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Psychosocial Treatment for Adult ADHD

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Psychosocial Treatment for Adult ADHD
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Chapter for: ADHD in Adults: A Practical Guide to Evaluation and Management

Abstract

Many adults with ADHD are likely to benefit from psychosocial interventions that teach

compensatory skills to manage symptoms and address functional impairment. Based on the

research literature and the authors' experience developing and implementing interventions, this

chapter provides a practice-friendly overview of skills-based treatment selection and

implementation, emphasizing cognitive-behavioral techniques. Principles are illustrated using

case examples and adjunctive treatment options are discussed.

Keywords: Attention-Deficit/Hyperactivity Disorder, ADHD, psychosocial treatment,

psychotherapy, cognitive-behavioral therapy, CBT

Psychosocial Treatment for Adult ADHD

Although psychostimulants and other medications are often considered first-line treatments for adult ADHD, psychosocial interventions are indicated for many patients. Fortunately, skills-based cognitive-behavioral treatment for adult ADHD is receiving increasing empirical support[1]. Psychosocial interventions, including cognitive-behavioral treatment, may be appropriate for several subgroups of patients who, taken together, likely constitute a large number of adults with the disorder. Many adults with ADHD cannot take medications or are unwilling to engage in this form of treatment. Others may not respond to medications. Other adults may show a partial response to medication but, despite successful symptom reduction, they may still display impairing symptoms that interfere with daily functioning. In many clinical trials of ADHD medications, a 30% reduction in symptoms can qualify a patient as a treatment responder[2]. For patients with high baseline levels of symptoms, this leaves substantial room for further improvement.

Psychosocial treatment may also be indicated when the clinician identifies deficits in compensatory skills or systems for managing time, tasks, and money as a key contributor to the patient's chronic impairment. ADHD often confers a double-bind in which the very skills, strategies, and systems that might help patients manage their symptoms are much harder to use because of those same symptoms. Thus, adults with ADHD, throughout their life, may be less likely to develop and maintain such systems on their own[3]. Finally, psychosocial intervention may be indicated when a patient displays psychiatric comorbidity or impairment in specific functional domains that is not fully addressed by pharmacological treatment. For example, many patients with ADHD also meet criteria for depression or anxiety disorders[4,5], which may necessitate multimodal treatment. Because ADHD often affects functioning in a variety of

domains, additional non-pharmacological services may be indicated including parent training, couples counseling, or vocational rehabilitation. Given the chronic and impairing nature of ADHD, it would seem to be the rare patient that would not benefit from some type of non-medication adjunctive treatment. On the other hand, ADHD-focused psychosocial treatment would not be appropriate for patients with serious symptoms that require clinical attention such as suicidality or substance dependence. In addition, many clinicians question whether concurrent medication treatment of ADHD symptoms is necessary for patients to be able to access psychosocial interventions. While a recent randomized controlled trial did not find that medication status moderated response to skills-based treatment[6], further investigation of this question is necessary and multimodal treatment should always be strongly considered.

Among psychosocial interventions for adult ADHD, skills-based cognitive-behavioral treatments (CBT) have recently received empirical support in larger clinical trials. Solanto and colleagues [6] conducted a trial of 88 participants comparing a group-based CBT for ADHD, called "metacognitive therapy" to a supportive educational group, finding that metacognitive therapy resulted in a significantly greater reduction in symptoms. After an initial successful small RCT[7] our group at Massachusetts General Hospital [8] recently found, in a full-scale efficacy trial, that individual CBT for adults with ADHD receiving medication treatment but showing residual symptoms resulted in greater symptom reduction than an active control condition, relaxation with educational support. These randomized controlled trials constitute the most rigorous research evidence supporting psychosocial treatment for adults with ADHD. Given research evidence supporting skills-based interventions and clinical experience with our approach, the following discussion of general principles for psychosocial treatment for adults with ADHD will be heavily based upon such structured approaches. Later in the chapter, however, we discuss

other types of psychosocial intervention. Readers interested in more detailed information about the MGH treatment protocol are referred the published treatment manuals [9,10] and a recent practice-oriented article that includes online role play videos of treatment techniques [11].

Before discussing treatment planning and general principles for success in skills-based treatment, we present the following case description based on patients who participated in CBT in our clinic. This case study illustrates characteristics commonly observed in adults with ADHD Combined Type who seek out this treatment. Note connections between the patient's core symptoms and functional impairment and also note issues relevant to differential diagnosis. Later in the chapter, we use a summary of this patient's treatment to illustrate general treatment principles.

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Clinical Case Study: Rob

Rob is a 51-year-old married man with two adult sons who presented to the CBT program seeking skills and strategies to cope with chronic and impairing procrastination, distractibility, and disorganization. He also exhibited prominent hyperactivity and impulsivity including excessive talking, motor hyperactivity, and a history of involvement in various business ventures, in which he was often initially quite successful but eventually lost significant amounts of money. Rob had started but never completed college. Garrulous, personable, and upbeat, Rob's social skills appeared to serve as a coping mechanism. Problematic, however, was his tendency to impulsively take on large projects to help other people. Helping others often consumed so much of his time that he did not attend to his own significant financial and relationship problems.

Rob had received a diagnosis of ADHD several years previously when one of his sons was assessed and diagnosed with the disorder. He had taken a variety of stimulant medications in the past and was taking a sustained release stimulant at the time of intake. While he reported that medication definitely helped, he continued to experience significant and impairing symptoms well above the clinical cutoff (above the 98th percentile on a self-report rating scale[12]). Further assessment revealed that Rob lacked any systematic methods to manage time, tasks, and money. Rob did not meet diagnostic criteria for any other disorder, although he reported periods of depressed mood lasting up to a week triggered by major problems "entering crisis mode." Because of his impulsivity and distractibility, bipolar disorder was initially a rule-out diagnosis for Rob. However, he reported that he had "always been like this" and experienced these symptoms in a consistent (not episodic) manner since childhood. Therefore, ADHD was judged to be the most parsimonious explanation for his difficulties.

