Trauma Informed Care: Practical Application for Pediatric-Focused Advanced Practice Registered Nurses

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ABSTRACT

Trauma-informed care (TIC) is an essential holistic framework for pediatric-focused advanced practice registered nurses (APRNs) to understand, recognize, and respond to children and families who have experienced trauma while resisting re-traumatization. TIC allows APRNs to engage with children with an understanding of how trauma impacts well-being. Universal adoption of TIC is prudent; it assumes all patients experience some degree of trauma and disclosure is limited. The National Association of Pediatric Nurse Practitioners Partners for Vulnerable Youth published an evidence-based TIC toolkit online for pediatric-focused ARPNs as a clinical guide for TIC application. This article reviews toolkit elements and demonstrates practical application of TIC. J Pediatr Health Care. (2024) *XX*, 1–11

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Stress disorder, behaviors, adjustment disorder, psychological resilience, pediatric nursing

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INTRODUCTION

Every year in the United States (U.S.), millions of children experience traumatic events, including maltreatment, natural disasters, abuse, and violence (Cutuli et al., 2019). The lasting impact of trauma and adverse childhood experiences (ACEs) is an insidious public health emergency (Cerny et al., 2023; Goddard, 2021). Trauma and ACEs increase the likelihood of chronic health conditions with high morbidity and mortality (Goddard, 2021; Matthew et al., 2022; Schmitz et al., 2019). Toxic stress and complex trauma, especially in the absence of protective factors, have been shown to lead to poor physical and mental health outcomes (Krushas & Schwartz, 2022). Trauma-informed care (TIC) is an essential holistic framework for pediatric-focused advanced practice registered nurses (APRNs) to understand, recognize, and

respond to children and families who have experienced ACEs, trauma, and the subsequent physiologic and psychologic impact. TIC offers opportunities for pediatric-focused APRNs to engage with children and their families, leveraging an understanding of how trauma affects overall health and well-being.

Given ACEs' pervasiveness and long-term consequences, a growing need exists to enhance pediatric-focused APRN competence and confidence in applying TIC in all clinical settings (Cerny et al., 2023). Studies demonstrate that providing education and resources on TIC to healthcare professionals (HCPs) improves knowledge, self-efficacy, attitudes, and utilization of TIC (Berg-Poppe et al., 2022; Schmitz et al., 2019; Steen et al., 2022). The National Association of Pediatric Nurse Practitioners (NAPNAP) Partners for Vulnerable Youth (PVY) has recently published a position paper emphasizing the importance and impact of TIC (NAPNAP PVY, 2024). Following this, an evidence-based TIC toolkit was published online specifically for pediatric-focused ARPNs to act as a practical clinical guide in implementing TIC practices. The NAPNAP PVY TIC toolkit provides a much-needed comprehensive resource to aid pediatric-focused APRNs in initiating TIC early with a holistic care lens to provide primary and secondary prevention of complications related to trauma and ACEs. This article will review elements of the toolkit and give pediatric-focused APRNs guidance for practical application of TIC in clinical practice.

PRINCIPLES OF TIC

TIC uses a strengths-based approach, which focuses on an individual's unique strengths to assist in healing and empowerment (Denyer, 2022). The Substance Abuse and Mental Health Services Administration (SAMHSA) proposed the four R's as goals for a trauma-informed provider (1) realize how trauma impacts growth and development (the neurobiological effects of trauma and toxic stress), (2) recognize the manifestations of trauma, (3) respond through evidence-based interventions (referrals, treatments, anticipatory guidance), and (4) resist re-traumatization by being aware of potential trauma triggers and creating an inviting, safe care environment (SAMHSA, 2014). Additionally, APRNs should use the six core principles of TIC for all families they serve, including (1) safety; (2) trustworthiness and transparency; (3) peer support; (4) collaboration and mutuality; (5) empowerment, voice, and choice; and (6) cultural, historical, and gender issues (SAMHSA, 2014). These principles of TIC should be integrated into everyday clinical practice, including during the physical examination—which can be a triggering component of the medical visit for patients with a history of trauma (Soran, 2024). A trauma-informed physical examination focuses on language, positioning, and physical touch strategies that aim to promote a sense of patient safety, bodily autonomy, and shared decision-making between the provider and patient (Soran, 2024). Tables 1 and 2 demonstrate how these principles can be integrated into pediatric clinical practice. Additionally, TIC is most effective when there is organizational commitment to implementation, management buy-in, and inclusive training for all staff who encounter patients (Duffee et al., 2021; Huo et al., 2023).

