

# Practice Parameter for the Assessment and Treatment of Children and Adolescents With Anxiety Disorders

## ABSTRACT

This revised practice parameter reviews the evidence from research and clinical experience and highlights significant advancements in the assessment and treatment of anxiety disorders since the previous parameter was published. It highlights the importance of early assessment and intervention, gathering information from various sources, assessment of comorbid disorders, and evaluation of severity and impairment. It presents evidence to support treatment with psychotherapy, medications, and a combination of interventions in a multimodal approach. *J. Am. Acad. Child Adolesc. Psychiatry*, 2007;46(2):267–283. **Key Words:** anxiety disorders, treatment, practice parameter.

Anxiety disorders represent one of the most common forms of psychopathology among children and adolescents, but they often go undetected or untreated. Early

identification and effective treatment may reduce the impact of anxiety on academic and social functioning in youths and may reduce the persistence of anxiety disorders into adulthood. Evidence-supported treatment interventions have emerged in psychotherapy and medication treatment of childhood anxiety disorders that can guide clinicians to improve outcomes in this population.

Accepted September 11, 2006.

This parameter was developed by Sucheta D. Connolly, M.D., Gail A. Bernstein, M.D., and the Work Group on Quality Issues: William Bernet, M.D., and Oscar Bukstein, M.D., Co-Chairs, and Valerie Arnold, M.D., Joseph Beitchman, M.D., R. Scott Benson, M.D., Joan Kinlan, M.D., Jon McClellan, M.D., Ulrich Schoettle, M.D., Jon Shaw, M.D., Saundra Stock, M.D., and Heather Walter, M.D. AACAP Staff: Kristin Kroeger Ptakowski. Research Assistants: Heena Desai, M.D., and Anna Narejko.

A group of invited experts also reviewed the parameter. The Work Group on Quality Issues thanks Boris Birmaher, M.D., Phillip Kendall, Ph.D., Ann Layne, Ph.D., Barbara Milrod, M.D., Thomas Ollendick, Ph.D., Daniel Pine, M.D., and Moira Rynn, M.D., for their thoughtful review.

This parameter was reviewed at the member forum at the 2004 annual meeting of the American Academy of Child and Adolescent Psychiatry.

During September 2005 to January 2006, a consensus group reviewed and finalized the content of this practice parameter. The consensus group consisted of representatives of relevant AACAP components as well as independent experts: William Bernet, M.D., Work Group Co-Chair; Sucheta D. Connolly, M.D., and Gail A. Bernstein, M.D., authors; R. Scott Benson, M.D., Allan K. Chrisman, M.D., and Saundra Stock, M.D., members of the Work Group on Quality Issues; Efrain Bleiberg, M.D., Rachel Z. Ritvo, M.D., and Cynthia W. Santos, M.D., Council Representatives; Gabrielle Shapiro, M.D., Assembly of Regional Organizations Representative; Boris Birmaher, M.D., and Thomas H. Ollendick, Ph.D., independent expert reviewers; and Amy Hereford, Assistant Director of Clinical Practice. Members of the consensus group were asked to identify any conflicts of interest they may have with respect to their role in reviewing and finalizing the content of this practice parameter. One of the consensus group members was on the speakers' bureau for the following pharmaceutical companies: Eli Lilly, Novartis, Ortho-McNeil, and Shire.

This practice parameter was approved by AACAP Council on June 17, 2006.

This practice parameter is available on the Internet ([www.aacap.org](http://www.aacap.org)).

Reprint requests to the AACAP Communications Department, 3615 Wisconsin Avenue, NW, Washington, DC 20016.

0890-8567/07/4602-0267©2007 by the American Academy of Child and Adolescent Psychiatry.

DOI: 10.1097/01.chi.0000246070.23695.06

## METHODOLOGY

The list of references for this parameter was developed by searches of *Medline*, *OVIDMedline*, *PubMed*, and *PsycINFO*; by reviewing the bibliographies of book chapters and review articles; and by asking colleagues for suggested source materials. The searches covered the period 1996 to 2004 and used the following text words: child, adolescent, and anxiety disorders. Each of these papers was reviewed, and only the most relevant references were included in the present document.

## DEFINITIONS

The terminology in this practice parameter is consistent with the *DSM-IV-TR* (American Psychiatric Association, 2001). The major anxiety disorders included in the *DSM-IV-TR* are separation anxiety disorder (SAD), generalized anxiety disorder (GAD), social phobia, specific phobia, panic disorder (with and without agoraphobia), agoraphobia without panic disorder, posttraumatic stress disorder, and obsessive-compulsive disorder. Selective mutism may have a multifactorial etiology, but it is included in this practice

parameter as research indicates that in most cases children with selective mutism also meet criteria for social phobia (Bergman et al., 2002). This practice parameter addresses all of the above-mentioned anxiety disorders with the exception of posttraumatic stress disorder and obsessive-compulsive disorder, which have their own practice parameters.

### DEVELOPMENTAL CONSIDERATIONS

Fear and worry are common in normal children. Clinicians need to distinguish normal, developmentally appropriate worries, fears, and shyness from anxiety disorders that significantly impair a child's functioning. Infants typically experience fear of loud noises, fear of being startled, and later a fear of strangers. Toddlers experience fears of imaginary creatures, fears of darkness, and normative separation anxiety. School-age children commonly have worries about injury and natural events (e.g., storms). Older children and adolescents typically have worries and fears related to school performance, social competence, and health issues (Muris et al., 1998; Vasey et al., 1994). Fears during childhood represent a normal developmental transition and may develop in response to perceived dangers, but they become problematic if they do not subside with time and if they impair the child's functioning.

In children of preschool age, there is some emerging evidence that clear subtypes of anxiety may be less differentiated than in primary schoolchildren (Spence et al., 2001). The clinical impact of these anxiety symptoms may be significant even if full criteria are not met.

### CLINICAL PRESENTATION

Children with anxiety disorders may present with fear or worry and may not recognize their fear as unreasonable. Commonly they have somatic complaints of headache and stomachache. The crying, irritability, and angry outbursts that often accompany anxiety disorders in youths may be misunderstood as oppositionality or disobedience, when in fact they represent the child's expression of fear or effort to avoid the anxiety-provoking stimulus at any cost. A specific diagnosis is determined by the context of these symptoms.

Youths with SAD display excessive and developmentally inappropriate fear and distress concerning separa-

tion from home or significant attachment figures. This distress can be displayed before separation or during attempts at separation. These children worry excessively about their own or their parents' safety and health when separated, have difficulty sleeping alone, experience nightmares with themes of separation, frequently have somatic complaints, and may exhibit school refusal.

Specific phobia is fear of a particular object or situation that is avoided or endured with great distress. A specific fear can develop into a specific phobia if symptoms are significant enough to result in extreme distress or impairment related to the fear. It is common for youths to present with more than one specific phobia, but this does not constitute a diagnosis of GAD.

GAD is characterized by chronic, excessive worry in a number of areas such as schoolwork, social interactions, family, health/safety, world events, and natural disasters with at least one associated somatic symptom. Children with GAD have trouble controlling their worries. These children are often perfectionistic, show high reassurance seeking, and may struggle with more internal distress than is evident to parents or teachers (Masi et al., 1999). The worries of GAD are not limited to a specific object or situation, and worry is present most of the time.

Social phobia is characterized by feeling scared or uncomfortable in one or more social settings (discomfort with unfamiliar peers and not just unfamiliar adults) or performance situations (e.g., music, sports). The discomfort is associated with social scrutiny and fear of doing something embarrassing in social settings such as classrooms, restaurants, and extracurricular activities. These children may have difficulty answering questions in class, reading aloud, initiating conversations, talking with unfamiliar people, and attending parties and social events.

It is common for youths with GAD to have worries in the social domain, but these differ in several ways from worries associated with social phobia. Youths with GAD worry about a variety of areas and not just performance and social concerns. Youths with GAD worry about the quality of their relationships rather than experiencing embarrassment or humiliation in social situations. The anxiety associated with social phobia usually dissipates upon avoidance or escape from the social situation, but anxiety associated with GAD is persistent.

Children with selective mutism persistently fail to speak, read aloud, or sing in specific situations (e.g., school) despite speaking in other situations (e.g., with family and in the home environment). These children may whisper or communicate nonverbally with select individuals such as peers or teachers in some situations. Most of these children also have symptoms of social phobia, and selective mutism may be a subtype or earlier developmental manifestation of social phobia (Bergman et al., 2002). An audio- or videotape that substantiates normal speech and language in at least one setting is recommended, along with ruling out a communication disorder, neurological disorder, or pervasive developmental disorder.

Panic disorder is characterized by recurrent episodes of intense fear that occur unexpectedly. These uncued, episodic panic attacks include at least 4 of 13 symptoms from *DSM-IV-TR* such as pounding heart, sweating, shaking, difficulty breathing, chest pressure/pain, feeling of choking, nausea, chills, or dizziness. Youths with panic disorder fear recurrent panic attacks and their consequences, and they may develop avoidance of particular settings where attacks have occurred (agoraphobia). Cued panic attacks can occur with any of the anxiety disorders, are common among adolescents, and need to be distinguished from panic disorder, which occurs at a much lower rate (Birmaher and Ollendick, 2004). The uncued attacks of panic disorder are not limited to separation, a feared object/situation, social situations/evaluation, or other environmental cues.

## EPIDEMIOLOGY

Prevalence rates for having at least one childhood anxiety disorder vary from 6% to 20% over several large epidemiological studies (Costello et al., 2004). Strict adherence to diagnostic criteria and consideration of functional impairment, rather than just the presence of anxiety symptoms, bring the rates down substantially. Referral biases can also dramatically alter prevalence rates. This is complicated by evidence that disability can be associated with subthreshold anxiety symptoms that may not meet full criteria for a *DSM-IV* diagnosis (Angold et al., 1999).