[End box.]

Skills-Based Treatment Planning: Choosing Targets and Strategies

The first key step of treatment planning is a thorough diagnostic assessment followed by a detailed functional analysis of the patient's main problems in daily life. Diagnostic assessment of ADHD in adults is often challenging, given the need for retrospective and collateral reporting and the complexities of differential diagnosis and comorbidity [13]. Assessment is thoroughly addressed in a prior chapter in this book. Here we wish to highlight specific elements of assessment that can be used to guide psychosocial treatment planning.

First, the clinician must assess the patient's goals for treatment. Selection of treatment targets must be made collaboratively and must be tied to goals that are meaningful and motivating to the patient. Patients are unlikely to be highly motivated by, for example, the

intrinsic pleasure of having a neat and orderly task list. Salient goals help to motivate patients to use skills that, at first, feel clunky, boring, repetitive, and time-consuming. For example, if a patient reports chronic lateness, the clinician might be tempted to "jump in" with strategies to help the patient to be more punctual. But if the patient's primary goal is, instead, to improve his relationship with his girlfriend, then the clinician's emphasis may seem unimportant and disconnected from the patient's goals—a recipe for treatment drop-out. Any intervention suggested by the clinician must be framed in terms of how it will contribute to the patient's meaningful goals. In the above example, the clinician might write down the patient's goal of improving his relationship with his girlfriend and then engage the patient in a discussion of how his ADHD-related problems get in the way. If chronic lateness is annoying to the patient's girlfriend, learning behavioral strategies to be on-time can be framed as a means to improving the relationship rather than as and end for its own sake. The clinician must avoid sounding like one more moralizing voice telling the patient what he "should" do and instead offer interventions consistent with the patient's goals and values.

    After establishing meaningful goals, the clinician can engage the patient in a collaborative functional analysis, identifying what behaviors get in the way of these goals. This constitutes a list of treatment targets for skills-based intervention. In the above example, chronic lateness was identified as interfering with the patient's relationship. But not all lateness is created equal. The clinician must ask a series of detailed questions and consider multiple hypotheses about what might be contributing to this patient's difficulties before choosing a skill or strategy. Important questions include when and where the problematic behavior occurs (All situations or just some situations? What differentiates problematic situations? Time of day? Aversiveness of the task at hand? Presence of others?), what precedes the problem behavior (Getting wrapped up

in an interesting task?), what thoughts occur before and during the behavior ("I can do this one more thing before I leave."), and what are the consequences of the behavior, short- and long-term (What are the upsides of leaving later than you should? What are the long-term downsides?). This process is not limited to the treatment planning phase, but occurs continually throughout skills-based treatment. The most successful patients learn to independently engage in this type of functional analysis when trying to apply skills to their ADHD symptoms.

Table 1 illustrates key problems for adults with ADHD that may emerge from a functional analysis and behavioral strategies that could be useful. Note that without a careful analysis of the problem, it is difficult to choose an appropriate strategy. For example, a patient may report that he "forgets to take medication" about 50% of the time. However, the proposed interventions strategy might be different if the patient does not think of taking his medication at all on some mornings (forgetting) than if he always thinks of it but continues to watch TV thinking, "I'll grab it just before I head out the door," (avoidance).

Individual treatment usually proceeds best when clinician and patient focus on just a few treatment targets and skills at a time. Helping a patient acquire a few consistently well-executed skills is often much more effective than a "spaghetti at the wall" approach in which the clinician makes a variety of recommendations for a long list of problems in order to "see what sticks." Due to problems with distractibility, too many suggestions can be particularly problematic for adults with ADHD. Note that manuals used in treatment outcome studies and published for clinician use must necessarily cover all possible skills found to be helpful for adults with ADHD as a group. However, in clinical practice, selecting only those skills judged to be relevant to the patient's functional difficulties and meaningful goals is a reasonable method.

This section highlighted the following recommendations for selecting skills-based treatment targets and strategies for adults with ADHD.

- Assess the patient's goals for treatment and connect proximal treatment targets and to-be-learned skills to these goals.

- Conduct a functional analysis of the patient's presenting problems, employing detailed questions to assess contexts, triggers, and consequences. Choose skills and strategies that address these factors.

- Focus on consistent use of a few skills at a time.

Executing a Skills-Based Treatment Plan: Principles for Success

Effective psychoeducation is critical to the success of an intervention that will require patients to commit to behavior change. The patient must have a clear view of the role of cognitive and behavioral skills in coping with symptoms of ADHD. In the same way that stimulant medications do not "cure" ADHD but instead ameliorate symptoms while they are used, skills are best viewed as compensatory in nature. Skill use is not designed to correct the underlying neuropsychological deficits associated with ADHD (e.g., executive functioning deficits in daily life) but instead provides a way for patients to compensate for and cope with these deficits. In the first session with patients, we review a cognitive-behavioral model that describes how these primary deficits interfere with the development of compensatory skills and also how failure experiences may contribute to patterns of thinking that contribute to further avoidance of skill use [9]. Psychoeducation proceeds best as an interactive dialogue with the patient rather than a lecture. As such, we ask patients to give examples from their own lives, evaluating the extent to which this model of how ADHD affects other areas of functioning fits with their experiences. Often, this connection between what we know about ADHD's pervasive

effects functioning and the patient's own experience is quite meaningful. Many patients become emotional during this discussion because it validates their personal experience. To conclude this discussion, the clinician can then map any to-be-used compensatory skills directly onto this model of the patient's presenting problems.

