

Recognition of Depression in Medical Patients With Heart Failure

HAROLD G. KOENIG, M.D.

The author examined physician and patient factors related to recognition of depression in depressed medical patients. Medical inpatients over age 50 were systematically identified with depressive disorder (N = 1,000). Medical physicians (N = 422) treating these patients were asked whether they believed patients had depression warranting specific treatment. Frequency of seeing and treating older depressed patients and attitudes toward treatment effectiveness were key factors related to physicians' recognition of depression. Patient factors were younger age, white race, female gender, and persistence of depression after discharge. Although physicians' intuition about depression course was often correct, persistent depression was not recognized in nearly 40% of patients.

(Psychosomatics 2007; 48:338–347)

For patients with congestive heart failure (CHF), depression accounts for nearly \$5 billion of the \$20 billion total treatment costs,¹ and severely depressed CHF patients show a fourfold increase in mortality.² Approximately 14 to 20 million Americans have chronic pulmonary disease (CPD), which is the fourth leading cause of death in the United States,³ and death rates are likewise increased by over threefold among depressed patients.⁴ Studies using structured psychiatric interviews have reported that depressive disorder is present in 36%–59% of medical inpatients with CHF (16%–22% with minor and 20%–37% with major depression). Depression rates in patients with CPD are also high (7%–57%).⁵ This is particularly true for hospitalized CPD patients, where the rate of depressive disorder is close to 60% (unpublished data). Thus, a significant proportion of hospitalized patients with CHF/CPD (CHF and/or CPD) have depressive disorders that interfere with functioning, quality of life, and medical outcomes. Underrecognition of depression is widespread

among older medical patients in general and CHF/CPD patients in particular⁶ (over 90% in one study⁷).

Physician and patient characteristics that might help explain this are poorly understood. A MEDLINE review of the psychiatric and primary-care literature between 1968 and 2005 found only three studies that addressed physician factors.^{8–10} None of these studies were conducted in hospitalized patients or those with a specific medical disorder, nor did they examine the effects of physician characteristics on treatment of individual patients or have information on the future course of depression. In a recent large study of depressed CHF/CPD inpatients systematically identified by use of a structured psychiatric interview, the authors documented a low rate of depression treatment (under 50%) by physicians and infrequent referral for psychiatric consultation (less than 10%).^{11,12} In the present report from this study, we hypothesize that there are physician factors (demographic and attitude) and patient factors (demographic and health characteristics), besides severity or type of depression, that influence physicians' recognition of depression in patients with CHF/CPD.

METHOD

This report is part of a larger project ("parent" study) whose primary aim was to examine the predictors and

Received January 23, 2006; revised April 28, 2006; accepted May 3, 2006. From the Duke University Medical Center and GRECC VA Medical Center. Send correspondence and reprint requests to Dr. Koenig, Box 3400, Duke University Medical Center, Durham, NC 27710. e-mail: koenig@geri.duke.edu

© 2007 The Academy of Psychosomatic Medicine

course of depression in CHF/CPD patients. A secondary question involved predictors of physician recognition of depression. Patients in the parent study were consecutively-admitted patients age 50 or over with diagnoses of CHF/CPD admitted to Duke University Medical Center (DUMC: >1,000 beds) or three nearby community hospitals (102–369 beds). Trained psychiatric research nurses identified depressive disorder by use of the Structured Clinical Interview for DSM–IV (SCID–I/NP, Version 2.0¹³). Severity of depression was assessed with the 17-item Hamilton Rating Scale for Depression (Ham-D).¹⁴ Previous episodes of depression similar to the current one were determined. We assessed severity of CHF/CPD with the Dyspnea subscale of the Chronic Heart Failure/Chronic Respiratory Disease Questionnaire.¹⁵ Overall severity of medical illness (all disorders) was measured with the clinician-rated Cumulative Illness Rating Scale (CIRS).¹⁶ Research nurses followed up patients at 6 weeks by telephone and at 12 weeks in person. The Longitudinal Interval Follow-up Evaluation (LIFE–II)¹⁷ was used to collect information retrospectively on course of depressive disorder since the last contact and allowed weekly psychiatric ratings (PSR) from 1 (“usual self”) to 6 (definite criteria for severe depression). Patients were categorized as remitted if they had PSR ratings of 1 or 2 for 2 consecutive weeks.¹⁸ After a depression patient was identified, research nurses contacted the treating hospital physician (HP) to notify him/her that their patient met research criteria for a current depressive disorder and then asked the HP to complete two questionnaires: Questionnaire A (Q-A), which asked about the HP’s personal demographics, attitudes, and behaviors related to their usual treatment of older depressed patients, and Questionnaire B (Q-B), which asked questions related to this particular patient’s depression (see Appendix 1). Question #1 of Q-B asked, “Do you believe that Mr./Ms. X has a depression warranting some type of specific treatment?”

