

## ORIGINAL ARTICLES

## Treatment Preferences Among Depressed Primary Care Patients

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**OBJECTIVE:** To understand patient factors that may affect the probability of receiving appropriate depression treatment, we examined treatment preferences and their predictors among depressed primary care patients.

**DESIGN:** Patient questionnaires and interviews.

**SETTING:** Forty-six primary care clinics in 7 geographic regions of the United States.

**PARTICIPANTS:** One thousand one hundred eighty-seven English- and Spanish-speaking primary care patients with current depressive symptoms.

**MEASUREMENTS AND MAIN RESULTS:** Depressive symptoms and diagnoses were determined by the Composite International Diagnostic Interview (CIDI) and the Center for Epidemiological Studies Depression Scale (CES-D). Treatment preferences and characteristics were assessed using a self-administered questionnaire and a telephone interview. Nine hundred eight-one (83%) patients desired treatment for depression. Those who preferred treatment were wealthier (odds ratio [OR], 3.7; 95% confidence interval [95% CI], 1.8 to 7.9;  $P = .001$ ) and had greater knowledge about antidepressant medication (OR, 2.6; 95% CI, 1.6 to 4.4;  $P \leq .001$ ) than those who did not want treatment. A majority (67%,  $n = 660$ ) of those preferring treatment preferred counseling, with African Americans (OR, 2.2; 95% CI, 1.0 to 4.8,  $P = .04$  compared to whites) and those with greater knowledge about counseling (OR, 2.1; 95% CI, 1.6 to 2.7,  $P \leq .001$ ) more likely to choose counseling. Three hundred twelve (47%) of the 660 desiring counseling preferred group over individual counseling. Depression severity was only a predictor of preference among those already in treatment.

**CONCLUSIONS:** Despite low rates of treatment for depression, most depressed primary care patients desire treatment, especially counseling. Preferences for depression treatment vary by ethnicity, gender, income, and knowledge about treatments.

**KEY WORDS:** depression; primary care; patient preferences; treatment preferences.

J GEN INTERN MED 2000;15:527-534.

Depression is one of the most common conditions among primary care patients<sup>1,2</sup> and is expected to become the second leading cause of disability worldwide over the next decade, owing to its effects on morbidity and productivity.<sup>1-4</sup> While efficacious treatments, including antidepressant medication and psychotherapy exist, as many as three fourths of depressed primary care patients do not receive appropriate care<sup>5-7</sup> despite the availability of national practice guidelines for the treatment of major depression in primary care.<sup>8</sup> The individual and societal importance of depression, as well as the substantial gap in levels of appropriate care for primary care patients increase the importance of understanding patient factors, including treatment preferences, that affect the probability of receiving appropriate care. Yet, there have been few studies of patient preferences for depression treatment in primary care.<sup>9,10</sup> Knowledge of patient treatment preferences and of the patient factors associated with such preferences could help practice management by clarifying which preferences need to be supported through practice infrastructure and which patients may be at risk for not receiving the treatments they prefer, possibly leading to compliance problems.<sup>11-13</sup>

Previously published surveys of general public and primary care patient attitudes about depression treatment show that while a majority agree that depression requires professional treatment, with counseling preferred over medication, there is significant misunderstanding about the efficacy and appropriateness of both standard and alternative treatments for depression.<sup>9,14,15</sup> However, these studies were limited by the fact that a minority of the study samples were depressed; the results may not represent the preferences of patients actually undergoing treatment. The present study extends this previous work by examining preferences and their correlates in more detail among a larger, more diverse group of depressed primary care patients.

We sought to answer the following questions in a group of 1,187 depressed primary care patients: (1) Do a majority of depressed patients prefer active treatment over no treatment for depression? (2) Do a majority of de-

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pressed primary care patients prefer medication or psychotherapy as their first choice treatment, and if psychotherapy is the first choice, which modality (individual or group) is preferred? and (3) What patient characteristics are associated with specific treatment preferences?

## METHODS

The data are from the baseline phase of *Partners in Care* (PIC),<sup>16</sup> a longitudinal, experimental trial of quality improvement for depression in managed primary care.

