Chapter 2
Depression and a Stepped Care Model

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Given the public health significance of depression and the limited resources available for providing evidence-based treatment, there is a need to develop effective models of care to reduce the personal and societal costs of the disorder. Within stepped care service provisions, all patients presenting with symptoms of depression generally are first offered the lowest intensity and least intrusive intervention deemed necessary following assessment and triage. Only when patients do not show improvement do they move to higher, more intensive levels of care. However, stepped care models also provide information to aid clinicians in decision making regarding selection of treatment strategies that are most appropriate for an individual patient. For some individuals, lower levels of care would never be appropriate or may not be preferred by the consumer. Thus, stepped interventions offer a variety of treatment options to match the intensity of the patient’s presenting problem as well as potential patient preference. In this chapter, we discuss various strategies for treating depression consistent with a stepped model of care beginning with least intensive treatment and then moving up through the hierarchy of steps of care. While this is not a comprehensive review of all available treatments for depression, the chapter is designed to make clinicians aware of specific strategies for addressing depressive symptoms and to provide guidance about resources available at the various levels of care.

Step 1: Assessment and Monitoring

Assessment and Triage

Assessment in a stepped care model should assist in ideographically informing treatment decision making. The assessment process should guide decisions regarding
level of care appropriate for an individual patient and should typically involve administration of self-report instruments as well as a clinical interview. One commonly used self-report screening measure of depressive symptoms in adults is the Beck Depression Inventory-II (Beck et al., 1996). The BDI-II has high 1-week test–retest reliability \((r = 0.93)\) as well as internal consistency finding an alpha coefficient of 0.91 (Beck et al., 1996). The Montgomery–Asberg Depression Rating Scale (MADRS; Davidson et al., 1986) is another commonly used screening measure of depression. It has been found to have excellent inter-rater test–retest reliability \((r = 0.93)\). One interesting consideration of the MADRS is that similar indices of reliability have been examined when administered via telephone, video-conference, as well as face to face (Williams and Kobak, 2008). Other commonly used measures are the Hamilton Rating Scale for Depression (Hamilton, 1980) and the lengthier Structured Clinical Interview for DSM-IV. For young children, the Children’s Depression Inventory (Kovacs, 1992) is widely used and may be a helpful measure; however, there have been some concerns that it may lack appropriate specificity to be used as a stand-alone diagnostic tool (Carey et al., 1987). For adolescents, some inventories developed for adults may be appropriate. In particular, the BDI-II and the BDI-SF have been shown to be a valid screening tool for inpatient adolescents 11 years and older even in the presence of comorbid conditions (Bennet et al., 1997). The Reynolds Adolescent Depression Scale (Reynolds, 1987) may be used in cases where the BDI-II is deemed a poor fit. This measure has been found to have acceptable test–retest reliability and high concurrent validity with other measures of depression in both clinical and community samples (Masip et al., 2008). The semi-structured clinical interview, the Children’s Depression Rating Scale-Revised (CDRS-R; Poznanski and Mokros, 1996), may be used with both children and adolescents to provide a more ideographic approach to assessment of depression. This measure has been found to have acceptable internal consistency and 2-week test–retest reliability of 0.80 (Poznanski and Mokros, 1996). Finally, the Geriatric Depression Scale is commonly used for screening of depression in an older population (Yesavage et al., 1983). The advantage of these screening instruments is that they offer indicators for different degrees of depressive symptomatology (i.e., mild, moderate, severe symptom presentations) as well as allow for monitoring of suicidality. These indicators may assist healthcare providers in determining whether and when a higher level of care is warranted.

In addition to initial screening and assessment, ongoing monitoring of symptoms allows a clinician to determine whether a higher level of care is warranted at any stage in the treatment process. This practice also allows for regular assessment of suicidality or self-harm behaviors that may warrant inpatient or more intensive care. Such monitoring of suicidality in patients who present with depressive symptoms should occur throughout the course of care. In addition to the symptoms monitoring forms mentioned previously, there are a number of specific suicide assessments that can be used if a clinician is concerned about a patient’s risk for self-harm (e.g., The Modified Scale for Suicidal Ideation; Joiner et al., 1997). Such assessment should include questions about frequency, intensity, and duration of suicidal ideation; specificity of plan; access to a plan; any preparatory behaviors; reasons
for living; self-control strategies; and intent to die (Joiner et al., 1999). Acute assessment should also include family and personal history of suicide, attempts, mental illness as well as an evaluation of protective factors, strengths, and vulnerabilities with supplementary data being provided from those close to the individual when possible (APA, 2003).

An innovative approach to assessment and treatment that incorporates several useful aspects of stepped care model has been described in the Wilford Hall model of outpatient treatment (Kelleher et al., 1996). In an effort to streamline treatment, an orientation period was implemented in a group format where initial assessment, psychoeducation, and treatment alternatives were presented. After initial assessment, the client and the group facilitators collaboratively decided on the most appropriate treatment option based on available assessments, treatment goals, and client preferences. The Wilford Hall model also includes continual monitoring using a computer-based data management system (COMIS; Clinical Outcome/Management Information System). This system provides ongoing assessment of the presenting problem and treatment satisfaction. This is a valuable information for managed care providers on the efficacy of treatments delivered using objective outcome measures, an increasing necessity for reimbursement (Ciarlo et al., 1986; JCAHO, 1993). This particular model is designed to be used in a military setting with a variety of different presenting problems and corresponding assessments to help inform treatment. The one consistent assessment is an ideographic functional assessment, which may be an important tool in identifying the appropriate step for the patient. This model of assessment could be a useful tool in a stepped care model as it incorporates several important aspects of the decision-making process (severity, preference, ongoing assessment) that will be discussed throughout the remainder of the chapter.

**Watchful Waiting**

There is some evidence to suggest that spontaneous remission may occur in individuals seeking treatment with minor symptoms of depression (Peterson and Halstead, 1998). It has been found that many people naturally recover from major depressive episodes as well, especially within the first 3 months of occurrence (Posternak et al., 2006). For this reason, a watchful waiting period is often considered a first-line, low-intensity level of care for individuals with low levels of depressive symptoms. Watchful waiting involves repeated assessment or monitoring of symptoms without any other active treatment (i.e., medication, psychotherapy; Meredith et al., 2007) and is usually a collaborative decision between the clinician and the patient (Hegel et al., 2006). Data collected by the Canadian Community Health Survey has shown that 16% of those that had their first major depressive episode recovered within 2 weeks and 30% recovered within 4 weeks, which would support the use of a watchful waiting period (Patten, 2006). Additional evidence supporting use of watchful waiting emerged from investigations of cognitive behavior therapy (CBT) for depression. In these studies, time-course investigations have revealed that a significant amount of change in CBT occurs within the first 4 weeks of treatment.
(Ilardi and Craighead, 1994) before any explicit CBT strategies are introduced, suggesting that supportive therapy may also be a low-level, first-step intervention. This rapid response to treatment is maintained over time and occurs regardless of treatment condition (Busch et al., 2006; Gaynor et al., 2003; Renaud et al., 1998). Watchful waiting has been effective across populations, including with older adults (Williams et al., 2000) and adolescents (Bridge et al., 2007; Cheung et al., 2005; Renaud et al., 1998). However, it should be noted that watchful waiting has not produced significant results in all studies (Hegel et al., 2006). In addition to efficacy data, there are data to suggest that watchful waiting may be preferred by some patients. In one clinic-based survey, 16% of individuals indicated a preference for watchful waiting over active treatment and were subsequently less likely to seek alternate, more active, treatments (Dwight-Johnson et al., 2006). Given that treatment dropout rates can reach up to 50% for psychotherapy and medication treatment (Marks, 2002), patient treatment preferences may be critical (Institute of Medicine, 2001), particularly if patients are not likely to pursue options other than the one they prefer.

