Patients' Desires and Expectations for Medical Care: A Challenge to Improving Patient Satisfaction

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Patients' desires and expectations for medical care warrant scrutiny because of their potential influence on health care use and patient satisfaction and their effects on patients' perceptions of quality of care. To determine if desires and expectations for selected elements of medical care and specialty referral differ between VA outpatients and non-VA outpatients, we conducted a cross-sectional survey of patients at a VA medical center site and 2 primary care sites of its university affiliate. Of 390 eligible patients at the VA medical center site, 270 (69%) consented to participate and returned completed self-administered questionnaires. At its university affiliate sites, 119 (73%) of the 162 eligible patients completed questionnaires. Overall, patient desire and expectation for elements of medical care and specialty referral were similar and high at all study sites. Desire ranged from 33% for a blood test to check for anemia to 80% for heart auscultation. Desire for specialty referral for hypothetical scenarios averaged 71% and 61% among VA Medical Center patients and university affiliate patients, respectively. Patient demographics and socioeconomic status were poor predictors of desire for care. These results suggest (a) that VA medical center outpatients' desires and expectations for preventive medical care are not significantly different from those of non-VA outpatients, (b) that desire is often high for both highly recommended care and care that is not generally recommended or is controversial, and (c) that high levels of desire are not limited to patients of higher levels of socioeconomic status. In an effort to improve satisfaction, it is important to examine ways in which to address patients' desires and expectations for medical care, even while faced with competing health care spending priorities.

Patients' satisfaction with their medical care is an important measure of quality and is related to a number of important health care variables and outcomes (1–3), including treatment compliance, disease control, and provider continuity (4–7). Thus, satisfaction has emerged as an important component and measure of evaluation of quality of care (8–12).

Patients' desires and expectations with regard to medical care are an important determinant of patient satisfaction with medical care. For example, unmet expectations have been found to be associated with patient dissatisfaction (3, 13–15). Increasing the congruence between patient desires and expectations regarding medical care with the care they actually receive may result in increased patient satisfaction (10). Thus, identifying, understanding, and negotiating patients' desires and expectations may be one way to increase patient satisfaction (16). Furthermore, patients' desires and expectations warrant scrutiny because of their potential influence on health care use and their effects on patients' perceptions of the quality of their health care (11, 17).

The VA health care system is concerned about meeting its patients' expectations and about the quality of

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care it provides and has initiated ongoing quality improvement programs. Thus, it provides an excellent environment in which to evaluate the effects of patients' desires and expectations on use and perceptions of quality. However, we do not know whether the results of such an assessment would be generalizable to other patient populations. Patients of the VA health care system are perceived by some as perhaps having different expectations regarding care; however, the scientific literature comparing desire and expectation regarding medical care between VA outpatients and non-VA outpatients is limited (3, 4). There have been no studies of VA medical center outpatients that have both measured patient desire and expectation regarding medical care and included a comparison community sample.

Consistent with previous research, we conceptualized patient desire as a perception that a given event is wanted or valued, while an expectation is defined as a perception that the occurrence of a given event is likely (8, 17, 18). An element of medical care may be desired but not expected or, conversely, expected but not desired. It is thus important to incorporate measures of both desires and expectations to explicate patient demand for elements of medical care.

This study addresses whether desires and expectations for selected elements of preventive medical care differ between a sample of patients presenting to primary care clinic sites associated with a Southeastern Michigan VA medical center (VA outpatients) and its university affiliate (non-VA outpatients). We assessed desires and expectations regarding specific medical tests and components of physical examinations and counseling. We chose these elements of care because they encompass a broad spectrum of services that are frequently performed in a periodic health examination. We also assessed patient attitudes toward referral to a specialist using hypothetical case scenarios. The study addressed the following questions: What is the level of patients' desires and expectations regarding preventive medical care and does it differ substantially between VA outpatients and non-VA outpatients? What are the sociodemographic determinants of desires and expectations for care?

METHODS

Participants

Participants were recruited consecutively from patients making a visit to each of 3 primary care sites during 3- to 4-week periods in January-March 1996.