Six weeks after the baseline evaluation, patients were contacted and asked whether they had seen their primary-care physician (PCP) at least once since hospital discharge and asked for permission to contact that PCP; if the patient had not seen their PCP by 6 weeks, then permission was sought at the 12-week follow-up. Once patient permission was obtained, the PCP was sent two questionnaires in the mail: Q-A (same questionnaire as the HP, above, received) and Questionnaire C (Q-C), which contained Question #1 of Q-B along with others (see Appendix 1). For this report, the only information relevant from Q-B and Q-C is whether the HP or PCP believed the patient had depression. In some cases, the HP was also the PCP for a patient; in that case,

Question #1 was answered only on Q-B. If the physician had several patients enrolled in the depression study, he or she was asked to fill out a separate Q-B and/or Q-C for each patient. Physicians were paid \$20 for each questionnaire completed.

Statistical Analysis

Three categories of variables: 1) physician characteristics; 2) physician behaviors/attitudes; and 3) patient characteristics/outcome (see Table 1) were examined as predictors of physicians’ recognition of depression (Question #1). Since each physician could fill out multiple questionnaires, depending on how many of their patients were enrolled in the study, the MIXED procedure in SAS was used, with Physician ID in the class statement and Patient in the repeated statement.¹⁹ In bivariate analyses, only a single pre-

TABLE 1. Physician and Patient Characteristics

Physician Characteristics (N = 422) ^a	% (N)	Mean (SD)
Age, years		36.4 (11.6)
Ethnicity (% white)	75.2 (315)	
Gender (% women)	36.6 (153)	
Specialty		
Internal medicine	61.6 (257)	
Family practice	13.9 (58)	
Other	24.5 (102)	
Position		
Attending/community MD	48.9 (206)	
Fellow	1.9 (8)	
Resident	35.2 (148)	
Intern	14.0 (59)	
Percent of patients over age 55		60.7 (18.7)
Status		
Hospital MD	66.8 (282)	
Primary-care MD only	32.5 (137)	
Not specified	0.7 (3)	
Patient Characteristics (N = 1,000)		
Age, years		67.8 (10.3)
Ethnicity (% white)	73.9 (739)	
Gender (% women)	62.4 (624)	
Education, years		11.4 (3.3)
Admitting hospital		
Duke University Medical Center	50.5 (505)	
Community hospital	49.5 (495)	
Medical diagnosis		
CHF only	17.4 (174)	
CPD only	52.7 (527)	
Both CHF and CPD	29.9 (299)	
Depression diagnosis		
Major depressive disorder	41.3 (413)	
Minor depressive disorder	58.7 (587)	

CHF: congestive heart failure; CPD: chronic pulmonary disease.
^aN may vary by up to 2%, depending on characteristic.

Depression and Heart Failure

dictor was entered into the model with the dependent variable (Table 2 and Table 3). For multivariate analyses *within categories*, variables from the bivariate analyses in each category significant at the $p \leq 0.05$ were entered into the model, and nonsignificant variables ($p < 0.05$) were eliminated using a backward stepwise procedure. For multivariate analyses *across categories*, significant variables from the within-category multivariate models were entered into a final model, and nonsignificant variables were eliminated, as above. The significance criterion was set at $p = 0.05$ and was not adjusted for multiple comparisons because of the exploratory nature of this research.

RESULTS

Patients

A total of 1,000 patients (see Table 1 for patient characteristics) were identified with depressive disorder. Depression diagnosis required impairment of psychological, social, or occupational functioning. Follow-up data on depression course were obtained on 86.5% of all patients.

Physicians

A total of 422 physicians (HP and PCP) returned Q-A with usable data (see Table 1 for physician characteristics). The response rate was 80% for HPs but only 50% for PCPs (see below). Note that physicians were required to complete Q-A before filling out Q-B or Q-C; 14% of physicians ($N = 59$) were both the HP and the PCP, so they filled out both Q-B and Q-C (answering Question #1 on Q-B only). Physicians' usual treatment of depression (Q-A) in older patients and their attitudes toward treatment have been reported elsewhere,²⁰ but are summarized below.

