

‘Cost effectiveness’ analysis and the ‘societal approach’: should the twain ever meet?

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Abstract

When carrying out economic evaluations, health economists almost invariably subscribe to the ‘societal perspective’, even for cost-effectiveness analysis (CEA). However, the theoretical roots of cost effectiveness are in production theory; it is the point of tangency between an isocost and an isoquant. In this context, there is no role for a societal approach to CEA, and, in this paper, we argue why this is the case.

First, we detail what is meant by the societal perspective. Then we review what we call ‘textbook’ CEA, from the point of view of organising the inputs to production in the most efficient manner, and argue that there is no role for the societal perspective in this type of CEA. We find there is a divergence between the societal CEA and this textbook CEA. We use a simplified example to illustrate the consequences of taking a societal perspective in a CEA. In particular, we highlight the fact that allocative issues arise in the context of societal CEA. Then we outline the arguments regarding the importance of the divergence between societal and textbook CEA. It is argued that CEA cannot (on its own) address allocative efficiency, and that the only technique that can is cost-benefit analysis (CBA). We advocate a return to having the efficiency question to be addressed drive the method of economic evaluation, recognising that the use of CBA does not necessarily require full monetary valuation of benefits.

1. Introduction

When carrying out economic evaluations, health economists almost invariably subscribe to the ‘societal approach’, even for cost effectiveness analyses (CEAs). This focus on the societal perspective is present both in economic evaluation guidelines, which recommend what should be done, and also in what studies have actually done in practice (or at least what they say they do).

For example, in their book on cost-effectiveness in medicine and health care, Gold *et al.* (1996, p99) state:

“...we concluded that the societal perspective is the appropriate one for decision making concerning health care resources in the public interest.”

Although the Canadian Guidelines for the conduct of economic evaluation are not prescriptive about which type of economic evaluation to undertake, they do say that :

“All studies should report from a comprehensive societal perspective.” (Torrance *et al.*, p538).

Byford and Raftery (1998) also insist that all economic evaluations, undertaken in the context of the United Kingdom’s National Health Service, should take a societal perspective.

Recent examples of actual CEAs which take the societal perspective, or at least claim to, are as follows:

“This economic assessment was carried out from a societal perspective. Such an approach is considered to be more broad, and to be the most appropriate for health authorities. Given that the effectiveness of the alternatives compared can be measured in the same (natural) units, a cost-effectiveness analysis was employed.” (Tiendra *et al.*, 1997, p195)

“Cost-effectiveness, cost-utility and cost-benefit analyses were performed from the societal perspective and the perspective of any provincial health department.” (Evans *et al.*, 1997, p566)

In this paper, we argue that taking a societal approach to CEAs is unwarranted and perhaps incorrect. The contents are organized in the following way. In the next

section, we detail what is meant by the societal perspective. In section three, we review what we call ‘textbook’ CEA from the point of view of organizing the inputs to production in the most efficient manner, and argue that there is no role for the societal perspective in this type of CEA. We find that there is a divergence between the ‘societal’ and this ‘textbook’ CEA. Also in this section, we use a simplified example to illustrate the consequences of taking a ‘societal’ perspective in a CEA. In particular, we highlight the fact that issues of allocative efficiency arise in the context of a ‘societal’ CEA. The next section outlines our arguments regarding the importance of this divergence. We will argue that CEA cannot (on its own) address allocative efficiency and the only technique that can is cost-benefit analysis (CBA). Then we outline our proposed alternative approach to economic evaluation in health care. This involves bringing the study question to be addressed back to the forefront when deciding on the method of analysis, recognizing that the use of CBA does not necessarily require full monetary valuation of benefits, and rather viewing CBA as a decision making framework to “focus public decisions properly” (Gramlich, 1997).

2. What do we mean by the ‘societal approach’?

Broadly speaking, the term ‘societal approach’ is used to emphasize that economic evaluations should take into account all the costs and benefits associated with an intervention, no matter who bears the costs and who gains the benefits (Boyle *et al.*, 1983). This societal perspective allows for the possibility of considering issues of allocative efficiency: whether to allocate resources to one use (for a certain group of patients) at the expense of another use (for another group of patients). With consideration of allocative issues, one must also confront distributional questions as there is explicit recognition that the benefits to the ‘gainers’ come at the expense of the benefits foregone by the ‘losers’.²

Thus, the societal perspective means including costs falling not only on health services (such as inpatient, outpatient and primary care) but also those falling on other public

