



## Speaker

### APPRAISING THE APPRAISERS: WHAT IS THE FUTURE OF HEALTH TECHNOLOGY ASSESSMENT IN EUROPE?

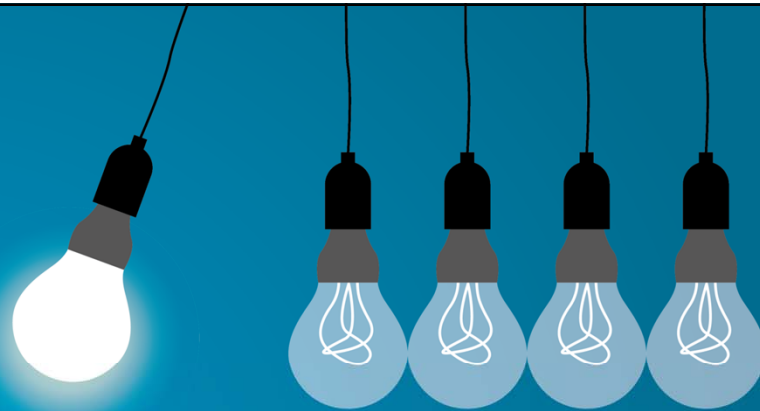


Susan Guthrie, PhD, MSc  
Rand Europe  
Cambridge, UK



### Evaluating the impact of the NIHR HTA Programme – qualitative and quantitative approaches

Dr Susan Guthrie



## Outline



Introduction



Background



Research  
methods



Impact



Conclusions &  
recommendations

## Outline



Introduction



Background



Research  
methods



Impact



Conclusions &  
recommendations

## Assessing the impact of the NIHR HTA Programme, 2003-2013

- **Objective:** to assess the impact of the programme in the UK and abroad
- **Research questions:**
  - What has been the impact of the programme, and HTA-funded research, from 2003 to 2013?
  - How can the programme maximise its impact in the future?
- **Methods:** mixed methods, primarily qualitative

*Note: this research builds on the work of Hanney et al. (2007) and was commissioned and funded by the NIHR HTA Programme*

## Analysis of the returns on research funding under the NIHR HTA programme

- **Objective:** to provide an economic assessment of the benefits of the programme at low cost
- **Research questions:**
  - What benefits would have been available to the health system, and the wider community, if the findings of HTA studies had been implemented?
- **Methods:** Economic analysis comparing potential benefits, assuming full implementation, from 10 high impact HTA studies to the cost of the programme; short illustrative case studies

## Outline



Introduction



Background



Research  
methods



Impact



Conclusions &  
recommendations

## NIHR HTA Programme

- **Aim:** to fund research on the effectiveness, costs and broader impact of health technologies for those who use, manage and provide care in the NHS
- **Research:** pilot and feasibility studies, clinical trials and evidence syntheses
- **Funding streams:** commissioned and researcher-led workstreams and Technology Assessment Reports (TARs)
- **Output:** Research published in *Health Technology Assessment* and other peer-reviewed journals

Source: <http://www.nets.nihr.ac.uk/programmes/hta>

## NIHR HTA Journal publications, 2003-2012

	RCTs	Other primary research	Systematic reviews	Total
Screening and diagnostics	15	17	65	97
Pharmaceuticals	19	8	29	56
Surgery	16	4	12	32
Devices	16	3	16	35
Mental health	21	3	6	30
Methodology	0	21	34	55
Other	27	7	61	95
<b>Total</b>	<b>133</b>	<b>59</b>	<b>223</b>	<b>500</b>

*Source: Raftery and Powell (2013). Health Technology Assessment in the UK, The Lancet, 382: 1278-85*

## Outline



Introduction



Background



Research  
methods



Impact



Conclusions &  
recommendations

## Methods – qualitative/mixed-methods study



Key informant  
interviews  
(n=20)



Bibliometric  
analysis



Survey



Case  
studies  
(n=12)



