

Chapter 2

Primary Care *Is* the De Facto Mental Health System

Rodger Kessler and Dale Stafford

This chapter is a review of the research literature that suggests that primary care is the de facto behavioral health services and care system. It will summarize and reiterate the following points that have been made in the research literature for many years:

- Most patients with psychological problems are seen in nonpsychiatric medical settings
- Many medical presentations contain significant psychological comorbidity. Strosahl and Robinson point out in Chap. 8 that presentations that are for specific psychological or substance abuse issues are infrequent. More often, psychological issues are found to be part of acute medical issues, such as sleeping problems, headache or gastrointestinal problems, as well as complex chronic medical conditions such as diabetes, cardiac conditions or pain.
- The costs of untreated or inadequately treated behavioral problems include lack of medical improvement, decreased compliance with medical treatment and overserved and underserved patients.¹
- There are multiple clinical, administrative and financial barriers to effective psychological care in medicine and medical settings.
- The most effective response to these issues is developing medical-psychological collaborative care models in primary care practices. There is ample reason to think that this will produce the holy grail of medicine—better care and higher levels of patient-centered involvement, resulting in better health status and reduced need and demand for medical resources.²

Patients with Behavioral Health Problems are Primarily Seen in Primary and Specialty Medical Care

For over 25 years there has been a robust literature suggesting that when patients have psychological or behavioral problems they will turn almost exclusively to the primary care medical office, not to traditional mental health and substance abuse services for care;³ hence the conclusion that primary care is the de facto mental health system.

Patients with psychological problems are most likely to receive medical services related to such problems solely in primary care medical settings.⁴⁻⁵ It has been demonstrated that 43 to 60% of patients with psychological problems are solely treated in primary medicine, while 17 to 20% of patients with psychological problems are treated in the specialty mental health system.⁶⁻⁷

At any given time in primary care, there is a prevalence of psychiatric disorders of 21 to 26%.⁸⁻⁹ For patients with chronic medical disorders the rates for hospitalized medical inpatients are triple the community rates of comorbidity.⁸

Depression, anxiety, panic, somatization and substance abuse are the most frequently encountered diagnostic presentations.¹⁰⁻¹¹ Eighty percent of people who come to primary care because of psychological and social distress present with physical symptoms.^{3, 12} Most often there is no identifiable organic cause for the somatic complaints that are presented and half of patients presenting to a primary care office will be found to have no medical illness, while almost a third will present with multiple unexplainable symptoms.¹³⁻¹⁵

In these settings psychological and behavioral problems are often undetected,^{11, 16-17} resulting in infrequent use of evidence-based treatments and suboptimal management.^{16, 18} Treatment rates for the psychological diagnostic categories most frequently seen in primary care are generally poor.¹⁹ Among medical inpatients, formal diagnosis is made in only 11% of cases, depression was accurately diagnosed in 14 to 50% of cases and alcohol-related disorders were accurately diagnosed only in 5 to 50% of cases.²⁰

Pharmacology is the most common treatment intervention for psychological disorders. When pharmacologic treatment of behavioral disorders is initiated, less than half of all patients remain on the medication for a therapeutically indicated period of time.²¹⁻²² Coyne et al.²³ note that with focused efforts to detect comorbidities, a quarter to a third of primary care patients will screen positive and 18 to 30% of those positively screened will meet the criteria for diagnosis. For those patients diagnosed with psychological or behavioral comorbidity, treatment initiation is very low.²³⁻²⁴

Many Medical Presentations Have Psychological Dimensions

Psychological factors influence physiological functioning and in some situations appear to determine the course and utilization of medical care. Twenty percent to 50% of patients are not adherent to medical treatment recommendations.²⁵ Patients who are treated for mental health related problems use significantly more *medical* services than patients who are not so treated²⁶ and untreated psychological comorbidity is a predictor of decreased medication compliance.²⁷

The problem is particularly severe for patients with chronic medical disorders. Over 20 years ago, the Medical Outcome Study noted medical-behavioral comorbidity in any chronic medical condition of 65%. In 2002, United Health Care, as part of the Goal Focused Treatment and Outcome Study, observed that 40% of the

1,859 patients treated for depression also displayed at least one chronic medical condition.²⁸ Recently, findings from the Star*D (sequenced treatment of alternatives to relieve depression) suggest that in both cohorts of over 4,000 patients, total depressive comorbidity with medical illness was about 50%.²⁹

Psychological distress increases with the number of medical comorbidities that are present.³⁰ When there is a psychological comorbidity along with a chronic medical condition, significantly more impaired functioning and worse health status are reported.^{31–33} Heart disease, chronic lung disease, diabetes, cancer, chronic pain, sleep disorders, stroke and arthritis are the most frequently cited disorders associated with psychological comorbidity.^{33–37} The World Health Organization's World Health Survey was recently completed by over 245,000 patients. The results suggested that depression causes the greatest decrement in health when compared with angina, arthritis, asthma or diabetes, and that the comorbid state of depression with any of the chronic diseases alone worsens health more than depression alone, or with any combination of the chronic diseases.³⁸

