Guide to an Outpatient Medication Assessment

If medication is being considered as part of an ADHD child's treatment, a proper, short-term trial or evaluation must first be conducted to determine whether medication is useful for that child and, if so, what dose. Because the major area in which improvement with medication is expected is the classroom, the classroom should be the place where the effects of medication are evaluated. Although some authors have advocated using a cognitive test administered in the doctor's office to determine medication responsiveness and to select a dose, research has shown that results from such tasks do not relate closely to the way a child responds to medication in the natural environment of the classroom. Therefore, many leading clinical centers are now employing short-term, outpatient medication trials to evaluate medication response in children. What follows is the school-based procedure that we employ in our outpatient clinic. It is practical and efficient and takes approximately four weeks to evaluate two medications or two doses and placebo. Although the medication is prescribed by a physician, it will become clear that the school plays the major role in evaluating the child's response to medication.

1. First, the school personnel should begin a behavioral intervention that follows the guidelines presented in our other handouts. Only after a comprehensive behavioral intervention has been established, modified, and stabilized, and only if such an intervention is insufficient, should a medication assessment be conducted. Note that using other interventions first and adding medication only if they are insufficient is now recommended both by most experts in the field and by the manufacturers of the medications.

2. Teachers should ensure that the behavioral intervention includes components that will serve as dependent measures in the medication assessment (e.g., daily report card or task sheet, teacher frequency counts with child's individual target behaviors, both academic and social, monitored).

3. One individual at the school should be designated as a coordinator for the assessment. Appropriate school personnel (e.g., teacher, psychologist, counselor, principal, nurse) should then talk with the child's parents and physician about the need for an assessment. Information documenting the procedures that have been implemented and how they have proven insufficient should be presented. Most physicians are quite responsive to offers to conduct assessments that provide them with concrete data from the classroom. It should be emphasized to them that the evaluation will provide objective information that can be used in long-term treatment planning and will protect both the child's best interests and theirs.

4. Once the assessment has been agreed to by parents and physician, the physician needs to conduct a physical examination and history to rule out conditions that preclude an assessment with stimulants.

5. The physician needs to then select the type and doses of medication that will be assessed. One common protocol includes placebo and two doses or types of stimulant drug (e.g., .3 mg/kg and .6 mg/kg methylphenidate b.i.d. or their equivalents in pemoline or d-amphetamine (Dexedrine, Adderall)--with those doses reduced to .15 and .3 mg/kg for low and high doses, respectively, for overweight children, for older and therefore heavier children, and for children who do not have behavior problems). Very few children need doses of methylphenidate higher than .3 mg/kg per dose (approximately 10 mg for a typical fourth grader) twice daily. Other preparations could be employed for a variety of reasons (e.g., need long-acting preparation because school will not administer midday dose). If using d-amphetamine, the methylphenidate dose should be halved. If pemoline is employed, the dose should be four to six times a single methylphenidate dose with A.M. administration only. If a single dose of Adderall is used (skipping the midday dose), it will likely last for the whole school day and should be equivalent to the A.M. dose of methylphenidate from a b.i.d. methylphenidate dosing schedule (htat is, 10 mg methylphenidate b.i.d. can be replaced with 10 mg Adderall q.a.m.).

6. Teachers must work with the physician regarding the timing of medication administration to ensure that times of the day during which the child exhibits problems will overlap with peak medication times (that is, will occur between one and three hours after pill ingestion for standard methylphenidate). Either the child's school work schedule or the medication schedule should be adjusted if they do not coincide.

7. The physician or school personnel coordinating the assessment should find a pharmacist to cooperate with the assessment. Any local pharmacist will do who is willing to put the medication in capsules so active medication can't be distinguished from placebo. The pharmacist or school coordinator should establish a random schedule in which medication condition changes daily (except pemoline, which changes in triplets of days) within each week of the evaluation and each condition occurs at least once weekly (e.g., Wk 1 order for Monday through Friday: P, .3, P, .6, .3). Each dose should be given between 5 and 10 times or until stable data have been obtained and a pattern or lack thereof is

clear. If a child is drug naïve, the lowest dose of medication should be given first to minimize side effects. The entire assessment should take between 15 and 30 school days, depending on the number of conditions evaluated.

8. The pharmacist should package the medication and placebo in identical, self-locking opaque capsules in dated, individual envelopes according to the random order. AM medications are administered by parents and PM by the school.

9. Everyone, including the child, should know that the assessment is occurring, but everyone who will provide any information regarding the child's response should be kept blind to condition. The importance of including placebos to ensure that expectancy effects do not bias the results should be emphasized to all involved. The child should be told why "fake" pills are being employed. If objective measures are used to evaluate response, placebo is unnecessary.

10. The main measure to use to evaluate medication response is the child's Daily Report Card, which should have already been established for the behavioral intervention. The data for each target behavior should be plotted on a graph daily, not connecting the dots until the medication conditions are revealed after the assessment has been completed. Then the child's percentage of successful goal attainment should be examined for each target behavior to determine whether the child is more successful at reaching his goals on medication days at a given dose than on placebo days. There needs to be adequate room for movement both up and down in the DRC percentage for it to be a sensitive measure of medication effects.

