SF-6D & SF-6Dv2 - Calculating QALYs from the SF-36, SF-12 and the standalone SF-6Dv2

The SF-6D & SF-6Dv2 Utility Indexes provide a means for using the SF-12, SF-36 and SF-36v2 Health Surveys, and the new standalone SF-6Dv2 Health Utility Survey in economic evaluation by estimating a preference-based single index measure for health from these data using general population values.

SF-6D: A brief overview

The SF-36 is one of the most widely used measures of general health in clinical studies throughout the world. It generates eight dimension scores and two summary scores for physical and mental health. Whilst such scores provide an excellent means for judging the effectiveness of health care interventions, they have only a limited application in economic evaluation because they are not based on preferences.

SF-6D and SF-6Dv2 were developed by Professor John Brazier & colleagues as part of the ScHARR Outcomes team the University of Sheffield.

The SF-6D allows the analyst to obtain quality adjusted life years (QALYs) from the SF-36, SF-36v2 and SF-12 Health Surveys for use in cost utility analysis. The SF-6Dv2 allows the analyst to obtain QALYs from the SF-36v2 Health Survey and SF-6v2 Health Utility survey.

Access

SF-6D and SF-6Dv2 is managed, by QualityMetric, who own the SF-12, SF-36 and SF-36v2 Health Surveys, and the standalone SF-6Dv2 Health Utility Survey. This allows you to access your generic measure of health and health indexes in one place. To use SF-6D and SF-6Dv2 and their related preference-based weights, please visit the QualityMetric website and complete an online Licence Request.

Commercial licenses for the SF-6D and SF-6Dv2: please request here

Academic licenses for the SF-6D and SF-6Dv2: please request here

Please note that you will also need to obtain a *study specific* license for the SF-36 or SF-12 from QualityMetric.

FAQ

What is the SF-6D?

The SF-6D is a generic preference-based single index measure of health that can be used to generate QALYs and hence which can be used in cost-utility analysis.

Category

Software

Health Outcome Measures

Learn more

How does the SF-6D generate preference scores?

The SF-6D comes with a set of preference weights obtained from a sample of the general population in the UK using the recognised valuation technique of standard gamble. Members of the general population in the UK were asked to value a selection of health states from which a model has been estimated to predict all the health states described by the SF-6D. Preference weights are available from other countries (see below).

What do the programmes do?

The programmes will generate for each row of your dataset the six dimension scores of the SF-6D, the six digit health state and a utility value anchored at 1 for full health and 0 for dead.

Video

Please watch this video for more information

What types of programmes are available?

SF-6D

Weights for the original SF-6D utility score were estimated using a set of parametric preference weights obtained from a sample of the general population using the recognised valuation technique of standard gamble.

(In addition an excel programme is available from the University of Sheffield to convert SF-36 data into the SF-6D utility score estimated using a set of non-parametric Bayesian preference weights) For further details see Kharroubi et al. (2007). Please contact us through this page to request details of this programme.

SF-6Dv2

The SF-6Dv2 has been valued using the results of a discrete choice experiment (DCE) undertaken in the first instance with a general population sample in the UK. The DCE included duration as an attribute so that values can be anchored on the zero to one scale for calculated QALYs.

Valuation Surveys in different Countries

SF-6D

The SF-6D utility score was originally generated using preference weights obtained from a sample of the general population in the UK. The UK population may have different preferences to non-UK populations.

Valuation surveys methods have been completed in Japan, Hong Kong, Portugal, Brazil, Australia and Spain using similar methods to those used in the UK. Details on these surveys can be found in the publications listed at the bottom of this note.

SF-6Dv2

There is a standard DCE protocol that is being used to undertake valuation surveys around the world. There are published results for Australia and China, and future results are expected from US and Japan soon.

Relevant publications:

SF-6D

Lam CLK, Brazier J, McGhee SM. Valuation of the SF-6D health states is feasible, acceptable, reliable and valid in a Chinese population. Value in Health 2008;11:295-303.