- Clinical application: Pediatric-focused APRNs should integrate the principles of TIC into their clinical practice—including techniques for a trauma-informed physical examination. Examples and links to additional resources for a trauma-informed physical examination are available in the TIC toolkit.

ADVERSE CHILDHOOD EXPERIENCES

To appropriately incorporate the principles of TIC, it is essential to better understand the widespread prevalence and impact of ACEs. ACEs have a graded dose-response relationship as trauma compounds with each additional ACE (Goddard, 2021). Four or more ACEs place children at higher risk for developing long-term health complications, including substance and alcohol addiction, depression, liver disease, heart disease, lung disease, and cancer (Goddard, 2021). Left untreated, sequelae of ACEs and trauma lead to chronic illness in adulthood, high healthcare utilization, increased morbidity and mortality, and even early death (Koball et al., 2021).

For example, an adult with three or more ACEs often has medical expenses exceeding 10% of their household income (Koball et al., 2021). Additionally, adults with a history of ACEs are more likely to frequent the emergency department and be admitted to the hospital. However, they often cannot pay for services, leaving the burden of payment on the healthcare system (Koball et al., 2021). Adults with a history of ACEs also have higher rates of no-show appointments, leading to further healthcare revenue loss (Koball et al., 2021). Besides long-term health effects, ACEs are linked to multiple health conditions throughout childhood (Table 3).

The American Academy of Pediatrics, NAPNAP, PVY, and National Child Traumatic Stress Network (NCTSN) call for pediatric providers to play a proactive role in mitigating impacts of ACEs with implementation of TIC (AAP, 2021; Bora et al., 2022; Forkey et al., 2021; Goddard, 2021; Jee et al., 2019; Matthew et al., 2022; NCTSN, 2017; Steen et al., 2022). The American Academy of Pediatrics published a clinical practice guideline entitled *TIC*, describing the need for knowledge, screening tools, practical guidance, community resources, and interventions for pediatric HCPs caring for children who have experienced trauma (Forkey et al., 2021). Screening for ACEs is a critical component of TIC that allows pediatric-focused APRNs to identify trauma, assess risk for toxic stress, provide necessary resources, and make the proper referrals (Loveday, 2022). Despite the benefits of screening, there is no universal screening tool recommendation nor a ubiquitous definition of ACEs (Loveday, 2022). Various ACE screening tools assess for impacts of traumas and adversities. However, until a pediatric standardized screening tool is developed with scientific rigor,

TABLE 1. Six core principles of TIC: Examples for everyday practice

Principles	Primary care	Acute care
Safety	"Would you feel more comfortable with your caregiver in the room?" "Do you have a preference for your provider's gender?"	"Are the alarms making you uncomfortable? If so, we can silence the alarms in your room." "Is there a family member or friend that you would like to stay in the room with you?" "If you need anything while I am gone, you can push the call light and a staff member will come in to assist you."
Trustworthiness and transparency	"What we discuss during your visit is confidential between you and the provider unless there is concern for harm to yourself or others."	"As soon as I am made aware of any results or changes in your treatment, you will be the first to know."
Peer support	"I am always here for you if you need a trusted adult to talk to." "I am a part of your team just as you and your caregiver are. It is important to me to always be honest with you and ask that you are as honest as you can be so that I can best care for you."	"Would you like me to call child-life to help you through your IV placement?" "Would you like to go to the playroom with other children on the floor?"
Collaboration and mutuality	"How can we work together to make this better?"	"How do you feel about going home with the plan we have developed together? What would you like to discuss before leaving?"
Empowerment and choice	"Would you like to sit on the exam table or in the chair?" "Because you are over 18, would you like me to make a record of your phone number so we can call you with your lab results from today's visit?"	"Would you like to get your blood pressure or temperature first?" "We have discussed a plan to help you get better, what questions do you have regarding the plan and do you agree with moving forward with the plan?"
Cultural, historical, and gender issues	"What is your preferred name?" "How would you like to be referred to?" "What cultural preferences do you have?"	"Is there someone outside your family that you talk to for advice or guidance such as a religious or spiritual leader? If so, would you like me to reach out to them to see if they are available to come visit?" "I want to be mindful of your religious and cultural preferences. Are you okay with consenting to a blood transfusion if needed?"

