NICE decisions in the South-West quadrant

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Background

- Results of cost-effectiveness analyses are commonly presented visually on a cost-effectiveness plane that is divided into four quadrants (Figure 1) [1,2]
- The main focus of the literature and guidance documents lies on the North-East (NE) quadrant, where interventions are more effective but also associated with higher costs than their comparator
- Technologies in the South-West quadrant (SW; less effective and less costly) may offer additional options for patients, whist saving costs to the healthcare system
- When interventions appear in the NE or SW quadrants, payers need to make a trade-off between costs and effects
- Based on research indicating different willingness to pay (WTP) for more effective interventions than willingness to accept (monetary compensation for) less effective interventions, it has been a matter of debate whether identical or different cost-effectiveness thresholds should be applied in the NE and SW quadrants [3-7]

Objectives

- Our aim was to investigate how the UK National Institute for Health and Care Excellence (NICE) has thus far been evaluating interventions that are deemed less effective and less costly than relevant comparators
- On a cost-effectiveness plane, these interventions would be found in the SW quadrant

Methods

- The NICE website was searched pragmatically for relevant keywords related to the SW quadrant using the website's own and the Google Advanced search engines on 26-28 March 2025
- The selection was limited to Technology Appraisals (TAs) that were fully completed at the time of the search. Other guidance documents were excluded from the analysis
- Manufacturer submissions, External Assessment Group reports, and NICE Committee documents related to identified TAs underwent a single round of in-depth review
- TAs were retained when the company's and/or NICE-preferred base case ICER versus relevant comparator(s) in at least one main target population was lying in the SW quadrant

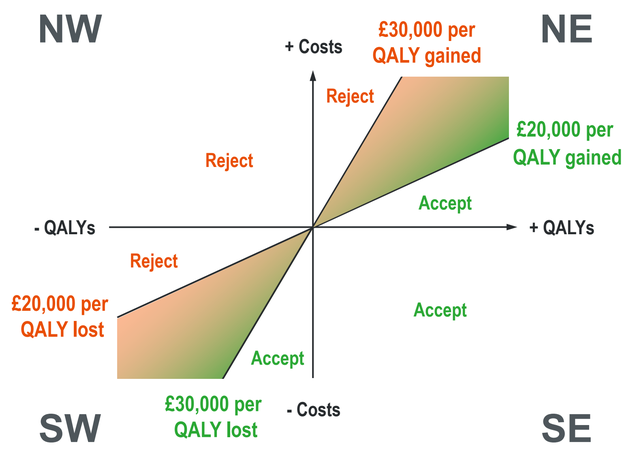

Figure 1. ICERs in the NE and SW quadrants

Results

- We identified forty completed NICE TAs in which a reference was made to the SW quadrant. Sixteen TAs were excluded after in-depth review, due to SW quadrant ICERs only being reported in subgroup, sensitivity, scenario, and/or exploratory analyses. In twenty-four cases, the new technology was considered less effective and less costly than (a) relevant comparator(s) in at least one target population
- As per NICE's own categorisation and reporting [8], 10/24 (42%), 13/24 (54%) and 1/24 (4%) of these technologies were recommended, optimised, and not recommended, respectively (Table 1)
- NICE Committee slides for some TAs (including TA663, TA694, TA705, TA770, TA813, TA824) listed specific rules for the interpretation and/or decision-making with ICERs in the SW quadrant (see conclusions)
- The ICER clearly remains a crucial decision factor in the SW quadrant. Interventions were generally deemed cost-effective and given a positive recommendation when they were expected to produce cost savings exceeding £20,000 to £30,000 per quality-adjusted life year (QALY) lost.
- Uncertainty can be accepted when SW quadrant ICERs go above £30,000 saved per QALY lost. More certainty is needed with SW quadrant ICERs approach £20,000 saved per QALY lost (Figure 1)
- In various TAs, in absence of direct comparisons, the new intervention was assumed to have similar or only slightly less clinical effectiveness than the relevant comparator. With ICERs becoming very sensitive to small QALY changes, the net benefits approach can facilitate interpretation of cost-effectiveness outcomes in these circumstances
- Exact ICERs were often kept confidential due to patient access schemes or price discounts being offered by the manufacturers involved
- The ICER and cost savings were not the only relevant decision drivers. Argumentation around small QALY losses, better safety profiles, patients having few treatment options, and/or formulation benefits (e.g., oral administration) were sometimes also considered by NICE Committees

NICE Technology Appraisal	157	245	276	427	433	561	663	681	688	694	705	710	758	768	813	824	849	891	906	934	974	1035	1046	1050
Year of evaluation	2008	2012	2013	2017	2017	2019	2020	2021	2021	2021	2021	2021	2022	2022	2022	2022	2022	2023	2023	2023	2024	2025	2025	2025
Decision*	R	R	O	R	O	R	O	O	O	O	R	R	O	O	R	O	O	R	O	O	O	R	NR	R
ICER deemed acceptable	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•
Cost savings for the NHS			•	•	•						•	•	•		•									
Similar efficacy / Small QALY loss	•	•	•								•	•	•			•	•	•	•	•	•			•
Better safety profile				•					•															
Additional treatment option			•	•	•		•	•	•														•	
Formulation benefit	•		•	•	•																	•		

* Type of recommendation as per NICE's own categorisation and reporting [8]: NR: Not recommended; O: Optimised, R: Recommended

Table 1. Decision drivers mentioned in NICE Technology Appraisals with ICERs located in the South-West quadrant of the cost-effectiveness plane

Conclusions

- Over the years, NICE has positively recommended several interventions that were deemed less effective and less costly than comparators. Whilst not an ideal situation for manufacturers to be in, our research demonstrates that NICE approval can nevertheless be obtained for such products
- These decisions offer additional treatment options to patients and clinicians, whilst potentially improving overall health outcomes by freeing up resources that can be reinvested elsewhere [9]
- The ICER remains a crucial decision factor for products located in the SW quadrant. Although there has been some debate regarding variations in WTP between the NE and SW quadrants, NICE consistently applies its £20,000 to £30,000 per QALY threshold to both quadrants
- There are some specific rules for interpretation / decision-making with ICERs in the SW quadrant:
  - *SW quadrant ICERs are presented as costs saved per QALY lost / forgone*
  - *Higher ICERs are better, as they refer to more costs being saved per QALY lost*
  - *Larger cost savings are required when there is more uncertainty in the evidence base; More certainty is needed when ICERs start approaching £20,000 saved per QALY lost*
  - *Because ICERs in the SW quadrant can be sensitive to small QALY differences, presentation of net benefits can facilitate interpretation of results*
- Exact ICERs were often kept confidential due to price discounts or access schemes being offered
- In the reviewed TAs, NICE decisions were not purely based on ICERs and anticipated cost savings. Clinical considerations around relatively small QALY losses, better safety profiles, patients having few treatment options, and/or formulation benefits (e.g., oral administration) were sometimes also taken into consideration by NICE Committees
- In its 2022 manual to health technology evaluations, NICE has formalised decision rules for technologies in the SW quadrant that it had previously already been applying in practice [10]

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