

## Treatment in Psychiatry

*Treatment in Psychiatry begins with a hypothetical case illustrating a problem in current clinical practice. The authors review current data on prevalence, diagnosis, pathophysiology, and treatment. The article concludes with the authors' treatment recommendations for cases like the one presented.*

# Assessment and Treatment of Correctional Inmates With ADHD

**Kenneth L. Appelbaum, M.D.**

Mr. A is a 32-year-old inmate in a medium-security prison who is being treated by the facility psychiatrist for recently diagnosed attention deficit hyperactivity disorder (ADHD). His school records are not available, but Mr. A's parents report that they always struggled to get him to do his homework and that he had academic difficulties from the third or fourth grade. They recall his teachers reporting that he easily became bored in class, often fidgeted, could not sit still, had problems focusing on schoolwork, and generally did not perform up to his potential. He did not complete high school. While in prison, he enrolled in GED courses, and the instructors confirm that despite his apparent motivation, he still has difficulty concentrating, organizing his work, and finishing projects. He also has a job in the prison kitchen, and his supervisor reports that Mr. A often forgets to complete assigned tasks and makes mistakes with tasks that involve multiple steps. He has received a warning that he could lose his job if his performance does not improve. Officers on his cellblock report that he seems restless during times of high activity or noise on the unit. Mr. A never had a clinical assessment for his problems prior to his incarceration. Not long after his arrival, the prison psychologist administered an ADHD symptom questionnaire and tested for problems with attention. Interview and test results were consistent with a diagnosis of ADHD. The prison psychiatrist prescribed a 2-month course of 400 mg/day of bupropion, which brought no noticeable improvement. Mr. A has also enrolled in an ADHD educational group at the prison that includes a focus on organizational skills and impulse control.

Mr. B is a 29-year-old inmate in a maximum-security prison who presents with the complaint "I need something to help me concentrate and keep me out of trouble." He reports that he was always a "lousy student" and is a high school dropout. He also states that he was diagnosed with ADHD as a child and took methylphenidate prior to incarceration. He complains that it now takes him a long time to read a book or to complete a letter, and he has received several disciplinary reports for fighting, for disobeying correctional officers, and for positive urine drug screens for benzodiazepines and opiates. He endorses multiple ADHD symptoms on a self-report checklist. Since his incarceration, he has not tried to enroll in educational, work, or other prison programming because he believes that he would not be able to focus on any of these tasks. Mr. B will not consent to contact with his family or sign a release for past treatment records and states that "none of that matters" to what he needs now. He refuses additional psychological testing, and he believes that group treatment is "just a lot of talk and a waste of time." He knows that other inmates receive stimulant medications for their ADHD, and he has no interest in trying any medication other than a stimulant.

What problems can arise with the availability of controlled substances in a correctional setting? Is it ever appropriate to prescribe stimulants to inmates, and if so, what factors might guide correctional psychiatrists in making treatment decisions? Are either of these patients appropriate candidates for stimulants?

### Prevalence of ADHD Among Inmates

ADHD begins in childhood, and for many individuals the condition continues into adulthood (1–6). Community estimates of prevalence during childhood range from 4% to 12% in the United States (7) and are comparable in other countries (8). Some 10%–60% of affected children

This article is featured in this month's AJP **Audio**.

will continue to have ADHD symptoms as adults (1), and the prevalence of the disorder is about 4% for all adults (5, 6). Although the presentation can differ as a person ages, many of the associated impairments persist.

The reported prevalence of ADHD among prisoners ranges from 9% to 45% (9–16). The literature has several methodological problems, however. Studies often rely on limited sources of information, retrospective reviews of symptoms, community-based screening tools, or small and nonrepresentative inmate samples. All of these factors can result in overestimation of the prevalence of functionally significant ADHD symptoms in correctional settings. Nevertheless, the observed increased risk of adult antisocial personality for children with ADHD suggests that the disorder would be overrepresented in correctional settings (17).

