CLINICAL REPORT Guidance for the Clinician in Rendering Pediatric Care

American Academy of Pediatrics
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Trauma-Informed Care

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abstract

Most children will experience some type of trauma during childhood, and many children suffer from significant adversities. Research in genetics, neuroscience, and epidemiology all provide evidence that these experiences have effects at the molecular, cellular, and organ level, with consequences on physical, emotional, developmental, and behavioral health across the life span. Trauma-informed care translates that science to inform and improve pediatric care and outcomes. To practically address trauma and promote resilience, pediatric clinicians need tools to assess childhood trauma and adversity experiences as well as practical guidance, resources, and interventions. In this clinical report, we summarize current, practical advice for rendering trauma-informed care across varied medical settings.

INTRODUCTION

Experiences in childhood, both positive and negative, have a significant effect on subsequent health, mental health, and developmental trajectories. For many children and adolescents, traumatic experiences are all too common. Almost one-half of American children, or 34 million younger than 18 years, have faced at least 1 potentially traumatic early childhood experience.[1–7] Such traumas may include those originating outside the home, such as community violence, natural disasters, unintentional injuries, terrorism, immigrant or refugee traumas (including detention, discrimination,[6,8,9] or racism), and/or those involving the caregiving relationship, such as intimate partner violence, parental substance use, parental mental illness, caregiver death, separation from a caregiver, neglect, or abuse, originally defined as adverse childhood experiences (ACEs).[10] For many children, medical events, such as injury, medical procedures, and/or invasive medical treatments, can be traumatic. Given the robust science explaining the physiologic consequences of accumulated trauma experiences on the brain and body,[11–14] there have been calls for pediatric clinicians to address childhood trauma and child traumatic stress.[10,14–16] However,

practical guidance about how to consider, address, and operationalize this care, although necessary, has been insufficient.

Pediatric clinicians are on the front lines of caring for children and adolescents and, thus, have the greatest potential for early identification of and response to childhood trauma. Data indicate that, although pediatric providers intuitively understand the negative effects of trauma, they report a lack of knowledge, time, and resources as major barriers to providing trauma-informed care (TIC).[5,6] Yet, experts believe that the complete assessment of child and adolescent behavioral, developmental, emotional, and physical health requires consideration of trauma as part of the differential diagnosis to improve diagnostic accuracy and appropriateness of care.[17,18]

TIC is defined by the National Child Traumatic Stress Network as medical care in which all parties involved assess, recognize, and respond to the effects of traumatic stress on children, caregivers, and health care providers. This includes attention to secondary traumatic stress (STS), the emotional strain that results when an individual hears about the first-hand trauma experiences of another. In the clinical setting, TIC includes the prevention, identification, and assessment of trauma, response to trauma, and recovery from trauma as a focus of all

services. TIC can be conceptualized in a public health stratification, as summarized in Table 1:

- primary prevention of trauma and promotion of resilience;
- secondary prevention and intervention for those exposed to potentially traumatic experiences, including caregivers, siblings, guardians, and health care workers; and
- tertiary care for children who display symptoms related to traumatic experiences.

This clinical report and the accompanying policy statement[19] address secondary prevention and intervention: practical strategies for identifying children at risk for trauma and/or experiencing trauma symptoms. "Children," unless otherwise specified, refers to youth from birth to 21 years of age. These clinical strategies and skills include the following[16,20]:

- knowledge about trauma and its potential lifelong effects;
- support for the caregiver-child relationship to build resilience and prevent traumatic stress reactions;
- screening for trauma history and symptoms;
- recognition of cultural context of trauma experiences, response, and recovery;
- anticipatory guidance for families and health care workers;
- avoidance of retraumatization;

- processes for referral to counseling with evidence-based therapies when indicated; and
- attention to the prevention and treatment of STS and associated sequelae.

Pediatricians have a powerful voice and reach that could promote the policies and procedures necessary to transform pediatric health care into a TIC system. This guidance for pediatric clinicians is organized around 5 strategies for implementation to become trauma informed: awareness, readiness, detection and assessment, management, and integration. The companion policy statement[19] outlines broad recommendations for implementing TIC in child health systems.

AWARENESS

Pediatric clinicians can promote resilience, identify adversity and trauma, and ameliorate the effects of adversity in their work with children and families. Although the epidemiology and physiology of trauma have been explored in the literature,[9,12,13,21,22] few concepts have been translated into the provision of practical TIC in pediatric settings.[6,16,23] Awareness of the science and epidemiology of trauma provides the scientific grounding for the practices of TIC.

TABLE 1 Range of Trauma Experiences, Symptoms, and Response

Potentially Traumatic Experiences	Trauma Symptoms (Table 5)	Office Response
None	None to some	Primary prevention: anticipatory guidance; resilience promotion
Single-incident or minor trauma	None or latent or mild	Secondary prevention: anticipatory guidance; resilience promotion; trauma-informed guidance; close monitoring: screen for trauma history and symptoms
Major event or cumulative	Mild to moderate	Secondary and tertiary prevention: anticipatory guidance; resilience promotion; psychoeducation; trauma-informed guidance, close monitoring, and follow-up; possible referrals to community services, mental health
Major event or cumulative	Moderate to severe	Tertiary prevention and treatment: anticipatory guidance; resilience promotion; psychoeducation; trauma-informed guidance, close monitoring, and follow-up; avoidance of retraumatization; referrals to community services; referral to evidence-based and evidence-informed trauma mental health services

Adapted from Forkey H, Griffin J, Szilagyi M. *Childhood Trauma and Resilience: A Practical Guide.* Itasca, IL: American Academy of Pediatrics; 2021.

Safe, Stable, and Nurturing Relationships

The most fundamental adaptational mechanism for any child is a secure relationship with a safe, stable, nurturing adult who is continuous over time in the child's life.[24] This is usually the child's parent or caregiver but can involve extended family and biological or fictive kin. It is in the protective context of this secure relationship that the child develops the varied resilience skills that will prevent or ameliorate the effects of cumulative adversities. The nurturing caregiver protects the child from harm, mediates the world for the child, and helps the chil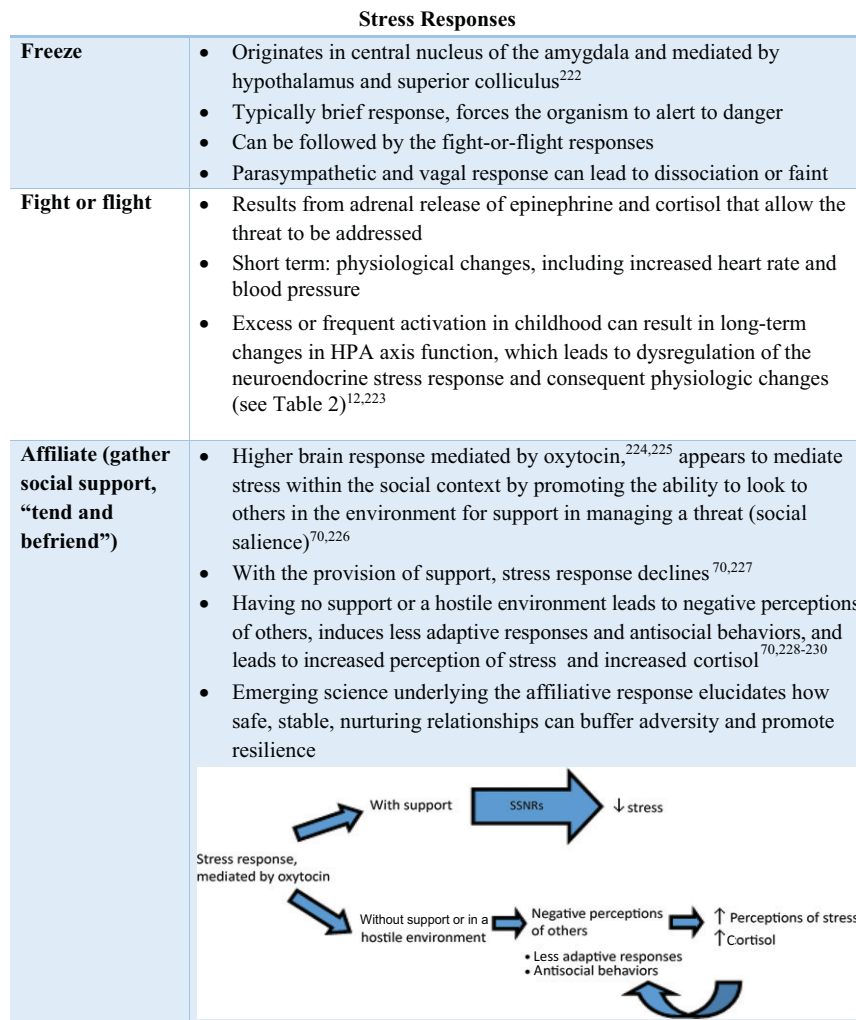d to develop the adaptive skills to manage stressful experiences. Physiology, in addition to psychology, is affected by protective relationships.[14,25–27]