11. As a supplemental measure of medication response , teachers should rate the child on the IOWA Conners daily; parents complete the Abbreviated Conners nightly (as a measure of rebound). Teachers and parents should also complete a daily side effects rating scale. If there are target problems included in the behavioral intervention that are <u>not</u> covered on the IOWA Conners (e.g., gets along with other children), teachers should also rate those daily on specially constructed but simple rating scales (e.g., not a problem, mild problem, moderate problem, severe problem).

12. Whenever possible, daily objective information should also be gathered at school regarding the child's major behavioral and academic problems (see School Assessment sheet handout or Task sheet handout for examples). This may be as simple as recording the child's completion rate and accuracy on his assignments or recording the number of fighting incidents reported by playground monitors.

13. After the assessment period has been completed, the blind should be broken and the assessment coordinator should graph daily data and compute means and standard deviations for the dependent measures within each condition.

14. The teacher, school coordinator, physician, and parent should meet to determine whether the <u>incremental</u> improvement obtained with medication outweighs any side effects observed. This should be done by paying most attention to the child's major problem areas, and comparing whether the improvement shown in those areas outweighs any risks associated with taking the medication. This is a clinical judgment. The child's variability within each condition and his final level of functioning should be considered when making this judgment.

Pelham, W.E. (1993). Pharmacotherapy for children with attention-deficit hyperactivity disorder. <u>School Psychology Review</u>, <u>22</u>, 199-227.

Child: _____ Teacher's Name: _____ Date:_____Day:_____

Pittsburgh Modified Conners Rating Scale

Check the column that best describes this child today.

	Not at All	Just a Little	Pretty Much	Very Much
1. Fidgeting				
2. Hums and makes other odd noises				
3. Excitable, Impulsive				
4. Inattentive, easily distracted				
5. Fails to finish things he or she starts (short attention span)				
6. Quarrelsome				
7. Acts "smart"				
8. Temper outburst- behavior explosive and unpredictable				
9. Defiant				
10. Uncooperative				
11. Restless and overactive				
12. Disturbs other children				
13. Demands must be met immediately -- easily frustrated				
14. Cries often and easily				
15. Mood changes quickly and drastically				
16. Fights, hits, punches, etc.				
17. Is disliked by other children				
18. Frequently interrupts other children's activities				
19. Bossy: always telling other children what to do				
20. Teases or calls other children names				
21. Refuses to participate in group activities				
22 Is actively rejected by other children				
23. Is simply ignored by other children				

24. To what extent was this child's behavior towards peers like that of a normal child today?

Very much like a normal child 0 1 2 3 4 5 6 Not at all like a normal child

25. To what extent was this child's behavior towards adults like that of a normal child today?

Very much like a normal child 0 1 2 3 4 5 6 Not at all like a normal child

26. To what extent do you find interacting with this child a pleasant experience today?

Very pleasant 0 1 2 3 4 5 6 Very unpleasant

18. Do you believe this child received active medication or placebo today?

Please circle one. Medication Placebo

19. If 'Medication' in #18 above, would you like to see this child continue to receive the pill he received today as part of his ongoing treatment after this assessment is completed? Yes No

Pittsburgh Side-Effects Rating Scale

Child's name:_____ **Date:**_____

Form completed by:_____

Instructions: Listed below are several possible negative effects (side effects) that medication may have on an ADHD child. Please read each item carefully and use the boxes to rate the severity of this child's side effects during your contact with him or her today. When requested, or wherever you feel it would be useful for us to know, please describe the side effects that you observed or any other unusual behaviors in the "Comments" section below. **The same person should complete this scale each time it is completed.**

Use the following system to assess severity:

None:	The symptom is assessed and is found absent.
Mild:	The symptom is present but is not sufficient to cause concern to the child, peers or adults and would not affect a decision to recommend medication.
Moderate:	The symptom causes impairment of functioning or social embarrassment to a degree that the benefits of medication must be considerable to justify the risks of continuing medication.
Severe:	The symptom causes impairment of functioning or social embarrassment to a degree that the child should not continue to receive medication as part of treatment.

	None	Mild	Moderate	Severe
Motor Tics—repetitive movements: jerking or twitching (e.g., eye blinking-eye opening, facial or mouth twitching, shoulder or arm movements)—please describe below				
Buccal-lingual movements: Tongue thrusts, jaw clenching, chewing movement besides lip/cheek biting—please describe below				
Picking at skin or fingers, nail-biting, lip or cheek chewing—please describe below				
Worried/Anxious				
Dull, tired, listless				
Headaches				
Stomachache				
Crabby , Irritable				
Tearful, sad, depressed				
Socially withdrawn—decreased interaction with others				
Hallucinations (sees or hears things that aren't there)				
Loss of appetite				

Parent: Please complete the additional item below.

Trouble sleeping (time went to sleep: _____)				

Comments: