The Evolution of Cost Comparison at NICE: What Can We Learn from Fast-Track Appraisals?

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ISPOR Poster Acceptance Code: HTA129
Abstract ID: 120161

Introduction

In February 2022, the National Institute for Health and Care Excellence (NICE) updated their manuals for methods, processes and topic selection for technology assessments (1,2). One change made during the update was the removal of the fast-track appraisal (FTA), originally introduced in 2017. Treatments were eligible for FTA via two routes: with an incremental cost per quality-adjusted life year gained of <£10,000 (low incremental cost-effectiveness ratio [ICER] route); or with efficacy and safety equivalent to existing, approved treatments, at lower cost (cost comparison route).

FTA has now been replaced by a cost comparison process for treatments with equivalent efficacy and safety, and lower cost compared with an existing recommended treatment.

Objectives

This research aims to reflect on completed FTAs and understand:

- How many FTAs were completed since the inception of the process
- How many treatments assessed via FTA were eligible through the low ICER route versus the cost comparison route
- The methods used during development of cost comparison analyses for FTA
- Any learnings for future cost comparison assessments for NICE

Methods

Completed NICE technology appraisals were reviewed from 1st April 2017 to 13th June 2022. Documentation associated with each technology appraisal was reviewed to identify which were FTAs.

In addition to completed appraisals, appraisals in development were also reviewed to identify any FTA in development for which draft guidance was available.

For each identified FTA, data on FTA route were extracted (low ICER route or cost comparison route) and, if a cost comparison was carried out, the methodology applied.

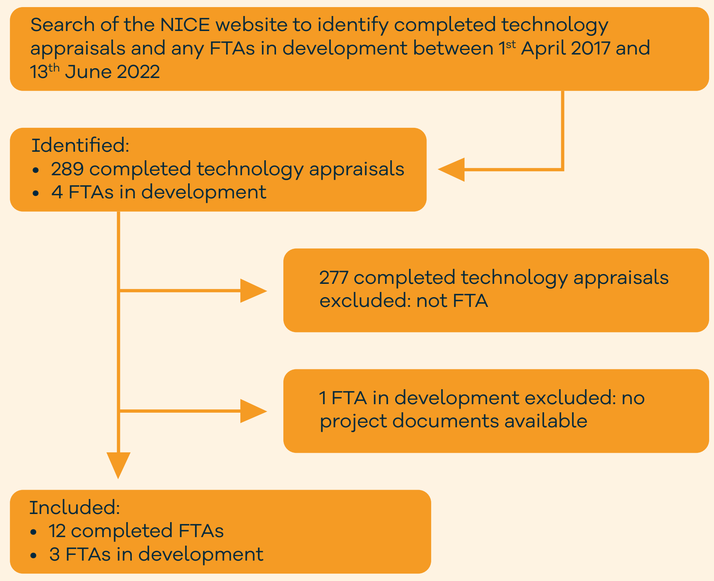
Results

A total of 289 completed technology appraisals were identified, of which 12 were FTAs (3-14). A further four FTAs in development were identified (15-18), of which three had final draft guidance available (15-17; Figure 1). The three FTAs in development that were reviewed have since been published. All 15 FTAs included a positive recommendation for the appraised therapy, either with or without restrictions. The conditions evaluated by FTA included wet age-related macular degeneration (n=2) and moderate-to-severe plaque psoriasis (n=4).

Only one FTA was eligible via the low ICER route (14); the remaining 14 appraisals were eligible via the cost comparison route. Of the 14 cost comparison FTAs, 10 involved an economic model and four involved a summary of annual drug acquisition costs (one also included drug administration costs). All 14 cost comparisons included the cost of drug acquisition, with nine cost comparisons only including drug acquisition cost. A summary of the data extracted on cost comparison methodology is presented in Table 1.

The focus of NICE committee discussions in the identified FTAs centred of the appropriateness of comparator selection (TA734 [9]) and the available evidence for short- and long-term equivalence of efficacy and safety (TA735 [8], TA521 [4], ID3898 [16]). The cost comparison analyses themselves were largely well received. The evidence review group (ERG) preferred longer time horizons in three appraisals (TA734 [9], TA671 [11], TA521 [4]) and updated the submitted analysis to include the cost of administration in two appraisals (TA486 [3], ID1399 [15]); however, the overall conclusion of these analyses remained unchanged.

Figure 1: Flow of included and excluded technology appraisals



Abbreviations: FTA, fast-track appraisal; NICE, National Institute for Health and Care Excellence.

