Counseling via Analogy: Improving Patient Adherence in Major Depressive Disorder

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SCOPE AND SEVERITY OF MAJOR DEPRESSIVE DISORDER

Rates of major depressive disorder (MDD) in the United States are approximately 16.2% for lifetime prevalence and 6.6% for 1-year prevalence.[1] Suicide is the 11th leading cause of death in the United States, resulting in more deaths annually than human immunodeficiency virus.[2] The consequences and costs of untreated MDD are immense. The psychosocial consequences of MDD in terms of marital and family strain are severe, and impairment resulting from MDD contributes to reduced productivity.[3–5] Untreated MDD also has physical consequences for patients. Evidence suggests that the presence of MDD is a significant risk factor for stroke, hypertension, heart disease, and death after myocardial infarction.[6–9] The enormous magnitude and impact of untreated MDD are highlighted by the World Bank's 1996 report noting MDD as the fourth leading contributor to total disability-adjusted life-years lost on a worldwide basis and by their projection that MDD will be the second leading contributor by the year 2020.[10]

Patient resistance to diagnosis and treatment is seen by primary care physicians as the most challenging barrier to initiating treatment for depression.[11] Studies examining patient adherence with medication have found that a substantial number of patients who are prescribed antidepressants do not take them as directed.[12,13] It is estimated that, of the 57% of patients with MDD receiving treatment for depression in the primary care setting, only 1 in 5 is adequately treated.[1] Insufficient frequency and duration of treatment for MDD are strongly associated with higher rates of depressive relapse and impaired functioning.[14–17] Another effect of inadequate treatment of MDD is suicide; approximately 15% of all patients hospitalized for depression will die by suicide.[18] Psychiatric research has now firmly established the frequency with which MDD becomes a recurrent or chronic illness. In a primary care study of patients with MDD, 37% relapsed within a 1-year follow-up period.[19] Likelihood of depressive relapse increases with number of prior episodes of MDD; the median number of episodes across the life span is 4.[20,21] Treatment with antidepressants or psychotherapy greatly improves time to recovery and lengthens time to depressive relapse.[22,23]

TREATMENT SEEKING FOR MAJOR DEPRESSIVE DISORDER

The process by which patients decide to seek care for depressive symptoms involves multiple steps, both in choosing a care provider and in following through with treatment.[24] Beliefs about health care provider helpfulness and treatment effectiveness affect both the decision to seek care and the type of provider sought.[25,26] Factors found to correlate with the decision to pursue care for depression include higher levels of education and high levels of distress from the episode (i.e., longer duration, greater impact on role functioning).[27–30] Seeking care from a primary care physician as opposed to a mental health specialist is associated with lower educational level and ease of access, but not with severity of symptoms, medical comorbidity, or level of social support.[29,31] Deciding not to pursue treatment has been associated with failure in recognizing depression as an illness and not considering it a serious problem.[30]

Substantial data demonstrate alterations in brain function and biochemistry among those with MDD, with normalization of parameters following treatment of MDD via psychotherapy or medication.[32,33] Despite this objective evidence, mental illnesses such as MDD are often viewed by sufferers (and their relatives) as deficiencies in character or willpower, in contrast to illnesses traditionally considered "physical." The tendencies of health insurance organizations to place special limits on treatment for mental illnesses and to list mental health benefits and providers separately from those for other health problems contribute to this false distinction. Such a non–biologically based

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Table 1. Similarities Among Major Depressive Disorder, Hypertension, and Diabetes for Use in Patient Counseling via Analogy