In general, girls are somewhat more likely than boys to report an anxiety disorder, but more specifically this has been shown for specific phobia, panic disorder, agoraphobia, and SAD. The average age at onset of any

single anxiety disorder varies widely between studies, but panic disorder often emerges later in the mid-teen years (Costello et al., 2004).

The long-term course of childhood anxiety disorders remains controversial. Despite remission of some initial anxiety disorders, children may develop new anxiety disorders over time (Last et al., 1996) or in adolescence (Aschenbrand et al., 2003). The more severe the anxiety disorder and the greater the impairment in functioning, the more likely it is to persist (Dadds et al., 1997, 1999; Manassis and Hood, 1998). Children and adolescents with anxiety disorders are at risk of developing new anxiety disorders, depression, and substance abuse. A prospective study found anxiety and depressive disorders in adolescence predicted approximately a two- to threefold increased risk of anxiety or depressive disorders in adulthood (Pine et al., 1998). A longitudinal study of New Zealand children found that adolescents with anxiety disorders have elevated rates of anxiety, major depression, illicit-drug dependence, and educational underachievement as young adults (Woodward and Fergusson, 2001).

The sequelae of childhood anxiety disorders include social, family, and academic impairments. Anxiety disorders disrupt the normal psychosocial development of the child (e.g., children with severe social phobia may not socialize with other children; children with SAD may not have the opportunity to develop independence from adults). Social problems include poor problem-solving skills and low self-esteem (Messer and Beidel, 1994). Anxious children interpret ambiguous situations in a negative way and may underestimate their competencies (Bogels and Zigterman, 2000). In a prospective study, first graders who reported high levels of anxiety symptoms were at significant risk of persistent anxiety symptoms and low achievement scores in reading and math in fifth grade (Ialongo et al., 1995).

## RISK AND PROTECTIVE FACTORS

The development of anxiety disorders in children and adolescents involves an interplay between risk and protective factors (Spence, 2001). Biological risk factors include genetics and child temperament. Several twin studies present evidence of genetic and shared environmental contributions to childhood anxiety (Eley, 2001). The temperamental style of behavioral inhibition in early childhood increases the likelihood of anxiety

disorders in middle childhood (Biederman et al., 1993) and social phobia in adolescence (Kagan and Snidman, 1999). Parental anxiety disorder has been associated with increased risk of anxiety disorder in offspring (Biederman et al., 2001; Merikangas et al., 1999) and high levels of functional impairment in children with childhood anxiety disorders (Manassis and Hood, 1998).

Studies of environmental risk factors in the development of childhood anxiety disorders have focused on parent-child interactions and parental anxiety. Anxious parents can model fear and anxiety, reinforce anxious coping behavior, and unwittingly maintain avoidance, despite their desire to be of help to their child (Dadds and Roth, 2001; Muris et al., 1996). Overprotective, overcontrolling, and overly critical parenting styles that limit the development of autonomy and mastery may also contribute to the development of anxiety disorders in children with temperamental vulnerability (Hirshfeld et al., 1997; Rapee, 1997). Insecure attachment relationships with caregivers (Manassis et al., 1994) and, specifically, anxious/resistant attachment (Warren et al., 1997) can increase the risk of childhood anxiety disorders.

Children's coping skills have been considered to be protective factors in childhood anxiety disorders (Spence, 2001). Learning to use active coping strategies, distraction strategies, and problem-focused rather than avoidant-focused coping have been encouraged in anxious youths (Ayers et al., 1996).

## RECOMMENDATIONS

Each recommendation in this parameter is identified as falling into one of the following categories of endorsement, indicated by an abbreviation in brackets following the statement. These categories indicate the degree of importance or certainty of each recommendation.

[MS] *Minimal standards* are recommendations that are based on rigorous empirical evidence (such as randomized, controlled trials) and/or overwhelming clinical consensus. Minimal standards are expected to apply more than 95% of the time (i.e., in almost all cases).

[CG] *Clinical guidelines* are recommendations that are based on empirical evidence and/or strong clinical consensus. Clinical guidelines apply approximately 75% of the time (i.e., in most cases). These practices

should almost always be considered by the clinician, but there are significant exceptions to their universal application.

[OP] *Options* are practices that are acceptable, but there may be insufficient empirical evidence and/or clinical consensus to support recommending these practices as minimal standards or clinical guidelines.

[NE] *Not endorsed* refers to practices that are known to be ineffective or contraindicated.

The recommendations of this parameter are based on a thorough review of the literature as well as clinical consensus. The following coding system is used to indicate the nature of the research that supports the recommendations:

[rdb] *Randomized, double-blind clinical trial* is a study of an intervention in which subjects are randomly assigned to either treatment or control groups and both subjects and investigators are blind to the assignments.

[rct] *Randomized clinical trial* is a study of an intervention in which subjects are randomly assigned to either treatment or control groups.

[ct] *Clinical trial* is a prospective study in which an intervention is made and the results are followed longitudinally.

## SCREENING

Recommendation 1. The Psychiatric Assessment of Children and Adolescents Should Routinely Include Screening Questions About Anxiety Symptoms [MS].

With the high prevalence of anxiety disorders in children and adolescents, routine screening for anxiety symptoms during the initial mental health assessment is recommended. Screening questions should use developmentally appropriate language and be based on *DSM-IV-TR* criteria. Obtaining information about anxiety symptoms from multiple informants including the youths and adults (parents and/or teachers) is essential because of variable agreement among informants (Choudhury et al., 2003). Children may be more aware of their inner distress and parents or teachers may underestimate the severity or impact of anxiety symptoms in the child (e.g., GAD). However, adults may better appreciate the impact of anxiety on family or school functioning (e.g., SAD, social phobia). In addition, the anxious child's concerns

about performance during the assessment and desire to please the interviewer can affect the child's report (Kendall and Flannery-Schroeder, 1998).

For youths 8 years and older, self-report measures for anxiety such as the Multidimensional Anxiety Scale for Children (March et al., 1997) or Screen for Child Anxiety Related Emotional Disorders (Birmaher et al., 1999) can assist with screening and monitoring response to treatment. Further details on these and other anxiety measures are available in recent excellent reviews by Langley et al., 2002 and Myers and Winters, 2002). Screening tools for young children with anxiety disorders are being studied and focus on parent report measures (Spence et al., 2001).

## EVALUATION

**Recommendation 2.** If the Screening Indicates Significant Anxiety, Then the Clinician Should Conduct a Formal Evaluation to Determine Which Anxiety Disorder May Be Present, the Severity of Anxiety Symptoms, and Functional Impairment [MS].

For anxiety disorders, this evaluation should include differentiating anxiety disorders from developmentally appropriate worries or fears. Significant psychosocial stressors or traumas should be carefully considered during the evaluation to determine how they may be contributing to the development or maintenance of anxiety symptoms. Research in very young children is limited, but using play narrative assessment along with pictures, cartoons, and puppets to communicate during the diagnostic interview can be helpful (Warren and Dadson, 2001). Differentiating the specific anxiety disorders can be challenging.

Although formal psychological testing or questionnaires are not required for the evaluation of anxiety disorders, there are several instruments that may be helpful in supplementing the clinical interview in youths 6-17 years old and in differentiating the specific anxiety disorders. Clinicians may use sections of the available diagnostic interviews such as the Anxiety Disorders Interview Schedule for *DSM-IV*-Child Version (ADIS; Silverman and Albano, 1996) or a checklist based on *DSM-IV* criteria (Langley et al., 2002; Silverman and Ollendick, 2005). Measures for assessment and follow-up of specific anxiety disorders including social phobia, selective mutism, and specific phobia are also available (Myers and Winters, 2002).

The clinician should ask the parent and child about symptom severity and impairment in functioning along with the presence of anxiety symptoms during the assessment for childhood anxiety disorders (Manassis and Hood, 1998). The ADIS has a Feelings Thermometer (ratings from 0-8) to help children quantify and self-monitor ratings of fear and interference with functioning. The ADIS has clinicians ask how much [type of anxiety] has "messed things up" for the child and stops the child from doing things he or she likes to do. Younger children may use more developmentally appropriate visual analogues such as smiley faces and upset faces to rate severity and interference.

**Recommendation 3.** The Psychiatric Assessment Should Consider Differential Diagnosis of Other Physical Conditions and Psychiatric Disorders That May Mimic Anxiety Symptoms [MS].

Psychiatric conditions that may present with symptoms similar to those seen in anxiety disorders include attention-deficit/hyperactivity disorder (ADHD; restlessness, inattention); psychotic disorders (restlessness and/or social withdrawal); pervasive developmental disorders, especially Asperger's disorder (social awkwardness and withdrawal, social skills deficits, communication deficits, repetitive behaviors, adherence to routines); learning disabilities (persistent worries about school performance); bipolar disorder (restlessness, irritability, insomnia); and depression (poor concentration, sleep difficulty, somatic complaints; Manassis, 2000).

Physical conditions that may present with anxiety-like symptoms include hyperthyroidism, caffeinism (including from carbonated beverages), migraine, asthma, seizure disorders, and lead intoxication. Less common in youths are hypoglycemia, pheochromocytoma, CNS disorder (e.g., delirium, brain tumors), and cardiac arrhythmias. Prescription drugs with side effects that may mimic anxiety include antiasthmatics, sympathomimetics, steroids, selective serotonin reuptake inhibitors (SSRIs), antipsychotics (akathisia), haloperidol, pimozide (neuroleptic-induced SAD), and atypical antipsychotics. Nonprescription drugs with side effects that may mimic anxiety include diet pills, antihistamines, and cold medicines.

Childhood anxiety disorders are commonly associated with somatic symptoms, such as headaches and abdominal complaints. The mental health assessment should be considered early in the medical evaluation

process for youths with somatic complaints. It is important to assess somatic symptoms at baseline before initiating treatment to help the child and parents understand these symptoms and their relationship to the anxiety. Documenting physical symptoms before treatment with medication will decrease the likelihood of mistaking baseline somatic complaints as medication side effects.