TABLE 2. TIC recommendations based on age group

Infants/toddlers	Preschoolers/school-age	Adolescents
Create a safe space for infants/toddlers and allow them to be in the caregiver's lap if possible.	Create a safe and culturally aware environment for the child and family.	Ask for preferences for language regarding privacy, gender, and anatomy terms during the encounter.
Limit unnecessary separation of infant/toddler and caregiver.	Allow the child to sit in the caregiver's lap if it makes them more comfortable.	Ask about preference for provider gender at the time of scheduling; accommodate as best as possible.
Be aware of and limit exams/actions that may be overstimulating to the infant/toddler, including loud or unusual noises, bright light, and poignant smells.	Slowly approach the child and explain all the exam steps to them.	Ask for consent before starting the physical exam and throughout each step. Communicate the right to decline any part of the exam or intake.
Maintain a calm, even voice when speaking to children and caregivers.	Speak in a child-friendly voice, meeting the child at their developmental level, which may relieve some of the preschool/school-aged child's tension.	Communicate mandated reporter obligations or state-specific laws regarding confidentiality.
Ask about infant/toddler caregiver interactions and educate on positive ways to improve attachment.	Allow preschool and school-aged children to make choices throughout the visit. Provide anticipatory guidance for caregivers to help preschool/school-aged children thrive—including positive parent-child interaction, developmentally appropriate play with other children, positive parenting styles, and mindfulness.	Ensure teens have clear access to exam room doors and can exit if desired.

Adapted from: University of Michigan Health (2023).

TABLE 3. ACE-linked health conditions by age

Infants	School-age	Adolescents
Failure to thrive	Increased risk of viral infections	Headache
Growth delay	Pneumonia	Abdominal pain
Sleep disruption	Asthma/atopic diseases	Increased participation in high-risk activities, substance use, teen pregnancy/teen paternity, STIs
Developmental delay	Learning/behavior difficulties	Mental health conditions

Adapted from: State of California Department of Health Care Services (2024).

validated, and universally recommended, pediatric-focused APRNs should utilize the tool that best fits the needs and risks of their specific patient population. While screening for ACEs is important, some experts recommend a change in emphasis from screening for ACEs to promoting positive childhood experiences through fostering relational health, empowering resilience, and educating caregivers (Williams, 2023). This paradigm shift utilizes the strengths-based approach of TIC, which results in child empowerment, improved resilience, and stronger relationships (Goddard et al., 2022b). Additional resources and information on ACE screening tools can be found in NAPNAP PVY's TIC toolkit.

- Clinical application: Pediatric-focused APRNs should be aware of the holistic health impacts of ACEs and utilize appropriate ACE and trauma screening tools as clinically indicated (available in the TIC toolkit).

TOXIC STRESS AND NEUROBIOLOGICAL RESPONSES

The toxic stress response is a key culprit in the adverse long-term health outcomes associated with ACEs, as unmet basic needs, limited social support, and frequent or high levels of adversity exacerbate the stress system (Krushas & Schwartz, 2022). Stress is an expected physiologic function of the body and can be productive when it is brief and met with appropriate coping mechanisms (Harvard University, n.d.). However, left without proper coping mechanisms or protective factors, chronic, extreme, or multiple stressors can permanently alter children's protective physiologic adaptations and, ultimately, resilience potential (Harvard University, n.d.; Krushas & Schwartz, 2022) (see Table 4).

Physiologic Changes

Exposure to complex trauma and toxic stress can have a lasting, cumulative effect on a child's physical and mental health (Harvard University, n.d.; Krushas & Schwartz, 2022; NASTAD, n.d.). Traumatic events and toxic stress impact brain function, chemistry, and anatomy, which ultimately leads to long-term emotional regulation and behavioral changes (Harvard University, n.d.). When the stress-response system (sympathetic nervous system) experiences prolonged activation, it increases circulating cortisol levels in the body, causing long-term cardiometabolic problems such as obesity, hypertension, insulin resistance, and glucose intolerance (Krushas & Schwartz, 2022). Three parts of the brain can be impacted by acute trauma and toxic stress—the prefrontal cortex, the hippocampus, and the amygdala (NASTAD, n.d.). The prefrontal cortex, or the thinking center, loses neuronal integrity, which impairs communication with the rest of the brain, causing poor decision-making (NASTAD, n.d.). The hippocampus' ability to regulate emotions is weakened, resulting in emotional lability, and the amygdala

TABLE 4. Types of stress

	Positive stress	Tolerable stress	Toxic stress
Definition	Expected physiologic function of the body, which occurs daily.	Prolongation of positive stress met with appropriate coping mechanisms and protective factors.	Chronic, extreme or multiple exposures to stressors with inadequate or no coping mechanisms.
Pathophysiology	There is a brief elevation in heart rate and a short release of stress hormones that quickly return to baseline.	There is an extended release of stress hormones and physiologic adaptations mitigated by coping/protective factors.	There is an extended release of stress hormones and physiologic adaptations without balancing factors.
Examples	Public speaking, taking an exam, receiving an injection, and meeting new people.	Natural disasters, death of family or friend, car accident, or other serious injury.	Abuse, neglect, exposure to violence, caregivers with substance abuse disorders, and/or burdens of poverty.

