The integration of psychotropics into a broader psychosocial therapeutic plan would seem more than justified by previous reviews of the benefits associated with such a multimodal approach to coordinated behavioral health treatment (Reis de Olivera, Schwartz, & Stahl, 2014). It is no longer enough to think along traditional lines of which is the best medication for a particular diagnosis, nor is it sufficient to adhere to one school of psychotherapy and apply it without much regard to diagnosis. Thus, CBT (cognitive-behavioral therapy) for CBT’s sake, just as pharmacotherapy as a standalone, would appear to be paradigms with diminished futures. Evidence-based therapeutic strategies argue that treatments, or a combination of treatments, might best be selected according to their relative impact on a certain constellation of symptoms, together with accompanying psychosocial variables, not the least among these being subject variables. Such an approach advocates integrating different biopsychosocial approaches to optimize therapeutic result. In some instances it is a question of selecting one treatment over another, while in the majority of cases it is more a question of combining treatments, and often this means coordinating multimodal therapeutic interventions (Lazarus, 1981).

“Evidence-based” is a lure that does not always provide us with clear-cut distinctions among multiple intervention strategies because, quite often, the evidence is not there. The evidence that is available, and it is substantial, is limited by its designs, which are driven by the interests of the investigators. Medications are largely tested against placebo, while CBT has rarely been pitted head-to-head against other psychosocial therapies, and where this has been done by resurrecting past studies in meta-analyses, the results are confoundingly ambiguous (Tolin, 2010), which is not a state to be cherished in science. Meta-analyses incorporate all of the shortcomings of the original randomized controlled trials (RCTs) that they attempt to digest (Kennedy-Martin, Curtis, Faries, Robinson, & Johnston, 2005; Walker, Hernandez, & Kattan, 2008). Oftentimes, meta-analyses find no difference between medication and psychotherapy, and no discernable advantage among various medications or among different psychotherapies. And, just as obfuscating is the fact that many studies are kept from public knowledge through selective publication, leading to a skewing of data toward a spurious impression of greater effectiveness than might otherwise be the case if all data were reported (Turner, Matthews, Linardatos, Tell, & Rosenthal, 2008). Still, one often finds that CBT

Evidence-Based Biopsychosocial Treatment through the Integration of Pharmacotherapy and Psychosocial Therapy

Mark D. Muse
is presented as having accumulated substantial data to support it as an efficacious therapy for the majority of psychiatric disorders (Butler, Chapman, Forman, & Beck, 2006), and this is certainly true because the number of studies completed with CBT as the independent variable far outweigh studies conducted on other psychotherapies. However, it is a stretch to say, based on the present data, that CBT is more efficacious than other psychotherapies. Hofmann, Asnaani, Imke, Sawyer, & Fang (2012), in a review of 269 meta-analyses concluded that CBT generally showed higher response rates than other psychosocial therapies, but the nature of the other therapies examined was often vague, and in several cases no superiority of CBT over the other psychosocial approaches was demonstrated, while in at least one case psychodynamic therapy was shown to be superior to CBT; indeed, when psychoanalysis is studied for effectiveness, it compares well with other therapies (de Maat et al., 2013), although the rigor of such studies leaves much to be desired.

What is the researcher, not to mention the clinician hoping to hang his shingle on tangible data, to derive from such a state of affairs? I submit that we have many wonderful meta-analyses that have given us a glimpse of where the truth lies, but we need to go back and design hard-hitting RCTs to fill in the blanks. Perhaps we have mined the data sufficiently at this point, and need more data. Well-designed RCTs that compare head-to-head the different psychosocial therapies are needed, just as are RCTs that pit different medications against psychosocial therapies, and not just placebo-controlled groups. And, the reciprocal influence among various therapies—such as pharmacological agents with other psychotropics (so-called polypharmacy) as well as such agents with a multitude of psychosocial therapies (what analysis of variance calls “interactions”)—is where the hope for integration lies. Having said this, one is often struck by the commonalities of the various therapeutic approaches (Frank & Frank, 1991), be they pharmacologic or psychotherapeutic; and, until we are able to determine more precisely what components of a given approach endow it with an advantage over its brother, we are likely to run a lot of RCTs with equivocal results, since, in the end, the common response to therapeutic intervention, placebo included, is a global one in which patients tend to get better.