Major depression is a risk factor for the development of cardiac disease in healthy patients and for adverse cardiac outcomes in patients with heart disease. Depression is present in 20% of outpatients with cardiac disease and a third of patients with congestive heart failure.³⁹ In patients with congestive heart failure, for example, there have been reports of comorbid depression rates from 11 to 25% in outpatients and from 35 to 70% in inpatients.⁴⁰ Depressed patients who have a myocardial infarction or a stroke have higher mortality rates.^{41–42} Recently an analysis of 17 studies of cardiac disease depressive comorbidity found that depression after a cardiac event was associated with a threefold increase in cardiac mortality.⁴³ The risks for depressive cardiac comorbidity are twice as high for women under 60 years of age as they are for women older than 60.⁴⁴ In addition, there has been a recent finding that use of antidepressant medication in patients with heart failure was associated with increased likelihood of death or cardiovascular hospitalization, limiting pharmacologic treatment for depression as an option.⁴⁵ So for such patients, nonpharmacologic psychological treatments are that much more important.

Patients with chronic obstructive pulmonary disease (COPD) have a comorbidity with depression that is almost 45% and is associated with longer hospital stays, increased symptoms and poorer functioning.⁴⁶ There is a high prevalence of adults with arthritis and depression. When there is such a comorbidity, treatment compliance is worse, and there is poorer general health, greater disability and increased pain reports.^{47–48} There have also been reports suggesting that the presence of depression comorbid with sleep-related breathing disorders.⁴⁹

Considerable attention has been paid to psychological comorbidity with diabetes. Depression rates for patients with diabetes are twice as high as those for other primary care patients, with rates of 15 to 30% reported.³⁷ Because depression is associated with hyperlipidemia and heart failure, there is increased risk of cardiac events among patients with diabetes.³⁷ When there is behavioral comorbidity, there is a poorer illness course,^{50–51} particularly if there are multiple diabetic complications.⁵² The greater the level of measured depression, the worse the adherence to medical treatments.⁵³ Panic is frequently comorbid with diabetes, and when panic

disorder is present, there is also a high frequency of comorbidity with depression.⁵⁴ Older adults with history of depressive symptoms were more likely to *develop* diabetes, and the association is not fully explained by risk factors for diabetes.⁵⁵ Depressive comorbidity is associated with higher A1c levels,⁵⁶ and higher mortality.^{51,57} In addition, it appears that when women are diagnosed with type 2 diabetes, there is both a higher risk of their children developing diabetes⁵⁸ and a higher incidence of depression in their offspring.⁵⁹

There Are Costs of Untreated or Inadequately Treated Psychological Problems

It has long been established that patients with psychological comorbidities have more costly health care. This is only partially explained by their medical conditions.⁶⁰⁻⁶¹ The majority of these costs were for general medical services and medications, not behavioral health services.⁶² There is a large amount of research that suggests patients with behavioral and medical comorbidities have 30 to 100% higher non-mental-health utilization of health care resources.^{61, 63}

For example, in one investigation Simon et al.⁶¹ found that the annual health costs of depressed patients are \$4,246 compared with \$2,371 for nondepressed patients. Controlling for morbidity, depressed patients utilize three times the amount of health care services, incur twice the medical costs, and make seven times the number of visits to the emergency room.⁶¹ Depression associated with diabetes produces 50 to 75% increases in health care costs.⁶⁴ Untreated psychological conditions result in poorer physical health, less effective medical treatment and higher mortality rates. This is in addition to the increased utilization of services and increased costs of medical services already discussed.⁶⁵⁻⁶⁶ In some samples, almost 20% of primary care patients have been assessed with an anxiety disorder.¹¹ When anxiety disorders are comorbid with asthma, there is triple the hospitalization rate.¹⁷ Such findings suggest a patient population that is overserved and underserved.¹

High utilizers of medical services have high frequencies of psychological distress.⁶⁷ Conversely, patients with a chronic medical illness who are high utilizers of medical services have a high prevalence of comorbid psychological disorders. Affective, somatization and anxiety disorders are the most frequent comorbid conditions.⁶⁸

The prevalence of psychiatric disorders amongst high utilizers of medical services reveals rates of somatization disorder and anxiety disorders over 20% and panic disorder over 10%.⁶⁸ The top 10% of medical services utilizers account for 25% of all primary care visits, 52% of specialty visits, 40% of hospital days and 26% of all prescriptions written.⁶⁷ High utilizers of health care had 3 times as many office visits, diagnoses and medications; and had 8 times as many hospital admissions.⁶⁹ Katon et al.⁶⁷ have further observed that the top 10% of primary care patients use more services than the lowest 50%.

We are therefore left with a large patient population whose often unrecognized and untreated psychological comorbidities worsen health status and contribute to significantly greater utilization and cost of medical services.

