

*The following abstracts, from medical journals containing literature on depression management, were selected for their relevance to this Special Report supplement.*

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### **Analysis of Depressive Disorders from the National Comorbidity Survey**

*Patients with subthreshold depression have significant functional impairment, an increased family history of clinical depression, and an elevated risk of subsequent clinical depression. Subthreshold depression, therefore, should be considered a variant of depressive disorder that should serve as a serious target for preventive intervention and treatment. This report presents general population epidemiologic data on the lifetime prevalence, correlates, course, and impairments associated with minor depression (mD), major depression with 5 to 6 symptoms (MD 5-6), and major depression with 7 or more symptoms (MD 7-9). Data were obtained from the National Comorbidity Survey, a nationally representative survey of 8098 respondents of the prevalence and correlates of DSM-III-R psychiatric disorders among people ages 15 to 45 in the US household population. The results showed mD and MD to be recurrent disorders and that many people with mD had a large number of minor depressive episodes rather than only 1 or 2 before the transition to MD. There was considerable evidence of incomplete episode resolution for MD and mD. The average number of lifetime episodes, average length of longest episode, and 30-day and 12-month prevalence increased along a gradient from mD to MD 7-9. Impairment, as measured by interference with daily life, visiting a physician or other professional for depression, and taking medications, increased significantly along the gradient from mD to MD 7-9. When comorbidities were analyzed, a higher proportion of minor depressives than major depressives had pure lifetime depressive disorders, defined as depression in the absence of other anxiety or addictive disorders. Previous anxiety disorders were associated with increased risk of both subsequent mD and subsequent MD. These results provide strong support for a significant clinical continuity between minor and major depressive disorders and suggest that mD should be taken seriously. The study also raises the possibility of the existence of 2 types of mD—primary mD that is unlikely to progress to MD and mD that is secondary and likely to progress to MD. Based on the fact that 10% of the US population will experience an episode of mD, there is an important public health need to further characterize this disorder.*

Kessler RC, Zhao S, Blazer DG, Swartz M. Prevalence, correlates, and course of minor depression and major depression in the national comorbidity survey. *J Affect Disord* 1997;45:19-30.

### Age-Related Differences in Psychiatric Diagnosis and Intervention

*Older patients with depression have higher mortality rates and higher health service use than older, nondepressed patients and are more likely to seek and receive mental health treatment from primary care physicians. Thus, increasing detection and treatment of mental illness in primary care may be essential for decreasing the excess morbidity seen in these patients. One strategy for accomplishing this is with formal screening questionnaires such as the Primary Care Evaluation of Mental Disorders (PRIME-MD), which was designed for use in primary care. In this study, the authors have examined the relationship between patient age and the likelihood of psychiatric diagnosis and intervention in a cohort of 952 younger (< 65 years) patients and 1135 older (> 65 years) patients after implementation of the PRIME-MD. Outcomes measured were rates of overall PRIME-MD use, overall and new psychiatric diagnosis, and provider intervention for psychiatric conditions. Patient age group was not significantly associated with PRIME-MD use. However, older patients were not only less likely to be diagnosed with a psychiatric disorder (OR = 0.42; P < 0.001), but were less likely to be diagnosed with psychiatric disorders in multivariate analyses that adjusted for positive or highly positive screens. Overall, 16% of older patients and 30% of younger patients with positive questionnaires received a psychiatric diagnosis. Providers were less likely to intervene for psychiatric conditions in older patients (OR = 0.39; P < 0.001). Seven percent of the older patients received an intervention, compared with 16% of the younger patients. The PRIME-MD increased rates of diagnosis and treatment but did not alter age-related differences. The diagnostic disparities were not caused by lower prevalence rates among the elderly or decreased screener sensitivity and suggest that providers responded differently to older and younger patients. Several reasons could account for decreased intervention among older patients—more concurrent medical conditions, less acceptance of a psychiatric diagnosis among older patients, ascribing of symptoms by providers to recent losses, and the feeling of providers that symptoms in older patients are less amenable to treatment. Thus, although the PRIME-MD increases rates of diagnosis and treatment, additional measures will be required to eliminate age-associated disparities.*

Valenstein M, Kales H, Mellow A, et al. Psychiatric diagnosis and intervention in older and younger patients in a primary care clinic: Effect of a screening and diagnostic instrument. *J Am Geriatr Soc* 1998;46:1499-1505.

