

# Primary Care Physicians' Approach to Depressive Disorders

## *Effects of Physician Specialty and Practice Structure*

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**Background:** Because primary care physicians (PCPs) are the initial health care contact for most patients with depression, they are in a unique position to provide early detection and integrated care for persons with depression and coexisting medical illness. Despite this opportunity, care for depression is often suboptimal.

**Objective:** To better understand how to design interventions to improve care, we examine PCPs' approach to recognition and management and the effects of physician specialty and degree of capitation on barriers to care for 3 common depressive disorders.

**Methods:** A 53-item questionnaire was mailed to 3375 randomly selected subjects, divided equally among family physicians, general internists, and obstetrician-gynecologists. The questionnaire assessed reported diagnosis and treatment practices for each subject's most recent patient recognized to have major or minor depression or dysthymia and barriers to the recognition and treatment of depression. Eligible physicians were PCPs who worked at least half-time seeing outpatients for longitudinal care.

**Results:** Of 2316 physicians with known eligibility, 1350 (58.3%) returned the questionnaire. Respondents were family physicians (n = 621), general internists (n = 474), and obstetrician-gynecologists (n = 255). The PCPs report recognition and evaluation practices related to their most recent case as follows: recognition by routine ques-

tioning or screening for depression (9%), diagnosis based on formal criteria (33.7%), direct questioning about suicide (58%), and assessment for substance abuse (68.1%) or medical causes of depression (84.1%). Reported treatment practices were watchful waiting only (6.1%), PCP counseling for more than 5 minutes (39.7%), antidepressant medication prescription (72.5%), and mental health referral (38.4%). Diagnostic evaluation and treatment approaches varied significantly by specialty but not by the type of depression or degree of capitation. Physician barriers differed by specialty more than by degree of capitation. In contrast, organizational barriers, such as time for an adequate history and the affordability of mental health professionals, differed by degree of capitation more than by physician specialty. Patient barriers were common but did not vary by physician specialty or degree of capitation.

**Conclusions:** A substantial proportion of PCPs report diagnostic and treatment approaches that are consistent with high-quality care. Differences in approach were associated more with specialty than with type of depressive disorder or degree of capitation. Quality improvement efforts need to (1) be tailored for different physician specialties, (2) emphasize the importance of differentiating major depression from other depressive disorders and tailoring the treatment approach accordingly, and (3) address organizational barriers to best practice and knowledge gaps about depression treatment.

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**D**EPRESSION IS a highly prevalent illness that is associated with enormous personal and societal costs.<sup>1-3</sup> In the United States alone, major depression is associated with more than 20 000 suicides and \$47 billion in health care costs annually.<sup>4</sup> Primary care physicians (PCPs) are the initial health care contact for most patients with depression and are in a unique position to provide early detection and continued management for persons with de-

pression and coexisting medical illness.<sup>5</sup> Studies from the 1980s, however, show that PCPs fail to recognize 30% to 50% of depressed patients and, for those recognized, often prescribe ineffective medications or inadequate doses of antidepressant medications.<sup>6-10</sup> These early studies precipitated a concerted effort<sup>1,11</sup> to increase public and professional knowledge about the early detection and effective treatment of major depression. Concurrent with these educational campaigns, new classes of antidepressant drugs

## PHYSICIANS AND METHODS

### STUDY POPULATION

A randomly chosen sample of 1125 family physicians identified from the membership roster of the American Academy of Family Physicians, 1125 general internists identified from the membership roster of the American College of Physicians, and 1125 obstetrician-gynecologists identified from the American College of Obstetrics and Gynecology were selected for the study. Retired physicians and physicians in training were excluded. The research team systematically oversampled female physicians and physicians practicing in geographical areas of greater managed-care market penetration to obtain a sample with a sufficient number of women and subjects practicing in a capitated-care environment. Physicians were considered eligible if they self-identified as a PCP who worked at least half-time providing longitudinal care for outpatients. These sampling and eligibility criteria were designed to exclude subspecialty physicians and physicians who were engaged primarily in administrative medicine or research.

### INSTRUMENT DEVELOPMENT

A multidisciplinary team of general internists, family physicians, obstetrician-gynecologists, and social scientists developed the 53-item survey instrument to be self-administered in 15 minutes or less. The instrument was pilot tested in 2 phases. In the first phase, a convenience sample of 15 physicians—5 each from family practice (FP), general internal medicine (GIM), and obstetrics-gynecology (Ob-Gyn)—were paid to critique the survey for item clarity. After modifications were made to incorporate their feedback, the survey was fielded to a random sample of 150 physicians divided equally among the 3 specialties. In

addition to testing item clarity in a more representative sample, the second pilot test was used to estimate an expected response rate and to examine items for sufficient response variability.

Major constructs in the survey included current practice patterns regarding diagnostic evaluation and treatment and barriers to the recognition and treatment of depression. The survey characterizes current practice by randomly assigning each physician a single type of depressive disorder—major depression, minor depression, or dysthymia—and asking physicians to report on their most recent patient newly recognized to have the specified depressive disorder. The assigned depressive disorder was described briefly, along with a listing of *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*,<sup>14</sup> symptoms. Major depression was described as depressed mood or anhedonia plus substantial additional symptoms of depression and impairment of social functioning or work performance. Minor depression was described as depressed mood or anhedonia but few additional symptoms of depression, mild impairment of social functioning or work performance, and symptom duration of less than 2 years. Dysthymia was described as depressed mood or anhedonia for at least 2 years but without additional symptoms to meet criteria for major depression, plus impairment in social functioning or work performance.

