

Developing context relevant health economics case studies and related active learning material

Di McIntyre (University of Cape Town) and
Heather Brown (University of Lancaster)

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Contextualising cases

- ▶ Active learning is when students:
 - ▶ Participate and engage in the learning process
 - ▶ Use and apply knowledge



Why use cases?

- ▶ Understand key concepts, particularly when there are several, complex ones
- ▶ Develop skills in applying concepts or methods
- ▶ Promote analytic thinking and interpretation
- ▶ Often done in groups, which:
 - ▶ Builds collaboration
 - ▶ Draws on learners' different experiences
 - ▶ Allows in-depth exploration of ideas and views



Endless permutations

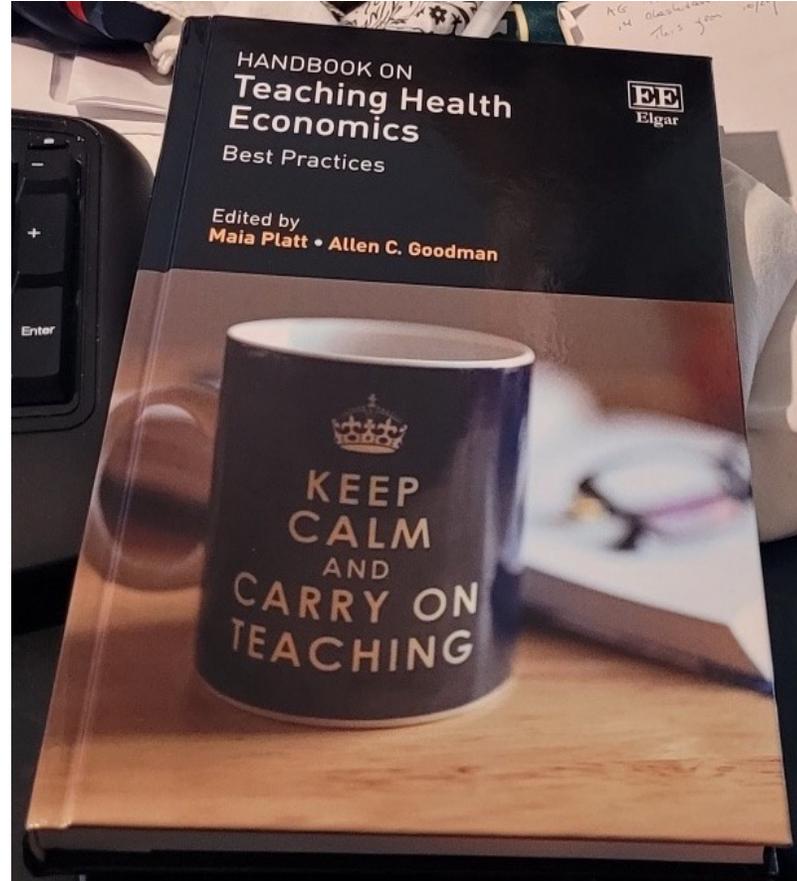
- ▶ Time:
 - ▶ Short (e.g. less than 30 minutes)
 - ▶ Long (e.g. over a day or so, or even a whole course!)
- ▶ Preparation required by learners:
 - ▶ None
 - ▶ Reading background material or other preparation
- ▶ Type of activity:
 - ▶ Role-play
 - ▶ Game
 - ▶ Problem solving scenario
 - ▶ Number crunching and interpretation

Use your imagination

- ▶ Ideas for case studies sometimes come from seeing examples of what others have done
 - ▶ May not be entirely relevant to your context
 - ▶ Develop your own, but give credit
- ▶ Develop own ideas - not only are cases more engaging for learners, stimulating for teachers
- ▶ Always start from learning outcomes:
 - ▶ What do you want your learners to *know*?
 - ▶ What do you want your learners to *be able to do*?

Whirlwind tour of some examples

- ▶ Three main resources:
 - ▶ [Teaching materials repository](#)
 - ▶ [IHEA YouTube channel](#)
 - ▶ Boston Pre-congress Sessions Playlist
 - ▶ Teaching-related skills Playlist
 - ▶ [Handbook](#)
- ▶ Some textbooks



Insurance game (Jennifer Kohn)

- ▶ Boston pre-congress session video & handbook
- ▶ Either an insurer or a consumer
- ▶ Each customer has a 'risk card' 1-6
- ▶ Consumer gets sick if the roll of the dice gives their number or less

#	Ratio	Probability
1	1/6	17%
2	2/6	33%
3	3/6	50%
4	4/6	67%
5	5/6	83%
6	6/6	100%



Insurance game (Jennifer Kohn)

