

The Mental Health Patient Profile: Does It Change Primary Care Physicians' Practice Patterns?

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Background: We conducted a prospective trial randomizing 75 physicians to either a control or intervention arm to evaluate the impact of providing patient-reported information on anxiety and other mental health symptoms and disorders to primary care physicians.

Methods: Five hundred seventy-three patients of the study physicians who met entry criteria were randomized to either usual care or usual care supplemented with feedback of patient-reported mental health information to physicians. This mental health information was derived from initial patient-reported questionnaires completed in waiting rooms of physicians contracted to a mixed-model health maintenance organization in Colorado. Main outcome measures included impact of intervention on rates of (1) chart notation of anxiety, depression, or other mental health diagnoses or symptoms; (2) referral to mental health specialists; (3) prescription of psychotropic medications; (4) hospitalization; and (5) office visits during a 5-month observation period.

Results: Physicians receiving feedback on previously unrecognized and untreated anxiety patients were more likely to make chart notations (adjusted odds ratio [AOR] = 2.51, 95 percent confidence interval [CI] = 1.62 - 3.87), to make referrals to mental health specialists (AOR = 3.86, 95 percent CI = 1.63 - 9.16), and to see patients for more frequent outpatient visits (AOR = 1.73, 95 percent CI = 1.11 - 2.70). Use of psychotropic medications and rate of hospitalizations did not differ significantly.

Conclusions: Providing patient-reported mental health information to primary care physicians resulted in increased recognition and referral rates for previously unrecognized and untreated anxiety patients, plus an increase in primary care visits, without concomitant increases in the use of psychotropic medications or rate of hospitalizations. (J Am Board Fam Pract 1996;9:336-45.)

Estimates of the prevalence of emotional problems among patients of primary care physicians range from 27 percent to 47 percent.¹⁻⁵ Anxiety symptoms and disorders represent an important subset of these mental health conditions and have been shown to be more prevalent than depression in the general population.^{2,6} In addition to the considerable health burden imposed by anxiety, recent data show an increase in the risk of fatal coronary artery

disease and sudden death among men with elevated anxiety symptoms.⁷ Yet, anxiety conditions in many patients are neither recognized nor treated by the primary health care system.^{1,8}

Patients with psychiatric conditions seek care more often from primary care physicians than mental health professionals.^{9,10} This fact has led Regier et al¹¹ to refer to primary care as the de facto mental health care system, estimating that 54 percent of those treated for mental disorders are served by primary care physicians exclusively, while the mental health sector serves only 15 percent of the psychologically distressed population, and the remainder are either not in treatment or are receiving treatment through the combined primary care-mental health sectors or through the general hospital inpatient-nursing home sectors.¹¹ Patients with mental disorders have been shown to have higher health care utilization and expenditures than patients without these conditions.^{12,13} Prompt recognition and treatment of mental health conditions might lead to lower overall uti-

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lization and expenditures and to improvements in patient functioning and well-being.^{4,13}

Although the prevalence and treatment patterns of depression among primary care patients have been well studied, the prevalence and treatment of anxiety in primary care are only recently being addressed.^{14,15} In addition, very little is known about the most effective ways to influence recognition and treatment of anxiety by primary care physicians. Studies on the impact of educational interventions, designed to heighten the awareness of mental health conditions by primary care physicians, have had mixed results.^{1,16-21} Studies have shown greater success in influencing recognition and treatment of depression among primary care physicians through the use of a variety of specific screening tools.²² Recently, these tools have included the Center for Epidemiologic Studies—Depression Scale (CES-D)^{23,24} and the Symptom Checklist 90-Revised (SCL-90-R).^{25,26} These instruments are designed to alert the practitioner to symptoms of a mental health condition, though further evaluation is required to make a specific diagnosis. The Primary Care Evaluation of Mental Disorders (PRIME-MD) 1000²⁷ and the The System-Driven Diagnostic System for Primary Care (SDDS-PC)²⁸ also contain questionnaires to screen for and to aid in the primary care diagnosis of common mental disorders. In one study, Spitzer et al²⁷ used the PRIME-MD screening questionnaire to recognize patients with mood, anxiety, somatoform, alcohol, and eating disorders. When those patients with positive responses on the screening questionnaire received a more in-depth examination by the primary care physician using a clinical evaluation guide to aid diagnosis, the overall accuracy of the PRIME-MD diagnoses compared with those of independent mental health professionals was 88 percent.

