Are you concerned about your child’s hyperactivity, impulsivity, and inattention? Do you wonder whether what you see is a disorder, or simply feistiness and high energy combined with intelligence, curiosity and boredom? Or, do you believe there is a problem, but worry about the use and impact of the medications? Do you just want their use carefully monitored for benefits vs. side effects?

If some of these concerns describe you, SymTrend may help you and your child.

SymTrend® is an easy-to-use aid for tracking and understanding your child’s response to the situations. It will help you, teachers and clinicians trace links among your child’s behaviors, external stresses, and daily activities. SymTrend charts can be used to monitor both behavioral interventions and drug treatments. Once you're clear about what’s happening, you can make informed decisions.

SymTrend’s tools are also well-suited for adults with ADHD to answer similar questions about their behavior and response to medications. SymTrend’s special When-To and How-To Reminder tools are particularly useful for enhancing daily performance. See the Other Resources section to learn more.
SymTrend Library: Recording Symptoms

The SymTrend library has Health Logs for recording the types of behaviors, symptoms, treatments, side effects, and emotional reactions that are commonly associated with attention issues. Select one from the library or design your own.

How time consuming is it?

- Usually one recording period for a couple of minutes at the end of the day is sufficient.
- Your clinician may want you to record more than once a day if medication adjustment, skills, development or activity/symptom relationships prove complicated.

How do I record?

- Use a desktop or laptop computer connected to the Internet.
- Use a handheld computer for tracking the ups and downs of activity levels and attention during the day (and send the data to the Internet).

What information should I collect?

- Use a SymTrend Health Log to keep track of typical ADHD behavioral symptoms (signs of hyperactivity, impulsivity, and inattention), in the settings in which the behaviors occur most/least frequently.
- Track the side effects of medications and the variation in internal feeling states (e.g., emotions, energy, interest).
- Also record indices of other likely complicating health related matters: blood sugars, headaches, menses, seizures, psychosocial stressors, risk taking behavior, or productive activities.
SymTrend® Tools: Tracking Progress

Use SymTrend’s online **Progress Profile** charts to summarize progress before and after an intervention or other significant event. A color chart highlights areas of progress and of stumbling blocks.

- Green arrows pointing to the right indicate improvement.
- Red arrows pointing leftward indicate a worsening.
- The arrow’s size indicates the amount of change.
- The location of the arrow’s tip tells the current symptom intensity. The Progress Profile is ideal for Individualized Education Plan (IEPs) reporting. It just takes a few mouse clicks to generate quarterly and yearly profiles as shown in the chart below.

In the Progress Profile chart to the left, three of five arrows are rightward and green, indicating significant progress this quarter.

- The most progress occurred while listening in class (from a problem every day to problems 40% of days, Line 3).
- Substantial progress was also made outside the classroom: from problems 80% of days to 30% (Line 5).
- Progress, but still inadequate functioning occurred when working alone (70% of days, Line 2).
- A worsening due to schedule changes occurred from 20% of days to 40% of days (Line 4).
- No change in problem incidence occurred with group participation (Line 1).
What will I learn from my entries?

Use SymTrend charts not only to depict the amount and extent of symptom change (see Tracking Progress), but also to understand change. For example, use the Quick Report to:

- Understand why problems persist.
- Clarify the source of problems (distractions, emotions, family stresses, work/school stresses).
- Detect why things are not going as well as expected, or as hoped for.

This example shows how charts can help monitor the impact of medications. A mother reported that her son complained that an increase in medication made him feel “Like a Zombie” (1). In response, the child’s prescribing clinician tried a second regimen (2) to achieve as good functional management without the mind numbing side effect.
SymTrend® Tools: Keeping Records

How can SymTrend help me get organized?

Many persons with ADHD see multiple providers for different aspects of their care. When care and special education efforts expand from a matter of weeks or months to years, the Care Records tool becomes increasingly useful.

- Use SymTrend’s Care Records tool to put all your records in one place.
- Compile a clear, accurate history of services, findings, medications, procedures, and life events.
- Print out your history before you see a new provider to help you remember what has happened in the past.
- When your treatment team is distributed across providers at different locations, share information among providers easily by giving them all access to the same records.
- SymTrend integration enables all providers to have a common history to understand the symptom course and treatment response.

Care Records Example

(links are not active in graphic)

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/16/01</td>
<td>Treatment</td>
<td>Concerta; 18 mg 1/day</td>
</tr>
<tr>
<td>09/04/01</td>
<td>Visit</td>
<td>Ben Casey; psychopharm consult</td>
</tr>
<tr>
<td>09/01/01</td>
<td>Major Event</td>
<td>new school; first day at new school</td>
</tr>
</tbody>
</table>
SymTrend® Tools: Reminding When-To

How can I remember to enter data, when I can’t remember where I left my keys?