Watchful waiting has several advantages and may be a cost-effective, time-efficient first step of care. Watchful waiting periods may be accomplished without requiring patients to present at a healthcare facility. Scogin and colleagues (2003) suggested telephone- and Internet-based monitoring systems (such as the COPE program detailed later in this chapter) may be useful strategies for tracking depressive symptoms in a stepped care model. Additionally, these may be implemented by clinicians without a high degree of specialized training, including counselors, social workers, and case managers. Such care providers may be more readily available, especially in geographic areas or settings where access to more intensive, evidence-based treatments is limited. Given the potential for improvement during watchful waiting periods, it seems like systematic monitoring of symptoms during waitlist periods when a more intensive treatment is not yet available for a patient is warranted.

Watchful waiting can be implemented in different forms. Typically, watchful waiting involves a non-directive approach to care and begins with a clinical interview and/or self-report measures providing an initial assessment of depressive and other mental health symptoms in a supportive, empathic encounter. In addition to a clinical interview, self-report assessment of depressive symptoms may be most useful for ongoing monitoring. There are instances where watchful waiting is contraindicated and an alternate treatment strategy may be recommended. These contraindications include moderate to severe levels of depressive symptomatology and cases where a patient is considered to be at risk for harming self or others.

A period of at least 4 weeks is recommended as a standard watchful waiting period. When sudden gains or early treatment response occurs, it generally happens within this time frame (Gaynor et al., 2003; Ilardi and Craighead, 1994). During this 4-week period, patient symptoms are monitored on a weekly basis. If at the end of the watchful waiting period symptoms have failed to achieve clinically significant improvement, patients typically progress into a more intensive intervention. Individuals who respond effectively to watchful waiting may benefit
from a continued period of monitoring as a strategy for preventing and/or addressing worsening of symptoms should this occur.

**Step 2: Interventions Requiring Minimal Practitioner Involvement**

**Psychoeducation**

Psychoeducation is a part of nearly all comprehensive evidence-based treatments for depression. However, it may also be delivered as a stand-alone strategy that requires minimal specialized training, if a therapist is needed at all, and is thus considered a lower level of intervention in the stepped care model. Despite presumed clarity about the definition of the term “psychoeducation,” descriptions of this intervention in the research literature vary considerably. Most definitions of psychoeducation for depression describe it as a form of treatment that emphasizes instruction and education on a variety of topics relating to depression, including symptoms, the expected clinical course and prognosis, treatment options and strategies, and signs of relapse (Dowrick et al., 2000; Lin et al., 2008; Ong and Caron, 2008). Psychoeducation can be provided through verbal communication between a patient and mental health service provider, in either an individual or group format, through written materials, such as pamphlets or books or through computer programs and web sites (Christensen et al., 2004; Cuijpers, 1998; Dowrick et al., 2000). Computerized psychoeducation may be relatively comparable to the written material found in pamphlets or books or it can be quite complex and include animation and video clips. Treatment approaches that utilize psychoeducation may involve a single session of varying length, from a couple of hours to an entire day, or may take place through numerous sessions attended over the span of a number of weeks. This approach has a number of intended purposes, including providing informational material that assists patients in understanding their symptoms, increasing appropriate treatment seeking, encouraging compliance with and participation in psychological and pharmacological treatments, increasing the speed of recovery, and enhancing the repertoire of skills that patients have to help them cope. Psychoeducation has been applied successfully to individuals experiencing subclinical and clinical levels of depression (Christensen et al., 2004; Cuckrowicz and Joiner, 2007; Cuijpers, 1998; Dowrick et al., 2000). Furthermore, it has been used with a number of age groups, including adolescents, adults, and the elderly, as well as caregivers of the elderly and family members of children, adolescents, and adults suffering from depression (Cuijpers, 1998; Ong and Caron, 2008). Psychoeducation has also been applied successfully with more specific populations, low-income women in a group format as well as individual education supplemented by a pamphlet, and women experiencing postnatal depression in a non-directive group format (Honey et al., 2002; Lara et al., 2003).

Although numerous studies examining the efficacy of psychoeducation have been completed, only one meta-analysis of the existing data on psychoeducation has been
conducted. This meta-analysis examines a specific cognitive-behavioral psychoeducational course titled “Coping with Depression” (Cuijpers, 1998). The results of the meta-analysis found that when compared to control groups, the mean effect size of the “Coping with Depression” course was 0.65, which is considered to be a moderate effect size. When calculated based on change from pretest to posttest, the mean effect size of the “Coping with Depression” course was 1.21, which is considered to be a large effect size, suggesting that psychoeducation is an effective option for treating depression. Furthermore, Cuijpers (1998) noted that there was some evidence to suggest that individuals who receive psychoeducation continue to demonstrate improvement over post-treatment follow-up periods, although additional research on the post-treatment effects of psychoeducation is needed.

Although psychoeducation is a treatment approach that is very adaptable to computer-based formats, only one study has been conducted to date examining the efficacy of non-interactive computer-based psychoeducational program. Christensen and colleagues (2004) compared the efficacy of a psychoeducational web site, titled BluePages (www.bluepages.anu.edu.au), and an interactive cognitive-behavioral therapy web site, titled MoodGYM (www.moodgym.anu.edu.au), to an attention placebo condition as a treatment for individuals in the general community exhibiting symptoms of depression. Both programs were found to have moderate effect sizes when intent-to-treat analyses were done as well when only those who completed the full course of treatment were examined. It was also found that there were significantly fewer dropouts in the psychoeducation program (15%) compared to the CBT program (25%). This suggests that both psychoeducation and cognitive-behavioral therapy administered through the Internet are efficacious treatments for the symptoms of depression, particularly for individuals exhibiting clinical levels of symptoms. A subsequent study conducted by Cukrowicz and Joiner (2007) also supports a CBT-based program of psychoeducation. They examined the comparative efficacy of a brief computerized cognitive-behavioral psychoeducational program, titled the Cognitive-Behavioral Analysis System of Psychotherapy (CBASP), to a computerized psychoeducational program, in a college student population. The results of the study indicated that at 2-month follow-up, individuals in the CBASP group had moderate effect sizes in their symptoms of anxiety and depression and greater improvement than those in the computerized psychoeducational program group. Cukrowicz and Joiner (2007) concluded that computer-based psychoeducational programs may be useful treatment options for individuals experiencing depression, particularly given their user-friendly, time-efficient, and cost-effective nature.

