

Perceptions About Competing Psychosocial Problems and Treatment Priorities Among Older Adults With Depression

Enola K. Proctor, Ph.D.

Leslie Hasche, M.S.W.

Nancy Morrow-Howell, Ph.D.

Martha Shumway, Ph.D.

Grace Snell, M.S.W.

Objective: Depression often co-occurs with other conditions that may pose competing demands to depression care, particularly in later life. This study examined older adults' perceptions of depression among co-occurring social, medical, and functional problems and compared the priority of depression with that of other problems. **Methods:** The study's purposeful sample comprised 49 adults age 60 or older with a history of depression and in publicly funded community long-term care. Four-part, mixed-methods interviews sought to capture participants' perceptions of life problems as well as the priority they placed on depression. Methods included standardized depression screening, semistructured qualitative interviews, listing of problems, and qualitative and quantitative analysis of problem rankings. **Results:** Most participants identified health, functional, and psychosocial problems co-occurring with depressive symptoms. Depression was ranked low among the co-occurring conditions; 6% ranked depression as the most important of their problems, whereas 45% ranked it last. Relative rank scores for problems were remarkably similar, with the notable exception of depression, which was ranked lowest of all problems. Participants did not see depression as a high priority compared with co-occurring problems, particularly psychosocial ones. **Conclusions:** Effective and durable improvements to mental health care must be shaped by an understanding of client perceptions and priorities. Motivational interviewing, health education, and assessment of treatment priorities may be necessary in helping older adults value and accept depression care. Nonspecialty settings of care may effectively link depression treatment to other services, thereby increasing receptivity to mental health services. (*Psychiatric Services* 59:670–675, 2008)

Depression is a major chronic illness that affects one-fourth to one-fifth of community-dwelling older adults (1,2). It diminishes quality of life, exacerbates physical and functional dependency (3–6),

and increases medical costs (7,8). Although depression in later life can be effectively treated, most elderly people with depression remain untreated (9). Older adults are vulnerable to mental health service barriers (10),

low detection and treatment rates in primary medical care (11,12), and pervasive stigma—their own as well as that from their family members and treatment providers. Depression treatment is further complicated by comorbidity with other problems. Although older adults with functional disability have higher rates of depression (13), they and their providers may demote depression treatment to a lower priority when medical, functional, and psychosocial comorbidities vie for attention (14). Competing demands may diminish depression as a priority concern, thereby contributing to inadequate rates of depression treatment (15).

This study explored depression as a treatment priority among a group of older adults with comorbid conditions. All were receiving public community long-term care. Every U.S. state provides community long-term care. As a public safety net, community long-term care helps low-income people with chronic conditions compensate for functional disabilities by providing case management and supportive in-home services from certified nursing assistants or in-home aides, including personal care; help with physical activities of daily living, such as cooking, cleaning, laundry, and bathing; medication management; and home-delivered meals. Qualification for public community long-term care requires Medicaid eligibility and severe functional impairments that carry risk of

The authors are affiliated with the Brown School of Social Work, Washington University, 1 Brookings Dr., Campus Box 1093, St. Louis, MO 63130 (e-mail: ekp@wustl.edu).

nursing home placement. Of new, elderly community long-term care clients, 18% show symptoms of depression, and an additional 7% meet criteria for major depressive disorder, 2.5 times the rate among older adults in general (16). They also experience such psychosocial problems as self-neglect, grief, economic hardship, housing concerns, difficulties accessing health care, and social isolation. Community long-term care is the kind of service system suggested in the report of the President's New Freedom Commission (10) as having high promise to improve treatment of mental disorders in vulnerable populations.

This article reports results of a mixed-methods study with two aims: one, to examine older adults' perceptions of depression in relation to their other life problems, and two, to compare priorities for treating depression with priorities for solving other problems. Effective and durable improvements to mental health care must be shaped by an understanding of client perceptions, preferences, and priorities.

Methods

Participants

The study's homogeneous purposeful sample (17) comprised publicly funded community long-term care clients living in their homes, age 60 or older, and with a history of depression. Recruitment letters were mailed to 109 individuals whose depression had been established through a score of 9 or higher on the Center for Epidemiologic Studies Depression Scale or a Diagnostic Interview Schedule diagnosis of major depression in a prior clinical epidemiological study (16) and who consented to follow-up contact. Sixty-six individuals responded to the letters (61%) and agreed to be contacted for the study. Respondents did not differ from nonrespondents by depression presence or absence, education, or gender, but they were significantly older ($p=.02$) and slightly but not significantly more likely to be white and to live in urban communities. Both studies excluded persons with severe cognitive impairment and non-English-speaking individuals.

