

The Role of Competing Demands in the Treatment Provided Primary Care Patients With Major Depression

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Objective: To examine whether competing demands explain the appearance of inadequate primary care depression treatment observed at a single visit.

Design: A cross-sectional patient survey.

Participants and Setting: Two hundred forty patients with 5 or more symptoms of depression seeing 12 physicians in 6 primary care practices, representing 77.4% of the depressed patients identified through 2-stage screening of more than 11 000 primary care attenders.

Main Outcome Measures: In patients with elevated depressive symptoms, discussing depression as a possible diagnosis in untreated patients, and changing depression management in treated patients.

Results: Physicians and patients discussed depression in 46 (47.9%) of 96 untreated patients; physicians changed depression treatment recommendations in 87 (60.4%) of 144 treated patients with current symptoms. Chronic physical comorbidity decreased the odds that physi-

cians and untreated patients discussed depression as a possible diagnosis (odds ratio = 0.66, $P = .01$). New problems decreased the odds that treatment recommendations would be changed in treated patients who remained depressed (odds ratio = 0.39, $P = .05$). Physicians and untreated patients were more likely to discuss depression as a possible diagnosis if patients reported antidepressant medication was acceptable (odds ratio = 4.57, $P = .01$) and less likely to discuss depression if patients reported specialty care counseling was acceptable (odds ratio = 0.33, $P = .05$).

Conclusions: The attention depression gets during a given medical visit is less associated with the severity of the patient's depressive symptoms than with the number or recency of other problems the patient has. If competing demands provide ongoing barriers to depression treatment, interventions will be needed to assure that patients with chronic physical problems receive high-quality mental health care in the primary care setting.

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PROVIDING comprehensive care requires that patients and their primary care physicians establish priorities among many health issues that could potentially be addressed at any given visit. Studies that examine the adequacy of primary care for a specific problem will necessarily observe gaps in performance when patients have multiple problems because the specific problem under investigation may not have a high priority for that particular visit. This "competing demands" phenomenon has been described previously for primary care health promotion^{1,2} and more recently for mental health care.^{3,4} In primary care treatment of mental health problems, the detection and management of major depression represents an active choice from multiple physician-patient priorities including the treatment of acute physical ill-

ness, the monitoring of chronic physical illnesses, and the provision of preventive services. The **Figure** provides the study's conceptual framework adapted from the competing demands literature³ identifying potentially key provider, patient, and practice variables that influence whether depression is addressed during a primary care visit. This study investigates the influence of key patient characteristics.

RESULTS

The 240 patients in the study were on average (SD) 43.9 (12.8) years old, 84.2% were female, 79.2% were high school educated, and 15.8% were minority. One hundred forty-four patients reported taking antidepressant medication and/or seeing a specialty care provider during the 6

PATIENTS AND METHODS

STUDY DESIGN

Data for this article were collected for a study examining the effect of a primary care-based intervention to increase the proportion of depressed patients who completed guideline-concordant care. The parent study used stratified randomization to assign 12 primary care practices in the Ambulatory Sentinel Practice Network to an enhanced or usual care condition. Two physicians in each of the 6 primary care practices randomized to the usual care condition used a 2-stage screening process to recruit 20 depressed patients from a consecutively identified cohort (77.4% participation rate of eligible identified patients). An extensive description of the parent study's methods is available from one of us (K.R.) (K. Rost, PhD, P. Nutting, MD, J. Smith, BS, and J. Werner, MS, unpublished data, July 22, 1999). Two hundred forty patients participating in the usual care condition (2 physicians \times 6 practices \times 20 patients) provided the subjects for this analysis. Eligible patients (1) reported 5 or more of the 9 criteria for major depression in the past 2 weeks on the Inventory to Diagnose Depression⁵; (2) screened negative for lifetime mania; (3) screened negative for alcohol dependence with current drinking⁶; and (4) did not meet *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* criteria for bereavement-related depression. We excluded patients who were pregnant, postpartum, or breastfeeding because the parent study tested an intervention addressing antidepressant medication management. In addition, practical considerations forced us to exclude a few patients with severe cognitive impairment, patients whose physical illness was too severe to complete screening, patients who could not read the screening materials, patients with no telephone in the home, and patients who planned to seek most of their health care elsewhere during the next year. Immediately after patients were identified as eligible, the

administrative staff invited them to participate in a longitudinal study seeking to understand more about what people who feel sad or uninterested in things decide to do about their condition. Study enrollment procedures, including management of suicidal intent, were approved by the Human Research Advisory Committee of the University of Arkansas for Medical Sciences, Little Rock, and the University of Colorado Multi-institutional Review Board, Denver.