Feature	Major Depressive Disorder	Hypertension	Diabetes
Prevalence	High (6%)[a]	Very high (28%)[b]	High (7%)[c]
Onset	Childhood or adult	Childhood or adult	Childhood or adult
Etiology	Genetic predisposition, environmental	Genetic predisposition, environmental	Genetic predisposition, environmental
Primary organ	Brain	Vasculature	Pancreas or muscles/tissues
Disturbed homeostasis	Neurotransmitter tone	Vascular tone	Glucose regulation
Chemical transmitters	Serotonin, norepinephrine	Norepinephrine, epinephrine	Insulin, glucagon
Exacerbating agent	Excess social stress	Excess stress, salt intake	Excess caloric intake
Related disorders	Anxiety disorders, substance abuse	Heart disease	Hypertension, obesity
Major physical consequences (if untreated)	Myocardial infarction, stroke, hypertension, suicide	Myocardial infarction, stroke, renal failure	Myocardial infarction, stroke, renal failure, loss of vision, amputation
Management (self-monitoring)	Mood, thought patterns	Blood pressure	Blood glucose
Stepped treatment			
Mild disease	Lifestyle modification via social support and exercise, psychotherapy	Lifestyle modification via diet and exercise	Lifestyle modification via diet and exercise
Moderate disease	Medication	Medication	Medication
Severe disease	Medication combinations, electroconvulsive therapy	Medication combinations, intravenous medications	Medication combinations, insulin pump
Potential disability	Significant	Significant	Significant
Caregiver stress	High	Moderate	High

[a]Data from Kessler et al.[1]
[b]Data from Glover et al.[38]
[c]Data from Acton et al.[39]

view of mental illness contributes to resistance in seeking and accepting treatment for MDD.[31,34] In fact, the authors of a recent study on patient attitudes in primary care concluded that "up to half of patients with depression may be reluctant to accept evidence-based treatment for depression."[31(p999)] Given the extent and consequences of untreated MDD, it is vital that health care providers find ways to promote patient acceptance of MDD as a treatable illness and patient willingness to initiate and complete treatment.

DEVELOPMENT OF THE MEDICAL ANALOGIES MODEL

We have developed a model for use in clinical practice that attempts to address the particular challenges faced by primary care physicians in initiating and sustaining treatment for their depressed patients. Specifically, in an effort to promote patients' understanding of the biological nature of MDD and increase acceptance of treatment, we use analogies between 2 common diseases (diabetes and hypertension) and MDD. This model grew out of unstructured conversations exploring attitudinal change in patients initially resistant but later agreeable to treatment, combined with a review of the treatment-seeking literature in depression. The model of using medical analogies specifically targets 2 factors identified by others[27–30] as barriers to initiating treatment in the primary care setting: low levels of education and low perceived severity of illness. First, by providing analogies to concrete examples with which a patient is likely to be familiar, such as hypertension and diabetes, our goal is to make the abstract and somewhat difficult-to-grasp concepts of "invisible" brain dysfunction more tangible to less educated patients and provide a sense that depression is truly an illness. Most people know someone with diabetes or hypertension and accept these diseases as biological conditions in need of treatment. The analogies model can help guide patients in reframing their psychological distress into a coherent biological illness. Second, by accentuating the medical and long-term consequences of untreated depression, we endeavor to increase patients' conception of the illness as a potentially severe problem, emotionally activating them to consider change. As education alone has been shown to be insufficient to induce change in many patients,[35] our model emphasizes the biological basis and potential long-term, severe consequences of MDD, thus providing a level of motivational enhancement for change, which other researchers have demonstrated to be effective.[36,37]

In Table 1, we list the specific similarities among the diseases, which can be employed to increase patients' understanding of the biological nature and potential severity of MDD. Such analogies may be particularly useful in patients with diabetes or hypertension who develop MDD. We present the table to be used as an aid in the clinical

encounter between health care provider and patient. Not all points would need to be brought to the patient's attention; rather, specific items that the health care provider believes will resonate with the patient's conception of the illness could be selected.