Behaviors and Attitudes About one-third (37%) indicated that they saw between 5 and 9 depressed older patients per month, and an additional 44% said that they saw 10 or more. Questions were asked about the average number (per month) of older depressed patients who were started on antidepressants (52% started ≤ 2), were referred for counseling/psychotherapy (86% referred ≤ 2), and were referred to psychiatrists (89% referred ≤ 2), whether they thought these treatments were effective (70%–83% said they did not help a lot), and reasons why they might not treat older patients with depression (62%: patient resistant to treatment; 61%: medical issues too pressing; 56%: unsure of depression diagnosis, etc.).

Recognition of Depression After being told that their patient met research criteria for depressive disorder, phy-

sicians were asked whether they believed the patient had depression warranting treatment (Question #1). Belief that the patient was depressed was predicted by several physician and patient characteristics. Results are reported first for HPs who treated patients during their hospital stay and then for PCPs who treated patients after discharge.

For hospital physicians (HPs), a total of 286 answered Question #1 of Q-B for 801 of 1,000 patients (80% response rate). The number of HPs was less than 1,000 because many HPs treated more than one patient in the study (1 to 26 patients, especially for community physicians). In 511 of 801 patients (63.8%), HPs indicated that they believed depression warranting treatment was present. Bivariate analyses (Table 2) indicated that physicians' characteristics related to recognition of depression were older age, internal-medicine specialty, training (for attending and community physicians), seeing fewer patients over age 55, and seeing 10 or more older depressed patients per month. Recognition of depression was also more common among physicians who felt that antidepressants helped patients a lot, those more certain of the depression diagnosis, and, curiously, physicians indicating that patients could not afford treatment.

Patient characteristics favoring HP recognition of depression were younger age, white race, female gender, being hospitalized in the community (versus DUMC), having more severe medical illness (CIRS), having major or more severe depression, and not remitting during follow-up.

Multivariate analyses within categories indicated that HPs' recognition of depression was more common in physicians with fewer older persons in their practice and, not surprisingly, those who reported seeing more depressed older persons per month. Likewise, those who thought antidepressants helped patients a lot and those who were more certain of the depression diagnosis were more likely to believe the patient was depressed.

Patient characteristics predictive of physicians' recognition of depression were younger age, white race, female gender, severity of medical illness, and depression not remitting during follow-up. In the final multivariate model, the only physician characteristics predicting depression-recognition were seeing 10 or more depressed older patients per month and believing that antidepressants helped patients a lot. Patient characteristics that predicted HPs' recognition were younger age, white race, female gender, and depression not remitting during follow-up. Despite the fact that physicians usually recognized patients with a depression that would have a chronic course, there were many exceptions. On one hand, numerous patients in whom they

Depression and Heart Failure

did not recognize depression had not remitted at 12-week follow-up (38.8%; N = 100), and most of these patients (71.7%) did not receive any treatment for depression during their hospitalization. On the other hand, many patients whom physicians thought were depressed ultimately remitted from depression (40.6%; N = 179), the majority of these receiving no treatment (58.7%). Thus, physician accuracy in recognition of depression, based on the eventual course of depression, was good but not exemplary.

For primary-care physicians (PCPs), a total of 197 completed Q-C for 416 patients, with each PCP completing Q-C for 1 to 22 patients. After excluding Q-C for 77 patients

where the PCP was also the HP and excluding 54 patients where the PCP did not answer Question #1 on Q-C, this left 285 patients for whom 178 PCPs answered Question #1. Although the response rate by PCPs to Q-C was low, it was higher than 29% (285/1,000) for the following reasons: 1) 14% of patients were lost to follow-up by Week 6 and an additional 6% by Week 12, so that 20% of patients were not available to give permission to contact their PCP; 2) 8% (77/1,000) were excluded because their PCP was also the HP; and 3) an estimated 15% had not seen their PCP by the time of the 6- or 12-week follow-up or refused to consent to have their PCP contacted. This reduced the number of

TABLE 3. Factors Affecting Primary-Care Physicians' Belief That a Depressed Patient Needs Treatment^a

