



User Guide

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1. Introduction

This guide has been developed in order to give users of EQ-5D basic information on how to use EQ-5D. Topics include administering the instrument, setting up a database for data collected using EQ-5D as well as information about how to present the results. Also included are some frequently asked questions dealing with common issues regarding the use of EQ-5D and a list of currently available EuroQoL products.

EuroQoL Group

- The EuroQoL Group is a network of international multidisciplinary researchers devoted to the measurement of health status. Established in 1987, the EuroQoL Group originally consisted of researchers from Europe, but nowadays includes members from North America, Asia, Africa, Australia, and New Zealand. The Group is responsible for the development of EQ-5D, a preference based measure of health status that is now widely used in clinical trials, observational studies and other health surveys.
- The EuroQoL Group has been holding annual scientific meetings since its inception in 1987.
- The EuroQoL Group can be justifiably proud of its collective scientific achievements over the last 20 years. Research areas include: valuation, EQ-5D use in clinical studies and in population surveys, experimentation with the EQ-5D descriptive system, computerized applications, interpretation of EQ-5D ratings and the role of EQ-5D in measuring social inequalities in self-reported health.
- The EuroQoL Group's website (www.euroqol.org) contains detailed information about EQ-5D, guidance for users, a list of available language versions, EQ-5D references and contact details.

EQ-5D

EQ-5D is a standardised measure of health status developed by the EuroQoL Group in order to provide a simple, generic measure of health for clinical and economic appraisal¹. Applicable to a wide range of health conditions and treatments, it provides a simple descriptive profile and a single index value for health status that can be used in the clinical and economic evaluation of health care as well as in population health surveys (Figure 1).

EQ-5D is designed for self-completion by respondents and is ideally suited for use in postal surveys, in clinics, and in face-to-face interviews. It is cognitively undemanding, taking only a few minutes to complete. Instructions to respondents are included in the questionnaire.

EQ-5D essentially consists of 2 pages - the EQ-5D descriptive system (page 2) and the EQ visual analogue scale (EQ VAS) (page 3). The EQ-5D descriptive system comprises the following 5 dimensions: mobility, self-care, usual activities, pain/discomfort and anxiety/depression. Each dimension has 3 levels: no problems, some problems, severe problems. The respondent is asked to indicate his/her health state by ticking (or placing a cross) in the box against the most appropriate statement in each of the 5 dimensions. This decision results in a 1-digit number expressing the level selected for that dimension. The digits for 5 dimensions can be combined in a 5-digit number describing the respondent's health state. **It should be noted that the numerals 1-3 have no arithmetic properties and should not be used as a cardinal score.** This current 3-level, 5-dimensional format of EQ-5D will remain unchanged for the immediate future. However a EuroQoL task force is developing a 5-level version. This should become available around 2009.

The EQ VAS records the respondent's self-rated health on a vertical, visual analogue scale where the endpoints are labelled 'Best imaginable health state' and 'Worst imaginable health state'. This information can be used as a quantitative measure of health outcome as judged by the individual respondents.

¹ EuroQoL Group. EuroQoL-a new facility for the measurement of health-related quality of life. Health Policy 1990;16:199-208

Figure 1: EQ-5D (UK English version)

By placing a tick in one box in each group below, please indicate which statements best describe your own health state today.

Mobility

- I have no problems in walking about
- I have some problems in walking about
- I am confined to bed

Self-Care

- I have no problems with self-care
- I have some problems washing or dressing myself
- I am unable to wash or dress myself

Usual Activities (*e.g. work, study, housework, family or leisure activities*)

- I have no problems with performing my usual activities
- I have some problems with performing my usual activities
- I am unable to perform my usual activities

Pain/Discomfort

- I have no pain or discomfort
- I have moderate pain or discomfort
- I have extreme pain or discomfort

Anxiety/Depression

- I am not anxious or depressed
- I am moderately anxious or depressed
- I am extremely anxious or depressed

To help people say how good or bad a health state is, we have drawn a scale (rather like a thermometer) on which the best state you can imagine is marked 100 and the worst state you can imagine is marked 0.

We would like you to indicate on this scale how good or bad your own health is today, in your opinion. Please do this by drawing a line from the box below to whichever point on the scale indicates how good or bad your health state is today.

**Your own
health state
today**

Best
imaginable
health state



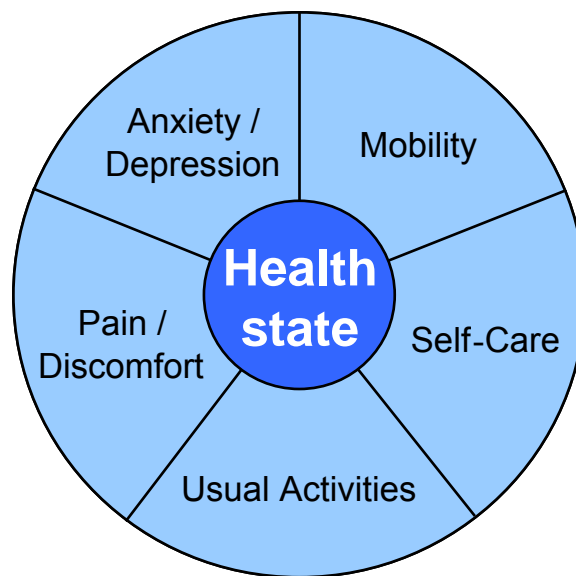
Worst
imaginable
health state

What is a health state?

