

Practice Parameter on Disaster Preparedness

Betty Pfefferbaum, M.D., J.D., Jon A. Shaw, M.D., and the American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues (CQI)

This Practice Parameter identifies best approaches to the assessment and management of children and adolescents across all phases of a disaster. Delivered within a disaster system of care, many interventions are appropriate for implementation in the weeks and months after a disaster. These include psychological first aid, family outreach, psychoeducation, social support, screening, and anxiety reduction techniques. The clinician should assess and monitor risk and protective factors across all phases of a disaster. Schools are a natural site for conducting assessments and delivering services to children. Multimodal approaches using social support, psychoeducation, and cognitive behavioral techniques have the strongest evidence base. Psychopharmacologic interventions are not generally used but may be necessary as an adjunct to other interventions for children with severe reactions or coexisting psychiatric conditions. *J. Am. Acad. Child Adolesc. Psychiatry*, 2013;52(11):1224–1238. **Key Words:** child and adolescent, disaster, disaster system of care, psychological first aid, resilience

A disaster is “a severe disruption, ecological and psychosocial, which greatly exceeds the coping capacity of the affected community.”¹ This Practice Parameter describes prevention, assessment, and intervention strategies to meet the emotional needs of children and families affected by disasters. Disasters are circumscribed in time and place, with a subsequent cascade of secondary stressors and adversities occurring in the aftermath. Psychological sequelae occur across a timeline generally conceptualized as pre-impact, impact, and post-impact phases.² The pre-impact phase provides opportunities to prepare, organize, and train mental health personnel; to work with community leaders to identify the needs of children and their families; and to evolve strategies for rapid and effective intervention. The impact phase occurs when the force of the disaster creates the maximum likelihood of bodily injury and death. The post-impact phase spans the period from the immediate aftermath, when rescue and recovery efforts predominate and when early interventions such as psychological first aid are administered, through an intermediate phase and the subsequent long-term recovery period, when

more intensive psychosocial interventions are delivered.

Because providing disaster mental health services requires special expertise and unique approaches, this Practice Parameter is designed to guide mental health clinicians working in the context of disasters. The Practice Parameter covers various disaster mental health practices, including “psychological first aid” and other early interventions; interventions used in the intermediate aftermath; assessment of psychological morbidities and risk and protective factors; subsequent treatments using multimodal, individual, family, and group approaches; and the use of psychoactive medications. It assumes familiarity with normal child development and the principles of child psychiatric diagnosis and treatment. Unless otherwise noted, the term *child* refers to children and adolescents and *parent* refers to the child’s primary caregiver, regardless of whether that is a biological or adoptive parent or legal guardian.

METHODOLOGY

The literature search was conducted in November 2009 using PubMed, MEDLINE, PsycINFO, EBM Reviews (evidence-based medicine), EMBASE (biomedical and pharmacologic), ERIC (education), and Social Work Abstracts. The search in MEDLINE and PsycINFO combined the



This article can be used to obtain continuing medical education (CME) at www.jaacap.org.

following search terms: “child” OR “adolescen*” OR “teen” OR “youth” AND “disaster,” yielding 1,926 results, which totaled 1,766 when duplicates were removed and 1,631 when the search was limited to the English language. These results were then limited to “humans,” “all child (0–18 years),” “review articles,” “treatment,” and “prevention,” yielding 320 results. When limited to “core clinical journals,” 220 results were produced. This search was repeated in the EBM Reviews (evidence-based medicine database) and EMBASE (biomedical and pharmacologic database), resulting in 118 articles, and in ERIC (education), yielding 122 results. In Social Work Abstracts, the subject term “disaster” was limited to child and adolescent populations, yielding 31 results.

The PubMed database was searched independently to make full use of the MeSH term database. In PubMed, MeSH terms were used to narrow the search results. The MeSH term “disaster” was used, and those results were limited to “children 0–18 years,” “human,” and “English,” yielding 6,101 results. When these were limited to “randomized controlled trials” or “meta-analyses,” 131 results were found. Continuing in PubMed, a search using the MeSH term “terrorism” yielded 653 results when limited to “all children (0–18).” When these results were limited to “English,” “meta-analyses,” “randomized controlled trials,” and “reviews and practice guidelines,” 89 results were identified.

The PsycINFO database also was searched independently to take advantage of the unique subject headings used in this database. In PsycINFO, the “disaster” subject heading was combined with the subject heading of “treatment,” which yielded 77 results. When these were limited to children and adolescents, 18 results were returned. “Disaster” was combined with “mental health” and limited to children and adolescents, yielding 20 results. The subject headings “post-traumatic stress disorder” (PTSD) and “treatment” were combined and yielded 78 results using the same limits. A search of the subject headings “grief” and “treatment outcomes” yielded 53 results, and 7 results when limited to children and adolescents. The subject headings “posttraumatic stress disorder” and “drug therapy” yielded 58 results when limited to the child and adolescent population. Similar processes were used to review entries in the other databases. The MeSH term database in PubMed and the Subject Heading search in PsycINFO were searched to generate

any new subject headings that had not been used previously.

In January 2013, an updated search using the same databases was conducted to identify materials published since November 2009. This search yielded an additional 63 publications.

Abstracts identified in the searches were reviewed to select material for potential inclusion in the parameter. Throughout the search process, the reference sections of review articles^{3–7} were examined to find any additional articles that were not generated in the search. In addition, studies of child disaster interventions described in refereed peer-reviewed journals were examined.

Reports and studies were included if they described interventions and contained sufficient information to ascertain their appropriateness for use with child disaster populations. Some interventions developed for nondisaster situations were included based on their current and potential application in the disaster context.

BACKGROUND

Children may experience a spectrum of psychological effects across the disaster timeline. Their reactions vary from normal stress reactions to manifest psychiatric disorders. In a national survey conducted 3 to 5 days after the September 11, 2001, terrorist attacks, 35% of parents nationwide reported that their children had at least 1 post-traumatic stress symptom.⁸ A survey of a random sample of more than 8,000 New York City children in grades 4 through 12 6 months after the September 11 attacks showed that 28.6% of the children had at least 1 anxiety/depressive disorder.⁹ The degree of exposure, measured by direct and/or indirect experiences, correlated directly with the prevalence for probable anxiety/depressive disorders.⁹ Twenty-seven months after the September 11 attacks, the most common emotional reactions in children accessing federally funded services were sadness, tearfulness, anger, irritability, sleep disturbance, and intrusive thoughts and images.¹⁰ Younger children (6–11 years) were more likely to present with anxiety, problems concentrating, social isolation, and withdrawal, whereas older children (12–17 years) were more likely to exhibit numbing, avoidance reactions, and substance abuse.¹⁰ Eighteen to 27 months after Hurricane Katrina, 14.9% of children and adolescents representing families in the disaster area defined by the Federal Emergency Management Agency (FEMA) or

families applying for assistance from the American Red Cross (ARC) had a serious emotional disturbance, with 9.3% estimated to have serious emotional disturbance directly attributable to the hurricane.¹¹ This compares to prevalence estimates of serious emotional disturbance at 4% to 7% in studies of communities across the country.¹² The greatest risk for long-term psychiatric impairment in the Hurricane Katrina study was in youth who were exposed to hurricane stressors (experiences that involved serious risk of death, death of a family member or close friend, victimization resulting from lawlessness after the storm, victimization of a loved one, physical illness or injury caused or exacerbated by the storm, physical adversity, psychological adversity, major property loss, income loss, and ongoing difficulties associated with housing), those with a family history of psychopathology, and those with lower family income.¹¹ See the American Academy of Child and Adolescent Psychiatry (AACAP) Practice Parameter for the Psychiatric Assessment and Management of Physically Ill Children and Adolescents¹³ for additional insight into potential emotional reactions to the stressors of physical illness.

An understanding of children's disaster reactions requires an appreciation of the complex systems within which the child dwells, including the family, school, and community, and a host of mediating factors. These include trauma exposure (e.g., intensity, duration, physical proximity, injury, relationship to victims and survivors, exposure to media coverage); individual protective factors (e.g., adaptive coping and problem-solving skills, resilience, positive emotions, neurobiological integrity); family protective factors (e.g., positive parent-child relationships, parental harmony, positive family environment); and community factors (e.g., secondary stressors, traumatic reminders, social support, extended family, valued school and religious affiliations).²

Disaster System of Care

The disaster system of care is built on existing systems. It includes a public health component, which emphasizes resilience and focuses on identification of those in need of services, and a clinical component, which is designed to treat post-traumatic stress or maladaptive emotional and behavioral responses that result from the disaster and secondary adversities.^{14,15} Mental and behavioral health considerations should be integrated into public health, medical, and pediatric disaster

management.¹⁶⁻¹⁸ Ideally, initial disaster services are provided within a hierarchical incident command structure established by local, state, and federal governments. During the impact and immediate post-impact phases of a disaster, interventions may be provided in emergency shelters, family assistance centers, medical and pediatric health care settings, schools, and community-based programs. In the intermediate and longer-term phases of response and recovery, systems of care may extend to primary health care settings, schools and preschools, daycare settings, youth centers, faith-based institutions, and volunteer organizations.