Physician characteristics	Bivariate Analyses		
	β (SE) ^b	df	F ^c
Sex, female	0.15 (0.06)	159	6.3**
Physician behaviors/attitudes			
Older patients started on antidepressant/month: >2	0.19 (0.06)	160	10.2**
Unsure of effectiveness of treatments (yes)	-0.13 (0.07)	141	3.7* ^d
Patient characteristics			
Race, non-white	-0.16 (0.07)	121	6.2**
Congestive heart failure	-0.11 (0.06)	121	3.9*
Previous episodes of depression	0.15 (0.06)	121	6.9**
Major depression (vs. minor depression)	0.17 (0.06)	121	8.9**
Severity of depression (Ham-D)	0.013 (0.005)	121	5.5*
Depression remitted within 12 weeks	-0.18 (0.06)	120	10.4**
	Multivariate Within Categories		
Physician characteristics			
Sex, female	0.15 (0.06)	159	6.3**
Physician behaviors/attitudes			
Older patients started on antidepressant/month: >2	0.19 (0.06)	140	9.7**
Unsure of effectiveness of treatments (yes)	-0.14 (0.07)	140	4.4*
Patient characteristics			
Race, non-white	-0.14 (0.06)	118	4.9*
History of depression	0.14 (0.06)	118	6.1**
Depression remitted within 12 weeks	-0.17 (0.06)	118	9.8**
	Final Multivariate Model		
Physician characteristics			
None			
Physician behaviors/attitudes			
Older patients started on antidepressant/month: >2	0.19 (0.06)	139	9.0**
Unsure of effectiveness of treatments (yes)	-0.14 (0.07)	139	4.5*
Patient characteristics			
Race, non-white	-0.14 (0.07)	105	4.6*
Depression remitted within 12 weeks	-0.17 (0.06)	105	8.5**

Ham-D: Hamilton Rating Scale for Depression.
^aIf the PCP was also the hospital physician, then he/she was deleted from this analysis; however, the hospital physician for one patient may have been the PCP-only for another patient, and would thus be included in this analysis.
^b β : unstandardized beta, SE: standard error, df: degrees of freedom.
^c* $p \leq 0.05$; ** $p \leq 0.01$.
^d* $p = 0.058$.

questionnaires sent to PCPs to 573 of 1,000 patients, giving an estimated response rate of 50% (285 of 573). The 285 patients with completed PCP questionnaires were compared with the 715 patients who were either ineligible (PCP was never contacted to fill out questionnaire or PCP was same as HP and not included) or whose PCP did not return the questionnaire or answer Question #1.

This analysis revealed that there was no significant difference in age, race, gender, or diagnosis of major versus minor depression. There was a small difference (all $p < 0.05$) favoring patients with completed PCP questionnaires in terms of greater education (11.9 versus 11.2 years), diagnosis of CHF (49% versus 42%), and less severe medical illness (12.0 versus 12.6).

Also, a larger difference was found in type of hospital where patient was admitted. Among patients whose PCPs completed questionnaires, 69.8% were admitted to DUMC, as compared with 30.2% of patients admitted to community hospitals ($p < 0.0001$). Thus, results here likely generalize more to PCPs with patients hospitalized at academic medical centers like DUMC than to community hospitals. PCPs believed that 180 of 285 patients (63.2%) had a depression warranting specific treatment.

Several physician and patient characteristics predicted depression recognition. Bivariate analyses (Table 3) indicated that recognition was more common by female physicians. Recognition was also more common among physicians who started more than two older patients on antidepressants per month and who were more certain about the effectiveness of treatments. Patient characteristics favoring PCP recognition of depression were white race, CPD, history of depression, major depression (versus minor), more severe depression, and depression not remitting during follow-up. Multivariate analyses within categories indicated that besides being female, physicians more likely to recognize depression were those who started two or more older depressed patients per month on antidepressants and were more certain of treatment effectiveness.

Patient characteristics most strongly associated with PCP recognition of depression were white race, a history of depression, and depression less likely to remit during follow-up. The final multivariate model indicated that PCPs who started two or more older patients on antidepressants per month and were more certain of treatment effectiveness were more likely to recognize depression. The only patient characteristics independently related to PCP recognition were white race and depression not remitting during follow-up. PCP and HP recognition of a treatable depression was a strong predictor of whether the patient actually received

treatment (either antidepressants or psychotherapy) during hospitalization ($F[511] = 42.8$; $p < 0.0001$, for HPs and $F[121] = 45.3$; $p < 0.0001$, for PCPs).