Toxic Stress and Trauma

All children experience some stress and adversity at some point in life, but when it is managed within the context of these nurturing relationships, such events can be weathered and even used for growth. Adverse events that lead to the frequent or prolonged activation of the stress response (see Fig 1) in the relative absence of protective relationships has been termed "toxic stress" in the pediatric literature.[14] Toxic stress responses result from events that may be long lasting, severe in intensity, or frequent in occurrence. The available caregiver support is insufficient to turn off the body's stress response. It is critical to note that the toxic stress response has 2 components: the significant stressors and the relative insufficiency of protective relationships. In sum, there is a marked imbalance between stressors and protective factors.[28]

Toxic stress responses can result in potentially long-lasting or lifelong impairments in physical and mental health through biological processes that embed developmental, neurologic, epigenetic, and immunologic

Stress Responses

Freeze	• Originates in central nucleus of the amygdala and mediated by hypothalamus and superior colliculus[222] • Typically brief response, forces the organism to alert to danger • Can be followed by the fight-or-flight responses • Parasympathetic and vagal response can lead to dissociation or faint
Fight or flight	• Results from adrenal release of epinephrine and cortisol that allow the threat to be addressed • Short term: physiological changes, including increased heart rate and blood pressure • Excess or frequent activation in childhood can result in long-term changes in HPA axis function, which leads to dysregulation of the neuroendocrine stress response and consequent physiologic changes (see Table 2)[12,223]
Affiliate (gather social support, "tend and befriend")	• Higher brain response mediated by oxytocin,[224,225] appears to mediate stress within the social context by promoting the ability to look to others in the environment for support in managing a threat (social salience)[70,226] • With the provision of support, stress response declines[70,227] • Having no support or a hostile environment leads to negative perceptions of others, induces less adaptive responses and antisocial behaviors, and leads to increased perception of stress and increased cortisol[70,228-230] • Emerging science underlying the affiliative response elucidates how safe, stable, nurturing relationships can buffer adversity and promote resilience

FIGURE 1 Stress responses. HPA, hypothalamic-pituitary-adrenal.

TABLE 2 Physiologic Effects of Trauma in Children

Area	Impact	Specifics	Implications and Associations
Brain connectivity[93]	Cortisol acts on rapidly developing brain structures	Amygdala overactive; hippocampus underactive; prefrontal cortex not accessible	Preliminary association with more severe clinical course in major depressive disorder
Epigenetic changes[21]	Methylation patterns impacted by threat, mediated by cortisol	Methyl groups attach to promoter region or come off promotor regions of genes, leading to the transcription or lack of transcription of genes	Adult stress and reactivity behavior[231,232]
Immune function[80]	Alteration of immune system in response to constant threat	Inflammatory system up-regulated; humoral immunity diminished; cytokine-induced "sickness behavior"[81] (feeling sick)	Symptoms including the following: decreased appetite, fatigue, mood changes including depression and irritability, poor cognitive function

changes.[12,14] The lifelong effects of toxic stress are statistically related to many adult illnesses, particularly those related to chronic inflammation, and causes for early mortality.[29] The robust literature on the physiologic effects of toxic stress is beyond the scope of this clinical report yet briefly summarized in Table 2.

Trauma is a broader term used to describe both a precipitant and a human response. The Substance Abuse and Mental Health Services Administration defines trauma as an event, series of events, or circumstances experienced by a person as physically or emotionally harmful that have long-lasting adverse effects on the person's functioning and well-being (emotional, physical, or spiritual).[16] This definition accounts for the fact that people may respond differently to potentially traumatic events and informs TIC with appreciation that the traumas people experience can result in behavioral changes that may allow them to manage the trauma in the short-term but can have lasting negative effects on conduct. These difficulties should not be viewed as malicious actions or even intentional but as consequences of adversity.[30]

Because these epidemiological and physiologic studies provide the background and impetus for TIC, understanding the terminology

derived from this literature is important in appreciating the scope, variety, and nuances of TIC and how to actualize them. These are summarized in Table 3.

High-risk Populations

It is important to be aware that the exposures of some child populations and their families put them at particular risk of experiencing trauma but also that the components of TIC can benefit these children and families.[31–34] More than 7.4 million children, or nearly 1 in 10 children, are reported as potential victims of child abuse and neglect annually.[35] In 2019, more than 670 000 children spent time in foster care.[36] Children who remain at home after child protective services investigation or are moved to kinship care resemble their peers in foster care in having an extremely high prevalence of significant childhood trauma.[37–39] Immigrant and refugee children may have left poverty, war, and violence, may have encountered abuse or separation from family members, and can be at risk for deportation, detention, and separation and discrimination.[6,40,41] Poverty, or near poverty, affects approximately 43% of US children, and both urban and rural poverty have been linked with multiple stressors and increased risk of trauma.[42–44] Children of underrepresented racial, ethnic, and religious groups are

more likely to be exposed to discrimination.[45,46] The psychological, interpersonal, and perhaps physiologic effects of trauma inflicted on a community (particularly because of race, identity, or ethnicity) may be passed to succeeding generations and is referred to as historical trauma.[47,48] Community violence and bullying, along with cyberbullying, are experienced by many children and recognized as traumatic exposures included in expanded definitions of ACEs.[49–51] Lesbian, gay, bisexual, transgender, and queer children and adolescents, children of color, American Indian and Alaskan native children, immigrant children, neurodiverse children and adolescents, and children and adolescents with overweight and obesity are all more likely to experience discrimination, both overt and as a series of microaggressions (small slights, insults, or indignities either intentional or unintentional) that accumulate over time.[52–54] Additionally, children of military families have a higher prevalence of trauma, abuse, grief, and loss.[55] Populations at higher risk for pediatric medical traumatic stress include preterm infants, children with complex and/or chronic medical conditions, and those suffering from serious injury or illness.[56] Up to 80% of children and family members experience trauma