Psychoeducational approaches may appeal more to certain populations. It has been suggested that computer-based psychoeducational approaches may be particularly beneficial when used with populations that have had more exposure and training in the use of computers. Psychoeducational approaches to treatment may also be acceptable in instances where patients live too far away from mental health service providers to receive regular therapy services, do not have the financial means to receive regular therapy services, or are currently on a waitlist to receive therapy services. There are also some patients for whom psychoeducational approaches are not indicated, in including individuals with comorbid disorders (e.g., psychosis,
substance abuse) and individuals with severe concentration or attention difficulties (Cuijpers, 1998). Controversy exists about whether psychoeducational approaches are appropriate for populations with severe symptoms of depression. Some research exists suggesting that psychoeducational approaches may be effective for individuals with severe symptoms of depression, including those individuals with histories of depression-related hospitalization and symptoms that are unresponsive to antidepressant medications (Swan et al., 2004). There is some evidence that may support a more intensive intervention for those suffering from more severe depressive symptomology including three to six times higher prevalence for relapse for those that have residual symptoms (Tranter et al., 2002), and findings from large-scale studies that have indicated that more severe depressive symptoms may benefit from medication plus active treatment as an initial step (Elkin et al., 1989, 1995). However, further research is necessary to determine the populations for which psychoeducation is most likely to be an effective treatment approach.

**Bibliotherapy**

Bibliotherapy has been used as a preventive intervention for individuals at high risk for depression and for individuals exhibiting elevated symptoms of depression and as an adjunct to traditional forms of therapy (Stice et al., 2006). Mains and Scogin (2003) reported that as many as 60–97% of psychologists prescribe bibliotherapy as a component of their treatment to enhance the learning of strategies discussed in therapy and to increase the degree of behavioral change outside of session (Gregory et al., 2004).

While bibliotherapy can be completed without the assistance of a mental health service provider, many individuals have advocated for minimal mental health service provider contact as part of a bibliotherapy regimen. Cuijpers (1997) and Mains and Scogin (2003) recommend that mental health service providers conduct a thorough assessment of candidates for bibliotherapy, provide a brief introduction to bibliotherapy in a separate session, and schedule 5–15 min phone contacts with the patient on a weekly basis. The rationale for this contact is to mitigate risks which may contribute to the failure of the treatment. One risk is that of misdiagnoses. In the absence of a formal diagnosis of a trained professional, an individual may run the risk of using a treatment that is inappropriate (e.g., a depression protocol for the treatment of bipolar) (Cuijpers, 1997). Additionally, it has been found that treatment dropout may be more likely in bibliotherapy (Rosen et al., 1976) than in face-to-face interventions. Weekly contact may help with adherence and can also help provide alternatives if dropout is deemed appropriate. A weekly check-in may also allow for monitoring of symptoms and suicidality to quickly move a client into a more intensive step of care if necessary. The efficacy and necessity of these measures await further empirical investigation as other research suggests that entirely self-administered treatments are equally as effective as those treatments in which mental health service providers give additional assistance during the treatment process (Gregory et al., 2004).
The most recent meta-analysis of bibliotherapy, conducted by Gregory and colleagues in 2004, examined 29 treatment outcome studies of cognitively oriented forms of bibliotherapy, 17 of which were judged to be particularly methodologically rigorous. When considering all 29 studies, bibliotherapy had an effect size of 0.99, but when including only those studies deemed to be of higher quality in terms of their research design, bibliotherapy had an effect size of 0.77. The authors compared these effect sizes to those obtained in a meta-analysis of controlled studies of individual therapy for depression and a meta-analysis of controlled studies of cognitive therapy for depression and determined that the effect size of bibliotherapy is relatively comparable to these therapeutic approaches. Gregory et al. (2004) also found no significant differences in effect sizes between group-administered bibliotherapy and self-administered bibliotherapy, which is further support that either modality is acceptable.

Two examples of books that are commercially available and have empirical support are *Feeling Good* (Burns, 1980) and *Control Your Depression* (Lewinsohn et al., 1986). *Feeling Good* is cognitively oriented and focuses primarily on identifying and altering distorted or problematic thinking, although some behaviorally oriented techniques such as activity scheduling are included in the book. *Control Your Depression* is behaviorally oriented and focuses primarily on pleasant activities, developing social skills, and relaxation strategies, although cognitive techniques are also included in the book. In addition to these two commonly used books, many other books are commercially available that have a solid theoretical basis such as *Overcoming Depression One Step at a Time: The New Behavioral Activation Approach to Getting your Life Back* (Addis and Martell, 2004) and *The Mindfulness and Acceptance Workbook for Depression: Using Acceptance and Commitment Therapy* (Strosahl and Robinson, 2008). These treatments have been shown to be efficacious when administered by a therapist, but that have not yet been empirically tested in a bibliotherapy format. Additionally, as with psychoeducational approaches to the treatment of depression, bibliotherapy can also be easily adapted to computerized formats that have the distinct advantages of being easily updated and free to the public (Cuijpers, 1997).

As with psychoeducation and watchful waiting, bibliotherapy may be an appropriate intervention for patients who do not have the means to access traditional therapy services or for patients who are currently on a waiting list to receive traditional therapy services. Bibliotherapy may also be a particularly appealing intervention for individuals who may otherwise avoid seeking treatment because of the stigma associated with traditional psychotherapy (Mains and Scogin, 2003). The current research literature has only examined bibliotherapy as an intervention for individuals suffering from mild to moderate depression (Cuijpers, 1997; Gregory et al., 2004). The risks of suicide and challenges in motivation and attention that often accompany severe depression make bibliotherapy an inappropriate recommendation for this population (Gregory et al., 2004; Mains and Scogin, 2003). Additional patient characteristics that should be taken into account when considering bibliotherapy as a treatment option include the cultural relevance of a specific bibliotherapy program such as treatment goals that are explicitly contradicted by the
patient’s culture or values. Additionally, the patient’s expectations and preferences for treatment, the patient’s attitude toward bibliotherapy as a treatment option, the patient’s reading level and/or disabilities that might impair comprehension of the material, and the patient’s history and preferences for school-like tasks (Gregory et al., 2004; Mains and Scogin, 2003) should be considered.

