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Comparison of EQ-5D VAS valuations: analysis of background variables

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7.1 INTRODUCTION

Preference-based instruments for measuring HRQoL of life have been developed in different countries and applied in empirical research in a much wider range of countries. A major concern in this context has been whether the valuations (values or utility weights) elicited for the instrument in 1 country are applicable in another, that is, whether the valuations in terms of the relative values/utilities of different health states are similar or not. If they are, an instrument that has been valued in country A can be applied in country B without having to carry out a very cumbersome and expensive process of eliciting the valuations in country B. However, if the valuations differ, the use of an instrument with valuations from country A in country B, for example in the evaluation of health interventions, may lead to different results and a different order of preference among the interventions from those should valuations from country B have been available.

One of the main purposes of the EuroQol Group since its inception in 1987 has been to explore the question of whether health state valuations are similar across a number of European countries. To this end, a simple standardised health state descriptive system was created, a set of standard health states was derived from this system, a way of valuing these states in a postal survey (using a VAS "thermometer") of a representative population sample drawn in a standardised way was devised, and a standard set of background variables for each respondent was recorded (The EuroQol Group, 1990). After some experimentation, the first 6-dimensional health state descriptive system was modified in 1991 to produce the present 5-dimensional system (EQ-5D), together with a standard set of health states to be valued, i.e. the present standard EQ-5D questionnaire (Brooks et al, 1996).

The early valuation studies in the UK, the Netherlands and Sweden using a set of health states defined by the first 6-dimensional health state descriptive system led the Group to conclude that there is "a striking similarity" in the relative valuations of these states across these countries (The EuroQol Group, 1990). Since then, valuation studies have been carried out with the present standard EQ-5D valuation questionnaire in several European countries. In spite of the aim to standardise the valuation...
studies, in practice the studies have differed in many, potentially important, respects. Hence the 'raw' valuations from different countries may not be directly comparable. At face value valuations appear to be similar across countries, but thus far no rigorous comparison has been made.

The purpose of this chapter is to pool the data from the European VAS-based valuation studies carried out since 1991, and to compare the valuations across studies and countries in a more rigorous way by accounting for measurable differences in methodology, study features and respondent characteristics, i.e. the background variables outlined in Chapter 6. It is evident from the results in Chapter 8 that health state valuations vary mainly because the states are different, i.e. are composed of different levels of different dimensions. Here we keep this source of variance constant and explore the extent to which the variance in the valuations of different health states, when considered separately, can be explained by the background variables. In addition we explore to what extent median VAS valuations differ between the studies.

7.2 MATERIAL AND METHODS

The VAS valuations

The standard valuation method of the EuroQol Group has been a postal questionnaire with the standard health states to be valued (15 different states plus repeated 11111, 33333, and dead). For various reasons, valuation studies have departed from the standard approach. For example, some studies have been interview-based rather than postal surveys. In some studies the health states to be valued have been ranked before valuation and their indicated duration may have departed from the standard 1 year. So not only the set of states to be valued may have departed to some extent from the standard set described above, the treatment of missing and inconsistent valuations may have been different. Finally, the population samples may have been drawn in various ways, resulting in differences in demographic and socio-economic characteristics.

The data sets

The pooled data originated from 11 studies from 6 European countries. These studies have been described in detail in Chapter 6. By using the abbreviations assigned to the studies in Chapter 6 the standard studies are Netherl. (Rotterdam survey in The Netherlands in January 1991); UK_FR (Frome IV study in the UK in June-August 1991); Finland (Finnish national survey in November-December 1992); Cat_Hos (a Catalanian study in l'Hospitalet del Llobregat in November-December 1992); Navarra (a survey in Navarra in September 1995); Sweden (Swedish national survey in April 1994); Ger_94 (a national German survey in June 1994); and Ger_97 (another German survey in April 1997). The non-standard studies are UK_MVH (a national sur-