DISCUSSION

This study examines how the characteristics of physicians and patients influence physician belief that a patient has depression warranting specific treatment. The uniqueness of this study is the large number of physicians, the large number of depressed patients with a specific medical illness (CHF/CPD), the detailed information on both groups (including course of depression after discharge), and the ability to link physicians' characteristics and attitudes to specific patients. Patients were diagnosed with current depressive disorder by use of a structure psychiatric interview during their hospital stay, and physicians were asked whether they believed the patient was depressed only after they were informed that the patient met criteria for a depressive disorder. Although physicians agreed in two-thirds of cases, fewer patients than this received treatment or had psychiatric consultations, even those with severe (major) depression. One would think that HPs who treated the patients in the hospital when diagnosed with depression would be more likely to agree with depression diagnoses than would PCPs who saw patients several weeks after discharge (sometimes after patients had remitted from depression). However, this was not the case; HPs and PCPs agreed with the depression diagnosis almost equally (63.8% versus 63.2%). HPs most likely to believe that the patient had a depression warranting treatment were those who reported seeing more depressed older patients per month and who felt that antidepressants helped a lot (i.e., had more experience with geriatric depression and believed in the efficacy of treatment). PCPs' recognition of depression was also predicted by number of older depressed patients started on antidepressants and belief in the effectiveness of treatments. If a physician regularly identifies older patients with depression and believes that there is treatment that can help these patients, then they will probably be more alert for this diagnosis.

Whether patients had CHF or CPD did not influence either HP or PCP depression recognition. As noted earlier, study after study has reported a high rate of depression in older medical inpatients, and there is evidence that treatment with antidepressants and/or counseling can be helpful.²¹⁻²³ Failure to recognize and treat depression, then, is a problem. Physicians acknowledged that they were often unsure of the diagnosis or the efficacy of treatment, and those with less training (house staff) were less likely to

Depression and Heart Failure

believe that patients were depressed (at least in the bivariate analysis). Interestingly, belief that patients were resistant to treatment or that they did not have enough time to treat depression (the most common reasons given for failure to treat) had no impact whatsoever on the belief that a particular patient was depressed.

Patient characteristics were also relevant to physicians' belief in the presence of depression, especially for the HP. Physicians were more likely to diagnose depression if the patient was younger, white, or female, independent of severity, type, or course of depression. Failure to recognize depression in older patients, black patients, or men may indicate the effects of bias, stereotyping, or the value placed on the quality of life for these patients. Some physicians may think that older patients should be depressed, that black patients cannot afford or need treatment, or that women are more emotional and prone to depression than men. These attitudes may blind the physician to the presence of depression. The authors found that, for both HPs and PCPs, the strongest predictor of depression recognition was depression that did not remit during follow-up. PCPs likely saw patients after many of them had remitted from depression, so this finding in PCPs is not surprising. However, this was also true for HPs, who seemed to intuitively know which depressed patients would get better and which would not, and they were often accurate in this assessment. This intuition, however, was by no means 100%; in fact, nearly 40% of patients whom HPs believed were not depressed continued to have significant symptoms throughout the 12-week follow-up (72% without treatment during hospitalization), and over 40% of those whom HPs believed were depressed ultimately remitted during follow-up (59% without treatment).

Little is known about factors that influence medical physicians' belief that a medical patient is depressed and warrants treatment, and, until now, nothing was known about this in older medical patients with CHF/CPD. In a study of 55 physicians treating 83 medical outpatients diagnosed with depression by the Diagnostic Interview Schedule, Robbins and colleagues⁸ found that physicians more sensitive to nonverbal expressions of emotion and those who tended to blame patients less for exaggerating or prolonging their depression were more accurate in recognizing depression.

In a study of primary-care physicians in the United States and Canada, Main and colleagues⁹ found that clinician training in depression, beliefs about the discomfort associated with having depression, and self-efficacy in diagnosing and treating depression determined whether they thought depression was an important primary-care concern;

this, however, was not examined in relationship to individual patient treatment. Similarly, in the present study, self-efficacy in diagnosis of depression (at least in bivariate analyses) for HPs and belief in the effectiveness of treatments for PCPs were associated with recognition of depression. Finally, Sliman and colleagues¹⁰ examined recognition of depression by internal-medicine residents in medical outpatients identified as depressed by the Beck Depression Inventory. Residents' assessment of patients' depression status was poor; however, they were more likely to rate patients as depressed if they had a previous psychiatric history. No specific physician characteristic (years of training or gender) predicted accuracy in depression assessment.

