

Depression Treatment Preferences in Older Primary Care Patients

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Purpose: For depressed older primary care patients, this study aimed to examine (a) characteristics associated with depression treatment preferences; (b) predictors of receiving preferred treatment; and (c) whether receiving preferred treatment predicted satisfaction and depression outcomes. **Design and Methods:** Data are from 1,602 depressed older primary care patients who participated in a multisite, randomized clinical trial comparing usual care to collaborative care, which offered medication and counseling for up to 12 months. Baseline assessment included demographics, depression, health informa-

tion, prior depression treatment, potential barriers, and treatment preferences (medication, counseling). At 12 months, services received, satisfaction, and depression outcomes were assessed. **Results:** More patients preferred counseling (57%) than medication (43%). Previous experience with a treatment type was the strongest predictor of preference. In addition, medication preference was predicted by male gender and diagnosis of major depression (vs dysthymia). The collaborative care model greatly improved access to preferred treatment, especially for counseling (74% vs 33% in usual care). Receipt of preferred treatment did not predict satisfaction or depression outcomes; these outcomes were most strongly impacted by treatment condition. **Implications:** Many depressed older primary care patients desire counseling, which is infrequently available in usual primary care. Discussion of treatment preferences should include an assessment of prior treatment experiences. A collaborative care model that increases collaboration between primary care and mental health professionals can increase access to preferred treatment. If preferred treatment is not available, collaborative care still results in good satisfaction and depression outcomes.

Key Words: *Treatment preferences, Depression, Primary care, Collaborative care, Counseling*

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Late-life depression is very common in primary care settings, affecting at least 5% to 10% of older primary care patients (Blazer, 2003). Untreated depression in older adults results in serious consequences, including suicide (National Institutes of Health [NIH], 1997); increases in all-cause mortality; and functional decrements (Frojd, Hakansson, Karlsson, & Molarius, 2003). Psychotherapy and antidepressant medication are both effective treatments for depression in older

adults (Charney et al., 2003), but despite the seriousness of late-life depression and the availability of efficacious treatments, many older adults do not receive such treatments (Swartz et al., 1998). Even in the presence of a psychiatric diagnosis, older adults are less likely to receive mental health services than are younger adults (Klap, Unroe, & Unützer, 2003).

One important component that may influence treatment utilization is the older person's acceptance and preferences for the services that are offered. In studies with primarily mixed-age depressed patients, matching treatment to patient preferences resulted in better acceptability (Thompson & Scott, 1991), service utilization (Bedi et al., 2000; Dwight-Johnson, Unützer, Sherbourne, Tang, & Wells, 2001; Rokke, Tomhave, & Jovic, 1999), and satisfaction (Bedi et al.). Treatment preference is often determined by several factors, including depression severity (Bedi et al.), past treatment experiences (Dwight-Johnson, Sherbourne, Liao, & Wells, 2000; Rokke & Scogin, 1995), and ethnicity (Cooper et al., 2003; Dwight-Johnson et al., 2000). There is very little research to suggest that these findings are true of people over the age of 60, however. Existing studies of older adults suggest that they find a variety of types of psychological services acceptable (Areán, Alvidrez, Barrera, Robinson, & Hicks, 2002; Landreville, Landry, Baillargeon, Guerette, & Matteau, 2001; Rokke & Scogin), tend to prefer psychotherapy over medication (Landreville et al.; Rokke & Scogin; Unützer et al., 2002), and prefer being treated in primary care (Areán, Hegel, & Reynolds, 2001).

Given that no single treatment modality is clearly superior to another and that preferences may influence patient acceptance and satisfaction with treatment, depression guidelines established by the Agency for Healthcare Research and Quality (AHRQ, formerly the Agency for Health Care Policy and Research) encourage providers to give patients their choice of treatment (Schulberg, Katon, Simon, & Rush, 1998). This requires providers to anticipate which patients will choose various treatment options in order to plan for the availability of services and negotiate optimal treatment plans. Currently, there is a mismatch between older adults' preferences for being treated in the primary care setting, yet preferring counseling, which commonly is not offered in primary care. When such preferred services are not available and not feasible to add, it is important to understand the impact of not meeting preferences on service use and outcomes.

