

The Child Behavior Checklist and Related Forms for Assessing Behavioral/Emotional Problems and Competencies

Thomas M. Achenbach, PhD,* and Thomas M. Ruffle, MD†

OBJECTIVES:

After completing this article, readers should be able to:

1. List the types of behavioral and emotional problems that primary care physicians who work with children must address.
2. Describe the data required from parents, children, teachers, and child care practitioners for assessment of behavioral and emotional problems.
3. Describe systems of questionnaires that can be used for obtaining standardized assessment data.

Introduction

Primary care physicians who work with children must deal with a great variety of behavioral and emotional problems. The system described in this article provides low-cost, standardized assessment and documentation of such problems and requires little effort by the physician.

Primary care physicians are under increasing pressure to obtain standardized documentation for the conditions they encounter. The most obvious pressures stem from managed care. Among the most frequently imposed expectations of primary care physicians are to:

- Be gatekeepers for most forms of care needed by patients.
- Offer increasingly diverse services to more patients while limiting the time spent with each patient.
- Provide extensive documentation for assessments of patients and for treatment and referral.

To fulfill these expectations, physicians need cost-effective procedures for obtaining, using, and transmitting information about patients.

Children's behavioral and emotional problems pose special challenges for meeting such managed care requirements. Certain types of behavioral problems, such as those ascribed to attention deficit hyperac-

tivity disorder (ADHD), are widely publicized as candidates for medical management. Concerned parents, therefore, may request that pediatricians and family practitioners evaluate their children for ADHD. To assess ADHD and other behavioral and emotional problems, physicians need information from people who see children in their everyday contexts. Parents and parent-surrogates are the primary sources of such information for most children. Older children can contribute useful information about their own functioning. Teachers are especially important sources of information when children's functioning in school is relevant, such as when ADHD is suspected.

There are no litmus tests to determine precisely which children have behavioral or emotional disorders. Furthermore, even when a child's behavior is clearly problematic, detailed documentation is needed to pinpoint the specific areas in which the child's behavior deviates from norms for age and gender. Such documentation is needed for deciding what action to take, advising parents, communicating with mental health and special education personnel, and referring to specialists.

The Child Behavior Checklist (CBCL)

The CBCL is a standardized form that parents fill out to describe their children's behavioral and emotional

problems. The version of the CBCL for ages 2 and 3 years (CBCL/2 to 3) can be completed by parents in about 10 minutes. The version for ages 4 to 18 years (CBCL/4 to 18) includes competence items and problems. The problem items can be completed by most parents in about 10 minutes, and the (optional) competence items require an additional 5 to 10 minutes. The CBCL is self-explanatory and can be filled out in a waiting room or can be sent home for completion. If a parent is unable to complete the CBCL independently, a receptionist or other staff member can read the items aloud and enter the parent's answers while the parent follows along on a second copy. For parents whose English skills are poor but who can read other languages, translations are available in 58 languages.

Figure 1 shows the CBCL/2 to 3 filled out for 3-year-old Adam Stern by his mother. For each problem item, parents circle 0 if the item is not true of their child, 1 if the item is somewhat or sometimes true, and 2 if the item is very true or often true. Problem items on the CBCL/4 to 18 resemble those on the CBCL/2 to 3, except that parents rate the CBCL/4 to 18 problem items for the preceding 6 months instead of the 2 months specified on the CBCL/2 to 3. Competence items on the CBCL/4 to 18 assess the child's activities, social relations, and school functioning.

The data obtained with the CBCL are summarized on a profile that displays the parent's ratings of each item. The profile also displays the child's standing on syndromes of problems that were derived from statistical analyses of CBCLs filled out for large numbers of clinically referred children. Each syndrome consists of problems that were found to occur concomitantly. Figure 2 displays the profile for Adam Stern that was scored from the CBCL/2 to 3 filled out by his mother.

*Departments of Psychiatry and Psychology, University of Vermont, Burlington, VT.

†Vermont Child Development Clinic, Burlington, VT.

