

The Technology Appraisals programmes in the UK

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Associate Director STA

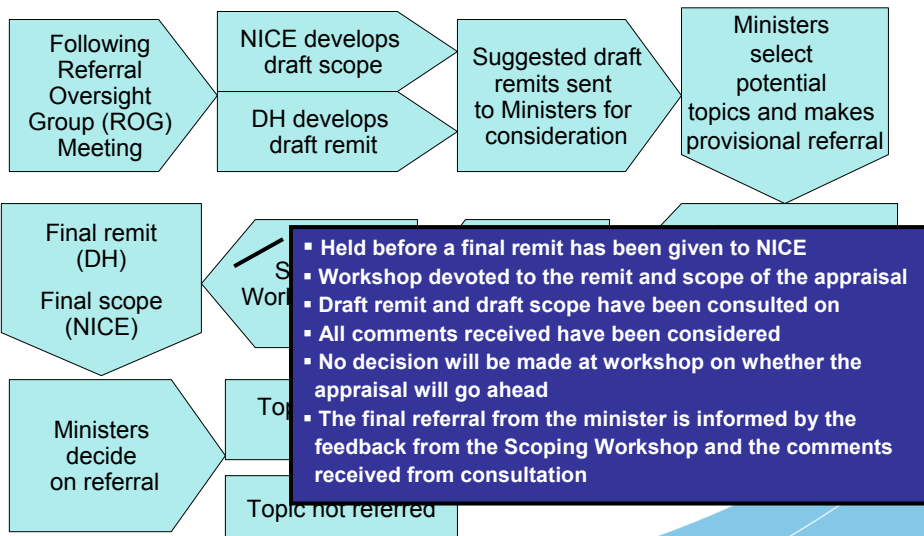
How are topics selected?

- NICE commissioned by Department of Health for:
 - Technology appraisals
 - Clinical guidelines
 - Public health guidance
- Interventional procedures referred by clinical community
- Patient safety guidance development recommended in the Chief Medical Officer's "Safety First" report
- Anyone can suggest a topic via our website
- Clinical topics are usually: NHS priorities, major diseases, controversial (or potentially so)
- Once topic is referred Government has no undue influence on what our guidance says.

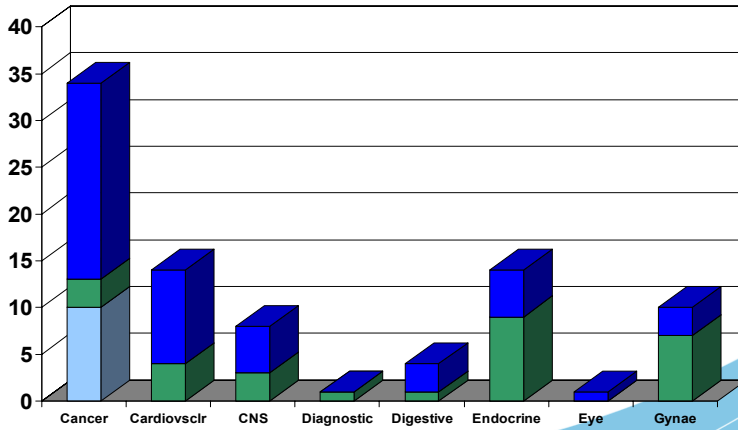
Sources of topic suggestions 2006-7

Main categories	Number received
Webform	613
National Horizon Scanning Centre	107
Implementation consultants	44
PH engagement	40
Specialist advisors	32
NICE staff	15
TOTAL	

