

FROM ADDERALL TO ZOLOFT: WHAT EVERY ADMINISTRATOR NEEDS TO KNOW ABOUT MEDICATIONS FOR STUDENTS

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There is increasing recognition that some school behavioral or attention problems may be early symptoms of a psychiatric disorder such as ADHD (attention deficit hyperactivity disorder), depression, anxiety disorders, or other diagnoses. Such disorders are now recognized to have a high genetic heritability, to compromise brain functioning in predictable ways, and to require primarily psychopharmacologic treatment for successful outcomes (Pennington, 2002). The ability of school professionals to detect such disorders, initiate effective behavioral treatments and, at some point, support parents in effective referrals for psychopharmacologic medication becomes critical. In the field of psychopharmacology, there are several classifications of drugs that usually, but not invariably, correspond to the major types of psychiatric disorder (Forness, Walker & Kavale, 2003). These will each be discussed below, along with a section on their efficacy and guidelines for their use in school-age children and adolescents.

ADHD

Children with ADHD are usually diagnosed when their inattention, hyperactivity or impulsivity become so excessive that their social or academic performance becomes significantly impaired. The prevalence of ADHD is about 5% of children and adolescents. When symptoms of ADHD do not respond adequately to standard behavioral interventions, *psychostimulants* become the treatment of choice. Ritalin and Dexedrine are common forms of this medication. They are relatively quick acting, showing a therapeutic effect well within the first hour but last

only a few hours, so they have to be given 2 or 3 times daily. Extended-release versions of these drugs are now becoming available along with newer stimulants such as Adderall, Focalin or Vyvanse that last most of the day or even into early evening.

Prescribing physicians are also beginning to use standardized treatment algorithms to guide their choice and titration of these drugs (Konopasek & Forness, 2004). Titration is a process whereby the prescribing physician begins with a relatively low dose and, based on feedback from teachers and parents, adjusts the dose upwards or downwards based not only on therapeutic effects but also on presence or absence of side effects. Adverse side effects mainly involve loss of appetite, insomnia, stomachache, or headache; but these may often disappear with careful titration. If the first-line drug cannot be effectively titrated (because of lack of therapeutic effects or persisting side effects), another stimulant is tried. After unsuccessfully trying two or more stimulants, the physician may switch to a second-line medication such as Strattera, a *selective norepinephrine reuptake inhibitor* (SNRI), or a third line medication such as an atypical antidepressant (see below).

Article I. Depression or Mood Disorders

Children with depression are usually diagnosed when they become pervasively impaired with such symptoms as depressed or irritable mood, loss of interest or pleasure in most activities, problems in sleep or appetite, loss of energy, diminished concentration, or hopelessness.

Dysthymia is a variant of depression in which such symptoms are somewhat less intense or pervasive but still disabling. The prevalence of depression or dysthymia is around 2% in children but increases to 6% or greater in adolescents. Cognitive behavioral therapy is the prime evidence-based treatment. The therapist teaches the child or adolescent how to reframe his or her thinking and thus improve skills in monitoring and controlling symptoms. It is time-limited, with

usually 12 to 15 sessions, but requires the therapist to have very specialized training to be effective.

The first-line antidepressant medications are *selective serotonin reuptake inhibitors* (SSRIs) such as Prozac, Zoloft, Celexa or Luvox. If two or more of these are not found effective, second line drugs such as Effexor or Wellbutrin are used. These are *atypical antidepressants*. Both types of antidepressants are difficult to titrate, and the algorithms are more complex. Each of the antidepressants may take up to 3 to 4 weeks to show an initial effect on depressed or irritable mood although, within the first few days, they may favorably impact sleeping, eating or other physical symptoms. Their side effects (such as headaches, stomachaches, agitation, or dizziness) may also be difficult to overcome in children and adolescents.

Children with bipolar disorder have symptoms of depression, but these alternate with episodes of manic or elevated mood accompanied by decreased need for sleep, excessive talkativeness, expansive energy or the like. Prevalence is less than one percent. There are few good behavioral treatments other than educating children and parents about the course of the disorder and the need for compliance with medication. First-line medications are *mood stabilizers* such as lithium and Depakote. Side effects are nausea, drowsiness, and slight tremors with lithium. *Atypical neuroleptics* (see below) are sometimes used as second-line drugs in the bipolar treatment algorithm.

Section 1.01 Anxiety Disorders

Children may be diagnosed with several types of anxiety disorders including generalized anxiety disorder (GAD), separation anxiety disorder (SAD), obsessive-compulsive disorder (OCD), or post-traumatic stress disorder (PTSD). Prevalence of anxiety disorders in children and adolescents is 13%, higher than any other class of psychiatric disorder. As with depression,

cognitive behavioral therapy is the prime evidence-based practice, with a focus on helping the child monitor and control anxiety responses specific to the particular diagnosis. First-line medications are the *SSRIs* (described above for depression). Second-line medications are the *anxiolytics* or anxiety-breaking drugs such as Ativan, Klonopin, or Buspar. These are short-acting and have relatively few side effects other than sedation, but long-term use may lead to drug tolerance and need for higher doses.