Receive pre-set To-Do messages and schedule alerts throughout the day. Get as few or as many as you need.

Get an email on your desktop computer or a beep on your handheld computer.

Use SymTrend’s When-To Reminders to:

1. Remind you each night to:
   - Review calendar for tomorrow.
   - Get clothes, keys, papers/homework together.

2. Schedule time each day to:
   - Go through checklist before leaving school/work.
   - Spend 15 minutes on paperwork, bills, etc.
   - Review subtasks of long-term assignments.
   - Do relaxation, deep breathing.
   - Exercise.
   - Enter health data.
SymTrend Tour: Symptom Tracking, Charting, & Reminding for ADHD

Home > ADHD > SymTrend Tools

1 2 3 4 5 6

What can be done to help sluggish, overwhelmed, or forgetful minds? When-To Reminders tell the user what to do, but not how to do it. SymTrend instills the "how" by having the user consult personalized mindfulness guides several times daily.

SymTrend How-To Reminders are Health Logs that contain 1 to 2 minute exercises designed to:

- Foster awareness
- Enhance preparedness
- Aid reflection
- Execute tasks
- Stay focused
- Calm agitation

Think of mindfulness guides as being tools for instilling cognitive watchwords. See an example of a mindfulness guide on the right.

Next Section: Case Study

Copyright 2005 SymTrend, Inc. All rights reserved.
Jimmy, a seven year old boy, had been at a Montessori preschool and kindergarten. His old school had an unstructured format and his activity level was not an issue.

After a couple of weeks in a structured public school classroom, his teachers requested he be evaluated for ADHD.

His behavior at home had also deteriorated.

When medication was recommended by a clinician, Jimmy’s mother chose to use SymTrend to report behaviors during a baseline period before medication and after medications were started.

The school cooperated with Jimmy’s mother. They also took part in behavior monitoring.
Case Study: Why Jimmy's mother used SymTrend®

- Jimmy’s teachers found he couldn’t sit still and focus during classroom activities.
- It was hard to get him out of bed and ready for school.
- He had difficulties getting along with his older sister, who felt he interfered with her activities.
- He couldn’t sit still at home at the dinner table.
- After watching other friends and their children, Jimmy’s mother agreed that his behavior was beyond the norm.
- She worried, however, about the impact of medication.

Recording Symptoms:
Jimmy’s mother entered at the end of the day about three periods: 1) ratings about getting him ready for school, 2) ratings left by teacher on voice mail after school, and 3) ratings about his behavior in the afternoon and evening at home.

Keeping Records:
- Mother entered doctors’ visits and medication changes.
- Her impressions of and reactions to changes in Jimmy.

Tracking Impact:
The charts showed the impact of medications – both positive trends and side effects.

Treatment & Educational Support:
The ratings completed by the teacher made the teacher more mindful of the classroom situations that made matters worse.

Case Study: SymTrend Tools Used

Recording Symptoms:
Jimmy’s mother entered at the end of the day about three periods: 1) ratings about getting him ready for school, 2) ratings left by teacher on voice mail after school, and 3) ratings about his behavior in the afternoon and evening at home.

Keeping Records:
- Mother entered doctors’ visits and medication changes.
- Her impressions of and reactions to changes in Jimmy.

Tracking Impact:
The charts showed the impact of medications – both positive trends and side effects.

Treatment & Educational Support:
The ratings completed by the teacher made the teacher more mindful of the classroom situations that made matters worse.
Case Study: Recording Symptoms

Mother Selected Health Log from Library and Had SymTrend® Make Minor Changes

- **Request for Monitoring:** Jimmy’s mother agreed to a trial of Concerta. She insisted, however, that the teachers keep track of his behavior each day to closely monitor the impact of the medication. She wanted to be sure the treatment was right for him and that there were no side effects.

- **Health Log:** She found a Health Log in SymTrend’s library. It was designed to be used by a mother with an ADHD child undergoing a medication trial. She had SymTrend modify it so that the context screens matched his activities at home and at school.

- **Recording Schedule:** The plan was for Jimmy’s mother to record her own data and teacher data using the online Symptom Recorder. She was to rate his behavior and note the contexts in which problems occurred, and note side effects.

- **Baseline:** A week of recordings was made before the medication started to serve as a baseline.

**SAMPLE BEDTIME RATINGS**
Case Study: Recording Symptoms (cont.)

Teachers Agreed to Take Notes and Call in a Report Each Day

The teacher's aide had a paper sheet with rating scales and checklists. In less than a minute at the end of school each day, she left a voice mail with the day's report.

