



ELSEVIER

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/jval

Public Preferences for Prioritizing Preventive and Curative Health Care Interventions: A Discrete Choice Experiment

Jeroen Luyten, PhD^{1,2,3,*}, Roselinde Kessels, PhD^{4,5}, Peter Goos, PhD^{4,5,6,7}, Philippe Beutels, PhD^{1,8}

¹Centre for Health Economics Research & Modelling Infectious Diseases, Vaccine & Infectious Disease Institute, Faculty of Medicine & Health Sciences, University of Antwerp, Antwerpen, Belgium; ²Centre for Economics and Ethics, Institute of Philosophy, University of Leuven, Leuven, Belgium; ³Department of Social Policy, London School of Economics and Political Science, London, UK; ⁴Faculty of Applied Economics, Department of Economics, University of Antwerp, Antwerpen, Belgium; ⁵StatUa Center for Statistics, University of Antwerp, Antwerpen, Belgium; ⁶Department of Econometrics, Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam, The Netherlands; ⁷Faculty of Bioscience Engineering, Department of Biosystems, University of Leuven, Leuven, Belgium; ⁸School of Public Health and Community Medicine, The University of New South Wales, Sydney, Australia

ABSTRACT

Background: Setting fair health care priorities counts among the most difficult ethical challenges our societies are facing. **Objective:** To elicit through a discrete choice experiment the Belgian adult population's (18–75 years; N = 750) preferences for prioritizing health care and investigate whether these preferences are different for prevention versus cure. **Methods:** We used a Bayesian D-efficient design with partial profiles, which enables considering a large number of attributes and interaction effects. We included the following attributes: 1) type of intervention (cure vs. prevention), 2) effectiveness, 3) risk of adverse effects, 4) severity of illness, 5) link between the illness and patient's health-related lifestyle, 6) time span between intervention and effect, and 7) patient's age group. **Results:** All attributes were statistically significant contributors to the social value of a health care program, with patient's lifestyle and age being the most influential

ones. Interaction effects were found, showing that prevention was preferred to cure for disease in young adults, as well as for severe and lethal disease in people of any age. However, substantial differences were found in the preferences of respondents from different age groups, with different lifestyles and different health states. **Conclusions:** Our study suggests that according to the Belgian public, contextual factors of health gains such as patient's age and health-related lifestyle should be considered in priority setting decisions. The studies, however, revealed substantial disagreement in opinion between different population subgroups.

Keywords: distribution, efficiency, equity, prevention, QALY, treatment.

Copyright © 2015, International Society for Pharmacoeconomics and Outcomes Research (ISPOR). Published by Elsevier Inc.

Introduction

One of the greatest challenges for the future consists in finding a fair match between ever-increasing medical needs and possibilities on the one hand and finite health care budgets on the other hand. Consensus exists that such priority setting should reflect a concern for both efficiency (making maximal use of valuable resources) and equity (avoiding that some people become deprived of their deserved share) [1,2]. Over the past decades, the concern for efficiency has been operationalized in cost-utility analysis, informing decision makers on the ratio between incremental costs and incremental quality-adjusted life-years (QALYs) attributable to interventions [3]. Equity, however, remains a much more elusive concept because a large number of contextual considerations of patients, illnesses, or interventions could justify a more or less favorable weighing in rationing decisions [4]. Therefore, an important research objective remains to clarify which distributive principles carry social support.

The aim of this article is to contribute to the empirical literature describing the general public's distributive preferences regarding health care. We do so by means of a discrete choice experiment (DCE) held in a representative sample of the Belgian adult population. We pay specific attention to the following two issues. First, published studies about preferences for health care resource allocation largely ignored the difference in nature between prevention and cure. Unlike cure, however, prevention 1) avoids the intangible costs of experiencing ill-health; 2) can give rise to substantial externalities, with consequences for both efficiency and equity [5] (e.g., herd immunity through vaccination [6]); 3) is closely related to social justice (e.g., by adjusting social determinants of health) [7]; and 4) is attributed only a small fraction (<5%) of the health care budget in most countries [8], and may be the first to be cut in times of scarcity. In this study, we pay specific attention to the relative value of either type of health care and investigate whether their nature affects rationing

* Address correspondence to: Jeroen Luyten, Centre for Health Economics Research & Modelling Infectious Diseases, Vaccine & Infectious Disease Institute, Faculty of Medicine & Health Sciences, University of Antwerp, Universiteitsplein 1, B-2610 Antwerpen, Belgium.

E-mail: jeroen.luyten@uantwerpen.be.

1098-3015/\$36.00 – see front matter Copyright © 2015, International Society for Pharmacoeconomics and Outcomes Research (ISPOR).

Published by Elsevier Inc.

<http://dx.doi.org/10.1016/j.jval.2014.12.007>

principles. Second, an important criticism against studies eliciting social preferences is that aggregation covers up important heterogeneity in the ethical views of different respondents [7]. We therefore pay much attention to differences in the preferences of relevant subgroups, via the inclusion of several respondent characteristics as covariates in our analysis.

Methods

DCEs are a widely used technique to quantify individuals' preferences by observing their stated choices in a number of hypothetical scenarios [9–11]. Respondents are confronted with a sequence of choice sets consisting of two or more competing options. For each choice set, they have to indicate the option they like best. The options are described in terms of a fixed set of attributes or dimensions that differ in their levels. The data from a DCE allow the assessment of the relative importance of each attribute in the total value attributed to the options under valuation.

