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ABSTRACT

PURPOSE The purpose of this study was to ascertain physician characteristics associated with exploring suicidality in patients with depressive symptoms and the influence of patient antidepressant requests.

METHODS Primary care physicians were randomly recruited from 4 sites in northern California and Rochester, NY; 152 physicians participated (53%-61% of those approached). Standardized patients portraying 2 conditions (major depression and adjustment disorder) and 3 antidepressant request types (brand specific, general, or none) made unannounced visits to these physicians between May 2003 and May 2004. We examined factors associated with physician exploration of suicidality.

RESULTS Suicide was explored in 36% of 298 encounters. Exploration was more common when the patient portrayed major depression (vs adjustment disorder) ($P = .03$), with an antidepressant request (vs no request) ($P = .02$), in academic settings ($P < .01$), and among physicians with personal experience with depression ($P < .01$). The random effects logistic model revealed a significant physician variance component with $\rho = 0.57$ (95% confidence interval, 0.45-0.68) indicating that there were additional, unspecified physician factors determining the tendency to explore suicide risk. These factors are unrelated to physician specialty (family medicine or internal medicine), sex, communication style, or perceived barriers to or confidence in treating depression.

CONCLUSIONS When seeing patients with depressive symptoms, primary care physicians do not consistently inquire about suicidality. Their inquiries into suicidal thinking may be enhanced through advertising or public service messaging that prompts patients to ask for help. Research is needed to further elucidate physician characteristics associated with the assessment of suicidality.

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INTRODUCTION

Suicide is a leading cause of death and potential life-years lost worldwide.¹ Most people who die by suicide have a treatable mental disorder, usually depression, but few have seen a mental health specialist.^{2,3} Although many patients are reluctant to seek and actively engage in mental health treatment, up to 75% of those who complete suicide have seen a primary care clinician in the previous 30 days.⁴⁻⁷ The primary care setting thus presents an excellent venue for detection of and early intervention for suicide risk.^{8,9}

Suicide ideation, defined as the presence of passive or active thoughts about a premature end of life, is present in 2% to 7% of all primary care patients.^{10,11} Suicide ideation confers risk for suicide as well as morbidity and all-cause mortality.¹²⁻¹⁸ In spite of ample opportunity for detection and intervention, presuicidal patients seldom alert physicians to their plans, and studies have found low rates of inquiry and detection of patients' suicidal thoughts by primary care practitioners.^{8,15,19} Remarkably little is known about the factors that influence whether primary care physicians broach the topic of suicide. The lack of data on suicide risk is especially

striking considering how much has been written about the detection of depression in the primary care setting.²⁰⁻²³

To determine whether physician characteristics, patient symptoms, and patient behavior influence whether physicians explore the topic of suicide with their patients, we conducted secondary analyses of data collected in a randomized trial that examined actual clinical behavior of physicians in the context of patient requests for treatment. Specifically, we examined the following questions: (1) What physician demographic and clinical characteristics enhance the likelihood that they will broach the topic of suicide to patients with depressive symptoms? (2) Are physicians more likely to inquire about suicide when patients have more severe symptoms of depression? (3) Do patient requests for antidepressants affect physician inquiries about suicide?

METHODS

Design Overview

The study was approved by the institutional review boards at all participating institutions, and details have been presented elsewhere.²⁴ Standardized patients were trained to portray 6 roles, involving 2 clinical conditions (major depression or adjustment disorder) and 3 medication request types (brand specific, general, or none). Participating physicians gave advanced consent to see 2 unannounced standardized patients and have the visits covertly audio recorded by the patient; physicians were randomized to see both roles with 2 of the request types. Visits took place between May 2003 and May 2004. After each visit, the standardized patients completed a reporting form on the questions asked by the physician. Physicians completed a clinician background questionnaire at the conclusion of the study.

Physicians

Internists and family physicians were recruited from 4 sites: (1) a primary care network in the Sacramento, Calif, area; (2) a group-model health maintenance organization, also in the Sacramento area; (3) a physician network in the San Francisco, Calif, Bay Area; and (4) a physician network in the Rochester, NY, area. A total of 152 physicians participated in the study; 6 physicians saw only 1 standardized patient. Participation rates by site ranged from 53% to 61%. The age and sex distributions of participating physicians were similar to those of nonparticipating physicians.

