Practice Parameter for the Assessment and Treatment of Children and Adolescents With Posttraumatic Stress Disorder

This Practice Parameter reviews the evidence from research and clinical experience and highlights significant advances in the assessment and treatment of posttraumatic stress disorder since the previous Parameter was published in 1998. It highlights the importance of early identification of posttraumatic stress disorder, the importance of gathering information from parents and children, and the assessment and treatment of comorbid disorders. It presents evidence to support trauma-focused psychotherapy, medications, and a combination of interventions in a multimodal approach. J. Am. Acad. Child Adolesc. Psychiatry, 2010;49(4):414–430. **Key Words:** child, adolescent, posttraumatic stress disorder, treatment, Practice Parameter

More than one of four children experiences a significant traumatic event before reaching adulthood.[1] These traumas may include events such as child abuse; domestic, community, or school violence; disasters, vehicular or other accidents, medical traumas, war, terrorism, refugee trauma, the traumatic death of significant others; or other shocking, unexpected or terrifying experiences. Although most children are resilient after trauma exposure, some develop significant and potentially long-lasting mental health problems. This Practice Parameter was written to help child and adolescent psychiatrists and other medical and mental health professionals assess and treat one such condition, posttraumatic stress disorder (PTSD). An earlier Practice Parameter on this same subject was first published in the *Journal of the American Academy of Child and Adolescent Psychiatry* in October 1998.[2] Because the diagnosis of PTSD requires the passage of at least 1 month after exposure to an index trauma, this Practice Parameter does not address the immediate psychological needs of children after disasters or other acute traumatic events, i.e., within the first month.

These guidelines are applicable to the evaluation and treatment of child and adolescent patients 17 years and younger. This document presumes familiarity with normal child development and the principles of child psychiatric diagnosis and treatment. In this Parameter the word *child* refers to adolescents and younger children unless explicitly noted. Unless otherwise noted, *parents* refers to the child's primary caretakers, regardless of whether they are the biological or adoptive parents or legal guardians.

METHODOLOGY

A literature search was conducted on MEDLINE accessed at www.pubmed.gov using the following Medical Subject Heading terms: *stress disorders, posttraumatic* AND *randomized controlled trials;* limits all child: 0–18 years, only items with abstracts, English, randomized controlled trials. This resulted in 70 abstracts. A search of PsycINFO was conducted using the following thesaurus terms: *posttraumatic stress disorder;* limit 1 to *treatment outcome/randomized clinical trial;* limit 2 to *(childhood or adolescence),* resulting in 24 abstracts. A search of the PILOTS database was conducted using the terms *clinical trials* AND *child* AND *adolescent,* resulting in 20 abstracts. The search covered the period from 1996 to 2006 and was conducted on May 7, 2007. Only abstracts that included randomized controlled trials, instruments measuring childhood PTSD symptoms, and significant results with regard to PTSD symptoms were included. This search was augmented by programs listed on the National Child Traumatic Stress Network Web site (www.NCTSN.org), those nominated by expert reviewers, and manuscripts that have recently been accepted for publication in peer-reviewed journals.

CLINICAL PRESENTATION

Posttraumatic stress disorder is the one of the few psychiatric diagnoses in *DSM-IV-TR* that requires the presence of a known etiologic factor, i.e., a traumatic event that precedes the development of the disorder. For PTSD to be present, the child must report (or there must be other compelling evidence of) a qualifying index traumatic event and specific symptoms in relation to that traumatic experience. Compelling evidence might include sexually transmitted infection in a young child, a reliable eyewitness report (e.g., a police report that a child was rescued from the scene of an accident), or a forensic evaluation confirming the likelihood that the child experienced a traumatic event. An inherent contradiction exists in that avoidance of describing traumatic experiences is a core feature of PTSD, as indicated below; yet diagnosing PTSD requires that the child describe the traumatic event.

In the absence of child report or other compelling evidence of a qualifying index trauma, a PTSD diagnosis should not be made. There may be situations where children or adolescents present with symptoms suggestive of PTSD (e.g., general anxiety symptoms, nightmares and impairment; or in an older youth, self-injurious behavior such as repeated cutting, substance abuse, and indiscriminant sexualized behavior) in the absence of a disclosure of trauma exposure. In this situation the clinician should not presume that trauma has occurred. Clinicians are wise to ask in nearly all routine evaluations whether traumatic events (e.g., maltreatment, acute injuries, disasters, and witnessed violence to loved ones) have occurred. However, if children and caregivers cannot confirm that a traumatic event has occurred, then clinicians ought not to imply that symptomatology is a consequence of forgotten trauma. Conversely, some children may be afraid, ashamed, embarrassed, or avoidant of disclosing traumatic experiences, particularly in an initial clinical interview. Avoidance may take the form of denial of trauma exposure and as such may be an indication of the severity of the child's avoidance symptoms rather than lack of trauma exposure. Parental denial of the child's exposure to trauma may occur because the parent is unaware of the child's trauma exposure, because the parent is a perpetrator or for a variety of other reasons. An error in either direction, i.e., mistakenly attributing symptoms to trauma that did not occur or disregarding the possibility of a real trauma history, has potential risks. Children should be referred for a forensic evaluation if the clinician has suspicion of trauma exposure but no confirmed reports. There are many differences between forensic and clinical evaluations; clinicians should not attempt to conduct forensic assessments in the context of a clinical evaluation.