**Computer-Based Intervention/E-Health**

Computer-based intervention, also known as computer-aided cognitive-behavioral therapy (CCBT), is defined as “any computing system that aids cognitive-behavioral therapy by using patient input to make at least some computations and treatment decisions” (Marks et al., 2007). CCBT includes cognitive-behavioral therapy programs delivered through the Internet, CD-ROMs, DVDs, PDAs, telephone systems, and virtual reality devices, but does not include treatments in which a mental health service provider makes all treatment decisions, while treatment is being provided through the use of technology (e.g., over the telephone, in an Internet chat room) (Marks et al., 2007). Most CCBT programs use multimedia technology and include textual components, audio voice-overs, video clips, and interactive components, including multiple-choice questions and short-answer responses boxes that patients use to input information (Cavanagh and Shapiro, 2004). Many of the CCBT programs also include weekly homework assignments, measures tracking patient symptoms, and opportunities for patients to provide consumer satisfaction feedback (Cavanagh and Shapiro, 2004). Because of the portability of CCBT technology, treatment can take place in a variety of settings, including the homes of patients, outpatient clinics, inpatient units, schools, and public locations, such as libraries (Marks et al., 2007). Some CCBT programs may require large amounts of mental health service provider contact (e.g., virtual reality exposure CCBT) while other CCBT programs may require no contact with a mental health service provider (e.g., those accessed from the home of the patient over the Internet, with no initial consultation from a mental health service provider).

One meta-analysis has been conducted examining the efficacy of CCBT programs for depression. Cavanagh and Shapiro (2004) analyzed the data from five available CCBT treatment outcome studies that utilized the Beck Depression Inventory as a treatment outcome measure. The results of their meta-analysis showed a large (1.38) pretest to posttest effect size for CCBT, but only a small (0.34) effect size for CCBT when compared to waitlist controls. Furthermore, they found a medium (0.63) effect size favoring therapist-administered CBT over CCBT, although this effect size was calculated based on only two studies with 18 participants in the two CCBT conditions.

Since the Cavanagh and Shapiro (2004) meta-analysis, a number of important CCBT treatment outcome studies have been completed and several commercially available CCBT programs have emerged with adequate empirical support as measured by improvement on the BDI-II in relation to standard care. Two large-scale studies conducted by Proudfoot and colleagues (2004) and Cavanagh and colleagues
L.A. Broten et al. (2006) found that completion of the *Beating the Blues* (www.beatingtheblues.co.uk) CCBT program led to significant decreases in measures of anxiety and depression and significant increases in measures of well-being and work and social adjustment. These improvements were maintained at up to 6 months following treatment, leading the National Institute for Clinical Excellence (NICE) to recommend it as a treatment for mild to moderate depression (Marks et al., 2007).

The most recent iteration of the *Overcoming Depression* (www.overcoming-depression.com) was tested by Whitfield and colleagues (2006) with a group of individuals who were on a waitlist to receive therapy services for their depression. Whitfield et al. (2006) found that participants who completed the entire six-session program demonstrated significant decreases in their symptoms of depression and expressed high degrees of satisfaction with the program.

*Good Days Ahead: The Multimedia Program for Cognitive Therapy* (www.mindstreet.com) is an eight-session multimedia computer program that has been tested in one randomized controlled trial where participants were assigned to computer-assisted cognitive therapy, standard cognitive therapy, or a waitlist control condition (Wright et al., 2005). Unlike in previous studies, participants assigned to the computer-assisted therapy condition spent half of each of their 50-min sessions receiving standard individual cognitive therapy and the other half of each of their sessions completing the *Good Days Ahead* program. Computer-assisted cognitive therapy and standard cognitive therapy both led to significant improvements in symptoms of depression that were maintained at 6-month follow-up. Furthermore, participants in the computer-assisted cognitive therapy condition had experienced significant decreases in negative core beliefs and automatic thoughts, whereas individuals in the standard cognitive therapy condition only experienced significant decreases in negative automatic thoughts. This finding suggests that there may be some advantages to having computer programs supplement traditional therapy approaches.

As previously mentioned, Christensen and colleagues (2004) compared the efficacy of a psychoeducational web site, titled BluePages, and a free interactive cognitive-behavioral therapy web site, titled MoodGYM, to an attention placebo condition as a treatment for individuals in the general community exhibiting symptoms of depression with positive results. In addition, further examination into the efficacy of MoodGYM has found it to be effective at decreasing depressive symptomology at 6- and 12-month follow-up (Christensen et al., 2006; Mackinnon et al., 2008). The makers of Mood Gym have also released a version for adolescents, e-Couch (www.ecouch.anu.edu.au), which is still awaiting empirical testing.

In addition to these promising programs, other types of computer-based and e-health interventions currently exist that seek to incorporate new, innovative additions to computer-based treatments. For example, *COPE* (www.healthtechsys.com) utilizes a combination of treatment booklets and telephone calls to treat depression (McKendree-Smith et al., 2003). The telephone calls are routed to a computer system that uses interactive voice response technology to provide individualized feedback to patients as they complete the treatment program or record messages for clinicians if necessary (McKendree-Smith et al., 2003). Additional computer-based
treatment programs are also currently in the development and testing stage. Researchers at Western Michigan University have recently developed a 10-session computer-based behavioral activation treatment for depression, titled *Building a Meaningful Life Through Behavioral Activation* (Spates and Naugle, 2009). The first six sessions of this treatment focus on helping patients to track their day-to-day behaviors and bring their behaviors more in line with their values and goals. The remaining four sessions of the treatment are guided ideographically based on the problems described by individual patients. This program is not yet available for public dissemination and preliminary efforts investigating the effectiveness of the program are underway.

Certain individuals have suggested that specific populations may prefer computer-based interventions, including those who would rather work with a computer than a therapist or those with schedules or life circumstances that may interfere with regular therapy attendance (e.g., irregular work schedules or homelessness). Additionally, individuals who have difficulties with the stigma associated with seeking therapy services may be more inclined to participate in a computer-based protocol (e.g., Mood Gym and Blue Pages) as personal stigma has been demonstrated to be significantly reduced (Griffiths et al., 2004). However authors also found an increase in perceived stigma associated with the use of the programs. Considering that the most cited reason for avoiding psychological treatment is stigma (Corrigan, 2004), further investigation into computerized treatment and stigma is warranted. Computer-based interventions may be appropriate for individuals who have employment obligations that make seeking therapy services difficult (Marks et al., 2007), for those who are currently on a waitlist for services (Cavanagh and Shapiro, 2004) or for individuals who cannot seek therapy because of their location in rural areas. There are other populations for which computer-based interventions may not be recommended. Wright et al. (2005) note that computer-based interventions have only been tested with individuals displaying mild to moderate symptoms of depression and as such, computer-based interventions may not be appropriate for individuals experiencing severe levels of depression. Other authors have suggested that computer-based interventions may not be appropriate for individuals who cannot read or write in the language of the intervention or for individuals who have diagnoses of active substance abuse or psychosis (Cavanagh and Shapiro, 2004). As with psychoeducation and bibliotherapy, further research is needed to determine more specific populations for which computer-based approaches may and may not be indicated.