When a new skill is introduced during treatment, the "how" of skills practice is one of the most critical predictors of success in skills-based intervention[14]. Patients must practice compensatory skills in the "real world" long enough until, 1) they can determine whether the skill is helpful, and, 2) the skill becomes less effortful. Many patients report that they have previously tried many organizational strategies, planner formats, and scheduling systems. Frequently, however, patients start using a new system with enthusiasm only to stop after a few days when the novelty has worn off, they discover that the skill is too onerous to maintain, and they have not yet experienced the longer-term benefits of the skill. The patient must be encouraged to try the new skill consistently for a long enough period of time so that use becomes less effortful and they have direct experience with longer-term benefits. For example, writing down and tracking all to-be-done items on a task list can be initially tedious and anxiety-provoking. The clinician should discuss this with the patient up front, emphasizing that while it may seem like a time-consuming process in the short term, it is likely to make the patient more efficient and less anxious in the long term. Practicing skills from week to week also gives patient and clinician the opportunity to refine and troubleshoot strategies over time so that the best system for that specific patient can be developed. For this reason, "keeping it simple" at the outset is especially important as a complicated system is rarely sustainable. The patient must be encouraged to start with a "good enough" system rather than a seemingly perfect but unsustainable one.

Structured sessions are critical to helping patients target their efforts toward the most important problems. Even if clinician and patient have agreed upon treatment targets and skills, it can be hard to stay focused on these specific goals as the patient's life continues to unfold outside of the session. The clinician must balance focus on agreed-upon targets with emotional responsiveness and to the patient's ongoing concerns. We have found that it is helpful to be clear with patients about the focused nature of treatment sessions, openly discussing how to get "back on track" when sessions veer off topic. Adults with ADHD in particular are often tangential in session. Sometimes this can be difficult for clinicians because in many cases, the "tangents" are appealing, interesting, and even funny stories told by patients that can engage the clinician away from more troubling, clinically important work that the patient needs to confront. Most patients, however, are generally aware of this and seem to appreciate an open discussion about how to keep the session on track. Importantly, the patient should be encouraged to monitor the clinician in this regard as well! A session format that is standard for cognitive-behavioral treatment is recommended: 1) set an agenda, 2) review skills practice from the previous week and troubleshoot, 3) introduce new psychoeducation or skills training, and, 4) assign of skills practice for the following week. In this way, emergent topics from the week can be appropriately triaged during the agenda-setting process.

Although a structured session and specific treatment targets might make skills-based treatment seem clinically rigid to the unfamiliar reader, the quality of the therapeutic relationship is essential and there is ample room for creativity. Active listening, validation, warmth, humor, and emotional responsiveness are all critical clinician skills in this form of treatment. We are asking our patients to do something that very, very difficult. If a patient does not trust his or her clinician and feel that they are collaborating in the patient's best interest, he or she is unlikely to

persist in therapy. A skilled clinician works collaboratively with the patient and takes a non-judgmental, problem-solving orientation. We are quite explicit with our patients that, whether they have completed skills practice successfully or not, they should come back to session and discuss their difficulties rather than avoiding treatment. We cannot force them to change but will steadfastly support them in trying again.

Continued formal and informal assessment of patient progress serves many important functions in skills-based treatment[15,16]. In our practice, we have patients complete weekly self-report symptom checklists such as the Current Symptoms Scale [12] or the Adult ADHD Symptom Report Scale [17]. These ratings provide objective data to evaluate whether treatment is working and which skills may be contributing to success. The process also trains the patient to engage in periodic self-evaluation, a critical step in engaging in active problem-solving instead of avoidant coping. From week to week, these ratings provide an ongoing record of treatment progress that can be used as feedback to the patient to reinforce skills maintenance efforts. For example, the clinician can plot a patient's weekly symptoms across sessions on a graph to illustrate how consistent skill use has paid off over time (see Treatment Summary and Figure 1).

Clinicians treating adults with ADHD in any modality should attend to medication adherence. For some patients, this will need to be a formal treatment target. Pharmacy and medical claims data suggest that many patients with adult ADHD discontinue medication after only a few months[18] and one study of adults with ADHD found that self-reported medication adherence during a two-week period averaged only 86%, with ADHD symptom severity correlating negatively with adherence[19]. Thus, adults with more severe ADHD take medications less consistently and better adherence may be associated with improved symptom control and possibly fewer side effects. A detailed functional analysis of adherence problems is essential to

choosing the right strategy. Does the patient need an auditory or visual reminder to cue medication-taking? Does she need to put the pill bottle in a more obvious, accessible location? Does he have negative thoughts when he thinks about taking his pills that trigger avoidance? Is the patient experiencing aversive side effects that she is reluctant to discuss with her prescribing physician? A seemingly straightforward behavioral issue like medication adherence can have very complex causes and a thorough understanding of those causes is essential to selecting the right intervention.

Even if a patient knows where, when, and how to use a skill, thoughts and beliefs often play a critical role in whether that skill is actually used. If a patient makes overly negative interpretations or predictions about situations that have been problematic in the past, this may reduce his motivation to persist in active problem-solving or skill use. For example, if a patient in the early stages of learning to consistently use a planner forgets to write down an appointment and misses the appointment, she might think, "Great—here's another example of something I failed at," and may give up on using the planner all together. Another commonly-observed example has to do with some patients' aversion to arriving even a few minutes early for appointments, often tagged to the automatic thought, "Sitting in the waiting room is a waste of time." The consequence is that the patient tries to do too many other things before appointments and habitually arrives late. Interventions for this patient might include weighing the pros and cons of arriving early and "wasting" a few minutes versus persistent lateness. By engaging in problem-solving with the therapist, the patient might develop a helpful behavioral strategy such as always bringing some work to do so that the time waiting can be productive.

