

Patients' preferences for GP consultation for perceived cancer risk in primary care:

a discrete choice experiment

Abstract

Background

Contacting a doctor for advice when experiencing a potential cancer symptom is an important step in early diagnosis, but barriers to consultation are commonly reported. Understanding barriers to consulting in primary care within the cancer context provides opportunities to improve earlier diagnosis of cancer.

Aim

To investigate patients' GP consultation preferences when presented with a potential cancer symptom, and to describe whether these preferences are mediated by variable levels of cancer risk.

Design and setting

A UK-wide online survey of adults ≥ 50 years old, using quota sampling to reflect general population characteristics.

Method

A discrete choice experiment examined participants' preferences for primary care consultation for three cancer symptom scenarios: risk level not mentioned, risk designated as 'low', or risk designated as 'high'. Scenarios based on length of consultation, time to getting an appointment, convenience, choice of GP, and GP listening skills were presented in a self-completed online questionnaire.

Results

A total of 9616 observations were obtained from 601 participants. Participants expressed preferences for doctors with better listening skills, the ability to see a GP of their choice, and shorter waiting times. These findings were the same across risk conditions and demographic groups. Participants were willing to wait an extra 3.5 weeks for an appointment with a doctor with good/very good listening skills (versus very poor listening skills) and an extra week for an appointment with a GP of their choice (versus any GP).

Conclusion

Patient decisions about help seeking seem to be particularly influenced by the anticipated listening skills of doctors. Improving doctors' communication skills may in the longer term encourage people to seek prompt medical help when they experience a cancer symptom.

Keywords

cancer; communication skills; decision making; health services research; primary health care; symptoms; social skills.

INTRODUCTION

More than half of the UK population will be diagnosed with some form of cancer during their lifetime.¹ Prompt presentation with cancer symptoms could help to improve clinical outcomes in some, and patient experience in nearly all, patients.^{2,3} International comparison surveys indicated that responders in the UK more often reported barriers to seeing their primary care doctor than in other countries with similar healthcare systems.⁴ Therefore, understanding barriers to consulting in primary care within the cancer context provides opportunities to improve earlier diagnosis of cancer [Box 1].² Against this background, the authors hypothesise that psychosocial, clinician, and system factors may all contribute to how long a patient waits between noticing a cancer symptom and making an appointment with a healthcare professional.

This study used a discrete choice experiment to better understand the trade-offs that patients are willing to make when making an appointment for a cancer symptom. Discrete choice experiments allow us to understand which aspects of service delivery are most important to patients, and suggest the aspects of a health service that are likely to result in the greatest reductions in time to help seeking were they to be

addressed.⁵ Discrete choice experiments can be used to understand consultation preferences and are based on the principle that services can be described in terms of a set of attributes (such as type of healthcare professional), which can take on one of several levels (for example, any GP, GP of your choice). Discrete choice experiment participants are asked to state their preferences in a choice between a number of options of attributes with different levels (for example, same day/any GP versus 10 days/GP of your choice); and statistical modelling is used to calculate which attributes are valued and to what extent.⁵ This study elicited public preferences for different consultation options within the context of experiencing a cancer symptom. The study also explored whether these consultation preferences varied by cancer risk based on existing evidence, suggesting the influence of perceived symptom seriousness on consultation preferences.⁵ Finally, the study aimed to examine whether participant characteristics (such as age or experience of cancer) influenced consultation preferences,⁶ with the aim of adding depth to the results that could be useful for policymakers.

METHOD

Discrete choice experiment

Discrete choice experiment guidelines were followed for study design and analysis.⁷⁻⁹

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How this fits in

Prompt consultation in primary care when people experience a potential cancer symptom is considered key to earlier diagnosis. Several factors are known to influence consulting, although it is not clear how patients weigh up these factors. This study used a discrete choice experiment to explore patients' preferences for GP consultation using different cancer symptom scenarios. The listening skills of the doctor were a key driver of preference; improving communication in consultations is likely to encourage help seeking in the longer term.

Detailed information about the discrete choice experiment design is available from the authors on request.

