

Epi-on-the-Island
An Introduction to Health Economics
19-23 June 2023

Tentative Schedule (all times ADT, Atlantic Daylight Time)

(Instructors: MP = Mike Paulden; DH = David Hall)

Timetable for All Students (Monday)

Day	Time	Lecture / Discussion (MP/DH)
Mon	9:00-10:15	Introduction to the course <ul style="list-style-type: none"> ● What will you learn ● What skills do the case studies focus on ● Economics and public health, zoonotic disease ● Two groups (human health and animal health)
	10:45-12:00	What is economics? <ul style="list-style-type: none"> ● Supply, demand, and risk ● Mitigation, beliefs, and preferences ● Opportunity cost, optimization, welfare, discounting
	1:00-2:45	Short case studies: outlining the problem, methodology, and results The value of identified vs statistical lives (e.g. ventilators, puppies, and feedlots)
	3:15-5:00	Discussion: What the two groups will focus on for the rest of the week and which group students should join

Timetable for Human Health Economics Group ONLY (Tuesday-Thursday)

(Instructor: MP = Mike Paulden)

Exercises will be conducted using a spreadsheet package (Excel, Google Sheets, OpenOffice)

Day	Time	Lecture / Lab (MP)	(1) CADTH Guidelines	(2) Edlin et al. (<i>Optional</i>)
Tues	9:00-10:15	Introduction to Health Economic Evaluation	pp.13-14	pp.1-14
	10:45-12:00	Introduction to CADTH's Guidelines for economic evaluation	pp.15-22	
	1:00-2:45	Basic modeling using decision trees (hands on exercise)		pp.41-58
	3:15-5:00	Interpreting basic results from decision models (hands on exercise)		pp.59-76
Wed	9:00-10:15	Introduction to Markov modelling of health technologies	pp. 33-37	
	10:45-12:00	Building your own Markov model (hands on exercise)		pp. 77-86, pp. 133-143
	1:00-2:45	Interpreting the results of a health economic model (hands on exercise)		pp. 77-86
	3:15-5:00	Discussion on WTP, QALYs, and other contentious issues		
Thurs	9:00-10:15	Incorporating uncertainty using probabilistic analysis	pp.53-59	pp. 68-71
	10:45-12:00	Incorporating uncertainty using probabilistic analysis (hands on exercise)		pp. 87-118, pp. 145-162
	1:00-2:45	Reporting and interpreting uncertain results of a economic evaluation (hands on exercise)	p.53-57	pp.163-176
	3:15-5:00	Discussion on policy implications and next steps		pp.177-208

Timetable for Animal Health Economics Group ONLY (Tuesday-Thursday)

(Instructor: DH = David Hall)

Exercises will be conducted using a spreadsheet package (Excel, Google Sheets, OpenOffice)

Day	Time	Lecture / Lab (DH)	Case Study (DH)
Tues	9:00-10:15	Introduction to Health Economic Evaluation (Example: Impact of vaccine for Johne's disease)	Johne's vaccine
	10:45-12:00	Introduction to Case Study: Rabies in Bhutan	Rabies in Bhutan
	1:00-2:45	Basic impact assessment using benefit cost ratios (BCR)	
	3:15-5:00	Interpreting BCR results Incorporating value or time, interest rates, valuation	
Wed	9:00-10:15	Expand BCR analysis: incorporating Net Present Value (NPV) and Internal Rate of Return (IRR) Incorporating results to policy options	
	10:45-12:00	Incorporating risk in BCR Case study	Poultry coronavirus (Infectious bronchitis)
	1:00-2:45	A closer look at policy WTA/WTP	Water quality and livestock in AB
	3:15-5:00	Beliefs and Preferences Choice analysis	Water quality and livestock in AB & Johne's in dairy cattle in Canada
Thurs	9:00-10:15	Production functions	Johne's in dairy cattle in Canada
	10:45-12:00	Incorporating uncertainty in WTA/WTP	
	1:00-2:45	Reporting and interpreting uncertain results of a economic evaluation	
	3:15-5:00	Discussion on policy implications and next steps	

Timetable for All Students (Friday)

Day	Time	Lecture / Discussion (MP/DH)
Fri	9:00-10:15	Comparisons Similarities and differences between human/animal health Philosophies, tools, limitations
	10:45-12:00	Participant Cases Selected participant cases and approaches Case introduction, instructor comments, presenter reply
	1:00-2:45	Conclusions The role of economics in policy formulation Where economics falls short (the rational decision maker, optimality, social welfare vs the individual, asymmetric information, etc)
	3:15-5:00	Open discussion and wrap up

References

1. Canadian Agency for Drugs and Technologies in Health (CADTH). *Guidelines for the Economic Evaluation of Health Technologies: Canada (4th edition)*. CADTH; 2017.

PDF version **free to download** from the CADTH website:

<https://url.mikepaulden.com/cadth>

2. Edlin R, McCabe C, Hulme C, Hall P, Wright J. *Cost Effectiveness Modelling for Health Technology Assessment*. Springer; 2015.

Ebook **free to download** from the University of Alberta library:

<https://url.mikepaulden.com/edlin>

May also be free to download from other institutions. Please note that you are **not** expected to purchase the book if you do not have free access.

Exercises **free to download** from the University of Leeds website:

<https://hta-modelling.leeds.ac.uk/>