Most individuals who experience truly life-threatening events manifest posttraumatic symptomatology immediately.[3,4] However, only about 30% on average tend to manifest enduring symptomatology beyond the first month.[5] Therefore, PTSD is not diagnosed until at least 1 month has passed since the index traumatic event occurred. After large-scale disasters, vehicular accidents, or medical trauma, children may be seen very soon after traumatic exposure by medical personnel, mental health professionals, or paraprofessionals. Acute stress disorder, adjustment disorder, or another disorder may be diagnosed within the first month of exposure. Transient moderate psychological distress may be a normative reaction to traumatic exposure. Recent data have suggested that panic symptoms in the immediate aftermath of trauma exposure are predictive of subsequent PTSD in children and this may be an important symptom to evaluate in this acute period.[6,7] Little is known about the efficacy of early interventions that are typically provided in the immediate aftermath of disasters, and whether they may cause harm to children as they have been found to do in some adult studies.[8] One randomized controlled study demonstrated that providing an early mental health intervention, psychological debriefing, was neither better nor worse than a control group in improving PTSD symptoms for children in road-traffic accidents.[9]

Acute PTSD is diagnosed if the symptoms are present after the first month and for less than 3 months after the index trauma; chronic PTSD is diagnosed if the symptoms persist beyond 3 months. Debate is ongoing a to whether or not an alternative condition alternatively referred to as "complex PTSD" (also known as disorders of extreme stress not otherwise specified or developmental trauma disorder) exists in severely, early, or interpersonally traumatized children or adolescents.[10] An alternative view with substantial support is that complex PTSD is chronic PTSD occurring with or without other comorbid *DSM-IV-TR* conditions.[11] In either perspective, there is clinical consensus that children with severe

PTSD may present with extreme dysregulation of physical, affective, behavioral, cognition, and/or interpersonal functioning that is not adequately captured in current descriptions of PTSD diagnostic criteria. Some of these children may be misdiagnosed with bipolar disorder because of severe affective dysregulation related to PTSD; others may have true bipolar disorder but also need attention to their trauma symptoms. It is also important for clinicians to be aware that children can have a trauma history yet have psychiatric symptoms that are unrelated to the trauma; discerning the role that the trauma plays in the child's current symptoms requires knowledge of the complexity with which PTSD and other trauma symptoms may present and general child psychopathology. Child and adolescent psychiatrists can fulfill a critical need in this regard.

PTSD Symptom Clusters

In addition to the presence of a known trauma, diagnosing PTSD requires the presence of symptoms in three distinct clusters.

Reexperiencing of the trauma must be present as evidenced by at least one of the following symptoms: recurrent and intrusive recollections, nightmares, or other senses of reliving the traumatic experience. In young children this can take the form of repetitive play in which aspects or themes of the trauma are expressed, or trauma-specific reenactment may occur. Frightening dreams without trauma-specific content may also occur. Trauma reminders (people, places, situations, or other stimuli that remind the child of the original traumatic event) may lead to intense psychological or physiologic distress.

Persistent avoidance of trauma reminders and emotional numbing must be present as evidenced by at least three of the following symptoms: efforts to avoid trauma reminders including talking about the traumatic event or other trauma reminders; inability to recall an important aspect of the trauma; decreased interest or participation in previously enjoyed activities; detachment or estrangement from others; restricted affect; and a sense of a foreshortened future.

Persistent symptoms of hyperarousal must also be present as evidenced by at least two of the following symptoms: difficulty falling or staying asleep; irritability or angry outbursts; difficulty concentrating; hypervigilance; and increased startle reaction.

Young children also manifest new aggression, oppositional behavior, regression in developmental skills (toileting and speech), new separation anxiety, and new fears not obviously related to the traumatic event (usually fear of the dark or fear of going to the bathroom alone) as associated symptoms.[12]

There is ongoing debate about the validity of the *DSM-IV-TR* diagnostic criteria for children, particularly the requirement of three avoidance/numbing symptoms in preadolescent children, because these symptoms require children to report on complex internal states that are too difficult for young children to comprehend and for parents to observe. Empirical studies have also raised serious questions about the appropriateness of this threshold for prepubertal children.[13-15]

Childhood PTSD confers increased risk for a number of problems in later childhood, adolescence, and adulthood. PTSD related to child abuse or domestic violence is associated with smaller cerebral volume and smaller corpora colossa,[16] with the severity of these changes being proportional to the duration of the children's trauma exposure. Some studies have shown that childhood PTSD is associated with lower academic achievement compared with children who have been exposed to trauma but have not developed PTSD,[17] whereas a more recent study has found that only reexperiencing symptoms are associated with cognitive impairment in adults with child maltreatment-related PTSD.[18] Certain types of traumatic events seem to be particularly associated with poor outcomes, whether or not children develop full-blown PTSD. For example, childhood sexual abuse alone is a strong predictor of a number of adverse outcomes in adolescence and adulthood, including substance abuse, conduct disorder, and depression.[19] The relation of child sexual abuse to suicidality is particularly serious, with up to 20% of all adolescent suicide attempts being attributable to this trauma and childhood sexual-abuse victims being eight times more likely than their nonsexually abused counterparts to attempt suicide repeatedly during adolescence.[19-21] Adolescents with sexual-abuse–related PTSD also have high-risk sexual behaviors.[22] Adults with PTSD related to childhood trauma have been found to have significantly higher rates of depression, suicide attempts, substance abuse, psychiatric hospitalizations, and relationship difficulties

compared with anxiety-disordered adults who have a trauma history without PTSD or no trauma history.[23]

EPIDEMIOLOGY

One sample of adolescents and young adults indicated that the overall lifetime prevalence of PTSD in the general youth population was 9.2%.[24] A recent national sample of adolescents (12–17 years old) indicated that 3.7% of male and 6.3% of female adolescents met full diagnostic criteria for PTSD.[25] A survey of 1,035 German adolescents found a lifetime prevalence rate of 1.6%.[26] Many more trauma-exposed children develop clinically significant PTSD symptoms without meeting full diagnostic criteria; research has indicated that these children have comparable functional impairments to those with a diagnosis of PTSD.[27] The few studies that have examined the natural course of PTSD in children have sometimes concurred with the general trend of adult studies that PTSD rates per sample decrease, albeit gradually, with time.[13,28-31] Despite these group averages that show overall "natural recovery" (i.e., remission without treatment), within these samples are always those who experience chronic PTSD over the course of many years. In other words, cohorts of children exposed to sexual abuse, natural disasters, war, accidents, and school violence have been documented to have decreases in rates of PTSD over the course of time, but significant proportions of these cohorts continued to meet criteria for chronic PTSD. More ominous are two prospective studies that have shown no group average decrease in PTSD symptomatology. McFarlane[32] showed that Australian school-age children (mean age, 8.2 years) did not decrease their PTSD symptomatology over 18 months after a bushfire.[32] Scheeringa et al.[33] showed that preschool-age children did not decrease PTSD symptomatology over 2 years. An important question is whether younger children are more vulnerable to permanent effects of trauma. Another important question is whether earlier treatment would result in better outcomes than delayed or no treatment, even if rates of PTSD diagnosis decline over time for all age groups during childhood and adolescence. A new study has indicated that this is the case for adults.[34]

