Decision-making criteria among European patients: exploring patient preferences for primary care services

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Background: Health economics preference-based techniques, such as discrete choice experiments (DCEs), are often used to inform public health policy on patients’ priorities when choosing health care. Although there is general evidence about patients’ satisfaction with general-practice (GP) care in Europe, to our knowledge no comparisons are available that measure patients’ preferences in different European countries, and use patients’ priorities to propose policy changes. Methods: A DCE was designed and used to capture patients’ preferences for GP care in three countries, B48 eligible patients were identified across nine GP practices. The DCE questions compared multiple health-care practices (including their ‘current GP practice’), described by the following attributes: ‘information’ received from the GP, ‘booking time’, ‘waiting time’ in the GP practice, ‘listened to’, as well as being able to receive the ‘best care’ available for their condition. Results were compared across countries looking at the attributes’ importance and rankings, patients’ willingness-to-wait for unit changes to the attributes’ levels and changes in policy. Results: A total of 692 respondents (75% response rate) returned questionnaires suitable for analysis. In England and Slovenia, patients were satisfied with their ‘current practice’, but they valued changes to alternative practices. All attributes influenced decision-making, and ‘best care’ or ‘information’ were more valued than others. In Germany, almost all respondents constantly preferred their ‘current practice’, and other factors did not change their preference. Conclusion: European patients have strong preference for their ‘status quo’, but alternative GP practices could compensate for it and offer more valued care.

Introduction

Patient choice of health-care provider has become an increasingly important aspect of health-care policy in many European countries. Unfortunately, much of the discussion in the literature so far focused the attention on choice of secondary provider, with scarce recognition of the importance of patient choice and patient preferences in relation to primary care.¹ Which aspects of care patients value and how they make trade-offs between them should be considered to make sure that policy changes can truly enhance patient access to primary care services and the quality of care received.²

Recent European policy developments have brought increased attention to choice in the primary care setting.¹ For example, in England, the national general practice (GP) contract was recently amended to expand free choice of GP practice (outside of standard boundaries or catchment areas of practices) following a 12-month pilot scheme started in 2012.³ In Germany, patients can access the GP of their choice regardless of area of residence, although more recently there have been attempts to promote registration with a GP to strengthen the gatekeeping and coordinating roles of GPs.⁴ In Slovenia, patients have free choice of GP with a restricted number of one change per year.⁵ In light of the increased trend in choice policies across primary care across Europe, this article offers a unique perspective on decision-making criteria among European patients, using the discrete choice experiment (DCE) approach to capture their preferences for primary care services across a series of country settings.

DCE is an economic tool that can be used to study preferences across a variety of settings. Its application to health can demonstrate the value a particular health-care service has when making decisions.⁶,⁷ It is based on two assumptions: (i) health-care interventions, services and policies can be described by their attributes (or characteristics); and (ii) an individual’s valuation depends on the levels of these characteristics. It allows quantification of the patient benefit (i.e. satisfaction) attached to the health-care service when described by its several aspects that can span across structure (e.g. ‘location’), process (e.g. ‘waiting time’ and ‘quality of the treatment’) or health outcomes (e.g. ‘health state’). The benefits of using the DCE approach for eliciting patient preferences in health care are many manifold. First, a DCE simultaneously examines all aspects of care that are important to patients, creating a hierarchy of relative importance of, for example, structure or process-related attributes as compared with health outcomes. Second, a DCE may mimic actual decision-making because it requires respondents to make trade-offs in a choice context. For example, a DCE can show how much patients value a more convenient location by how much they are willing to sacrifice other aspects of their care, like waiting time. Third, a DCE also allows quantifying the overall benefit attached to hypothetical health-care practices described by selected attribute levels, including combinations that represent models of care that may not be currently available. Finally, hypothetical health-care practices can be compared alongside existing practices (e.g. ‘current care’). Having the opportunity to essentially ‘opt-out’ of making a hypothetical choice is an important feature, as it allows respondents not to be forced to make a choice that they would not make in real life (Ryan et al, 2008). This feature is particularly important when valuing patient preferences for policy changes from the ‘current care’ to ‘alternative health-care practices’. This is the first DCE study aimed at comparing patient preferences for GP care across a series of European countries and discussing the use of patient satisfaction data when informing policy changes across country settings.
**Methods**