Building on previous qualitative studies, the survey asked physicians about role responsibilities, perceived skill, and barriers to recognizing and managing depression (**Figure 1**). These potential barriers were organized into 3 domains: physician factors (9 items,  $\alpha = .79$ ), patient factors (6 items,  $\alpha = .67$ ), and organizational factors (5 items,  $\alpha = .69$ ). Last, we collected descriptive data on the patient, physician, and practice, including a description of the practice setting (solo, single or multispecialty, or health maintenance organization) and the proportion of practice income derived from

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have been introduced, primary care has become increasingly capitated, and obstetrician-gynecologists have taken an expanded role in providing primary care. The effects of these changes are uncertain, but care is clearly not yet optimal.

To design effective quality improvement programs, information is needed about current practices and the sources of practice variation. Practices may vary appropriately in response to clinical differences (eg, depression severity) or for less desirable reasons, such as differences in physician training, practice organization, or reimbursement. In prior research,<sup>8,12</sup> highly capitated practices were shown to have slightly lower rates of detection for major depression and less counseling. Recent cohort studies<sup>13</sup> suggest that the type of depression should be an important source of practice variation because antidepressant medication appears to have questionable effectiveness for minor depression. Although research evidence is lacking, differences in residency training for depression between the primary care specialties suggest that practice variation would differ substantially by specialty and may be a source of greater variation than the type of depression or degree of capitation. To address these questions, we conducted

a national survey to (1) describe PCPs' current practices for the recognition and acute-stage management of 3 common depressive disorders—major depression, minor depression, and dysthymia—and (2) determine the degree to which practice variation and barriers to best practice vary by the extent of capitation, type of depressive disorder, and physician specialty.

## RESULTS

### ELIGIBILITY AND RESPONSE RATE

Surveys were mailed to 3375 physicians who were determined to be in the following categories: 1350 were eligible and completed the survey; 966 were eligible but refused or did not complete the survey; 558 were ineligible because they were not involved at least half-time in continuity care ( $n = 384$ ) or were not PCPs ( $n = 174$ ); and 501 nonresponders did not have an accurate telephone listing through their professional society, CD-ROM databases, or operator and were considered to be of unknown eligibility. Response rates were calculated by considering all physicians with unknown eligibility as eligible (47.9%) and by excluding those with unknown eligibility (58.3%).

fee-for-service or capitated payments. Practice structure was categorized as minimal capitation (<30% income from capitated payments), partially capitated ( $\geq$ 30% income from capitated payments), or fully capitated (salaried physician in a health maintenance organization practice setting).

#### DATA COLLECTION

The survey was mailed to each selected physician, accompanied by a personalized cover letter on professional society or university letterhead and a postage-paid reply envelope. Physicians were offered a choice of a medical textbook on antibiotics or inclusion in a drawing for savings bonds as an incentive to participate. A second mailing was sent to nonrespondents 3 weeks after the initial mailing, accompanied by a reminder letter. Two weeks after the second mailing, the office personnel of nonrespondents were called to confirm eligibility and request that the physician complete a faxed copy of the survey within 48 hours. Two weeks after the telephone call, nonrespondents who had not refused to participate were sent a final copy of the survey accompanied by a special-appeal letter. Telephone numbers were supplied by the professional society. When the numbers were incorrect or missing, local operators and CD-ROM databases were used in an attempt to identify valid telephone numbers. To characterize nonresponders, a random sample of eligible physicians ( $n = 40$  from each specialty) who had not returned the questionnaire were selected for further study. These physicians were contacted by telephone and offered \$50 to complete a faxed copy of the survey.

#### DATA ANALYSIS

The sample size was chosen to obtain a total sample of 1620 respondents, assuming an 80% eligibility rate and a

60% response rate. We used a stratified random sample design within each physician specialty that oversampled older age strata, female physicians, and physicians residing in 15 metropolitan statistical areas known to have high managed-care penetration. There were 16 strata within each physician specialty defined by a combination of 2 levels of metropolitan statistical areas, 4 age groups, and physicians' sex. The sampling frame was constructed to include 20% from the 15 target metropolitan statistical areas and an equal number of physicians from each age and sex group. Older female physicians were rare in the 3 physician populations. Consequently, we selected all female physicians within these age groups to maximize their representation in the survey.

Design weights, defined as the ratio of the total number of physicians within a stratum to the number of physicians selected, were used to compensate for the oversampling of specific strata. Poststratification weights also compensated for physician nonresponse by adjusting the design weights back to the population cell counts. All weighted population estimates and SEs were computed using a commercial software package (SUDAAN 6.40).<sup>15</sup>  $\chi^2$  Tests for contingency tables and linear and logistic regression parameter estimates incorporated the poststratification weights in their computations. Continuous variables were compared using the Wilcoxon rank sum statistic.<sup>16</sup> Regression analyses were used to examine the association between physician specialty, type of depression, and degree of capitation with physicians' practice patterns and barriers to care while controlling for differences in patient characteristics. Except for the description of physician and practice characteristics, all data are reported using design weights to reflect the populations of the professional societies from which the sample was drawn.