Therefore, our purpose in the current study was to examine treatment preferences for depressed older adults participating in a study of depression treatment. IMPACT (Improving Mood-Promoting Access to Collaborative Treatment) was a multisite, randomized clinical trial that compared usual care with a collaborative care model of depression treatment for 1,801 older primary care patients. Collaborative care centered on a depression care manager, who collaborated with the patient, primary care physician, and other health professionals to coordinate depression care. The depression care manager coordinated medication management and also offered brief psychotherapy. The

primary findings indicated that collaborative care was much more successful than usual care in depression outcomes, satisfaction, and improving access to care (Unützer et al., 2002).

The current study had three aims. Our first aim was to identify predictors of baseline treatment preferences. On the basis of past research with mostly younger populations, we hypothesized that women and Black participants would prefer counseling, those with more severe depression would prefer medications, and those with prior positive treatment experiences would prefer the same type of treatment. We expected potential barriers to treatment, including transportation and time-consuming obligations, to predict a preference for medications, as it generally requires fewer visits and less time than counseling. Our second aim was to test the hypothesis that greater access to preferred treatment would be predicted by a preference for medication and being in the collaborative care condition. Third, we hypothesized that receipt of preferred treatment would predict better outcomes (satisfaction and depression).

Methods

We derived data for this article from the IMPACT study (Unützer et al., 2002), a multisite, randomized trial comparing a primary-care-based collaborative care model with usual care to treat late-life depression. The procedures for this study met ethical requirements for the protection of human subjects and were approved by the Institutional Review Boards at all participating organizations. All participants gave written informed consent.

Participants

We selected participants from 18 primary care clinics belonging to eight health care organizations in five states (Unützer et al., 2001). Inclusion criteria were that participants (a) were 60 years of age or older; (b) met criteria for major depression or dysthymia, according to the *Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (SCID; First, Spitzer, Miriam, & Williams, 2002); (c) planned to use their primary clinic for the next year; and (d) spoke English. We excluded participants for (a) currently abusing alcohol, based on score > 2 on the CAGE (Ewing, 1984); (b) having a history of bipolar or psychotic disorder; (c) experiencing severe cognitive impairment, according to a score < 3 on a six-item cognitive screen (Callahan, Unverzagt, Hui, Perkins, & Hendrie, 2002); or (d) currently seeing a psychiatrist.

The original study sample included 1,801 participants. Approximately half were referred to the study by their primary care physicians, and the other half were identified by systematic screening in primary care. As previously reported (Unützer et al., 2002), 308 (14%) of referred individuals refused to participate in the screening, as did 5,246 (16%) of individuals offered the systematic screening. Of the 2,102 individuals who

were deemed eligible after the full interview, 1,801 (86%) agreed to participate. Across the 12-month follow-up period, the number of participants who dropped out was very small ($n = 143$, or 7.9%).

We limited the sample in the current report to the 1,602 participants who expressed a preference for one of the two active treatments (antidepressants or counseling) at baseline. Thus, we excluded 199 (11.05%) of the original sample ($N = 1,801$) because of the small number without an expressed preference ($n = 78$; 4.33%) or who preferred neither treatment ($n = 121$; 6.72%).

Treatment Condition

We randomly assigned participants to one of two treatment conditions, collaborative care or usual care. Collaborative care consisted of the integration of mental health services into primary care medicine. Depression treatment was managed by a team of providers including the patient's primary care provider, a consulting psychiatrist, and a depression care manager, who were available for up to 1 year. The depression care manager educated patients about their treatment options for depression and provided ongoing depression management by supporting antidepressant medication management prescribed by the patient's physician, offering behavioral activation, or a course of Problem Solving Treatment in Primary Care, a brief, structured form of psychotherapy for depression in primary care. Thus, for collaborative care participants, both medications and counseling were available within the primary care setting. With their depression care manager, participants negotiated a treatment plan, which could be changed as needed. More detailed descriptions of the collaborative care model are provided elsewhere (Hegel et al., 2002; Saur et al., 2002; Unützer et al., 2001, 2002).

In the usual care condition, participants received care that was typically available in their clinics. Primary care physicians who had referred patients to the study were informed of the depression diagnosis and were free to initiate antidepressant medications, refer patients to mental health specialists, or provide any other treatments for depression. In both groups, depression treatment decisions were left up to patients and their primary care providers.