- Jimmy's mother then entered the aide's ratings into the SymTrend® Health Log.
- The teacher's aide agreed to call in a report because she wanted to figure out which of the day's activities was most challenging for Jimmy. And also, what triggers might set him off into a downward behavioral cascade.

ADHD SAMPLE SCHOOL RATINGS

Copyright 2005 SymTrend, Inc. All rights reserved.
Case Study: Keeping Records

Jimmy’s mother recorded medication changes and major events that she suspected might make a difference in the Care Records. Later (9/21), after an increase in medication dose (9/19), she also typed in a note that her son was showing unusual behavior that she thought might be a side effect of the medication. At these times, Jimmy reported that he felt like a “zombie”. He felt “robot-like”.

<table>
<thead>
<tr>
<th>Date</th>
<th>Treatment</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/25/01</td>
<td>Concerta</td>
<td>18 mg 1/day</td>
</tr>
<tr>
<td></td>
<td>Concerta</td>
<td>Ritalin; 5 mg at 12 noon</td>
</tr>
<tr>
<td>09/21/01</td>
<td>Note</td>
<td>He seems like a zombie from these meds. Has no life. Where is my son?</td>
</tr>
<tr>
<td>09/19/01</td>
<td>Concerta</td>
<td>36 mg 1/day</td>
</tr>
<tr>
<td>09/16/01</td>
<td>Concerta</td>
<td>18 mg 1/day</td>
</tr>
<tr>
<td>09/04/01</td>
<td>Visit</td>
<td>Ben Casey; psychopharm consult</td>
</tr>
<tr>
<td>09/01/01</td>
<td>Major Event</td>
<td>new school; first day at new school</td>
</tr>
</tbody>
</table>

Copyright 2005 SymTrend, Inc. All rights reserved.
Case Study: Tracking Progress with Progress Profile Charts

Chart Revealed Gains, but Significant Issues Remaining

The Progress Profile chart helped her see the direction of change between the baseline period and the period after the onset of the medication. She shared this summary chart with her husband and son. She showed it to her son’s doctor and teachers.

Although the chart shows improvement (all arrows are green and rightward), the behaviors plotted here are still rated in the negative range after the medication.

- This chart shows the change in Jimmy’s symptoms between two time periods, the baseline period: (9/9/2001 through 9/16/2001 - the day before any medication started), and the rest of the recordings (9/16/2001 through 9/30/2001).

- Each line of the chart shows the progress of a single symptom.

- During the baseline period, Jimmy’s average Bad Day/Good Day (S) at school (line 5) rating was –3.75 (Very Bad) and he progressed to an average rating of just –1.5 (better than Somewhat Bad) in period two (P2, from 9/16 – 9/30).

Copyright 2005 SymTrend, Inc. All rights reserved.
Case Study: Quick Report Also Documented Symptom Changes and Noted Side Effects

- Jimmy’s mother viewed a Quick Report. It supported her impression that the Concerta dose increase was too high for Jimmy. Her son was less hyperactive (average daily recording moves up beyond Mild), but often acted “Like a Zombie,” after an increase in dosage of a long-acting pill to 36 mg (1 on chart).
- She showed the chart to Jimmy’s doctor. He lowered the dose of the long-acting Concerta back to 18 mg and added a short-acting dose of Ritalin at noon (2 on chart).
- Jimmy’s mother realized that even with the new combination, he still had mild difficulties with attention and hyperactivity. She discussed further behavioral interventions with the teachers.
Once stimulant medication had reduced Jimmy’s hyperactivity, teachers could focus on reducing his inattention by implementing a behavior modification program. The question then became where to start? What was available to build on? Teachers knew that Jimmy had his good and bad days, but did not know why.

- To find out they reviewed SymTrend® charts. The charts revealed that Jimmy’s best days were days on which there was either an irregularly scheduled Art or Computer instruction and the instruction occurred in the morning (See days in weeks 1 and 2 below that have marks on lines 2 and 3 for morning art or morning computer).
- With this pattern brought to their attention, teachers realized what produced a better day. Jimmy so excelled in these activities and received so much praise, that these rewards positively disposed him to engage his attention during the classes that followed.

They tested this idea by scheduling a week of art and computer classes every morning on alternate mornings. The results were clear (week 3); Jimmy had a week of only no or mild disruptions. Based on this test finding, teachers could justify creating a behavior modification program that would involve all students: participation in an individual student choice activity period was made contingent upon appropriate levels of participation in a personally challenging subject.

