Discussion Guide for Pediatricians:
Addressing Trauma & Toxic Stress through the Pediatric Practice

Accompanies the Early Childhood Health Optimization Module

PURPOSE

Pediatricians are committed to ensuring the optimal health and development of all children. A significant risk to a child's health is the experience of toxic stress. Toxic stress can negatively impact brain development, which is related to higher incidence of negative health outcomes, high-risk behavior, and an overall decline in well-being.

The experiences that can result in toxic stress—poverty, abuse, community violence, parental mental illness and substance use disorder, and more—are complex. This guide attempts to provide pediatricians the necessary background to understand the issue of adversity and toxic stress and then provide possible approaches to incorporating this knowledge into the primary care practice—where pediatricians and the medical home team can work together to prevent and mitigate the effects of toxic stress to support the health and development of the children in their care. Preferably, the practitioner will have completed the Module prior to reading this Discussion Guide.

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MODULE OVERVIEW

This discussion guide is meant to accompany the Module that provides practitioners from several disciplines—including pediatrics—information and approaches to promote healthy brain development of young children, from birth to five. The Module presents the information in four segments:

1) **Understanding how early experiences build brain architecture**
2) **The science behind the effects of toxic stress on brain development**
3) **The role that executive function plays in health and learning**
4) **Building resilience across the lifespan**

A summary of the content found in each segment is below.

How Early Experiences Build Brain Architecture

A child's experiences during the earliest years of life have a lasting impact on the architecture of the developing brain. While a child's genetic makeup provides the foundation, the experiences a child has can be significantly influential on whether the brain will provide a strong or weak foundation for all future learning, behavior, and health.

This segment of the module walks the user through the basics of brain development, beginning with the section of the brain responsible for the core functions of the body like vision and hearing. The brain is developing at an incredibly rapid rate during this early period of life, with over 700 neural connections being made per second. This is often referred to as a sensitive period, because the experiences an infant or young child is having can easily influence how the brain will respond to future experiences. Each early experience informs and reinforces previous experiences. If these experiences involve insecurity, isolation, unmet needs, and other adverse experiences, the brain begins to interpret the world as being an unsafe, unstable place. And as depicted in future segments, this will begin to affect how the brain and the body's systems respond to future stressors—and not in a positive way.

The period of early childhood is critical because the brain, as we've learned, is more flexible during this period and negative experiences can be overcome with positive experiences, leaving less of a negative impact on the child for the long-term. As a child grows older and becomes an adult, the brain is less flexible—its plasticity decreases. This makes changing learning abilities, behaviors, and health outcomes much more difficult.

The good news from this segment is the role that parents and other adult caregivers can play in protecting and promoting healthy brain development. When parents are responding to a child's cues for attention—the smiles, the cries—in a positive way, it reinforces neural connections in the brain that send signals that the world is a safe place and stress levels remain at a low or manageable level. This "serve and return" concept between parent and child plays a key role healthy child development—as well as in preventing or mitigating the effects of what is known as toxic stress.

The Science Behind the Effects of Toxic Stress on Brain Development

This second segment of the module takes us through the various types of stress that exist and how they impact healthy brain development. Some stress is positive—and even necessary for healthy development. A child learning to walk experiences stress, but it is obviously important that this experience occur. This is called positive stress. There are also events that are considered tolerable stress. These are undesirable events such as the loss of a family member or the experience of a natural disaster. The key factor in a situation like this, however, is that it is occurring to the child in the presence of loving, caring, stable adults. When a child experiences high, sustained levels of stress in the absence of those loving supportive relationships with parents and adult caregivers, the result can be toxic stress.

What causes toxic levels of stress? Some of the biggest risk factors are adverse childhood experiences (ACEs). Landmark studies done by the Centers for Disease Control and Prevention and Kaiser Permanente established that ACEs—they looked at 10 of them—can play a critical role, not just in childhood but all throughout the lifespan. The ACEs they considered for their study included:

- Physical, emotional, or sexual abuse
- Physical or emotional neglect
- Parental separation or divorce
- Incarceration of a household member
- A household member with mental illness or substance dependency
- A mother treated violently

When ACEs occur in conjunction with other traumatic events—many of which are occurring within the caregiving relationship with the child—this is often referred to as complex trauma.

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Data from the ACE Study and other related studies on the impact of complex trauma indicate a direct relationship between the number of ACEs an adult reported having and the number of health and psychosocial complications they had as adults. Some of these negative outcomes included ischemic heart disease, diabetes, substance dependency, depression, suicide attempts, high-risk sexual behavior, and many more. Toxic levels of stress from ACEs and complex trauma can change brain architecture and the stress response systems. This then changes the way the brain and body will respond to future stressors, usually putting the body at risk for the outcomes mentioned above. ACEs impact children from all socioeconomic backgrounds and it's estimated that pediatricians see 2-4 children with 4 or more ACEs each day.

There are ways to mitigate and reverse the effects of toxic stress. Our understanding of brain science indicates, however, that any intervention applied has a significantly better impact when applied in early childhood than in later years. Contrary to popular belief, the mere removal of a young child from an environment of severe neglect is not a guarantee of positive outcomes. Children who experience significant deprivation typically need therapeutic, supportive care to facilitate their recovery. In the absence of appropriate intervention services, neglected children remain at increased risk for a host of problems (as described above) that have been found to continue through adolescence and into the adult years. These same problems may manifest later in older children and require intensive intervention.