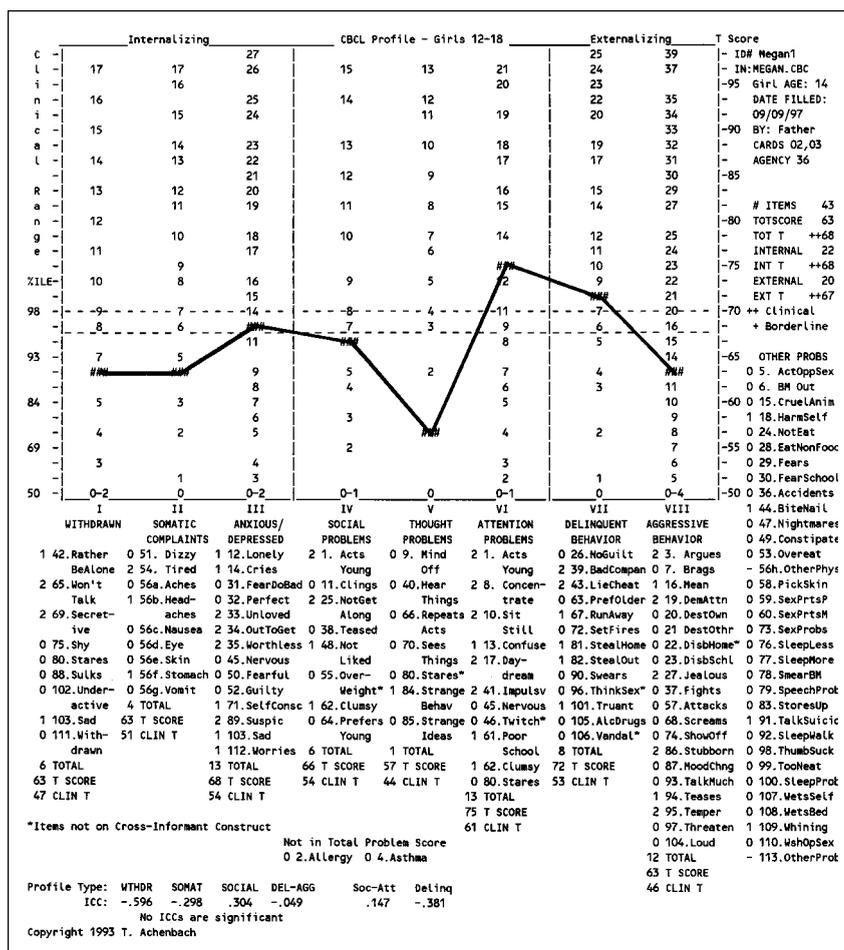


FIGURE 3. Computer-scored profile for Megan Dunn from the CBCL/4 to 18 completed by her father.

specific aspects of the reports may be as valuable as the aspects that are consistent across multiple informants. For example, if Ms. Stern is the only informant who reports aggressive behavior, it would be helpful to ask her about the circumstances in which she observes aggressive behavior and how these circumstances may differ from the circumstances in which Mr. Stern and others see Adam. The physician then can decide among options, such as child-rearing advice for Ms. Stern, further evaluation of Adam, or referral to a specialist. The cross-informant software described later makes it easy for the physician to compare data obtained from different informants about a child.

Obtaining and Scoring CBCL Data

There are several methods for obtaining and scoring CBCL data.

For example, when Ms. Stern arrived for Adam's appointment with his doctor, the doctor's receptionist gave Ms. Stern the CBCL/2 to 3 to fill out in the waiting room and made herself available to answer questions about the form. After Ms. Stern completed the CBCL/2 to 3, which took about 10 minutes, she returned it to the receptionist, who took about 5 minutes to score it by hand on the profile (Fig. 2). (The profile also could be scored by others, such as a clerical worker, nurse, or physician assistant, either by hand or by using a desktop or notebook computer, which would take about 2 minutes.) If the C-TRF had been mailed in by Adam's child care provider or preschool teacher, it also could be scored on the C-TRF profile in about 5 minutes by hand or in 2 minutes by computer. Hand-scoring of the competencies on the CBCL/4 to 18 requires 5 to 7 minutes

in addition to the 5 minutes needed to score the problems. Computer scoring of the competencies is considerably faster and easier than hand-scoring.

COMPUTER SCORING

The most efficient method of scoring forms is via computer with a software package that is compatible with most computers. Personnel who are familiar with word processing can use the software to score all the forms.

Figure 3 shows a computer-scored profile for the CBCL/4 to 18 that was completed for 14-year-old Megan Dunn by her father. The profile is analogous to the hand-scored profile previously illustrated for 3-year-old Adam Stern, although the syndromes of problem items differ somewhat. For example, the CBCL/4 to 18 profile includes a syndrome designated as attention problems that includes many of the types of problems that are ascribed to ADHD.