OUR EXPERIENCE WITH THE MODEL

We have found this model to be particularly useful for patients of lower education levels and those experiencing minimal role dysfunction despite significant distress. Patients who have long-standing symptoms or who are experiencing significant consequences (such as losing a job) as a result of their impairment from depression typically require little convincing of the need for treatment. Use of the model during a single office visit is often not successful in changing the mind of a patient resistant to treatment, but continuing to present the case for treatment at future visits can lead to gratifying acceptance by the patient, much as has been demonstrated in counseling for smoking cessation.[37] We have also found the model useful in several patients who, though well educated, were psychologically defended against the idea of being psychiatrically vulnerable. In patients such as these, who may frown upon the concept of "needing a mental crutch," emphasizing the "responsible choice" of accepting treatment to prevent long-term consequences that may pose a problem or burden to loved ones has also proved useful. While we have not explored the use of our model by nonphysician providers, there is a potential for this form of counseling to be developed as a brief intervention by ancillary providers. It is our hope that wider usage of medical analogies for depression will result in greater rates of treatment and reduced stigmatization of patients treated for mental illness.

REFERENCES

1. Kessler RC, Berglund P, Demler O, et al. The epidemiology of major depressive disorder: results from the National Comorbidity Survey Replication (NCS-R). JAMA 2003;289:3095–3105
2. National Institute of Mental Health. Suicide Facts and Statistics [monograph on the Internet]. Washington, DC: National Academy Press; 2004. Available at: http://www.nimh.nih.gov/suicideprevention/suifact.cfm. Accessed March 18, 2005
3. Judd LL, Paulus MP, Wells KB, et al. Socioeconomic burden of subsyndromal depressive symptoms and major depression in a sample of the general population. Am J Psychiatry 1996;153:1411–1417
4. Wells K, Stewart AL, Hays RD, et al. The functioning and well-being of depressed patients: results from the Medical Outcomes Study. JAMA 1989;262:914–919
5. Stewart WF, Ricci JA, Chee E, et al. Cost of lost productive work time among US workers with depression. JAMA 2003;289:3135–3144
6. Jonas BS, Mussolino ME. Symptoms of depression as a prospective risk factor for stroke. Psychosom Med 2000;62:463–471
7. Jonas BS, Franks P, Ingram DD. Are symptoms of anxiety and depression risk factors for hypertension? longitudinal evidence from the National Health and Nutrition Examination Survey I Epidemiologic Follow-Up Study. Arch Fam Med 1997;6:43–49
8. Frasure-Smith N, Lesperance F, Talajic M. Depression following myocardial infarction: impact on 6-month survival. JAMA 1993; 270:1819–1825
9. Anda R, Williamson D, Jones D, et al. Depressed affect, hopelessness, and the risk of ischemic heart disease in a cohort of US adults. Epidemiology 1993;4:285–294
10. Murray C, Lopez A. 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 on behalf of the World Health Organization and the World Bank; 1996
11. Nutting PA, Rost K, Dickinson M, et al. Barriers to initiating depression treatment in primary care practice. J Gen Intern Med 2002;17:103–111
12. Souery D, Mendlewicz J. Compliance and therapeutic issues in resistant depression. Int Clin Psychopharmacol 1998;13:S13–S18
13. Demyttenaere K. Risk factors and predictors of compliance in depression. Eur Neuropsychopharmacol 2003;13(suppl 5):S69–S75
14. Judd LL, Akiskal HS, Maser JD, et al. Major depressive disorder: a prospective study of residual subthreshold depressive symptoms as predictor of rapid relapse. J Affect Disord 1998;50:97–108
