■ CLINICAL PRACTICE

Trauma-Informed Care in Pediatrics: A Developmental Perspective in Twelve Cases with Narratives

Joshua Strait, DO[1]; Sean Meagher, MD[1]

Perm J 2020;24:19.045

E-pub: 12/06/2019

https://doi.org/10.7812/TPP/19.045

ABSTRACT

Introduction: The dose-response relationship of adverse childhood experiences (ACEs) with chronic morbidities is recognized as prevalent. However, screening for ACEs and implementing trauma-informed care (TIC) have yet to become a standard of care in pediatrics.

Objectives: To document impactful developmental experiences of implementing TIC and universal screening of ACEs in the pediatric setting, elucidate the relationship between ACEs and their common presentation of developmental and behavioral health problems in pediatric patients, and propose feasible system changes to promote evidence-based professional expertise.

Methods: During pediatric residency training, I implemented routine universal screening of pediatric patients using ACE questionnaires. Research-based trauma-informed practices, such as patient-centered communication regarding adverse health outcomes associated with prevalent ACEs, were used. Clinical vignettes describe 12 cases.

Results: Most patients and their families were receptive to counsel on recognizing, preventing, and mitigating the effects of toxic stress resulting from ACEs. Behavior in a patient, and sometimes a parent, was addressed from a developmentally sensitive lens of TIC, and appropriate therapeutic interventions were discussed. Addressing ACEs opened crucial conversations with some patients, which promoted efficacious, developmentally sensitive care.

Discussion: Implementing TIC in the pediatric setting, especially in training, is not only feasible but also vital to adequately understand the patient population. Equipped with clinical knowledge and experience in addressing ACEs, practitioners will more readily empower patients and their families to improve health outcomes.

Conclusion: When pediatric practitioners discover, intervene, and address the adverse effects of ACEs, their care becomes more efficacious and evidence based.

"[Adverse childhood experience] studies are as revolutionary as germ theory was for the 19th century."
—Sandra L Bloom, MD[1]

INTRODUCTION

Practitioners often consider individual variability and developmental plasticity among their patients in the sensitive years of development to comprehend the role of events and environments.[2] During the first 18 years of life, levels of toxic stress caused by adverse childhood experiences (ACEs) are known to have a strong, graded dose-response relationship with increased health risk behaviors, chronic adverse health conditions, and the leading causes of death such as heart disease, stroke, and diabetes.[3] ACEs include 10 categories of abuse, neglect, and household dysfunction. They are common and considered to be "the main determinant of the health and social well-being of the nation."[4] This article will review the developmental impact of ACEs and trauma-informed care (TIC) and will provide a sampling of clinical vignettes demonstrating TIC skills in a pediatric setting.

Developmental Impact of Adverse Childhood Experiences

There is an inverse relationship between the developmental stages of childhood and the 3 types of stress: Positive, tolerable, and toxic.[5] The relative frequency of the 3 types of stress can adversely affect developmental health outcomes, or it can optimize developmental health outcomes. Through positive stress, the body responds with mild to moderate elevations in cortisol. Support and protection are generally provided by a caring adult; this allows for the stress response to return to baseline. A tolerable stress response is higher in magnitude and can occur when there is a death in the family, serious illness, or another traumatic event; these adverse life events are ameliorated by the availability of supportive and caring adults. The magnitude of harm to the developing brain of a child depends on the severity of the stressor and how much protection an adult provides.[5]

In the case of toxic or chronic levels of stress hormones brought on by an ACE, the stress response is activated for a prolonged duration with relative absence of protection and support from an adult. This is the most hazardous form of stress and can adversely alter the brain architecture of a child.[5,6] Because of the abundance of glucocorticoid receptors in these structures, high levels of cortisol can lead to disruptions in the amygdala, hippocampus, and prefrontal cortex.[5] This can result in overactivity and hypertrophy of the amygdala along with neuronal loss in the hippocampus and prefrontal cortex, which can lead to impairments in learning, memory, behavior, executive functioning, mood, increased risky behaviors, difficulty with forming healthy relationships, and impulse control.[5,6] The disruption in neurodevelopment caused by toxic stress has the potential to cause social, emotional, and cognitive impairment in a child or adolescent. The mechanisms of neurobiological change and intergenerational transmission of ACEs through epigenetic modification are well documented[a;7] and continue to be researched.

As health care practitioners partner with caring family members and mentors close to the child through shared decision

Author Affiliations
[1] Department of Pediatrics, US Army, Brooke Army Medical Center, Fort Sam Houston, TX

Corresponding Author
Joshua Strait, DO (jstrait@westernu.edu)

Keywords: adverse childhood experience, ACE, behavioral, developmental, ecobiodevelopmental, pediatric education, pediatrics, trauma-informed care

The Permanente Journal • For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.

making, they play an important role in preventing ACEs and promoting resilience should ACEs occur.[7] With this transformational knowledge, practitioners and educators can use measures to screen for ACEs and implement TIC.[8,9] Unfortunately, many practitioners and training programs remain hesitant to implement such changes. The rates of screening for ACEs remain low, with constraints for widespread screening to include time, resources, concern for revictimizing adults and children, and possible parental hesitancy to self-report. There seems to be even less opportunity and confidence for medical residents who are unaware of the opportunity to screen their patients.[10,11]

The pediatric medical home is an ideal environment to implement universal screening for trauma and adversity in standard clinical practice.[12] Koita et al[9p2] wrote "because [p]ediatricians provide care for children and their families at regular intervals, patients and providers develop a trusting relationship, which facilitates screening and patient education about the impacts of adversity on health." The founder and medical director of the Trauma Center in Brookline, MA, van der Kolk[13p169] declares that "recognizing the profound effects of trauma and deprivation on child development need not lead to blaming parents." He attests that we can assume parents may be doing the best they can in raising their kids, "but *all* parents need help to nurture their kids" [emphasis added]. Addressing all those involved in working with children, he offers this[13p169]:

> *Our great challenge is to apply the lessons of neuroplasticity, the flexibility of brain circuits, to rewire the brains and reorganize the minds of people who have been programmed by life itself to experience others as threats and themselves as helpless. Social support is a biological necessity, not an option, and this reality should be the backbone of all prevention and treatment.*

A pediatrician's approach to reduce toxic stress in children affected by ACEs is highly successful if rooted in evidence-based research, the science of ACEs, and delivered by a TIC approach.[8,10,12]

Trauma-Informed Care

Bloom, founder of the Sanctuary Model, has suggested that being "trauma informed" means that one embraces and demonstrates new mental models informed by trauma theory.[14] Still others use being trauma informed to describe how various caregivers (social services, education, health care, and corrections) can better serve people who have experienced traumatic life events.[15] Regardless, when working with patients who have behavioral and/or other health challenges as well as a history of ACEs, a trauma-informed practitioner would provide education about how these are "normal reactions to abnormal circumstances."[16] One developmentally sensitive practice to be employed in every pediatric setting encourages patients to feel they have more control over the encounter itself, such as offering choices in the examination room (ie, "shall we start with the left ear or right?" or "would you prefer to sit or stand?"). Another example includes using body language in a way that communicates to the patient and his/her family "I believe you, and I care." Turning one's back to a patient and having one's gaze fixed on a computer screen may be distressing for a patient whether or not a history of ACEs is present.

Figure 1. Trauma-informed care pyramid.[a]

[a] Bottom 2 levels (asterisk) are universal trauma precautions; top 3 levels (double asterisk) represent trauma-specific care.

Reprinted with kind permission from Raja S, Hasnaian M, Hoersch M, Gove-Yin S, Rajagopalan C. Trauma informed care in medicine: Current knowledge and future research directions. Fam Community Health 2015 Jul-Sep;38(3):216-26. DOI: https://doi.org/10.1097/fch.0000000000000071.16

As depicted in the TIC pyramid (Figure 1),[17] there are best practices, also known as universal trauma precautions, that all professionals can employ, and additional levels of trauma-specific care to consider as well. Understanding health risk behaviors and trauma-related coping mechanisms is a fundamental skill for trauma-informed practitioners. Collaborating with patients in a nonjudgmental fashion when discussing health behavior change decreases patient anxiety and deepens trust between practitioner and patient.[17] When employing TIC, it is important to know where to refer patients by maintaining a list of affordable, accessible trauma-specific practitioners to provide integrated behavioral health and maintain interprofessional collaboration to ensure continuity of care.[17] Employing a strengths-based approach will magnify the therapeutic intervention.[8,18] When a practitioner or clinic decides to conduct routine ACEs screening of all patients, it is important to consider the importance of using "a framing statement prior to the trauma screen" and to ensure that all staff are competent "with communication skills training about how to discuss a positive trauma screening with a patient."[17] An example of one such framing statement is "We screen all our patients for a history of trauma, which may contribute to current and lifelong health." Therapeutic behavior assists in removing lingering shame or guilt associated with childhood trauma.