Standardized Patient Roles and Visits

A total of 18 actresses portrayed the 2 standardized patient roles. Role 1 was a 48-year-old divorced white woman with major depression of moderate severity

and wrist pain consistent with carpal tunnel syndrome. Role 2 was a 45-year-old divorced white woman with adjustment disorder with depressed mood and low back pain. Role outlines were revised iteratively until they were judged by a consensus of investigators and advisors to be clinically credible and manageable within the context of a 15- to 20-minute, new-to-physician, "acute" visit. Standardized patients were required to portray the role details with 95% accuracy, maintain affective fidelity (agreed-on levels of depressed mood and anxiety), and demonstrate competence in completing the reporting form. By design, there were 3 antidepressant request conditions: (1) a request for Paxil (paroxetine), (2) a request for "medication that might help," and (3) no specific request. In the analyses reported here, the first 2 request conditions were collapsed into 1 category, called "prompt." The third condition was labeled "no prompt."

Immediately following the visit, standardized patients listened to the audio recording and completed the reporting form, including questions on the physician's depression history taking. An independent judge listened to 36 randomly selected audio recordings; overall agreement between the standardized patient and the independent judge was 92% (mean κ , 0.82). Within 2 weeks of a standardized patient visit, physicians were asked via facsimile whether, during the prior 2 weeks, they had been definitely or probably suspicious that 1 of their patients was actually a standardized patient; 12.8% of physicians reported being suspicious. At least 2 months separated both the time from consent to the first visit and the time from the first to the second visit.

Standardized Patient Reporting Form Questions

This study focused on the items on the standardized patient reporting form pertaining to history taking for depression symptoms. Items were derived from published recommendations and the advice of the study's clinical advisory panel.²⁵ One item inquired whether the physician asked the standardized patient about thoughts of wanting to be dead, of engaging in self-harm, or of committing suicide (yes/no). This variable was the main outcome of the study and is referred to as exploration.

Clinician Background Questionnaire

We asked physicians about their age, sex, race (white or not), medical specialty (family medicine or internal medicine), and practice setting (solo or group, academic medical setting or not). Based on Bandura's Social Cognitive Theory,²⁶ we asked 8 questions pertaining to their level of confidence in treating depres-

sion, each rated on a 4-point Likert scale (Cronbach $\alpha = 0.76$; mean, 3.0; SD, 0.41; range, 1.75-4.0), and 9 items about perceived barriers to treating depressed patients, each rated on a 3-point Likert scale (Cronbach $\alpha = 0.75$; mean, 2.0; SD, 0.45; range, 1.00-2.88), to indicate the extent to which different factors limited optimal depression care. Finally, based on research suggesting that personal experience may inform clinical decision making,²⁷ we asked whether physicians had personal experience with depression in themselves, in family members, or in close friends. Physicians completed the questionnaire at least 4 weeks after the last standardized patient visit. The physicians' practices were compensated to make up for lost revenue but were not paid to complete the questionnaire.

Audiotape Analysis

Encounters were analyzed using the Measure of Patient-Centred Communication (MPCC).²⁸ We felt that the MPCC score would serve as a proxy for physician communication style that would predict the likelihood of exploring suicidality in their patients. The MPCC has shown adequate reliability (interrater reliability reported as 0.80-0.83) and validity, and has an established relationship with patient trust and patient perceptions of their physicians' communication behavior.²⁸⁻³⁰ The MPCC measures 3 aspects (or components) of physician communication and is unique in that it is theoretically linked to a model of patient-centered communication. For component 1 (exploring both the disease and the illness experience), the coder notes patient statements about symptoms, ideas, expectations, feelings, and the effect of the symptoms on functioning. Component 2 (understanding the whole person) measures the degree to which the physician explores family, social, and occupational issues. Component 3 (finding common ground) measures the degree to which the physician arrives at a common understanding with the patient about the nature of the problem and its management. We trained 2 coders to score the recordings using the MPCC; 10% of recordings were scored by both coders. The total MPCC score represents the mean of the 3 component scores. Observed scores ranged from 0.12 (least patient centered) to 0.81 (most patient centered), with a mean of 0.51 (SD, 0.88). Our reliability data as well as means and standard deviations of the scores were virtually identical to those reported by the developers.²⁸

Statistical Analysis

Analyses were performed with STATA version 9.2 (Stata Corp, College Station, Tex). The main outcome of interest in these analyses was whether the physician explored the topic of suicide with the standardized

patient (exploration), as assessed from the standardized patient reporting form. In addition to examining the bivariate relationships between exploration and other variables, we used logistic mixed models to examine the relationships between exploration and characteristics of patients and physicians including the MPCC score. Patient characteristics included mood disorder (major depression vs adjustment disorder) and prompting (any medication request vs none). Physician factors included demographics, study site (San Francisco, Calif; Sacramento, Calif; Rochester, NY), practice setting (solo vs group; academic vs nonacademic), confidence in treating depressed patients, perceived barriers to treating depressed patients, and personal experience with depression (vs none).