Response rates varied significantly by specialty: 64.7%, 60.7%, and 46%, respectively, for FP, GIM, and Ob-Gyn ( $P = .001$ ). The effects of nonresponse were estimated by 2 methods. First, data from respondents to the first wave of mailings were compared with those of respondents from each successive wave of mailings. These comparisons showed that physicians in fully capitated settings were less likely to respond to the initial mailing, but no age, sex, or regional differences were noted among respondents to the 3 waves of mailings. Second, 53 of the 120 randomly selected nonresponders completed the survey in response to the \$50 payment. These nonresponders were more likely to practice in fully capitated settings but did not differ significantly from responders in their diagnostic or treatment approach or perceived barriers to best practice.

#### CHARACTERISTICS OF THE PHYSICIANS

The characteristics of responding physicians are summarized in **Table 1**. Family physicians reported a higher patient volume, were more likely to derive substantial practice revenue from capitated payments, and were less likely to have a mental health professional on site. Obstetrician-gynecologists were more likely than other physicians to be in solo or single-specialty practice.

#### CHARACTERISTICS OF PATIENTS WITH RECENTLY RECOGNIZED DEPRESSION

Physicians were randomly assigned to report on their most recent adult patient with newly recognized major depression, minor depression, or dysthymia. For each specialty, responses were equally divided among the 3 depressive disorders and described patients seen within the past week (34.7%), past 1 to 3 weeks (47.9%), past 4 to 6 weeks (12.3%), or longer than 6 weeks (5.1%). Respondents described patients who were predominantly female (81.5%, excluding Ob-Gyn patients), white (85%), and aged 22 to 65 years (88.6%). Most patients were described as being in very good to excellent health (54.1%), with only 10.5% classified in fair to poor health. Controlling for the degree of capitation and type of depression, patients of general internists were older and in poorer general health than those of the other specialties ( $P = .001$ ).

#### DIAGNOSTIC PRACTICE PATTERNS

Physicians' diagnostic suspicion for depression and degree of formal evaluation are key elements of the diagnostic process. Study physicians reported that the

Physician Barriers	Response*				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Recognizing depression is my responsibility	1	2	<b>3</b>	<b>4</b>	<b>5</b>
Treating depression is my responsibility	1	2	<b>3</b>	<b>4</b>	<b>5</b>
	Very Confident	Mostly Confident	Somewhat Confident	Not Confident	
I can diagnose depression	1	2	<b>3</b>	<b>4</b>	
I can treat depression with medications	1	2	<b>3</b>	<b>4</b>	
I can treat depression with counseling	1	2	<b>3</b>	<b>4</b>	
Overall, I can manage depression	1	2	<b>3</b>	<b>4</b>	
	Did Not Limit	Limited Somewhat	Limited a Great Deal		
Incomplete knowledge of diagnostic criteria		1	<b>2</b>	<b>3</b>	
Incomplete knowledge of treatment for depression		1	<b>2</b>	<b>3</b>	
Lack of effective treatments		1	<b>2</b>	<b>3</b>	
	Did Not Limit	Limited Somewhat	Limited a Great Deal		
<b>Organizational Barriers</b>		1	<b>2</b>	<b>3</b>	
Appointment time too short for an adequate history		1	<b>2</b>	<b>3</b>	
Inadequate time for me to provide counseling/education		1	<b>2</b>	<b>3</b>	
Mental health professionals not affordable		1	<b>2</b>	<b>3</b>	
Poor reimbursement for treatment		1	<b>2</b>	<b>3</b>	
Patient's insurance coverage limited treatment options		1	<b>2</b>	<b>3</b>	
	Did Not Limit	Limited Somewhat	Limited a Great Deal		
<b>Patient Barriers</b>		1	<b>2</b>	<b>3</b>	
Patient or family reluctance to accept diagnosis		1	<b>2</b>	<b>3</b>	
Medical problems were more pressing		1	<b>2</b>	<b>3</b>	
Patient reluctant to take antidepressant medication		1	<b>2</b>	<b>3</b>	
Patient concern about medication side effects		1	<b>2</b>	<b>3</b>	
Patient reluctant to see mental health professional		1	<b>2</b>	<b>3</b>	
Symptoms may be explained by other medical illness		1	<b>2</b>	<b>3</b>	

Figure 1. Barriers to care questions. Asterisk indicates that item responses that are shaded and in bold were counted as barriers.

recognition of a depressive disorder was almost always prompted by patient characteristics, regardless of physician specialty, severity of depression, or degree of capitation (Table 2). Regression analyses showed that the degree of formal evaluation varied significantly by specialty but not by the type of depression, physician sex, or degree of capitation. Compared with obstetrician-gynecologists, FP physicians and general internists were more likely to use formal diagnostic criteria (odds ratio [OR] for FP = 9.7 and for GIM = 5.2) ( $P < .001$ ), assess for psychiatric comorbidity or physical causes of depression (OR: FP = 2.4, GIM = 2.6) ( $P < .001$ ), make direct assessments for suicide (OR: FP = 2.2, GIM = 1.5) ( $P = .002$ ), and discuss the diagnosis using the term *depression* (OR: FP = 3.5, GIM = 3.0) ( $P = .001$ ). Direct questioning about suicide varied slightly by depression

type, ranging from 63.5% for major depression, 58.4% for dysthymia, and 54.5% for minor depression ( $P < .04$ ). Most important, more than 90% of physicians reported using the term *depression* when discussing the diagnosis with the patient.