Sample and recruitment

Data were collected from a sample of the general population aged ≥ 50 years who did not have a current diagnosis of cancer. Participants were members of an online research panel (Survey Sampling International, who have 11.5 million panel participants who are incentivised to take part in research),¹⁰ and the questionnaire was emailed to members of the panel in November 2015. Participants were purposively sampled to match the general population with regards to age, education, and sex, in accordance with census data.¹¹

Attributes and attribute levels

Based on findings of previous research,^{5,6,12} including work focused on help seeking for cancer symptoms,^{13,14} five attributes of primary care consultations were chosen:

- length of consultation (minutes);
- time to getting an appointment (weeks);
- convenience of appointment (during normal working hours or not);
- choice of GP (ability to see a GP of their choice or any GP); and

Box 1. Factors known to affect consulting in primary care

- Worry about wasting a doctor's time is consistently highlighted as a barrier to help seeking by patients with cancer,¹⁵⁻¹⁷ and the general public,^{18,19} and awareness of long waiting times exacerbates feelings of time-wasting.¹³
- Difficulty making an appointment has been reported both in population surveys and qualitative interview studies with people reporting 'alarm' symptoms.^{13,18,19}
- In the English General Practitioner Patient Survey, communication with the doctor is the most important driver of overall satisfaction with primary care.¹²
- Two-thirds of English patients have a preference for seeing a specific doctor, also known as interpersonal or relational continuity of care.²⁰

- GP listening skills (how good the doctor is at listening to you).

The levels of attributes were chosen based on previous research (Figure 1).^{5,6,12}

Questionnaire design

The questionnaire comprised six sections:

1. a question determining eligibility;
2. structured questions about general health;
3. discrete choice experiment scenarios;
4. perceived difficulty completing the discrete choice experiment;
5. questions on experience of cancer; and
6. demographic questions.

For the discrete choice experiment scenarios each responder was asked to make eight separate choices, and for each choice was asked to choose one of two options that varied by the levels of the attributes.

Three vignettes were developed that varied according to cancer risk: risk level not mentioned, designated as 'low risk', or designated as 'high risk' (Box 2). Descriptive, qualitative labels were chosen (such as 'low risk') to avoid questionnaire burden associated with explaining percentage risk because quantitative information may lead to varying interpretation in different individuals.²¹ Participants were randomly assigned to one of the three risk scenarios.

A factorial design was used to reduce the number of possible scenarios to 16 (more details available from the authors on request). As it was considered overly burdensome for a single responder to complete all 16 choices, they were split into two sets of eight choices, and the responders were randomly assigned to receive one of these.

The study aimed to recruit 600 participants. Although no consensus exists regarding sample size calculation for discrete choice experiments because of their complexity (such as number of attributes and levels),²² this sample size is similar to previous studies.²³ Three hundred participants were randomly assigned to each set of scenarios, and 100 participants in each scenario set were randomly assigned to each risk scenario.

With each choice participants were asked 'Which consultation sounds best to you?' (Figure 2). A 'neither' option was not included because the study was not looking at consultation uptake but rather modelling preference structures.

Attributes	Levels			
Length of consultation	10 minutes	20 minutes		
Time to getting an appointment (waiting time)	Same day	1 week	4 weeks	
Convenience	Any time	Normal working hours only		
Choice of GP	GP of your choice	Any GP		
Listening skills	Very good	Good	Poor	Very poor

Figure 1. Attributes and levels used in the discrete choice experiment.

The survey included questions regarding demographics, smoking status ('Yes, I am a current smoker', 'Not now, but I used to smoke', and 'No, I have never smoked'), and previous cancer experience: 'Have you or any family members or close friends, ever been diagnosed with cancer?' (Myself, Parent/brother/sister/child, Other family member, Close friend, Prefer not to say, and None of the above). All participants were asked to rate how easy/difficult they found the scenarios to complete, and were given the opportunity to provide free-text comments on the survey.

Statistical analysis

The discrete choice experiment preference data were analysed using a conditional logit regression model where the outcome was consultation preference (A or B) and the variables in the equation were the individual

attributes (such as time to consultation). Detailed information about the analysis is available from the authors on request.

Three groups of conditional logit regression models were run. First, the model was run on the whole sample. Second, another group of models were run that stratified participants according to risk scenario. Third, nine groups of models were run that stratified participants separately according to demographic characteristics including sex, age, education, ethnic group, marital status, employment status, smoking status, previous personal history of cancer, and self-rated health. In the second and third cases, differences in preferences were tested for between the stratified groups using χ^2 tests.