Supporting parents and other caregivers during the child's early years is the most effective way to prevent toxic stress from ever occurring. This can include referring parents to high-quality parenting and home-visiting programs for additional supports—even prenatally. It can also include helping parents identify high-quality childcare programs that can support and enhance the nurturing a child receives. The next segment provides several other examples of ways to buffer toxic stress.

The Role that Executive Function Plays in Health and Learning

The brain functions in a complex but coordinated fashion. Cognitive, emotional, and social capacities are completely intertwined in the brain, each impacting the other. Emotional well-being and social competence, developed in the early years, provide a strong foundation for emerging cognitive abilities.

The higher-level skills that connect to and manage the others act like an "air traffic control system" in the brain and are known collectively as Executive Function and Self-Regulation.

These skills are essential for school achievement, for the preparation and adaptability of our future workforce, and for avoiding a wide range of population health problems. They help children make positive, healthy choices and build a strong foundation for the future.

As this segment describes, toxic stress can impede the ability of this well-organized executive function system and the ability of a child to self-regulate effectively. While all children can experience distractions and brief periods of stress that can inhibit their ability to self-regulate well, children who experience toxic stress can be at risk for long-term impairment of this system. Toxic stress continuously stimulates HPA axis, a system that is necessary for survival, and it will override the prefrontal cortex, the area of the brain in which executive function and self-regulation sit. Ongoing impairment of executive function prevents a child—and eventually the adult version of that child—from making plans, following instructions, making healthy choices, behaving appropriately in response to a normal stressor, and more. This has obvious impacts on lifelong outcomes related to health and well-being.

Building Resilience Across the Lifespan

Life will not be absent of stressors, so building resilience to be able to respond and move past those stressors successfully is critical to lifelong physical and mental health and overall well-being. This is not simply the ability to "pull oneself up by his bootstraps." It should be clear at this point that there is a science behind building resilience and this final segment describes this.

The most important factor in helping a child become resilient goes back to the first segment of the module, which emphasizes the importance of the serve and return nature of the parent-child relationship. Human beings need to be in relationships. These relationships play a critical role, particularly for young children, in how their development, behavior, and health evolves. The relationships a child has can act as a buffer to the stressful events in life, which can make the difference between these events resulting in tolerable stress versus toxic stress.

Pediatricians can play a role in promoting resilience in young children by first helping parents understand the importance of the relationship they have with their child, even before

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birth. Parents who understand the basic science of how environment and experiences in early childhood can impact a child's lifelong health and ability to be a successful member of society can then make informed choices about the environment and experiences they provide.

Parents needing additional support to create positive experiences for their child can receive referrals to high-quality parenting programs that benefit both parents and children. They can also be encouraged to reach out to other support systems such as community groups, faith communities, and friends.

In addition, parents who are aware of what to expect at various developmental stages can have realistic expectations of their children and can also identify possible problems more easily. The pediatric well visit provides an excellent opportunity to share this information and other anticipatory guidance with parents.

These various strategies described in this segment lead to more resilient parents and more resilient children. This resilience can make the difference when negative experiences come; the strengths of the parent and child overcome the potential negative outcomes from those events. Rather than ongoing turmoil and negative outcomes that endure, these events can actually result in growth and even more resilience building.

Summary

While the module and this discussion guide provide approaches to responding to children and families experiencing toxic stress, it is important to highlight the strategies included to prevent these experiences from ever happening. These are often called protective factors and are very much in line with the heart of pediatrics. They include promoting healthy and supportive adult-child relationships—one of the most significant ways to protect a child's health; giving the child and the parent a sense of self-efficacy and perceived control; helping children develop strong adaptive skills and the ability to self-regulate; and encouraging families to engage support from their faith, hope, and cultural traditions.

Pediatricians have a unique and trusted relationship with families. Their voice has authority and families look to them for the guidance they need to give their children the opportunity to grow into healthy, successful adults. The problems families face can be complex. Pediatricians, along with care coordinators, therapists, and home visitors, should have an understanding of the potential risks to children's physical and mental health and the ways to protect them from those risks. By ensuring this, children will have a significantly better chance of having the healthy, productive, and satisfying lives we all hope they will have.

THE IMPACT ON PEDIATRICS

The AAP estimates that the average pediatrician sees 2-4 children with an ACE score of four or more each day.

For many pediatricians, addressing exposure to trauma and traumatic events that could cause toxic stress in their patients is challenging. Reasons for this might include a lack of time in the office setting, the sensitive and complex nature of the topic, limited referral resources, and a personal discomfort addressing the subject with the child or the parent. However, the Adverse Childhood Experiences (ACE)[1] study conducted by the Centers for Disease Control and Prevention and Kaiser Permanente emphasized the effect of trauma on the developing brain and physical and mental health across the life span—a natural concern for all pediatricians. Importantly, ACEs described in the study are present in every socioeconomic level and can be devastating to a child's physical, mental, and emotional health and well-being into adulthood.

Trauma may be an event that is unpredictable, produces a feeling of helplessness, and overwhelms a person's capacity to cope. Trauma is also viewed as the connection between traumatic events and chronic, lasting stress. Experiencing any type of trauma during childhood can be very stressful. In the presence of loving, positive and nurturing relationships, this stress can oftentimes be temporary and a child can heal and recover. Without the presence of those loving, nurturing relationships, however, or when the stressful events are intense or repetitive, the child can experience what is now known as toxic stress.[2] This type of stress can negatively impact a child's brain development, resulting in adverse health and development outcomes that can last into adulthood.

The science supporting the connection between healthy brain development and overall health continues to gain strength. This research requires a shift in the way all healthcare professionals approach patient care. For pediatricians especially, this information provides a primary opportunity to prevent chronic health issues and other detrimental developmental factors by addressing

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the myriad sources of stress that a child can experience early in life. Pediatricians have a valued and highly trusted relationship with parents and families. They can help parents understand the unique role they play in creating a safe, stable, and nurturing environment for their children, which in turn provides a greater likelihood for a healthier life, well into adulthood.

THE ROLE OF THE PEDIATRICIAN IN PREVENTING, IDENTIFYING, AND TREATING TRAUMA & TOXIC STRESS

Pediatricians are likely familiar with a family's strengths and stressors since they treat the child during stressful episodes of acute care. As a trusting relationship evolves, families develop comfort discussing personal issues with their pediatrician. The American Academy of Pediatrics has always supported the involvement of families in a child's care. Pediatricians understand that a child is not raised in isolation and that a child's health is impacted by not only his or her biology, but also the home environment, community, and existing interpersonal relationships. The ACE study and knowledge of early brain development have affirmed that the developmental milieu is indeed critical for addressing the various risks for childhood adversity and toxic stress. The relationship between the developmental milieu and both brain development and infant mental health can be understood by reviewing the Eco-bio-developmental Framework graphic described in *The Lifelong Effects of Early Childhood Adversity and Toxic Stress*[3]and adapted from *The Foundations of Lifelong Health Are Built in Early Childhood* (2010) from the Center on the Developing Child at Harvard University. See Figure 1.

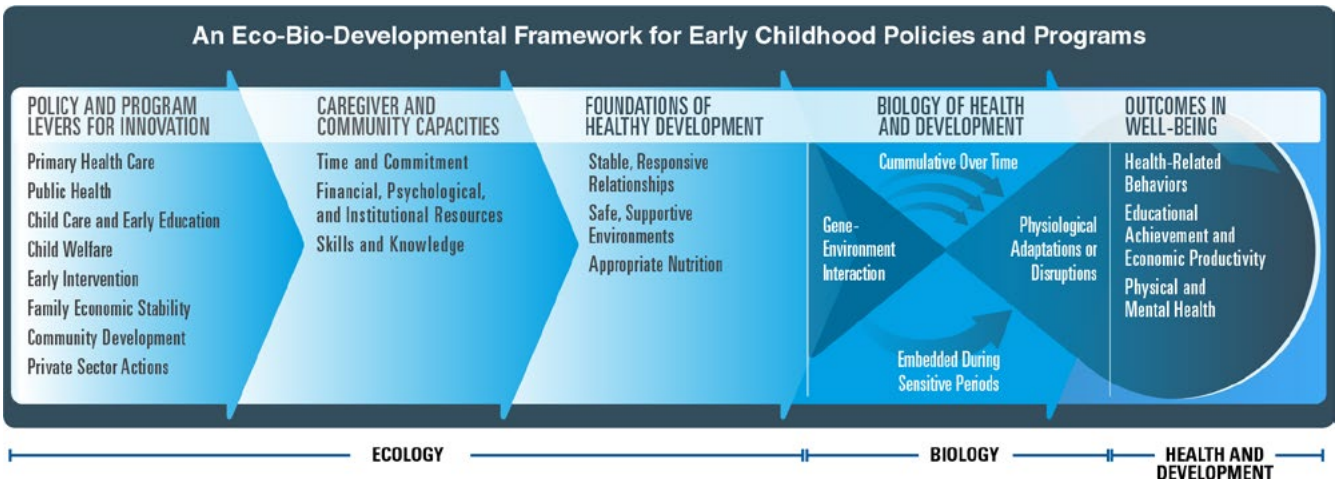

Figure 1. An eco-bio-developmental framework for early childhood policies and programs. Source: *AAP Technical Report: The Lifelong Effects of Early Childhood Adversity and Toxic Stress*, 2012. Adapted from the Center on the Developing Child at Harvard University *The Foundations of Lifelong Health Are Built In Early Childhood.*

Prevention

Children will have the best opportunity to be mentally and physically healthy throughout the life course if they never experience severe or ongoing adversity or toxic stress. Thus, a preventive approach is essential and prevention is an integral part of the pediatric practice. At each well child visit, especially those in early childhood (infancy to five years of age), pediatricians are providing parents information and guidance, and if needed, referral to appropriate therapeutic treatment. These interventions can help create a safe, healthy, and nurturing environment for their child.

Much like the recommendations for immunizations to prevent a variety of diseases, pediatricians can make recommendations that will help "immunize" children against toxic stress. Many studies have indicated the important role that safe, stable, and nurturing relationships play in supporting healthy brain development.[4] In addition, high-quality early childcare and education programs provide a safe and stimulating environment for children to explore, learn, and develop appropriately—again with the presence of additional loving caregivers. There are actually a number of "protective factors" that can help ensure that the child has what he or she needs to experience healthy development. These were developed by Strengthening Families, an initiative of the Center for the Study of Social Policy, and are available online at www.strengtheningfamilies.net.

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One of these protective factors is knowledge of parenting and child development. Adults tend to parent the way they were parented. Individuals who experienced harsh or inconsistent parenting as children may be more likely to parent their own children with that style, unless they learn other healthier techniques. Infants and young children need regular, predictable, and consistent routines to be able to develop in a healthy way. When parents become aware of this need, they can provide this type of environment. In addition, when parents are made aware of how their child should be developing—such as with language development—they can help identify when problems may be arising and act accordingly.