For years the movement toward integrating psychopharmacology with psychotherapy has moved forward on sound judgment alone: even with a paucity of substantiating research, a multimodal approach where pharmacotherapy is coordinated with psychological treatments has appeared to make sense at face value. Only recently has sufficient data accumulated to allow evidence-based pronouncements on the value of combining these two approaches, and the data available at this time have vindicated the theory to a large extent, while certain exceptions have also been found. The efficacy of combining pharmacotherapy and psychotherapy as a practice is borne out to a large extent by research; yet, as we shall see in the coming chapters, medication is sometimes contraindicated as an add-on to psychotherapy, and therapy is not always a benefit when added to medication management. As more investigations are completed in the area of biopsychosocial integration, it will become increasingly apparent that a multitude of variables are implicated in outcome, the patient population under consideration being one of the most important (Arnold, 1993).

We have elucidated here, as far as the evidence takes us to date, which combination of treatments is recommendable for each of the major psychiatric diagnoses. Never before has a single volume embarked upon coordinating psychopharmacological and psychotherapeutic treatments for the major psychiatric diagnoses from the evidence-based
Methodology

The present volume has attempted to reduce bias by avoiding all pre-established search filters when sifting through the evidence as it exists today, but instead relied heavily on unfettered RCTs and meta-analyses to complete an exhaustive nonquantitative systematic review of the literature (Siwek, Gourlay, & Slawson, 2002). Cognizant of the variability in the quality inherent in clinical trials (Juni, Altman, & Egger, 2001), we endeavored to be all inclusive (Edinger & Cohen, 2013) while, ultimately, distilling our findings in a way that leads to basic best-practice recommendations, based upon evidence and upon the expert opinion of each chapter’s authors. While some of the indications in this book arrive at the level of research-validated best practices, others are meant only as a starting place for the clinician to build his or her own therapeutic prescription for a given patient. In any case, we hold to the definition of evidence-based clinical practice as more than the mere application of treatments according to their proven effectiveness in controlled trials; rather, we accept evidence-based practice as “the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients, while integrating individual clinical expertise with the best available external clinical evidence from systematic research” (Sackett et al., 1996).

The chapter authors each collected current research in their respective domain, and categorized the quality of the research according to the following hierarchy:

**Level 1a:** Evidence derived from a high-quality meta-analysis of RCTs.
**Level 1b:** Evidence derived from at least one well-controlled RCT.
**Level 2a:** Evidence derived from at least one randomized study without double-blind controls.
**Level 2b:** Evidence derived from at least one controlled, non-randomized quasi-experimental study.
**Level 3:** Evidence based on a case study or correlation study.
**Level 4:** Evidence based on a committee report or panel of experts.

After weighting and weighing the evidence, best-practice recommendations were arrived at by using the criteria outlined in Table 1.1.
The results of each chapter’s survey of the evidence, as intriguing and valuable in guiding clinical interventions as they may be, generated varying degrees of confidence. It is a given that no result presented itself with unequivocal certainty, and a great deal is left up to interpretation. The evidence, as might be predicted, was more substantial for the major psychiatric diagnoses (psychosis, mood disorder, anxiety) than for those diagnoses treated within subspecialties (pain, eating disorders, sleep disorders).

We summarize in Table 1.2, at the cost of oversimplification, the major findings of the various chapters that comprise this book, keeping in mind that only those practice recommendations that are considered first-line are presented here. Apart from Table 1.2, each chapter presents a more detailed table of its respective findings and practice recommendations; in the summary tables of the individual chapters the reader will find not only first-line treatments for the condition under study, but also alternative treatments that may be suggested for an array of reasons. In developing our recommendations and suggestions, we have remained cognizant of the principle that “first-line” treatments are only a starting point, and that there are numerous circumstances in which an alternative treatment should be considered preferable to the standard first-line approach.

There is, without a doubt, much left to be discovered in the effectiveness of various approaches for the treatment of mental health diagnoses, conditions, symptoms, and issues, and a recurrent call for greater investigation permeates each and every chapter of this volume. Consequently, what our survey has revealed is that we have a way to go before we identify condition-specific effective and efficacious treatments. Until then, it is reassuring that all treatments, regardless of the condition, tend to be effective to a degree. Globally, medication is about on par with psychotherapy, which is on par with social/family approaches, and many drugs and psychotherapies are equivalent among themselves (Cuijpers, 2016). That is not to say that there are no differences; rather, the differences are less impressive than the similarities. It would seem that any treatment is better than none (Kelly, 1955), including placebo. And let us be clear, placebo is not the absence of treatment, but treatment without any particular intervention.

