‘It’s All About Layers’: Painting The Picture Of Health Inequalities For Health Technology Assessment

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INTRODUCTION

Health inequalities are considered “often avoidable and unfair differences in health between different groups within society” [1]. The impact of new health technologies on health inequalities is one of many ‘value’ considerations that should be considered during the health technology assessment (HTA) process. HTA bodies, such as the National Institute for Health and Care Excellence (NICE), are beginning to take more steps to address the impact of health inequalities on decision-making in the healthcare system [2].

However, NICE does not clearly define how health inequalities should be valued or how much weight should be placed on inequalities during the decision-making process [3]. In some appraisals, it is unclear whether health inequalities contribute to the final decision at all. A 2024 statement by NICE provides some guidance on quantitative methods for capturing health inequalities in HTA, but it is not clear how this will affect decision making [4].

The objective of this study was to:

- Describe and evaluate potential methods to capture the impacts of health inequalities that could be used in UK HTAs.
- Summarise a range of stakeholder views on health inequalities in HTA.
- Make recommendations for current and future policy or research objectives relating to health inequalities in HTAs in the UK.

METHODS

Part One:

We conducted a pragmatic literature review, focussed on the available methods that can be used to incorporate health inequalities into health economic evaluations. The benefits and limitations of the methods were also extracted, summarised and critiqued.

Part Two:

We conducted a series of stakeholder engagements, including interview sessions and a workshop. Stakeholders were recruited from a range of organisations related directly or indirectly to health care in the UK, including NICE, charity representatives, government organisations, and academics.

RESULTS

The pragmatic literature review identified five methods of incorporating health inequalities into economic evaluations, beyond the standard deliberative approach (Table 1). Each had various strengths, weaknesses and ranges of practicality. Aggregate distributional cost-effectiveness analysis (DCEA) and a more qualitative multi-criteria decision analysis (MCDA) were likely to be most applicable and useful for NICE current processes [5,6]. Equity-based weighting (EBW) is currently applied in other circumstances, such as to account for severity, although it remains simplistic in nature compared with alternative methods. Figure 1 summarises the key outputs from the stakeholder engagement exercise.

Figure 1: Key outputs from stakeholder interviews

A deliberative process should be fundamental to decision making, with quantitative analysis used to supplement any deliberation, not to overrule deliberation.

Generalisability, ease of interpretation, and comparability of quantitative methods are the most important factors when considering new methods for decision making.

It is important to understand the value that society places on health gain in disadvantaged groups. Such insights can inform any development of methods.

Health inequalities are often overlooked or not properly understood in committee discussions.

Table 1: Identified approaches for health inequalities

	EBW	ECEA	DCEA*	MCDA	MP
Approach to inequality fully incorporated into CEA?	Yes	No	No	No	Yes
Can it explicitly measure the extent to which healthcare outcomes are distributed across groups?	No	Yes	Yes	Yes (if included as MCDA criteria)	No
Method for incorporating inequality	Weights outcomes by derived factor	Derives distributional financial risk protection outcomes	Derives distributional cost-effectiveness and inequality impact	Weightings assigned to every decision aspect, with each given a score to rank multiple strategies; can be done more qualitatively	Constraints included as part of the analysis to optimise
Need to modify CEA?	Only to apply new weighting	Yes	Yes, if aggregate	No	Yes
Impact on CEA outcomes?	Re-weighted for adjustment factor	Distribution of cost assessed across subgroups	Distribution of costs, QALY and QALE assessed across relevant subgroups	Unchanged	Change dependent on constraint included
Inequality-adjusted evaluation outcome?	ICER	ICER & extended criteria outcomes, usually financial risk protection	ICER, inequality measure and/or SWF	Score or rank overall and for each criteria	ICER or specific optimisation objective
Criteria for decision making	WTP threshold	WTP threshold	WTP threshold given inequality aversion parameter	Highest rank or score out of available interventions	WTP threshold or optimisation objective

* aggregate or conventional DCEA
Abbreviations: CEA – cost-effectiveness analysis, DCEA – distributional cost-effectiveness analysis, EBW – equity-based weighting, ECEA – extended cost-effectiveness analysis, ICER – incremental cost effectiveness ratio, MCDA – multi-criteria decision analysis, MP – mathematical programming, QALE – quality-adjusted life expectancy, QALY – quality-adjusted life year, SWF – social welfare function, WTP – willingness-to-pay

KEY RECOMMENDATIONS FOR NICE

CLARITY

- Make clear how health inequalities are values in decision making.
- The appraisal template should be updated to indicate which type of analysis would be useful to provide in the context of health inequalities.

ENGAGEMENT

- Engage with companies on the feasibility of DCEA.
- Research societal preferences for health gain in disadvantaged populations to inform either EBW or DCEA.

CONSISTENCY

- Offer training to decision makers to improve understanding of health inequalities.
- Implement qualitative aspects of MCDA to better guide the deliberative process.
- Apply EBW consistently.

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