The regression results were used to calculate the probability that different types of consultation (defined in terms of the attributes and levels) would be selected. They were then ranked in order of preference by these probabilities, so consultations with higher probability appeared higher in the ranking and were preferred by study participants.⁸ This used the 32 types of consultation used in the discrete choice experiment.

To determine the trade-offs participants were willing to make between the attributes, the marginal rates of substitution were calculated as a ratio of the coefficients of two attributes. The marginal rates of substitution allow direct assessment of how much of one attribute participants are willing to trade for one unit of another attribute and enables a comparison of different attributes on a common scale.⁸ In this case the marginal rates of substitution values were calculated using the 'waiting time to appointment' attribute as the denominator so that participants' preferences and the trade-offs could be compared on a common value scale in terms of 'willingness to wait'. For ease of interpretation the marginal rates of substitution were computed for statistically significant variables, using dummy-coded variables.

All analyses were undertaken using the software package Stata (version 12.0). Other analyses involved descriptive statistics on single items included in the questionnaire including age, education, ethnicity, marital status, employment, smoking status, personal history of cancer, and self-rated health.

RESULTS

Participants

A total of 658 people without a current diagnosis of cancer and aged ≥ 50 years

Figure 2. Example of discrete choice experiment scenario (for low-risk condition).

We would like you to imagine that you have decided to go and see the GP about a symptom you've had for the last 6 weeks that you are worried might be cancer. With this symptom there is a low risk of cancer.

Attributes	Consultation A	Consultation B
How long the allocated time slot for your appointment is	10 minutes	20 minutes
How long you need to wait to get an appointment (that is, from calling to book an appointment to the date of the appointment)	1 week	4 weeks
What time of the day and week the appointment is	Any time	Normal working hours only
Which GP you will see	GP of your choice	Any GP who is available
How good the GP is at listening to you	Very good	Good

Which consultation sounds best to you?

Consultation A

Consultation B

Box 2. Vignettes associated with risk scenarios

Risk level not mentioned

We would like you to imagine that you have decided to go to see the GP about a symptom you've had for the last 6 weeks that you are worried might be cancer.

Low risk

We would like you to imagine that you have decided to go to see the GP about a symptom you've had for the last 6 weeks that you are worried might be cancer. With this symptom there is a low risk of cancer.

High risk

We would like you to imagine that you have decided to go to see the GP about a symptom you've had for the last 6 weeks that you are worried might be cancer. With this symptom there is a high risk of cancer.

Table 1. Demographic characteristics (n = 601)

Variable	Participants n (%)
Sex	
Male	300 (50.0)
Female	301 (50.0)
Age, years	
50–59	250 (41.6)
60–69	229 (38.1)
≥70	122 (20.3)
Education	
No formal qualifications	170 (28.3)
Lower than degree	338 (56.2)
Degree level	93 (15.5)
Ethnicity	
White British	592 (98.5)
Other	6 (1.0)
Prefer not to say	3 (0.5)
Marital status	
Married	388 (64.6)
Not married	213 (35.4)
Employment	
Working	199 (33.1)
Not working	402 (66.9)
Smoking status	
Current smoker	144 (24.0)
Former smoker	215 (35.8)
Never smoked	242 (40.3)
Personal history of cancer	
Yes	276 (45.9)
No	325 (54.1)
Self-rated health	
Poor	65 (10.8)
Fair	233 (38.8)
Good/excellent	303 (50.4)

completed the discrete choice experiment. Fifty-seven participants were excluded because they failed quality checks: seven because they completed the discrete choice experiment section in less than 50 seconds; 46 because responses to the first practice question were irrational²⁴ (meaning participants chose the consultation where all attributes were less preferable compared with the alternative consultation), and four because they failed the quality control question related to age (by providing two inconsistent age answers). Hence, the final sample consisted of 601 participants. Demographic characteristics are presented in Table 1.

Most of the 601 participants found the discrete choice scenarios easy ($n=291$; 48%), or very easy ($n=240$; 40%), to complete, with a smaller proportion reporting they found the section difficult ($n=68$; 11%), or very difficult ($n=2$; 0.3%). The open-text comments also did not reveal any concerns about the discrete choice experiment. Most people (78%) did not provide specific feedback, but words such as 'interesting' or 'good' were commonly used to describe the survey.