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### Maintenance Therapy and Recurrence of Major Depression

*Depression in the elderly has serious health consequences and is associated with increased costs, disability, and mortality. Older patients are more prone to relapse and present a challenge for long-term management. Depression in older patients can be effectively treated during acute and continuation therapy over 6 to 12 months. However, maintenance therapy with combined medication and psychotherapy have not been examined. In this study, the efficacy of maintenance nortriptyline hydrochloride, interpersonal psychotherapy (IPT), or both in preventing recurrence was examined in a randomized, placebo-controlled trial in 107 patients (mean age, 67 years) with recurrent unipolar major depression, who were fully recovered after open treatment with nortriptyline and IPT. Survival analysis showed a significant effect of active treatment over placebo in preventing recurrences of major depressive episodes, with the following 3-year recurrence rates: nortriptyline and IPT, 20%; nortriptyline, 43%; IPT, 64%; and placebo, 90%. Combined treatment with nortriptyline and IPT was superior to IPT and placebo and showed a trend to superior efficacy over nortriptyline monotherapy. Older age was associated with a higher and more rapid recurrence during the first year of maintenance with the monotherapies or placebo. This study thus suggests a clinically significant advantage of combined medication and psychotherapy over medication or IPT alone. Continuation of combined medication and psychotherapy may represent the best long-term treatment strategy for preserving recovery in older patients.*

Reynolds CF, Frank E, Perel JM, et al. Nortriptyline and interpersonal psychotherapy as maintenance therapies for recurrent major depression. *JAMA* 1999;281:39-45.

### **Recognition, Management, and Outcomes of Depression in Primary Care**

*Current treatment of depression in primary care has significant shortcomings, if judged by the standards of specialists. Primary care physicians recognize only 50% of patients with major depression and initiate treatment in an even smaller percentage of cases; undertreatment is frequent; and many patients stop taking medications within the first month. Current knowledge of the outcomes among primary care patients with recognized or unrecognized depression suggests that the unrecognized group is less symptomatic and shows improvement without specific treatment. The clinical significance of nonrecognition or failure to treat with antidepressants is uncertain. This study presents the results of an epidemiologic survey of 1952 patients (age 18 to 65 years) in a primary care clinic of a staff-model health maintenance organization. Assessments were made at baseline and at 3 and 12 months with the Composite International Diagnostic Interview, Brief Disability Questionnaire, and General Health Assessment Questionnaire. Based on diagnostic interviews, 6.6% of patients had major depression and 8.8% had subthreshold depression. Primary care physicians recognized 41 (64%) of 64 patients with major depression and 17 (29%) of 58 patients with subthreshold depression as cases of psychologic disorder. Of patients with major depressive disorder, 36 (56%) received antidepressant medication within 3 months of screening and 23 (39%) of 59 patients reported at least one specialty mental health visit since screening. Both recognition and treatment were related to severity of symptoms and disability. Patients with unrecognized or untreated depression showed rates of improvement similar to those of patients with recognized or treated depression. This study showed that most cases of major depression were recognized by treating physicians, and patients received some level of treatment. Patients who were unrecognized or who were untreated appeared to have milder and more self-limited depression. The results argue for a more focused approach toward improving depression treatment, with resources being directed at ensuring adequate follow-up and relapse prevention among patients receiving treatment.*

Simon GE, Von Korff M. Recognition, management, and outcomes of depression in primary care. *Arch Fam Med* 1995;4:99-105.

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### **Collaborative Management of Depression in Primary Care**

*Randomized trials in specialty settings have shown the efficacy of antidepressant medications and specific psychotherapies in the treatment of major depression. However, epidemiologic studies of community and primary care populations have demonstrated that only about 30% of patients with major depression receive these treatments. Primary care represents a potential setting in which to improve these results, increase the percentage of people with major depression who receive treatment, and determine whether these treatments work for patients with minor depression. The integration of mental health services into primary care could potentially improve patients' adherence to antidepressant regimens and facilitate access to effective psychotherapies. In this trial, 153 primary care patients with current depression were randomized either to usual care or to an intervention that consisted of behavioral treatment and counseling and included 4 to 6 visits with an on-site psychologist for the patients, as well as instruction and case-by-case consultation for the primary care physician. All information was reviewed by a psychiatrist who recommended any change in medication. More than half the patients who were referred to a psychologist in this study met the criteria for minor depression. At 4 months of follow-up, significantly more intervention patients with major and minor depression than usual-care patients adhered to antidepressant medication. Satisfaction with care of depression in intervention patients with minor and major depression was also increased compared with controls. Of greatest significance, the intervention was associated with improvement in all 4 clinical outcomes for major depression. The outcome results in patients with minor depression were not as clear-cut, and effectiveness was suggested in only 1 of 4 study outcome analyses compared with usual care patients, suggesting a high rate of spontaneous remission in patients with minor depression. The results indicate that integrating a range of specialty mental health providers into primary care practice can improve outcomes and patient satisfaction for treatment of major depression.*

Katon W, Robinson P, Von Korff M, et al. A multifaceted intervention to improve treatment of depression in primary care. *Arch Gen Psychiatry* 1996;53:924-932.