**The DCE questionnaire**

A description of the DCE questions is presented here; however, more details are provided in Supplementary Appendix 1 on the DCE choice set creation (with an example of a DCE choice and detailed description of its attributes and levels); questionnaire design and development; the inclusion of validity tests and robustness checks; feasibility and piloting; preparation for data collection and analysis and ethical approval. First, respondents were asked to describe their 'current GP practice' in terms of five characteristics (and choose between their attached levels): (i) being able to receive all the 'information' they want from the GP on their care (Rarely; Sometimes; Most of the times; Always); (ii) being 'listened to and involved in decision-making' Rarely; Sometimes; Most of the times; Always; (iii) the 'booking time' (Next day; 1 week; 2 weeks; 3 weeks); (iv) the 'waiting time' spent in the GP practice (10, 20 30 or 40 min); and (v) being able to receive the 'best care' available for their health state from the GP (Rarely; Sometimes; Most of the times; Always). Following that, patients were then asked to complete a set of five DCE choices about their most preferred GP practice. Each choice compared three separate GP practice services ('hypothetical Practice A', 'hypothetical Practice B' and their 'current practice' described by combinations of the same attributes and levels used above; see Supplementary Appendix 1). The set of choices was created according to best practice in the design of DCE. An additional set of questions addressed patients' socio-demographic characteristics, health status and use of health care.

**Data collection, sample and sample size**

Germany, Slovenia and England were selected as a convenient sample of European countries involved in the European Union Cross Border Care Collaboration project (EUCBCC; www.ecabeurope.eu). Nine separate GP practices were involved in the study (two GP practices in Germany, three GP practices in England and four GP practices in Slovenia; see Supplementary Appendix 2). They were chosen as a convenient sample of data collection sites equally distributed between urban and rural locations, and ranged in size from 1 to 21 general practitioners. A target recruitment of ~100 patients from each GP practice was estimated to be sufficient for comparing preferences across country settings. The questionnaire was administered to patients aged ≥18 years while attending their GP practice. Subjects that were too ill to listen to the researcher were excluded from the study. A researcher was available during data collection in the GP practice to provide clarification and assistance in completing the questionnaire. After giving their signed consent, respondents were invited to complete a questionnaire either while waiting (with the option of completing it after the consultation) or later at home (to be returned in a prepaid envelope).

**Analysis of data**

Only questionnaires with a completed DCE choice set and section on their 'current practice' were considered for analysis. GP practice characteristics, patient responses, aspects of their 'current practice' service and demographic characteristics were analysed using raw statistics. Categorical data were described using frequencies and percentages, whereas continuous data were described with a mean and standard deviation. The utility or satisfaction function, which specifies the relationship between the attributes and preferences, was derived from the DCE choice set and estimated using an appropriate regression model (see Supplementary Appendix 3).

Results from the raw statistics and regression model are presented for the pooled data ('all countries') and for the three country-specific subgroups.

**Comparing patient preferences across countries**

Differences in the scale parameter prevented direct comparison of regression coefficients between groups. Hence, the regression coefficients were indirectly compared looking at the attribute importance ranking and willingness-to-wait (WTW) estimates for changes in GP care (explanations are presented in Supplementary Appendix 4).

**Comparing policy changes across countries**

Two examples of change in health-care practice were proposed ('change in health-care practice 1', from 'current practice' to hypothetical 'alternative practice 1'; and 'change in health-care practice 1', from 'current practice' to hypothetical 'alternative practice 2'). Details on the actual characteristics attached to each health-care practice ('current practice', 'alternative practice 1' and 'alternative practice 2') are presented in table 3. Measure of patient satisfaction for the two proposed changes is provided by WTW for the change; details are presented in Supplementary Appendix 4.