- ▶ Insurer sets premium
- ▶ Consumer decides if to buy insurance or pay out-of-pocket if gets ill
- ▶ Aim: maximise \$\$ at end of each round
 - ▶ Customers: $\text{Start \$} - \text{premium or expenses} = \text{End \$}$
 - ▶ Insurers: $\text{Total premiums} - \text{Total expenses} = \text{Net profit}$
- ▶ Different scenarios of information and policy restrictions, including on pricing

Policy Round	Information	Pricing	Other
Free Market, Perfect Information	Consumers must show risk cards to insurers.	Insurers can charge any price to any customer.	Consumers can choose NOT to purchase insurance.
Free Market, Asymmetric Information	Consumers do NOT have to show risk cards, but can choose to.	Insurers can charge any price to any customer.	Consumers can choose NOT to purchase insurance.
Free Market, Symmetric Uncertainty	Consumers receive risk cards AFTER they choose whether or not to purchase insurance.	Insurers can charge any price to any customer.	Consumers can choose NOT to purchase insurance.
Community Rating, Perfect Information	Consumers must show risk cards to insurers.	Insurers must charge the same price to all customers.	Insurers can refuse to sell insurance (pre-existing condition exclusion) and consumers can choose not to purchase insurance.
Community Rating, Perfect Information, Guaranteed Issue	Consumers must show risk cards to insurers.	Insurers must charge the same price to all customers.	Insurers MUST sell insurance to all willing customers, but consumers can choose not to purchase insurance.
Community Rating, Asymmetric Information, Guaranteed Issue, Individual Mandate	Consumers do NOT have to show risk cards, but can choose to do so.	Insurers must charge the same price to all customers.	Insurers MUST sell insurance to all willing customers. Consumers MUST either buy insurance or pay a \$1 000 'tax'.
Community Rating, Asymmetric Information, Guaranteed Issue, Individual Mandate, Mandatory preventative care coverage	Consumers do NOT have to show risk cards, but can choose to do so.	Insurers must charge the same price to all customers AND cover \$150 in preventative care expenses with certainty in addition to the \$5 000 expenses if the policy holder gets sick.	Insurers MUST sell insurance to all willing customers. Consumers MUST either buy insurance or pay a \$1 000 'tax'.

Role-plays

- ▶ Mobilising resources in a rural, low-income country context (Gilson *et al.*) - repository:
 - ▶ Ground in reality: economic, fiscal, demographic and health data and key health system challenges appropriate for context
 - ▶ Role-plays are particularly useful for:
 - ▶ Develop critical analysis skills
 - ▶ Understand different stakeholder perspectives
 - ▶ Develop insights into complexity of policy processes
- ▶ Noricum role-play (Florian Buchner - Handbook):
 - ▶ Semester long role-play to experience complexity of reorganising a health system from different stakeholder perspectives

In pursuit of equity in health care (Heather Brown) - problem solving

The Secretary of State for Health, Jeremy Hunt has recently become interested in social justice. Consequently the new buzzword floating around the Department of Health is 'equity'.

The Secretary of State has asked a working party to meet with the following aims:

- 1 To come up with a definition of equity.
- 2 To outline how this definition would be operationalised. This bit should address questions like what would be the role of local authorities and clinical commissioning groups and how would you monitor implementation of the policy (i.e. what would you measure and how?).

The Secretary of State considers himself a 'can do' politician, meaning that he views himself, as a person of action, is very impatient. So, the first meeting of the working party takes place this afternoon.