### Setting

Forty-six clinics in 7 geographically diverse regions of the United States participated in the study. The sites were selected to include a range of organizational structures: staff-model HMOs, primary care networks contracting with a single prepaid insurer, multiple prepaid insurers, prepaid and managed fee-for-service insurers, and one public health system. Clinicians were internists, family practitioners, general practitioners, and nurse practitioners.

### Subjects

From June 1996 to March 1997, all English- and Spanish-speaking adult (age >17) patients visiting participating providers were asked to complete a brief screening instrument which contained the “stem items” for major depression and dysthymia from the Composite International Diagnostic Interview (CIDI), edition 2.1, 12-month version.<sup>17</sup> This instrument measures whether, in the past 12 months, the patient has experienced a 2-week period of daily sadness or loss of interest, and whether the patient has had a 2-year period of daily depressed mood, which extended into the past 12 months. The instrument was modified to screen for presence of depressive symptoms in the past 30 days to capture patients with current symptoms that potentially would need treatment.

Eligible patients (i.e., those who intended to use the clinic as their source of primary care for the following year and who had insurance that covered care from the PIC behavioral health care providers) signed written informed consents approved by the human subjects committees of RAND and the managed care organizations. Patients were eligible to take part even if they were already receiving treatment for depression.

Of the 27,332 patients completing the screener (85% of those approached), 3,918 were potentially eligible, 2,417 were present in the clinic to confirm insurance eligibility, and 241 had ineligible insurance. Of those who read the informed consent, 1,356 enrolled, and the remaining patients either refused (369), left the clinic (322), disenrolled before initiating the study (74), or were ineligible based on pilot exclusion criteria (55). Of the enrolled patients, 1,204 completed the baseline patient assessment interview (PAQ), in which preferences were as-

sessed; however, 17 of these patients were later found to have ineligible insurance, leaving an analytic sample of 1,187. We developed weights that adjust for differential probability of enrollment and response to the PAQ. Specifically, at each step of enrollment, a weight was constructed reflecting the probability of remaining in the sample as a function of patient demographic and clinical characteristics, site, and likelihood that the clinic was randomized to the intervention condition. These weights were multiplied for a final weight. Prior to weighting, respondents to the PAQ did not differ significantly from enrolled nonrespondents in physical or mental health, but were older, better educated, and more likely to be female.

### Data and Measures

All measures were assessed at baseline either on the screening instrument, the self-report mailed PAQ, or as part of a telephone interview which confirmed diagnostic status and gathered more detail on economic and labor outcomes.

**Patient Treatment Preferences.** Patients were asked, “If you were depressed and you could choose between 5 treatments that might cure your depression, which ONE would you choose? (1) Free medication daily for 6 months, often causes nausea and headaches, 75% chance of cure (representing older antidepressants which have greater side effects, but low costs); (2) Medication daily for 6 months, no or only minor side effects, costs you \$80/month (\$480 total), 75% chance of cure (representing newer antidepressants which have few side effects, but are more expensive); (3) Individual counseling 1 hour per week for 3 months, costs you \$25 a session (\$300 total), 75% chance of cure; (4) Group counseling 1 hour per week for 3 months, costs you \$5 per session (\$75 total), 75% chance of cure; or (5) Wait and see (no treatment, no cost), 40% chance of cure.” Indicators were created of preference for no active treatment (option 5) versus any one of the active depression treatments, and among those who chose treatment, of preference for medication, individual counseling, or group counseling.

**Independent Variables.** We relied on a conceptual framework based loosely on the groupings of predictors from the Anderson/Aday<sup>18</sup> access model (i.e., need, enabling, and predisposing factors).

*Patient predisposing factors* are individual characteristics that may influence preference. They included *demographic characteristics* (gender, age, race, and education) and a measure of *household wealth* ranked within age categories; *past treatment experience* with medication and counseling; *knowledge about antidepressant medication* (5 items,  $\alpha = 0.589$ ) and *counseling* (2 items,  $\alpha = 0.648$ ) adapted from the Medical Outcomes Study<sup>1</sup>; *perceived stigma regarding treatment for depression* reflecting how much difficulty or embarrassment they felt they would

