From efficiency to equity: considerations in NICE technology appraisals

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HTA149

Introduction

- Equity in healthcare ensures that all individuals have access to resources, and care needed to achieve their highest attainable standard of health, by addressing systemic, social, and individual factors that drive health disparities, such as those arising from socioeconomic status, race, geography, or disability.[1,2]
- As healthcare systems aim to promote fair and inclusive access to health gains, equity is a growing priority in health technology assessment (HTA) frameworks worldwide.[3] Its incorporation in HTAs supports value-based decision-making, ensuring resources are allocated to maximize health gains while reducing unfair disparities.[4]
- The updated National Institute for Health and Care Excellence (NICE) guidance highlights the importance of incorporating health inequalities into technology appraisals (TA). Through a modular update NICE aimed to better "support initiatives that reduce health inequalities and help the most disadvantaged groups in society", emphasizing its intent to integrate consideration of equity into healthcare decision-making.[5,6]
- Understanding how equity is currently considered in HTAs can help identify methodological gaps and inform the development of more inclusive, value-based assessment frameworks.

Objective

- To explore the extent to which equity considerations are incorporated in NICE TA reports from the past year, as well as understand the methods used for this, including the presence of equity-related evidence, analyses, and committee deliberations.

Methods

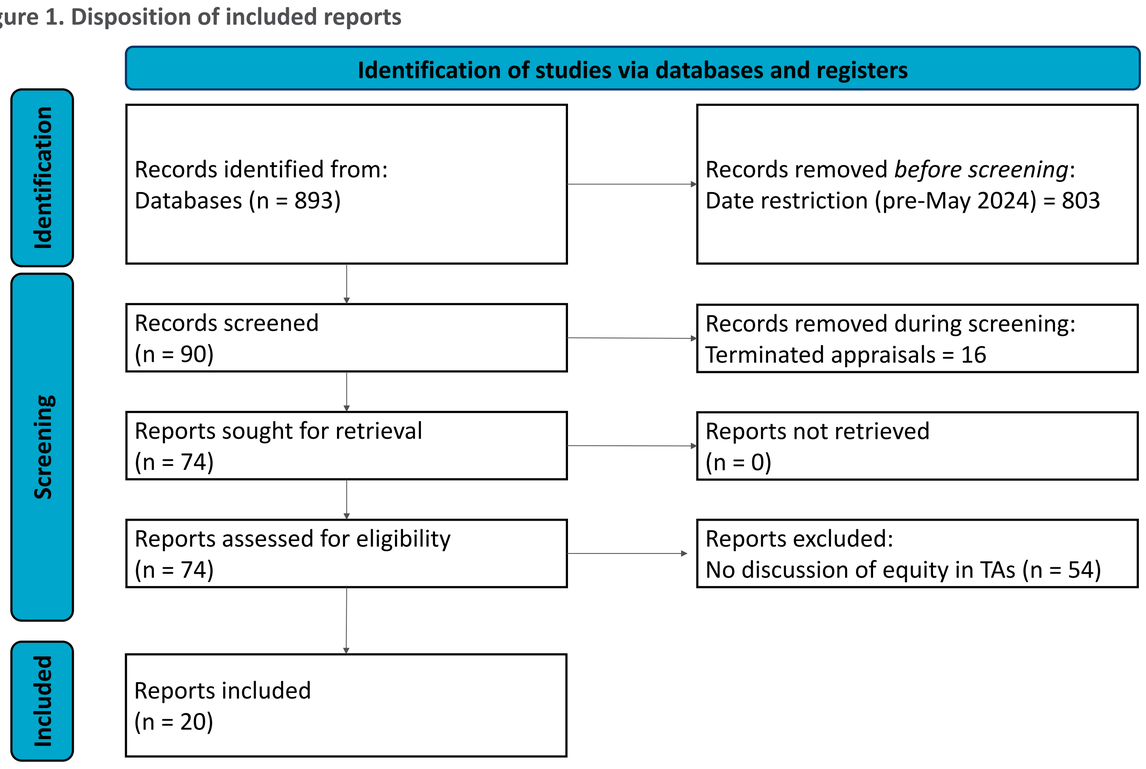
- A Scoping Review was conducted to explore how equity considerations are incorporated into NICE TAs and Highly Specialised TAs (HSTs). All completed appraisals published from 28th May 2024 to 6th June 2025 were eligible.
- Relevant documents were retrieved from the NICE website (https://www.nice.org.uk/guidance). A pre-specified data extraction form was developed to capture mentions of equity or health inequalities, description of any equity-focused analysis, and how equity considerations were reflected in committee discussions or final recommendations.
- Data were extracted by a single reviewer and independently verified by a second reviewer to ensure consistency and accuracy. Findings were narratively summarised to describe current practices and highlight gaps in the consideration of equity within NICE TAs.