Training in TIC does not require much work or time but does require pediatricians to reframe their role as healers. It requires a willingness to tolerate ambiguity, a patience to not expect every person to respond with gratitude or heal with every therapeutic intervention; ultimately it requires a listening ear. As illustrated in this article, all pediatricians are empowered when using a better framework to consider the sensitive years of development. Trauma-informed pediatricians better understand that many adult diseases are really developmental disorders that began early in life. This is made clear through the ecobiodevelopmental framework, which considers multiple factors including psychological

The Permanente Journal • For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.

adaptations and disruptions, epigenetics, anatomic development, and children's social and physical environment, as documented by Shonkoff et al.[5] In addition to asking pediatricians to consider the effect of toxic stress on development and behavior, this transformational framework "underscores the need for new thinking about the focus and boundaries of pediatric practice."[5]

CLINICAL VIGNETTES

The researchers provide the following cases from direct practice. These cases document impactful experiences of implementing TIC and universal screening of ACEs in the pediatric setting, while depicting the relationship between ACEs and their common presentation of developmental and behavioral health in pediatric patients. These 12 patients are selected from hundreds as an appropriate sampling of the varying clinical presentations of individuals affected by ACEs. In our attempt to adhere to best practices and protect the privacy of the patients whose cases are discussed here, we have changed the names and other identifying characteristics. Any resemblance to any persons, living or dead, or to actual events is coincidental. A nonresearch determination letter was obtained from the institutional review board Brooke Army Medical Center at Fort Sam Houston, TX, eliminating the need for institutional review with implied informed consent for standard clinical care.

Each patient had his/her unique story to tell but, before this, had not known it was acceptable or important to do so. Afterward, each patient understood that these traumatic events are not a "normal" part of childhood; no matter what they felt, or had formerly been told, these events were not their fault; and they are not alone in their experience because ACEs are common. Furthermore, as they consider the effect their ACEs have had on their lives, they are now empowered to explore how to remove shame, guilt, and blame; find effective means to reduce toxic stress; and no longer let these events define their health. Personal safety and ongoing abuse were evaluated and addressed as needed. Patients and parents were educated about the relationship between toxic stress and adverse health outcomes. Most patients and/or parents verbalized understanding of their personal connection between toxic stress consequent to ACEs, behavior, physical symptoms, and overall health. Each family was encouraged to increase open communication, validation, and to find ways to build personal and familial resilience. When applicable, parents were invited to consider how their own personal history of ACEs might be affecting their own parenting. As a result, important conversations and appropriate therapeutic interventions were made possible.

I admit to limitations in words and text space to adequately depict the clinical significance and emotional implications of each of the following patient interactions. Table 1 is designed to summarize and assist navigating each case within the series.

Case 1: "He's Just a Lazy Teenager"

Victor, a 13-year-old boy, who was concerned about "shortness of breath," came to the clinic with his father, Eugene. Victor relayed the details of a recent episode of difficulty breathing while in a movie theater with his family. Alarmed, he walked out of the theater and had to wait about 5 minutes for the episode to pass.

Making a point to never look at the computer screen during the interview, I knew from prior chart review that Victor had visited this same clinic twice in the past 6 months for evaluation of chest pain. At that time, cardiac causes were ruled out.

"I think I was having a panic attack," Victor now said. He quietly added, "They seem to be happening more often."

Because of abnormal results on a Patient Health Questionnaire-2, our nurse administered a full Patient Health Questionnaire-9[19] and the Generalized Anxiety Disorder 7-item GAD-7[20] screening questionnaire, and the results revealed concern for severe depression and anxiety, respectively. Victor admitted he had progressively felt this way over a couple of years.

Eugene dismissed the results of both questionnaires and offered his perspective, describing his son as a "lazy a**hole … [who] locks himself away in his room … [and] gets angry whenever I ask him to stop playing video games." With no documented history of depression or anxiety, Victor had not identified what possibly could have triggered his recent panic attack, nor what was contributing to his chronic symptoms. After asking Eugene if he had anything further he wanted to add, I invited him out of the room for the adolescent-specific psychosocial examination.[21] I handed Eugene the Center for Youth Wellness (CYW) ACE-Q Teen Questionnaire[b;3,22](parent/caregiver report) and asked that he fill it out in the waiting room. Once Eugene left the room, I handed Victor the CYW ACE-Q Teen Self-Report questionnaire. I explained to Victor I did not need to know the specific events (unless he would like to discuss them), but rather a tally of any possible positive responses to better understand what he may have faced in his life. I made sure not to turn my back toward him, as a subtle way to communicate I was not leaving him alone or considering this interview just routine. While he tallied his score, I made notes on my clipboard. "Okay, I'm done."

Without showing any signs of surprise, I confirmed an ACE score of 5/10 (and 2/9 supplemental). The supplemental questions (7 for children up to 12 years old, and 9 for teens up to 19 years old) assess for exposure to additional early life stressors relevant to children and youth, such as bullying, history of being in foster care, prejudice, or community violence. Studies show those with an ACE score of 4 or more have a 4-fold to 12-fold increase in health risks for alcoholism, drug abuse, depression, and suicide attempt compared with those with a score of 0.[3] I leaned in to inform him I was concerned for his health and safety. I asked, "How have these events affected you in your life?"[4] Victor described overwhelming isolation after his parents' divorce, the persistent conflict at home between his father and stepmom, being bullied at school, and not feeling loved by his father. He felt angry at himself for not being happy and driven, like his father expected him to be. "I don't know why I can't just be happy." He described a history of cutting, and intermittent thoughts of ending his life, saying, "I'm not sure I would be missed." Sometimes interpersonal problems with family and peer relationships lead to behaviors such as cutting.[23]

He continued to talk about his father, "I feel like he doesn't care or even love me most of the time." After listening to Victor speak for some time about the effect of ACEs on his life, I invited him to consider his episodes of chest pain and panic attacks and

The Permanente Journal • For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.

his symptoms of depression and anxiety as natural consequences to abnormal circumstances.[4,16] With tears in his eyes, Victor was no longer looking at the floor, and his shoulders relaxed as if a weight was removed from his shoulders. "Can I offer a thought about your dad?" I asked. "Sure," he replied.

"I think your dad loves you, but he may have never learned how to express it. Victor, he might have a list of his own ACEs, and it may be affecting his way of relating to you and others. We can't control how he acts, but we can control how we see him."[24]

After inviting Eugene back into the room, I pointed out the differences in his assessment of Victor's personal ACEs (1/10, 0/9 supplemental). I encouraged him to share his thoughts with me. After an uncomfortable period of silence and strained surprise, he remarked, "I don't understand how to fix him." He began to insinuate that Victor may have misunderstood the questions. I noticed Victor begin to tense his body and lower his head. I intervened to discuss how the score was not as important to me as recognizing that Victor had experienced several life-altering events currently affecting his health and his perception of himself and the world around him. What Eugene perceived as defiant anger was more likely Victor's normal reaction to high levels of toxic hormones. "What this indicates to me is the trauma Victor has experienced is something his mind, body, and spirit process as danger, and makes him feel isolated, anxious, and depressed." I explained that Victor is stuck in a mode of toxic levels of stress hormones affecting his brain and preventing him from functioning at his best. "Sir, I invite you to consider you don't need to fix him, but perhaps be an active listener."

Victor expressed interest in starting antidepressants. I discussed neuroplasticity and methods to help his brain recover. Eugene reacted, "I just don't believe in this whole depressed thing or [that] Victor should be on pills to function … . I'll speak to his mother about this."