Brazier JE, Fukuhara S, Roberts J, Kharoubi S et al. Estimating a preference-based index from the Japanese SF-36.

Journal of Clinical Epidemiology; 62(12): 1323-1331.

Ferreira LN, Ferreira PL, Brazier J, Rowen D. A Portugese value set for the SF-6D. Value in Health 2010; 13(5): 624-630.

Abellan-Perpiñan JM, Sanchez-Martinez FI, Martinez-Perez JE, Mendez I. Lowering the 'floor' of the SF-6D scoring algorithm using a lottery equivalent method. Health Economics 2012: 21; 1271-1285.

Méndez I, Abellán JM, Sanchez FI, Martinez JE. Inverse probability weighted

estimation of social tariffs: An illustration using SF-6D value sets. Journal of Health Economics 2011: 30; 1280-1292.

SF-6Dv2

Brazier J, Mulhern B, Bjorner JB, Rowen D, Alonso A, Vilagut G, Ware J. Developing a new version of the SF-6D health state classification system from the SF-36v2: SF-6Dv2. Medical Care 2020; 58:557-565

McDool E, Mukuria C, Brazier J. A Comparison of the SF-6Dv2 and SF-6D UK Utility Values in a Mixed Patient and Healthy Population. Pharmacoeconomics. 2021 Aug;39(8):929-940. doi: 10.1007/s40273-021-01033-6. Epub 2021 May 27. PMID: 34043147.

Mulhern B, Norman R, Brazier J. Valuing SF-6Dv2 in Australia Using an International Protocol. Pharmacoeconomics. 2021 Oct;39(10):1151-1162. doi: 10.1007/s40273-021-01043-4. Epub 2021 Jul 12. PMID: 34250578

Mulhern B, Brazier J, Bansback N, Norman R. Valuing SF-6Dv2 in the UK using a discrete choice experiment with duration. Medical Care 2020;58:566-578

Poder TG, Fauteux, V, He J, Brazier, JE. Consistency Between Three Different Ways of Administering the Short Form 6 Dimension Version 2. Value in Health. 2019; 22(7):837–842

Xie S He, Wu J, Xiaoning He, Chen G, Brazier J. Do Discrete Choice Experiments Approaches Perform Better Than Time Trade-Off in Eliciting Health State Utilities? Evidence From SF-6Dv2 in China. Value in Health, September 03, 2020 DOI:https://doi.org/10.1016/

Whitehurst, DGT, Brazier JE, Viney, R. et al. The SF-6Dv2: How Does the New Classification System Impact the Distribution of Responses Compared with the Original SF-6D?. PharmacoEconomics (2020). https://doi.org/10.1007/s40273-020-00957-9

Wu J, Xie S, He X, Chen G, Bai G, Feng D, Hu M, Jiang J, Wang X, Wu H, Wu Q, Brazier JE. Valuation of SF-6Dv2 Health States in China Using Time Trade-off and Discrete-Choice Experiment with a Duration Dimension. Pharmacoeconomics. 2021 May;39(5):521-535. doi: 10.1007/s40273-020-00997-1. Epub 2021 Feb 18. PMID: 33598860; PMCID: PMC8079294.

Wu J, Xie S, He X, ChenG, Brazier J. The Simplified Chinese version of SF 6Dv2: translation, cross cultural adaptation and preliminary psychometric testing. Quality of Life Research 2020, https://doi.org/10.1007/s11136-020-02419-3

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1. Deverill , Roberts , Brazier (March 2002) , http://www.sciencedirect.com/science/article/pii/S0167629601001308?via%3Dihub, Journal of Health Economics, 21(2), 271-292
2. O'Hagan, Roberts, Brazier, Kharroubi(May 2007) , http://www.sciencedirect.com/science/article/pii/S0167629606000981, http://https://www.journals.elsevier.com/journal-of-health-economics, 1;26(3), 597-612
3. Roberts , Brazier (Sep 2004) , http://https://www.ncbi.nlm.nih.gov/pubmed/15319610, http://journals.lww.com/lww-medicalcare/pages/default.aspx, 42(9), 851-9.