Disease Management for Depression

Introduction

The Centers for Medicare and Medicaid Services and the Disease Management Association of America define disease management as a system of coordinated health care interventions and communications for populations with conditions in which patient self-care efforts are substantial. Disease management supports the clinician-patient relationship and plan of care, and emphasizes prevention of disease-related exacerbations and complications using evidence-based guidelines and patient empowerment tools. Disease management also evaluates clinical, humanistic, and economic outcomes on an ongoing basis with the goal of improving overall health. The specific goals of disease management include:

- Improving patient self-care through patient education, monitoring, and communication.
- Improving physician performance through feedback and/or reports on patient progress in compliance with protocols.
- Improving communication and coordination of services among patients, physicians, disease management organizations, and other providers.
- Improving access to services, including prevention services and prescription drugs as needed.

The following functions are the main components of disease management:

- Identification of patient populations.
- Use of evidence-based practice guidelines.
- Support of adherence to evidence-based medical practice guidelines by providing practice guidelines to physicians and other providers, reporting on the patient’s progress in compliance with protocols, and providing support services to assist the physician in monitoring the patient.
- Provision of services designed to enhance patient self-management and adherence to the patient’s treatment plan.
- Routine reporting and feedback to the health care providers and to the patient.
- Communication and collaboration among providers and between the patient and the patient’s providers.
- Collection and analysis of process and outcomes measures, along with a system to make necessary changes based on the findings of those measures.

Disease management programs are used widely for many chronic diseases; but the most common diseases include asthma, congestive heart failure, diabetes mellitus, and hypertension. Considerations in selecting a disease for disease management often include:

- Availability of treatment guidelines with consensus about what constitutes appropriate and effective care.
- Presence of generally recognized problems in therapy that are well documented in the medical literature.
- Large practice variation and a range of drug treatment modalities.
- Large number of patients with the disease whose therapy could be improved.
- Preventable acute events that often are associated with the chronic disease (e.g., emergency department or urgent care visits).
- Outcomes that can be defined and measured in standardized and objective ways, and that can be modified by application of appropriate therapy (e.g., decreased number of emergency department visits or hospitalizations).
- The potential for cost savings within a short period (e.g., less than 3 years).

Three major not-for-profit organizations whose mission is to promote quality health care have recognized the contribution of disease management activities to quality health care by establishing disease management certification or accreditation programs. The Joint Commission on Accreditation of Healthcare Organizations, an independent, not-for-profit organization and the nation’s predominant standard-setting and accrediting body in health care, offers disease-specific care program certification. Program certification is based on an assessment of compliance with consensus-based national standards, effective use of established clinical practice guidelines to manage and optimize care, and activities for performance measurement and improvement. The National Committee for Quality Assurance (NCQA) recently began accrediting disease management programs on the basis of standards that are patient oriented, practitioner oriented, or both. It also offers organizations certification for program design (e.g., Hospital Accreditation Program) and management programs that meet NCQA standards for quality health care.
content development), systems (e.g., clinical information and other support systems), or patient contact (i.e., for nurse call centers and other organizations without comprehensive activities). Many disease management organizations were so eager to undergo the accreditation or certification process that they volunteered to do so before the standards were finalized.

The Utilization Review Accreditation Commission (URAC), also known as the American Accreditation HealthCare Commission, establishes standards for the health care and insurance industry. URAC’s goal is to promote continuous improvement in the quality and efficiency of health care delivery by achieving excellence among purchasers, providers, and patients through the establishment of standards, education and communication programs, and a process of accreditation. URAC has accreditation programs for disease management as well as case management, claims processing, core accreditation, credential verification, health call centers, health networks, health plans, health provider credentialing, health utilization management, health Web sites, Health Insurance Portability and Accountability Act (HIPAA) privacy and security, independent review organizations, vendor certification, and workers’ compensation utilization management. URAC has goals for disease management accreditation and case management.

**Why Focus on Depression?**

To date, disease management programs are more common for the treatment of asthma, congestive heart failure, diabetes mellitus, and hypertension because many of the considerations outlined in the introduction clearly apply to these chronic diseases. However, much attention has turned to depression in recent years because many of the same considerations apply to behavioral health. For example, authoritative guidelines for managing depression have become available recently from the American Psychiatric Association and other reputable sources (Table 1).

Up-to-date information on treatment guidelines from various sources also is available online from the National Guideline Clearinghouse (http://www.guideline.gov/body_home_nf.asp?view=home).

Depression is now recognized as a serious chronic mental illness. It is characterized by depressed mood or loss of interest in or pleasure from activities that ordinarily are enjoyed (see Appendix A for diagnostic criteria for major depression). It may be accompanied by severe weight loss or gain, sleep disturbances, fatigue, diminished ability to concentrate, and suicidal thoughts. The symptoms of depression can have a profound impact on an individual’s interpersonal, social, and occupational function, resulting in family discord and unemployment.

Depression is very common; 5.8% of American adults will experience depression sometime in their lifetime. In any given year, approximately 9.9 million American adults are affected. The illness is nearly twice as common in women as in men, and hormonal factors may contribute to gender differences in prevalence. Women who give birth are particularly vulnerable to depression during the postpartum period. The risk of depression is up to three times more likely in first-degree biological relatives (e.g., daughter, father) of a patient diagnosed with the illness than in the general population, which suggests a genetic component to the illness. Certain medical conditions (e.g., stroke, Parkinson’s disease, diabetes) can lead to depression; up to 25% of patients with these medical conditions develop depression.

