



Providing Psychosocial Support to Children and Families in the Aftermath of Disasters and Crises

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abstract

Disasters have the potential to cause short- and long-term effects on the psychological functioning, emotional adjustment, health, and developmental trajectory of children. This clinical report provides practical suggestions on how to identify common adjustment difficulties in children in the aftermath of a disaster and to promote effective coping strategies to mitigate the impact of the disaster as well as any associated bereavement and secondary stressors. This information can serve as a guide to pediatricians as they offer anticipatory guidance to families or consultation to schools, child care centers, and other child congregate care sites. Knowledge of risk factors for adjustment difficulties can serve as the basis for mental health triage. The importance of basic supportive services, psychological first aid, and professional self-care are discussed. Stress is intrinsic to many major life events that children and families face, including the experience of significant illness and its treatment. The information provided in this clinical report may, therefore, be relevant for a broad range of patient encounters, even outside the context of a disaster. Most pediatricians enter the profession because of a heartfelt desire to help children and families most in need. If adequately prepared and supported, pediatricians who are able to draw on their skills to assist children, families, and communities to recover after a disaster will find the work to be particularly rewarding.

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INTRODUCTION

Disasters are “one-time or ongoing events of human or natural cause that lead groups of people to experience stressors including the threat of death, bereavement, disrupted social support systems, and insecurity of basic human needs such as food, water, housing, and access to close family members.”¹ In a representative sample of more than 2000 US children 2 through 17 years of age, nearly 14% were reported to have been exposed to a disaster in their lifetime, with more than 4% of disasters occurring in the past year.¹ Disasters, thereby, affect the lives of millions of children

every year, whether through natural disasters, such as earthquakes, hurricanes, tornadoes, fires, or floods; human-made disasters, such as industrial accidents, war, or terrorism; or as a result of pandemics or other naturally occurring disease outbreaks. Children are particularly vulnerable to the effects of disasters and other traumatic events because of a lack of experience, skills, and resources to be able to independently meet their developmental, social-emotional, mental, and behavioral health needs.^{2,3} Disasters also have the potential to cause short- and long-term effects on the psychological functioning, emotional adjustment, health, and developmental trajectory of children, which even may have implications for their health and psychological functioning in adulthood; children, as a group, are among those most at risk for psychological trauma and behavioral difficulties after a disaster.⁴

Pediatricians and other pediatric health care providers are in an excellent position to (1) encourage families and communities to prepare for potential disasters; (2) provide support to children and families in the immediate aftermath of a disaster, as well as throughout the recovery process; (3) share advice and strategies with caregivers on how to promote and support children's adjustment, coping, and resilience; (4) provide timely triage to identify and refer children with or at considerable risk of developing adjustment difficulties to appropriate services; (5) serve as a consultant to schools, child care centers, and other child congregate care sites on preparedness, response, and recovery efforts; and (6) advocate at the local, state, and national levels for a state of preparedness and services to meet the needs of children affected by disasters.³ Stress is intrinsic to many major life events that children and families face, including the experience

of significant illness and its treatment. The information provided in this clinical report may, therefore, be relevant for a broad range of patient encounters, even outside the context of a disaster.

Emotional distress also may interfere with the accurate reporting of symptoms and may even mimic physical conditions. Effective management of medical conditions may be compromised, thereby reducing the quality of pediatric care provided both in the aftermath of disasters and in situations involving patient/family distress. Despite the increased call for psychosocial support in the aftermath of a disaster, surveys of practicing pediatricians consistently indicate that most pediatricians perceive themselves to be unprepared to address the needs of children in such crises.^{5,6} This clinical report presents information about children's common adjustment reactions to disasters, their risk factors for addressing and dealing with challenges, and practical strategies to help patients and families increase coping skills and resiliency.

CREATE A SAFE HEALTH CARE ENVIRONMENT IN THE AFTERMATH OF A DISASTER

Sites that may deliver care in the aftermath of a disaster should be designed to minimize the likelihood of contributing additional stress to children. When delivering medical care, attempts should be made to minimize the use of invasive or painful procedures or treatments and provide appropriate sedation or analgesia whenever required. Parents and family members should remain with children to the extent possible throughout the evaluation and treatment process, provided that they are able to cope with their own discomfort or distress. Parents may be guided in supporting their children, such as by using coping strategies they have found effective in

the past (eg, distraction or attention-refocusing techniques, like a calming touch or use of gentle humor). Parents should be allowed to temporarily leave the examination room if they are feeling overwhelmed, but should notify the child before leaving that they will be in an adjacent area and that the pediatrician or nurse will remain with them for a few minutes until they return.