Each of the 5 dimensions comprising the EQ-5D descriptive system is divided into 3 levels of perceived problems:

- Level 1: indicating no problem
- Level 2: indicating some problems
- Level 3: indicating extreme problems

A unique health state is defined by combining 1 level from each of the 5 dimensions.



A total of 243 possible health states is defined in this way. Each state is referred to in terms of a 5 digit code. For example, state 11111 indicates no problems on any of the 5 dimensions, while state 11223 indicates no problems with mobility and self care, some problems with performing usual activities, moderate pain or discomfort and extreme anxiety or depression.

Note: Two further states (unconscious and death) are included in the full set of 245 EQ-5D health states, but information on these states is not collected via self-report.

Versions of EQ-5D

EQ-5D in different languages

Currently there are more than 100 translated versions of EQ-5D. If you want to know if there is an EQ-5D version appropriate for your country, please consult the website.

All translations/adaptations of EQ-5D are produced using a standardised translation protocol that conforms to internationally recognized guidelines. These guidelines aim to ensure semantic and conceptual equivalence and involve a forward/backward translation process and lay panel assessment. Only the EuroQoL Group Executive Office can give permission for a translation to be performed and translations can only be stamped as official if they are performed in cooperation with EuroQoL Group reviewers.

Alternative modes of administration

EQ-5D was primarily designed for self-completion by the patient or respondent. However the Group has brief guidelines for the following alternative modes of administration:

- (i) Face-to-face
- (ii) Self-completion in the presence of an interviewer
- (iii) Telephone interview
- (iv) Proxy (asking the proxy to rate how he or she, (i.e. the proxy), would rate the subject's health)

Guidelines for telephone and proxy use are available in a number of different languages.

Child versions

EQ-5D is generally considered suitable for children aged 12 years and over (although this may vary in different countries). Currently a EuroQoL Group task force is developing a version for children between 7 and 12 years in international English. This version is being validated in Swedish, Italian, Spanish and German and these versions should become available in 2008.

Please check the EuroQoL website for up-to-date information on the availability of EuroQoL products.

2. Scoring the EQ-5D descriptive system

The EQ-5D descriptive system should be scored as follows:

By placing a tick in one box in each group, please indicate which statements best describe your health today.

Mobility

I have no problems in walking about

I have some problems in walking about

I am confined to bed

Self-Care

I have no problems with self-care

I have some problems washing or dressing myself

I am unable to wash or dress myself

Usual Activities (e.g. work, study, housework, family or leisure activities)

I have no problems with performing my usual activities

I have some problems with performing my usual activities

I am unable to perform my usual activities

Pain/Discomfort

I have no pain or discomfort

I have moderate pain or discomfort

I have extreme pain or discomfort

Anxiety/Depression

I am not anxious or depressed

I am moderately anxious or depressed

I am extremely anxious or depressed

Levels of perceived problems are coded as follows:

- Level 1 is coded as a '1'
- Level 2 is coded as a '2'
- Level 3 is coded as a '3'
- Level 3 is coded as a '3'
- Level 3 is coded as a '3'

NB: There should be only one response for each dimension.

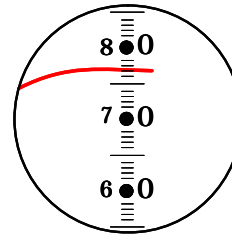
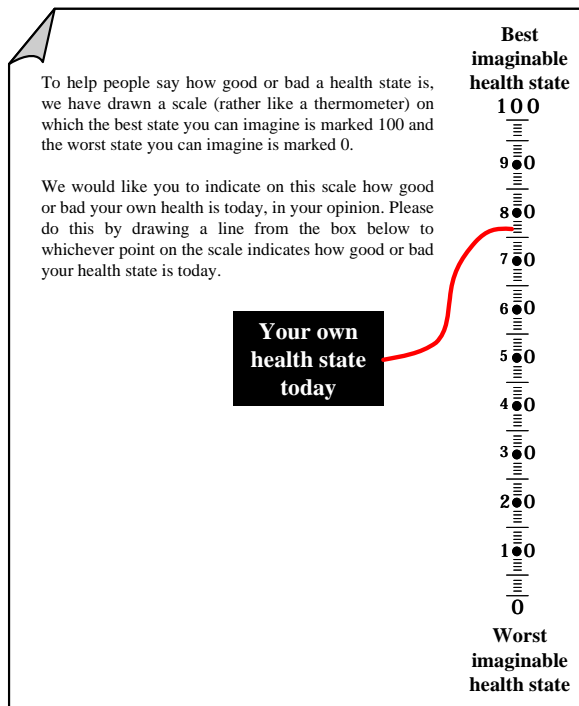
This example identifies the state 11232.