Depression often goes unrecognized and untreated. This illness is accurately diagnosed in only 30% to 40% of cases. Symptoms often are not reported to a health care professional because of a lack of patient awareness that the symptoms constitute an illness or the stigma associated with mental illness. Patients and clinicians may fear insurance or employment discrimination. Many people do not seek treatment because they do not recognize that the illness is treatable. Some patients (and clinicians) view depressive symptoms as a natural consequence of aging or a normal reaction to stressful life events. Often, feelings of shame, guilt, or hopelessness may present a barrier to diagnosis.

Failure of health care professionals to detect depression may be due to inadequate training in recognizing the illness. About half of patients treated for depression receive treatment in the primary care setting, where training and experience in the diagnosis of depression may be limited. Physical complaints may distract primary care providers from making the
Table 1. Authoritative Guidelines for Managing Depression

1. **American Psychiatric Association**

2. **American Society of Health-System Pharmacists (ASHP)**

3. **Texas Department of Mental Health and Mental Retardation**

4. **American College of Physicians-American Society of Internal Medicine**

5. **U.S. Preventive Services Task Force**

6. **American Academy of Child and Adolescent Psychiatry**

7. **Veterans Health Administration/Department of Defense**

8. **The Expert Consensus Guideline Series**

9. **Canadian Psychiatric Association and the Canadian Network for Mood and Anxiety Treatments**

10. **North of England Antidepressant Guideline Development Group**

11. **Australian National Depression Initiative**

*Clinical practice is subject to constant change, and the guidelines in this list may become outdated or be superseded by newer ones. The reader is encouraged to consult the National Guideline Clearinghouse (http://www.guideline.gov/asp/d2.asp?cp=t&ck=t&nce=8&fr=f), a public resource for evidence-based clinical practice guidelines sponsored by the Agency for Healthcare Research and Quality (formerly the Agency for Health Care Policy and Research) in partnership with the American Medical Association and the American Association of Health Plans, for the most current guidelines.*
Health care professionals may lack the confidence to ask the patient about symptoms specific to mood or may hesitate to broach the subject because of pressure to minimize time spent with the patient. Clinicians’ beliefs and attitudes (e.g., understanding of the effectiveness of antidepressant drug therapy, misconceptions about the extent to which patients bear some responsibility for their illness) also may influence the likelihood of diagnosis. Detection may depend on a clinician’s level of skill in interviewing and communicating with patients.

Treatment of depression often is inadequate despite the availability of effective therapies and a high rate of health service utilization by patients with depression. In a 4-year study of elderly enrollees in an HMO, only 12% to 25% of patients with clinically significant depressive symptoms received treatment for depression, and fewer than half of patients receiving antidepressant drug therapy received an adequate trial of an appropriate dosage. In a survey of younger adults with depression, fewer than 10% received appropriate medication management and follow-up visits.

The large gap between best care and usual care for depression (i.e., inadequate detection and treatment of depression) serves as an impetus to apply disease management strategies to the treatment of depression. Education and training of health care providers to improve detection and treatment could help fill this gap. The availability of new and improved tools for use by primary care physicians to diagnose and treat depression and self-administered screening tools for patients have led to increased interest in depression disease management.

Depression increasingly is a focus of disease management initiatives because of its large economic impact. It is a chronic illness with recurrent acute episodes that are costly. Depression is the leading cause of short- and long-term disability in the United States—persons with untreated depression report a larger number of days spent in bed and days of disability or restricted activity than the general population. Depression also is associated with higher than average rates of physical illness and health care utilization. Health care costs are higher for depressed patients than for patients without depression, even after adjusting for medical morbidity. Mortality rates are increased in depressed patients, usually as a result of suicide; up to 15% of patients hospitalized for depression commit suicide.

In 1990, the estimated annual costs of depression in the United States amounted to $43.7 billion, including $12.4 billion for direct costs, $7.5 billion for mortality costs (costs due to suicide), and $23.8 billion for morbidity costs (costs arising from workplace absenteeism and reduced workplace productivity). Employers increasingly recognize the impact of depression in the workplace. However, convincing employers of the cost-effectiveness of drug therapy for depression can be a challenge because of the high cost of this therapy.

In the 2002 Novartis Pharmacy Benefit Report, antidepressants represented the most costly and widely prescribed drug class (among 32 drug classes evaluated) with respect to HMO spending and use. Therapy for depression has the potential to reduce the indirect costs of illness. It could save employers an estimated $93 per patient in reduced disability costs in the first 30 days after initiation of therapy, and this figure does not reflect cost savings to the employer from reduced workplace absenteeism and improved productivity. Antidepressant drug therapy improves workplace performance, with a response within 4 weeks after initiating therapy. The natural history of depression and the methods used to manage depression are outlined in Appendix B.

**Current Status of Disease Management Programs for Depression**

The importance of a person’s mental health to overall health and quality of life and the need for mental health services to restore and maintain mental health are increasingly recognized by the government and the private sector. Policy makers also have gained a greater understanding of the high prevalence and chronic nature of depression and the role of antidepressant drug therapy in managing the illness on a long-term basis. Mental health utilization (the percentage of members receiving services, inpatient discharges, and average length of stay), follow-up after hospitalization for mental illness, and antidepressant medication management are among the NCQA 2002 Health Plan Employer Data and Information Set (commonly referred to as HEDIS) measures, which apply to Medicaid and
Medicare recipients as well as participants in commercial health plans. Disease management strategies have great potential to improve therapeutic outcomes for patients with depression. However, the management of depression presents a challenge to many health care providers because it usually is first seen in the primary care setting due to of a lack of access to specialty care or the stigma associated with seeking treatment from a mental health professional.

