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## Debate Response

# Cost-effectiveness thresholds: a comment on the commentaries

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I am grateful for the commentaries on my paper (Culyer, 2016a), and for the insights which Harris (2016) and Gusmano and Kaebnick (2016) bring out. I am reassured by the absence of any deep disagreements with the analysis or its conclusions. My intention was not so much to invent a new theory of cost-effectiveness analysis (CEA) or CEA thresholds as to make the logic of both of them clearer and to be explicit about the implications, which in many ways are rather remarkable, not generally understood by many health researchers, and of considerable political significance.

CEA and health technology assessment (HTA) are models. They are like toys, to be played with and adapted to suit various purposes. Like all models they are simplified representations of 'reality' whose value, if they have any at all, lies in stripping away minor and irrelevant factors so as to identify critical information needs, expose important links inside the model – logical and empirical – and predict, with credibility, consequences that matter. CEA and HTA, done well, can also help decision makers to address the more difficult trade-offs that arise in a given context of choice.

Gusmano and Kaebnick place the argument of my paper in the context of Paretian welfare economics. Whether or not my analysis is appropriately seen as an application of Paretian welfare economics is also context dependent (Culyer, 2010). At the most general level, CEA is no more a branch of Paretian welfare economics than is investment theory. If the context of application is one in which one is seeking to discover what, for the well-being of humanity, a decision maker ought to do – or how she ought to do it – then we are pretty solidly in normative territory, which could be Paretian – though I prefer the approach I call 'extra-welfarist' (Cookson and Claxton, 2012). However, the context not only may require a non-Paretian set of principles but even no social normative principles at all. Sometimes CEA and the analysis of thresholds may be required by a for-profit

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insurance agency in order to help determine a package of benefits and associated premiums, in which case welfare, as commonly understood, hardly matters at all. On other occasions, the purpose and focus of the analysis may be on the way in which costs and benefits fall – as perceived by those upon whom they fall – in order for a higher authority to determine what compensation or bribes might be required to secure acquiescence in a new policy initiative within a given budget and threshold(s). In another context, the object may be to assess the advantages and disadvantages of particular investments from the perspective of a government department. In yet another, the problem may be to set a threshold (or a budget) for a publicly financed package of health care designed for a subset of the population that has previously been uninsured. In the first of these, the underlying objective may be profit maximisation, in the second, the underlying motivation may be political feasibility, in the third, the scope of 'welfare' is highly restricted to a specific departmental view, in the fourth, the underlying motivation may be health maximisation for a target group of the population. In none is it welfare maximisation, as conventionally understood in welfare economics. So, as Gusmano and Kaebnick emphasise, the role of values is pivotal. It shapes the entire design of the model and the way in which it is used. But a *particular* set of values does not underlie normative CEA or threshold analysis (Culyer, 2014). Both can be harnessed for a wide variety of social values, even including some that are especially nasty. Such is the way with tools, which may usually be used for either good or ill.

The extra-welfarist use of CEA for public policy choices and its interpretation of thresholds differs from conventional Paretian welfare economics, not least in allowing for interpersonal comparisons and distributional concerns (Culyer, 2016b). Whether it also suffers from the 'traditional weaknesses' of welfare economics is moot. Gusmano and Kaebnick claim that it does. The particular respects of welfare economics to which they draw attention (no interpersonal comparisons, a focus on individual welfare, indifference to the character of preferences, efficiency being the only societal goal, amongst others) are not, however, features that characterise my analysis, so it is not clear to me which weaknesses, traditional or otherwise, they have in mind. Thus, an objection that I, like Sen (1993), have against the Paretian approach is that it attaches far too great and undiscriminating a significance to individual *preferences*. My analysis does not even require that the measure of health be preference based – though it allows that it may be.

The context prescribed in my paper was explicitly normative – one of population health maximisation[1] – and Harris takes this as a given for the purposes of this discussion. I agree with almost all he writes. I have only four small points to make. First, comparing new and existing interventions can increase overall health care expenditure only if the budget constraint is ignored (e.g. by failures to disinvest) or if the new interventions generate a case for increasing the budget. Disinvestments are admittedly hard (but see, e.g. Paprica *et al.*, 2015) as I acknowledged.

1 The first footnote of the paper lists many other possible objectives of a health care system.

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Second, I confirm that the value of the 'simple rule' for when to take on cost-effective treatments does indeed depend on their replacing comparators that are less cost-effective; that, after all, is what 'more cost-effective' implies. Third, regarding weighting schemes, my main point was not to determine what weights should be used (including weights of unity), which is what people usually worry about, but was rather to avoid a common inconsistency in weighting, so that the weights attaching to people receiving benefits should apply also to similarly placed people who lose benefits (Claxton *et al.*, 2015; McCabe *et al.*, 2015). Fourth, while it is true that I have a general bias in favour of open decision making, the degree and extent of openness has plainly to be context dependent, like everything else. A degree of confidentiality is nearly always needed in matters regarding named individuals; it is often unfortunately required in health product pricing negotiations. It is, nonetheless, fundamentally destructive of confidence building, trust and credibility for all who are excluded from the decision-making process. So the burden of proof lies with whomever objects to open decision making – and that burden should not be light.

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