BRIEF REPORTS

Patients' Desires and Expectations for Medical Care in Primary Care Clinics

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To explore whether patients' desires for and expectations of medical care differ between the United States and Canada, we surveyed 652 patients and 105 physicians at primary care sites in Michigan and Ontario. Patient desires were similar at both sites, but expectations were higher in Michigan. Michigan physicians gave higher estimates of patient desire than physicians in Ontario. Physicians at both sites, however, similarly underestimated patients' desires. These between-site differences in expectation may reflect differences both in general cultural factors and in patient exposure to different clinical policies within the medical systems.

KEY WORDS: **comparative study; Ontario, Canada; patient desires; patient expectations; United States.**
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Many studies have shown that the utilization of a broad array of procedures and tests is higher in the United States than in Canada. Investigators have suggested that differential availability of these procedures and tests explains higher use rates in the United States.[1,2] Less attention has been paid to whether these differences reflect between-country differences in patient preferences. This study addresses two questions: whether patient desires and expectations differ between primary care sites in the United States and Canada; and whether physician perceptions of their patients' desires and the match between them differ between sites. We conceptualize patient desire as a perception that a given event is wanted, and patient expectation as a perception that a given event is likely.[3,4]

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METHODS

Participants

Participants were recruited consecutively from patients visiting four primary care sites in Michigan and Ontario in 1996. The Michigan sites were a general medicine clinic and a family practice clinic. In Ontario, because all Canadian internists belong to specialty groups, the study was conducted at two family practice clinics. All sites were affiliated with university hospitals. As we were particularly interested in attitudes about prostate and mammography screening, men over 44 years and women over 34 years of age, without a personal history of prostate and breast cancer, respectively, were recruited (n = 322 in Michigan, n = 330 in Ontario; response rate = 78%).

All faculty and residents practicing at the four sites (n = 124 in Michigan, n = 36 in Ontario) were mailed questionnaires. The completion rates were 68% and 61%, respectively. The greater number of physicians at the Michigan sites is the result of more residents regularly rotating through the clinics than at the Ontario sites.

Survey Instruments

We developed a self-administered questionnaire to measure patients' desires and expectations for a broad spectrum of frequently performed services in a periodic health examination. Desire was measured by asking patients if they wanted each element sometime within the next year or two. Expectation was measured by asking how likely patients thought it was that a doctor would recommend or order each element sometime in the next year or two. Patients indicated desire or expectation or both on a scale of 1 to 5 ("definitely do not want" to "definitely do want" for desire and "not at all likely" to "very likely" for expectation).

A self-administered questionnaire was designed to measure physicians' perceptions of their patients' desire. Physicians were asked to "give your best guess as to the percentage of your patients who would report wanting, if asked in a survey, each of the services listed below, as part of a well visit." Each element of care in the patient questionnaire was listed, and physicians were asked to indicate percentages for women aged 40 to 49 years and men aged 50 years and older to anchor their estimates to specific groups.

Data Analysis

Patients. The dependent variables of interest were patient desire and expectation of the elements of care. Patients were considered to desire or expect an element if they indicated 4 or 5. The principal independent variable was site (Michigan vs Ontario). To assess the effects of specialty, we restricted the Michigan site to family practice only in secondary analyses. Because these secondary analyses did not change our conclusions, we report only the main findings. We tested for statistically significant differences between sites using logistic regression controlling for patient gender, age, race, educational level, marital status, and self-assessed health status.

Physicians. The dependent variable was physicians' perception of the percentage of their patients who desire each element. To determine physician underestimation or overestimation of patient desire, we subtracted the mean physician estimate from the calculated rate of patient desire of the same patient age group (women 40–49 and men 50 and older) used to anchor physician estimates. We used a significance level of .01 to account for multiple comparisons.

PATIENT RESULTS

Both patient samples were primarily white (78% in Michigan and 92% in Ontario, $p < .001$), female (63% at both sites), with a mean age of 58 years at both sites, with high school education level or higher (65% in Michigan and 56% in Ontario, difference not significant [NS]). About half of the participants in both sites made three or more physician visits in the 6 months prior to the survey. About three quarters of the participants in both sites assessed their health as being good to excellent. Participants and nonparticipants differed significantly in age and education, with participants more likely to be younger ($p < .001$) and more highly educated ($p < .001$).

Desire for elements of care was similar and generally high at both sites (Table 1). Desire was generally higher for recommended screening elements. For instance, the rate of desire for a Pap test, mammogram, and breast examination was over 80% for each at the Michigan sites and over 70% for each at the Ontario sites. Sociodemographic factors were not generally associated with desire.

In both sites, expectations were generally higher for recommended screening tests than for other elements (Table 1). For instance, approximately three quarters of women at the Michigan sites and one half of women at the Ontario sites expected to receive mammography, Pap tests, and breast examinations, but only about one quarter expected to receive an exercise stress test or blood count. In contrast to desire, however, expectations of Michigan participants were significantly higher than those of Ontario participants for many elements of care.

Physician Results

Michigan study physicians were younger than their Ontario counterparts (mean 32 years vs 38 years, respectively, $p < .01$). Nearly two thirds (63%) of the physicians in Michigan were male, as were 45% of the physicians in Ontario (NS). About three quarters (72%) of the physicians in Michigan were resident trainees, while 55% in Ontario were (NS).