Adapted from: Harvard University (n.d.).

TABLE 5. Stress responses

Fight	Flight	Freeze	Fawn
Behavior becomes aggressive, dominating, oppositional	Behavior becomes hyperactive, excessively worried, mimics obsessive/compulsive disorders	Behaviors may include dissociation, inability to make decisions, long-term may cause depression or isolation	Behaviors become deferential to others' opinions, they are the "peacekeepers" and "people pleasers," may lack normal boundaries, will avoid conflict
Examples:	**Examples:**	**Examples:**	**Examples:**
When attempting to obtain a blood pressure reading on a child with sensory issues or history of physical abuse, they may yell, hit, or act otherwise aggressively toward staff in the room.	Individual is triggered by being in the room with an unfamiliar adult and starts avoiding eye contact and may withdraw from or lean away from staff to physically create more space. Adolescents may refuse further treatment or try to leave. Young children may become hyperactive and move nonstop around the room.	When asking a young child to get on the exam table to listen to their heart/lungs they appear to refuse to listen and stay where they are. When asking an adolescent or older child a question about their medical history they do not respond.	A child may defer all answers to medical questions to caregivers or other participants in the room. A child may be extra-friendly to staff.

Adapted from: NASTAD (n.d.).

is perpetually on high alert, leading to frequent, inappropriate triggering of the fight, flight, freeze, or fawn responses (NASTAD, n.d.). See Table 5 for further definitions and examples of these stress responses.

Symptoms of trauma and overactive stress-response systems vary depending on developmental age and can often be misinterpreted as intentional, oppositional behaviors (Center for Early Childhood Development, n.d.; NCTSN, n.d.; SAMHSA, 2024). Infants and toddlers may be fussy, difficult to calm, easily startled, avoidant, or show early behavioral delays (Center for Early Childhood Development, n.d.; NCTSN, n.d.). During early childhood, symptoms of trauma may present as clinging to caregivers, fear of new experiences, easily scared, aggressive behaviors, frequent tantrums, developmental regression, and somatic complaints like headaches and stomachaches (Center for Early Childhood Development, n.d.; SAMHSA, 2024). In middle childhood, symptoms can look like anxiety, fear of new situations, guilt or shame, difficulty concentrating at school or home, inability to do homework, and inability to manage strong emotions appropriately (SAMHSA, 2024). Preteens may also have difficulty managing emotions; have frequent outbursts; experience problems with attention and memory, insomnia; and be oppositional to parents or authority (SAMHSA, 2024). During adolescence, symptoms can appear as depression, anxiety, and loneliness or present through substance abuse, self-harm, hypersexuality, and opposition to authority (SAMHSA, 2024). Throughout the lifespan, these cumulative trauma symptoms lead to an increased risk of expulsions from daycare and early education centers, school suspensions/expulsions, involvement in the child welfare system, and entry into the juvenile justice system (SAMHSA, 2024).

While it is important to recognize possible symptoms of trauma, pediatric-focused APRNs should note that not all children who experience trauma or have a history of ACEs will have symptoms or poor outcomes.

Epigenetics and Hereditary Changes

Epigenetics was first defined by Waddington (1942) to describe the interactions between genes and the environment and has evolved to refer to the structural or biochemical alteration of components of DNA, without changing DNA sequencing (Li, 2021). Recent research on animals indicates that early life adversity, like chronic or severe stress and trauma, influences DNA methylation in several genes, and those changes are passed subsequently to offspring (Zhou & Ryan, 2023). Since this finding, human research has demonstrated an association between early life adversity and peripheral epigenetic markers for genes responsible for synaptic plasticity, neurotransmission, and the immune system. Recent evidence suggests these adverse health effects can be hereditary and intergenerational; however, a direct link has not been established as the changes may be associated with shared environment, behavioral, and genetic factors. Additionally, maternal stress and trauma can directly alter the methylation of fetal DNA (Zhou & Ryan, 2023).