## TREATMENT

### Recommendation 4. Treatment Planning Should Consider a Multimodal Treatment Approach [CG].

A multimodal treatment approach for children and adolescents with anxiety disorders should consider education of the parents and the child about the anxiety disorder, consultation with school personnel and primary care physicians, cognitive-behavioral interventions, psychodynamic psychotherapy, family therapy, and pharmacotherapy. Selection of the specific treatment modalities for an individual child and family in clinical practice involves consideration of psychosocial stressors, risk factors, severity and impairment of the anxiety disorder and comorbid disorders, age and developmental functioning of the child, and family functioning. In addition, child and family factors such as attitudes or acceptance of a particular intervention and provider-practitioner factors such as training, access to evidence-based interventions, and affordability of such interventions need to be considered.

### Recommendation 5. Treatment Planning Should Consider Severity and Impairment of the Anxiety Disorder [CG].

Until evidence from comparative studies inform clinical practice, treatment of childhood anxiety disorders of mild severity should begin with psychotherapy. Valid reasons for combining medication and treatment with psychotherapy include the following: need for acute symptom reduction in a moderately to severely anxious child, a comorbid disorder that requires concurrent treatment, and partial response to psychotherapy and potential for improved outcome with combined treatment (March, 2002; Ollendick and March, 2004). Residual anxiety disorder symptoms can increase the risk for maintenance or relapse of the same or a comorbid anxiety disorder (Birmaher et al., 2003 [rdb]; Dadds et al., 1997 [rct]). Therefore, it is

recommended that functional impairment, not just anxiety symptom reduction, be monitored during the treatment process.

Several studies suggest that for youths with anxiety disorders, greater severity of anxiety symptoms or older age have been predictors of poor treatment response for cognitive-behavioral therapy (CBT) alone (Barrett et al., 1996 [rct]; Last et al., 1998 [rct]; Layne et al., 2003; Southam-Gerow et al., 2001) and SSRIs alone (Birmaher et al., 2003 [rdb]; RUPP Anxiety Group, 2003). Southam-Gerow et al. (2001) suggested the “dose” or intensity of treatment may need to be increased (based on symptom severity or age), integration of a parent/family component to treatment may need to be considered, and adjunctive interventions may be needed to target specific symptoms in some youths (e.g., social skills training for social phobia) to improve treatment outcome. Only one published controlled study has examined a combined treatment approach with medication and psychosocial interventions. In school-refusing adolescents with severe anxiety and depression, imipramine plus CBT was more efficacious than placebo plus CBT in improving school attendance and reducing depressive symptoms (Bernstein et al., 2000 [rdb]). However, without continued intensive treatment, a substantial number of subjects met criteria for anxiety and/or depressive disorders 1 year after treatment (Bernstein et al., 2001).

Controlled studies are under way that examine the comparative efficacy of medications versus psychotherapeutic interventions alone and in combination for youths with anxiety disorders. These studies may help the clinician choose the most effective treatment modalities in a given child and for a specific anxiety disorder. The Child/Adolescent Anxiety Multimodal Treatment Study is a placebo-controlled study that compared the effectiveness of sertraline, CBT, CBT plus sertraline, and pill placebo in youths with SAD, social phobia, and GAD (National Institutes of Health Clinical Trials Web Site, 2003).

### Recommendation 6. Psychotherapy Should Be Considered as Part of the Treatment of Children and Adolescents With Anxiety Disorders [CG].

Among the psychotherapies, exposure-based CBT has received the most empirical support for the treatment of anxiety disorders in youths (Compton et al., 2004). CBT is a psychotherapeutic intervention

supported by numerous randomized, controlled trials in youths with anxiety disorders. However, although CBT has been shown to reduce anxiety symptoms and to be superior to waitlist control (WLC), relative efficacy and effectiveness versus alternative therapeutic interventions still needs to be investigated.

#### COGNITIVE-BEHAVIORAL THERAPY

In CBT, the clinician teaches the child adaptive coping skills and provides practice opportunities to develop a sense of mastery over anxiety symptoms or situations that are associated with distress and impairment. Albano and Kendall (2002) describe five components of CBT for childhood anxiety disorders: psychoeducation with child and parents about the illness and CBT, somatic management skills training (e.g., relaxation, diaphragmatic breathing, self-monitoring), cognitive restructuring (e.g., challenging negative expectations and modifying negative self-talk), exposure methods (e.g., imaginal and in vivo exposure with gradual desensitization to feared stimuli), and relapse prevention plans (e.g., booster sessions and coordination with parents and school). Depending on the anxiety disorder, different components are emphasized more strongly. Positive, contingent reinforcement schedules help to increase motivation for children to attempt exposures that increase their anxiety initially. Parents learn relaxation techniques and function as CBT coaches. Adherence to the CBT model is important, but flexibility that considers the individual and family factors, comorbidity, and psychosocial stressors is necessary for treatment success (Albano and Kendall, 2002).

The most widely used and best researched manual-based CBT protocol for youths with anxiety disorders (ages 7–14) is the Coping Cat program (Kendall, 1990) and adaptations of this program in Australia (Coping Koala) and Canada (Coping Bear). The Coping Cat program has been given the designation “probably efficacious” based on standards of empirical support (Ollendick and King, 1998). The program is designed for children with SAD, GAD, and social phobia. Several studies comparing individual CBT and WLC used the Coping Cat and found clinically significant improvement with active treatment versus WLC (Kendall, 1994 [rct]; Kendall and Southam-Gerow, 1996 [rct]; Kendall et al., 1997 [rct]). Treatment gains

were maintained at 1 year (Kendall, 1994 [rct]; Kendall et al., 1997 [rct]) and at long-term follow-up assessments (2–5 years; Kendall and Southam-Gerow, 1996). A number of studies have also demonstrated efficacy of group CBT (with and without parental involvement) in youths (Barrett, 1998 [rct]; Flannery-Schroeder and Kendall, 2000 [rct]; Manassis et al., 2002 [ct]; Muris et al., 2001 [ct]; Silverman et al., 1999a [rct]). Some of these studies suggested that individual CBT may be preferred to group CBT in some subgroups of children such as those with comorbid ADHD or severe trauma (Muris et al., 2001) or in children with high levels of social anxiety (Manassis et al., 2002).

Several CBT studies have examined CBT in the treatment of anxiety-related school refusal behavior. One study compared individual CBT plus parent and teacher training to WLC (King et al., 1998 [rct]). The children treated with CBT showed significantly greater improvement compared with controls in multiple areas of functioning. Another randomized study compared CBT to educational support for youths with school refusal (Last et al., 1998 [rct]). Both treatments showed significant treatment gains, and CBT was not superior to educational support. Clinically, learning disorders and language impairments should also be considered. A multimodal approach that included CBT and medication was found to be more effective than CBT plus placebo for adolescents with anxiety-based school refusal and comorbid depression (Bernstein et al., 2001 [rdb]).

CBT for specific phobia differs from CBT for GAD, social phobia, and SAD in its focus on graded exposure (Velting et al., 2004). Treatment is also likely to include cognitive modification of unrealistic fears and participant modeling (demonstrations by therapist and parent of approaching feared objects or situations). Treatment outcome studies that have included children with specific phobias have indicated that their response to treatment is positive and comparable with that of children with other anxiety disorders (e.g., Berman et al., 2000).

To provide modifications for social phobia, Spence et al. (2000) have advocated for the inclusion of social skills training and increased social opportunities along with the core CBT components. Compared with nonanxious peers, children with social phobia showed poorer social skills (Spence et al., 1999) and functional limitations such as few friends, low participation in

activities, and common use of avoidant coping (Beidel et al., 1999). Spence et al. (2000 [rct]) reported that in comparison with WLC, children with social phobia receiving group CBT plus social skills training had significantly greater reductions in social anxiety and increased ratings of social skills.

Modification of standard CBT for panic disorder and selective mutism may benefit from some unique components that require further study to establish efficacy. The components suggested for panic disorder are interoceptive exposure (exposure to physical sensations associated with panic such as dizziness, shortness of breath, and sweating by using exercises that induce these sensations) and education about the physiological processes that lead to these physical sensations (Ollendick, 1995 [ct]). Case studies in selective mutism encourage individualized, multimodal treatment plans. Modifications suggested for selective mutism include parents and teachers as part of the "management team" to monitor the child's communication at home and school and emphasize positive reinforcement when the child attempts steps on a graded exposure ladder. Steps that precede full verbalization may include relaxed nonverbal participation, mouthing words, speaking to parent at school, and whispering to peers or teachers. Adults, siblings, and classmates are encouraged not to speak for the child (Fung et al., unpublished, 2006, *Meeky Mouse Therapy Manual: A Cognitive Behavioural Treatment Program for Children with Selective Mutism*. Contact: Sandra Mendlowitz, Ph.D., Department of Psychiatry, Hospital for Sick Children, 555 University Avenue, Toronto, Ontario M5G 1X8.).

The critical components of the full CBT program that are essential to treatment gains still need to be explored. For information about modifications of the standard CBT protocol that have been recommended in older adolescents and young children, see Hirshfeld-Becker and Biederman (2002); Southam-Gerow et al. (2001), and Warren and Dadson (2001). It is interesting that educational support (as an attention-placebo control condition) had a high response rate in two studies and efficacy comparable with the CBT condition in youths with anxiety disorders (Last et al., 1998 [rct]; Silverman et al., 1999b [rct]). This control condition included nonspecific support and psychoeducation about the nature, causes, and course of anxiety disorders. These studies suggest that psychoeducation and supportive therapy may lead to self-directed

exposure and in turn reduce anxiety. Thus, additional research is needed to determine whether CBT is superior to alternative psychosocial interventions for children with anxiety disorders.