In the present study, we also found that interns, residents, or fellows were less likely to recognize depression diagnoses than were attending and seasoned physicians in community hospitals. This raises concern about the training of medical physicians, and whether it sufficiently emphasizes the recognition and treatment of depression in older patients. Like Sliman and colleagues,¹⁰ the author found, at least among PCPs, that a patient's history of psychiatric problems—depression in particular—was a predictor of physicians' recognition of depression. PCPs probably knew these patients better than HPs did, and if patients had a history of depression, then the PCP would be more likely to acknowledge that it may still be a problem.

Strengths and Limitations

The low response rate by PCPs (50%) may have affected rates of PCP recognition of depression and therefore makes comparison between PCPs and HPs difficult. Also, PCPs were more likely to respond if they were DUMC (versus community) physicians, thereby affecting the generalizability of results to community settings. Finally, a significant percentage of patients remitted from depression by the time they saw their PCP (29% by 6 weeks and 50% by 12 weeks), further affecting recognition rates by PCPs. Other limitations apply to the study as a whole. First, the large proportion of physicians in training at DUMC may have affected the generalizability of results to more seasoned clinicians, who were more likely to recognize depression. Second, it may not be entirely accurate that this study measures only physicians' recognition of depression, since nurses told them that patients were depressed; rather, the authors measured their agreement with the research diagnoses. Third, some patients may have refused or postponed treatment offered in the acute hospital setting, thus affecting treatment rates. Fourth, medical symptoms may have been mislabeled as symptoms of depression in some

patients, affecting the validity of depression diagnoses; all patients, however, had to have at least 2 weeks of depressed mood or pervasive loss of interest, which are not likely to be confused with medical illness.

Study strengths include the large number of patients and physicians, the 80% response rate for HPs, the use of a structured psychiatric interview (SCID) to diagnose depression, the 86% patient follow-up with the LIFE, and the ability to connect physicians' characteristics with beliefs about depression in individual patients.

CONCLUSION

When told that their patient met criteria for a depressive disorder, only two-thirds of physicians agreed with the diagnosis and need for treatment. Although physicians were often quite accurate in assessment (based on remission of

depression after hospitalization), nearly 40% of the time they were wrong, and these patients continued to suffer from depression for months after discharge (most without treatment). For physicians managing patients in the hospital, there are patient characteristics (age, gender, race) and physicians' attitudes toward treatment that influence whether or not they believe that patients have depressive disorder warranting treatment, and these factors are independent of the type of depressive disorder, severity of depression, or the course of depression after discharge. This may be partially the result of bias or stereotyping. Medical training programs should emphasize the recognition and treatment of depression in older patients with CHF/CPD and the necessity for referral if patients are not responding to treatment.

Funding was provided by NIMH Grant R01-MH57662.

APPENDIX 1. Physicians' Questionnaire

Questionnaire A: (registration; all physicians completed once)

1. Age, years _____
2. Race 1. White 2. Black 3. Other
3. Sex 1. Male 2. Female
4. Primary specialty 1) internal medicine, 2) family practice, 3) cardiology, 4) pulmonary, 5) nephrology, 6) surgery, 7) other specialty
5. If Duke house staff, what year? 1) attending physician, 2) fellow, 3) intern, 4) resident
6. Years practicing primary specialty _____
7. Years in practice at current hospital _____
8. Approximately what percent of your patients are over age 55? _____%
9. In an average month, approximately how many older patients (age 55 or over) do you see who might be depressed?
1) none; 2) 1-4; 3) 5-9; 4) 10 or more
10. In an average month, approximately how many older patients do you start on antidepressant medication?
1) none; 2) 1-2; 3) 3-4; 4) 5 or more
11. Have you found that treatment with antidepressant drugs helps these patients?
1) No, doesn't help much. 2) Yes, helps somewhat. 3) Yes, helps a lot.
12. In an average month, approximately how many older depressed patients do you refer for counseling or psychotherapy?
1) none; 2) 1-2; 3) 3-4; 4) 5 or more
13. Have you found that counseling or psychotherapy helps these patients?
1) No, doesn't help much. 2) Yes, helps somewhat. 3) Yes, helps a lot.
14. In an average month, approximately how many older depressed patients did you refer to a psychiatrist?
1) none; 2) 1-2; 3) 3-4; 4) 5 or more
15. Have you found that referring them to a psychiatrist helps these patients?
1) No, doesn't help much. 2) Yes, helps somewhat. 3) Yes, helps a lot.
16. I'm going to read you a list of reasons why physicians might not treat older medical patients with depressive symptoms. Which of these would you *strongly* agree with?
 - A. Don't have time; medical issues too pressing. 1. Agree 2. Disagree
 - B. Unsure of depression diagnosis. 1. Agree 2. Disagree
 - C. Unsure of effectiveness of treatments. 1. Agree 2. Disagree
 - D. Feel poorly prepared about how to treat depression. 1. Agree 2. Disagree
 - E. Patient is resistant to treatment. 1. Agree 2. Disagree
 - F. Patient cannot afford treatment. 1. Agree 2. Disagree
 - G. Concerned that Rx may interact with medical conditions or drugs. 1. Agree 2. Disagree
 - H. Feel that patient will get better on their own, without treatment. 1. Agree 2. Disagree
 - I. No mental health resources locally to refer to. 1. Agree 2. Disagree
 - J. Other _____ 1. Agree 2. Disagree