Impulsive and *overly positive* assumptions may also be problematic[20]. For example, another patient learning to use a planner might, upon receiving a new appointment, have the

thought, "Oh, I don't need to write this one down because it's important to me—I'll definitely remember it." This overly optimistic assumption would also get in the way of consistent skill use. Clinicians should probe for and attend to these patterns of thinking. The major CBT approaches for adult ADHD include application of formal cognitive restructuring—strategies designed to increase the patient's awareness of problematic thinking patterns and to help patients coach themselves more effectively [9,21,22]. Key cognitive errors, such as all-or-nothing thinking, jumping to conclusions, and overgeneralization, can be identified in the thinking patterns of adults with ADHD in either the positive or negative direction. For readers interested in the application of cognitive techniques, Ramsay and Rostain [21] provide an excellent, comprehensive discussion and description of the role of cognitive therapy strategies in treatment of adults with ADHD.

In addition to looking for internal cues that influence behavior, effective interventions guide patients in structuring their environments in a way that will support skill use. Clinicians and theorists have noted that because ADHD appears to be a disorder of performance rather than knowledge, interventions should be placed as close as possible in space and time to the point at which the target behavior needs to occur (i.e., the "point of performance," [23,24]). Put another way, interventions should reduce the patient's working memory load as much as possible. A prime example of a "point of performance" strategy is helping the patient to set up and use visual and auditory reminders. For example, if a patient loses track of time when getting ready in the morning, he might set a daily recurring reminder alarm on his cell phone to go off 15 minutes prior to the target departure time. An example of putting an intervention at the physical point of performance would be having a patient with poor morning medication adherence Velcro her

medication bottle to the handle of the refrigerator, which she reports she automatically opens every morning to get a glass of juice.

When teaching skills in session, the more concrete the better. Many clients will enthusiastically discuss several possible strategies in the abstract during session with every intention of executing those strategies over the following week. Unfortunately, patients with ADHD often have extreme difficulty translating their intention into action—the clinician must not collude with the patient in hypothetical discussions. Clinicians should constantly ask questions focused on the specifics of any skill to be practiced outside of session, and the degree to which achievement of the skill in question is realistic. When will the patient need to use the skill? How will he know it is needed and remember to use it? Where will she keep the tools needed (e.g., task list)? What thoughts will arise when he is faced with choosing to use the skill? What will get in the way of using the skill? How will she know if she used it successfully? Actually practicing the skill in the session is one of the most effective ways to increase the likelihood that it will occur in the "real world." We often work with patients on their task lists in session as well as having them practice distractibility reduction techniques with us while trying to do boring tasks.

Involvement of significant others and family members in treatment can be incredibly powerful, near disastrous, or somewhere in between —thus, it must be undertaken with care, guided by a reasonable assessment of the risks and benefits in the context of the individual patient's relationship. The primary goal of family involvement in individual treatment is to recruit the family member to support the patient's change efforts. We have found, however, that in many instances, spouses have been experiencing long-term frustration with their partner with ADHD and this can make a difference in the type of support the partner is able to provide.

Individual therapy for ADHD is likely not the place to try to fix a contentious relationship and, in our experience, single sessions involving family members with heated relationships are at best unhelpful and at worst a negative experience for all involved. (Patients with more severe relationship problems should be referred for couples work as addressed later.) If the patient reports, however, that her family member is generally supportive and interested in her work in therapy, the clinician can suggest that this family member attend a session with the patient. The clinician can provide the family member with psychoeducation and help to initiate an ongoing dialogue about how he or she can be supportive of treatment. We generally present psychoeducation about ADHD and the CBT model and then describe the specific skills that are contained within the treatment plan. The session might also include an open discussion about how the patient feels the family member can be helpful—for example, providing gentle reminders about skill use and working with the patient to set up organizational systems that will be used by everyone in the household. Above all, the clinician should keep the focus on the patient's need for support rather than the family member's complaints or grievances.

This section outlined the following recommendations for executing skills-based treatment for adults with ADHD.

- Provide psychoeducation about ADHD and the treatment model, connecting it directly to the patient's experience.

- Help patients consistently practice a few simple skills and "good enough" systems until they can see the benefits.

- Use session structure to maintain focus on the most important problems and strategies.

- Maintain a non-judgmental working relationship and a problem-solving orientation.

- Assess progress formally and informally throughout treatment.

- Assess and address medication adherence.

- Pay attention to and restructure thoughts and beliefs that hinder use of skills.

- Help patients put cues and interventions as close as possible in time and space to where the target behavior will be performed.

- Help patients plan skill use as specifically and concretely as possible. Practice in session as appropriate.

- Consider a session involving a family member to increase support for the patient, but do so with care.

The following treatment summary illustrates the application of several of these concepts with Rob, the patient described earlier.

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Treatment Summary

Rob's treatment followed the "Mastering Your Adult ADHD" CBT manual[9]. Rob was quite enthusiastic about learning new skills but admitted that "sticking with it" had historically been difficult. In the early stages of treatment, he identified filing his taxes on time (something he had not done for several years) as a proximal goal to work toward using skills from session. In terms of organization and planning skills, Rob benefitted most from keeping a daily task list with priorities and due dates noted. He put a great deal of effort into keeping all notes in one place on a simple legal pad, using the list daily, and making a list for the next day. He noted that the list was a way to "get real with myself" about what needed to be done. He found that talking to other people about his new methods was a way to stay consistent. To cope with his distractibility, Rob benefitted most from collecting data on the length of his attention span for "boring" tasks (like

taxes) and structuring his work time accordingly. He would often take short breaks between these 20-minute work periods, such as a quick walk outside.