Procedures, data collection, and analysis plan

Interviews were conducted from November 2005 through July 2006 in urban and rural regions of one Midwestern state. A telephone screen, completed with all 66 participants who responded to recruitment letters, included demographic and health information, current depression status per the Patient Health Questionnaire-9 (PHQ-9), and current cognitive status per the Short Portable Mental Status Questionnaire (SPMSQ) (18). Those with SPMSQ scores of 4 or greater, reflecting moderate to severe cognitive impairment, were ineligible for the in-depth interview (19).

In-home interviews were conducted with 49 participants. Of the 66 persons screened, two refused to participate further and 15 were ineligible because of cognitive impairment, not meeting the depression criterion of the PHQ-9, or relocation from the region. Five trained and supervised master's-level student research assistants conducted the interviews, which lasted between 15 and 105 minutes and were audiotaped with respondents' permission and transcribed. Participants were paid \$20.

Four-part, mixed-methods interviews sought to capture participants' perceptions of the life problems and concerns they experienced, as well as the priority they placed on depression. Part 1 involved listing problems. Participants were asked to identify a maximum of "five biggest problems in your daily life right now." Each of these problems was recorded on an index card, and participants confirmed that the card text accurately stated their problems.

Part 2 was an acknowledgment of depression: To capture participants' perceptions of current depressive symptoms and status, the interviewer introduced an additional card listing only the PHQ-9 depression symptoms endorsed by the participant during the telephone screen. Because this card did not have a preestablished name, the interviewer explored participants' thoughts and acknowledgment of depression to name the card, using such probes as "Have you ever thought that these

problems were related to depression?" "Has anyone ever suggested that these problems may be related to depression?" "Other people call this problem nerves, feeling down, and mood; do any of these terms describe this problem for you?" "Is there something else that you would like to call this card?" If an independently generated problem card duplicated symptoms listed on the PHQ-9 card, the texts of these cards were combined on the participant's approval.

Part 3 captured the participant's perception of depression's relationship to other problems. The participant was shown the PHQ-9 card and was asked how his or her other problems and PHQ-9 symptoms were interrelated. Responses were recorded.

Part 4 prioritized depression among other problems. The interviewer asked the participant to rank the life problem cards in order of importance by stating, "These are all the problems from our list and your list that are causing difficulty in your life right now. I want you to think about these problems and pick out the problem you would most want to be resolved or 'fixed.' There is no right or wrong answer." After the participant identified the problem that had the highest priority, the interviewer asked, "what is the next most important problem?" As the participant ranked the problem cards, the interviewer recorded the priority number on each card and then reviewed all cards and asked the participant to confirm the rank order.

The study was approved by both Washington University's Human Subjects Committee and the state's Division of Health and Senior Services Human Subjects committee. Participants gave verbal consent for the telephone screening and written consent for the in-home interview.

Data analysis

Identified problems were coded into categories through an iterative, content-analysis approach (20). Five members of the research team collaboratively reviewed all of the problem cards to develop categories. Two team members then coded the problem cards into the categories, with 90% interrater reliability ($\kappa=.90$). A final

Table 1

Characteristics of 49 community long-term care clients with a history of depression who were interviewed to discuss competing priorities to the treatment of depression

Variable	N	%
Age (M±SD)	73.6±6.2	
Education completed (M±SD years)	9.5±3.2	
Race		
Caucasian	30	61
African American	19	39
Gender		
Male	5	10
Female	44	90
Location		
Urban	25	51
Rural	24	49
Short Portable Mental Status Questionnaire score for cognitive status		
0 to 1, no impairment	45	92
2 to 3, mild impairment	4	8
Patient Health Questionnaire–9 score (M±SD points) ^a	12.1±4.9	
Depression severity score		
5–9, mild	19	39
10–14, moderate	16	33
15–19, moderately severe	9	18
20 or more, severe	5	10
Probable depression diagnosis		
None	22	45
Depressive disorder	12	24
Major depression	15	31
Mental health treatment experience		
No treatment	15	31
Current medications only	15	31
Current medications and counseling including pastoral care	11	22
Past medications only	5	10
Past medications and counseling including pastoral care	3	6

^a Possible scores range from 0 to 27, with higher scores indicating more severe depression.

set of categories enabled quantitative analysis.