Protective Factors

Protective factors refer to personal qualities, relationships, or occurrences that buffer the harmful effects of toxic stress (Bowen et al., 2022; Harvard University, n.d.). Recognized protective factors from the peer-reviewed literature include personal resilience, stable caregiver relationships, reduced exposure to stressful events, and strong social/community

connections (Harvard University, n.d.; Krushas & Schwartz, 2022). One of the most crucial protective factors from toxic stress is maternal *(caregiver)*—infant attachment (Jethava et al., 2022; Krushas & Schwartz, 2022). Early caregiver responsiveness to infants' needs helps with the healthy development of the infant's nervous system and provides the infant with a foundation for accessing coping resources (Krushas & Schwartz, 2022). This theme continues into later life, as healthy relationships and family connectedness in older children and adolescents are also protective factors against toxic stress (Krushas & Schwartz, 2022). As a child ages, a sense of connection with the community also becomes important (Krushas & Schwartz, 2022). Throughout the lifespan, other protective behaviors include caregiver knowledge of healthy parenting skills, caregiver understanding of normal child development, and promotion of resilience and social/emotional competence in children (Bowen et al., 2022). Additionally, caregiver support and involvement are some of the best predictors for successful treatment outcomes and lower levels of anxiety and depression during trauma-focused cognitive behavioral therapy (CBT) (Canale et al., 2022).

- Clinical application: Pediatric-focused APRNs should recognize the manifestation of trauma symptoms influenced by developmental age and encourage protective factors by providing relevant anticipatory guidance to children and their families. Recognizing stress responses in children manifesting as developmental or behavioral concerns offers optimal opportunity for early identification and intervention to lower health risks associated with unmitigated toxic stress. Parent hand-outs on positive parenting and building resiliency in children are available in the TIC toolkit.

IMPACT AND VALUE OF TIC

The quadruple aim is a healthcare framework aimed at improving the performance of health systems (Bodenheimer & Sinsky, 2014). The framework builds on the Triple Aim, which was originally developed by the Institute for Healthcare Improvement (Bodenheimer & Sinsky, 2014). TIC is a strengths-based approach pediatric-focused APRNs can utilize to mitigate lasting negative impacts of ACEs and toxic stress while also meeting the targets of the quadruple aim: (1) reducing healthcare costs, (2) improving population health, (3) improving patient outcomes, and (4) enhancing provider well-being (Perley & Ganzel, 2023). TIC reduces healthcare costs by enabling providers early identification and management of stress and trauma, improving patient outcomes, and reducing unnecessary healthcare encounters and hospital visits associated with chronic illnesses (Chokshi et al., 2020; Perley & Ganzel, 2023; Schmitz et al., 2019). When HCPs effectively address trauma and ACEs, children and their families have better experiences and health outcomes (Chokshi et al., 2020; Matthew et al., 2022; Schmitz et al., 2019). Using the TIC strengths-based approach, pediatric-focused APRNs can better identify ACEs and complex trauma, provide early intervention, and avoid retraumatization, which can mitigate long-term negative consequences of trauma in children (Dueweke et al., 2019; Jee et al., 2019; Matthew et al., 2022; Schmitz et al., 2019). Finally, TIC improves provider well-being by teaching them to self-reflect and debrief after discussing trauma with patients (Goddard, 2021; Jee et al., 2019; Steen et al., 2022).

In addition to meeting the quadruple aim's requirements for improving healthcare delivery for population health, the TIC approach recognizes the impact of social determinants of health (SDOH). Specifically, it emphasizes the need for pediatric-focused APRNs to consider children's and families' SDOH within the context of their care (Forkey et al., 2021). The U.S. Department of Health and Human Services' Healthy People 2030 campaign identified two SDOH domains relevant to TIC: healthcare access and quality, and social-community contexts (USDHHS, n.d.). Pediatric-focused APRNs are uniquely educated with a holistic care framework and are subsequently positioned to provide quality, accessible, and affordable TIC to children (Goddard, 2021; Goddard et al., 2022a). One of the goals of improving access and quality healthcare is to increase adolescent preventative care visits (USDHHS, n.d.). TIC can augment this effort by creating positive patient experiences and better patient engagement through the TIC principles of safety, empowerment, transparency, and choice, encouraging adolescent healthcare utilization (Cerny et al., 2023). The NAP-NAP PVY TIC toolkit provides pediatric-focused APRNs with guidance for referrals and treatment options, potentially increasing the number of children who receive care for their trauma symptoms (USDHHS, n.d.).