Survey Procedure

Data reported are from baseline and 12-month follow-up surveys. Prior to randomization, trained interviewers collected baseline data by using a computer-assisted personal interview. The baseline interview contained questions regarding demographics, mood, prior treatment experiences, and depression treatment preferences. At 12 months, a telephone-survey research group conducted blind follow-up interviews, which included questions about treatments received, mood, and satisfaction. For the purposes of

this article, we discuss only the measures collected for the current hypotheses.

Baseline Measure

Demographic Variables.—Demographic variables assessed at baseline include gender, age, race or ethnicity, marital status, education level, Medicare insurance, insurance coverage for prescription medications, total household income, and working status.

Depression.—Depression variables included a diagnosis according to the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, revised (known as the DSM-IV-R) of major depression, dysthymia, or both from the SCID (First et al., 2002), more than two prior depressive episodes (yes or no), thoughts of suicide (yes or no), and severity of baseline depressive symptoms, as measured by 20 depression items (SCL-20) from the Hopkins Symptom Checklist-90 (Derogatis, Lipman, & Covi, 1973).

Other Health-Related Variables.—We also included a positive screen for anxiety (yes or no), based on whether the participant had a positive response to screening questions for either panic or posttraumatic stress disorder. We determined presence of cognitive impairment as indicated by a score of 3 to 5 on the six-item cognitive screen (Callahan et al., 2002). We tabulated the number of chronic medical diseases from a list of 10 common disorders, based on participants' self-report. We measured health-related impairment with three items from the Sheehan Disability scale (Sheehan, Harnett-Sheehan, & Raj, 1996), which queries patients on the extent to which health had interfered with work (including around the home), family life, and social life. Participants rated their overall quality of life on a scale from 0 (about as bad as dying) to 10 (your life is perfect).

Past Experience With Depression Treatment.—At baseline, interviewers asked participants about previous depression care, including any past depression care (yes or no); any antidepressant use in the past 3 months (yes or no); any specialty mental health visits or psychotherapy in the past 3 months (yes or no); satisfaction with depression care before the study (excellent, very good, good, fair, or poor); how helpful past medication or counseling was (not at all, not very, somewhat, or very helpful); bothersome or irritating side effects from antidepressants (yes or no); and whether they discontinued antidepressant use as a result of side effects (yes or no).

Potential Treatment Barriers.—We included variables that could affect a participant's ability or preferences about engaging in treatment. We included several transportation variables: receipt of transportation assistance (any in past 3 months: yes or no; number of times used in past 3 months) and estimated

travel time to usual provider, mental health specialty, or place to pick up prescriptions. Time-related responsibilities included caregiving responsibilities (yes or no), household responsibilities (scale of 0–4), number of people in household, presence of children or grandchildren in the household, and work status. We also included whether there was daily contact with a spouse or partner (yes or no).

Treatment Preferences.—To determine preferences, interviewers asked participants the following question: “Let’s assume that you are suffering from depression and you had to choose between (1) taking antidepressant medication daily for 6 to 9 months; (2) going for counseling or psychotherapy weekly for at least 2 months; or (3) receiving no treatment at all. Which would you prefer?” Responses categories were medication, counseling, either, or neither. We assessed preferences prior to any education, so they represent participants’ preferences when they entered the primary care setting.

Measures at 12 Months

Treatments Received.—We assessed treatments received by self-report by using a version of the Cornell Services Index for Primary Care (Meyers, Sirey, & Bruce, 1997) that was modified for a computer-assisted interview. Questions included in the current analyses referred to any antidepressant use and counseling or psychotherapy in the period since the prior assessment (this measure was administered at 3, 6, and 12 months). Interviewers asked participants about any prescription, nonprescription and over-the-counter medications they were taking for help with depression, anxiety, sleep, energy, or pain. We considered those who reported using FDA-approved antidepressant medications at any time point to be antidepressant users. Interviewers also asked participants the following question: “In the past 3 (or 6) months, have you had any visits to a counselor, therapist, psychotherapist, or other mental health provider?” We considered those who responded “yes” at any time point to be counseling users.

Receipt of Preferred Treatment.—We created this variable on the basis of the presence of a match between baseline treatment preference and treatments received. If a person received the treatment type preferred at baseline at any point during the 12-month period, we labeled them as having received their preferred treatment. This resulted in two categories: (a) yes, received preferred treatment, or (b) no, did not receive preferred treatment.

Satisfaction With Depression Care.—Interviewers asked participants this question: “Over the past 6 months, how would you rate the quality of care you have received for depression at your primary care clinic?” (excellent, very good, good, fair, poor). We derived a dichotomous variable, with those who reported their depression care as “excellent” or “very

good” considered as satisfied, and those who responded “good,” “fair,” or “poor” as not satisfied.