Data on participants' perceptions of depression and depression's relationship to other problems were analyzed with NVivo qualitative data analysis software (21) for transcript coding. Using an editing-style analytic approach, coders identified text segments that represented themes related to the study purpose (22). Although derived themes were similar to those developed from respondents' problem categories (family, money, and frustration with medical care), additional categories emerged, such as disappointment and regret with life. The team's project journal was used to track coding practices.

Participants' priority rankings for each problem were scored as follows. For each participant, a relative rank

variable was computed for each problem by dividing the original rank by the total number of problems listed by the participant. The relative ranks were then subtracted from 1 to yield a variable ranging from 0 to 1, with 1 reflecting the highest possible relative rank and 0 the lowest. We then identified the problem that each participant considered most important and the problem that each ranked as least important. Rank data, along with data on demographic characteristics, PHQ-9 items, and the problem categories, were analyzed with SAS version 9.1 for Windows (23). Student's *t* tests and Fisher's exact chi square tests were used to explore the relationship of depression severity to problem categories and ranks. Depression severity was dichotomized, with PHQ-9 scores

between 5 and 9 coded as mild and scores of 10 or above coded as moderate to severe as outlined by Kroenke and colleagues (24).

Results

Table 1 presents participants' demographic and mental health information.

Perceptions of depression in relation to other problems

As shown in Table 2, most participants identified health and functioning problems, and about 40% reported emotional problems, such as grief, loneliness, worries, boredom, or memory problems. Financial, family, and health care problems were also common. Identification of only two problems varied by depression severity: functional problems, specifically problems with getting up and around in the home and being unable to do things, were significantly associated with depression severity. Those with mild depression were significantly more likely to identify family problems as having higher priority. Only three people—all moderately or seriously depressed—self-identified depression as a problem.

When shown their PHQ-9 symptom card (completed during the telephone screening), about half of the respondents (53%) labeled the PHQ-9 symptom card as depression or said that someone had suggested they had depression; others were unsure what to call the symptoms or attributed the symptoms to a health condition, grief, or pain, as reflected in such comments as “[This is] just life . . . yeah, because I let my life go to the point that you know, that . . . well okay, [there is] little interest or pleasure in doing things,” “When you’re on fixed income you don’t have much money,” and “I guess [I’m] disgusted with the way things turned out.”

When asked how depression is related to other problems, some participants said that they did not know: “I don’t really know. I don’t know where the [depression is] coming from, I really don’t. I just get like that sometimes and I don’t know why. I can’t tell you why.” And, “I don’t know. . . . Because I had depression for years, I think it’s just a normal thing with me, being depressed about things.” For

Table 2

Frequency and rankings of problem categories by a total sample of 49 community long-term care clients with a history of depression

Life problem	Reporting problem		Rank of problem ^a		Problem ranked most important		Problem ranked least important	
	N	%	M	SD	N	%	N	%
Health	42	86	.51	.25	17	41	5	12
Health condition	26	53						
Aches and pain	7	14						
Health limits ability to function	9	18						
Functioning	30	61	.43	.26	5	17	5	17
Get out and about (outside of house)	9	18						
Get up and around (inside of house)	7	14						
Household chores and self-care activities	8	16						
Can't do what I want to do	6	12						
Emotional well-being	21	43	.46	.32	5	24	4	20
Grief	5	10						
Loneliness	9	18						
Worrying about what will happen to self	3	6						
Memory and thinking problems	2	4						
Boredom	2	4						
Money and finances	15	31	.48	.25	5	33	2	13
Family	14	29	.52	.22	4	29	0	0
Family member has a problem	6	12						
Worries about family member's well-being	5	10						
Wants more from family relationships	3	6						
Frustrated with medical care	13	27	.31	.25	1	8	4	31
Getting help	7	14	.43	.32	3	43	1	14
Dependent on others	4	8						
Needs more help	3	6						
Frustrated with housing	5	10	.43	.31	1	20	1	20
Other problem	10	20	.40	.31	3	30	2	20
Depression	49	100	.19	.24	3	6	22	45

^a Two participants did not rank their problems. Values reported are for relative rank (RR), for which items were reverse scored: $RR = 1 - (\text{rank of problem} / \text{total number of problems ranked})$.

others, there were clear connections between depression and the other problems they identified, as reflected in such comments as “I think it’s because of my health that I have all this because I feel so down”; “The depression and hopeless feelings is caused from . . . the things I can’t do”; “It’s probably because you’re expecting to [do] better with your life”; “Just plain loneliness. . . . Now you wouldn’t think I would be lonely with all of these people around, but you are” and “Stretching money to meet the needs . . . and you want to go here or yonder, . . . and you don’t have the extra money and you can’t go.”