### **Contextual Concerns**

Despite the likelihood of an increased prevalence of ADHD among inmates, the prescription of controlled substances in jails and prisons opens a Pandora's box of potential woes for the correctional psychiatrist. Inmates typically have limited access to items of value, and stimulant medications can become a source of both profit and abuse. Twelve percent of state prisoners report having used stimulants during the month prior to their offense, which provides some indication of the potential size of the market for these drugs (18). Easy access to the diagnostic criteria used by prescribers, along with coaching by cohorts, can result in sophisticated attempts at malingering. If word gets out that the psychiatrist is an easy mark, the floodgates may open. Referrals and schedules can swell with drug abusers and entrepreneurs seeking access to highly desired medications. Differentiating truly impaired patients from those seeking medications for recreational use or profit can take up substantial clinical time with no guarantee of success. Some clinical encounters may feel adversarial as psychiatrists doubt the veracity of the patient's presentation and resent being pulled away from time spent with legitimate patients. Patients screened out from treatment might also show resentment. There are few secrets in a crowded and closed institutional society, and inmates typically know who is on medications and why they have received them. Inmates may become antagonistic when they are denied prescriptions despite having presenting complaints that are similar or even identical to those of associates who did receive medication. They might file grievances, board complaints, or lawsuits against the psychiatrist. Although these actions may have little merit or likelihood of success, they nevertheless harass and distress the provider.

Problems occur even when psychiatrists prescribe stimulants for appropriate patients. Legitimate patients may

be pressured into turning over their medications to more predatory inmates. Despite monitoring of medication administration by nursing and correctional staff, opportunities for medication diversion persist. Some individuals become quite skilled at passing cursory mouth checks while checking their drugs. Others may swallow and then regurgitate medications, retrieving undissolved pills for sale or later use. Even in the absence of medication diversion or misuse, the handling of controlled substances places significant demands on nursing staff as a result of special procedures for storage, monitoring, and documentation.

One might understandably wonder why stimulants would ever be used in a prison setting. In fact, many experienced and thoughtful correctional practitioners strongly discourage their use, and the professional literature includes calls for caution (19). Nevertheless, ADHD does occur among inmates, and it does cause impairment and distress. A complete prohibition of stimulants would leave many of those inmates without effective treatment. The resulting dysfunction can have its own disruptive effect within the prison. Appropriate treatment of carefully screened inmates can benefit both the patient and the facility (20). In addition, at least some of the problems associated with prescribing stimulants to inmates can be mitigated by the development of guidelines that promote consistency in diagnosis and include supervisory review prior to treatment (21).

### **Evaluation**

Current diagnostic criteria for ADHD require the presence of hyperactive-impulsive or inattentive symptoms that cause impairment before the age of seven. Some children, however, have minimal, if any, impairment before age seven, and adults who did not present for treatment during childhood may have difficulty recalling symptoms or providing documentation of early impairment. Several commentators have acknowledged these limitations, leading some to call for a loosening of the age criterion to age 12 or older (22–27). A prudent correctional psychiatrist will require a diligent effort by the inmate to provide some corroborating information of prepubescent impairment. Because an inmate might not have a treatment history, corroboration can include school records, recollections by family members, or other third-party reports. Despite the limited accuracy of self-reports by adults of childhood ADHD symptoms, the validity of retrospective diagnosis may be enhanced by third-party information, as well as by the fact that incarcerated persons are in a population that is expected to have a higher prevalence of the disorder (28).

When assessing an inmate for ADHD, current functioning is the most critical component of the evaluation. Although childhood history and adult symptoms in the

community have relevance, only significant current impairment warrants the use of controlled substances in a jail or prison setting. Difficulty with recreational activities, such as leisure reading, rarely justifies the risks associated with stimulant treatment. Symptoms that impair participation in programming, educational activities, and work assignments would have greater relevance. Untreated ADHD can also lead to impulsive behaviors that may result in disciplinary infractions by the inmate, but there are dangers in relying solely on such behaviors to indicate current functional impairment. Knowledge of treatment criteria can spread quickly within closed correctional communities, where little remains secret. If disruptive behavior by itself is known to meet the threshold for current functional impairment, some inmates might create disturbances in an attempt to gain access to medications. Psychiatrists can minimize this risk by focusing primarily on difficulties with engagement in productive activities. Third-party information can provide helpful confirmation of functional impairments. Observations by work supervisors, teachers, programming staff, and health care providers help in verifying self-reported difficulties. Security officers play an especially important role because of their close and prolonged contact with inmates, and skillful correctional psychiatrists make use of their input (29).