## TREATMENT PRACTICE PATTERNS

Treatment approaches also varied considerably among specialties (Table 3). Antidepressant medication was the preferred therapy, used by 84.7% of family physicians, 65.2% of internists, and 52% of obstetrician-gynecologists ( $P < .001$ ). Women physicians were almost twice as likely (OR = 1.9;  $P = .02$ ) to prescribe antidepressant medication as male physicians. Mental health referrals were common and were the sole form of treatment for 22.4% of patients seen by obstetrician-gynecologists, 14.4% of patients seen by internists, and 4.1% of those seen by family physicians ( $P < .001$ ). Family physicians were 5 times more likely to refer patients to a psychologist or social worker than to a psychiatrist, whereas internists and obstetrician-gynecologists referred patients 1.3 times more commonly to psychologists or social workers.

In contrast, treatment practices varied little by the type of depression. Controlling for physician specialty, patient characteristics, and organizational structure, patients with major depression were somewhat more likely to be treated with antidepressant medication (76.9%, 72.7%, and 68.4% for major depression, dysthymia, and minor depression, respectively) ( $P = .12$ ), were more likely to be referred to a mental health professional (47.3%, 35.6%, and 33.2%) ( $P = .01$ ), and were less likely to be simply observed (2.6%, 6.8%, and 8.5%) ( $P = .04$ ). The average time to the first planned follow-up was 3.6 weeks for major depression, 4.5 weeks for dysthymia, and 4.6 weeks for minor depression. For major depression, 50% of patients were scheduled for follow-up within 2 weeks, as recommended by clinical guidelines.

An aspect of care that may affect management is the availability and quality of mental health specialty care. Therefore, we asked physicians to rate their satisfaction with referrals to mental health professionals compared with medical subspecialty referrals (Figure 2). Physicians were less satisfied with referrals to mental health specialists than to medical subspecialists. More than half of respondents were "somewhat" or "much less" satisfied with referrals to psychiatrists. Dissatisfaction varied by specialty: family physicians and general internists were less satisfied with psychiatrist and psychologist or social worker referrals than obstetrician-gynecologists ( $P < .001$ ). Referral satisfaction predicted current treatment practices. Across all primary care specialties, physicians who were satisfied with referrals were more likely to refer their "last patient with newly recognized depression" to a mental health professional (referrals to psychologists or social workers and psychiatrists were 49.4% and 33.6%, respectively, for much more satisfied physicians compared with 24.6% and 5.7% for much less satisfied) ( $P = .001$ ).

**Table 1. Physician and Practice Characteristics\***

Characteristic	Physician Specialty		
	Family Physician (n = 621)	General Internist (n = 474)	Obstetrician-Gynecologist (n = 255)
Experience, y†	11 (5-19)	10 (4-17)	11.9 (4-20)
Female sex	51.0	51.9	47.8
Practice structure‡			
Solo	25.9	24.0	29.8
Single-specialty group	44.9	40.9	48.3
Non-HMO-multispecialty group	20.9	24.0	14.1
HMO-multispecialty group	8.0	11.0	7.8
Mental health professional on site‡	27.0	36.9	36.1
Weekly practice volume, No. of patients)††	100 (75-120)	75 (50-100)	80 (55-100)
Adults	80.0	98.0	89.8
Minority	15.0	20.0	20.0
Estimated prevalence of major depression††	6.0 (3-12)	5.8 (2.9-11.1)	2.5 (1.3-4.9)
Practice revenue‡			
Minimal capitation (<30%)	62.0	72.0	74.9
Partial capitation (≥30%)	29.0	16.0	14.9
Full capitation (HMO-salaried)	9.0	12.0	10.2

\*Data are expressed as percentage unless otherwise indicated. HMO indicates health maintenance organization.

†Values are median (interquartile range).

‡P<.01.