**Results**

**GP practices, patient responses and their socio-demographic characteristics**

Between May and October 2012, a total of 841 eligible patients were identified across the GP practices of which 692 returned a completed questionnaire (table 1). In Germany and Slovenia, all eligible patients who received the survey completed it (128 and 329, respectively). German patients, however, did not sign the consent form; their justification being that the GP practices did not want them to do so. They were worried to release any personal data reported on the consent form, although we assured they were to be kept confidential and collected only for ethics purposes. In England, 149 of 384 questionnaires distributed were either not returned to the researcher (n = 135) or returned but the respondents refused to take part (n = 14; by not signing the consent form, not completing the questionnaire or subsequently withdrawing from the study). The large volume of not returned questionnaires was mainly owing to one GP practice where the questionnaires were distributed to patients by the GP practice receptionists for completion at home. In this particular GP practice, only 61% (235 of 384) of the questionnaires were returned with attached signed consent form. Overall, the following numbers of questionnaires were suitable for analysis: 128 in Germany, 213 in England and 289 in Slovenia. Patient socio-demographic characteristics are described in table 2.

**Patient current practice**

Current experience of GP care was positive across countries, and characterized by (i) receiving ‘information’ most of the time/always (93%); (ii) being ‘listened to and involved in decision-making’ most of the times/always (92%); (iii) a ‘booking time’ of ≤1 week (86%); (iv) an average ‘waiting time’ of ~20 min; and (v) receiving ‘best care’ most of the times/always (92%; see Supplementary Appendix 5, ‘all countries’).

When looking at the country-specific data, the best attributes levels combination for the ‘current practice’ was reported by the German subgroup. Here, >88% respondents experienced a ‘current practice’ with the most convenient ‘attributes’ levels attached to it (‘always’ receiving ‘information’, ‘always’ being ‘listened to and involved in decision-making’, ‘always’ receiving ‘best care’, ‘next day’ ‘booking time’). Moreover their average
"waiting time" was ~28 min (details are reported in Supplementary Appendix 5).

**DCE questions**

**Validity of respondents**

About 90% of the questionnaires that were analysed resulted with valid responses, coming from patients who passed the internal consistency test (see Supplementary Appendix 1). Results from separate models including all responses, vs. those with valid responses only, indicated that there are no apparent differences between the overall fit and the individual attribute level coefficients. Therefore, all respondents were considered for analysis. Theoretical validity was gained, as the parameter estimates from the regression model presented the same sign and significance as expected (see Supplementary Appendix 1).

**Constant choices**

In all, 71.75% of respondents presented a consistent preference for their current practice, and did not want to trade for alternative practices, as they were satisfied with their experience of current GP care (table 1, questionnaires with constant choice for 'current practice'). The greater the proportion of people who did not want to change their 'current practice', the more satisfactory was the combination of attribute levels attached to it (see Supplementary Appendix 5).

**Comparing patient preferences across countries**

The importance ranking for the GP practice characteristics is summarized in figure 1. For the German respondents, attending their 'current practice' was the only valued aspects of care. In Slovenia and the UK, where respondents also valued other aspects of care apart from continuity of care with their 'current practice', receiving 'best care', 'information' and being 'listened to and involved in decision-making' were ranked between first and fourth places. 'Booking time' and 'waiting time' were always reported as the least preferred (fifth or sixth places).

### Table 1 Responses and versions of the questionnaire

<table>
<thead>
<tr>
<th>All countries n (%)</th>
<th>Germany n (%)</th>
<th>England n (%)</th>
<th>Slovenian n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Responses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Questionnaires distributed</td>
<td>883 (100)</td>
<td>128 (100)</td>
<td>384 (100)</td>
</tr>
<tr>
<td>Questionnaires returned</td>
<td>707 (80.07)</td>
<td>128 (100)</td>
<td>235 (61.20)</td>
</tr>
<tr>
<td>Questionnaires used for analysis</td>
<td>603 (71.35)</td>
<td>128 (100)</td>
<td>213 (55.50)</td>
</tr>
<tr>
<td>Questionnaires with constant choice for 'current practice'</td>
<td>452 (71.75)</td>
<td>128 (100)</td>
<td>126 (59.15)</td>
</tr>
<tr>
<td><strong>Versions of the questionnaire</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>159 (25.20)</td>
<td>31 (24.20)</td>
<td>52 (24.40)</td>
</tr>
<tr>
<td>2</td>
<td>152 (25.20)</td>
<td>30 (23.40)</td>
<td>50 (23.50)</td>
</tr>
<tr>
<td>3</td>
<td>160 (25.40)</td>
<td>34 (26.60)</td>
<td>53 (24.90)</td>
</tr>
<tr>
<td>4</td>
<td>159 (25.20)</td>
<td>33 (25.80)</td>
<td>58 (27.20)</td>
</tr>
</tbody>
</table>

a: Questionnaires were distributed to the patients attending the GP practice by a member of the local research team (with the exception of one GP practice in England where they were distributed by the GP practice receptionists).

b: Questionnaires returned to the research team with attached consent form either at the GP practice or by post. In Germany, the GP practices did not allow their patients to sign the consent form and share with us their names, although we assured this information was kept confidential and collected for consent purposes only.

c: Only questionnaires with completed DCE choice set and 'current practice' levels were considered for analysis.

d: % are referred to questionnaires used for analysis.