The study was conducted at a general medicine outpatient clinic of a southeastern Michigan VA medical center and a general medicine and a family practice outpatient clinic of its university affiliate. Since the study was particularly concerned with attitudes about prostate specific antigen (PSA) testing, men 45 years of age and older without a personal history of prostate cancer were eligible for the study. Excluded from the study were patients who had evidence of cognitive impairment or were unable to read or write well enough to complete the questionnaire. Of the 390 eligible patients at the VA medical center site, 270 (69%) consented to participate and returned completed questionnaires. At the university affiliate sites, 119 (73%) of the 162 eligible patients completed questionnaires.

Survey Instrument

We developed a self-administered questionnaire designed to measure a patient's desires and expectations regarding selected elements of care, including tests, physical exam components, counseling, and referral to a specialist for selected clinical scenarios. Desire for each specific element of care was measured by asking patients to "decide if each of the services listed below describes the type of service you do not want or you do want sometime within the next year or two." Expectation of elements of care was measured by asking patients to decide "sometime within the next year or two, how likely do you think it is that a doctor will recommend or order the following?" Patients were asked to indicate desire by circling a number from 1 to 5 ("definitely do not want" to "definitely do want") and to indicate expectation by circling a number from 1 to 5 ("not at all likely" to "very likely"). We used language that indicated the clinical reason for the test. For example, we asked if a patient desired and expected a "PSA blood test to check for prostate cancer" and a "blood test to check for anemia" (see Appendix A). Sociodemographic information collected for participants included race, educational level, marital status, and income level.

To examine desire and expectation regarding referral to a physician specialist, we developed 3 clinical scenarios. Each scenario depicted a hypothetical case of a patient presenting with 1 of 3 conditions (sinusitis, skin rash, or epigastric discomfort) for assessment (see Appendix B for details). The scenarios were designed so as to not have a high medical priority for immediate referral. After reading the short scenario, participants were asked to indicate whether they agreed (using a 5-point Likert scale ["strongly disagree" to "strongly

agree"]) that, at this time, "I would probably want the doctor to refer me to [a specialist]" and "I think the doctor would probably refer me to [a specialist], even if I did not ask to be sent to one." Each copy of the questionnaire included only 1 of the 3 scenarios, and questionnaires were randomly distributed to participants.

Data Analysis

The main dependent variables of interest were patients' reported desires and expectations regarding each of the elements of care and regarding referral to a specialist. The principle independent variable of interest was site (the VA medical center site versus its university affiliate sites). We first conducted bivariate analyses using the chi-square test on the multiple dependent variables across sites. We used a more conservative significance level (P < .01) to account for multiple comparisons.

We next tested for statistically significant differences between sites using logistic regression to control for possible confounding effects related to other patient characteristics (age [groupings of 45–54 years, 55–64 years, 65–74 years, and 75 years and older], race [Caucasian versus minority], educational level [categorized as high school or less and greater than high school], marital status [currently married versus unmarried], income level [categorized as less than \$12,000, \$12,000–19,999, \$20,000–39,999, and \$40,000 and above], and self-assessed health status [3-point scale, poor/fair to very good/excellent]).

A patient was considered to desire or expect an element of care or referral to a specialist if he circled a 4 (unlabeled) or 5 ("definitely do want" for desire for the elements of care, "very likely" for expectation of the elements of care, and "strongly agree" for statements indicating desire and expectation for referral to a specialist). We repeated our analyses dichotomizing responses as having strong desire or strong expectation (if patients selected a value of 5) versus other responses (values 1 through 4). The results of these alternative analyses did not appreciably affect the associations between the dependent and independent variables.

To examine associations between patients' desires and expectations regarding care and sociodemographic characteristics, we constructed 3 scales, combining (a) the 5 items for laboratory procedures, (b) the 2 items for physical exam elements, and (c) the 2 items for counseling. Using these 3 scales as the dependent variables in sequential models, we tested for statistically

Table 1
Patient Sociodemographic Profiles

	VA Outpatients (n = 270)	Non-VA Outpatients (n = 119)
Mean agea (y)	67	63
Race ^b (%)		
White	84	75
Black	6	7
Other	10	18
Education ^b (%)		
<high school<="" td=""><td>31</td><td>15</td></high>	31	15
High school/GED	25	18
≥College graduate	8	37
Income ^b (%)		
<\$12,000	41	12
\$12,000-19,999	30	15
\$20,000–39,999	22	19
≥\$40,000	7	53
Health status ^a (%)		
Excellent/very good	17	28
Good	38	44
Fair/poor	45	28
Physician visits in 6 mo prior to surveya (%)		
0–2	44	55
≥3	56	45

a P < .05.

significant associations between desire and expectation and patient characteristics using linear regression.