There Are Multiple Clinical, Administrative and Financial Barriers to Effective Psychological Care in Medical Settings

There are multiple clinical and systems barriers that limit effective psychological and behavioral care for those patients that need it.⁷⁰ It is still rare for psychologists and other behavioral health practitioners to practice within medical settings.⁷¹ One barrier is the lack of appropriately trained, on-site behavioral health clinicians. When referrals are made to clinicians outside of the medical office, patients rarely follow through and participate in off-site treatment.^{24, 72–73} Studies show 50 to 90% of referrals made to out-of-the-office mental health practitioners result in no appointment being made.^{74–75}

Historically, it has been referral to specialty care off of the primary care site that has dealt with further evaluation and treatment of complex, chronic medical problems. Such a model has not been effective in dealing with psychological and psychiatric problems. It is also not the usual practice to have “specialty medical services” being provided as part of usual care. This has begun to change a bit. Within the last 15 years, the chronic care model has been the subject of substantial medical attention.⁷⁶ Such a model identifies that chronic medical problems require ongoing, often interdisciplinary care. It also suggests that since psychosocial issues often interfere with optimal patient participation and compliance with medical care, there is a need to adopt behavior change as a focus of care. Unfortunately, such efforts have not often included assessing and treating the underlying psychological issues that limit effective adaptation and coping. Without that attention, behavior change has proved elusive.⁷⁷ Even more recently, there has been a focus on applying the chronic disease model to depression. Unfortunately, the lack of focus on significant psychological involvement in the model reinforces mental health issues being carved out from other medical issues. This, then, limits the effectiveness of the intervention.

As any primary care physician trying to find psychological assistance for their patients knows too well, most psychological care has been carved out to managed care. Since managed care focuses on cost savings within given patient populations, it has focused on limiting access to and supply of services for short-term cost savings. There is no incentive to use behavioral health to assist in the reduction of the need and demand for medical services, even though untreated comorbidities are the demonstrable cost drivers. Managed care incursion into medicine adds to carve-out costs, so there is no motivation to assist patient behavioral health care in physicians’ practices. Neither is there motivation to develop procedures and funding streams to assist development of medical-behavioral collaboration.

This and other reasons have resulted in increased difficulty for physicians accessing already difficult to access psychological services and a natural reluctance

to take on yet another, time-consuming task. This is part of the reason why behavioral health services have consistently been identified by physicians as being more difficult to access than any other specialty.^{78–79} Mental health referral had the lowest percentage of specialty referral in a survey of family physicians' referral decisions, with a rate of 4.2% of all referrals made in a sample of 2,534 referrals.⁸⁰ Over half of primary care physicians sampled reported problems arranging outpatient behavioral health care.⁷⁸

On the behavioral health side, there has only been limited attention to working within nonpsychiatric medicine. Most psychologists and other providers are not on the staff of community and regional hospitals. They generally do not participate in the settings and tasks in which medical practitioners get to know each other and each other's practice, or work together planning the delivery of health care. Because psychologists and behavioral health practitioners have functioned as autonomous practitioners, there is a limited knowledge of how primary care operates, the skills necessary to function in that setting and what is expected of them.^{81–82}

This situation is compounded by behavioral health practitioners having a limited embracing of the empirically supported treatments whose applications have been demonstrated as effective in medicine. Despite lengthy evidence supporting guideline-based care for behavioral disorders in primary care, such treatments remain the exception, rather than the rule.⁸³ The emerging culture of medicine includes a strong focus on evidence-based treatments. Until psychological and behavioral treatments address the importance of evidence-based support, there is a risk of their continuing to be viewed by primary care providers as a black hole, with no relation to medicine as practiced.⁸⁴ Also, many physicians are uneducated as to the types of available behavioral health practitioners, their skill sets and the types of psychological treatments appropriate for a particular patient and problem.

On the other hand, there is ample reason to think that the most effective response to these issues is improving collaborative medical-psychological care delivered within primary care practices. There is consistent evidence that supports the efficacy of evidence-based psychological interventions as part of the treatment of medical issues.^{12, 85–86} Some studies have demonstrated the effectiveness of such interventions in the primary care office.⁶⁵ Collaborative care models have been demonstrated to be more effective than consult-liaison models of care⁸⁷ and have lowered costs while providing effective clinical outcomes.^{65, 88}

Treating medical-psychological comorbidities has been the subject of a robust literature suggesting that specific behavioral health treatments are clinically, and potentially, cost-effective. Such psychological treatments of medical problems have demonstrated reduction of hospitalizations and rehospitalizations, physician visits, emergency room use, levels of pain, analgesic medication costs, disability claims, mortality and medical costs and enhanced quality of life.^{89–93}

Kripilani et al.²⁵ reviewed 37 controlled trials evaluating medication compliance and clinical outcomes in patients with chronic medical conditions from 1967 to 2004. The findings suggested that adherence increased most consistently with behavioral interventions. Such interventions have generally focused on enhancing self-management and self-efficacy, reducing psychophysiological arousal, altering

behavior patterns, stress management and enhancing social support.⁹¹ Chiles et al.⁹⁴ found most dramatic treatment effects to be behavioral medicine interventions that provided psychoeducational interventions that assisted coping.

Evidence-supported programs to effectively treat behavioral health issues in primary care have been consistently demonstrated.^{83, 95–96} Recently, Gilbody et al.⁹⁷ reviewed 37 randomized studies of collaborative care for depression, including over 12,000 patients. The analysis suggested that depressive outcomes improved consistently, mostly owing to increased medication compliance. In 11 of the studies, gains were maintained up to 5 years. Availability of psychiatric supervision and increased level of training of behavioral health clinicians were also factors influencing better outcomes.