suffer in applying for a job, applying for insurance, or with family or friends if others knew that they had been treated for depression ( $\alpha = 0.808$ ); and patient perception of *need for treatment*. Patient perception of need for treatment included *severity of depressive symptoms* measured using a 23-item version of the Center for Epidemiological Studies Depression Scale (CES-D) adapted by Dr. Daniel Ford (personal communication) to be more compatible with DSM-IV symptoms; (2) *depressive disorder status*, defined as major depression, single episode or recurrent; dysthymia; or “depressive symptoms only” (history of depressive symptoms for 30 days or more but not meeting diagnostic criteria for major depression or dysthymia), as determined by the CIDI; (3) diagnosis of *anxiety disorder* (panic disorder with or without agoraphobia, generalized anxiety disorder, obsessive compulsive disorder), as determined by the CIDI; (4) any *chronic medical condition*; (5) *mental or physical well-being and functioning*, as measured by the Medical Outcomes Study 36-item Short Form.<sup>19</sup>

*Enabling factors* are those personal and community resources that allow or prevent a patient from seeking and receiving treatment. They included *paid sick time*, *number of children in the household*, and *study “blocks”* (clinic clusters within sites).

## Analysis

Data were analyzed using STATA version 6. We used univariate and bivariate analysis to describe the sample and to examine potential predictors of treatment preference, using 2-tailed *t* tests for continuous variables (all were normally distributed) and  $\chi^2$  tests for dichotomous variables. Due to multiple comparisons, a conservative measure of significance ( $P \leq .01$ ) was used. Those variables found to be significantly different among the treatment preference groups along with demographic factors and block were entered into a 3-step nested logistic regression analysis. First, predictors of choosing any treatment versus no treatment were determined. Second, significant differences between those who preferred medication and those who preferred counseling among those preferring active treatment were determined. Third, among those who preferred counseling, those who preferred individual counseling were compared to those who preferred group counseling. The models were first run for the entire patient sample, controlling for recent treatment experience, then separate models were run for patients in treatment and not in treatment during the 6 months prior to entering the study. To illustrate results, we present standardized predictions of the percentages of patient preferences for each independent variable, based on the regression parameters and each individual’s actual value for all covariates.<sup>20</sup> The patients are clustered within providers and clinics, but the interclass correlations were close to zero, so we report results unadjusted for cluster effects.

## RESULTS

The characteristics of the sample are presented in Table 1. About 78% of patients reported having at least one chronic medical problem. The age range was 18 to 90 years, with a mean of 44 (SD = 15). All patients in the sample reported depressive symptoms in the past 12 months, with 55.9% meeting criteria for current depressive disorder (major depression, dysthymia, or both). Eighty-one percent ( $n = 964$ ) had a lifetime history of depressive disorder, while only 18% ( $n = 223$ ) had current symptoms without lifetime or 12-month disorder. Forty-four percent of the sample had received some treatment for depression during the 6 months prior to enrollment. A majority of patients (83%,  $n = 981$ ) reported wanting active treatment for depression. Of the total sample, 27% ( $n = 321$ ) preferred antidepressant medication for treatment of depression, 29% ( $n = 348$ ) preferred individual counseling, and 26% ( $n = 312$ ) preferred group counseling.

Table 2 presents the adjusted, predicted percentage of patients in each category with a given treatment preference, based on the final regression models which included the independent variables listed in this table and “block.” Among the whole sample, those who preferred ac-

Table 1. Sample Characteristics\*

Characteristic	% (n)
Total sample	100 (1,187)
Female	71 (839)
Education	
No or some high school	19 (220)
High school graduate	30 (354)
Some college	32 (377)
College graduate	20 (236)
Age, y	
17-34	29 (344)
35-59	56 (659)
$\geq 60$	16 (184)
Ethnicity	
White (non-Hispanic)	57 (676)
Black	7 (85)
Hispanic	30 (350)
Other	6 (76)
Depressive disorder <sup>†</sup>	56 (664)
Major depression	53 (571)
CES-D <sup>‡</sup> score (mean $\pm$ SD)	43.3 $\pm$ 20.2
Comorbid anxiety disorder	42 (498)
Number of comorbid medical conditions	
0	22 (259)
1	24 (288)
$\geq 2$	54 (640)
Previous counseling	60 (710)
Previous medication for emotional problems	47 (546)

\*Results are weighted for probability of enrollment and survey response, and control for predictors of retention and response in analysis.

