Primary Care Attributes and Care for Depression Among Low-Income African American Women

| Ann S. O'Malley, MD, MPH, Christopher B. Forrest, MD, PhD, and Jeanne Miranda, PhD

Depression, a common and often chronic disorder, is expected to become the second greatest cause of disability worldwide over the next decade.[1,2] Depressive symptoms, with or without major depressive disorder, can impair functioning to levels comparable to or worse than those seen with chronic medical conditions such as congestive heart failure, diabetes, angina, and arthritis.[3,4] Despite the chronic and debilitating course of this disorder and the existence of efficacious interventions,[5] most people with depression fail to seek mental health care; those who do seek care are most frequently seen in primary health care settings rather than psychiatric settings.[6–8]

Unfortunately, depression is underrecognized and undertreated in these general medical care settings,[9–11] and there are inconsistencies in the process and quality of care for depression in primary care practices.[12] Therefore, an understanding of factors that influence identification and care for depression in this setting is important. Lower-income and non-White women are particularly unlikely to seek care in mental health settings[13]; they are more likely to seek help from primary health care providers than are wealthier women and White women.[14] Yet, primary care providers are less likely to diagnose depression among African American women than among White women.[10,15]

Although research has examined primary care providers' knowledge and communication style as factors in identifying depression, little is known about the attributes of primary care delivery systems as they relate to recognition and treatment of this condition. Because lower-income African American women are less likely to use mental health specialty providers than primary care providers for their psychosocial needs,[13,14] we hypothesized that, among these women, those whose primary care providers offered more medically comprehensive services would be more likely to have their psychosocial needs met.

Objectives. We examined the association between attributes of primary care providers and care for depression, from a patients' perspective, among a sample of predominantly low-income African American women.

Methods. Computer-assisted telephone interviews were conducted among a population-based sample of 1202 women residing in Washington, DC.

Results. Respondents whose primary care physicians provided more comprehensive medical services were more likely to be asked about and treated for depressive symptoms than women whose providers were less medically comprehensive. Women who rated their providers as having more respect for them also were more likely to be asked about and treated for depression.

Conclusions. More comprehensive primary care delivery and a physician–patient relationship focused on mutual respect are associated with greater rates of physician inquiry about and treatment for depression among vulnerable women. (*Am J Public Health.* 2003; 93:1328–1334)

In addition, we hypothesized that women whose primary care providers were more accessible, in terms of availability of appointments, hours of operation, and women's ability to reach them by telephone, would be more likely to be asked about depressive symptoms. Previous studies have shown that better access enhances the likelihood of receipt of needed health care, first-contact care with a primary care provider, and provider continuity.[16,17] We examined, among a community sample of predominantly low-income, African American women, associations between primary care attributes and care for depression, both assessed from the patient's perspective.

METHODS

We identified a population-based sample of women residing in Washington, DC, census tracts where at least 30% of households had incomes below 200% of the 1999 poverty threshold.[18] A professional sampling system (Genesys; Georgetown University Medical Center, Washington, DC, and Johns Hopkins School of Public Health, Baltimore, MD) generated a list of telephone numbers designed to provide a sample of 25% random-digit-dialing and 75% targeted households. The

random-digit-dialing sample was generated from the set of telephone exchanges that serviced lower-income census tracts in Washington, DC. A listed household sample was merged with demographic information, derived from census and marketing data, that targeted our inclusion criteria.

In addition to questions regarding mental health services, the telephone survey used in this study gathered information on respondents' use of cancer screening services; as a result, only women older than 40 years were eligible for participation. We developed the survey with focus groups, results of previous research,[19–24] and pilot testing. It contained items gathering information on women's primary care experiences, demographic and socioeconomic characteristics, insurance, health status, and depressive symptoms. Interviews were conducted during January through March 2000 by experienced, trained female interviewers. Further details regarding the design of the survey are available elsewhere.[25] The response rate was 85%.

Dependent Variables

Three dichotomous items assessed whether respondents had been asked about depressive symptoms ("Has your regular doctor ever asked if you were feeling down, depressed, or

nervous?"), had been treated with medication for depression ("Has your regular doctor ever treated you with medication for being depressed or for helping you with your mood?"), or had undergone counseling for depression suggested to them by their primary care provider ("Has your regular doctor ever suggested that you talk with a counselor to help you with your mood?"). The 2 items assessing treatment were not mutually exclusive, and they were combined in the analyses; women with a positive response to either item were categorized as having had "treatment" recommended. Together, the 3 outcomes just described are termed "care for depression."