When depression is effectively treated there is a general decrease in use of medical services^{98,–99} This is also the case for the successful depression treatment of diabetic patients⁵⁷ resulting in health care cost reductions between \$379 and \$952 per patient over the course of 2 years.¹⁰⁰ Those who may benefit most from collaborative care of both diabetic and behavioral health comorbidities are those patients with multiple diabetic complications.⁵⁷

Cognitive and behavioral interventions have been demonstrated to be effective in treating behavioral comorbidities that include physical symptoms.^{96, 101} In addition, the inclusion of cognitive behavioral therapy (CBT) as part of diabetic care is associated with improved hemoglobin A1c levels.¹⁰² When effective depression treatment is provided, COPD outcomes have improved.⁴⁶ CBT has also been effective in treating high medical expense somatization disorder.¹⁰³ Multidisciplinary assessment and intervention with frequent attendees at primary care clinics has demonstrated increased physician satisfaction and reduced the overall costs of medical care by almost 75% the year after the intervention.¹⁰⁴ Patients who have substance abuse who are treated within the primary care office with collaborative medical and behavioral health care have both improvement in the substance abuse disorder and show per-member reductions in medical costs of between \$431.12 and \$200.03.⁹² Combined behavioral interventions for patients with alcohol dependence were demonstrated to have as good outcomes as that with naltrexone and better outcomes than that with acamprosate (Campral).¹⁰⁵

Collaborative approaches involving both medical and behavioral practitioners have been generating more support.^{106–107} Colocation of behavioral health has been shown to improve collaboration. In one survey of 162 primary care physicians, there was cotreatment in some form about 30% of the time.¹⁰⁸ Recent data show two beneficial outcomes from referring to psychological services within a primary care office. Appointments are kept at rates often over 90%,⁷² much higher rates than have been previously reported. Secondly, there is better compliance with prescribed medication.¹⁰⁹

Physicians appear to be ready to have active collaborative care relationships with behavioral health clinicians and in some cases prefer to have behavioral health services as part of their practice.^{71, 73, 110} Williams et al.⁷³ have reported on a survey of primary care physicians showing that just over 60% of respondents would prefer to have behavioral health practitioners as part of their practice. If there is the opportunity for collaborative care, physicians select it as an intervention strategy more often than

other available referral options.¹¹¹ There also appears to be patient preference for treatment of behavioral health issues in a primary care setting.¹¹⁰

Despite such data, it is clear that the existence and effectiveness of empirically validated psychological treatments is a necessary, but insufficient element to move systems towards selecting collaborative models of care. A model must be supported in which such treatments are delivered within the primary care office

Casciani¹¹² suggests that there are differences that distinguish primary care behavioral health services from practice by traditional behavioral health clinicians. He suggests that in primary care behavioral health there is a diagnostic change to physical illness or injury, a primary focus on factors affecting health and illness recovery and a goal of improving health and collaboration with the medical team and family. Beyond the clinical issues, there are a specific set of skills and training necessary to effectively work together. These include working on the reengineering of clinical office processes, and changes in administrative, insurer and regulator activities. All of these are critical to success and require effort that takes time, and incurs costs.¹¹³

A collaborative care model addresses the issues presented earlier in the discussion of right treatments. Such a model uses evidence-based practice, implemented and coordinated to provide treatments by colocated medical and psychological practitioners. This results in better identification of patients who need collaborative care, easier referral, increased patient involvement and acceptance, and better communication between the behavioral health practitioner and the primary care physician. In the authors' own experience, such a model has been effective in family medicine, internal medicine, gynecology, obstetrics and neurology.

Summary

Historically, there have been limitations in detection and treatment of psychological disorders in the medical setting, and referring out to the specialty treatment system has been ineffective. The consequences of nontreatment or inadequate treatment of such psychological disorders are ineffective medical and psychological treatments and inappropriate and unnecessary utilization of health care. This chapter suggests an alternative approach to current treatment models in which psychological and medical treatments are integrated within the medical office. Such an approach supports a right treatment model, in which there is a common focus on providing evidence-supported treatment with attention to timing, amount and types of service, promoting the best outcomes, in the most cost-efficient fashion.

References

1. Lucas SF, Peek CJ. A primary care physician's experience with integrated behavioral health-care: What difference has it made? In: Cummings NA, Cummings JL, Johnson JN, eds. *Behavioral Health in Primary Care: A Guide for Clinical Integration*. Madison, CT: Psychosocial Press; 1997.