Several self-report and observer rating scales are available for the assessment of ADHD. By themselves, they do not provide sufficient information to make the diagnosis, but they can help in that process as well as in monitoring treatment response (30). Neuropsychological testing does not have a central role in diagnosing ADHD, but it too can be a helpful adjunct in determining whether a patient has difficulties with cognition, attention, learning, and executive functioning (2, 31).

## Treatment

Medications, especially stimulants, are the mainstay of treatment for ADHD. In the correctional setting, however, problems associated with use of controlled substances shift the risk-benefit analysis. Several categories of nonstimulant medications are available, and there are compelling reasons to use them as first-line agents for this population despite their other limitations. Although atomoxetine is the only nonstimulant medication approved by the U.S. Food and Drug Administration for the treatment of ADHD, clinical studies have shown varying degrees of efficacy for other agents, especially bupropion, the tricyclic antidepressants, and, to a lesser extent, venlafaxine (4, 31). Psychiatrists can reasonably reserve stimulants for inmate patients who have failed an adequate trial of one or more nonstimulant medications or who have a contraindication to such trials. With the evaluation and treatment approach described in this article, in the author's experience, less than 1% of all prison inmates will require stimulant medications.

When stimulants are needed in the treatment of ADHD, immediate-release medications may have general benefits compared with longer-acting formulations (32), and

they have specific advantages for use with incarcerated patients. Sustained-release preparations can more easily be checked and even swallowed and regurgitated for diversion and sale or for later misuse. In contrast, nursing staff can crush immediate-release medications, which significantly lessens the risk of diversion. When possible, dosing of the shorter-acting agents should be timed to coincide only with activities that require enhanced attention and functioning.

Evidence of misuse, abuse, or diversion of the medication or of other substances should prompt immediate discontinuation of prescribed stimulants. In the absence of coercion, an inmate who diverts medication demonstrates a lack of commitment to treatment. Similarly, misuse or abuse of any substance raises concerns about appropriateness of treatment. Continuing to prescribe controlled substances for such inmates can seriously undermine the credibility of psychiatrists within the institution. Psychiatrists can caution inmates about these potential consequences at the start of treatment to avoid any later misunderstandings.

In addition to medications, treatment options for ADHD in correctional settings, as in community settings, may include nonpharmacologic interventions (33, 34). Education about the disorder can help ease frustration, enhance self-esteem, and teach organizational skills. Group therapy with other inmates who have ADHD can have similar benefits. A willingness to participate in these activities provides an indication of the inmate's investment in treatment. In contrast, the absence of a meaningful commitment of time and energy should call into question the inmate's degree of distress and need for medications and possibly the diagnosis itself.

## Summary and Recommendations

Mr. A and Mr. B present contrasting pictures of the appropriateness of stimulant treatment for inmates with ADHD. Although Mr. A reports no history of ADHD diagnosis or treatment, his parents recall childhood symptoms before age 12 that are consistent with the diagnosis. Mr. B, in contrast, reports a history of ADHD and stimulant treatment but refuses to release past records or consent to family contact that could confirm his self-reported history. Mr. B also will not cooperate with testing or treatment modalities other than stimulant medications. The most significant consideration regarding Mr. B, however, is his lack of involvement in prison programming, educational opportunities, work assignments, or other significant activities that might justify use of stimulant medications to aid functioning. Even with confirmation of his self-reported past history and cooperation with other recommendations, his reports of difficulties with leisure activities and his disruptive behaviors, by themselves, would not override the contraindications to treatment in this setting. In the absence of impairments in more meaningful current activities, there is little reason to pursue further workup or nonstimulant treatments for Mr. B.

**Mr. A, in contrast, has participated in the evaluation and in other treatment interventions. Most important, reliable third parties confirm the presence of ADHD symptoms causing difficulty with Mr. A's ongoing involvement in educational and work activities despite his apparent motivation. These findings, along with his lack of response to an adequate trial of a nonstimulant medication, all support the use of stimulants. The absence of a childhood diagnosis of ADHD or of reported symptoms prior to age seven do not change this conclusion.**

Received June 6, 2008; revision received July 17, 2008; accepted July 18, 2008 (doi: 10.1176/appi.ajp.2008.08060849). From the Center for Health Policy and Research, University of Massachusetts Medical School, Shrewsbury, Mass. Address correspondence and reprint requests to Dr. Appelbaum, Center for Health Policy and Research, 13E779, University of Massachusetts Medical School, 333 South St., Shrewsbury, MA 01545-2732; kenneth.appelbaum@umassmed.edu (e-mail).