### Key informant interviews

Interviews with senior stakeholders (n=20): academics, policy-makers and individuals involved in the HTA Programme

- **Strength:** Diverse perspectives, draws on extensive knowledge of HTA programme
- **Limitation:** Primarily positive



## Bibliometric analysis

Analysis of the dissemination and use of scientific publications resulting from HTA-funded research

- **Strength:** citation-based measures with benchmarks for comparison; full portfolio coverage
- **Limitation:** citation-based measures are only a proxy for quality; research focus



## Researchfish impact data

Electronic survey of all grant holders on the impacts of their research

- **Strength:** low additional burden on researchers
- **Limitation:** concerns over data comprehensiveness, low response rate from study specific respondents



## Case studies

**Case studies (n=12):** in-depth case studies on the outputs and outcomes of HTA-funded research projects

- **Strength:** detailed investigation into impact of HTA-funded research and mechanism of impact
- **Limitation:** summarising diverse impacts

## Methods – (primarily) quantitative study



**Economic analysis** supplemented by short case studies

*Note: two key (and many other) assumptions: (i) separation of implementation from research; (ii) skew in distribution of impacts*

- **Strength:** 'Quick and dirty' economic analysis; gives a 'headline' number with case studies providing some context
- **Limitation:** Many (mostly conservative) assumptions; one big (not conservative) assumption; limited formative value



## Outline



Introduction



Background



Research  
methods



Impact



Conclusions &  
recommendations

## Findings from the mixed-methods study: Types of impacts



**Impact on patients and health policy:** health gains, health system change, health policy change, socioeconomic benefits from improved health outcomes



**Impact on knowledge production and the research system:** knowledge production, direction of research, capacity building



**Impact on industry and the economy:** product development, wider socioeconomic benefits



**International impact:** any international impact across all of the above categories

## Impact of NIHR HTA research on patients and health policy

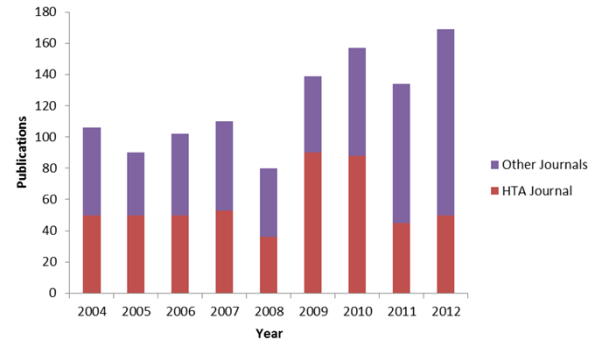
- **Direct impact:** direct implementation
- **Indirect impact on patients:** through impact on guidelines, particularly NICE and the NSC
  - NICE: change in guidelines
  - NICE: TARs
  - NSC: screening pilot and, if pilot successful, national screening Programme

## Impact of NIHR HTA research on patients and health policy

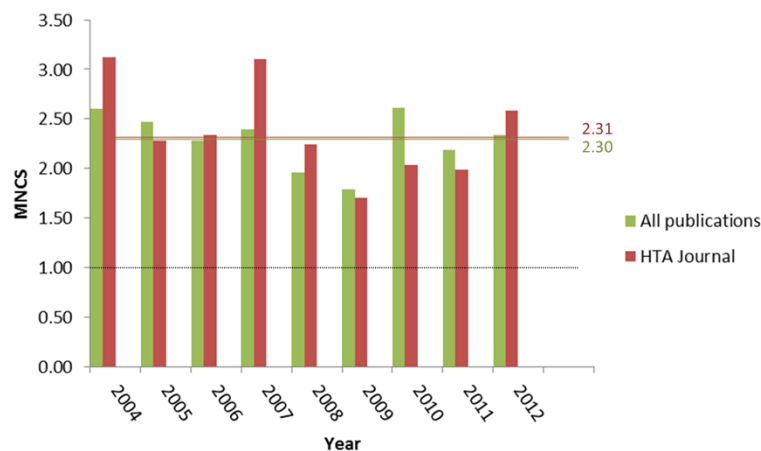
- **Joint impact of HTA Programme and NICE/NSC:** little uptake of research without 'receptor bodies', but also lack of evidence for guidelines without NIHR HTA Programme
- **Implementation:** challenges around responsibility, resources and stakeholder perspectives