What we don't know is humbling, but what we do know from previous studies (MacKenzie, 1998; Sinyor, Schafer, & Levitt, 2010; Soderberg, & Tungstrom, 2007) is that about one-third of patients treated will initially get better, while one-third of those

Table 1.1 Best-practice recommendation criteria.

<table>
<thead>
<tr>
<th>Level of value</th>
<th>Best-practice status</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level A</td>
<td>Recommended</td>
<td>Assessment supported by a substantial amount of high-quality evidence (Level 1 or 2) and based upon a consensus of the clinical judgment of the chapter authors</td>
</tr>
<tr>
<td>Level B</td>
<td>Suggested</td>
<td>Assessment supported by sparse, but high-grade data (Level 1 or 2), or a substantial amount of low-grade data (Level 3 or 4) and the clinical consensus of the chapter authors</td>
</tr>
<tr>
<td>Level C</td>
<td>May be considered</td>
<td>Assessment supported by low-grade data (Level 3 or 4), or the clinical consensus of the chapter authors</td>
</tr>
</tbody>
</table>
Table 1.2  Evidence-based findings and derived first-line clinical practice recommendations for the integration of pharmacotherapy and psychosocial therapy in the biopsychosocial treatment of major psychiatric diagnoses.

Psychosis

- Treatment of psychotic disorders should not be delayed, but begin early in the patient’s life, and should involve both medications and psychosocial components that are tailored to each patient’s specific needs and circumstances
- Antipsychotic medication use is nearly universally indicated in the management of psychoses
- CBT is more effective in reducing positive symptoms than in reducing negative symptoms, and is particularly indicated as adjunctive therapy where medication has not improved positive symptoms
- There is some evidence that preceding CBT with cognitive remediation (CR) may shorten therapy duration and reduce costs
- Relapse after successful initial treatment is prevalent with psychosis, and there is some evidence that cognitive-based and family therapies that specifically target relapse may improve longer outcomes

Major depressive disorders

- MILD: Talk therapy should be the primary intervention. CBT, cognitive therapy (CT), and interpersonal therapy (IPT) have been well researched
- MODERATE: Combined medication and talk therapy is preferred starting point. If a combined approach is not available, talk therapy and pharmacotherapy are both first-line.
- SEVERE WITHOUT PSYCHOTIC FEATURES: First-line interventions include CBT, CT, IPT, selective serotonic reuptake inhibitors (SSRIs), serotonin–norepinephrine reuptake inhibitors (SNRIs), and bupropion
- SEVERE WITH PSYCHOTIC FEATURES: SSRI/SNRI augmented with aripiprazole

Bipolar disorder

- MANIA: Patients diagnosed with mania should be started on medications with proven efficacy: specifically, carbamazepine, lithium, valproate, and second-generation antipsychotic medications, including aripiprazole, olanzapine, quetiapine, risperidone, and ziprasidone. For severe mania, combinations of mood stabilizers and second-generation antipsychotic medications should be considered, while providing psychoeducation over an extended period. Psychotherapy is not effective in controlling acute mania
- DEPRESSION: Electroconvulsive therapy should be considered for severely depressed patients, and for patients with severe mania accompanied by psychotic symptoms, significant suicidality, life-threatening malnutrition, or catatonia, and in those patients who fail to respond to medications. Traditional antidepressants should be avoided since they increase risk of switching to a manic or hypomanic mood

Dysthymia and adjustment disorder

- DYSTHYMIA: Combination therapy, consisting of CBT and pharmacotherapy, is first-line treatment for dysthymia
- ADJUSTMENT DISORDER with DEPRESSION: The first-line treatment for adjustment disorders is psychotherapy, especially problem-solving therapy (PST). Medications are overused in the primary care setting for treating adjustment disorders