Primary care providers usually have limited time to spend with patients and what time is available often is inadequate for patients with multiple chronic illnesses. In a managed care system, depression often competes with other chronic disease states and conditions for limited health care dollars. Clinicians must prioritize their time, and patients may be forced to set priorities for their needs. Patients may be reluctant to accept the diagnosis of depression, and access to medications also may be a barrier to successful treatment. Failure to adhere to drug therapy and follow up with clinic visits compromises patient outcomes.

Although there can be some challenges in managing depression through a disease management program, many disease management vendors have taken on the challenge and have seen great success. Some of the experiences to date with depression disease management programs are described here.

**Depression Disease Management Programs**

**Cedars-Sinai Medical Center (Los Angeles, CA)**

The clinics of Cedars-Sinai Medical Center are exploring new educational initiatives for treating depression in patients with cardiovascular disease. Their past disease management programs involving hypertension, hyperlipidemia, diabetes, asthma, and the anticoagulation therapy have shown strong cost-savings results. For additional information, see Disease Management News, March 25, 2001 (page 5), or contact Jeff Borenstein, MD, at Cedars-Sinai Medical Care Foundation (310) 247-7700, ext. 502.

**Group Health Cooperative of Puget Sound (Seattle, WA)**

Group Health Cooperative of Puget Sound, an HMO with more than 450,000 members in western Washington state, has been a national leader in implementing disease management for patients with depression. The disease management program at Group Health Cooperative has evolved over the past decade, during which various strategies were used to improve the accuracy of diagnosis and optimize acute-phase management. Models for collaborative management of depression by primary care physicians and specialists were evaluated in randomized controlled trials.

**Consultation Liaison Primary Care Collaborative Model.** In a 12-month trial, 217 patients with depression who agreed to receive antidepressant drug therapy were randomized to receive a multifaceted intervention or usual care by the primary care physician. The multifaceted intervention entailed frequent, intensive visits over the first 4–6 weeks of treatment (the first and third visits were with the primary care physician and the second and fourth visits were with a psychiatrist). Patients (and family members as appropriate) were educated about the biology of depression and its etiology and treatment (e.g., behavioral therapies, antidepressant drug therapy). Videotaped and written educational materials also were provided. Patients were asked to complete a questionnaire about adverse effects from drug therapy and any concerns for subsequent discussion with the primary care physician; completing this questionnaire was designed to encourage the patient to assume an active role in his or her treatment. Adherence to drug therapy (e.g., refill frequency) was monitored during the continuation and maintenance phases of treatment.

At the start of the study, primary care physicians participated in a half day workshop on the diagnosis and treatment of depression and study methods. The psychiatrist assisted the primary care physician with modification of drug therapy when severe adverse effects occurred or response to drug therapy was inadequate. Either the primary care physician or the psychiatrist could make changes to the drug dosage or type of drug after oral consultation. Psychiatrists provided the primary care physicians with oral and written feedback about patient progress. Monthly conferences involving the primary care physicians and psychiatrists were conducted to discuss cases.
Compared with usual care, the intervention was associated with significantly greater patient adherence to antidepressant drug therapy, patient satisfaction with overall quality of care and antidepressant drug therapy, and improvement in depressive symptoms.44

**Brief Therapy Primary Care Model.** A multifaceted intervention involving antidepressant drug therapy and cognitive-behavioral treatment was evaluated in 153 patients with depression.45 Patients were randomized to receive the intervention or usual care by the primary care physician. Patients in the intervention group participated in four to six sessions with a psychologist over the first 2 months of the study. Cognitive-behavioral treatment and counseling on the importance of medication adherence were provided in these sessions. Cognitive-behavioral treatment was designed to promote the use of adaptive coping strategies and encourage the patient to adopt positive thought patterns and activities instead of negative ones. The psychologists met with a psychiatrist on a weekly basis to discuss each patient’s medication adherence and response. The psychiatrist made recommendations to the primary care physician for dosage adjustments as needed. Primary care physicians participated in training on drug therapy and cognitive-behavioral treatment for depression at the start of the study. Videotapes and written materials about depression and its treatment were provided to patients.

Patient medication adherence, satisfaction with quality of care for depression and antidepressant drug therapy, and improvement in depressive symptoms were significantly greater in patients in the intervention group than in patients in the usual-care group.45

**Cost-Effectiveness of Collaborative Care.** The success of the Consultation Liaison Primary Care Collaborative Model and the Brief Therapy Primary Care Model was attributed to patient education, physician training, the reorganization of care, and the availability of information systems to facilitate tracking and sharing of key patient data.16 An analysis of costs associated with the two models revealed that the intervention was associated with a modest increase in the cost-effectiveness of treating depression compared with usual care, despite increased costs due to the need for extra visits by the intervention group.46 The costs for each patient successfully treated were approximately $1700 to $1800 in the intervention group and $1950 to $2150 in the usual-care group. The investigators speculated that further improvement in cost-effectiveness of the intervention might be achieved if the intervention was reserved for patients with an inadequate response after 6 to 8 weeks of usual care.16