Supporting effective parental self-care is obviously critical, as well. If parents aren't healthy and emotionally well-regulated, they will find it difficult to provide that stability to their children. The trusted voice of the pediatrician encouraging parents to seek support from friends, family, community groups, and other supports can have a strong, positive impact on the entire family.

Understanding some of the psychosocial as well as tangible stressors, such as financial hardship, that families may be experiencing can help the pediatrician identify resources that can provide additional, more specific support in the areas needed. If a parent is unemployed and the family is experiencing financial hardship, food or housing assistance may be needed. A parent who is suffering from mental illness would benefit greatly from therapeutic services. By supporting the family's more global needs, the pediatrician can actually be protecting the child's health by preventing adverse situations that could result in toxic stress.

Pediatricians do not have to provide these resources within their practices. In many cases, the local city or county government or state Department of Children and Families or Department of Health can provide information on resources such as food pantries, shelters, organizations offering rental assistance, mental health service providers, parenting support groups, and more. Having a list of numbers and organizations readily available can make it easier for the pediatrician to make a referral to the right resources needed. See the *Practitioner Resource Guide* for more information.

Identification

The Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Program is required in every state by Medicaid. It is intended for pediatricians to screen, diagnose, and treat eligible children at early regular intervals to avoid or minimize childhood illness. Like developmental and behavioral screenings, mental health screenings are part of a comprehensive health and developmental history.

It should be noted that screening for social determinants of health is not like developmental screening. With developmental screening, a standardized instrument with cut-offs is used to identify those at risk for developmental delays. For many of the social determinants of health, screening begins by setting the stage for a very personal disclosure. If any of the published tools are not used in the context of a safe, trusting, and nurturing relationship, the screen itself has the potential to be adverse or to re-traumatize the family ("I told them my deep dark secret and there was no response" or "Now my child's doctor thinks I am a bad parent because of what happened to me as a child").

SIGNS OF TRAUMA & TOXIC STRESS IN CHILDREN

Parents and other adults in the child's life need to be aware of the variety of symptoms infants and children may exhibit after a traumatic event, from emotional and behavioral changes to somatic complaints. Infants and young children experiencing toxic stress may be clingy and fearful of new situations, easily frightened, difficult to console, irritable, aggressive, impulsive, and inattentive. They may also have difficulty sleeping, struggle with their appetite, and show regression in functioning and behavior. It is important for parents to know that these symptoms are a part of the body's normal fight, flight, or freeze response to stress or a threat. These symptoms occur particularly when the stress response is "turned on too much" or "turned on too long." It is important for pediatricians to remind families that children are doing the best they can with the knowledge, skills, and strategies they have obtained at their developmental age and stage. Caring for a child who has been traumatized can be challenging, especially for caregivers who have other stressors. However, if a child's daily functioning at home, in childcare, in preschool, etc., becomes impaired, it will be important to assess that child immediately for additional, trauma-informed services.

Trauma signs and symptoms in young children can take many forms. Understanding these signs and symptoms as trauma-related depends upon sensitive information gathered from the child and parent. That said, the signs and symptoms listed below must always be considered in the context of a young child's history, caregiving system, environments, etc., and with recognition that these symptoms could also be unrelated to trauma and reflect developmental or temperamental variations. Children

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react differently to trauma or adversity based on their age, the pervasiveness of adversity and the child's stress response system.

How Young Children React Differently to Adversity, Toxic Stress, and Trauma

Babies	Clingy/separation anxiety Flat affect—no joy Constricted play, exploration, mood No preferred caregiver Failure to thrive Irritable, unable to soothe
Toddlers	Biting, kicking, tantrums Unprovoked aggression Disinterested in toys Indiscriminate preference of caregivers No appetite Developmental regression Language delay Sexualized behavior Easily startled Lack of exploration
Preschool	Repetitive post traumatic play Sleep troubles, nightmares, fear of falling asleep Hyper vigilance (constant worry about possible danger) Skill regression Restless, impulsive, hyperactive Aggressive behavior Physical symptoms (headaches, stomach aches, aches and pains) Avoidant, anxious, clings General fearfulness/new fears Helplessness, passive, low frustration Sadness/depression Poor peer relationships and social problems (controlling/over permissive)

Assessment for Exposure To Trauma

As pediatricians become more aware of the significant effect that exposure to a traumatic or stressful event(s) may have on a child's health, well-being, and safety, they may consider asking explicitly about any exposure to trauma. Given data on the frequency of child exposure to traumatic events, it is not unreasonable to consider trauma during every health visit. Presented properly, such universal assessments can help remove any sense of stigma or judgment and can reassure the family. The diagnosis cannot be made if it is never considered. A pediatrician who gives consideration to the fact that trauma may be a contributing factor to a presenting physical or behavioral complaint has taken an important first step.

Depression is often the result of a traumatic history. The AAP recommends that mothers should be screened for depression at all well-child visits. Several validated tools may be used to detect if a woman may be experiencing perinatal depression. Both the Patient Health Questionnaire (PHQ-9) and the Edinburgh Postnatal Depression Scale (EPDS) are brief, valid, and free to the public. Both may be completed by the patient or administered by the clinician and are easily scored immediately. Cut-off scores are available and can categorize risk as low, mild, moderate, or as "probable depression." It is critical for the screening tool to be used as an initial way to determine a woman's possible risk for depression as a starting point for a follow-up assessment and not to be used to diagnose a Major Depressive Disorder. It is important to ask the woman whether she has ever been diagnosed with depression in her lifetime, especially during a previous pregnancy.