² The emphasis on adopting the societal approach may also be partially motivated by the consideration of avoiding cost shifting as opposed to cost effective uses of societal resources. As Byford and Raftery (1998) point out, “A societal perspective helps detect cost shifting between sectors”. However, it may

sector budgets (such as provision of home care and social support) as well on patients and carers themselves (Farrar and Donaldson, 1996). Gold *et al.* (1996) would add to these costs those resulting from lost production although this issue is still under debate in the literature.³ Despite the fact that much of the discussion about the societal perspective takes place in the context of discussions of this productivity debate (Drummond *et al.*, 1997), for the purposes of this paper it is not relevant - the issue of the societal perspective goes beyond the inclusion or not of lost productivity.

3. Textbook CEA and its conflict with the societal approach

3.1. 'Textbook' CEA

Traditionally, CEA does not take account of a societal perspective, or any explicit perspective at all for that matter (Sugden and Williams, 1978). The term 'cost-effectiveness' has a very specific meaning in economics. It has to do with organizing the inputs to production in the most technically efficient way, and choosing that combination of inputs which minimizes the costs of production. That is, it relates to the identification of the point on an isoquant which is tangential to an isocost line; the point at which the inputs (or cost) of achieving a particular level of output are (is) minimized (Pearce, 1992). The context is purely that of a production process.

All that the firm is concerned with in this situation is the cost of resource inputs used in that production process. Other (societal) considerations are dealt with elsewhere, through the preferences of consumers. For example, a firm will not be concerned with costs to consumers when pursuing cost-effectiveness in production.⁴ These costs will be weighed against other considerations (or aspects of utility) when potential customers decide whether or not to consume the product in question. Of course, other considerations would include welfare effects, such as health and production gains (or

not necessarily be the case that cost shifting will be detected even when the societal perspective is taken. It depends upon how exactly the cost and benefit data are aggregated and presented.

³ See Gold *et al.* (1996), Olsen and Richardson (1999) and references contained therein for more on the ongoing debate about the inclusion of productivity costs in economic evaluation.

⁴ Of course, a firm may take such considerations into account when deciding where to locate. For example, the firm may decide that, if it locates too far away from consumers just to achieve lower costs of production, this may result in less sales. Therefore the firm may move closer to consumers which will result in higher production costs. However, whichever location is chosen will depend on the costs of getting the products to the consumers, and such transport costs should be taken into account as an input to production of the final product.

avoidance of production loss). All of these other considerations are part of the allocative decision. That is, in influencing the consumer's decision on whether or not to purchase, they consequently influence the amount of society's resources to be allocated to the production of the commodity in question.

In some respects, the health economics literature plays lip service to this textbook approach to CEA. For example, the literature often introduces CEA as a method for addressing the following types of questions:

- What is the least cost way of achieving a given output (or goal)?⁵
- Can the same level of output be achieved with less of one input?⁶
- What is the best way of spending a given budget?⁷

In designing CEAs to answer such questions in health care, it is important to point out two things. Firstly, CEA, in this context, does not involve comparisons of groups of patients with different types of diseases. If a less costly way of achieving a given health improvement can be found, this can just be substituted for the previous form of care. The same group of patients is treated by whichever is the more cost-effective intervention. Secondly, CEA will not involve consideration of whether a budget allocated to the treatment of a given group of patients (or within the population) should be expanded. If such a budget were expanded, the resources would have to come from some other activity which (contradicting the first point in this paragraph) will involve comparisons of groups in terms of whether the gains to be had by expanding the budget are greater than those to be had by using the resources elsewhere.

Therefore, expanding on the question listed in the first bullet point above, although it is often not stated in full, CEA is really about answering the question of “what is the least

⁵ In the textbook approach, this goal or output would be the production of a specific product, or commodity. In CEA in health care we are often talking about some given level of “health”, such as a life year or a QALY, which is derived from the product “health care” (including prevention and health promotion) and whose demand is derived from a demand for “healthy days” which help one to achieve broader utility-based objectives. This, in itself, is a big issue which will not be dealt with to any great extent in this paper. Weinstein and Stason (1977) say that the underlying premise of CEA is that, “..for a given health-benefit goal, the objective is to minimize the cost of achieving it.”

⁶ Strictly, an issue of technical efficiency, but one which is addressed under the guise of CEA, as the two concepts are, of course, related (Gravelle and Rees, 1992).