FROM THE AMERICAN ACADEMY OF PEDIATRICS

TABLE 3 Definitions of Terminology in TIC

Terminology of Traumas	Definitions
Acute stress disorder and Post-traumatic stress disorder (PTSD)	Psychiatric diagnoses that include having experienced or witnessed a traumatic event and then having persistent symptoms that include the following: reexperiencing (intrusive thoughts, nightmares, or flashbacks); avoidance (feeling numb, refusing to talk about the event); hyperarousal (irritability, exaggerated startle response, always expecting danger); acute stress disorder: symptoms occur 3 d to 1 mo after traumatic exposure[81]; PTSD: symptoms must occur ≥3 mo after the trauma[233]
ACEs	Stressful or traumatic events, including child abuse and neglect, that occur within the primary caregiving relationship; often breach the parent-child relationship, which is fundamental to nurturing healthy development; linked in population studies to physiologic and behavioral changes impacting the health and well-being of patients over their life course with a wide array of health problems, including associations with substance misuse.[10,21,24,80] The original ACEs (from initial study published in 1998) are the following: physical abuse, sexual abuse, emotional abuse, physical neglect, emotional neglect, intimate partner violence, mother treated violently, substance misuse within household, household mental illness, parental separation or divorce, and incarcerated household member. Subsequent studies have expanded the original ACE panel to include other adversities,[9,234] including the following: experiencing racism, experiencing bullying, separation from caregiver (resulting from immigration, foster care, incarceration, death, or any other reason), witnessing violence, community violence,[49] adverse neighborhood experience,[235] and financial insecurity[236]
Complex childhood trauma (as defined by the National Child Traumatic Stress Network)	Encompasses both a child's exposure to multiple interpersonal traumatic events, including maltreatment and household dysfunction, and the broad, pervasive, and predictable impact this exposure has on the individual child[83,237]; can disrupt a child's attachment with caregivers, development, and sense of self
Developmental trauma disorder (DTD)	A proposed diagnosis based on evidence that children exposed to complex trauma are at risk for severe pervasive disruptions in their development in the domains of emotional health, physical health, attention, cognition, learning, behavior, interpersonal relationships, and sense of self; sometimes used interchangeably with complex childhood trauma; describes problems in affect dysregulation, negative self-concept, and difficulty with relationships that occur as a result of trauma-related developmental impairments; symptoms overlap or co-occur with several PTSD symptoms, but DTD includes a fuller spectrum of dysregulation resulting from the insults to multiple pathways in the developing brain when nurturing and is seen as a result of complex childhood trauma; more accurately describes the outcomes of such trauma in children than does the diagnosis PTSD[158,238]
Pediatric medical traumatic stress (PMTS)	The distress that children and family members experience during hospitalization for a perceived life-threatening diagnosis or while living with or caring for someone with life-altering chronic conditions[239–241]; often related to the person's subjective experience of the medical event rather than its objective severity and is mitigated by SSNRs that promote resilience
Secondary traumatic stress (STS)	A response that may occur in parents, other family members, and health care workers such as physicians, nurses, other hospital staff (including nonclinical staff), first responders, and therapists who are exposed to the suffering of others, particularly children[242]; may have many of the same long-term effects on health that affect children exposed to trauma; individual trauma histories can contribute to the reaction
Social determinants of health (SDoHs)	Conditions of the greater ecology or environment, occurring where people live, learn, work and play, which affect the neuroendocrine stress response and affect a wide range of health risks and outcomes[8,22]; can be mitigated by an SSNR and other protective factors and exacerbated by ACEs and intrafamilial and interpersonal traumas; examples include: poverty, food insecurity, homelessness, and lack of access to health care; examples that also overlap with the expanded ACEs include racism, discrimination, and community violence
Trauma	An event, series of events, or set of circumstances an individual experiences as physically or emotionally harmful that can have lasting adverse effects on the person's functioning and mental, physical, emotional, or spiritual well-being[14]; can occur outside caregiving relationships (eg, dog bites, natural disasters), within the context of the caregiving relationship (eg, exposure to domestic violence, various forms of abuse or disordered caregiving because of parental mental illness or substance use disorder), or in the context of relationships outside the family (racism, bias, discrimination, bullying)

symptoms after a life-threatening illness, injury, or painful medical procedure.[57]

READINESS

TIC transforms the fundamental questions in medical care from "What is wrong with you?" to "What happened to you?" and, finally, to "What's strong with you?" A trauma-informed approach acknowledges the biological effects of adversity without suggesting that childhood adversity is destiny. It requires a compassionate approach that does not suggest blame. It requires pediatric health care workers at every level to understand the context of a child's relationships, especially within the family, and ask, "What are the caregiver's strengths and challenges?" "What are the child's strengths and challenges?" and "Who supports you?" This changes the pediatric role from "I must fix you" to "I must understand you (and the relationships that created you and can help you heal)."[25,58] Thus, readiness includes an understanding of what provides resilience and how to promote it.

Relational Health Care

TIC is fundamentally relational health care, the ability to form and maintain safe, stable, and nurturing relationships (SSNRs). Pediatricians are able to support the caregiver-child relationship, the context in which there can be recovery from trauma and the restoration of resilience. Fundamental to these concepts is an understanding of attachment.

Attachment

Attachment describes the emotionally attuned give-and-take between caregiver and child and the trust, safety, and security provided to the child[59] that promotes healthy brain growth, development of accurate mental maps of self and others, development of resilience, and protection from trauma.[60] Fundamentally, the predictable compassionate availability of the caregiver promotes the secure attachment of the child.[61,62] Recent studies show attachment remains malleable beyond infancy, even into adolescence and adulthood, to some extent.[63,64]

Effective Parenting

Effective parenting encompasses the skills that caregivers bring to the task of parenting and is the context in which secure attachment develops and is relied on during and after traumatic experiences. Although caregivers approach parenting with a range of skills, attitudes, and beliefs rooted in their cultural and family contexts, studies have shown that effective or positive parenting has some universal features.[65–67]

It is through secure attachment with a predictably empathic caregiver that children learn to regulate their emotions. Children start by turning to a caregiver when upset. The caregiver comforts the child by touch, words, and compassion, which shuts down the stress response and restores emotional regulation. Secure attachment happens as a child predictably receives this sympathetic support from the caregiver when the child is distressed and the child comes to confidently anticipate that support. This relationship becomes a reliable source of safety, and the caregiver is a secure base from which the child can explore their environment.[62] Multiple studies have shown that a secure attachment relationship is the best means for building or rebuilding resilience in children; it is also the context for promoting healthy brain growth and development.[62,65,68,69] With these positive affiliative experiences, modulation of the stress response begins and includes the release of oxytocin, a potent hormone regulator of the sense of safety and well-being.[68,70]

Thus, the first step of TIC is to assess this aspect of the relationship, observing the child-caregiver interaction, including the caregiver's attention to the child, the caregiver's ability to read and respond to the child in developmentally appropriate ways, and the child's ease, comfort, and response to the caregiver. Discussion can begin by focusing on the caregiver's and child's strengths and noting the constructive aspects of the relationship while providing the caregiver with empathy. When attachment is strained, caregivers have often lost empathy for the child. The positive regard and attuned attentive listening provided before and while raising concerns supports the caregiver. The empathy provided to the caregiver thus allows the opportunity for them to reattune to the child.[62]

Resilience

Resilience is defined as a dynamic process of positive adaptation to or despite significant adversities.[71] This is not a static or innate quality but includes skills children can learn over time with reliable support from attachment figures. The development of resilience includes aptitudes that are attained through play, exploration, and exposure to a variety of normal activities and resources. Studies have shown that development can be robust, even in the face of severe adversity, if certain basic adaptational mechanisms of human development (resilience factors) are protected and in good working order. These mechanisms include attachment to a competent caregiver, cognitive development with opportunity for continued growth, mastery of age-salient developmental tasks, self-control or self-regulation, belief that life has meaning, hope for the future, a sense of self-efficacy, and a network of supportive relationships.[71] On the other hand, if those basic adaptational mechanisms or protective factors are absent or impaired before, during, or after the adversity, then the outcomes for children tend to be poorer[71] (see Table 4).

TABLE 4 Adaptational Mechanisms of Resilience

T	Thinking and learning brain, with opportunity for continued growth; cognitive development
H	Hope, optimism, faith, belief in a future for oneself
R	Regulation (self-regulation, self-control of emotions, behaviors, attention, and impulses)
E	Efficacy (self-efficacy) or sense that one can impact their environment or outcomes
A	Attachment, secure attachment relationship with safe, stable, and nurturing caregiver or competent caregiver
D	Development, mastery of age-salient developmental tasks
S	Social context, or the larger network of healthy relationships in which one lives and learns

Adapted from Masten AS. Ordinary magic. Resilience processes in development. *Am Psychol.* 2001;56(3)227–238; Forkey H, Griffin J, Szilagyi M. *Childhood Trauma and Resilience: A Practical Guide.* Itasca, IL: American Academy of Pediatrics; 2021.

Robust implementation of TIC is strength-based, building on family protective factors rather than emphasizing deficits. At almost every encounter, from early childhood through adolescence, pediatric care can include resilience promotion, building on identified strengths. Because resilience is a dynamic process of positive adaptation, routine anticipatory guidance about development or safety can be used to promote relational health and positive childhood experiences, including achievements at home, at school, and in neighborhoods, which enhance resilience.[72] When addressing adversities or concerns about development, surmounting the challenges can be framed with resilience and positive experiences as the goal.[73] For example, when speaking with a caregiver about a child learning to fall asleep on their own, sleep skills can be framed as building resilience by supporting self-regulation and self-efficacy. Alternatively, when a caregiver expresses concern about a child or teenager who had been sleeping until experiencing a traumatic event, the discussion can be framed around what resilience factors are being challenged (developmental skill mastery, self-efficacy, self-regulation) and which ones can be used to support the child's recovery (attachment and thinking).