RISK AND PROTECTIVE FACTORS

Female gender, previous trauma exposure, multiple traumas, greater exposure to the index trauma, presence of a preexisting psychiatric disorder (particularly an anxiety disorder), parental psychopathology, and lack of social support are risk factors for a child developing PTSD after trauma exposure.[35] Conversely, parental support, lower levels of parental PTSD, and resolution of other parental trauma-related symptoms have been found to predict lower levels of PTSD symptoms in children.[36,37] In the context of a disaster, increased television viewing of disaster-related events, delayed evacuation, extreme panic symptoms, or having felt that one's own or one's family member's life was in danger have each been found to be independently and significantly associated with developing PTSD symptoms in children.[38-40] Recent research has suggested that children's psychological reactions to trauma exposure are to some degree influenced by genetic factors.[41]

EVIDENCE BASE FOR PRACTICE PARAMETERS

In this Parameter, recommendations for best treatment practices are stated in accordance with the strength of the underlying empirical and/or clinical support, as follows:

- Minimal standard (MS) is applied to recommendations that are based on rigorous empirical evidence (e.g., randomized, controlled trials) and/or overwhelming clinical consensus. Minimal standards apply more than 95% of the time (i.e., in almost all cases).
- Clinical guideline (CG) is applied to recommendations that are based on strong empirical evidence (e.g., nonrandomized controlled trials) and/or strong clinical consensus. Clinical guidelines apply approximately 75% of the time (i.e., in most cases).
- Option (OP) is applied to recommendations that are acceptable based on emerging empirical evidence (e.g., uncontrolled trials or case series/reports) or clinical opinion, but lack strong empirical evidence and/or strong clinical consensus.
- Not endorsed (NE) is applied to practices that are known to be ineffective or contraindicated.

The strength of the empirical evidence is rated in descending order as follows:

- Randomized, controlled trial (rct) is applied to studies in which subjects are randomly assigned to two or more treatment conditions.
- Controlled trial (ct) is applied to studies in which subjects are nonrandomly assigned to two or more treatment conditions.
- Uncontrolled trial (ut) is applied to studies in which subjects are assigned to one treatment condition.
- Case series/report (cs) is applied to a case series or a case report.

SCREENING

Recommendation 1. The Psychiatric Assessment of Children and Adolescents Should Routinely Include Questions About Traumatic Experiences and PTSD Symptoms (MS).

Given the high rate of trauma exposure in children and the potentially long-lasting course of PTSD, it is important to detect this condition early. Routine screening for PTSD during an initial mental health assessment is therefore recommended. Even if trauma is not the reason for referral, clinicians should routinely ask children about exposure to commonly experienced traumatic events (e.g., child abuse, domestic or community violence, or serious accidents), and if such exposure is endorsed, the child should be screened for the presence of PTSD symptoms. Screening questions should use developmentally appropriate language and be based on *DSM-IV-TR* criteria. Obtaining information about PTSD symptoms from multiple informants including children and parents or other caretakers is essential for prepubertal children because the addition of caretaker information significantly improves diagnostic accuracy.[14]

To screen for PTSD symptoms, clinicians must first determine whether children have been exposed to qualifying traumatic experiences. One of the most comprehensive tools in this regard is the Juvenile Victimization Questionnaire, which has been validated for ethnically diverse samples of children 2 to 17 years of age.[42] Optimal screening strategies will depend on children's ages. For children 7 years and older, children can self-report trauma exposure and symptoms. Self-report measurements for PTSD such as the University of California at Los Angeles (UCLA) Posttraumatic Stress Disorder Reaction Index[43] or the Child PTSD Symptom Scale[44] can assist with screening and monitoring response to treatment. An abbreviated version of the UCLA PTSD Reaction Index is shown in Table 1.

When screening children younger than 7 years, instruments must be administered to caregivers because young children do not yet possess the developmental capacities for accurate self-report of psychiatric symptomatology. The PTSD for Preschool-Age Children is an 18-item checklist that covers most PTSD items plus several items appropriate for young children.[45] A subset of 15-items in the Child Behavior Checklist has shown promising sensitivity and specificity compared to a gold-standard interview for PTSD.[46] The Trauma Symptom Checklist for Children[47] is a checklist for a wide range of trauma-related difficulties such as PTSD, depressive, anxiety, and dissociative and anger symptoms. The companion instrument for younger children, the Trauma Symptom Checklist for Young Children, has also been found to have good psychometric properties and its PTSD subscale has correlated well with PTSD scores on the UCLA PTSD Reaction Index in young children.[48]

EVALUATION

Recommendation 2. If Screening Indicates Significant PTSD Symptoms, the Clinician Should Conduct a Formal Evaluation To Determine Whether PTSD Is Present, the Severity of Those Symptoms, and the Degree of Functional Impairment. Parents or Other Caregivers Should Be Included in This Evaluation Wherever Possible (MS).

The proper assessment of PTSD requires relatively more diligence and educational interviewing than perhaps for any other disorder. Respondents need to be educated about complicated PTSD symptoms so that they understand what is being asked so that they do not over- or under-endorse symptoms based on misunderstandings of what is being asked. For instance, most people intuitively know what symptoms from other disorders such as sadness or hyperactivity look like, but few have experienced an overgeneralized fear reaction in the presence of a reminder of a life-threatening traumatic event in the past, or dissociative staring, or a sense of a foreshortened future. This would be especially true for nontraumatized parents responding about their children. This style of interviewing runs counter to the way most clinicians were trained in that inter-

TABLE 1 Abbreviated University of California at Los Angeles PTSD Reaction Index.[43] © 2001 Robert S. Pynoos and Alan M. Steinberg. Reprinted with permission from Alan M. Steinberg.