⁷ A role identified by, amongst others, Johannesson and Jonnson (1991).

costly way of achieving a given outcome for the same group and without expanding the given budget?”

3.2. Where does ‘societal CEA’ lead us?

The conflict between the ‘societal’ approach and the ‘textbook’ approach comes with respect to the narrowness of what the latter allows to be counted in the CEA. For example, patients’ costs (the equivalent of costs to the consumer in the textbook approach) would be excluded using the textbook approach but included using the societal approach to CEA. Which is correct?

To help answer this, consider a simplified example: the case of day hospitals versus inpatient care for frail elderly people. Assume that these interventions are equally effective and that, when considering hospital and other public sector inputs, the day hospital is less costly. Thus, the day hospital would be judged to be the more cost-effective option, under the ‘textbook’ view of CEA. No groups are compared; the same group of frail older people gets cared for, the question being just a matter of how.

However, the day hospital will also have greater patient and carer costs associated with it, as its patients are maintained at home. These costs are more likely to matter if, by taking them into account, a different result emerges, i.e., that day hospitals now become more costly overall. But what would this result mean? If the view is maintained that the more efficient option can simply be substituted for that which is less efficient, inpatient beds would now be chosen.

As a result of this, however, more inpatient beds would have to be reserved for frail elderly people, using more health care resources, than would have been the case by taking the narrower perspective. The opportunity cost of this, however, would be the benefits foregone from not having these extra health care resources put into some other beneficial use. Thus, the question becomes one of whether it is *worthwhile allocating* those (health care) resources to frail older people or to some other group of

patients. This contravenes our definition of CEA from above, in that groups are now being compared. It is not just the case of a less costly method, in societal terms, simply being substituted for that which is more costly. The CEA technique is not able to judge the worthwhileness of this use of resources. And furthermore, if a decision maker interprets the results of a ‘societal CEA’ incorrectly and simply chooses the inpatient option, this crucial allocative aspect of the decision, is obscured.⁸ In addition, the distributional aspects of the decision are not taken into account. An *implicit* decision is made that the best use of resources is to allocate them to this group of frail elderly at the expense of any other potential patient group, without actually thinking through the allocative and distributional issues inherent in this resource allocation decision.

Questions of ‘worthwhileness’ and deciding on how many resources to allocate to different activities for different groups of people are the preserve of CBA. Johannesson and Jonsson (1991) point out that:

“[i]t is not possible with [CEA] to determine whether a treatment is profitable to society or not.”

and furthermore that,

“[i]f one alternative has a higher cost-effectiveness ratio than another but offers better effects, the choice between these alternatives cannot be made simply on the basis of cost-effectiveness analysis, but some decision criterion has to be introduced.”

3.3 Examples from the literature

It is difficult to identify situations where the inclusion of patients’ and carers’ costs would have changed the conclusion of an evaluation. This may lead some to argue that this distinction between ‘textbook’ and ‘societal’ perspective is not relevant. However, there are studies in which the inclusion of patient/carer costs has changed substantially the relative costs of the interventions evaluated (Sculpher *et al.*, 1992). It has also been admitted that the inclusion of such costs could potentially change the rankings presented in the cost-per-QALY league tables:

⁸ Alternatively (and maybe more likely) the decision maker will make ‘no decision’ and stick with the day hospital because it is less costly to his/her organization. In the process, he/she may have become bewildered by economic evaluation, thinking “I thought this CEA would allow me to choose the less costly method without harming anyone’s health!”

“The possibility that some of the rankings might be changed had private costs been included cannot be ruled out.” (Williams, 1985)

Baladi *et al.* (1998) in their assessment of the adherence to the Canadian economic evaluation guidelines make the following comments on perspective:

“In some studies, such as those dealing with the treatment of schizophrenia, there were qualitative discussions on the implications of adopting a societal perspective. In these studies, indirect costs and patient-borne costs could be substantial.”

“It is believed that in only the studies dealing with the treatments of schizophrenia, would a less comprehensive perspective than the societal one have substantially altered the results because of the probable importance of indirect cost associated with the disease.”

Gerard (1992) has shown that cost-per-QALY league tables contain the results from studies, some of which include and some of which exclude patient costs, which could potentially have an influence on an intervention’s league position.