The Federal Response: Crisis Counseling Assistance and Training Program

State and local governments have primary responsibility for disaster management, but the FEMA has authorized the Substance Abuse and Mental Health Services Administration (SAMHSA) to provide mental health funding to states experiencing a major disaster that overwhelms state and local resources. These monies fund SAMHSA's Crisis Counseling Assistance and Training Program (CCP) which supports adult and child needs assessment, individual and group crisis counseling, public education, and referral. The CCP does not supplant existing services. Services are strengths based, outreach oriented, and delivered in nontraditional settings. The CCP also funds training and education for mental health professionals and paraprofessionals and community partners.¹⁹

Volunteers, the American Red Cross, and Volunteer Organizations

Volunteers make vital contributions to disaster services especially during the immediate post-impact period when they participate in both spontaneous and organized activities.²⁰ The ARC, an independent, privately-funded, humanitarian organization, is congressionally-mandated to provide disaster services. The ARC recruits, trains, and mobilizes volunteers, including mental health professionals.²¹ The Medical Reserve Corps, sponsored by the Office of the United States Surgeon General, is a national network of locally organized and directed units that coordinate volunteer health professionals (e.g., physicians, nurses, pharmacists, psychologists, epidemiologists) and others (e.g., chaplains, interpreters, legal advisors, office workers) who donate time and expertise to prepare for and respond to

emergencies by supplementing existing local emergency and public health resources.²²

The Media

The media is vitally important in risk communication to prepare and inform the community of issues that can affect response and recovery (e.g., evacuation routes, location of shelters, ongoing recovery efforts, water pollution, medical services, support services). Those who provide media risk communication must know their audience, establish a sense of trust, and build credibility. This requires accepting the public as an equal partner, being sensitive to public concerns, providing accurate information, using credible sources, and being open to new information. It is helpful to remain calm and neutral; to accept limitations in knowledge; to address issues rather than engage in debate; to be focused, brief, and succinct; and to avoid unnecessary abstractions, jargon, and negative commentary. It is better to emphasize goals than to make promises that lead to disappointments and accusations.²³

Serving Children With Special Needs

The nature of disaster interventions requires recognition of children with special needs who are at risk for adverse outcomes.² Special-needs children include those exposed to maltreatment or poverty; children from minority backgrounds; refugee and immigrant children; children from families with limited language proficiency; children residing in foster care homes, halfway houses, shelters for domestic violence, and youth hostels; homeless and runaway children; children confined to juvenile detention centers; and children with medical illnesses, developmental disabilities, mobility challenges, and psychiatric disorders. Disasters can undermine the systems of safety that are in place to protect children, leaving them vulnerable to secondary stressors associated with violence, abuse, and opportunistic crimes.

Some children with identified special needs may be receiving ongoing psychosocial services before a disaster. As part of preparedness activities, community and mental health leaders should promote contingency planning for continuity of care and resource provision in anticipation of a disaster. This requires an accurate assessment of the child's and the family's needs, coping capacity and resilience, cultural and language competency, and available support services. Subsequent to a disaster, the focus is on

maintaining and restoring supportive services and care environments.

The Role of Mental Health Clinicians

Mental health clinicians invariably will be involved in the aftermath of disasters and thus it is imperative that they participate in training offered by organizations such as the ARC and Medical Reserve Corps and, wherever possible, participate in local medical, psychiatric, and civil emergency preparedness and planning efforts. This should be followed by just-in-time training as clinicians deploy for a specific assignment.²⁴ Depending on their expertise and experience, child and adolescent specialists can serve as child advocates, child development experts, clinicians, community consultants, educators, and systems specialists. They have the skills to triage survivors, deliver psychotherapeutic and psychosocial interventions, and engage parents and families to facilitate healthy recovery. Child and adolescent psychiatrists may prescribe psychoactive agents if needed. Some child professionals may have the skills to assist in coordinating services among local, state, and federal programs and to assist community leaders in decision making regarding services needed for children at various ages. When consulted, child specialists can help the media shape effective messages for parents and children.

It is the responsibility of all mental health professionals who provide care during disasters to recognize their own capabilities, personal and professional limitations, and resources. Those who provide care are vulnerable to psychological stress and may, out of a sense of dedication, exhaust themselves in an effort to assist those in critical need. Disaster providers must learn self-monitoring behaviors and anxiety reducing techniques; plan for appropriate sleep, rest, and recuperation intervals; and maintain interpersonal, family, and social supports. Professionals new to the field should seek consultation with experienced disaster providers.²⁴

PRINCIPLES

Principle 1. Clinicians should use the principles of psychological first aid, the primary intervention used during the impact, and the immediate post-impact phase of a disaster.

Psychological first aid is a component of the public health, mental health, medical, and emergency response systems, which recognizes that

the foremost concerns during the impact phase and in the immediate aftermath of a disaster are safety, security, and triage.²⁵ Psychological first aid can be administered by nonclinicians to address emotional stress until professional intervention is available.²⁶ Psychological first aid should be ethnically, culturally, and developmentally appropriate to individual needs, striving to foster resilience and the natural impetus for recovery.

Psychological first aid focuses on basic physical and psychological needs by decreasing physiological arousal; offering and mobilizing support and psychosocial assistance; providing accurate and timely information about disaster reactions and available resources; and conducting ongoing assessments of functional status, triage, and referral.²⁷ Intrinsic to psychological first aid are elements of crisis intervention that foster the titrated expression of the child's experience verbally or symbolically, restore the child's psychological equilibrium, normalize activities, and encourage the child's attempts to obtain help from others when needed.²⁸ Children should not be encouraged to talk about or relive the event unless they are comfortable doing so.

A major component of early intervention and psychological first aid is triage. Some individuals will need behavioral assessment at the initial disaster triage site or victim reception area. The task is to screen, assess, and move survivors along a behavioral treatment timeline expeditiously, identifying those needing services, such as crisis intervention, psychopharmacological support, and/or referral for further assessment, and more intensive behavioral management. A computerized rapid triage model, PsySTART, uses risk data to link children to a continuum of interventions through various emergency medical services; public health, mental health, and specialized disaster programs; and disaster relief agencies.^{16,29}

Available Psychological First Aid Intervention/Materials

The National Child Traumatic Stress Network (NCTSN) and National Center for PTSD developed a modular approach to psychological first aid for use by mental health responders in diverse settings under diverse conditions.^{30,31} The ARC,³² the International Federation of Red Cross and Red Crescent Societies,³³ and other groups^{34,35} have published materials on psychological first aid. One model, "Listen, Protect, and Connect,"

provides guidance to parents, teachers, and others in implementing psychological first aid.^{34,35} Although psychological first aid is informed by evidence, empirical studies are needed to establish the efficacy and effectiveness of these interventions. Preliminary evaluation of the NCTSN and National Center for PTSD *Psychological First Aid* showed that it was considered an appropriate intervention and was not seen as harmful, and that training about the intervention increased provider confidence in working with children and adults.³⁶

Principle 2. Clinicians should use psychological debriefing only with caution.

Although the term *psychological debriefing* is used inconsistently, in general, the intervention is intended to facilitate prevention and recovery by normalizing reactions, creating a coherent narrative of the event, integrating the experience, sharing and validating emotions, and mitigating stress.³⁷ The intervention as traditionally conceived is delivered in the early aftermath of an event in a single group session in which survivors share their experiences and reactions, reconstruct the event, and discuss coping strategies.³⁸ This approach to debriefing is currently the subject of intense debate because of concern that it may increase arousal and feelings of helplessness and lead to maladaptive behaviors. Studies have shown that adults receiving psychological debriefing may not benefit psychologically compared with controls and in some instances may do worse. The lesson from adult debriefing studies is that in some cases, natural recovery with no intervention may be superior to any intervention or to the wrong intervention.³⁸

Debriefing has received less attention in children.³⁷ The few available child debriefing studies have not all evaluated the traditional approach to debriefing delivered in a single group session in the early aftermath of a disaster, and the reports on these studies have provided minimal detail about the structure and content of debriefing sessions.³⁹⁻⁴¹ Methodologic limitations in these studies also have prevented the investigators from drawing definitive conclusions about the benefit of the interventions used. For example, Stallard *et al.*³⁹ found improvement in children receiving an individual "debriefing" session 4 weeks after involvement in an accident, but children who participated in an individual session not focused on their accident experience also showed improvement. It is unclear if the children

would have shown similar improvement without treatment. However, there was no evidence that the debriefing intervention was harmful.

Although there are few empirical data to support psychological debriefing with children, anecdotal evidence suggests that, if used, debriefing should not occur in the immediate aftermath of disaster,³⁷ when numbness and arousal may be prominent. The child's age and the type and degree of exposure should be among the factors considered when conducting group debriefing. Participation should be voluntary and with the consent of the parents or caretakers. Care must be taken to avoid exposing children to information and emotions that they cannot process or integrate to avoid re-traumatizing them through re-exposure to their own experiences or exposure to the experiences of others.⁴² Parallel attention to parental concerns and education can be beneficial.^{37,42}

Principle 3. Specific therapeutic approaches in the intermediate post-impact phase of a disaster include family outreach, psychoeducation, social support, screening, and anxiety reduction techniques.