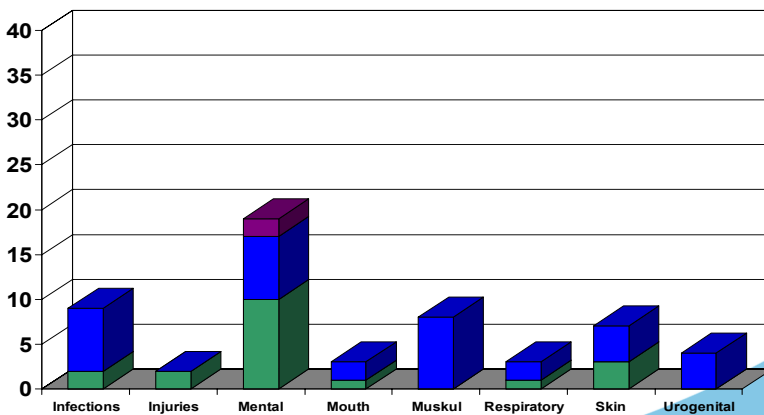
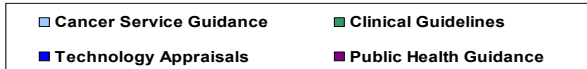
The scoping process



Volume of guidance by disease area



Volume of guidance by disease area



Stakeholders

1. Consultees and Commentators

(= stakeholders)

- **Consultees**
 - Manufacturers/sponsors
 - Professional organisations
 - Patient/carer organisations
 - DH, Welsh Assembly Government, Primary Care Trusts
- **Commentators**
 - NHS Agencies (eg NHS Confederation, NHS Quality Improvement Scotland)
 - National Collaborating Centres
 - Research groups
 - Manufacturers of comparator technologies

2. Assessment / Evidence review Group

→ provides (MTA) and critiques the evidence

- Independent academic group
- Commissioned through the National Coordinating Centre for Health Technology Assessment
- Receive all evidence submitted by stakeholders

In MTA

- Carry out systematic review and develop economic model

3. The Appraisal Team at NICE

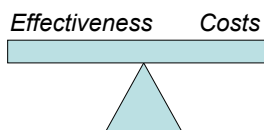
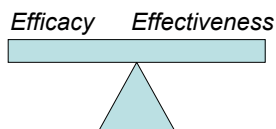
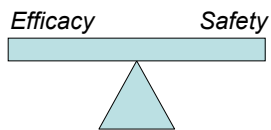
- Associate Director
- Project Manager
- Administrator
- Technical Advisor
- Technical Lead