15. Fava M, Rosenbaum JF, McGrath PJ. Lithium and tricyclic augmentation of fluoxetine treatment for resistant major depression: a double-blind, controlled study. Am J Psychiatry 1994;151:1372–1374
16. Nierenberg AA, Amsterdam JD. Treatment-resistant depression: definition and treatment approaches. J Clin Psychiatry 1990;51(suppl):39–47
17. Nierenberg AA, Keefe BR, Leslie VC, et al. Residual symptoms in depressed patients who respond acutely to fluoxetine. J Clin Psychiatry 1999;60:221–225
18. Blumenthal SJ, Kupfer DJ, eds. Suicide Over the Life Cycle: Risk Factors, Assessment, and Treatment of Suicidal Patients. Washington, DC: American Psychiatric Association; 1990
19. Lin EHB, Katon WJ, VonKorff M, et al. Relapse of depression in primary care. Arch Fam Med 1998;7:443–449
20. NIMH/NIH Consensus Development Conference statement. Mood disorders: pharmacologic prevention of recurrences. Am J Psychiatry 1985;142:469–476
21. Angst J. Clinical course of affective disorders. In: Helgason T, Daly R, eds. Depressive Illness: Prediction of Course and Outcome. Berlin, Germany: Springer-Verlag; 1988:1–47
22. Kroenke K, West SL, Swindle R, et al. Similar effectiveness of paroxetine, fluoxetine, and sertraline in primary care: a randomized trial. JAMA 2001;286:2947–2955
23. Keller MB, Kocsis JH, Thase ME, et al. Maintenance phase efficacy of sertraline for chronic depression: a randomized controlled trial. JAMA 1998;280:1665–1672
24. Mechanic D. The epidemiology of illness behavior and its relationship to physical and psychological distress. In: Mechanic D, ed. Symptoms, Illness Behavior and Help Seeking. New York, NY: Prodist; 1982:1–24
25. Leaf PJ, Bruce ML, Tischler GL, et al. Factors affecting the utilization of specialty and general medical mental health services. Med Care 1988;26:9–26
26. Greenly J, Mechanic D. Social selection for those seeking help for psychological problems. J Health Soc Behav 1976;17:249–262
27. Mechanic D, Angel R, Davies L. Risk and selection processes between the general and the specialty mental health sectors. J Health Soc Behav 1991;32:49–64
28. Mojtabai R, Olfson M, Mechanic D. Perceived need and help-seeking in adults with mood, anxiety, or substance abuse disorders. Arch Gen Psychiatry 2002;59:77–84
29. Fortney J, Rost K, Zhang M. A joint choice model of the decision to seek depression treatment and choice of provider sector. Med Care 1998;36: 307–320
30. Blumenthal R, Endicott J. Barriers to seeking treatment for major depression. Depress Anxiety 1996;4:273–278
31. Van Voorhees BW, Cooper LA, Rost KM, et al. Primary care patients with depression are less accepting of treatment than those seen by mental health specialists. J Gen Intern Med 2003;18:991–1000
32. Manji HK, Drevets WC, Charney DS. The cellular neurobiology of depression. Nat Med 2001;7:541–547
33. Mayberg HS, Brannan SK, Tekell JL, et al. Regional metabolic effects of fluoxetine in major depression: serial changes and relationship to clinical response. Biol Psychiatry 2000;48:830–843

34. Jorm AF, Korten AE, Jacomb PA, et al. Helpfulness of interventions for mental disorders: beliefs of health professionals compared with the general public. Br J Psychiatry 1997;171:233–237
35. Vergouwen AC, Bakker A, Katon WJ, et al. Improving adherence to antidepressants: a systematic review of interventions. J Clin Psychiatry 2003;64:1415–1420
36. Miller WR, Rollnick S. Motivational Interviewing: Preparing People to Change. New York, NY: Guilford Press; 2002
37. Fiore M, Bailey WC, Cohen SJ, et al. Treating Tobacco Use and Dependence. Rockville, Md: US Dept Health and Human Services; 2000
38. Glover J, Greenlund KJ, Ayala C, et al. Racial/ethnic disparities in prevalence, treatment, and control of hypertension—United States, 1999–2002. Morb Mortal Wkly Rep 2005;54:7–9
39. Acton KJ, Burrows NR, Geiss LS, et al. Diabetes prevalence among the overall population—United States, 1994–2002. Morb Mortal Wkly Rep 2003;52:702–704