**Step 3: Interventions Requiring More Intensive Care and Specialized Training**

*Group Treatment for Depression.* Group interventions are a form of psychotherapy in which one or more therapists treat a group of clients simultaneously. Although it is well established that psychological interventions are effective treatments for depression with adults as well as children and adolescents (Weisz et al., 2006), it
has not been definitively determined whether group treatments are as effective as individual treatments (Cuijpers et al., 2008). Managed care companies perceive the cost of treatments of depression to be excessive (Henk et al., 1996) which has promoted a shift in research from determining the best treatment to the best treatment at the best value (Yates, 1995). Given that group treatments allow many people to receive a therapeutic intervention simultaneously, it may be a viable option for reducing the burden on the strained healthcare system; however, it is still a more intensive level of care than the models discussed previously. Group interventions may also maximize cost-effectiveness as the costs of group therapy are about half that of individual treatment (Vos et al., 2005) depending on the length of time, number of therapists involved, and size of the group (Scott and Stradling, 1990). The apparent cost-effectiveness of group interventions has led to certain health management organizations to encourage its use as the treatment of choice by raising financial incentives for the use of group therapy (Jeffery, 1999). A recent meta-analysis comparing treatment outcomes of individual versus group treatments for depression found small but significant differences in acute treatment outcome in favor of individual therapy (Cuijpers et al., 2008). However, the effect size was 0.20, which is considered to be small and may not be of clinical significance. Additionally, the post-treatment outcomes favoring individual treatment did not persist at 1- or 6-month follow-up, indicating that individual treatment may be slightly more beneficial in the short term but of equal effectiveness after the conclusion of treatment. Other research has also suggested that group treatments can be equally efficacious as an individual treatment of depression (McDermut et al., 2001).

Similar results have been found in adolescent treatment of depression. Clarke et al. (1999) conducted a randomized clinical trial with depressed adolescents comparing group CBT, group CBT plus a separate parent group, and a waitlist control. CBT groups had higher depression recovery rates (66.7%) and a greater reduction in self-reported depression than the waitlist group, which achieved 48.1% recovery rate. Lockwood et al. (2004) conducted a meta-analysis which found group and individual CBT were equally efficacious for the treatment of moderately depressed adolescents.

It has been found that group cognitive behavior therapy also appears to be an effective treatment when delivered in a community setting (Peterson and Halstead, 1998; Satterfield, 1998). These positive findings, while not as large as those obtained in research settings coupled with its cost-effectiveness, led Peterson and Halstead to recommend that group CBT may be a first-line treatment in a stepped care approach. In addition, it has been postulated that group therapy may address factors that individual treatment cannot (McDermut et al., 2001). For example, interpersonal relationship functioning and social support have been shown to predict the subsequent course of depression, both of which are potentially available in, and could be targeted by group therapy (Brown and Moran, 1994; Hammen, 1991; Keitner and Miller, 1990).

Consideration must be given to suicidality of severely depressed patients when administering group interventions. Individuals may be less likely to report suicidality in a group setting than in individual psychotherapy or with their personal
physician. It may be beneficial to add a brief individual suicide assessment as a first step to a group therapy format as a precautionary measure. In addition, for more severe patients, semi-regular concurrent individual therapy sessions (possibly at a reduced frequency compared to standard individual therapy) could be incorporated as an augment to the group therapy where careful suicide assessments could be conducted in a one-on-one format.

Treatment acceptability may play an important role in determining if an individual is better suited to individual or group interventions. Group interventions have consistently had higher dropout rates when compared to individual psychotherapy (Cuijpers et al., 2008). Furthermore, there is some evidence that dropout may be directly related to the fact that the treatment was implemented in a group (Meresman et al. 1995; Steuer et al., 1984). There are several possible reasons for these findings. Group treatments are less flexible than individual psychotherapy and are often only available at a specified time; thus, a conflict in scheduling may arise leading to the discontinuation of therapy. Also, individuals may be uncomfortable or unwilling to disclose important personally relevant information in group therapy. Thus, those with variable schedules or strong preference against group interventions may be particularly suited for a treatment that provides relative anonymity and flexibility such as the Internet-based applications mentioned previously. An assessment of treatment preference and willingness may be useful in determining treatment selection.

**Individual Psychotherapy**

Individual psychotherapy is typically considered a more intensive and costly level of stepped care. However, in spite of the greater initial cost of psychotherapy, the cumulative cost of medications may prove to be more expensive. It has been reported that a large proportion of patients with Major Depressive Disorder suffer a chronic (25%) or recurrent (75%) course (Rush et al., 2008), and there is no evidence that antidepressants alter the course of depression (Dimidjian et al., 2006). Since antidepressants do not appear to have enduring effects after use is discontinued, patients may be at significant risk for relapse and recurrence (Hollon et al., 2005). The current recommendation for the treatment of chronic or recurrent episodes of depression is prescription of antidepressants indefinitely (American Psychiatric Association, 2000). Given that some psychotherapeutic interventions have been proven to have enduring effects and to be equally efficacious for the treatment of depression in adults as medication (Dimidjian et al., 2006), using psychotherapy as a first-line treatment of depression with antidepressants in adjunct or in response to a lack of improvement or relapse may provide significant long-term savings.

In a stepped care model, individual intervention may be appropriate for individuals who do not benefit from lower levels of care, have moderate to severe symptom presentation, have a strong preference for individual therapy, or are considered treatment resistant. Individual psychotherapy is delivered by mental health specialists and requires specialized training in the form of psychotherapy that is
delivered. It is delivered in a one-on-one format most typically in an outpatient care setting. There is great variability in the length, theory, and technique of treatment in individual psychotherapies. Cognitive Behavior Therapy (CBT) and Interpersonal Psychotherapy (IPT) are the treatments that have received the most attention and support in the literature for the treatment of depression, however, investigations have shown Behavioral Activation (BA) to be equally effective.

CBT has been shown to be effective in the treatment of depression in more randomized controlled trials than any other psychosocial treatment (Persons et al., 2001). In general, it has been found that CBT is more effective than waitlist and placebo, and marginally more effective than other bona fide psychotherapeutic interventions (Dobson, 1989; Gloaguen et al., 1998). The Treatment of Depression Collaborative Research Project (TDCRP) found CBT to be an effective treatment for mild to moderate depression but recommended medication management for those suffering from more severe depression (Elkin et al., 1989). However, more recent studies have shown CBT to be equally effective as medication for moderate to severe depression (DeRubeis et al., 2005). One strength of CBT is that its effects appear to be maintained after treatment is discontinued, with maintenance effects that compare favorably to ongoing antidepressant treatment (Hollon et al., 2005).