Analyses were conducted with each standardized patient-physician encounter as an observation. Random intercept, mixed effects regression analyses evaluated both standardized patients and physicians as random effects and other covariates as fixed effects. Assessment of the physician random effect (or variance component) allowed calculation of the consistency with which physicians explored suicide in the encounters. We report that consistency as the proportion of total variance contributed by the physician variance component (ρ , or the intraclass correlation coefficient).³¹ Results were considered statistically significant if the *P* value was .05 or less. Analyses excluding encounters wherein the physician suspected the patient was a standardized patient were similar to those reported here and are not presented.

RESULTS

Suicide was explored in 36% of the 298 encounters. Table 1 shows the relationships between exploration about suicidality and each of the measured characteristics. Exploration was more common when the standardized patient role was major depression (vs adjustment disorder) and when the standardized patient used a prompt (vs none). In the depression scenario, the rate of question asking about suicidality was at least 10% higher for both request conditions (brand specific and general) compared with the no request condition (data not shown). In addition, the increased exploration in the depression scenario was more pronounced with a general request than with a brand-specific request.

Exploration was also more common in academic settings and among physicians with a personal experience with depression (whether in themselves, family members, or close friends). There was no relationship between individual standardized patients ($n = 18$) and the likelihood of exploring suicide (details not shown, $P = .25$).

When only the standardized patient role and request variables were entered into a random effects logistic model with exploration as the dependent variable, we observed a significant physician variance com-

ponent ($p = 0.57$; 95% confidence interval, 0.45-0.68). When physician characteristics and MPCC score were also entered into the model, the effects for role, prompt, academic setting, and personal experience

with depression continued to be significant (Table 2). The p value dropped slightly to 0.53 (95% confidence interval, 0.40-0.67). In none of the logistic regression models were standardized patient random effects significant, suggesting that role fidelity was well standardized across the 18 standardized patients.

Table 1. Relationships Between Exploration and Patient and Physician Characteristics

Characteristic	No. (%) of Encounters*	Exploration†		P Value
		Yes	No	
Total	298 (100)	108 (36)	190 (64)	–
Patient				
Role				
Major depression	149 (50)	63 (42)	86 (58)	.03
Adjustment disorder	149 (50)	45 (30)	104 (70)	
Prompt‡				
Yes	199 (67)	81 (41)	118 (59)	.02
No	99 (33)	27 (27)	72 (73)	
Physician				
Age, mean (SD), y	–	45.0 (9.9)	46.7 (9.8)	.16
Sex				
Female	97 (33)	34 (35)	63 (65)	.77
Male	201 (67)	74 (37)	127 (63)	
Race/ethnicity				
White	210 (70)	83 (40)	127 (60)	.07
Not white	88 (30)	25 (28)	63 (72)	
Specialty				
Family medicine	98 (33)	35 (36)	63 (64)	.90
Internal medicine	200 (67)	73 (36)	127 (64)	
Practice size				
Solo	67 (22)	23 (34)	44 (66)	.71
Group	231 (78)	85 (37)	146 (63)	
Practice setting				
Academic	40 (13)	24 (60)	16 (40)	<.01
Nonacademic	258 (87)	84 (33)	174 (67)	
Barriers score,§ mean (SD)	–	2.0 (0.4)	2.0 (0.5)	.82
Confidence score, mean (SD)	–	3.0 (0.4)	3.0 (0.4)	.82
Personal experience with depression				
Yes	122 (41)	57 (47)	65 (53)	<.01
No	176 (59)	51 (29)	125 (71)	
Site				
Sacramento, Calif, network	41 (14)	14 (34)	27 (66)	.77
Sacramento, Calif, HMO	60 (20)	19 (32)	41 (68)	
San Francisco, Calif	101 (34)	40 (40)	61 (60)	
Rochester, NY	96 (32)	35 (36)	61 (64)	
MPCC score,¶ mean (SD)	–	0.52 (0.73)	0.51 (0.95)	.13

HMO = health maintenance organization; MPCC = Measure of Patient-Centred Communication.