I asked Eugene, a veteran, if any of his friends who fought in war with him returned home and struggled with posttraumatic stress disorder or feelings of isolation. Through our discussion, he

Table 1. Summary of cases

Case	Age, Sex	ACEs/toxic stress relevance	TIC intervention
1	13 y, M	Depressed, anxious; relevance of trauma history not recognized by father	Screening indicated vast disconnect between parent and patient. ACE questionnaire made conversation possible, which led to both patient and his father to better understand effect of ACEs and thereby willing to engage in proper therapeutic intervention.
2	13 y, M	Patient with intellectual disability among other diagnoses; he has witnessed intimate partner violence	Patient, normally very quiet, felt safe enough to reveal his deepest concerns about safety at home. Therapeutic alliance formed between mother, child, and practitioner for safety plan.
3	19 y, F	History of severe anxiety, high-risk behavior with drugs and sex	Links between history of ACEs and current health risk behaviors established. Patients are able to understand their methods of self-medicating when understanding the science of toxic stress; they are then empowered to pursue specialized treatment.
4	17 y, M	ACEs quite possibly would have never been discovered because parent was unaware; symptoms hidden and not discussed with parent	Receptive to recommendations for open communication, self-care, and finding personal means to suppress stress reaction. Practitioners cannot adequately assume who has a history of ACEs or who does not without asking the questions.
5	14 y, F	High ACE score in both patient and mom. Intergenerational transmission assumed normal by both patient and mom	Not all patients are ready to address effects of personal trauma on current health. TIC allows for patients to be given control.
6	6 mo, F	Maternal history of postpartum depression and childhood ACEs	Parents can be empowered in their efforts to build resilience in their children through TIC.
7	8 y, F	Diagnosis of ADHD, with formerly undiscussed trauma history; symptoms not addressed with medication	Some parents carry burden of their children's trauma, as well as their own personal ACEs. When the link between symptoms and trauma history is made, the family can move forward with healing.
8	2 y, M	At-risk parents with personal history of ACEs and without much community connection	TIC allows for education on parental self-care and the vital role of relationships and community connection for the family.
9	16 y, M	Patients carrying weight of mom's guilt; Mom wanting to help but does not know how; military family at risk	TIC makes possible the opportunity for family members to be vulnerable with each other and openly express their concerns. Most parents want to discuss ACEs and help their children heal. TIC encourages patients to discuss ACEs with their practitioner.
10	14 y, F	Social isolation and political extremism putting patient at risk	Sometimes all a practitioner can do is discuss the science and offer counsel, even when family is not receptive.
11	11 y, M	Dysfunctional family; patient with intellectual disability largely unable to express his own ACEs; verbally abusive father in room, intimate partner violence	Some forms of trauma can be revealed through simply asking the questions. Assessing for safety and implementing important TIC measures can de-escalate a potentially catastrophic interaction.
12	12 y, M	Parental history of trauma can manifest through the parent's behavior or interactions with clinicians	Difficult clinical encounters can often clue the practitioner in to a parental history of ACEs. Approaching families through a lens of TIC allows for more appropriate therapeutic alliance.

ACE = adverse childhood experience; ADHD = attention-deficit/hyperactivity disorder; F = female; M = male; TIC = trauma-informed care.

For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.

began to correlate the effect of depressive symptoms and posttraumatic stress disorder when he described losing 2 close friends who ended their own lives after their time in combat. I discussed the basics of cognitive behavioral therapy.[24] I recommended that Victor regularly work with a professional through cognitive work, as well as meditation, prayer, yoga, and/or mindfulness so Victor may feel safe in his body.

At the 2-week follow-up, Victor's mother joined us. His father was more receptive to Victor starting therapy and antidepressants after our reiterated discussions of Victor's symptoms, ACEs, and neuroplasticity. Victor is currently doing well, with declining symptoms of anxiety and depression, and Eugene enthusiastically reminds him to take his medication and attend therapy.

Case 2: "Sometimes I Get Scared"

Gabriel, a 13-year-old boy with an intellectual disability, attention-deficit/hyperactivity disorder (ADHD), and a rare genetic condition affecting multiple organ systems, arrived with his mother, Melanie, at a subspecialty clinic for follow-up. Melanie filled out her assessment of Gabriel's ACEs while I explained to him what each question on his questionnaire was asking. He concentrated intently on each question, then told me, "Sometimes I get scared." I leaned forward in my chair, with my hands opened palm side up on my knees. I was mindful to let him know I was listening, concerned, and accepting of whatever he was about to share. "What makes you feel scared, Gabriel?" I asked, patiently waiting for his answer. "Sometimes Mommy and Daddy yell at each other … . Mommy throws plates at Daddy."

Validating Gabriel's response with a nod, I asked, "What else?" Although intellectually behind his peers, he articulated some common adverse effects of intimate partner violence. "Sometimes I feel like it's my fault … like I cause it … I don't know how to help it." When I assessed for Gabriel's and his siblings' safety at home, he detailed their normal response: "We all go hide until the yelling stops."

Melanie tearfully verified Gabriel's experiences, admitting to her lifelong struggle with bipolar disorder. "Sometimes it gets out of control. … Because of how much it has strained my marriage, my husband and I are in counseling, and I just got on meds." Gabriel playfully swung his feet on the edge of the examination table, observing my interactions with his mother. I said, "Gabriel, thank you so much for sharing your experience with me. You strike me as a very brave boy. You can always talk about these things with your doctor if you want to. I am glad to hear your mom and dad are getting the help they need. Sometimes we all need to ask others for help."

Turning to Melanie, I asked, "What are some things you think you can do to stop from escalating?" Recruiting Gabriel to help in setting a safety plan, she agreed to hold a family council over dinner that night and find ways that she could signal to her family when feeling particularly on edge, and for family members to likewise decide how best they can communicate their feelings with her. Melanie added that giving herself permission to leave the room, to take a walk, deep breathe, pray, and/or engage in other personal healthy measures sometimes help her.

After this TIC interaction, his primary physician expressed surprise that Gabriel even talked to me because "he normally is a closed box … can never get a word out of him." In follow-up, Melanie expressed that she and the family continue to work on communication and goal setting.

Case 3: "I've Done Every Drug"

Sadie, a 19-year-old with ADHD, came by herself to the clinic for her yearly checkup. She admitted that life had been particularly stressful until recently when she dropped out of college. "I realized it really wasn't for me when I was failing all my classes. … I've always put so much pressure on myself to get As in all my classes." Sadie described debilitating symptoms of anxiety, which often prevented her from leaving her room. "I would go days without food because I just couldn't get out the door, afraid of having another panic attack or something like that."

I used strengths-based therapeutic techniques through the adolescent psychosocial examination[21] and started with asking Sadie her greatest strength: "Something you're proud of in yourself." "I help people," she quickly responded. "Marvelous," I replied. "Sadie, you do strike me as a very kind and helpful individual. I imagine you will have a lot of opportunities to use this strength to help others, even while you face struggles of your own." After I verified with her the confidentiality of our discussion, with exceptions to danger for herself and others, she unabashedly described her extensive experimentation with numerous types of drugs. "They make me feel so alive and okay." She began using illegal substances in her early teens. "I have put myself in a lot of stupid situations … even got raped once by a guy I thought loved me." Practitioners had been treating her ADHD with medication less likely to be abused.

We discussed the life-altering events put on her at an early age. Sadie wanted to hear more. We discussed the negative aspects of ACEs. Sadie excitedly reported, "I know exactly what [ACEs] have caused me to do! I've been trying to fill this huge hole in me created by my parents' divorce." While I listened, she continued, "I turn to all these drugs and boys, because even for a moment I feel like I'm getting what I've needed my whole life."

Continuing to be nonjudgmental of her experience, I encouraged her to find unique ways to build personal resilience.[8] Sadie recognized the need to properly address her battle with anxiety and no longer shoulder the weight of her parents' divorce. She agreed to see a specialist for drug use cessation and anxiety management, both consequent to her traumatic experiences. Sadie used to do yoga and felt like it helped her feel safe in her body. Through my use of TIC in the clinical encounter, Sadie felt empowered to no longer "fill the void" with drugs and promiscuity, but rather with opportunities for her to exercise mindfulness and wellness. Sadie proved, if given the chance to reflect, patients are able to identify and understand their methods of self-medicating and risky behavior when understanding the science of toxic stress caused by ACEs.

Case 4: "My Mom Might Get Upset if She Knew"

Jacob, a 17-year-old boy with seasonal allergies, visited the clinic with his mother for a medication refill and to discuss recurrent

The Permanente Journal • For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.

abdominal pain. Jacob was a high school athlete with plenty of friends, competitive grades, and test scores to get accepted into any major university. Jacob and his mother both admitted to use of protein powder and creatine when we discussed dietary and physical activity practices. They both thought the supplements would help him have strength and endurance for his rigorous sports demands, but they admitted to stomachaches beginning around the same time of implementing such dietary practices. After counseling and expressing caution against the use of such products, I invited his mom out of the room so Jacob could practice being in charge of his medical care, starting with the adolescent psychosocial examination.[21]

Jacob's CYW ACE-Q Teen Self-Report revealed a score of 5. I asked, "Do you currently feel safe at home?" "Yes." I followed up by assessing for any ongoing ACEs. After he told me these events were no longer happening but rather happened several years ago, I asked him how they currently affected him. He responded with a shrug of the shoulders, "I've never really thought about it." "Have you been able to talk these things through with your parents? Are they aware?" He quickly responds, "I've talked with my dad, but my mom might get upset if she knew." Living at home with his mom and stepdad, he is often not sure which caring adult he can turn to in times of need. The remainder of our conversation revealed that Jacob had intermittently been having overwhelming symptoms of depression, without a recognizable event or circumstance surrounding these symptoms.