Section 1.02 *Schizophrenia and Other Considerations*

Children with schizophrenia or other psychotic disorders have severe symptoms such as delusions, hallucinations, withdrawal, and grossly disorganized speech or behavioral patterns. Prevalence is considerably less than one percent. Psychosocial therapy includes family support, social skills, and a low-stress, structured environment. Medications are the newer or *atypical neuroleptic* drugs such as Risperdal, Zyprexa, Abilify, or Seroquel. Older antipsychotics such as Haldol or Thorazine are sometimes used as second line medications for treatment-resistant cases. Side effects can include significant weight gain, sedation, and possible abnormal muscle movements.

There are other psychiatric diagnoses such as Tourettes Disorder that includes severe verbal or motor tics. Medications include *antihypertensives* such as Clonidine or Tenex. These drugs are also used as second or third-line drugs for ADHD or anxiety disorders as well. The neuroleptics, described above, are likewise also used as third-line drugs for treatment-resistant depression or bipolar disorder, as well as first-line drugs for children with autism or Aspergers who have severe aggression or related symptoms. Comorbidity (co-occurrence of two or more psychiatric disorders in the same individual) often leads, quite appropriately, to *polypharmacy*,

using more than one medication in systematic ways to control a complex combination of various disorders in a single use.

Article II. Evidence-based Treatment

The standard for evidence-based treatment in psychiatry and related fields has now become randomized clinical trials (Forness, 2005). The most compelling trials are those that compare drugs with existing treatments or interventions. While there are several, well designed studies of behavioral or cognitive behavioral therapies and of psychopharmacological treatments, only recently have randomized trials been conducted in which behavioral or cognitive behavioral interventions and medications been compared *directly* with one another. There are fewer than a dozen such studies, and these have been recently summarized (Forness, Freeman & Paparella, 2006).

One study, the Multimodal Treatment of ADHD (MTA) study, involved a very intensive, behavioral intervention that included teacher and parent training, home-school behavioral programs, extra part-time classroom aides, and an intensive behavioral summer camp. This intervention was compared with carefully titrated stimulant medication. Each was also compared with both treatments combined and with a community control group. Treatment occurred over a 14-month period across 6 sites with 576 children. Results favored the *combined* treatment but also favored medication treatment over the very expensive behavioral intervention. Follow-ups 10 months later and 2 years later tended to support medication treatment, but findings were compromised somewhat since many parents in the behavioral group sought out medication at their own expense after the initial 14-month intervention phase ended. Other studies on ADHD also demonstrated that adding a four-hour weekly program of tutoring, therapy, social skills, and

parent training did not add *additional* benefit to careful stimulant medication treatment but that adding stimulant treatment to an intensive behavioral intervention *did* add significant benefit.

Studies of depression and anxiety disorders in children and adolescents directly compared cognitive behavioral therapies with SSRI medications, both alone and in combination, along with a placebo group. The Treatment of Adolescent Depression Study (TADS) and the Pediatric OCD Treatment Study (POTS) were both large studies across several sites and lasted for 12 weeks each. The TADS trial demonstrated not only that combined treatment was best but also that medication alone was significantly better than cognitive behavioral therapy alone. The POTS trial demonstrated that combined treatment was best but that medication alone or cognitive behavioral therapy alone did not differ significantly from one another. On balance, these multisite randomized clinical trials for ADHD, depression, and anxiety suggested that combined behavioral and medication treatments generally produced the best outcomes but that medication alone had some advantage over behavioral or cognitive behavioral interventions alone.

Article III. School Guidelines

The findings that *combined* treatments are best practice and that medication treatments seem critical to successful outcomes underline the role of school professionals (Wilens, 2004). In order to ensure that medication will be used effectively, schools must consider their role in each of the major steps of psychopharmacologic treatment. *First* is the referral. After behavioral supports have been put in place, school professionals must be prepared to initiate referrals for those children who are not responding in predictable ways. Screening for possible psychiatric diagnoses may assist parents in determining if the referral should go to a board certified child psychiatrist, for severe or complex disorders, or may only require referral to a pediatrician or family practitioner. Teacher or parent rating scales designed to produce provisional psychiatric

diagnoses for children may help in this effort (Gadow & Sprafkin, 2002). *Second*, school professionals must help prepare the child and family for the fact that titration and treatment algorithms may of necessity dictate a potentially long and involved process. Extended family cooperation and persistence are integral to finding the right psychopharmacologic medication and the correct dose. *Third*, school professionals must collaborate with prescribing physicians and provide systematic feedback (using behavioral rating scales, side-effect ratings, or other measures) on the child's or adolescent's functioning during titration and periodically thereafter. *Fourth*, schools should develop procedures for emergencies (acute or dangerous adverse events, the child's forgetting to take his or her medication, and the like) and for long-term monitoring of medication effectiveness.

It should be noted here that, under IDEA, schools could potentially be held liable for costs of psychopharmacologic services if they are not judicious in their phrasing of the recommendation to refer. School professionals can generally avoid such liability by stressing that they have provided all appropriate behavioral interventions, as required and legally permissible under IDEA, to effect the child's social and academic progress. They can then add that there *may* be additional problems occurring at home or other settings that might be responsive to psychopharmacologic treatment and that they would be happy to assist in referral sources and collaboration. Such a statement about unaddressed problems is almost invariably likely to be true given the pervasive nature of such disorders (Pennington, 2002).

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