Here is a list of nine problems people sometimes have after very bad things happen. Think about your traumatic experience and circle one of the numbers (0, 1, 2, 3, or 4) that tells how often the problem happened to you DURING THE PAST MONTH. For example, 0 means not at all and 4 means almost every day.					
1. I get upset, afraid or sad when something makes me think about what happened.	None ☐ 0	Little ☐ 1	Some ☐ 2	Much ☐ 3	Most ☐ 4
2. I have upsetting thoughts or pictures of what happened come into my mind when I do not want them to.	None ☐ 0	Little ☐ 1	Some ☐ 2	Much ☐ 3	Most ☐ 4
3. I feel grouchy, or I am easily angered.	None ☐ 0	Little ☐ 1	Some ☐ 2	Much ☐ 3	Most ☐ 4
4. I try not to talk about, think about, or have feelings about what happened.	None ☐ 0	Little ☐ 1	Some ☐ 2	Much ☐ 3	Most ☐ 4
5. I have trouble going to sleep, or wake up often during the night.	None ☐ 0	Little ☐ 1	Some ☐ 2	Much ☐ 3	Most ☐ 4
6. I have trouble concentrating or paying attention.	None ☐ 0	Little ☐ 1	Some ☐ 2	Much ☐ 3	Most ☐ 4
7. I try to stay away from people, places, or things that make me remember what happened.	None ☐ 0	Little ☐ 1	Some ☐ 2	Much ☐ 3	Most ☐ 4
8. I have bad dreams, including dreams about what happened.	None ☐ 0	Little ☐ 1	Some ☐ 2	Much ☐ 3	Most ☐ 4
9. I feel alone inside and not close to other people.	None ☐ 0	Little ☐ 1	Some ☐ 2	Much ☐ 3	Most ☐ 4

viewers do not want to "lead" children during interviews. To prevent this, clinicians can ask children to provide adequate details about onset, frequency, and duration to be convincing. In one study, 88% of PTSD symptomatology was not observable from clinical examination of young children.[12] The reexperiencing and avoidance items in particular require an individual to recognize that their emotions and behaviors are yoked to memories of previous events that, almost by the definition of PTSD, they are trying to avoid remembering. In particular, it is insufficient to ask about reexperiencing and avoidance items generically, such as, "Do you have distress at reminders of your past event?" Interviewers must tailor these probes to the individualized experiences of each patient with specific examples, such as, "When you went past the house where the event occurred, did you get upset?" Many individuals will respond in the negative to the generic question, but in the affirmative to the specific probe once they have been properly educated on what the interviewer is asking about.

The clinician should ask the child and parent about symptom severity and functional impairment in addition to the presence of PTSD symptoms during the assessment. The Child PTSD Symptom Scale includes a rating of functional impairment that can be followed during the course of treatment to monitor improvement. Younger children may use more developmentally appropriate visual analogs such as gradated depictions of fearful to happy faces or a "fear thermometer" to rate symptom severity and interference with functioning.

Although formal psychological testing or questionnaires are not required to diagnose PTSD, several instruments may be helpful in supplementing the clinical interview in youth 4 to 17 years old. Clinicians may find the Clinician's Assessment of PTSD Symptoms—Child and Adolescent Version[49] or the Schedule for Affective Disorders and Schizophrenia for School Aged Children—Present and Lifetime Version PTSD section[50] helpful in this regard. Both entail child and parent consensus ratings of PTSD symptoms that are rated in relation to an index trauma selected at the beginning of the interview.

For preschool children, the Posttraumatic Stress Disorder Semi-Structured Interview and Observational Record for Infants and Young Children is an interview for caregivers that contains appropriate developmental modifications.[51]

Recommendation 3. The Psychiatric Assessment Should Consider Differential Diagnoses of Other Psychiatric Disorders and Physical Conditions That May Mimic PTSD (MS).

Psychiatric conditions may present with symptoms similar to those seen in PTSD. Avoidance and reexperiencing symptoms of PTSD such as restless, hyperactive, disorganized, and/or agitated activity or play can be confused with attention-deficit/hyperactivity disorder (ADHD). Hyperarousal symptoms in children such as difficulty sleeping, poor concentration, and hypervigilant motor activity also overlap significantly with typical ADHD symptoms, and unless a careful history of trauma exposure is taken in relation to the timing of the onset or worsening of symptoms, these conditions may be difficult to distinguish. PTSD may also present with features more characteristic of oppositional defiant disorder due to a predominance of angry outbursts and irritability; this may be particularly true if the child is being exposed to ongoing trauma reminders (such as the presence of the perpetrator of violence). PTSD may mimic panic disorder if the child has striking anxiety and psychological and physiologic distress upon exposure to trauma reminders and avoidance of talking about the trauma. PTSD may be misdiagnosed as another anxiety disorder including social anxiety disorder, obsessive-compulsive disorder, general anxiety disorder, or phobia due to avoidance of feared stimuli, physiologic and psychological hyperarousal upon exposure to feared stimuli, sleep problems, hypervigilance, and increased startle reaction. PTSD may also mimic major depressive disorder due to the presence of self-injurious behaviors as avoidant coping with trauma reminders, social withdrawal, affective numbing, and/or sleep difficulties. PTSD may be misdiagnosed as bipolar disorder, as discussed above, due to children's hyperarousal symptoms and other anxiety symptoms mimicking hypomania; traumatic reenactment mimicking aggressive or hypersexual behavior; and maladaptive attempts at cognitive coping mimicking pseudo-manic statements. An examination of the revised criteria for juvenile mania and child PTSD symptoms reveals significant overlap.[52] PTSD may be misdiagnosed as a primary substance-use disorder because drugs and/or alcohol may be used to numb or avoid trauma reminders. Conversely, it is important to remember that there are many youths with a history of trauma who have primary substance-use disorders with few trauma symptoms; these youths will typically benefit more from receiving treatment for substance use than for PTSD.

Some children with PTSD may be severely agitated. The severity of their hypervigilance, flashbacks, sleep disturbance, numbing, and/or social withdrawal may mimic a psychotic disorder. Other children with PTSD may have unusual perceptions that should be differentiated from the hallucinations of a psychotic illness. The likelihood of a delirium should also be considered in the presence of impairment of sensorium and fluctuating levels of consciousness. Any underlying physical illness associated with trauma requires immediate medical care.