DETECTION AND ASSESSMENT

Detection involves both surveillance and formal screening to identify children and families with the history of exposure to potentially traumatic experiences as well as those who exhibit signs and symptoms of trauma. Although TIC is common in social services and other mental health settings, in a health care environment, TIC can be conceptualized by using a medical model. Similar to other medical conditions, TIC includes purposeful

triage, engagement, history-taking, surveillance and screening, examination, differential diagnosis, sharing of the diagnosis, and management, which may include office-based anticipatory guidance, referral, psychopharmacology, and/or follow-up or recommendations.

Surveillance for maladaptation after experiencing trauma includes consideration of all those who may be affected by exposure to the direct suffering of the child. Health care workers, such as first responders, nurses, social workers, trainees, physicians, and nonclinical hospital or clinic employees, may be deeply affected by witnessing or hearing about the traumatic experiences of children. Parents (biological, foster, kinship, or adoptive) are particularly at risk for prolonged trauma reactions that may impair their ability to care for and comfort their children. Siblings may also be affected, particularly when there is complex trauma or exposure to suffering, such as having a sibling with cancer or another life-altering disease that involves chronic pain.

Peri-trauma

Peri-trauma refers to situations in which medical providers are caring for children as the traumatic events are unfolding. One example is pediatric medical traumatic stress. Pediatric medical traumatic stress is a situation in which children experience medical procedures or other aspects of medical care as traumatic events. The effects of such trauma can be mitigated by attending to the child's and family's experience of medical care and reducing (as much as possible) frightening or painful aspects of necessary care and procedures. This mitigation can include asking children (and caregivers) about their fears and worries, optimizing pain management and comfort measures, and working with

caregivers to increase their ability to provide effective support for their child. The Healthcare Toolbox includes a number of specific suggestions, including assessing distress (D), providing emotional support (E), and addressing the family needs (F)—a D, E, F protocol to follow the A, B, Cs of resuscitation.[74]

Another comprehensive strategy used by schools and community agencies when a mass trauma or disaster occurs is Psychological First Aid (PFA).[75] Developed by the National Child Traumatic Stress Network, PFA is an evidence-informed program that is designed to help children, families, adults, and other witnesses in the immediate aftermath of a disaster or terror event. Core skills for implementation of PFA are identical to TIC: establish an emotionally safe environment, connect with primary support persons (relational health), link to community resources, and provide psychoeducational materials to help understand the potential responses of children to the exposure.

Triage

The first step in medical care is to identify an emergency versus nonemergency situation. When dealing with trauma, its causes, or its consequences, consideration of whether a child may be emergently at risk requires assessment and response as a top priority. In practicing TIC, protocols and practices to identify and address child or family safety issues, both physical and psychological, are integral to care.

Trauma may result from children being in unsafe settings because of abuse, neglect, or impaired caregiving. When the practitioner suspects maltreatment or failure of the caregiver to protect a child at any point in a health encounter, referral to child protective services

is necessary and mandated. These issues need to be considered even before screening and addressed with standard protocols to respond to identified risks.[76–78]

Other immediate safety issues may arise when a consequence of trauma is self-harm or intent to injure others. Screening for suicidality, self-injury, or intent to harm others is included in TIC along with clear protocols for how to address positive endorsement of these issues.

Engagement

TIC creates a respectful and emotionally safe space in which to engage children, adolescents, and families around the discussion and management of these issues and to prevent retraumatization. Discussion of trauma may raise stress levels, and appropriate engagement reassures the child and family that the setting is safe. Culture can also affect how trauma is experienced and understood by families, and cultural awareness can ease the conversation. Engaging children and families begins with greeting the patient and family and being fully present in the moment while maintaining a balance between professionalism and friendliness. It involves initially asking open-ended questions, followed by more specific and probing questions as needed and that are elicited by caregiver and child or adolescent responses. It involves listening in an active, nonjudgmental, attuned way, reflecting back to the family what is heard for clarification and confirmation, seeking clarification when necessary, paraphrasing, attending to and reflecting on the emotions that accompany the information, and summarizing what is discussed. Implicit bias can affect the provider's ability to be nonjudgmental in these conversations.[46,79] Acceptance,

curiosity, and empathy are conveyed to the patient or caregiver in the process of attentive listening.[61] Engagement also involves mutual regard between the provider and family. Adolescents and capable children bring their own perspective. Each brings expertise to the TIC of the child or adolescent. The provider has expertise in medicine, whereas the patient and family have expertise about the child, what happened, and their situation, beliefs, strengths, and culture.

When working with families and patients who have experienced trauma, the provider's body language, affect, and tone of voice can promote or inhibit care. Affect describes the facial and body expressions that reflect our emotional state. Individuals who have experienced trauma are more sensitive to body language, facial expressions, and tone of voice.[70] Approaching children slowly and calmly or letting them sit with a caregiver and using higher pitched, more musical speech may ease a child's tension because these sounds are associated with the release of oxytocin in the amygdala, resulting in calming of this threat-sensitive brain area. A shift to low tones during a discussion may alert a child or caregiver to potential danger and stimulate defensive responses.[61]

History

Much of the information needed to integrate TIC into practice may be obtained as part of the routine health evaluation. Social, developmental, and medical history are all opportunities to identify risks, stressors, and strengths. The health history provides an opportunity to assess child and family resilience factors, social connectedness, parenting attitudes, and skills. The review of systems allows the medical provider to

collect symptoms of trauma that may not have been identified in the chief complaint but that can offer valuable insight into the current impact of trauma on the patient.[80,81] Symptoms may be functional, neurodevelopmental, or related to immune function.

1. Functional symptoms: Manifestation of the symptoms of trauma may evolve over time. Functional complaints can result after single-incident traumas (eg, automobile crash, hurricane) or may be early manifestations of complex trauma.[82–84] Sleep difficulty, changes in appetite, toileting concerns (eg, constipation, abdominal pain or enuresis), and challenges with school functioning (eg, poor attention or attendance) may be the early presentation of ongoing trauma.[84,85] Diagnostic criteria for attention-deficit/hyperactivity disorder and adjustment disorder overlap with some of these functional symptoms. When these signs and symptoms are noted, it can be useful to include trauma in the differential diagnosis.[17,86,87]

2. Neurodevelopmental symptoms: Some of the most recognizable manifestations of early trauma result from the effect on areas of the rapidly developing brain of young children. Developmental skill acquisition (higher brain) can be hindered as recognition of and response to threat is prioritized (lower brain).[88,89] Specific areas of the brain affected are the limbic system, hippocampus, and prefrontal cortex.[12,13,90–92] The prefrontal cortex is involved in cognition, emotional regulation, attention, impulse control, and executive function. Consequently, children may have developmental delay and behave as if they are younger than their actual age[89,93] (see Table 5 for an easy way to remember these effects). Other

TABLE 5 Most Common Symptoms of Trauma Exposure

F	Frets (anxiety and worry) and fears
R	Regulation difficulties (disorders of behaviors or emotions; hyperactive, impulsive, easily becomes aggressive or emotional; inattentive)
A	Attachment challenges (insecure attachment relationships with caregivers); poor peer relationships
Y	Yawning (sleep problems) and yelling (aggression, impulsivity)
E	Educational and developmental delays (especially cognitive, social-emotional, and communication)
D	Defeated (hopeless), depressed, or dissociated (separated from reality of moment, lives in own head)

Adapted from Forkey H, Griffin J, Szilagyi M. *Childhood Trauma and Resilience: A Practical Guide.* Itasca, IL: American Academy of Pediatrics; 2021.

observed symptoms may include the following:

- rapid, reflexive response to stimuli, reminders, or triggers[93,94];
- inattention, poor focus, hyperactivity, and difficulty completing tasks[86,95];
- difficulty tolerating negative mood so the child seeks ways to defuse the tension through hyperactivity, impulsive behaviors, aggression, self-harm, such as cutting and suicidality, or engagement in health risk behaviors (substance use, sexual activity)[89,95,96];
- reactions to stimuli, triggers, or reminders can be transient and flip suddenly back to "normal"; this appears to the observer as emotional lability[88,92]; and
- negative world view and self-narrative; flat affect; difficulty engaging socially or viewing themselves as worthless.[88,92,97]

3. Immune function symptoms: When a child is exposed to early, severe, or prolonged trauma, the immune system is chronically pressed into action, and, over time, changes can occur in the inflammatory system and humoral immunity.[80,89] A persistent inflammatory response can leave children vulnerable to diseases, such as asthma and metabolic syndrome.[80,98,99] Humoral immunity may be impaired so that children are more susceptible to infection. Additionally, immune system stimulation may result in the "sick syndrome," which is a perception of feeling unwell that can include headaches, stomachaches, and lethargy.[80,81]

Surveillance

Surveillance or monitoring is the process of recognizing children who might be at risk for being affected by trauma and is modeled after developmental surveillance. Surveillance is less formal than screening and can be conducted at every visit. Asking about caregivers' concerns, obtaining a trauma history, observing the child, and identifying risk and protective factors provides information about resilience supports and trauma exposure.[100] Surveillance requires attention to relationships and engagement. Questions such as "Has anything scary or concerning happened to you or your child since the last visit?" are a way to more specifically explore the possibility of adverse experiences.[85] Recognizing that certain symptoms may indicate exposure to childhood adversities, we can ask, "What has happened to you (or your family)?" For adolescents, these questions can be asked as part of the HEADSSS (questions about Home environment, Education and employment, Eating, peer-related Activities, Drugs, Sexuality, Suicide/depression, and Safety) psychosocial interview.[101,102] Questions that are considered less threatening are asked first and followed with questions that may be perceived as more intrusive.[101] Providers may be concerned that asking questions about a family's needs, a child's trauma history, or a child's symptoms may distress the child or caregiver, but studies in which this topic has been explored indicate that, when the topic is raised, families respond well to having the issues acknowledged and addressed in a supportive setting.[85,103,104]

Children only heal from trauma in the context of SSNRs, so it is also necessary to ask about the strengths that are already present in the family. Starting these conversations with questions about child, adolescent, or family strengths frames the conversation in a positive and resilience-focused way.[105,106] For instance, a clinician may ask how the child, adolescent, or family copes with stress, what a teenager does well, whether they have frequent family meetings to talk about solving problems, and whether each member of the family has someone to turn to for safety and comfort when they are upset. Trauma that occurs because of problems in the primary attachment relationship represents the greatest threat to the child or adolescent and may be the most challenging for providers to explore. Caregivers may have their own trauma histories or mental health struggles, substance use issues, and/or multiple stressors related to social determinants of health (SDoHs), including poverty, housing instability, and violence exposure that affect their parenting. Exploring parenting stressors, strengths, and attitudes in conversation can help the provider to pinpoint specific leverage points to help children but may also create an opportunity for the caregiver to reflect about the effects of their parenting or stressors on the child. TIC is compassionate and assumes that all caregivers love their children and are doing the best they can. It also assumes that children

are doing the best they can.[107,108] Adolescents should be included in these conversations and have a role in identifying strengths and challenges. Pediatricians who have cared for a family over time may already have considerable insight into the family's dynamics and be able to engage the caregivers in an empathic yet open conversation. Furthermore, compassionate surveillance can be combined with use of screeners or questionnaires to elicit more information.

Screening

Validated screeners used at preventive health care visits can provide valuable information about child development, mental health, and behavior.[109] They can be reassuring when normal or alert the pediatric provider to symptoms or risks when borderline or abnormal. Commonly used tools, such as the Ages and Stages Questionnaire,[110] the Pediatric Symptom Checklist,[111] the Strengths and Difficulties Questionnaire,[112] and the Patient Health Questionnaire-9[113] may elicit symptoms that are the possible result of trauma (developmental delays, social-emotional problems, anxiety, etc). Perinatal depression screening may not only identify symptoms of this illness but provide opportunities to explore maternal stressors and strengths.[114] Those exposed to known traumas can be evaluated by using standardized posttraumatic stress disorder (PTSD) screening tools such as the PTSD Reaction Index Brief Form,[115] and those exposed to medical traumas can be evaluated by using a tool such as the Psychosocial Assessment Tool.[116,117] The Pediatric Traumatic Stress Screening Tool in the Intermountain Care Process Model has been recently developed to screen for pediatric traumatic stress in the primary care setting, either as a universal screen or with targeted screening when

traumas are known.[118] These tools effectively help identify the diagnostic criteria for PTSD, although they are not designed to identify the full spectrum of symptoms of complex trauma (developmental trauma disorder [DTD]).

Screening, per American Academy of Pediatrics (AAP) guidelines, suggests using instruments that are standardized and validated and have defined psychometric properties (sensitivity, specificity, positive predictive value). By that definition, there are currently no screening tools for ACEs and only a few validated screening tools for SDoHs. However, standardized (but not validated) tools are being used in some pediatric settings to assess ACEs and SDoHs and are using aggregate risk scoring to target providing increased support.[119–121] Many of the available screening tools expanded on the domains included in the original Centers for Disease Control and Prevention/Kaiser ACE study to include additional items applicable to urban and minority populations, including witnessing neighborhood violence and experiencing bullying or discrimination.[9] Parental ACE screening may offer the opportunity to align with caregivers and build a partnership to explore issues that may be affecting their parenting. Indeed, several recent studies suggest that parental ACEs can be linked with concerning outcomes for children.[122–125] Concurrent resilience screening offers the opportunity to identify protective factors that can buffer identified stressors, thus providing more nuanced understanding of a child's risk. Screening also offers the opportunity to then frame the discussion around promoting strengths in the caregiver-child relationship to protect a child from toxic stress and build adaptive

skills.[107] Similar to ACE screening, there are few available standardized validated resilience screening tools, although the Connor-Davidson Resilience Scale[126] and Brief Resilience Scale[127] assess caregiver resilience.[128] (Readers are referred to the AAP Screening Technical Assistance Web site at https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Screening/Pages/About-Us.aspx for developmental and SDoH screening tools.)

A limitation of ACE and SDoH screening tools is their lack of nuance: they identify risk factors that have been derived from epidemiological studies, not outcomes at the individual level.[129,130] Those outcomes are the result of the physiologic response to adversities. Although currently only available in the research setting, biomarkers of this physiologic response have the potential to be more accurate measures of the effects of adversity at the individual level.[131–133] Eventually, clinic-friendly, noninvasive biomarkers could also be used to identify patient-specific response to both stressors and therapeutic interventions.[134,135]

Screening health care workers for the effects of hearing about and addressing the trauma experiences of others is most commonly achieved with informal self-assessment strategies to identify symptoms or experiences that may be associated with burnout or STS.[136] Substance use disorder, depression, and suicidality may be associated with exposure to secondary trauma, and there appears to be overlap between burnout and STS.[137–144] An example of a screening tool for health care workers is the Professional Quality of Life Scale,[145] which includes subscales for compassion satisfaction, burnout, and STS.

Cultural considerations affect all aspects of TIC, including screening. Instruments that are not normed for the population or translated and validated in the language of the patient and family can result in misleading results. Thus, it is important to consider screening results cautiously with consideration of the family's culture and ethnicity in relation to the screening tool being used.[146]

Examination

Blood pressure measurement at preventive health visits or when stress is a potential etiologic factor for concerns is indicated.[147] Elevated blood pressure may be the first symptom of childhood traumatic stress, especially as youth age.[148,149] Abnormalities in hearing, vision, and growth parameters can be clues to adversities.[150,151] Overweight and obesity have been associated with ACEs.[152–154] Physical examination may reveal signs of neglect or abuse. The immunologic effect of trauma may result in inflammatory or infectious consequences identifiable on examination.[1,80,99,155,156] Children who have sustained cumulative ACEs and traumas may exhibit certain common behaviors the provider may witness during physical and mental health evaluation (refer to history and symptoms described earlier).

