

The Authors' Reply

We thank Birks^[1] for his comments on our paper on the current controversies regarding discounting health effects in pharmacoeconomic evaluations. We acknowledge the reinforcement that Birks provides on our major recommendation that it is best to give decision makers insight into the detailed and disaggregated data on outcomes to enable them better to underpin their judgments. His major comment adds to the debate by extending the discussion to the question whether discounted QALYs do at all form an appropriate output measure for assessing the effectiveness of healthcare interventions.

In particular, Birks argues that it is questionable whether QALYs can validly be compared and consequently aggregated (whether or not discounted). To underpin this question, Birks brings aspects of (in)equity into the discussion. However, we feel that the use of QALYs for maximising health gains and the resulting inequities should not be part of the discussion about whether or not health gains should be discounted. Equity concerns should be dealt with using mechanisms other than adjusting the discounting procedure. For example, the value of a QALY-gain could be re-adjusted for individual patients using equity weights based on proportional shortfall, fair innings or severity of illness. To date, much discussion surrounds this concept, and it remains unclear what concept of equity should be used.^[2]

All in all, the concept of correcting QALY-gains for equity can be seen completely separately from the discussion on the theoretical basis of discounting. The bare purpose of discounting is to adequately correct for different types of time preference. Time preference is a complex composite of 'pure' time preference (impatience and uncertainty about the future) and decreasing marginal utilities of different utility arguments over time (such as income and life expectancy). The relations between these parameters can be formalised using simple mathe-

matics, as has been done by Gravelle and Smith.^[3] We note that an application of the Gravelle and Smith methodology^[4] has recently led to the adoption of a new discounting guideline for The Netherlands to prescribe different discount rates for money and health.^[5]

Gravelle and Smith^[3] have also indicated that possible changes in the value of health over time are not reflected properly in cost-effectiveness analysis if one would use similar discount rates for money and health effects. Changes in the valuing of health can be accommodated either by adapting the benefit measure directly, or correcting the discount rate for health. Birks extends this issue to the value of life itself, instead of the value associated with health outcomes, such as life years. He suggests that future living may be valued higher than present living, due to accumulated future wealth. However, this may contradict the fact that life years are generally solely corrected for health-related quality of life, and wealth is generally only an implicit part of this at best.

In his closing remarks, Birks refers to the difference between the social and the individual perspective taking into consideration the discounting procedure. This is an important remark building on previous work as described, for example, by the Washington Panel.^[6] However, in the current debates on discounting procedures within the framework of national pharmacoeconomic guidelines and recommendations for methodology, the individual perspective does not seem to play a very important role. The social perspective seems to be currently guiding and Birks correctly states that the individual one should not be fully neglected.

We conclude that, overall, Birks' comments do not contradict our statements, but merely extend them in various directions. He also reinforces our main conclusion that it is also important to give decision makers the detailed and disaggregated data on outcomes to enable them to fully understand the models used and to perform tailor-made sensitivity

analyses. Finally, we note that the Dutch policy makers have made their recent change in the discounting guideline fully in line with the views expressed in our original paper,^[7] strengthening the relevance of the paper, at least for the Dutch context.

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