Taking the opportunity to discuss the deleterious nature of ACEs and the toxic stress they have created for Jacob, I ensured that he understood his body was triggering a survival response with the potential to make him sick now and throughout his life. He admitted to off and on issues with feeling overwhelmingly sad, with intermittent suicidal ideation without a plan. "I feel okay today, but often at night I begin to have these dark thoughts. …" He examined my reaction to see if he could trust me with this information. "Jacob, I want you to know now, you have permission not to be ashamed by these thoughts or feelings. They sometimes happen as a natural consequence to abnormal circumstances." I reassured him against feeling alone or weak. "Good news, Jacob, today is the beginning of your opportunity to counteract these toxic levels of stress hormones with compassionate self-care."

After I taught him the basics of cognitive behavioral therapy, namely the relationship between events, thoughts, feelings, and behavior/symptoms, he expressed interest in finding personal ways to suppress his stress reaction. He discussed ideas that might work for him, including prayer and getting more involved at church. He declined to meet with a professional therapist, so I invited him to follow-up with me or any other practitioner if so desired. He agreed to reconsider therapy if he found that some of his personal goals showed minimal improvement. I encouraged him to communicate with at least one caring adult in his life about these things.[25]

Considering my original perception of Jacob and my better understanding of the depth of his character, I was reminded of a quote from Cosmos[26]: "Pretending to know everything closes the door to finding out what's really there." Jacob is still working hard with school and athletics, his stomachaches have become less frequent, and he admits to feeling happier.

Case 5: "I'm Okay"

Prescilla, a 14-year-old girl with high blood pressure and tachycardia, arrived with her mother, Mary, to follow-up for these conditions. Her vital signs once again showed a heart rate in the 120s to 130s/min and blood pressure of 130s/80s mmHg. Results of standard laboratory workup had been reassuring on previous visits. Mary remarked that Prescilla tends to be a bit more nervous when visiting a doctor. She had otherwise been healthy. Through our conversation, it was obvious that Prescilla appeared much older and acted much more mature than the average 14-year-old. It was simultaneously apparent she was nervous to be with me. I offered the option to discuss adolescent items with or without her mom present for the adolescent portion of the interview.[21] She quickly responded that she would prefer her mom be in the room during the interview. Prescilla filled out her CYW ACE-Q Teen Self-Report without hesitation. Her score of 8/10, with supplemental 4/9, happens to be the highest score I have assessed in my patients thus far. Mary's assessment of her was a score of 6/10 and supplemental 3/9.

Without revealing which ACEs she was indicating, Prescilla explained to Mary why her score was, in fact, 8/10. "Oh yeah, that's right, I forgot," Mary commented without much emotion. They both acted as though they were normal events. Mary admitted her personal score would be a 5/10 or 6/10, as she offered a dismissive laugh and shoulder shrug. I had interacted with Prescilla's mom just 2 weeks earlier when I met with Prescilla's older brother for an annual physical examination. During that visit, I had taken note of his tachycardia but assumed it was related to nervousness and caffeine consumption; I had not assessed his ACE score. When it became clear this family had faced intergenerational trauma, with admitted ACEs in both mother and child as well as a sibling with unexplained tachycardia, I wondered how they might be functioning to help each other overcome these effects. Prescilla described chronic headaches but said, "I have been told I don't drink enough water." She also described feelings of depression, with little interest in school or social situations. Mother and daughter both assumed ACEs were a part of a normal upbringing.

Prescilla was adamant she did not want or need any help with finding ways to build resilience and overcome the effects of her trauma. It became clear she needed the control, as Perry and Szalavitz[27] describe: "Because trauma at its core is an experience of utter powerlessness and loss of control, recovery requires that the patient be in charge of key aspects of the therapeutic interaction." I still hesitated to conclude the interview and possibly send Prescilla and her mother home to possible intimate partner violence or abuse. "Those things were in the past; we're safe now," they informed me. I spent the last minutes of our interaction describing toxic stress and the ways we can overcome its effects. "I am worried about you, Prescilla, but I want to give you complete control over your own health." I added, "Anytime you feel the need to talk about these things, you can ask your practitioner to be sensitive to the effect of your ACEs. Perhaps in the future, whenever you feel ready, you

The Permanente Journal • For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.

could bring your ACEs up to your practitioner and ask that s/he be a listening ear, and provide professional recommendations for you as needed." Mary began to agree that talking through these things might help Prescilla feel safe, have fewer headaches, and find personal means for self-care. Prescilla remained uninterested.

Having at least done my part to listen, accept, and educate, I reassured myself I did all I could. I hope to this day that Prescilla and her family are finding ways to build resilience and end the intergenerational cycle.

Case 6: "Thank You for Doing This"

Theresa, a 6-month-old female infant, arrived with her mother, Adriane, for a well-child checkup. Adriane denied any concerns at the time. According to her report, Theresa was developmentally appropriate with normal findings of the physical examination. I told Adriane, "I want to discuss the Adverse Childhood Experience questionnaire you filled out in the waiting room." I said, "Although Theresa is young, it is important you can have the following conversation with her pediatrician as needed." I explained the scientific findings from the original ACE study and the consequent research that allow us to understand the mechanism to chronic illness, with the good news that the effects can be mitigated and reversed. Through use of the ACE-Q Child,[22] Adriane documented a score of 1/10. With tears in her eyes, she commented, "Thank you for doing this." Adriane explained that shortly after Theresa's birth she had been struggling with postpartum depression. She did not want Theresa to have to deal with mental illness in the home, as she had to in her younger years.

I asked, "Do you feel like you can talk to your husband about these things?"[28] "Yes, he is a good man, and I've been feeling better over the past couple months." After she asked me how she could prevent her own history of ACEs from affecting her mothering, I discussed the importance of self-care and removing any lingering shame or guilt. She admitted to herself that she was doing the best she could. She was relieved to know that acknowledging her struggles with postpartum depression, as well as a childhood that included her own ACEs, was the beginning of her recovery.

As with most moms, I offered her daily goals in which she could compassionately gauge her mothering through use of the acronym HEART (Hug, Engage, Ask questions, Read to, Talk to).[29] These 5 basic measures were sure to accelerate Theresa's neurodevelopment and increase levels of bonding between her and Adriane, but can also, when onerous to initiate or perform, be used as a measure for Adriane to understand she may need further professional health services. "I really appreciate your trusting me with this information. I can tell you now, you are doing such a great job as Theresa's mom, and I am assured she is part of a family that loves her and wants what's best for her." I then described the importance of building resilience so that whatever adversity she may face, Theresa will be able to bounce back and know she is loved no matter what. Additionally, I discussed the importance of open communication for the entire family, so that if an ACE happens in Theresa's life, they can move forward as a family. She thanked me again for asking these important questions, having this discussion, and offering her encouragement.

We know, through follow-up, that Theresa continues to develop appropriately. Adriane denies current symptoms of depression, expressing joy with motherhood despite normal parental challenges.

Case 7: "Her Personality is Gone"

Lizzie, an 8-year-old girl with a diagnosis of ADHD, was accompanied by her mother, Katie, who wanted to discuss "changes to her medication." Lizzie's ADHD was diagnosed when she was 6 years of age, and varying doses of stimulant medications were tried. She was at her maximum dose, and Katie was still worried about her. "She shuts down quickly, and it's like her personality is gone." Lizzie was indeed almost without emotion, sitting perfectly still as if exhausted. I looked at Lizzie, introduced myself, and offered to shake her hand. She hesitated, but shook my hand with a reserved smile. Her mom continued to describe her sadness and frustration: "Her teacher says she's failing and may have to repeat this year. She takes a long time to go to sleep and gets really nervous when asked to do something. She doesn't eat much and has lost weight. I am so worried."

Having been trained to consider all causes for symptoms of ADHD, especially trauma, I began to ask the important TIC questions. Katie answered, "Yes, we don't talk about it much anymore, but Lizzie was molested by my brother, now in prison, when she was 5. I've been so angry with myself. I was also molested when I was little … swore I would never let it happen to my kids, and I feel like I failed to protect her." With tears in her eyes, Katie continued, "I still haven't gotten over her dad's death." I leaned in, with affirmative body language and prompted, "Please keep going." Katie explained that Lizzie's dad died during a military deployment and that life has been incredibly difficult for them. "I'm not even sure how to show love; my childhood was crap."

I was silent, knowing that some of the most important times to allow for silence are between episodes of a patient's and/or the parents' thoughts. TIC offers a compassionate approach in communicating with all patients and their parents or guardians. Ultimately, we know little of what our patients have suffered; still we have the opportunity to listen, acknowledge, and accept their suffering. This is the beginning of a therapeutic interaction.