<sup>†</sup>Current major depression or dysthymia.

<sup>‡</sup>Center for Epidemiologic Studies Depression Scale.

tive treatment over no treatment were wealthier (OR, 3.74; 95% CI, 1.77 to 7.91;  $z = 3.46$ ;  $P = .001$ ), had greater knowledge about antidepressant medication (OR, 2.60; 95% CI, 1.55 to 4.36;  $z = 3.64$ ;  $P < .001$ ), and were more likely to have a concurrent 12-month anxiety disorder (OR, 1.74; 95% CI, 1.14 to 2.65;  $z = 2.58$ ;  $P = .01$ ). There was a significant interaction of disorder status and recent treatment for depression ( $z = -2.34$ ;  $P = .019$ ); patients who had recent treatment and had symptoms only (no disorder) were more likely to say they wanted treatment compared to other patients (see Table 2).

Among all patients preferring active treatment, factors associated with selecting counseling over medication were (1) female gender (OR, 1.45; 95% CI, 1.01 to 2.09;  $z = 2.00$ ;  $P = .046$ ); (2) ethnicity (African Americans compared to whites) (OR, 2.22; 95% CI, 1.03 to 4.81;  $z = 2.03$ ;  $P = .042$ ); (3) greater knowledge about counseling (OR, 2.09; 95% CI, 1.63 to 2.68;  $z = 5.77$ ;  $P < .001$ ); (4) paid sick leave (OR, 1.59; 95% CI, 1.10 to 2.30;  $z = 2.48$ ;  $P = .013$ ); and (5) no recent antidepressant treatment (OR, .39; 95% CI, .27 to .56;  $z = -5.06$ ;  $P < .001$ ). Among those who had not had recent counseling, predictors of preference for counseling were the same as for the group overall. Among subjects who had counseling in the 6 months prior to enrollment, those who preferred counseling were less likely to have had recent antidepressant treatment (OR, .39; 95% CI, .19 to .79;  $z = -2.60$ ;  $P = .009$ ), had greater knowledge about counseling (OR, 1.6; 95% CI, 1.1 to 2.4;  $z = 2.35$ ;  $P = .019$ ), were less concerned about stigma associated with depression treatment (OR, .59; 95% CI, .42 to .82;  $z = -3.13$ ;  $P = .002$ ), and were less likely to have young children in the home (one child compared to none [OR, .36; 95% CI, .17 to .78;  $z = -2.60$ ;  $P = .009$ ]; three or more children compared to none [OR, .24; 95% CI, .06 to .98;  $z = -1.98$ ;  $P = .047$ ]). Among those who had antidepressant treatment in the past 6 months, those preferring counseling had greater knowledge of counseling (OR, 2.0; 95% CI, 1.4 to 3.0;  $z = 3.78$ ;  $P < .001$ ), were less concerned about stigma associated with depression treatment (OR, .63; 95% CI, .49 to .83;  $z = -3.38$ ;  $P = .001$ ), and had moderate comorbid medical illness (2 illnesses vs none [OR, 2.5; 95% CI, 1.1 to 5.6;  $z = 2.22$ ;  $P = .027$ ]).

Women (OR, 2.0; 95% CI, 1.3 to 3.1;  $z = 3.24$ ;  $P = .001$ ), college graduates (OR, 3.0; 95% CI, 1.8 to 5.2;  $z = 3.97$ ;  $P < .001$ ) and those with less knowledge of counseling (OR, .61; 95% CI, 0.46 to 0.80;  $z = -3.50$ ;  $P < .001$ ) were more likely to choose individual counseling over group counseling. Among those who had recent counseling, only female gender (OR, 5.04; 95% CI, 2.1 to 12.4;  $z = 3.53$ ;  $P < .001$ ) and college education (OR, 3.55; 95% CI, 1.2 to 10.9;  $z = 2.03$ ;  $P = .027$ ) predicted preference for individual over group counseling.