CBT is a result of a merger of cognitive psychology based on the practice and research of Aaron T. Beck (1976) and behavior therapy. Beck proposed that depressive symptoms result when stressful external life events activate maladaptive schema or cognitive structures that bias the interpretation of experiences (Beck et al., 1979). These maladaptive schemas influence overt behaviors, cognitions or automatic thoughts, and emotions. The interactions among these elements are believed to be reciprocal and causal in nature, with a change in one affecting the others. In the context of a structured therapy session, CBT uses several interventions that are aimed at changing maladaptive schemas that influence overt behaviors, cognitions or automatic thoughts, and emotions in combination with behaviorally based treatment objectives aimed at increasing contact with naturally reinforcing contingencies through goal setting and homework assignments. The reader is referred to Essential Components of Cognitive-Behavioral Therapy for Depression (Persons et al., 2000) for a more detailed explanation of this therapeutic approach.

Interpersonal psychotherapy (IPT) is another time-limited approach to the treatment of depression with substantial empirical support (Weissman et al., 2007). In a meta-analysis by Cuijpers et al. (2008) comparing the efficacy of treatments for depression, IPT was found to be slightly more efficacious than other psychological treatments, including CBT. However, it should be noted that other meta-analyses have found IPT to be equally or less effective than CBT (Dobson, 1989; Gloaguen et al., 1998). A meta-analysis conducted by Kotova (2005) examining efficacy of IPT specifically for women suffering from depression found that when compared to no treatment, IPT achieved large effect sizes (0.60–0.73). Direct comparisons between IPT and CBT yielded roughly equivalent results with a slight favor for IPT for severely depressed individuals (Elkin et al., 1989). When compared to placebo or
psychoeducation, IPT achieved moderate effect sizes (0.37–0.48) and was slightly less effective than medication (–0.15). These results were reported to maintain their efficacy over time.

Although IPT has no specific theoretical origin it was originally designed in an attempt to specify (manualize) the practice of supportive therapy and was based on the work of Sullivan, Meyer, and Bowlby. The main focus of IPT is to attempt to understand and address depressive symptoms in the context of close interpersonal attachments and explore how these interactions are currently causing problems in the patient’s personal and social context. Additionally, IPT seeks to build interpersonal skills and improve communication through the use of role play and experimentation in close relationships. The specific goals of IPT are based on which of the four common problem areas (grief, roles disputes, role transitions, or interpersonal deficits) seem to be the primary concern for the patient (Weissman et al., 2007).

For a detailed description of the most recent iteration, the reader is directed to Comprehensive Guide to Interpersonal Psychotherapy (Weissman et al., 2000).

CBT and IPT require specialized training and are delivered primarily by mental health specialists who tend to be more expensive, less widely available, and often are not located in places where the greatest need for services reside. Thus, it may be recommended that treatments that are shorter in duration and simpler to train and implement while maintaining efficacy may be a more effective use of resources and time as a first-line individual treatment for depression. Delivery of these interventions using computer or telehealth mechanisms as addressed above may be one cost-effective alternative.

Behavioral activation (BA) is another viable option. There is now solid empirical support for using a purely behavioral model among depressed adults (Jacobson et al., 1996), including older adults (Scogin et al., 1989). Jacobson et al. (1996) describes BA as “the application of behavioral principles such as goal setting, self-monitoring, activity scheduling, problem solving, and graded task assignment” to alter the avoidance and rumination behaviors that are characteristic of depression. Furthermore, BA seeks to increase behaviors that put the participant in contact with natural reinforcing contingencies that will ultimately become self-maintained and to decrease activities that promote depressive symptoms. This is accomplished by performing an ideographic functional analysis to identify problematic avoidance behavior and alternative coping strategies to produce higher rates of meaningful response contingent positive reinforcement (Kanter et al., 2007). For a full account of BA, the reader is referred to Depression In Context: Strategies for Guided Action (Martell et al., 2001). Dimidjian et al. (2006) found that BA was as effective as antidepressant medications and superior to CBT in the acute treatment of moderately to severely depressed adults and maintained effects over time. Further support comes from the component analysis conducted by Jacobson et al. (1996) demonstrating that 20 sessions of the purely behavioral component of CBT was equal in efficacy to the full CBT package described by Beck et al. (1979). As suggested by Jacobson, BA is a more parsimonious treatment than CBT and could be more easily trained and implemented by clinicians with less specialized expertise. People who
are poor, on welfare, less educated, unemployed, or from certain minority groups may be at greater risk for depression. These individuals are also at the greatest risk for having restricted access to assessment and treatment, especially individual treatment, due to those same circumstances. As suggested by Dimidijian et al. (2006), BA is meant to be more exportable and easier to train than cognitive therapy, IPT, and other complex interventions. This would allow more professionals at a larger variety of locations to deliver an empirically supported manualized treatment, especially to the aforementioned at-risk populations. Thus, if it could be shown that BA can be effectively trained and implemented by lower level therapist, it may expand options for implementing evidence-based treatments in settings where more intensive levels of care are not otherwise available (i.e., community-based centers, school settings, primary care, specialty clinics) and for wider dissemination of treatment to at-risk populations (US Department of Health and Human Services, 2002) while lessening the burden on an overwhelmed healthcare system. Additionally, given BA’s straightforward theory and implementation, it may lend itself well to bibliotherapy and the computer-based interventions listed previously. These strategies currently await further empirical investigation.

Assessing treatment preference may be important in deciding which intervention is best as an initial step. In a meta-analysis of studies that investigated treatment preferences, it was consistently found that subjects preferred psychotherapy and counseling over medication (van Schaik et al., 2004). It has also been found that more patients enter treatment when their preference of treatment is discussed and supported and in cases they could not receive their preferred treatment, they were more likely to go with no treatment altogether (Dwight-Johnson et al., 2001). If it is found that lower level therapist can effectively deliver BA, it may allow greater access to an empirically based intervention for those that may prefer individual therapy but currently do not have access.

**Medication**

While this chapter is primarily focused on psychosocial interventions within a stepped care model, pharmacotherapy for depression is often a first-line treatment and warrants some discussion. In most instances access to antidepressant medication is readily available in primary care settings, unlike evidence-based psychosocial interventions which generally require a specialized therapist. However, compliance with medication can often be an issue and therefore should be given consideration within a behavioral health care stepped care model. In addition, medication management often requires inclusion of elements of care discussed elsewhere in this chapter. Indeed, the American Psychiatric Association suggests that psychiatric management consist of a “broad array” of services including a diagnostic evaluation, evaluation of safety (suicide/homicide), establishment and maintenance of the therapeutic alliance, monitoring of symptoms, psychoeducation, and efforts to enhance treatment adherence (APA, 2000). This certainly places additional burden
on prescribing physicians, some of which may be more efficiently accomplished using technology-based mechanisms.