**Table 2. Diagnostic Evaluation of Depression by Primary Care Physicians\***

Components of Diagnostic Evaluation	Physician Specialty†			Degree of Capitation		
	Family Physician (n = 621)	General Internist (n = 474)	Obstetrician-Gynecologist (n = 255)	Minimal (n = 852)	Partial (n = 277)	Full (n = 132)
Cue to suspect depression						
Patient characteristic (eg, appeared depressed)	91 (1.4)	90 (2.0)	95 (1.4)	90 (1.2)	90 (2.0)	96 (0.9)
Routinely ask about depression	8 (1.8)	9 (2.0)	4 (1.5)	9 (1.5)	8 (2.3)	3 (1.3)
Screening questionnaire results	1 (0.6)	1 (0.7)	1 (0.7)	1 (0.4)	2 (1.1)	1 (0.4)
Diagnosis based on formal criteria‡	41 (2.9)	29 (3.2)	21 (3.2)	33 (2.4)	35 (4.1)	34 (6.4)
Assessed for (multiple answers allowed)						
Physical causes of depression‡	86 (1.9)	87 (2.5)	76 (3.4)	85 (1.7)	83 (3.1)	80 (5.3)
Substance abuse‡	74 (2.4)	69 (3.4)	52 (4.1)	68 (2.2)	69 (3.9)	67 (6.3)
Bereavement	43 (2.9)	47 (3.7)	44 (4.0)	45 (2.5)	43 (4.3)	42 (6.8)
Sexual or physical abuse‡	24 (2.4)	25 (3.1)	49 (4.1)	30 (2.2)	29 (3.8)	25 (5.8)
Suicide assessed by direct questions‡	65 (2.8)	52 (3.7)	48 (4.1)	57 (2.4)	63 (4.1)	54 (6.8)
Diagnosis discussed using the term <i>depression</i> ‡	94 (1.4)	91 (2.2)	84 (2.8)	91 (1.4)	92 (2.2)	86 (5.1)

\*Data are expressed as percentage (SE).

†Practice structure could not be classified for 89 physicians; therefore, n = 1261 for practice structure analysis.

‡P<.001 for specialty comparisons, controlling for depression type, degree of capitation, and patient and physician characteristics.

## PHYSICIAN BARRIERS TO BEST CARE

Physician barriers to care varied more by physician specialty than by practice structure. Across all specialties, physicians strongly endorsed their role in recognizing depression (**Table 4**). Perceived responsibility for treating depression, however, was less consistent, being endorsed by 87.5% of family physicians, 73% of general internists, and 40.8% of obstetrician-gynecologists. Controlling for specialty, attitudes about responsibility did not differ by practice structure or other physician characteristics.

Confidence in the overall management of depression, representing both diagnostic and treatment aspects, was high for family physicians (34.7% very con-

fidant and 48.3% mostly confident), intermediate for general internists (15.4% very confident and 48.5% mostly confident), and relatively low for obstetrician-gynecologists (3.1% very confident and 31.2% mostly confident). Individual skill components showed a similar pattern, with family physicians being more confident for diagnosis (FP = 94.9%, GIM = 91.5%, and Ob-Gyn = 79.6% "very or mostly confident"), treatment with medication (FP = 91.3%, GIM = 74.9%, Ob-Gyn = 44.4%), and treatment with counseling (FP = 36.1%, GIM = 24.9%, Ob-Gyn = 18.7%) ( $P \leq .001$  for all comparisons). Knowledge of diagnostic criteria was a perceived barrier (Ob-Gyn = 44.3%, GIM = 18.7%, and FP = 16.3%) ( $P < .001$ ), and knowledge of treatment options was limiting for obstetri-

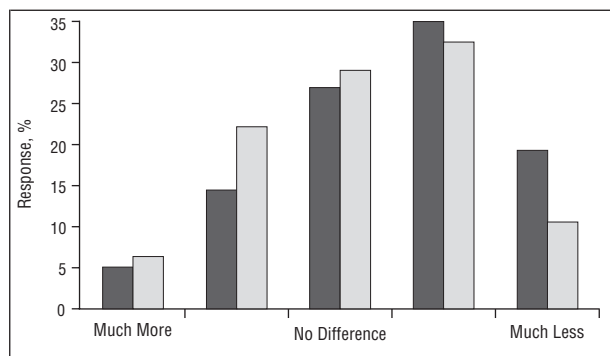
**Table 3. Primary Care Physicians Treatment Approach for Depression\***

Treatment Modalities	Physician Specialty			Type of Depression		
	Family Physician (n = 621)	General Internist (n = 474)	Obstetrician-Gynecologist (n = 255)	Major Depression (n = 449)	Dysthymia (n = 468)	Minor Depression (n = 433)
Watchful waiting†	5 (1.2)	9 (2.1)	6 (1.9)	3 (1.0)	7 (1.7)	9 (1.9)
Exercise or recreation	39 (1.9)	29 (2.9)	29 (3.3)	28 (3.2)	39 (3.4)	37 (3.3)
Brief counseling (3-5 min)	32 (2.7)	29 (3.4)	32 (3.8)	30 (3.4)	33 (3.4)	31 (3.1)
Counseling for >5 min	40 (2.9)	39 (3.5)	40 (3.8)	40 (3.3)	39 (3.4)	40 (3.3)
Antidepressant medication‡	85 (2.0)	65 (3.5)	52 (4.0)	77 (2.8)	73 (2.9)	68 (3.0)
Psychiatry referral‡	6 (1.4)	18 (2.8)	19 (3.0)	17 (2.6)	10 (1.8)	9 (2.0)
Psychologist or social worker referral	31 (2.6)	22 (2.8)	25 (3.6)	30 (3.2)	26 (3.1)	26 (2.9)

\*Data are expressed as percentage (SE).

†P < .05 for comparisons between depression type, controlling for specialty and patient and practice characteristics.

‡P < .001 for comparisons between specialty, controlling for type of depression and patient and practice characteristics.



