

NICE Technology Appraisals: *What has been accomplished?*

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Presentation to *Pharma 2005* Conference,
Berlin, 17th March 2005



Disclaime

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- I draw on my experience as a member of the Appraisals Committee and the Economics Task Group of the National Institute for Clinical Excellence
- However, the views expressed in this presentation are my own and should not be taken to necessarily represent the opinion of either the Committee, the Task Group or of the Institute.

Structure

- Context
- Range of appraisals
- Appraisal decisions
- Cost-effectiveness ‘threshold’:
 - Potential addition to service cost
- Impact:
 - Impact on thinking
 - Service impact: *is NICE guidance followed?*
 - Political impact
 - International impact
- Conclusions

Context

- Professional concerns and controversy about what to do about the high cost of some new drugs and other health technologies
- Media/public attention highlighted local variations in the availability of some new drug therapies ...
- ... so-called '*post-code rationing*'
- In 1999 the new Labour Government was prepared to be more centrally directive, but at arms length!

Volume and range of technologies appraised*

Pharmaceuticals 57

Others: 30

Of which:

Medical Devices 10

*Diagnostic/
screening* 3

Procedures 14

Health Promotion 3

* As at January 2005

What has been recommended?

- Of the 87 technology appraisals:
 - **23 recommended for routine use** (all licensed indications)
 - **58 for selective use** (usually sub-groups within licensed indications)
 - **6 for use in the context of research studies only**

Selected use: *aims to find sub-group(s) in which the intervention is more cost-effective*

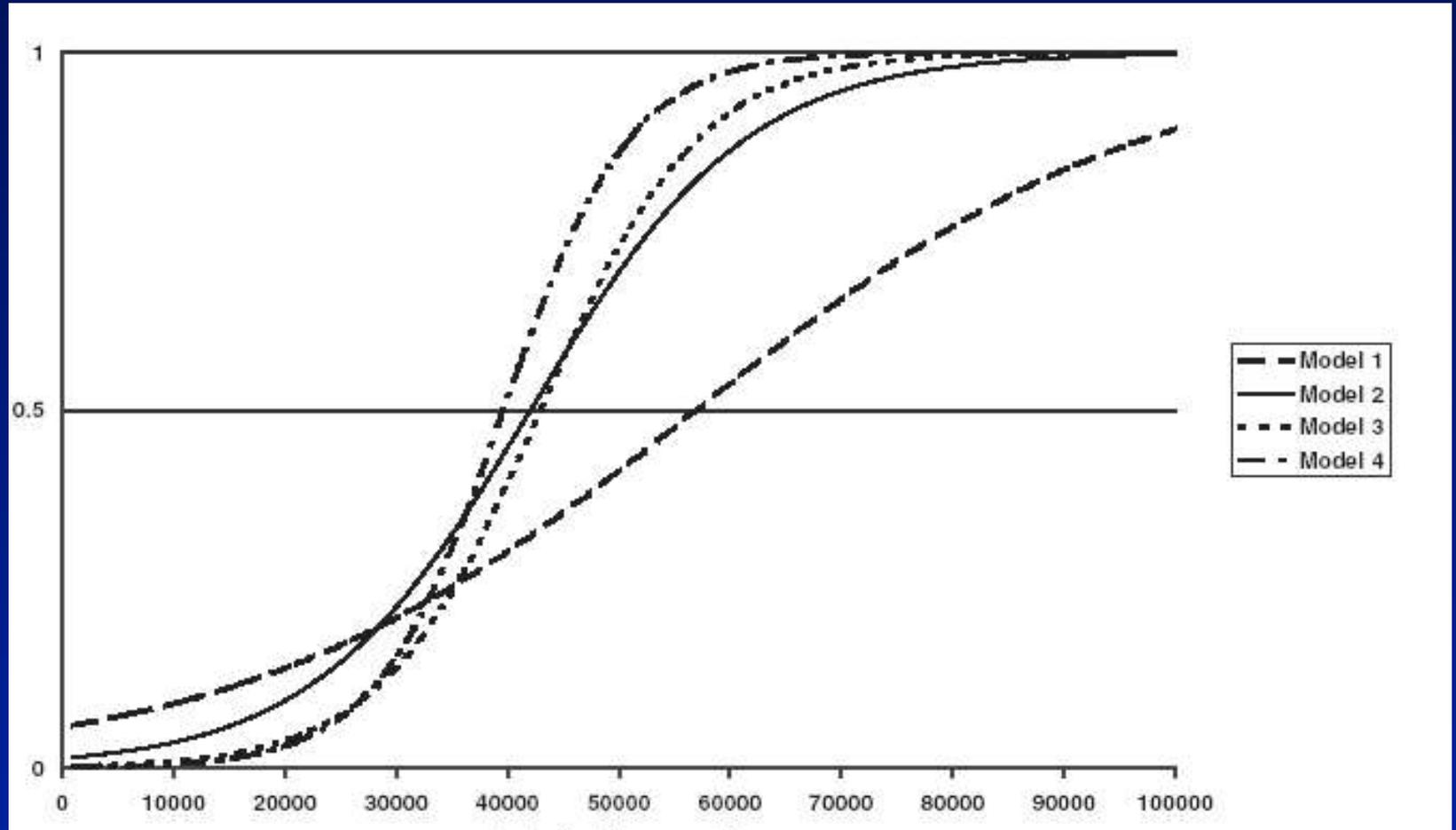
- Examples:
 - *'only for second-line use'*
 - *'only where other drugs are contra-indicated'*
 - *'in Type 1 but not Type 2 diabetes'*
 - *'only if other drugs have been tried and failed'*
 - *'only for those with severe disease'*
 - *'in cases with specific co-morbidities'*