The treatment of children and adolescents has even more complicating factors. The National Institute of Mental Health (NIMH)-funded Treatment for Adolescents with Depression Study (TADS, 2003) found that CBT plus fluoxetine (Prozac) is “the most favorable trade-off between benefit and risk for adolescents with major depressive disorder.” The TADS study indicates that CBT plus fluoxetine is the most effective treatment for adolescent depression as this combination provided the greatest improvement in symptoms of major depressive disorder (MDD) while moderating risk of harm-related adverse events. In spite of this recommendation, antidepressants alone are routinely given as a first-line treatment for depressed youth (Safer, 1997) which may be due to the fact that CBT combined treatment is often not feasible for financial or other reasons. Adding to these concerns, in 2004 the US Food and Drug Administration (FDA) issued a black box warning for antidepressants used with pediatric populations due to concerns regarding suicidality leaving many clinicians and patients wary of psychopharmacological interventions. There are also significant other risks for side effects including agitation, sleep disruption, gastrointestinal and sexual problems (Antonuccio et al., 1999). Additionally, there is a lack of investigation into potential effects of antidepressants on development. This is especially concerning considering case reports that SSRIs may be linked to growth suppression (Weintrob et al., 2002). SSRIs also have troubling withdrawal symptoms upon abrupt discontinuation, which may be more prevalent in children and adolescents given their passive involvement in treatment. When long-term efficacy is examined, CBT alone appears to have equal efficacy as fluoxetine at 18-week follow-up and combination treatment at 36 weeks without the significant risk involved with psychotropic medications (TADS, 2007).

It has been argued that due to the significant risk for side effects as well as the difficulty in implementation and high cost of CBT plus fluoxetine, other scientifically supported interventions may be determined to be preferable as a first-line intervention for certain populations. Antonuccio (2008) suggests that using the TADS studies as a guide, it may be possible to tailor treatment decisions to patient and parent preferences after education about the various risks and outcomes. This may play a vital role in treatment selection in a stepped intervention. For those whom safety is a priority or those suffering from less severe depressive symptoms, some of the interventions mentioned previously in this chapter may the best initial step. For those for whom short-term efficacy is prioritized, CBT plus fluoxetine or fluoxetine alone may be warranted. For a more thorough discussion and a summary handout meant to assist in patient education, the reader is referred to Antonuccio (2008).

Pharmacotherapy has also been addressed and investigated using a stepped care model in adult populations. The Sequenced Treatment Alternatives to Relieve Depression (STAR*D; Rush et al., 2008) study was designed to investigate the impact of sequenced treatment strategies. The study implemented a SSRI antidepressant (citalopram) as the first step in the model of treatment. Those who failed to respond to this initial step were then given the option of changing
medications, changing to cognitive psychotherapy, augmenting medication with cognitive therapy, or augmenting with another medication type. In total, 70% of those that completed the stepped protocol achieved remission (Fawcett, 2008). However, many of the participants needed several steps to achieve remission and those who required more steps showed higher intolerance for treatment and higher relapse rates (Rush et al., 2008).

Expert panels have also identified approaches that take the best evidence for medication treatment for depression into account and have developed sets of algorithms for administering and monitoring medication for depression (i.e., Texas Implementation of Medication Algorithm, Michigan Implementation of Medication Algorithm). The medication algorithm guidelines are directed to primary care practitioners rather than specialists. The algorithms aid those with prescriptive authority in making evidence-based decisions about adjustment of medication regimens based on patient improvement or worsening. Investigators at Western Michigan University have developed an interactive multimedia technology to disseminate information about medication algorithms to prescribing physicians as well as to increase the efficiency and use of the algorithms in guiding decisions about patients. This technology allows medical staff to regularly monitor depressive symptoms using well-established symptom questionnaires and to make evidence-based decisions about medication regimens.

**Step 4: Most Restrictive and Intensive Forms of Care**

**Inpatient Care**

Inpatient care for depression is considered among the highest, most restrictive, and most intensive levels of care. It is costly and requires extensive resources. Cotterill and Thomas (2004) found the typical cost per case in inpatient treatment was between US $5000 and $7000 for an average of $410–638 per day. In addition to these concerns are concerns of stigma, risk of damage to the therapeutic alliance, as well as the fact that those that are hospitalized may lose their jobs as a result of time missed. Although there are forms of inpatient care that are meant to be intensive and long term, the purpose of the section is to discuss brief hospitalization as a safety measure for severely depressed individuals as the final measure in a stepped protocol. In cases of severe depression where acute suicidality or homicidally is present, inpatient care via voluntary or mandated commitment to a hospital setting may be considered. This practice currently accounts for 50–60% of all psychiatric hospitalizations (Sullivan et al., 2005).

The APA’s Practice Guidelines for Selecting a Treatment Setting for Patients at Risk for Suicide (2004) suggest that for those whom suicidality is a reaction to a precipitating event, have a plan that is low in lethality or intent, have a stable and supportive living environment, and are agreeable to follow-up recommendations, an outpatient safety plan may be the best course of action. The safety plan should be
a collaborative effort designed to provide immediate safety, ensure adequate monitoring, provide social support, and draw upon individual resources to problem solve upcoming times that may be especially problematic. Utilization of a safety plan may ameliorate the weakness of “no-harm contracts” (Paladino and Minton, 2008; Shea, 2002), as these have not been found to reduce the risk of suicide (APA, 2003).

For those with stronger indicators of suicide risk, it may be best to directly discuss options of care with the client, recommending voluntary placement in an inpatient facility. In cases where it is determined that the client is a great risk to themselves but refuses voluntary placement, involuntary commitment to an institutionalized setting where their behavior can be careful monitored and intensive short-term treatment can be implemented should be used.

Treatment that is received in inpatient settings may vary greatly (Brabender, 1993), yet very few outcome studies have been conducted to evaluate short-term treatments in these settings (Jarrett, 1995). Given the expense and personal cost in time and freedom to an individual that has been hospitalized, briefer and more effective treatments are always being sought. This is especially important considering that depressive symptom severity at discharge is associated with risk of future hospitalization (Lieberman et al., 1998). Currently, antidepressant medications are the “mainstay” in treatment with suicidal patients with acute, recurrent, or chronic depression. However, there is little evidence to suggest that antidepressants reduce suicide risk (APA, 2003). In fact, as discussed previously, there is some evidence that antidepressants may increase suicidality in adolescent populations. This finding also has support in the adult literature. An increased risk for completed suicide of about twice that of the base rate for an at-risk population was found in the first 12 weeks following the beginning of antidepressant treatment (Valenstein et al., 2009). These concerns necessitate further research into brief inpatient interventions.