**Figure 2.** Satisfaction with referrals to psychiatrists (darker bars) or psychologists or social workers (lighter bars) compared with medical subspecialists.

Obstetrician-gynecologists (45.4%), internists (16.3%), and family physicians (11.6%) ( $P < .001$ ). Across all specialties, confidence was associated with reported practice patterns. For example, higher confidence in treatment with medication was associated with antidepressant drug treatment ( $P = .001$ ), and higher confidence for overall management was associated with fewer referrals ( $P = .001$ ).

### ORGANIZATIONAL AND PATIENT BARRIERS

Organizational barriers varied primarily by the degree of capitation. Compared with physicians in fully capitated systems, minimally capitated physicians were less likely to cite “inadequate time for counseling” ( $OR = 0.37$  for minimal capitation and  $0.63$  for partial capitation;  $P = .04$ ) but were more likely to list financial barriers (“inadequate reimbursement”:  $OR = 3.3$  for minimal capitation and  $2.5$  for partial capitation [ $P = .02$ ]; or “insurance limited treatment options”:  $OR = 2.4$  for minimal capitation and  $2.3$  for partial capitation [ $P = .05$ ]). Almost 50% of respondents listed “mental health professional not affordable” as a barrier. Physicians citing inadequate time reported less counseling ( $P = .02$ ) and were less likely to use formal diagnostic criteria ( $P = .04$ ). Financial barriers were not associated with treatment practices.

Patient barriers were not associated with the type of depression, physician specialty, or practice structure.

More than half of respondents reported patient reluctance to see a mental health professional, reluctance to take antidepressant medication, or concern about medication adverse effects. More than a third reported patient or family reluctance to accept the diagnosis.

### COMMENT

The care of depressive disorders may be our most useful barometer for the quality of mental health services in the primary care sector. This study provides a profile of PCPs' approach to recognition and treatment and the barriers to quality care for the most common forms of depression. These data show important specialty differences for diagnostic and treatment practices, differences that exceeded variation by the type of depression or the physicians' degree of capitation. Given that 34% of young adult women, a group at increased risk for depression, see obstetrician-gynecologists exclusively for primary care services, these findings should expand and refocus quality-improvement efforts.<sup>17</sup>

Recognition and diagnosis is the first step toward effective treatment. Physicians expressed high confidence in their skill at diagnosing depression, a confidence level that has remained consistently high during the past decade.<sup>18-20</sup> Despite high confidence, previous studies<sup>21</sup> show that 25% to 50% of depressed patients are not recognized at a single visit. Our data show that recognition is triggered by patient cues such as depressed appearance. Although this approach is consistent with guidelines from the Agency for Health Care Policy and Research<sup>1</sup> and the US Preventive Task Force,<sup>22</sup> it probably contributes to underrecognition. To increase the level of recognition, interventions should be considered that encourage physicians to incorporate a question about mood into their routine examination, that improve physicians' communication skills and their ability to deal effectively with emotional content, or that encourage patients to discuss feelings of depression with their physician. Recent studies<sup>23-26</sup> provide evidence that training in communication skills improves recognition and affective outcomes and may decrease overall health care costs.

Once recognition occurs, the degree of formal evaluation varied markedly by specialty, with family physi-

**Table 4. Barriers to Care\***

Barrier	Physician Specialty			Degree of Capitation†		
	Family Physician (n = 621)	General Internist (n = 474)	Obstetrician-Gynecologist (n = 255)	Minimal (n = 852)	Partial (n = 277)	Total (n = 132)
<b>Physician</b>						
Low confidence in treatment with counseling‡	64 (2.9)	75 (3.3)	81 (3.1)	70 (2.3)	72 (3.9)	75 (5.8)
Low confidence in overall management‡	17 (2.2)	36 (3.4)	66 (3.9)	33 (2.1)	26 (3.6)	43 (6.7)
Incomplete knowledge of diagnostic criteria‡	16 (2.3)	19 (2.8)	44 (4.0)	24 (2.1)	21 (3.6)	26 (6.2)
Not responsible for treatment‡	12 (1.9)	27 (3.1)	59 (4.0)	26 (2.0)	24 (3.6)	31 (6.0)
Incomplete knowledge of treatment of depression‡	12 (1.9)	16 (2.6)	45 (4.1)	20 (1.9)	20 (3.4)	22 (6.1)
Low confidence in treatment with medications‡	9 (1.7)	25 (3.1)	56 (4.0)	22 (1.8)	20 (3.3)	38 (6.7)
Lack of effective treatments	9 (1.7)	12 (2.3)	17 (3.1)	12 (1.6)	11 (2.7)	11 (4.3)
Low confidence for diagnosis‡	5 (1.3)	8 (2.1)	20 (3.3)	10 (1.4)	7 (2.0)	16 (5.0)
Not responsible for recognition	3 (0.9)	4 (1.4)	8 (2.1)	5 (1.0)	3 (1.3)	1 (0.7)
<b>Organizational</b>						
Inadequate time to provide counseling or education	64 (2.8)	63 (3.6)	71 (3.7)	63 (2.4)	68 (4.1)	77 (5.9)
Appointment time too short for an adequate history§	54 (3.0)	53 (3.6)	62 (3.8)	54 (2.5)	56 (4.3)	66 (6.6)
Mental health professionals not affordable‡	48 (3.0)	39 (3.6)	61 (4.1)	50 (2.5)	50 (4.3)	38 (6.9)
Insurance coverage limited treatment options§	37 (2.9)	34 (3.4)	46 (4.1)	40 (2.5)	39 (4.2)	24 (5.7)
Poor reimbursement for treatment§	31 (2.8)	27 (3.2)	34 (3.9)	34 (2.4)	27 (3.8)	13 (4.4)
<b>Patient</b>						
Patient concern about medication side effects	54 (3.0)	53 (3.7)	42 (4.2)	51 (2.5)	54 (4.3)	48 (6.8)
Patient reluctant to see mental health professional	52 (3.0)	50 (3.7)	63 (4.0)	52 (2.5)	60 (4.3)	50 (7.0)
Patient reluctant to take antidepressant medication	44 (2.9)	45 (3.7)	44 (4.2)	42 (2.5)	50 (4.3)	45 (6.9)
Symptoms may be explained by other medical illness	42 (2.9)	52 (3.6)	41 (4.0)	45 (2.5)	42 (4.3)	45 (6.8)
Patient or family reluctance to accept diagnosis	37 (2.9)	32 (3.4)	37 (4.0)	35 (2.4)	42 (4.3)	25 (5.8)
Medical problems were more pressing	26 (2.6)	32 (3.4)	31 (3.8)	30 (2.3)	27 (3.8)	25 (6.0)