RESULTS

Patient Characteristics

VA outpatients were older and less educated and had lower household incomes than non-VA outpatients. VA outpatients were also more likely to have assessed themselves as being in fair to poor health and to have made more physician visits in the 6 months prior to the survey than were non-VA outpatients (see Table 1).

Patient Desire for Individual Elements of Care

Desire for the elements of care was similar and generally high at both sites. As shown in Table 2, the proportion of patients at the VA medical center site who indicated desire for each element of care ranged from 48% who indicated a desire to "talk to my doctor about diet and/or exercise" to 78% who indicated desire for a

ь *P* < .001.

Table 2 Patient Desire for and Expectation of Elements of Care

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	Perce Desiring	g Care	Percentage Expecting Care Among Those Desiring Ita	
	VA Out- patients (n = 270)	Non-VA Out- patients (n = 119)	VA Out-	Non-VA Out-
Laboratory				
Cholesterol test PSA test Chest x-ray Exercise stress test Anemia test	77 76 64 ^b 59 49 ^b	79 78 48 54 33	72 64 56 49 44	79 65 44 41 45
Physical exam				
Heart auscultation Digital rectal exam	78 64	80 67	90 75	94 84
Counseling How to relieve stress	51	44	51	52
Diet and/or exercise	48	50	65	75

a The number of patients indicating desire for each element of care ranged from 120 to 201 among VA outpatients and from 37 to 92 among non-VA outpatients.

doctor to "listen to my heart." At the university affiliate sites, desire ranged from 33% for a "blood test to check for anemia" to 80% for a doctor to "listen to my heart." Significantly more VA outpatients reported desire for a chest x-ray and anemia testing than did non-VA outpatients; however, after adjusting for sociodemographic characteristics, there was no difference in desire between sites for anemia testing and only a nonsignificant trend toward greater desire for a chest xray among VA outpatients (odds ratio [OR] = 1.9; 99% CI = 0.9, 3.9).

Although desire was generally very high for recommended screening tests, such as cholesterol testing, it was also quite high for more controversial tests, such as PSA testing. Traditional physical examination elements (eg, heart auscultation and digital rectal examination) were wanted by most patients, even though their utility as routine parts of health maintenance examinations has been questioned (19).

Further analyses of desire showed that a substantial proportion of those who desired the elements of care indicated strong desire for them (value 5 only: "definitely do want"). For example, 64% and 68% of VA outpatients and non-VA outpatients, respectively, strongly desired a cholesterol test, and 66% of VA outpatients and 59% of non-VA outpatients indicated strong desire for a PSA test.

Patient Expectation of Elements of Care

For both sites, expectations of desired care were also generally high and very similar between sites (see Table 2). For instance, over 70% of those who desired a cholesterol test and a digital rectal exam expected that they would receive them. However, only about one half of those who desired an exercise stress test, chest xray, or blood count expected that these tests would be done by their physician. Adjusting for sociodemographic characteristics in logistic regression models did not affect the between-site similarities in expectation.

Patient Desire and Expectation Regarding Laboratory, Physical Exam, and Counseling Item Groupings

Next, we examined which patient characteristics were predictors of greater desire for and expectation of care, using scales of overall desire and expectation for (a) laboratory procedures, (b) physical exam elements, and (c) counseling items. No patient sociodemographic characteristics were significantly related to desire for physical exam elements or counseling items, or to expectation of any of the 3 scales. Furthermore, sociodemographic characteristics together explained very little of the variance in patient desire or expectation. For example, R^2 values were 0.02 and 0.01 for desire for physical exam elements and counseling items, respectively, and 0.04 for expectation of lab procedures. With regard to desire for laboratory procedures, however, bivariate analyses revealed a small but significant association between being a VA outpatient and desire for laboratory procedures. This association was no longer significant when we adjusted for sociodemographic characteristics. However, patients who reported their health as being very good or excellent had lower desire for lab procedures than did those who perceived their health status as poor (see Table 3).