Influence of consultation characteristics (main effects model)

The coefficient results (Table 2) indicated that the attributes 'time to getting an appointment', 'choice of GP', and 'listening skills' were statistically significant in participants' preferences for a GP consultation. 'Length of consultation' and 'convenience of appointment' were not.

Given the attribute coding used in the regression equation, the sign on the coefficients for the significant attributes indicates that participants preferred shorter waiting times to see a GP, with the ability to see their choice of GP, and with very good (versus very poor) listening skills (all $P<0.001$).

Influence of cancer risk and sociodemographic characteristics

There were no statistically significant

differences in preferences between participants assigned to each of the three risk scenarios (Table 3). There were also no statistically significant variations in consultation preferences by participant sub-groups, including age, education, ethnicity, marital status, employment status, smoking status, previous personal history of cancer, and self-rated health assessment (all $P>0.05$; results not shown).

Order of preferences

Consultations for the total sample were ranked in order of preference by calculating the mean probability of choosing a given consultation (Table 4). Consultations at the top of the table are the most preferred, and consultations at the bottom of the table are the least preferred consultation. For example, the highest ranking consultation was 20 minutes long, 1 week waiting time from phone call to appointment, that could be at any time with a GP of their choice who has very good listening skills. However, although listening skills are highly valued by participants, even consultations with a doctor who has good listening skills moves down the ranking table if this is accompanied by long waiting times [4 weeks], lack of convenience (during working hours only), and without a choice of GP.

Willingness to wait trade-offs

Calculation of the marginal rates of substitution identified the magnitude of participants' preference for a GP with good listening skills, and seeing a GP of their choice (Table 2). Participants were prepared to wait around 3.5 weeks for a GP with very good or good listening skills compared with seeing a GP with very poor listening skills. They were prepared to wait around 1 week to see a GP of their choice compared with having no choice.

DISCUSSION

Summary

This study explored people's preferences for consulting a GP when considering a potential cancer symptom. Participants preferred to see a GP of their choice, a GP with good listening skills, and to be able to access timely appointments. Length of consultation and convenience of appointment did not influence people's preferences. Participants' preferences did not vary by risk of cancer symptom, and there were no other sociodemographic associations. People were willing to trade shorter waiting times with having a consultation with a doctor who was good at listening to them and (to a lesser extent) the ability to see a GP of their

Table 2. Conditional logit analysis regression results for total sample

Attribute	Level	Effects coded ^a	Dummy coded ^a	Willingness to wait for an appointment (weeks)
		Coefficient (95% CI)	Coefficient (95% CI)	MRS
Length of consultation	(minutes)	0.001 [-0.007 to 0.008] ^b	0.001 [-0.007 to 0.008] ^b	
Waiting time	(weeks)	-0.540 [-0.584 to -0.496]	-0.540 [-0.584 to -0.496]	
Convenience/availability	Normal working hours only	-	-	
	Any time	0.041 [-0.003 to 0.085] ^b	0.083 [-0.002 to 0.167] ^b	
Healthcare professional	Any GP	-	-	
	GP of your choice	0.244 [0.204 to 0.283]	0.487 [0.403 to 0.571]	0.902 = [-0.487/-0.540]
Listening to you	Very poor	-	-	
	Poor	-0.678 [-0.781 to -0.575]	0.359 [0.206 to 0.511]	0.665 = [-0.359/-0.540]
	Good	0.845 [0.758 to 0.933]	1.882 [1.739 to 2.025]	3.485 = [-1.882/-0.540]
	Very good	0.870 [0.773 to 0.966]	1.906 [1.728 to 2.085]	3.530 = [-1.906/-0.540]

^aIn the case of effects coding the coefficients show the effect of each variable relative to the grand mean. With dummy coding of categorical variables, the coefficients show the effect relative to the omitted category. ^bCoefficient not significantly different from zero; all other coefficients significant at $P < 0.001$. MRS = marginal rate of substitution. Number of observations = 601. Pseudo- $R^2 = 0.4283$.

choice, further reinforcing the importance of good listening skills in the context of anticipated help seeking for potential cancer symptoms. Patients may be more likely to feel that they are being taken seriously by a doctor who appears to listen, and are therefore willing to wait for the opportunity for their concerns to be addressed.

