Dangerous Omissions: The Consequences of Ignoring Decision Uncertainty

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Overview

- Policy background
- What decisions need to be made?
- Why does uncertainty matter?
- Decision making in joined up world
- Decision making in a fragmented world
- What can NICE do?
Policy background

• Adoption and reimbursement
  – Explicit transparent analysis
  – Consideration of opportunity costs

• Prioritising and commissioning research
  – Implicit and opaque

• Separation of remit for adoption and research commissioning
What are the decisions?

• Should a technology be adopted given existing information?
  – Which clinical strategies are cost-effective?
  – For which patient groups?

• Is current evidence sufficient to support use in NHS?
  – Do we need more evidence?
  – What type of evidence is required?
  – What additional research should be conducted to provide this evidence?
What is required?

- Synthesis of current evidence
- Estimates of expected cost and health benefit
- Measure of uncertainty in these estimates
- Estimate of the health benefit which may be displaced
Why does uncertainty matter?

<table>
<thead>
<tr>
<th>How things could turn out</th>
<th>Treatment A</th>
<th>Treatment B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possibility 1</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Possibility 2</td>
<td>12</td>
<td>10</td>
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<tr>
<td>Possibility 3</td>
<td>14</td>
<td>20</td>
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<tr>
<td>Possibility 4</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Possibility 5</td>
<td>14</td>
<td>13</td>
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<tr>
<td><strong>Average</strong></td>
<td><strong>12</strong></td>
<td><strong>13</strong></td>
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Best we can do now? Choose B and get 13 QALYs

Could we do better? If we knew we get 13.8 QALYs

Maximum benefit of more evidence is 0.8 QALYs

But is it worth it?
Do we need more evidence?

Choose A

Choose B

Cost-effectiveness threshold

Maximum benefit of evidence

£0 £10,000 £20,000 £30,000 £40,000 £50,000 £60,000

£0 £5,000,000 £10,000,000 £15,000,000 £20,000,000 £25,000,000
Decisions in a joined up world?

- Adopt technologies if they are expected to be cost effective based on existing evidence

  But **only** if we simultaneously address question: **Is the evidence sufficient?**

- Demand or commission further research to inform this choice in the future
In a fragmented world?

• Sponsored research?
  – No powers to demand research (or disclosure or access to ipd)
    • A remit for ‘coverage with evidence’?
    • Could it be enforced?

• Publicly funded research?
  – Separation of the remit for adoption and research commissioning
  – NICE cant control research prioritising and commissioning
    • Some limited influence
    • Prioritising and commissioning not consistent with adoption decisions
What can NICE do?

• Separation of adoption and research decisions
  – Adoption decisions without accountability for impact on future research
  – Research decisions without accountability for relevance to adoption decisions

• Dangers
  – Adoption decisions undermine evidence base for practice
    • Incentives and ethics
  – Commissioned research does not inform decisions

• Adoption becomes the only policy instrument
Account for the cost of uncertainty

What we lose if we accept technology

What we lose if we reject a technology

Opportunity loss vs. Cost-effectiveness threshold
Clear signals and incentives

Provide more evidence!
Clear signals and incentives

Reduce price (but don’t tell)
Only in research or no means no?

- **Clear signals**
  - No because it is not a cost-effective use of resources
  - No because there is currently insufficient evidence to justify NHS use
  - Spell out the key evidence needed (not the research)

- **Clear incentives**
  - If and when additional evidence is made available then considered for early review
  - Incentives to sponsors (evidence and price)
  - Incentives for others stakeholders to lobby for publicly funded research
  - Clear signals to research commissioners
No means no  But the reasons really matter!

• Appraisal process
  – Already generates much of the analysis and information
  – Explicit consideration of which uncertainties are most important
  – Clear consideration of the evidence (not the research) needed

• STA makes this the most pressing issue
  – Issuing guidance when evidence base is least mature
  – Piecemeal nature of STA guidance

• Real and present danger
  – Potential damage to evidence base for current and future NHS practice

• Real opportunity
  – Address evidence needs of the NHS
  – Provide clear signals and incentives