Patient Desire and Expectation for Referral to a **Specialist**

Desire and expectation for specialty referral for sinusitis and epigastric discomfort were similarly high at both sites. VA outpatients were more likely, how-

^b P < .01 for differences in desires and expectations between sites in bivariate analyses using the chi-square test. However, there were no significant differences between sites using logistic regression to control for age, race, educational level, income, marital status, smoking status, and self-assessed health status.

Table 3Predictors of Desire for Laboratory Procedures^a

	Correlation Coefficient	Standardized Beta Coefficient
VA outpatient	0. 1 4 ^b	0.10
Age		
45–54 y 55–64 y 65–74 y 75 y and older	Ref 0.07 -0.03 -0.04	Ref 0.11 0.01 0.02
>High school	-0.04	0.05
White race	-0.03	-0.05
Income <\$12,000 \$12,000-19,999 \$20,000-39,999 ≥\$40,000	Ref -0.07 -0.02 -0.11 ^b	Ref -0.18 -0.11 -0.13
Currently married	-0.06	-0.01
Currently smoker	0.12 ^b	0.07
Perceived health status Poor/fair Good Very good/excellent	Ref 0.04 −0.17 ^b	Ref -0.03 -0.19 ^b

^a Desire for laboratory procedures combines desire scores (measured on a 5-point scale) for cholesterol, PSA, exercise stress, anemia, and chest x-ray testing. The regression model included age, race, educational level, income, marital status, smoking status, and self-assessed health status. Adjusted $R^2 = 0.05$ for the overall regression model. (Adjusted R^2 values of models for the other scales were 0.02 and 0.01 for desire for physical exam elements and counseling items, respectively, and 0.04, 0.01, and 0.03 for expectation of laboratory procedures, physical exam elements, and counseling items, respectively.)

ever, to desire a dermatological referral (OR = 4.6; 95% CI = 1.5, 14.7). Overall, desire for referral averaged 71% among VA outpatients and 61% among non-VA outpatients for the 3 clinical scenarios combined (P = .12). Of those who desired a referral, 72% of VA outpatients and 68% of non-VA outpatients thought that their physician would give them a referral even if they

did not ask for one, and 83% of patients at both sites thought that their physician would refer them if they asked them to. Greater proportions of patients at both sites desired specialist referral for abdominal pain than for the other clinical scenarios (74% at the VA and 80% at the university affiliate sites, see Table 4).

Sociodemographic characteristics were only modestly associated with desire and expectation regarding specialty referral for both VA and non-VA outpatients, with C-statistics (a measure of the model's predictiveness ranging from 0.5 [worthless] to 1.0 [perfect prediction]) ranging from 0.69 to 0.74 for desire and from 0.71 and 0.81 for expectation.

DISCUSSION

In this study, we found that although VA medical center outpatients were older, less educated, and less financially well-off than were university affiliate patients, VA outpatients' desires and expectations for preventive medical care were at least as high as those of non-VA outpatients. Indeed, at both the VA medical center clinic and its university affiliate clinics, patient sociodemographics explained relatively little in predicting desire or expectation regarding the elements of preventive care or referral to a specialist. Both patient desires and patient expectations regarding the elements of medical care were high and similar at both study sites. The generally high desire for care at both sites was further reinforced by desire for and expectation of specialty referral in the clinical vignettes. Patients' desires and expectations regarding specialty referral seemed particularly high, considering the inconvenience of having to make a return visit to see a specialist. With just 1 exception, well over half of the patients at all sites desired and expected referral to a specialist for a common clinical problem.