### Table 2 Patients’ socio-demographic characteristics

<table>
<thead>
<tr>
<th>All countries n (%)</th>
<th>Germany n (%)</th>
<th>England n (%)</th>
<th>Slovenian n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sociodemographic characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (mean, standard deviation)</td>
<td>52 (17.70)</td>
<td>57.40 (17.50)</td>
<td>51.50 (18.70)</td>
</tr>
<tr>
<td>Gender (female)</td>
<td>402 (63.90)</td>
<td>76 (59.40)</td>
<td>150 (70.40)</td>
</tr>
<tr>
<td>Health state</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very poor</td>
<td>4 (0.64)</td>
<td>0 (0.00)</td>
<td>3 (1.42)</td>
</tr>
<tr>
<td>Poor</td>
<td>49 (7.85)</td>
<td>15 (11.80)</td>
<td>16 (7.58)</td>
</tr>
<tr>
<td>Average</td>
<td>213 (34.10)</td>
<td>55 (43.30)</td>
<td>58 (27.50)</td>
</tr>
<tr>
<td>Good</td>
<td>277 (44.40)</td>
<td>53 (41.70)</td>
<td>96 (45.50)</td>
</tr>
<tr>
<td>Very good</td>
<td>81 (13.00)</td>
<td>4 (3.15)</td>
<td>38 (18.00)</td>
</tr>
<tr>
<td>Chronic disease (yes)</td>
<td>247 (40.00)</td>
<td>40 (32.30)</td>
<td>63 (30.00)</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In paid work</td>
<td>289 (46.10)</td>
<td>50 (39.10)</td>
<td>95 (45.00)</td>
</tr>
<tr>
<td>Retired</td>
<td>214 (34.10)</td>
<td>56 (43.80)</td>
<td>62 (29.40)</td>
</tr>
<tr>
<td>Others</td>
<td>124 (19.80)</td>
<td>22 (17.20)</td>
<td>54 (25.60)</td>
</tr>
<tr>
<td>Number of GP visits in the past 6 months (mean, SD)</td>
<td>2.91 (3.35)</td>
<td>3.37 (3.29)</td>
<td>2.94 (3.19)</td>
</tr>
</tbody>
</table>

Decision-making criteria among European patients
Comparing policy changes across countries

Two specific changes in GP care from their ‘current practice’ to alternative practice configurations are illustrated in figure 2. When looking at ‘change in health-care practice 1’, respondents valued moving from their ‘current practice’ to an alternative practice offering a service with the advantage of a decreased ‘booking time’ (from ‘20 min’ to ‘15 min’). More specifically, the added benefit attached to ‘change in health-care practice 2’ is almost three times greater than the benefit attached to ‘change in health-care practice 1’ (4 min vs. 11 min WTW, respectively; ‘all countries’ group). Country-specific analysis showed that the values attached to the two changes varied significantly across country settings.

Discussion

Results from this multi-country DCE study conducted in England, Germany and Slovenia reported that current experience of GP care is valued across country settings. In England and Slovenia, patients...
also valued changes to alternative GP practices. All service characteristics influenced their choice, but ‘best care’ and ‘information’ were more important than the others. In Germany, only ‘receiving their current GP care’ was valued, and almost all respondents were not willing to trade their current experience with other models of care.

The findings showed strong evidence of ‘status quo’ bias, where any change from the baseline ‘current practice’ is perceived as a loss.\(^\text{10}\) According to status quo bias theory,\(^\text{11}\) this evidence could be interpreted in three different ways according to ‘rational decision-making’, where patients perceive that the change to an alternative GP could lead to greater anxiety for the chance than actual benefits; ‘cognitive misperception’, where even small losses of changing from the current situation could be perceived as larger than they actually are; and ‘psychological commitment’, e.g. previous commitment to a GP or family’s opinion or the desire to direct and control their own situation can cause reluctance to change. Crucially, the evaluation of the benefit attached to particular changes in GP care proved that alternative models could compensate for the strong preferences for the ‘status quo’, and offer more valued health-care practices across settings.

