Attention-deficit/hyperactivity disorder (ADHD) is the most common neurodevelopmental disorder, affecting millions of children, adolescents, and adults in the United States.\textsuperscript{1–3} ADHD is associated with a wide range of comorbid conditions and adverse outcomes, including learning and psychiatric disorders, substance abuse, school failure, increased healthcare costs and utilization, and, by young adulthood, significantly increased risk for suicide.\textsuperscript{4–8} Furthermore, many children will continue to have ADHD in adulthood, accompanied by high rates of comorbid psychiatric conditions.\textsuperscript{4}

Fortunately, despite this worrisome array of adverse outcomes, there are highly effective medical and behavioral treatments that have been shown to be associated with improved outcomes in multiple domains, such as reduced risks for substance use disorders, reduced emergency department visits, and improved school and academic outcomes.\textsuperscript{5,9,10} It is therefore a major public health imperative that clinicians provide optimal diagnostic and treatment services for children and adolescents affected by ADHD, including using ADHD-specific rating scales to guide clinical decision-making. The article by Chang et al\textsuperscript{11} in this issue of Pediatrics provides important information about ADHD rating scales and draws much-needed attention to the critical role that rating scales play in the diagnosis and treatment of childhood ADHD. To establish a diagnosis of ADHD, it is required that impairing symptoms are present in 2 or more settings.\textsuperscript{12} For children, the 2 most important settings are obviously home and school, and the most important observers of child behavior in these settings are parents/guardians and teachers. From a purely practical perspective, the only way to obtain precise information about the symptoms of ADHD from teachers is by using validated ADHD-specific rating scales. The only alternative is for clinicians to communicate directly with teachers, an option that for most clinicians and teachers is simply not possible. In recognition of this reality, the American Academy of Pediatrics ADHD practice guideline explicitly recommends the use of validated ADHD questionnaires for both the initial diagnosis and the monitoring of response to treatment.\textsuperscript{13,14}

Unfortunately, as reported in this journal 1 year ago, rating scales are used only about half the time during initial diagnostic assessments and only 7.5\% (for teacher rating scales) to 10.8\% (for parent rating scales) in the first year after ADHD treatment is initiated by pediatricians to assess response to treatment.\textsuperscript{14}

The diagnosis of ADHD is dependent on precise documentation of behavioral symptoms, as well as assessment of the severity of these symptoms. This practical reality will remain until the hoped-for development of biologically based diagnostic tools. The assessment of response to treatment with medications is...
similarly dependent on comparison of symptoms before and after trials of medication. In the absence of questionnaire data, clinicians are forced to rely on incomplete and imprecise information (e.g., “Sally’s teacher says things seem to be going a bit better, but not by a whole lot.”). With apologies if the following comparison seems overly dramatic, but diagnosing and treating ADHD without rating scales is comparable to diagnosing childhood diabetes based on the presence of polyuria, and titrating insulin doses based on changes in the severity of polyuria, all without ever measuring blood glucose or hemoglobin A1c levels.

In this context, studies such as that by Chang et al highlight the clinical importance of ADHD rating scales while providing information about several specific scales. The study demonstrates that all of the studied scales (Child Behavior Checklist–Attention Problems and several versions of the Conners Rating Scales) have acceptable sensitivity and specificity as diagnostic tools. The meta-analytic approach employed by the authors is ideally suited to extract clinically useful information from available studies. Nevertheless, the paper also highlights several important issues that remain to be addressed by further studies of ADHD rating scales, including conflicting results of teacher versus parent ratings, gender differences, and assessment of symptoms in younger children.

Of perhaps greater importance is the need to develop, implement, and study electronic approaches to overcome the logistical barriers that often prevent clinicians from employing rating scales to guide their care for children with ADHD. I am sympathetic to the pressure to diagnose and treat ADHD in the absence of rating scale information and fortunate to have access to a new, highly efficient electronic system that has dramatically improved the rate at which we are able to obtain rating scales results for patients in my own institution.15 Electronic systems to administer and interpret ADHD rating scales represent the most promising solution to this barrier to optimal treatment of ADHD. It is my sincere hope that the study by Chang et al will help to focus the attention of clinicians on this important issue and promote research aimed at overcoming the barriers that currently prevent us from providing optimal diagnostic and treatment services for children with ADHD.

ABBREVIATION

ADHD: attention-deficit/hyperactivity disorder

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