Virtually all subjects in the study were recruited before the patient's visit with the physician, who in most cases provided their ongoing care. Study personnel did not inform physicians in the usual care condition when their patients met criteria for major depression but, in some cases, patients asked their physician questions about the study. All data reported in this article were collected from patients using a structured telephone interview conducted an average (SD) of 8.4 (8.7) days after the index visit.

OPERATIONAL DEFINITION OF MAJOR VARIABLES IN THE STUDY

Dependent Variables

Two outcome variables were defined for this study—one for untreated patients and the other for treated patients who remained symptomatic.

Discussing Depression in Untreated Patients

Depression was characterized as being discussed as a possible diagnosis during the visit if untreated patients reported that during the index visit a doctor or other health care provider asked them about depressive symptoms or previous depression treatment, told them that they had depression, or recommended depression treatment during the visit. Untreated patients were defined as patients who did not take antidepressant medication or receive specialty care counseling during the 6 months before the index visit.

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months before baseline. Patients reported an average (SD) of 6.7 (1.4) symptoms of major depression and 2.2 (1.8) physical comorbidities. Following the index visit, 68.4% of the 240 subjects reported that antidepressant medication was probably or definitely acceptable; 77.9% reported that specialty care counseling was probably or definitely acceptable; 28.7% of patients reported that the main reason for the visit was a new problem. The 12 board-certified family physicians participating in the study were on average (SD) 43.3 (5.9) years old, 66.7% were male, and 91.7% were nonminority.

Physicians and patients discussed depression as a possible diagnosis in 46 (47.9%) of the 96 untreated patients in the sample. Physicians adjusted treatment recommendations in 87 (60.4%) of the 144 treated patients in the sample. As listed in the **Table**, logistic regression models found that physicians and untreated patients were more likely to discuss depression as a possible diagnosis if patients had fewer physical comorbidities (odds ratio [OR] = 0.66, $P = .01$), if patients reported antidepressant medication was acceptable (OR = 4.57, $P = .01$), if patients reported specialty care counseling was unac-

ceptable (OR = 0.33, $P = .05$), and if patients had less education (OR = 0.77, $P = .02$). Logistic regression models found that physicians were more likely to adjust treatment recommendations in treated patients if patients reported a new problem was not the reason for the visit (OR = 0.39, $P = .05$) and if patients were currently married (OR = 4.22, $P < .001$). No other variables were statistically significant.

COMMENT

In the patient population we studied, the attention depression gets during the visit is less associated with the severity of the patient's emotional symptoms than with the number or recency of other problems the patient has. In untreated patients, each chronic physical problem reduces the odds that the physician discusses depression as a possible diagnosis (OR = 0.66, $P = .01$). In treated patients, a new problem reduces the odds that the physician changes depression recommendations (OR = 0.39, $P = .05$). Besides these indicators of competing demands, attitudinal and sociodemographic variables are

Untreated patients included undetected patients and detected patients electing watchful waiting, both groups whose depressive symptoms require monitoring.⁷

Changing Depression Management in Treated Patients

Depression management was characterized as being changed if treated patients reported that during the index visit a doctor or other health care provider recommended that they go for counseling to another doctor or therapist (referral), gave them a prescription for medication to help their personal or emotional problems, or changed medication that they were already taking for personal or emotional problems. Treated patients were defined as patients who took antidepressant medication or received specialty care counseling during the 6 months before the index visit. All treated patients reported 5 or more of the 9 criteria for major depression at the index visit.

INDEPENDENT VARIABLES

Competing Demands

We characterized competing demands on patients' agendas (yes/no) if patients reported that their reason for the index visit was a new problem, rather than an old problem or a checkup. We also characterized the degree of competing demands on the patient's and/or physician's agenda by summing the number of physical comorbidities the patient reported from a list including diabetes, high blood pressure, arthritis, respiratory conditions, recent cancer, neurological conditions, stroke, congestive heart disease, coronary artery disease, back problems, irritable bowel syndrome, thyroid disease, kidney failure, or eye disease.

Covariates

We tested the hypothesized relationship controlling for other conceptually relevant influences on primary care depression

treatment shown in the Figure. These variables were operationalized as follows:

Patient Attitudes. This construct was measured by assessing the acceptability of specialty care counseling and the acceptability of antidepressant medication to patients. Patients were asked to rate how acceptable each of these 2 approaches were for helping them feel better by noting whether each approach was definitely acceptable, probably acceptable, probably unacceptable, or definitely unacceptable. Patient responses were dichotomized into probably not/definitely not acceptable and probably/definitely acceptable. Values for these variables were imputed in 6 subjects who failed to answer the questions by assigning these subjects the most prevalent response.