The CBCL/4 to 18 profile also includes a syndrome designated as delinquent behavior, which comprises unaggressive conduct problems, such as lying, stealing, truancy, and substance use. Together, the CBCL/4 to 18 delinquent behavior and aggressive behavior syndromes include most of the behaviors that are combined in the conduct disorder category of the fourth edition of the American Psychiatric Association's *Diagnostic and Statistical Manual (DSM-IV)*. The CBCL/4 to 18 profile has these separate scales because statistical analyses yielded separate syndromes for unaggressive conduct problems versus aggressive conduct problems. The physician, therefore, can see at a glance whether a child is deviant with respect to unaggressive delinquent behavior, aggressive behavior, neither, or both. The profile displayed in Figure 3 was printed from DOS software; Windows® versions of the software were released in late 1999.

The Youth Self-Report for Ages 11 to 18 (YSR)

Adolescents such as Megan Dunn can be asked to fill out the YSR to describe their own problems and

TABLE 1. Forms Most Likely to be Used by Medical Practitioners

NAME OF FORM	FILLED OUT BY
Child Behavior Checklist for Ages 2 to 3 (CBCL/2-3)	Parents
Caregiver-Teacher Report Form for Ages 2 to 5 (C-TRF)	Child care providers and preschool teachers
Child Behavior Checklist for Ages 4 to 18 (CBCL/4-18)	Parents
Teacher's Report Form for Ages 5 to 18 (TRF)	Teachers
Youth Self-Report for Ages 11 to 18 (YSR)	Youths

TABLE 2. Commonly Asked Questions

1. Who fills out the forms? Parents fill out CBCL, youths fill out YSR, teachers fill out TRF, caregivers and preschool teachers fill out C-TRF
2. Who scores the forms? Clerical worker, receptionist, nurse, or physician assistant
3. How long does it take to score a form? 2 minutes by computer; 5 to 12 minutes by hand
4. What does the physician get? A profile that compares the child with a normative sample of peers on each syndrome (eg, aggressive behavior, attention problems, somatic complaints) plus scores on each specific problem
5. How long does it take the physician to evaluate a profile? 1 to 2 minutes
6. How much do forms cost? <ul style="list-style-type: none"> • 40¢ per CBCL, YSR, and TRF (\$10 per package of 25) • 40¢ per hand-scored profile (\$10 per package of 25; not needed if scoring software is used)
7. What software is available? <ul style="list-style-type: none"> • DOS software is available for scoring all forms • Windows®95/98/NT software was released in 1999
8. Are there faster ways to process the data in busy practices? <ul style="list-style-type: none"> • Scannable "bubble" forms of the CBCL/4-18, YSR, and TRF can be processed by reflective-read scanners, image scanners, and fax • A client-entry program enables parents and youths to enter their responses into a computer
9. Have these forms been well researched? <i>A Bibliography of Published Studies</i> ³ lists more than 3,500 reports of findings obtained with the CBCL and related forms
10. Where can ordering information be obtained? Child Behavior Checklist University Medical Education Associates 1 South Prospect St. Burlington, VT 05401-3456 Fax: 802-656-2602; Tel: 802-656-8313 E-mail: Checklist@uvm.edu; Web: http://Checklist.uvm.edu

competencies. As with the other assessments, the YSR can be filled out in the waiting room and either hand-scored or computer-scored by receptionists, clerical workers, nurses, or physician assistants. The physician then can view the scored profile before seeing the adolescent. If an adolescent's reading skills are in doubt, the YSR can be administered by a receptionist using the procedure described earlier for administering the CBCL to parents whose reading skills are questionable.

The Teacher's Report Form for Ages 5 to 18 (TRF)

For children who attend school, the TRF completed by a child's teacher also can be hand-scored or computer-scored on a profile. The scores obtained from one or more teachers can be compared with those obtained on the CBCL/4 to 18 from one or both parents or surrogates. For 11- to 18-year-olds, the profile scored from self-reports on the YSR also can be compared with the TRF and CBCL profiles.

Cross-Informant Comparisons of Parent, Teacher, and Self-Reports

Comparisons of parents' reports with reports by others, such as teachers and adolescents, are especially helpful for assessing the cross-informant consistency of problems on syndromes such as anxious/depressed, somatic complaints, and attention problems to document the need for further medical assessment or referral for mental health services. To facilitate comparisons among scores from multiple informants, cross-informant software enables users to enter data from each CBCL/4 to 18, TRF, and YSR scored for the same child. The software then produces a profile scored from each form and side-by-side comparisons of the scores obtained from each informant on each item and each syndrome. This enables the user to identify specific problems and specific syndromes on which multiple informants agree versus those on which they disagree.

