

Individual abstract

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- abstract (maximum 2800 characters for Objectives, Methods, Results, Discussion)
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Title: A comparison of the ReQoL-UI and EQ-5D-5L for eliciting the QALY: a case study economic evaluation in people with anxiety and depression

Objectives. Different preference-based measures/tariffs produce different quality-adjusted life years (QALYs), with implications when interpreting economic evidence. For people with mental health conditions, the Recovering Quality of Life Utility Index (ReQoL-UI) based on the time trade-off (TTO) represents an alternative to the EQ-5D-5L. In the UK, there are multiple options to elicit the QALY from the EQ-5D-5L including Devlin's TTO (and discrete choice experiment) tariff or Van Hout's cross-walk algorithm. Our objective was to compare 'cost per QALY' evidence generated by these three tariffs for those with anxiety and/or depression, combined with the application of recommended statistical methods for economic evaluations.

Methods. The case study was a 2:1 allocation (internet-delivered Cognitive Behavioural Therapy [iCBT]: 8-week waiting-list control) randomised controlled trial. QALYs were calculated using area-under-the-curve over 8-weeks. Analyses were conducted on a complete-case (CC) and intention-to-treat (ITT) basis, with multiple-imputation by chained equations for missing cases in the latter, with/out baseline utility adjusted (BA) QALYs. Bootstrapping enabled quantification of probability of cost-effectiveness, with incremental cost-effectiveness ratios (ICERs) judged against an upper £30,000 per QALY threshold preferred by NICE, UK. ReQoL-UI results are based on a preliminary tariff and so may change.

Results. 361 people were randomised (241:120), with CC (194: 88) and ITT (236: 116) analyses conducted. ICER (and QALY) estimates varied considerably depending on tariff and form of analysis, ranging from: TTO, £23,857 (ITT, QALY) to £37,062 (ITT, BA QALY); cross-walk, £20,310 (ITT, QALY) to £28,442 (ITT, BA QALY); ReQoL-UI, £23,111 (ITT, QALY) to £369,068 (CC, BA QALY). In general, the cross-walk always suggested the lowest ICER and the ReQoL-UI the highest. Under all analyses the cross-walk suggests iCBT was cost-effective at ICER<£30,000; however, the TTO and ReQoL-UI ICER>£30,000 when adjusting for baseline utility. The ReQoL-UI was the only tariff to suggest between trial-arm preference-based health converged over 8-weeks rather than dispersed.

Discussion. The concept of "a QALY is a QALY" has been debated extensively, often focussing on the QALYs different preference-based measures produce. However, QALYs are also effected by the statistical methods employed for the economic evaluation. Careful consideration needs to be given to the 'appropriate' use of statistical methods within economic evaluations, developing pre-defined statistical analysis plans, as well as the preference-based measure used, as each of these aspects will affect the QALYs finally presented to decision makers with implications for what is considered 'cost-effective'.

Category. Health technology assessment: methods