How cost-effective do technologies need to be?

- Cost-effectiveness is not an absolute attribute
 - *it does not require the technology to be cost-neutral or cost-saving*
- It depends on how much the health-care system is willing and able to pay for additional health benefits
 - *it needs a threshold of what is acceptable*
- So what is (or was) NICE's position?
 - *Initially it was in denial!*
- But the reality was fairly clear

Probabilistic cost-effectiveness thresholds

Probability of rejection by NICE



Cost-effectiveness ratio

From: Devlin & Parkin, *Health Economics*, 13: 437-452 (2004)

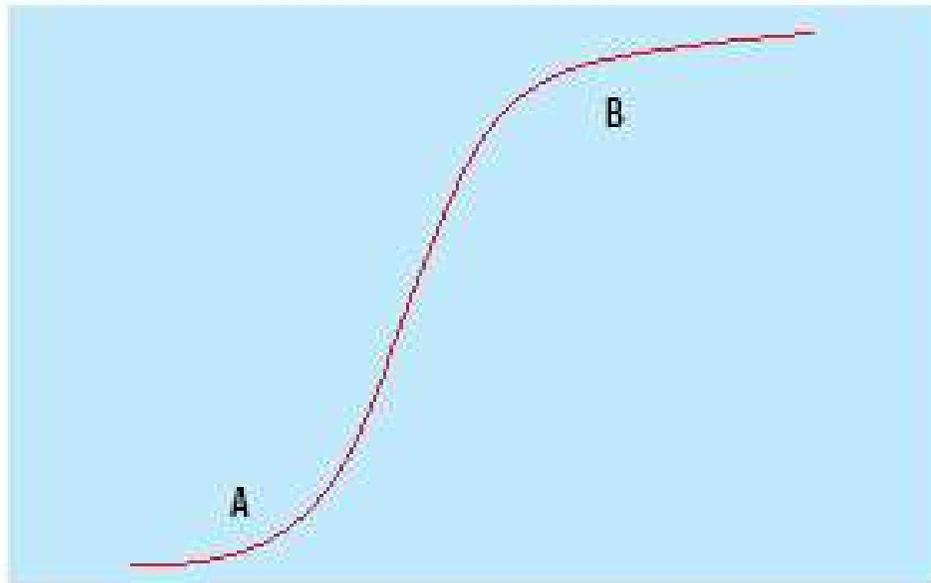
So what does NICE now

say

- Various statements about this 'benchmark'
- Public statement by Rawlins (NICE 2002):
 - *appears that there is less chance of being accepted if above £30k*
- Revised Methodological Guidance (NICE, April 2004):
 - *< £20k - likely to be accepted*
 - *> £20k - needs additional factors to justify*
 - *> £30k - these factors have to be increasingly strong*
- Rawlins and Culyer (BMJ, September 2004)
 - **Inflexions in the curve**
 - Lower inflexion (A) - £5k-£15k
 - Upper inflexion (B) - £25k-£35k

The official version*:

Probability of rejection on
grounds of cost ineffectiveness



Increasing cost/QALY (log scale)

Relation between likelihood of a technology being considered as cost ineffective plotted against the log of the incremental cost effectiveness ratio

A = £5k - £15k

B = £25k - £35K

Impact on thinking

- NICE has brought cost-effectiveness as a decision-aid into the limelight and led to improvements in methodology
- It has legitimised and encouraged more rigorous attempts to understand whether and how technologies can be used cost-effectively
- It has encouraged companies to take cost-effectiveness seriously and has led to significantly better analysis and evidence being presented
- But has demonstrated how uncertain many of these judgements are particularly at time of launch and the need to review decisions as evidence accumulates
- It has created excess demand for health economists.....

NICE: impact on NHS costs

- Because the focus is (rightly) on cost-effectiveness *not* on cost-containment, NICE guidance typically increases cost
- Each appraisal document estimates the additional cost to NHS *if* the guidance is followed (compared to the present situation)
- But to assess the impact of NICE guidance requires a clear view of what the trajectory of use of the technology would have been *without* the Guidance and then what it is *with* the Guidance?
- NICE guidance runs alongside company marketing....

NICE: service

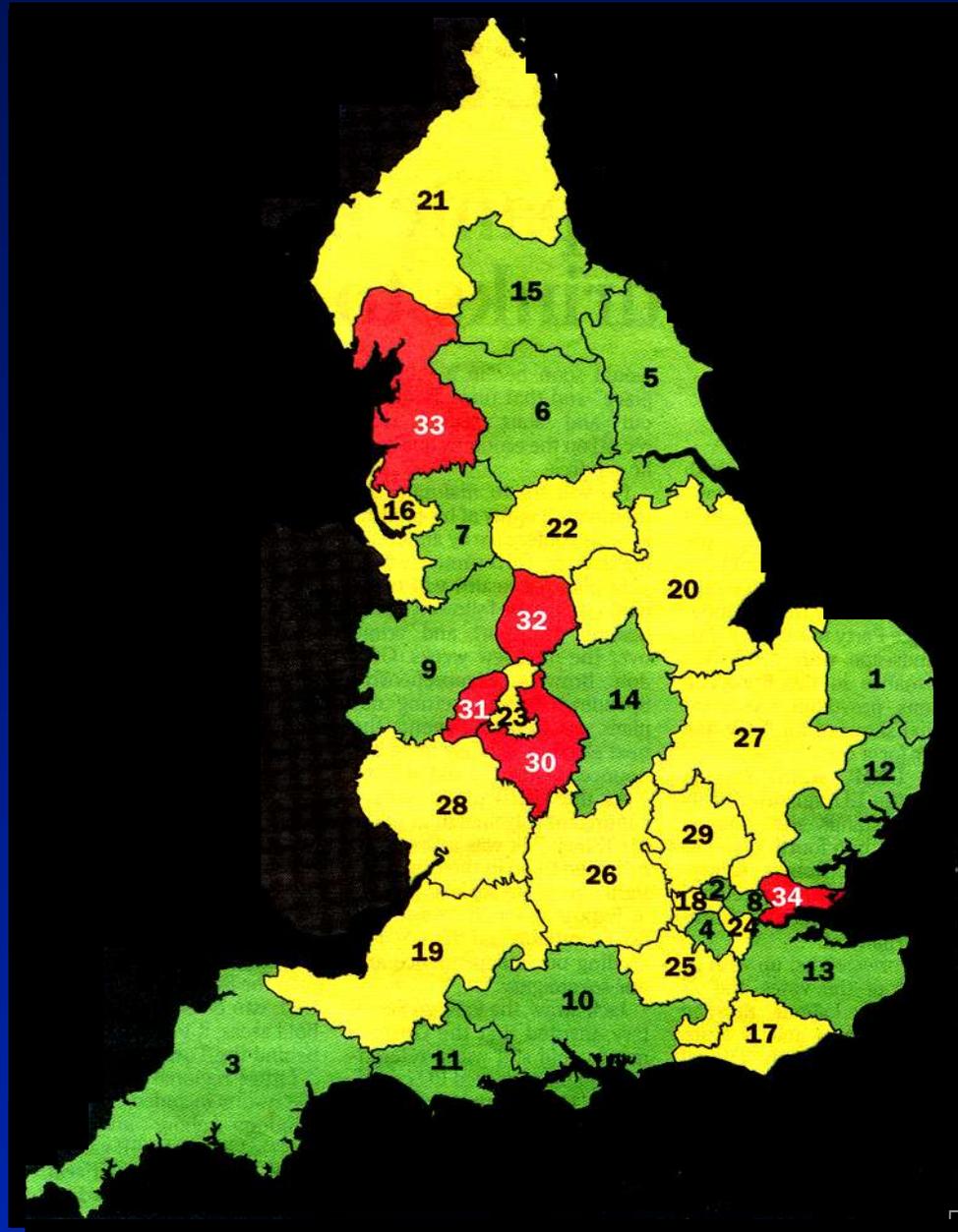
impact

- Increasing concern from many stakeholders that NICE guidance is not being consistently followed ...
- ... but very difficult to establish whether often complex selective use indications are being followed
- A number of ad hoc surveys from interested parties
- ... providing growing evidence of an implementation problem

For example, based on a survey the ABPI concluded:

- Guidance had little discernible impact on medicines initiated in primary care
- Some evidence of impact in secondary care
- Some evidence of impact on medicines initiated in secondary care and managed in primary care
- Significant variability in local uptake
- No evidence of low-spending health authorities catching up

Local variation in adherence to cancer drug guidance*



Of 15 cancer drugs recommended by NICE:

- 9 - 15 under-prescribed
- 5 - 8 under-prescribed
- 0 - 4 under-prescribed

* Richards Report, Department of Health, June, 2004

Results of national evaluation of implementation of NICE guidance*

- A formal, independent evaluation of response to 12 'tracer' sets of guidance
- Used interrupted time series analysis, plus case-note reviews, surveys and interviews to establish use of technology relative to NHS guidance (generally to early 2002)
- Results were mixed and difficult to interpret: for example
 - Use of taxanes and orlistat increased significantly in line with guidance
 - Use of drugs for Alzheimers increased but trend not affected