\*Data are expressed as percentage (SE).

†Practice structure could not be classified for 89 physicians; therefore, n = 1261 for practice structure analysis.

‡P < .001 for specialty comparisons, controlling for depression type, practice structure, and patient and physician characteristics.

§P < .05 for practice structure comparisons, controlling for depression type, specialty, and patient and physician characteristics.

icians being more likely to follow recommended guidelines for the diagnostic evaluation. Despite these differences, most physicians diagnosed depression based on their overall clinical impression, with some inquiry about specific symptoms. This finding is consistent with a previous study<sup>27</sup> showing that none of 50 physicians elicited enough symptoms to make a DSM-IV–based diagnosis. Why are the DSM-IV criteria not used? Previous studies<sup>28-30</sup> show that about half of PCPs know most DSM-IV criteria. In our sample, almost 50% of obstetrician-gynecologists cited incomplete knowledge of diagnostic criteria as a barrier. Therefore, a knowledge deficit precludes use for a substantial number of physicians. A second issue is limited time. On average, primary care visits last 13 minutes, and patients have an average of 6 problems on their problem list.<sup>31,32</sup> Data from the PRIME-MD 1000 Study<sup>33</sup> showed that it takes about 8 minutes to apply formal diagnostic criteria, a substantial portion of the usual visit. Faced with multiple active problems, 8 minutes for formal diagnosis may not be perceived as acceptable by the physician or patient. Finally, study physicians failed to use formal diagnostic criteria but expressed high confidence in their diagnostic skill. Why? It is possible that PCPs do not think that formal diagnostic criteria are important, or they think that the existing nomenclature is not well suited to the primary care setting. Widespread adoption of formal diagnostic criteria is likely to require compelling data that formal criteria are superior to the overall clinical impression, a

diagnostic system adapted to the time pressures of primary care, and a vigorous campaign to disseminate the diagnostic system. A psychiatric classification system developed for primary care, the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition: Primary Care Version*,<sup>34</sup> represents a tentative first step in this direction.

The most common treatment mode for depression is antidepressant medication, and within this mode, the selective serotonin reuptake inhibitors dominate. Although no more efficacious than tricyclic antidepressant medications, selective serotonin reuptake inhibitors need only once-a-day dosing, require less dose titration, and are associated with fewer adverse effects.<sup>35,36</sup> Primary care physicians have embraced these medications with good reason. A recent randomized trial<sup>36</sup> in the primary care setting showed that patients are more likely to continue taking selective serotonin reuptake inhibitors and reach adequate dosages compared with tricyclic antidepressant medications. Although antidepressant medication was the predominant therapeutic mode, family physicians were the only specialty with uniformly high confidence in medication treatment. General internists and obstetrician-gynecologists were less confident about medication treatment, suggesting that educational programs directed at these groups should emphasize discussions of drug therapy.

The initial treatment varied little by the type of depression, a finding that is consistent with the failure

to use well-defined diagnostic criteria. Patients with major depression, however, were somewhat more likely to be treated with antidepressant medication or referred to a mental health specialist. Given solid randomized trial data<sup>37</sup> demonstrating the efficacy of antidepressant therapy for major depression, it is appropriate that these patients are treated the most aggressively. The practice patterns seen for minor depression are more problematic. Primary care physicians appear to be ahead of the knowledge curve in the treatment of minor depression. Minor depression is associated with important functional impairment, but there are no trial data proving treatment effectiveness for this disorder.<sup>2,3,38,39</sup> In fact, subset analysis from trials<sup>40,41</sup> of depressive disorders suggest that antidepressant medications are ineffective or, at best, less effective for milder forms of depression. Ongoing clinical trials are addressing this issue. Based on current evidence, antidepressant medications are probably being overprescribed for patients with minor depression.