This study confirmed the previous literature regarding patient preferences for GP care in Europe (see Supplementary Appendix 1). The evidence showed that patient value their GP care, and a series of aspects are important when making their choice, including ‘information’, ‘listened to and involved in decision-making’, ‘continuity of care’, ‘booking time’ and ‘information’. The strength of this study lies in the fact that real data on patients’ individual experience were considered in the evaluation, and patients were allowed to state their preference for their ‘status quo’, and compare it with alternative health-care practices. In previous exercises, they were either forced to choose alternative options or to compare them with a constant ‘current practice’ that did not take individual differences into account.

The majority of the publications reported in Supplementary Appendix 1 investigated UK-based patient experiences, followed by few other country-specific evaluations (in Denmark,\(^\text{12}\) in the Netherlands\(^\text{13}\) and in Switzerland\(^\text{14}\) and one multi-country comparison conducted in 12 different European settings.\(^\text{15}\) The latter study was an evaluation of health-care quality looking at WHO measures of achievement used across EU countries. The authors were able to capture large variations in patient satisfaction attached to particular dimensions of care both across settings and individuals. The added value of this study is that, although applied to a smaller number of countries, the DCE survey was not only able to gather information on what aspects of care are important to patients, but also calculate trade-off between them, measure the overall patient satisfaction attached to alternative health-care practices and value the benefit for policy changes.

There is ongoing discussion in the literature about incorporating an objective measure of the patient utility to support open public involvement in public health decision-making; DCE could be a useful tool to assist policy makers in the redesign of primary care services according to patient experience.\(^\text{16}\) Results from our study...
can also support policymakers and clinicians when providing the quality information patients need when making decisions on their care. Recent EU policy developments included the creation of National Contact Points across member states to assist patients, and provide them with quality information when seeking care in their home country and abroad.17 When comparing findings across the three case studies, particular attention needs to be placed on the international divergences in the service organization and management, as well as in the differences in culture, previous experience, socio-economic factors and health status of respondents.18 For example, German and Slovenian patients who accessed walk-in practices with no need of booking their visits might have valued differently the booking time attribute compared with English patients who needed to book their appointment in advance. Moreover, German participants were also more reluctant to participate in the research and release personal views and information. This might have influenced their reported experience of ‘current GP care’, and opportunity to prefer other services beyond their current experience. Contract constraints forced our survey to be conducted in three countries already involved in the EUCBCC project, and time and budget constraints limited the number of GP practices invited to take part. The restricted GP and country sample sizes did not support the generalizability of findings across European settings, and did not allow further multilevel analyses to take into account correlations at multiple levels (national, practice, individual and multiple responses from individuals).19 Future work should support the challenge of validating stated preferences with revealed preferences from actual behaviour (i.e. testing for external validity).

Supplementary data
Supplementary data are available at EURPUB online.

Acknowledgments
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Conflicts of interest: None declared.

Key points
- A discrete choice experiment (DCE) was used to elicit patients’ preferences for alternative models of GP care across three European countries (Germany, England and Slovenia).
- Current experience of GP care was positive across the three case studies.
- In Germany, only receiving care from their current practice was important, and almost all respondents were not willing to trade it with other practices. English and Slovenian respondents valued all aspects of care, although ‘best care’ and ‘information’ were more valued than others.
- European patients value GP care; although their current experience is valued highly, future changes in health-care practice could reconfigure more appealing models across country settings.

References
Introduction

Breast cancer (BC) is the most common cancer among women both in developed and developing countries, with an estimated 1.38 million new cancer cases diagnosed worldwide in 2008 (23% of all cancers). The incidence of BC has been steadily increasing in developing countries.2,3 BC incidence in Turkey was 24/100,000 in 1993 and increased to 50/100,000 in 2010.4,5 Changes in reproductive factors, lifestyle (westernized lifestyle) and age structure (aging) have increased incidence and mortality rates, especially in western Turkey.6

However, incidence and mortality rates are decreasing in developed countries because of early detection and improved...