We developed an intervention designed to provide patient self-reported information on anxiety and depression symptoms and disorders to primary care physicians. In developing our intervention, we considered several different approaches for communicating patient information to the primary care physician. Previous studies suggest that didactic information not presented in the context of an individual patient's treatment does little to change practice patterns.^{1,16-21} Furthermore, we were concerned that busy primary care physicians might not be willing to collect even a

small amount of information on mental health as part of their routine history. We chose not to impose practice guidelines because we believed doing so might lead to resistance on the part of participating physicians.^{29,30} Instead, we developed a hybrid approach in which patient-specific information was collected and summarized by someone other than the primary care physician. This information was designed to be sufficiently specific and reliable to lead to targeted therapeutic options and was provided to the physician in a succinct user-friendly format.

The intervention was tested using a sample of these physicians' patients who had previously unrecognized, untreated anxiety and depression to evaluate the impact of the intervention on physician recognition and treatment rates for anxiety and depression symptoms and disorders. We report the results of a prospective, randomized study to evaluate the impact of this intervention.

Methods

Study Setting

The study was conducted at TakeCare, a mixed-model health maintenance organization (HMO) serving 110,000 enrollees in central Colorado. All enrollees in the TakeCare Colorado plan received broad mental health coverage for both inpatient and outpatient services without deductibles under a capitated contract with American Biodyne, a managed mental health care organization.

Physician Participation

Primary care physicians caring for TakeCare patients in Colorado ($n = 128$) were invited to participate in the study, and 75 physicians (59 percent) agreed. There were no significant differences between physicians who did and did not agree to participate in terms of specialty-board certification or years in practice. The 23 practices, represented by the 75 physicians who agreed to participate, ranged in size from a solo practice to a group practice of 12 providers.

Randomization

To minimize contamination between the two study arms, we randomized physicians and physician extenders (nurse practitioners and physician assistants affiliated with the physicians) to the usual care (control) or intervention arms by physician-call group, so that all physicians within

a single physician-call group were randomized to the same arm of the study. Physicians in the intervention arm received their patients' self-reported mental health and functional status information three times during the course of the study, whereas physicians in the control arm received this patient information only after the conclusion of the study. Patients were assigned to the control and intervention arms based on the assignment of their primary care physician's practice group. The study was approved by a Human Research Committee.

Patient Selection

We screened primary care patients between the ages of 21 and 65 years from these physicians' practices to select patients who reported clinically important anxiety symptoms and who had not had a mental health condition recognized, diagnosed, or treated within the previous 6 months. Patients who chose to participate read and signed an informed consent form. A detailed description of the screening procedure, patient selection criteria, and survey instruments for the study is reported elsewhere.^{31,32} Briefly, all patients of participating physicians were offered a self-administered screening questionnaire in the waiting room. Patients who met the study entry criteria of having elevated anxiety symptoms based on the self-reported SCL-90-R cutoff points established for the study and who did not report receiving treatment in the previous 6 months for worry or stress underwent a record review at both TakeCare and American Biodyne.

On record review, all patients found to have a previous diagnosis of a mental health condition or to have documentation of anxiety or depressive symptoms or to have undergone treatment for any mental health condition in the preceding 6 months were excluded from the study. Eligible patients then underwent a second, more extensive baseline screening assessment for study entry. Patients meeting entry cutoff points on the SCL-90-R at this baseline visit were enrolled in the study. Follow-up interviews were subsequently conducted at approximately 11 weeks and at 5 months after the baseline assessment.

Of the 7914 patients who completed the waiting room screening questionnaire, 618 patients met study entry criteria and were enrolled in the study after this double screening procedure. Of

these 618 patients, 573 (92.7 percent) completed the 5-month study period.