Validated, brief pediatric screening tools specific to ACEs for a busy primary care setting have yet to be developed. There are some who are using developmental screenings, such as those mentioned in the American Academy of Pediatrics policy statement on developmental screening or the newly developed Survey of Wellbeing for Young Children to identify these issues. Some pediatricians are also working to validate tools related to ACEs as well as trying to measure the resilience of a family with questions such as those found at www.resiliencetrumpsaces.org. Many pediatricians, however, are just starting to have conversations with families using some general, open-ended questions.

Open-ended Questions

Information about trauma and toxic stressors can be solicited in a nonthreatening but trauma-informed manner. Questions provide a prompt for what family members may have forgotten or not yet shared.

> "Has your home life changed in any significant way (eg, moving, new people in the home, people leaving the home)?"
>
> "Since the last time I saw you (your child), has anything really scary or upsetting happened to you (your child) or anyone in your family?"
>
> "Are there any behavior problems with the child at home, at childcare or school, or in the neighborhood?"

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"How do you deal with stress?"

"Has anything bad, sad, or scary happened to your child recently?"

"Did anything bad, sad, or scary happen to you as a child?"

Close-ended Questions

When trying to identify domestic violence, substance abuse, bullying, or child abuse, it may be necessary to be more direct. This includes framing around a concern.

"You have told me that your child is having difficulty with aggression, attention, and sleep. Just as fever is an indication the body is dealing with an infection, when these behaviors are present, they can indicate the brain and body are responding to a stress or threat. Do you have any concerns that your infant/child is being exposed to stress or something that would be scary to him?"

"The behaviors you describe and the trouble she is having at childcare are very common. However, they are also sometimes warning signs that the brain is trying to manage a stress or threat. For example, sometimes children respond this way if they are being harmed or if they are witnessing others they care about being harmed. Do you know of violence exposure with friends, at home, or in the neighborhood?"

"So what you are describing to me may be related to stress. Do you feel safe at home? Do you think your child feels safe at home? At childcare or preschool? Playing in the neighborhood?"

It is important for pediatricians to mention that they are having these conversations about exposure to trauma with all families because it is so prevalent. They should inform the parents that trauma occurs in all types of families regardless of race, culture, or socioeconomic status. This helps to reduce stigma and establishes it as a normal part of the assessment and a true health-related issue.

Initial Response

While some children may require referral to therapeutic services, which is discussed further in this guide, there are important steps pediatricians can take, as well, in their pediatric practice. These steps are not necessarily "treatments," but can play a critical role in strengthening the relationship with the family and encouraging ongoing communication about the child and family's experience with trauma.

It is important for pediatricians to mention that they are having these conversations about exposure to trauma with all families because it is so prevalent. They should inform the parents that trauma occurs in all types of families regardless of race, culture, or socioeconomic status.

Be Empathetic

Disclosure of exposure to a traumatic event can be very difficult for children and families who may already feel vulnerable and isolated. The pediatrician's response to this disclosure immediately influences the children's and parents' perceptions of and response to the traumatic event, including whether they seek any further evaluation and treatment. Demonstrating empathy should be the first reaction. A pediatrician can respond with a statement like:

"I am so sorry to hear that you/your child experienced_____. This must be very difficult for you to discuss. Thank you for sharing this information with me. I know we can work together to help you and your child."

Elicit Further Symptoms and Provide Education

Next, it is important to check in with the parent and, when appropriate, the child (based on age and developmental level) with regard to the child's current symptoms and behavior, use of coping strategies, supports, and any other concerns the family might express. Start with an open-ended question that does not easily allow a one-word answer:

"What differences have you noticed in your child since the event?" Or ask the child, "What differences have you noticed in yourself since the event?"

Some children cope fairly well after a traumatic event, especially when they have a supportive caregiver in the home. If the child is doing well, praise the child's ability to cope with the event and the caregiver for supporting the child through this difficult time. However, be aware that the child or parent may not yet feel comfortable revealing the depths of their emotions around the event.

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One of the best things a pediatrician can do, even for those who do not appear symptomatic at the time, is provide education and resources about traumatic or adverse events and the typical responses to trauma. Normalizing the event can help reduce the child's and caregiver's distress. The pediatrician can use statements such as:

> "A lot of infants and children have something happen that is really scary for them at least one time in their life."
>
> "It can be really scary for children at first, but most of those children do really well and after a short time get back to feeling the way they did before. But if their symptoms do continue, there are things we can do to help provide more support to you and your child."

Help Parents Cope and Self-care

Caring for a child who has been traumatized can be extremely challenging, resulting in parents who become frustrated, angry, and exhausted as they try to manage the child's behaviors. It is very helpful when speaking with the parents, in the absence of the child, to find out how they are coping. Parents may have experienced the current trauma or have a history of traumatic events and be suffering from symptoms of their own. This will all factor into their ability to effectively care for their child. If parents disclose symptoms of distress for themselves, it is important to encourage them to seek the support of an adult practitioner for treatment. Each managed healthcare plan has care coordinators on staff and will accept a referral from the physician to connect patients to additional resources and treatment. Many parents can still support their child despite their distress, but they need their own support system to be successful. The pediatrician can help parents to identify their strengths and coping resources while encouraging them to use their support systems.