2. Fries JFK, Beadle CE, Cooper PP, et al. Reducing health care costs by reducing the need and demand for medical services. *N Engl J Med*. 1993;329(5):321–325.
3. Regier D, Narrow W, Rae D, Manderscheid R, Locke B, Goodwin F. The de facto U.S. mental and addictive services system: epidemiologic catchment area prospective 1-year prevalence rates of disorders and services. *Arch Gen Psychiatry*. 1993;50:85–94.
4. Dietrich AJ, Williams JW, Ciotti MC, et al. Depression care attitudes and practices of newer obstetrician gynecologists: a national survey. *Am J Obstet Gynecol*. 2003;189:267–273.
5. Narrow WE, Regier DA, Rae DS, Manderscheid RW, Locke BZ. Use of services by persons with mental and addictive disorders: findings from the National Institute of Mental Health Epidemiological Catchment Area program. *Arch Gen Psychiatry*. 1993;50:95–107.
6. Academy of Psychosomatic Medicine. Mental disorders in general medical practice: an opportunity to add value to healthcare. *Behav Healthc Tomorrow*. 1996;72:55–62.
7. Katon W. The epidemiology of depression in primary care. *Int J Psychiatry Med*. 1987;17(1):93–112.
8. Katon W, Schulberg HC. Epidemiology of depression in primary care. *Gen Hosp Psychiatry*. 1992;14:237–247.
9. Thompson M. Five giant leaps to integrating health care delivery and ways to drive organizations to leap or get out of the way. *J Ambul Care Manage*. 2000;23:1–18.
10. Sartorius N, Ustun TB, Costa e Silva JA, et al. An international study of psychological problems in primary care: preliminary report from the WHO collaborative project on psychological problems in general healthcare. *Arch Gen Psychiatry*. 1993;50:818–824.
11. Kroenke K, Spitzer RJ, Williams JB, Monahan PO, Lowe B. Anxiety disorder in primary care: prevalence, impairment, comorbidity and detection. *Ann Intern Med*. 2007;146:317–325.
12. Allen LA, Escobar JI, Lehrer PM, Gara MA, Woolfolk RL. Psychosocial treatments for multiple unexplained physical symptoms: a review of the literature. *Psychosoma Med*. 2002;64:939–950.
13. Escobar JI, Waitzkin H, Silver R. Abridged somatization: a study in primary care. *Psychosom Med*. 1998;60:466–472.
14. Panzarino P. The costs of depression: direct and indirect treatment versus mistreatment. *J Clin Psychiatry*. 1998;59:11–14.
15. Smith G, Rost K, Kashner T. A trial of the effect of standardized psychiatric consultation on health outcomes and costs in somatizing patients. *Arch Gen Psychiatry*. 1995;52:238–243.
16. Dilts SL, Mann N, Dilts JG. Accuracy of referring psychiatric diagnosis on a consultation liaison service. *Psychosomatics*. 2003;44(5):407–411.
17. Katon W, Roy-Byrne PP. Panic disorder in the medically ill. *J Clin Psychiatry*. 1989;50:299–302.
18. Frank RG, Huskamp HA, Pincus HA. Aligning incentives in the treatment of depression in primary care with evidence-based practice. *Psychiatr Serv*. 2003;54:682–687.
19. Herrman H, Patrick DL, Diehr P, et al. Longitudinal investigation of depression outcomes in primary care in six countries: the LIDO study. *Psychol Med*. 2002;32:889–890.
20. Mayou R, Hawton K, Feldman E. Psychiatric problems among medical admissions. *Int J Psychiatry Med*. 1991;21:71–74.
21. Korsen N, Scott P, Dietrich AJ, Oxman T. Implementing an office system to improve primary care management of depression. *Psychiatr Q*. 2003;74:45–60.
22. Kroenke K, West SL, Swindec R, et al. Similar effectiveness of paroxetine, fluoxetine, and sertraline in primary care. *JAMA*. 2001;286:2047–2955.
23. Coyne JC, Thompson R, Palmer SC, Kagee A. Should we screen for depression? Caveats and potential pitfalls. *Appl Prev Psychol*. 2000;9:101–121.
24. Scholle SH, Haskett RF, Hanusa BH, Pincus HA, Kupfer DJ. Addressing depression in obstetrics/gynecology practice. *Gen Hosp Psychiatry*. 2003;25:83–90.
25. Kripalani S, Yao X, Haynes B. Interventions to enhance medication adherence in chronic medical conditions. *Arch Intern Med*. 2007;167:540–550.