Priorities of depression and other problems

Nearly half of the participants (40%) ranked health as their first-ranked problem (Table 2). Functioning, emotional well-being, and family

problems constituted about one-tenth of participants’ first-ranked problems. Only 6% of participants ranked depression as the most important of their problems, whereas 45% ranked it last in importance. Relative rank scores for the various problems were remarkably similar (range=.31–.52) with the notable exception of depression, which had a relative rank score of .19, lowest of all.

The priority of only one problem—money and finances—varied by depression severity. Money was a higher-priority problem for participants with mild depression ($\text{mean} \pm \text{SD} = .60 \pm .18$) than for those with more severe depression ($.37 \pm .27$; $t = 2.16$, $df = 16$, $p < .05$). The relationship between depression severity and its own priority ranking approached significance, ranked higher by those with moderate to severe depression than by those with mild depression.

Discussion

The relatively small, homogeneous sample of older adults studied here limits generalizability. All respondents had participated in a prior study, but the studies had different questions, interviewers, and methods. Given that much literature on depression perception has come from general population studies, this sample provides the important insight of older adults currently experiencing depression.

Consistent with findings of other studies, the depression co-occurred with health problems and functional impairment (25–30). But another type of comorbidity—psychosocial—is prominent in these findings. Psychosocial comorbidity comprises social, interpersonal, socioeconomic, family, and environmental issues, as reflected in *DSM* axis 4 (31). Although psychosocial comorbidity has

received less attention from researchers than medical and functional comorbidity, *DSM-IV* notes that it may trigger or exacerbate a mental disorder, develop as a result of psychopathology, or constitute problems that need to be considered in managing mental disorder (31). Psychosocial problems are more prominent in public systems of care, but their co-occurrence with depression should be explored in other settings because they may be as common as medical problems among older adults and because quality of care for psychosocial needs is poorer among older adults with depression than quality of care for functional, medical, or psychiatric needs (32).

Stigma may help explain the fact that few older adults identified depression spontaneously as one of their problems (7,33–35), although participants acknowledged that others had characterized their condition as depression, and the sample had relatively high rates of past and current depression treatment. Their infrequent identification of depression may also reflect their view of its close association with other problems, particularly those pertaining to physical health, social support, physical functioning, and pain—a view consistent with the biopsychosocial perspective (36–38) and social models of depression (39), in which depression is viewed as arising from adverse personal and social circumstances that accrue in old age (40). Finally, the low ranking of depression may reflect low self-efficacy and a sense that late-life depression is inevitable.

Co-occurring medical problems may compete for time, attention, and priority among older adults and their mental health care providers (14,15, 41). These findings demonstrate that psychosocial problems also compete strongly—and often successfully—for priority among older adults, suggesting that the acceptance and effectiveness of depression treatment may depend on providers' ability to connect it to problems higher in priority to the older adult.

Conclusions

Older adults with depression experience multiple health, functioning,

and psychosocial problems, and services are needed to deal with them (42). Service providers will be challenged to adequately respond to the wide range of problems that co-occur with depression. Engaging older adults in mental health treatment may be complicated by their reluctance to identify depression and by depression's relatively low priority in the mix of competing problems. When depression is seen as a low priority, adherence to mental health treatment may be undermined (43) and risk of treatment dropout may rise (44).

Mental health care providers should elicit older adults' perspectives on depression and approach depression care within a social context, linked to other medical and social services. Depression care may need to be "rationalized," or explained in the framework of psychoeducation or motivational interviewing. Disease management approaches to depression treatment (45–50) that include use of a therapeutic alliance, case management, patient education, and problem solving around co-occurring problems may be needed to motivate and engage older adults. Nonspecialty settings such as that studied here may be well positioned to engage older adults in depression treatment. Providers' existing relationship with older adults may help them see the value of treating their depressive symptoms and may help them link with primary medical care and specialty mental health depression care.

Acknowledgments and disclosures

The preparation of this article was supported in part by the Center for Mental Health Services Research, George Warren Brown School of Social Work, Washington University in St. Louis, and by award 5P30-MH-068579 from the National Institute of Mental Health.

The authors report no competing interests.