In some parts of the United States, a comprehensive CBT program for anxiety disorders may not be readily available. In such instances, the following components of CBT may be considered: educational support (provide supportive treatment and educate the child and family about anxiety disorders) (Last et al., 1998 [rct]; Silverman et al., 1999b [rct]) and psychoeducation based on CBT principles, parent training (guidance to establishing a structured program for monitoring anxious behavior in the home that includes setting up expectations, rewards, and contingencies) and case management support that includes contact with the school (Chavira and Stein, 2002 [ct]; Labellarte et al., 1999). The child and family may also be encouraged to read about childhood anxiety disorders and interventions with CBT (Connolly et al., 2006; Manassis, 1996; Rapee et al., 2000).

The current evidence offers support for the short-term efficacy (Flannery-Schroeder and Kendall, 2000; Kendall et al., 1997; Silverman et al., 1999a) and long-term effectiveness (Barrett et al., 2001; Kendall et al., 2004) of child-focused CBT for childhood anxiety. However, child-focused CBT is not effective for all children with anxiety disorders, and about 20% to 50% may continue to meet criteria for an anxiety disorder after treatment (Barrett et al., 1996; Kendall, 1994; Kendall et al., 1997). Given limitations in the translation of CBT to community practice, a broad array of psychosocial interventions and multimodal treatments need to be flexibly considered so that individual children and families receive the most comprehensive treatment available to them.

## PSYCHODYNAMIC PSYCHOTHERAPY

Numerous case studies indicate the benefits of psychodynamic psychotherapy (Goldberger, 1995; McGehee, 2005; Novick, 1974). However, there is limited research on efficacy or effectiveness of psychodynamic psychotherapy alone, in combined treatments, or compared with other modalities (Lis et al., 2001). A few empirical studies evaluate the effectiveness of psychodynamic psychotherapy for anxious youths and young adults (Milrod et al., 2005; Muratori et al., 2003;

Target and Fonagy, 1994). These studies highlight the importance of considering “dosing” or intensity of treatment interventions.

Psychodynamic therapists understand anxiety as a signal of internal distress and conflict that motivates the individual to employ internalized, largely unconscious coping strategies, defense mechanisms, and compromise formations. Anxiety disorders result when the signaling system becomes dysfunctional and the signals interfere with normal behavior and development. The goal of psychodynamic psychotherapy is to bring the anxiety back to functional levels and for the child to regain a healthy developmental trajectory.

Psychodynamic psychotherapy for anxiety disorders uses a case formulation informed by one or more of several psychodynamic theoretical perspectives (ego psychology, object relationships, attachment, temperament, motivational, self-psychology, and intersubjective) and incorporates the assessment of the patient’s developmental accomplishments and difficulties. Supportive and expressive techniques are used to decrease internal conflict and enhance regulation of affect and impulses, allowing the individual to develop appropriate signal anxiety.

A retrospective chart review from the Anna Freud Centre included 352 children who met *DSM-III-R* criteria for anxiety or depressive disorders (Target and Fonagy, 1994). Children received full psychoanalysis or psychodynamic therapy one to three times per week for an average of 2 years. There was improvement in adaptation based on Children’s Global Assessment Scale ratings in 72% of children who received either treatment for at least 6 months. Children with anxiety disorders, with or without other comorbidities, showed more improvement than children with other disorders. Anxiety disorders with focused symptoms such as phobic disorders were most likely to remit with equal response to either treatment, and more pervasive anxiety disorders were less likely to remit or required more frequent and intensive treatment for remission.

A 2-year follow-up in Italy of time-limited (11-week) psychodynamic psychotherapy with children who met *DSM-IV* criteria for depressive or anxiety disorders (mainly dysthymia, SAD, or phobias) evaluated short- and long-term effects (Muratori et al., 2003 [non-randomized controlled trial]). Children were assigned

to psychodynamic therapy or community services as usual (comparison group). The psychodynamic protocol included parents in the therapeutic process. Significant improvement in the psychodynamic therapy group versus comparison group was demonstrated on the Children’s Global Assessment Scale at 6-month follow-up ( $p < .05$ ) and the Child Behavior Checklist scale scores at 2-year follow-up ( $p < .05$  to  $p < .01$ ). Also, a benefit of the psychodynamic intervention was suggested by less frequent use of mental health services by patients who received this treatment versus comparison group.

An open case series examined panic-focused psychodynamic psychotherapy with modifications for adolescents and young adults in eight patients (18-21 years old) with panic disorder using a 12-week, twice-weekly, manual-based protocol (Milrod et al., 2005 [ct]). The adolescents met *DSM-IV* criteria for panic disorder with agoraphobia and were seriously impaired. The protocol is designed to address psychodynamic core conflicts in panic disorder such as separation and dependency, recognition and management of anger toward attachment figures and significant others, and perceived dangers of sexual excitement. The protocol is flexible and includes the possibility of parent participation based on developmental needs of the patient. Results showed remission of panic disorder in all eight subjects.

In summary, although there is extensive clinical experience with psychodynamic psychotherapy for childhood anxiety disorders, clinical trials research is sparse. More controlled studies are needed to delineate the efficacy and effectiveness of psychodynamic treatments for anxious youths.

#### PARENT-CHILD AND FAMILY INTERVENTIONS

Research and clinical experience suggest that parents and families may play an important role in the development and maintenance of childhood anxiety. Parental anxiety, parenting styles, insecure attachment, and parent-child interactions are risk factors that may not be addressed by child-focused interventions. Interventions that improve parent-child relationships, strengthen family problem solving, reduce parental anxiety, and foster parenting skills that differentially reinforce adaptive coping and appropriate autonomy in the child are often incorporated into a range of

psychotherapeutic interventions with anxious children. Clinicians who conduct CBT and psychodynamic psychotherapy with anxious children routinely involve parents in the treatment process.

Involvement of parents in the CBT process for child anxiety (beyond standard psychoeducation and coaching) was examined in several trials primarily with WLCs (Barrett, 1998 [rct]; Barrett et al., 1996 [rct], 2001 [rct]; Cobham et al., 1998 [ct]; Mendlowitz et al., 1999 [ct]; Spence et al., 2000 [rct]). One of these studies showed significant additional benefit on several outcome measures when a parent component is added to child CBT (Barrett et al., 1996). Another study found additional benefit for child anxiety when parental anxiety management was added to child CBT if there was an anxious parent (Cobham et al., 1998). A recent study compared group CBT for children, group CBT for children plus parent training group, and no-treatment control (Bernstein et al., 2005 [rct]). CBT was significantly more effective than no-treatment control in decreasing child anxiety and associated functional impairment. Group CBT plus parent training compared to group CBT alone resulted in additional benefits for children on several outcome measures. The benefits of adding a parental component to standard CBT for childhood anxiety as well as other interventions targeting parents or family need further study. Parent involvement may be most critical when the parent is anxious.

Family therapy examines issues in the context of family structure and process rather than focusing on an individual. A number of parenting and family variables have been examined in families of children with anxiety disorders (Ginsburg and Schlossberg, 2002). High maternal emotional overinvolvement appears to be connected with SAD in at-risk children (Hirshfeld et al., 1997), and maternal criticism and control may be associated with childhood anxiety (Rapee, 1997; Siqueland et al., 1996). Dadds and Roth (2001) propose an integrative model for family treatment with anxious children that considers the established interaction between attachment and parent-child learning processes, taking into account behavioral and temperamental characteristics of both the child and parent. Further empirical studies in family therapy with anxious children and integration with other established interventions are needed.

#### Recommendation 7. SSRIs Should Be Considered for the Treatment of Youths With Anxiety Disorders [CG].

SSRIs have emerged as the medication of choice in the treatment of childhood anxiety disorders. When anxiety disorder symptoms are moderate or severe or impairment makes participation in psychotherapy difficult, or psychotherapy results in a partial response, treatment with medication is recommended (Birmaher et al., 1998; Labellarte et al., 1999). Recent randomized, placebo-controlled trials with the SSRIs have established the short-term efficacy of SSRIs in the treatment of childhood anxiety disorders (Table 1), including selective mutism with social phobia (Black and Uhde, 1994 [rdb]), GAD, social phobia, and SAD (Birmaher et al., 2003 [rdb]; RUPP Anxiety Study Group, 2001 [rct]; Rynn et al., 2001 [rdb]; Wagner et al., 2004 [rdb]). In February 2004, the U.S Food and Drug Administration issued a black-box warning and advised clinicians to carefully monitor pediatric patients receiving treatment with antidepressants (including SSRIs) for worsening depression, agitation, or suicidality, particularly at the beginning of medication treatment or during dose changes. This warning is based on review of studies with adolescents whose primary diagnosis was depression, not studies of youths with anxiety.

SSRIs have generally been well tolerated for childhood anxiety disorders, with mild and transient side effects that included gastrointestinal symptoms, headaches, increased motor activity, and insomnia. Less common side effects such as disinhibition should also be monitored. The clinician should routinely screen for bipolar disorder or family history of bipolar in youths before treatment with an SSRI.

Greater severity of illness and presence of social phobia predicted a less favorable outcome for youths with SAD, GAD, and social phobia when fluvoxamine was compared with placebo (RUPP Anxiety Group, 2003). In another study, youths with social phobia and GAD responded significantly better to fluoxetine than placebo (Birmaher et al., 2003 [rdb]). However, clinical response to fluoxetine for youths with SAD was not significantly different from that to placebo. Severity of illness at intake and positive family history of anxiety disorders predicted poorer response at posttreatment.