Results

Included appraisals

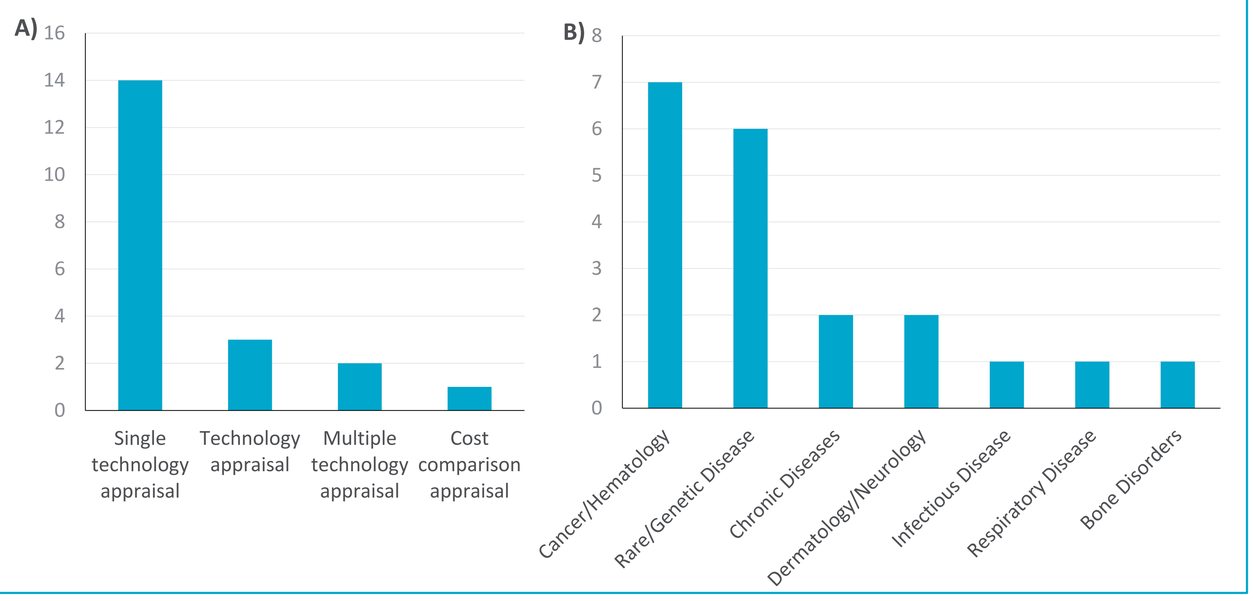
- A total of 90 TA and HSTs reports were published in the study period, of which equity considerations were explicitly described in just 20.[7-26] Furthermore, quantitative analysis was performed in only 2 of the included appraisals (**Figure 1**).[7-8]

Figure 1. Disposition of included reports



- Most of the included reports were single TAs (N=14, 70%).[7-20] Other types of report identified were HSTs (N=3, 15%),[21-23] multiple technology appraisals (N=2, 10%)[24-25] and cost comparison appraisals (N=1, 5%)[26] (**Figure 2A**).
- Most of the appraisals including equity considerations addressed cancer/haematology (N=7)[9,10,14-18] and rare genetic disorders (N=6)[7,8,21-23,26], with additional evaluations covering endocrine/metabolic, chronic, respiratory, dermatological/ neurological, and infectious diseases (N=7)[11-13,19,20,24,25] (**Figure 2B**).