Practical steps can be taken to minimize children's exposure to frightening images and sounds that may compound their distress or serve as triggers or reminders of a disaster. Doors/curtains in the health care setting should be closed to reduce exposure to others who are injured or in pain. Televisions in waiting, examination, and inpatient rooms can be turned off if they are broadcasting coverage of the crisis event. Staff members are encouraged to remember that children can often overhear and understand their conversations.

Parents and doctors can provide explanations about medical treatments and care in positive terms that emphasize how these interventions are intended to keep children safe and/or help them feel better. Potential risks may be presented in supportive ways, for example, "We are going to put this belt around your waist so that you remain safe and secure in the ambulance," rather than "We will put this belt on so that you don't go flying out of the ambulance if we have to stop quickly on the way to the hospital." This advice is relevant even outside the context of a disaster.⁷

COMMON ADJUSTMENT REACTIONS OF CHILDREN TO DISASTERS

The effect of a disaster on each individual child varies depending on a number of factors, including (1) the nature of the event and the amount of death, destruction, and disruption; (2) the degree of personal

involvement of children and their families; (3) the duration of time before children's daily environment, and that of the overall community, returns to a safe, predictable, and comfortable routine; (4) whether the stressor is a 1-time or chronic event; (5) the level of coping ability of the children's caregivers; (6) the children's preexisting mental health, developmental level, and baseline resiliency and coping skills; and (7) the nature of the secondary stressors and losses that follow the crisis event. In communities recovering from a disaster, it is therefore often helpful for pediatricians not only to inquire about children's symptoms, but also to ask families about what children were exposed to as a result of the disaster, what they understand about what has happened to their community, any ongoing stressors that may complicate recovery, and additional questions that explore and identify these risk factors (see Table 1).

Most children who are experiencing adjustment difficulties after a disaster may demonstrate no observable symptoms. Children might try to avoid revealing concerns and complaints to not seem odd and not further burden adults in their lives who are having difficulty coping as well. Even children suffering from posttraumatic stress disorder (PTSD) may go undetected unless pediatricians screen or directly inquire about symptoms and adjustment. One of the core criteria of PTSD is an active avoidance of thinking about or talking about the triggering event and one's associated reactions to that event. Making the diagnostic process even more difficult, most of the symptoms of an acute stress disorder or PTSD may not be externally expressed at all (eg, intrusive thoughts). As a result, parents, teachers, and other caregivers tend to underestimate the level of children's distress after a disaster and overestimate their resilience, especially if relying on the observation of overt behaviors rather

TABLE 1 Common Symptoms of Adjustment Reactions in Children after a Disaster²⁴

Sleep problems: difficulty falling or staying asleep, frequent night awakenings or difficulty awakening in the morning, nightmares, or other sleep disruptions.
Eating problems: loss of appetite or increased eating.
Sadness or depression: may result in a reluctance to engage in previously enjoyed activities or a withdrawal from peers and adults.
Anxiety, worries, or fears: children may be concerned about a repetition of the traumatic event (eg, become afraid during storms after surviving a tornado) or show an increase in unrelated fears (eg, become more fearful of the dark even if the disaster occurred during daylight). This may present as separation anxiety or school avoidance.
Difficulties in concentration: the ability to learn and retain new information or to otherwise progress academically.
Substance abuse: the new onset or exacerbation of alcohol, tobacco, or other substance use may be seen in children, adolescents, and adults after a disaster.
Risk-taking behavior: increased sexual behavior or other reactive risk-taking can occur, especially among older children and adolescents.
Somatization: children with adjustment difficulties may present instead with physical symptoms suggesting a physical condition.
Developmental or social regression: children (and adults) may become less patient or tolerant of change, revert to bedwetting, or become irritable and disruptive.
Posttraumatic reactions and disorders: see Table 2.

than inquiring specifically about feelings and reactions. The adults' own reactions to the event also may diminish their ability to identify their children's needs with optimal sensitivity or reliability.⁸ Finally, the parents' own difficulty adjusting to an event may, in turn, threaten children's sense of safety and security and serve as a negative model of emotional regulation.⁹

Research has shown that after a major disaster, a large proportion of children in the affected community will develop adjustment reactions, with many qualifying for a diagnosis of a mental health condition, often related to trauma, anxiety, or depression.¹⁰ In a study conducted 6 months after the terrorist attacks of September 11, 2001, involving

a representative sample of more than 8000 students in grades 4 through 12 attending New York City public schools, 27% met criteria for 1 or more probable psychiatric disorders on the basis of self-reporting of symptoms and impairment in daily functioning. The study reported the following:

- 11% of students had PTSD;
- 8% of students had major depressive disorder;
- 12% of students had separation anxiety disorder;
- 9% of students had panic attacks; and
- 15% of students had agoraphobia (or fear of going outside or taking public transportation).

Perhaps of even greater concern, at least two-thirds of those students who self-reported mental health symptoms and impairment in daily functioning also reported that they had not sought care, even though free mental health services had been available in their schools. In addition, the vast majority (87%) of all students surveyed reported at least 1 ongoing symptom that persisted 6 months after the event, reported as follows:

- 76% of students reported often thinking about the attacks;
- 45% of students were actively trying to avoid thinking or talking about the event;
- 25% of students were experiencing difficulty concentrating;
- 24% of students were having sleep problems (including 17% with nightmares); and
- 18% of students stopped going to places or doing things that reminded them of the events of September 11.¹¹

Because most children experience at least some long-term reactions to a disaster and because many children and families cannot or do not access mental health services for reasons including cost and perceived stigma,

it is important to explore strategies that provide interventions and support to all children after a major disaster, rather than relying exclusively on the traditional clinical approach of triage and referral for those patients identified as needing care.

Anticipatory guidance and advice can be provided to families by pediatricians on how to identify and address the most common adjustment reactions that can be anticipated among children after a disaster (see Table 1). For example, sleep problems are common after a disaster, and children who have difficulty sleeping may develop problems with concentration, attention, learning, and academic functioning. Promoting sleep hygiene (eg, providing a consistent, quiet, and comfortable location and time for sleep that is free of noise or other distractions, preceded by a quiet and consistent bedtime ritual), may be difficult but is nonetheless important, especially when families are living in shelters or other temporary sites. Posttraumatic stress reactions are frequently observed immediately after a disaster and can be best explained to children as the way their body automatically responds after an event frightens them. Less commonly, PTSD may develop a while after the traumatic event occurred, especially among children who perceived at the time of the event that their life was in jeopardy or experienced intense fear, helplessness, or horror. Table 2 includes the diagnostic criteria for PTSD, as outlined in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*,¹² which include symptoms of intrusion, avoidance, negative alterations in cognitions and mood, and increased arousal that persist for at least 1 month and result in significant impairment in social, academic, or other areas of functioning.

Distress that occurs as a result of children's involvement in a disaster

TABLE 2 Symptoms of Posttraumatic Stress Disorder²⁴

Exposure: The child is exposed to actual or threatened death, serious injury, or sexual violence. This may be through the child's direct experience; by witnessing the traumatic event, especially when involving a caretaker; or by the child learning that the traumatic event occurred involving a close family member or friend without any direct experience or witnessing of the event by the child.

The following symptoms must occur for more than 1 month's time:

1. Intrusion
 - The child has repeated distressing memories and/or dreams (nightmares) about the traumatic event; it is not required for children to remember the content of these distressing dreams. For some children, repetitive play activities may involve themes or aspects of the traumatic event.
 - The child may display a loss of awareness of present surroundings (dissociation) and act as if the traumatic event is reoccurring (flashbacks).
 - The child may experience intense or prolonged psychological distress and/or physiologic reactions at exposure to internal or external cues that symbolize or resemble the traumatic event.
2. Avoidance
 - The child attempts to avoid distressing memories, thoughts, feelings, activities, and/or places that remind him or her of the traumatic event.
3. Negative alterations in cognitions and mood
 - The child has problems remembering important aspects of the traumatic event.
 - The child maintains negative beliefs or expectations about oneself, others, or the world.
 - The child has thoughts about the cause or consequences of the traumatic event that lead to blame of self/others.
 - The child experiences negative emotional states, such as depression, and has trouble experiencing and expressing positive emotions.
 - The child shows a markedly diminished interest or participation in significant activities, including play.
 - The child feels distant from others, which may lead the child to become socially withdrawn and avoid people, conversations, or interpersonal situations.
4. Increased arousal and reactivity associated with the traumatic event
 - Irritable and angry outbursts (extreme temper tantrums).
 - Reckless or self-destructive behavior.
 - Hypervigilance.
 - Exaggerated startle response.
 - Problems with concentration.
 - Sleep disturbance.

often creates an additional burden for the children who may have had unresolved predisaster psychopathology or adjustment difficulties. Psychological issues that children have attempted to suppress may resurface, even if these issues are not directly related to the disaster.^{10,13} As a result, unrelated events and experiences (eg, previous traumatic events or worries about the health of parents) may be the cause for what appear to be reactions to the disaster itself. This distress may be seen among adults, such as parents, as well.

In a related manner, future events and references that remind children of the losses or disturbing images, sensations, and emotions associated with the disaster event may serve as later triggers of their grief or trauma symptoms. Some examples include

anniversaries of the disaster, severe weather that reminds a child of a natural disaster, persistent signs of destruction in the community, sounds of emergency vehicles, allusions to similar events on television or in classroom lessons, or visits to health care facilities. These reminders may result in an unanticipated, acute resurgence of some of the feelings associated with the loss or crisis and catch children off guard. Parents, educators, and others who work with children should anticipate that such triggers may occur and help children anticipate and plan for how to address these feelings.

BEREAVEMENT AND SECONDARY STRESSES

Whereas the adjustment difficulties (as outlined in Table 1) that children experience after a disaster may be

related to posttraumatic reactions, many will not be directly attributable to the disaster itself. Disasters may worsen preexisting problems, such as financial strain, parental depression, parenting challenges, or child behavior problems, which may have been adequately compensated or addressed in a setting of less stress.¹⁴ Disasters often also initiate a cascade of secondary losses and stressors that may become the primary concern for a particular child or family. A child presenting with sleep problems months after a flood may be responding to marital conflict or parental distress related to financial concerns instead of solely struggling to cope with the flooding itself. After a major natural disaster, it is common to see increased unemployment or underemployment resulting in financial stress on families; a need for families to relocate resulting in changes in schools or peer groups for the children; temporary living situations that are suboptimal or causes of interpersonal conflict; or depression, substance use, or marital conflict among parents. Such an increase in marital stress, domestic violence, and parental mental health problems was demonstrated in the Gulf Coast region after Hurricane Katrina.^{15,16} Child abuse has also been reported to increase after major disasters.¹⁷ Pediatricians may see children and families dealing with such issues even if the children or adults in the family did not experience the disaster itself as traumatic but instead are reacting to secondary losses or stressors. Management of these concerns requires a different approach than trauma treatment; pediatricians need to adopt a more holistic approach to assessing adjustment and promoting coping and resiliency among children and families after a disaster. Assessments need not only to explore how children are adjusting with the disaster event itself, but also to seek information about their current life circumstances and how they are

dealing with the challenges these circumstances may pose. Given that children may withhold voicing their concerns in the presence of their parents or other family members so as not to further burden the adults who may be in distress themselves, it is important to interview the children alone with the parents' permission and child's assent when trying to assess fully their level of coping.

Given that these secondary losses and stressors may continue for even several years after a major disaster, children's adjustment difficulties may persist for a similarly extended time. Children's adjustment should not be expected before the restoration and stabilization of the home, school, and community environments and supports for children, which may not return to being fully functional for several years.

If children experience the deaths of family members or friends as a result of the disaster, bereavement may emerge as their predominant concern. In most situations, bereavement in the context of a disaster is not dissimilar from bereavement occurring in other contexts; when children have observed a violent death of a loved one, grief may be compounded by trauma reactions requiring treatment of trauma in addition to bereavement support. Children, like adults, will struggle with understanding and accepting the death and the effect it has on them and their family and the challenge of a life devoid of someone they loved.¹⁸ Parents, teachers, and other caring adults are often reluctant to talk with children who are grieving or even to raise the topic out of a fear of causing further distress by saying the "wrong thing." Yet, the distress is caused by the reaction to the death itself, rather than any question or invitation to talk. Talking may provide some relief if not coerced. Avoiding discussion is rarely helpful and often isolates children at a time

when they are most in need of support and assistance.

Pediatricians and other pediatric health care providers can serve as a useful resource for children who have recently experienced the death of a close family member or friend by helping their caregivers understand the importance of inviting and answering their questions, providing information to help guide them in understanding and adjusting to the loss, and helping them identify strategies for coping with the associated distress. Timely information about how to involve children in the funeral or other memorialization activities, how to enlist the support of school personnel, and bereavement support services available within the community are helpful to provide, through in-person meetings, phone calls, or psychoeducational material. Practical and free resources are available for this purpose¹⁹ (see www.aap.org/disasters/adjustment and www.achildgrief.com). A resource offering free multimedia training materials on how to support grieving children is available through the Coalition to Support Grieving Students at www.grievingstudents.org. Practical guidance on how to approach notification of children about the death of a family member or friend,²⁰ including within the unique context of a disaster,²¹ can be found elsewhere.

RISK FACTORS FOR ADJUSTMENT DIFFICULTIES AND GUIDELINES FOR REFERRAL

In the immediate aftermath of a disaster, pediatricians need to assess both the physical and mental health of children. The primary focus is, of necessity, medical stabilization and evaluation, but a secondary mental health triage should follow shortly thereafter. Table 3 outlines the factors to be assessed during this mental health triage to identify children most in need of mental

health services or other immediate attention to their mental health needs. The following factors, in particular, suggest the need for immediate mental health services: (1) dissociative symptoms, such as detachment, derealization, or depersonalization, which may present in children as appearing confused, distant, daydreaming, or aloof (such dissociation at the time of exposure has been found to be the most significant predictor of later PTSD); (2) extreme confusion or inability to concentrate or make even simple decisions; (3) evidence of extreme cognitive impairment or intrusive thoughts; (4) intense fear, anxiety, panic, helplessness, or horror; (5) depression at the time of the event¹³; (6) uncontrollable and intense grief; (7) suicidal ideation or intent; and (8)

marked physical complaints resulting from somatization.²² When children's caregivers are struggling themselves to cope with the event, helping the caregivers access services for themselves and/or providing a referral to a mental health provider to assist with children's coping also may be indicated.

Children's adjustment and resiliency depend on a number of factors that relate to the nature of the event itself (such as how much damage or death resulted from the event); the degree of personal effects on children or those close to them in terms of death, disability, injury, or loss of property or damage to housing; the level of exposure involving direct witnessing or viewing graphic coverage through the media or online; the degree and duration of secondary losses and stressors; the disruption caused to children's extended support system and the level of adaptation of caregivers and the degree to which they are able to create a safe and nurturing environment that promotes recovery for the children; and the nature of children's preexisting coping abilities.^{23,24} Table 3 outlines the factors before, during, and after a disaster that are associated with an increased risk of difficulty adjusting after a disaster.

Separation from parents or other important caregivers is associated with increased difficulty adjusting to a disaster. Efforts to reunite children who are separated from their family by the event are a high priority.^{25,26} In those situations in which children require medical treatment or observation before reunification is possible, individual volunteers can be assigned to provide consistent and ongoing support to individual children until reunification is achieved. When parents, guardians, or other family members are available, guidance by the health care team can help them serve an active and appropriate role in the evaluation and

treatment process and can help to reduce their children's distress.³

BASIC SUPPORTIVE SERVICES AND PSYCHOLOGICAL FIRST AID

Attention to the basic needs of individuals affected by a disaster is a top priority for the immediate response. Basic needs include food, shelter, safety, supervision, communication, and reunification with loved ones. Ensuring that these basic needs are addressed is the first step to providing emotional support.

In addition, all individuals directly affected by a disaster should be provided psychological first aid, which involves psychoeducation and supportive services to accelerate the natural healing process and promote effective coping strategies.

Psychological first aid includes providing timely and accurate information to promote an understanding that will facilitate adjustment, offering appropriate (but not false) reassurance that corrects misconceptions and misperceptions that might otherwise unnecessarily increase the appraisal of risk, supplying information about likely reactions and practical strategies to facilitate coping with distress, and helping people identify supports in their family and useful resources in their community.²⁷ One such model for psychological first aid that is readily accessible to those outside the mental health field is Listen, Protect, and Connect.²⁸ Pediatricians and other pediatric health care providers should ensure that all staff in their practice setting, including front office and support staff, are familiar with psychological first aid and ready to provide such support to children and adults in the aftermath of a disaster. Given that children and families who present to health care settings are often in distress, these are useful skills that can be used on a daily basis even outside the context of a disaster. In addition, having other adults who

TABLE 3 Factors Associated With an Increased Risk of Adjustment Problems After a Disaster²⁴