Parents with Trauma History

When eliciting history from the family, the pediatrician may become aware of multiple adverse childhood events within the child or parents' life. Oftentimes trauma exposure clusters and layers within a household. The accumulation of multiple trauma exposures in the family further weakens the child's ability to cope with any additional trauma in a healthy way and may limit parents' ability to be an effective support system. Be alert to risk factors, such as substance abuse, domestic violence, and parental mental health issues.

Parents who have their own trauma history may have difficulty controlling their own emotions, making decisions that keep themselves and their children safe, developing healthy relationships, and setting clear boundaries for themselves and their children. Additionally, they may fail to respond appropriately to their infants and children, especially when either of them is under stress. Well-child visits are an ideal opportunity to observe this parent-child relationship to determine if the dyad is responsive to one another or if the young child uses the parent as a secure base. It is important to approach these parents in a trauma-informed manner. This includes recognizing that parents' anger, resistance, or avoidance may be in response to their own trauma. It is also important to remember that parents are doing the best they can with the examples they have been shown in their own lives. Pediatricians can model direct, honest communication and set clear boundaries with these parents and provide concrete recommendations using easily understood language to explain the rationale. Make every effort to honestly support and encourage parents' healthy choices, compliance with requests, and good decisions.

Pediatricians can also be prepared with referral resources for parents who may require support for their own untreated trauma experiences. These families may also need assistance connecting to social service supports for economic resources—like job training, financial services, a food pantry, or crisis services—such as for intimate partner violence counseling or substance abuse treatment. The family could also simply require assistance finding high-quality childcare. Additionally, they often require more frequent visits with the primary care physician or another professional to provide support, encouragement, and treatment.

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When Parents Contribute to the Traumatic Stress

As depicted in the ACE study and other literature related to trauma, parents and other adult caregivers can be the source of trauma and toxic stress for young children—overtly or inadvertently through lack of nurturing and protection. This obviously creates a challenging situation for anyone working with the family, including pediatricians. The pediatrician must approach this complex situation with care. The AAP Committee on Child Abuse and Neglect has a number of policy documents providing specific guidance on identifying and responding to situations of child abuse and neglect. But what does a pediatrician do when the parent's actions are not technically abuse or neglect, but are in fact creating a toxic, unhealthy environment for a young child?

As mentioned, there are numerous protective factors that a pediatrician can incorporate into the discussion with the parent that can provide a nonthreatening, positive approach to modifying parent behavior to better support the healthy development of the child. For issues that are more acute in nature, such as a parent who is experiencing intimate partner violence, having resources ready to support the parent is critical. In all cases, the pediatrician can be working with the parent starting with the common understanding that they all are working to provide the best environment for the child. Pediatric practices can prepare for these sensitive conversations by discussing how the entire practice will respond to these situations in a consistent manner and having resources that all pediatricians in the practice can use for referrals.

ONGOING SUPPORT FOR CHILDREN EXPERIENCING TRAUMA & TOXIC STRESS

Help the Family Cope With a Child Exposed to Trauma

Pediatricians can help by providing caregivers with practical strategies to address the challenging symptoms of the child who has been traumatized. Over time, with practice, patience, and calm and consistent parenting, the child's brain and body can learn to respond in a healthier, more adaptive way.

Some general strategies to help children and families cope with trauma symptoms are listed in Table 1. The approach should be individualized based on the child's history, the type of trauma that was experienced, and the behavior that is being exhibited. This will be particularly true if the trauma experienced is directly related to the activity in question. Pediatricians may need to seek guidance from a therapist with expertise in trauma treatment prior to making recommendations for a referral to treatment.

It will be important for the pediatrician to educate the parent that even infants can experience stress, anxiety, and depression. Many parents believe that because infants are young and pre-verbal they may not be impacted by stressful events or dysfunctional environments. Studies have demonstrated quite clearly that behavior changes can and will occur in infants and young children. Because the brain is developing so rapidly before 3 years of age, it is much more sensitive to the experiences a child has—negative or positive. Infants need to know they are in a safe, nurturing environment; parents should be reminded that there is no such thing as too much positive attention given to an infant.

It is not just the child's history of trauma, but also the parents' situations that may contribute to the child's symptomology. For example, the child's failure to thrive may be in response to the mother's depression or the father's violent behavior. The child's skill regression may be caused by muscular

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degeneration or by the trauma of the parents' divorce, the father's deployment, or by the birth of a new sibling. The following symptoms can have many causes. It is important to be aware immediately if it could be a result of adverse situations, trauma exposure, or toxic stress. Here are some strategies for everyday use that families may find helpful to help their child cope.

Table 1. Tools To Support Families

Symptoms Child Might Experience	How Family Can Respond
Sleep disturbance	Provide safe sleeping space. Establish consistent bedtime schedule. Create a soothing bedtime routine (bath, reading books, dim light, brief cuddling/ snuggling). Establish a "no screen time" 1 hour before bed (children under 2 years should have no screen time at all). Night-light in room. Accept and empathize with child's fears, but help provide solution to the fear, such as: ▪ Transitional item: stuffed animal, blanket, pillow, or other desired item (may tell the child story of stuffed animal being scared and needing to sleep with child to feel safe and secure). ▪ Object or routine for young child to "get rid of (source of fear)" (for example, a dust sprayer to spray for monsters, sprinkle anti-monster dust, or a dream catcher to catch bad dreams).
Eating disturbance	Follow consistent schedule. Calm, pleasant meals. Three healthy meals and three healthy snacks (offer something every two hours). Sit down to eat all meals and snacks. Expect experimentation and messiness. Give a chewable multivitamin with iron and zinc.
Food refusal	No force-feeding, cajoling, or reprimands. Set up rewards for taking each step toward eating item (having item on plate, smelling item, putting item to lips, tasting item, taking a bite, swallowing item). Offer two desired foods and one non-preferred food at each sitting. Repeat offering food. High-calorie/high-protein diet if underweight. Follow growth weekly or monthly with primary care.
Overeating and hoarding	Set up reward system for "asking for food items" and "eating item when given" (instead of sneaking and hiding food item). Offer plenty of water throughout the day. Frequent checks for hidden foods and reward system for "bedroom free of food."
Tension headaches	Ask, "What do you think might be causing this headache?" Provide visual imagery with progressive relaxation exercises. Encourage child to drink lots of water. Maintaining a headache diary may help determine triggers.

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Table 1. Tools To Support Families *(continued from previous page)*

Symptoms Child Might Experience	How Family Can Respond
Toileting issues ▪ Encopresis/constipation	Eliminate any negative associations around toileting. (Non-food) reward system for sitting on the toilet (may need a graduated reward system for small steps toward sitting on the toilet... e.g., pooping in training diaper while in bathroom, pooping in training diaper while standing next to toilet, pooping in training diaper while sitting on closed toilet seat, pooping in training diaper while sitting on open toilet seat, pooping in toilet). Engage in game or activity that can only be used in the bathroom. Clean out bowel only as necessary (taking steps to minimize additional trauma).
Daytime incontinence	Treat constipation if present. Timed voiding (every 2 hours). Reward incentive for remaining dry during set intervals and adhering to voiding schedule.
Functional abdominal pain	Consider increasing fiber in diet and decreasing lactose in young children or mother's diet, for those breastfeeding. Clarify whether each bout is "same" or "different"; otherwise limit conversation about the pain. Reinforce well behavior. Create distraction. Encourage cognitive coping skills (positive self-talk). Practice relaxation techniques (deep breathing).
Anxiety/fears/avoidance	Acknowledge and respect the fear. Do not belittle, exaggerate, or cater to the fear. Provide information about the fear: ▪ Read a book about the feared concern. ▪ Watch reassuring television programs, movies, or videos. Provide graduated exposure to the fear with rewards for each step taken.
Difficulty with verbally expressing feelings	Have caregiver label her own emotions and response throughout the day, e.g., "Mommy is really frustrated sitting in traffic right now." Have caregiver help child label child's emotions, e.g., "It looks like you are upset that you have to wait your turn." Encourage child to label his own emotions throughout the day to practice, e.g., "How are you feeling right now?"
Irritable/aggressive behavior	Have caregiver help child understand caregiver's facial expression and tone of voice. Remind caregiver to be aware of her emotional response to child's behavior. Do not take the behavior personally. Be consistent and calm when disciplining; avoid yelling and aggression. Give messages that say child is safe, capable, and worthwhile. Praise desired and neutral behavior. Spend extra-special time playing with child.

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Table 1. Tools To Support Families *(continued from previous page)*

Symptoms Child Might Experience	How Family Can Respond
Trouble with self-regulation ▪ Strong, inappropriate emotions ▪ Low tolerance for stress ▪ Easily frustrated	**Techniques for the parent** Remind caregiver to not take this behavior personally. Lower the tone and intensity in voice. Remain calm and gentle. Get down to child's eye level to speak. Give directions that are positively stated, simple, and direct, without use of strong emotions. Anticipate a reactive response and use redirection before child's emotions are out of control. Reminder that infants and young children both benefit from positive touch and reassurance that they are safe and loved. **Techniques for the child** Teach child calming skills (breathing techniques, relaxation skills or exercises) when child is not upset. Have child practice skills when child is not upset. Have caregiver model skills to child when caregiver is upset. Gently remind child to use skills when upset; caregiver may suggest they use a skill together. Use of strategic ignoring for behaviors that can be ignored can help children learn to self-calm.

Ongoing Monitoring and Encouragement

After toxic stress has been identified, the pediatrician will assess the level of trauma exposure, the extent of related symptoms, and the capabilities and coping skills of the parents. They should provide education, anticipatory guidance, and a resource/referral for additional services for evaluation, treatment, or support. The next important step will be establishing a reasonable time frame for follow-up with the child and family. Obtain input from the family to find out how frequently they can and are willing to follow up. Follow-up is helpful to check in with parents and the child about resolution of symptoms, effectiveness of coping strategies, and continued access to support systems. Any previous referrals can be verified and follow-up is an opportunity to assess the need for any additional referrals. It will also be very important for the pediatrician to work in close coordination with any other clinicians or therapists involved, to develop and monitor a care plan that will most benefit the child and family.

Responding to Active Symptoms Resulting from Exposure to Trauma

There is no hard-and-fast rule on when to refer a child to trauma-informed therapeutic services. After learning about and discussing the child's and family's experience following the traumatic event(s), the pediatrician can consider the severity of the incident as well as the length of time the child has experienced negative symptoms. If symptoms have lasted for days to weeks and the parent or pediatrician is concerned, a referral would be the most appropriate action to take. A pediatrician with an established relationship with local trauma-informed service professionals has a potential resource for consultation and can provide easier access to care for the families when needed.

