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Choosing your health insurance package: A method for measuring the public's preferences for changes in the national health insurance plan

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ABSTRACT

With rising healthcare expenditure and limited budgets available, countries are having to make choices about the content of health insurance plans. The views of the general population can help determine such priorities. In this article, we investigate whether preferences of the general population regarding the content of health insurance plans could be measured with the help of a stated preference method: the Basket Method (BM). In this method, people use an online tool to include or exclude healthcare interventions from their hypothetical insurance package; this then affects their monthly premium. The study was conducted in the Netherlands. In total, 1007 members of two panels managed by the NIVEL filled out an online questionnaire that included the BM. The suitability of the BM was tested with the help of five criteria, e.g. the BM's ability to distinguish between healthcare interventions. Our results suggest that the BM is suitable for measuring preferences of the general population regarding the content of the health insurance plan, as it performs well on most criteria. Policy makers can use these preferences when deciding the content of the health insurance plan. Its contents will then be more aligned to the population's needs and preferences.

1. Introduction

1.1. Background

There is increasing demand worldwide for healthcare, caused by rising population expectations, population ageing and improved diagnosis and treatment due to advances in medical technology [1,2]. While this increasing demand causes healthcare expenditures to rise, the budget that can be allocated to healthcare is more and more limited. Given these growing budget constraints, choices have to be made concerning the financing of healthcare [3], including whether or not to reduce health insurance coverage [4].

To guide this decision-making process about the use of public funds, many countries have started to apply cost-effectiveness analysis (CEA) of health interventions, often as part of a more formalised implementation of health technology assessment (HTA) [5]. Some countries, such as New Zealand and Sweden, make their criteria for funding decisions publicly available in order to enhance the transparency and legitimacy of the outcome [6]. Additionally, an increasing number of countries, including the UK

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and Ireland, are considering incorporating the views of the general public in their decision-making process about resource allocation to healthcare interventions [7,8]. The involvement of the general population in setting healthcare priorities is considered to have added value, given the public's central role in funding the system, their awareness of which types of healthcare are important for them and their knowledge of the benefits of the various healthcare programmes gained through their own experiences or those of family and friends [7].

As it is often difficult to derive preferences for healthcare interventions from revealed behaviour, a variety of what are known as 'stated preference methods' have been developed, asking individuals to state preferences and inferring information from that to help determine the priorities as seen by the general public. Common examples include Contingent Valuation and Contingent Ranking [8]. Until now, most studies have used stated preference methods to elicit preferences from the public at large for healthcare interventions intended only for a single illness. Fewer studies consider a small number of different illnesses [7,9–16]. For instance, Olsen and Donaldson measure preferences for three interventions intended for different illnesses with help of Contingent Valuation [12]. Even in that case, respondents make choices for each intervention separately, which can lead to mental account and scope biases (e.g. wanting to spend all funds on one intervention but also on the other). In the case where a health insurance package is being assembled, it is important which interventions from a *set* of interventions should be added to one package.

A common study design that considers a complete health insurance plan is called Choosing Health Plans All Together (CHAT) [9–11]. CHAT is a stated preference method that asks *groups* of people to compose a new insurance plan that fits a given budget by choosing different coverage levels for different healthcare *categories* [9]. In the current study, however, we are interested in measuring individuals' preferences for specific healthcare interventions under consideration for inclusion or exclusion from the insurance package and need to be weighed against each other. We propose the use of a novel Internet-based stated preference method, the 'Basket Method' (BM), to measure these preferences. The Basket Method focuses on *individuals*, asking them which of a set of interventions they want in the existing insurance package. Individuals are constantly confronted with the effects of their choices on the insurance premium. This makes them aware of the consequences of their changes to the existing health insurance plan. Combined with the option of presenting information about which interventions are already part of the package in a natural way, BM can models reality closely.

1.2. Study focus

We aim to investigate whether the Basket Method is suitable for measuring the preferences of the general public regarding the content of the health insurance package. Our study is conducted in the Netherlands, where people are obliged to take out healthcare insurance covering a fairly broadly defined part of the healthcare costs they incur, e.g. hospital care and physician services [17]. On top of this basic package, people may opt for a complementary insurance package [18,19]. As financial resources are limited, the Dutch government makes choices about which interventions to include and exclude in the basic insurance package. These choices are based on recommendations from the Health Insurance Board (CVZ).

2. Method

2.1. The basket method

The basket method is an Internet-based survey tool in which people are presented with a variety of healthcare interventions. They are then asked to move the interventions that they want to include in the insurance package to one box on the screen, and move the remainder to the other box. Meanwhile, with each choice that the respondent makes, the monthly premium for the insurance package is adjusted. Because respondents were immediately confronted with the budget impact of the choices they made, their choices were very close to reality [9]. The interventions were described using a fixed set of attributes (Supplementary data: Table 1).

2.2. Study materials

2.2.1. Intervention descriptions

Recommendations from the CVZ to the government regarding the inclusion or exclusion of healthcare interventions are bundled in yearly reports [20]. For this study, 29 interventions from the 2007, 2008 and 2009 reports were chosen [21–23]. Half the 29 interventions were being considered for inclusion in the basic package and the other half were being considered for exclusion. We developed intervention descriptions based on a review of the literature, the available information about the interventions, and online focus groups with members of the Dutch public (aged 39–85). The resulting descriptions consisted of the title and explanation (including the patient group and the severity of the illness) and seven different attributes: the intervention's expected effect, incidence of the illness, available alternative interventions, costs of the intervention for users, costs of the alternative for users, size of co-payment and additional costs per premium payer if the healthcare intervention is included (Supplementary data: Table 1). Every respondent had to assess a random subset of five interventions from the total of 29. This number was chosen based on existing literature on information processing [24–27] and based on the results of our focus group.

2.2.2. Internet application and questionnaire: the choice questions

We developed an Internet questionnaire that we offered to respondents through a self-developed Internet application. First, all healthcare interventions and their attributes were shown one by one to the respondents. The respondents then saw the five interventions again in a decision-making setting and could request detailed attribute information per intervention (Fig. 1a). They had to place interventions that were to become part of the basic