Differential Diagnosis Considerations and Comorbidities

The provider is encouraged to consider trauma as a possible etiology in the assessment of developmental, mental health, behavioral, and physical symptoms in all pediatric encounters because of the following: (1) the experience of adversity is so common; (2) the symptoms of trauma overlap with the symptoms of other common pediatric conditions[87,95]; and (3) failure to do so might lead to an incorrect or incomplete diagnosis and treatment, enabling the effects of trauma to further embed.[17,157,158] Trauma may be mistaken for other conditions, such as attention-deficit/hyperactivity disorder, and includes symptoms that overlap with other diagnostic categories, such as anxiety and depression.[86,87,159] It has been proposed that trauma may result in a different "ecophenotype" of common conditions that have a different trajectory and different response to common treatments.[93] Children may also have comorbid conditions, such as ADHD, anxiety, depression, or developmental and learning issues, because they frequently accompany childhood trauma. A more detailed description of diagnoses that are commonly confused with trauma or comorbid with it are covered in the AAP clinical report "Children Exposed to Maltreatment: Assessment and the Role of Psychotropic Medication."[87]

Diagnostic Continuum

Pediatric providers may encounter children with a wide range of symptoms resulting from trauma. As noted, trauma can result in short-term changes in behavior or have a more lasting impact depending on the child, the trauma itself, and the supports or emotional buffers in a child's life. When traumatic events are more severe, prolonged, or less buffered by a caregiver, effects on various aspects of functioning can be more severe.[1,160–163] Children exposed to chaotic households, abuse, or neglect, especially in the early years of life, may have more severe symptoms and symptoms that evolve over time.[94,159,164,165] Diagnostically, this may result in children who have functional symptoms (short-term problems with sleeping, eating, toileting), adjustment disorder, PTSD, or complex trauma symptoms.[163,166,167]

MANAGEMENT

Sharing the Diagnosis With Children and Caregivers

Some parents and caregivers may come to understand the role of adversities in their child's symptoms through discussion of the trauma history and symptoms, and others will require the provider to explain this connection before they can appreciate the provider's advice and recommendations. Psychoeducation is the first step in management of childhood trauma and includes empathic, nonjudgmental sharing of diagnostic information and provider concerns about the etiology of a child's symptoms The provider's role is to integrate the child or adolescent and caregiver's concerns, the child or adolescent's symptoms, and elements of a thorough history and examination into an explanation of why this raises a concern about trauma exposure or why trauma may be the underlying cause or one of the causes of a child's symptoms, much as is done for any diagnosis. A simple explanation of the pathophysiology of trauma may help the caregiver to move from frustration with the child or adolescent's behaviors or symptoms to empathy. In some situations, the explanation may also provide the caregiver with insight into their own history of trauma and its impact on their parenting behaviors or responses to their child's behaviors, or how an event that affected their child may have traumatized the caregiver as well.

Psychoeducation includes acknowledging that a trauma history can affect behavior and thoughts, with some discussion of how that happens. Table 6 has information on specific psychoeducation. The variable responses of children to trauma can be frustrating or confusing. Discussion of the emerging data on the biological sensitivity to context may be useful

TABLE 6 Responses to Trauma to Explain to Caregivers: Psychoeducation

Impacts of Trauma on Function and Behavior	Clinical Presentation
Changes in auditory processing	Children may lose the ability to hear sounds of safety (musical high-pitched voice) and be preferentially attuned to low-pitched sounds that warn of caregiver depression and anger.[247]
Changes in how children interpret facial expressions	Children may misinterpret the affects and emotions of others, particularly confusing anger and fear.[93]
Limited vocabulary for emotions	Children may also not accurately recognize or express their own emotions, leading them to act out or respond in ways that seem "off." What a child (or caregiver) identifies as "anger" may be disappointment, frustration, fear, grief, or anxiety.[88]
Negativity	Trauma results in children having overactive limbic systems with a focus on safety and a presumption of danger. This can result in strong negative reactions as the first response to a stimulus that might be benign or ambiguous.[61]
Triggers	Triggers can be physical (smells or sounds that recall details of the trauma) or emotional (feeling embarrassed or shamed, recalling how child felt during abuse). Prevention of exposures to reminders or triggers is the best approach. Triggers may be subtle, so educating and assisting caregivers with their identification is key. This helps caregivers understand a child's response.[167]
Learned Behavior	Behaviors that were adaptive for a child in a previous environment may be maladaptive in their current environment. These behaviors can evoke some of the same reactions from caregivers that the child experienced with other adults, reinforcing a familiar pattern of interactions that may not be productive in the new setting.[61]

Adapted from the National Child Traumatic Stress Network. Families and caregivers. Available at: https://www.nctsn.org/audiences/families-and-caregivers. Accessed January 11, 2021;[243] US Department of Health and Human Services, Administration for Children and Families. Resources on trauma for caregivers and families. Available at: https://www.childwelfare.gov/topics/responding/trauma/caregivers/. Accessed January 11, 2021[244]; and American Academy of Pediatrics. Parenting After Trauma: Understanding Your Child's Needs. Available at: https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/healthy-foster-care-america/Documents/FamilyHandout.pdf. Accessed June 24, 2021[245].

to caregivers.[168,169] Genetic variations in how a person responds to stress may contribute to a child's sensitivity to adversity.[170] Yet, those with high reactivity who are supported and learn to channel that reactivity to positive activities and passions may have the greatest potential.[168] This information, along with specific suggestions about how to support children, can address some of the consternation of caregivers regarding children's heterogeneous responses to both adversity and interventions.

Office-Based Anticipatory Guidance and Management

Trauma-informed anticipatory guidance provided by pediatricians can help families promote resilience and begin to address the effects of trauma. If screening for SDoHs is being conducted and/or social needs are identified, referral to applicable community-based services is indicated (eg, food bank, pro bono legal aid, etc). Having a list of community providers, such as Early Head Start, Head Start, evidence-based maternal, infant, and early childhood home visiting programs,

state Maternal Child Health Title V programs, and Family to Family Health Information Centers ready for distribution, directly contacting the referral provider with the patient present, or providing formal care coordination all facilitate family engagement and help families connect to needed community resources. For older children and adolescents, trauma-informed schools and teenager crisis centers may be available in the community. In trauma-informed schools, personnel at all levels have a basic realization about trauma and an understanding of how trauma affects student learning and behavior in the school environment.[171,172]

Every encounter in an office setting, from those with young children to those with adolescents, is an opportunity to strengthen the attachment between a child and caregiver.[173] Through techniques such as reinforcing positive back-and-forth interactions between a parent and a child (serve and return), helping the caregiver to understand the child's experience (keeping the child's mind in mind),

helping the children to learn words to describe a variety of emotions, and promoting self-reflection concerning the caregiver's own trauma history, the pediatric clinician can render primary prevention against the development of anxious and maladaptive attachment patterns and promote regulation.[82,174] Examples of relevant anticipatory guidance include advice, resources, or referrals to community programs, including Reach Out and Read[175–177]; developmentally appropriate play with others[178–180]; promoting positive, authoritative (in contrast to punitive or authoritarian) parenting styles[181–183]; and mindfulness.[184–186] Table 7 includes specific advice to promote regulation after trauma.

Referral for Treatment

The presence of complex symptoms, mental health diagnoses, substance abuse, and/or a significant trauma history are indications for referral to evidence-based trauma-informed mental health services.