The first chart row reveals teachers ratings of Jimmy’s inattention rated 3 times during each school day. (A triad of points for each day are grouped together slightly offset). The recordings cover three weeks partitioned by vertical lines.

- There is considerable variation from day to day over the first two weeks.
- The days with the lowest inattention scores correspond with a vertical bar mark on one of the two chart rows below the inattention ratings row. These bars signify when a computer or art class was held in the morning.
- During week 3, when there was a morning computer or art class each day, the inattention ratings were uniformly low, indicating an impact of the morning instruction schedule change.
Case Study: Benefits

Impact:

- Charts helped identify the impact of medication and its side effects.
- They also demonstrated that Jimmy still has behavioral issues that must be addressed in school. The charts will be used to monitor the impact of those programs as well.

Teachers’ Role & Enhanced Individualized Education Plans (IEPs):

- Teachers were able to provide feedback to the special education coordinator (for his IEP) and to Jimmy’s mother about performance in class without undue burden.
- Teachers were able to use the SymTrend® chart findings and positive medication impact to Jimmy’s advantage through behavioral analysis.

Medications:

- Feedback was available for Jimmy’s clinician to adjust medications.
Other Resources

Information for Adults and Teens with ADHD

- Managing Sleep
- Using SymTrend® "Mindfulness Guides" to support social behavior and organization.

Resources for Coaches/Special Educators

- Using with Individual Education Plans
- Creating your own "Mindfulness Guides" for your clients

Government Documents

- Government publications about ADHD
- Summary of findings and links for The Multimodal Treatment Study of Children with ADHD

Links and Books

- Links for ADHD information and chat areas.

Copyright 2005 SymTrend, Inc. All rights reserved.
Managing Sleep

Difficulty falling asleep and restless sleep are much more common among those with ADHD. This is particularly true in teens (50% report it) and adults (70% report it).

These problems have multiple sources; it is as yet unclear which is primary for any given person.

- It may have something to do with the stimulant-class of medications that those with ADHD take, although this is now rejected as the primary source of the problem.
- Other studies report that the “internal clock” of persons with ADHD may be weak and hard to set on a timetable that fits with the demands of school and work.

Performance improves with better sleep, so changes in sleep habits (or “sleep hygiene”) should be part of treatment.

- Keep a sleep diary for one or two weeks before you change anything so that you can understand if your interventions are working. Record a) the time you went to bed, b) an estimate of how long it took to get to sleep, the quality of the sleep, and c) how long you slept. Also record your d) daytime sleepiness, e) irritability, f) ability to concentrate, and g) performance with work tasks/schoolwork. SymTrend® can provide a special diary for this purpose.

- NIH suggestions for improved sleep include:
  - Set a regular time for bed each night and stick to it.
  - Establish a relaxing bedtime routine. Do not have a TV in the bedroom. Computers should also be off limits prior to sleep. A hot shower or bath may be relaxing.
  - Don’t do too much activity after dinner and don’t eat large meals close to bedtime.
- Don't have caffeine within six hours of bedtime. Chamomile tea or warm milk sometimes have a sedative impact. Alcohol should be avoided because it may result in frequent waking.
- Keep the bedroom dark, quiet and at a comfortable temperature.
- Avoid naps during the day.
- Exercise vigorously in the morning or late afternoon

- Medication options for sleep problems you may want to pursue with your clinicians:
  - Some clinicians recommend another dose of a stimulant medication 45 minutes before bedtime for adults. They find the medication may have a "paradoxical effect" of calming restlessness, enough to help falling asleep.
  - Benadryl, sold as an antihistamine without a prescription, is sometimes helpful. For some users this medication lasts too long, causing sleepiness the next day.
  - Melatonin, has some function in setting the "internal clock". It may not be effective for the first few days use. Dosages less than typically provided in over-the-counter preparations are recommended (1 mg or less).
  - Other prescription medications are occasionally prescribed, such as antidepressants and clonidine. These can may have side effects, especially drowsiness from clonidine.

- Use special lights to help reset your internal clock. These lights are, however, experimental and expensive.
Social Mindfulness Guides

Persons with ADHD sometimes have problems with conversation. They may digress from one topic to another with rapid enthusiasm, creating a dizzying, overwhelming, and frustrating experience for listeners. ADHD persons are sometimes poor listeners, and turn takers.

- Coaches often recommend conversation skills exercises for teens and adults with ADHD. These exercises help paying attention, listening, staying on track, collecting information, responding to others, etc. These exercises then become guides for more successful conversations.