26. Kisch J. *The Effect of Capitation Paradigms on Collaboration Between Primary Care and Behavioral Health Providers in Primary care*. Madison, CT: Psychosocial Press; 1997.
27. Osterberg L, Blaschke T. Adherence to medication. *N Engl J Med*. 2005;353:487–497.
28. Goldman W, McCulloch J, Cuffel BA. Four-year study of enhancing outpatient psychotherapy in managed care. *Psychiatr Serv*. 2003;54:41–49.
29. Yates WR, Mitchell J, Rush AJ, et al. Clinical features in outpatients with and without co-occurring general medical conditions in STAR*D confirmatory analysis. *Prim Care Companion J Clin Psychiatry*. 2007;9:7–15.
30. Fortin M, Bravo G, Hudon C, Lapointe L, Dubois M-F, Almirall J. Psychological distress and multimorbidity in primary care. *Ann Fam Med*. 2006;4:417–422.
31. Felker B, Katon W, Hedrick S, Rasmussen J, McKnight KM, Fihn SD. The association between depressive symptoms and health status in patients with chronic pulmonary disease. *Gen Hosp Psychiatry*. 2001;23:56–61.
32. Koike AK, Unutzer J, Wells KB. Improving the care for depression in patients with comorbid medical illness. *Am J Psychiatry*. 2002;159:1738–1745.
33. Rollman BL, Belnap BH, Reynolds CF, Schulberg HC, Shear MK. A contemporary protocol to assist primary care physicians in the treatment of panic and generalized anxiety disorders. *Gen Hosp Psychiatry*. 2003;25:74–82.
34. Kruse J, Schmitz N, Thefeld W. On the association between diabetes and mental disorders in a community sample. *Diabetes Care*. 2003;26:1841–1846.
35. Levinson S. Psychosocial interventions in chronic medical illness: an overview of outcome research. *Gen Hosp Psychiatry*. 1992;14:43–49.
36. Pies R, Rogers D. Recognition and treatment of depression: a review for the primary care physician [CE review]. 2005. Available at: <http://www.medscape.com/viewprogram/4572-pnt>. Accessed September 30, 2006.
37. Piette JD, Richardson C, Valenstein M. Addressing the needs of patients with multiple chronic illnesses: the case of diabetes and depression. *Am J Manag Care*. 2004;10:152–162.
38. Moussavi S, Chatterji S, Verdes E, Tandon A, Patel V, Ustun B. Depression, chronic diseases, and decrements in health: results from the World Health Surveys. *Lancet*. 2007;370:851–858.
39. Whooley MA. Depression and cardiovascular disease: healing the broken hearted. *JAMA*. 2006;295:2874–2881.
40. Holzapfel N, Zugck C, Muller-Tasch T, et al. Routine screening for depression and quality of life in outpatients with congestive heart failure. *Psychosomatics*. 2007;48(2):112–116.
41. Carlos-Poston WS, Haddock CK, Conard MW, Jones P, Spertus J. Assessing depression in the cardiac patient: When is the appropriate time to assess depression in the patient undergoing coronary revascularization? *Behav Modif*. 2003;27:26–36.
42. Frasure-Smith N, Lesperance F, Talajic M. Depression following myocardial infarction: impact on 6-months survival. *JAMA*. 1993;270:1819–1825.
43. Bush DE. *Post Myocardial Infarction Depression (123)*. Rockville, MD: US Department of Health and Human Services; 2005.
44. Mallik S, Spertus JA, Reid K, et al. Depressive symptoms after acute myocardial infarction; evidence for highest rates in younger women. *Arch Intern Med*. 2006;166:876–883.
45. Sherwood A, Blumenthal JA, Trivendi R, et al. Relationship of depression to death or hospitalization in patients with heart failure. *Arch Intern Med*. 2007;167(4):367–373.
46. Ng T, Niti M, Tan W, Cao Z, Ong KC, Eng P. Depressive symptoms and chronic obstructive pulmonary disease. *Arch Intern Med*. 2007;167:60–67.
47. Parker JP, Wright GE. The implications of depression for pain and disability in rheumatoid arthritis. *J Rheumatol*. 1995;8(4):279–283.
48. Strine TW, Hootman JM, Okoro CA, et al. Frequent mental distress status among adults with arthritis age 45 years and older, 2001. *Arthritis Rheum*. 2004;51(4):533–537.
49. Peppard PE, Szklo-Coxe M, Mae Hla K, Young T. Longitudinal association of sleep related breathing disorder and depression. *Arch Intern Med*. 2006;166:1709–1715.

