



Editors' Comment

Attention-Deficit/Hyperactivity Disorder (ADHD) accounts for more child and adolescent outpatients than any other single diagnosis. It is estimated that 3 to 7% of school-age children have this disorder, with higher rates reported in some studies. The disorder primarily consists of 3 core symptoms: inattention (concentration difficulties, short attention span, distractibility), impulsivity (impatience, acting without thinking), and hyperactivity (restlessness, always on the go).

ADHD is usually diagnosed in childhood, but it can persist into adolescence and adulthood. Because of the disorder's high prevalence, prevention of long-term difficulties is of considerable concern. In this issue of the NYU Child Study Center Letter, we focus on the importance of establishing a working alliance of home, school and community to enhance the development of each child with ADHD and prevent academic, social, and emotional difficulties.

AG/HSK

Introduction

When the diagnosis of ADHD is established the child and family should be informed about its causes, different subtypes, manifestations, developmental course and treatment options available. Effective treatments for children with ADHD in the home, school, and community settings should be coordinated. School personnel have an important role to play in enabling children with ADHD to have a successful school career. It is important for parents and school

TREATING ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD) IN SCHOOL SETTINGS

professionals to understand how ADHD affects the learning process. Interferences may include: difficulty paying attention, blocking out common distractions, making transitions easily, staying organized with time and materials, holding back urges to talk, or waiting for turns. ADHD is not, in and of itself, a learning disability, but it certainly can impair a child's ability to learn and to apply what he or she has learned. The child may also have difficulty making and keeping friends because, like parents and teachers, sometimes other children get frustrated with youngsters with ADHD. It is also important to take into account any co-existing conditions a child might have and how they might impact the child's functioning. Other conditions co-exist with ADHD at a high rate, with estimates of oppositional defiant disorder nearly 40%, anxiety and mood disorders 30%, and learning disabilities upwards of 30%.

Current scientific evidence supports a combined behavioral and pharmacologic approach for most children. The subtleties of how to time the introduction of each treatment component, i.e., which behavioral techniques to introduce or which particular medications to use, are best decided with input and collaboration from all the members of the "school team," which should also include the parents and the child. The preferences of those involved and the resources available should be balanced with interventions known to be efficacious.

Functions of the school team

The school team has the opportunity to debunk many of the myths associated with medications for children with ADHD and can inform the child, parents, and other school personnel, that a good medication response is expected in approximately 70-80% of children with ADHD. The school team also can emphasize that treatment for ADHD is an ongoing process, i.e., a series of steps to see which specific interventions work best with a specific child. For example, a child may have a negative response to one stimulant but a positive response to another. School nurses can effectively decrease parental and child anxiety by describing in concrete terms how they monitor side effects and minimize anticipated embarrassment about coming to the office for medication. The school team can serve as a liaison between the home, treating doctor and school in monitoring treatment effects. In medication trials it is advisable to inform the teachers that different doses and medications may be tried and that their feedback on standardized, brief rating scales helps determine the best dose of a particular agent.

It is generally not advisable to inform the teachers exactly when and how much of a particular medication is being used, in order to avoid subjective bias in their report of behavioral changes. There are several new agents that meet the criteria of safety and effectiveness for young people in the treatment of ADHD that can last throughout the school day, and research is proceeding rapidly on new stimulant and non-stimulant medications.



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Children with ADHD do not by definition need to be, nor are they typically, classified as having an educationally handicapping condition, and therefore are not typically receiving formal special educational services. They are, however, eligible for classroom and school accommodations under what is commonly referred to as Section 504, an important part of the Americans with Disabilities Act, if their ADHD interferes with learning and behavior in school. School personnel can play a critical role in helping to identify which specific accommodations are indicated for a given child. For example, having someone check the child's backpack at the end of the day is a simple accommodation that can successfully "level the playing field" when it comes to doing homework and having the necessary materials.

The school team can participate in developing the positive behavior support plans, Behavior Intervention Plans (BIPs), which are required under the law when children with ADHD exhibit behaviors that interfere with their learning or the learning of others. Functional behavioral assessment (FBA) is a methodology that schools are now using to determine exactly what behavioral interventions need to be used with a given child.