The author reports no competing interests.

## References

- Spencer T, Biederman J, Wilens TE, Faraone SV: Adults with attention-deficit/hyperactivity disorder: a controversial diagnosis. *J Clin Psychiatry* 1998; 59(suppl 7):59-68
- Faraone SV, Biederman J, Spencer T, Wilens T, Seidman LJ, Mick E, Doyle AE: Attention-deficit/hyperactivity disorder in adults: an overview. *Biol Psychiatry* 2000; 48:9-20
- Wilens TE, Faraone SV, Biederman J: Attention-deficit/hyperactivity disorder in adults. *JAMA* 2004; 292:619-623
- Wilens TE, Dodson W: A clinical perspective of attention-deficit/hyperactivity disorder into adulthood. *J Clin Psychiatry* 2004; 65:1301-1313
- Kessler RC, Adler L, Barkley R, Biederman J, Conners CK, Demler O, Faraone SV, Greenhill LL, Howes MJ, Seznik K, Spencer T, Ustun TB, Walters EE, Zaslavsky AM: The prevalence and correlates of adult ADHD in the United States: results from the National Comorbidity Survey Replication. *Am J Psychiatry* 2006; 163:716-723
- Fayyad J, De Graaf R, Kessler R, Alonso J, Angermeyer M, Demetselaere K, De Girolami G, Haro JM, Karam EG, Lara C, Lepine JP, Ormel J, Posada-Villa J, Zaslavsky AM, Jin R: Cross-national prevalence and correlates of adult attention-deficit hyperactivity disorder. *Br J Psychiatry* 2007; 190:402-409
- American Academy of Pediatrics, Committee on Quality Improvement and Subcommittee on Attention-Deficit/Hyperactivity Disorder: Diagnosis and evaluation of the child with attention-deficit/hyperactivity disorder. *Pediatrics* 2000; 105: 1158-1170
- Farone SV, Sergeant J, Gillberg C, Biederman J: The worldwide prevalence of ADHD: is it an American condition? *World Psychiatry* 2003; 2:104-113
- Dalteg A, Gustafsson P, Levander S: [Hyperactivity syndrome is common among prisoners: ADHD not only a pediatric psychiatric disorder]. *Lakartidningen* 1998; 95(26-27):3078-3080 (Swedish)
- Eystone LL, Howell RJ: An epidemiological study of attention-deficit hyperactivity disorder and major depression in a male prison population. *Bull Am Acad Psychiatry Law* 1994; 22:181-193
- Curran S, Fitzgerald M: Attention deficit hyperactivity disorder in the prison population (letter). *Am J Psychiatry* 1999; 156: 1664-1665
- Rasmussen K, Almvik R, Levander S: Attention deficit hyperactivity disorder, reading disability, and personality disorders in a prison population. *J Am Acad Psychiatry Law* 2001; 29:186-193
- Lindgren M, Jensen J, Dalteg A, Meurling AW, Ingvar DH, Sten L: Dyslexia and AD/HD among Swedish prison inmates. *Journal of Scandinavian Studies in Criminology and Crime Prevention* 2002; 3:84-95
- Ziegler E, Blocher D, Gross J, Rosler M: [Assessment of attention deficit hyperactivity disorder (ADHD) in prison inmates]. *Recht und Psychiatrie* 2003; 21:17-21 (German)
- Rosler M, Reit W, Retz-Junginger P, Hengesch G, Schneider M, Supprian T, Schwitzgebel P, Pinhard K, Dovi-Akue N, Wender P, Thome J: Prevalence of attention deficit-/hyperactivity disorder (ADHD) and comorbid disorders in young male prison inmates. *Eur Arch Psychiatry Clin Neurosci* 2004; 254:365-371
- Daderman AM, Lindgren M, Lidberg L: The prevalence of dyslexia and AD/HD in a sample of forensic psychiatric rapists. *Nord J Psychiatry* 2004; 58:371-381
- Mannuzza S, Klein RG, Bessler A, Malloy P, LaPadula M: Adult psychiatric status of hyperactive boys grown up. *Am J Psychiatry* 1998; 155:493-498