This study includes patients who exhibited elevated anxiety symptoms on two separate screening assessments, even if their symptoms did not meet strict DSM-III-R criteria for an anxiety-related disorder. The inclusion criteria were kept broad because most primary care physicians have little formal training in psychiatric diagnosis and rarely adhere strictly to DSM-III-R terminology. In a recent study by Robbins et al,²⁴ among patients classified as having major depression or anxiety disorders on the Diagnostic Interview Schedule (DIS) that were recognized by their primary care physicians, only 59 percent of these patients had their condition correctly labeled by their physicians as anxiety or depression. The remaining patients' conditions were given other labels, such as "alcohol or substance abuse," "stress," or "marital problems." In addition to misclassifying mental health disorders in patients, primary care physicians see patients with milder forms of illness that might not meet strict criteria for a mental health diagnosis, though these patients still might undergo treatment.^{27,33}

Intervention Procedures

A key component of the intervention was a one-page mental health laboratory form called the Mental Health Patient Profile. It was designed to summarize the complex self-reported information from the measures used in the study, including the SCL-90-R, the DIS, a patient rating of current health as measured by the health state preference method, and the Medical Outcome Study (MOS) Short-Form Health Survey (SF-36), also known as the RAND 36-Item Health Survey. The format was designed to be easily understood and to be similar to that which physicians commonly use when reviewing clinical laboratory results. A baseline version of this form is shown in Figure 1.

A second key component of the intervention was a 1-hour face-to-face meeting between each intervention-arm physician and one of the authors (PM), who at the time of the study was an internist affiliated with TakeCare of Colorado. During this meeting at the participating physician's office, the study physician conducting the interview adhered to the following protocol:

1. Explained the study design
2. Provided a copy of the complete patient self-

Name: Doe J
 Clinic ID #: N/A
 Date of Birth: 7/20/40

Name of PCP: Roe R
 Date of Survey: 1/10/92
 Survey given at: Baseline

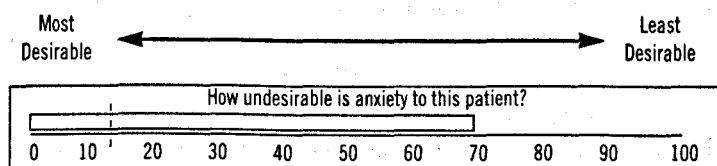
Below are the results of your patient's tests for anxiety, general mental health, depression, and well-being.
 (On the attached page you will find a short explanation of each test.)

1. Anxiety and Depression Symptom Checklist (SCL-90-R):

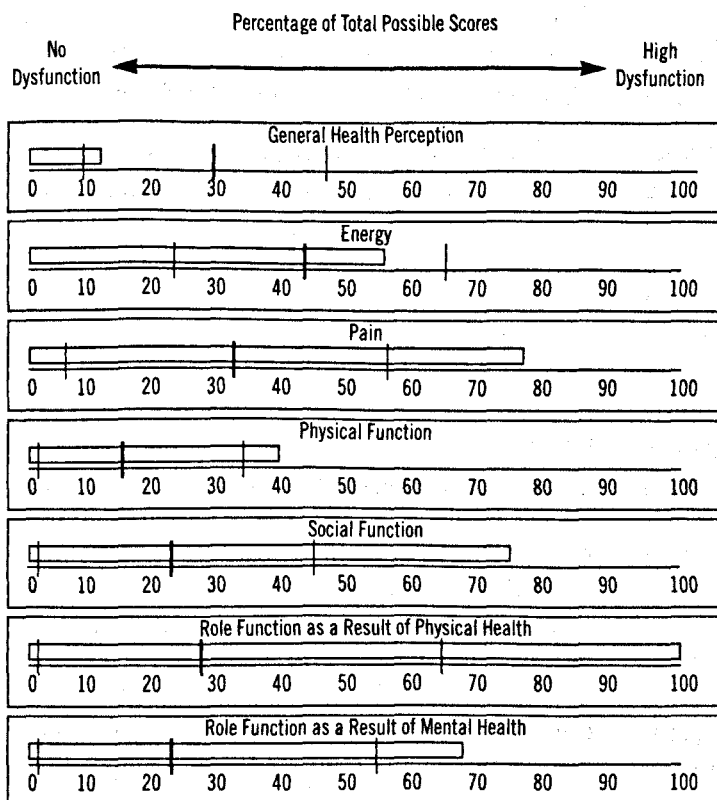
SYMPTOM	30-58 Normal	SCORE 59-62 Marginal	63-81 Elevated
Anxiety	58		
Phobic Anxiety	44		
Somatization		61	
Obsessive-Compulsive			71
Depression			70