Depression Severity. This construct was measured using a 23-item version of the Center for Epidemiological Studies–Depression⁵ which was modified to measure DSM-IV⁸ symptoms for major depression during the past week.

Sociodemographic Characteristics. The model included continuous measures of age and education, and dichotomous measures of gender, minority status, and marital status.

DATA ANALYSIS

The research team used a hierarchical approach to test the relationship of patient characteristics to whether depression was attended to during the visit in clustered hierarchical linear models nesting patients within physicians and physicians within practices. These models indicated that no significant differences were noted among physicians or practices, most likely a result of the limited variation among 12 physicians in 6 practices. The insignificant clustering effects allowed us to employ regression models to test the hypothesized relationships.

associated with whether depression gets addressed during the visit. Physicians and untreated patients were more likely to discuss depression as a possible diagnosis if patients reported antidepressant medication was acceptable (OR = 4.57, $P = .01$) and less likely to discuss depression if patients reported specialty care counseling was acceptable (OR = 0.33, $P = .05$). A lower level of education is positively associated with discussing depression as a possible diagnosis with untreated patients; current marital status is positively associated with changing depression recommendations in treated patients.

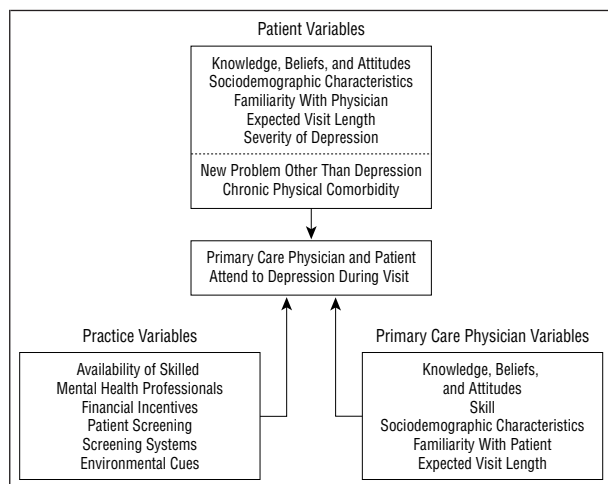
Our results indicate that chronic physical problems potentially disrupt initiating (but not adjusting) depression treatment. Thus, one would expect longitudinal cohort studies to observe that physical comorbidity negatively predicts the probability of initiating care but is unrelated to the course of care depressed patients receive over time. Such findings would contradict preventive medicine studies⁹ that show that physical comorbidity negatively predicts the course of preventive care patients receive over time. If physical comorbidity is unrelated to the course of depression care patients receive

over time, these data support the idea that physicians and patients successfully prioritize the problems they address over multiple visits so that emotional problems receive high-quality treatment in the primary care setting, even when facing competing demands. In contrast, new problems potentially disrupt adjusting (but not initiating) depression treatment. Previous studies have found that new problems predict lower rates of health habit counseling.¹⁰

Subsequent research efforts to address how competing demands affect depression treatment over the long term should be encouraged to investigate a broader array of variables. Patient variables should be expanded to include actual visit length and familiarity with the primary care physician, which has been shown to be an important predictor of primary care physicians' detection of depression and other psychosocial problems in pediatric and adult populations.^{11,12} Conceptually relevant primary care physician and practice characteristics noted in the Figure should also be investigated for their influence on depression treatment in data sets that have more physicians and practices than we had available to study.

To our knowledge, this study provides the first evidence that patient attitudes toward antidepressant medication and specialty care counseling are associated with the probability that an untreated patient's depression gets addressed. The finding is consistent with an accumulating literature¹³⁻²⁰ which argues that trying to improve the outcomes of primary care depression treatment by improving physician detection vastly oversimplifies a complex problem. As deliberate participants in the visit, patients will reveal or conceal information about their emotional problems to achieve goals that are important to them²¹⁻²³ according to their psychological readiness.²⁴ Perhaps recognizing that their primary care physician is likely to suggest pharmacotherapy,²⁵ patients who do not want antidepressant medication decide to "go it on their own" to avoid being pressured into accepting a prescription or feeling guilty for refusing help. Going it on one's own may be a constructive choice for some patients with mild to moderate depression who improve on their own.²⁶ But going it on

one's own may not be a constructive choice for the 50% of undetected patients who remain depressed 1 year later, many of whom fail to return when their symptoms become more severe.²⁷ Conversely, untreated depressed patients who find specialty care counseling an acceptable treatment report reduced odds of discussing depression during the index visit. While this decision may be an efficient use of time for patients who do not rely on primary care physicians to be gatekeepers to the mental health system, patients who accept specialty care counseling as an acceptable treatment have *not yet started* specialty care counseling and might do so more quickly with the support and encouragement of their primary care physicians if depression were discussed. This finding also suggests that primary care physicians may underestimate their patients' interest in specialty care counseling because they are more likely to discuss depression with the subgroup of depressed patients who find specialty care counseling unacceptable.