Physical conditions that may present with PTSD-like symptoms include hyperthyroidism, caffeinism, migraine, asthma, seizure disorder, and catecholamine- or serotonin-secreting tumors. Prescription drugs with side effects that may mimic aspects of PTSD include antiasthmatics, sympathomimetics, steroids, selective serotonin reuptake inhibitors (SSRIs), antipsychotics (akathisia), and atypical antipsychotics. Nonprescription drugs with side effects that may mimic PTSD include diet pills, antihistamines, and cold medicines.

Posttraumatic stress disorder is often associated with somatic symptoms such as headaches and abdominal complaints. A mental health assessment should be considered early in the medical evaluation of youths with somatic complaints, particularly those with a known history of trauma exposure. There is some preliminary evidence to suggest that trauma exposure adversely affects immunologic functioning in children.[53]

TREATMENT

Recommendation 4. Treatment Planning Should Consider a Comprehensive Treatment Approach Which Includes Consideration of the Severity and Degree of Impairment of the Child's PTSD Symptoms (MS).

Treatment of children with PTSD symptoms should include education of the child and par-

ents about PTSD, consultation with school personnel, and primary care physicians once informed consent/assent has been obtained, and trauma-focused psychotherapy including cognitive-behavioral therapy, psychodynamic psychotherapy, and/or family therapy. Pharmacotherapy may also be considered in the multimodal approach to children with PTSD. School-based screening and treatments should be considered after community-level traumatic events because this is an efficient way of identifying and treating affected children. Selection and timing 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 PTSD, age, cognitive and developmental functioning of the child and family functioning, and other comorbid conditions. In addition, child and family factors such as attitudes or acceptance of a particular intervention and clinician factors such as training, access to and attitudes about evidence-based interventions, and affordability of such interventions need to be considered.

Children with significant PTSD symptoms who do not meet full criteria for a PTSD diagnosis often have comparable functional impairment to those with a PTSD diagnosis.[27,33] Treatment decisions for children should take into account symptom severity and functional impairment, regardless of whether or not they have an actual PTSD diagnosis. Until evidence from comparative studies can inform clinical practice, treatment of mild PTSD should begin with psychotherapy. Valid reasons for combining medication and psychotherapy include the need for acute symptom reduction in a child with severe PTSD, a comorbid disorder that requires concurrent treatment, or unsatisfactory or partial response to psychotherapy and potential for improved outcome with combined treatment.[54]

There is evidence that including parents in treatment is helpful for resolution of children's trauma-related symptoms. Deblinger et al.[55[rct]] provided trauma-focused cognitive behavioral therapy (CBT) to parents alone, children alone, or to parents and children and compared these three conditions with community treatment as usual. Parental inclusion in treatment resulted in significantly greater improvement in child-reported depression and parent-reported behavior problems. Studies have demonstrated that lower levels of parental emotional distress[39[rct],56[rct]] and stronger parental support[57[rct]] predict more positive treatment response, including in PTSD symptoms, during children's participation in trauma-focused CBT (TF-CBT) treatment.

Recommendation 5. Treatment Planning Should Incorporate Appropriate Interventions for Comorbid Psychiatric Disorders (MS).

Children with PTSD often have comorbid psychiatric conditions. Appropriate diagnosis and treatment should be provided in a timely manner according to established treatment guidelines for the comorbid condition. PTSD commonly occurs in the presence of depressive disorders,[58] ADHD,[59] substance abuse,[60] and other anxiety disorders.[58] Ideally, treatment of comorbid conditions should be provided in an integrated fashion. One evidence-supported model for treating adolescents with PTSD and comorbid substance abuse has been described.[61,62] This model, Seeking Safety, integrates evidence-based interventions for PTSD and substance-use disorders and focuses on assuring safety in the present moment.

Recommendation 6. Trauma-Focused Psychotherapies Should Be Considered First-Line Treatments for Children and Adolescents With PTSD (MS).

Among psychotherapies there is convincing evidence that trauma-focused therapies, that is, those that specifically address the child's traumatic experiences, are superior to nonspecific or nondirective therapies in resolving PTSD symptoms. This has been true across the developmental spectrum from preschoolers through adolescents, and encompassing diverse theoretical therapies such as psychoanalytic, attachment, and cognitive-behavioral treatment models.[63[rct],64[rct],65[rct]] The importance of directly addressing the child's traumatic experiences in therapy makes sense when considering PTSD symptoms: avoidance of talking about trauma-related topics would be an expected occurrence when children are given a choice of focus during treatment, as is the case in nondirective treatment models. This outcome was observed in a study comparing child-centered therapy sessions with trauma-focused treatment, i.e., children in child-centered therapy rarely spontaneously mentioned their personal traumatic experiences.[63[rct]] Timing and pacing of trauma-focused therapies are guided

in part by children's responses that therapists and parents monitor during the course of treatment. Clinical worsening may suggest the need to strengthen mastery of previous treatment components through a variety of interventions, rather than abandoning a trauma-focused approach.

Among the trauma-focused psychotherapies, TF-CBT[66] has received the most empirical support for the treatment of childhood PTSD. TF-CBT and a similar group format, Cognitive Behavioral Intervention for Trauma in Schools (CBITS),[67] have been supported by numerous randomized controlled trials for children with PTSD comparing these treatments with wait-list control conditions or active alternative treatments. Child-parent psychotherapy[68] combines elements of TF-CBT with attachment theory and has been tested in one randomized controlled trial. A trauma-focused psychoanalytic model[65] for sexually abused children has been tested in one randomized study. Many other models are in development and at various stages of testing.

Based on the evidence presented below, there is growing support for the use of trauma-focused psychotherapies that (1) directly address children's traumatic experiences, (2) include parents in treatment in some manner as important agents of change, and (3) focus not only on symptom improvement but also on enhancing functioning, resiliency, and/or developmental trajectory.