## DISCUSSION

Over 80% of depressed primary care patients in this sample preferred active treatment. Low-income patients

and patients with less knowledge about antidepressants were less likely to prefer active treatment. Low-income patients may be less likely to prefer active treatment because of competing priorities for time and money or the belief among the poor that depression treatments are ineffective.<sup>14</sup> Of the need-related factors, presence of comorbid anxiety disorder predicted preference for active treatment. This is consistent with research that shows increased outpatient services use among patients with anxiety disorders,<sup>21-23</sup> perhaps because of increased overall psychological distress. None of the enabling factors/barriers to care predicted preference for active treatment, perhaps because this was a patient sample who already were in care.

Preference varied somewhat between those who had recently received treatment and those who had not. Most important, patients who had recent treatment and no longer met criteria for a current disorder were most likely to say they would want treatment if depressed, suggesting that those who receive inadequate treatment or have incomplete response to treatment may become discouraged and need additional support to remain in care. In the PIC study, those patients in depression care at baseline who were randomized to the intervention which provided education, support, and activation were more likely to remain in care over the study follow-up period compared to those in usual care.<sup>24</sup>

This study found that of those who preferred active treatment, a majority preferred counseling, regardless of the severity of their symptoms. Predisposing patient characteristics, such as gender, African-American ethnicity, and a greater knowledge of counseling, were significantly associated with a preference for counseling over medication. This suggests that, in addition to cultural and gender differences, treatment preferences may in part reflect selective attention to treatment information or gaps in patient education. Not receiving paid time off from work was associated with a preference for medications over counseling; thus, the time costs of counseling may represent substantial barriers to selecting it. Almost as many patients preferred group to individual therapy, and only predisposing factors, but not disease severity or enabling factors, predicted preference for group counseling. It is understandable that different types of patients in different life circumstances would prefer different treatments, even when their depression was of similar severity. Although the treatments have roughly equal efficacy, especially for those with mild to moderate depressive disorders, they differ in terms of financial and time costs, degree of self-disclosure and interaction with others, and use of psychoactive medications.

Our findings may have implications for practitioners. Because treatment preferences vary among patients and because providers are unlikely to accurately assess patient preferences without asking them directly,<sup>25</sup> it is important for clinicians to elicit patient preferences in order to help patients realize their treatment preferences. Pa-

Table 2. Adjusted Percentages of Patient Preferences\*

Characteristic	Chose Treatment over No Treatment <sup>†</sup>		Chose Counseling over Medication <sup>‡</sup>		Chose Individual Counseling over Group <sup>§</sup>	
	Adjusted %	Standard Error	Adjusted %	Standard Error	Adjusted %	Standard Error
Gender						
Female	83.4	2.3	69.5 <sup>  </sup>	1.6	56.8 <sup>¶</sup>	2.2
Male	77.9	3.5	62.5	3.1	41.9	3.9
Age						
17-34	81.3	3.5	65.9	3.1	58.3	3.8
35-59	82.9	2.5	67.2	1.8	51.7	2.5
≥60	79.1	4.1	72.2	4.2	46.9	6.0
Ethnicity						
Hispanic	83.8	3.0	65.3	3.7	53.5	4.4
Black	83.3	5.2	79.9 <sup>*</sup>	5.3	57.7	6.4
White	81.2	2.8	66.8	1.9	50.8	2.8
Other	72.3	6.7	71.7	5.4	61.8	7.1
Education						
No or some high school	80.3	4.1	62.9	4.5	37.8	6.1
High school graduate	81.6	2.9	69.7	2.7	49.0	3.8
Some college	83.7	2.8	68.1	2.4	52.4	3.2
College graduate	80.5	3.9	67.2	3.2	72.2 <sup>¶</sup>	3.9
Ranked wealth						
Highest quartile	87.6 <sup>¶</sup>	1.6	67.6	1.9	56.3	2.6
Lowest quartile	79.7	1.7	67.6	1.9	49.6	2.7
Ever taken medication for emotional problems						
Yes	83.2	3.0				
No	80.7	2.5				
Ever had counseling						
Yes	82.8	2.9				
No	80.6	2.6				
Current disorder <sup>a</sup>						
Recent treatment	82.4	2.6				
No recent treatment	81.0	2.3				
Symptoms only						
Recent treatment	93.7 <sup>*</sup>	2.3				
No recent treatment	81.8	2.3				
Antidepressant in last 6 months						
Yes			56.0 <sup>¶</sup>	2.9	50.0	4.0
No			74.7	1.9	54.0	2.3
Counseling in last 6 months						
Yes			70.1	2.6	54.8	3.7
No			66.3	1.8	52.2	2.3
Medication knowledge <sup>b</sup>						
Lowest score (1.4)	50.6 <sup>¶</sup>	11.0	77.0	6.5	65.0	9.1
Highest score (5.0)	96.1	1.8	59.1	6.9	42.1	8.5
Counseling Knowledge <sup>c</sup>						
Lowest score (1.0)	86.7	3.3	35.8 <sup>¶</sup>	5.7	74.9 <sup>¶</sup>	5.6
Highest score (5.0)	79.9	3.7	88.8	2.5	34.4	52.9
Stigma associated with psychiatric care						
No stigma (0)	79.6	3.1	74.6	3.7	55.6	5.2
Highest stigma (4)	85.9	2.3	62.0	3.4	50.7	4.6
CES-D score <sup>d</sup>						
<20 (no probable disorder)	81.1	4.8	69.1	5.0	58.5	5.8
≥20 (probable disorder)	81.9	2.4	67.4	1.6	51.8	2.3
Disorder status						
Disorder <sup>a</sup>			67.7	1.9	51.3	2.7
Symptoms only			67.4	2.4	54.7	3.0