(Continued)
Anxiety disorders

- **GENERALIZED ANXIETY DISORDER**: First-line treatment should be psychotherapeutic, and CBT is a reasonable first choice.
- **SPECIFIC PHOBIAS**: First-line treatment for simple phobias should be CBT, with exposure techniques emphasized. No psychotropic medication is recommended on a continuous basis for the treatment of phobias.
- **SOCIAL ANXIETY DISORDER**: Social anxiety disorder is more resistant to treatment than other anxiety disorders, and it responds about equally well to pharmacological and psychosocial treatment. SSRIs are considered first-line pharmacological treatment for social anxiety disorder, whereas benzodiazepines or beta blockers may provide effective p.r.n. coverage for performance anxiety. CBT is recommended as a first-line psychosocial treatment, with a group therapy approach particularly indicated.
- **PANIC DISORDER**: CBT is the treatment of choice for panic disorder. Psychodynamic therapy should be considered for those patients unable to tolerate CBT for panic disorder.
- **POSTTRAUMATIC STRESS DISORDER (PTSD)**: Monotherapy with medication is not indicated with PTSD since there is no drug treatment at this time for this disorder. Psychotherapy is first-line, with CBT and trauma-focused being equally as effective. Medications play only an adjunctive role in the management of PTSD.
- **OBSESSIVE COMPULSIVE DISORDER**: CBT is the treatment of choice, and should be prescribed as monotherapy since combining it with pharmacotherapy provides no real advantage.

Borderline personality disorder (BPD)

- Psychotherapy is the first-line treatment. No given psychosocial approach, however, has proved more effective than other approaches. While dialectical behavioral therapy (DBT) and mentalization-based therapy (MBT) have proved effective interventions with BPD, systems training for emotional predictability and problem solving (STEPPS) is a much shorter intervention with similar effectiveness.
- No medication is indicated for the treatment of BPD, *per se*, and benzodiazepines in particular should be avoided with this patient population.

Sleep disorders

- For the treatment of insomnia, CBT for insomnia (CBT-i) techniques should be considered first-line treatment due to the durability of treatment gains and lack of adverse effects associated with such treatment.
- Of the medications for insomnia, benzodiazepines, Z-drugs, and orexin/hypocretin antagonists appear to have the greatest efficacy, but all of these drugs may cause significant side effects and interact with other medications.

Chronic pain disorders

- Integration of multidisciplinary approaches is essential to chronic pain management; this entails coordinating combination therapies of CBT with pharmacological approaches, physical therapy, exercise, and nutrition.
- CBT is first-line intervention for chronic pain, with pharmacological forming an essential, but adjunctive, role for many patients.
- Antidepressant medication, especially tricyclic medication and mood stabilizers, are considered first-line among pharmacological treatments of chronic pain.
- Combined therapy is generally indicated over monotherapy for the management of chronic, benign pain.
Table 1.2 (Continued)

Eating disorders

- ANOREXIA NERVOSA: CBT is demonstrated to be the most efficacious first-line treatment for adults. Family psychotherapy is indicated as first-line for children under 16 with the inclusion of CBT and other psychotherapy approaches when the young patient is cognitively and developmentally capable of using these methods. Nutritional education and behavioral intervention are recommended when patients are insufficiently nourished/significantly malnourished such that they are cognitively compromised and unable to make use of psychotherapy. Adding insight-oriented forms of psychosocial intervention to CBT is appropriate when a patient of any age exhibits co-morbidities or life concerns necessitating the integration of interpersonal and dynamic change processes.

- BULIMIA NERVOSA: First-line treatment should be CBT and interpersonal psychotherapy or, alternatively, DBT when presenting with BPD. Fluoxetine or another SSRI, in combination with psychotherapy, should be considered when co-morbid with depressive and/or anxiety disorders. Family psychotherapy is indicated as first-line for children under 16.

- BINGE EATING DISORDER: Combination therapy, with CBT plus SSRI, is first-line treatment. If response to CBT and SSRI is insufficient, shift SSRI to SNRI or augment with dopamine norepinephrine reuptake inhibitor (DNRI), provided no self-induced vomiting. Psychostimulants to improve appetite management may be indicated in combination with antidepressant and CBT or other psychosocial therapy.

Childhood Disorders: ADHD and behavioral disorders

- ATTENTION DEFICIT/HYPERACTIVITY DISORDER (ADHD): There is compelling evidence that combined treatment, consisting of stimulant medication and behavioral management methods, are especially efficacious in the management of ADHD.

- OPPOSITIONAL DEFIANT DISORDER (ODD): Psychosocial interventions should be first-line treatments for ODD. Behavioral Parent Training (BPT) has demonstrated the greatest benefits and is recommended across all age groups. Problem-solving skills training (PSST) and anger control skills training (ACST) are also well-established interventions, but they typically complement BPT for ages 7 and up. Pharmacological treatments are not recommended as solitary or even combined treatments for ODD due to an inability to reduce core symptoms and risk of negative side effects.