While learning these new behavioral strategies was critical to his success, equally important for Rob was work that focused on his thinking patterns. In particular, Rob identified prominent *overly positive* thinking that occurred throughout the day and led to avoidance and failure to use skills. Rob reported thinking thoughts like, "Well, I'm a good person so this will just work out for me" that often preceded poor decisions or avoidance behavior. Because such thoughts occurred very fleetingly and were often negative reinforced by a reduction in anxiety, they were hard for Rob to recognize. He began to notice and catalogue his most common "red flag" thoughts. He next decided to write them on brightly colored Post-It Notes around his workspace so he could be more aware when they happened. When he became aware that he was having a "red flag" thought, he would try to stop and "get real" about what he would need to do to solve or cope with the problem at hand. Cognitive work also focused on helping Rob see the costs of consistently sacrificing his own needs for others. To help him bring these ideas to mind when he needed them, a paper plate metaphor was discussed in session where Rob was asked to imagine all of his commitments to himself and others as food piled onto a single, flimsy, grease-soaked paper plate. When confronted with the opportunity to take on another project, he then asked himself, "Can this *really* fit on my plate?" as a way to cue more conscious decision-making about these issues.

Data collected using the Barkley Current Symptoms Scale[12] (self-report) throughout the course of treatment indicated that significant symptom reduction took place in the latter half of the sessions (see Figure 1). Rob believed that this was due to the time it took to "get good at" using the skills and also identified the cognitive work as critical to helping him use the skills

when he needed them. During treatment, Rob filed his taxes on time for the first time in several years. He was very proud of this and of the skills he had acquired. Several months after Rob completed treatment, he returned for a "skills booster" and appeared to have returned to his baseline symptoms, reporting that he had not been using skills consistently. He entered a "refresher course" of CBT skills and experienced symptom reduction within just a few sessions. Together, Rob and his clinician decided to taper treatment slowly over time to help Rob maintain his skills. During these tapered sessions, Rob was responsible for setting the session agenda and taking the lead role in session.

[End box.]

[Figure 1 about here.]

As illustrated by Rob's case, if a patient responds to skills-based CBT in the short term, acute treatment may need to be augmented with interventions designed to help with maintenance of gains. Although studies have demonstrated that treatment responders can indeed maintain their CBT-related gains in the absence of ongoing intervention [8], in our clinical experience some patients have difficulty maintaining skill use without additional support. This point is illustrated by Rob's need to return to CBT in order to re-engage with skill use—an option that should always be open to patients who successfully complete a course of CBT. In our treatment, we specifically address relapse prevention, normalize slips in skill use, and encourage patients to return to therapy in the future if they need help re-engaging with skills or if new challenges arise. In some cases, a clinician might consider tapering final sessions or continuing patients on "maintenance" CBT at lower frequency. For example, a patient might complete 12-20 sessions of weekly CBT and be tapered over time to once-a-month visits. In these maintenance visits, the clinician can place more of the responsibility for planning and directing the session on the

patient. As was the case for Rob, patients can be instructed to come to the session having formulated the agenda and having identified which skills they would like to discuss and troubleshoot. Finally, use of maintenance groups for "graduates" of skills-based CBT is another cost-effective, potentially useful option for practices that see larger numbers of adults with ADHD. Groups could be held monthly and patients could be given the option to attend as-needed.

Review of Major Psychosocial Treatment Options

As discussed at the outset of this chapter, skills-based cognitive-behavioral interventions for adult ADHD have received the most rigorous empirical support. These findings are both emerging and promising. Across open trials and randomized controlled trials, these interventions have been associated with a large pre-to-post effect size for self-reported symptoms ($d = 1.12$; see also this reference for more detailed review of individual studies[1]). In 2010, two cognitive-behavioral treatment programs heavily targeting organization and planning skills—those of Safren et al. [8] and Solanto et al. [6]—received empirical support in larger randomized controlled trials with active control conditions. Both of these treatments qualify as Probably Efficacious Treatments according to the standards established by the American Psychological Association's Division 12 [25]. Safren et al. [8] compared a 12-session individual CBT intervention to relaxation training with educational support for 86 patients. Patients in this study were receiving medication treatment but had sufficient residual symptoms to still meet criteria for the disorder. CBT was associated with significantly greater reductions in blinded-assessor -rated and self-reported symptoms of ADHD and responders maintained their gains at 6- and 12-month follow-up assessments. Solanto and colleagues [6] compared a 12-session group-based cognitive-behavioral therapy to support group intervention for 88 adults diagnosed with ADHD. She found that group

CBT was associated with significantly greater reductions in inattentive symptoms by self-, other-, and blinded investigator-report. Notably, only some patients in this study were on medication and medication status did not appear to impact response to group CBT. Taken together, empirical evidence supports the integration of skills-based cognitive-behavioral interventions into evidence-based practice for adult ADHD.