(continued)

Table 2. (Continued)

Characteristic	Chose Treatment over No Treatment <sup>†</sup>		Chose Counseling over Medication <sup>‡</sup>		Chose Individual Counseling over Group <sup>§</sup>	
	Adjusted %	Standard Error	Adjusted %	Standard Error	Adjusted %	Standard Error
Anxiety disorder						
Yes	85.9 <sup>#</sup>	2.5	67.2	2.2	52.7	3.3
No	78.7	2.8	67.9	2.1	53.0	2.6
No. of chronic diseases						
0	83.6	3.5	66.0	3.3	47.1	4.3
1	79.6	3.7	69.8	2.9	51.9	3.9
2	82.1	3.3	66.5	3.5	57.3	4.1
≥3	81.9	3.0	67.7	2.5	55.0	3.7
SF-36 MCS <sup>e</sup>						
Lowest quartile	82.3	1.9	65.7	2.2	56.0	2.8
Highest quartile	83.8	1.4	69.3	2.0	50.5	2.8
SF-36 PCS <sup>f</sup>						
Lowest quartile	81.6	1.6	66.0	1.9	53.7	2.5
Highest quartile	85.2	1.5	69.5	2.0	52.0	2.9
Paid sick leave						
Yes	82.3	2.4	69.5 <sup>*</sup>	1.6	51.9	2.1
No	80.1	3.5	60.8	3.3	56.8	4.7
Number of young children in household						
None	82.8	2.4	69.6	1.7	53.9	2.3
1	79.8	4.0	62.6	3.7	51.3	5.0
2	76.7	5.1	66.2	4.5	48.8	6.1
≥3	83.9	5.3	59.4	7.0	53.3	8.3

\*Adjusted percents calculated from logistic regression models containing variables in the table and block (see "Methods" section).

<sup>†</sup>Of the total sample (N = 1,187), patients who preferred active treatment over no treatment.

<sup>‡</sup>Of those patients who preferred active treatment (n = 981), patients who preferred counseling over medication.

<sup>§</sup>Of those patients who preferred counseling (n = 646), patients who preferred individual counseling over group counseling.

<sup>||</sup>P ≤ .05

<sup>#</sup>P ≤ .01

<sup>¶</sup>P ≤ .001

<sup>a</sup>Current major depression or dysthymia.

<sup>b</sup>Medication knowledge scores ranged from 1.4 (lowest knowledge) to 5.0 (greatest knowledge).

<sup>c</sup>Counseling knowledge scores ranged from 1.0 (lowest knowledge) to 5.0 (greatest knowledge).

<sup>d</sup>Center for Epidemiologic Studies Depression Scale score.

<sup>e</sup>SF-36 Mental Health Component score (higher scores indicate better functioning).