With respect to the inclusion of production costs avoided, studies have shown that this can lead to an alternative which was less costly, when considering health service costs only, becoming more costly when the averted production costs are included (Evans *et al.*, 1997, Liem *et al.*, 1997). Given that this alternative was also more effective, from the health service perspective, the alternative was cost-effective, according to the textbook definition. However, taking the societal perspective results in it being more costly and more beneficial, which leads to questions of the amount of resources which should be put into this activity: a question for CBA.

Therefore, it would seem that to include broader societal costs in a CEA does conflict with the textbook approach and that, even at the level of practical application of CEA, inclusion of such costs will often result in the question being addressed being one of allocative efficiency. Societal CEAs are addressing allocative questions (often implicitly), and what is called for is really CBA where the allocative decision can be addressed explicitly.

This has been recognized to an extent by Drummond *et al.* (1997, p117) who state that:

“The issue would be one of whether alternative (or broader) viewpoints would change the kind of results that merely a health care cost comparison would give.”

However, Drummond *et al.*, despite recognizing the importance of perspective, do not go on to state explicitly that if the inclusion of such viewpoints does make a difference, then the study moves out of the realms of CEA and into those of CBA.

The argument we present is similar to that made by Gerard and Mooney (1993) who state that, given that the measure of benefit in CEA is health-specific, the opportunity cost of health care resources being used in one way manifests itself in terms of health foregone in other potential uses of those resources. Once non-health costs (such as production and patients’ costs) are introduced, non-health benefits should be too. If non-health benefits are not included, then health costs only are relevant. Our argument echoes this, and expands it slightly, as we contend that it should be public sector costs, the costs of the inputs to the production process, which should be considered in the narrow perspective ‘textbook CEA’.

4. Where do we go from here?

4.1. Does it matter?

If the points made in this paper do not matter, then one answer to the question of where do we go from here is just to carry on as before. Indeed, Gold *et al.* (1996) justify their exclusion of CBA (on the basis that its monetary valuation of health outcomes is offensive to some) by pointing out that according to Phelps and Mushlin (1991):

“...CEA offers much the same information. Often the two techniques will lead to similar or identical decisions concerning the allocation of health resources, so the distinction may be more important for the sake of appearance than for its practical consequences.”

However, our contention is that the points made do matter. Ruling out the use of CBA does not rule out the need for CBA – that is, the need to address allocative questions. In fact, it seems that CEA is currently being asked now to handle both

types of questions: those of technical and of allocative efficiency. This is reflected by the recent efforts of many authors to give CEA a theoretical basis in welfare economics (Johannesson, 1995; Gold *et al.*, 1996; Garber and Phelps, 1997; Meltzer, 1997; Garber, 1999).

However, asking CEA to play both these roles creates confusion. The ‘textbook’ CEA is relatively simple for users of economic evaluation to interpret, and generates relatively simple ‘decision rules’. If a new treatment is shown to be more cost-effective than that which currently exists, then the new treatment may simply be substituted for existing care. The same group of patients will be treated, it is just a question of by which means.

On the other hand, it seems very responsible to say that a study will take a societal perspective. However, as we showed, the introduction of the societal viewpoint can change the startling simplicity of textbook CEA. If the use of this perspective changes the results of the simple form of CEA, allocative questions will be raised. These are inherently more difficult to answer because they involve comparison of groups with respect to whether (and how many) resources should be allocated to them. As Mishan (1981) says, “The difficulties that now beset the economist arise from the general interrelationship of valuation and distribution.” The information produced by such ‘societal’ CEAs can no longer be used in a strict CEA framework. There is no clear decision arising from these types of CEA. In the best case scenario, they provide information which can be fed into the allocative decision to be made. In the worst case, the decision maker applies the simpler decision rule of ‘textbook’ CEA even if a broader ‘societal’ CEA was undertaken, thinking that programs which authors of papers declare ‘cost effective’ should be automatically implemented. The new ‘cost-effective’ form of care is substituted for the existing care; the allocative aspect (i.e. that some other group of patients will lose out) being missed or ignored. Clearly, saying that an intervention is ‘cost-effective’ is misleading when the resulting resource implications are allocative.