Recently, researchers have started to examine the possibility that mindfulness-based intervention might be helpful for adults with ADHD. The rationale appears to be that if adults with ADHD could improve their attentional control via consistent practice of mindfulness, they might decrease their inattention and impulsivity. Zylowska and colleagues [26] conducted an uncontrolled feasibility study of 24 adults and 8 adolescents who completed an 8-week mindfulness training program. They noted improvements in pre-to-post self-reported symptoms and also improvements on neuropsychological test performance, although a control group would be needed to rule out practice effects. Philipsen and colleagues [27] have also found promising results applying group Dialectical Behavior Therapy (DBT) skills training for adults with ADHD in a large open trial. One key component of DBT is mindfulness, although many other CBT skills are also taught. Together, these studies suggest that additional controlled studies of mindfulness-based treatment for adult ADHD are needed. In the meantime, patients interested in integrating mindfulness practice into their self-care regimen should be encouraged to do so, given its demonstrated benefits for stress reduction and growing evidence for effects on mood and anxiety symptoms [28,29]. However, mindfulness-based therapy cannot yet be considered a primary treatment for adult ADHD.

With respect to alternative interventions for adult ADHD, coaching has become an increasingly popular option. What is ADHD coaching and how does it differ from skills-based

treatment? The Institute for the Advancement of ADHD Coaching defines it as, "…a designed partnership that combines coaching skills and knowledge of the neurobiological condition known as Attention Deficit Hyperactivity Disorder. AD/HD coaches assist the client to develop, internalize and integrate his/her own tools, education and self-knowledge to direct and manage life and work challenges. Coaches collaboratively explore strengths, talents, tools and new learning to increase self-awareness and personal empowerment. Coach and client design strategies and actions and monitor progress by creating accountability in line with goals and aspirations." (Retrieved from: http://www.adhdcoachinstitute.org/joom2/content/view/120/229/). Some researchers have questioned the distinction between coaching and CBT [30] and descriptions of coaching programs often include behavioral strategies and techniques [31]. In a prior review [32] we outlined several factors that distinguish coaching from cognitive-behavioral therapy. First, the ultimate goal of CBT is to train the patient in domain-general skills that can eventually be applied in a variety of contexts whereas coaching appears to target specific work, academic, or personal goals. Second, CBT attends to the role of thoughts and feelings in blocking or facilitating skill use—a feature not traditionally incorporated into coaching [33]. Third, a CBT therapist's goal is to make herself obsolete due to the patient's acquisition of skills, whereas in coaching there does not appear to be any expectation that positive outcomes will persist beyond the end of the coaching relationship. The most important difference between CBT and coaching is that the CBT therapist is guided by scientific knowledge about relationships between thoughts, emotions, and behavior applied flexibly to the patient using a comprehensive functional analysis of the presenting problem. CBT scientist-practitioners also regularly subject their interventions to scientific study. Although coaching has been studied in a few open trials [31,34,35], the efficacy of coaching for adult ADHD remains largely unstudied [30].

Coaching practitioners often emphasize that coaching is not a substitute for psychotherapy but can be a useful adjunctive service for adults already receiving ongoing medication or skills-based intervention [33]. To the point, two studies by Stevenson and colleagues [36,37] found positive results using a clinic-based skills training approach for adult ADHD that included an individual support person for each participant. The support person made weekly contact with the patient to improve treatment adherence and enhance motivation. The increased accountability and social support provided by a coach in support of skill acquisition and application in CBT might be particularly powerful combination. This intriguing possibility warrants further study. In the meantime, we recommend that patients wishing to obtain ADHD coaching spend time "doing their homework" on the training, experience, and qualifications of ADHD coaches to obtain optimal professional support. Integrating the coach into the patient's team of providers will improve communication and coordination of care.

Many patients and clinicians consider employing interventions that purport to alter the underlying neurological or neurocognitive deficits of ADHD non-pharmacologically including neurofeedback, low-energy neurofeedback systems (LENS), cerebellar retraining, and cognitive training approaches. Many of these systems are commercially available—however, it is important to recognize the importance of treatment outcome data when selecting or recommending treatments for any condition. Some of these treatments may not have any peer-reviewed data to support their efficacy. A Medline database search for published research on both LENS and cerebellar retraining and ADHD yielded no results. Neurofeedback training has been studied in people with ADHD but methodological issues make it difficult to draw conclusions about the true cause of any observed treatment-related change[38]. Ramsay[39] recently reviewed the evidence for neurofeedback and working memory training and concluded that

empirical support for these treatment strategies in adults with ADHD is currently "tentative and non-conclusive." In addition, patients should consider the costs associated with these interventions and that they may require significant time commitment (e.g., 30 to 60 sessions in the case of neurofeedback training[40]). Of the treatments in this category, working memory training appears to be receiving increased scientific support in improving executive functions in children[41] and additional rigorous studies in adults with ADHD, such as those conducted for medication and CBT, are hopefully on the horizon.

Because ADHD in adulthood is associated with impairment in multiple domains, other types of intervention and consultation targeting specific areas may be indicated. First, adults with ADHD and comorbid disorders may need integrated treatment that also targets mood, anxiety, or substance use problems. Naturally there are instances in which treatment of the comorbid disorder takes precedence over treatment of the ADHD. Unfortunately, methods for integrating psychosocial treatment of ADHD and other disorders have not yet been widely studied. Second, patients may benefit from psychosocial modalities that target relationship difficulties (couples therapy), family functioning (family therapy), and parenting skills (behavioral parent training;[42]. Third, consultation in specific areas such as job skills (vocational rehabilitation or counseling), financial management (financial planners), and home organization (organizational consultation) may also be indicated. Finally, support groups, such as those sponsored by Children and Adults with Attention-Deficit Hyperactivity Disorder (CHADD), play a very important role for many adults with ADHD, providing social support, validation, and a positive environment that supports patients' change efforts. Advocacy organizations like CHADD can also provide information and support as patients advocate for themselves in educational settings and in the workplace. It must be emphasized that for most patients, these resources are not a substitute for

ongoing medication and skills-based treatments to manage core ADHD symptoms. However, clinicians should think broadly about the ways in which the lives of their patients could be improved and should consider recommending these types of services as appropriate.