Subsequent to the impact and immediate post-impact phases of a disaster, children often will benefit from interventions aimed at strengthening resilience and the natural impetus to recovery. These therapeutic approaches provide opportunities to identify the spectrum of emotional reactions, facilitate appropriate grieving and coping, restore normative age-appropriate behaviors, and prevent the onset of maladaptive behaviors and mental disorders. Services may be delivered in various places, including family notification and support centers, shelters, schools, and health and mental health care settings.⁴³

Family Outreach

The disaster literature suggests that decisions about services for children are influenced by parental response,⁴⁴ yet studies indicate that parents often underestimate the suffering of their children.^{45,46} Thus, family outreach that includes psychoeducation and information about services is a major component of disaster mental health efforts.⁴³ Paraprofessionals typically engage children and families in places where they naturally congregate, such as at schools, faith-based gatherings, and primary care settings; through neighborhood canvassing; and through the media.⁴⁷

Psychoeducation

Psychoeducation is used after disasters to normalize disaster reactions, correct distortions and misperceptions, enhance the child's sense of control, encourage the use of family and social supports, promote positive adaptive coping, and assess risk and protective factors.^{43,47,48} Topics may focus on common psychological reactions, mediators affecting the course of recovery, grief reactions, and stress management techniques. Families should be given information about reactions and symptoms that signify the need for further evaluation.²⁴

Although no cause-and-effect relation should be assumed, studies have found an association between viewing disaster-related television coverage and posttraumatic stress in children.^{8,49,50} Research has yet to explore children's reactions to various digital network technologies, such as search engines, social networks, and texting. Thus, as part of psychoeducation, clinicians should inform parents about children's reactions to traumatic events and encourage parents to assist their children in processing emotions related to the disaster and media coverage, to reassure their children about safety, to limit and monitor their children's exposure to media coverage, and to suggest and practice coping strategies.⁵¹

Psychoeducation can be delivered informally or in formal structured presentations⁴⁷ and may include written materials adapted for the event, age and developmental status, language, and culture. The media can disseminate information.¹⁹ Acknowledging that websites change over time, some organizations currently publish fact sheets and other useful information describing specific hazardous events and children's reactions to these events, information on recovery, and resources with contact information. These include the AACAP (<http://www.aacap.org/cs/DisasterTrauma.ResourceCenter>), the American Academy of Pediatrics (<http://www.aap.org/healthtopics/disasters.cfm>), the ARC (<http://www.redcross.org/>), FEMA (<http://www.fema.gov/>), the National Association of School Psychologists (www.nasponline.org/resources), and the NCTSN (<http://www.nctsn.org/nctsn>).

Psychoeducation also entails providing information to parents, teachers, responders, and public officials to encourage empathy, enhance social support, promote help seeking, and decrease the stigma associated with mental health services.²⁶ Sahin *et al.*⁵² examined the use of psychoeducation for children and parents after an earthquake in Turkey. Although participants

had access to information through other channels, the 2 groups perceived the intervention to be beneficial. Noting that children perceived greater benefit if they engaged in expressive play-like activities, and that those who were exposed to a larger number of activities had higher perceived benefit scores, the investigators emphasized the importance of audience participation in the retention of material. Moreover, they cautioned that the presentation of information should not suggest that recipients are supposed to experience certain reactions.

Social Support

Social support, defined as the “social interactions that provide individuals with actual assistance and embed them into a web of social relationships perceived to be loving, caring and readily available in times of need,”⁵³ is essential throughout all phases of a disaster.⁴⁷ Providers should help families to access social supports and use community resources.⁴⁷ Coping assistance, which is similar to social support, can be initiated by parents, teachers, and other child caretakers to enhance social interactions that promote a specific coping activity.⁵⁴ Thus, children should be encouraged to talk to parents, teachers, and other caretakers. No single coping strategy is effective in all situations for all children, and multiple strategies may be used at once.⁵⁵

Screening

Psychological screening of survivors facilitates intervention by identifying those with the greatest need. Studies have provided preliminary evidence to support screening in child disaster survivors,⁵⁶⁻⁵⁸ but the appropriate timing of screening remains in debate, especially given the ubiquitous distress that accompanies disasters.^{57,58} The process of screening can stimulate dialogue about children’s reactions and needs and can increase awareness about interventions.⁵⁹ Screening is commonly conducted in school settings using tools to assess trauma exposure and internalizing and externalizing reactions with the goal of identifying children needing more comprehensive evaluation. Screening tools should be brief and uncomplicated, appropriate in content to the disaster phase and context, acceptable to those being screened, and easy to administer and score.^{60,61} Appropriate screening instruments are discussed in the AACAP Practice Parameter for the Assessment and Treatment of Children and Adolescents With

Posttraumatic Stress Disorder (PTSD).⁶² Problems associated with screening include its focus on illness rather than resilience, the potential inappropriate labeling of children,⁵⁹ and the potential failure to identify some children in need of attention because their symptoms fluctuate.⁵⁸

Anxiety Reduction Techniques

The management of anxiety, which dominates the clinical presentation in the aftermath of a disaster, is an essential aspect of the therapeutic response. Maintaining routines to the extent possible may help allay anxiety. Specific behavioral anxiety reduction techniques commonly involve distraction and relaxation and cognitive coping strategies. For example, providers and parents can redirect children from troubling thoughts and emotions to more productive activities. Relaxation techniques typically use 2 approaches—breathing and muscle relaxation—and some also use guided imagery. Coping techniques used as part of a cognitive therapy approach involve teaching children the connections between their thoughts, feelings, and behaviors and guiding them in developing adaptive thinking patterns.

Principle 4. The clinician should assess and monitor risk and protective factors to determine the child’s vulnerability for psychological morbidity.

The evaluation of risk and monitoring of psychological responses occur across the disaster timeline. Informal assessment occurs on an ongoing basis as first-line responders, school personnel, pediatric and primary care providers, public health professionals, mental health providers, and volunteers interact with children and families. Formal assessment also may be indicated.

Clinical Assessment

The family’s response to a disaster affects the child’s response, and the child’s response reciprocally influences the family’s adaptation.^{46,63} Thus, the child should be evaluated in the context of the family. Clinical assessment entails a personal interview with the child and parent(s) and can be aided by information from other sources (e.g., teachers). The parent interview should clarify the nature, severity, and duration of the child’s and family’s disaster exposure and experience; identify the inventory of stressors; examine the spectrum of possible behavioral, mood, and anxiety symptoms and

other psychological morbidities and somatic ills, including multiple unexplained physical symptoms; document the child's developmental and medical history; and enumerate important contextual mediators, such as social, religious, ethnic, and cultural factors.

Children should be asked directly about their experiences, reactions, and functional impairment.⁶² In most instances, children can recount their experience in words or use nonverbal means (e.g., play, storytelling, drawing) to relate what occurred. Pynoos and Eth⁶⁴ proposed a framework for interviewing traumatized children, emphasizing the importance of focusing on the traumatic experience; providing the opportunity for children to describe their experiences in whatever medium they choose; and supporting the child; and explicating emotional reactions, cognitive distortions, and maladaptive behaviors. See the AACAP PTSD Practice Parameter for a discussion of issues arising in the assessment of childhood PTSD and for instruments that might facilitate the assessment process.⁶² To focus exclusively on posttraumatic stress symptoms, however, ignores the complex range of internalizing, externalizing, and somatic reactions that children may manifest in response to disasters and to associated losses and the cascade of secondary adversities that typically follow disasters. Thus, methods should assess the full spectrum of post-disaster psychological morbidities, including fear, anxiety, depression, and behavioral problems.⁶⁵

The child's cognitive and emotional development influences the expression of post-disaster reactions and thus the focus of the clinical assessment. With preschool and younger school-age children, the clinician often must make inferences regarding trauma reactions from manifest behaviors.⁶⁶ For the preschool child, such behaviors may include clinging and dependent behaviors, phobic reactions, sleep and appetite disturbances, nightmares, loss of bladder and bowel control, agitation, temper tantrums, and hyperactivity. The younger school-age child may not verbalize psychological distress but may manifest it through play and behavioral symptoms, such as sleep and appetite disturbances, somatic complaints, concentration problems, irritability, hyperactivity, decrements in school performance, and sibling rivalry. Older children and adolescents have the capacity to express unpleasant internal emotional states and to describe their experiences verbally. The older

child may present with hyperarousal, anxiety, panic, dysphoria and depressed mood, and maladaptive behaviors, such as belligerence and interpersonal conflict. The adolescent may present with depressed mood, social withdrawal, suicidal ideation and/or behavior, a sense of a foreshortened future, a flight into pseudo-independence, impulsive behavior, substance use or abuse, and/or hedonistic behavior.