**TABLE 1**  
Placebo-Controlled Pharmacological Treatment Studies

Author	Treatment	Demographics	Diagnoses	Results
<b>SSRIs</b>				
Black and Uhde, 1994 [rdb]	Fluoxetine (12–27 mg/d)	<i>N</i> = 15, 6–11 y.o.	SM plus SoP or AD	Fluoxetine > PLC
RUPP, 2001 [rct]	Fluvoxamine (50–250 mg/d child, max 300 mg/d adolescent)	<i>N</i> = 128, 6–17 y.o.	SoP, SAD, GAD	Fluvoxamine > PLC
Rynn et al., 2002 [rdb]	Sertraline (50 mg/d)	<i>N</i> = 22, 5–17 y.o.	GAD	Sertraline > PLC
Birmaher et al., 2003 [rdb]	Fluoxetine (20 mg/d)	<i>N</i> = 74, 7–17 y.o.	GAD, SoP SAD	Fluoxetine > PLC Fluoxetine = PLC
Wagner et al., 2004 [rdb]	Paroxetine (10–50 mg/d)	<i>N</i> = 322, 8–17 y.o.	SoP	Paroxetine > PLC
<b>Other antidepressants</b>				
Gittleman-Klein and Klein, 1971 [rdb]	Imipramine (100–200 mg/d)	<i>N</i> = 35, 6–14 y.o.	School phobia with anxiety disorders	Imipramine > PLC
Berney et al., 1981 [rdb]	Clomipramine (40–75 mg/d)	<i>N</i> = 51, 9–14 y.o.	School refusal	Clomipramine = PLC
Klein et al., 1992 [rdb]	Imipramine (75–275 mg/d)	<i>N</i> = 21, 6–15 y.o.	SAD with or without school phobia	Imipramine = PLC
<b>Benzodiazepines</b>				
Bernstein et al., 1990 [rdb]	Alprazolam (0.75–4.0 mg/d) vs. Imipramine (50–175 mg/d)	<i>N</i> = 24, 7–18 y.o.	School refusal, SAD	Alprazolam = Imipramine = PLC
Simeon et al., 1992 [rdb]	Alprazolam (0.5–3.5 mg/d)	<i>N</i> = 30, 8–17 y.o.	OAD, AD	Alprazolam = PLC
Graae et al., 1994 [rdb]	Clonazepam (0.5–2.0 mg/d)	<i>N</i> = 15, 7–13 y.o.	SAD	Clonazepam = PLC

*Note:* SSRIs = selective serotonin reuptake inhibitors; y.o. = years old; SM = selective mutism; SoP = social phobia; AD = avoidant disorder; PLC = placebo; SAD = separation anxiety disorder; GAD = generalized anxiety disorder; OAD = overanxious disorder.

This study and the RUPP Anxiety Study (2001) indicate that clinicians should consider increasing SSRI doses for patients if significant improvement is not achieved by the fourth week of treatment.

No controlled studies are available for medication treatment of childhood-onset panic disorder. A trial of SSRIs in adolescents with panic disorder (Renaud et al., 1999 [ct]) and chart review (Masi et al., 2001) in adolescents with panic disorder showed significant improvement in panic symptoms with SSRIs.

Whereas controlled trials have established the safety and efficacy of short-term treatment with SSRIs for childhood anxiety disorders, the benefits and risks of long-term use of SSRIs have not been studied. Pine (2002) recommends that clinicians may consider a medication-free trial for children who have a significant reduction in anxiety or depressive symptoms on an SSRI and maintain stability in these symptoms for 1 year. This trial off medication should be during a low-stress period, and the SSRI should be reinitiated if the child or adolescent relapses.

There is no empirical evidence that a particular SSRI is more effective than another for treatment of childhood anxiety disorders. Clinically, the choice is often based on side effects profile, duration of action, or

positive response to a particular SSRI in a first-degree relative with anxiety (Manassis, 2000). In addition, the risk-benefit ratio for a medication trial needs to be carefully assessed because CBT has been shown to be effective and long-term side effects of medications have not been studied in youths (Birmaher et al., 1998).

At this time, there are no specific dosing guidelines for children and adolescents with anxiety disorder. Review articles recommend starting at low doses, monitoring side effects closely, and then increasing the dose slowly on the basis of treatment response and tolerability (Birmaher et al., 1998; Labellarte et al., 1999). Clinicians need to appreciate that anxious children and anxious parents may be especially sensitive to any worsening in the child's somatic symptoms or emergence of even transient side effects of medications.

**Recommendation 8. Medications Other Than SSRIs May Be Considered for the Treatment of Youths With Anxiety Disorders [OP].**

The safety and efficacy of medications other than SSRIs for the treatment of childhood anxiety disorders have not been established. However, noradrenergic antidepressants (venlafaxine and tricyclic antidepressants [TCAs]), buspirone, and benzodiazepines have

been suggested as alternatives to be used alone or in combination with the SSRIs (Birmaher et al., 1998; Labellarte et al., 1999). Data are limited in childhood anxiety disorders to guide treatment with combinations of medications when a single medication is not effective in managing anxiety symptoms. Comorbid diagnoses are strongly considered in selection of medication.

Preliminary findings from controlled trials of extended-release venlafaxine in the treatment of youths with GAD (Rynn et al., 2002 [rdb]) and social phobia (Tourian et al., 2004 [rdb]) suggest it may be well tolerated and effective for GAD and social phobia relative to placebo. Since the introduction of SSRIs, TCAs have been used less often because of the need for close cardiac monitoring and greater medical risk with overdose of TCAs. Controlled trials with TCAs for pediatric anxiety disorders have shown conflicting results and have not established efficacy for this use (Table 1). Clomipramine is a TCA with serotonergic properties that is used alone or to boost the effect of an SSRI when there is a partial response. It has been shown to be efficacious in the treatment of childhood obsessive-compulsive disorder through controlled studies, but it has not been systematically examined in the treatment of other anxiety disorders (Geller et al., 2003). It should be introduced at a low dose in youths and closely monitored for anticholinergic and cardiac side effects.

Buspirone may be an alternative to SSRIs for GAD in youths, but there are no published controlled trials. Buspirone may be well tolerated at doses of 5 to 30 mg twice daily in anxious adolescents and at lower doses of 5 to 7.5 mg twice daily in anxious children (Salazar et al., 2001 [ct]). The most common adverse side effects in youths were lightheadedness, headache, and dyspepsia.

Benzodiazepines have not shown efficacy in controlled trials in childhood anxiety disorders (Table 1), despite established benefit in adult trials. Clinically they are used as an adjunct short-term treatment with SSRIs to achieve rapid reduction in severe anxiety symptoms that may permit initiation of the exposure phase of CBT (e.g., panic disorder, school refusal behavior; Birmaher et al., 1998; Renaud et al., 1999 [ct]). Clinicians should use benzodiazepines cautiously because of the possibility of developing dependency (Riddle et al., 1999). They are contraindicated in adolescents with substance abuse (Birmaher et al.,

1998). Possible side effects include sedation, disinhibition, cognitive impairment, and difficulty with discontinuation (Labellarte et al., 1999).

#### Recommendation 9. Treatment Planning May Consider Classroom-Based Accommodations [OP].

The clinician could consider the following classroom-based accommodations when anxiety disorders interfere with school functioning. If anxiety interferes with homework completion, then the length of homework assignments should be modified to an amount commensurate with the student's capacity. If anxiety is overwhelming at school, then an adult outside the immediate classroom should be identified who can assist the child with problem-solving or anxiety management strategies. If performance or test anxiety is present, then testing in a quiet, private environment may reduce excess anxiety. It is often helpful to educate the classroom teacher about the nature of the child's anxiety and suggest strategies that facilitate the student's coping. The clinician may recommend that these specific accommodations for the anxiety disorder be written into the student's 504 Plan or Individualized Educational Plan.

#### COMORBIDITY

##### Recommendation 10. Comorbid Conditions Should Be Appropriately Evaluated and Treated [MS].

Anxiety disorders are highly comorbid with other anxiety disorders and with other psychiatric disorders including depression (Angold and Costello, 1993; Lewinsohn et al., 1997), ADHD (Kendall et al., 2001), and substance abuse (Schuckit and Hesselbrock, 1994). Other commonly co-occurring conditions include oppositional defiant disorder, learning disorders, and language disorders (Manassis and Monga, 2001). Comorbid disorders may affect functioning and treatment outcome. They should be assessed and may benefit from being treated concurrently with the anxiety disorder (Manassis and Monga, 2001). Diagnosis is complicated by overlapping symptoms between anxiety disorders and comorbid conditions, which can lead to misdiagnosis and underdiagnosis of comorbidity. Inattention, for example, may be present in anxiety, ADHD, depression, learning disorders, and substance abuse. A common clinical phenomenon is

the recognition of a comorbid diagnosis once the primary diagnosis is treated and additional symptoms become more evident.

The presence of comorbid major depression increases with older age, is associated with greater severity and impairment of the anxiety disorder, is more likely to be associated with social anxiety, and may be a poor prognostic indicator (Bernstein, 1991; Manassis and Menna, 1999). A child with severe depression may not be able to participate in CBT effectively. Treatment of depression needs to be prioritized with initiation of an SSRI antidepressant medication recommended early in the treatment process (Labellarte et al., 1999; March, 2002). Careful monitoring of suicide risk is recommended.

Clinical studies have shown that as many as one third of children with ADHD have co-occurring anxiety disorders (MTA Cooperative Group, 2001 [rct]). The MTA Group suggests that for youths with ADHD comorbid with anxiety, a combination of medication management for the ADHD and behavioral management, at least parent training, are recommended as initial interventions (March et al., 2000). The MTA Group and others found the presence of comorbid anxiety does not alter the response of core ADHD symptoms to methylphenidate, and side effects to stimulants were not significantly greater in children with ADHD and anxiety than in those with ADHD alone (Abikoff et al., 2005 [rct]; Diamond et al., 1999 [ct]).

Children with anxiety disorders are at greater risk of alcohol abuse in adolescence (Schuckit and Hesselbrock, 1994). Comorbid alcohol abuse/dependence in adolescents should be assessed and considered in treatment planning with anxiety disorders (Manassis and Monga, 2001). Based on the temporal relationship between childhood anxiety disorders and risk of alcoholism in adolescents (Schuckit and Hesselbrock, 1994), it is suggested that some adolescents use alcohol to reduce anxiety symptoms. CBT may be effective in reducing anxiety if the alcohol abuse is treated, and developing alternative coping strategies to address anxiety may help to reduce alcohol consumption. A 7.4-year follow-up study suggested that children who were successfully treated with CBT for their anxiety disorders, as compared with less positive responders, had a reduced amount of substance use involvement and related problems at long-term follow-up (Kendall et al., 2004).