Note: The main outcome of interest was whether the physician explored the topic of suicide with the standardized patient. This variable is referred to as exploration.

* The number (percentage) of encounters with the characteristic present.

† The number (percentage) of encounters with the characteristic present with (Yes) and without (No) exploration, or the mean (SD) for the characteristic for encounters with and without exploration.

‡ By design, there were 3 standardized patient conditions: (1) request for Paxil (paroxetine), (2) request for a "medication that might help," and (3) no specific request. The first 2 conditions were collapsed into 1 category, called "prompt."

§ Range of scores: 1.00-2.88. Higher scores indicate greater perceived barriers to treating depression.

|| Range of scores: 1.75-4.00. Higher scores indicate greater confidence in treating depression.

¶ Range of scores: 0.23-0.67. Higher scores indicate greater patient-centered communication.

DISCUSSION

This secondary analysis of a randomized trial of standardized patient visits to primary care practices examined specific physician and patient characteristics that may predict whether physicians are likely to inquire about suicide in their patients with depression. We found that, overall, primary care physicians inquired about suicide in less than one half of the standardized patients with depression and in even fewer of those with adjustment disorder. In the depression scenario, standardized patient requests for medication significantly increased physicians' inquiries about suicide. This finding was especially true when general requests were made; the effects of brand-name requests on inquiry about suicide were less powerful.

There was significant physician variance in this behavior with a large effect size (p), suggesting that physicians have a characteristic style that influences whether they explore suicide. This finding is impressive, given that the p value for primary care physician activities is generally reported to range from 0 to 0.3 and is usually less than 0.1.³² Even after controlling for potential confounders, the p value remained large, indicating

Table 2. Adjusted Relationships of Exploration With Patient and Physician Characteristics

Characteristic	AOR (95% CI)	P Value
Patient		
Major depression	4.12 (1.95-8.71)	<.01
Prompt (yes)*	2.29 (1.00-5.24)	.05
Physician		
Age	0.95 (0.90-1.02)	.14
Female	0.95 (0.30-2.95)	.92
White	3.30 (0.90-12.18)	.07
Family medicine	0.81 (0.27-2.38)	.70
Site		
Sacramento, Calif	2.06 (0.31-13.44)	.45
San Francisco, Calif	1.23 (0.25-6.11)	.80
Rochester, NY	1.19 (0.21-6.88)	.84
Solo	2.90 (0.70-12.00)	.14
Academic	10.03 (2.13-47.31)	<.01
Barriers score	1.39 (0.39-4.94)	.61
Confidence score	0.71 (0.19-2.64)	.61
Personal experience with depression (yes)	3.11 (1.09-8.89)	.03
MPCC score	1.04 (0.99-1.10)	.10

AOR = adjusted odds ratio; CI = confidence interval; MPCC = Measure of Patient-Centred Communication.

Note: The main outcome of interest was whether the physician explored the topic of suicide with the standardized patient. This variable is referred to as exploration. The model included standardized patient dummy variables (not shown). For categorical variables, AORs were calculated by comparison with the alternate characteristic. For continuous variables (age, barriers score, confidence score, MPCC score), AORs reflect the effect of a unit change in value.

* By design, there were 3 standardized patient conditions: (1) request for Paxil (paroxetine), (2) request for a "medication that might help," and (3) no specific request. The first 2 conditions were collapsed into 1 category, called "prompt."

that there are additional, albeit unspecified, physician factors that determine the tendency to explore suicide risk. These factors are probably related to unmeasured attitudes, traits, or knowledge. Our analyses suggest that suicide inquiries are not related to physician specialty (family medicine or internal medicine), sex, communication style, or perceived barriers to or confidence in treating depression.