Katie told me she tried to take Lizzie to a therapist, but it did not last because Lizzie did not want to discuss the events. "Do you think all this stuff is what has caused her ADHD?" her mom asked. I responded by telling Katie that childhood trauma and ADHD can present with very similar symptoms.[30] I reassured her we could now better understand why Lizzie struggles the way she does, and consider ways we could help her through these difficult times. Lizzie looked to her mom, as if in awe, or even sad, that Katie was crying. I reassured Katie that Lizzie did not have to talk about the specific details of her ACEs. "Sometime in the future, her body and mind will be more ready to process these things. Until then, continue to love her and support her as you're doing. May I offer some advice?" Her mom replied eagerly, "Yes, please." I suggested, "Find ways the 2 of you can work together on reducing stress reactions within your bodies." I explained the fight, flight, or freeze mechanism as a means of survival our bodies employ, in relation to behavior.[6,8,10]

 The Permanente Journal • For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.

From what Katie described to me, it was clear both of them continued to experience a toxic level of this mechanism. I said, "I think perhaps her being overwhelmed consequent to toxic stress prevents her from concentrating and feeling safe during stressful, although safe situations, such as being quizzed at school." As I spoke without judgment, I hoped Katie began to understand that her levels of worry and anxiety about her own childhood, the loss of her husband, and the trauma that Lizzie has faced were perhaps making it harder for them to heal. I did not have to say much before she resolutely stated, "I think sometimes my anxiety, depression, and stress really affect her." How remarkable that Katie was able to put this together. "I think you may be right." Katie sounded more confident when agreeing to work on reducing stress and "taking better care" of herself. I continued, "I also think it's important her school conduct a psychoeducational analysis. They might better be able to know why she struggles in the classroom." We agreed on a treatment plan, which included adjusting medications with a trial of long-acting clonidine (Kapvay) for addressing symptoms of ADHD and which some practitioners also use in children with a history of toxic stress.[27] I then offered resources for both of them, and continued encouragement in their challenges.

At subsequent meetings, Katie excitedly said, "My daughter is back!" The therapist they now regularly see knows not to force a discussion in which Lizzie is not ready to process. The school found that Lizzie has substantial dyslexia and implemented an individualized education program for her. She continues to follow-up regularly in our clinic.

Research shows that "the parent's trauma becomes the child's own and [the child's] behavioral and emotional issues can mirror those of the parent."[24,31] Lizzie's case adds witness to the importance of asking the tough questions of ACEs/trauma history, to prevent perpetually putting a bandage on a bleeding wound. Lizzie is excelling, although still working through her struggles. She is gaining weight and sleeping better while receiving medications better suited to address her overwhelming symptoms. Katie gets frustrated with Lizzie's behavior and recently asked for help in knowing how to discipline Lizzie. She no longer wants to spank her, knowing it is not a recommended form of discipline.[32] Lizzie is improving in reading and comprehension skills, and she is able to express the full range of childhood emotion.

Case 8: "We Want Him to Have a Better Childhood than We Did"

Max, a healthy 2-year-old boy, visited the clinic for his 2-year well-child checkup. The only concern shared by his parents, Dan and Jess, was a mild eczematous rash on his arms and legs. They filled out Max's ACE score as a 0/10 and supplemental 0/7. "We've never seen this form, but it seems important." I responded, "I screen my patients for any potential adverse events that have been shown to contribute to lifelong health. It gives me a better idea of any possible risk factors that should be addressed early on." They looked at each other as if deciding which of them would like to speak first. It turned out they had had a long discussion with each other while filling out the form in the waiting area. "Honestly, doctor, we worry a lot about how to raise him. Neither of us was shown how to love," Dan said and paused with a sense of sadness. I nodded to let him know I was listening. "We don't want anything bad to happen to him, and we don't want to fail him. If we were to fill this form out for us, our numbers would be a lot different! We want him to have a better childhood than we did."

Max's parents recently moved here for work. They did not have family close by, nor had they made many friends since their move. After they admitted they were not sure whom they could call in times of need, I asked if I could make a recommendation. "If you attend a religious group, I encourage you to get involved.[33] You could also join the local YMCA and other such community organizations where you might be able to meet friends and make connections. One of the most important things I recommend for all of my families is to have a connection to their community.[8] This contributes to Max's and your resilience, and, of course, with having help whenever needed." They agreed and were hopeful.

I then took the opportunity to commend them on striving to prevent intergenerational transmission of ACEs. I informed them that their being mindful of how their own childhood history might be affecting them, and finding personal ways to heal together, is already effectively preventing their ACEs from adversely defining their relationship with Max. There is much more that can be done to help adults end the cycle of intergenerational trauma.[34] Incorporating mind, body, and spirit, I encouraged them to nurture their sense of meaning and purpose in the community and to help Max do the same in the future. According to Perry and Szalavitz,[27p260] "[H]ealing and recovery are impossible—even with the best medications and therapy in the world—without lasting, caring connections to others."

Case 9: "His Mom Seems Angry about the Questionnaire"

I will never forget the day I met Christopher and his family. My hard-working nurse helped give the ACE questionnaire, and she warned me that the patient's mom seemed angry about it. "Right now, she's in with her daughter, who is seeing a different doctor," she told me. Reviewing my past positive experiences with implementing TIC, I prepared myself for any possible type of conversation as I walked toward the clinic room Christopher was in.

Christopher, a healthy-appearing 16-year-old boy, was there for his annual visit. I made sure his mom would be joining us soon. "Yeah, whenever Tonia's done," he said quietly, referring to his sister. He did not seem nervous but was perhaps a little unsure about what to expect. "I am glad to meet you. What brings you in today?" "Well, I guess I need to get a check-up," he said and began to make eye contact with me.

After asking the standard developmental health questions, I began the adolescent portion of the patient's history. "Christopher, please tell me what your greatest strength is. What are you most proud of within yourself?" "I don't know, I've never really thought of that before." After I gave him time, even some prompting, he said, "Well, I really like sports." "Yes, that's very impressive, and it requires a lot of work to excel in sports. You strike me as a hard worker. But what is a unique characteristic that others close to you can rely on you for?" He was not alone, because most adolescents struggle to immediately answer this question. However, he began to understand. "I am dedicated!" After challenging him

The Permanente Journal • For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.

to consider his strengths on a regular basis, I encouraged him to draw on his strengths when faced with difficult things. I learned his friends were doing drugs, and sometimes he accepted their invitation to experiment. His grades had been declining, and he sometimes got into trouble at school. He sometimes felt sad but denied overwhelming feelings of depression or suicidal ideation. "I don't know. I guess sometimes life doesn't seem worth it, but then I'm okay again." It was not until we discussed his CYW ACE-Q Teen Self-Report that I began to understand.

At this point, his mom, Julia, and older sister, Tonia, walked into the room. Surprisingly, Julia seemed happy and curious to meet me. After introducing myself to Christopher's family, I said, "I was just about to explain why I screen for adverse childhood experiences, or ACEs." I held up the questionnaire and asked, "What questions might you have about ACEs?" With weary eyes, she quickly responded, "I'm wondering why my daughter wasn't given the same form to fill out. This kind of stuff is important for me to talk [about]. … I have wanted to talk to my kids about … what happened…, but I don't know how to."

"Well, not all pediatricians routinely ask these questions of their patients. Many practitioners are still learning about ACEs." After I took the time to explain the clinical significance of assessing for these events and the great news that we understand how to better prevent, mitigate, and potentially reverse their effect on us, she became excited. "I had a s*** childhood. I swore to myself my kids would never have to go through it. But …" As her tough exterior began to soften, she sat forward and wiped away tears. Julia proceeded to explain that while she was sent on a military deployment, Christopher and Tonia were in the care of her now ex-husband, where "terrible things happened." There was a long pause as all 3 of us waited for her to continue. "I have blamed myself every f***ing day for what happened to them while I was away. Now I just have to live with it. My kids are trying to spare me by trying to be tough about it." She turned to them and said, "But you guys don't have to be tough. I'm here for you." Christopher was motionless, but I noticed a tender look in his eyes as he gazed at his mother. Tonia began to cry.

The remainder of our conversation was transformative for all of us. The vulnerability expressed in that moment exhibited the power to positively alter the course of this family. The pain I felt for both Julia and her 2 children, likewise, allowed me to have access to the true art of healing in the pediatric setting. I encouraged each of them to find their personal and collective means of healing, emphasizing that each of them need not discuss the traumatic details before s/he was ready. "Because of what we just experienced, right here and now, you are already beginning to heal." The amount of love felt in that room will forever be in my memory. Knowing that the unique stressors of military life have been linked with high rates of mental illness,[35] I offered resources aimed to promote their resilience.

As I concluded our time together, I told Julia, "If you would like to, I suggest you bring up ACEs to your personal doctor, and any future doctor Christopher and Tonia will see. They may not fully know about the lifelong health effects of ACEs, but I am confident they will then want to read up on it."

