

HERU Briefing Paper

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Briefing paper for the NHS

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PREFERENCES FOR SELF-CARE OR CONSULTING A HEALTH PROFESSIONAL IN MINOR ILLNESS

1. Self-care is being promoted within the NHS for reasons that include optimisation of resources
2. DCE respondents preferred to use self-care when managing flu-like symptoms, and were willing to pay almost £23 to do so.
3. Where professional help was required, advice from community pharmacy was the preferred option.

Key Messages

Background

Policy makers increasingly advocate the development of services that encourage patients to practise self-care. Shared responsibility for health and the importance of regarding self-care as part of the overall provision of health care have been emphasised. This is true both for the management of chronic conditions and minor illnesses. Drivers behind this policy include optimisation of resources; morbidity statistics for England and Wales suggest that more than 40% of GP consultations are for "minor" conditions that could be treated without medical advice, or managed without specific treatment (1). It has also been suggested that patients empowered with the necessary skills and resources for managing their own health will benefit from greater control over their lives and improved outcomes.

Recent UK Government policy documents highlight the role of community pharmacies in supporting safe and effective self-care by the public. Community pharmacies provide general health advice as well as specific information about prescription and over-the-counter medicines. Enhancing this role, the new contract for community pharmacy in Scotland has supported the introduction of a "minor ailment service" whereby patients exempt from prescription charges can receive treatment for self-limiting conditions directly from any pharmacy. A pilot study in Ayrshire and Arran however, has shown that while such services can be provided successfully, uptake may be limited with a relatively low impact on GP workload (2). The current study used a discrete choice experiment (DCE) to find out more about people's preferences for managing common symptoms associated with self-limiting conditions.

Method

To inform the development of the DCE, semi-structured, qualitative interviews were conducted with 24 individuals, randomly selected from respondents to a previous survey about medicines' use in Scotland (3). Analysis of the interview transcripts revealed three attributes, important when people decided how to manage symptoms, and potentially policy-relevant. Box 1 shows the attributes, their associated levels and descriptions.

Box 1: DCE attributes; descriptions and levels

1. Type of management (*"There are several ways you could deal with these symptoms."*)

Self-care; community pharmacy advice; GP consultation; practice nurse consultation; NHS24 telephone advice; complementary therapist consultation.

2. Availability (*"The length of time you would have to wait before you can deal with your symptoms in your preferred way"*)

0 hours; 1 hour; 5 hours; 1 day; 2 days; 5 days

3. Cost (*"We want you to think about how much you would be prepared to spend to get your preferred option. This would include all associated costs such as travel costs and the cost of any treatment."*)

£2; £5; £7; £15

Participants were presented with a clinical scenario (Box 2) describing a set of flu-like symptoms.

Box 2: DCE symptom scenario

Please imagine this situation:

You have a headache and a fever, your bones are aching and your nose feels slightly blocked up. You are still able to do all the things you usually do but are more tired than usual. The symptoms started to appear four days ago, and were slightly worse when you woke up this morning.

In each of the given choice sets, participants were asked to select their preferred choice for managing these symptoms from three options; two unique profiles (combinations of the attributes, each with unique levels) and a "do nothing" option. Figure 1 illustrates a choice question.

Figure 1 Example of a choice question

Example	Which option would you choose?	
	Option 1	Option 2
Type of management	Self-care	GP
Availability	1 hour	2 days
Cost	£2	£7

Tick ONE box only

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Option 1	Option 2	Do nothing

SAS statistical software was used to generate the DCE design. The most efficient design (in terms of minimising D-error) consisted of 72 separate choice sets, each comprising two alternative profiles. These 72 choice sets were allocated by SAS into eight separate blocks (nine sets per block), each of which was incorporated into a separate questionnaire. Two warm-up questions and two consistency tests (contraction property) were also included. Additional core questions collected descriptive socioeconomic and lifestyle data.

The sample for the discrete choice experiment comprised 652 respondents to the previous survey (3) who had agreed to be approached for further research and who had not been involved in the interviews or piloting of the DCE. Each participant received (randomly) one of the eight versions, thus 81 or 82 participants received each version.

Data were entered into SPSS. Descriptive data were analysed using frequencies and the χ^2 test. Choice data were transferred to STATA and analysed by multinomial regression analysis using conditional logit. Categorical data ("type of management") were expressed as dummy variables. For analysis, the reference level was "self-care". Data from the warm-up and consistency questions were excluded from the analysis.