Table 1: Data extracted on cost comparison methodology for included FTAs

Appraisal number	Therapy	Condition	Cost comparison or low ICER?	Overview of cost comparison approach	Key issues with the cost comparison identified during the appraisal
TA794	Diroximel fumarate	Relapsing-remitting multiple sclerosis	Cost comparison	No model developed; manufacturer supplied a summary of drug acquisition costs over a 1-year time horizon	None identified
TA778	Pegcetacoplan	Paroxysmal nocturnal haemoglobinuria	Low ICER	N/A	N/A
TA735	Tofacitinib	Juvenile idiopathic arthritis	Cost comparison	Markov model with 3-monthly cycles capturing drug acquisition and drug administration costs annually for 11- and 16-year-olds, and aggregated for 11–18-year-olds	Minor issues identified by the ERG around cost data used for subcutaneous and intravenous administration of the therapy
TA734	Secukinumab	Moderate-to-severe plaque psoriasis	Cost comparison	5-year model assessing response to initial treatment followed by treatment discontinuation. The model captured drug acquisition costs for initial treatments only	The ERG and NICE Committee preferred a longer model duration of 12 years (which covered the full time-horizon for the population under consideration, 6–17-year-olds). The ERG also preferred the inclusion of treatment costs post-discontinuation of initial therapy
TA723	Bimekizumab	Moderate-to-severe plaque psoriasis	Cost comparison	10-year model with health states for initial treatment period, maintenance period, no treatment and death. The model captured drug acquisition costs	The ERG carried out a number of scenario analyses and noted that the results of the manufacturer analysis were sensitive to assumptions around discontinuation of treatment
TA672	Brolucizumab	Wet age-related macular degeneration	Cost comparison	A lifetime (30 years) Markov model with health states for on-treatment, discontinued treatment, and death. The model captured drug acquisition, drug administration and resource use costs	Minor issues explored by the ERG around alternative dosing schedules
TA671	Mepolizumab	Severe eosinophilic asthma	Cost comparison	No model developed; manufacturer supplied a summary of drug acquisition and drug administration costs over a 1-year time horizon	The ERG explored a longer time horizon (10 years) and noted that the conclusions of the analysis did not change
TA596	Risankizumab	Moderate-to-severe plaque psoriasis	Cost comparison	10-year Markov model with health states for initial treatment period, maintenance period, no treatment, and death. The model captured drug acquisition costs	None identified
TA572	Ertugliflozin	Type 2 diabetes	Cost comparison	No model developed; manufacturer supplied a summary of drug acquisition costs over a 1-year time horizon	None identified
TA521	Guselkumab	Moderate-to-severe plaque psoriasis	Cost comparison	5-year model considering initial treatment, discontinuation after initial treatment, and long-term treatment. The model captured drug acquisition costs	ERG explored a longer time horizon (10 years), which the NICE Committee preferred
TA497	Golimumab	Non-radiographic axial spondyloarthritis	Cost comparison	No model developed; manufacturer supplied a summary of drug acquisition costs over a 1-year time horizon	None identified
TA486	Aflibercept	Choroidal neovascularization	Cost comparison	A lifetime (~25 years) model capturing drug acquisition costs	ERG explored the addition of administration costs within the analysis and noted that the conclusions of the analysis did not change
ID399 (TA803)	Risankizumab	Psoriatic arthritis	Cost comparison	10-year Markov model capturing drug acquisition costs	ERG explored the addition of administration costs within the analysis and noted that the conclusions of the analysis did not change
ID1399 (TA803)	Faricimab	Wet age-related macular degeneration	Cost comparison	A lifetime (25 years) Markov model capturing drug acquisition, drug administration costs, and resource use costs	Minor issues explored by the ERG around alternative dosing schedules
ID3899 (TA799)	Faricimab	Diabetic macular oedema	Cost comparison	A lifetime (25 years) Markov model capturing drug acquisition, drug administration costs, and resource use costs	Minor issues explored by the ERG around monitoring visits

Abbreviations: ERG, evidence review group; FTA, fast-track appraisal; ICER, incremental cost-effectiveness ratio; N/A, not applicable; NICE, National Institute for Health and Care Excellence.

Conclusion

A total of 15 FTAs (including three in development) were identified from this review, comprising 4% of completed technology appraisals during the period from 1st April 2017 to 13th June 2022 (12/289). The new cost comparison route aims to increase the speed of assessment for treatments with equivalent efficacy and safety compared with existing therapies, to provide earlier access for patients. The methods of cost comparison identified via this review remain relevant for future assessments, and manufacturers should carefully consider their approach to comparator choice, how both long-term and short-term equivalence of efficacy and safety are established, as well as the chosen methodological approach to the cost comparison.

For cost comparison, while a simple description of annual drug acquisition costs may be appropriate in some circumstances, consideration of a longer time horizon and the inclusion of other relevant costs may be considered appropriate by the ERG and NICE committee.

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ISPOR Europe 2022, 6–9 November 2022, Vienna, Austria

Abbreviations

ERG, evidence review group; FTA, fast-track appraisal; ICER, incremental cost-effectiveness ratio; N/A, not applicable; NICE, The National Institute for Health and Care Excellence.

(Stand No. X2-304)

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