Some physicians might avoid bringing up the issue of suicide because of fears that broaching the topic might heighten patients' suicidal feelings.³³ Others could be concerned about offending the patient or are themselves made uncomfortable by the prospect of inquiring about a behavior that was once considered a sin by many religious authorities and a crime in many legal jurisdictions worldwide. Prior work on primary care physicians' response to domestic violence invoked the image of opening Pandora's box to explain why they avoided screening for domestic violence.³⁴ Physicians reported a fear of offending their patients and concern that they had insufficient expertise to intervene appropriately if the patient screened positive—so

they avoided the topic altogether. For some physicians, suicide may represent another of the thorny issues in Pandora's box, raising many of the same fears and concerns of inadequate expertise and insufficient time in a busy practice. Interestingly, although there was no association between physicians' personal experiences with domestic violence and their proclivities to screen, we found that physicians' personal experience with depression was significantly associated with exploration (adjusted odds ratio = 3.11; $P = .03$).³⁴ Perhaps those who have had personal experience with depression are less judgmental, more attuned to the suffering it entails, more aware of the mortality risk, and less likely to be influenced by societal stigmatization of mental illness and suicide.

We found patient-related factors were also a significant predictor of physician suicidal assessment. Physicians were more likely to ask about suicide when the standardized patient role was major depression (vs adjustment disorder with depressed mood). This finding is reassuring because patients with more depressive symptoms are more likely to attempt and complete suicide.² Physicians also were more likely to ask about suicide when the standardized patient requested antidepressant treatment (vs no request). This was especially true when general requests were made; the effects of brand-name requests on inquiry about suicide were less powerful. This finding suggests that patient requests or prompts may in essence give the physician permission to ask about a topic such as suicide that otherwise might be avoided by both physician and patient. In fact, it is interesting to note that the patient request in this study had a similar effect size to a clinical intervention to improve detection of suicidal ideation in primary care described in a recent study.³⁵

Overall, physicians asked about suicide only 27% of the time in the unprompted condition. This finding is similar to the control group rate of detection of 20.5% in a recent study.³⁵ Surprisingly, there are few studies that would help inform effective interventions to address this problem. A recent study from France found that telephone follow-up after a suicide attempt reduced repeated attempts over 1 year,³⁶ and collaborative care has been shown to reduce suicide ideation in primary care patients.⁸ These studies suggest that system-level interventions similar to what has been found to improve outcomes for depressed primary care patients may also improve outcomes for suicidal patients. To date, routine screening for suicide has not been universally advocated, but it seems evident that inquiries about suicide may be the most important questions that primary care physicians ask of patients with depressive symptoms.^{1,8,37} Our study suggests that one approach to improving the rate of

physician recognition of suicidal thinking in depressed patients is through advertising or public service messaging ("social marketing") that prompts patients to ask for help in treating depression without encouraging them to request specific antidepressant medications. Patient prompts for treatment would not be effective, however, if we did not improve the ability of physicians to respond appropriately to these prompts. Earlier research has suggested that interventions aimed at changing specific physician behavior in depression care are more likely to lead to primary care physician behavior change and improved patient outcomes than more comprehensive interventions aimed, for example, at improving physician monitoring of depression treatment response.³⁸

This study has a number of limitations. First, we established that there are significant individual differences between physicians in their propensity to broach the topic of suicide, but the study design did not allow us to identify the specific traits, attitudes, or personal experiences that account for these differences. More research is needed. Second, although the use of standardized patients has a number of potential methodologic advantages, we cannot know whether the observed physician behavior would hold true with real patients in other practice settings.²⁴ It is reassuring that standardized patient factors were not significant in determining whether physicians broached the topic of suicide. Third, a considerable limitation is that the standardized patients in this study were middle-aged women making first visits to a new physician. The estimated rate of exploring suicide risk in this sample may not accurately represent physicians' overall rate of exploration or formal screening.³⁹ Rates of exploration or screening may be higher or lower as a function of patient age, sex, or race, or length of the physician-patient relationship. Given that suicide rates peak in women in their mid 40s, our focus on depressed middle-aged women is a strength. Fourth, although we can provide a reasonable estimate of whether physicians explored the topic of suicide with these patients, we have no data on the quality of these discussions or whether the discussions could be considered formal suicide screens. The numbers provided here are undoubtedly upper-bound estimates of the rate of suicide screening conducted with depressed middle-aged women in the community. Fifth, although our study concludes that physicians have a characteristic style that influences whether they explore suicide, we are unable to clearly identify the specific physician factors that determine this behavior. Finally, the data on suicide exploration were derived entirely from standardized patient report. Although these reports were made immediately after the visit with the physician and thus

should not be subject to memory decay, we do not have data on their validity.