<sup>f</sup>SF-36 Physical Health Component score (higher scores indicate better functioning).

tients who are not offered their preferred treatments may be at greater risk for treatment nonadherence,<sup>11-13</sup> and patients who take an active part in clinical decision making may have improved clinical outcomes and satisfaction with care.<sup>26-28</sup> Future studies should explore how clinician treatment preferences affect patient preferences.

Should practitioners honor a patient's autonomy in declining or deferring care for depression, especially when this choice may be associated with poverty or lack of knowledge? This is an important question because untreated depression has serious consequences for the individual, including disability and increased morbidity and mortality from other medical conditions,<sup>1,3,29</sup> and for society, including lost productivity and increased health care utilization.<sup>30-32</sup> The value of active treatment at first may be especially important in primary care where absence of an infrastructure for monitoring patients over time may easily turn "watchful waiting" into no treatment. The al-

ternative is to develop guidelines and practice policies that target treatments to patients who remain depressed after a period of observation.<sup>33</sup> Since treatment knowledge is associated with treatment preference, future studies should examine the role of education in motivating depressed patients to seek active treatment and assisting them in making informed treatment choices.

Our findings also have potential implications for health care policy. Because most patients in this and previous studies prefer counseling, strategies to increase access to counseling from primary care<sup>16,34-37</sup> may increase the proportion of patients entering into depression care. Since specific short-term group therapies<sup>38</sup> are efficacious in depression and are often less costly than individual therapy, it is important to note that there is a substantial patient group not only willing to consider group therapy, but preferring it foremost. Health plans and systems which serve diverse populations should aim to provide a variety of

effective depression treatments to address the preferences of patients, including ethnic minorities who may have different treatment preferences than the majority<sup>39</sup> and who have traditionally had more difficulty accessing health care services.<sup>40</sup> The association between lower income and the preference for no treatment suggests that the poor may need supplemental resources in addition to education and activation to motivate treatment.

The limitations of our study must be considered when interpreting our findings. Patient treatment preferences are complex and difficult to assess in a questionnaire format. Treatment preferences were elicited with a hypothetical question because the study enrolled patients who screened positive for depressive symptoms, but who did not necessarily consider themselves depressed, nor were they seeking care for depression. Information on costs, side effects, and efficacy were included to make the choice more realistic; however, they may not represent the specific characteristics of the treatments in each of the diverse clinical settings. Thus, actual treatment preferences may differ from the more hypothetical preferences reported here.

Several characteristics of the sample may limit the generalizability of our findings. Conclusions regarding patients who prefer no treatment may be limited because this was a clinical sample that may overrepresent those preferring active treatment. Further, patients who refused the initial screener may have been less likely to prefer active treatment if they had been depressed. Weights used to control for demographic and clinical differences between respondents and nonrespondents may not fully account for differences between these groups. For example, more educated patients were more likely to participate at each step and may also have been more likely to prefer treatment. The rates of patient-reported previous counseling are high compared to previous primary care samples,<sup>41</sup> perhaps because practices with accessible counseling resources were more likely to take part in this study. Although our weighted logistic regression models control for previous treatment experience, patients who prefer counseling may be overrepresented in our sample. Finally, our sample included patients with minor depression. Although it causes significant impairment in functioning and increases in somatization and health services utilization,<sup>42</sup> there is debate over the effectiveness of treatments for minor depression, and thus the appropriateness of honoring their treatment preferences.

This study suggests that despite low rates of treatment for depression in primary care, most depressed patients want treatment, with most preferring counseling over medication. Along with demographic factors, knowledge about treatments for depression was a significant predictor of patient treatment preference, suggesting an important role for patient education in promoting informed decision making. Future research on depression treatment preferences in primary care should examine the extent to which patient treatment preferences are

honored, whether educational interventions shift patient preferences, and whether providing preferred treatments for depression leads to improved treatment adherence and outcomes and patient satisfaction.

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*The authors would like to thank Jurgen Unutzer, MD, MPH and Arlene Fink, PhD for their thoughtful comments on the text, and Naihua Duan, PhD and Lingqi Tang, PhD for their assistance in developing the analytic plan.*

*Salary support for Dr. Dwight-Johnson from NIMH grant K 12 MH00990-01-01. Partners in Care study funded by Agency for Health Care Policy and Research grant HS08349-02.*

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