Rapid Assessment Methodology: Getting the Important things Right

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What’s the role of assessment?

...to inform **decisions** about the value of new technologies

- **Technology cost-effective**
  - Positive guidance (True positive)
  - Negative guidance (False negative)
  - Positive guidance (False positive)
  - Negative guidance (True negative)
- **Technology not cost-effective**
Key features of assessment to support decisions (1)

Identify all appropriate comparators
- Avoid partial analysis
- May involve sequences
- May involve starting & stopping rules

Identify all relevant evidence
- Avoid selecting evidence
- Link with comparators

Model structure
- Linking evidence with decision
- Key assumptions

• Systematic review
• Discussion with clinical experts
• Review of routine NHS data

• Systematic review
• Include work in progress
• Appropriate synthesis

• Model building/checking
• Systematic review
• Discussion with clinical experts
Key features of assessment to support decisions (2)

Characterise uncertainty
- All sources of uncertainty
- Quantify error probabilities
- Interactive with decision makers
- Scientific value judgements

Sub-group heterogeneity
- Cost-effectiveness by sub-group
- Variation in underlying risk
- Treatment effect modifiers

- Model building/checking
- Sensitivity analysis
- Scenario analysis

- Model building/checking
- Discussion with clinical experts
- Risk modelling (IPD)
- Estimating treatment-sub-group interactions (IPD)
Implications of inaccurate assessments

(What are the costs of false positives and false negatives?)

Poor assessment → Increased risk of wrong decisions → Cost imposed on NHS

→ Health forgone
How do we select the correct assessment for a technology?

At the point of topic referral (‘scoping screen’)

What is the size of the patient group?

The larger the group the greater the benefit but also the cost of a wrong decision. More at stake.

What are the costs of decision reversal?

The higher the cost of decision reversal the more important it is to get it right the first time.

Relevant evidence is not all in the public domain and belongs to several manufacturers

To include access to all evidence may need a third party assessment
### How do we select the correct assessment for a technology?

**After a rapid assessment ('STA screen')**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>What is the best estimate of the ICER relative to the threshold?</td>
<td>Further assessment may be unwarranted if ICER appreciably less (or more) than threshold.</td>
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<tr>
<td>Are there major concerns about the brief assessment?</td>
<td>Despite some iteration, further (third party) assessment may be needed to address major flaws which can have marked effect on ICER.</td>
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<td>Considerations in initial screen only become clear during brief assessment</td>
<td>‘Ownership’ of evidence and cost of decision reversal.</td>
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Conclusions

• Speed (and source) of assessment should vary with technology
• Two opportunities to select appropriate assessment
  – At scoping
  – After initial (brief) assessment
• Decisions should be driven by health benefits to the NHS
• Need flexibility in Technology Appraisal programme
• Can inform the Evaluation Pathway Programme