(continued)

Depression and Heart Failure

APPENDIX 1. Physicians' Questionnaire (continued)

Questionnaire B: (only patient's hospital physician completed)

1. Do you believe that Mr./Ms. X has a depression warranting some type of specific treatment? 1) No. 2) Yes.
2. Did Mr./Ms. X mention to you that someone had told him/her that he/she might be depressed? 1) No. 2) Yes.
3. You chose to: 1) Treat Ms./Mr. X for depression. 2) *Not* treat Ms./Mr. X for depression.
4. Why did you choose to treat him/her? _____
5. Why did you decide against treatment? _____
6. Are you Mr./Ms. X's primary-care physician (person who provides most of his/her usual medical care)? 1) No 2) Yes
7. Is Mr./Ms. X's depression serious enough to let his/her primary-care physician know about it? 1) No 2) Yes
8. Do you think Mr./Ms. X will need continued treatment for depression after he/she is discharged from the hospital? 1) No 2) Yes

Questionnaire C (only patient's outpatient primary-care physician completed)

Part A (#1 and #2 missing if primary-care physician is same as hospital physician)

1. Do you believe that Mr./Ms. X has a depression warranting some type of specific treatment? 1) No. 2) Yes.
2. After Mr./Ms. X's recent hospitalization, did his/her hospital physician indicate to you that he or she was depressed? 1) No. 2) Yes.

Part B

3. Did Mr./Ms. X indicate in his/her last outpatient visit (date) that he/she was feeling depressed when in the hospital recently? 1) No. 2) Yes.
4. Did Mr./Ms. X indicate in his/her last outpatient visit (date) that he/she was currently feeling depressed? 1) No. 2) Yes.
5. During his/her last outpatient visit (date), did you happen to ask Mr./Ms. X about depression? 1) No. 2) Yes.

Part C

6. Was Mr./Ms. X receiving any form of treatment for depression when he/she last visited your office? 1) No. 2) Yes.
7. Did you start him or her on a new antidepressant drug, suggest going for counseling, or refer the patient to a psychiatrist during that office visit?
 - 1) No; already receiving one of these treatments.
 - 2) No; patient didn't seem depressed and in need of treatment.
 - 3) No; other reason for not treating _____
 - 4) Yes; did one or more interventions.[If answer is #1, skip to Q #9. If 2, 3, 5, stop interview. If 4, ask Q #8 and then stop interview.]
8. If Yes (4), what kind of treatment for depression was given?
 - A) Prescribed an antidepressant: 1) No 2) Yes
 - B) Referred for counseling 1) No 2) Yes
 - C) Referred to psychiatrist or psychologist 1) No 2) Yes
 - D) Other treatment: 1) No 2) Yes
9. If the patient was already receiving treatment for depression, what kind of treatment?
 - 1) antidepressant drug treatment;
 - 2) psychotherapy or counseling;
 - 3) both 1 and 2;
 - 4) other treatment: _____
10. Did the patient seem to be getting any benefit from the treatment above?
 - 1) No benefit;
 - 2) Yes; some benefit;
 - 3) Yes; a lot of benefit;
 - 4) Didn't assess benefit during that visit. {If not receiving antidepressant drug therapy (answer to Q. 9 is not 1 or 3), stop the interview.}
11. If treatment involved an antidepressant medication, did the patient seem to be having any side effects from this drug?
 - A) No side effects;
 - B) Yes; patient having side effects.
 - C) Didn't assess for side effects to antidepressant during that appointment.
12. Did you make any changes in the antidepressant drug treatment regimen?
 - 1) No.
 - 2) Yes; increased antidepressant medication.
 - 3) Yes; decreased dose of antidepressant medication.
 - 4) Yes; stopped all antidepressant medication.
 - 5) Yes; switched patient to another antidepressant medication.
 - 6) Other: _____