## Impact of NIHR HTA research on the research system

- **Publications:** Monographs in *Health Technology Assessment* and publications in other peer-reviewed journals
- **Publication rate:** 96% of research published (excluding TARs) (Turner et al. 2013)



## Impact of NIHR HTA research on the research system



## Impact of NIHR HTA research on the research system

- **Capacity building:** Major programme of clinical research building UK capacity
- **Cultural change in attitudes to research:** contributed to the change attitudes towards clinical and health economic research

*The research establishment has completely changed its view about the validity and importance of the HTA's kind of work. The HTA isn't the only driver of this change....but it played a role in the general paradigmatic change in what is meant by good health research in the last 20 years.*

## Impact of NIHR HTA research on industry and the economy

- **Limited overlap with industry-funded research:** HTA Programme typically funds research in areas where there is little or no commercial incentive to carry out research (e.g. off-patent drugs)
- **Refinement of products:** where HTA research suggests that there may be a market for a particular technology, there is some indication that this then leads to product refinement
- **Role of TARs**

## International impact of NIHR HTA research

- Insofar as HTA research findings are generalizable to other countries (and sometimes even when they're not!), HTA research can have an impact on all of the aforementioned areas of impact:
  - **Patients and health policy:** direct implementation of new technology; citations on international guidance
  - **Knowledge production and the research system:** inclusion in pooled analyses; international collaborations and sharing of methods
  - **Impact on industry and the economy:** impact of TARs via NICE

## Quantitative study findings

- Potential net-benefit from the 10 studies of £3.0 billion
- 12 per cent would cover cost of HTA Programme from 1993 to 2012
- Many critical assumptions:
  - Findings are fully implemented and each treatment implemented for one year
  - Economic methods comparable and high quality
  - Results replicated in general population and prevalence estimates appropriate
  - No dis-benefits and no 'opportunity cost' for treatments displaced.

## Outline



Introduction



Background



Research  
methods



Impact



Conclusions &  
recommendations

## Conclusions

- Both approaches demonstrated impact of programme in different ways
- Both suggest that the NIHR HTA programme is effective in delivering many of its intended outcomes
- Qualitative/mixed-methods approach offers more nuanced understand of:
  - Routes through which this happens
  - Facilitators and barriers
  - Formative findings to support further impact in the future

## Areas for improvement

- Greater targeted post-hoc support for dissemination
- Consider funding research on the short-term costs of the implementation of new technologies
- Monitor and evaluate the impact of PPI
- Improve the transparency of the priority setting process

## Good practice to maintain

- Maintain relationships with NICE and the NSC
- Maintain flexible and supportive relationships with researchers
- Maintain quality and focus on NHS needs
- Continue to monitor the impact of the programme
- Continue to be an exemplar of good research practice

## Lessons for wider HTA systems and their evaluation

- Assess impact for accountability and learning
- UK system requires close relationships with decisionmakers
- Important benefits for research
- Quantitative and qualitative approaches offer different benefits
- Some qualitative content is important for effective learning and improvement

## Acknowledgements

### Qualitative study

- **Team at RAND Europe:** Teresa Bienkowska-Gibbs; Catriona Manville; Alexandra Pollitt; Anne Kirtley; Steven Wooding
- **Advisory board:** Ruairidh Milne; Kieran Walshe; Stephen Hanney; Lester Firkins

### Quantitative study

- Marco Hafner; Teresa Bienkowska-Gibbs; Steven Wooding