A promising new treatment for those in inpatient care is Brief Behavioral Activation Treatment for Depression (BATD; Hopko, et al., 2003; Lejuez et al., 2001a, b, 2002). Based on the behavioral activation treatment described previously, BATD provides a brief, manualized approach for intervention in a hospital setting. In a small trial, BATD plus antidepressant medication when compared to supportive treatment as usual plus antidepressant medication achieved favorable outcome with a large effect size of 0.73 after only a 2-week treatment period (Hopko et al., 2003). This preliminary evidence seems to support this approach as a brief intervention for severely suicidal inpatients.

It has been suggested that one of the most critical times to intervene with a patient that has had a history of suicidal behavior is at the point of discharge (Goldacre et al., 1993; Jacobs, 1999). There is significant evidence that taking a proactive or broad-based community approach to prevention is indicative of improved outcomes for suicidal patients (e.g., King et al., 2003; Knox et al., 2003; Motto and Bostrom, 2001). In a literature review of suicide prevention, Goldney (2005) suggested that community-based approaches should be emulated on a large scale as they are promising interventions for suicide prevention. Certainly discharge planning should involve recommendations and resources to provide evidence-based care in a less restrictive setting once the patient is released from inpatient care.
Research Agenda for Stepped Care

A fully realized stepped care model would maximize client outcomes while minimizing provider costs. Demand for services far outnumbers the availability of those who have been trained to deliver effective mental health services (Haaga, 2000). Effective stepped interventions may ease this burden while maximizing the quality of care. Given the high incidence of depression, as well as the high rate of those who suffer yet go unrecognized and treated, an organized national stepped care plan is essential. To reach this goal will require a dedicated and systematic research agenda. Data from existing sequenced care trials (e.g., STAR*D and TORDIA—Treatment Of Resistant Depression In Adolescents; Brent et al., 2008) began to shed light on the potential benefits of augmenting (adding another medication or CBT) or switching (to another medication or CBT) treatment after an initial sub-optimal response to selective serotonin reuptake inhibitor pharmacotherapy. These trials are a valuable beginning, but they only look at a few possible steps. Many other sequences remain open to empirical investigation. For instance, is pharmacotherapy the best first step? There is some evidence that antidepressant medication may reduce symptoms more quickly and, thus, may be more cost-effective as an acute treatment compared to CBT (Domino et al., 2008; Elkin et al., 1989). However, an initial response to pharmacotherapy may not be as sustained as in CBT (Hollon et al., 2005; Rohde et al., 2008). Lengthier remission/recovery periods and lower recurrence/relapse rates may enhance the cost-effectiveness of CBT when calculated over longer time spans (Dobson et al., 2008). Furthermore, given that depressive episodes are typically recurrent, treatments that produce sustained recovery and reduced relapse rates may ultimately be more cost-effective than even watchful waiting (which appears unlikely to have any preventative effect on future episodes). Thus, in addition to exploring a range of steps and sequences, research allowing for analysis of short-term and long-range clinical outcomes and additional service utilization is needed to examine these possibilities empirically.

Furthermore, other interventions beyond medication and CBT warrant investigation. As reviewed earlier, both IPT and BA have solid empirical support in the treatment of depression. How should these interventions be incorporated into a comprehensive stepped model that cuts across modalities? In addition, how should they be sequenced within the domain of psychotherapeutic interventions? Should they be delivered in person by a therapist or via the computer? Should there simply be a menu of empirically supported psychosocial treatment options from which patients choose, either in person or on the computer? Should IPT or BA replace, precede, or post-date CBT and on what grounds? These remain important open questions. To illustrate, consider BA. Conceptually BA could be readily used in sequence with CBT, as the first part of most CBT protocols typically incorporates components of BA, such as activity scheduling (see Beck et al., 1979). If a substantial percentage of patients would respond to a Step 1 involving straightforward activity scheduling and, thus, not need to progress to more individualized functional analysis-based behavioral activation or cognitive therapy techniques this would be the beginning of a theoretically logical and empirically sensible stepped model. Furthermore, might there be some interventions that are so broadly applicable and easy to implement by
a therapist or computer program (e.g., activity scheduling) that they may be more cost-effective than even watchful waiting?

Current models of evidenced-based psychological practice emphasize treatment planning based on a combination of empirical evidence, provider expertise in treatment delivery, and client variables such as treatment preferences (Spring, 2007). Thus, it is important to explore how a therapist’s expertise in treatment and client preferences can be best incorporated into stepped care models. To illustrate, consider that despite its strong empirical track record, only a minority of patients in the STAR*D trial chose to switch to, or receive augmentation with, CBT (Thase et al., 2007). These data suggest we need research focused not only on treatment outcome but on treatment decision making and how treatment options are presented to clients. Furthermore, in several of the large trials of CBT versus medication there have been findings of site differences—that is, at some centers CBT outcomes were better than at other centers within the same study—possibly related to expertise in delivery of CBT (DeRubeis et al., 2005; Jacobson and Hollon, 1996). If most depressed patients do not opt for comprehensive CBT and its effects are variable even across academic centers conducting funded treatment trials using integrity protocols, these are important considerations that must be studied as stepped care models are developed.

It is important not only to investigate multiple stepped care models to examine differential immediate and long-range outcomes, but also to consider variables that moderate outcome. That is, are there intake (clinical or demographic) characteristics of clients that predict which step or sequence of steps is most likely to be helpful? For instance, do the most severely depressed clients do best if provided combined pharmacotherapy and psychotherapy as the first step? Should clients with a history of prior episodes of depression receive a different series of steps, skip potential initial steps like watchful waiting, or progress through the steps more rapidly, compared to those receiving treatment for first depressive episode? These questions suggest that even if there is convergence on a generally applicable set of steps, one size is unlikely to fit all. Thus, identification of variables that predict treatment response among subgroups of patients would be important to determine.

Finally, it is important to note that the stepped care research agenda is tied to developments in the broader depression intervention research arena. It is still unclear exactly why many of our most empirically supported treatments work. Determining the mechanisms of action in effective intervention may allow for more targeted and effective intervention, which would be critical to maximizing the potential efficacy of a given step in a stepped care model. Furthermore, in psychotherapy it is important not only to determine the variables that mediate outcome at the level of a treatment package (e.g., a 20 session CBT protocol) but also to determine which techniques within packages are “active ingredients” so as to also amass empirically supported techniques (O’Donohue and Fisher, 2009). Progress in this area may benefit from research examining whether specified techniques produce change in a theoretically identified variable, which then mediates subsequent changes in symptomatic functioning. Stepped care models could then be crafted to emphasize techniques, tied to specific process variables, that appear most active in the change process.
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Stepped Care and e-Health
Practical Applications to Behavioral Disorders
Draper, C.; O Donohue, W. (Eds.)
2011, VIII, 328 p., Hardcover
ISBN: 978-1-4419-6509-7