Typical characteristics of children with ADHD

Knowledge of some key evidence-based characteristics of children with ADHD can be helpful to school personnel as these students often frustrate even caring adults. As Dr. Russell Barkley eloquently states, "children with ADHD forget to remember" - they have the rules of behavior stored in memory but fail to access those rules at the time they need to apply them. They are usually more bound by immediate consequences and less governed by longer-term consequences than their non-ADHD peers. Simply put, a distraction such as a tapping pencil, or a toy or hand-held video game, has pleasing effects that are more compelling to them than the seemingly faint and far-off consequence of not finishing an assignment on time. Distractions can lead to protracted off-task behavior, forgetting to start or finish a required task, or even peer rejection as a function of not sharing well. This inability to inhibit responding is

considered by experts a core deficit that accounts for many ADHD-related behaviors. Consequently, teachers and others "in the trenches" can establish behavior modification programs on an individual basis or even a classroom basis. Many schools find classwide techniques a practical way to alleviate concerns about stigmatizing individual children.

Types of classroom interventions

Two types of interventions can be helpful: antecedent interventions, i.e., things done before the target behavior occurs, and consequence-based interventions, i.e., things done after the behavior happens. Both are designed to change the rate at which unwanted behavior occurs. Antecedent interventions prevent problem behaviors before they occur, usually prompting some alternative or replacement behavior in its place. Some antecedent-based changes that have been shown to help youngsters with ADHD are: decreasing "down time," such as the time to pass out papers, increasing the pacing of tasks, frequently announcing and reiterating class rules and their consequences, doing more difficult academic, problem-solving tasks in the morning, rather than in the afternoon. Individualized checklists to prompt specific desired target behaviors also are antecedent interventions. (See Figure #1: "*Jack's Ready for Work*") Antecedent interventions can be conceptualized as the need to design, or structure, the environment to be ADHD-friendly. Strategies such as using closed spaces, decreasing visual and auditory intrusions, minimizing play materials that can distract, modifying the length of tasks, and using more frequent "checking in" with children during the times they are expected to work independently have been supported by research.

Antecedent interventions alone are not considered sufficient for reducing ADHD-related problems, and are best paired with consequence-based strategies, such as a token economy, time-out, and punishment. Although controversies exist regarding time-out and punishment, it is believed that these strategies work best when parents participate actively. When designing behavior contracts, also called Daily Report Cards or DRCs, it is impor-

tant to remember that, as a rule, children with ADHD need more frequent and more immediate feedback on their behavior than their non-ADHD peers. Where a weekly note might suffice to help a non-ADHD child improve homework completion, the youngster with ADHD is more likely to need daily feedback and daily consequences, both positive and negative.

The DRC begins with identification of the desired or "target" behaviors. The school team, with the parent and child identify the 1-3 most important behaviors. A well-defined target behavior is stated in positive terms, e.g., "completing in-class math sheets" and is observable, measurable, and specific. By contrast, a target behavior such as "not getting off-task" is not clear, is more difficult to measure, and doesn't necessarily lead to improvement. (See Figure #2: *"Sample List of Appropriate Target Behaviors"*)

The format of DRCs can vary and two examples are shown 1) targeting "quiet listening in seat" during the child's high risk times of writing, math, and spelling/grammar. (See Figure #3: *Daily Report Card: One behavior across settings*) and 2) the other targeting completing work and working without disturbing others during different times of the day. (See Figure #4: *"Two-behavior DRC"*)

The school team can determine appropriate school-based rewards. (See Figure #5: *"20 Suggested School-based Rewards"*).

Bear in mind some key principles for children with ADHD: their rewards must be carefully picked to be salient to them; they tend to require more frequent rewards; and since they satiate more quickly on the same rewards, variety is important. When the student fails to meet the criteria for a reward, or breaks an important class rule, according to

research, "prudent reprimands" are most effective: public reprimands, or reprimands stated with a negative emotional tone are both less effective and potentially damaging, as they may lead to diminished self-esteem. "Prudent reprimands" are brief, clear statements to start, or stop, a specific behavior, delivered immediately after the behavior, not delayed, and said in an unemotional, neutral tone of voice, as opposed to an angry tone. They work best when consistently backed up with a pre-determined time-out or loss of privilege. School personnel should bear in mind the generally accepted goal of having a minimum ratio of 4 positive:1 negative comment in working with students.