1. Preexisting factors
<ul style="list-style-type: none"> • Previous psychopathology, significant losses, attachment disturbances, limited coping skills, or other traumatic events. • Socioeconomic differences that result in lower levels of postdisaster resources and support.
2. Nature of disaster experience
<ul style="list-style-type: none"> • Injury of the child or death or injury of those close to the child. • Nature and extent of exposure, including number of deaths, physical proximity to disaster, and extent of personal loss. Human-made disasters, especially terrorist attacks that have a high degree of intentionality, generally create reactions that are more prevalent and long-lasting. • Extent of exposure to horrific scenes (including indirectly through the media). • Child's perception (at the time of the event) that his or her life was in jeopardy.
3. Subsequent factors
<ul style="list-style-type: none"> • Personal identification with the disaster or victims. • Separation of child from parents or other important caregivers as result of event. • Loss of property or belongings; need to relocate or other disruption in daily routine or environment. • Parental difficulty in coping, substance abuse, mental illness. • Lack of supportive family communication style. • Lack of community resources and support.

care for children, such as staff within child care facilities and schools, also be familiar with these strategies is important to create resilient communities that are able to support children in the aftermath of a disaster.

NOTIFICATION AND MEDIA COVERAGE

Children should be informed about a disaster as soon as information becomes available. Children can sense when critical information is being withheld and when trusted adults are not being genuine; this, in turn, undermines their trust and sense of safety and compromises the ability of these adults to be later viewed as a source of support and assistance. Even very young children or those with developmental disabilities can sense the distress of trusted adults. Children also often overhear or otherwise learn information about the events, such as through the Internet or social media or from conversations with other children.

The amount of information to share with individual children may vary by the developmental level of the children or their typical coping strategies. In general, older children seek and benefit from more information. Irrespective of their age, children who generally cope by learning more and understanding more about a threat will often seek and benefit from a deeper understanding. But no matter the developmental level or usual coping style, it is best to start with simple and basic facts about the event and then take the lead from children's questions that follow about what further information or explanations will be helpful. If some time has passed since the event, children can be asked what they may have already heard or learned about the event and what questions they now have. In this way, misunderstandings and misconceptions can be identified and addressed. The goal is to help

children feel they understand what is going on enough for them to know how best to deal with the situation.

Media coverage often contains graphic images and details, evocative pictures or stories, or strong emotional content that is not helpful for children or adults. Technological advances and changes in the mass media landscape now offer a stage unlike any in history, from which disaster events can reach an enormous audience in real-time. Continuous news coverage, broadcast over the ubiquitous presence of televisions, personal computers, the Internet, and smartphones, and an increasingly sophisticated technology for live broadcasts has resulted in the unprecedented coverage of disasters in real-time and exquisite detail, allowing viewers to experience the event almost as if they were physically present. This expanded media presence has led to a broader population of children and youth with either primary or secondary exposure to an event.^{8,29,30}

Parents should, therefore, limit the amount of media coverage in the immediate aftermath of a disaster for children and all members of the family, including television, radio, Internet, and social media, and remember that children often overhear and pick up on media coverage being viewed by adults. If media coverage is going to be viewed by children, parents may want to record and view it first and/or watch along with children. In discussions, avoid graphic details and excessive information that is not helpful to understand what has happened or learn what to do to keep safe or to cope. If no further understanding is resulting from continued viewing of coverage of the event, then it is best for even adults to discontinue such viewing. Right after a disaster occurs is a good time to turn off electronic devices that are being used for entertainment and come together physically and

emotionally as a family unit to provide support to one another.

PROMOTING EFFECTIVE COPING STRATEGIES

Advocating specific coping strategies for children after a disaster can be challenging because of the interaction among a number of factors, including a child's personal characteristics, preexisting functioning, and developmental level.¹⁰ Research on stress management has demonstrated that directly facing a problem is associated with better outcomes, and avoiding the situation or only reacting emotionally can be more problematic, but outcomes may vary depending on the nature of the stressors. Problem-focused coping may be most beneficial when stressors can be controlled by the child. Avoidant or emotion-focused coping might be more productive when stressors cannot be removed.³¹ The influence of a child's caregivers is also important to consider; parents and other caring adults may be so overwhelmed themselves after a disaster that they are unable to appreciate the distress in their children. Adults often hide their own distress to protect their children or provide them false reassurance; they may intentionally or unintentionally imply that children should not be upset. In reality, if children feel worried, then they are worried. Telling them that they should not be worried is usually ineffective and undermines the potential for children to own their feelings and learn strategies to deal with them.