50. Anderson RJ, Freedland KE, Clouse RE, Lustman PJ. The prevalence of co morbid depression in adults with diabetes: a meta analysis. *Diabetes Care*. 2001;24:1069–1078.
51. Katon W, Rutter C, Simon G, et al. The association of comorbid depression with mortality in patients with type 2 diabetes. *Diabetes Care*. 2005;28(11):2668–2672.
52. deGroot M, Anderson R, Freeland KE, Clouse RE, Lustman PJ. Association of depression and diabetes complications: a meta analysis. *Psychosom Med*. 2001;63:619–630.
53. Ciechanowski PS, Katon WJ, Russo JE. Depression and diabetes: impact of depressive symptoms on adherence function and costs. *Arch of Intern Med*. 2000;160:3278–3285.
54. Ludman EJ, Katon W, Russo J, et al. Panic episodes among patients with diabetes. *Gen Hosp Psychiatry*. 2006;28:475–481.
55. Carnethon MR, Biggs ML, Barzulay JJ, et al. Longitudinal association between depressive symptoms and incident type 2 diabetes mellitus in older adults. *Arch Intern Med*. 2007;167:802–807.
56. Lustman PJ, Anderson RJ, Freeland KE, de Groot M, Carney RM, Clouse RE. Depression and poor glycemic control: a meta-analytic review of the literature. *Diabetes Care*. 2000;23:934–942.
57. Kinder LS, Katon WJ, Ludman E, et al. Improving depression care in patients with diabetes and multiple complications. *J Gen Intern Med*. 2006;21:1036–1041.
58. Pinhas-Hamiel O, Standiford D, Hamiel D, et al. The type 2 family: a setting for the development and treatment for adolescent type 2 diabetes mellitus. *Arch Pediatr Adolesc Med*. 1999;153:1063–1067.
59. Irving RR, Mills JL, Choo-Kang EG, et al. Depressive symptoms in children of women with newly diagnosed type 2 diabetes. *Prim Care Companion J Clin Psychiatry*. 2007;9:21–24.
60. Kroenke K, Spitzer RJ, Williams JB, et al. Physical symptoms in primary care: predictors of psychiatric disorders and functional impairment. *Arch Fam Med*. 1994;3:774–779.
61. Simon GE, Von Korff M, Barlow W. Health care costs of primary care patients with recognized depression. 1. *Arch Gen Psychiatry*. 1995;52:850–856.
62. Kathol RG, McAlpine D, Kishi Y, et al. General medical and pharmacy claims expenditures in users of behavioral health services. *J Gen Intern Med*. 2005;20(2):160–167.
63. Katon WJ. Clinical and health services relationships between major depression depressive symptoms and general medical illness. *Biol Psychiatry*. 2003;54:216–226.
64. Simon GE, Katon WJ, Lin E.H, et al. Diabetes complications and depression as predictors of health services costs. *Gen Hosp Psychiatry*. 2005;27:344–351.
65. Katon W, Roy-Byrne P, Russo J, Deborah C. Cost-effectiveness and cost offset of a collaborative care intervention for primary care patients with panic disorder. *Arch Gen Psychiatry*. 2002;59:1098–1004.
66. Kelly RH, Russo J, Katon W. Somatic complaints among pregnant women cared for in obstetrics: normal pregnancy or depressive and anxiety symptom amplification revisited. *Gen Hosp Psychiatry*. 2001;23:107–113.
67. Katon W, Von Korff M, Lin E, et al. Distressed high utilizers of medical care; DSM-III-R diagnoses and treatment needs. *Gen Hosp Psychiatry*. 1990;12:355–362.
68. Katon W, Sullivan MD. Depression and chronic medical illness. *J Clin Psychiatry*. 1990;51(6):3–11.
69. Hildebrandt DE, Westfall D, Nicholas R, Smith P, Stern J. Are frequent callers to family physicians high utilizers? *Ann Fam Med*. 2004;2:546–548.
70. Pincus HA, Hough L, Houtsinger JK, Rollman BL, Frank RG. Emerging models of depression care: multi-level (6 P) strategies. *Int J Methods Psychiatr Res*. 2003;12:54–63.
71. Brazeau C, Rovi S, Yick C, Johnson M. Collaboration between mental health professionals and family physicians: a survey of New Jersey family physicians. *Prim Care Companion J Clin Psychiatry*. 2005;7(1):12–14.
72. Watkins K, Pincus H, Tanielian B. *Evidence-Based Care Models for Recognizing and Treating Alcohol Problems in Primary Care*. Santa Monica, CA: Rand Corporation; 2001.
73. Williams J, Palmes G, Kurt K, Pulley A, Meschan JF. Referral by pediatricians of children with behavioral health disorders. *Clin Pediatr*. 2005;44:343–349.