This section reviewed major psychosocial treatment strategies, emphasizing the following points.

- Skills-based cognitive behavioral treatments for adult ADHD have shown positive results in randomized controlled trials and are currently the only type of psychosocial treatment with strong empirical support.

- Mindfulness practice has many benefits and patients should be encouraged to add mindfulness-based practice to their self-care plan—however, these strategies require further study as primary treatments for adult ADHD.

- Coaching can be potentially useful adjunct to medication or skills-based treatment. Patients should carefully select their coach in consultation and integrated with the other members of their care team. Further study of coaching efficacy is needed.

- Clinicians should strongly consider referring patients to additional psychosocial resources as appropriate including treatment for comorbid disorders, couples or family therapy, parent training, vocational or organizational consultation, financial planning, and support and advocacy groups.

This chapter highlighted empirical findings and recommendations from our clinical experience and treatment manuals[9,10] in applying skills-based treatments for adults with ADHD. We encourage readers to learn more about these approaches and to seek out additional training and experience. Many patients are eager to learn ways to manage their symptoms and to work

with a clinician who has the skills, experience, and empathy necessary to partner with them in improving their lives.

References

1.   Knouse LE, Safren SA. Current Status of Cognitive Behavioral Therapy for Adult Attention-Deficit Hyperactivity Disorder. *The Psychiatric clinics of North America.* 2010;33(3):497-509.
2.   Steele M, Jensen PS, Quinn DMP. Remission versus response as the goal of therapy in ADHD: A new standard for the field? *Clin Ther.* 2006;28(11):1892-1908.
3.   Safren S, Sprich S, Chulvick S, Otto MW. Psychosocial treatments for adults with ADHD. *Psychiatric Clinics of North America.* 2004;27(2):349-360.
4.   Miller TW, Nigg JT, Faraone SV. Axis I and II comorbidity in adults with ADHD. *Journal of Abnormal Psychology.* 2007;116(3):519-528.
5.   Kessler RC, Adler L, Barkley RA, et al. The prevalence and correlates of adult ADHD in the United States: Results from the National Comorbidity Survey Replication. *Am J Psychiatry.* 2006;163(4):716-723.
6.   Solanto MV, Marks DJ, Wasserstein J, et al. Efficacy of metacognitive therapy for adult ADHD. *Am J Psychiatry.* 2010;167:958-968.
7.   Safren SA, Otto MW, Sprich S, Winett CL, Wilens T, Biederman J. Cognitive-behavioral therapy for ADHD in medication-treated adults with continued symptoms. *Behavior Research and Therapy.* 2005;43(7):831-842.
8.   Safren SA, Sprich S, Mimiaga MJ, et al. Cognitive behavioral therapy vs. relaxation with educational support for medication-treated adults with ADHD and persistent symptoms. *JAMA.* 2010;304(8):857 - 880.
9.   Safren SA, Perlman CA, Sprich S, Otto MW. *Mastering your adult ADHD: A cognitive-behavioral therapy approach.* New York: Oxford Univeristy Press; 2005.
10.   Safren SA, SPrich S, Perlman CA, Otto MW. *Mastering your adult ADHD: a cognitive-behavioral treatment program client workbook* New York: Oxford Univeristy Press; 2005.
11.   Sprich S, Knouse LE, Cooper-Vince C, Burbridge J, Safren SA. Description and Demonstration of CBT for ADHD in Adults. *Cognitive and Behavioral Practice.* 2010;17(1):9-15.
12.   Barkley RA, Murphy KR. *Attention-deficit hyperactivity disorder: A clinical workbook, 3rd edition.* New York: Guilford Press; 2006.
13.   Murphy KR, Gordon M. Assessment of adults wtih ADHD. In: Barkley RA, ed. *Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment.* New York: Guilford; 2006:425-450.
14.   Yovel I, Safren S. Measuring Homework Utility in Psychotherapy: Cognitive-Behavioral Therapy for Adult Attention-Deficit Hyperactivity Disorder as an Example. *Cognitive Therapy and Research.* 2007;31(3):385-399.
15.   Persons JB. *The case formulation approach to cognitive-behavior therapy.* New York: Guilford Press; 2008.
16.   Knouse LE, Safren SA. Adult attention-deficit hyperactivity disorder. In: Baer L, Blais M, eds. *Handbook of clinical rating scales and assessment in psychiatry and mental health.* New York: Springer USA; 2009.
17.   Kessler RC, Adler LA, Gruber MJ, Sarawate CA, Spencer T, Van Brunt DL. Validity of the World Health Organization Adult ADHD self-report scale (ASRS) screener in a

representative sample of health plan members. *International Journal of Methods in Psychiatric Research.* 2007;16(2):52-65.

18. Olfson M, Marcus SC, Zhang HF, Wan GJ. Continuity in methylphenidate treatment of adults with Attention-Deficit/Hyperactivity Disorder. *Journal of Managed Care Pharmacy.* 2007;13(7):570-577.

19. Safren SA, Duran P, Yovel I, Perlman CA, Sprich S. Medication Adherence in Psychopharmacologically Treated Adults With ADHD. *Journal of Attention Disorders.* 2007;10(3):257-260.

20. Mitchell JT, Anastopoulos AD, Knouse LE, Kimbrel NA, Benson J. Evaluating potential mechanisms of change in the treatment of AD/HD in adulthood: an exploratory analysis of maladaptive thoughts. *Annual conference of the Assocation for Behavioral and Cognitive Therapies*. Orlando, FL2008.