Figure 2. Distribution of identified reports across A) report types and B) disease areas

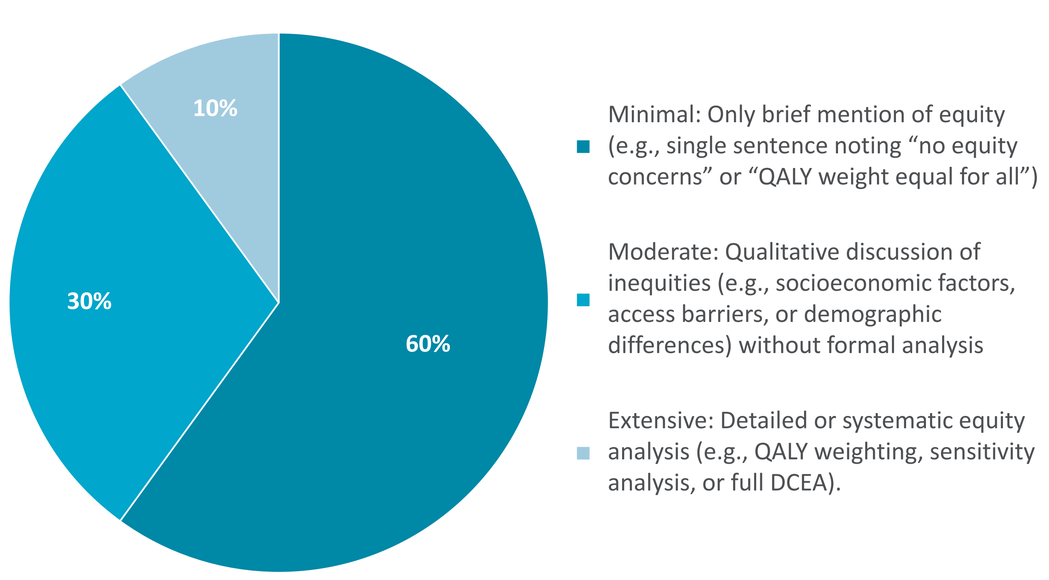


Results (continued)

Equity considerations

- Equity considerations across the included appraisals commonly highlighted socioeconomic disadvantages, regional variation in access to treatment, and disease-specific disparities, particularly for rare genetic conditions, chronic illnesses, and paediatric populations.
- Differences arose in the description of inequities, including treatment administration challenges, age- or gender-based eligibility, racial or ethnic bias, and caregiver burdens. While Quality Adjusted-Life-Year (QALYs) were generally weighted equally, several reports noted potential adjustments for long-term or uncaptured benefits (**Figure 3**).
- Reporting on equity was highly variable across appraisals, with differences in the level of detail, scope of factors considered, and whether patient- or system-level inequities were addressed.

Figure 3. Level of detail in the consideration of equity across included appraisals



Equity analysis

- In most of the 20 reports that describe some level of equity consideration, the outcome was either that there were no equity concerns, concerns were identified and discussed narratively, or concerns were explored qualitatively with findings not integrated with quantitative analyses[7-26]
- In the main cost effectiveness analyses applied the NICE reference case assumption that each additional QALY has the same weight regardless of the characteristics of the individuals receiving the health benefit. Thus, equity was not being modelled quantitatively (e.g. there was no weighting, stratified subgroup analyses, sensitivity analysis of DCEA conducted).
- A small number of appraisals explored alternative approaches, such as providing results with both unweighted and weighted QALYs or conducting sensitivity analyses for different patient groups.
  - Two reports (exagamglogene autotemcel therapy for sickle cell and beta thalassemia) outlined the conduct of a distributional cost-effectiveness analysis (DCEA) which stratified patient populations using the Index of Multiple Deprivation.[7,8]
    - QALYs were equity-weighted based on Atkinson social welfare functions, which includes inequality aversion. The company used an inequality aversion parameter estimate of 11, assigning greater value to health gains in more disadvantaged populations.
    - This allowed estimation of equity weighted QALY gains and opportunity costs across socioeconomic groups, highlighting how the intervention could reduce health inequity benefitting those from more deprived backgrounds most. This approach aligns with NICE's commitment to consider health inequalities in economic evaluations.
- Overall, the consideration of equity within quantitative modelling was limited and with variable depth, with most equity discussion occurring narratively rather than through formal analytic methods.

NICE considerations

- Most appraisals did not apply any additional QALY weighting or formal equity adjustments, which HTA committees acknowledged as consistent with the current NICE reference case, but also noted limits to its ability to quantitatively address health inequalities.
- Committees frequently noted that there was insufficient evidence to quantify or model equity impacts. Equity was discussed qualitatively often with a focus on treatment convenience, caregiver burden, or barriers to access rather than accounted for methodologically or with incorporation of data into quantitative analyses.
- Several condition-specific examples highlighted unique equity aspects, such as weekly Somapacitan dosing for growth hormone deficiency, oral treatment options for the management of symptomatic anaemia with Vadadustat, and the need to account for skin-color bias in assessing atopic dermatitis treatments such as Lebrikizumab.
- Overall, NICE recognised the importance of equity, but it was not systematically integrated into decision-making beyond existing severity or QALY modifiers.