References

1. Gallo JJ, Lebowitz BD: The epidemiology of common late-life mental disorders in the community: themes for the new century. *Psychiatric Services* 50:1158–1166, 1999
2. Callahan CM, Hui SL, Nienaber NA, et al: Longitudinal study of depression and health services among elderly primary care patients. *Journal of the American Geriatrics Society* 42:833–838, 1994
3. Murray CJ, Lopez AD: The Global Burden

of Disease: A Comprehensive Assessment of Mortality and Disability From Diseases, Injuries, and Risk Factors in 1990 and Projected to 2020. Cambridge, Mass, Harvard School of Public Health, 1996

4. Alexopoulos GS, Vrontou C, Kakuma T, et al: Disability in geriatric depression. *American Journal of Psychiatry* 153:877–885, 1996
5. Bruce ML, Seeman TE, Merrill SS, et al: The impact of depressive symptomatology on physical disability: MacArthur Studies of Successful Aging. *American Journal of Public Health* 84:1796–1799, 1994
6. Borson S, Claypoole K, McDonald GJ: Depression and chronic obstructive pulmonary disease: treatment trials. *Seminars in Clinical Neuropsychiatry* 3(2):115–130, 1998
7. Mental Health: A Report of the Surgeon General. Rockville, Md, Department of Health and Human Services, US Public Health Service, 1999
8. Bruce M: Depression and disability in late life: directions for future research. *American Journal of Geriatric Psychiatry* 9:102–112, 2001
9. Bartels S, Smyer M: Mental disorders in aging: an emerging public health crisis. *Generation* 26:14–20, 2002
10. Achieving the Promise: Transforming Mental Health Care in America. Pub no SMA-03-3832. Rockville, Md, Department of Health and Human Services, President's New Freedom Commission on Mental Health, 2003
11. Callahan CM: Quality improvement research on late life depression in primary care. *Medical Care* 39:772–784, 2001
12. Unützer J, Bruce ML: The elderly. *Mental Health Services Research* 4:245–247, 2002
13. Mojtabai R, Olfson M: Major depression in community-dwelling middle-aged and older adults: prevalence and 2- and 4-year follow-up symptoms. *Psychological Medicine* 34:623–634, 2004
14. Munson M, Proctor EK, Morrow-Howell N, et al: Case managers speak out: responding to depression in community long-term care. *Psychiatric Services* 58:1124–1127, 2007
15. Klinkman MS: Competing demands in psychosocial care: a model for the identification and treatment of depressive disorders in primary care. *General Hospital Psychiatry* 19:98–111, 1997
16. Morrow-Howell N, Proctor EK, Choi S, et al: Depression in public community long-term care: implications for intervention development. *Journal of Behavioral Health Services and Research* 35:37–51, 2008
17. Kuzel AJ: Sampling in qualitative inquiry, in *Doing Qualitative Research*, 2nd ed. Edited by Crabtree BF, Miller WL. London, Sage, 1999
18. Lowe B, Unützer J, Callahan CM, et al: Monitoring depression treatment outcomes with the Patient Health Question-