Missing values can be coded as '9'.

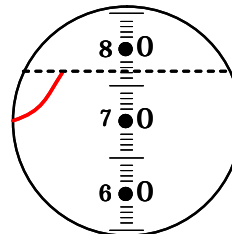
Ambiguous values (e.g. 2 boxes are ticked for a single dimension) should be treated as missing values.

3. Scoring the EQ VAS

The EQ VAS should be scored as follows:



For example this response should be coded as 77



Even though the line does not cross the VAS this response can still be scored by drawing a horizontal line from the end point of the response to the VAS. In this example the response should be coded as 77

Missing values should be coded as '999'.

Ambiguous values (e.g. the line crosses the VAS twice) should be treated as missing values.

4. Converting EQ-5D states to a single summary index

EQ-5D health states, defined by the EQ-5D descriptive system, may be converted into a single summary index by applying a formula that essentially attaches values (also called weights) to each of the levels in each dimension. The index can be calculated by deducting the appropriate weights from 1, the value for full health (i.e. state 11111). Information in this format is useful, for example, in cost utility analysis.

Value sets have been derived for EQ-5D in several countries using the EQ-5D visual analogue scale (EQ-5D VAS) valuation technique or the time trade-off (TTO) valuation technique. The list of currently available value sets with the number of respondents and valuation technique applied is presented in table 1. Most of the EQ-5D value sets have been obtained using a representative sample of the general population, thereby ensuring that they represent the societal perspective. For anyone working with EQ-5D data, an essential guide to the Group's available value sets can be found in: EuroQoL Group Monograph series: Volume 2: EQ-5D value sets: inventory, comparative review and user guide, recently published by Springer (see section 8 for more information).

Table 1: List of available value sets as of May 2007

| Country | N | Valuation method |
|----------------|----------|-------------------------|
| Belgium | 548 | EQ-5D VAS |
| Denmark | 1179 | EQ-5D VAS |
| Denmark | 1332 | TTO |
| Europe | 6870 | EQ-5D VAS |
| Finland | 928 | EQ-5D VAS |
| Germany | 339 | EQ-5D VAS |
| Germany | 339 | TTO |
| Japan | 543 | TTO |
| New Zealand | 919 | EQ-5D VAS |
| Netherlands | 298 | TTO |
| Slovenia | 370 | EQ-5D VAS |
| Spain | 294 | EQ-5D VAS |
| Spain | 975 | TTO |
| UK | 3395 | EQ-5D VAS |
| UK | 3395 | TTO |
| US | 3773 | TTO |
| Zimbabwe | 2384 | TTO |

Documents containing the scoring algorithms, information on the valuation studies, tables of values for all 243 health states and SPSS and SAS syntax files can be ordered from the EuroQoL Executive Office (userinformationservice@euroqol.org).

5. Organising EQ-5D data

Data collected using EQ-5D can be entered in a database according to the following schema:

| Variable name | ID | COUNTRY | YEAR | MOBILITY | SELFCARE | ACTIVITY | PAIN | ANXIETY |
|----------------------|-------------------|---------|------|---|---|---|---|---|
| Variable description | patient ID number | | | 1=No Problems, 2=Some problems, 3=Extreme problems, 9=Missing value | 1=No Problems, 2=Some problems, 3=Extreme problems, 9=Missing value | 1=No Problems, 2=Some problems, 3=Extreme problems, 9=Missing value | 1=No Problems, 2=Some problems, 3=Extreme problems, 9=Missing value | 1=No Problems, 2=Some problems, 3=Extreme problems, 9=Missing value |
| Data row 1 | 1001 | UK | 2006 | 2 | 1 | 2 | 2 | 1 |
| Data row 2 | 1002 | UK | 2006 | 1 | 1 | 1 | 1 | 1 |

| Variable name | STATE | EQ_VAS | SEX | AGE | EDU | METHOD | SOC_ECON |
|----------------------|-------|--------------------|-----------------------------------|--------------------|--|---|---|
| Variable description | | 999= Missing value | 1=male, 2=female, 9=Missing value | 999= Missing value | 1=low, 2=medium, 3=high, 9=Missing value | 0=postal, 1=interview, 2=telephone, 9=Missing value | 1=employed, 2=retired,, 9=Missing value |
| Data row 1 | 21221 | 80 | 1 | 43 | 1 | 0 | 1 |
| Data row 2 | 21111 | 90 | 2 | 24 | 2 | 0 | 4 |

NB: The variable names are just examples. However, the variables for the 5 dimensions of the EQ-5D descriptive system should be named 'mobility', 'selfcare', 'activity', 'pain', and 'anxiety'. If they are given different names the syntax codes containing the value sets that are distributed by the EuroQoL Group will not work properly.

6. Presenting EQ-5D results

Data collected using EQ-5D can be presented in various ways. A basic subdivision can be made according to the structure of the EQ-5D:

1. Presenting results from the descriptive system as a health profile
2. Presenting results of the EQ VAS as a measure of overall self-rated health status
3. Presenting results from the descriptive system as a weighted index

However, the way results are presented is partly determined by what message you, as a researcher, wish to convey to your audience.