In my experience, most parents want to talk about ACEs, even their own history. Starting trauma-informed discussions with families, in an environment of trust, is how a family can begin the intent to prevent intergenerational transmission of childhood trauma and help guide their children through this difficult world. Ultimately, practitioners can empower families by encouraging them to initiate these conversations with their health practitioners—education from the ground up.

CHALLENGES OF USING TRAUMA-INFORMED CARE IN CLINICAL ENCOUNTERS

Since the original publication of the ACE Study[3] in 1998, there has been slow and lingering progress in screening for ACEs and implementing TIC as a standard for all practitioners. Many objections have been brought up, such as "I don't know what can of worms might be opened," or "I wasn't trained to be a therapist." Many practitioners lack sufficient time to devote to their patients to discuss such important topics. We regularly encounter other systemic issues with lack of access to appropriate services and an administrative pressure focused on reimbursement. Practitioners spend countless hours training in medical and scientific settings but often feel ill-equipped to implement TIC. Some remain unaware of how to incorporate body language, motivational interviewing, and good "bedside" manner into the visit to gain patients' trust to share intimate, personal information. Families can sometimes present with abrasive and confrontational interactions. Even the uncertainty of how some of our patients and/or their parents may react to being asked about a traumatic childhood can prevent us from initiating the discussion.

Case 10: "It's All a Conspiracy"

It was not surprising when the appointment with Charlotte quickly turned negative. The 14-year-old arrived with both parents, Brian and Carol, to follow-up for a recent sports injury. Brian later revealed he worked in radiology, after quizzing me on what I was seeing on the radiography of his daughter's wrist. In retrospect, I realize it was an opportunity for him to covertly assess my proficiency as a health care practitioner. Sometimes the power differential between physician and patient might trigger a subconscious stress reaction in some families. Charlotte was homeschooled and did not really have a group of friends she was allowed to spend time with. I invited Brian and Carol back into the examination room after the adolescent portion of the interview[21] and after Charlotte completed her ACE-Q Teen Self-Report (score 1/10 and 1/9 supplemental). Her parents handed me their blank questionnaire. Perhaps wanting me to react, Brian started yelling, "We looked up this questionnaire of yours. We don't associate ourselves with anything that comes from California. It's all a conspiracy from those d*** liberal Democrats trying to tell me how to raise my kid." Charlotte tensed up and was clearly uncomfortable as her father turned red in the face. "Dad, please don't."

Giving him time to speak his mind, and despite being astounded at his audacity, I tried to remain calm. I explained why I choose to screen my patients for these life-altering events. All

The Permanente Journal • For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.

I could do at that point was reinforce the scientific evidence that our lifelong health is largely determined by what happens in the developing years.

There certainly may be an explanation for the pain Brian was speaking from. Nevertheless, some of the dysfunctional lives our patients may lead can be revealed through difficult encounters such as these. Children are at risk when families are in social isolation. Deleterious fear of "the other" and political extremism can often be a symptom of one's own personal pain and a history of trauma.[36]

Case 11: "You're Just Trying to Get Me in Trouble"

"Alarming" is how to describe the encounter with Damien and his family. "You're just trying to get me in trouble; look at you, you're too stupid to even know what you're talking about," Damien's father, Bryce, yelled at the child's mother, Sarah. Damien, an 11-year-old with intellectual disability, autism spectrum disorder, ADHD, and "behavioral issues," began to slump his shoulders and look down at his feet with apprehension. Bryce admitted he did not normally come to Damien's medical appointments but wanted to that day. Struggling with alcoholism and recently released from a short prison stay, he said, "I may not be a perfect father, but she won't let me be." We discussed how the family had been living in and out of various hotels during the last year and a half. Sarah sat silently and looked to me to help calm the atmosphere in the air. "Sir, no one is trying to get anyone in trouble," I said as I remained in my seat. "What this questionnaire does tell me is that your son has faced a considerable amount of difficult circumstances. We all want to ensure his safety and his health." He quickly responded, "I am not a bad guy. She keeps on trying to blame me for our s***." "I am not doing any such thing," Sarah said before explaining to me they are in the process of a divorce. Bryce continued to raise his voice and emotionally and verbally abuse Sarah. As his voice continued to escalate, I began to worry how far his anger would take him.

Perhaps miraculously, I found a way to acknowledge his frustration and talk him down from his place of irrational pain. "What kind of help are you seeking as a family?" I asked. Sarah admitted to regularly seeing a therapist, but Bryce refused to "believe in that kind of crap." I tried to steer this interaction toward the most important person in the room, the boy who might not fully understand why but certainly sensed a persistent state of fear and anger between his caregivers. Perhaps Damien felt like it was his fault because he was not like other kids. "Because I care for Damien and I understand how difficult these times are for all of you, I would like to make a suggestion. May I?" I held my breath while waiting for his parents' response. Sarah responded in the affirmative, and Bryce said, "Sure, go ahead." I discussed going to couple's therapy and found out that Bryce was not interested when Sarah had invited him to do so. "Bryce, again, because I am concerned for the health of Damien, I am going to challenge you to attend therapy with your wife, so at the very least you can both learn skills to communicate with each other and your children. This will help reduce times of toxic stress, which we can all see Damien is experiencing right now in this room." I added, "Right now, sir, I am feeling incredibly stressed as if you might hurt anyone in this room. I am confident you don't want Damien to feel like that whenever you come around." I prayed I had not crossed some kind of line. Bryce looked at Damien, who remained quietly withdrawn, and said, "Okay, I'll do it."

This interview could have gone in a dozen different directions, but after I implemented TIC, the family agreed to move forward on a path with a higher chance of a bright future. I hope both parents consider the lifelong consequences their strife will likely have on Damien. Always in the best interest of a patient's safety, each practitioner strives to apply the most meaningful therapeutic intervention. Sometimes the most memorable training comes through having to think fast. There are often times with no obvious right answer but rather painful moments ripe for important interventions.

Case 12: "I Have Control Issues"

After she refused the 2 needed vaccines for 12-year-old Hugh and complained about the last several pediatricians' clinical decision making, Hugh's mother, Stephanie, asked me about the ACE questionnaire, "Why exactly are you doing this?" A medical chart review had revealed the challenges of his mom's dissatisfaction with medical care. Despite Stephanie not responding to the clinical justification for all vaccinations, I proceeded with the science behind ACEs and their risk to lifelong health. Because her approach to me was abrasive, I was unsure how the encounter might turn out. I started to think perhaps this very scenario was one reason many practitioners hesitate screening for ACEs. Touching on the intergenerational transmission of ACEs and their effect on parenting, a child's behavior, and chronic illness, even incorporating data from epigenetics,[7] I noticed something changing in Stephanie's body language. She relaxed, took a deep breath, looked directly at me and said, "Wow, thank you. This explains a lot of my own childhood."

This had happened in encounters before—the ideal opportunity for parents to let something out, seemingly something they formerly did not know they could. I took the opportunity to ask her, "How have your ACEs affected your life?" She replied, "I had a terrible childhood, with a lot of these [ACEs]. I work so hard to prevent Hugh from going through that stuff. I have control issues, I know; but I absolutely refuse to let my son suffer like I did."

As a practitioner and professional, I began to see Stephanie in an entirely different paradigm. "I support you in your efforts to love, nurture, and protect your son. Now might be the opportunity for you to know the adversity you faced as a child was not your fault. You have permission to be gentle on yourself while you continue to move forward."

Equipped with scientific knowledge and confidence in understanding the importance of TIC, practitioners can understand that parents can, although sometimes misunderstood, be empowered through advocating for their child. A practitioner will certainly have to undergo emotionally draining and challenging experiences with certain parents before s/he can better understand them.

CHILDHOOD EMOTIONAL NEGLECT

As depicted in many of the preceding cases, it is fundamental to consider childhood emotional neglect in every patient encounter. Physical and sexual abuse is found when something was done that should not have happened, but it is often very difficult for practitioner and patient alike to recognize when something is not there, which normally and naturally should be. Childhood emotional neglect is an often under-recognized and insidious detrimental form of childhood trauma that has lasting and lingering effects on its survivors. Referring to childhood emotional neglect as "the Invisible Force" and with a fundamental caution to not "shame parents or make parents feel like failures," Webb and Musello[37] clearly detail that "whatever the level of parental failure, emotionally neglected people see themselves as the problem, rather than seeing their parents as having failed them."

Sometimes even well-intentioned caregivers do not fully comprehend the effect of not responding with nurture and reassurance, as nature would have us do. Pediatricians may see signs of it in a 15-minute clinical interaction if they know to look for it. If childhood emotional neglect is suspected, pediatricians should demonstrate validation, support, and emotional reciprocity for the parents to see. A simple measure every pediatrician should adopt in every clinical encounter is properly acknowledging the important role of emotions by using language that validates emotion, be it anger, sadness, or joy, and by supporting the role of healthy supportive language with the patient. Examples are "Today you seem sad. Are you sad? That's okay, sometimes I feel sad too. It can be an important emotion to help me understand things differently" … or "We all feel angry sometimes, and that's okay. We just have to make sure we don't act poorly in our anger."