Also see repository for rationing exercise by Tracey Sach

Understanding methodological concepts

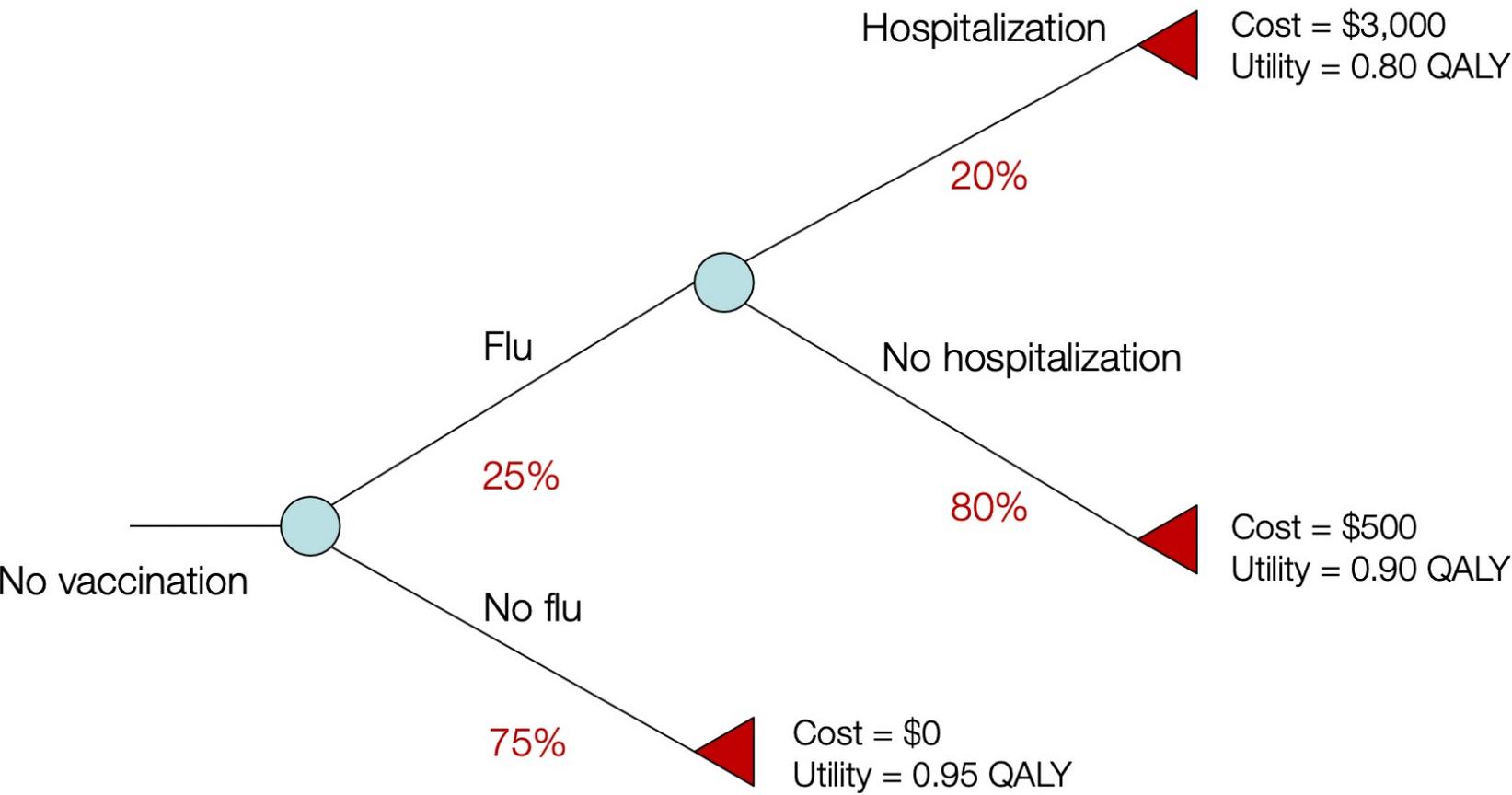
▶ Michal Horny - Boston pre-congress session video

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Probabilistic sensitivity analysis

“A simulation procedure in which all input parameters are considered as random quantities and therefore are associated with probability distributions that describe the background knowledge of the decision-maker”





Using methodological tools critically

- ▶ Eliciting Visual Analogue Scale (VAS) valuations (Nancy Devlin) - see repository

Exercise on Incremental Cost-Effectiveness Ratios

Developed to accompany: Stephen Morris, Nancy Devlin and David Parkin (2007). *Economic Analysis in Health Care*.

Five different clinical tests are available to detect cases of a disease. Each of the tests is mutually exclusive i.e. if a patient receives one test, they will not receive the other. The costs and effects of each test is independent of the costs and effects of the other tests. If no tests are performed, the cost will be zero, and no cases will be detected.

Using the following information, conduct an incremental cost-effectiveness analysis:

	Cost (£)	Effect (no. cases detected)
Test 1	12,000	10.20
Test 2	10,000	10.05
Test 3	22,000	10.30
Test 4	13,000	10.10
Test 5	8,000	10.00

Which test is most cost effective? Use the cost-effectiveness plane to illustrate your answer.

What further information would you require in order to make the judgement that any of these options are good value for money?

Thoughtful number crunching and interpretation

- ▶ See “National Health Accounts and their use in informing health sector reform” in repository

Suggestions for developing and using case studies

- ▶ Possibly start by using existing case studies (as is or adapt)
 - ▶ IHEA repository “Creative Commons Attribution-Share Alike License”:
 - ▶ Attribution - credit the original source
 - ▶ Share Alike - if adapt, must still credit the original source and share the amended version as an OER
- ▶ Start small when developing your own from scratch, and become more ambitious over time:
 - ▶ Stimulating and rewarding, but can be time-consuming

Suggestions for developing case studies

- ▶ Use your imagination, but ground it in reality (contexts that learners can relate to)
- ▶ Develop facilitator's notes and refine over time
 - ▶ Good to plan in detail how to run exercise
 - ▶ Makes it feasible for others to use your materials
- ▶ Pilot

Tips for using case studies

- ▶ Where it involves group work, facilitator(s) should circulate among physical (or virtual) groups to check understanding and answer any queries
- ▶ If work done in groups, good to have group report-backs:
 - ▶ Different issues and ideas raised in different groups
- ▶ Important to summarise at the end to highlight key issues and relate back to learning outcomes