Strengths and limitations

This study used a novel methodological approach to look at a combination of

primary care attributes for consulting with a GP regarding a cancer symptom. Specifically, discrete choice experiments allow preferences and trade-offs of real-life choices to be examined, aspects that would otherwise be difficult to explore systematically in the research setting. Possible confounding of symptom experience (such as severity) was also adjusted for, although it was not possible to measure actual behaviour. However, several studies in health care have used symptom

Table 3. Conditional logit regression analysis by risk group (effects coded)

Attribute	Level	Risk level not mentioned ^a	Low risk ^b	High risk ^c	P-value ^d
		Coefficient (95% CI)	Coefficient (95% CI)	Coefficient (95% CI)	
Length of consultation	(minutes)	-0.002 [-0.017 to 0.012] ^e	0.004 [-0.011 to 0.020] ^e	0.001 [-0.014 to 0.015] ^e	0.83
Waiting time	(weeks)	-0.578 [-0.641 to -0.516]	-0.531 [-0.591 to -0.472]	-0.516 [-0.575 to -0.457]	0.13
Convenience/availability	Normal working hours only	-	-	-	
	Any time	0.013 [-0.065 to 0.092] ^e	0.083 [0.007 to 0.160]	0.026 [-0.047 to 0.099] ^e	0.40
Healthcare professional	Any GP	-	-	-	
	GP of your choice	0.191 [0.118 to 0.263]	0.309 [0.234 to 0.385]	0.237 [0.162 to 0.311]	0.08
Listening to you	Very poor	-	-	-	
	Poor	-0.698 [-0.890 to -0.506]	-0.634 [-0.827 to -0.440]	-0.717 [-0.909 to -0.525]	0.82
	Good	0.864 [0.695 to 1.031]	0.831 [0.670 to 0.994]	0.849 [0.686 to 1.012]	0.96
	Very good	0.762 [0.603 to 0.923]	0.973 [0.809 to 1.138]	0.889 [0.737 to 1.050]	0.19
Joint test ^f					0.48
Overall joint test ^g					0.18

^aNumber of observations = 205; Pseudo- $R^2 = 0.4309$. ^bNumber of observations = 200; Pseudo- $R^2 = 0.4503$. ^cNumber of observations = 196; Pseudo- $R^2 = 0.4115$. ^d χ^2 test that coefficients are equal across risk groups within every level. ^eCoefficient not significantly different from zero; all other coefficients significant at $P < 0.001$. ^fJoint χ^2 test that every coefficient is equal across the risk groups within every level of this attribute. ^gJoint χ^2 test that every coefficient is equal across the risk groups within every level of every attribute.

Table 4. Order or preference probability analyses showing the ranked order of scenarios based on the mean predicted probability of participants selecting them

Ranking	Mean predicted probability	Length of consultation, minutes	Time from phone call to appointment	Convenience	Healthcare professional	Listening to you
1	0.9746	20	1 week	Any time	GP of your choice	Very good
2	0.9739	20	1 week	Any time	GP of your choice	Good
3	0.9724	10	Same day	Working hours	Any GP	Very good
4	0.9582	20	Same day	Working hours	Any GP	Good
5	0.9493	20	Same day	Working hours	GP of your choice	Very good
6	0.8966	20	Same day	Any time	Any GP	Poor
7	0.8957	10	1 week	Any time	GP of your choice	Very good
8	0.8760	10	1 week	Working hours	GP of your choice	Good
9	0.8540	10	Same day	Any time	GP of your choice	Good
10	0.7650	20	Same day	Any time	GP of your choice	Poor
11	0.7107	10	1 week	Any time	Any GP	Good
12	0.6642	10	Same day	Working hours	GP of your choice	Very poor
13	0.6237	10	4 weeks	Any time	GP of your choice	Very good
14	0.5512	10	1 week	Working hours	GP of your choice	Poor
15	0.5322	20	4 weeks	Working hours	GP of your choice	Good
16	0.4678	10	Same day	Any time	Any GP	Very poor
17	0.4488	20	Same day	Any time	Any GP	Very poor
18	0.3763	20	1 week	Working hours	Any GP	Poor
19	0.3358	20	4 weeks	Any time	Any GP	Good
20	0.2893	20	Same day	Working hours	GP of your choice	Very poor
21	0.2466	20	1 week	Working hours	Any GP	Very good
22	0.2350	10	4 weeks	Working hours	Any GP	Very good
23	0.1240	20	4 weeks	Any time	Any GP	Very good
24	0.1043	20	4 weeks	Working hours	Any GP	Good
25	0.1034	10	4 weeks	Working hours	GP of your choice	Very poor
26	0.0507	10	1 week	Any time	Any GP	Very poor
27	0.0454	20	1 week	Working hours	Any GP	Very poor
28	0.0418	10	4 weeks	Any time	GP of your choice	Poor
29	0.0276	20	4 weeks	Any time	GP of your choice	Very poor
30	0.0257	10	4 weeks	Working hours	Any GP	Poor