**Telephone Counseling and Computerized Monitoring.** The effectiveness of conducting disease management interventions by using telephone calls to patients instead of clinic visits was studied. In a pilot study, 28 patients initiating antidepressant drug therapy received written information about depression and six weekly telephone counseling and support sessions by a trained therapist (the intervention). The transtheoretical model of behavioral change (i.e., stages of change, such as contemplation) and cognitive-behavioral strategies were used to enhance patient self-management and coping skills.47 After 3 months and 6 months, patients in the intervention group had significantly fewer depressive symptoms than did a group of 94 patients receiving usual care. Patient adherence was twice as likely in the intervention group as in the usual-care group. The number of clinic visits did not differ significantly between the two groups (i.e., the benefits associated with the intervention did not require extra visits).48

The use of computerized systems for providing feedback to primary care physicians about antidepressant dosages and prescription refills, follow-up visit frequency (i.e., adequacy), and algorithm-based recommendations for treatment (an approach referred to as feedback) was evaluated alone and in combination with care management in a 6-month, randomized, controlled trial of 613 patients who were initiating antidepressant drug therapy.49 Care management entailed telephone calls to patients by a care manager at the initiation of therapy and 8 weeks and 16 weeks later to discuss antidepressant drug therapy, adverse effects, and response. Feedback provided to primary care physicians included treatment recommendations on the basis of a computerized algorithm that took into consideration actual and recommended antidepressant dosages and follow-up visit frequency. Usual care was used as a control.

Patients in the feedback group were no more likely to receive appropriate antidepressant drug therapy or experience at least moderate improvement in depressive symptoms than patients in the usual-care group. However, patients in the feedback group who received care management were more likely to receive
appropriate antidepressant drug therapy and experience improvement in depressive symptoms than were those in the usual-care group. The incremental costs per patient were $22 for the feedback approach and $83 for feedback plus care management.49

Relapse Prevention. Recent disease management efforts at Group Health Cooperative have addressed patients with persistent depression who are at high risk for relapse. In a randomized trial, 386 patients with depression who had recovered to a large extent after 8 weeks of treatment but who were at high risk for relapse were randomized to a relapse prevention program or usual care.50 The relapse prevention program was designed to promote medication adherence and increase patient self-monitoring of symptoms and recognition of the prodromal symptoms that precede a relapse. The program involved two primary care visits with a depression specialist (a psychologist, a nurse with a master's degree in psychosocial nursing, or a social worker) and three telephone calls over a 1-year period. A written relapse prevention plan was devised for each patient. Primary care physicians received intermittent reports about patient progress.

Medication adherence, the use of an adequate dosage, and refill frequency were significantly better in the intervention group than in the usual-care group. Depressive symptoms also were significantly improved in the intervention group at the end of the study. However, the number of episodes of relapse was no different in the two groups.50 The investigators speculated that more intensive relapse prevention interventions may be required to reduce relapse rates. Future disease management efforts at Group Health Cooperative will address relapse prevention.

Health Hero Network, Inc. (Mountain View, CA)

Involving patients in their care is critical to effectively managing a chronic illness. Health Hero Network, a technology company, has designed the Health Hero Platform, a group of electronic devices that healthcare providers can use to send patients reminders to take their medicine, provide them with feedback on their progress, and provide tips for managing their disease more effectively. This empowers patients to feel more in control and to practice better self-care. Health Hero Network customers are using Health Hero solutions for programs in heart failure, cardiovascular disease, diabetes, asthma, chronic obstructive pulmonary disease, and many other chronic conditions.

The company is collaborating with the Department of Veterans Affairs to develop a disease management program for depression. The use of telemedicine to communicate with patients will be an integral component of this program and will include reminders to take medications and to keep scheduled appointments. For additional information about the Health Hero Network, go to http://www.healthhero.com/index.html.

Heritage Information Systems Inc. (Richmond, VA)

Heritage Information Systems Inc. is a privately held consulting company providing clinical management and pharmacy cost containment services to government programs, insurance companies, and large employers. The company serves 10 state Medicaid programs, several national commercial insurers, 5 Blue Cross Blue Shield licensees, and some of the largest employer groups in the country.

A mail-based disease management program to improve the treatment of depression by reducing physician practice variation was implemented. Heritage Information Systems educated physicians to better use clinical practice guidelines. This educational intervention led to substantial cost savings; physicians prescribed more appropriate treatments that were more cost-effective. Education of the physicians also led to improved medication adherence by patients. Educational information along with treatment guideline information was mailed to physicians of patients with excessively long or short antidepressant drug therapy, possible drug interactions, and nonadherence problems. For additional information, see Disease Management News, March 10, 2001 (pages 3 and 5), or go to http://www.heritage-info.com.

Kaiser Permanente Care Management Institute (Oakland, CA)

The Care Management Institute was created in 1997 to help Kaiser Permanente improve the quality of care and health outcomes for its members. Depression, asthma, cardiovascular disease, diabetes mellitus, elder care, heart failure, chronic pain, and cancer were the clinical priorities because they represented an opportunity to improve care for members of the HMO.

Kaiser Permanente received certification from the
NCQA for design of a depression disease management program in September 2002. Non-compliant patients were identified and targeted interventions encouraged improved treatment compliance. The percentage of patients starting antidepressant drug therapy who had at least three follow-up visits within the first 12 weeks of therapy and the percentages of patients continuing antidepressant drug therapy for at least 3 months and at least 6 months increased between 1998 and 1999 at Kaiser Permanente. For additional information, go to http://www.kpcmi.org.