- CONDUCT DISORDER (CD): The first-line treatment for CD should be psychosocial; CBT is particularly indicated when it incorporates a systemic component that targets patient, parent, and family dynamics.

Disorders of elder population: Depression, dementias and cognitive disorders

- LATE-LIFE DEPRESSION: Antidepressant for major depressive disorder if ≤ 75 years and no executive dysfunction. May be augmented with aripiprazole. Psychotherapy is indicated, especially CBT, PST, or brief psychodynamic therapy.

- COGNITIVE DEFICITS OF DEMENTIA: Acetylcholinesterase inhibitors (AChEIs) for Alzheimer’s disease, up to 2 years. Memantine + AChEI for moderate–severe Alzheimer’s disease. Reality-oriented psychotherapy.

- DEPRESSION CONCOMITANT WITH DEMENTIA: Antidepressants if major depressive disorder criteria met. Behavioral therapy groups, and effort to enhancing social engagement of patients. Teaching behavioral approaches to residential staff.

- PSYCHOTIC SYMPTOMS CONCOMITANT WITH DEMENTIA: No interventions meet level A of evidence.

- BEHAVIORAL SYMPTOMS CONCOMITANT WITH DEMENTIA: Caregiver training and psychoeducational counseling.
who do not respond to the initial treatment will, in turn, respond to a second treatment, and so on, regardless of the treatment employed. While such results are based on group studies and cannot be translated directly to any given patient or condition, the overall positive outcome, although less than perfect, is of great solace to those trying to help others in need. It is also reason to pause and reflect before championing any given therapeutic school, method, or substance.

That being said, Table 1.2 generally finds that psychotherapy is as effective, while posing less risk of pernicious iatrogenic outcomes, as pharmacotherapy, and, therefore, psychosocial interventions are indicated as first-line treatment over pharmacotherapy in the majority of psychological problems. The exception, in which pharmacotherapy might be considered to trump psychotherapeutic approaches as first-line interventions, consist largely of the treatments of major mood and thought disorders. Combination treatments, on the other hand, are generally indicated for the majority of conditions, with anxiety disorders, adjustment disorders, and personality disorders being the exception. Yet, each condition has its own indications and contraindications, and all are full of caveats.

For example, antipsychotic medication use is generally indicated in the management of psychoses, while combined treatments that involve both medications and psychosocial components are best tailored to each patient’s specific need and circumstance. Relapse is particularly prevalent with schizophrenia, and the use of cognitive and family therapies that specifically target relapse should form an integral part of treatment with this patient population. In the treatment of major depression, combined treatments can provide greater benefit when patient expectations are addressed to ensure that there is a realistic understanding of the degree and pacing of improvement; the combined use of selective serotonin reuptake inhibitors (SSRIs) together with CBT should be considered first-line. Bipolar disorder, by and large, requires the use of mood-stabilizing medication during manic episodes, and antidepressant agents (excepting SSRIs and serotonin–norepinephrine reuptake inhibitors (SNRIs)) during the depression phase of the disorder, while psychotherapy is essential as an adjunct for educating the patient on compliance with psychopharmacology and for facilitating a eurhythmic lifestyle. Dysthymia responds best to combination therapy of psychopharmacology and CBT, while adjustment disorder with depressed mood responds well to psychotherapy (especially problem-solving therapy and CBT). Pharmacotherapy should generally be avoided in chronic depression that manifests with a large psychosocial adjustment component, such as in the case of adjustment disorder with depression, as well as in some forms of depression not-otherwise-specified (NOS).

Personality disorders, and more particularly borderline personality disorder (BPD), are best treated with psychosocial approaches, while medication, at best, might be used for co-existing symptoms outside the classic borderline constellation of symptoms; nonetheless, no one psychotherapy has proved more effective than the others used in the treatment of BPD. Chronic benign pain is optimally treated with an integrative, multidisciplinary approach, and CBT is the first-line psychotherapeutic intervention among such a multimodal treatment regimen, with pharmacological interventions forming an essential, but adjunctive, role for many patients. Opioids are of limited utility in the treatment for chronic pain, but should be reserved as a tertiary approach.