Depression Outcomes.—We measured depression severity with 20 depression items (SCL-20) from the Hopkins Symptom Checklist–90 (Derogatis et al., 1973) at 12 months. We considered participants who experienced a 50% or more decrease in SCL-20 scores from baseline to 12 months to be substantially improved.

Data Analyses

We conducted univariate and bivariate analyses to describe the sample and to select predictor variables, based on the hypothesized predictors described herein. We used multiple logistic regression analysis to examine predictors of four outcomes: (a) baseline preference for counseling versus medication; (b) receipt of preferred treatment; (c) satisfaction with treatment; and (d) improvement in depressive symptoms (i.e., 50% reduction in SCL scores from baseline). We excluded a total of 69 deceased patients at 12 months from the 12-month analyses.

For the analysis predicting baseline treatment preferences, predictors examined in bivariate analyses included demographics, depression, other health-related variables, past mental health treatment, and barriers. We included variables that were significant ($p \leq .05$) in the logistic regression model.

For the three 12-month outcomes (receipt of preferred treatment, satisfaction, and depression outcomes), we examined the same predictor variables in bivariate analyses and included them if significant ($p \leq .05$). For all three 12-month outcomes, additional predictors were baseline treatment preferences (medication or counseling), treatment condition (collaborative or usual care), and their interaction. If the interaction is significant, we present it in the results; when the interaction term is not significant, we present the main effects models. Finally, for the satisfaction and depression improvement outcomes, we also included receipt of preferred treatment as a predictor, to determine whether receiving one’s preferred treatment predicted greater depression improvement or satisfaction.

To detect multicollinearity, we started by examining the bivariate correlations among independent variables. No pair of variables was highly correlated. The correlation coefficients ranged from -0.25 to 0.38 ; values in chi-square tests for nominal variables were $p < .001$. We then evaluated the multicollinearity diagnostic statistics, the Variance Inflation Factor (VIF; Allison, 1999; Neter, Wasserman, & Kutner, 1990), produced by linear regression analysis (PROC REG with options VIF in SAS). The VIFs ranged from 1.08 to 1.83, indicating no presence of multicollinearity in the model.

Missing Data.—We used a multiple imputation technique to account for missing data. Variables examined in this study had missingness rates of less than 2%. The unit nonresponse rate for the 12-month follow up was 17%. We used a predictive

mean-matching method (Little, 1988) to create five imputed data sets. We then analyzed each of five complete data sets by using standard complete-data methods. Details of missing data imputation are presented in Tang, Song, Belin, and Unützer (2005). We combined the results across five imputed data sets by averaging, and we adjusted standard errors to reflect both within-imputation variability and between-imputation variability (Rubin, 1987).

Results

Description of Sample and Treatment Preferences

Characteristics of the sample ($N = 1,602$) are presented in Table 1. The average age of the participants was 71.1 ($SD = 7.4$). Most participants were female (67%) and had a high school education (81%). The sample was ethnically somewhat more diverse than national samples of older adults (Unützer et al., 2002), with 33% minority participants. Most participants (52%) met criteria for both major depressive disorder and dysthymia. More participants (57%, $n = 920$) preferred counseling, with 43% ($n = 682$) preferring antidepressant medication.

Predictors of Treatment Preference

We conducted a multiple logistic regression to examine factors associated with treatment preferences for medication or counseling (see Table 2). The overall model was highly statistically significant, $\chi^2(23) = 176$, $p < .0001$. The only demographic variable that was significant was gender, as female participants were more likely to prefer counseling and male participants were more likely to prefer medication. Of the clinical variables, severity of depression diagnosis was the only significant predictor; participants with major depression were more likely than patients with dysthymia to prefer medication. The strongest predictors related to prior treatment experience. Participants were more likely to prefer counseling if they had recent visits to specialty mental health or psychotherapy or had found counseling helpful in the past (compared with those with no past experience with counseling). Conversely, they were more likely to prefer medications if they had used antidepressants in the past 3 months or had found antidepressants helpful or tolerable in the past (compared with those with no past experience with antidepressants). None of the hypothesized barriers (e.g., transportation, caregiving, or household responsibilities) predicted preferences.