SYMPTOM CHANGE MEASURES FROM BASELINE	7 weeks Change	6 months Change
GLOBAL ANXIETY SCORE		
TOTAL GLOBAL SCORE		

3. Patient Rating of Current Health



4. Functioning and Well-Being Measures (SF-36):



2. Diagnostic Interview Schedule (DIS) Results Yielding DSM-III-R Diagnoses*

Positive for Diagnosis of:

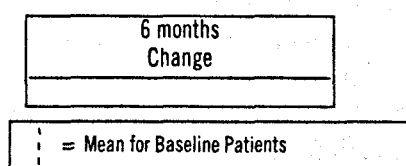
Depression

Post Traumatic Stress

*See next page for DSM-III-R diagnostic criteria

Note: - represents worsening
 + represents improvement

3a. Change from Baseline—Patient Rating



4a. Change from Baseline—SF-36

MEASURES	7 wks Change	6 mos Change
General Health Perception		
Energy		
Pain		
Physical Function		
Social Function		
Role Function—Physical Health		
Role Function—Mental Health		

Note: - represents worsening
 + represents improvement

_____ = Mean for Screened Population
 _____ = Standard Deviation

Figure 1. Patient profile - baseline.

- administered screening questionnaire
3. Provided a brief overview of the measures used in the study and sample questions from each measure
4. Provided a description of psychiatric coverage provided by TakeCare and psychiatric services provided by American Biodyne, the capitated mental health provider to TakeCare
5. Provided articles and an audiotape describing alternative ways to manage anxiety and mental health conditions in primary care³³⁻³⁶
6. Provided early data comparing that physician's patients with the entire study population, based on the percentage of patients meeting study entry criteria as well as the percentage of these patients currently receiving treatment
7. Reviewed Mental Health Patient Profiles on at least 3 of that physician's patients who had elevated anxiety symptoms
8. Provided a toll-free telephone number that could be used to reach a physician who was available to answer further questions regarding subsequent Mental Health Patient Profiles

Although the articles and audiotape offered general recommendations for the management of anxiety, no specific recommendations on how to care for patients found to have clinically important anxiety were made. Each physician had complete freedom to provide support or counseling to the patient, refer the patient to American Biodyne or some other counseling source, prescribe for the patient a medication of the physician's choosing, or disregard the information.

A third component of the intervention was the reporting of follow-up information. Results of both the 11-week and 5-month patient assessments, using follow-up Mental Health Patient Profiles, were mailed to the intervention physicians. Changes that occurred since a patient's baseline assessment in anxiety symptoms, functioning and well-being, and current health state ratings were contained in the follow-up Mental Health Patient Profiles.

Both intervention- and control-arm physicians were mailed survey results that contained demographic and medical practice information only. Control-arm physicians received Mental Health Patient Profiles for their patients at the close of the study, 1 year after the administration of the baseline patient questionnaire. Detailed instruc-

tions on how to read and interpret these results were also provided to the physicians at that time.

Analytic Approach

We evaluated unadjusted outcomes for the intervention and control arms for both physicians and their patients. Previous researchers have noted the difficulty of separating "recognition" from "treatment" of a mental health condition based on chart review.^{16,37-39} Yet, for the purpose of this study, we evaluated "hard" end points, including prescription of a psychotropic medication or referral to a mental health specialist, in addition to the "softer" endpoint of chart notation, because we believed that it was important clinically to distinguish between patients in whom the physician made a clear-cut therapeutic choice in response to the problem and patients in whom the physician might have only noted a problem in the chart. Outcome measures included any chart notation or description related to anxiety, stress, depression, or other mental health condition; referral to mental health specialists; prescription of psychotropic medications; hospitalizations; and physician visits. Because the unit of randomization was the physician call group but the unit of analysis was the patient, it was necessary to control for differences in the patient characteristics of the two arms. Therefore, we evaluated results using logistic regression controlling for patient age, sex, and physician practice type. Severity subgroups were defined in four categories (of increasing severity): anxiety symptoms only, anxiety symptoms and disorders excluding simple phobias, anxiety and depression symptoms, and anxiety and depression symptoms and disorders. A more detailed explanation of these patient groupings is described elsewhere.^{31,32}

Results

Physician Characteristics

Of the 75 physicians who were enrolled, 40 were randomized to the intervention arm and 35 to the control arm. During the course of the study period, 1 intervention-arm physician retired, 1 additional intervention-arm physician left his practice, and 1 control-arm physician withdrew from the study after having a baby. The patients of these physicians all remained in the study because they were assigned to receive their care from different physicians in the same practice. In all, we

Table 1. Physician Characteristics by Study Arm.