scenarios to explore people's anticipated behaviour (for example, medical help seeking),¹⁸ and responses to vignettes are considered useful as proxies for behaviour.²⁵ Assumptions were made about who were 'valid' completers (that is, those who passed the three validity checks) but it is not possible to be certain that all completers provided meaningful answers. Overall, it is reassuring that only a small percentage (8%) of people were excluded for failing quality checks. Using an online survey panel for recruitment may have resulted in a sample of people who may not have been representative of the general population

because they have opted to join a participant panel, and are incentivised to take part in research. However, using quota sampling to match population characteristics helped mitigate this. Findings were similar to those of studies recruiting through primary care,^{5,6} which lends weight to the validity of the current study's approach.

Another potential limitation relates to the use of risk scenarios in exploring people's preferences for consultations. Although previous evidence supports the finding that varying risk does not necessarily influence patient²⁶ and GP decisions,²⁷ it is not possible to be certain that participants were

using the risk information to make their judgements. The concept of risk may be difficult to convey in hypothetical scenarios, as perceived risk may be affected by various factors such as prior knowledge and experience as well as unpredictability. Quantifying the contribution of these factors to risk perception is challenging but pre-specifying a risk level for the scenarios may have helped mitigate the effects of personal/subjective experiences on risk perception and subsequent decision making.

Comparison with existing literature

The finding that patients would like to see their own choice of doctor is in line with previous studies exploring patient preferences for accessing health care.^{6,12} Relational continuity of care promotes security and trust, which can motivate patients to seek help.²⁸ The discrete choice experiment used in the current study extends these findings by including the listening skills of the doctor, which research from 2015 has identified as a key factor influencing patient preferences;¹² it was also one of the most important attributes in the current study.

The finding that participants were willing to trade off speed of access for continuity of care has been reported before, where patients were willing to wait 5 days longer (comparable with 7 days in the present study) to see a doctor of their choice for an acute, low-worry symptom.²⁹ However, the trade-off between waiting time and listening skills has not been explored previously, and the present study found a marked increase in how long people were willing to wait to obtain a consultation with a doctor who had good listening skills (3.5 weeks). This finding may be counter-intuitive, especially for a serious symptom that may be due to cancer, but highlights the importance of the clinician factors that may facilitate help seeking.

Although patients were willing to wait longer to see a GP of their choice or a GP with good listening skills, a shorter waiting time was still a statistically significant driver of people's preferences in the present study. This supports previous research that found a preference for shorter waiting times across all symptoms (from mild to severe).⁵

Access to consultations in terms of convenience of appointment, and longer consultations, did not influence preferences in the present study, contradicting other discrete choice experiment research. For example, others have found convenience of appointment to be more important

than speed of access.⁶ The variations in preferences for healthcare system factors may be due to the differences in scenarios studied with respect to clinical severity (for example, cancer versus non-cancer symptoms) and urgency (for example, acute versus chronic symptoms). These differences may also relate to the use of an older sample in the present study, as older patients may have fewer constraints on their own time (for example, 67% of participants in the current study were not in employment). Further research is needed to explore how and why preferences for system factors (such as consultation length) differ for different populations.

Implications for research and practice

Health policy in England has focused on improving access to services but this study's findings highlight that, in the context of experiencing a possible cancer symptom, people are willing to trade speed of access for a doctor with better interpersonal skills. It may therefore be possible to promote help seeking by improving doctors' communication skills. Conversely, and more worryingly, this means that having negative experiences when communicating with the doctor may put people off seeking help promptly.