Predictors of Receiving Preferred Treatment at 12 Months

The results of the multiple logistic regression to predict receipt of preferred treatment are presented in Table 3. The overall model was significant, $\chi^2(24) = 418.45$, $p < .0001$. Baseline treatment preference did not predict receipt of preferred treatment, but

Table 1. Sample Characteristics and Preferences

Sample Characteristics, N (%)	Total (N = 1,602)	Medication (N = 682)	Counseling (N = 920)
Gender			
Male	536 (33)	240 (45)	296 (55)
Female	1,066 (67)	442 (41)	624 (59)
Age (years)			
60–64	380 (24)	170 (45)	210 (55)
65–74	671 (42)	287 (43)	384 (57)
≥ 75	551 (34)	225 (41)	326 (59)
Spouse or live-in partner			
No	863 (54)	361 (42)	502 (58)
Yes	739 (46)	321 (43)	418 (57)
Race and ethnicity			
White (non-Hispanic)	1,238 (77)	523 (42)	715 (58)
Black	194 (12)	92 (47)	102 (53)
Hispanic	125 (8)	45 (36)	80 (64)
Other	45 (3)	22 (50)	23 (50)
Education*			
< High school graduate	299 (19)	145 (48)	154 (52)
≥ High school graduate	1,302 (81)	537 (41)	765 (59)
Diagnosis**			
Major depression	279 (17)	111 (40)	168 (60)
Dysthymia	482 (30)	181 (38)	301 (62)
Both	841 (52)	390 (46)	451 (54)
Anxiety (based on screener)			
No	1,122 (70)	481 (43)	641 (57)
Yes	480 (30)	201 (42)	279 (58)
Chronic diseases			
0–1	281 (18)	101 (36)	180 (64)
2–3	652 (41)	291 (45)	361 (55)
≥ 4	669 (42)	290 (43)	379 (57)
Used antidepressant in past 3 months**			
No	904 (56)	296 (33)	608 (67)
Yes	698 (44)	386 (55)	312 (45)
Visited specialist or psychotherapist in past 3 months			
No	1,464 (91)	633 (43)	831 (57)
Yes	138 (9)	49 (36)	89 (64)

Notes: For “Total” column, N and percentages are calculated by column. For “Medication” and “Counseling,” N and percentages are calculated by row. Comparing differences across preference groups for multiple imputed data sets: * $p \leq 0.05$, ** $p \leq 0.01$.

baseline preference interacted with treatment condition, $t(1578) = -4.63$, $p < .0001$, as illustrated in Figure 1. Participants who initially preferred counseling were significantly more likely to receive their preferred treatment in collaborative care than in usual care, odds ratio (OR) = 6.95 (95% confidence interval [CI] = 5.10–9.49), $p < .0001$. Of those who preferred counseling, adjusted estimates indicate that 74.20% ($SE = 2.09$) in the collaborative care group actually received counseling, compared with 33.23% ($SE = 2.35$) in usual care, $t(1,578) = 12.23$, $p < .001$. Those who preferred medications also were more likely to receive them in collaborative care than usual care, OR = 2.12 (CI = 1.42–3.17), $p < .001$, although this difference was of lesser magnitude than the counseling effect. Of participants preferring medication, 82.52% ($SE = 2.12$) in collaborative care compared with 70.15% ($SE = 2.49$) in usual care received medication, $t(1,151) = 3.68$, $p < .001$. As indicated in Table 3, other factors that

Table 2. Logistic Regression Predicting Baseline Preference for Antidepressant Medication

Predictor	OR	95% CI	<i>t</i> _{df}	<i>p</i>
Female gender	0.71	0.55, 0.91	-2.67 _{1,579}	.008
Ethnic minority	0.864	0.65, 1.14	-1.03 _{1,579}	.304
At least high school graduate	0.935	0.69, 1.27	-0.43 _{1,579}	.670
Major depression	1.445	1.12, 1.86	2.88 _{1,579}	.004
SCL-20 depression score (range = 0–4)	0.878	0.72, 1.07	-1.28 _{1,579}	.202
Positive on cognitive impairment screener	1.212	0.96, 1.53	1.61 _{1,579}	.107
Prior antidepressant medication experience				
None				
Not helpful, tolerated	1.492	1.03, 2.17	2.1 _{1,579}	.036
Not helpful, not tolerated	0.887	0.59, 1.34	-0.57 _{1,579}	.570
Helpful, tolerated	2.741	1.96, 3.82	5.95 ₃₄₉	< .001
Helpful, not tolerated	3.101	1.97, 4.89	4.89 ₄₅₉	< .001
Any antidepressant use in the past 3 months	1.744	1.35, 2.25	4.32 _{1,579}	< .001
Prior counseling experience				
No counseling				
Counseling, not helpful	1.211	0.87, 1.7	1.12 _{1,579}	.264
Counseling, helpful	0.592	0.44, 0.79	-3.59 _{1,579}	< .001
Any specialty mental health visit or psychotherapy in the past 3 months	0.658	0.43, 0.99	-1.99 _{1,579}	.047