DCEs are predominantly used to elicit personal preferences (for a general review of applications, see [12]), but, in a number of studies, they have also been used to explore a population's social and ethical views regarding priority setting in health care (e.g., [13,14]; for specific reviews, see [15–17]). One motivation for using DCEs in the latter context is that respondents are forced to consider the consequences of their choice (choosing one option implies foregoing the other), which avoids that they simply ignore the fact that health care resources are limited.

Conducting a DCE involves the following steps: 1) identification of the attributes and attribute levels, 2) experimental design of the choice sets, 3) survey development, 4) sample selection and survey administration, and 5) data analysis.

Identification of the Attributes and Attribute Levels

For our research objective, it was important to identify a number of decontextualized, generic characteristics that provide a workable description of both preventive and curative interventions. These characteristics should enable respondents to make a meaningful judgment regarding the necessity to reimburse a given intervention. We considered literature review and expert opinion the preferable sources of information. Reviews have classified considerations, potentially relevant for rationing health care programs, into three groups: characteristics belonging to the patient, the intervention, and the health condition [15,18]. We updated a review of DCEs about priority setting [17] and identified 12 DCEs exploring the social value of health care [13,14,17,19–27]. We reviewed these studies focusing on the attributes used. We observed that all studies used combinations of attributes to indicate what would happen when a patient would not receive care (severity of illness, expressed in morbidity and/or mortality) and what would happen in case a patient received care (effectiveness of the intervention/health improvement). In addition, the studies involved a cost or budget impact attribute, the number of patients affected, alternative treatment options, and characteristics of the recipient (mainly age or health-related lifestyle).

The reviewed studies, however, mainly focused on cure, either explicitly or implicitly by shaping a context that is intuitively associated with curing patients, rather than with preventing illness. Therefore, we carried out a separate review of studies aiming to elicit preferences for prevention to find additional attributes. In a review of 114 DCEs [12], we found nine specifically applied to preventive interventions such as screening tests or vaccines [28–36]. These nine studies suggested the inclusion of two additional attributes in our DCE, namely, the intervention's risk on adverse effects and the time span between the intervention and its clinical effect.

In sum, our literature review suggests the following list of nine attributes as most useful to include in our DCE: type of intervention (curative or preventive), effectiveness of the intervention, adverse effects associated with the intervention, severity of illness, cost of the intervention, number of patients, relation to health-related lifestyle, time span between the intervention and the expected effect, and age group of the patient.

Subsequently, we organized group discussions with convenience samples consisting of researchers ($N = 10$) and lay persons ($N = 14$) in which we presented interventions in terms of these nine characteristics to investigate whether we overlooked potentially important attributes and whether the descriptions we used for the attributes and their levels allowed a realistic mental image of a health care program. No additional attributes were considered essential. However, when we tested exploratory choice sets, it appeared that inclusion of all nine attributes made the cognitive burden too large for respondents. Respondents not only had to compare the characteristics of the intervention and the disease but also had to consider scale differences between both programs (cost and number of patients). This extra dimension required respondents to make calculations and made them raise questions for clarification. Therefore, we decided to exclude the attributes cost and number of patients by mentioning in every choice set that the interventions had the same cost and were beneficial for the same number of patients.

The next challenge was to refine the wording used to describe the attributes and their levels, and to consider other than verbal presentations of the attribute levels. First, we presented all attributes to our convenience sample in various formulations to determine which one was easiest to understand. Because the use of attributes representing risks or chances is cognitively demanding, we considered using visualizations for the levels of the attributes effectiveness, risk on adverse effects, and lifestyle instead of verbal descriptions [37]. However, we learnt that a verbal description was most reliable because it minimized the cognitive burden imposed on the respondents while still bringing across the intended meaning. Also, for the other attributes, we experimented by describing levels using numbers and percentages, and found that the choice task was most intuitive when we described levels verbally. Terms such as “rarely” and “often” are more judgmental than numbers and chances (e.g., 1 adverse effect per 100 interventions), and they may translate into different numerical equivalents in different respondents. Using probabilities, however, does not guarantee equal interpretation (e.g., is a chance of 1 per 100 rare or often?). For our purpose, the qualitative rather than quantitative judgment of the respondent was what mattered, and, therefore, we opted for qualitative descriptions for a limited number of attribute levels.

We used three levels for each attribute, except for the attributes type of intervention, which has two levels, and age group of the patient, which has five levels. For the age attribute, we decided against covering all ages because this would make the age groups very wide. Instead, we opted for equally wide age intervals at different stages of life. Table 1 presents the descriptions of the attributes and their levels used. We presented the attributes one by one to the members of our convenience sample and asked them how they interpreted each attribute and attribute level. We encountered no difficulties in understanding.

Experimental Design of the Choice Sets

The DCE presented respondents with 14 choice sets of two competing medical interventions, termed “profiles” henceforth. The profiles are combinations of levels of the seven attributes in Table 1. To limit the cognitive burden imposed on the respondents, we used “partial profiles” [38–40]; that is, we varied the levels of only four of the seven attributes in the choice sets and

Download English Version:

<https://daneshyari.com/en/article/10486210>

Download Persian Version:

<https://daneshyari.com/article/10486210>

[Daneshyari.com](https://daneshyari.com)