DISCUSSION

The work between a practitioner and a patient is a sacred trust. It demands our time, our emotion, our sensitivity, and potentially a consideration of our own history of trauma.[10,38] Parents and their children may be willing to be vulnerable with a pediatrician if they believe there is hope. Although some practitioners may hesitate in implementing TIC into their practice out of concern for "opening up a can of worms" or not having adequate time to address such important issues, consideration should be made for 2 fundamental truths. First, research suggests the adverse lifelong effects to the mind, body, and spirit of not addressing ACEs. Second, to improve the status quo, practitioners can implement universal screening for trauma and adversity that incorporates ACEs and TIC research standards and practices to equip patients to discuss these issues openly in their families and with practitioners.

Future research implications are plentiful. It would be important to contrast pediatric residents who received training in TIC and screening for ACEs in how their future practice differs from peers who did not. Will they find more efficacy and satisfaction in their work? Will they become more equipped to have difficult conversations with their patients and/or patients' parents? Will they be more efficacious in therapeutic techniques aimed at reducing patients' health risk behavior? Future prospective studies could also include looking at intervention vs control group (screened for and referred for ACEs using TIC vs no intervention) and look for uptake of referrals and long-term outcomes.

Limitations for this series include small sample size, possible lack of generalizability, and potential bias in the patients' or parents' responses (eg, under-reporting of ACEs, with some respondents not wanting to be considered burdensome to the physician). It can be a challenge for pediatricians to fully understand how events have altered a patient's life within the time constraints of an appointment. It is often necessary for pediatricians to learn how to ask the "right" questions to ensure they have the full picture.

Pediatricians must therapeutically ask, "What happened to you?" rather than the easily billable "What's wrong with you?"[4,10,12] In the absence of a TIC framework, patients may be uncomfortable addressing ACEs. The status quo may create an environment in which patients are not provided sufficient time to address personal and sensitive questions regarding ACEs. Current practices often involve overworked practitioners who may appear to be glued to the computer screen.

Helping colleagues relate to the importance of TIC is perhaps the greatest opportunity for the medical trainee. Differing attitudes among health care colleagues may largely be indicative of 1) knowing vs not knowing their own ACE score and the importance of asking their patients about their childhood trauma and 2) understanding vs not understanding the impact of ACEs on their own lives and being able or unable to empathize with their patients' lived experiences of trauma.[10] By implementing formal training on ACEs and TIC in graduate health programs, especially when a trainee considers his/her own ACEs, trainees will better understand the scientific and clinical significance of lifelong effects of patients' traumatic histories.[38]

We propose that graduate health programs use the following 9 professional competencies, as developed by some TIC proponents, which are in the process of rigorous development and evaluation.[39] These can and should be implemented in every graduate health training program:

1. Understand the nature and prevalence of trauma
2. Implement patient-centered communication and care
3. Understand the neurobiology of trauma
4. Understand the health effects of trauma
5. Implement interprofessional collaboration
6. Consider practitioner's personal history and trauma history
7. Integrate peers with lived experiences
8. Advocate for system change
9. Screen for traumatic events when appropriate.

Best practices suggest that pediatricians apply what is known about the science of ACEs, toxic stress, and maladaptive behaviors, as well as increase connection and resilience for all patients. Perry and Szalavitz[27p260-1]write in their book, *The Boy Who Was Raised as a Dog*:

> *What maltreated and traumatized children most need is a healthy community to buffer the pain, distress and loss caused by their earlier trauma. What works to heal them is anything that increases the number and quality of a child's relationships. What*

The Permanente Journal • For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.

helps is consistent, patient, repetitive loving care. … Because healthy communities themselves are often what prevents interpersonal traumatic events … from occurring in the first place, the breakdown of social connection that is common in our highly mobile society increases everyone's vulnerability .… [W]e need to build a healthier society.

Practitioners must set reasonable expectations when working with families, to prevent professional burnout. Acknowledging that some families may remain dysfunctional, despite one's best efforts, frees practitioners from assuming responsibility for possible vicarious traumatization. Resilience is important to consider for both the patient *and* practitioner. Indeed, clinical interactions can be largely influenced by a practitioner's own trauma history. Recognizing the signs of professional burnout and vicarious traumatization and prioritizing good self-care are fundamental for the healer.[17] Pediatricians empower themselves to be healers when, during clinical encounters, they are willing to feel and be vulnerable in moments of sadness and stress.

CONCLUSION

Starting the conversation of childhood trauma is often what must happen for patients and parents to process connections of childhood trauma to current health problems. Attainment of such awareness can set families on a trajectory of emotional and physical healing. In a clinical framework that considers contributing factors that adversely affect sensitive years of development, all practitioners should echo the words of Felitti and Anda: "Gradually, we came to see that asking, listening, and enabling a patient to go home feeling still accepted, is in itself a major intervention. The clinical practice of asking, listening, and accepting is doing."[40] Medical practitioners are in a position to guide families toward the healing process when childhood trauma is considered a cause of developmental and behavioral issues. Not all children presenting with these issues have childhood trauma as the cause of their problems. Nevertheless, approaching pediatric patients with a developmentally sensitive framework of TIC helps ensure the development and well-being of these children.[1,10-12,14,15,41] ❖

[a] Michael Meaney, who evaluated newborn rat pups and their mothers, conducted one such important study. According to van der Kolk,[13] "He discovered that how much a mother rat licks and grooms her pups during the first 12 hours after their birth permanently affects the brain chemicals that respond to stress—and modifies the configuration of over a thousand genes."

[b] The CYW and partner primary pediatric care clinic, the Bayview Child Health Center (BCHC) in San Francisco, CA, have been screening youth for ACEs using a modified ACEs screening questionnaire, the CYW ACE-Q, since 2014. The practice and the aforementioned questionnaire have been studied and reviewed.[42]

Disclosure Statement

The author(s) have no conflicts of interest to disclose.

Acknowledgments

We thank the interprofessional group Trauma-Informed Health Care Education and Research (TIHCER) for collaborating on delivering trauma-informed care, specifically Ellen Goldstein, MD (University of Wisconsin School of Medicine and Public Health), and Martina Jelly, MD (University of Oklahoma School of Community Medicine), for technical and language editing; Sheela Raja, MD (University of Illinois at Chicago), for permission to use the trauma-informed care pyramid and the 9 professional core competencies; as well as Shairi Turner, MD (Florida Department of Health), and Michelle Hoersch, MS (US Department of Health and Human Services, Office of Women's Health), for permission to use the 9 professional competencies.

Kathleen Louden, ELS, of Louden Health Communications performed a primary copy edit.

Disclaimer

The views expressed herein are those of the author(s) and do not reflect the official policy or position of Brooke Army Medical Center, the US Army Medical Department, the US Army Office of the Surgeon General, the Department of the Army, the Department of the Air Force, or the Department of Defense or the US Government.

How to Cite this Article

Strait J, Meagher S. Trauma-informed care in pediatrics: A developmental perspective in twelve cases with narratives. Perm J 2020;24:19.045. DOI: https://doi.org/10.7812/TPP/19.045

