



Expected Utility Theory, the Value of a Statistical Life and the Measurement of Health States

Presented by

Professor Jeffrey Richardson

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2nd Floor, Building 75
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Since its axiomatization by Von Neumann and Morgenstern, Expected Utility Theory (EUT) has been the theoretical basis for the analysis of choices taken under risk in economic theory. In the health economics literature it has been used to support two approaches to measurement, namely the standard gamble (SG), commonly claimed a gold standard in cost-utility analysis, and the value of a statistical life (VSL), also claimed to be the correct metric for measuring health outcomes in cost benefit analysis.

This paper notes the empirical disconfirmation of EUT and outlines a fundamental theoretical flaw in the theory and similar axiomatised theories of risk behaviour. This is that theories based upon consequentialism omit important considerations relevant to decision making.

This criticism demonstrates the invalidity of the claim that either the SG or the VSL are "correct" metrics. Dependence on EUT introduces bias which, in the case of the VSL, is potentially extreme. An empirical test of VSL supports this conclusion.

The results are significant for policy and theory. Currently, the VSL is being used to determine the dollar value of a QALY (Quality-Adjusted Life Year) in a major European Union research project. This will mislead policy. There is a need for further theoretical and empirical examination of the metrics which best satisfy the needs of health economic evaluation. It is agreed that this must draw upon input from society and not solely upon technical analyses.

Presenter

Jeff Richardson is a Professor in the Faculty of Business and Economics at Monash University and Foundation Director of its Centre for Health Economics. He is an Adjunct Associate of Stanford University and Honorary Professor at the University of South Australia. His research interests have included comparisons of international health care systems and health system reform, the econometric modelling of hospital and medical supply, demand and medical fees, cost-effectiveness and cost-utility analysis, the effects of privatisation and regulation in the health sector, health care technology and its diffusion, and the modelling of quality of life with multi-attribute utility instruments. Professor Richardson has worked with the World Health Organization, the Australian Development Assistance Bureau and the Rockefeller Foundation and chaired the recent review of the Tasmanian Hospital System.