Questions to address

- Which decision?
- What should we understand by value?
- Which benefits?
- Who decides?
- What would a broader measure of benefit mean?
- What about opportunity costs?
Which decision?

- Allocating resources within collectively funded systems
  - Investments and disinvestments
  - Beyond medical technologies

What is value?

Do the benefits gained outweigh the opportunity costs?
What is value?

Flexible funding

<table>
<thead>
<tr>
<th>Costs</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs₁</td>
<td>Benefits₁</td>
</tr>
<tr>
<td>Costs₂</td>
<td>Benefits₂</td>
</tr>
<tr>
<td>Costs₃</td>
<td>Benefits₃</td>
</tr>
</tbody>
</table>

New intervention

<table>
<thead>
<tr>
<th>Costs</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs₄</td>
<td>Benefits₄</td>
</tr>
<tr>
<td>Costs₅</td>
<td>Benefits₅</td>
</tr>
<tr>
<td>Costs₆</td>
<td>Benefits₆</td>
</tr>
</tbody>
</table>

Alternative unfunded intervention(s)

<table>
<thead>
<tr>
<th>Costs</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs₇</td>
<td>Benefits₇</td>
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<tr>
<td>Costs₈</td>
<td>Benefits₈</td>
</tr>
<tr>
<td>Costs₉</td>
<td>Benefits₉</td>
</tr>
</tbody>
</table>

Do the benefits gained outweigh the opportunity costs?

Which benefits?

Survival

Quality of life
Whose benefits?

- Those with rare disease
  - Survival
  - Quality of life

- Those with severe disease
  - Survival
  - Quality of life

- Those with short life-expectancy
  - Survival
  - Quality of life

Which type of health?

- Insurance
- Productivity gains
- Hope
- Option value
Which broader benefits?

- Independence
- Social interaction
- Being informed

Who decides?

- 3 QALYs
  - Mild
  - No cure
  - Common
  - Unproductive

  Versus

- 1.5 QALYs
  - Severe
  - Chance of cure
  - Rare
  - Unproductive

  Versus

- 2 QALYs
  - End of life
  - No cure
  - Intermediate
  - Productive

- What’s in the benefit function?
- Whose preferences?

- Value judgements
- Non-technical
- No consensus
What's this mean?

- Finding ‘new’ benefits doesn’t increase funding
- Same resources get redistributed
- ‘New’ benefits present in many other interventions

What about opportunity costs?

<table>
<thead>
<tr>
<th>Burden - QALY loss (absolute shortfall)</th>
<th>Net production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver cancer</td>
<td>£30,034</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>£23,489</td>
</tr>
<tr>
<td>Emphysema &amp; COPD</td>
<td>£15,482</td>
</tr>
<tr>
<td>Depression</td>
<td>£11,890</td>
</tr>
<tr>
<td>Average forgone</td>
<td>£11,611</td>
</tr>
<tr>
<td>Asthma</td>
<td>£2,888</td>
</tr>
<tr>
<td>Prostate cancer</td>
<td>- £2,430</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>- £23,382</td>
</tr>
<tr>
<td>Psoriasis</td>
<td>- £36,067</td>
</tr>
</tbody>
</table>

Claxton et al, Health Economics 2015;24;1-7
Conclusions

- Selecting benefits is a value judgement
- Some putative benefits more coherent than others
- Ultimate responsibility lies with decision makers
- Claims for wider benefits not unique to new pharmaceuticals
- Quantifying trade-offs challenging
- Often dealt with deliberatively
- Wider the benefit measure needs to be reflected in opportunity costs

Thank you!
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