

### ■ CLINICAL COMMENTARY:

#### White-coat hypertension represents one point along the continuum of hypertension

Unfortunately, the best available clinical evidence provides an unfulfilling answer to the question posed by this Clinical Inquiry. It requires inductive reasoning and logic to derive a treatment plan from the evidence presented. Perhaps it is because the diagnosis of white-coat hypertension remains poorly defined and clinically elusive.

Nevertheless, application of the simple principle of “where there’s smoke, there’s fire” fits best here. Clinicians should be aware that white-coat hypertension represents one point along the continuum of hypertensive disease. When diagnosed, patients with white-coat hypertension should at a minimum be followed for associated morbidities and treated when systemic hypertension is identified.

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## Does a short symptom checklist accurately diagnose ADHD?

### ■ EVIDENCE-BASED ANSWER

Several abbreviated checklists perform well in distinguishing children with attention deficit/hyperactivity disorder (ADHD) from those without ADHD under ideal conditions and in research settings. While many guidelines and experts recommend using these checklists as an efficient method to collect data from multiple sources (strength of recommendation: **B**, based on extrapolation from cohort studies to define test characteristics and consensus opinion), experts point out the subjective nature of responses on behavior rating scales, and the limitations in using checklists as the sole source of information.

The Swanson, Nolan, and Pelham (SNAP) checklist from the *Diagnostic and Statistical Manual of Mental Disorders*, revised 3rd edition (*DSM-III-R*) has been shown to have a sensitivity and specificity in excess of 94% to distinguish hyperactive, inattentive, and impulsive children with ADHD from those without ADHD. This was based on criteria in the *DSM-III-R*. The *DSM-IV* SNAP checklist (available at [www.adhd.net/snap-iv-form.pdf](http://www.adhd.net/snap-iv-form.pdf); scoring at [www.adhd.net/snap-iv-instructions.pdf](http://www.adhd.net/snap-iv-instructions.pdf)), based on the newer diagnostic criteria, has not been adequately evaluated. The ADHD Rating Scale-IV (in DuPaul et al, *ADHD Rating Scale IV—Checklists, Norms, and Clinical Interpretations*, available from Guilford Press) and the ADD-H Comprehensive Teacher/Parent Rating Scale (ACTeRS; available from MetriTech, Inc at [www.metritech.com](http://www.metritech.com)) are useful for their brevity, but they do not perform as well in differentiating children with ADHD from those without ADHD.

### ■ EVIDENCE SUMMARY

A variety of brief ADHD-specific rating scales are used for both parent and teacher assessment of child behavior. Rating scales are generally

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**TABLE**

**Descriptive characteristics of abbreviated symptom checklists for ADHD**

Scale	Minutes	# Items	Age	Effect size		
				Hyperactivity	Inattention	Impulsivity
<b>ACTeRS Parent Version</b>	5–10	25	5–12	1.5	2.0	NA
<b>ACTeRS Teacher Version</b>	5–10	24	5–12	NA	NA	NA
<b>DSM-IV SNAP</b>	5–10	40	6–12	NA	NA	NA
<b>DSM-III-R SNAP</b>	5–10	38	6–12	3.1–5.1	3.5–4.2	4.0–5.5
<b>ADHD Rating Scale-IV</b>	5	18	5–18	1.1	1.2	1.1
<b>Conners Rating Scale, Revised (1997, Short Version)<sup>11,12,13</sup></b>	5–10	27	3–17	NA	NA	NA

Numbers reported in ranges indicate multiple studies.

ACTeRS, ADD-H Comprehensive Teacher Rating Scales; *DSM*, *Diagnostic and Statistical Manual of Mental Disorders*; SNAP, Swanson, Nolan, and Pelham; ADHD, attention deficit/hyperactivity disorder; NA, not available.

evaluated to establish mean scores for affected and unaffected children. Many scales publish such normative data in commercially available manuals. Some scales have been evaluated by 1 or more independent studies to compare children with and without ADHD. Rating scales have not been evaluated as a sole tool for the diagnosis of ADHD.

The test characteristics of a particular scale depend on the cut points for a positive or negative test. The usefulness of psychological tests in discriminating normal from abnormal behavior is often reported as “effect size.” The effect size is the difference in mean scores between 2 populations divided by an estimate of the individual standard deviation.<sup>1</sup> An effect size of 4.0 means that abnormal subjects and normal controls are separated 4 standard deviations and thus almost completely separated. An effect size of 1.0 shows significant overlap between the 2 populations. An effect size of 4.0 is roughly equivalent

to a sensitivity and specificity of 97%. An effect size of 1.0 is roughly equal to a sensitivity and specificity of 71%.

**Table 1** outlines the characteristics and effect size of several available brief ADHD-specific checklists.<sup>2–4,6,11–13</sup> Typically, the gold standard was a clinical diagnostic interview, usually conducted by a clinical psychologist, as well as supporting data from schools and parents.

**RECOMMENDATIONS FROM OTHERS**

The American Academy of Pediatrics states that the use of ADHD-specific checklists is a clinical option when evaluating children for ADHD. They caution that the ADHD scales may function less well in clinicians’ offices than suggested by reported effect size and, in addition, rating scales are subject to bias and may convey a false sense of validity. They also state that it is not known if these scales provide additional information beyond a careful clinical assessment.<sup>7</sup>

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## Often scales miss more passive, less disruptive ADHD children and overdiagnose high-energy children

The Institute for Clinical Systems Improvement recommends use of at least 1 ADHD-specific rating scale to be administered to parents and teachers. This information should be used as part of the overall historical database for the child and should not be used as the sole criteria for diagnosis of ADHD.<sup>8</sup>

Many sources agree that ADHD-specific rating scales allow a rapid and consistent collection of information from multiple sources. However, the information they provide is necessary, but not sufficient, to make a definitive diagnosis of ADHD. In addition to assisting in diagnosis, checklists can be helpful in monitoring treatment changes once a diagnosis has been established.

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### ■ CLINICAL COMMENTARY: Gather data from multiple sources

Sorting out children with ADHD, bipolar disorder, or learning disabilities from lively or distractible children is not a simple matter. Often the objective rating scales miss the more passive, less disruptive, inattentive ADHD children while overdiagnosing high-energy children as having ADHD. Perhaps the new *DSM-IV* SNAP will provide the objective sensitivity and specificity we desire as clinicians. However, this checklist requires further evaluation.

Information from ACTeRS scales has helped me treat these children, but I prefer to have both parents, if possible, independently complete the form. Obtaining scales from a Special Education teacher or psychologist, when available, in addition to the primary classroom teacher, is invaluable. Still, it often comes down to how a child responds to medication. Proceed with caution if there is a family history of bipolar disorder, as these children often do worse on stimulants and are better treated by our colleagues in child psychiatry.

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