



#### A qualitative study of manufacturers' submissions to the UK NICE single technology appraisal process Dr Eva Kaltenthaler Health Economics and **Decision Science, ScHARR University of Sheffield, UK**











### Outline

- Background
- Methods
- Results
- Recommendations







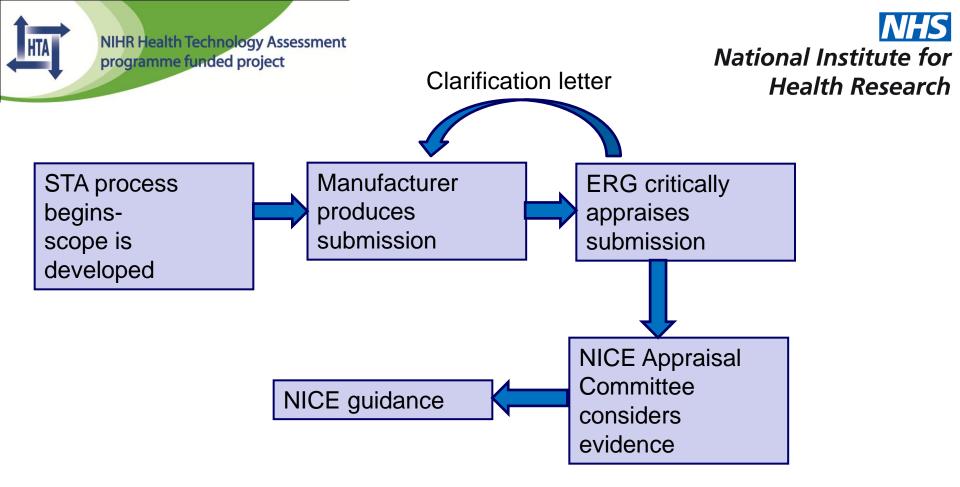


## **NICE STA process**

- Introduced in 2005
- Single technology for a single condition
- Manufacturer produces a submission outlining the clinical and cost effectiveness of the technology
- Evidence Review Groups (ERGs) critically appraise the submission and produce a report
- A clarification letter is sent to the manufacturer by NICE with questions from the ERG
- ERG report and submission are used by the NICE Appraisal Committee to make recommendations on the use of technologies













#### **NICE STAs**

- Manufacturer has approximately 9 weeks to produce a submission
- ERG has 8 weeks to produce a report
- **Responsibility of the manufacturer to** present the case for the technology
- The ERG does not produce a new review or new model







#### **Research team**

#### University of Sheffield University of Liverpool

- Eva Kaltenthaler
- Chris Carroll
- Patrick Fitzgerald
- Diana Papaioannou
- Ron Akehurst

- Rumona Dickson
- Angela Boland









### **Critical appraisal research**

- Short report commissioned by NIHR Evaluation, **Trials and Studies Coordinating Centre**
- Aims were to:
- identify current approaches used by the ERG groups to critically appraise manufacturers' submissions
- Identify recurring themes in clarification letters
- Map the NICE STA process for the first 95 STAs
- **Develop a new ERG report template**
- Make recommendations



Liverpool Reviews and





#### **Methods: ERG reports**

- Thematic analysis of first 30 completed ERG reports using a framework approach
- Data on the strengths and weaknesses of each manufacturer submission were extracted and coded
- Themes emerging from data:
  - process
  - reporting
  - satisfying objectives
  - reliability and validity of findings
  - content







#### **Methods: clarification letters**

- Thematic analysis of 21 clarification letters associated with the 30 ERG reports
- Set of open codes to categorise data
- Data categorised into:
  - clinical and economic issues
  - indirect comparisons
  - licensing
  - systematic review methods
  - report quality







# Results of thematic analysis of ERG reports

- Common issues and concerns were identified
- Many positive comments on the quality of the submissions
- 90% (27/30) identified inadequate reporting of processes
- 67% (20/30) identified criticisms of data being used, especially in models
- 57% (17/30) identified issues with the conduct of the systematic review







# Results of thematic analysis of clarification letters

- 400 points of clarification were analysed
- Majority of points related to the economic data analysis
- Issues included:
  - clarification of data sources and choices
  - queries about modelling decisions
  - requests for additional analyses
  - queries regarding internal inconsistencies between the clinical and economic sections of the submission





Implementation Group (LRiG)





#### **Development of recommendations**

- Workshop to discuss key findings
- 50 participants from all 10 ERG groups **NETSCC** and NICE
- Set of recommendations for manufacturers ERG teams and NICE
- Many positive aspects in submissions







#### Recommendations

- 1. Submissions should be comprehensive, clearly written, appropriately copy edited and internally consistent.
- 2. Definitions for all key terms and abbreviations should be provided.
- 3. There should be transparency in the reporting of methods and analyses.
- 4. Where applicable, reviews should adhere to internationally accepted standards for conducting and reporting reviews.







#### Recommendations

- 5. Where there is a single clinical study the study report and protocol should be an addendum to the submission.
- 6. There should be clear reporting of methods and results used for indirect comparisons.
- 7. The submission should provide relevant and sufficiently detailed data related to clinical progression, outcomes and adverse events.
- 8. There should be clear and concise rationale for the synthesis of clinical data.
- 9. Clear rationale should be provided for the types of analyses chosen for use in the submission.











#### Recommendations

- 10. There should be clear and concise rationale for the development of economic models and the assumptions used to develop models need to be provided.
- 11. A systematic review of utility values should be included where appropriate in the submission.
- 12. Reviewing of model parameter values should be comprehensive and transparent. How comprehensive depends on how critical the

parameter is.







#### Limitations

- Only the first 30 completed STAs were included in this analysis
- Changes to the STA process: manufacturer's template, clarification process
- We looked at ERGs interpretation of the manufacturers' submissions
- ERGs have different interpretations











#### Conclusions

Manufacturers' submissions can never contain all necessary data but these recommendations may help to improve the quality of submissions to the NICE STA process.







National Institute for Health Research

#### References

- Kaltenthaler E, Boland A, Carroll C, Dickson R, Fitzgerald P, Papaioannou D. Evidence Review Group approaches to the critical appraisal of manufacturer submissions for the NICE STA process: a mapping study and thematic analysis. Health Technol Assess 2011;15(22): 1-82.
- Kaltenthaler E, Papaioannou D, Boland A, Dickson R. The NICE Single Technology Appraisal Process: Lessons from the first four years. Value in Health (in press).
- Carroll C, Kaltenthaler E, Fitzgerald P, Boland A, Dickson R. A thematic analysis of the strengths and weaknesses of manufacturers' submissions to the NICE Single Technology Assessment (STA) process, Health Policy (in press).



Liverpool Reviews and

O F





#### The views and opinions expressed are those of the authors and do not necessarily reflect those of the UK Department of Health.

#### Project Number 08/228/01



LIVERPOOL



NIHR Health Technology Assessment programme funded project

#### **NHS** National Institute for Health Research



E-mail: <a href="mailto:e.kaltenthaler@sheffield.ac.uk">e.kaltenthaler@sheffield.ac.uk</a>