Assessment of Reactions to Media Coverage

Professionals should conduct a media history to ascertain the amount and type of exposure to all forms of media coverage, including the Internet, social media, and computer-based media; to evaluate the content of, and reactions to, media coverage; and to determine the context of media exposure (e.g., children accessing coverage alone or in the presence of adults or peers).⁵¹

Assessment of Resilience

Resilience is the capacity to rebound and to restore pre-disaster psychological equilibrium.^{67,68} Masten⁶⁹ suggested that fundamental to the "correlates of resilience" is the child's adaptive system as it evolves developmentally within the context of family and community. The assessment of resilience is complicated by the necessity to define vulnerability and protective factors and to measure the different variables that mediate adaptation to adverse events.^{70,71}

Individual, family, and community factors contribute to resilience. Individual factors include one's neurobiology, the integrity of one's stress response system, and other individual dimensions, such as intelligence, cognitive ability, communication skills, social skills, locus of control, self-esteem, humor, hope, and optimism. Family factors associated with resilience include family cohesion, affectional ties within the family, and warm and caring parents.⁷² Community factors include caring social, community, school, and religious institutions.⁷²

Assessment Instruments

Assessment has been strengthened by instruments that measure disaster-specific stressors and reactions focusing on dimensions of exposure, stressors, emotional and behavioral reactions, family and psychosocial support, and attributions of causation. Instruments for screening and for evaluating posttraumatic stress symptoms are described in the AACAP PTSD Practice Parameter.⁶² Instruments are available to

assess other outcomes (e.g., Balaban,⁶⁵ www.nctsn.org, www.ncptsd.va.gov).

Principle 5. Schools are a natural site for partnerships to conduct assessments of and deliver services to children exposed to disasters and for preparedness activities.

Schools provide access to children and they are a logical setting where trained personnel can assess psychological reactions to disasters and, when needed, provide mental health services, from prevention to individual and group counseling. Establishing disaster services in schools requires coordination with community-based providers. Ideally, work with schools begins before a disaster occurs through, for example, school crisis response teams that can foster collaboration between schools and community providers, prepare and empower school personnel through training and resources, and promote preparedness and response.⁷³ Appropriate services should be determined in conjunction with the involved school or school district based on factors, such as the extent of disaster destruction, the exposure of children and staff, and the availability of school and community resources. Addressing the needs of principals and teachers should be part of any school-based effort because these individuals must contend with their own disaster experiences while simultaneously helping children in the schools.^{74,75} Barriers to school-based services include concern among school personnel that mental health efforts might re-traumatize children by exposing them to traumatic reminders and that disaster efforts may divert time from learning activities.

The school setting can be the site of a disaster as when damaged by natural events or is the focus of human-generated violence, such as the target of a bombing. Preparedness, response, and recovery strategies should consider this potentiality through contingency planning and specific interventions. Disaster preparedness programs in schools increase awareness of disasters and provide preparatory prevention activities.⁷⁶ Ronan and Johnston^{76,77} found that a school-based, disaster education program increased knowledge of protective activities, family emergency planning, and disaster adjustments at home. Preliminary evidence also exists for the effectiveness of resilience-focused school-based interventions.^{78,79} The Rand Corporation has published a tool kit for addressing trauma in schools, which includes interventions for children traumatized by disasters.^{80,81}

Post-event school interventions normalize psychological reactions, encourage children to express and process their psychological responses, foster cognitive understanding, clarify misconceptions, facilitate peer interactions, and provide opportunities to identify and refer children at risk for adverse outcome.^{43,82,83}

Principle 6. Clinicians should preferentially consider multimodal disaster interventions that have the strongest evidence base.

Over time, most survivors will restore pre-disaster psychological equilibrium. In some children, psychological syndromes may slowly crystallize and impair the child's capacity to meet the demands of everyday life in the home, school, or social domains. These children and their families may require enhanced and sustained therapeutic interventions.

The choice of disaster intervention modalities for children is determined by the child's disaster exposure, psychological reactions, and pre-existing conditions and by the presence of psychological comorbidities. Disaster interventions generally focus on posttraumatic stress reactions, anxiety and fear responses, depressive symptoms, grief reactions, behavior problems, school functioning, and overall coping and adaptive strategies. Many child disaster interventions that have been studied use multimodal, modular, and manual-guided approaches with components using social support, psychoeducation, construction of a trauma narrative, cognitive-behavioral techniques, coping skills enhancement, and problem-solving skills. These interventions have been delivered to individual children,⁸⁴⁻⁹² to children in small groups,^{78,79,83,93-104} or in some combination of individual and group sessions.^{105,106} Two studies in which children were randomized to individual or group administration of the same intervention showed no difference in outcomes,^{86,107} although in 1 study, children assigned to the group approach were more likely to complete the intervention.⁸⁶ Some interventions have included a parent component.^{78,79,84,87,91,94,105} Interventions have been administered in clinical and school settings.

The AACAP PTSD Practice Parameter identified trauma-focused cognitive-behavioral therapy and Cognitive Behavioral Intervention for Trauma in Schools (CBITS) as the best supported currently available trauma-focused therapies.⁶² Jaycox *et al.*¹⁰⁸ compared the use of these 2 interventions in children 15 months after Hurricane

Katrina. Cognitive-behavioral intervention for trauma in schools was delivered in a group format at school, whereas trauma-focused cognitive-behavioral therapy was delivered individually at a mental health clinic. The 2 treatments resulted in a significant decrease of PTSD symptoms, although many children continued to experience elevated symptoms after treatment. Most families did not access treatment at the clinic setting but did access the school-based intervention. Other exemplary multimodal approaches include the Multi-Modality Trauma Treatment^{106,109} and the University of California–Los Angeles trauma/grief-focused group psychotherapy.^{97,98,110,111}

Some disaster reactions, such as depression, may occur secondary to intractable posttraumatic stress or in response to secondary adversities or other hardships in the aftermath of disaster and over time. Studies have suggested that depression,^{105,112,113} anxiety,¹¹² and traumatic grief^{114,115} may respond to treatment of trauma symptoms. In other instances, the presence of severe and enduring posttraumatic stress and/or other symptoms may require more traditional psychiatric interventions to decrease clinically maladaptive emotions and behaviors. These may include cognitive-behavioral and projective techniques, play and psychodynamic approaches, family and group interventions, and medication if indicated (see Principle 7). Dugan *et al.*¹¹⁶ described the successful use of play therapy in 2 young children exposed to Hurricane Katrina. These children experienced fears, anxiety, and avoidance with themes of fear, control, safety, power, and aggression in their play, which resolved with treatment.

When disasters result in the death of loved ones, the child and family must confront the reality and meaning of loss in their own life experiences. Grief is a normal reaction to loss for which bereavement support rather than formal treatment may be indicated. Curtis and Newman¹¹⁷ found moderate empirical evidence of positive effects with community-based interventions for bereaved children, but a meta-analysis by Currier *et al.*¹¹⁸ found no significant effect of grief therapy on adjustment and suggested that better outcomes occurred if the children were at “high risk” or showed signs of maladjustment and if the intervention was provided close to the time of loss.

Indicators for formal psychiatric treatment after traumatic loss include previous emotional or behavioral problems; current depressive,

anxiety, and behavioral symptoms that interfere with the child’s development¹¹⁹; and/or trauma symptoms that interfere with the child’s ability to mourn the loss.¹²⁰ Approaches range from acute crisis intervention and brief supportive therapies to more intensive therapies involving cognitive-behavioral, psychodynamic, play, and psychopharmacologic approaches.

Cohen *et al.*^{114,115} developed and evaluated a manual-guided intervention, Cognitive-Behavioral Therapy for Childhood Traumatic Grief, which includes sequential trauma- and grief-focused modular components for the treatment of traumatic bereavement in children. Children who received the intervention evidenced improvement in PTSD, traumatic grief, depression, anxiety, and behavior. Salloum and Overstreet¹⁰⁷ also reported benefit in posttraumatic stress, depression, and traumatic grief reactions with their school-based grief and trauma intervention in children in New Orleans 3 years after Hurricane Katrina.

Guided activity workbooks with projective and other cognitive behavioral techniques have been used with children after disasters. These include, for example, *Helping Children Cope with Disasters*,¹²¹ *Healing After Trauma Skills (H.A.T.S.)*,¹²² and *My Hurricane Katrina and Rita Story: A Guided Activity Workbook for Children and Teenagers*.¹²³

Individual Treatment of Children

Individual treatment of children in clinical practice, as opposed to, for example, school-based interventions, should rely on a careful ongoing assessment of the child and family with attention to comorbid conditions (see Principle 4). In many disaster situations, individual treatment is not practical but may be necessary for children with pre-existing and/or enduring conditions for whom the intense and sustained relationship with the therapist is essential. In practice, psychodynamic approaches are commonly interwoven into interventions with the goal of understanding the meaning that the child imposes on the disaster experience and how the experience resonates with the child’s other experiences, prior trauma, defense mechanisms, and coping strategies.

It is prudent to be conservative and to support the natural impetus to recovery. Therapists should avoid interventions that may be excessively arousing and those that attribute pathology to normal stress reactions. It is wise to acknowledge

and build on the child's adaptive psychological defenses and coping skills and on natural support structures and to avoid confronting the child prematurely with arousing stimuli. Sometimes, families initiate but fail to continue in treatment. Thus, clinicians are advised to assess barriers to families' commitment to treatment, explore potential treatment avoidance and noncompliance, and consider delivering each session with the possibility that the child and family may not return for additional work.