In summary, this study examined the factors that influence whether physicians broach the topic of suicide with distressed patients in primary care. The finding that patient requests for medication led to higher rates of exploration speaks to the potential value of disease awareness campaigns, mental health literacy programs, and patient activation programs.⁴⁰⁻⁴² Our data also suggest that research is needed to better elucidate the characteristics of physicians associated with the assessment and reporting of suicide ideation in patients with symptoms of depression. Ideally, these studies would be conducted in conjunction with research on how characteristics of patients and health care settings influence physician assessments. More translational research is needed to inform the design and implementation of interventions aimed at suicide prevention and other improved outcomes for depressed patients.

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Key words: Depression; adjustment disorders; antidepressants; suicide; primary care; office visits; multilevel models; prevention; screening; practice-based research

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References

1. Gaynes BN, West SL, Ford CA, Frame P, Klein J, Lohr KN. Screening for suicide risk in adults: a summary of the evidence for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2004;140(10):822-835.
2. Mann JJ, Apter A, Bertolote J, et al. Suicide prevention strategies: a systematic review. *JAMA.* 2005;294(16):2064-2074.
3. Pirkis J, Burgess P. Suicide and recency of health care contacts. A systematic review. *Br J Psychiatry.* 1998;173:462-474.
4. Arean PA, Alvidrez J, Barrera A, Robinson GS, Hicks S. Would older medical patients use psychological services? *Gerontologist.* 2002;42(3):392-398.