Located in London and
Manchester



Guide to the Processes of Technology Appraisals

The HTA paradigms



*Methodological
robustness*

Transparent

Inclusive

*Independent
decision
making*

*National
Timely*

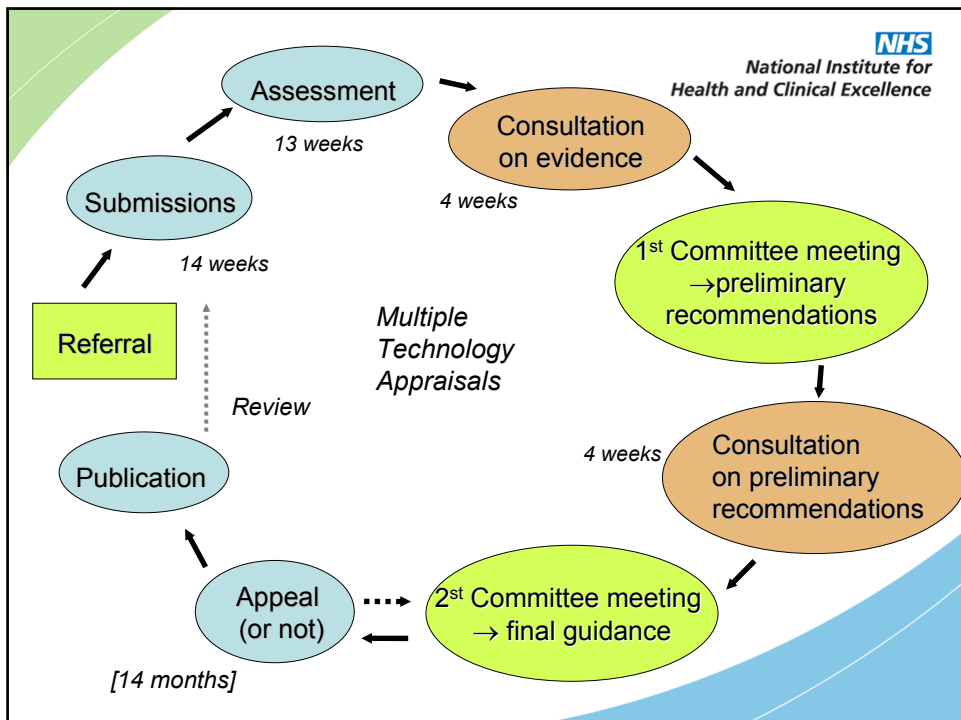
*Clarification &
consultation*

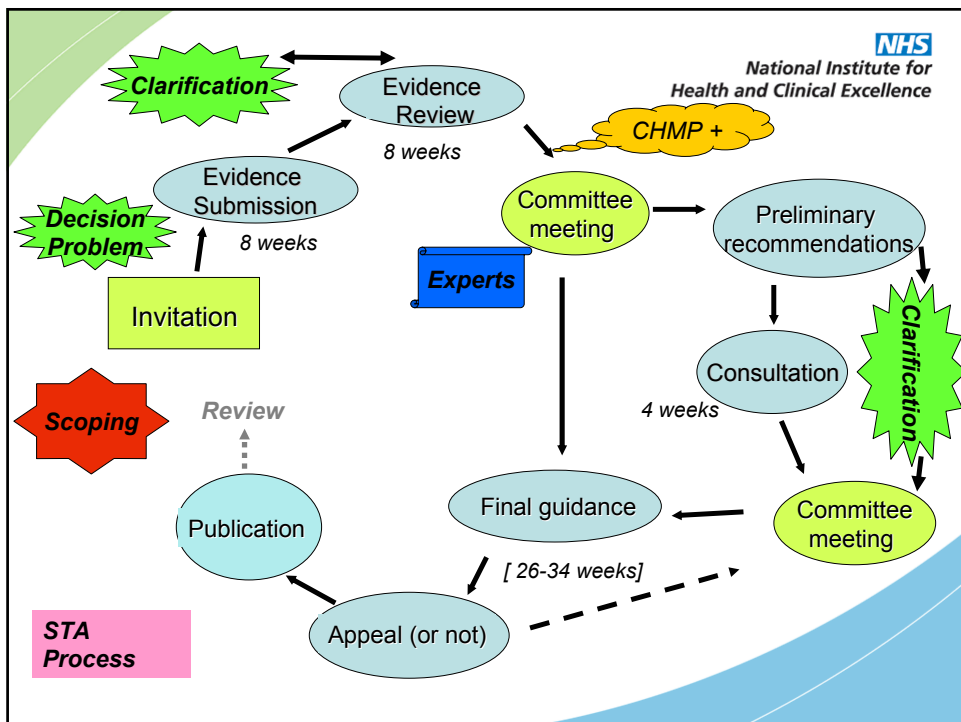
*Secure
implementation*



Two Processes

- Multiple Technology Process
 - Used over the last few years
 - Extensive consultation and independent assessment
 - Considered to be ‘too long’
- Single Technology Process
 - Abbreviated process for single technologies / single indications
 - Recommendations issued timely and close to their point of introduction into the UK





NHS
National Institute for
Health and Clinical Excellence

First Appraisal Committee meeting - organisation

Present at meeting:

- Committee members
- NICE staff
- Clinical specialists and patient experts
- Assessment / Evidence Review Group

Outputs:

- Appraisal Consultation Document (ACD)
 - draft recommendations/guidance
- Possibly request for additional analyses to be carried out
- [STA only: final guidance]

MTA: Lead Team of 2 Committee members to present the evidence
STA: Technical Lead to present key issues for consideration

Second Appraisal Committee meeting - output

Final appraisal determination (FAD)
(Final guidance)



Approved by Institute's Guidance Executive



Consultees
for appeal



Commentators
for information



5 days later

Posted on NICE website
for information

Appeal

- Three possible grounds
 - failure to follow process
 - perversity
 - Institute has exceeded it's powers
- Appeal hearings held in public