- Mumola CJ, Karberg JC: Drug use and dependence, state and federal prisoners, 2004. *Bureau of Justice Statistics Special Report*, NCI 213530. Washington, DC, US Department of Justice, 2006. www.ojp.gov/bjs/pub/pdf/dudsfp04.pdf
- Burns KA: Psychopharmacology in correctional settings, in *Handbook of Correctional Mental Health*. Edited by Scott CL, Gerbasi JB. Washington, DC, American Psychiatric Publishing, Inc, 2005, pp 89-108
- McCallion D: Diagnosing and treating ADHD in a men's prison, in *The Science, Treatment, and Prevention of Antisocial Behaviors: Application to the Criminal Justice System*. Edited by Fishbein DH. Kingston, NJ, Civic Research Institute, 2000, chap 17
- Appelbaum KL: ADHD in prison: a treatment protocol. *J Am Acad Psychiatry Law* (in press)
- Applegate B, Lahey BB, Hart EL, Biederman J, Hynd GW, Barkley RA, Ollendick T, Frick PJ, Greenhill L, McBurnett K, Newcorn JH, Kerdyk L, Garfinkel B, Waldman I, Shaffer D: Validity of the age-of-onset criterion for ADHD: a report from the DSM-IV field trials. *J Am Acad Child Adolesc Psychiatry* 1997; 36:1211-1221
- Barkley RA, Biederman J: Toward a broader definition of the age-of-onset criterion for attention-deficit hyperactivity disorder. *J Am Acad Adolesc Psychiatry* 1997; 36:1204-1210
- Shaffer D: Attention deficit hyperactivity disorder in adults. *Am J Psychiatry* 1994; 151:633-638
- McGough JJ, Barkley RA: Diagnostic controversies in adult attention deficit hyperactivity disorder. *Am J Psychiatry* 2004; 161:1948-1956
- Faraone SV, Biederman J, Spencer T, Mick E, Murray K, Petty C, Adamson JJ, Monteaux MC: Diagnosing adult attention deficit hyperactivity disorder: are late onset and subthreshold diagnoses valid? *Am J Psychiatry* 2006; 163:1720-1729
- McGough JJ, McCracken JT: Adult attention deficit hyperactivity disorder: moving beyond DSM-IV (editorial). *Am J Psychiatry* 2006; 163:1673-1675
- Mannuzza S, Klein RG, Kleint DF, Bessler A, Shroud P: Accuracy of adult recall of childhood attention deficit hyperactivity disorder. *Am J Psychiatry* 2002; 159:1882-1888
- Appelbaum KL, Hickley JM, Packer I: The role of correctional officers in multidisciplinary mental health care in prisons. *Psychiatr Serv* 2001; 52:1343-1347
- Murphy KR, Adler LA: Assessing attention-deficit/hyperactivity disorder in adults: focus on rating scales. *J Clin Psychiatry* 2004; 65(suppl 3):12-17
- Pliszka S, AACAP Work Group on Quality Issues: Practice parameter for the assessment and treatment of children and adolescents with attention deficit hyperactivity disorder. *Am J Psychiatry* 2007; 164:1073-1093

- cents with attention deficit/hyperactivity disorder. *J Am Acad Child Adolesc Psychiatry* 2007; 46:894-921
32. Peterson K, McDonagh MS, Fu R: Comparative benefits and harms of competing medications for adults with attention-deficit hyperactivity disorder: a systematic review and indirect comparison meta-analysis. *Psychopharmacology (Berl)* 2008; 197:1-11
33. Safran SA, Otto MW, Sprich S, Winett CL, Wilens TE, Biederman J: Cognitive-behavioral therapy for ADHD in medication-treated adults with continued symptoms. *Behav Res Ther* 2005; 43:831-842
34. Murphy K: Psychosocial treatments for ADHD in teens and adults: a practice-friendly review. *J Clin Psychol* 2005; 61:607-619