The goal of these behavioral and pharmacologic interventions is to help children with ADHD to be more available for learning and to decrease the impulsive and intrusive behaviors that quickly mark them as "socially toxic." Research shows that their peers are quick to identify the negative social behaviors of children with ADHD and to label them as children to be avoided. Even after positive behavior changes, the re-assessment of their behavior by peers lags considerably.

Social skills groups are often suggested and are sometimes available in educational settings or in clinic situations. Although these are widely recommended, there is as yet a lack of evidence that they are effective in changing behavior over time and in generalizing to the classroom or the playground. The critical characteristics to look for in a social skills group are the teaching of specific, identifiable skills, and the planned prompting and reinforcement in the class and playground situation of the specific social skill learned in the group. Likewise, while the recommendation for treatment of organizational skills deficits is ubiquitously made for children with ADHD, there is no known validated treatment

protocol for this. We encourage school personnel to be aware of which treatments have been validated by research.

School-based treatment for youngsters with ADHD is sometimes best supplemented by specialty programs, such as summer programs that combine social skills training, parent training, behavior modification to increase appropriate classroom behavior, as well as skills training in sports, which are often a problem for these children. School personnel can play a pivotal advocacy role by informing their Committees on Special Education (CSE) and parents that such programs exist. For children whose behavior or learning can be expected to regress over the summer months, the CSE is obligated to provide 12-month programming.

Summary

The home and school team can work together to promote state-of-the-art care for youngsters with ADHD. The multi-modal strategic approach, combining carefully titrated pharmacotherapy with specific behavioral interventions in the child's school currently provides the greatest likelihood of a positive treatment outcome for youngsters with ADHD.

About the Author

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Figure #1 Antecedent-oriented Daily Report Card: Jack's Ready for Work

JACK'S READY FOR WORK!

- I have come into the classroom quietly.
- I have unpacked my homework and it is in the basket.
- My backpack is empty.
- My backpack is hung up and my coat is on a hook.
- I am in my seat and I am beginning my work.
- I am ready for Literature and have all of my belongings (book, folder, etc.)

JACK

MRS. KURTZ

Figure #2 Sample List of Appropriate Target Behaviors

- Sample List of Appropriate Target Behaviors**
- Contribute appropriately to class discussion
 - Write down homework assignments completely
 - Complete writing assignment in specified time
 - Follow directions with up to two reminders
 - Attempt half of all math problems
 - Check work over before asking for help
 - Remain seated during independent seat work unless asking teacher first by raising hand
 - Ignore teasing during Circle Time
 - Use inside voice level during snack time
 - Put homework in Mr. Jones's Inbox before attendance is taken in the morning
 - Complete "Do Now" without a fuss
 - No loose papers in binder before you go home
 - Start seatwork with only 1 reminder