FROM THE AMERICAN ACADEMY OF PEDIATRICS

TABLE 7 Anticipatory Guidance

	Office-Based Guidance to Promote Regulation After Trauma
Restoring safety	To reduce the stress response after trauma, caregivers can: repeatedly assure a child or teenager that they are safe now; allow the youth to express how they feel and listen attentively; provide extra physical contact (if appropriate) with hugs, touch, and rocking for younger children.
Routines	Routines or rituals also help reduce the stress response after the unpredictability and chaos of trauma by restoring a sense of order. Caregivers can use visual (pictorial schedule or charts) and verbal cues for well-defined mealtimes, sleep times, and rituals ("Before bed, we are going to brush teeth, read a story, sing a song, and then turn lights out"). Preparing children for changes in routines, or, for the child in foster care or the child of separated or divorced parents, for visitation, can reduce stress responses.
Relaxation techniques	Provide information verbally, with printed instructions or on phone apps that guide relaxation, meditation, and mindfulness. Refer to community programs that provide training in belly breathing, guided imagery, meditation, mindfulness, yoga, stretching, and massage, which can help to reduce the fight-or-flight responses and symptoms.[247]
Time-in or special time	Dedicated, child-chosen or child-directed play with a caregiver. Caregiver chooses a time that works for them and plans to spend 10 to 30 min with the child in fun activity of child's choosing. For infant or toddler, reading time is a good example of "time-in." Recommended for children from early childhood through adolescence.
Small successes	Children who experience trauma may have delays in skill development. Expectations may need to be tailored to the child's developmental level rather than actual age. It may take lots of repetition and practice before a skill or behavior is learned, so it is useful to celebrate and reward small steps toward desired behaviors.
Emotional container	Child may have strong emotions if reminded of trauma, and the emotions may be directed at the caregiver, although they are usually not about the caregiver. Caregiver needs to remain calm to model self-regulation and avoid retraumatizing the child.
Cognitive triangle	Thoughts impact feelings, which then impact behavior, which then reimpacts thoughts. For example, if children worry they cannot fall asleep, they will then feel nervous and stressed, and then not be able to fall asleep, reinforcing their cognitive belief that they cannot fall asleep. Similarly, if children think no one likes them, they will feel rejected and may lash out at another child, leading to rejection by that child and reinforcing their belief that they are not liked. It can help to identify this triangle and break the link between thoughts and emotions (through new experiences that link thought with different emotions) and/or the link between the emotions and the behavior ("It is ok to feel ___, but it is better to do ___ than to do ___." This technique involves labeling the emotions and teaching an alternative behavior.)
Distraction	Children who are dysregulating may benefit from distraction from the traumatic thoughts by suggesting a game, music, calling a friend, or deep breathing in a calm environment.
Positive parenting techniques	Positive parenting techniques have to be adapted to the age and developmental stage of the child, but they are principles that are known to work: (1) helping children identify and name their emotions; the next step for the child is to understand the emotion and then to learn healthy ways to express the emotion and build regulation skills; (2) reassuring safety and keeping the child safe both emotionally and physically; (3) attuned, attentive listening, which starts in infancy with "serve and return" but evolves into conversational exchanges over time; (4) setting appropriate boundaries and providing guidance through connecting and listening with children; it is best to teach rather than tell or command; for example, "We draw on paper, not on walls, because it is hard to wash markers off the walls"; (5) catching the child being good and offering the child positive, specific praise for good behaviors; (6) implementing rewards and privileges to create opportunities to develop skills; start small so the child can earn a reward quickly and then build up; (7) using positive language instead of "no" commands: for example, "We color on paper, not on the table," is a better way to approach a child who is drawing on the table than, "Stop that," Or, "we use gentle hands—we don't hit others"; (8) being a good role model as child mimics what they see rather than what they are told; (9) having some fun together as a family (time-in): read, talk, sing, play; (10) reinforcing positive skills as they develop: cooperation, politeness, appropriate assertiveness, kindness, etc; and (11) the law of natural consequences: sometimes the best lesson is letting the consequences play out (not cleaning your room means it will be a mess when your friends come over).

Adapted from Camoirano A. Mentalizing makes parenting work: a review about parental reflective functioning and clinical interventions to improve it. *Front Psychol.* 2017;8:14; Zuckerman B, Augustyn M. Books and reading: evidence-based standard of care whose time has come. *Acad Pediatr.* 2011;11(1)11–17; Zuckerman B, Khandekar, A. Reach Out and Read: evidence based approach to promoting early child development. *Curr Opin Pediatr.* 2010;22(4):539–544; Needlman R, Toker KH, Dreyer BP, Klass P, Medelsohn AL. Effectiveness of a primary care intervention to support reading aloud: a multicenter evaluation. *Ambul Pediatr.* 2005;5(4)209–215; Mendelsohn AL, Cates CB, Weisleder A, et al. Reading aloud, play, and social-emotional development. *Pediatrics.* 2018;141(5):e20173393; Shah R, DeFrino D, Kim Y, Atkins M. Sit Down and Play: a preventive primary care-based program to enhance parenting practices. *J Child Fam Stud.* 2017;26(2):540–547; Chang SM, Grantham-McGregor SM, Powell CA, et al. Integrating a parenting intervention with routine primary health care: a cluster randomized trial. *Pediatrics.* 2015;136(2)272–280; Girard LC, Doyle O, Tremblay RE. Maternal warmth and toddler development support for transactional models in disadvantaged families. *Eur Child Adolesc Psychiatry.* 2017;26(4):497–507; Weisleder A, Cates CB, Dreyer BP, et al. Promotion of positive parenting and prevention of socioemotional disparities. *Pediatrics.* 2016;137(2):e20153239; Shah R, Kennedy S, Clark MD, Bauer SC, Schwartz A. Primary care-based interventions to promote positive parenting behaviors: a meta-analysis. *Pediatrics.* 2016;137(5)e20153393; Perry-Parrish C, Copeland-Linder N, Webb L, Sibinga EMS. Mindfulness-based approaches for children and youth. *Curr Probl Pediatr Adolesc Health Care.* 2016;46(6):172–178; Bauer CCC, Caballero C, Scherer E, et al. Mindfulness training reduces stress and amygdala reactivity to fearful faces in middle-school children. *Behav Neurosci.* 2019;133(6):569–585; Ortiz R, Sibinga EM. The role of mindfulness in reducing the adverse effects of childhood stress and trauma. *Children (Basel).* 2017;4(3):16; Forkey H, Griffin J, Szilagyi M. Childhood Trauma and Resilience: A Practical Guide. Itasca, IL: American Academy of Pediatrics; 2021.

The most effective therapies are evidence-based treatments (EBTs) with demonstrated efficacy for children who have experienced trauma.[85,187,188] Treatments that are designated as evidence based have had the most rigorous evaluation, whereas evidence-informed treatments range from newly emerging practices that are building evidence support to less rigorously studied tools. Sege et al[189] published an overview of evidence-based individual and family-based psychotherapeutic interventions. Gleason et al[190] specifically outlined services for the treatment of young children. Having these services available on-site or through direct communication with colleagues in mental health (a "warm handoff") has been revealed to be the most effective approach.[191] It is important for caregivers who have their own history of trauma to seek individual therapy, and the pediatric provider may find it useful to have a list of adult mental health providers who address trauma. As research continues to elucidate the neurocognitive basis of trauma symptoms and methods to address those effects, new treatment modalities are being developed and may offer increased therapeutic resources for both adults and children.[192–194]

Even if therapies are not available on-site, it is useful to familiarize self and staff with evidence-based trauma therapies, how they work, how to refer locally and how to incorporate principals of treatment into pediatric anticipatory guidance. A quick reference for EBTs that includes a brief description of each and the level of evidence can be found on the California Evidence-Based Clearinghouse for Child Welfare (http://www.cebc4cw.org/). Some EBTs have been successfully adapted for telehealth,[195,196] and, in the wake of the coronavirus disease

2019 pandemic, opportunities for EBT via telehealth have expanded.[197] Telehealth is a mechanism to provide EBT in rural and other underresourced communities.[196]

Psychopharmacology

No medication, to date, is approved by the US Food and Drug Administration for trauma-specific symptoms or PTSD in children and adolescents. Medications may be judiciously considered for specific symptoms that are interfering with a child's ability to function normatively in specific ways.[72] Readers are referred to the AAP clinical report "Children Exposed to Maltreatment: Assessment and the Role of Psychotropic Medication" for discussion of medication use in identified comorbid mental health conditions.[87]

Role of Close Follow-up and Support

A commitment to working with the family over time may prevent or reduce feelings of abandonment or rejection, especially when community and mental health resources are in short supply. The pediatric provider who is continuous over time can continue to listen attentively and offer practical trauma-informed advice that reinforces resilience building and healing. Obtaining consent to share information with a mental health provider may also be reassuring to the caregiver or patient even after a referral and linkage to mental health care is established.