Applying TIC allows pediatric-focused APRNs to strengthen caregiver-child relationships and build resiliency, aligning with two of the goals under the social and community context: (1) increase youths' positive communication with parents and (2) increase youths' resilience to stress and challenges (Forkey et al., 2021; Goddard, 2021; Steen et al., 2022; USDHHS, n.d.). Pediatric-focused APRNs can be leaders in creating trauma-informed environments and organizations. Every interaction with a child is an opportunity to demonstrate a safe, supportive environment that can contribute to healing (Goddard, 2021).

- Clinical application: Pediatric-focused APRNs should consider the SDOH of children and their families when assessing trauma and directing a holistic/strengths-based care approach. Read more about ACEs and SDOH that place children and their families at risk for trauma and ACEs in the TIC toolkit.

Barriers to Providing TIC

Despite the impact and value of TIC, there are perceived barriers to implementation. Healthcare providers view inadequate time as the most significant barrier to delivering quality TIC (Bora et al., 2022; Cerny et al., 2023; Matthew et al.,

2022). Providers often assume longer appointment times are necessary to add more screenings or appropriately address trauma (Dueweke et al., 2019; Goddard, 2021). Despite these preconceptions, Schmitz et al. (2019) found no significant change in the length of clinic visit time following the incorporation of TIC practices into the visit.

An additional barrier to TIC implementation is fear of re-traumatization (Mishra et al., 2023). ACE screening is a critical component of practicing TIC, yet providers are concerned patients may feel re-traumatized when asked questions about their trauma experiences (Mishra et al., 2023). However, a scoping review found most families in a pediatric clinic were willing to discuss their past with a provider, and some even expressed relief and hopefulness upon being questioned about their trauma (Mishra et al., 2023). Pediatric-focused APRNs who take on the primary care role are in an optimal position to build trust with children and their families and with that trust, empower resilience, foster relational care, and promote personal/family strengths. Additionally, ACE screening enhances rapport building with the patient, refuting the clinician's fear of causing the patient distress or re-traumatization (Mishra et al., 2023).

Despite growing interest from pediatric-focused APRNs in being better informed on TIC interventions, a lack of training and limited educational opportunities pose another barrier (Bora et al., 2022; Cannon et al., 2020, Kuzma et al., 2022; Thang et al., 2023). Numerous studies demonstrated the apparent lack of training for HCPs. Bora et al. (2022) found 90.3% of physician study participants had not received formal training on ACEs or TIC, though 95.8% of physicians reported they would benefit from TIC education. Cannon et al. (2020) found that undergraduate and graduate nursing students understood the importance of TIC, but did not have the knowledge or skills to translate to clinical practice. In another study of TIC education for nursing students, Kuzma et al. (2022) had similar findings describing a need for TIC education in nursing students and for nursing preceptors. Thang et al. (2023) found nearly half of pediatric residents surveyed had not learned about ACEs through formal educational training, and less than a quarter were educated on toxic stress. While the findings emphasize the need for updated curricula in schools, they also call for comprehensive, practical, clinical resources on TIC for pediatric HCPs already in practice.

- Clinical application: Pediatric-focused APRNs should seek evidence-based training/continuing education on TIC, ACEs, and toxic stress to become better informed in practice. The TIC Toolkit provides links to training resources.

HEALTH PREVENTION/PROMOTION OF PEDIATRIC MENTAL HEALTH OUTCOMES

Since the COVID-19 pandemic, childhood mental health trends have been critically alarming, with increased mental health-related emergency room visits, suicide attempts, and rates of depression and anxiety (Goddard, 2021; Office of the Surgeon General, 2021). Evidence-based health prevention and promotion strategies should be implemented universally to improve pediatric mental health outcomes (Frye et al., 2020; Singh et al., 2022). Primary preventative strategies include nurturing protective factors, fostering resilience, educating parents on positive parenting strategies and normal child development, enhancing accessibility of community resources, and advocating for policies that support youth safety—a principle of TIC (Duffee et al., 2021; Hagan et al., 2017). Secondary preventative measures can include screening for behavioral, social, and emotional changes at every well-child visit, with routine depression and suicide screening beginning at 12-years-old (Duffee et al., 2021; Hagan et al., 2017). Pediatric-focused APRNs should also evaluate family relationships, family mental health, and ACEs (Goddard, 2021; Hagan et al., 2017). Finally, tertiary preventative measures include integrated behavioral healthcare, CBT interventions, and medication management. The COPE program is an evidence-based manualized program pediatric-focused APRNs can be trained in and be reimbursed for in the primary care setting to deliver evidence-based CBT to youth experiencing depression and anxiety (Melnyk & Lusk, 2022).