Characteristics	Intervention Arm (n = 35)	Control Arm (n = 34)	Total (n = 69)
Mean year residency completed	1982	1978	1980
Specialty	No. (%)	No. (%)	No. (%)
Family practice	23 (66)	25 (74)	48 (70)
Internal medicine	12 (34)	9 (26)	21 (30)
Board certification	34 (97)	31 (91)	65 (94)
	Mean (SD)	Mean (SD)	Mean (SD)
Years in practice	11.2 (10.3)	13.5 (9.7)	12.3 (10.0)
Years in current practice	10.0 (11.2)	11.9 (10.1)	11.0 (10.6)
Number of patients seen per day	24.2 (4.6)	25.1 (7.1)	24.6 (5.9)

SD = standard deviation

distributed 389 baseline Mental Health Patient Profiles; 368, 11-week follow-up Mental Health Patient Profiles; and 357, 5-month follow-up Mental Health Patient Profiles to physicians in the intervention arm.

Table 1 summarizes the characteristics of participating physicians. Of participating physicians who completed a baseline survey, nearly all (94 percent) were board certified. Seventy percent were family physicians, and 30 percent were general internists. On average, these primary care providers had been in practice for 12.3 years. The majority of this time had been spent in their current practice (approximately 11 years), suggesting that this is a group of practitioners with long and stable commitments to their current practices. Both internists and family practitioners reported treating approximately 25 patients per day. None of these characteristics differed significantly between physicians assigned to the intervention or control arms.

Patient Characteristics

Table 2 shows the characteristics of the patients by study arm. Patients were similar in terms of sex and number of comorbid conditions. Because the unit of randomization for the study was the physician practice rather than the patient, however, there were some statistically significant differences noted between patients in the intervention and control arms. There were more patients in the intervention arm than in the control arm because a few of the group practices randomized to the intervention arm enrolled a large number of patients. In addition, patients in the intervention

Table 2. Patient Characteristics by Study Arm.

Characteristics	Intervention Arm (n = 357) No. (%)	Control Arm (n = 216) No. (%)
Sex, female*	218 (61)	118 (55)
Patient mean age, years (SD) [†]	42 (10)	44 (11)
Type of practice*		
Family practice	133 (37)	120 (56)
Internal medicine	224 (63)	96 (44)
Comorbid conditions*		
None	112 (31)	67 (31)
One or more	245 (69)	149 (69)
Mean number (SD)	1.3 (1.3)	1.2 (1.2)
Severity subgroup*		
Anxiety symptoms only	87 (24)	49 (23)
Anxiety symptoms and disorders	36 (10)	14 (6)
Anxiety and depression symptoms	88 (25)	52 (24)
Anxiety and depression symptoms and disorders	146 (41)	101 (47)

SD = standard deviation.

*Not significant.

[†]P < 0.05.[‡]P < 0.001.

arm tended to be younger than patients in the control arm. The most dramatic difference was that more of the intervention patients received their care from an internist (63 percent) compared with 44 percent for the control arm. Because of these differences, we also conducted a logistic regression controlling for these factors.

Recognition and Treatment Rates

Table 3 summarizes univariate results for patients by study arm. Patients in the intervention arm were more likely to have a notation in their chart

Table 3. Outcome Measures for Mental Health Interventions and General Utilization.

Intervention and Utilization	Intervention Arm (n = 357) No. (%)	Control Arm (n = 216) No. (%)	P Value
Mental health intervention			
Notations in chart	114 (32)	40 (19)	< 0.001
Mental health referrals	34 (10)	7 (3)	0.005
Psychotropic medications	45 (13)	37 (13)	0.97
General utilization			
Any hospitalization	33 (9)	21 (10)	0.85
Any office visit	297 (83)	166 (77)	0.062
Physician visits, mean \pm SD	3.3 \pm 4.0	2.7 \pm 3.3	0.054

Table 4. Odds Ratio (OR) for Recognition and Treatment of Anxiety in Primary Care Patients for Intervention- Versus Control-Arm Physicians.