Integration

Once these aspects of care are part of a provider's repertoire of care, integrating knowledge about trauma into policies and procedures and daily practice are the next steps in creating a trauma-informed medical setting.[198,199]

Train All Staff in TIC

All staff, from schedulers to billers to nurses and care coordinators, can benefit from training in TIC that is thorough and discipline specific and includes information about physiology, presentation, recognition, and response.[15,200,201] This training would ideally promote patient empowerment and include caregiver and patient perspectives.

Implementing TIC in any setting is effective when there is consideration of clinic workflow to maintain efficiency. Specific strategies can include a warm and welcoming waiting room, clear communication of expectations and procedures, and providing choices when possible (eg, do you want blood pressure taken on right arm or left?).[201] As noted earlier, the care of a child who has experienced trauma requires an approach that is similar to addressing other health concerns. TIC can include members of the staff, all aware of and empowered to emphasize safety, patient self-efficacy, and a trauma-informed approach.[15,201] Use of formalized training in TIC for all staff has been found to be effective in changing staff-reported beliefs and behaviors for caregivers of children in residential care[202,203,204] and in improving child functioning and behavioral regulation.[204] In pediatrics, training of pediatrics residents caring for substance-exposed infants in TIC was effective at changing attitudes and improving therapeutic relationships.[205]

Office personnel may engage with caregivers and patients in ways that trigger strong emotions, especially if they themselves have experienced adversity or trauma. Financial considerations, scheduling, and conflict in the small spaces of an office can also be explored from a TIC perspective. Personnel would ideally engage in some planning

about how to handle a crisis or difficult situations that occasionally arise, such as the following: patients or caregivers who are indifferent or shut down, demanding, provocative, rejecting or hostile, or inattentive and distracted; or a child who is out of control and threatening to elope from the office. It is helpful to monitor one's own response when difficult situations arise and resist the urge to be angry or retaliate. It is less provocative to focus or comment on the emotion than the behavior: "I can see that you are angry, worried, sad, upset, etc," or "You probably don't want to be here right now." These responses are more affiliative and can help to shut down the stress response of the patient or caregiver whose fight-or-flight response may have been triggered by the health care setting, the interaction, or the medical stressor.

Integrated Health Care

Many providers find that the most efficient TIC can be provided by integrating physical and mental health services and social supports. Integrated care has been found to increase social-emotional screening rates[206] through colocation of services with clear strategies for medical provider introduction of the patient to the behavioral health consultant in real-time (warm handoff), by reducing the stigma of a mental health referral, or through facilitated or prearranged referral protocols.[191,207] Financial and staffing resource issues vary significantly by region, but investigating opportunities for primary care and mental health integration, social work, and/or formal engagement of referral sources and partnering organizations may increase the efficiencies of TIC. Providing case management to address the social modifiers of health (eg, referral to food bank, legal aid) can help to increase family resilience and

prevent the consequences of trauma. Referring to resources has been revealed to be associated with increased employment, use of child care, and a decrease in the use of homeless shelters.[208]

Two-Generation Approach

Growing evidence has linked increasing parental ACE scores and negative effects on child health and development,[122,123,125,209] providing compelling evidence that taking a 2-generation approach is important. Families may customarily live in multigenerational family units, and this is a cultural norm for some. The opioid crisis has produced many kinship and grand-families, emphasizing the need for multigenerational care because both children and caregivers have suffered traumatic losses and may be influenced by their own trauma histories.[210] Addressing how adversity experienced by a caregiver in childhood may affect their parenting and resilience can have profound effects on a child's health and outcomes. This approach can include asking these questions in engagement, surveillance, and screening; careful consideration of how the provider or practice can and will respond to elicited issues is important before integrating this into practice flow.

Community Partnerships

Pediatric offices can develop methods to coordinate trauma-related care with schools, child care, early educators, courts, legal supports, child welfare services, and other community partners (see policy statement[19]).

Staff and Provider Support

Addressing the trauma experiences of others can have significant consequences for health providers and staff. Per the National Child Traumatic Stress Network, STS is the emotional distress that results

when an individual hears about the first-hand trauma experiences of another.[136] The essential act of listening to trauma stories may take an emotional toll that compromises professional functioning and diminishes quality of life. Burnout is a syndrome characterized by a high degree of emotional exhaustion and depersonalization (ie, cynicism) and a low sense of personal accomplishment from work. Burnout refers more to general occupational stress and is not used to describe the effects of indirect trauma exposure specifically.[136] At least one meta-analysis concluded that job burnout contributes to, or at least increases the risk of, STS.[142] Recent surveys of medical students and residents reveal a high rate of depression (Patient Health Questionnaire-9 score >10) of 25% to 30%.[139,211] Some data indicate that more than 50% of the physician workforce in the United States suffers from burnout related to their profession.[212–214] For the individual physician, burnout can result in increased rates of apathy, depression, substance abuse, and suicide and can affect personal relationships.[139,212] STS similarly affects providers, although it is more often discussed in the mental health and child welfare literature rather than the medical literature.[144]

Detailed discussion of the response to burnout and STS is beyond the scope of this clinical report. However, effective TIC includes recognition of the effect of indirect trauma exposure on the workforce and safeguards to protect those caring for children and caregivers.[136,143] Acknowledgment that these are issues and providing resources to address them, with attention to leadership and supervision, have been cited as the most important first steps.[143,212,215] For both burnout and STS, support from the immediate supervisor and

organizational leadership have been demonstrated to be effective ways to combat the effects of trauma.[143,209] Team-based care, efficiencies in practice, and opportunities to share successes and frustrations with peers can all be helpful.[216–218] Promoting self-care remains an important part of TIC, with adequate time for rest, distance from the office or hospital, exercise, healthy diet, and prayer, meditation, or mindfulness shown to reduce symptoms of burnout and STS.[143,219,220] Such interventions are integral to developing and sustaining a trauma-informed practice and include all members of the health care team.

SUMMARY

TIC recognizes that exposure to adversities is common to many, if not most, children and that the developmental, behavioral, and health consequences can be profound and long lasting. Pediatric clinicians with an understanding of the physiology of both resilience and trauma are in a position to promote resilience, recognize and respond to traumas, and promote recovery.

Key Points

1. TIC is fundamentally relational health care, the ability to form and maintain SSNRs. Pediatric clinicians are well positioned to use a 2-generation approach, evaluate attachment relationships, and harness these attachments to encourage the caregiver's role in promoting regulation and resilience.
2. Providing TIC is achieved through common pediatric practices, starting with engagement and providing a safe setting for patients and families. Obtaining history, using surveillance or screening tools appropriate to the pediatric setting and clinical need, and effecting a response involving the pediatric provider and other community resources is consistent with addressing most health-related issues.
3. Trauma symptoms can vary, from changes in eating and sleeping to severe physical and mental health effects requiring extensive treatment. Individual differences in trauma symptoms relate to the interplay of exposures and buffering from SSNRs as well as genetic variations impacted by the early environment (biological differential sensitivity to context).
4. Treatment can begin in the office setting with psychoeducation and brief guidance for caregivers. Facilitating linkages to community resources for families to programs that promote positive parenting skills, regulation, and self-efficacy; address the SDoHs (poverty, housing, food insecurity, etc); or provide EBT further supports those at risk and can effectively treat those who are symptomatic.
5. Integrating this relational model of care to prevent and mitigate the impact of trauma so that all members of the care team feel supported and valued is integral to TIC. Addressing safety and supporting relationships that promote affiliative responses, decrease stress responses, and promote building resilience are principles of TIC for children, caregivers, and health care personnel.

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ABBREVIATIONS

ACE: adverse childhood experience
DTD: developmental trauma disorder
EBT: evidence-based treatment
PFA: Psychological First Aid
PTSD: posttraumatic stress disorder
SDoH: social determinant of health
SSNR: safe, stable, and nurturing relationship
STS: secondary traumatic stress
TIC: trauma-informed care

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