Family Intervention

When possible, children exposed to disasters should be evaluated and treated in conjunction with their families. It may be helpful for families to create a family trauma narrative, a process that requires family members to work together, thus facilitating communication and enhancing family coping.¹²⁴ Some investigators have described family intervention strategies after trauma exposure, but these accounts generally recommend therapeutic approaches and present anecdotal case reports without empirically documented efficacy.¹²⁵⁻¹²⁸

Group Interventions

Group work is ideal for educating children and their parents about disaster reactions and recovery, especially when large numbers of children must be reached. Sharing with other children who have similar experiences can reassure children who are hesitant to disclose their concerns or who believe their experiences are unique.¹²⁹ Groups vary with respect to structure and the use of projective techniques.¹³⁰ The group format provides opportunities to reminisce and explore loss, view various stages of recovery, observe coping strategies used by others, and gain the satisfaction of helping others. Certain topics, such as common reactions to trauma, traumatic reminders, anniversaries, and coping mechanisms, should be addressed even if not directly raised by participants. Group work serves as a forum for case identification.^{130,131} Group therapy may be particularly good for addressing intrusion symptoms, perhaps because children ventilate feelings that can be validated.⁵⁷ The therapist must set limits on the expression of anger and aggression to avoid increasing anxiety for some children.¹³⁰ Some children are uncomfortable with the group format and some need individual treatment. Group discussions may distress children when reminded of their own experiences

and when learning about the experiences of others. Children also may adopt the coping techniques of other children before fully examining their own reactions or potential coping strategies.¹³⁰

Principle 7. Clinicians may consider psychopharmacologic interventions as adjuncts to other interventions for children with severe reactions or coexisting psychiatric conditions.

Psychopharmacologic interventions are reserved for severe indications and for coexisting psychiatric conditions that warrant intervention. See the AACAP PTSD Practice Parameter for a discussion of appropriate considerations in determining the need for, and appropriate use of, psychoactive medications for traumatized children.⁶² Most stress reactions are a normal response to disaster and it is generally judicious to allow a reasonable period for recovery before considering psychopharmacologic intervention. When used, medications should be considered an adjunct to psychotherapeutic interventions and should focus on target symptoms, such as acute onset of sleep disturbances, anxiety, depression, agitation, or aggressive behavior, that impair the child's capacity to meet the demands of everyday life. A careful assessment is necessary to identify target symptoms, and a risk-benefit analysis should be conducted before using medication.¹³²

Selective serotonin reuptake inhibitors have a favorable risk-benefit profile and may be effective in treating comorbid anxiety and depression.¹³² There may be some risk in using selective serotonin reuptake inhibitors because these drugs are sometimes associated with an activation syndrome manifested by irritability, restlessness, decreased sleep, daytime drowsiness, inattention, and somatic symptoms such as headache, stomachache, or nausea.^{62,132} Although benzodiazepines are not usually recommended for use in children, they may decrease anxiety and improve sleep, but there is no evidence that they alter the progression of psychological reactions over time.¹³³ In addition, children treated with benzodiazepines may experience sedation, irritability, and disinhibition, and they are at risk for withdrawal symptoms.¹³⁴

There has been some interest in exploring psychopharmacologic interventions for trauma that might mitigate the risk for PTSD symptoms. For example, antiadrenergic drugs (e.g., propranolol), which can block the memory-enhancing effects of stress hormones, and

cortisol, which can diminish memory retrieval, have been shown to decrease risk for PTSD symptoms in adults.¹³⁵ A randomized control study, however, found no superiority of a β -blocker (propranolol) or an anxiolytic anticonvulsant (gabapentin) over placebo in preventing risk for PTSD symptoms in adults with severe physical injuries requiring specialized emergent treatment.¹³⁶ Saxe *et al.*¹³⁷ found that injured children who were treated with morphine for severe pain were less likely to have PTSD symptoms at 3-month follow-up, although the mechanism of action is not entirely clear.

PARAMETER LIMITATIONS

AACAP Practice Parameters are developed to assist clinicians in psychiatric decision making. These Parameters are not intended to define the sole standard of care. As such, the Parameters 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 or her family, the diagnostic and treatment options available, and other available resources. &

This Practice Parameter was developed by Betty Pfefferbaum, M.D., J.D., Jon A. Shaw, M.D., and the AACAP Committee on Quality Issues (CQI): Oscar G. Bukstein, M.D., M.P.H., and Heather J. Walter, M.D., M.P.H., Co-Chairs; and Christopher Bellonci, M.D., Scott Benson, M.D., Allan Chrisman, M.D., Tiffany R. Farchione, M.D., John Hamilton, M.D., Helene Keable, M.D., Joan Kinlan, M.D., Nicole Quiterio, M.D., Ulrich Schoettle, M.D., Matthew Siegel, M.D., and Sandra Stock, M.D.

AACAP Practice Parameters are developed by the AACAP CQI in accordance with American Medical Association policy. Parameter development is an iterative process between the primary author(s), the CQI, topic experts, and representatives from multiple constituent groups, including the AACAP membership, relevant AACAP

committees, the AACAP Assembly of Regional Organizations, and the AACAP Council. Details of the Parameter development process can be accessed on the AACAP website. Responsibility for Parameter content and review rests with the author(s), the CQI, the CQI Consensus Group, and the AACAP Council.

AACAP develops patient-oriented and clinician-oriented Practice Parameters. Patient-oriented Parameters provide recommendations to guide clinicians toward best assessment and treatment practices. Recommendations are based on the critical appraisal of 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 based primarily on clinical consensus. This Parameter is a clinician-oriented parameter.

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

The authors acknowledge the following experts for their contributions to this parameter: Lisa Amaya-Jackson, M.D., M.P.H., Stephen J. Cozza, M.D., David J. Schonfeld, M.D., Merritt D. Schreiber, Ph.D., and Leslie H. Wind, Ph.D.

Kristin Kroeger Ptakowski and Jennifer Medicus served as the AACAP staff liaisons for the CQI.

This parameter was reviewed at the Member Forum at the Annual Meeting of the American Academy of Child and Adolescent Psychiatry in October 2010.

From October 2011 to October 2012, this Parameter was reviewed by a consensus group convened by the CQI. Consensus group members and their constituent groups were as follows: Oscar G. Bukstein, M.D., M.P.H., chair; Allan Chrisman, M.D., shepherd; and R. Scott Benson, M.D., and Ulrich Schoettle, M.D., members (CQI); Lisa Amaya-Jackson, M.D., and Steve Cozza, M.D. (topic experts); Siham Muntasser, M.D., and Rebecca Susan Daily, M.D. (AACAP Assembly of Regional Organizations); and D. Richard Martini, M.D., and Margaret Stuber, M.D. (AACAP Council).

This Practice Parameter was approved by the AACAP Council on June 17, 2013.

This Practice Parameter is available on the Internet (www.aacap.org).

Disclosures: Dr. Pfefferbaum has no financial conflicts of interest to disclose. Dr. Shaw has no financial conflicts of interest to disclose. Dr. Bukstein has consulted with PRIME Continuing Medical Education (CME) and Ezra Innovations and has intellectual property with Routledge Press. Dr. Walter has no financial relationships to disclose. Disclosures of potential conflicts of interest for all other individuals named above are provided on the AACAP website on the Practice Parameters page.

Correspondence to the AACAP Communications Department, 3615 Wisconsin Ave, N.W., Washington, D.C., 20016.

0890-8567/\$36.00/©2013 American Academy of Child and Adolescent Psychiatry

<http://dx.doi.org/10.1016/j.jaac.2013.08.014>

REFERENCES

1. World Health Organization. Psychosocial Consequences of Disasters: Prevention and Management. Geneva, Switzerland: World Health Organization, Division of Mental Health; 1992:2.
2. Shaw JA, Espinel Z, Shultz JM. Care of Children Exposed to the Traumatic Effects of Disaster. Washington, DC: American Psychiatric Press; 2012.
3. Cohen JA, Mannarino AP, Gibson LE, Cozza SJ, Brymer MJ, Murray L. Interventions for children and adolescents following disasters. In: Ritchie EC, Watson PJ, Friedman MJ, eds. Interventions Following Mass Violence and Disasters: Strategies for Mental Health Practice. New York: Guilford Press; 2006: 227-256.
4. La Greca AM, Silverman WK. Interventions for youth following disasters and acts of terrorism. In: Kendall P, ed. Child and Adolescent Therapy: Cognitive Behavioral Procedures. 4th ed. New York: Guilford Press; 2012:324-344.
5. Rolfesnes ES, Idsoe T. School-based intervention programs for PTSD symptoms: a review and meta-analysis. J Trauma Stress. 2011;24:155-165.
6. Silverman WK, Ortiz CD, Viswesvaran C, *et al.* Evidence-based psychosocial treatments for children and adolescents exposed to traumatic events. J Clin Child Adolesc Psychol. 2008;37:156-183.
7. Wethington HR, Hahn RA, Fuqua-Whitley DS, *et al.* The effectiveness of interventions to reduce psychological harm from