Medications

There is considerable controversy about medication use for children exposed to trauma or toxic stress. One concern is that rates of psychotropic medication use among children in foster care vary widely state-to-state: anti-psychotic prevalence, for example, ranges from 3% of

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children in foster care to 22%, depending on what state the child lives in. Data on the use of antipsychotics show steady increases from 2000-2007.[5] The symptomatology of trauma is commonly misdiagnosed as ADHD or other disorders. Medications are often prescribed to manage behavioral issues when other therapeutic alternatives are either not considered or not available. Parents may be so desperate for solutions to their child's behavior challenges that they demand a quick-fix medication rather than considering other therapeutic alternatives. Learning about therapeutic alternatives and local providers is critical to providing a continuum of supports to families. Unfortunately, the complex issues that traumatized children face are rarely responsive to medication alone; without an integrated treatment plan, pediatricians and other providers may end up over-relying on pharmacotherapy while exposing the child to adverse medication effects. Furthermore, most psychotropic medications have not been substantially researched for use with young children, nor do we know the long term effects on the developing brain.

One way to think about pharmacotherapy for children who have been traumatized is to consider medications as functioning like a cast on a broken bone. While the cast does not cause healing, it provides an external support so that the work of healing can happen. Similarly, for children who have symptoms of trauma that prevent them from participating in therapies that will allow them to heal, medications can be a significant support to the healing process. Still, just as with placing a cast, adequate and ongoing assessment of symptoms is important; for example medicating "aggressive behavior" without being clear what the psychiatric diagnosis or psychological issues might be underneath the aggression is a recipe for poor response and/or adverse effects. In each case, carefully reviewing the risks and benefits of each medication with the child and their caregiver is important. Likewise, teaming with infant mental health specialists or others with expertise in behavioral issues in young children is a critical support to a pediatric practice.

EVIDENCE-INFORMED PRACTICES FOR CONSIDERATION

Referrals to Therapy

Children and families trying to manage trauma in their lives may need the help of mental health professionals trained to provide trauma-focused treatment. A Visit Discharge and Referral Summary for Family is available through the American Academy of Pediatrics to help pediatricians organize and make that referral. The pediatrician can complete the form by checking off the assessment findings, explaining any developmental or medical issues, selecting specific recommendations, and identifying a date for a follow-up appointment. The pediatrician can customize the form by adding specific names and phone numbers in the Recommendations area and incorporating local resources in the Resources area. This form can be completed electronically, printed, and provided to the family so they feel confident in providing the correct information to the referred professional. It is helpful when referrals are made to trauma-focused therapies, if they are available. See Table 2 for examples.

Table 2. Therapies for the Traumatized Child

Therapy	Goals
Parent-Child Interaction Therapy (PCIT) (appropriate for children 2–12 years old)	**PCIT works with caregivers and children to align appropriate parental response to child behaviors.**
Child-Parent Psychotherapy (CPP) (appropriate for newborns, infants, and children 0–6 years old)	**CPP is a dyadic intervention that targets the effect of trauma on the child-parent relationship and how the parent can provide emotional safety for the child.**
Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) (appropriate for physically abused children ages 2-5 and their parents)	**TF-CBT addresses underlying contributors to maltreatment to change hostility, coercive family interactions, and harsh parenting.**

Table 2. Adapted from the National Child Traumatic Stress Network materials found at www.nctsn.org/resources/topics/treatments-that-work/promising-practices.

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KEY MESSAGES FOR FAMILIES AND COMMUNITY PARTNERS

Responding to trauma and supporting the mental and physical health of the infant or young child involved can be complicated and challenging for even the most seasoned professionals.

Regardless of the intervention chosen, the family and child can be reassured that the pediatric practice can be an ongoing source of support for them as they heal from the traumatic event(s) or begin therapy outside the medical home. The pediatrician can continue to support the family through scheduled follow-up visits as well as proactively inquiring about these events in subsequent well-child visits. Science is clearly demonstrating the link between exposure to traumatic events that leads to toxic stress and long-term physical, mental, and behavioral health issues. This makes the pediatric practice an ideal location to address these issues early, to mitigate the effects of toxic stress and support a long, healthy life for the child.

As a trusted resource for health information, the pediatrician can be quite effective in delivering the key messages that families and community partners need to understand, namely:

> **Exposure to intense, repeated, or chronic traumatic or stressful events can have a serious, negative impact on early brain development.** Families and communities—including the pediatric medical home—must work together to ensure that infants and young children have safe and stable environments in which they feel nurtured and loved. By promoting this and other protective factors, infants and children have a better opportunity of experiencing healthy brain development and all the positive outcomes that can occur with that.

> **Early brain development that is disrupted by ongoing experiences of toxic stress can negatively impact a young child's lifelong health and well-being.** The ACE study and other research demonstrates quite clearly that adverse experiences in early childhood—even those that occur prenatally and during infancy—can have a significant impact on lifelong health. Higher rates of heart disease, diabetes, obesity, addiction, mental illness, cancer, social problems, and more can be present in those who have experienced events in early childhood that resulted in toxic stress. The structure of the brain and ultimately how it directs the body's stress responses after a traumatic event(s) are changed by these experiences and put the body at higher risk for these health complications, even long after the experiences have ended.

> **Parents, caregivers, and other caring adults have a critical role to play in nurturing healthy brain development.** One of the strongest protective factors that can prevent or buffer the effects of toxic stress is the presence of caring, loving adults in a young child's life. From infancy through the rest of childhood, having supportive, nurturing adults present can ensure that the stressful events experienced don't have the negative effects on health and development described above. Parents, caregivers, and other adults—including pediatricians—can work together to promote healthy brain development that will support the overall health and social-emotional development of young children, allowing them to experience whole, healthy lives.

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