Notes: Counseling = 0; medication = 1. Intervention status, recruitment method, and seven dummies for eight participating organizations were included in the model but not presented here. Inferences and degrees of freedom were calculated by the multiple imputation inference technique (Rubin, 1987).

increased the likelihood of receiving the preferred treatment involved past experience with antidepressants and specialty mental health visits.

Receipt of Preferred Treatment and Satisfaction With Treatment at 12 Months

The overall model was significant, $\chi^2(21) = 164.37$, $p < .0001$. Receipt of preferred treatment, however, was not significant, $t(175) = -0.34$, $p = .73$. Intervention status was the strongest predictor of satisfaction in the current model, OR = 3.43 (CI = 2.62–4.49), $p < .0001$.

Receipt of Preferred Treatment and Depression Outcomes at 12 Months

The overall model was significant, $\chi^2(18) = 185.03$, $p < .0001$. Similar to satisfaction, receipt of preferred treatment was not significant, $t(44) = 0.27$, $p = .79$. The collaborative care intervention was the strongest predictor of improvement in the current model, OR = 3.55 (CI = 2.70–4.67), $p < 0.0001$.

We examined satisfaction and depression outcomes at 12 months in greater detail for the collaborative care participants. Instead of baseline preferences, we

Table 3. Logistic Regression Predicting Receipt of Preferred Treatment

Predictor	OR	95% CI	<i>t</i> _{df}	<i>p</i>
Treatment condition (0 = usual care, 1 = collaborative)	6.954	5.10, 9.49	12.23 _{1,578}	< .0001
Preference (0 = counseling, 1 = meds)	5.580	3.96, 7.87	9.81 _{1,578}	< .0001
Treatment condition × Preference	0.305	0.18, 0.50	-4.63 _{1,578}	< .001
Age	0.985	0.97, 1.00	-1.53 ₁₁₁	.128
Female gender	1.23	0.90, 1.69	1.32 ₉₇	.191
Ethnic minority	0.826	0.56, 1.23	-0.98 ₃₀	.335
At least high school graduate	1.42	0.95, 2.11	1.75 ₆₃	.085
SCL-20 depression score (range = 0–4)	1.168	0.92, 1.48	1.31 ₁₇₆	.192
Prior antidepressant medication experience				
None				
Not helpful, not tolerated	2.024	1.25, 3.28	2.91 ₈₇	.005
Not helpful, tolerated	1.569	1.02, 2.40	2.07 _{1,578}	.039
Helpful, not tolerated	1.493	0.80, 2.78	1.3 ₃₈	.200
Helpful, tolerated	1.499	1.04, 2.16	2.18 ₇₂₈	.03
Any antidepressant use in the past 3 months	2.047	1.49, 2.81	4.47 ₁₁₀	< .0001
Prior counseling experience				
No counseling				
Counseling, not helpful	0.979	0.65, 1.46	-0.11 ₅₈₇	.916
Counseling, helpful	1.025	0.72, 1.46	0.14 ₁₁₉	.891
Any specialty mental health visit or psychotherapy in the past 3 months	1.924	1.09, 3.40	2.28 ₈₆	.025

Notes: Did not receive preferred treatment was coded as 0; received preferred treatment was coded as 1. Intervention status, recruitment method, and seven dummies for eight participating organizations were included in the model but not presented here. Inferences and degrees of freedom were calculated by the multiple imputation inference technique (Rubin, 1987).

examined preference after receiving psychoeducation as a predictor. Another modification included defining receipt of preferred treatment based on the initial treatment received as opposed to any time across the 12-month period. We observed no changes in the results for either of these analyses.