31 topics in 31 months



- Docetaxel BC
- Paclitaxel BC
- Bortezomib MM
- Gemcitabine BC
- Fludarabine CLL
- Trastuzumab BC
- Rituximab NHL*
- Erlotinib NSCLC
- Pemetrexed NSCLC
- Cetuximab H&N C
- Rituximab NHL**
- Bevacizumab NSCLC[‡]
- Carmustine Glioma[‡]
- Bevacizumab MBC[‡]
- Cetuximab MCRC[‡]
- Lapatinib MBC
- Rituximab RA
- Abatacept RA
- Adalimumab PsA
- Adalimumab Ps
- Infliximab Ps
- Infliximab sub-ac-UC
- Varenicline SC
- Natalizumab MS
- Omalizumab Asthma
- Rimonabant Obesity
- Telbivudine CHepB
- Entecavir CHepB
- Alteplase Stroke
- Dabigatran DVT
- Febuxostat HyperUri

Process stats & outcomes



	#	Result ACD	Result FAD	Appeals	Result > Appeal
FAD	4	n.a.	4 'yes'	1 not upheld	4 'yes'
ACD	13	2 'yes' 10 'no' 1 'OIR'	4 'yes' 7 'no' [2 tbc]	2 upheld 2 not upheld	6 'yes'* 5 'no'
ACD+	9	9 'minded no'	7 'yes' 2 'no'	1 upheld	8 'yes'* 1 'no'
Terminated	4				
Total	30	22	24	6	24



Timeliness – STA process

- Target: 80% should take 27 (no ACD) or 35 weeks from invitation to FAD on website
- Result: 73% of STAs (19/26) within 2-3 weeks of target
 - Cetuximab H&N: EMEA clarification
 - Erlotinib & pemetrexed NSCLC: keep together
 - Abatacept RA: licensing / subsequent planning
 - Lapatinib MBC: licensing (CHMP*2)
 - Infliximab UC: decision problem / split in 2 STAs
 - Febuxostat 'Gout': licensing



Close to marketing authorisation?

Drug	Stage	Ref<MA	ACD>MA	FAD>MA	Note
Trastuzumab (MBC)	F	-44	N.A.	+3	
Abatacept (RA)	F	-38	+10	+23	Licensing + referral
Bevacizumab (NSCLC)	T	-35	N.A.	N.A.	Non-subm + referral
Varenicline (SC)	F	-4	N.A.	+35	Referral
Lapatinib (MBC)	A	-77	[+3]	[+19]	Licensing
Adalimumab (Ps)	F	-26	+6	+18	Referral
Febuxostat (Gout)	A	-44	+5	[+17]	Licensing
Cetuximab (MCRC)	T	[-10]	N.A.	N.A.	Non-subm + referral

N=31

Qualitative review STA process 1



- Decision Support Unit & Steering Group
 - Methodological robustness / transparency / inclusiveness
 - 5 papers-meetings-surveys-interviews / 5 papers only
 - ‘Burden of proof’ / remit ERG / Committee handling / submission template
- Decision problem & initial clarification
 - Definition comparators
 - Link existing guidance
 - Reporting
 - Indirect comparisons

Qualitative review STA process 2



- Appraisal Committee clarification (‘minded no’)
 - ‘Missing’ comparisons (technologies / patient groups)
 - Approaches existing technology appraisals
 - Critical review by Evidence Review Group
- Appeals
 - Further exploration ‘alternative’ ICER(s)
 - Further exploration evidence comparator
 - Further exploration key assumptions + remodelling
 - Consideration of ‘cost schemes’

'Special arrangements'

- Bortezomib
- Erlotinib

Bortezomib monotherapy for relapsed multiple myeloma

Guidance

- 1 Bortezomib monotherapy is recommended as an option for the treatment of progressive multiple myeloma in people who are at first relapse having received one prior therapy and who have undergone, or are unsuitable for, bone marrow transplantation, under the following circumstances:
 - the response to bortezomib is measured using serum M protein after a maximum of four cycles of treatment, and treatment is continued only in people who have a complete or partial response (that is, reduction in serum M protein of 50% or more or, where serum M protein is not measurable, an appropriate alternative biochemical measure of response) and
 - the manufacturer rebates the full cost of bortezomib for people who, after a maximum of four cycles of treatment, have less than a partial response (as defined above).
- 2 People currently receiving bortezomib monotherapy who do not meet the criteria in paragraph 1 should have the option to continue therapy until they and their clinicians consider it appropriate to stop.