Independent Variables

Primary care. The main independent variables of interest were the primary care variables. We defined primary care with the Institute of Medicine's definition: "provision of integrated, accessible health care services by physicians that are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community."[26] The key attributes of primary care thus include organizational, financial, and geographic accessibility; comprehensive service delivery; a strong patient–provider relationship; continuity with a provider; and coordination of specialty care.[26–27]

On the basis of our pilot testing, we adapted items from the Primary Care Assessment Survey in developing our primary care variables.[19] Because our survey was administered by telephone to a sample that involved a relatively low literacy rate, it was necessary, in the case of certain items, to decrease the number of response options from 6 to 4. Scales were not created; rather, each primary care item was assessed as a separate "predictor" of the dependent variables (inquiry about and treatment for depressive symptoms). We retained the individual variables so that we would be able to ascertain the particular aspects of each primary care domain that were associated with each outcome. Hence, use of individual primary care items allowed us more insight than use of general scales would have provided. Responses to each item were dichotomized, at the median, into "lower" and

"higher" amounts of the primary care characteristic in question. Women's perceptions of their practice's primary care features were assessed as follows.

Accessibility was operationalized according to the techniques of previous studies.[17] Financial accessibility was assessed with a single item asking about the amount of money women paid for office visits. Geographic accessibility was assessed with a single item focusing on women's ratings of the convenience of their regular doctor's office location. Organizational accessibility (factors involved in arranging and promoting encounters between patients and providers[25]) was assessed with 4 items: appointment availability, appointment delays, ease of telephone communication, and amount of physician time with the patient.

The first aspect of *comprehensive service delivery,* overall comprehensiveness, was assessed with the following questions: "Thinking about how well your doctor knows you, how would you rate your regular doctor's ability to take care of *all* of your health care needs? Would you say it is poor, fair, good, or excellent?" The second aspect of comprehensive delivery was comprehensiveness of medical counseling (i.e., regarding smoking, alcohol use, and diet). The third aspect was comprehensiveness of evidence-based medical screening services (cholesterol, blood pressure, height and weight, clinical breast examination and mammogram). The fourth aspect was thoroughness of problem-focused physical examinations.

Using recognized conceptualizations of the *patient–provider relationship,*[26,28–31] we included 5 items that assessed 3 aspects of this relationship: communication, trust, and compassion. Communication was assessed with a question asking the respondent how she would rate her regular doctor's explanations of her health problems or treatment. Responses were made on a 4-point scale in which response options ranged from poor to excellent. Trust was assessed with a single item: "All things considered, how much do you trust your doctor, on a scale from 0 to 10, where 0 is not at all and 10 is completely." Compassion was assessed with items asking women to rate their regular provider's (1) patience with their questions or worries,

(2) care and concern for them, and (3) respect for them. Each item involved the same 4 response options, ranging from poor to excellent. Item responses were dichotomized at the median. All of the concepts just described were measured in the context of the global patient–provider relationship; items were not visit specific.

Coordination of specialty care was assessed with women's ratings of their regular physician's help in obtaining appointments with specialists, involvement in their care when they were hospitalized or under a specialist's care, and help in understanding specialists' recommendations or directions. This variable was assessed only among the 748 women who had been referred to a specialist or hospitalized by their regular physician.

Continuity of care included the degree to which women's office visits involved the same clinician (visit continuity) and the duration of that relationship with the clinician (longitudinal continuity). Visit continuity was assessed through determination of whether the woman had a usual site of primary care, and if so, whether she had a regular clinician at that site whom she saw for most of her visits. As a means of assessing relationship duration, women were asked, "How long has this person/place been your doctor/source of care?"

Depression status. Survey respondents completed the depression module of the Patient Health Questionnaire from the Primary Care Evaluation of Mental Disorders (PRIME-MD), a reliable and validated screening instrument[24] that assesses specific disorders according to criteria from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.* The PRIME-MD[23,24] has been widely used in clinical research, and items can be read to the patient if necessary.[21] The interview format has been used in previous studies involving lower-income women and members of ethnic minority groups.[7,32] Results from the PRIME-MD were used to classify individuals into 1 of 3 groups: no depression, minor depression, or major depression.

Control Variables

Control variables included demographic and socioeconomic characteristics such as age, household income, race/ethnicity, education, and health, employment, and insurance

status. Insurance categories were uninsured, public insurance only, and private. To be considered "uninsured," a woman had to have lacked coverage for the entire 12 months before the interview.