Figure #3 Daily Report Card: One behavior across settings

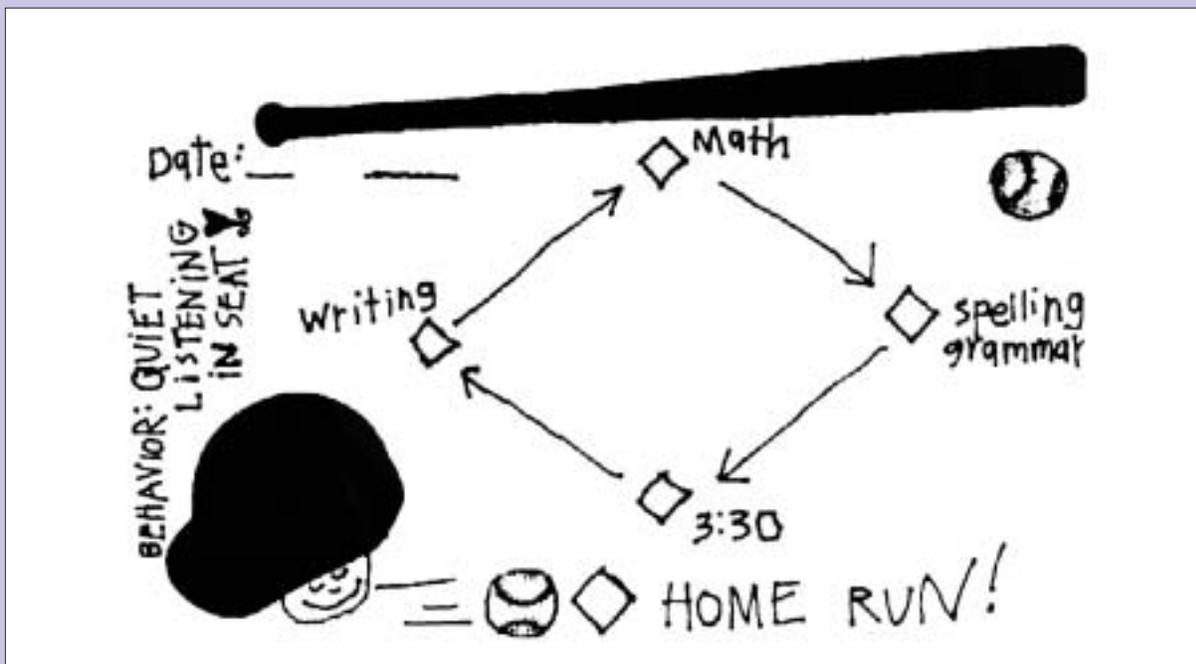


Figure #4 Two-behavior DRC

DAILY REPORT CARD

Child's Name: _____ **Date:** _____
Teacher's Name: _____ **Day:** M T W Th F
Grade: _____

Target Behaviors

completing work	Yes No N/A						
working without disturbing	Yes No N/A						

Daily Percentage = $\frac{\# \text{ Yes}}{\# (\text{Yes} + \text{No})} = \frac{\quad}{\quad} =$

Teacher's Initials _____

Comments: 80% or better earns choice of reward from Prize List

Figure #5: 20 Suggested School-based Rewards

- ### 20 SUGGESTED SCHOOL-BASED REWARDS
- | | |
|---|---------------------------------|
| Homework reduction | Teacher's helper- errand person |
| Extra computer time | Choose book to read to class |
| Free time in class | Care for class animal |
| Grab bag/treasure chest toys | Earn class party |
| Meal with a teacher and a friend | Choose stickers |
| Listening to music on tape/CD | Good note home/call parents |
| Leading in a game | Lottery tickets toward a prize |
| First on line | Play card game |
| Bringing something special to class (Show'n'Tell) | Award certificate |
| Clean erasers/Wash chalkboard | Visit principal |

Resources

(The) ADHD Report, Guilford Publications, New York, NY

Barkley, RA (2000) Taking Charge of ADHD: The Complete, Authoritative Guide for Parents. Guilford, New York, NY.

Parker, HC (1992) The ADD Hyperactivity Handbook for Schools: Effective Strategies for Identifying and Teaching ADD Students in Elementary and Secondary Schools. Impact Publications, Plantation, FL.

Pfiffner, LJ (1996) All About ADHD: The Complete Practical Guide for Classroom Teachers. Scholastic.

Robin, AL (2000) ADHD in Adolescents. Guilford, New York, NY

Zeigler Dendy, CA (1995) Teenagers with ADD: A Parent's Guide. Woodbine House. House

Website Resources

For information regarding Section 504 and classroom accommodations
<http://specialed.about.com/cs/accommodations/>

For information regarding Functional Behavioral Assessment (FBA)
<http://pbis.org/english/index/html>

For information regarding ethical considerations in medicating youth with ADHD
<http://www.nami.org/youth/bkgu-winter2001pdf>

For information regarding advocacy and education
<http://www.chadd.org>

For information on learning disabilities
<http://www.ldonline.org>

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Kids on Medication: Beyond the Controversy
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Summer Plans for Kids With Attention-Deficit/Hyperactivity Disorder
<http://www.aboutourkids.org/articles/summer-adhd.html>



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