**Author’s response to reviews**

**Title:** Functional health state description and valuation by people aged 65 and over; a pilot study

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**Author’s response to reviews:**

We thank the reviewer for giving us a further opportunity to clarify our pilot study. Apparently, the last round or rebutting has not entirely resolved the remarks the reviewer had. We note that the first reviewer comments still may need some elaboration. These comments were:

"I congratulate you in dealing with the majority of my earlier comments. However, as a matter of record I need to say that I cannot support your assertion that the TTO procedure as you describe is IN FACT equivalent to the standard procedure. I am personally not in favour of TTO (or for that matter SG) procedures but I do consider it imperative to distinguish between the classical, generally accepted standard form of such procedures and analogue versions that appear (somehow by magic) to replace them.

Where, where, where is the evidence to support the scientific legitimacy for such action?

Authors reply:

The reviewer is clearly correct in stating robust and validated measurements should be used. Note however, that at this stage it was not our intention to present accurate and valid estimates of utility scores or HRQoL. Instead we were mainly interested in the feasibility of TTO as a measurement tool in a specific frail elderly population. Previous studies had shown that the original instrument was too complicated even or less frail populations [1]. In our pilot and feasibility study we therefore switched to a more simplistic (more crude steps) analogue version of the TTO method. This again proved to be too complicated for the majority of respondents and we subsequently omitted it from the Dutch sample. We have added this additional explanation to
the body of the text in lines 206-227. We hope this elaboration adequately addresses the reviewer’s comments and explains our approach.

Line 206-227: The first group was presented with a questionnaire and was asked to value applicable EQ5D+C target health states, using a Time Trade Off (TTO), Appendix E, and a visual analogue scale (VAS), Appendix F.

Previous studies have shown that TTO techniques place a great cognitive burden on respondents, since they require a high degree of abstract reasoning [26]. Taking this into consideration, the decision was made to utilize a simplified version of the TTO exercise [27].

In our pilot and feasibility study we therefore switched to a more simplistic (more crude steps) analogue version of the TTO method. The TTO technique required the respondents to value how much time in health state 111111 (full health) was equivalent to 10 years spent in a target state. Target states represent different levels of decline in HRQoL. Thus, a typical TTO valuation task would involve a hypothetical trade-off between length and quality of life. The TTO process, utilized in our study, provides the elderly respondents with options to choose from, rather than subjectively reasoning and cognitively determining the point of indifference. The chosen TTO exercise provided elderly respondents with a less cognitively burdensome alternative.

The target states were 112112, 212111, 111221, 212121, 133113, 212321, 333211, 323331, and 333333. Only 9 health states were valued for the TTO exercise, since health state 111111 was given as the comparison full-health state.

With regard to the valuation method, we were mainly interested in the feasibility of TTO as a measurement tool in a specific frail elderly population. In line with previous studies our simplified TTO again proved to be too complicated for the majority of respondents, and we subsequently omitted it from the Dutch sample.

It is a real pity when such a key failure is present in otherwise well-conducted research (albeit as part of a PhD or "feasibility" exercise).

Please reconsider both the use of TTO and in particular your "strain" of it in future work. Health economists who demand the use of social preference weights for economic evaluation need to be confronted with the need to provide a proper rationale for that requirement; clinicians and patients cannot/should not be bound by such constraints.

There are better ways to establish the "value" of health!"

Authors reply:
We cannot agree more. Our feasibility study indeed has shown that TTO will not work in this population. The latter is now explicitly mentioned in the discussion, line 312-314.

Please address these comments in your revised submission

2. In your ***“ethical approval and consent to participate” section of your declarations*** please confirm whether written consent was obtained from participants. If written consent was not obtained, please explain why not.

Authors reply:

As mentioned in line 125-126 this indeed is the case. We obtained written consent from the participants

Reference List