References

1. Sullivan M, Simon G, Spertus J, et al: Depression-related costs in heart failure care. *Arch Intern Med* 2002; 162:1860–1866
2. Murberg TA, Bru E, Svebak S, et al: Depressed mood and subjective health symptoms as predictors of mortality in patients with congestive heart failure: a two-year follow-up study. *Int J Psychiatry Med* 1999; 29:311–326
3. Tjep BL: Disease management of COPD with pulmonary rehabilitation. *Chest* 1997; 112:1630–1656
4. Almagro P, Calbo E, Ochoa de Echaguen A, et al: Mortality after hospitalization for COPD. *Chest* 2002; 121:1441–1448
5. Mikkelsen RL, Middelboe T, Pisinger C, et al: Anxiety and depression in patients with chronic obstructive pulmonary disease (COPD): a review. *Nord J Psychiatry* 2004; 58:65–70
6. Kunik ME, Roundy K, Veazey C, et al: Surprisingly high prevalence of anxiety and depression in chronic breathing disorders. *Chest* 2005; 127:1205–1211
7. Rapp SR, Parisi SA, Walsh DA, et al: Detecting depression in elderly medical inpatients. *J Consult Clin Psychol* 1988; 56:509–513
8. Robbins JM, Kirmayer LJ, Cathebras P, et al: Physician characteristics and the recognition of depression and anxiety in primary care. *Med Care* 1994; 32:795–812
9. Main DS, Lutz LJ, Barrett JE, et al: The role of primary care clinician attitudes, beliefs, and training in the diagnosis and treatment of depression: a report from the Ambulatory Sentinel Practice Network, Inc. *Arch Fam Med* 1993; 2:1061–1066
10. Sliman RJ, Donohue TA, Jarjoura D, et al: Recognition of depression by internal-medicine residents. *J Community Health* 1992; 17:143–152
11. Koenig HG: Depression outcome in medical inpatients with congestive heart failure. *Arch Intern Med* 2006; 166:991–996
12. Koenig HG: Depression outcome in medical inpatients with chronic pulmonary disease. *Am J Geriatr Psychiatry* 2006; 14: 211–219
13. First MB, Spitzer RL, Gibbon M, et al: Structured Clinical Interview for DSM–IV Axis I Disorders, Non-Patient Edition (SCID–I/NP, Version 2.0). New York, Biometrics Research Department, N.Y. State Psychiatric Institute, 1996
14. Hamilton M: Development of a rating scale for primary depressive illness. *Br J Soc Clin Psychol* 1967; 6:278–296
15. Guyatt GH, Nogradi S, Halcrow S, et al: Development and testing of a new measure of health status for clinical trials in heart failure. *J Gen Intern Med* 1989; 42:101–107
16. Linn B, Linn M, Gurel L: Cumulative Illness Rating Scale. *J Am Geriatr Soc* 1968; 16:622–626
17. Keller M, Lavori P, Friedman B, et al: The longitudinal interval follow-up evaluation: a comprehensive method for assessing outcome in prospective longitudinal studies. *Arch Gen Psychiatry* 1987; 44:540–548
18. Frank E, Prien RF, Jarrett RB, et al: Conceptualization and rationale for consensus definitions of terms in major depressive disorder: remission, recovery, relapse, and recurrence. *Arch Gen Psychiatry* 1991; 48:851–855
19. SAS/STAT Software Changes and Enhancements Through Release 6.11; SAS/STAT Software Changes and Enhancements for Release 6.12, Cary, NC, SAS Institute, Inc., 1996
20. Koenig HG: Physician attitudes toward treatment of depression in older medical inpatients. *Aging Ment Health* 2006; 11:197–204
21. Harpole LH, Williams JW Jr, Olsen MK, et al: Improving depression outcomes in older adults with comorbid medical illness. *Gen Hosp Psychiatry* 2005; 27:4–12
22. Simon GE, Ludman EJ, Tutty S, et al: Telephone psychotherapy and telephone care management for primary-care patients starting antidepressant treatment: a randomized, controlled trial. *JAMA* 2004; 292:935–942
23. Thomas L, Mulsant BH, Solano FX, et al: Response speed and rate of remission in primary and specialty care of elderly patients with depression. *Am J Geriatr Psychiatry* 2002; 10:583–591