Keystone Health Plan Central (Camp Hill, PA)

Keystone Health Plan Central is a 225,000-member, jointly owned subsidiary of Capital Blue Cross and Pennsylvania Blue Shield. Its depression disease management program dates back to 1998. Screening scales and depression practice guidelines are distributed to primary care providers. Then, anonymous telephone and Internet-based depression screening mechanisms are offered. Patient education materials about the illness and the importance of medication adherence are given to providers and patients. For additional information see Disease Management News, May 10, 2001 (pages 1, 6, and 7), contact Devora Sherfy at Keystone Health Plan Central (717) 730-1941, or go to http://www.pahealthcoverage.com/keystonecentral.html.

LifeMasters Supported SelfCare (Irvine, CA)

LifeMasters Supported SelfCare is an interactive disease management company that provides tools such as health education, training in self-monitoring, and personalized coaching. Timely, clinically-validated information is provided to physicians to prevent serious medical episodes that can result in unnecessary emergency department visits and hospitalizations.

In the past, LifeMasters managed depression as a comorbidity with other diseases, but it recently launched a stand-alone depression program. The program focuses on primary care providers and newly diagnosed patients. A nurse call center and other support tools will be used to monitor patients to ensure adherence to medication regimens and to prevent relapse. For additional information, see Disease Management News, May 10, 2001 (pages 1, 6, and 7), contact Jeffrey Davis, MD, at LifeMasters Supported SelfCare (650) 941-1066, or go to http://www.lifemasters.net.

The Merck-Medco Experience (West Point, PA)

Merck-Medco, a pharmacy benefits management (PBM) company, developed Transitions to Better Health, a depression disease management program designed to optimize the cost-effective use of antidepressant drug therapies and clinical outcomes. The program was available to pharmacy benefits management clients, who decided whether to offer it to plan members. Plan members (i.e., patients) decided whether to participate and authorize the release of personal data. Member prescription claims data (and medical claims data, if available) were reviewed, and one or more of three interventions was offered as appropriate.

One intervention was designed to identify and recognize undiagnosed or untreated depression. Prescription claims data for certain types of medications (e.g., certain analgesics) and, if available, medical claims data were used to identify the plan members who are responsible for the highest 10% of plan costs because of the link between depression and high medical resource use. Patients who had agreed to participate in the program were screened for depressive symptoms by telephone interview conducted by a trained psychiatric nurse. Physicians were promptly notified if the patient appeared to meet the criteria for depression based on this screening. Published information from authoritative sources, including diagnostic criteria and treatment guidelines, was provided to the physician. Follow-up phone calls to the physician were made within one week to offer decision support based on the treatment guidelines. Additional follow-up contact with physicians took place 35 to 50 days later to ascertain the outcome if antidepressant drug therapy was not initiated.

The second intervention was designed to improve patient medication adherence and avoid premature discontinuation of drug therapy, relapse, and costly hospitalization. Patients filling a new prescription for an antidepressant for a first episode or recurrence of depression were contacted by telephone to obtain authorization to participate. Patients who agreed to participate received five education and support calls from a psychiatric nurse over a 12-month period. If needed, a pharmacist provided counseling on adverse effects from drug therapy. Educational mailings and behavioral reinforcement also were provided.
The third intervention encouraged physicians to prescribe antidepressant drug therapy for an adequate but not excessive duration, in accordance with authoritative treatment guidelines. After a year of treatment, the physician was asked to indicate whether the patient was a candidate for maintenance therapy or tapering and discontinuation of drug therapy. Written treatment guidelines that govern this determination were provided to the physician.

The information system capabilities of the PBM facilitated this disease management program and enabled plans to monitor NCQA HEDIS indicators. For example, prescription refill frequency was readily monitored. Results from the program to date are limited. Undiagnosed depression was detected in 9% of screened patients. The rate at which new antidepressant prescriptions for first episodes or recurrences were refilled at least once (presumably reflecting medication adherence) increased by 20%. Nearly 5% of patients monitored 18 months after starting antidepressant therapy had discontinued it (presumably reflecting avoidance of unnecessary use). Additional experience with the program is needed to evaluate the impact on patient outcomes and costs.

PacifiCare Behavioral Health (Laguna Hills, CA)

PacifiCare Behavioral Health, a wholly owned subsidiary of PacifiCare Health Systems, provides behavioral health services to members in 10 states and Guam. In 1999, the company developed Taking Charge of Depression, a disease management program for patients with depression that emphasizes self-management. A patient self-care resource kit with an information booklet about depression, medications, and lifestyle changes, and physician encounter cards for patient use in discussions during physician visits is provided to patients. Patients have monthly telephone contact with counselors to ensure adherence with medications and scheduled visits. Medication adherence is monitored through prescription refill activity and phone calls to the patient. For additional information, see Disease Management Advisor, July 2000;6(7):110-111, or go to http://www.pbhi.com.

PARTNERS Health Plan (South Bend, IN)

PARTNERS Health Plan is a regional health plan that developed PARTNERS in Mental Wellness, a depression disease management program. The program helps primary care providers use better screening tools for depression. Another component of the program is TxAlert, a reminder system that generates a review of claims and pharmacy data using national treatment standards. TxAlert allowed PARTNERS to alert physicians when patients were not taking their medication as prescribed. The goals of the program included increased medication adherence and use of counseling by behavioral health providers. For additional information, see Disease Management News May 10, 2001 (page 6) or contact Patricia Kirkpatrick at PARTNERS Health Plan (219) 236-7720.