Health profiles

One way of presenting data as a health profile is by making a table with the frequency or the proportion of reported problems for each level for each dimension. These tables can be broken down to include the proportions per subgroup, such as age, before vs. after treatment, treatment vs. comparator, etc.

Sometimes it is more convenient to dichotomise the EQ-5D levels into 'no problems' (i.e. level 1) and 'problems' (i.e. levels 2 and 3), thereby changing the profile into frequencies of reported problems. This can be the case, for example, in a general population survey where the numbers of reported level 3 problems are very low. Tables 2 and 3 are examples of how to present EQ-5D data in tabulated form. The data for the tables originates from a general population survey in the UK².

²Kind P, Dolan P, Gudex C, Williams A. Variations in population health status: results from a United Kingdom national questionnaire survey *Bmj* 1998;316 (7133): 736-41.

Table 2: Proportion of levels 1, 2 and 3 by dimension and by age group

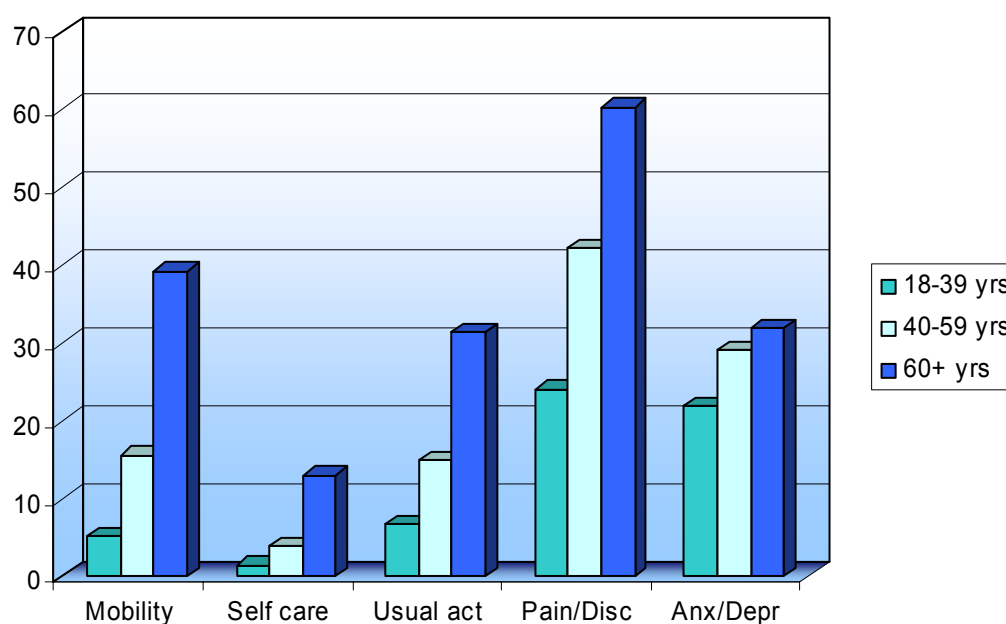
| <i>EQ-5D DIMENSION</i> | | <i>AGE GROUPS</i> | | | | | | | <i>TOTAL</i> |
|------------------------|---------|-------------------|--------------|--------------|--------------|--------------|--------------|------------|--------------|
| | | <i>18-29</i> | <i>30-39</i> | <i>40-49</i> | <i>50-59</i> | <i>60-69</i> | <i>70-79</i> | <i>80+</i> | |
| MOBILITY | Level 1 | 95.4 | 92.2 | 89.7 | 78.1 | 70.7 | 60.2 | 43.3 | 81.6 |
| | Level 2 | 4.6 | 7.6 | 9.9 | 21.9 | 29.3 | 39.8 | 56.7 | 18.3 |
| | Level 3 | 0.0 | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| SELF-CARE | Level 1 | 99.1 | 98.4 | 95.8 | 94.8 | 94.3 | 92.6 | 83.7 | 95.7 |
| | Level 2 | 0.9 | 1.5 | 4.0 | 5.2 | 5.5 | 7.1 | 15.6 | 4.1 |
| | Level 3 | 0.0 | 0.1 | 0.2 | 0.0 | 0.2 | 0.2 | 0.7 | 0.1 |
| USUAL ACTIVITIES | Level 1 | 93.3 | 91.4 | 89.2 | 78.1 | 75.3 | 73.7 | 56.0 | 83.7 |
| | Level 2 | 6.3 | 7.9 | 9.4 | 18.8 | 21.6 | 22.1 | 38.3 | 14.2 |
| | Level 3 | 0.4 | 0.7 | 1.5 | 3.0 | 3.1 | 4.2 | 5.7 | 2.1 |
| PAIN / DISCOMFORT | Level 1 | 83.9 | 80.7 | 74.1 | 56.3 | 53.8 | 44.0 | 39.7 | 67.0 |
| | Level 2 | 15.8 | 17.7 | 22.8 | 38.1 | 40.6 | 48.4 | 49.6 | 29.2 |
| | Level 3 | 0.3 | 1.6 | 3.1 | 5.6 | 5.6 | 7.6 | 10.6 | 3.8 |
| ANXIETY / DEPRESSION | Level 1 | 86.5 | 82.6 | 81.3 | 72.8 | 72.0 | 74.7 | 75.2 | 79.1 |
| | Level 2 | 12.6 | 16.4 | 16.9 | 24.4 | 25.1 | 22.6 | 24.1 | 19.1 |
| | Level 3 | 0.9 | 1.0 | 1.8 | 2.8 | 2.9 | 2.7 | 0.7 | 1.8 |

