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Expert Interview

A Rational Approach to Diagnosis and Treatment of Attention-Deficit/Hyperactivity Disorder (ADHD) in Adolescents and Adults: An Expert Interview With David W. Goodman, MD

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Editor's Note:
How prevalent is attention-deficit/hyperactivity disorder (ADHD)? How can you recognize it and provide evidence-based treatment for teens and adults? During the recent American Psychiatric Association (APA) Annual Meeting in Atlanta, Georgia, Randall F. White, MD, interviewed David W. Goodman, MD, Assistant Professor, Johns Hopkins University School of Medicine, Department of Psychiatry and Behavioral Sciences, Baltimore, Maryland and Director, Adult Attention Deficit Disorder Center of Maryland, on behalf of Medscape.

Medscape: What is the prevalence of ADHD in adults?

David W. Goodman, MD: The prevalence of ADHD in adults in the United States is approximately 4%. If you have 280 million people in the United States, that translates into about 8 or 9 million adults with ADHD, of whom less than 1 million have been diagnosed and treated.

Medscape: Does any aspect of ADHD in childhood or adolescence predict continued impairment in adulthood?

Dr. Goodman: Yes, we believe that about 50% of children will continue to have persistent symptoms in adulthood. There are 3 factors to consider in that prediction. The first is a genetic factor. If 1 of the 2 parents has ADHD, and the child has ADHD, the likelihood is that the child will continue to have ADHD. If the parent with ADHD grew out of it and their child now has ADHD, the likelihood is that the child too will grow out of it.

Another factor is psychosocial adversity; that is, the more chaotic and tumultuous the child's environment, the more likely the persistence of ADHD into adulthood. And the third is psychiatric comorbidity, so the more psychiatric conditions that coexist with ADHD in childhood, the more likely the ADHD will persist into adulthood.

Medscape: What are the major comorbidities and adverse outcomes of adult ADHD?

Dr. Goodman: For late adolescents and adults, the comorbidities can be bipolar disorder, major depression, and anxiety disorders including generalized anxiety disorder (GAD), panic disorder, and obsessive-compulsive disorder (OCD). Probably the most common is substance and alcohol abuse. About 50% of ADHD adults will have or have had a history of substance or alcohol abuse.

As children grow into late adolescence and young adulthood with persistent ADHD symptoms, we know that there's a much higher risk for driving accidents and unwanted pregnancy. They're less likely to finish high school, they're less likely to finish college if they get in. As they get into adulthood, they're more likely to have more jobs over the course of 10 years, they're more likely to be divorced, and they're more likely to declare bankruptcy.

So you can see that the progression of ADHD and its life impairments change as the age of the patient changes. In childhood we focus on academic and social outcomes. In adolescence, we're looking at substance abuse and pregnancy, impulsive criminal behavior, and driving outcomes. In the adult, we look at unstable employment history, financial difficulties, and disrupted if not terminated marriages.

Medscape: Is a particular substance of abuse associated with ADHD in adults?

Dr. Goodman: No. People had thought that individuals with ADHD would choose one over the other, but that is not clear at all. The patients can abuse alcohol, marijuana, cigarettes, and more dangerous drugs like narcotics, heroin, and cocaine. But there's no drug of choice.

Medscape: Are there any useful instruments or clinical scales for assessing adults with ADHD?

Dr. Goodman: The focus has been on the childhood presentation. The ADHD Rating Scale, which is the *Diagnostic and Statistical Manual of Mental Disorders* , Fourth Edition (DSM-IV) 18-item scale, each item scored 0 to 3, has been a standard research tool for screening and documenting the severity of symptoms for ADHD. That ADHD scale has been modified to an adult ADHD self-report scale [Adult Self-Report Scale],[1] and that probably is a scale that should be much more incorporated into clinical practice because it translates the childhood symptoms into adult symptoms. When adults read the symptoms, they can better identify their experience and impairments.

Having said that, there are a number of scales for adults. There are a Conners adult scale [Conners' Adult ADHD Rating Scale] and a Brown adult scale [Brown ADD Scale].[1] All of these scales have slightly different approaches yet serve the same purpose. The scales in and of themselves are not diagnostic; they complement the clinical interview, and ultimately the diagnosis of ADHD is predicated on the presenting symptoms; the historical, longitudinal course of those symptoms in the sense that they are chronic, pervasive, and unchanging; and a family psychiatric history looking for other people with ADHD. And then the last element is the level of impairment these symptoms cause the person during the course of the day.

We like to add at our center an outside informant. Even for adults, we will send a symptom checklist to a parent who can then rate the patient as they were as a child. That gives us an outside informant to document the historical reality of those childhood symptoms. If the parents aren't available, for adults we may use a sibling or a spouse who has known the patient over a long period of time.

One of the difficulties with rating scales for adults with ADHD is that many patients tend to underrate their symptoms; that is, because they have no basis for comparison, they don't know how other people function. The clinician can actually be misguided if the patient underreports their symptoms, and the clinician will be left with, "Well, this is really not very impairing and not terribly impressive, and I guess you don't have ADHD." When you bring in the spouse or the sibling who rates the symptoms as much more impairing and significant, then it adds a whole new dimension and probably increases the specificity of making the diagnosis.

Medscape: What is the evidence of efficacy of medication for treating adult ADHD?