References

1. Bloom S. The change that rocks the world [Internet]. Philadelphia, PA: The Sanctuary Model; 1985-2019 [cited 2019 Nov 20]. Available from: www.sanctuaryweb.com/Portals/0/2016%20PDFs/Change%20that%20rocks%20the%20world%20NCAR.pdf.
2. Voigt RG, Macias MM, Myers SM, Tapia CD, editors. AAP developmental and behavioral pediatrics. 2nd ed. Itasca, IL: American Academy of Pediatrics Section on Developmental and Behavior Pediatrics; 2018.
3. Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. Am J Prev Med 1998 May;14(4):245-58. DOI: https://doi.org/10.1016/s0749-3797(98)00017-8.
4. Felitti VJ. Origins of addictive behavior: Evidence from a study of stressful childhood experiences [German]. Prax Kinderpsychol Kinderpsychiatr 2003 Oct;52(8):547-59.
5. Shonkoff JP, Garner AS, American Academy of Pediatrics Committee on the Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care and Section on Developmental and Behavioral Pediatrics, et al. The lifelong effects of early childhood adversity and toxic stress. Pediatrics 2012;129:e232-46. DOI: https://doi.org/10.1542/peds.2011-2663.
6. Bucci M, Marques SS, Oh D, Harris NB. Toxic stress in children and adolescents. Adv Pediatr 2016 Aug 1;63(1):403-28. DOI: https://doi.org/10.1016/j.yapd.2016.04.002.
7. Meaney MJ, Ferguson-Smith AC. Epigenetic regulation of the neural transcriptome: The meaning of the marks. Nat Neurosci 2010 Nov;13(11):1313-8. DOI: https://doi.org/10.1038/nn1110-1313.
8. Ginsburg KR. Building resilience in children and teens: Giving kids roots and wings. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015:164.
9. Koita K, Long D, Hessler D, et al. Development and implementation of a pediatric adverse childhood experiences (ACEs) and other determinants of health questionnaire in the pediatric medical home: A pilot study. PLoS One 2018 Dec 12;13(12):e0208088. DOI: https://doi.org/10.1371/journal.pone.0208088.
10. Burke Harris N. How childhood trauma affects health across a lifetime [Internet]. New York, NY: TED Conferences LLC; 2014 Sep [cited 2019 Feb 02]. Available from: www.ted.com/talks/nadine_burke_harris_how_childhood_trauma_affects_health_across_a_lifetime.
11. Testimony of Sandra L Bloom, MD. Prepared for Attorney General's National Task Force on Children Exposed to Violence. Defending childhood: Protect, heal, thrive. Public hearing no. 4. Detroit, MI: Wayne State University; 2012 Apr 24.
12. The medical home approach to identifying and responding to exposure to trauma [Internet]. Elk Grove Village, IL: American Academy of Pediatrics; 2014 [cited 2019 Aug]. Available from: www.aap.org/en-us/Documents/ttb_medicalhomeapproach.pdf.
13. van der Kolk BA. The body keeps the score: Brain, mind, and body in the healing of trauma. New York, NY: Penguin Books; 2014.
14. Bloom SL. The Sanctuary Model: Developing generic inpatient programs for the treatment of psychological trauma in handbook of post-traumatic therapy. In: Williams MB, Sommer JF Jr, editors . A practical guide to intervention, treatment, and research. Westport, CN: Greenwood Publishing; 1994.
15. Harris M, Fallot RD. Envisioning a trauma-informed service system: A vital paradigm shift. New Dir Ment Health Serv 2001 Spring;89:3-22.
16. US Center for Substance Abuse Treatment. Chapter 3: Understanding the impact of trauma [Internet]. In: Trauma-informed care in behavioral health services. Treatment Improvement Protocol (TIP) series, no. 57. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2014 [cited 2019 Aug 12]. Available from: https://www.integration.samhsa.gov/clinical-practice/SAMSA_TIP_Trauma.pdf.

The Permanente Journal • For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.

17. Raja S, Hasnaian M, Hoersch M, Gove-Yin S, Rajagopalan C. Trauma informed care in medicine: Current knowledge and future research directions. Fam Community Health 2015 Jul-Sep;38(3):216-26. DOI: https://doi.org/10.1097/fch.0000000000000071.
18. Ginsburg KR. Engaging adolescents and building on their strengths. Adolesc Health Update 2007;19(2):1-8.
19. Spitzer RL. Patient Health Questionnaire: PHQ. New York, NY: New York State Psychiatric Institute; 1999.
20. Spitzer RL, Kroenke K, Williams JB, Lowe B. A brief measure for assessing generalized anxiety disorder: The GAD-7. Arch Intern Med 2006 May 22;166(10):1092-7. DOI: https://doi.org/10.1001/archinte.166.10.1092.
21. Klein DA, Goldering JM, Adelmann WP. HEEADSSS 3.0: The psychosocial interview for adolescents updated for a new century fueled by media. Contemp Pediatr 2014 Jan 1:16-28.
22. Burke Harris N, Renschler T. Center for Youth Wellness ACE-Questionnaire (CYW ACE-Q Child, Teen, Teen SR) , version 7/2105. San Francisco, CA: Center for Youth Wellness; 2015
23. Victor SE, Hipwell AE, Stepp SD, Scott LN. Parent and peer relationships as longitudinal predictors of adolescent non-suicidal self-injury onset. Child Adolesc Psychiatry Ment Health 2019 Jan 3;13:1. DOI: https://doi.org/10.1186/s13034-018-0261-0.
24. Schickedanz A, Halfon N, Sastry N, Chung PJ. Parents' adverse childhood experiences and their children's behavioral health problems. Pediatrics 2018 Aug;142(2):e20180023. DOI: https://doi.org/10.1542/peds.2018-0023.
25. Wenger S. Just one caring adult [Internet]. Kensington, MD: National Association for Children of Addiction [cited 2019 Feb 3]. Available from: https://nacoa.org/just-one-caring-adult/.
26. Druyan A, Soter S. Unafraid of the dark. 13th episode. In: Cosmos: A spacetime odyssey [television series]. Los Angeles, CA: Twentieth Century Fox Home Entertainment Ltd; 2014.
27. Perry BD, Szalavitz M. The boy who was raised as a dog: And other stories from a child psychiatrist's notebook—What traumatized children can teach us about life, loss, love and healing. Rev ed. New York, NY: Basic Books; 2017.
28. Montgomery P, Bailey P, Purdon SJ, Snelling SJ, Kauppi C. Women with postpartum depression: "My husband" stories. BMC Nurs 2009 Sep 5;8:8. DOI: https://doi.org/10.1186/1472-6955-8-8.
29. American Osteopathic Association, in partnership with the Erikson Institute. The HEART Initiative. Early childhood development education modules [Internet]. 2016 [Cited 2019 Aug 29]. Available from: https://osteopathic.org/practicing-medicine/providing-care/early-childhood-development-modules/.
30. Siegfried CB, Blackshear K. National Child Traumatic Stress Network, with assistance from the National Resource Center on ADHD: A program of Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD). Is it ADHD or child traumatic stress? A guide for clinicians. Los Angeles, CA and Durham, NC: UCLA-Duke University National Center for Child Traumatic Stress; 2016.
31. Sack D. When emotional trauma is a family affair: Trauma, once experienced seems to never want to let go [Internet]. Psychol Today 2014 May 5 [cited 2019 Aug 21]. Available from: www.psychologytoday.com/us/blog/where-science-meets-the-steps/201405/when-emotional-trauma-is-family-affair.
32. Sege RD, Siegel BS; Council on Child Abuse and Neglect; Committee on Psychosocial Aspects of Child and Family Health. Effective discipline to raise healthy children. Pediatrics 2018 Dec;142(6):e20183112. DOI: https://doi.org/10.1542/peds.2018-3609.
33. Koenig HC. Religion, spirituality, and health: The research and clinical implications. ISRN Psychiatry 2012;2012:278730. DOI: https://doi.org/10.5402/2012/278730.
34. Nakazawa DJ. Childhood disrupted: How your biography becomes your biology, and how you can heal. New York, NY: Atria Books; 2015.
35. Huebner CR; Section on Uniformed Services, Committee on Psychosocial Aspects of Child and Family Health. Health and mental health needs of children in US military families. Pediatrics 2019;143(1):e20183258. DOI: https://doi.org/10.1542/peds.2018-3258.
36. Brown B. Braving the wilderness: The quest for true belonging and the courage to stand alone. New York, NY: Penguin Random House; 2017.
37. Webb J, Musello C. Running on empty: Overcome your childhood emotional neglect. New York, NY: Morgan James Publishing; 2014.
38. Strait J, Bolman T. Consideration of personal adverse childhood experiences during implementation of trauma-informed care curriculum in graduate health programs. Perm J 2017;21:16-061. DOI: https://doi.org/10.7812/TPP/16-061.
39. Turner S, Raja S, Hoersch M. Nine professional competencies. Paper presented at: Academy on Violence and Abuse Global Health Summit; 2018 Nov 29-30; Tallahassee, FL.
40. Felitti VJ, Anda RF. The lifelong effects of adverse childhood experiences. In: Chadwick DL, Giardino AP, Alexander R, Thackeray JD, Esernio-Jenssen D, editors. Chadwick's child maltreatment: Sexual abuse and psychological maltreatment. Vol 2. 4th ed. Florissant, MO: STM Learning, Inc; 2014. p 203-15.
41. Felter J, Ayers L; Philadelphia ACE Task Force Workforce Development Workgroup. Toolkit: Incorporating trauma informed practice and ACEs into professional curricula [Internet]. Philadelphia, PA: Philadelphia ACE Project [cited 2019 Aug 12]. Available from: www.philadelphiaaces.org/resources/toolkit-incorporating-trauma-informed-practice-aces-professional-curricula#overlay-context=resources/slide-deck-incorporating-trauma-and-aces-information-curricula.
42. Purewal K, Marques SS, Koita K, Bucci M. Assessing the integration of the Center for Youth Wellness Adverse Childhood Experiences Questionnaire (CYW ACE-Q) in a pediatric primary care setting. Adolesc Health 2016:58(2)S47. DOI: https://doi.org/10.1016/j.jadohealth.2015.10.106.

The Permanente Journal • For personal use only. No other uses without permission. Copyright © 2019 The Permanente Press. All rights reserved.