Pfizer Inc. (New York, NY)

Pfizer Inc., a pharmaceutical company, oversees the Prime-MD® Today program, which uses a diagnostic instrument to help primary care physicians recognize the symptoms of depression, as well as anxiety, alcohol, eating, and somatoform disorders. The Prime-MD® Patient Health Questionnaire (PHQ-9) is a validated self-administered diagnostic instrument, which evolved from the Prime-MD diagnostic instrument administered by physicians. A depression self-quiz for consumer use is also available at http://www.zoloft.com/index.asp?pageid=4. For additional information about Prime-MD Today, go to http://www.zoloft.com/psd/healthmanagement/primemd.pdf.

Protocol Driven Healthcare Inc. (Bernardsville, NJ)

Protocol Driven Healthcare Inc. develops and markets health application software and services that are used to deliver health, wellness, and disease management programs. The company provides an Internet-based patient education and self-care program for depression to help patients adhere to medication regimens and allow physicians to provide better patient-specific information. For more information, go to http://www.pdhi.com/.

RAND Health (Santa Monica, CA)

RAND Health is the nation’s largest private health care research organization. RAND Health’s Partners in Care program is an integrated approach to improving care for depression in primary care. The program uses collaborative care and is suitable for a variety of practice settings. A study using the program...
demonstrated that patients’ mental health and daily functioning can be significantly improved by treatment. Favorable outcomes for employers, managed care organizations, and insurers, including a reduction in job-loss rates, were achieved with the use of modest, practical programs in primary care settings. Program materials are available at http://www.rand.org/health/pic/products/ or from RAND Distribution Services by calling (877) 584-8642.

Tufts Health Plan (Boston, MA)
Tufts Health Plan was founded in 1979 as a not-for-profit HMO. It has expanded into a family of companies, offering a full array of health care coverage options to individuals and employer groups. Depression is among the mental health disease management programs offered by the Tufts Health Plan. The depression program focuses on patients in the primary care setting. Patient education materials about the illness and medications are provided by mail and on the Internet. For additional information, go to http://www.tufts-healthplan.com/.

Additional Depression Disease Management Resources

Eli Lilly and Company (Indianapolis, IN)
Eli Lilly and Company, a pharmaceutical company, provides Internet-based patient information about the treatment of depression and information about where to seek treatment. A Zung scale self-assessment test is available online at: http://www.prozac.com/.

Forest Laboratories (St. Louis, MO)
Forest Laboratories, a pharmaceutical company, provides Internet-based patient information about the treatment of depression. In addition, a physician locator (by zip code) and a depression self-rating (i.e., screening) test are available online at: http://apps.redidata.com/forest/surv/survey.asp?one=&two=&three=&four=&wherefrom=WEBSITE&missing=true&accept=on.

QualityMetric Inc. (Lincoln, RI)
QualityMetric Inc., an independent, privately held corporation, is a provider of health outcomes assessment tools. The company was founded in 1997 by John E. Ware, Jr., PhD, principal developer of the SF-36®, SF-12®, and SF-8™ health surveys, widely used health assessment surveys. Internet-based tools for measuring outcomes in patients with depression are available from QualityMetric. For more information, go to http://www.qualitymetric.com/.

The Future of Depression Management
Disease management—an important approach to integrated care—has been shown to improve patient outcomes and quality of life while potentially reducing overall costs. Applying the key components of disease management to the treatment of depression can help ensure successful treatment. Disease management is a useful, efficient approach to health care. It has continued to gain widespread acceptance over the past 10 years, and health plans that provide multiple services to patients who need coordinated services are seeing the most success in their chronically ill patients.

Challenges in Managing Depression
The management of depression does present challenges to clinicians. Depression usually is treated in the primary care setting because of a lack of access to specialty care or the stigma associated with seeking treatment from a mental health professional. Changes in the financing and structure of the health care system during the 1990s affected patterns of referral of patients to specialists. In the early 1990s, referral was uncommon because of the negative economic impact on primary care providers under a capitation system (i.e., the primary care provider bore the cost for referrals). In the late 1990s, referral became more common with the establishment of managed behavioral health organizations. Nevertheless, only one in five patients with major depression is treated by a mental health specialist.

The structure of managed care systems increases reliance on primary care providers for mental health services. However, the primary care system is more effective in managing acute illnesses than chronic conditions such as depression. Primary care providers have limited time to spend with patients and what time is available often is inadequate for patients with chronic illnesses. In a managed care system, depression often competes with other disease states and conditions for limited health care
dollars. Clinicians must prioritize their time, and patients may be forced to set priorities for their needs.

The physician-patient relationship typically is not long lasting because of frequent changes in health insurance, especially in patients who change employers frequently. Mental health “carve outs” (i.e., subcontracting of mental health services to mental health providers separate from other health care services) may result in fragmented care. Continuity of care for patients with depression usually is lacking.

In addition, some patients may be reluctant to accept the diagnosis of depression; and access to medication can be a barrier to successful treatment. Failure to adhere to drug therapy and follow up with clinic visits also compromises patient outcomes.

Strategies for Overcoming Barriers to Managing Depression

Strategies to overcome barriers to managing depression include developing educational campaigns for the public to reduce the stigma associated with the treatment of depression and other mental illnesses. Many mental health associations (Table 2) have undertaken such efforts.

Education and training of primary care providers in communication skills and the use of screening tools can improve the detection rate of depression. Health systems can be redesigned to increase collaboration between primary care providers and specialists in the management of patients with depression (e.g., using collaborative management models) without compromising cost-effectiveness. Rebundling resources and delegating responsibility (e.g., patient education tasks that can be performed by nurses) can make such collaborations economically feasible. Information systems can be developed to facilitate communication among providers and tracking of patient data and outcomes. Identifying patients at high risk for relapse or recurrence so that they can receive maintenance therapy and other relapse prevention strategies (e.g., patient education, extra clinic visits, follow-up phone calls) and patients at low risk for relapse or recurrence so they can discontinue therapy (after tapering) optimizes the use of limited resources. Outcomes-based performance standards should be established to provide a basis for health plans to compare operational successes (e.g., relapse rates in patients with depression).