As well as promoting prompt help seeking, a GP's listening skills are likely to aid the elicitation of symptoms, which is critical for arriving at an appropriate management plan.³⁰ This step is fundamental to the initiation of the diagnostic process, especially in reducing the likelihood of missed diagnostic opportunities in primary care.²⁷ For example, recent evidence suggests that a significant proportion of patients diagnosed with colorectal cancer as an emergency had had three or more primary care consultations with relevant symptoms prior to diagnosis, suggesting possible opportunities for earlier diagnosis.³¹ This supports cancer recognition and referral guidelines from the National Institute for Health and Care Excellence published in 2015, which advocate open and honest conversations between patients and GPs.³² Future research should aim to understand more about communication within the GP-patient consultation in order to identify aspects of communication skills that can be optimised so that interventions can be developed to reduce barriers to consultation in patients with possible cancer.

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Ethical approval

This study was approved by University of Surrey Research Ethics Committee (reference number: UEC/2015/027/FHMS).

Provenance

Freely submitted: externally peer reviewed.

Competing interests

The authors have declared no competing interests.

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REFERENCES

1. Cancer Research UK. *Lifetime risk of cancer*. <http://www.cancerresearchuk.org/health-professional/cancer-statistics/risk/lifetime-risk> (accessed 11 Apr 2017).
2. Hiom SC. Diagnosing cancer earlier: reviewing the evidence for improving cancer survival. *Br J Cancer* 2015; **112**(Suppl 1): S1–S5.
3. Mendonca SC, Abel GA, Saunders CL, *et al*. Pre-referral general practitioner consultations and subsequent experience of cancer care: evidence from the English Cancer Patient Experience Survey. *Eur J Cancer Care* 2016; **25**(3): 478–490.
4. Forbes LJ, Simon AE, Warburton F, *et al*. Differences in cancer awareness and beliefs between Australia, Canada, Denmark, Norway, Sweden and the UK (the International Cancer Benchmarking Partnership): do they contribute to differences in cancer survival? *Br J Cancer* 2013; **108**(2): 292–300.
5. McAteer A, Yi D, Watson V, *et al*. Exploring preferences for symptom management in primary care: a discrete choice experiment using a questionnaire survey. *Br J Gen Pract* 2015; DOI: <https://doi.org/10.3399/bjgp15X685705>.
6. Rubin G, Bate A, George A, *et al*. Preferences for access to the GP: a discrete choice experiment. *Br J Gen Pract* 2006; **56**(531): 743–748.
7. Ryan M, Gerard K, Amaya-Amaya M, eds. *Using discrete choice experiments to value health and health care*. Dordrecht: Springer, 2008.
8. Lancsar E, Louviere J. Conducting discrete choice experiments to inform healthcare decision making: a user's guide. *Pharmacoeconomics* 2008; **26**(8): 661–677.
9. Bridges JF, Hauber AB, Marshall D, *et al*. Conjoint analysis applications in health — a checklist: a report of the ISPOR Good Research Practices for Conjoint Analysis Task Force. *Value Health* 2011; **14**(4): 403–413.
10. Survey Sampling International. *Survey panels & respondent experience*. <https://www.surveysampling.com/knowledge-center/panels-respondent-experience/> (accessed 24 Apr 2017).
11. Office for National Statistics. *2011 Census data*. <http://www.ons.gov.uk/ons/guide-method/census/2011/census-data/index.html> (accessed 11 Apr 2017).
12. Paddison CA, Abel GA, Roland MO, *et al*. Drivers of overall satisfaction with primary care: evidence from the English General Practice Patient Survey. *Health Expect* 2015; **18**(5): 1081–1092.
13. Cromme SK, Whitaker KL, Winstanley K, *et al*. Worrying about wasting GP time as a barrier to help-seeking: a community-based, qualitative study. *Br J Gen Pract* 2016; DOI: <https://doi.org/10.3399/bjgp16X685621>.