The presence of comorbid bipolar disorder is an important factor in medication choice because of the possibility that SSRIs and other antidepressants may exacerbate symptoms of bipolar disorder. Youths with anxiety disorders should be screened for bipolar disorder and family history of bipolar disorder before initiating a medication trial.

## PREVENTION

### Recommendation 11. Early Assessment and Intervention May Be Considered in Treatment and Prevention of Childhood Anxiety Disorders [OP].

With older age, increased severity of symptoms, parental psychopathology, and family functioning difficulties as significant predictors of poorer treatment outcome, early intervention, and prevention offer a proactive method for alleviating anxiety symptoms in youths (Crawford and Manassis, 2001; Dadds et al., 1997 [rct], 1999 [2-year follow-up]; Hirshfeld-Becker and Biederman, 2002; Southam-Gerow et al., 2001). In addition, targeting empirically based risk factors that are amenable to change with evidence-supported intervention satisfies the prerequisites for effective prevention (Spence, 2001). Opportunities for early intervention and prevention exist for childhood anxiety disorders and may include community screening and early assessment, early interventions in community settings, media-based and community-based psychoeducational programming, classroom-based programs, parent skills-training programs, and screening and treatment of parental anxiety disorders. Several of these are discussed in further detail.

Community screening and early assessment can identify anxious youths at greatest risk by using brief self-report screening measures such as the Multi-dimensional Anxiety Scale for Children and the Screen for Child Anxiety Related Emotional Disorders for anxiety symptoms (Dierker et al., 2001; Muris et al., 2002) and/or by teacher nomination (Layne and Bernstein, 2003). Group interventions with CBT in school and other community settings can provide effective early treatment for children with mild to moderate anxiety disorders, which may improve long-term functioning (Dadds et al., 1997 [rct], 1999; Muris et al., 2001 [ct]). Clinicians are encouraged to refer patients for early-intervention CBT even if anxiety symptoms are mild or subclinical. Adaptation of protocol-based CBT interventions to fit diverse

populations and take into account the limitations of community resources, including those of inner-city minority youths, can make evidence-supported treatments feasible and transportable (Ginsburg and Drake, 2002 [rct]; U.S. Department of Health and Human Services, 2000). Parent skills-training programs that teach parents anxiety management and foster healthy parent-child relationships may reduce the development of anxiety disorders in young children at risk (Hirshfeld-Becker and Biederman, 2002).

## SCIENTIFIC DATA AND CLINICAL CONSENSUS

Practice parameters are strategies for patient management, developed to assist clinicians in psychiatric decision making. American Academy of Child and Adolescent Psychiatry practice parameters, based on evaluation of the scientific literature and relevant clinical consensus, describe generally accepted approaches to assess and treat specific disorders or to perform specific medical procedures. These parameters are not intended to define the standard of care nor should they be deemed inclusive of all proper methods of care or exclusive of other methods of care directed at obtaining the desired results. The clinician—after considering all of the circumstances presented by the patient and his or her family, the diagnostic and treatment options available, and available resources—must make the ultimate judgment regarding the care of a particular patient.

*Disclosure: The authors have no financial relationships to disclose.*

## REFERENCES

*References marked with an asterisk are particularly recommended.*

- Abikoff H, McGough J, Vitiello B et al. (2005), Sequential pharmacotherapy for children with comorbid attention-deficit/hyperactivity and anxiety disorders. *J Am Acad Child Adolesc Psychiatry* 44:418–427
- \*Albano AM, Kendall PC (2002), Cognitive behavioural therapy for children and adolescents with anxiety disorders: clinical research advances. *Int Rev Psychiatry* 14:129–134
- American Psychiatric Association (2001), *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM-IV-TR)*. Washington, DC: American Psychiatric Association
- Angold A, Costello EJ (1993), Depressive comorbidity in children and adolescents: empirical, theoretical, and methodological issues. *Am J Psychiatry* 150:1779–1791
- Angold A, Costello EJ, Farmer EMZ, Burns BJ, Erkanli A (1999), Impaired but undiagnosed. *J Am Acad Child Adolesc Psychiatry* 38:129–137
- Aschenbrand SG, Kendall PC, Webb A, Safford SM, Flannery-Schroeder E (2003), Is childhood separation anxiety disorder a predictor of adult panic disorder and agoraphobia? A seven-year longitudinal study. *J Am Acad Child Adolesc Psychiatry* 42:1478–1485
- Ayers TS, Sandler IN, West SG, Roosa MW (1996), A dispositional and situational assessment of children's coping: testing alternative models of coping. *J Pers* 64:923–958
- Barrett PM (1998), Evaluation of cognitive-behavioral group treatments for childhood anxiety disorders. *J Clin Child Psychol* 27:459–468
- Barrett PM, Dadds MR, Rapee RM (1996), Family treatment of childhood anxiety: a controlled trial. *J Consult Clin Psychol* 64:333–342
- Barrett PM, Duffy AL, Dadds MR, Rapee RM (2001), Cognitive-behavioral treatment of anxiety disorders in children: long-term (6-year) follow-up. *J Consult Clin Psychol* 69:135–141
- Beidel DC, Turner SM, Morris TL (1999), Psychopathology of childhood social phobia. *J Am Acad Child Adolesc Psychiatry* 38:643–650
- Bergman RL, Piacentini J, McCracken JT (2002), Prevalence and description of selective mutism in a school-based sample. *J Am Acad Child Adolesc Psychiatry* 41:938–946
- Berman SL, Weems CF, Silverman WK, Kurtines WM (2000), Predictors of outcome in exposure-based cognitive and behavioral treatments for phobic and anxiety disorders in children. *Behav Res Ther* 31:713–731
- Berney T, Kolvin I, Bhate SR et al. (1981), School phobia: a therapeutic trial with clomipramine and short-term outcome. *Br J Psychiatry* 138:110–118
- Bernstein GA (1991), Comorbidity and severity of anxiety and depressive disorders in a clinical sample. *J Am Acad Child Adolesc Psychiatry* 30:43–50
- Bernstein GA, Borchardt CM, Perwien AR et al. (2000), Imipramine plus cognitive-behavioral therapy in the treatment of school refusal. *J Am Acad Child Adolesc Psychiatry* 39:276–283
- Bernstein GA, Garfinkel BD, Borchardt CM (1990), Comparative studies of pharmacotherapy for school refusal. *J Am Acad Child Adolesc Psychiatry* 29:773–781
- Bernstein GA, Hektner JM, Borchardt CM, McMillan MH (2001), Treatment of school refusal: one-year follow-up. *J Am Acad Child Adolesc Psychiatry* 40:206–213
- Bernstein GA, Layne AE, Egan EA, Tennison DM (2005), School-based interventions for anxious children. *J Am Acad Child Adolesc Psychiatry* 44:1118–1127
- Biederman J, Faraone SV, Hirshfeld-Becker DR, Friedman D, Robin JA, Rosenbaum JF (2001), Patterns of psychopathology and dysfunction in high-risk children of parents with panic disorder and major depression. *Am J Psychiatry* 158:49–57
- Biederman J, Rosenbaum JF, Bolduc-Murphy EA et al. (1993), A 3-year follow-up of children with and without behavioral inhibition. *J Am Acad Child Adolesc Psychiatry* 32:814–821
- Birmaher B, Axelson DA, Monk K et al. (2003), Fluoxetine for the treatment of childhood anxiety disorders. *J Am Acad Child Adolesc Psychiatry* 42:415–423
- Birmaher B, Brent DA, Chiappetta L, Bridge J, Monga S, Baugher M (1999), Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders Scale (SCARED): a replication study. *J Am Acad Child Adolesc Psychiatry* 38:1230–1236
- Birmaher B, Ollendick TH (2004), Childhood-onset panic disorder. In: *Phobic and Anxiety Disorders in Children and Adolescents*, Ollendick TH, March JS, eds. New York: Oxford University Press
- \*Birmaher B, Yelovich K, Renaud J (1998), Pharmacologic treatment for children and adolescents with anxiety disorders. *Pediatr Clin North Am* 45:1187–1204
- Black B, Uhde TW (1994), Treatment of elective mutism with fluoxetine: a double-blind, placebo-controlled study. *J Am Acad Child Adolesc Psychiatry* 33:1000–1006
- Bogels SM, Zigterman D (2000), Dysfunctional cognitions in children with social phobia, separation anxiety disorder, and generalized anxiety disorder. *J Abnorm Child Psychol* 28:205–211
- Chavira DA, Stein MB (2002), Combined psychoeducation and treatment with selective serotonin reuptake inhibitors for youth with generalized social anxiety disorder. *J Child Adolesc Psychopharmacol* 12:47–54
- Choudhury MS, Pimentel SS, Kendall PC (2003), Childhood anxiety disorders: parent-child (dis) agreement using a structured interview for the DSM-IV. *J Am Acad Child Adolesc Psychiatry* 42:957–964
- Cobham VE, Dadds MR, Spence SH (1998), The role of parental