Implementation tools

NICE has developed tools to help organisations implement this guidance (listed below). These are available on our website (www.nice.org.uk/TA129).

- Costing report and costing template to estimate the savings and costs associated with implementation.
- Audit criteria to monitor local practice.

Further information

Ordering information

You can download the following documents from www.nice.org.uk/TA129

- A quick reference guide (this document) – a summary of recommendations for healthcare professionals.
- 'Understanding NICE guidance' – information for patients and carers.
- The full guidance.
- Details of all the evidence that was looked at and other background information.

For printed copies of the quick reference guide or 'Understanding NICE guidance', phone the NHS Response Line on 0870 1555 455 and quote:

- N1354 (quick reference guide)
- N1355 ('Understanding NICE guidance').

Next steps



- STA process due for review 2008-9
- Topics to be included in the review
 - Burden of proof [Board ruling]
 - Terminated appraisals [Board ruling]
 - Review ERG report prior to Committee meeting
 - ERG remit [Service Level Agreement]
 - Update templates for evidence submission
 - Confidential information

Guide to the Methods of Technology Appraisals

Summary of the Reference Case

Element of health technology assessment	Reference Case	Section in the Guide providing details
Defining the decision problem	The scope developed by the Institute	5.3.2
Comparator	Alternative therapies routinely used in the NHS	5.3.2
Perspective on costs	NHS and PSS	5.3.3
Perspective on outcomes	All health effects on individuals	5.3.3
Type of economic evaluation	Cost-effectiveness analysis	5.3.4
Synthesis of evidence on outcomes	Based on a systematic review	5.4.1
Measure of health benefits	Quality-adjusted life years (QALYs)	5.5
Description of health states for calculation of QALYs	Health states described using a standardised and validated generic instrument	5.5
Method of preference elicitation for health state valuation	Choice-based method, for example, time trade-off, standard gamble (not rating scale)	5.5
Source of preference data	Representative sample of the public	5.5
Discount rate	An annual rate of 3.5% on both costs and health effects	5.7.2
Equity position	An additional QALY has the same weight regardless of the other characteristics of the individuals receiving the health benefit	5.9.7

Scoping - Comparators

- All relevant comparators are identified with consideration given to current practice and natural history of the condition without suitable treatment
- Although the best alternative care is the essential comparator, treatment representing routine UK care are also important where they differ from best alternative care
- Sequencing

Perspective – costs & outcomes

- Costs
 - Reference case: NHS and PSS
 - Non-reference case: outside NHS may be considered – e.g. resource costs could include direct costs on patients or carers or costs to other public sector organisations but not normally include productivity costs.
- Outcomes
 - Maximising health gain from available resources
 - All direct health effects whether for patients or, where relevant, other individuals (principally carers).

Evidence synthesis

- Systematic review
 - Typical patients
 - Normal clinical circumstances
 - Clinically relevant outcomes
 - Relevant comparisons
 - Include measures of uncertainty
- Meta-analysis
- ‘Multiple treatment comparisons’

Valuing health effects

- QALYs
- Standardised and validated generic (non-disease specific) instrument
- Values should be based on public preferences elicited using a choice-based method
 - EQ-5D

Criteria for Decision Making

- Broad clinical priorities for the NHS
- Degree of clinical need of patients with the condition
- Encouraging innovation
- Broad balance of benefits and costs
- Effective use of available resources

The problem

A fixed 'budget' and lost 'opportunity costs'

-
-
-
-



es
S
lity

Appraising Cost-Effectiveness

- Below £20,000/QALY - CE
- Above £20,000/QALY - CE and other factors
 - The degree of certainty surrounding the calculation of ICERs
 - Change in HRQoL inadequately captured
 - The innovative nature of the technology
- Above £30,000/QALY as above but much stronger (!)
- Always give reasons