Table 3: Frequency of reported problems by dimension and age group

| <i>EQ-5D DIMENSION</i> | | <i>AGE GROUPS</i> | | | | | | | <i>TOTAL</i> |
|------------------------|-------------|-------------------|--------------|--------------|--------------|--------------|--------------|------------|--------------|
| | | <i>18-29</i> | <i>30-39</i> | <i>40-49</i> | <i>50-59</i> | <i>60-69</i> | <i>70-79</i> | <i>80+</i> | |
| MOBILITY | No problems | 643 | 631 | 489 | 362 | 339 | 246 | 61 | 2770 |
| | Problems | 31 | 53 | 56 | 101 | 140 | 162 | 81 | 625 |
| SELF-CARE | No problems | 668 | 673 | 522 | 439 | 452 | 378 | 119 | 3251 |
| | Problems | 6 | 11 | 23 | 24 | 27 | 30 | 23 | 144 |
| USUAL ACTIVITIES | No problems | 629 | 625 | 486 | 362 | 361 | 301 | 80 | 2842 |
| | Problems | 45 | 59 | 59 | 101 | 118 | 107 | 62 | 553 |
| PAIN / DISCOMFORT | No problems | 566 | 552 | 404 | 261 | 258 | 179 | 56 | 2275 |
| | Problems | 108 | 132 | 141 | 202 | 221 | 229 | 86 | 1120 |
| ANXIETY / DEPRESSION | No problems | 583 | 565 | 443 | 337 | 345 | 305 | 107 | 2684 |
| | Problems | 91 | 119 | 102 | 126 | 134 | 103 | 35 | 711 |

In addition to presenting the results in tabulated form, you can also use graphical presentations. Two or 3 dimensional bar charts can be used to summarise the results in 1 graph, (see figure 2). Figure 2 shows the sum of the proportion of reported level 2 and level 3 problems for each of the 5 EQ-5D dimensions for 3 distinct age groups. Older people reported more problems on all dimensions but the effect of age was strongest for mobility and weakest for anxiety/depression.

Figure 2: Profile of the population (% reporting problem)



EQ VAS

In order to present all aspects of the EQ VAS data, you should present both a measure of the central tendency and a measure of dispersion. This could be the mean values and the standard deviation or, if the data is skewed, the median values and the 25th and 75th percentiles. An example is presented in table 4. The data for the table originates from a general population survey in the UK³.

Table 4: EQ VAS values by age – mean + standard deviation and median + percentiles

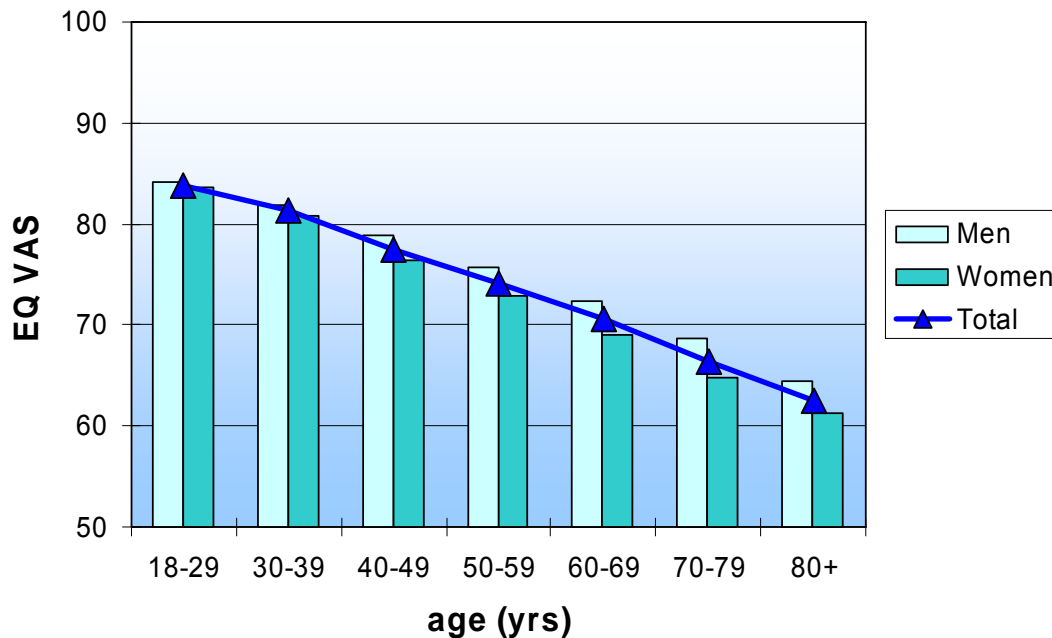
| EQ VAS | AGE GROUPS | | | | | | | TOTAL |
|-----------|------------|-------|-------|-------|-------|-------|------|-------|
| | 18-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80+ | |
| Mean | 87.0 | 86.2 | 85.1 | 81.3 | 79.8 | 75.3 | 72.5 | 82.8 |
| - Std dev | 13.8 | 14.6 | 15.5 | 46.8 | 17.5 | 18.5 | 18.2 | 23.1 |
| Median | 90 | 90 | 90 | 86 | 85 | 80 | 75 | 90 |
| - 25th | 80 | 80 | 80 | 70 | 70 | 65 | 60 | 75 |
| - 75th | 98 | 95 | 95 | 95 | 93 | 90 | 88 | 95 |