COGNITIVE-BEHAVIORAL THERAPIES

In TF-CBTs the clinician typically provides stress-management skills in preparation for the exposure-based interventions that are aimed at providing mastery over trauma reminders. Cohen et al.[66] described commonly provided TF-CBT components using the PRACTICE acronym: *psychoeducation* (e.g., educating children and parents about the type of traumatic event the child experienced, e.g., how many children this happens to, what causes it to happen, etc.; common trauma reactions including PTSD and about the TF-CBT treatment approach); *parenting skills* (use of effective parenting interventions such as praise, positive attention, selective attention, time out, and contingency reinforcement procedures); *relaxation skills* (focused breathing, progressive muscle relaxation, and other personalized relaxation activities to reverse the physiologic manifestations of traumatic stress); *affective modulation skills* (feeling identification; use of positive self-talk, thought interruption, and positive imagery; enhancing safety, problem solving, and social skills; recognizing and self-regulating negative affective states); *cognitive coping and processing* (recognizing relations among thoughts, feelings, and behaviors; changing inaccurate and unhelpful thoughts for affective regulation); *trauma narrative* (creating a narrative of the child's traumatic experiences, correcting cognitive distortions about these experiences, and placing these experiences in the context of the child's whole life); *in vivo mastery of trauma reminders* (graduated exposure to feared stimuli); *conjoint child-parent sessions* (joint sessions in which the child shares the trauma narrative with parents and other family issues are addressed); and *enhancing future safety and development* (addressing safety concerns related to prevention of future trauma, return to normal developmental trajectory). Different forms of TF-CBT interventions use different combinations and dosages of these PRACTICE components, depending on their target populations and types of trauma.

The most widely used and best researched manual-based CBT protocol for PTSD is TF-CBT.[66,69] TF-CBT has been designated "supported and efficacious" based on standards of empirical support.[70] TF-CBT was designed for children with PTSD in addition to depression, anxiety, and other trauma-related difficulties such as shame and self-blame. TF-CBT is typically delivered individually to children and their nonperpetrator parents, although it has also been provided in group formats. TF-CBT has been tested in several randomized controlled trials involving more than 500 children and shown clinically significant improvement compared with usual community treatment,[55[rct]] nondirective supportive therapy,[56[rct],71[rct]] child-centered therapy,[63] and wait-list control[72[rct]] conditions for children 3 to 17 years old. Treatment gains were maintained at 1-year follow-up in several of these studies.[73-76] TF-CBT has been adapted for Hispanic youth[77] and Native American families.[78] TF-CBT was provided in Spanish and English after the terrorist attacks of September 11, 2001, and was effective in decreasing PTSD symptoms.[79[ct]] TF-CBT has also been adapted for childhood traumatic grief, an emerging condition in which children lose loved ones in traumatic circumstances. Two trials of this adapted treatment model have shown significant improve-

ment in PTSD and childhood traumatic grief symptoms.[80[ut],81[ut]]

The best-researched group CBT protocol for childhood PTSD is CBITS. CBITS includes all of the PRACTICE components described above, with the exception of the parental component, which is limited and optional in the CBITS model. CBITS also provides a teacher component to educate teachers about the potential impact of trauma on students' classroom behavior and learning. CBITS is provided in a group format in the school setting (i.e., group therapy sessions are held in school, but not within children's regular classroom periods). The trauma narrative component is typically conducted during individual "breakout" sessions during which each child meets one on one with their usual group therapist. CBITS has been tested in two studies of children exposed to community violence. Stein et al.[67[rct]] documented that CBITS was superior to a wait-list condition in decreasing PTSD and depression. Kataoka et al.[82[ct]] also found that children assigned to CBITS improved more than children assigned to a wait-list control; this study cohort consisted of immigrant Latino children.

Seeking Safety[61] is a manualized individual or group CBT protocol for PTSD and comorbid substance-use disorders that includes sequential interventions for affective modulation, substance-abuse risk reduction, and trauma-specific cognitive processing. Seeking Safety was superior to treatment as usual in a small randomized controlled pilot group study for adolescent girls with PTSD and substance-abuse disorder.[62[rct]]

Several other manualized CBT protocols for child and adolescent PTSD are currently being used and/or evaluated. UCLA Trauma and Grief Component Therapy is an individual or group-based, adolescent-focused intervention that uses CBT in addition to other evidence-based components to alleviate PTSD and traumatic grief and to restore developmental progression. It was found to decrease PTSD, traumatic grief, and depressive symptoms in a study of Bosnian adolescents.[83[ct]] In a second study using this model, adolescents exposed to community violence experienced relief from PTSD symptoms.[84[ut]] This model was also found to be effective for reducing children's PTSD symptoms related to terrorism.[79[ct]] Individual child TF-CBT has shown superiority over a wait-list control condition in decreasing PTSD symptoms after single-episode traumas.[85[rct]] A cognitive and family therapy-based treatment model, Surviving Cancer Competently Intervention Program, which is provided in four group and family sessions over a single day, was superior to a wait-list control condition in decreasing hyperarousal symptoms in adolescent cancer survivors.[86[rct]]

Eye Movement Desensitization and Reprocessing (EMDR) is an effective treatment for adult PTSD but most randomized controlled trials for child EMDR have had serious methodologic shortcomings. One randomized controlled trial showed that a child-modified EMDR protocol was superior to a wait-list control in alleviating reexperiencing symptoms for Swedish children.[87[rct]] The researchers noted that "several deviations" existed between the child and adult EMDR components and techniques. The investigators stated that "the similarity of the structured EMDR technique and its components to the principles of cognitive psychotherapy is striking . . . the cognitive character of the EMDR makes it suitable for child applications." Because of this description, EMDR is included under CBT interventions.

PSYCHODYNAMIC TRAUMA-FOCUSED PSYCHOTHERAPIES

Psychodynamic trauma-focused psychotherapies aim to promote personality coherence, healthy development, and the achievement of traumatic symptom resolution.[88] In younger children, these treatments have focused on the parent-child relationship to address traumatic situations in which the parent (typically the mother) was the victim of the trauma (e.g., domestic violence) or was so personally traumatized or emotionally compromised by the experience that she was unable to sustain the child's development. For older children psychodynamic trauma-focused therapies provide an opportunity to mobilize more mature cognitive capacities, objectify and explain symptoms, identify trauma reminders, identify environmental factors that may complicate recovery—especially interactions that heighten regressive experience and make more explicit ways in which overwhelming fear and helplessness of the traumatic situation run counter to age-appropriate strivings for agency, competence, and self-efficacy. The relatively unstructured nature of the sessions may contribute to adolescents regaining a more internal locus of control that was lost during exposure to uncontrollable traumatic events.[88]

Child-parent psychotherapy is a relationship-based treatment model for young children (infants to age 7 years) who have experienced family trauma such as domestic violence.[68] It includes the following components: modeling appropriate protective behavior; assisting the parent in accurately interpreting the child's feelings and actions; providing emotional support to the child and parent; providing empathic communication, crisis intervention, and concrete assistance with problems of living; developing a joint parent-child narrative about the family trauma and correcting cognitive distortions in this regard; and interventions for addressing traumatic grief. As is clear from this description, this treatment model is not easily characterized as one specific type of therapy; rather it includes elements of psychodynamic, cognitive behavioral, social learning, and attachment treatments.