5. Oxman TE, Dietrich AJ, Schulberg HC. The depression care manager and mental health specialist as collaborators within primary care. *Am J Geriatr Psychiatry*. 2003;11(5):507-516.
6. Luoma JB, Martin CE, Pearson JL. Contact with mental health and primary care providers before suicide: a review of the evidence. *Am J Psychiatry*. 2002;159(6):909-916.
7. Appleby L, Shaw J, Amos T, et al. Suicide within 12 months of contact with mental health services: national clinical survey. *BMJ*. 1999;318(7193):1235-1239.
8. Schulberg HC, Bruce ML, Lee PW, Williams JW Jr, Dietrich AJ. Preventing suicide in primary care patients: the primary care physician's role. *Gen Hosp Psychiatry*. 2004;26(5):337-345.
9. Katon WJ, Unutzer J, Simon G. Treatment of depression in primary care: where we are, where we can go. *Med Care*. 2004;42(12):1153-1157.
10. Olfson M, Weissman MM, Leon AC, Sheehan DV, Farber L. Suicidal ideation in primary care. *J Gen Intern Med*. 1996;11(8):447-453.
11. Olfson M, Shaffer D, Marcus SC, Greenberg T. Relationship between antidepressant medication treatment and suicide in adolescents. *Arch Gen Psychiatry*. 2003;60(10):978-982.
12. Hawton K, Fagg J. Suicide, and other causes of death, following attempted suicide. *Br J Psychiatry*. 1988;152:359-366.
13. Fawcett J. Targeting treatment in patients with mixed symptoms of anxiety and depression. *J Clin Psychiatry*. 1990;51(Suppl):40-43.
14. Beck AT, Brown GK, Steer RA, Dahlsgaard KK, Grisham JR. Suicide ideation at its worst point: a predictor of eventual suicide in psychiatric outpatients. *Suicide Life Threat Behav*. 1999;29(1):1-9.
15. Bartels SJ, Coakley E, Oxman TE, et al. Suicidal and death ideation in older primary care patients with depression, anxiety, and at-risk alcohol use. *Am J Geriatr Psychiatry*. 2002;10(4):417-427.
16. Pfaff JJ, Almeida OP. Detecting suicidal ideation in older patients: identifying risk factors within the general practice setting. *Br J Gen Pract*. 2005;55(513):269-273.
17. Dewey ME, Davidson IA, Copeland JR. Expressed wish to die and mortality in older people: a community replication. *Age Ageing*. 1993;22(2):109-113.
18. Maier H, Smith J. Psychological predictors of mortality in old age. *J Gerontol B Psychol Sci Soc Sci*. 1999;54(1):P44-P54.
19. Williams JW Jr, Noel PH, Cordes JA, Ramirez G, Pignone M. Is this patient clinically depressed? *JAMA*. 2002;287(9):1160-1170.
20. Callahan EJ, Bertakis KD, Azari R, Helms LJ, Robbins J, Miller J. Depression in primary care: patient factors that influence recognition. *Fam Med*. 1997;29(3):172-176.
21. Comino EJ, Silove D, Manicavasagar V, Harris E, Harris MF. Agreement in symptoms of anxiety and depression between patients and GPs: the influence of ethnicity. *Fam Pract*. 2001;18(1):71-77.
22. Klinkman MS. Competing demands in psychosocial care. A model for the identification and treatment of depressive disorders in primary care. *Gen Hosp Psychiatry*. 1997;19(2):98-111.
23. Robbins JM, Kirmayer LJ, Cathebras P, Yaffe MJ, Dworkind M. Physician characteristics and the recognition of depression and anxiety in primary care. *Med Care*. 1994;32(8):795-812.
24. Kravitz RL, Epstein RM, Feldman MD, et al. Influence of patients' requests for direct-to-consumer advertised antidepressants: a randomized controlled trial. *JAMA*. 2005;293(16):1995-2002.
25. Dobscha SK, Gerrity MS, Corson K, Bahr A, Cuilwik NM. Measuring adherence to depression treatment guidelines in a VA primary care clinic. *Gen Hosp Psychiatry*. 2003;25(4):230-237.
26. Bandura A. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall; 1986.
27. Funder D. Toward a social psychology of person judgments: implications for person perception accuracy and self-knowledge. In: Forgas J, Williams K, eds. *Social Judgments: Implicit and Explicit Processes*. New York, NY: Cambridge University Press; 2003:115-133.
28. Brown J, Stewart M, Ryan B. *Assessing Communication Between Patients and Physicians: The Measure of Patient-Centred Communication (MPCC)*. Working Paper Series. 2nd ed. London, Ontario: Thames Valley Family Practice Research Unit and Centre for Studies in Family Medicine; 2001. Working Paper 95-2.
29. Fiscella K, Meldrum S, Franks P, et al. Patient trust: is it related to patient-centered behavior of primary care physicians? *Med Care*. 2004;42(11):1049-1055.
30. Stewart M, Brown JB, Donner A, et al. The impact of patient-centered care on outcomes. *J Fam Pract*. 2000;49(9):796-804.
31. Snijders T, Bosker R. Statistical treatment of clustered data. In: *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modelling*. London, England: Sage Publications; 1999:13-37.
32. Adams G, Gulliford MC, Ukoumunne OC, Eldridge S, Chinn S, Campbell MJ. Patterns of intra-cluster correlation from primary care research to inform study design and analysis. *J Clin Epidemiol*. 2004;57(8):785-794.
33. Stoppe G, Sandholzer H, Huppertz C, Duwe H, Staedt J. Family physicians and the risk of suicide in the depressed elderly. *J Affect Disord*. 1999;54(1-2):193-198.
34. Sugg NK, Inui T. Primary care physicians' response to domestic violence. Opening Pandora's box. *JAMA*. 1992;267(23):3157-3160.
35. Nutting PA, Dickinson LM, Rubenstein LV, Keeley RD, Smith JL, Elliott CE. Improving detection of suicidal ideation among depressed patients in primary care. *Ann Fam Med*. 2005;3(6):529-536.
36. Vaiva G, Ducrocq F, Meyer P, et al. Effect of telephone contact on further suicide attempts in patients discharged from an emergency department: randomised controlled study. *BMJ*. 2006;332(7552):1241-1245.
37. Gilbody S, Sheldon T, Wessely S. Should we screen for depression? *BMJ*. 2006;332(7548):1027-1030.
38. Lin EH, Simon GE, Katelnick DJ, Pearson SD. Does physician education on depression management improve treatment in primary care? *J Gen Intern Med*. 2001;16(9):614-619.
39. Uncapher H, Arian PA. Physicians are less willing to treat suicidal ideation in older patients. *J Am Geriatr Soc*. 2000;48(2):188-192.
40. Jorm AF. Mental health literacy. Public knowledge and beliefs about mental disorders. *Br J Psychiatry*. 2000;177:396-401.
41. Goldney RD, Fisher LJ, Wilson DH. Mental health literacy: an impediment to the optimum treatment of major depression in the community. *J Affect Disord*. 2001;64(2-3):277-284.
42. Dwight-Johnson M, Unutzer J, Sherbourne C, Tang L, Wells KB. Can quality improvement programs for depression in primary care address patient preferences for treatment? *Med Care*. 2001;39(9):934-944.