You can present a graphical representation of the data by using bar charts, line charts, or both (see figure 3). Figure 3 shows the mean EQ VAS ratings reported by

³ Kind P, Dolan P, Gudex C, Williams A. Variations in population health status: results from a United Kingdom national questionnaire survey *Bmj* 1998;316 (7133): 736-41.

men, women and both for 7 distinct age groups. The mean EQ VAS ratings are seen to decrease with increasing age. Also, men of all age groups reported higher EQ VAS ratings than women.

Figure 3: Mean population EQ VAS ratings by age group and sex



EQ-5D index

Information about the EQ-5D index can be presented in much the same way as the EQ VAS data. This means that for the index, you can present both a measure of the central tendency and a measure of dispersion. This could be the mean values and the standard deviation (or standard error). If the data is skewed, the median values and the 25th and 75th percentiles could be presented. Tables 5 and 6 and figures 4 and 5 contain 2 examples of how to present EQ-5D index results. Table 5 and figure 4 present the results from a study where the effect of a treatment on health status is investigated. Table 6 and figure 5 show results for a patient population and 3 subgroups (the tables and figures are based on hypothetical data and for illustration purposes only).

Table 5: EQ-5D index values before and after treatment – mean + standard deviation and median + percentiles

| EQ-5D index | before treatment | after treatment |
|--------------------|------------------|-----------------|
| Mean | 0.59 | 0.76 |
| - Std error | 0.012 | 0.015 |
| Median | 0.60 | 0.70 |
| - 25 th | 0.50 | 0.65 |
| - 75 th | 0.70 | 0.80 |
| N | 120 | 110 |

Figure 4: EQ-5D index values before and after treatment – mean values and 95% confidence intervals

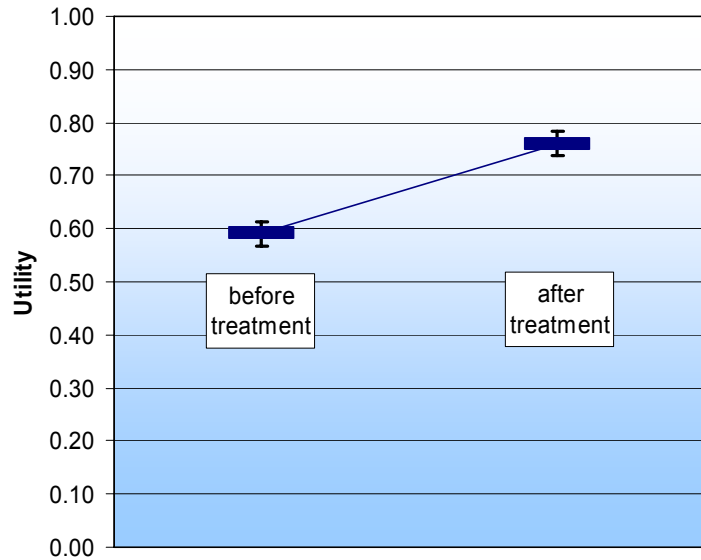
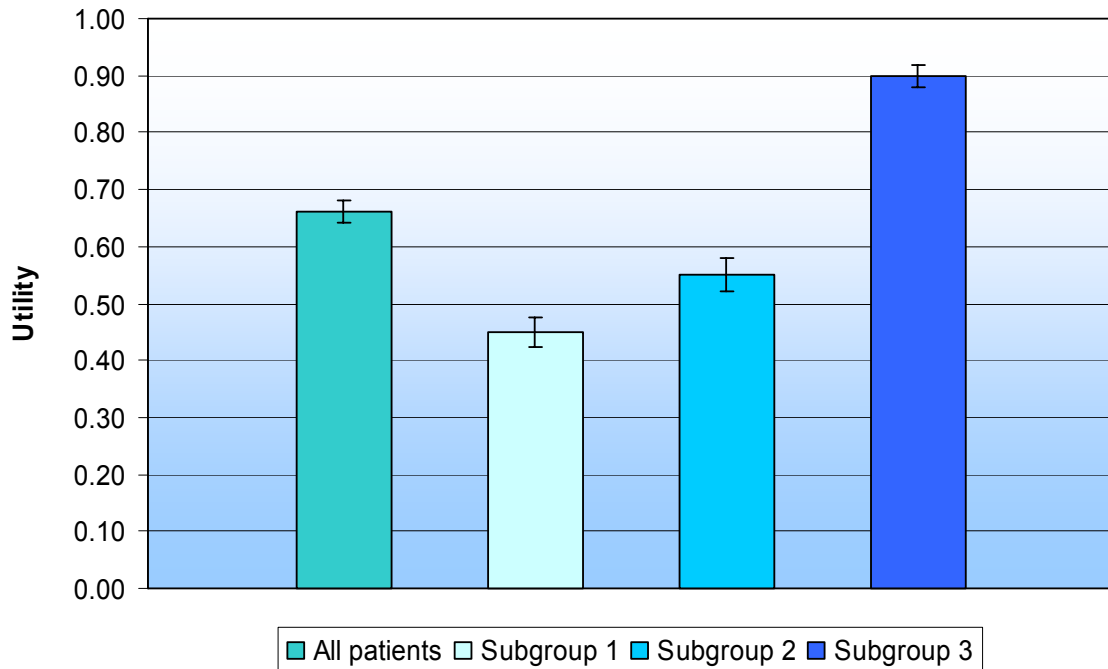