Conclusions

- Less than a quarter of TA reports published over the past year mention equity, and only two applied quantitative methods to assess its impact.
- Most appraisals discussed equity narratively, focusing on socioeconomic, geographic, and disease-specific disparities rather than integrating them into cost effectiveness models.
- Quantitative analysis largely relied on standard assumptions that all QALYs are valued equally, with few examples of weighting or sensitivity analyses undertaken to allow for equity considerations.
- NICE committees acknowledged the relevance of equity, but with minimal systematic integration of equity factors into decision-making.
- Although recent NICE guidance reflects a growing commitment to addressing health inequalities, clearer methodological frameworks are needed to support the consistent inclusion of equity-focused analyses in future health technology assessments.
- Various methodological resources exist to guide the integration of equity in HTAs, alongside initiatives by HTA bodies like the 2023 white paper "Advancing HTA Methods that Support Health Equity" by the Institute for Clinical and Economic Review (ICER) which calls for the formal incorporation of equity in HTA processes rather than relying only on qualitative deliberation.[27-29]
- Findings from this review highlight gaps in the quantitative consideration of equity. Stakeholder engagement and the use of disaggregated data, modelling and scenario analyses can help capture how benefits and costs vary across subgroups. Transparent reporting and sensitivity analyses will further strengthen consistency in applying equity within HTA.