Outcome Variable	No.	Unadjusted OR and 95% Confidence Interval	Adjusted* OR and 95% Confidence Interval
Notation in chart	154	2.06 (1.37, 3.11)	2.51 (1.62, 3.87)
Mental health referral	41	1.49 (0.98, 2.27)	1.73 (1.11, 2.70)
Prescription for psychotropic medications	72	1.01 (0.61, 1.68)	1.09 (0.64, 1.85)

*Adjusted for age, sex, practice type, and severity subgroup.

than patients in the control arm (32 percent versus 19 percent, respectively; $P < 0.001$). There was also a higher rate of referrals to mental health specialists for patients in the intervention group (10 percent versus 3 percent; $P = 0.005$), but there was no difference in the rate of prescribing psychotropic medications. Patients of physicians randomized to the intervention arm had an average of 0.6 more outpatient office visits for any reason during the 5-month study period than patients in the control arm (3.3 ± 4.0 versus 2.7 ± 3.3 , $P = 0.054$). Approximately 10 percent of patients in both arms were hospitalized for any reason during the study period, and there were no documented psychiatric hospitalizations in either group.

Table 4 shows the results of logistic regression conducted to calculate the unadjusted and adjusted odds ratios for recognition and treatment as a result of the intervention. In all these analyses, the intervention had a significant impact on rates of chart notation and referral to mental health specialists. This impact was strengthened by controlling for age, sex, practice type, and

severity subgroups. After these adjustments, intervention patients made almost one more visit than control patients during the 5-month study period (least squares adjusted mean equals 3.7 in intervention arm and 2.8 in control arm, $P < 0.001$; data not shown). Logistic regression did not show a significant impact of the intervention on prescription of psychotropic medications.

In the adjusted model, practice type and patient sex were also significant predictors of rates of chart notation and referral. Family physicians were more likely to make notations in the chart regarding anxiety, depression, or another mental health condition ($P < 0.001$) and more likely to refer patients to a mental health specialist ($P = 0.01$). Neither family physicians nor internists, however, were significantly more likely to hospitalize patients or to prescribe psychotropic medications in response to the intervention. With regard to patient sex, there was a trend toward higher rates of chart notation, mental health re-

fers, and prescription of psychotropic medications for female versus male patients, though this trend achieved statistical significance only for chart notation (data not shown). In contrast, severity subgroups were not significant predictors of study outcomes.

Patient Perceptions

At the time of the 5-month follow-up, we questioned patients about their perceptions of interactions with their physician. Patients of physicians in the intervention arm reported their physicians to be more proactive, with 67 percent of those who were treated stating that their physician first proposed that they be treated for their anxiety symptoms. In contrast, only 33 percent of control patients receiving treatment reported their physician taking the first step, and 67 percent reported that they had to propose treatment first.

Discussion

In this study we provided patient-specific information on anxiety and related mental health con-

ditions in a user-friendly format using a mental health laboratory form that required very little additional work by the primary care provider. We found that feeding back this information led physicians to increase their recognition of and treatment for these conditions. Physicians given this information were more likely to make notations in the chart concerning mental health symptoms and diagnoses, were more likely to refer patients for psychotherapy, and tended to see patients somewhat more frequently. Factors associated with higher recognition rates included being female and having a family physician as a primary care provider.

Our results contrast with those of other studies of educational intervention that have failed to heighten awareness of health conditions by primary care physicians. For example, German et al¹⁸ and Hoepfer et al²¹ found that giving patients' General Health Questionnaire (GHQ) scores to physicians had little impact on the overall recognition of mental illness or the assessment of mental impairment. A study by Shapiro and colleagues⁴⁰ reported that feedback of GHQ information had only marginal effects on overall detection of mental health problems, although it led to increased recognition among some patient subgroups.