Alternatively, once decision makers realize that basing decisions on a societal perspective will lead them to consider allocative questions, they may simply decide to

maintain the status quo; again, avoiding the allocative issue. Recently, disappointment was expressed as a result of interventions with relatively low ‘cost-effectiveness’ ratios not being expanded at the expense of more costly interventions (Garber and Phelps, 1997). Perhaps we can now explain, in part, why this has happened. Decision makers being told about CEAs will pick up messages such as “CEA will help to identify the least cost way of achieving a given objective.” Yet CEAs taking a societal perspective, and where taking that perspective makes a difference to the result, are not consistent with what decision makers are being told. These CEAs simply lead the decision maker to have to consider allocative issues, which will be inherently more difficult for her/him to do. It would not be surprising, therefore, if decision makers have difficulty with the concept of CEA when a societal viewpoint is taken. ‘Societal CEA’ is not what we say CEA is, ‘societal CEA’ does not do what we say CEA does, and ‘societal CEA’ leads decision makers along a path which they were not expecting to travel. In fact, it takes them into territory which requires the use of CBA.

It should be stressed that we are in favour of encouraging decision makers to address questions of allocative efficiency, but it needs to be made clear, and up-front, that that is what (some of) our techniques are leading them towards. By using the label ‘CEA’ for studies which could take them down either the path of a reasonably straightforward ‘textbook CEAs’ or the potentially more complicated allocative path of the ‘societal CEA’, we believe confusion is being created. It may be more helpful, therefore, to keep a distinction between CEA and CBA which is based on whether a technical or allocative efficiency question is to be addressed, rather than recommend ‘societal CEAs’ or to try to fit CEA into the welfare economic framework that is the preserve of CBA.

4.2. How can we deal with it?

We need to be more precise about our terminology with respect to economic evaluations. An important issue which is assumed to be understood (as evidenced by lack of its mention in any of the guidelines) is what is the purpose of the study, or, stated another way, what is the nature of the efficiency question being addressed? To bring this back to the forefront, we suggest that the nature of the question lead the type of analysis rather than the often-adopted convention of defining the analysis by the

measure of health outcome whether it be in natural units (which would then be CEA) or in monetary units (which would then be CBA). Instead, we should use CEA when questions of technical efficiency are being asked and CBA to address allocative efficiency (Mooney, 1994; Donaldson and Shackley, 1997). This is conceptually clearer and avoids the problems we have been discussing in this paper with respect to ‘societal CEA’. In being clearer about the definition of the types of analyses, and letting the question drive the analysis, it is clear that ‘societal’ CEAs may be addressing questions for which CBA is required.

When the type of analysis is defined in this way, by the nature of the question addressed, it also makes clearer the implication that everything does not have to be valued in monetary terms in order to define a study as a CBA. It appears that much of the objection raised to the use of CBA relates to the valuation in monetary terms of the outcomes. Indeed this has led many to dismiss the use of CBA altogether (Gold *et al.*, 1996; Australian Commonwealth Department of Health, 1992). However, as we have pointed out, what remains then is that analyses under the name of ‘CEA’ must deal with questions of both technical and allocative efficiency. This is confusing for students, practitioners and decision makers.

A key point to recognize at this stage, is that it is not necessary, and indeed most of the time not possible, to specify the type of analysis a priori in an assessment of a new intervention (Donaldson *et al.*, 1996). Until data on costs and outcomes have been collected, it is not possible to identify whether the question is one of technical efficiency (i.e. what we have called the ‘textbook’ CEA) or of allocative efficiency (i.e. which comes up in the context of ‘societal’ CEA, and calls for CBA). The perceived need of many scientific funding bodies, to label the type of analysis in advance has probably contributed to the adoption of the types based on their outcome measure, since the outcome measure is something that can be identified in advance.⁹

Once data on costs and outcomes have been collected, there are a number of possible scenarios. A new intervention could cost more, less or the same relative to a

comparator of existing care. The outcome from the new intervention could also be improved, worse or the same relative to existing care. Suppose that the new intervention has a better outcome, and costs no more than standard care. This scenario leads to a decision like the ‘textbook’ type of CEA: the new intervention may be substituted for the old. The same group of patients is treated, and can achieve a better health outcome for the same cost. On the other hand, suppose that by including the societal perspective, the new intervention is both more effective and more costly than the old. This is an allocative issue whereby it must be determined whether the additional benefit for this group of patients is worth the extra cost. To address this, one must consider the potential benefits attainable by other groups of patients for those extra costs. It is often not possible to identify which scenario will arise in advance.

The solution we propose for dealing with the ‘societal’ CEA is as follows. Firstly, explicit recognition of the question in a societal CEA may involve issues of resource allocation between groups, and thus CBA is the appropriate technique to address this allocative question. Secondly, we must clarify that CBA does not mean that everything must be valued in monetary terms. Culyer (1985) made the following statement regarding the importance of CBA as framework for decision-making:

“...a good CBA will: identify relevant options for consideration; enumerate all costs and benefits to various relevant social groups; quantify as many as can be sensibly quantified; not assume the unquantified is unimportant; use discounting where relevant to derive present values; use sensitivity analysis to test the response of net benefits to changes in assumptions; and look at the distributive impact of the options.”