 - No apparent change in use of hearing aids, hip prostheses, ICDs, laparoscopic hernia repair or laparoscopic colorectal cancer surgery

* Sheldon et al, *BMJ*, 329:999

Possible reasons for poor local implementation

- Lack of good planning and forward management, and specific systems to ensure implementation of guidance
 - *but the precise impact of NICE guidance cannot be predicted*
- Differing professional views and interests – we don't agree
- Different local priorities
- Cost-effective technologies may have serious impact on particular budgets in short-term
- Maybe NICE has set its cost-effectiveness threshold/benchmark too high, so that the local opportunity cost of NHS decisions is too high:
 - *we need a serious study of whether ,within the existing NHS budget, anything with a cost per QALY of <c£30,000 should be adopted*

NICE: the nature of its 'guidance'

- It is a recommendation:
 - *it does not override professional responsibility to make appropriate decisions for individual patients*
- Since January 2002, NHS organisations have been required to provide funding and resources for NICE recommended technologies:
 - *primary care trusts cannot use 'scarce resources' as an excuse for failing to implement NICE guidance*
- Since July 2004 NICE technology appraisal guidance is part of a 'core standard for the NHS':
 - *every NHS body must take them into account in planning and delivering care*
- NICE has no enforcement power or role itself
 - *but compliance will be reviewed by the Healthcare Commission (an NHS 'inspectorate')*

Political impact

- Has heightened media awareness of the issues
 - but still no real attempt to get public to buy into the cost-effectiveness argument
- NICE guidance has provided the benchmarks against which to show that 'post-code rationing' persists
- It is part of a shift in the balance between local NHA freedom and central control
- NICE is criticised from both sides:
 - by both those promoting technologies for being too restrictive;
 - by those providing local services, within a fixed budget, for not being restrictive enough!

International impact

- Transparency of NICE and its extensive use of the Web has made it internationally important
- Generally supportive and complimentary review by WHO added international credibility
- Evidence of use by other countries of NICE materials and methods:
 - *both a strength and a danger*

Conclusions

- Much has been done - and is available on the web
- Mainly concerned with new drugs
- Cost-effectiveness (*not cost*) is a main criterion
- NICE has had a major impact on thinking both within and beyond UK
- ***But it has so far failed to demonstrate its influence in removing/reducing local variation***
- Perhaps, the opportunity cost of its recommendations are too high in some localities
- But its existence ensures that the issue of appropriate adoption of technologies cannot be ignored