For the optimal treatment of insomnia, integrated cognitive-behavioral therapy for insomnia (CBT-i) with pharmacotherapy, in proper sequencing, appears to provide the most effective response. Pharmacotherapy may initially lead to faster alleviation of symptoms of insomnia but it is typically associated with adverse effects and the return
of symptoms upon discontinuation of medications. Supplementing CBT-i with medica-
tion, however, can lead to better treatment compliance in the early stages of therapy. 
Eating disorders respond well to CBT when personality disturbance is not severe. 
Notwithstanding psychosocial approaches as first-line, combined pharmacotherapy 
and psychosocial therapies are indicated in most clinical presentations of eating disor-
ders, including bulimia and anorexia. On the other hand, monotherapy with medication 
alone has not been shown to be effective in long-term treatment in any of the eating 
disorders, while group therapy is a useful adjunct to individual psychotherapy for all 
eating disorders, but is not sufficient as monotherapy.

A common factor found across ADHD, oppositional defiant disorder (ODD), and 
conduct disorder (CD) is that effective interventions rely upon the support of adult 
caregivers, with the most robust, long-lasting treatment effects achieved when parents 
and teachers are involved in intervention efforts. Psychostimulants are the gold stand-
ard for the pharmacological treatment of ADHD, yet first-line pharmacological inter-
vention is recommended for ADHD only, and is not recommended as monotherapy for 
either ODD or CD. Psychosocial therapies are considered first-line interventions for 
ODD and CD, achieving significant positive outcomes with lasting intervention effects. 
In the treatment of the elderly, with or without dementias or cognitive disorders, evi-
dence shows that antidepressants and psychotherapy are equally efficacious in address-
ing late-life depression. With demented patients, antidepressants are effective for the 
treatment of major depressive disorder, particularly with those diagnosed with 
Alzheimer-related dementia. When treating psychosis associated with cognitive disor-
ders, however, psychosocial/nonpharmacological methods are preferred due to their 
low side effect profile with this medically vulnerable population. When behavioral dis-
turbances occur concomitant with dementia, nonpharmacological interventions may 
be the first treatment tried.

The State of the Art of Clinical Research and its Derived Evidence-Based Practice Guidelines

In summary, the preceding indications are not meant to be taken as a cookbook. There are, 
in fact, few specific recommendations, other than pointing out what might be best prac-
tices, and other practices that are best avoided. The indications are largely for first-line 
treatments, with further recommendations when patients are initial nonresponders. 
However, “difficult” patients, which may make up a sizable part of some challenging prac-
tices, require creative thinking, and may justify, indeed, compel the use of minority 
therapeutic approaches that are not ordinarily recommended, or the occasional imple-
mentation of polypharmacy when such practices are best not adopted by default. The 
individual chapters, dedicated to their respective major disorder or patient population, 
provide practice guidelines for second- and third-line interventions for just such complex 
or resistant cases.

Practice guidelines in general vary considerably in quality, and have been noted to 
reflect in many cases the bias of professional and governmental organizations that 
devise them (Stricker, Abrahamson, & Bologna, 1999). In this regard, we have given free 
rein to the experts who author each chapter in this book, knowing full well that bias will 
exist to a certain degree, but, in avoiding institutional input, we have confided in the 
individual professionals’ assessment of the evidence as they found it in their respective
inquiries. If there is an overriding bias to the present volume, it is in insisting on evidence in formulating treatment guidelines rather than on theoretical considerations.

Practice guidelines might best be developed in accordance with American Psychological Association standards (APA, 1999, 2002), which place emphasis on demonstrating that recommended specific treatments offer benefit beyond the patient simply being "in treatment", because, as we have seen, most patients get better when in treatment, regardless of the type of treatment. Until then, evidence-based practice (APA Presidential Task Force on Evidence-Based Practice, 2006) is an ideal that is slowly becoming reality as research strives to provide more discerning results. In its current state, moreover, it requires that the practitioner be aware of the kind of research data that may be relevant to decisions made in the office, and it also cries out for further institutional investment in research if evidence is to continue to refine our decision-making.

The Cochrane Library (Higgins & Green, 2011) has, as of 2008, over a half million registered controlled trials, and yet we have seen that there is a need for much more research to fill in the gaps in our knowledge. With the evidence that we have to date, certain indications, recommendations, and directions suggest themselves. Guidelines have been offered in the past for integrating pharmacotherapy with CBT (Veale & Stout, 2010), with caution being recommended when combining treatment for integrative care of depression, obsessive compulsive disorder, posttraumatic stress disorder, generalized anxiety disorder, panic, body dysmorphia, eating disorders, and personality disorders. Based largely on National Institute of Clinical Excellence recommendations (NICE, 2004, 2005, 2007), Veale and Stout (2010) suggest medication might be integrated with psychosocial therapies when one or the other has proved insufficient. Busch and Malin (1998) point out, however, that even when a given treatment or combination of treatments increases effective management of presenting symptoms, an initial improvement in symptoms may obviate further therapeutic follow up, and interfere with the patient's motivation to address more long-term issues.