Although it is important for children to be encouraged to express their feelings and concerns, it is equally important that adults help foster a range of coping skills in children so that they have strategies they can use to address distress and troubling feelings. If parents can communicate some of their own distress, with an

emphasis on sharing personal strategies they have used to cope effectively with that distress (that may be applicable to the children), they provide opportunities for children to learn coping strategies. For example, a parent can share that he was upset about the destruction of their home and loss of personal property and that this interfered with his sleep or caused some sadness, and then discuss how talking to another trusted adult, getting some exercise, meditating, helping others who were also affected, and so forth, helped him feel better. Pediatricians can support families by providing examples of a variety of coping strategies (eg, both problem focused and emotion focused, approach and avoidance) while modeling emotional regulation and a positive attitude. Suggesting that children contribute to a food or clothing drive for those who lost their homes or draw hopeful pictures for victims in hospitals can help children feel like they are contributing. Adolescents may wish to write positive comments in social media to encourage those who may be isolated and distressed after a disaster. Children may also benefit from the pediatrician sharing his or her own understanding of the disaster and recovery process which will help children better interpret all that is going on (eg, "The tornado created a big mess, but we are pulling together as a community," or "Living in a shelter with all the other children in the neighborhood must have been a real adventure"). Communicating with children in this manner after a disaster may help them begin to make sense of all that has occurred and increase their self-confidence because they have coped with an event that once appeared overwhelming.

Children may feel guilt or shame associated with the disaster, even when they have no objective reason to feel responsible. They may question what they did or failed to do that led to or contributed to the

impact of the disaster; they may wonder what they could have done to have improved the outcome. It is often helpful to reassure children about their lack of responsibility. When children persist in beliefs that their inadvertent comments or actions were somehow contributory (eg, a child has an argument with a parent just before the parent is killed in a car accident during a severe storm), it may be helpful to clarify that their behavior or conversation was in no way intended to cause such harm and did not do so. Although such guilt and shame may be common in the aftermath of a disaster, if left unaddressed, these painful self-incriminating emotions may cause significant distress and long-term adjustment problems. Self-blame and survivor's guilt may remain with children and can lead to long-term difficulties.³²

Children, just as do adults, often feel powerless in the aftermath of a disaster; this may be improved if they are able to help others. It is, therefore, beneficial to help children identify practical actions they can take to aid others, whether victims of the disaster or others in need in the family or broader community.

Psychotropic medications should generally be avoided in the management of children's distress after a disaster. Children need to develop an understanding of the event and learn to express and cope with their reactions. Medication should, therefore, not be used to suppress reactions such as crying or feelings such as sadness and should not be used to blunt children's awareness of the event. Referral to or consultation with a child mental health professional with expertise in the management of childhood trauma is recommended for primary care providers when considering use of psychotropic medications for persistent or severe posttraumatic reactions.²¹

CONSULTATION TO SCHOOLS

Pediatricians can work with local schools to assist in recovery efforts for students. After a disaster, schools are likely to see negative effects on learning among their students, and staff may find it difficult to teach or manage their classes unless adequate supports are put in place immediately after the disaster and maintained until recovery has been completed. Schools can serve as an effective means to reach the broad population of children and families affected by the disaster and a cost-effective and accessible site for the delivery of basic and supportive services by professionals already familiar to the students and trusted by the families. Schools are also sites that are amenable to psychoeducation, psychological first aid, and group supportive services. Schools are particularly well suited to monitoring children's adjustment over time and can be used to provide additional mental health services or referral to community services.

Schools should have well-established guidelines for crisis response and well-trained crisis response teams.^{33,34} All school staff should have basic skills in psychological first aid²⁸ and basic bereavement support.^{18,35} Resources for training and guidance for schools responding to crisis and loss can be found at the Web site for the National Center for School Crisis and Bereavement (www.schoolcrisiscenter.org) and the Coalition to Support Grieving Students (www.grievingstudents.org).

SHORT- AND LONG-TERM INTERVENTIONS

The goal of short-term intervention is to address immediate physical needs and to keep children safe and protected from additional harm; to help children understand and begin to accept the disaster; to identify, express, validate, and cope with their feelings and reactions; to reestablish a sense of safety through routines and

family connections; to start to regain a sense of mastery and control over their life; and to return to child care or school and other developmentally appropriate activities.^{21,36} Children who are grieving the loss of a family member or friend may benefit from bereavement counseling or support. Those experiencing or at high-risk of developing PTSD should be offered referral to a mental health professional experienced in cognitive-behavioral therapy that addresses trauma. School-based group treatment using cognitive-behavioral treatment approaches, such as Cognitive-Behavioral Intervention for Trauma in Schools, also has been shown to be effective.³⁷ Children with multiple stressors and/or chronic and ongoing trauma and those with limited external supports within their family, school, and broader community are more likely to require counseling or other formal support.