### Costs of Depression in Older Patients

Both major depression and subthreshold depression have a significant impact on older individuals' quality of life and ability to function and are associated with other adverse outcomes, such as increased medical morbidity and mortality. Because most patients with depression are evaluated and treated in primary care settings, this study was performed in a large staff-model health maintenance organization (HMO) to examine the association between depressive symptoms and the cost of general health services. This was a prospective cohort study that enrolled 2558 subjects. The main outcome measures were depressive symptoms, measured with the Center for Epidemiological Studies Depression scale (CES-D) at 2 and 4 years, and cost of health services obtained from computerized databases, including outpatient visits, hospitalization, pharmacy, and laboratory costs. The mean CES-D score at baseline was 8.5, and during the 4 years of the study the prevalence of major depression ranged from 14% to 18%. A significant subset had depressive symptoms that persisted from 2 to 4 years. Patients with significant depressive symptoms at baseline had higher median costs during the first year (\$2147) than patients without depressive symptoms (\$1461) and also had higher median costs during the 4-year period after the baseline survey (\$15,423 versus \$10,152). There was no significant interaction between the presence of depressive symptoms and chronic medical illness. The effect of depression was consistent across all categories of costs. The association of depression and total healthcare costs remained significant after adjustment for age, sex, and severity of chronic illness. Only about 1% of costs was accounted for by specialty mental health or substance abuse treatment. This study focused on direct costs of health-care from the perspective of the HMO and probably underestimates the total economic impact of depression, especially in terms of loss of productivity of the patients and their caregivers.

Unitzer J, Patrick DL, Simon G, et al. Depressive symptoms and the cost of health services in HMO patients aged 65 years and older. *JAMA* 1997;277:1618-1623.

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### Course of Unipolar Major Depressive Disorder

Most studies of unipolar disorder have focused on relapse and chronicity of major depressive episodes (MDEs). Alternative subtypes of depression have been described from cross-sectional studies of major depressive disorder (MDD), suggesting that the course of MDD may be pleomorphic and varied. The authors conducted weekly analyses of depressive symptoms in a cohort of 431 patients with MDD evaluated prospectively in the National Institute of Mental Health Collaborative Study. Patients were divided into 4 levels of severity: 1) depressive symptoms at the threshold of MDD; 2) depressive symptoms at the threshold for minor depressive or dysthymic disorder (minD); 3) subthreshold depressive symptoms (SSD); and 4) no depressive symptoms. Patients with MDD spent 41.5% of follow-up weeks asymptomatic, 26.7% of weeks with minD, 16.5% of weeks with SSDs, and 15.3% of weeks with MDD. Patients with their first lifetime MDE were symptom-free in 54% of weeks and experienced their first depressive episode later and had a later age of onset compared with patients with a history of MDEs. Patients with MDD manifested symptoms during 59% of follow-up weeks, and 27% never had an asymptomatic week during follow-up. Fifty-nine percent of patients with MDD spent weeks at each of the 4 depression levels, and patients changed symptom levels an average of 1.8 times per year. Patients in the first episode had significantly fewer total changes compared with patients with prior depression. At the MDD level, patients received antidepressants in 60.8% of weeks. Thus, these weekly analyses of unipolar MDD reveal prolonged chronic symptoms during the course of illness, with symptoms absent in only 41.5% of weeks, and 23% of patients who had at least a 2-year follow-up were never free of depressive symptoms. The weekly course of MDD primarily involved minD and SSD symptoms, which were 3 times more common than MDD symptoms. The authors hypothesize that unipolar depression is a clinically homogeneous illness in which major, minor, and subsyndromal depressive symptoms commonly alternate over time in the same patients as different manifestations and levels of the activity of illness.

Judd LL, Akiskal HS, Maser JD, et al. A prospective 12-year study of subsyndromal and syndromal depressive symptoms in unipolar major depressive disorders. *Arch Gen Psychiatry* 1998;55:694-700.

### Physicians' Perspectives on Concurrent Treatment in the Community

Primary care physicians (PCPs) treat the majority of patients with depressive disorders. Treatment by mental health providers (MHPs) may have better outcomes, but it is more expensive and less readily available. Collaborative treatment by PCPs and MHPs results in better outcomes for patients with major depression in randomized, controlled trials; however, little is known about concurrent treatment of depressed patients in community settings. The authors report the results of a survey of 276 PCPs in Michigan on concurrent treatment arrangements and provider, environmental, and organizational factors that predict collaboration. Surveys were returned by 162 PCPs (59%). PCPs reported spending 20% of their time treating patients with depression. They treated 50% of patients by themselves, cotreated 30% with MHPs, and referred 10% of patients out. Physicians primarily cotreated with psychologists (42.5% of cotreatments). They made contact with cotreating MHPs in 50% of shared cases, most commonly to communicate at the beginning of treatment (25%) or to discuss a medication change (20%). However, provider contact seldom included joint treatment planning. Multivariate regression indicated that physical colocation of MHPs and PCPs was a predictor of enhanced collaboration ( $P < 0.001$ ), and conversely, practicing in a smaller town was predictive of decreased collaboration ( $P < 0.05$ ). Other characteristics, such as sex, date of graduation, type of medical degree, number of patients in a half-day clinic, and having more managed care patients, did not predict collaboration. However, collaborations were found to be more difficult when patients were enrolled in a managed care program in terms of contacting and trusting MHPs and the quality of the relationship. The results indicated that concurrent treatment of patients with depression by PCPs and MHPs is common in the community, although these arrangements did not resemble the intensive interactive models shown to be effective in clinical trials. Colocation is important for these treatments to be more collaborative.

Valenstein M, Klinkman M, Becker S, et al. Concurrent treatment of patients with depression in the community: Provider practices, attitudes, and barriers to collaboration. *J Fam Pract* 1999;48:180-187.