A different challenge is how to operationalize evidence and its derived recommendations, and transfer guidelines into established practices. A growing body of evidence suggests that psychiatric medication outcomes are shaped significantly by psychological and social factors surrounding the prescribing process; however, there have also been consistent findings demonstrating a gap between evidence-based emphasis on the importance of the prescribing environment and actual prescribing practices among professionals who work in environments that tend to limit personal engagement of patient with professional (Grol & Grimshaw, 2002). While psychiatric training program directors purport to value highly the importance of psychosocial factors in the prescribing process (Mallo, Mintz, & Lewis, 2014), there is limited emphasis of these factors being incorporated into psychopharmacology training (McGrath & Muse, 2010; Muse & McGrath, 2010). Until a more comprehensive training model emerges in schools of medicine and/or psychology, it is our impression that most professional development in the area of integrated practices will occur postspecialization, largely through the continuing education pursuits of the most motivated practitioners. This leaves us with the feeling that a lot of lip service is given to evidence-based practice, while it is, perhaps, the unusual practitioner who actually does the homework necessary to be able to apply research findings to his or her trade.

Finally, we offer a field-wide look at the state of research in mental health treatment through our survey of the various psychiatric groupings. Table 1.3 summarizes the
Table 1.3 The state of research in evidence-based behavioral health treatments of major psychiatric diagnoses.

General observations across all diagnoses

- Research results are difficult to transfer directly to clinical practice due to the limitations found in many research studies. Specifically, research conditions are quite different from practice conditions, which begs the question of whether research results, due to their restrictive protocols, underestimate the effectiveness of treatment in a flexible, accommodating clinical setting.
- The selection of patients in randomized controlled trials (RCTs) is exclusionary, and does not necessarily represent the patient population served in clinical practice.
- Patients’ preference for a given treatment method is ignored in research employing randomized assignment. Patient preference, however, plays a large role in treatment outcomes, and may account for clinical improvements due to goodness of fit that is absent in research designs.
- Outcome data in research, such as rating scales, may miss the quality-of-life issues that motivate people to seek treatment.
- Many studies of medication impact utilize only one medication, and some do not allow for dose titration. In a few studies there is flexible dosing, and an occasional “second step” medication when a first medicine does not bring about symptom resolution, but the treatment options are still limited.
- There is a large variety of treatment approaches that in the research are often treated as equivalent. Many of these have not truly undergone head-to-head trials.
- CBT is a broad term that is used to describe therapies that may have little in common, but are often aggregated into meta-analyses without verification that the protocols are comparable.
- In both therapy and medication the majority of studies compare to a placebo. In the few studies that do compare medicines in a head-to-head trial, such comparisons are often limited to pairing a new drug with an older one. Research would ideally compare multiple psychosocial and pharmacologic treatments with other comparable therapies, rather than simply showing superiority over placebo.
- Research has lagged behind practice, where patients often choose their mode of therapy or elect for combined therapy. Much more research needs to be done involving combined therapy.
- Many studies that result in inconclusive or negative findings are not made public, creating an inflated sense of the effectiveness of treatments based only on positive, confirmatory studies.

Diagnosis-specific observations

- Psychoses: There is significant demographic variation based on the particular diagnostic criteria and research sampling methodology utilized in identifying schizophrenia. Findings are limited by the small size of the compared groups. Well-controlled investigations of the combination of psychotropic medication plus nonmedicine treatments versus medication or psychotherapy alone are limited because the use of add-on nonmedicine treatment has become the standard practice for most patients suffering from psychosis; therefore, there are many confounds that obscure the true effectiveness of each treatment, per se. Research contains several specific models for integrated clinic operations, but it has not advanced to the stage of reliably unpacking individual psychosocial components within those models.
- Major depressive disorder: Antidepressant medications in research are grouped based on category (i.e., selective serotonin reuptake inhibitor (SSRI), tricyclic, serotonin–norepinephrine reuptake inhibitor (SNRI), etc.). These medicines also often get aggregated in meta-analyses, ignoring potential differences. CBT studies limit therapy to a number of sessions far below the number generally employed in other therapies such as psychoanalysis, making head-to-head comparisons difficult.
Bipolar disorder: Traditionally, research into bipolar disorders focused mostly on controlling acute mood symptoms using physical interventions such as medication or electroconvulsive treatments, and only recently have psychosocial components come under investigation. The research into psychosocial interventions for bipolar depression, however, has mainly focused on its use as adjunctive treatment. Research has focused on medication adherence and very little emphasis has been directed toward behavioral adherence.

