E. (2009). Toward a consensus on the QALY. *Value in Health*, 12(S1), S31-S35
3. Johnson, F.R. (2009). Editorial: Moving the QALY forward or just stuck in traffic? *Value in Health*, 12(S1), S38-S39
4. Newman, P.J., Cohen, J.T., Weinstein, M.C. (2014) Updating cost-effectiveness – The curious resilience of the \$50,000-per-QALY threshold. *NEJM*, 371(5), 796-797
5. Paulden, M. (2017). Recent amendments to NICE’s value-based assessment of health technologies: implicitly inequitable? *Expert Review Pharmacoeconomics & Outcomes Research*, 17(3), 239-242
6. Birch, S and Gafni, A. (2007). Economists’ dream or nightmare? Maximizing health gains from available resources using the NICE guidelines. *Health Econ, Policy and Law*, 2, 193-202
7. Cuyler, A.J. (2016). Cost-effectiveness thresholds in health care: A bookshelf guide to their meaning and use. *Health Econ, Policy and Law*, 11, 415-432
8. Bertrum, M.Y., Lauer, J.A., De Joncheere, K., Edejer, T., Hutubessy, R., Kieny, M., Hill, S.R. (2016). Cost-effectiveness thresholds: pros and cons. *Bull World Health Organ*, 94, 925-930

Week 8 – Uncertainty, different ways to deal with it.

1. Drummond textbook (2015, pp 389-93
2. Briggs, A.H. (2000). Handling uncertainty in cost-effectiveness models. *Pharmacoeconomics*, 17(5) 479-500.

3. Grimm, S.E., Strong, M., Brennan, A., Wailoo, A.J. (2017). The health technology assessment risk analysis chart: Visualizing the need for and potential value of a managed entry agreement in HTA. *Pharmacoeconomics*, 35, 1287-96
4. Bojke, L., Claxton, K., Sculpher, M., Palmer, S. (2009). Characterizing structural uncertainty in decision analytic models: a review and application of methods. *Value Health*, 12(5), 739–49.
5. Arrow, K. J. (2001). Uncertainty and the Welfare Economics of Medical Care (American Economic Review, 1963). *Journal of Health Politics, Policy and Law*, 26(5), 851-883.

Week 9 – Probabilistic analysis and real world cost-effectiveness, a better way forward?

Required:

1. Drummond textbook (2015) Chapter 11, pp 399-404 (405-408)
2. Briggs, A. (2005). Probabilistic analysis of cost-effectiveness models: Statistical representation of parameter uncertainty. *Value in Health*, 8(1), 1-2
3. Claxton, K., Sculpher, M., McCabe, C., Briggs, A., Akehurst, R., Buxton, M., Braisier, J., O'Hagan, T. (2005). Probabilistic sensitivity analysis for NICE technology assessment: Not an optional extra. *Health Econ*, 14, 339-347
4. Baio, G, Dawid, A.P.(2015). Probabilistic sensitivity analysis in health economics. *Stat Method Medical Research*, 24(6), 615-634 (heavy emphasis in statistics/computations)
5. Khor, S., Beca, J., et al. (2014). Real world costs and cost-effectiveness of rituximab for diffuse large B-cell lymphoma patients: A population based analysis. *BMC Cancer*, 14, 586
6. Shin, S., Park C.M., et al. (2016). Erlotinib plus gemcitabine versus gemcitabine for pancreatic cancer: Real-world analysis of Korean National database. *BMC Cancer*, 16, 443

Week 10 – Decision making with limited budgets. Fiscal constraints and cost control

1. McGregor, M. (2006). What decision-makers want and what they have been getting. *Value in Health*, 9(3), 181-185
2. Merlo, G., Page, K., Ratcliffe, J., Halton, K., Graves, N. (2015). Bridging the gap: Exploring the barriers to using economic evidence in healthcare decision making and strategies for improving uptake. *Appl. Health Econ. Health policy*, 13, 303-309.
3. Goetghebuer, M.M., Wagner, M., Khoury, H., Levitt, R.J., Erickson, L.J., Rindress, D. (2012). Bridging health technology assessment and efficient health care decision making with

multicriteria decision analysis: Applying the EVIDEM framework to medicines appraisal. *Medical Decision Making*, 32, 376-88

4. Thokala, P., Devlin, N., Marsh, K., Baltussen, R., Boysen, M., Kalo, Z., Longrenn, T., Mussen, F., Peacock, S., Watkins, J., Ijzerman, M. (2016) Multiple criteria decision analysis for health care decision making – An introduction: Report 1 of the ISPOR MCDA emerging good practices task force. *Value in Health*, 19, 1.-13

Recommended (optional)

Hurley, Grignon et al -Moral hazard in health insurance (draft paper..not for circulation)

Week 11 – Dementia OR cancer? Two case studies

1. Dementia: Gitlin, L.N., Hodgson, N. (2010). The cost-effectiveness of a non-pharmacologic intervention for individuals with dementia and family caregivers: The tailored activity program. *Am J Geriatr Psychiatry*, 18(6), 510-519

2. Pediatric and adult cancers: Pharmacogenetics and pharmacogenomics: State of the art and potential socio-economic impact in the EU. *Technical Report Series: Directorate General, Joint Research Centre*, European Commission **NOTE: Cost-effectiveness pages 69-80**

Week 12 – No Readings, draft paper discussions, submission ready