In general, children are helped by returning to their routine, such as child care, school, organized activities, and sports, as soon as practical after a disaster, as long as the necessary support systems and accommodations (such as temporarily reducing or providing more time for homework assignments or tests) are in place. Expectations for children's classroom performance and behavior may need to be modified until their adjustment difficulties no longer interfere with their cognitive, emotional, and social functioning. Parents and educators may be falsely reassured, however, by a return to routine, misinterpreting that children are more resilient than they may be and are no longer in need of support or assistance once they have begun the process of recovery. Children often need ongoing support for months or longer after a major disaster, and some will require more intensive interventions. If supports and assistance are withdrawn before full recovery has occurred, some children will fail to return to their baseline level of

adjustment and coping and may show continued impairment for an extended period of time.

In the immediate aftermath of a disaster, communities often become more cohesive for a time period, with members of the community providing and receiving support that had not been expressed before the disaster. This "honeymoon phase" is often characterized by some initial improvement in coping among members of the community but is often not sustained. Some vulnerable individuals, despite an initial improvement, may be challenged without ongoing support; they may come to feel hopeless about their ability to return to their baseline functioning or doubt they will ever recover fully. Depression and suicidality, especially among adults, may therefore be seen later, such as several months after the disaster event, despite initial improvement but before substantial recovery occurs. These observations have been noted among communities affected by major disasters and represent an important vulnerability.^{38,39}

In contrast, if children and adults receive sufficient and sustained support, and have the internal resources to adjust to the event, they may emerge with new skills that they can use to cope with future adversity. In this way, disasters may result in posttraumatic growth among both children and adults. Such posttraumatic growth is more likely to occur when children are provided support of sufficient intensity and duration.²⁴

Schools also can provide opportunities for students to help others as they and their communities recover from the event and its aftermath. Having the opportunity to help others often assists in the adjustment and coping of the students providing such assistance. Schools also can help students identify appropriate mechanisms for memorialization and

commemoration. These activities provide a means for expressing grief and loss in a shared fashion, thereby decreasing isolation and promoting cohesion. When deaths have occurred as a result of the disaster, these means of remembrance can reaffirm the personal attachment to the individual(s) who died and reassure the bereaved that the loved one will be remembered. Any such activities should involve the active participation of children and adolescents both in the planning and implementation to ensure that they are developmentally appropriate and personally relevant for them. Simply put, a memorial planned by adults for children is most likely to be therapeutic for the adults.¹⁸

PROFESSIONAL SELF-CARE

Pediatricians, when they are members of the community affected by a disaster, also experience their own personal effects as well as the effects on family and friends. Despite this, they must contend with the increased needs of their patients during a time when conditions may be austere and the supports available for the practice of medicine may be significantly compromised. Physicians may find that they need to provide more direct mental health services and basic medical services while also helping families navigate the process to obtain social services. The "emotional labor" during disasters can be highly strenuous. In addition, it can be difficult to witness the distress of patients and their families (as well as that of other staff); vicarious traumatization can result from repeated exposure to the evocative stories of patients and their families. Reminding oneself that one is making a positive impact, when surrounded by enormous needs that seem beyond one's control, can be challenging. Establishment of flexible routines, monitoring oneself for negative thoughts, creating realistic

professional expectations, setting healthy boundaries between personal time and professional hours, practicing daily personal stress management, making a conscious attempt to reduce compassion fatigue, and use of both professional and social supports, including counseling, will increase the likelihood that pediatricians will remain able to attend to the needs and feelings of their patients as well as their own.⁶

Pediatricians, as a group, need to acknowledge that it is acceptable to be upset when situations are particularly distressing, need to become willing to ask for and accept assistance whenever it may be helpful (as opposed to only when it is “absolutely needed”), and need to actively take steps to care for their colleagues and themselves. The American Academy of Pediatrics has identified a range of resources that pediatric health care providers can use to promote the recovery of children, families, and communities (www.aap.org/disasters/adjustment). As a professional organization, the American Academy of Pediatrics has identified professional self-care as an important priority and has focused funding, strategic planning efforts, and continuing education initiatives in this area.

Most pediatricians enter the profession because of a heartfelt desire to help children and families most in need. If adequately prepared and supported, pediatricians who are able to draw on their skills to assist children, families, and communities to recover after a disaster will find the work to be particularly rewarding, although at times exhausting. There are few other opportunities to have such a dramatic effect on the lives of children, their families, and the community.

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ABBREVIATION

PTSD: posttraumatic stress disorder

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