- Some examples of social skills exercises include:
  - Active listening: Sit facing another person (or pretend to be facing someone important) and lean forward slightly toward the other person. Maintain eye contact. This not only makes you look like you are attending, but it also helps you focus on what the other person is saying.
  - Hearing the full message: Talk to someone you trust and feel comfortable with. Try repeating what you have heard the other person say. Find out what you left out.
  - Managing anger: Find a substitute action like hitting a pillow. Get away from the offending person or situation for a while. Excuse yourself, and take a “time out” to prevent saying things you'll regret.

**SymTrend® Mindfulness Guides and Social Skills Support:** SymTrend will place your exercise regimen on a Health Log for you. You can download these Health Logs to a handheld computer. When you are about to participate in a conversation or meeting, you can review the guidance material to make yourself “mindful” of what is important for you to focus on.
Other Resources: Information for Adults and Teens with ADHD

Organizational Mindfulness Guides

All people, especially those with ADHD, perform best when they are organized. For example, better organization involves being aware of: what to do first and when to allow interruptions and engage in digressions. You need to know what disrupts you and requires immediate attention.

In their book, "Out of the Fog", Kevin Murphy and Suzanne LeVert (see the Resources section at the end of this tour) advise how to get organized. Begin by:

- **Writing down all problems** that occur.
- **Note what transpires** when making a mistake and becoming confused, frustrated, or irritated.
- **Divide mistakes and derailers into two lists.** Some problems will involve failed time management (forgot an appointment). Others will involve failed physical management (couldn’t find keys).
- **Order each list** by how much distress the errors provoke either because they occur frequently and are bothersome or because they are disruptive in terms of time, money, productivity, hurt feelings, embarrassment, etc.

The next step is creating an organization plan that will minimize mistakes and derailment. The principal theme of an organizational plan is keeping track of activities better through organizational calendars and To-Do lists. You can design a SymTrend® Health Log and set of Reminders (a mindfulness guide) to help you do just that.

- Start with frequent reminders and simple tasks so as to break up the day into manageable chunks.
- Record feelings and stressors frequently each day, in order to identify provocation situations and learn whether some times of day are worse than others.
SymTrend Tour: Symptom Tracking, Charting, & Reminding for ADHD

Copyright 2005 SymTrend, Inc. All rights reserved.
The National Institute of Health and the National Institute of Mental Health have published several booklets about ADHD. These are available on the NIMH website (http://www.nimh.nih.gov), but are also linked here.

**A Look at ADHD** (PDF)

**Attention Deficit Hyperactivity Disorder** (PDF)

**Treatment of Children with Mental Disorders** (PDF)
The Multimodal Treatment Study of Children with ADHD (*MTA* for short) brought together 18 nationally recognized authorities in ADHD at 6 different university medical centers and hospitals to evaluate the leading treatments for ADHD, including various forms of behavior therapy and medications.

The study included nearly 600 elementary school children, ages 7-9, randomly assigned to one of four treatment modes: (1) medication alone; (2) psychosocial/behavioral treatment alone; (3) a combination of both; or (4) routine community care.

The MTA results published in December 1999 indicate that:

- Long-term combination treatments as well as medication-management alone are both significantly superior to intensive behavioral treatments and routine community treatments in reducing ADHD symptoms.
- These differential benefits extend as long as 14 months.
- In other areas of functioning (specifically anxiety symptoms, academic performance, oppositionality, parent/child relations, and social skills), the combined treatment approach was consistently superior to routine community care, whereas the single treatments (medication-only or behavioral treatment only) were not.
- The combined treatment allowed children to be successfully treated over the course of the study with somewhat lower doses of medication, compared to the medication-only group.
- Carefully monitored medication management with monthly follow-up is more effective than intensive behavioral treatment for ADHD symptoms, for periods lasting as long as 14 months.
- For some outcomes that are important in the daily functioning of these children (e.g., academic performance, familial relations), the combination of behavioral therapy and medication was necessary to produce improvements better than community care. Of note, families and teachers reported somewhat higher levels of consumer satisfaction for those treatments that included the behavioral therapy components.

* Reprinted from the NIMH site. For more information about the findings of this study, go to: [http://www.nimh.nih.gov/childhp/mtaqa.cfm](http://www.nimh.nih.gov/childhp/mtaqa.cfm)
Other Resources: Books and Links

**General Books**


**Strategies for Adults**
Kevin R. Murphy:
[http://www.adultadhdclinic.com](http://www.adultadhdclinic.com)


Michele Novotni:


**Links and Chat Areas (more available inside the SymTrend® site)**

[http://www.adhdnews.com](http://www.adhdnews.com)

[http://www.add.about.com](http://www.add.about.com)