- anxiety in the treatment of childhood anxiety. *J Consult Clin Psychol* 66:893–905
- \*Compton SN, March JS, Brent D, Albano AM, Weersing VR, Curry J (2004), Cognitive-behavioral psychotherapy for anxiety and depressive disorders in children and adolescents: an evidence-based medicine review. *J Am Acad Child Adolesc Psychiatry* 43:930–959
- Connolly S, Simpson D, Petty C, eds. (2006), *Anxiety Disorders*, Collins C, ed. New York: Chelsea House
- Costello EJ, Egger HL, Angold A (2004), Developmental epidemiology of anxiety disorders. In: *Phobic and Anxiety Disorders in Children and Adolescents*, Ollendick TH, March JS, eds. New York: Oxford University Press
- Crawford AM, Manassis K (2001), Familial predictors of treatment outcome in childhood anxiety disorders. *J Am Acad Child Adolesc Psychiatry* 40:1182–1189
- Dadds MR, Holland DE, Laurens KP, Mullins M, Barrett PM, Spence SH (1999), Early intervention and prevention of anxiety disorders in children: results at two-year follow-up. *J Consult Clin Psychol* 67:145–150
- \*Dadds MR, Roth JH (2001), Family processes in the development of anxiety problems. In: *The Developmental Psychopathology of Anxiety*, Vasey MW, Dadds MR, eds. New York: Oxford University Press
- Dadds MR, Spence SH, Holland D, Barrett PM, Kaurens K (1997), Early intervention and prevention of anxiety disorders: a controlled trial. *J Consult Clin Psychol* 65:627–635
- Diamond I, Tannock R, Schachar R (1999), Response to methylphenidate in children with ADHD and comorbid anxiety. *J Am Acad Child Adolesc Psychiatry* 38:402–409
- Dierker LC, Albano AM, Clarke GN et al. (2001), Screening for anxiety and depression in early adolescence. *J Am Acad Child Adolesc Psychiatry* 40:929–936
- Eley TC (2001), Contributions of behavioral genetics research: quantifying genetic, shared environmental and nonshared environmental influences. In: *The Developmental Psychopathology of Anxiety*, Vasey MW, Dadds MR, eds. New York: Oxford University Press
- Flannery-Schroeder EC, Kendall PC (2000), Group and individual cognitive-behavioral treatments for youth with anxiety disorders: a randomized clinical trial. *Cogn Ther Res* 24:251–278
- Geller DA, Biederman J, Stewart SE et al. (2003), Which SSRI? A meta-analysis of pharmacotherapy trials in pediatric obsessive-compulsive disorder. *Am J Psychiatry* 160:1919–1928
- Ginsburg GS, Drake KL (2002), School-based treatment for anxious African-American adolescents: a controlled pilot study. *J Am Acad Child Adolesc Psychiatry* 41:768–775
- Ginsburg GS, Schlossberg MC (2002), Family-based treatment of childhood anxiety disorders. *Int Rev Psychiatry* 14:143–154
- Gittelman-Klein R, Klein DF (1971), Controlled imipramine treatment of school phobia. *Arch Gen Psychiatry* 25:204–207
- Graae F, Milner J, Rizzotto L, Klein RG (1994), Clonazepam in childhood anxiety disorders. *J Am Acad Child Adolesc Psychiatry* 33:372–376
- Goldberger M (1995), Enactment and play following medical trauma. *Psychoanal Study Child* 50:252–271
- Hirshfeld DR, Biederman J, Brody L, Faraone SV, Rosenbaum JR (1997), Associations between expressed emotion and child behavioral inhibition and psychopathology: a pilot study. *J Am Acad Child Adolesc Psychiatry* 36:205–213
- \*Hirshfeld-Becker DR, Biederman J (2002), Rationale and principles for early interventions with young children at risk for anxiety disorders. *Clin Child Fam Psychol Rev* 5:161–172
- Ialongo N, Edelson G, Werthamer-Larsson L, Crockett L, Kellam S (1995), The significance of self-reported anxious symptoms in first grade children: prediction to anxious symptoms and adaptive functioning in fifth grade. *J Child Psychol Psychiatry* 36:427–437
- Kagan J, Snidman N (1999), Early childhood predictors of adult anxiety disorders. *Biol Psychiatry* 46:1536–1541
- \*Kendall PC (1990), *Coping Cat Workbook*. Ardmore, PA: Workbook Publishing
- Kendall PC (1994), Treating anxiety disorders in children: results of a randomized clinical trial. *J Consult Clin Psychol* 62:100–110
- Kendall PC, Brady EU, Verduin TL (2001), Comorbidity in childhood anxiety disorders and treatment outcome. *J Am Acad Child Adolesc Psychiatry* 40:787–794
- Kendall PC, Flannery-Schroeder EC (1998), Methodological issues in treatment research for anxiety disorders in youth. *J Abnorm Child Psychol* 26:27–38
- Kendall PC, Flannery-Schroeder E, Panichelli-Mindel SM, Southam-Gerow M, Henin A, Warman M (1997), Therapy for youths with anxiety disorders: a second randomized clinical trial. *J Consult Clin Psychol* 65:366–380
- Kendall PC, Safford S, Flannery-Schroeder E, Webb A (2004), Child anxiety treatment: outcomes in adolescence and impact on substance use and depression at 7.4-year follow-up. *J Consult Clin Psychol* 72:276–287
- Kendall PC, Southam-Gerow MA (1996), Long-term follow-up of cognitive-behavioral therapy for anxiety disordered youth. *J Consult Clin Psychol* 64:724–730
- King NJ, Tonge BJ, Heyne D et al. (1998), Cognitive-behavioral treatment of school-refusing children: a controlled evaluation. *J Am Acad Child Adolesc Psychiatry* 37:395–403
- Klein RG, Koplewicz HS, Kanner A (1992), Imipramine treatment in children with separation anxiety disorder. *J Am Acad Child Adolesc Psychiatry* 31:21–28
- \*Labellarte MJ, Ginsburg GS, Walkup JT, Riddle MA (1999), The treatment of anxiety disorders in children and adolescents. *Biol Psychiatry* 46:1567–1578
- \*Langley AK, Bergman RL, Piacentini JC (2002), Assessment of childhood anxiety. *Int Rev Psychiatry* 14:102–113
- Last CG, Hansen C, Franco N (1998), Cognitive-behavioral treatment of school phobia. *J Am Acad Child Adolesc Psychiatry* 37:404–411
- Last CG, Perrin S, Hersen M, Kazdin AE (1996), A prospective study of childhood anxiety disorders. *J Am Acad Child Adolesc Psychiatry* 35:1502–1510
- Layne AE, Bernstein G (2003), Anxiety symptoms in children: age and gender differences and teacher awareness. Presented at the 50th Annual Meeting of the American Academy of Child and Adolescent Psychiatry, Miami, October 14–19
- Layne AE, Bernstein GA, Egan EA, Kushner MG (2003), Predictors of treatment response in anxious-depressed adolescents with school refusal. *J Am Acad Child Adolesc Psychiatry* 42:319–326
- Lewinsohn PM, Zinbarg R, Seeley JR, Lewinsohn M, Sack WH (1997), Lifetime comorbidity among anxiety disorders and between anxiety disorders and other mental disorders in adolescents. *J Anxiety Disord* 11:377–394
- Lis A, Zennaro A, Mazzeschi C (2001), Child and adolescent empirical psychotherapy research: a review focused on cognitive-behavioral and psychodynamic-informed psychotherapy. *Eur Psychol* 6:36–64
- Manassis K (1996), *Keys to Parenting Your Anxious Child*, Hauppauge, NY: Barron's Educational Series
- Manassis K (2000), Childhood anxiety disorders: lessons from the literature. *Can J Psychiatry* 45:724–730
- Manassis K, Bradley S, Goldberg S, Hood J, Swinson RP (1994), Attachment in mothers with anxiety disorders and their children. *J Am Acad Child Adolesc Psychiatry* 33:1106–1113
- Manassis K, Hood J (1998), Individual and familial predictors of impairment in childhood anxiety disorders. *J Am Acad Child Adolesc Psychiatry* 37:428–434
- Manassis K, Mendlowitz SL, Scapillato D et al. (2002), Group and individual cognitive-behavioral therapy for childhood anxiety disorders: a randomized trial. *J Am Acad Child Adolesc Psychiatry* 41:1423–1430
- Manassis K, Menna R (1999), Depression in anxious children: possible factors in comorbidity. *Depress Anxiety* 10:18–24
- \*Manassis K, Monga S (2001), A therapeutic approach to children and adolescents with anxiety disorders and associated comorbid conditions. *J Am Acad Child Adolesc Psychiatry* 40:115–117
- \*March JS (2002), Combining medication and psychosocial treatments: an evidence-based medicine approach. *Int Rev Psychiatry* 14:155–163
- March JS, Parker JD, Sullivan K, Stallings P, Conners CK (1997), The Multidimensional Anxiety Scale for Children (MASC): factor