Four hundred fifty-five women in the sample (37.8%) had Medicare coverage. Of these women, those with no additional supplementary health insurance plan (i.e., Medi-Gap) (includes those with Medicare part B coverage) were categorized as having public insurance coverage only. Women who had Medicaid and no additional private insurance coverage were classified as "public only." Women who had a Medi-Gap policy in addition to Medicare coverage were categorized as having private insurance coverage and public coverage as well. These categories allowed us to distinguish between women with and without additional private insurance coverage above and beyond that provided by Medicaid or Medicare.

We also measured the number of visits women had had with their regular provider in the previous year. This "visit frequency" variable was included as a covariate in the models, the reason being that an increased number of visits implies more opportunities for contact and inquiry regarding depressive symptoms.

Data Analysis

We used χ^2 tests to assess significance in cross tabulations. We conducted stratified analyses to detect possible interaction effects, focusing special attention on potential interactions between insurance and the 2 independent variables of primary interest, organizational access and comprehensiveness of medical services. All demographic, socioeconomic, health status, primary care, visit frequency, insurance, and plan type characteristics that were conceptually important and contributed to the fit of the model were used as covariates in the logistic regression analyses.[33] We conducted bivariate logistic regression analyses to assess the effect of each individual primary care domain on care for depression, adjusting for age, education, income, health status, depression status, insurance coverage, and frequency of primary care visits. We then computed full models (1 with the outcome of inquiry regarding care for de-

pression and 1 with the outcome of treatment for depression) that adjusted for the same covariates but also included all of the primary care domains so that we could obtain adjusted "full model" odds ratios.

RESULTS

Sample Characteristics and Prevalence of Depressive Symptoms

Table 1 describes the study population, 82.7% of which was African American. The percentage of women in the 41- to 64-year age group (13.2%) who were uninsured was slightly higher than the national rate (7%) for

this group.[34] The majority of respondents (62%) used a private doctor or a health maintenance organization; 27% visited community health centers or other nonprofit community health clinics. According to the PRIME-MD, 4.7% of the sample screened positive for major depression, and 19.7% screened positive for minor depression. Higher percentages of younger and poorer women were depressed (Table 1).

Consistent with previous studies,[9–11] rates of inquiry about and treatment for depression were low (Figure 1), even though 98% of depressed women reported at least 1 visit to their primary care provider in the previous

TABLE 1—Characteristics of the Study Population: Washington, DC, 2000.

Characteristic	Overall (n = 1205), %	Nondepressed (n = 908), %	Minor or Major Depression (n = 294), %
Age, y			
41–64	44.7	43.1	46.0
≥ 65	55.3	56.9	54.0
Education, y			
< 12	26.3	23.5	32.6[a]
12	33.5	33.0	35.9
≥ 12	40.2	43.5	31.2[a]
Income, $			
Don't know/refused	26.9	27.1	27.4
≤ 30 000	42.5	39.3	48.9[a]
> 30 000	30.6	33.6	23.6[a]
Race/ethnicity			
Black/African American	82.7	82.0	84.8
White	6.6	7.4	4.6
Hispanic/other	3.7	3.6	4.2
Refused	7.0	6.9	6.3
Owns home	66.2	69.8	58.8[a]
Work status			
Retired/disabled	62.6	62.3	66.1
Working full-time	24.3	25.1	19.5
Other	13.6	12.6	14.4
Married/living as married	26.5	27.0	22.5
Poor/fair health status (self-assessed)	26.2	20.6	39.4[a]
Has a regular medical practitioner	84.8	85.1	86.4
Health insurance for any period during past 12 mo			
Public only	22.8	19.6	28.8[a]
Private (may include Medicare/Medicaid)	67.9	71.6	60.2[a]
Uninsured for entire past 12 mo	9.3	8.8	11.0

Note. Three women were missing information on the Primary Care Evaluation of Mental Disorders, so the sample size was 1202 for this variable.
[a] χ^2 P = .001 for comparison of percentages between depressed and nondepressed women.
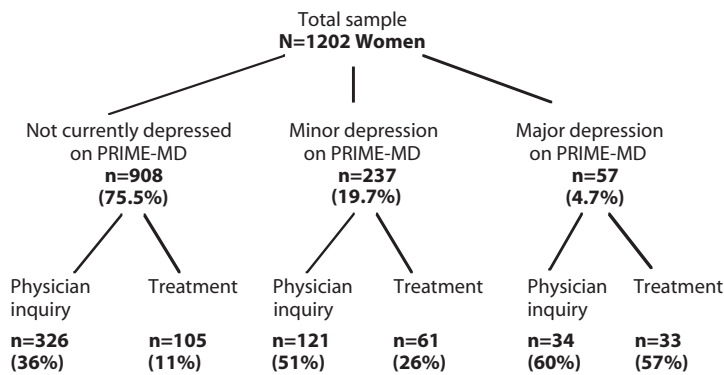
FIGURE 1—Study women's prevalence of depression on the PRIME-MD and their primary care physicians' inquiries about and recommendations of treatment for depression.

