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PREFERENCE MEASUREMENT IN HEALTH

EDITED BY

GLENN C. BLOMQUIST

*Department of Economics and Martin School of Public
Administration and Policy, University of Kentucky,
Lexington, KY, USA*

KRISTIAN BOLIN

*Department of Economics, University of Gothenburg,
Gothenburg, Sweden*



United Kingdom – North America – Japan
India – Malaysia – China

OVERVIEW

Measurements of individual benefits of, or preferences for, different health and medical interventions are fundamental for prioritizing among different and alternative uses of resources in the health care sector. There are two fundamentally different methods for eliciting individual benefits of goods and services – one based on orthodox neoclassical welfare economics and the other based on different non-welfarist approaches. At the core of welfare-based methods are the assumptions that (1) total societal utility is the sum of individual utilities in that society, and (2) there are no applicable substitutes for the assessment of well-being that the individuals make themselves. Improvements of societal welfare must come about either by Pareto improvements or by potential Pareto improvements (Hicks-Kaldor criteria). Empirically, the welfarist approach seeks to estimate individual demand functions from which consumer surplus can be readily inferred as a monetary metric – cost-benefit analysis. The result measures the individual's *willingness to pay* for a specific item. Empirical methods for direct measurement of the individual's willingness-to-pay for a good, a service or even a specific outcome have been developed. The non-welfarist approach to eliciting individual preferences in the health area relies on empirical techniques for revealing preferences for specific health states. The practical use of such measures is, primarily, within cost-utility analysis. With the exception of the chapter by Warshawsky-Livne et al., the contributions in this volume deal with research question using a welfarist-based approach.

This volume of the series of *Advances in Health Economics and Health Services Research* is devoted to *Preference Measurement in Health*. The volume is comprised of six chapters. The first four chapters focus on altruism and health production in the family. The last two chapters are concerned with topics related to specific health conditions.

The first chapter is titled *Altruism, Efficiency, and Health in the Family*, and was authored by Mark Dickie and Matthew J. Salois. Their contribution deals with parental decision-making with the objective of alleviating acute health conditions of their own or of other family members. They develop a theoretical model of intra-household parental division of responsibilities for child health care. Based on the theoretical model they estimate

parental willingness-to-pay for illness relief. Their results are mostly, but not entirely, supportive of the hypothesis that parents share responsibility for providing child health care according to comparative advantage. Also, their empirical findings are inconsistent with the notion of a household represented by a common utility function.

The second chapter is titled *Adolescent Girls' Preferences for HPV Vaccines: A Discrete Choice Experiment*, and was authored by Derek S. Brown, Christine Poulos, F. Reed Johnson, Linda Chamiec-Case, and Mark L. Messonnier. As suggested by the title, this chapter deals with preferences for human papillomavirus vaccines. More specifically, it deals with preferences for different ranges of protection offered by such vaccines. The study employs a national (US) survey about HPV vaccines. Their data are 307 completed responses – by girls aged 13–17 and their mothers – to a discrete choice experiment involving two hypothetical HPV vaccines characterized by different sets of clinical-effectiveness features. Their findings suggest that the most important feature of a considered vaccine is its protection against cervical cancer. The elicited preferences of daughters and mothers for their daughters were found to be similar.

The third chapter, *Gender Differences in Risk Attitudes*, by L. Warshawsky-Livne, L. Novack, A. B. Rosen, S. M. Downs, J. Shkolnik-Inbar, and J. S. Pliskin, deals with attitudes toward health risks. Information concerning preferences for 13 different health states was elicited using both the time trade-off and the standard-gamble method. A measurement of the attitude toward risk was calculated for each respondent, based on the information about health-state preferences among 629 university students in Israel. This information revealed a significant difference between men and women as regards their attitude toward risk. In contrast to what might be expected, men demonstrated risk aversion, whereas women were found to be nearly risk neutral.

In the fourth chapter, *Mutual Altruism: Evidence from Alzheimer Patients and Their Spouse Caregivers*, Markus König, Christian Pfarr, and Peter Zweifel present the results of a contingent valuation experiment involving 126 Alzheimer patients and their caregiving spouses. Information regarding willingness-to-pay associated with three hypothetical treatments was collected. The treatments were varied according to their effect on the patient and the caregiver. Overall, the results suggest mutual altruism between patient and spouse.

The fifth chapter has a somewhat different focus compared to the previous chapters. In *How Should the Health Benefits of Food Safety Programs Be Measured?*, the authors, V. Kerry Smith, Carol Mansfield, and Aaron

Strong present estimates of consumer preferences regarding food safety. They distinguished between ex ante food risks and ex post expected adverse effects of realized illnesses and employed a US national survey to estimate preferences. Their main finding is that consumers prefer ex ante risk reduction. They also found that private efforts are preferred to public measures, and that risk reduction of being struck by illness is preferred to reduction of severity of symptoms in case of illness.

In the final chapter of this volume, Damian Tago, Henrik Andersson, and Nicolas Treich present their study *Pesticides and Health: A Review of Evidence on Health Effects, Valuation of Risks, and Benefit-Cost Analysis*. It is a comprehensive survey of the literature on the health effects of pesticides. They included studies published in the years 2000–2013, and distinguish between (1) health-effect studies, which are divided according to direct or indirect exposure, and exposure associated with consumption, (2) studies that estimate preferences for pesticide-related health risks, and (3) studies that apply cost-benefit analysis, and methods for measuring risk perception, to the issues related to health risks associated with pesticides.

Preference measurement in health is crucial for understanding patient satisfaction and essential for efficient use of scarce resources. We hope that the chapters in this volume contribute to understanding of preferences and stimulate future research.

Glenn C. Blomquist
Kristian Bolin
Editors