- Clinical application: Pediatric-focused APRNs should promote protective factors, foster resilience, screen for trauma and ACEs, and implement early mental health treatment interventions. Links to the COPE2Thrive training, screening tools, parent handouts, guidelines for mental health referrals, and resources for connecting children and families with therapists (national register) are available in the TIC toolkit.

THE VITALITY OF RESILIENCE

The promotion of resilience in children is a primary prevention strategy and one of the key tools APRNs have to protect youth against the negative consequences of toxic stress and adverse long-term impacts of traumatic experiences. "Resilience is the ability of a system to adapt successfully to challenges that threaten function, survival, or development" (NAPNAP, 2019, p.12). Techniques for instilling resilience are similar to earlier discussion of promoting protective factors: encouraging positive parenting skills; helping children develop problem-solving and emotional-control skills; assessing for SDOH; promoting family relationships and family mental health; finding ways to be involved in the community; building self-efficacy and confidence; and advocating for integrated behavioral health care (Goddard, 2021). Building resilience starts in early childhood. For toddlers, this can look like establishing daily routines, engaging with them through reading and play, having them help with chores, and encouraging them to connect with other children to build social and emotional skills (Sege, 2024). Throughout the lifespan, it involves promoting family relationships and mental health by practicing gratitude, being

active in the community, and parental role modeling of coping skills and positivity (Munshi, 2022).

- Clinical application: Pediatric-focused APRNs should promote resilience at every patient encounter and educate parents/caregivers on healthy parenting strategies. The TIC toolkit links helpful handouts the pediatric-focused APRN can provide caregivers with to support their children through life's adversities and a link to Dr. Kenneth R. Ginsburg's (MD) work on building resilience in youth.

INTEGRATING BEHAVIORAL HEALTH IN PRIMARY CARE

A tertiary prevention strategy for youth mental health is integrating behavioral health into primary care (Frye et al., 2020). The U.S. mental health system is overwhelmed due to limited access to care, a shortage of pediatric mental HCPs, insufficient behavioral health facilities, and an increasing number of children requiring services (Frye et al., 2020; McEnany et al., 2020). In 2020, one-sixth of youth in the U. S. had either a mental or behavioral health disorder (McEnany et al., 2020). According to a survey by Whitney and Peterson (2019), more than half of the 7 million children identified with a treatable mental health disorder did not receive any treatment. While the survey did not investigate the barriers to obtaining treatment, it postulated that state policies on access to behavioral healthcare could be an important component. Part of the solution to this crisis lies in integrating mental health services into primary care offices (Frye et al., 2020). This can be done through a collaborative model using telehealth, co-location of specialists, and improving relationships with community connections (Frye et al., 2020). An integrated model helps provide early mental health screening and intervention, improving health outcomes (Colizzi et al., 2020). NAPNAP's position paper on integrating behavioral health services strongly advocates for pediatric-focused APRNs to take a leadership role in this process. Pediatric-focused APRNs have the education, training, and skills to address basic mental health needs, promote resiliency, initiate mental health screening, and be leaders in care integration (Frye et al., 2020).

Another key resource to advance integrated behavioral health care is the National Network of Child Psychiatry Access Programs (NNCPAP). This national organization aims to connect pediatric primary care providers with virtual/phone consultations from pediatric psychiatrists, broadly expanding access to mental health care (NNCPAP, n.d.). The NNCPAP has full program coverage in 47 U.S. states, with partial coverage offered in California and Pennsylvania and no coverage yet in Idaho. NAPNAP also created the NAPNAP Cares initiative, which contains 30 continuing education courses on pediatric mental and behavioral health to support pediatric-focused APRNs providing mental health services in primary care as well as providing a pathway to the Pediatric Primary Care Mental Health Specialist (PMHS) role (NAPNAP, n.d.). A link to these resources can be found in the TIC toolkit on NAPNAP PVY's webpage.

PMHS certification is a key tool for pediatric-focused APRNs to optimize integrated care. This specialty credential can be obtained by APRNs with familiarity and expertise in pediatric developmental, behavioral, and mental health care via multiple possible pathways to certification, including practical experience, faculty experience, or specialized education (Pediatric Nursing Certification Board [PNCB], n.d.) This specialized certificate demonstrates an APRN's education, skills, and abilities in identifying, assessing, screening, diagnosing, and managing children with developmental, behavioral, and mental health conditions (PNCB, n.d.). This role will help expand access to care for children with behavioral and mental healthcare needs, provide much-needed early evidence-based intervention, and satisfy the TIC principle of collaboration and mutuality by working as an interdisciplinary team.