Conceptual framework showing potential patient, physician, and practice determinants of attention to depression during a primary care visit.

The strengths of this study include the use of newly emerging methods that allow us to distinguish between untreated and treated cases of depression²⁰ in examining the relationship of competing demands on the initiation and ongoing provision of high-quality depression treatment; however, we do acknowledge the study's limitations. First, because our cross-sectional design cannot establish causality, we cannot conclude that competing demands negatively influence depression treatment. Longitudinal studies are needed to strengthen inference about this question because experimental studies on this relationship cannot be readily conducted. Second, we also cannot draw any conclusions about competing priorities and detection because our database did not allow us to ascertain whether physicians recognized depression symptoms without addressing them at that particular visit. Third, we suspect new problems reduce the probability that physicians address depression in untreated and treated patients; however, we may not have observed the relationship in untreated patients

Logistic Regression Models Examining Predictors of Depression Activity During the Visit						
Variable	Discussing Depression in Untreated Patients (n = 93)*			Changing Depression Treatment in Treated Patients (n = 141)†		
	Parameter Estimate	Wald χ^2 With 1 df	Odds Ratio (95% Confidence Interval)	Parameter Estimate	Wald χ^2 With 1 df	Odds Ratio (95% Confidence Interval)
Intercept	4.33	4.82	...	0.86	0.31	...
Age	-0.07	0.14	0.93 (0.65-1.34)	0.31	2.49	1.36 (0.93-2.00)
Minority (0 = minority, 1 = white)	0.53	0.70	1.70 (0.49-5.83)	-1.18	3.20	0.31 (0.08-1.12)
Education	-0.26	5.70‡	0.77 (0.62-0.95)	-0.04	0.20	0.96 (0.79-1.15)
Marital status (0 = not currently, 1 = currently)	-0.60	1.26	0.55 (0.19-1.55)	1.44	12.82§	4.22 (1.92-9.29)
Sex (0 = female, 1 = male)	1.44	3.50	4.20 (0.93-18.90)	0.62	1.28	1.87 (0.63-5.50)
Physical comorbidity	-0.41	6.52§	0.66 (0.48-0.91)	-0.17	1.53	0.84 (0.65-1.10)
New problem (0 = no, 1 = yes)	-0.14	0.08	0.87 (0.32-2.34)	-0.94	3.73‡	0.39 (0.15-1.00)
Specialty care acceptability (0 = unacceptable, 1 = acceptable)	-1.11	3.71‡	0.33 (0.11-1.00)	-0.35	0.41	0.70 (0.24-2.06)
Medication acceptability (0 = unacceptable, 1 = acceptable)	1.52	7.21§	4.57 (1.51-13.89)	0.96	3.37	2.61 (0.93-7.25)
Depression severity	0.01	0.18	1.01 (0.98-1.03)	-0.00	0.07	1.00 (0.98-1.02)

* Indicates 78.3% of the 240 cases classified correctly by the model.
 † Indicates 75.2% of the 240 cases classified correctly by the model.
 ‡ P ≤ .05.
 § P ≤ .01.

because the question in the database did not allow us to distinguish whether the new problem the untreated patient presented with was a physical or emotional problem. A new emotional problem probably increases the likelihood that depression will be addressed. A new physical problem probably decreases the likelihood. Fourth, we note that because untreated patients may have inadvertently cued their physician that they were depressed by asking questions about the study, our estimate of the proportion of patients who discussed depression with their physician may be high. The resulting measurement error reduces the study's ability to estimate accurately the relationship between competing demands and the 2 outcomes of interest. Fifth, while our cohort resembles depressed primary care populations that are predominantly female subjects,²⁷ our findings are less generalizable to male patients, minorities and poorly educated individuals who did not constitute a large proportion of the sample, and to patients without telephone access, pregnant or postpartum patients, illiterate and cognitively impaired patients who were excluded from the parent study.

Even with these limitations, this study provides the first empirical evidence that competing demands from other problems predict whether depression is discussed and treatment recommendations are adjusted to a much greater degree than the severity of the depression symptoms. A better understanding of the effect of competing demands over time is needed to ensure that depressed patients get high-quality mental health care as initial and continuing treatment for the disorder is increasingly concentrated in the primary care setting.

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