- structure, reliability, and validity. *J Am Acad Child Adolesc Psychiatry* 36:554–565
- March JS, Swanson JM, Arnold LE et al. (2000), Anxiety as a predictor and outcome variable in the multimodal treatment study of children with ADHD (MTA). *J Abnorm Child Psychol* 28:527–541
- Masi G, Mucci M, Favilla L, Romano R, Poli P (1999), Symptomatology and comorbidity of generalized anxiety disorder in children and adolescents. *Compr Psychiatry* 40:210–215
- Masi G, Toni C, Mucci M, Millepiedi S, Mata B, Perugi G (2001), Paroxetine in child and adolescent outpatients with panic disorder. *J Child Adolesc Psychopharmacol* 11:151–157
- McGehee R (2005), Child psychoanalysis and obsessive-compulsive symptoms: the treatment of a ten-year-old boy. *J Am Psychoanal Assoc* 53:213–237
- Mendlowitz SL, Manassis K, Bradley S, Scapillato D, Miezitis S, Shaw BF (1999), Cognitive-behavioral group treatments in childhood anxiety disorders: the role of parental involvement. *J Am Acad Child Adolesc Psychiatry* 38:1223–1229
- Merikangas KR, Avenevoli S, Dierker L, Grillon C (1999), Vulnerability factors among children at risk for anxiety disorders. *Biol Psychiatry* 46:1523–1535
- Messer SC, Beidel DC (1994), Psychosocial correlates of childhood anxiety disorders. *J Am Acad Child Adolesc Psychiatry* 33:975–983
- Milrod B, Busch F, Shapiro T, Leon AC, Aronson A (2005), A pilot study of psychodynamic psychotherapy for 18–21 year old patients with panic disorder. *Ann Am Soc Adolesc Psychiatry* 29:289–314
- MTA Cooperative Group (2001), ADHD comorbidity findings from the MTA study: comparing comorbid subgroups. *J Am Acad Child Adolesc Psychiatry* 40:147–158
- Muratori F, Picchi L, Bruni G, Patarnello M, Romagnoli G (2003), A two-year follow-up of psychodynamic psychotherapy for internalizing disorders in children. *J Am Acad Child Adolesc Psychiatry* 42:331–339
- Muris P, Mayer B, Bartelds E, Tierney S, Bogie N (2001), The revised version of the Screen for Child Anxiety Related Emotional Disorders (SCARED-R): treatment sensitivity in an early intervention trial for childhood anxiety disorders. *Br J Clin Psychol* 40:323–336
- Muris P, Meesters C, Merckelbach H, Sermon A, Zwakhalen S (1998), Worry in normal children. *J Am Acad Child Adolesc Psychiatry* 37:703–710
- Muris P, Merckelbach H, Ollendick T, King N, Bogie N (2002), Three traditional and three new childhood anxiety questionnaires: their reliability and validity in a normal adolescent sample. *Behav Res Ther* 40:753–772
- Muris P, Steerneman P, Merckelbach H, Meesters C (1996), The role of parental fearfulness and modeling in children's fear. *Behav Res Ther* 34:265–268
- \*Myers K, Winters NC (2002), Ten-year review of rating scales: II. Scales for internalizing disorders. *J Am Acad Child Adolesc Psychiatry* 41: 634–659
- National Institutes of Health Clinical Trials (2003), Available at <http://www.clinicaltrials.gov>. Accessed February 2003
- Novick KK (1974), Issues in the analysis of a preschool girl. *Psychoanal Study Child* 29:319–340
- Ollendick TH (1995), Cognitive-behavioral treatment of panic disorder with agoraphobia in adolescents: a multiple baseline design analysis. *Behav Ther* 26:517–531
- Ollendick TH, King NJ (1998), Empirically supported treatments for children with phobic and anxiety disorders: current status. *J Clin Child Psychol* 27:156–167
- \*Ollendick TH, March J (2004), Integrated psychosocial and pharmacological treatment. In: *Phobic and Anxiety Disorders in Children and Adolescents*, Ollendick TH, March JS, eds. New York: Oxford University Press
- \*Pine DS (2002), Treating children and adolescents with selective serotonin reuptake inhibitors: how long is appropriate? *J Child Adolesc Psychopharmacol* 12:189–203
- Pine DS, Cohen P, Gurley D, Brook J, Ma Y (1998), The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. *Arch Gen Psychiatry* 55:56–64
- Rapee RM (1997), Potential role of childrearing practices in the development of anxiety and depression. *Clin Psychol Rev* 17:47–67
- Rapee RM, Spence SH, Cobham V, Wignall A (2000), *Helping Your Anxious Child*. Oakland, CA: New Harbinger
- Renaud J, Birmaher B, Wassick SC, Bridge J (1999), Use of selective serotonin reuptake inhibitors for the treatment of childhood panic disorder: a pilot study. *J Child Adolesc Psychopharmacol* 9:73–83
- \*Research Units on Pediatric Psychopharmacology Anxiety Study Group (RUPP) (2001), Fluvoxamine for the treatment of anxiety disorders in children and adolescents. *N Engl J Med* 344:1279–1285
- Research Units on Pediatric Psychopharmacology Anxiety Study Group (RUPP) (2003), Searching for moderators and mediators of pharmacological treatment effects in children and adolescents with anxiety disorders. *J Am Acad Child Adolesc Psychiatry* 42:13–21
- Riddle M, Bernstein GA, Cook E et al. (1999), Anxiolytics, adrenergic agents, and naltrexone. *J Am Acad Child Adolesc Psychiatry* 38:546–556
- Rynn M, Kunz N, Lamm L, Nicolacopoulos E, Jenkins L (2002), Venlafaxine XR for treatment of GAD in children and adolescents. *Presented at the 49th Annual Meeting of the American Academy of Child and Adolescent Psychiatry*, San Francisco, October 22–27
- Rynn MA, Siqueland L, Rickels K (2001), Placebo-controlled trial of sertraline in the treatment of children with generalized anxiety disorder. *Am J Psychiatry* 158:2008–2014
- Salazar DE, Frackiewicz EJ, Dockens R et al. (2001), Pharmacokinetics and tolerability of buspirone during oral administration to children and adolescents with anxiety disorder and normal healthy adults. *J Clin Pharmacol* 41:1351–1358
- Schuckit MA, Hesselbrock V (1994), Alcohol dependence and anxiety disorders: what is the relationship? *Am J Psychiatry* 151: 1723–1734
- \*Silverman W, Albano AM (1996), *Manual for the Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions*. San Antonio, TX: The Psychological Corporation
- Silverman WK, Kurtines WM, Ginsburg GS, Weems CF, Lumpkin PW, Carmichael DH (1999a), Treating anxiety disorders in children with group cognitive-behavioral therapy: a randomized clinical trial. *J Consult Clin Psychol* 67:995–1003
- Silverman WK, Kurtines WM, Ginsburg GS, Weems CF, Rabian B, Serafini LT (1999b), Contingency management, self-control, and education support in treatment of childhood anxiety disorders: a randomized controlled trial. *J Consult Clin Psychol* 67:675–687
- Silverman WK, Ollendick TH (2005), Evidence-based assessment of anxiety and its disorders in children and adolescents. *J Clin Child Adolesc Psychol* 34:380–411
- Simeon JG, Ferguson HB, Knott V et al. (1992), Clinical, cognitive, and neurophysiological effects of alprazolam in children and adolescents with overanxious and avoidant disorders. *J Am Acad Child Adolesc Psychiatry* 31:29–33
- Siqueland L, Kendall PC, Steinberg L (1996), Anxiety in children: perceived family environments and observed family interaction. *J Clin Psychol* 25:225–237
- Southam-Gerow MA, Kendall PC, Weersing VR (2001), Examining outcome variability: correlates of treatment response in a child and adolescent clinic. *J Clin Child Psychol* 30:422–436
- \*Spence SH (2001), Prevention strategies. In: *The Developmental Psychopathology of Anxiety*, Vasey MW, Dadds MR, eds. New York: Oxford University Press
- Spence SH, Donovan C, Brechman-Toussaint M (1999), Social skills, social outcomes and cognitive features of childhood social phobia. *J Abnorm Psychol* 108:211–221
- Spence SH, Donovan C, Brechman-Toussaint M (2000), The treatment of childhood social phobia: the effectiveness of a social skills training-based, cognitive-behavioural intervention, with and without parental involvement. *J Child Psychol Psychiatry* 41:713–726
- Spence SH, Rapee R, McDonald C, Ingram M (2001), The structure of anxiety symptoms among preschoolers. *Behav Res Ther* 39:1293–1316
- Target M, Fonagy P (1994), Efficacy of psychoanalysis for children with emotional disorders. *J Am Acad Child Adolesc Psychiatry* 33: 361–371

- Tourian KA, March JS, Mangano RM (2004), Venlafaxine ER in children and adolescents with social anxiety disorder. *Abstracts of American Psychiatric Association 2004 Annual Meeting*, New York, May (abstract NR468)
- U.S. Department of Health and Human Services (2000), *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*. Washington, DC: U.S. Government Printing Office
- Vasey MK, Crnic KA, Carter WG (1994), Worry in childhood: a developmental perspective. *Cogn Ther Res* 18:529-549
- Velting ON, Setzer NJ, Albano AM (2004), Update on and advances in assessment and cognitive-behavioral treatment of anxiety disorders in children and adolescents. *Prof Psychol Res Pract* 42:42-54
- Wagner KD, Berard R, Stein MB et al. (2004), A multicenter, randomized, double-blind, placebo-controlled trial of paroxetine in children and adolescents with social anxiety disorder. *Arch Gen Psychiatry* 61: 1153-1162
- \*Warren SL, Dadson N (2001), Assessment of anxiety in young children. *Curr Opin Pediatr* 13:580-585
- Warren SL, Huston L, Egeland B, Sroufe LA (1997), Child and adolescent anxiety disorders and early attachment. *J Am Acad Child Adolesc Psychiatry* 36:637-644
- Woodward LJ, Fergusson DM (2001), Life course outcomes of young people with anxiety disorders in adolescence. *J Am Acad Child Adolesc Psychiatry* 40:1086-1093

**Screening for Posttraumatic Stress Disorder in Children After Accidental Injury** Justin A. Kenardy, BSc, PhD, MAPS, Susan H. Spence, BSc, MBA, PhD, Alexandra C. Macleod, BPsySc

*Objective:* Children who have experienced an accidental injury are at increased risk of developing posttraumatic stress disorder. It is, therefore, essential that strategies are developed to aid in the early identification of children at risk of developing posttraumatic stress disorder symptomatology after an accident. The aim of this study was to examine the ability of the Child Trauma Screening Questionnaire to predict children at risk of developing distressing posttraumatic stress disorder symptoms 1 and 6 months after a traumatic accident. *Methods:* Participants were 135 children (84 boys and 51 girls; with their parents) who were admitted to the hospital after a variety of accidents, including car-and bike-related accidents, falls, burns, dog attacks, and sporting injuries. The children completed the Child Trauma Screening Questionnaire and the Children's Impact of Events Scale within 2 weeks of the accident, and the Anxiety Disorders Interview Schedule for *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Child Version*, was conducted with the parents to assess full and subsyndromal posttraumatic stress disorder in their child 1 and 6 months after the accident. *Results:* Analyses of the results revealed that the Child Trauma Screening Questionnaire correctly identified 82% of children who demonstrated distressing posttraumatic stress disorder symptoms (9% of sample) 6 months after the accident. The Child Trauma Screening Questionnaire was also able to correctly screen out 74% of children who did not demonstrate such symptoms. Furthermore, the Child Trauma Screening Questionnaire outperformed the Children's Impact of Events Scale. *Conclusions:* The Child Trauma Screening Questionnaire is a quick, cost-effective and valid self-report screening instrument that could be incorporated in a hospital setting to aid in the prevention of childhood posttraumatic stress disorder after accidental trauma. **Pediatrics** 2006;118:1002-1009.