Table 2. Mental Health Associations with Information for the Public

<table>
<thead>
<tr>
<th>Association</th>
<th>Address</th>
<th>Phone Number</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Psychiatric Association</td>
<td>1000 Wilson Boulevard, Suite 1825</td>
<td>(888) 357-7924</td>
<td><a href="http://www.psych.org">http://www.psych.org</a></td>
</tr>
<tr>
<td>National Institute of Mental Health</td>
<td>6001 Executive Boulevard, Room 8184, MSC 9663</td>
<td>(866) 615-NIMH[6464]</td>
<td><a href="http://www.nimh.nih.gov/publicat/depression.cfm">http://www.nimh.nih.gov/publicat/depression.cfm</a></td>
</tr>
<tr>
<td>National Mental Health Association</td>
<td>2001 North Beauregard Street,12th Floor</td>
<td>(800) 969-NMHA[6642]</td>
<td><a href="http://nmha.org">http://nmha.org</a></td>
</tr>
</tbody>
</table>

Patient education should motivate patients to assume a more active role in their own care and improve their self-management skills and adherence to prescribed therapy. The use of information systems can help promote patient adherence and improve outcomes by tracking prescription refill and clinic visit frequency and timing, and by identifying patients who discontinue drug therapy prematurely. Telephone calls to patients (especially those whose adherence is poor) may result in better adherence and outcomes.

Health management is a strategy that has been advocated as an alternative to disease management. The patient (not the disease) is the focus of this approach; patients are partners in care and they negotiate priorities with the physician and managed care organization. Quality-of-life measures are used to a greater extent than disease-specific measures in...
evaluating outcomes. Physician efficiency in detecting and triaging mental illnesses and prioritizing time is increased through the use of ReACT, a strategy that entails recognizing the presence of distress, assessing the type and severity of the problem, categorizing the problem, and treating the problem. Support staff and various technologies (e.g., information systems, telephone interviews, interactive voice response systems) are used to optimize efficiency. Collaboration between primary care providers and mental health specialists is emphasized.

Conclusion

Depression is a costly mental illness that often goes undetected or inadequately treated. Disease management programs for depression are not as well established as those for other chronic medical conditions because of the structure of the health care system and patient attitudes and behavior. However, many vendors are taking on the challenge of implementing depression disease management programs and seeing success.

Strategies to overcome barriers to managing depression include training of health care providers in detection and diagnosis of the illness, increasing collaboration among primary care providers and specialists, and providing patient education to increase motivation, self-management skills, and adherence to the treatment regimen.

Disease management can improve patient outcomes and quality of life while potentially reducing overall health care costs. It is key to integrating care. As more health care payers incorporate disease management principles into the delivery of care, we will begin to see many more depression disease management programs.
Appendix A. Diagnostic Criteria for Major Depression

A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

Note: Do not include symptoms that are clearly due to a general medical condition, or mood-incongruent delusions or hallucinations.

(1) depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). Note: In children and adolescents, can be irritable mood.

(2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others)

(3) significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. Note: In children, consider failure to make expected weight gains.

(4) insomnia or hypersomnia nearly every day

(5) psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)

(6) fatigue or loss of energy nearly every day

(7) feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)

(8) diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)

(9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide

B. The symptoms do not meet criteria for a Mixed Episode.

C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).

E. The symptoms are not better accounted for by bereavement, i.e., after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.

Appendix B.
Natural History, Management, and Treatment of Depression

Depression usually first manifests when a person is in her or his late 20s, although the onset can occur at any age. Untreated episodes usually last for 6–24 months. Depression has a variable course. About two thirds of untreated patients have only a single episode and return to their previous level of functioning (i.e., achieve spontaneous remission). However, residual symptoms and impairment of interpersonal, social, and occupational functioning persist in 20% to 35% of cases. Approximately 50% to 85% of patients have at least one more episode (i.e., a recurrence), usually within 2 or 3 years.

The goals of treatment for depression in the acute phase are to eliminate all symptoms and restore psychosocial function (i.e., achieve remission). Prevention of relapse (i.e., a return of symptoms before full recovery within 6 months after remission) is the primary goal of treatment during the continuation phase. Prevention of recurrence (a new episode following a full recovery) is the goal of maintenance therapy.

Initial therapeutic options in the acute phase of a depressive episode are pharmacotherapy, psychotherapy, or both. Considerations in choosing among these options include symptom severity, patient preference, and past response of the patient and family members to antidepressant therapy. Demographic variables (e.g., age, sex, marital status) are not good predictors of treatment outcome. Antidepressant drug therapy should be provided for patients with moderate or severe symptoms and, if preferred by the patient, may be used for mild symptoms as well. Psychotherapy alone may be considered for patients with mild or moderate symptoms. Combination pharmacotherapy and psychotherapy is sometimes used for patients with psychosocial or interpersonal problems, or a personality disorder and moderate or severe depression.

Pharmacotherapy
Depression has been attributed in part to the depletion of neurotransmitters (norepinephrine, serotonin, dopamine, or a combination) in the central nervous system, although theories about the pathogenesis of depression are still evolving and subject to debate. Most antidepressant medications inhibit neuronal reuptake of one or more of these neurotransmitters, thereby enhancing neurotransmission. However, the effects of antidepressants are complex and remain to be fully elucidated.