Dysthymia and adjustment disorders: There is little research on dysthymia, and even less on adjustment disorder with depressed mood. What little research is available has largely been done through drug studies, leaving little evidence as to the effectiveness of psychosocial treatment of chronic depression.

Anxiety disorders: More research on psychosocial approaches other than CBT is needed. Such research would ideally compare different psychosocial therapies, rather than simply show superiority over placebo. Much more research is needed with the child and adolescent population to show benefits and adverse reactions to pharmacotherapy in anxiety disorders.

Personality disorder: Structured interviews and self-report assessments are helpful in properly diagnosing borderline personality disorder (BPD), but they are rarely used outside of research settings. Although there is no Food and Drug Administration (FDA) approved medication for BPD, many patients seen in clinical trials for psychosocial interventions are on psychotropics, confounding the results obtained. Future research should begin to test models that integrate what are considered the best ideas from different programs, thereby drawing on some of the most fertile areas as we continue exploring better treatments.

Insomnia: More research is needed to make specific comparisons between different pharmacological interventions, comparing pharmacological interventions to CBT, and examining the efficacy of different sequences of treatment combinations. As benzodiazepines are used in the treatment of insomnia, more research is needed to evaluate the potential relationship between this class of medication use and dementia. More research on polypharmacy for insomnia and depression is needed in order to development specific guidelines regarding safe and effective combinations.

Chronic pain: Research to date has not entirely clarified the benefit/risk ratio of the intrathecal opioid drug pump. Medications for pain can be particularly risky for older adults, yet there is little research on alternatives. Future research should be directed at the identification of which components of CBT work for what type of patient and why. Furthermore, future research should include more direct comparisons of adverse outcomes associated with mainstream treatments vs. the relative safety of alternative medicine treatments.

Eating disorders: The preponderance of research is on anorexia nervosa, while bulimia has been relatively neglected.

Child and adolescent population: Much more research is needed with the child and adolescent population to show benefits and adverse reactions to pharmacotherapy. Few studies have examined the efficacy of pharmacotherapies on children with comorbidity of attention deficit hyperactivity disorder (ADHD) and aggression. Pharmacological research dedicated exclusively to the treatment of oppositional defiant disorder (ODD) is very limited.

Geriatric population: Very few studies have examined the efficacy of psychotherapy as a treatment for a formally diagnosed depressive syndrome in people with dementia. The FDA has not approved any medication to treat psychotic symptoms concomitant with dementia, making all medication use off-label.
quality of research discovered by the different teams that authored the individual chapters. While there are many limitations in the design and findings of past and present studies, the recent interest in research-based evidence in the selection of treatment modalities is, itself, an indication of practitioners’ desire to be guided by rational decision-making in providing recommendations to their patients. It is our hope that the behavioral sciences will continue to improve the research effort to reduce ambiguities among evidence, and to further clarify effective and efficacious treatment options.

Evidence-based practice of behavioral health intervention is wrought with caveats of inadequate research and insufficient guidelines for translating what evidence exists into clinical practice recommendations. Still, given that the emphasis on linking practice to research is essentially nascent at this time, the future is left to imagine. One of the inspiring trends is the blurring of traditional professional difference between “prescribers” and “therapists.” It is not difficult to imagine a future in which clinicians in the behavioral health field are educated in the biological foundations as well as the psychological and sociological foundations of mental illness and health. Such a generation of practitioners, integrated into the entire extant body of knowledge and eager to expand its limits, may better ask the right questions and find the correct answers on how to best bring science to bear on matters of mental/emotional suffering and wellbeing.

Note

1 Table 1.2 reviews the first-line practice recommendations for each major diagnosis and/or patient population. The individual chapters delve further into the details of each condition, and present in their respective summary tables not only first-line treatments, but suggested alternative treatments of merit to be considered when matching approach with the individual patient.

References