The Michigan physicians gave higher mean estimates of patient desire than did the Ontario physicians (Table 2). For example, Michigan physicians' mean estimates

Table 1. Patient Desire for and Expectation of Elements of Care

	Desire		Expectation	
Elements of Care	Michigan, % ($n = 322$)	Ontario, % ($n = 330$)	Michigan, % ($n = 322$)	Ontario, % ($n = 330$)
Laboratory				
Pap test	81	75	79*	60
Mammography	83	72	75*	50
PSA test	78	75	58*	31
Cholesterol test	73	72	57*	39
Exercise stress test	56	60	27	20
Chest x-ray	45	37	31	21
Blood count	42	42	22	21
Physical Exam				
Breast exam	86	80	81*	65
Digital rectal exam	67	68	69*	45
Heart auscultation	83	84	86	79
Counseling				
Diet and/or exercise	54	55	50	41
How to relieve stress	50	55	33	31

*$p < .01$ *for differences in desires and expectations between sites controlling for gender, age, race, educational level, marital status, and self-assessed health status.*

were higher than Ontario physicians for desire for a prostate-specific antigen (PSA) test (60% vs 41%, respectively), and desire for a cholesterol test (73% vs 54%, respectively). Physicians at both sites, however, tended to similarly underestimate their patients' desires. Underestimates were greater for elements of care that are not part of screening recommendations (e.g., exercise stress test and chest x-ray) or for which recommendations are controversial (e.g., PSA test and mammography for women 40–49). There were no statistically significant differences between faculty and resident physicians' estimates, or between physician genders.

DISCUSSION

Patients' desires (defined as their perceptions of wanting a given element of care) were similarly high in both sites. For instance, despite no recommendation for screening exercise stress tests in either country, over one half indicated desire for this test. Furthermore, desire was similarly high between sites for screening tests for which clinical policies differ between regions. For instance, three quarters of the men expressed desire for PSA testing, despite no recommendation for prostate screening in Ontario and variable recommendations for this screening in the United States.[5–9] Although patient desire was high, physicians greatly underestimated desire, particularly for elements of care that are generally not recommended. It may be that patients are unaware of guidelines or of the relative lack of evidence for the benefit of certain elements of care, while physicians may have, in part, based their estimates of patient desire on such knowledge.

In contrast to desires, expectations (defined as patients' perceptions of the likelihood of receiving a given element of care) were significantly higher among Michigan participants. This difference was particularly high for elements of care associated with breast, prostate, and cholesterol screening. The lower expectations in Ontario (despite similar desire) may suggest a greater awareness and acceptance of limited health care resources among Canadians. Further, Americans may frequently receive more of these services, which may lead to continuing expectation. This is suggested by the between-site differences being among the greatest for screening tests that occur more commonly in the United States.[10–13] Thus, between-site differences in expectation may reflect both a general difference in culture and a more specific stimulus driven by differences in national clinical policies for these screening tests.

Several aspects of the study merit comment. The findings suggest there is a difference in expectation of medical care between Michigan and Ontario patients; however, it is not possible to determine if a patient's expectations are based on his or her intention to explicitly request any ele-

Table 2. Differences Between Physician Estimates of Patients' Desire and the Proportion of Patients Who Indicate Desire for Specific Elements of Care

	Michigan		Ontario	
Elements of Care	Physicians' Estimate of Patients' Desire*, % (SE) (n = 83)	Difference Between Patient Desire and Physician Mean Estimate† (n = 156)	Physicians' Estimate of Patients' Desire*, % (SE) (n = 22)	Difference Between Patient Desire and Physician Mean Estimate† (n = 166)
Laboratory				
Pap test	81 (2)	−6	75 (6)	−6
Mammography	77 (2)	−14	52 (6)	−17
PSA test	60 (2)	−21	41 (5)	−35
Cholesterol test	73 (2)	−3	54 (5)	−15
Exercise stress test	32 (2)	−30	23 (5)	−37
Chest x-ray	25 (2)	−25	18 (3)	−17
Blood count	34 (2)	−5	31 (6)	−6
Physical Exam				
Breast exam	75 (2)	−16	71 (6)	−18
Digital rectal exam	51 (3)	−19	45 (5)	−24
Heart auscultation	79 (3)	−5	62 (8)	−21
Counseling				
Diet and/or exercise	65 (2)	13	50 (5)	−4
How to relieve stress	56 (3)	6	47 (6)	−3

**Physicians' mean percentage estimates (SE) of their patients' desires (male patients aged 50 years and older and female patients aged 40–49 years).*

†Differences between proportion of patients who indicate desire (male patients aged 50 years and older and female patients aged 40–49 years) and physician mean estimates of their patients' desire (percentage points). For example, 62% of patients in Michigan indicate desire for an exercise stress test. Physicians' mean estimate of the proportion of their patients who desire an exercise stress test in 32%. Thus, the difference between patient desire and physician mean estimate of desire for an exercise stress test is 30 percentage points.

ment. Although the findings suggest that physicians generally underestimate their patients' desire, the study design did not allow us to assess variation among physicians. Furthermore, underestimates may have been due to differences in questions asked of physicians (". . . as part of a well visit") versus patients (". . . in the next year or two"). In addition, participants were younger and more highly educated than nonparticipants. If participants had greater desires than nonparticipants, we may have overestimated the differences between patients' desires and physicians' estimates of patients' desires (as physicians were estimating desire for all patients, not only patients who participated in the study). Our study suggests that expectations and desires are different dimensions of patient demand for medical care, but we are limited in quantifying this observation. Within both sites, patients who desired specific tests were generally more likely to expect them. However, this relation varied by test. For recommended screening tests, such as mammography, there was a closer match between desire and expectation. For tests not routinely recommended, such as chest x-ray, the match between desire and expectation was much lower.

If these findings hold true in larger studies, it may be that higher expectations for medical care among U.S. patients contribute to utilization differences found between countries. However, further research is needed to generalize these findings and to assess how patient desire and expectation are manifested and negotiated during specific clinical encounters.

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