The various antidepressant agents and antidepressant drug classes are comparable in efficacy in treating depressive episodes; 50% to 75% of patients respond to antidepressant drug therapy. Because the response rates are similar among the available agents, selection of an antidepressant agent usually is made on the basis of safety, tolerability, patient preference, and cost.

Regular and consistent monitoring—a key component of disease management—of antidepressant drug therapy is critical to managing depression successfully. Accurate patient monitoring helps to ensure that the health care provider selects a drug with maximum therapeutic effect and minimal adverse effects and also helps to ensure proper dose titration. Regular monitoring of the patient and provision of feedback to the health care provider can address any potential problems with adverse effects and efficacy at an early stage. Early intervention also can resolve issues that could affect compliance. Patient monitoring is key in the early stages of the treatment process. Disease management programs can help to ensure successful treatment.

Psychotherapy
Various types of psychotherapy have been used to treat depression, including cognitive-behavioral therapy, interpersonal therapy, psychodynamic psychotherapy, problem-solving therapy and other behavior therapies, and marital, family, and group therapy. Cognitive-behavioral therapy and interpersonal therapy are the two forms of psychotherapy with the most documentation of benefit in treating depression. Cognitive-behavioral therapy challenges and reverses irrational beliefs and distorted attitudes toward the self, the environment, and the future. It helps patients change negative styles of thinking and behaving.

Interpersonal therapy focuses on disturbed relationships that cause and exacerbate depressive symptoms. It facilitates mourning after losses, resolves role disputes and transitions, and overcomes deficits in social skills to reduce social isolation and increase social support.

Cognitive-behavioral therapy has been found to be as effective as (or perhaps even more effective than) antidepressant drug therapy. Evidence suggests that interpersonal therapy and antidepressant drug therapy are comparable in efficacy. However, the available comparative data are insufficient to draw conclusions about the relative effectiveness of psychotherapy and antidepressant drug therapies.

Disease management programs can help improve access to psychotherapy services, which are critical to improving patient self-management skills. This is where the

(Continued on next page)
Appendix B.
Natural History, Management, and Treatment of Depression (continued)

The use of disease management services can be especially beneficial; psychotherapy services often are not part of mainstream health care services. A disease management program can help integrate multiple types of services to optimize patient care and ensure successful treatment of depression.

**Acute Phase**
Antidepressant drug therapy usually is best initiated using a small dosage followed by gradual dosage increases over the initial week or weeks to avoid or minimize adverse effects. If a patient does not have at least a moderate improvement in symptoms (i.e., if the patient has no response or a partial response) after 6 to 8 weeks of antidepressant drug therapy despite the use of full therapeutic dosages, switching to another antidepressant agent should be considered.

A goal of disease management is to improve the coordination of services among the patient, physician, disease management organization, and other health care providers. The acute phase of treatment can be a potentially volatile phase and is key to successfully treating the patient. Coordinating care across health care providers at this phase is critical to successfully managing the patient; disease management programs can help to optimize services so that patients can focus on adhering to their new medication regimen.

**Continuation Phase**
Patients who receive antidepressant drug therapy in the acute phase should continue therapy using the same dosage for 16 to 20 weeks after remission is achieved to prevent relapse. About 25% of patients will relapse within 2 months if therapy is not continued. Antidepressant drug therapy reduces relapse rates by at least 50%.

Disease management programs are designed to optimize patient self-management so that patients are empowered to adhere to their medication regimens. Disease management can promote adherence in the continuation phase to help prevent relapse.

**Maintenance Phase**
Continuing antidepressant drug therapy, psychotherapy, or both on a long-term basis after the continuation phase may be considered for patients at high risk for recurrence. Full antidepressant dosages are used for maintenance therapy. The duration of maintenance therapy depends on the prognosis. For example, it may be 5 or more years for patients at high risk for recurrence, and indefinite or lifelong for patients with two or three episodes, each of which occurred within a year after discontinuing antidepressant medication.

Disease management programs facilitate medication adherence in the maintenance phase and help prevent relapse and recurrence.

**Discontinuation of Therapy**
The decision to discontinue therapy is based on the risk of recurrence. The dosage of antidepressants should be gradually reduced over a period of at least several weeks before discontinuing therapy to allow for the detection of emerging symptoms or recurrences and to prevent medication discontinuation syndromes (i.e., withdrawal symptoms). These syndromes may be mistaken for or mask signs of a relapse because they affect mood, energy, sleep, and appetite.

Patients should be monitored for signs of relapse or recurrence over a period of several months after discontinuation of therapy. Patient counseling should address the possibility of relapse or recurrence, the early warning signs, and what to do if these signs occur.

Disease management can provide services designed to enhance patient self-management skills. If the health care provider and patient decide to discontinue therapy, these skills enable the patient to reduce his or her risk of relapse and recognize the signs and symptoms of relapse and seek treatment.

**Patient Self-Management**
Self-management skills (e.g., recognizing the prodromal symptoms that precede a relapse) are considered vital for effectively treating depression. Developing a relapse prevention plan in the event that prodromal symptoms occur is recommended.

Disease management programs have services designed to enhance patient self-management and help patients adhere to a strict medication and psychotherapy treatment plan. Depending on the needs of the patient, disease management programs can encourage and facilitate the development of critical self-management skills.

The information in this appendix is adapted from the sources in Table 1, found on page 3 of this document.
References