As an example, side-by-side comparisons of problem items may

TABLE 3. Clinical Conditions For Which The Family of CBCL Forms Has Been Applied

<ul style="list-style-type: none"> • Abdominal pain • Abuse • ADHD • Aggression • Anxiety • Arthritis • Asthma • Autism • Birth defects • Brain damage • Burns • Cancer • Cerebral palsy • Cleft palate • Crohn disease • Cystic fibrosis • Depression • Diabetes • Drug therapies • Eating problems • Encopresis • Enuresis • Epilepsy • Gender problems • Genetic factors • Headaches • Hearing impairment • Heart disease • Hemophilia • Hormones 	<ul style="list-style-type: none"> • Human immunodeficiency virus infection • Language disorders • Lead toxicity • Leukemia • Magnetic resonance imaging • Meningitis • Mental retardation • Neuropathology • Obesity • Obsessive compulsive disorder • Oppositional disorder • Pain • Post-traumatic stress disorder • Prader-Willi syndrome • Preterm birth • Rheumatic disease • School refusal • Separation • Short stature • Sickle cell anemia • Sleep disturbance • Spina bifida • Stress • Substance abuse • Suicide • Temperament • Tourette syndrome • Turner syndrome • Williams syndrome
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professionals to record observations of children's behavior in school classrooms and other group settings. Table 2 presents answers to questions that physicians commonly ask about the forms that they are most likely to use.

Comparisons with Other Forms

In addition to the family of forms described in this article, other forms are available for obtaining ratings of children's problems. Among the best known are those developed by C. Keith Conners⁴ for obtaining parent and teacher ratings of attention problems and hyperactivity. Several scales scored from the Conners parent and teacher forms correlate significantly with scales scored from the CBCL/4 to 18² and TRF⁵. For children suspected of having ADHD, the Conners forms frequently are used in conjunction with the CBCL and TRF. Whereas the Conners forms focus mainly on attention problems and hyperactivity, the CBCL and TRF can be used to determine the extent of a child's problems across a broad spectrum of syndromes.

When ADHD has been diagnosed, brief versions of the Conners forms may be readministered at intervals of approximately once weekly to evaluate the short-term effects of interventions such as stimulant medication. The CBCL and TRF can be used to evaluate the effects of interventions for ADHD across broader ranges of functioning assessed over longer periods. To take into account the distinction that DSM-IV makes between inattentive and hyperactive-impulsive subtypes of ADHD, separate scores can be

reveal a youth reporting suicidal ideation and behavior on the YSR that neither his parents nor teachers report. This would indicate a possible risk for suicide that was not evident to the youth's parents and teachers. In another case, the side-by-side comparisons of syndrome scores might reveal high scores on the attention problems scale by all informants, which would support the need for treatment.

Overview

Table 1 summarizes the forms, age ranges, and informants that are most relevant for assessment by primary care physicians. Related procedures are available for more specialized assessments, including the Semi-structured Clinical Interview for Children and Adolescents (SCICA)¹ and the Direct Observation Form (DOF)², which can be used by para-

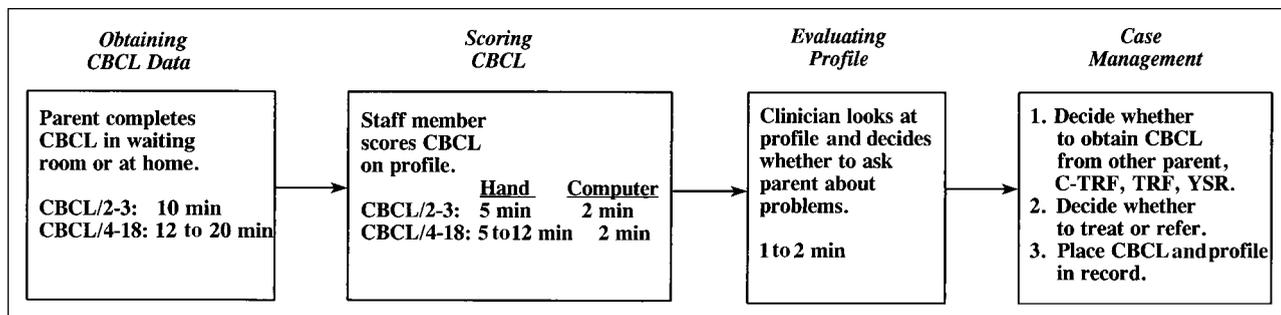


FIGURE 4. Flow chart of typical use of the CBCL in primary care.

computed for inattention and hyperactivity-impulsivity subscales of the TRF attention problems scale. Scores for these subscales are provided by the 1999 Windows[®] software for the TRF and can be obtained by hand-scoring the TRF.