- naire-9. *Medical Care* 42:1194-1201, 2004
19. Roccaforte WH, Burke WJ, Bayer BL, et al: Reliability and validity of the Short Portable Mental Status Questionnaire administered by telephone. *Journal of Geriatric Psychiatry and Neurology* 7:33-38, 1994
20. Bernard RH, Ryan GW: Text analyses, in *Handbook of Methods in Cultural Anthropology*. Edited by Bernard HR. London, Sage, 2000
21. Qualitative Solutions and Research: NVivo 2.0: Using NVivo in Qualitative Research. Melbourne, Australia, QSR International, 2002
22. Miller WL, Crabtree BJ: Clinical research: a multimethod typology and qualitative road-map, in *Doing Qualitative Research*, 2nd ed. Edited by Crabtree BF, Miller WL. London, Sage, 1999
23. Base SAS 9.1 Companion for Windows. Cary, NC, SAS Institute Inc, 2004
24. Kroenke K, Spitzer RL, Williams JB: The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine* 16:603-613, 2001
25. Bair MJ, Robinson RL, Katon W, et al: Depression and pain comorbidity: a literature review. *Archives of Internal Medicine* 163: 2433-2445, 2003
26. Bogner HR, Cary MS, Bruce ML, et al: The role of medical comorbidity in outcome of major depression in primary care: the PROSPECT study. *American Journal of Geriatric Psychiatry* 13:861-868, 2005
27. Charlson M, Peterson JC: Medical comorbidity and late life depression: what is known and what are the unmet needs? *Biological Psychiatry* 52:226-235, 2002
28. Lyness JM, Bruce ML, Koenig HG, et al: Depression and medical illness in late life: report of a symposium. *Journal of the American Geriatrics Society* 44:198-203, 1996
29. Penninx BW, Guralink JM, Ferrucci L, et al: Depressive symptoms and physical decline in community-dwelling older persons. *JAMA* 279:1720-1726, 1998
30. Proctor EK, Morrow-Howell NL, Dore P, et al: Comorbid medical conditions among depressed elderly patients discharged after acute psychiatric care. *American Journal of Geriatric Psychiatry* 11:329-338, 2003
31. *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. Washington, DC, American Psychiatric Association, 1994
32. Proctor EK, Morrow-Howell N, Lee MJ, et al: Quality of care for depressed elders in post-acute care: variations in needs met through services. *Journal of Behavioral Health Services and Research* 32:127-141, 2006
33. Morano CL, DeForge BR: The views of older community residents toward mental health problems. *Journal of Mental Health and Aging* 10:45-64, 2004
34. Bruce ML, Wells KB, Miranda J, et al: Barriers to reducing burden of affective disorders. *Mental Health Services Research* 4 (4):187-197, 2002
35. Unützer J, Katon W, Sullivan M, et al: Treating depressed older adults in primary care: narrowing the gap between efficacy and effectiveness. *Milbank Quarterly* 77: 225-256, 1999
36. George LK: Social factors and the onset and outcome of depression, in *Aging, Health Behaviors, and Health Outcomes*. Edited by Schaie KW, House JS, Blazer DG. Hillsdale, NJ, Erlbaum, 1992
37. Kemp B, Mitchell JM: Functional assessment in geriatric mental health, in *Handbook of Mental Health and Aging*. Edited by Birren JE, Sloane RB, Cohen GD. San Diego, Academic Press, 1992
38. Lebowitz BD, Niederehe G: Concepts and issues in mental health and aging, in *Handbook of Mental Health and Aging*, 2nd ed. Edited by Birren JE, Sloane RB, Cohen GD. San Diego, Academic Press, 1992
39. Lawrence V, Murray J, Banerjee S, et al: Concepts and causation of depression: a cross-cultural study of the beliefs of older adults. *Gerontologist* 46:23-32, 2006
40. Barg FK, Huss-Ashmore R, Wittink MN, et al: A mixed-methods approach to understanding loneliness and depression in older adults. *Journal of Gerontology: Social Sciences* 61:329-339, 2006
41. Rost K, Nutting P, Smith J, et al: The role of competing demands in the treatment provided primary care patients with major depression. *Archives of Family Medicine* 9: 150-154, 2000
42. Morrow-Howell N, Proctor EK, Rubin E, et al: Service needs of depressed older adults following acute psychiatric care. *Aging and Mental Health* 4:330-338, 2000
43. DiMatteo MR, Haskard KB, Williams SL: Health beliefs, disease severity, and patient adherence: a meta analysis. *Medical Care* 45:521-528, 2007
44. Sirey JA, Bruce ML, Alexopoulos GS, et al: Perceived stigma and patient-rated severity of illness as predictors of antidepressant drug adherence. *Psychiatric Services* 52: 1615-1620, 2001
45. Unützer J, Katon W, Callahan CM, et al: Collaborative care management of late life depression in the primary care setting: a randomized controlled trial. *JAMA* 288: 2836-2845, 2002
46. Bruce ML, Ten Have TR, Reynolds CF, et al: Reducing suicidal ideation and depressive symptoms in depressed older primary care patients: a randomized controlled trial. *JAMA* 291:1081-1091, 2004
47. Ciechanowski P, Wagner E, Schmalting K, et al: Community-integrated home-based depression treatment in older adults: a randomized controlled trial. *JAMA* 291:1569-1577, 2004
48. Areán PA, Gum A, McCulloch CE, et al: Treatment of depression in low-income older adults. *Psychology and Aging* 20:601-609, 2005
49. Gensichen J, Beyer M, Muth C, et al: Case management to improve major depression in primary health care: a systematic review. *Psychological Medicine* 35:1-8, 2005
50. Williams JW, Gerrity M, Holsinger T, et al: Systematic review of multifaceted interventions to improve depression care. *General Hospital Psychiatry* 29:91-116, 2007