Appropriate perspectives for health care decisions

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The problem

- Costs and benefits fall on different sectors
- Budget set by a socially legitimate higher authority
- No consensus on how to trade off
  - Health, consumption and other social arguments
  - No complete, legitimate and explicit SWF
- Even if willing to impose a SWF
  - Non marginal effects
  - Displaced wider effects
  - Dynamic effects
  - Social consensus and other social objectives
Conceptual framework

• Two sectors
  – Budget constrained Health system
  – Rest of the economy

• Impacts on the health care system
  – Health gained $\Delta h$
  – Costs falling on the health care system $\Delta c_h$
  – Health forgone $\Delta c_h/k$

• Wider impacts
  – Costs falling on patients carers $\Delta c_c^c$
  – External effects on the wider economy $\Delta c_c^e$
  – Net consumption costs/benefits $\Delta c_c = \Delta c_c^c + \Delta c_c^e$

• Social values
  – $k =$ Cost effectiveness threshold (how much health give up within HCS)
  – $\nu =$ How much (individual) consumption willing to give up to improve their health
## Spectrum of policies

<table>
<thead>
<tr>
<th>Possible Policy</th>
<th>Net health benefit</th>
<th>ICER</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Ignore effects (NICE 2008)</td>
<td>( \Delta h - \frac{\Delta c_h}{k} &gt; 0 )</td>
<td>( \frac{\Delta c_h}{\Delta h} &lt; k )</td>
</tr>
</tbody>
</table>

- **Possible Policy**: The different policies considered in the spectrum.
- **Net health benefit**: The mathematical expression \( \Delta h - \frac{\Delta c_h}{k} > 0 \) represents the condition for positive net health benefit.
- **ICER**: The Incremental Cost-Effectiveness Ratio, expressed as \( \frac{\Delta c_h}{\Delta h} < k \) for the considered marginal rule.
### Biases of policies (marginal changes)

<table>
<thead>
<tr>
<th>Type of Technology</th>
<th>A. Ignore wider costs</th>
<th>B. Costs on budget</th>
<th>C. Ignore constraint</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bias</td>
<td>Decision</td>
<td>Bias</td>
</tr>
<tr>
<td>More effective</td>
<td></td>
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<tr>
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<tr>
<td>Positive costs (NHS)</td>
<td>+</td>
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<td>-</td>
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</tr>
<tr>
<td>Cost saving (NHS)</td>
<td>-</td>
<td>D</td>
<td>+</td>
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- Bias in different directions depending on context
- Lead to false positive (FP) or false negative (FN) decisions
- So why not just use policy D?
Non marginal changes

• Incentive for technologies to have positive health care costs
• Sequence of decisions displace increasingly valuable health care

• Bias due to non marginal change
  – Impose costs - underestimate health forgone
  – Reduce costs - overestimate the value of health gained
  – Always a positive bias

• Policy D may no longer be the best
  – Always a possibility of false positive decisions
  – What circumstances will each policy be best?
### Ranking alternative policies

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<th>Ranking of extent of bias</th>
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- Non marginal effect is small relative to external effects - ‘Take into account’ (D)
- Non marginal effect on NHS large relative to external effects
  - Ignore any consumption benefits (A) but treat any consumption cost as if on constraint (B)
- Never ignore the constraint and use (c)
Implications for policy

• Questions of value
  – Formal prescription
    • Requires specification of a complete SWF
    • \(v\) is the measure of social welfare and presupposes a complete SWF
    • \(k\) is simply an inefficient nuisance preventing welfare maximisation
  – Deliberative approach
    • Trade-offs still need to be made
    • \(k\) is an expression of social value of collective health care
    • \(v\) is how much of their consumption individuals are willing to give up to improve their own health
    • So good reasons why \(k \neq v\)
Implications for policy

• Questions of fact
  – Cost-effectiveness threshold
  – Is a change non marginal?
    • Impact relative to budget (single and a series of decisions)
    • How does k change with budget impact?
  – Consumption value of health
    • Requires social and scientific value judgements
  – Net consumption benefits
    • Cost of care not borne by NHS
    • Effects on wider economy (external to patient and carers)
    • Measurement and valuation requires social and scientific value judgements
Other critical considerations

• Displaced external effects
  – Compare to external benefits forgone
  – Improved heath on average offers benefits to the wider economy
  – On average a HCS perspective is sufficient!
  – Is a proper assessment of exceptions possible?

• Dynamic effects
  – Price to appropriate any net consumption benefits
    • External benefits become internal costs
  – Investment Incentives (technologies, disease and populations)
    • Impact relative to budget (single and a series of decisions)
  – Spend less of on health care more on payment of rent (reduce health)

• Social consensus
  – Potential conflict and long run credibility
  – Static and dynamic conflicts with social policies and NHS principles
Judgement of scientific and social values

- Complete and legitimate specification of SW is not possible
- Budget reveals a legitimate (partial) expression of value
- HCS perspective is appropriate
  - HCS perspective in many circumstances will be wholly appropriate
  - Likely damaging consequences of extending perspective far outweigh any potential for benefit
- One thing we do know
  - Never use a societal perspective without proper consideration of budget constraints
  - Policy C - the common approach to societal perspective in health and elsewhere should not be used