QALYs and the ‘QALY problem’ in PC

1. Idea of the QALY
2. ‘QALY problem’ in Palliative Care
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1. **Idea of the QALY**

2. ‘QALY problem’ in Palliative Care
Idea of the QALY

• In a single payer system, e.g. NHS in United Kingdom, the payer aims to maximise health and health improvement across the population subject to ‘scarcity’ (i.e. resource constraints).

• How do you choose what to pay for within any given budget?

• In particular, how is the consequence part of cost-consequence analysis measured?
  
  — Easy to specify a bilateral comparison of the two treatments have the same goal, e.g. ibuprofen and paracetamol
  
  — But how do you compare the effectiveness of, say, hip replacement surgeries versus child vaccinations? Allocating the whole NHS budget requires a vast number of such comparisons
Idea of the QALY

Effect on costs

+$120,000
+$90,000
+$60,000
+$30,000

Negative effect on outcomes

Positive effect on outcomes

-$30,000
-$60,000
-$90,000
-$120,000
Idea of the QALY

Effect on costs

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+$60,000

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-$60,000

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    » Effectiveness on HRQOL & survival effects
Idea of the QALY

How is the **consequence** part of cost-consequence analysis measured?

This is the problem the **Quality-Adjusted Life Year** is intended to solve:

A **generic** measure combining HRQOL and survival
Idea of the QALY

Effect on costs

$100,000/1.25 QALYs

$80,000 per QALY

Effect on QALYs

-$120,000

-$90,000

-$60,000

-$30,000

+$30,000

+$60,000

+$90,000

+$120,000
Idea of the QALY

- Effect on QALYs
  - $15,000/2.25 QALYs
  - $4,444 per QALY

- Effect on costs
  - $120,000
  - $90,000
  - $60,000
  - $30,000
  - $30,000
  - $60,000
  - $90,000
  - $120,000

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Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin
Idea of the QALY

Effect on QALYs

-3 -2 -1 +1 +2 +3

Effect on costs

+$120,000
+$90,000
+$60,000
+$30,000

$100,000/1.25 QALYs
=$80,000 per QALY

$15,000/2.25 QALYs
=$4,444 per QALY

-$30,000
-$60,000
-$90,000
-$120,000

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Idea of the QALY

Important caveats:

In principle, this is not a single payer issue; guidelines for ‘ideal’ economic evaluation are very similar in US and UK. We are interested in the most cost-effective care whoever pays. Lack of traction in US is as much political as anything. In practice, this is highly complex and contested territory. Lots of considerations, including equity (e.g. rare diseases) and discounting.
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The ‘QALY problem’ in Palliative Care

Understanding your dependent variable

In addition to general limitations to QALY analysis, there are concerns specific to EOL context.

Typical EOL interventions:

- May not impact survival, have relatively short-term impact on QoL
  - QALYs assume additive time, but some evidence EOL time is valued differently
- May be multifaceted
  - QALYs assume trade-able preferences, but some evidence EOL preferences are lexicographical
The ‘QALY problem’ in Palliative Care
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Preferences

Indifference curves

![Indifference curves graph with points A, B, and C on the curve IC 1. The axes are labeled "Apples" on the vertical axis and "Bananas" on the horizontal axis, with coordinates 20, 26, and 41 for Bananas and 14, 10, and 9 for Apples.](www.economicshelp.org)
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Understanding your dependent variable

• There is a small, lively literature on this for those who are interested.

• A good starting point, with a hard-nosed economist’s defence of the QALY and lots of references to other viewpoints, is:

The ‘QALY problem’ in Palliative Care

Understanding your dependent variable

My own view is that:

- Some move towards cost-consequence analysis is essential (especially for interventions with survival effects)
- QALY debate in PC is premature when so little cost-consequence work has been done
  - So, if conducting economic studies please consider cost-consequence analyses
  - But don’t get too caught up on the QALY itself; it is an idea whose time is yet to come in palliative care or in American healthcare