**P**HYSIICIANS WERE NOT confident in their ability to treat depression with counseling. This self-assessment has remained stable over time.<sup>18-20</sup> As the sole form of treatment, effective psychotherapy requires advanced training, a high degree of skill, and extensive experience. Few PCPs have the training, interest, or environment necessary to practice effective psychotherapy. Nevertheless, psychotherapy appears to be a valued therapeutic mode. Referrals to psychologists or social workers were common despite physicians' satisfaction with these referrals being somewhat less than for medical subspecialists. Although formal psychotherapy was not commonly used by physicians themselves, brief or extensive counseling was reported by about three quarters of respondents, most often in conjunction with the prescribing of antidepressant medications. Primary care physicians can play a valuable role as an empathic listener and patient educator about depression and its treatment.<sup>37,42</sup> Confidence and skills can be improved through relatively brief training courses and should be available to community physicians and those in training.<sup>25,43-45</sup>

Physicians reported numerous barriers to the care of depressed patients. Among the most common were patient reluctance to accept the diagnosis, begin treatment with medication, or accept referral to a mental health specialist. These barriers are consistent with a community-based survey<sup>46</sup> showing that 40% of persons with major depression do not want or perceive the need for treatment. Patient-related barriers impose significant limitations on treatment.

Barriers related to physicians' attitudes, skills, and knowledge showed large specialty differences but little variation by degree of capitation. Physicians uniformly embraced their role for recognizing depression, but fewer endorse a role in treating depression, one that is implicit in clinical guidelines (eg, from the Agency for Health Care Policy and Research<sup>1</sup>) developed for PCPs. The discrepancy between high responsibility for recog-

nition and lesser responsibility for treatment suggests that some physicians are unwilling to play an active role in treating depression. This discrepancy is perpetuated, in part, by mental health services that are often organized as a parallel but separate system that does not reimburse PCPs for the costs of providing ongoing treatment of depression.<sup>47</sup> In separate systems, responsibility for treatment may be wrested away from (or perhaps ceded willingly) the PCPs. The gap between responsibility for recognition and treatment varied by specialty, showing the greatest divergence for obstetrician-gynecologists. These specialty differences most likely reflect differences in specialty training for depression. Family practice programs have a long tradition of ambulatory-based training that embraces a biopsychosocial model of illness. Internal medicine programs expanded ambulatory training and began primary care tracts within the past decade. Obstetrics-gynecology programs are just beginning curricula that incorporate broader training in ambulatory care.<sup>48</sup> Curricular changes and continuing medical education programs that improve depression treatment skills are clearly needed to influence attitudes about treatment responsibility.

Physicians in capitated and noncapitated settings reported inadequate resources to adequately care for depressed patients. The limitation on resources, however, was specific to the financing system. Fee-for-service systems limit resources by restricting or denying reimbursement for treatment. Capitated systems limit resources by restricting physician time (ie, too many patients and not enough time). These data show that the organization and financing of health care affect directly physicians' practices in complex ways and deserve further investigation. Finally, physicians were dissatisfied with referrals to mental health specialists, and this dissatisfaction was associated with fewer referrals. Further research is needed to determine the reasons for dissatisfaction, but possible explanations are affordability, limited availability, poor communication, and insurance plans that limit referral options.<sup>49-51</sup> Katon et al<sup>13</sup> have shown that integrating a consultant-liaison psychiatrist into the mental health setting leads to improved patient outcomes and is well accepted by PCPs. This model holds promise but is not prevalent in the organization of primary and mental health specialty care.

These data offer a timely description of current care of depression. The study is strengthened by a large, randomly selected, national sample of physicians; inclusion of the 3 major physician specialties providing adult primary care; and the ability to examine the effects of practice structure on care. Furthermore, physicians' management approaches were based on descriptions of a recent patient with depression rather than hypothetical cases or general approaches.

Two limitations should be noted. First, the response rate was only moderate. Although respondents and nonrespondents apparently did not differ, respondents may have more favorable attitudes and better strategies for managing depression. Second, these data are from self-reports and do not measure actual practice. Some questions may have been influ-



enced by social desirability and may reflect the physicians' idealized approach to depression. For these reasons, readers should consider these results as upper bounds for actual depression evaluation and treatment practices.

## CONCLUSIONS

Primary care physicians' diagnostic and treatment approaches differ by specialty more than by type of depressive disorder or extent of capitation. Quality-improvement efforts need to (1) be tailored for different physician specialties, (2) emphasize the importance of differentiating major depression from other depressive disorders and tailor the treatment approach accordingly, and (3) address organizational barriers to best practice and knowledge gaps about depression treatment. Finally, the care of depressed patients is an integral part of primary care, but not all depressed patients will be best served or prefer treatment in this setting. Improving the quality and integration of mental health referral services is necessary for improving outcomes for patients with depression.

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### Clinical Pearl

#### Varicella Vaccine for Adults

Since adults often have severe illness if they contract chickenpox, varicella vaccine is recommended for adults who did not have chickenpox. Serologic testing for those with a negative history may be worthwhile. (*Ann Intern Med*. 1996;124:35-40.)