Table 6: EQ-5D index values of the total patient population and the 3 subgroups – mean + standard deviation and median + percentiles

| <i>EQ-5D-index</i> | All patients | Subgroup 1 | Subgroup 2 | Subgroup 3 |
|--------------------|--------------|------------|------------|------------|
| Mean | 0.66 | 0.45 | 0.55 | 0.90 |
| - Std error | 0.010 | 0.013 | 0.015 | 0.010 |
| Median | 0.55 | 0.40 | 0.55 | 0.95 |
| - 25th | 0.50 | 0.30 | 0.50 | 0.80 |
| - 75th | 0.70 | 0.50 | 0.60 | 1.00 |
| <i>N</i> | 300 | 100 | 75 | 125 |

Figure 5: EQ-5D index values of the total patient population and the 3 subgroups – mean values and 95% confidence intervals



7. EQ-5D: Frequently asked questions

For what period of time does EQ-5D record health status?

Self-reported health status captured by EQ-5D relates to the respondent's situation at the time of completion. No attempt is made to summarise the recalled health status over the preceding days or weeks, although EQ-5D has been tested in recall mode. An early decision taken by the EuroQoL Group determined that health status measurement ought to apply to the respondent's immediate situation - hence the focus on 'your own health state today'.

General population value sets vs patient population value sets

If you want to undertake a utility analysis you will need to use a value set. Generally speaking utility analysis requires a general population-based value set (as opposed to a patient-based set). The rationale behind this is that the values are supposed to reflect the preferences of local taxpayers and potential receivers of healthcare. Additionally, patients tend to rate their health states higher than the general population because of coping etc, often underestimating their need for healthcare. The EQ-5D value sets are therefore based on the values of the general population.

Difference between the EQ-5D descriptive system and the EQ VAS

The descriptive system can be represented as a health state, e.g. health state 11212 represents a patient who indicates some problems on the usual activities and anxiety/depression dimensions. These health states can be converted to a single index value using (one of) the available EQ-5D value sets. These value sets have been derived using VAS or TTO valuation techniques, and reflect the opinion of the general population. The EQ VAS scores are patient-based and are therefore not representative of the general population. The EQ VAS self-rating records the respondent's own assessment of their health status. The EQ VAS scores however are anchored on 100 = best imaginable health and 0 = worst imaginable health, whereas the value sets are anchored on 11111 = 1 and dead = 0 and can therefore be used in QALY calculations.

Difference between the VAS and TTO techniques

The difference between the value sets based on TTO and those based on VAS is that the techniques used for the elicitation of the values on which the models are based differ. In the TTO task, respondents are asked, for example, to imagine they live in a health state (e.g. 22222) for 10 years and then asked to specify the amount of time they are willing to give up to live in full health instead (i.e. 11111). For example, someone might find 8 years in 11111 equivalent to 10 years in 22222. The VAS technique on the other hand, asks people to indicate where, on a vertical thermometer-like scale ranging from best imaginable health to worst imaginable health, they think a health state should be positioned.

Multinational clinical trials

Information relating to EQ-5D health states gathered in the context of multinational trials may be converted into a single summary index using one of the available EQ-5D value sets. There are different options available to do this using appropriate value sets-however the choice depends on the context in which the information will be used by researchers or decision makers. In cases where data from an international trial are to be used to inform decision makers in a specific country, it seems reasonable to expect decision makers to be interested primarily in value sets that reflect the values for EQ-5D health states in that specific country. So for example, if applications for reimbursement of a drug are rolled out from country to country, country-specific value sets should be applied and reported in each pharmaco-economic report. This is no different from the requirement to use country-specific costs. In the absence of a country-specific value set, the researcher should select another set of values for a population that most closely approximates that country. Sometimes however, information about utilities is required to inform researchers or decision makers in an international context. In these instances, 1 value set applied over all EQ-5D health states data is probably more appropriate.