References

1. World Health Organization. Health equity. Available from: https://www.who.int/health-topics/health-equity#tab=tab_1; Accessed: 28/10/2025 **2.** Braveman P. Defining Health Equity. Journal of the National Medical Association. 2022;114(6):593-600. doi:https://doi.org/10.1016/j.jnma.2022.08.004 **3.** Cheng MY, Xie R, Chapman R, Lai TC. HTA93 A Systematic Literature Review on Incorporating Equity Considerations in Health Technology Assessment (HTA). Value in Health. 2023;26(6):S275-S276. doi:10.1016/j.jval.2023.03.2659 **4.** Diaby V, Ali A, Babcock A, Fuhr J, Braithwaite D. Incorporating health equity into value assessment: frameworks, promising alternatives, and future directions. J Manag Care Spec Pharm. Sep 2021;27(9-a Suppl):S22-s29. doi:10.18553/jmcp.2021.27.9-a.s22 **5.** NICE health technology evaluations: the manual. Available from: https://www.nice.org.uk/process/pmg36/resources/nice-health-technology-evaluations-the-manual-pdf-72286779244741; Accessed:28/10/2025 **6.** NICE. Health inequalities - an update to NICE's methods for health technology evaluation. Available from: https://www.nice.org.uk/news/blogs/health-inequalities-an-update-to-nice-s-methods-for-health-technology-evaluation; Accessed 28/10/2025 **7.** NICE. Exagamglogene autotemcel for treating transfusion-dependent beta-thalassaemia in people 12 years and over (TA1003). Available from: https://www.nice.org.uk/guidance/ta1003; Accessed 28/10/2025 **8.** NICE. Exagamglogene autotemcel for treating severe sickle cell disease in people 12 years and over (TA1044). Available from: https://www.nice.org.uk/guidance/ta1044/history; Accessed 28/10/2025 **9.** NICE. Pembrolizumab for treating relapsed or refractory classical Hodgkin lymphoma [Review of TA540] [ID5084]. https://www.nice.org.uk/guidance/ta967/evidence/committee-papers-pdf-13375063405; Accessed 28/10/2025**10.** NICE. Tisagenlecleucel for treating relapsed or refractory B-cell acute lymphoblastic leukaemia in people aged up to 25 years (MA review of TA554) [ID6290]. https://www.nice.org.uk/guidance/ta975/evidence/committee-papers-pdf-13426896925; Accessed 28/10/2025 **11.** NICE. Atogepant for preventing migraine [ID5090]. https://www.nice.org.uk/guidance/ta973/evidence/committee-papers-pdf-13423870765; Accessed 28/10/2025 **12** . NICE. Lebrikizumab for treating moderate to severe atopic dermatitis in people 12 years and over [ID4025]. https://www.nice.org.uk/guidance/ta986/evidence/committee-papers-pdf-13437126253; Accessed 28/10/2025 **13.** NICE. Abaloparatide for treating osteoporosis in postmenopausal women [ID882]. https://www.nice.org.uk/guidance/ta991/evidence/committee-papers-pdf-13483968877; Accessed 28/10/2025 **14.** NICE. Rucaparib for maintenance treatment of advanced ovarian, fallopian tube and peritoneal cancer after response to first-line platinumbased chemotherapy [ID5100]. https://www.nice.org.uk/guidance/ta1055/documents/committee-papers-2; Accessed 28/10/2025 **15.** NICE. Futibatinib for previously treated advanced cholangiocarcinoma with FGFR2 fusion or rearrangement [ID6302]. https://www.nice.org.uk/guidance/ta1005/evidence/committee-papers-pdf-13497724621; Accessed 28/10/2025 **16.** NICE. Quizartinib for induction, consolidation and maintenance treatment of newly diagnosed FLT3-ITD-positive acute myeloid leukaemia [ID4042]. https://www.nice.org.uk/guidance/ta1013/evidence/committee-papers-pdf-13551516397; Accessed 28/10/2025 **17.** NICE. Elranatamab for treating relapsed and refractory multiple myeloma after 3 or more treatments [ID4026]. https://www.nice.org.uk/guidance/ta1023/evidence/draft-guidance-consultation-committee-papers-pdf-13608633709; Accessed 28/10/2025 **18.** NICE. Selpercatinib for advanced thyroid cancer with RET alterations that has not been treated with systemic therapy [ID6132]. https://www.nice.org.uk/guidance/ta1039/documents/committee-papers-2; Accessed 28/10/2025 **19.** NICE. Vadadustat for treating symptomatic anaemia in adults having dialysis for chronic kidney disease [ID3821]. https://www.nice.org.uk/guidance/ta1035/evidence/committee-papers-pdf-15239391805; Accessed 28/10/2025 **20.** NICE. Linzagolix for treating moderate to severe symptoms of uterine fibroids. https://www.nice.org.uk/guidance/ta996/documents/674; Accessed 28/10/2025 **21.** NICE. Highly Specialised Technology Leniolisib for activated phosphoinositide 3-kinase delta syndrome in people 12 years and over [ID6130]. https://www.nice.org.uk/guidance/hst33/documents/committee-papers-2; Accessed 28/10/2025 **22.** NICE. Evaluation consultation document Burosumab for treating X-linked hypophosphataemia in children and young people. https://www.nice.org.uk/guidance/hst8/documents/evaluation-consultation-document-2; Accessed 28/10/2025 **23.** NICE. Highly Specialised Technology Olipudase alfa for treating NiemannPick disease types A and B [ID3913]. https://www.nice.org.uk/guidance/hst32/evidence/draft-guidance-consultation-1-committee-papers-pdf-15251289085; Accessed 28/10/2025 **24.** NICE. Ivacaftor–tezacaftor–elexacaftor, tezacaftorivacaftor and lumacaftor–ivacaftor for treating cystic fibrosis. https://www.nice.org.uk/guidance/ta988/documents/674; Accessed 28/10/2025 **25.** NICE. Therapeutics for people with COVID-19. https://www.nice.org.uk/guidance/ta878/documents/final-appraisal-determination-document; Accessed 28/10/2025 **26.** NICE. Somapacitan for treating growth hormone deficiency in people 3 to 17 years [ID6178]. Available from: https://www.nice.org.uk/guidance/ta1066/evidence/committee-papers-pdf-15363685981; Accessed 28/10/2025 **27.** Benkhalti M, Espinoza M, Cookson R, Welch V, Tugwell P, Dagenais P. Development of a checklist to guide equity considerations in health technology assessment. Int J Technol Assess Health Care. Jan 25 2021;37:e17. doi:10.1017/s0266462320002275; **28.** Culyer AJ, Bombard Y. An equity framework for health technology assessments. Med Decis Making. May-Jun 2012;32(3):428-41. doi:10.1177/0272989x11426484 **29**. ICER. Advancing Health Technology Assessment Methods that Support Health Equity. Available from: https://icer.org/wp-content/uploads/2022/07/ICER_Advancing-Health-Technology-Assessment-Methods-that-Support-Health-Equity_040523.pdf; Accessed 28/10/2025