In addition, the results indicate that patients' desires and expectations regarding medical care are generally

Table 4
Patient Desire for and Expectation of Specialist Referral

	Percentage Desiring Specialist Referral		Percentage Expecting Specialist	
	VA Outpatients	· ·	Referral Among Those Desiring Ita	
	(n = 270)		VA Outpatients	Non-VA Outpatients
Vignette 1: sinusitis (n = 133)	67	59	84	70
Vignette 2: rash (n = 126) Vignette 3: epigastric	71 ^b	44	67	60
discomfort ($n = 130$)	74	80	64	71

^a The numbers of patients indicating desire for referral for each scenario ranged from 58 to 62 among VA outpatients and from 16 to 32 among non-VA outpatients. ^b P < .01 for differences in desires and expectations between sites controlling for age, race and educational level, income, marital status, smoking status, and self-assessed health status.

ь *P* < .05.

in excess of current recommendations and guidelines. That is, a substantial number of patients expressed desire for elements of care that are not generally recommended and/or are controversial. For instance, despite no recommendation for screening exercise stress tests or chest x-rays, nearly one half or more of all patients wanted these tests as part of a periodic health examination. It may be that patients are either unaware of current guidelines and the relative lack of evidence of benefits of certain elements of care or desire these services for other reasons. Since many of these tests were frequently routinely performed in the past, and perhaps continue to be used routinely by some providers, past experience could have an effect on current desires. These results argue for the need for further information as to how failure to receive these tests affects patient perceptions of the quality of their care.

Patient satisfaction might reflect not only what types of medical care patients actually receive during the course of a periodic health examination, but also the congruence between what they desire and expect and what they receive (10). It is important for physicians to identify their patients' desires and expectations for preventive medical care. In doing so, they may be able to guide and educate their patients, providing knowledge of the effectiveness of different types of medical care to detect or prevent illness. Additionally, newsletters and/ or information sheets regarding recommended medical care could be provided by health care systems, supplementing information provided by personal physicians and contributing to the general education of patients. This may steer patients toward more appropriate desires and expectations for preventive care, potentially increasing their satisfaction with the care provided.

Several aspects of the present study merit comment. While the findings suggest that there is little difference in desire and expectation regarding preventive medical care between VA outpatients and non-VA outpatients at the study sites, it is not possible to assess the effect of past or future patient-physician encounters on these results. Patients' desires and/or expectations may have been modified during past consultation(s) with their physicians. Similarly, a shift in expectation may occur during future patient-physician encounters. Additionally, since the data come from a single VA medical center and its university affiliate, it is difficult to generalize the results to other VA medical centers and/or different clinical settings.

In summary, this study suggests that VA medical center outpatients' desires and expectations regarding various types of routine testing and care are not significantly different from those of non-VA outpatients. It is important to realize that patients often have high levels

of desire for and high expectations of not only recommended care, but also care that is not generally recommended or is controversial, and that strong desires for such care are not limited to higher levels of socioeconomic status. How to deal appropriately with patients' desires and expectations so as to improve satisfaction, while balancing competing health care spending priorities, is an important topic for investigation, as we strive to provide patient-oriented, high-quality care.

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APPENDIX A

Elements of Care

Laboratory

- Cholesterol test
- Chest x-ray
- An exercise test to check for heart disease
- A blood test to check for anemia
- PSA blood test to check for prostate cancer

Physical Exam

- Listen to my heart
- Rectal exam to feel my prostate gland

Counseling

- Talk to a doctor about diet and/or exercise
- Talk to a doctor about how to relieve stress

APPENDIX B

Patient Referral Vignettes

Vignette 1. Imagine that you were seen at the clinic for a stuffy nose, sore throat, and a headache that you had for the prior 2 weeks. The doctor told you that you may have a sinus infection and gave you a prescription for an antibiotic and a decongestant. Now it is 3 weeks later and you are no better and have the same symptoms, so you return to the clinic.

Vignette 2. Imagine that you are being seen at the clinic today for a rash on your face and arms that you have had for 10 days. The rash is itchy. You think it gets worse when you are outdoors. Six months ago you had the same rash for 3 weeks, but it cleared up after you used an over-the-counter cream.

Vignette 3. Imagine that you were seen at the clinic because of daily burning pain in your upper abdomen that you had for the prior 3 months. The pain was worse at bedtime and you frequently burped and had a bad taste in your mouth. The doctor said it could be acid indigestion, and prescribed an antacid and gave you a diet to follow. Now it is 6 weeks later and your symptoms are a little worse, so you return to the clinic.