12 months and 70.4% reported more than 2 such visits. Presence of depressive symptoms was the factor most consistently associated with recognition and treatment of depression on the part of primary care practitioners ($P=.001$).

Association of Primary Care Attributes With Care for Depression

Table 2 presents adjusted odds of one's regular provider inquiring about depressive symptoms according to primary care characteristics. Accessibility, comprehensiveness of medical care, patient–provider communication, coordination of specialty care, and duration of relationship with one's primary care provider were each individually associated with such inquiries in the bivariate models adjusting for age, socioeconomic status, depression status, health status, frequency of primary care visits, and insurance status. In the models that included all of the primary care characteristics, certain variables stood out as being significantly associated with physician inquiries: comprehensiveness of care, having a more respectful provider, and having a sustained relationship with one's provider.

Table 3 presents the adjusted odds of receiving treatment for depression. Comprehensiveness of medical services, provider compassion, and coordination of specialty care were positively associated with treatment recommendation in the bivariate models. In the full model, which also included all primary care characteristics, comprehensiveness of care and having a more respectful provider

were significantly associated with treatment for depression.

In all of the analyses, depression status was the variable most strongly associated with likelihood of receiving care for depression from a primary care provider. Women with better self-assessed physical health status had lower odds of being asked about and treated for depression. Consistent with earlier research,[35] having public insurance coverage was positively associated with one's regular provider inquiring about and recommending treatment for depression. Privately insured women were about half as likely as publicly insured women to have treatment for depression recommended by their primary care provider ($P<.01$) after adjustment for depression status (data not shown).

Neither financial nor geographic accessibility of primary care was associated with provider inquiry about or treatment for depression. Whereas insured women exhibited no significant differences in rates of provider inquiry according to accessibility, there were differences among women who were uninsured. Uninsured women were more likely to be asked about depressive symptoms if their providers were more accessible (specifically, if the women encountered shorter waits for appointments, were better able to contact their provider by telephone, and reported more satisfaction with the length of their clinical encounters). When this "interaction" between organizational access and insurance was included in the logistic regression analyses, it did not alter the results.

DISCUSSION

In this study, we examined whether specific attributes of primary care settings were associated with care for depression. Among the urban, low-income, predominantly African American women who took part in our study, those whose primary care providers provided more comprehensive medical services were significantly more likely to be asked about and treated for depression. In addition, women who perceived their primary care providers as being more respectful and women who had a sustained relationship with a provider had higher odds of being asked about and treated for depression.

Women whose primary care providers met more of their medical (physical) needs were more likely to obtain care for their psychosocial needs in regard to depression. To our knowledge, there is little literature exploring this relationship. One study assessed the mental health needs of young women and the extent to which their public-sector gynecological clinics provided comprehensive medical care.[7] However, that study did not examine the extent to which comprehensiveness of medical services was associated with being asked about or treated for those mental health needs.

In our study, not only the counseling aspects of comprehensiveness (e.g., counseling regarding tobacco and alcohol use and diet) but also the noncounseling aspects (e.g., height, weight, cholesterol, blood pressure screening) were associated with care for depressive symptoms. These findings suggest that care for depression is 1 element of the overall comprehensiveness of primary care practices. There is a need for further research investigating why some primary care practices offer a broader range of services than others.

Provider accessibility, although important in encouraging first-contact care,[17] was not associated with care for depression except in the case of uninsured women. Among these women, having more accessible providers was associated with higher rates of provider inquiries about depression. Many women may not seek primary care services because of depressive symptoms but may raise mental health concerns during the course of visits made for other reasons.