- Clinical application: Pediatric-focused APRNs can help mitigate the mental healthcare provider shortage by advocating for integrating behavioral health into primary care, being aware of and utilizing supportive resource networks, and becoming certified or trained in specialized mental healthcare delivery modalities (e. g., COPE, PMHS certification).

PROVIDER SELF-REFLECTION AND UNIVERSAL PRECAUTIONS

Steen et al. (2022) and Matthew et al. (2022) discuss the importance of provider self-reflection in implementing quality TIC. While TIC is traditionally patient-focused, recent studies reveal that the impact of one's own life experiences and trauma responses influence care delivery to patients (Matthew et al., 2022; Steen et al., 2022). By recognizing and minimizing individual biases, pediatric-focused APRNs can incorporate TIC principles of cultural, historical, and gender issues when working with children and their families (Duffee et al., 2021). Providers must consider the possibility of implicit bias arising from their own adverse experiences to be able to best provide objective, quality care to a child who has experienced trauma without inducing vicarious trauma to the HCP (Steen et al., 2022; Williams, 2023).

One way to encourage provider objectivity is the universal application of TIC. Universal precautions ensure all HCPs approach all patients with the assumption they could have trauma in their history, helping to eliminate the stigma patients experience when TIC and ACE screening is only employed on seemingly at-risk patients (Goddard, 2021; Matthew et al., 2022). Goddard (2021) further advocates for the need to universally incorporate TIC with all pediatric patients since the COVID-19 pandemic's devastating impact on the mental health of children and adolescents who lived through it and continue to experience secondary effects. Implementation of universal precautions allows for early

identification of trauma in patients whose trauma may have otherwise gone unrecognized (Goddard, 2021; Jee et al., 2019; Matthew et al., 2022). Universal precautions also provide significant benefits to children and families who may not have experienced trauma but still receive more thoughtful, patient-centered care.

- Clinical application: Pediatric-focused APRNs should universally incorporate TIC practices during every encounter with children and their families. The TIC toolkit provides a link to the Harvard Implicit Bias Test to allow the APRN to understand one's own biases further.

TIC FOR THE PROVIDER

Another consideration for pediatric-focused APRNs is that trauma and chronic stress are not isolated to patient experiences. Burnout and exhaustion among HCPs have been at an all-time high since the COVID-19 pandemic (Sonney & Peck, 2023). Nearly 90% of pediatric-focused APRNs have experienced symptoms of burnout, with numerous APRNs even questioning staying in their chosen profession (Sonney & Peck, 2023). Additionally, many pediatric-focused APRNs experience compassion fatigue, especially when caring for children who have mental health disorders or a history of trauma (Sonney & Peck, 2023). Compassion fatigue can manifest as irritability, hopelessness, ineffective coping, and loss of pleasure in the role of an APRN (Kase et al., 2019). Without adequate mental and emotional support, APRNs will struggle to provide emotionally intelligent, compassionate care to children, and ultimately, the rate of burnout will exacerbate the national healthcare provider shortage. Organizations should be urged to look for ways to support their staff's mental and emotional health (Gigli et al., 2022).

- Clinical application: Pediatric-focused APRNs should prioritize self-care, reduce stress, practice mindfulness, and seek community support. NAPNAP released a position statement regarding the danger of postpandemic burnout among APRNs with specific calls to action for health organizations (Dugan, 2022) and a TeamPeds talk episode discussing ways to build a more resilient pediatric-focused APRN workforce; links to both and further resources can be found in the TIC toolkit.

TIC: SUMMARY

Overall, TIC education and access to resources effectively improve HCP competence and confidence to deliver quality TIC, and HCPs are receptive to learning more about this concept (Cerny et al., 2023; Dueweke et al., 2019; Jee et al., 2019; Steen et al., 2022). Organizations should be encouraged to train all staff in TIC practices, and educational programs should be developed to train pediatric-focused APRNs in TIC delivery (Duffee et al., 2021). Additionally, HCPs must be aware of their potential biases surrounding trauma, prioritize their own mental health, and approach all patients with universal TIC precautions. Pediatric-focused APRNs are in the optimal position to deliver TIC to children who may have experienced trauma and should be encouraged that TIC can be successfully implemented within time constraints of standard patient encounters and without re-traumatizing their patients. An evidence-based TIC toolkit is now available on the NAPNAP PVY website to further equip pediatric-focused APRNs with their TIC knowledge and ability to integrate TIC into practice. Additionally, the toolkit has TIC resources by state, pertinent TIC literature, TIC/ACEs coding and billing tips, and parent handouts to help promote resilience and mental health.

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