- traumatic events among children and adolescents: a systematic review. *Am J Prev Med.* 2008;35:287-313.
8. Schuster MA, Stein BD, Jaycox LH, *et al.* A national survey of stress reactions after the September 11, 2001, terrorist attacks. *N Engl J Med.* 2001;345:1507-1512.
 9. Hoven CW, Duarte CS, Lucas CP, *et al.* Psychopathology among New York City public school children 6 months after September 11. *Arch Gen Psychiatry.* 2005;62:545-552.
 10. Covell NH, Allen G, Essock SM, *et al.* Service utilization and event reaction patterns among children who received Project Liberty counseling services. *Psychiatr Serv.* 2006;57:1277-1282.
 11. McLaughlin KA, Fairbank JA, Gruber MJ, *et al.* Serious emotional disturbance among youths exposed to Hurricane Katrina 2 years post-disaster. *J Am Acad Child Adolesc Psychiatry.* 2009;48:1069-1078.
 12. Costello EJ, Messer SC, Bird HR, Cohen P, Reinherz HZ. The prevalence of serious emotional disturbance: a re-analysis of community studies. *J Child Fam Stud.* 1998;7:411-432.
 13. American Academy of Child and Adolescent Psychiatry Work Group on Quality Issues. Practice parameter for the psychiatric assessment and management of physically ill children and adolescents. *J Am Acad Child Adolesc Psychiatry.* 2009;48:213-233.
 14. Pynoos RS, Schreiber MD, Steinberg AM, Pfefferbaum BJ. Impact of terrorism on children. In: Sadock BJ, Sadock VA, eds. *Kaplan & Sadock's Comprehensive Textbook of Psychiatry.* Vol 2. 8th ed., Philadelphia: Lippincott Williams & Wilkins; 2005:3551-3564.
 15. Ursano RJ, Friedman MJ. Mental health and behavioral interventions for victims of disasters and mass violence: systems, caring, planning, and needs. In: Ritchie EC, Watson PJ, Friedman MJ, eds. *Interventions Following Mass Violence and Disasters: Strategies for Mental Health Practice.* New York: Guilford Press; 2006:405-414.
 16. Gold JI, Montano Z, Shields S, *et al.* Pediatric disaster preparedness in the medical setting: Integrating mental health. *Am J Disaster Med.* 2009;4:137-146.
 17. National Commission on Children and Disasters. 2010 Report to the President and Congress. AHRQ Publication No 10-M037. Rockville, MD: Agency for Health Care Research and Quality; 2010.
 18. Pfefferbaum B, Flynn BW, Schonfeld D, *et al.* The integration of mental and behavioral health into disaster preparedness, response, and recovery. *Disaster Med Public Health Prep.* 2012; 6:60-66.
 19. US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services. Emergency Mental Health and Traumatic Stress: An Overview of the Crisis Counseling Assistance and Training Program. Publication No SMA09-4373. National Health Information Center. Washington, DC: DHHS; 2009. <http://store.samhsa.gov/product/Crisis-Counseling-Assistance-and-Training-Program-CCP-/SMA09-4373>. Accessed April 15, 2013.
 20. Tierney KJ, Lindell MK, Perry RW. Moving into action: individual and group behavior in disasters. In: Tierney KJ, Lindell MK, Perry RW, eds. *Facing the Unexpected: Disaster Preparedness and Response in the United States.* Washington, DC: Joseph Henry Press; 2001:81-120.
 21. Jacobs GA. The development of a national plan for disaster mental health. *Prof Psychol Res Pract.* 1995;26:543-549.
 22. Medical Reserve Corps (MRC). Office of the United States Surgeon General. <https://www.medicalreservecorps.gov/HomePage>. Accessed April 24, 2013.
 23. US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services. Communicating in a Crisis: Risk Communication Guidelines for Public Officials. Washington, DC: DHHS; 2002. www.hhs.gov/od/documents/RiskCommunication.pdf. Accessed April 15, 2013.
 24. Shibley HL, Stoddard FJ. Child and adolescent psychiatry interventions. In: Stoddard FJ, Pandya A, Katz CL, eds. *Disaster Psychiatry: Readiness, Evaluation and Treatment.* Washington, DC: American Psychiatric Publishing; 2011:287-312.
 25. National Institute of Mental Health. Mental Health and Mass Violence: Evidence-Based Early Psychological Intervention for Victims/Survivors of Mass Violence. A Workshop to Reach Consensus on Best Practices. NIH Publication No 02-5138. Washington, DC: US Government Printing Office; 2002.
 26. Reyes G, Elhai JD. Psychosocial interventions in the early phases of disasters. *Psychotherapy (Chic).* 2004;41:399-411.
 27. Everly GS Jr, Flynn BW. Principles and practice for acute psychological first aid training for personnel without mental health experience. *Int J Emerg Mental Health.* 2006;8:93-100.
 28. Shelby JS. Rubble, disruption, and tears: helping young survivors of natural disaster. In: Kaduson HG, Cangelosi D, Schaefer CE, eds. *The Playing Cure: Individualized Play Therapy for Specific Childhood Problems.* Northvale, NJ: Jason Aronson; 1997: 143-169.
 29. Schreiber M. Learning from 9/11: toward a national model for children and families in mass casualty terrorism. In: Danieli Y, Dingman RL, eds. *On the Ground after September 11: Mental Health Responses and Practical Knowledge Gained.* Binghamton, NY: Haworth Press; 2005:605-609.
 30. Brymer M, Jacobs A, Layne C, *et al.* Psychological First Aid: Field Operations Guide. 2nd ed. Los Angeles: National Childhood Traumatic Stress Network; July 2006. www.nctsn.org/nctsn_assets/pdfs/pfa/2/PsyFirstAid.pdf. Accessed April 24, 2013.
 31. Vernberg EM, Steinberg AM, Jacobs AK, *et al.* Innovations in disaster mental health: psychological first aid. *Prof Psychol Res Pract.* 2008;39:381-388.
 32. American Red Cross. Psychological First Aid: Helping Others in Times of Stress. Publication DSCLS206A. Washington, DC: American Red Cross; 2006.
 33. Simonsen LF, Reyes G. Community-based Psychological Support: A Training Manual. Geneva, Switzerland: International Federation of Red Cross and Red Crescent Societies; 2003.
 34. Schreiber M, Gurwitsch R. Listen, Protect, and Connect: Psychological First Aid for Children and Parents. Los Angeles: University of California Los Angeles, School of Public Health; 2006.
 35. Schreiber M, Gurwitsch R, Wong M. Listen, Protect, Connect—Model & Teach: Psychological First Aid (PFA) for Students and Teachers. Los Angeles: University of California Los Angeles School of Public Health; 2006.
 36. Allen B, Brymer MJ, Steinberg AM, *et al.* Perceptions of psychological first aid among providers responding to Hurricanes Gustav and Ike. *J Trauma Stress.* 2010;23:509-513.
 37. Stallard P, Salter E. Psychological debriefing with children and young people following traumatic events. *Clin Child Psychol Psychiatry.* 2003;8:445-457.
 38. Litz BT, Maguen S. Early intervention for trauma. In: Friedman MJ, Keane TM, Resnick PA, eds. *Handbook of PTSD: Science and Practice.* New York: Guilford Press; 2007:306-329.
 39. Stallard P, Velleman R, Salter E, Howse I, Yule W, Taylor G. A randomized controlled trial to determine the effectiveness of an early psychological intervention with children involved in road traffic accidents. *J Child Psychol Psychiatry.* 2006;47: 127-134.
 40. Vila G, Porche LM, Mouren-Simeoni MC. An 18-month longitudinal study of posttraumatic disorders in children who were taken hostage in their school. *Psychosom Med.* 1999;61: 746-754.
 41. Yule W. Posttraumatic stress disorder in child survivors of shipping disasters: the sinking of the Jupiter. *Psychother Psychosom.* 1992;57:200-205.
 42. Wraith R. Children and debriefing: theory, interventions and outcomes. In: Raphael B, Wilson JP, eds. *Psychological Debriefing: Theory, Practice and Evidence.* New York: Cambridge University Press; 2000:195-212.
 43. US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. Mental Health Response to Mass Violence and Terrorism. DHHS Publication No SMA 3959. Rockville, MD: Center for Mental Health Services; 2004.
 44. Stuber J, Fairbrother G, Galea S, Pfefferbaum B, Wilson-Genderson M, Vlahov D. Determinants of counseling for children in Manhattan after the September 11 attacks. *Psychiatr Serv.* 2002;53:815-822.
 45. Earls F, Smith E, Reich W, Jung KG. Investigating psychopathological consequences of a disaster in children: a pilot study incorporating a structured diagnostic interview. *J Am Acad Child Adolesc Psychiatry.* 1988;27:90-95.