As well, Gramlich (1997) says,

“Benefits and costs should be quantified when they can be and not when they cannot be, but whether quantified or not they should never be ignored. Even when they cannot be quantified, perhaps because they involve weighty matters of life and death, there are ways of setting up the analysis to focus public decisions properly.”

These statements support what has been referred to as a ‘balance sheet’ approach to the economic evaluation as has been proposed, in the health care context, by McIntosh *et al.*, (1999). This approach was first suggested by Lichfield (1968) in the urban

⁹ As well, for pedagogical purposes, this way of describing the types of analyses makes sense.

planning literature as a way to approach a CBA when not all benefits can be quantified in monetary terms. Costs/resource implications are measured on the one side; while benefits in terms of health and well-being are listed on the other.¹⁰ This approach makes explicit the trade-offs that are being made, while not requiring the quantification of *all* effects in monetary terms - only those which can be sensibly quantified. This information may go on to be used in a 'full' CBA where monetary valuation of all benefits is undertaken, but it may not be possible to go that far in all cases. The 'balance sheet' approach may instead be viewed as a decision making framework to aid in making a decision about whether the extra benefits are worth the extra costs; it makes explicit what the tradeoffs are that must be made (and the equity implications thereof) and informs the judgement.

Another important message to be emphasized to decision makers is that the economic evaluation may not give them an 'easy answer'. It is not always possible for the health economist to produce a summary number, such as a cost-effectiveness ratio, which dictates the appropriate course of action. Gold *et al.*(1996) in the introduction to their book, do acknowledge this:

“Resource allocation decisions can never be shaped by the mechanical ranking of cost-effectiveness ratios. Ratios provide information about one type of “value”, health benefit per dollar spent. But other values of society, including considerations of distributive justice and fairness...require that CEA be viewed as an informer of decision making rather than a decision maker per se.”

We would interpret this statement as saying that 'societal' CEAs may contribute to allocative decision making, i.e. they are partial CBAs in which not everything has been valued in terms of money.

5. Conclusion

In this paper we have argued that the societal approach and CEAs do not belong together. Other things being equal, if programme inputs and broader societal costs go in the same direction, so will conclusions about technical and allocative efficiency.

However, it can be problematic if the type of efficiency question then falls too far into the background.
¹⁰ This type of framework is similar to the 'cost-consequence' type of analysis identified by CCHOTA guidelines, where the outcomes or consequences are identified but not necessarily valued. However, the producers of these guidelines did not specifically identify this as related to a CBA.

However if such inputs and costs go in opposite directions, such an unambiguous conclusion may not be drawn. Thus, if the societal perspective is taken, one is likely to be in the realms of CBA where allocative decisions are addressed. This distinction has become blurred in the practice of economic evaluation of health care perhaps because of the reliance on practical definitions of CEA versus CBA which relate to the unit of measurement of benefits rather than to the nature of the efficiency question being asked in the analysis. It seems to be widely perceived that one cannot do a CBA unless the outcome can be valued in monetary terms. This does not negate the need to answer questions relating to allocative issues in health care. Therefore, CEA from the societal perspective has evolved to fill that need. However, this compromise can lead to confusion, both on the part of decision makers and of health economists themselves, as to what CEA actually is.

We have argued that the divergence between the ‘textbook’ and the ‘societal’ approaches to CEA matters on a practical level. However, it is also important (regardless of the existence or extent of confusion at the application level) for health economists and other practitioners of economic evaluation to be consistent in practice with what is taught in theory and to apply the appropriate type label to their analyses. It is not just a matter of a labeling problem however, since the mislabeling can be misleading, as we have outlined.

As health economists, it is important to present clear and relevant information to decision makers. This does not have to mean that the end output of an economic analysis is a single number which dictates the decision. The definitions of the frameworks (i.e. CEA and CBA) used to present information need to be clearer too. If there exists confusion based on these definitions, we may be impeding the usefulness of economic evaluation in decision making. In our view, it would be a significant methodological advance if we could shift from focusing on the perspective of economic evaluations to putting economic evaluations back into perspective: that is, concentrating on the efficiency question being addressed.

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