Child-parent psychotherapy is provided in conjoint parent-child treatment sessions. Child-parent psychotherapy has been tested in one randomized controlled trial for 3- to 5-year-old children exposed to marital violence and shown to be superior to case management plus individual psychotherapy in decreasing child PTSD and behavior problems.[64[rct]] Improvement in behavior problems was maintained at 6-month follow-up; child PTSD symptoms were not assessed at follow-up due to financial constraints.[89[rct]] Child-parent psychotherapy has been adapted for young children with traumatic grief[90] and is currently being tested in an open study for this population.

Trowell et al.[65[rct]] found that individual psychoanalytic psychotherapy that addressed sexual abuse-related issues was superior to group psychoeducation in decreasing PTSD symptoms in sexually abused children and adolescents. Although the total number of hours spent in treatment between the two conditions was equivalent (psychoeducation groups lasted 1.5 hours, whereas individual psychotherapy sessions lasted 1 hour), the investigators did not state whether duration of treatment was equivalent across the two conditions (the mean number of individual psychoanalytic sessions was 30 and the mean number of psychoeducation sessions was 18).

Recommendation 7. SSRIs Can Be Considered for the Treatment of Children and Adolescents With PTSD (OP).

Selective serotonin reuptake inhibitors are approved for use in adult PTSD and are the only medications shown to effectively decrease symptoms in all three adult PTSD clusters.[91-93] There are important differences between adults and children with regard to the physiology and manifestations of PTSD[94] that may have ramifications for the efficacy and use of medications in this age group. The history of antidepressant use in children[95] (i.e., early preliminary results were later found to be largely attributable to placebo effects) provides an illustration of why child clinicians should be cautious about basing treatment decisions on the adult literature, and why more medication trials are needed for children with PTSD. A recent acute PTSD treatment study involving more than 6,000 adult participants illustrated that those who agreed to take medication had significantly worse PTSD symptoms than those who agreed to receive psychotherapy.[34]

Preliminary evidence has suggested that SSRIs may be beneficial in reducing child PTSD symptoms. Seedat et al.[96[ut]] compared the rate of improvement in 24 child and adolescent subjects with 14 adult subjects provided with citalopram 20 to 40 mg/day and demonstrated equivalent improvements between groups. A Turkish open trial of fluoxetine showed effectiveness in improving earthquake-related PTSD symptoms in 26 participants 7 to 17 years old.[97]

Two recent randomized trials have evaluated the efficacy of SSRI medication for treating PTSD in children and adolescents. The first failed to find any superiority of sertraline over placebo in 67 children with initial PTSD diagnoses, although both groups experienced significant improvement, suggesting a strong placebo effect.[98[rct]] The second compared TF-CBT plus sertraline to TF-CBT plus placebo in 24 10 to 17 year olds with sexual abuse-related PTSD symptoms.[99[rct]] All children significantly improved with no group-by-time differences found except on Children's Global Assessment Scale scores. This study concluded that, although starting treatment with combined sertraline and TF-CBT might be beneficial for some children, it is generally preferable to begin with TF-CBT alone and add an SSRI only if the child's symptom severity or lack of response suggests a need for additional interventions.

Children with comorbid major depressive disorder, general anxiety disorder, obsessive-compulsive disorder, or other disorders known to respond to an SSRI may benefit from the addition of an SSRI earlier in treatment. More than 60% of the participants in the TF-CBT plus sertraline

study[99] had comorbid major depressive disorder, yet the results did not indicate a clear benefit of adding sertraline with regard to improvement in PTSD or depression scores.

Recent findings have suggested that some risks may be associated with SSRI medications.[100,101] In addition, SSRIs may be overly activating in some children and lead to irritability, poor sleep, or inattention; because these are symptoms of PTSD hyperarousal, SSRIs may not be optimal medications for these children. In these situations alternative psychotropic medication options may need to be considered. On the basis of the above information, there are insufficient data to support the use of SSRI medication alone (i.e., in the absence of psychotherapy) for the treatment of childhood PTSD.

Recommendation 8. Medications Other Than SSRIs May Be Considered for Children and Adolescents With PTSD (OP).

Algorithms and guidelines for treatment of adults with PTSD suggest that SSRIs can be recommended for the treatment of adult PTSD as a medication monotherapy, antiadrenergic agents such as clonidine and propranalol may be useful in decreasing hyperarousal and reexperiencing symptoms, anticonvulsants may show promise for treating PTSD symptoms other than avoidance, and benzodiazepines have not been found to be beneficial in treating PTSD-specific symptoms.[102,103]

Some evidence from open clinical trials has suggested that medications other than SSRIs may be helpful for youth with PTSD symptoms. These include α- and β-adrenergic blocking agents, novel antipsychotic agents, non-SSRI antidepressants, mood-stabilizing agents, and opiates. Robert et al.[104[rct]] randomly assigned hospitalized children with ASD secondary to burns to receive imipramine or chloral hydrate. This study demonstrated that at 6 months children receiving imipramine were significantly less likely to have developed PTSD than those receiving chloral hydrate. However, due to concern about rare but serious cardiac side effects, tricyclic antidepressants are not recommended as a first-line preventive intervention for PTSD in children. Saxe et al.[105[ut]] conducted a naturalistic study of the relation between morphine dosage and subsequent development of PTSD in acutely burned hospitalized children and found that, controlling for subjective experience of pain, there was a significant linear association between mean morphine dosage (milligrams per kilogram per day) and 6-month reduction in PTSD symptoms.