14. Whitaker KL, Macleod U, Winstanley K, *et al*. Help seeking for cancer 'alarm' symptoms: a qualitative interview study of primary care patients in the UK. *Br J Gen Pract* 2015; DOI: <https://doi.org/10.3399/bjgp15X683533>.
15. Macleod U, Mitchell ED, Burgess C, *et al*. Risk factors for delayed presentation and referral of symptomatic cancer: evidence for common cancers. *Br J Cancer* 2009; **101**(Suppl 2): S92–S101.
16. Smith LK, Pope C, Botha JL. Patients' help-seeking experiences and delay in cancer presentation: a qualitative synthesis. *Lancet* 2005; **366**(9488): 825–831.
17. Forbes LJ, Warburton F, Richards MA, Ramirez AJ. Risk factors for delay in symptomatic presentation: a survey of cancer patients. *Br J Cancer* 2014; **111**(3): 581–588.
18. Robb K, Stubbings S, Ramirez A, *et al*. Public awareness of cancer in Britain: a population-based survey of adults. *Br J Cancer* 2009; **101**(Suppl 2): S18–S23.
19. Niksic M, Rachet B, Warburton FG, *et al*. Cancer symptom awareness and barriers to symptomatic presentation in England — are we clear on cancer? *Br J Cancer* 2015; **113**(3): 533–542.
20. Aboulghate A, Abel G, Elliott MN, *et al*. Do English patients want continuity of care, and do they receive it? *Br J Gen Pract* 2012; DOI: <https://doi.org/10.3399/bjgp12X653624>.
21. Hsee CK. The evaluability hypothesis: an explanation for preference reversals between joint and separate evaluations of alternatives. *Organ Behav Hum Decis Process* 1996; **67**(3): 247–257.
22. Amaya-Amaya M, Gerard K, Ryan M. Discrete choice experiments in a nutshell. In: Ryan M, Gerard K, Amaya-Amaya M, eds. *Using discrete choice experiments to value health and health care*. Dordrecht: Springer, 2008: 13–46.
23. Ghanouni A, Halligan S, Taylor SA, *et al*. Quantifying public preferences for different bowel preparation options prior to screening CT colonography: a discrete choice experiment. *BMJ Open* 2014; **4**: e004327.
24. Miguel FS, Ryan M, Amaya-Amaya M. 'Irrational' stated preferences: a quantitative and qualitative investigation. *Health Econ* 2005; **14**(3): 307–322.
25. Peabody JW, Luck J, Glassman P, *et al*. Comparison of vignettes, standardized patients, and chart abstraction: a prospective validation study of 3 methods for measuring quality. *JAMA* 2000; **283**(13): 1715–1722.
26. Banks J, Hollinghurst S, Bigwood L, *et al*. Preferences for cancer investigation: a vignette-based study of primary-care attendees. *Lancet Oncol* 2014; **15**(2): 232–240.
27. Sheringham J, Sequeira R, Myles J, *et al*. Variations in GPs' decisions to investigate suspected lung cancer: a factorial experiment using multimedia vignettes. *BMJ Qual Saf* 2016; DOI: [10.1136/bmjqs-2016-005679](https://doi.org/10.1136/bmjqs-2016-005679).
28. Freeman G, Hughes J. *Continuity of care and the patient experience*. London: King's Fund, 2010. http://www.kingsfund.org.uk/sites/files/kt/field/field_document/continuity-care-patient-experience-gp-inquiry-research-paper-mar11.pdf (accessed 26 Jan 2017).
29. Gerard K, Salisbury C, Street D, *et al*. Is fast access to general practice all that should matter? A discrete choice experiment of patients' preferences. *J Health Serv Res Policy* 2008; **13**(Suppl 2): 3–10.
30. Jensen H, Topping M, Olesen F, *et al*. Cancer suspicion in general practice, urgent referral and time to diagnosis: a population-based GP survey and registry study. *BMC Cancer* 2014; **14**(1): 636.
31. Renzi C, Lyrtzopoulos G, Card T, *et al*. Do colorectal cancer patients diagnosed as an emergency differ from non-emergency patients in their consultation patterns and symptoms? A longitudinal data-linkage study in England. *Br J Cancer* 2016; **115**(7): 866–875.
32. National Institute for Health and Care Excellence. *Suspected cancer: recognition and referral*. NG12. London: NICE, 2015. <https://www.nice.org.uk/guidance/ng12> (accessed 26 Jan 2017).