Discussion

The results from this study have several important clinical implications in the treatment of depression in older primary care patients. First, most depressed older adults in primary care wished to receive some form of treatment for their depression, and initially more than half preferred counseling. Current depression guidelines indicate that both medications and counseling should be available, in order to honor patients' autonomy and choice (Schulberg et al., 1998). Counseling often is not available in primary care, and older primary care patients preferring counseling are less

likely to receive depression treatment (Unützer et al., 2001). Our study found that participants in usual care who preferred counseling were much less likely to receive their preferred treatment than those who preferred medication (33% vs 70%).

Because of the limited access to preferred treatment in usual care, enhanced collaboration between primary care and mental health providers will be necessary to match many older primary care patients' treatment preferences. Our findings indicate that a collaborative care model, such as the IMPACT model, can be very successful at matching patient preferences, with a dramatic impact on access to counseling—many elders' preferred treatment. Compared with usual care, the collaborative care model improved access to counseling from 33% to 74%. Collaborative care reduces a number of potential barriers to receiving counseling. These barriers can include stigma regarding specialty mental health settings, transportation or convenience, and barriers to effective referral and collaboration among providers.

An integral part of a collaborative care model is negotiating a treatment plan. In order to develop an acceptable treatment plan, it is important to understand in greater detail the specific treatment options patients prefer and why. Health care providers should discuss the patient's prior treatment experiences in terms of helpfulness, tolerance, and other factors, as this prior experience likely influences what the person is willing to try in the future. The importance of considering prior treatment experiences is highlighted by our finding that these variables were the strongest predictors of preferences for medication versus counseling. Overall, this finding is intuitive, given that people generally like what is familiar and what has worked before, and is consistent with past research (Bedi et al., 2000; Dwight-Johnson et al., 2000). It might be less intuitive to consider that participants who had not tolerated medications in the past still preferred medication if it had been helpful in the past; this finding would seem to indicate that a beneficial treatment response may be a more important consideration than the side effects experienced. Most patients without prior treatment experience will require additional education about treatment options.

Few demographic, clinical, and barrier variables were significant predictors of preferences. Interestingly, minority status was not predictive of treatment preference in the model, a finding that is contrary to previous studies of younger primary care patients (Brown, Schulberg, Sacco, Perel, & Houck, 1999; Cooper et al., 2003; Dwight-Johnson et al., 2000). As has been shown to be true in research with younger patients, older participants with more severe depression (i.e., major depression) were more likely to prefer medications than those with dysthymia. Furthermore, access barriers did not predict preferences. One possible explanation is that all participants who consented to the study were willing and able to commit the necessary time. These barriers may be more relevant for the acceptance of any active treatment compared with no treatment or willingness to partic-

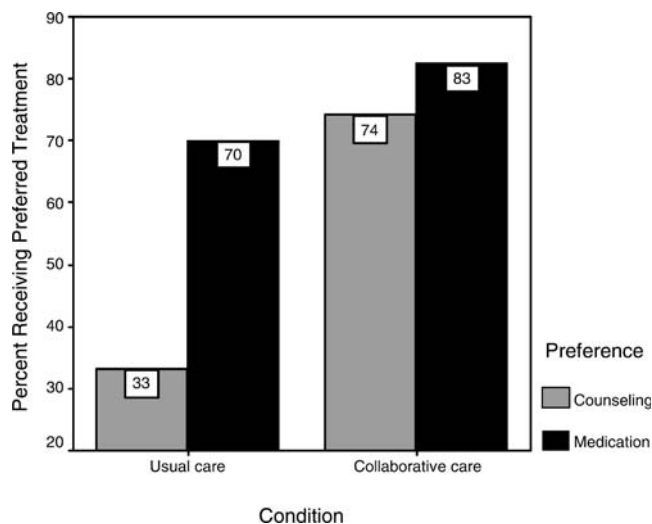


Figure 1. Receipt of preferred treatment by treatment condition and preference. Values are adjusted estimates from multiple logistic regression models.

ipate in a research study; it was not feasible to examine these possibilities with the current data. Participants also were asked about their preferences before they were given an explanation of exactly what treatment entailed; explanation about how often the participants might have to attend the clinic for psychotherapy could change their preferences.

In negotiating a treatment plan, another important factor to consider is the impact of matching—or not matching—treatment to an individual's preference. This is particularly relevant for primary care settings in which collocating mental health services simply are not feasible or when a patient is not able to engage in the preferred treatment (e.g., unable to travel often enough for counseling). Counter to our original hypotheses, matching treatment to preferences did not predict either satisfaction or depression outcomes. These findings are consistent with British studies that found randomly assigned patients did as well in treatment as those who were allowed to pick their treatment (Bedi et al., 2000; Chilvers et al., 2001; Ward et al., 2000).