46. Koplewicz HS, Vogel JM, Solanto MV, *et al.* Child and parent response to the 1993 World Trade Center bombing. *J Trauma Stress.* 2002;15:77-85.
47. Gard BA, Ruzek JL. Community mental health response to crisis. *J Clin Psychol.* 2006;62:1029-1041.
48. Young BH. The immediate response to disaster: guidelines for adult psychological first aid. In: Ritchie EC, Watson PJ, Friedman MJ, eds. *Interventions Following Mass Violence and Disasters: Strategies for Mental Health Practice.* New York: Guilford Press; 2006:134-154.
49. Fairbrother G, Stuber J, Galea S, Fleischman AR, Pfefferbaum B. Posttraumatic stress reactions in New York City children after the September 11, 2001, terrorist attacks. *Ambul Pediatr.* 2003;3:304-311.
50. Pfefferbaum B, Nixon SJ, Krug RS, *et al.* Clinical needs assessment of middle and high school students following the 1995 Oklahoma City bombing. *Am J Psychiatry.* 1999;156:1069-1074.
51. Pfefferbaum RL, Gurwitsch RH, Robertson MJ, Brandt EN, Pfefferbaum B. Terrorism, the media, and distress in youth. *Prev Res.* 2003;10:14-16.
52. Sahin NH, Yilmaz B, Batigun A. Psychoeducation for children and adults after the Marmara earthquake: an evaluation study. *Traumatology.* 2011;17:41-49.
53. Kaniasty K. Social support and traumatic stress. *PTSD Res Q.* 2005;16:1-8.
54. Prinstein MJ, La Greca AM, Vernberg EM, Silverman WK. Children's coping assistance: how parents, teachers, and friends help children cope after a natural disaster. *J Clin Child Psychol.* 1996; 25:463-475.
55. Compas BE, Malcarne VL, Fondacaro KM. Coping with stressful events in older children and young adolescents. *J Consult Clin Psychol.* 1988;56:405-411.
56. Liu A, Tan H, Zhou J, *et al.* Brief screening instrument of post-traumatic stress disorder for children and adolescents 7-15 years of age. *Child Psychiatry Hum Dev.* 2007;38:195-202.
57. Stallard P, Law F. Screening and psychological debriefing of adolescent survivors of life-threatening events. *Br J Psychiatry.* 1993;163:660-665.
58. Stallard P, Velleman R, Baldwin S. Psychological screening of children for post-traumatic stress disorder. *J Child Psychol Psychiatry.* 1999;40:1075-1082.
59. McDermott BMC, Palmer LJ. Post-disaster service provision following proactive identification of children with emotional distress and depression. *Aust N Z J Psychiatry.* 1999;33:855-863.
60. Pfefferbaum B, Jacobs AK, Houston JB. Children and disasters: a framework for mental health assessment. *J Emerg Manag.* 2012; 10:349-358.
61. Pfefferbaum B, North CS. Assessing children's disaster reactions and mental health needs: screening and clinical evaluation. *Can J Psychiatry.* 2013;58:135-142.
62. American Academy of Child and Adolescent Psychiatry. Practice parameter for the assessment and treatment of children and adolescents with posttraumatic stress disorder. *J Am Acad Child Adolesc Psychiatry.* 2010;49:414-430.
63. McFarlane AC. The relationship between patterns of family interaction and psychiatric disorder in children. *Aust N Z J Psychiatry.* 1987;21:383-390.
64. Pynoos RS, Eth S. Witness to violence: the child interview. *J Am Acad Child Psychiatry.* 1986;25:306-319.
65. Balaban V. Psychological assessment of children in disasters and emergencies. *Disasters.* 2006;30:178-198.
66. Scheeringa MS, Zeanah CH, Myers L, Putnam FW. New findings on alternative criteria for PTSD in preschool children. *J Am Acad Child Adolesc Psychiatry.* 2003;42:561-570.
67. Garnezy N. Resilience in children's adaptation to negative life events and stressed environments. *Pediatr Ann.* 1991;20:459-466.
68. Naglieri JA, LeBuffe PA. Measuring resilience in children: from theory to practice. In: Goldstein S, Brooks RB, eds. *Handbook of Resilience in Children.* New York: Springer Science + Business Media; 2005:107-121.
69. Masten AS. Resilience in developing systems: progress and promise as the fourth wave rises. *Dev Psychopathol.* 2007;19:921-930.
70. Luthar SS, Cicchetti D, Becker B. The construct of resilience: a critical evaluation and guidelines for future work. *Child Dev.* 2000;71:543-562.
71. Rutter M. Psychosocial resilience and protective mechanisms. *Am J Orthopsychiatry.* 1987;57:316-331.
72. Hoge EA, Austin ED, Pollack MH. Resilience: research evidence and conceptual considerations for posttraumatic stress disorder. *Depress Anxiety.* 2007;24:139-152.
73. Schonfeld DJ, Newgass S. School Crisis Response Initiative. OVC Bulletin. Washington, DC: Office for Victims of Crime, US Department of Justice; 2003.
74. Pynoos RS, Goenjian AK, Steinberg AM. A public mental health approach to the postdisaster treatment of children and adolescents. *Child Adolesc Psychiatr Clin N Am.* 1998;7:195-210.
75. Dean KL, Langley AK, Kataoka SH, Jaycox LH, Wong M, Stein BD. School-based disaster mental health services: clinical, policy, and community challenges. *Prof Psychol Res Pract.* 2008;39:52-57.
76. Ronan KR, Johnston DM. Correlates of hazard education programs for youth. *Risk Anal.* 2001;21:1055-1063.
77. Ronan KR, Johnston DM. Hazards education for youth: a quasi-experimental investigation. *Risk Anal.* 2003;23:1009-1020.
78. Berger R, Pat-Horenczyk R, Gelkopf M. School-based intervention for prevention and treatment of elementary-students' terror-related distress in Israel: a quasi-randomized controlled trial. *J Trauma Stress.* 2007;20:541-551.
79. Gelkopf M, Berger R. A school-based, teacher-mediated prevention program (ERASE-Stress) for reducing terror-related traumatic reactions in Israeli youth: a quasi-randomized controlled trial. *J Child Psychol Psychiatry.* 2009;50:962-971.
80. Jaycox LH, Morse LK, Tanielian T, Stein BD. How Schools Can Help Students Recover from Traumatic Experiences: A Tool Kit for Supporting Long-Term Recovery. Santa Monica, CA: RAND Corporation; 2006.
81. Jaycox LH, Stein BD, Amaya-Jackson L. School-based treatment for children and adolescents. In: Foa EB, Keane TM, Friedman MJ, Cohen JA, eds. *Effective Treatments for PTSD.* 2nd ed. New York: McGraw-Hill; 2009:327-345.
82. Ronan KR, Finnis K, Johnston DM. Interventions with youth and families: a prevention and stepped care model. In: Reyes G, Jacobs GA, eds. *Handbook of International Disaster Psychology.* Westport, CT: Praeger; 2006:13-35.
83. Wolmer L, Laor N, Dedeoglu C, Siev J, Yazgan Y. Teacher-mediated intervention after disaster: a controlled three-year follow-up of children's functioning. *J Child Psychol Psychiatry.* 2005;46:1161-1168.
84. Brown EJ, Pearlman MY, Goodman RF. Facing fears and sadness: cognitive-behavioral therapy for childhood traumatic grief. *Harv Rev Psychiatry.* 2004;12:187-198.
85. Catani C, Kohiladevy M, Ruf M, Schauer E, Elbert T, Neuner F. Treating children traumatized by war and tsunami: a comparison between exposure therapy and meditation-relaxation in North-East Sri Lanka. *BMC Psychiatry.* 2009;9:1-11.
86. Chemtob CM, Nakashima JP, Hamada RS. Psychosocial intervention for postdisaster trauma symptoms in elementary school children: a controlled community field study. *Arch Pediatr Adolesc Med.* 2002;156:211-216.
87. Fernandez I. EMDR as treatment of post-traumatic reactions: a field study on child victims of an earthquake. *Educ Child Psychol.* 2007;24:65-72.
88. Field T, Seligman S, Scafidi F. Alleviating posttraumatic stress in children following Hurricane Andrew. *J App Develop Psychol.* 1996;17:37-50.
89. Gilboa-Schechtman E, Foa EB, Shafan N, *et al.* Prolonged exposure versus dynamic therapy for adolescent PTSD: A pilot randomized controlled trial. *J Am Acad Child Adolesc Psychiatry.* 2010;49:1034-1042.
90. Goodman RF, Morgan AV, Juriga S, Brown EJ. Letting the story unfold: a case study of client-centered therapy for childhood traumatic grief. *Harv Rev Psychiatry.* 2004;12:199-212.
91. Scheeringa MS, Weems CF, Cohen JA, Amaya-Jackson L, Guthrie D. Trauma-focused cognitive-behavior therapy for posttraumatic stress disorder in three-through six year-old children: a randomized clinical trial. *J Child Psychol Psychiatry.* 2011;52:853-860.
92. Taylor LK, Weems CF. Cognitive-behavior therapy for disaster-exposed youth with posttraumatic stress: results from a multiple-baseline examination. *Behav Ther.* 2011;42:349-363.