Space limitations preclude systematic comparisons of the CBCL family of forms with other forms for rating children's functioning, but some distinctive features of the CBCL and its related forms include:

1. Diverse behavioral/emotional problems and competencies are assessed on parallel forms completed by parents, teachers, child care providers, and youths. Related forms are available for completion by clinical interviewers and by observers who rate children's behavior in group settings such as classrooms.
2. The forms are scored on profiles that display syndromes derived from multivariate statistical analyses of large samples of clinically referred children.
3. The syndromes reflect actual patterns of problems found among clinically referred children, rather than being based on *a priori* criteria, such as those of DSM-IV.
4. The profiles show how a child's scores on each syndrome compare with scores obtained from national normative samples of children of the child's gender and age, as rated by the relevant type of informant.
5. Manuals for the forms display prevalence rates for each problem plus the distributions of scores for all scales for children of each gender and age.
6. More than 3,500 publications report clinical, developmental, genetic, prognostic, and other correlates of the syndromes found in studies performed in 50 cultures.^{3,6}
7. At least five studies have been published on applications of the forms to each of the topics of potential interest to physicians shown in Table 3.³

Typical Use of the CBCL in Primary Care

Because the CBCL costs only 40 cents and can be scored by cleri-

cal staff, it can be used routinely to assess most children. The physician then can decide whether to review the scored profiles for all cases. Alternatively, the physician can review only the scored profiles on which the staff member scoring the profile notes scores that are deviant or parents express concern about their child. The physician typically can review a profile in 1 to 2 minutes.

In all cases, the completed CBCL and profile can be retained in the child's record to document his or her current functioning, as reported by the parent who completed the CBCL. If the physician elects interventions or referrals, the CBCL can help to document the basis for these decisions. If no action is needed, the CBCL provides a baseline picture of the child's functioning for comparison with CBCLs obtained later. Figure 4 outlines the typical use of the CBCL in primary care settings. For further illustrations of applications to primary care, the *Medical Practitioner's Guide for the Child Behavior Checklist and Related Forms*⁷ can be ordered by mail, phone, fax, or online (see Table 2 for address, phone and fax numbers, e-mail, and Web site).

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PIR QUIZ

Quiz also available online at www.pedsinreview.org.

5. A true statement about the interpretation of the CBCL is that:
 - A. A score below the lower broken line is within the normal range.
 - B. A score between the broken lines is clinically significant and requires immediate intervention.
 - C. A score that falls on the 75th percentile for aggression indicates that 75% of children tested demonstrate aggressive behaviors that are deviant.
 - D. Arbitrarily setting lower cutpoints for scores is not recommended and invalidates the tool.
 - E. Scores must reach the cutpoint before they indicate a need for further evaluation.
6. A true statement about using the CBCL in a clinical setting is that:
 - A. A profile documenting deviance is helpful in supporting a need for further evaluation.
 - B. Although available, the self-report version for completion by older children who can read is not very reliable and, therefore, is not recommended.
 - C. Software for computer scoring is not yet available.
 - D. One form is applicable for all age groups.
 - E. Using input from more than one source (eg, mother, father, child, teacher, or child care provider) usually invalidates the tool.
7. Cross-informant comparisons of parent, teacher/child care provider, and self-reporting:
 - A. Are cumbersome and difficult to incorporate into a busy general pediatric practice.
 - B. Are supported by computer software in older age groups only.
 - C. Can be printed as comparison graphs illustrating results from the various sources.
 - D. Rarely provide useful information.
 - E. Serve primarily to evaluate whether mother and father have similar or disparate child-rearing philosophies.
8. The primary difference between the CBCL and the Conners Rating Scales is that the CBCL:
 - A. Addresses a broader scope of behavior characteristics.
 - B. Cannot be used to evaluate the effects of medications or behavior interventions.
 - C. Has been used only to evaluate children in North America.
 - D. Is not applicable to school-age children.
 - E. Should not be used in conjunction with other surveys.