



## The use (or rather the non-use) of cost-effectiveness data in priority setting decisions – are we underestimating the barriers to using health economics in real world priority setting decisions?

Comment on “Use of cost-effectiveness data in priority setting decisions: experiences from the national guidelines for heart diseases in Sweden”

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### Abstract

After having practicing and researching health economics for nearly 15 years now, it has become clear to me that the use of cost-effectiveness data in priority setting decisions is rather a rare than a common practice. The Eckard *et al.* article though, describes a wonderful exception to this rule and a very good example of how it can be used when the conditions are right. However, do we fully understand what these conditions are? In this commentary article I will address some of the institutional and cultural conditions that need to be fulfilled in order for cost-effectiveness data to actually be used in priority setting decisions.

**Keywords:** Health Policy, Cost-effectiveness, Priority Setting

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### Introduction

Despite the large production of cost-effectiveness data worldwide, today it is fascinating that we know and understand so little about the actual use of health economic evaluations among the intended audience – the medical decision-makers. What happens after a health economic evaluation has been produced? Will it be used at all and, if so, how? Who uses economic evaluations and for what purposes? Are there differences in the use patterns between decision-makers at different healthcare levels? Are decision-makers able and willing to use them, and to what extent can the patterns be explained by contextual issues?

Quite a few researchers have tried to address these questions in systematic literature reviews (1–10) over time. All reviews conclude that a health economic evaluation seldom is the decisive factor behind decision at regional or local level but sometimes on a national level. Whether the technology (predominately pharmaceuticals) should be reimbursed or recommended or not is decided by an independent committee and many times done in an explicit way (11). These reviews indicate that health economic evaluations primarily are used as grounds for decisions on reimbursement status or treatment guidance at a national level, and often in connection with authorities' assessment of current and new technology in healthcare, like in the case provided by Eckard *et al.* (12). Yet, the great majority of priority setting decisions is taking place at the regional and local level under less formalized

conditions.

Having studied real world pharmaceutical priority setting on national, regional and local level in Sweden and internationally for several year, the conclusion reached in my doctoral thesis was that there are a few contextual conditions that need to be fulfilled in order for cost-effectiveness data to be incorporated into any part of priority setting. These conditions are as following; 1) lack of budget restrictions, 2) fit between data and decision-making rules legitimate to be used by decision-makers to reduce uncertainty, 3) demand for transparency, 4) internal and external institutions, and 5) existence of a prevailing template for how to incorporate (13). This framework will be used to analyse the results derived from Eckard *et al.* (12).

### Budget restrictions

The occurrence of budget restrictions is suggested to limit the use of cost-effectiveness data as few such evaluations inform decisions like how to optimize the budget on a healthcare department level. Due to its ability of enlighten healthcare managers with an estimated expenditure for an intervention (based on the expected unit cost and volume), budget impact analyses are speaking directly to affordability, the chief concern of health managers everywhere, and a shortcoming of formal health economic evaluations. This observation is confirmed by the case of the national guidelines for heart diseases illustrated by Eckard *et al.* (12), as the priority

setting group did not have any budget restriction to take into consideration and cost-effectiveness data was used in the priority setting.

### Decision-making rules used to reduce uncertainty

Decision-making rules refers to the methods used to remove or reduce uncertainty and the need for structure in the priority setting process. When observing formulary committee members prioritise the pharmaceuticals to include in a formulary, I noticed quite soon that there was a connection between the strategies used to handle uncertainty and the use of cost-effectiveness data (13). A number of strategies were implemented in order to handle uncertainty; privileging one source and excluding others, delaying decisions (i.e. postponing decisions to a later meeting), delegating the decision to the prescribing physicians, calibration (standardise different sources), and sequential decision-making (considering different evidence at different points in time) and sequential decision-making. Cost-effectiveness data increased in importance when the calibration strategy was implemented since this was data that could be included in meta-analyses and fitted the desired strategy to reduce uncertainty. Of course it is impossible to judge if it was the data available that influenced the preference for strategy to reduce uncertainty or vice versa, but there seems to be an interdependency at hand that is worthwhile looking closer into. Also, in the Eckard *et al.* (12) article this link between reducing uncertainty and use of cost-effectiveness data was observed.

### Transparency

When there is a demand for transparency in priority setting, it is suggested to increase the probability that health economic evaluations are used due to its relative applicability compared to other decision criteria (13). The most prominent health technology assessment agencies globally, in terms of using cost-effectiveness data, interestingly share the common feature that their decision-making process is relatively transparent and influenced by the theoretical framework "Accountability for Reasonableness" (A4R). According to this framework, fair and legitimate processes must fulfill the four conditions of publicity, relevance, revisions and enforcement (14). This framework is based on the ideas of democratic deliberation.