93. Cain DS, Plummer CA, Fisher RM, Bankston TQ. Weathering the storm: persistent effects and psychological first aid with children displaced by Hurricane Katrina. *J Child Adolesc Trauma*. 2010;3:330-343.
94. Giannapoulou I, Dikaiakou A, Yule W. Cognitive-behavioral group intervention for PTSD symptoms in children following the Athens 1999 earthquake: a pilot study. *Clin Child Psychol Psychiatry*. 2006;11:543-553.
95. Hardin SB, Weinrich S, Weinrich M, Garrison C, Addy C, Hardin TL. Effects of a long-term psychosocial nursing intervention on adolescents exposed to catastrophic stress. *Issues Ment Health Nurs*. 2002;23:537-551.
96. Karairmak O, Aydin G. Reducing earthquake-related fears in victim and nonvictim children. *J Genet Psychol*. 2008;169:177-185.
97. Layne CM, Pynoos RS, Saltzman WR, et al. Trauma/grief-focused group psychotherapy: school-based postwar intervention with traumatized Bosnian adolescents. *Group Dyn*. 2001;5:277-290.
98. Layne CM, Saltzman WR, Poppleton L, et al. Effectiveness of a school-based group psychotherapy program for war-exposed adolescents: a randomized controlled trial. *J Am Acad Child Adolesc Psychiatry*. 2008;47:1048-1062.
99. Lesmana CBJ, Suryani LK, Jensen GD, Tiliopoulos N. A spiritual-hypnosis assisted treatment of children with PTSD after the 2002 Bali terrorist attack. *Am J Clin Hypnosis*. 2009;52:23-34.
100. Ronan KR, Johnston DM. Behaviourally-based interventions for children following volcanic eruptions: an evaluation of effectiveness. *Disaster Prev Manag*. 1999;8:169-176.
101. Shoostary MH, Panaghi L, Moghadam JA. Outcome of cognitive behavioral therapy in adolescents after natural disaster. *J Adolesc Health*. 2008;42:466-472.
102. Vijayakumar L, Kannank GK, Kumar G, Devarajan P. Do all children need intervention after exposure to tsunami? *Int Rev Psychiatry*. 2006;18:515-522.
103. Weems CF, Taylor LK, Costa NM, et al. Effect of a school-based test anxiety intervention in ethnic minority youth exposed to Hurricane Katrina. *J Appl Dev Psychol*. 2009;30:218-226.
104. Wolmer L, Laor N, Yazgan Y. School reactivation programs after disaster: could teachers serve as clinical mediators? *Child Adolesc Psychiatr Clin N Am*. 2003;12:363-381.
105. Goenjian AK, Walling D, Steinberg AM, Karayan I, Najarian LM, Pynoos RS. A prospective study of posttraumatic stress and depressive reactions among treated and untreated adolescents 5 years after a catastrophic disaster. *Am J Psychiatry*. 2005;162:2302-2308.
106. March JS, Amaya-Jackson L, Murray MC, Schulte A. Cognitive-behavioral psychotherapy for children and adolescents with posttraumatic stress disorder after a single-incident stressor. *J Am Acad Child Adolesc Psychiatry*. 1998;37:585-593.
107. Salloum A, Overstreet S. Evaluation of individual and group grief and trauma interventions for children post disaster. *J Clin Child Adolesc Psychol*. 2008;37:495-507.
108. Jaycox LH, Cohen JA, Mannarino AP, et al. Children's mental health care following Hurricane Katrina: a field trial of trauma-focused psychotherapies. *J Trauma Stress*. 2010;23:223-231.
109. Amaya-Jackson L, Reynolds V, Murray MC, et al. Cognitive-behavioral treatment for pediatric posttraumatic stress disorder: protocol and application in school and community settings. *Cogn Behav Pract*. 2003;10:204-213.
110. Saltzman WR, Layne CM, Steinberg AM, Arslanagic B, Pynoos RS. Developing a culturally and ecologically sound intervention program for youth exposed to war and terrorism. *Child Adolesc Psychiatr Clin N Am*. 2003;12:319-342.
111. Saltzman WR, Pynoos RS, Layne CM, Steinberg AM, Aisenberg E. Trauma- and grief-focused intervention for adolescents exposed to community violence: results of a school-based screening and group treatment protocol. *Group Dyn*. 2001;5:291-303.
112. Smith P, Yule W, Perrin S, Tranah T, Dalgleish T, Clark DM. Cognitive-behavioral therapy for PTSD in children and adolescents: a preliminary randomized controlled trial. *J Am Acad Child Adolesc Psychiatry*. 2007;46:1051-1061.
113. Goenjian AK, Karayan I, Pynoos RS, et al. Outcome of psychotherapy among early adolescents after trauma. *Am J Psychiatry*. 1997;154:536-542.
114. Cohen JA, Mannarino AP, Knudsen K. Treating childhood traumatic grief: a pilot study. *J Am Acad Child Adolesc Psychiatry*. 2004;43:1225-1233.
115. Cohen JA, Mannarino AP, Staron VR. A pilot study of modified cognitive-behavioral therapy for childhood traumatic grief (CBT-CTG). *J Am Acad Child Adolesc Psychiatry*. 2006;45:1465-1473.
116. Dugan EM, Snow MS, Crowe SR. Working with children affected by Hurricane Katrina: two case studies in play therapy. *Child Adolesc Ment Health*. 2010;15:52-55.
117. Curtis K, Newman T. Do community-based support services benefit bereaved children? A review of empirical evidence. *Child Care Health Dev*. 2001;27:487-495.
118. Currier JM, Holland JM, Neimeyer RA. The effectiveness of bereavement interventions with children: a meta-analytic review of controlled outcome research. *J Clin Child Adolesc Psychol*. 2007;36:253-259.
119. Weller EB, Weller RA, Benton T, Wiltsie JJ. Grief. In: Lewis M, ed. *Child and Adolescent Psychiatry: A Comprehensive Textbook*. 3rd ed. Philadelphia: Lippincott Williams & Wilkins; 2002:470-477.
120. Cohen JA, Mannarino AP, Greenberg T, Padlo S, Shipley C. Childhood traumatic grief: concepts and controversies. *Trauma Violence Abuse*. 2002;3:307-327.
121. La Greca AM, Vernberg EM, Silverman WK, Vogel AL, Prinstein MJ. *Helping Children Cope with Disasters: A Manual for Professionals Working with Elementary School Children*. Miami: University of Miami and Florida International University; 1996.
122. Gurwitsch RH, Messenbaugh AK. *Healing After Trauma Skills (H.A.T.S.): A Manual for Professionals, Teachers, and Families Working with Children after Trauma/Disaster*. 2nd ed. Rockville, MD: National Child Traumatic Stress Network; 2005. www.nctsn.org/nctsn_assets/pdfs/edu_materials/HATS2ndEdition.pdf. Accessed April 24, 2013.
123. Kliman G, Oklan E, Wolfe H, Kliman J. *My Katrina and Rita Story: A Guided Activity Workbook for Children and Teenagers*. San Francisco, CA: Children's Psychological Health Center; 2005.
124. Figley CR. A five-phase treatment of post-traumatic stress disorder in families. *J Trauma Stress*. 1988;1:127-141.
125. Baggerly J, Exum HA. Counseling children after natural disasters: guidance for family therapists. *Am J Fam Ther*. 2008;36:79-93.
126. Miller L. Family therapy of terroristic trauma: psychological syndromes and treatment strategies. *Am J Fam Ther*. 2003;31:257-280.
127. Riggs DS. Marital and family therapy. In: Foa EB, Keane TM, Friedman MJ, eds. *Effective Treatments for PTSD: Practice Guidelines from the International Society for Traumatic Stress Studies*. New York: Guilford Press; 2000:280-301.
128. Wells ME. Psychotherapy for families in the aftermath of a disaster. *J Clin Psychol*. 2006;62:1017-1027.
129. Yule W, Williams RM. Post-traumatic stress reactions in children. *J Trauma Stress*. 1990;3:279-295.
130. Gillis HM. Individual and small-group psychotherapy for children involved in trauma and disaster. In: Saylor CF, ed. *Children and Disasters*. New York: Plenum Press; 1993:165-186.
131. Terr LC. Treating psychic trauma in children: a preliminary discussion. *J Trauma Stress*. 1989;2:3-20.
132. Cohen JA. Pharmacologic treatment of traumatized children. *Trauma Violence Abuse*. 2001;2:155-171.
133. Friedman MJ, Donnelly CL, Mellman TA. Pharmacotherapy for PTSD. *Psychiatr Ann*. 2003;33:57-62.
134. Donnelly CL, Amaya-Jackson L. Post-traumatic stress disorder in children and adolescents: epidemiology, diagnosis and treatment options. *Pediatr Drugs*. 2002;4:159-170.
135. Pitman RK, Delahanty DL. Conceptually driven pharmacologic approaches to acute trauma. *CNS Spectr*. 2005;10:99-106.
136. Stein MB, Kerridge C, Dimsdale JE, Hoyt DB. Pharmacotherapy to prevent PTSD: results from a randomized controlled proof-of-concept trial in physically injured patients. *J Trauma Stress*. 2007;20:923-932.
137. Saxe G, Geary M, Bedard K, et al. Separation anxiety as a mediator between acute morphine administration and PTSD symptoms in injured children. *Ann N Y Acad Sci*. 2006;1071:41-45.