Instead of preferences, satisfaction and depression were most strongly influenced by treatment condition, as reported in the original findings from IMPACT (Unützer et al., 2002). Thus, what seems to be most relevant for outcomes is the availability of a provider who can discuss treatment options, negotiate a treatment plan, offer active evidence-based treatment, and monitor progress on a regular basis. If the person responds to treatment, he or she is more likely to be satisfied (Hansson, 1989; Holcomb, Parker, Leong, Thiele, & Higdon, 1998; Katon et al., 1995, 1996). Although it may not affect the outcomes, we believe on ethical grounds that it is more patient centered and thus desirable to provide access to both medications and psychotherapy in primary care, allowing more patients to access their preferred treatment (Halpern, Johnson, Miranda, & Wells, 2004). If preferred treatment (such

as counseling) cannot be provided in primary care, then an alternative evidence-based treatment such as antidepressant medication should be offered.

Although this is one of the first studies that we know of to longitudinally study depression treatment preferences for older adults, it is exploratory in nature and has limitations that have to be considered. First, participants were asked to make a decision about treatment choices without any additional information about the treatments. Older adults may have less information regarding mental health issues and treatment options than do younger adults (Mickus, Colenda, & Hogan, 2000; Robb, Haley, Becker, Polivka, & Chwa, 2003), and they may be more likely to initiate mental health treatment once they are educated about these treatments. Psychoeducation did not change the findings for the collaborative care treatment group, however. Thus, the information from this study is valuable for helping health care providers to anticipate their patients' initial treatment preferences and important issues to assess (especially prior treatment experiences) while negotiating a treatment plan.

A second limitation is that the participants in this study had agreed to participate in a treatment trial; by virtue of their interest in research, they may not be representative of all depressed older adults seen in primary care. This could explain the lack of findings for race or ethnicity and preferences, as well as matching preferences on outcomes. Individuals who were willing to participate in research and be randomized to treatment condition probably were more accepting of different kinds of mental health services, compared with those who refused. Thus, they preferred a certain type of treatment, but their preference may not have been very strong. Despite this limitation, these findings seem generalizable to most depressed older primary care patients, based on the fact that 86% of those eligible agreed to participate, and very few dropped out of the study.

There is a subset of older adults, however, who refused to participate in the study, or once enrolled in the study, did not want any active treatment. It is possible that assessing preferences and matching treatment to preferences is especially important for these older adults. Some of these older adults likely had strong preferences and were unwilling to have their treatment be decided by random assignment. Others likely have negative attitudes about mental health treatment, in which case additional intervention would be necessary, such as psychoeducation, addressing stigma concerns, and motivational enhancement techniques. An important aspect of working with this population would seem to be to assess why they prefer to not engage in mental health treatment, in an attempt to address some of the issues. Unfortunately, it was not possible to examine these issues in the current sample, given the limited information about their reasons for refusal and the fact that they were a small portion of the overall sample.

In spite of these limitations, the current study has a number of strengths. First, it involves a large, diverse sample of depressed older adults from eight different health care organizations around the country. Second,

the study assesses preferences in depressed elders actually involved in depression care, which suggests that the findings are likely representative of many depressed, older primary care patients being offered depression treatment. Our study also has more detailed information than past research on a variety of demographic, clinical, and service utilization variables, including 12-month outcomes information.

In conclusion, this is one of the largest studies to examine treatment preferences in older, depressed primary care patients seeking care in primary care medicine. The findings suggest that most older primary care patients desire active treatment, particularly counseling. They do not show the same preference patterns as younger medical patients; most importantly, prior treatment experience is more relevant in this population than demographic background variables. A collaborative care model that includes a depression care specialist collocated in the primary care setting can dramatically improve access to preferred treatment, especially counseling. If preferred treatments are not available, then it seems that negotiating a treatment plan and implementing active treatment by means of a collaborative care model can still result in very good satisfaction and depression outcomes. Future research should continue to explore treatment preferences of depressed older primary care patients by using both qualitative and quantitative research designs. Such research should further explore ways to facilitate matching treatments to patients' preferences, and its impact on service utilization and outcomes.

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