The publicity criterion is perceived as a guarantee for patterns to evolve in the priority setting. By informing stakeholders who are affected by the decisions, in a way which increases the understanding of the motives of the decision, the acceptance of the outcome is suggested to increase. Consequently, this transparency is thought to lead to the development of "case laws", i.e. like cases will be treated in a similar way. Why cost-effectiveness data is used particularly in those priority setting situations where there is demand for transparency may be explained by the relative simplicity of applying cost-effectiveness compared to principles such as need and solidarity. Like National Institute for Health and Care Excellence (NICE) and TLV (the Swedish Dental and Pharmaceutical Benefits Board), the National Board of Health and Welfare is adapting transparency of priority setting in a similar way so fits nicely with previous experiences that cost-

effectiveness data is also used in decision-making.

### Internal and external institutions

Internal and external institutions are the taken-for-granted assumptions that prevails in an organisation and part of the tacit or explicit knowledge around the values (for instance the relative importance of decision criteria), or the professional norms, underpinning the organisation or individuals influences the use through the rationalities and archetypes prevailing in the organisation. In organisations, or situations, when medical decision-makers do not base their decision on evidence, the use of cost-effectiveness data, by default, will be extremely limited. A fundamental pre-condition for use would be a preference for the rational decision-making style. If this is the case, the battle among the professions will center around what kind of information is legitimate and rational to use. Having studied priority setting from the inside observing the decision-makers in real life over time it becomes soon quite evident that different professions have their own standards and ideals they try to transfer to the organisations they belong to. However, in most organisations it is possible for multiple rationalities to co-exist and particularly so in priority setting groups. So in order to maximize the benefit for all parties involved and allowing these different standards to co-exist, maybe it is very rational to use different information in different phases of decision-making? In the case of Eckard *et al.* (12), the co-existence of multiple rationalities was identified as well, confirming that health economists have reached the point of being considered as a profession and thus cost-effectiveness data is legitimate to use in healthcare priority setting as long as there is someone there who has been legitimately assigned (a health economist) to translate and explain what it means and how it should be used. The constant reinforcement of including cost-effectiveness data in priority setting illustrated in the latter case also legitimized the health economist attending as a representative of a profession of importance.

### Prevailing templates

In New Institutional Theory it is assumed that organisations are organised by their managers in accordance with the prevailing template in their field (15). This means that they mimic other organisations to retain legitimacy (isomorphism). Isomorphism results from both formal and informal pressure exerted on a weaker organisation by another stronger party which it is dependent upon, between two parties. The mimicking organisation aim at gaining some of that success, and hence legitimacy, by imitating the more successful organisation. In the case of the National Board of Health and Welfare, the agency share a common template for successful Health Technology Assessment (HTA) with other Swedish national authorities such as TLV and SBU (The Swedish Council of Health Technology Assessment) although these three national authorities have different areas of responsibility. All three Swedish authorities are guided by a national framework for priority setting which stipulates that the cost-effectiveness principle among other principles should form basis for priority setting decisions. So, in the Eckard *et al.* (12) case, there were clear instructions that cost-effectiveness data should be part of the consideration and

also other prevailing templates for how to incorporate such data into decision-making, thus legitimating the use of cost-effectiveness data.

Using this framework for understanding the conditions at hand influencing a positive uptake of cost-effectiveness data in the research of Eckard *et al.*(12), it becomes clear that the key conditions for use in this priority setting context were: 1) clear goals and instructions that cost-effectiveness was a key principle for decision-making, and 2) the existence of a health economist who could understand and disseminate the cost-effectiveness data to all the decision-makers in the group, help explain and translate the cost-effectiveness message and relevance into a language that made sense to those making the decisions.

### The definition of use of cost-effectiveness data

Measuring the use of cost-effectiveness data presents a number of challenges for the researcher as there is no generally accepted definition of the use of health economic evaluations. So far the use has been suggested to be defined as dissemination, recognition, understanding and/or utilising (1). Based on empirical research of the British National Health Service (NHS) decision-making, Williams (16) suggests use being defined rather as a matter of requesting, accessing, interpreting or implementing economic evaluations. Based on my own previous research of the use (13), I strongly believe the use may also be defined accordingly to the purpose of the use and consequently the phase of the priority setting process, i.e. preparation of the decision-making, hearing of expert comments/evaluation of evidence, actual decision-making and post-decision communication (rationalisation). Taking these different aspects of use into the consideration, maybe cost-effectiveness data is not rarely used any more even though it might not be used for rationalisation purposes. So the conclusion is that for cost-effectiveness data to be further used in priority setting decisions, 1) we health economists need to be pragmatic and accept the use as legitimate even though the data might not be used for legitimising decisions to the public, and 2) for decision-makers responsible for designing priority setting process to make sure the conditions discussed are fulfilled to enable the use of cost-effectiveness data in real life.

### Ethical issues

Not applicable.

### Competing interests

Author declares that she has no competing interests.

### Author's contribution

STE is the single author of the manuscript.

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