The decision about which value set to use will also depend on whether the relevant decision making body in each country specifies any requirements or preferences in regard to the methodology used in different contexts (e.g. TTO, standard gamble (SG), VAS or discrete choice modelling (DCM)). These guidelines are the topic of an international ongoing debate but the EuroQoL website is planning to provide a summary of health care decision-making bodies internationally, and their stated requirements regarding the valuation of health states.

Detailed information regarding the valuation protocols, guidelines on which value set to use and tables of all available value sets has recently been published by Springer in: EuroQoL Group Monograph series: Volume 2: EQ-5D value sets: inventory, comparative review and user guide' (see section 8 for more information). Chapter 4 by Nancy Devlin and David Parkin will be of special interest to researchers pondering the issue of which value set to use.

8. Additional information

Key EuroQol references

1. The EuroQol Group (1990). EuroQol-a new facility for the measurement of health-related quality of life. Health Policy 16(3):199-208.
2. Brooks R (1996). EuroQol: the current state of play. Health Policy 37(1):53-72.
3. Dolan P (1997). Modeling valuations for EuroQol health states. Med Care 35(11):1095-108.
4. Roset M, Badia X, Mayo NE (1999). Sample size calculations in studies using the EuroQol 5D. Qual Life Res 8(6):539-49.
5. Greiner W, Weijnen T, Nieuwenhuizen M, et al. (2003). A single European currency for EQ-5D health states. Results from a six country study. Eur J Health Econ; 4(3):222-231.
6. Shaw JW, Johnson JA, Coons SJ (2005). US valuation of the EQ-5D health states: development and testing of the D1 valuation model. Med Care; 43(3): 203-220.

Referring to the EQ-5D instrument in publications

When publishing results obtained with the EQ-5D, the following references can be used:

1. The EuroQol Group (1990). EuroQol-a new facility for the measurement of health-related quality of life. Health Policy 16(3):199-208.
2. Brooks R (1996). EuroQol: the current state of play. Health Policy 37(1):53-72.

If you used a value set in your study you can also include a reference to the publication regarding that value set. The appropriate references for the value sets can be found in the EQ-5D Value Sets Monograph and in the value set summary documents that can be ordered from the EuroQoL Executive Office.

Products available from the EuroQoL Executive Office

EQ-5D language versions/guidelines for different modes of administration

All language versions and guidelines for different modes of administration must be obtained exclusively from the EuroQoL Executive Office. Normally only the language(s) appropriate to the country where the research request originates will be supplied. They are distributed freely provided the research is not being funded by a commercial organization (e.g. a pharmaceutical or medical device company). In these latter instances, sponsorship is requested.

The Measurement and valuation of health status using EQ-5D: A European perspective. Eds Brooks R, Rabin R, de Charro F. Kluwer Academic Publishers, 2005

This book reports on the results of the European Union-funded EQ-net project which furthered the development of EQ-5D in the key areas of valuation, application and translation. The book can be obtained from Springer at www.springeronline.com at a cost of €107.95.

Measuring self-reported population health: An international perspective based on EQ-5D. Eds Szende A, Williams A. EuroQoL Group Monographs Volume 1. SpringMed publishing, 2004.

This booklet provides population reference data for a number of different countries and is available on request from the EuroQoL Executive Office.

EQ-5D concepts and methods: a developmental history. Eds Kind P, Brooks R, Rabin R. Springer, 2005.

This book is a collection of papers representing the collective intellectual enterprise of the EuroQoL Group and can be obtained from Springer at www.springeronline.com at a cost of € 85.00.

EQ-5D value sets: Inventory, comparative review and user guide. Eds. Szende A, Oppe M, Devlin N. EuroQoL Group Monographs Volume 2. Springer, 2006.

This book provides an essential guide to the use of the EuroQoL Group's value sets for anyone working with EQ-5D data and can be obtained from Springer at www.springeronline.com at a cost of € 49.95.

Future developments

Since 2002, the EuroQoL Foundation has provided modest funding for EuroQoL members to carry out innovative EQ-5D-related research. Since 2004, the Group has been establishing specific task forces to:

- Investigate the use of EQ-5D in different disease areas
- Develop a 5-level version of EQ-5D
- Explore different valuation methodologies for the 5-level version
- Develop an EQ-5D version for children aged 7-12 years in different languages
- Investigate the use of EQ-5D in population health

- Explore the use of electronic versions of EQ-5D in pc and web-based applications as well as palm pilots and (in the future) cell phones. This task force will also investigate the eliciting of values via the computer

Contact information:

For more information please look at the EuroQoL website at www.euroqol.org or e-mail us at userinformationservice@euroqol.org

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Part of this user guide was taken from and is based on the UK user guide that was developed by Professor Paul Kind from York University, UK in 1998.