74. Callahan EJ, Bertakis KD, Azari R, Robbins JA, Helms LJ, Leigh JP. Association of higher costs with symptoms and diagnosis of depression. *J Fam Pract.* 2005;51(6):540–544.
75. Katon W. Will improving detection of depression in primary care lead to improved depressive outcomes? *Gen Hosp Psychiatry.* 1995;17:1–2.
76. Wagner EH, Austin BT, Davis C, Hindmarsh M, Schaefer J, Bonomi A. Improving chronic care: translating evidence into action. *Health Aff.* 2001;20(6):64–78.
77. Ewart CK. A social problem-solving approach to behavior change in coronary heart disease. In: Schumaker S, Schron E, eds. *Handbook of Health Behavior Change*. New York, NY: Springer; 1990.
78. Trude S, Stoddard JJ. Referral gridlock: primary care physicians and mental health services. *J Gen Intern Med.* 2003;18:442–449.
79. Walders N, Chhds GE, Comer D, Kelleher KJ, Drotar D. Barriers to mental health referral from pediatric primary care settings. *Am J Manage Care.* 2003;9:677–683.
80. Forrest CB, Nutting PA, Starfield B, von Schrader S. Family physicians referral decisions; results from the ASPN referral study. *J Fam Pract.* 2002;51(3):215–222.
81. Coyne JC, Thompson R. Psychologists entering primary care cannot be bought for \$24 worth of beads. *Clin Psychol Sci Pract.* 2003;19:102–110.
82. Witko KD, Bernes KB, Nixon G. Care for psychological problems; collaborative approach in primary care. *Can Fam Physician.* 2005;51:799–780.
83. Rollman BL, Weinreb L, Korsen N, Schulberg HC. Implementation of guideline based care for depression in primary care. *Adm Policy Ment Health Serv Res.* 2006;33(1):43–53.
84. Kessler R. Treating psychological problems in medical settings: primary care as the de facto mental health system and the role of hypnosis. *J Clin Exp Hypn.* 2005;53(2):290–305.
85. Raine R, Haines A, Sensky T, Hutchings A, Larkin K, Black N. Systematic review of mental health interventions for patients with common somatic symptoms: Can research evidence from secondary care be extrapolated to primary care? *Br Med J.* 2002;325:325–336.
86. Sobel DS. Mind matters, money matters: the cost effectiveness of mind/body medicine. *JAMA.* 2000;284(13):1705.
87. Hedrick SC, Chaney EF, Felker B, et al. Effectiveness of Collaborative care depression treatment in veterans affairs primary care. *J Gen Intern Med.* 2003;18:9–16.
88. Rost K, Pyne JM, Dickenson LM, LoSasso AT. Cost-effectiveness of enhancing primary care depression management on an ongoing basis. *Ann Fam Med.* 2005;3(1):7–14.
89. Chambless DL, Hollon SD. Defining empirically supported therapies. *J Consult Clin Psychol.* 1998;66:7–18.
90. Dixon K, Keefe FJ, Scipio CD, Perri LS, Abernathy AP. Psychological interventions for arthritis pain management in adults: a meta-analysis. *Health Psychol.* 2007;26(3):241–250.
91. Friedman R, Myers P, Sobel D, Caudill M, Benson H. Behavioral medicine, clinical health psychology, and cost offset. *Health Psychol.* 1995;14:509–518.
92. Parthasarathy S, Mertens J, Moore C, Weisner C. Utilization and cost impact of integrating substance abuse treatment in primary care. *Med Care.* 2003;41(3):357–367.
93. Pyne JM, Rost KM, Zhang M, Williams K. Cost-effectiveness of a primary care depression intervention. *J Gen Intern Med.* 2003;18:432–441.
94. Chiles D, Lambert M, Hatch M. Impact of psychological interventions on medical cost offset: a meta analytic review. *Clin Psychol Sci Pract.* 1999;6(2):204–221.
95. Dietrich AJ, Oxman TE, Williams JW Jr, et al. Re-engineering systems for the treatment of depression in primary care: cluster randomized controlled trial. *Br Med J.* 2004;329:11.
96. Simon GE, Katon WJ, VonKorff M, et al. Cost effectiveness of a collaborative care program for primary care patients with persistent depression. *Am J Psychiatry.* 2001;158(10):1638–1644.
97. Gilbody S, et al. Collaborative care for depression: a cumulative meta analysis and review of long term outcomes. *Arch Intern Med.* 2006;166:2314–2321.
98. Simon G, Chisholm D, Treglia M, Bushnell D. Course of depression, health services costs, and work productivity in an international primary care study. *Gen Hosp Psychiatry.* 2002;24:328–335.
99. Simon G, Revicki D, Heiligenstein J, et al. Recovery from depression, work productivity, and health care costs among primary care patients. *Gen Hosp Psychiatry.* 2000;153:153–162.

100. Simon GE, Katon WJ, Lin EH, et al. Cost-effectiveness of systematic depression treatment among people with diabetes mellitus. *Arch Gen Psychiatry*. 2007;64:65–72.
101. Escobar JI, Gara MA, Interian A, et al. Treatment of patients presenting with unexplained symptoms in primary care. *Neuropsychopharmacology*. 2006;29:S100.
102. Lustman PJ, Griffith LS, Freedland KE, Kissel SS, Clouse RE. Cognitive behavioral therapy for depression in type 2 diabetes mellitus: a randomized controlled trial. *Ann Intern Med*. 1998;129(8):613–621.
103. Allen LA, Woolfolk RL, Escobar JI, Gara MA, Hamer RM. Cognitive-behavioral therapy for somatization disorder: a randomized controlled trial. *Arch Intern Med*. 2006;166:1512–1518.
104. Matalon A, Nahmani T, Rabin S, Maoz B, Jacob H. A short-term intervention in a multidisciplinary referral clinic for primary care frequent attenders: description of the model, patient characteristics, and their use of medical resources. *Fam Pract*. 2002;19(3):251–256.
105. Anton R.F, O'Malley SS, Ciraulo DA, et al. Combined pharmacotherapies and behavioral intervention for alcohol dependence. The COMBINE study. *JAMA*. 2006;295(17):2003–2017.
106. Keller M, McCullough J, Klein D, et al. A comparison of nefazodone, the cognitive behavioral analysis system of psychotherapy, and their combination for the treatment of chronic depression. *New Engl J Med*. 2000;342:1462–1470.
107. Treatment for Adolescents with Depression Study (TADS) Team. Fluoxetine, cognitive-behavioral therapy and their combination for adolescents with depression. *JAMA*. 2004;18:807–820.
108. 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(3):180–187.
109. Haynes RB, McDonald HP, Garg AG. Helping patients follow prescribed treatments. *JAMA*. 2002;288(22):2880–2883.
110. Oxman TE, Dietrich AJ, Schulberg HC. Evidence based models of integrated management of depression in primary care. *Psychiatr Clin North Am*. 2005;28:1061–1077.
111. Meridith LS, Cheng WJ, Hickey SC, Johnson M. Factors associated with primary care clinicians' choice of watchful waiting approach to managing depression. *Psychiatr Serv*. 2007;58(1):72–78.
112. Casciani AI. The practical application of health and behavior codes. Paper presented at the American Psychological Association Annual Meeting, 2004; Honolulu, HI.
113. McDaniel SH, Schroeder C, Belar CD, Hargrove DS, Freeman EL. A training curriculum for professional psychologists in primary care. *Prof Psychol Res Pract*. 2002;33:65–72.