21. Ramsay JR, Rostain A. *Cognitive-behavioral therapy for adult ADHD: An integrative psychosocial and medical approach*. New York, NY US: Routledge/Taylor & Francis Group; 2008.

22. Solanto MV. *Cognitive-behavioral therapy for adult ADHD : targeting executive dysfunction*. New York: Guilford Press; 2011.

23. Barkley RA. *ADHD and the nature of self control*. New York: Guilford; 1997.

24. Ingersoll BD, Goldstein S. *Attention deficit disorder and learning disabilities: Realities, myths, and controversial treatments.* New York: Doubleday; 1993.

25. Chambless DL, Ollendick TH. EMPIRICALLY SUPPORTED PSYCHOLOGICAL INTERVENTIONS: Controversies and Evidence. *Annual Review of Psychology.* 2001;52(1):685-716.

26. Zylowska L, Ackerman DL, Yang MH, et al. Mindfulness meditation training in adults and adolescents with ADHD: A feasibility study. *J Atten Disord.* 2008;11(6):737-746.

27. Philipsen A, Richter H, Peters J, et al. Structured group psychotherapy in adults with attention deficit hyperactivity disorder: Results of an open multicentre study. *Journal of Nervous and Mental Disease.* 2007;195(12):1013-1019.

28. Hofmann SG, Sawyer AT, Witt AA, Oh D. The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical Psychology.* 2010;78(2):169-183.

29. Chiesa A, Serretti A. Mindfulness-Based Stress Reduction for Stress Management in Healthy People: A Review and Meta-Analysis. *The Journal of Alternative and Complementary Medicine.* 2009;15(5):593-600.

30. Goldstein S. Editorial: Coaching as a treatment for ADHD. *Journal of Attention Disorders.* 2005;9:379-381.

31. Kubik JA. Efficacy of ADHD Coaching for Adults With ADHD. *Journal of Attention Disorders.* March 1, 2010 2010;13(5):442-453.

32. Knouse LE, Cooper-Vince C, Sprich S, Safren SA. Recent developments in the psychosocial treatment of adult ADHD. *Expert Rev Neurother.* 2008;8(10):1537-1548.

33. Ratey NA. Life Coaching for Adult ADHD. *Clinician's Guide to Adult ADHD*. San Diego: Academic Press; 2002:261-277.

34. Zwart LM, Kallemyn LM. Peer-based coaching for college students with ADHD and learning disabilities. *Journal of Postsecondary Education and Disability.* 2001;15:1-15.

35. Swartz SL, Prevatt F, Proctor BE. A coaching intervention for college students with Attention-Deficit/Hyperactivity Disorder. *Psychology in the Schools.* 2005;42:647-656.

36.	Stevenson CS, Whitmont S, Bornholt L, Livesey D, Stevenson RJ. A cognitive remediation programme for adults with Attention Deficit Hyperactivity Disorder. *Australian and New Zealand Journal of Psychiatry.* 2002;36(5):610-616.
37.	Stevenson CS, Stevenson RJ, Whitmont S. A self-directed psychosocial intervention with minimal therapist contact for adults with attention deficit hyperactivity disorder. *Clinical Psychology & Psychotherapy.* 2003;10(2):93-101.
38.	Loo SK, Barkley RA. Clinical Utility of EEG in Attention Deficit Hyperactivity Disorder. *Applied Neuropsychology.* 2005/06/01 2005;12(2):64-76.
39.	Ramsay JR. Neurofeedback and neurocognitive training. *Nonmedication treatments for adult ADHD: Evaluating impact on daily functioning and well-being.* Washington, D.C.: American Psychological Association; 2010:109-129.
40.	Ramsay JR. CBT for Adult ADHD: Adaptations and Hypothesized Mechanisms of Change. *Journal of Cognitive Psychotherapy.* 2010;24(1):37-45.
41.	Diamond A, Lee K. Interventions shown to aid executive function development in children 4 to 12 years old. *Science.* 2011;333(6045):959-964
42.	Chronis AM, Chacko A, Fabiano GA, Wymbs BT, Pelham WE. Enhancements to the Behavioral Parent Training Paradigm for Families of Children with ADHD: Review and Future Directions. *Clinical Child and Family Psychology Review.* 2004;7(1):1-27.

Table 1: Common categories of difficulties for adults with ADHD, behavioral strategies, and examples

Problem	Strategy to Consider	Example
*Forgetfulness	Calendar for all appointments	Write down all appointments in one calendar—do so until it feels strange <u>not</u> to
	Automate regularly-occurring tasks	Set up automatic draft for bills
*Distractibility	Eliminate key distractors	Turn off notification sounds when a new email arrives
	Schedule activities strategically	Schedule the most attention-demanding tasks for the morning
Avoidance	Use desired activities as incentives	Do 15 minutes of work on an avoided project followed by 5 minutes on a more interesting one
	Increase awareness of problematic avoidance-related thoughts	Post problematic thoughts linked to avoidance—"I'll just check my e-mail really quick before I start working,"—near computer
	Increase accountability	Meet weekly with a group to share goals and report back on progress made (or not made!)
	Build behavioral momentum	Set goal to complete just the first step of an avoided task
Difficulty using a skill *when* and *where* it's needed	Place visual cue in the physical location where the skill is needed	Post-It reading, "CHECK CALENDAR" in the middle of computer screen to cue this skill *before* checking e-mail.
	Make sure the tools needed are easily accessible	Keeping calendar in a cell phone instead of on loose paper
	Set up cues & warnings at critical points in time	Set cell phone to sound a "10-minue warning" prior to work departure time

*Be sure to gather enough information to differentiate forgetting and distractibility from avoidance, recognizing that both (or all three) may need to be addressed.