Regression coefficients were calculated for all attributes and for the constant in the regression model. The regression equation for the model is represented by:

$$V = \text{Constant} + \beta \text{ GP} + \beta \text{ days} + \beta \text{ cost}$$

where V is the utility associated with any given profile. Within this model, the constant term estimated the utility of (preference for) doing something (rather than doing nothing) combined with the utility of practising

self-care (rather than any of the other types of management). The magnitude of the regression coefficients (β) represented the degree of preference for each of the attributes; the greater the coefficient, the higher the value of a marginal change in that attribute. The ratio of coefficients was used to demonstrate how respondents traded between attributes. The ratio of any given coefficient to the negative coefficient for the cost attribute was used to calculate willingness to pay (WTP) for marginal changes in the corresponding attribute. Utility scores were calculated to illustrate the benefit of different models of care.

Results

Of the 652 questionnaires mailed out, 326 participants returned the questionnaire (see Porteous et al (4) for information on characteristics of respondents). Of these, 31 did not complete the discrete choice experiment and two failed both consistency tests; in total, 293 responses were included in the discrete choice experiment analysis (293/573, 51% valid response rate). Table 1 shows the results of the multinomial logistic regression.

Table 1 Conditional logit regression analysis

Variable	Regression coefficient (β)	WTP
Constant term^a	1.968	£22.62
Type of management (<i>reference level, self-care</i>)		
• Pharmacy advice	-0.304	£19.13
• GP consultation	-0.473	£17.18
• Practice nurse consultation	-0.923	£12.01
• NHS24 telephone advice	-1.480	£5.61
• Complementary therapist consultation	-1.585	£4.40
Availability (<i>time to deal with symptoms in days</i>)	-0.321	£3.69 for a one day reduction
Cost (£)	-0.087	

a. The coefficient for the constant is used to estimate the combined preference for doing something to manage symptoms (rather than doing nothing) and preference for the reference level, self-care (and thereafter, WTP).

All coefficients were statistically different from zero ($p \leq 0.002$) suggesting that all attributes contributed to respondents' preferences. Coefficients for availability and cost attributes were negative indicating that respondents preferred waiting less time and paying less money, thus confirming theoretical validity. All coefficients for "type of management" were negative indicating that they were preferred less than the reference level (self-care).

All other things being equal and for the clinical scenario described, respondents preferred to do something (compared to doing nothing), with self-care the most preferred management option. Pharmacy advice was the next most preferred option followed by GP consultation, although there was no statistical difference between the two ($p=0.106$). NHS24 advice and consultation with a complementary therapist were preferred considerably less.

The ratio of the coefficients for the constant and cost gives an estimate of WTP for self-care. Our results suggest that all other things being equal, respondents would be willing to pay £22.62 to self-manage the clinical scenario described (1.968/0.087). This amount includes both the value of practising self-care and that of doing something in preference to nothing. By comparison, respondents were willing to pay £17.18 for GP advice (£22.62 - (0.473/0.087)) and £4.40 for advice from NHS24 (£22.62 - (1.585/0.087)). Respondents were prepared to pay £3.69 to reduce by one day, waiting time before they could deal with the scenario (0.321/0.087).

The results can also be used to estimate relative preferences for different models for managing minor illness. For example, the utility (V) associated with seeing a GP after a wait of four days at a cost of £5 can be calculated as:

$$V = \text{Constant} + \beta \text{ GP} + \beta \text{ days} + \beta \text{ cost}$$

$$V = 1.968 + (-0.473) + 4(-0.321) + 5(-0.087)$$

$$V = -0.224$$

The negative sign on the utility score implies that respondents would prefer to do nothing rather than use this model. An alternative might be to see a practice nurse after a wait of 5 hours at a cost of £5. The associated utility score for this model is 0.543 and the positive value suggests that this option would be preferred to doing nothing. This indicates that although in our scenario seeing a GP was preferred to seeing a practice nurse (all other things being equal), if the wait was too long, seeing a practice nurse became the preferred option.

Discussion

Our findings suggest that people prefer to self-manage self-limiting illness, and that when they need to seek professional help they are willing to use some of the alternatives to traditional general practice services (i.e. community pharmacists). However, they also suggest that recent government policies aimed at reducing waiting times to see a GP may discourage some patients from practising self-care. People seem to be less willing to use other alternative services, such as the practice nurse and NHS24. This suggests that the proposed benefits of new policies to support self-care

may not have their full desired effect without additional development. How individuals respond to clinical scenarios depends on the nature, perceived seriousness and severity of symptoms, change from usual pattern and available treatments. Behaviour may vary across different groups of people. We now need to see whether similar patterns are found for a variety of clinical scenarios, as well as try and understand more fully the reasons for patients having different preferences.

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