The findings of this study challenge the belief that primary care physicians who lack the training or time to provide counseling or psychotherapy will simply prescribe psychotropic medications in response to their patients' mental health problems.^{1,12,39} The number of outpatient physician office visits increased in the intervention arm, but we found no evidence of increased use of psychotropic medications in the intervention group, and hospitalizations did not increase significantly. Thus, the primary modes of intervention occurred through more frequent referral to mental health specialists and possibly also through greater support and reassurance during more frequent primary care office visits. These findings are similar to those of Orleans et al,⁴¹ who showed that primary care physicians relied less on prescribing psychotropic medications and more on outside referrals and brief supportive interventions in the primary care setting.

Although all patients enrolled in this study had full mental health coverage through a capitated mental health plan, overall rates of referral to

mental health specialists were low. This finding suggests that the Mental Health Patient Profile could be used to increase the benefits derived from a managed care mental health service by increasing referral rates.

Several limitations must be kept in mind when interpreting the results of this study. Although there was a statistically significant difference in the rates of both chart notations and referral to mental health specialists between the intervention and control group, only 32 percent of patients in the intervention group had a chart notation, only 10 percent were referred to a mental health specialist, and only 13 percent were prescribed medication. One explanation for these low recognition and treatment rates is that this study focused exclusively on previously undiagnosed patients, who probably have milder forms of illness than previously diagnosed patients. In addition, some primary care physicians might actively avoid psychosocial information.²⁴

It is unclear how generalizable the findings of this study would be to patients who do not have mental health plans as part of their insurance coverage, since all patients enrolled in this study had access to outpatient and inpatient mental health services without copayment or deductible through a managed mental health provider. Whether similar findings would occur if more financial barriers to referral existed cannot be determined from these data.

As noted previously, because physician practices rather than patients were randomized, there were differences between patients in the intervention and control arms. Also, while the number of internal medicine and family practices was similar in the two study arms, there was a larger proportion of patients in the intervention arm cared for by internists because a few of the internal medicine sites enrolled a large number of patients. In addition, intervention-arm patients tended to be younger. Because the multivariate analysis showed that younger patients were less likely to receive an intervention and internists were less likely to intervene, however, these differences would tend to decrease the chances of showing an impact of the intervention. That group differences were increased when controlling for patient age and sex and for physician practice type in the logistic regression supported this finding.

No attempt was made in this study to develop clinical guidelines for intervening in cases where symptoms of mental illnesses were discovered. Future outcome evaluations tied to the implementation of guidelines for the management of anxiety in primary care might lead to larger effects.

The Mental Health Patient Profile used in this study did not require the physician to conduct screening or diagnostic interviews with patients. Rather, these mental health forms were sent to the physician to aid in decision making. In contrast, a recent study by Spitzer et al²⁷ of the PRIME-MD relies on a one-page patient-administered questionnaire, followed by a 12-page evaluation guide that takes about 8 minutes for the physician to complete. Results of this study showed that 26 percent of 1000 patients studied received a specific Diagnostic and Statistical Manual of Mental Disorders III (DSM-III)⁴² diagnosis, of which one half were new diagnoses.

The Spitzer et al study differs from ours in several important respects. We focused on anxiety, including both symptoms and disorders; we looked only at patients who had no recent diagnoses; and we used a much more extensive battery of tests. Nonetheless, two important similarities emerged. First, both studies found that obtaining patient self-reported information generates increased recognition and treatment of mental health conditions. Second, the subsequent treatments focus more heavily on counseling or referral to mental health specialists than on increased use of medications. Ideally, a mental health screening tool should be reliable, simple to administer, and require minimal physician time to complete. Our battery of screening tests was more elaborate than the PRIME-MD, but was administered apart from the physician encounter. The PRIME-MD is briefer but requires more physician involvement. Other researchers have recommended a single question about feeling downhearted and blue as a way to screen for depression, and they have shown that this simple approach will detect three quarters of DIS-defined cases with a specificity of 95 percent.⁴³

Our results show that patient self-reported information on anxiety and psychological health, collected in a manner that places minimal burden on primary care physicians and their staffs, can lead to heightened physician awareness. This physician awareness in turn leads to increased in-

tervention. Additionally, our study refutes the notion that primary care physicians' first reaction to awareness of mental distress is to prescribe psychotropic medications. Rather, physicians are more likely to address these problems during office visits and to increase referrals to mental health specialists.

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