TABLE 2—Women's Odds of Being Asked About Depression by Their Primary Care Physicians, by Primary Care Characteristics (n = 1202)

Primary Care Characteristic	Bivariate Odds Ratio	Full Model Odds Ratio
Organizational accessibility		
Office hours/appointment availability	1.04	0.73
Waiting time for appointments	1.52**	1.20
Ability to reach the office by telephone	1.48**	0.94
Amount of time spent with physician	1.64**	1.10
Comprehensiveness of medical services		
Ability of physician to address health care needs	1.66**	1.00
Thoroughness of physical examination	1.79**	1.44*
Screening in past year	1.50*	1.33*
Counseling comprehensiveness in past year	3.12**	3.05**
Patient–physician relationship: communication		
Explanations of health problems or treatments	1.56**	0.91
How often questions were left unanswered	1.12	0.93
Patient–physician relationship: trust		
Extent to which physician trusted	1.48**	1.12
Belief that physician's primary concern is holding down costs	0.89	1.18
(reference group: women responding affirmatively)		
Patient–physician relationship: compassion		
Physician is patient with questions or worries	1.79**	1.25
Physician is caring	1.96**	1.19
Physician is respectful	2.00**	1.78**
Coordination of care[a]		
Help from physician in obtaining appointment with specialist	1.43**	0.89
Involvement of physician in treatment by specialist or hospitalization	1.64**	1.14
Physician helped provide an understanding of specialist's or other	1.59**	1.12
doctor's recommendations or directions		
Continuity of care		
Has usual site of primary care (reference group: no site)	2.09	1.43
Presence of regular practitioner at site of care	1.41	1.50
Visit continuity (more vs fewer visits with same practitioner)	1.22	1.60
Duration of relationship more than 2 years (reference group: fewer	1.39**	1.30*
than 2 years)		

Note. Unless otherwise noted, reference groups were those possessing fewer of the primary care characteristics. "Bivariate" odds ratios were obtained from bivariate logistic regression analyses that included 1 primary care variable along with all of the following covariates: age, depression status, income, education, health status, insurance status, and frequency of primary care visits. "Full model" odds ratios adjusted for age, depression status, income, education, health status, insurance coverage, frequency of primary care visits, and all of the primary care features included in the first column.
[a]Coordination of care items were completed only by the 748 women whose regular physicians had recommended that they see a specialist or who were hospitalized.
*$P < .05$; **$P \leq .01$.

Continuity has been well documented as a feature important to patients[36] and has been associated with better health outcomes, including enhanced recognition of a patient's health needs.[26,27] Patients who have a continuous relationship with a regular provider have better access to care.[37] Accordingly, in our study, women who had sustained relationships with their primary care providers were more likely to be asked about depression.

Respect appears to be an important attribute of patient-centered care among low-income, minority women. As was the case with earlier investigations,[38,39] our study revealed associations between interpersonal aspects of the patient–provider relationship

and care for depression. Women who perceived their providers as being more respectful were more likely to receive care for depression. The fact that women who were more often asked about depression also rated their providers as more respectful implies that providers should not be concerned that asking women about depressive symptoms will insult them.

Limitations of this study include the reliance on self-reported data without medical record validation, the possibility of recall bias, the cross-sectional study design, and the absence of information on primary care providers' knowledge about and attitudes toward depression. Because we did not collect data from primary care providers, we lacked specific information on whether women's health plans offered mental health "carve-out" benefits—that is, contracts with other organizations to provide mental health services in settings other than primary care. Women with previously recognized depression whose plans include carve-out benefits would not be expected to receive depression treatment from their primary care providers.[40] Nonetheless, women who fail to recognize their own depressive symptoms often present to the primary care setting with physical complaints, and the primary care provider is often their only contact with the health care system.

In addition, we did not assess race concordance between patients and providers. Previous research has shown that African Americans rate quality of interpersonal care higher in race-concordant patient–provider relationships.[41] If such race concordance, or its absence, had any effects on care for depression, we were unable to control for them. Finally, given the multiple individual comparisons made in our analyses, some of the associations noted may have been due to chance. However, the consistency of the findings across items within domains and across outcomes decreases the likelihood that these findings are spurious.

Because our study was community based, the respondents exhibited varying levels of access to and use of primary care; this strategy ensured that the voices of women with less access to primary care were heard. It also allowed us to include nondepressed women.