Dr. Goodman: There are 17 studies looking at amphetamine- and methylphenidate-based medication in adults with ADHD. Sixteen of the 17 studies are positive, and 14 of those studies are double-blind, controlled trials.[2] Clearly, the amphetamine- and methylphenidate-based treatments have demonstrated efficacy for adulthood ADHD in the same fashion as demonstrated in children and adolescents. Across the age range for this disorder, it seems to respond equally well to these same medications. Of the stimulant medications, MAS-XR (mixed salts of a single-entity amphetamine product) is the only one currently with a US Food and Drug Administration (FDA) indication for adults.

In the nonstimulant category, you have double-blind, controlled studies with atomoxetine, bupropion, and desipramine. Atomoxetine is the only nonstimulant approved by the FDA for adults with ADHD, and of those 3 agents, you have a total of 7 positive studies for adults.[2]

Atomoxetine has the largest pooled data of the nonstimulants. Methylphenidate has the largest total number of adult ADHD subjects studied, although methylphenidate in any preparation is not yet approved by the FDA for adults.

Medscape: Can you describe a rational approach to choosing a treatment for a given patient?

Dr. Goodman: The rational approach to treatment is based on the accuracy of the diagnosis, and I can't stress that enough. It's critical that an adequate amount of time be spent to do a comprehensive evaluation. In addition to assessing ADHD, one needs to interview for coexisting psychiatric conditions: major depression, bipolar disorder, OCD, panic disorder, GAD, and substance abuse. The comorbidity that tends not to show up in ADHD individuals is eating disorders, for reasons that we don't quite understand.

Once you come up with the ADHD diagnosis and any concurrent conditions, then you have to establish a diagnostic prioritization. Currently, the prioritization is acute alcohol and substance use first, because a lot of the cognitive difficulties you might ascribe to ADHD may actually be an outgrowth of that. The next conditions you want to treat if concurrent are bipolar disorder and major depression, because again the cognitive impact of these disorders tends to contaminate your assessment of cognitive impairment from ADHD. The third set is the anxiety-spectrum disorders.

If the person has a history of a psychiatric condition in the past that's not acutely relevant, that does not need to be a consideration -- except bipolar disorder, because we know that bipolar patients can be quiescent. The addition of stimulant medication may provoke a hypomanic or manic episode.

Once you have a diagnostic prioritization, then you can create a pharmacologic algorithm. The object is to treat one condition without worsening any of the coexisting conditions.

I tend to start with the agent that is proven most effective and most reliable. I use the long-acting stimulant medications for a number of reasons. One is that, especially in late adolescents and adults, I would prefer them to take the medication once a day to get the longest effect. There are clinicians who believe that adults can take their stimulant medication when they feel they want to.

Here is the difficulty with that approach: Many ADHD adolescents and adults fail to understand when they are impaired. For example, they may take their short-acting stimulant for task performance, but they don't consider taking medication before they get behind the wheel of a car. We know that adolescents and young adults with ADHD have significant impairment in driving when not medicated.[3] So if they take a long-acting stimulant in the morning, not only are their symptoms controlled during the course of the day but also into the early evening when they may be behind the wheel of a car. It's preferable to use long acting medication for that reason, and as well, it increases compliance.

Some patients can't tolerate stimulant medications, and then you move on to the nonstimulant medications starting with atomoxetine. Then perhaps you use some of the other agents that are not approved [by the FDA] but have been shown to be effective and safe.

Beyond medication, cognitive-behavioral therapy has been shown to be effective with medication, more helpful than medication alone. Really, there isn't a lot of good research on specific psychotherapies in adults with ADHD. In our center, we use organizational techniques: getting people to understand the benefit of auditory and visual cues, organizing a household so it better works for the ADHD person and reduces the frustration of the non-ADHD spouse.

We also work with the spouse or family members to help them understand what this is and what it isn't, because the non-ADHD people in the person's life tend to misinterpret the motives behind the person -- they say, "[The patient] is lazy, not motivated, or just is doing it to annoy me." You need to correct some of those misconceptions.

Medscape: Do adults tolerate the medications any differently from children?

Dr. Goodman: Adolescents and adults tolerate the medications relatively well. The appetite suppression is not so much of an issue in adults, who may actually want to lose a few pounds. That effect tends to diminish over the course of months, which is why stimulant medication fell out of favor as a diet agent because you lose that anorectic effect and have to increase the medication. That's in contrast to ADHD individuals who will maintain a dose over a long period of time without developing tolerance.

Medscape: How do the clinician and patient determine the appropriate duration of therapy?

Dr. Goodman: ADHD is a chronic and lifelong disorder. With that in mind, I turn to the patient who says, "Do I need to be on this medicine for the rest of my life?" and say: "It's a quality-of-life issue. Would you choose to have the quality of life on the medicine or the quality of life off the medicine, because your disorder is not going away?"

Medscape: What age is your most elderly patient on stimulant medication?

Dr. Goodman: Seventy-four. We treat patients from the age of 15 and up, and I think the oldest diagnosis I made was 68.

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References

1. Adler LA, Cohen J. Screening adults for attention-deficit/hyperactivity disorder (ADHD). Medscape Psychiatry and Mental Health, June 2003. Available at: http://www.medscape.com/viewarticle/457518_3. Accessed May 27, 2005.
2. Biederman J, Spencer TJ. Psychopharmacology of adults with attention-deficit/hyperactivity disorder. Primary Psychiatry. 2004;11:57-62.
3. Cox DJ, Merkel RL, Penberthy JK, Kovatchev B, Hankin CS. Impact of methylphenidate delivery profiles on driving performance of adolescents with attention-deficit/hyperactivity disorder: a pilot study. J Am Acad Child Adolesc Psychiatry. 2004;43:269-275. Abstract

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