There is some evidence of increased dopamine presence in children and adults with PTSD,[16] which is believed to contribute to the persistent and overgeneralized fear characteristic of PTSD. Dopamine blocking agents such as neuroleptics may therefore decrease some PTSD symptoms. One open study of risperidone resulted in 13 of 18 boys experiencing remission from severe PTSD symptoms.[106[ut]] These children had high rates of comorbid symptoms that could be expected to respond positively to risperidone; for example, 85% had coexisting ADHD and 35% had bipolar disorder.

There is also evidence of increased adrenergic tone and responsiveness in children with PTSD.[15] Both α- and β-adrenergic blocking agents have been used with some success in children with PTSD symptoms. Clonidine has been found in two open studies to decrease basal heart rate, anxiety, impulsivity, and PTSD hyperarousal symptoms in children with PTSD.[107[ut]],[108[ut]] In a case study, clonidine treatment resulted in improved sleep and increased neural integrity of the anterior cingulate.[109[cs]] Propranalol was found in an open study to decrease reexperiencing and hyperarousal symptoms in children with PTSD symptoms.[110[ut]]

The hypothalamic-pituitary-adrenal axis is also dysregulated in children with PTSD, in ways that are complex. This suggests a potential mechanism for future pharmacologic intervention, for example, through the use of corticotrophin release factor antagonists.[103(p97)] However, no trials of these medications have been conducted in children to date.

Recommendation 9. Treatment Planning May Consider School-Based Accommodations (CG).

Children with significant PTSD symptoms may have impaired academic functioning. This is often due to hypervigilance to real or perceived threats in the environment and may be a particular issue if trauma reminders are present in the school setting. One example of a school-based trauma reminder would be a sexual assault or bullying occurring at school, particularly if the perpetrator still attended the same school. Another example of a school-based trauma reminder was demonstrated by a school in New Orleans overlooking a levee that

was breached and houses destroyed by the flooding after Hurricane Katrina. Children attending this school were faced with unavoidable daily reminders of the original trauma.

Although every reasonable effort should be made to assist children in overcoming avoidance of innocuous trauma reminders (i.e., people, places, or situations that are inherently innocuous or safe, which only seem frightening to the child because of generalized fear), children should also be protected from realistic ongoing threats or danger whenever possible. Children who are experiencing significant functional impairment related to trauma reminders may benefit from school accommodations up to and including placement at an alternative school where reminders are not present. This is especially true if safety is an issue, for example, if the perpetrators of interpersonal violence and/or their peers are harassing the victimized child on an ongoing basis.

Recommendation 10. Use of Restrictive "Rebirthing" Therapies and Other Techniques That Bind, Restrict, Withhold Food or Water, or Are Otherwise Coercive Are Not Endorsed (NE).

Restrictive "rebirthing" or "holding" therapies that forcibly bind, restrict, withhold food or water, or are otherwise coercive have been used for children who have experienced severe early childhood trauma or losses. Often these children have been diagnosed with a more severe disorder, reactive attachment disorder, rather than PTSD. There is no empirical evidence to support the efficacy of these treatments, and in some cases these interventions have led to severe injury or death.[111] These interventions are therefore not endorsed.

PREVENTION AND EARLY SCREENING

Recommendation 11. School- or Other Community-Based Screening for PTSD Symptoms and Risk Factors Should Be Conducted After Traumatic Events That Affect Significant Numbers of Children (CG).

After community-level events that have the potential to traumatize large numbers of children, conducting screening for PTSD in schools or other settings where children commonly gather is important for secondary prevention and early identification. Typically such screening efforts do not occur in the immediate aftermath (i.e., first 4 weeks) after a community-level trauma due to a variety of factors including that usual services are often disrupted after such events; adults (including teachers and school administrators) have also been displaced, bereaved, and/or traumatized; and schools are usually not proactively prepared for such screening efforts.[112] Screening ideally ought to begin after approximately 1 month based on consensus from empirical findings that the vast majority of enduring PTSD symptoms begin immediately, and those who will experience natural recovery will do so within about 1 month. Models exist for successful universal school-based screening after community-level disasters[39] and for providing school-based treatment.[113] Because symptoms may not develop immediately and PTSD is not the only disorder that children develop after trauma exposure, it makes sense to also screen children for known risk factors for developing subsequent mental health difficulties and to provide follow-up for children at greatest risk for developing negative mental health sequelae.

Group interventions in school or other community settings can provide effective early treatment for children with PTSD symptoms. Adaptation of protocol-based CBT interventions to fit diverse populations and taking into account the limitations of community resources, including those of inner-city minority youth, can make evidence-supported treatments feasible. This was accomplished after the September 11 terrorist attacks through Project Liberty. TF-CBT and the UCLA Trauma and Grief Component Therapy were provided to more than 500 mostly multiply traumatized children from highly diverse ethnic backgrounds, provided in English and Spanish in a variety of community, school, and university-affiliated settings in group and in family and individual formats. Results indicated that this approach was effective in decreasing children's PTSD symptoms, and that clinicians were able to use evidence-supported treatments with fidelity. Programs that foster resiliency in youth are being tested internationally to proactively "immunize" children against the potentially adverse affects of traumatic events.[114]

PARAMETER LIMITATIONS

American Academy of Child and Adolescent Psychiatry Practice Parameters are developed to assist clinicians in psychiatric decision making. These Parameters are not intended to define the

standard of care and should not be deemed inclusive of all proper methods of care or exclusive of other methods of care directed at obtaining the desired results. The ultimate judgment regarding the care of a particular patient must be made by the clinician in light of all the circumstances presented by the patient and his/her family, the diagnostic and treatment options available, and available resources. &

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The AACAP develops patient-oriented and clinician-oriented Practice Parameters. Patient-oriented Parameters provide recommendations to guide clinicians toward best treatment practices. Recommendations are based on empirical evidence (when available) and clinical consensus (when not) and are graded according to the strength of the empirical and clinical support. Clinician-oriented Parameters provide clinicians with the information (stated as principles) needed to develop practice-based skills. Although empirical evidence may be available to support certain principles, principles are primarily based on expert opinion derived from clinical experience. This Parameter is a patient-oriented Parameter.

The primary intended audience for the AACAP Practice Parameters is child and adolescent psychiatrists; however, the information contained therein may also be useful for other mental health clinicians.

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