TABLE 3—Women's Odds of Being Treated for Depression by Their Primary Care Physicians, by Primary Care Characteristics (n = 1202)

Primary Care Characteristic	Bivariate Odds Ratio	Full Model Odds Ratio
Organizational accessibility		
Office hours/appointment availability	1.15	1.21
Waiting time for appointments	1.06	0.95
Ability to reach the office by telephone	0.82	0.64
Amount of time spent with physician	1.15	1.08
Comprehensiveness of medical services		
Ability of physician to address health care needs	1.47**	1.34
Thoroughness of physical examination	1.42*	1.42
Screening in past year	0.79	1.47*
Counseling comprehensiveness in past year	2.03**	1.64**
Patient–physician relationship: communication		
Explanations of health problems or treatments	0.87	0.41
Frequency at which questions left unanswered	0.69	0.58
Patient–physician relationship: trust		
Extent to which physician trusted	1.23	1.44
Belief that physician's primary concern is holding down costs (reference group: those responding affirmatively)	1.00	1.18
Physician is patient with questions or worries	1.33	1.32
Physician is caring	1.42*	0.99
Physician is respectful	1.47*	2.04**
Coordination of care[a]		
Help from physician in obtaining appointment with specialist	1.42*	1.30
Involvement of physician in treatment by specialist or hospitalization	1.59**	1.16
Physician helped provide an understanding of specialist's or other doctor's recommendations or directions	1.51**	1.07
Continuity of care		
Has usual site of primary care (reference group: no site)	1.97	0.75
Presence of regular practitioner at site of care	1.05	0.82
Visit continuity (more vs fewer visits with the same practitioner)	0.91	0.83
Duration of relationship more than 2 years (reference group: fewer than 2 years)	1.05	1.14

Note. Unless otherwise noted, the reference group (odds ratio of 1) for all primary care variables was the lower category. For example, women's ratings of comprehensiveness of screening services were dichotomized into lower vs higher, with lower as the reference group. "Bivariate" odds ratios were obtained from bivariate logistic regression analyses that included 1 primary care variable along with all of the following covariates: age, depression status, income, education, health status, insurance status, and frequency of primary care visits. "Full model" odds ratios adjusted for age, depression status, income, education, health status, insurance coverage, frequency of primary care visits, and all of the primary care features included in the first column.
[a]Coordination of care items were answered only by the 748 women whose regular physicians had recommended that they see a specialist or who were hospitalized.
*P < .05; **P ≤ .01.

Inclusion of our nondepressed comparison group allowed us, in turn, to adjust for potential negative bias among depressed patients, whose ratings of care might reflect their own affect rather than the actual quality of care received. Inclusion of items assessing specific features of primary care is important in a study of depressive symptoms among women with varying levels of access. Whereas there is a sizable literature on specific features of primary care as they relate to physical health status, preventable medical hospitalizations, and use of clinical preventive services,[42–45] fewer investigations have focused on specific features of primary care as they relate to treatment for depression.

The results of this study have additional implications for care for depression among lower-income women. The association between duration of patient–physician relationship and physician inquiries about depressive symptoms highlights the importance of this basic tenet of primary care. When patients are forced to change their regular primary care providers—a frequent occurrence, especially among members of lower-income groups with transient insurance coverage or changes in employment—their relationships with their providers, and the coordination of their care, suffer.[46] Such disruptions in care may have negative implications for recognition and treatment of depression among these groups.

In summary, rates of primary care provider inquiries about and treatment for depression were low in this sample of urban, low-income, predominantly African American women. Women with primary care providers who offered more comprehensive services, in terms of meeting all of these women's medical needs, were significantly more likely to be asked about and treated for depression. Aspects of the patient–provider relationship, such as whether women were treated with respect, were also associated with inquiry about and treatment for depression. In addition, women with sustained relationships with their primary care providers were more likely to be asked about depression.

Research on improving care for depression needs to further explore the mechanisms and temporal aspects of the relationships between primary care attributes and treatment for depression. Should such relationships be confirmed, health care plans might consider structuring themselves to promote comprehensive service delivery and to foster continuity of care and strong patient–provider relationships. In terms of quality improvement efforts, current interventions directed at primary care providers focus on improving providers' knowledge of depression treatment guidelines. Our findings suggest the possibility that future interventions targeting providers should incorporate patient-centered communication skills training, especially in the area of relationship building. ■

About the Authors

Ann S. O'Malley is with the Departments of Medicine and Oncology, Georgetown University Medical Center, Washington, DC. Christopher B. Forrest is with the Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, Md. Jeanne Miranda is with the Department of Psychiatry, Georgetown University Medical Center.

Requests for reprints should be sent to Ann S. O'Malley, MD, MPH, 2233 Wisconsin Ave NW, Suite 440, Washington, DC 20007 (e-mail: omalleya@georgetown.edu).

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