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Implementing trauma-informed care across the lifespan to acknowledge childhood adverse event prevalence: best clinical practices

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Abstract: *Adverse childhood experiences and toxic stress in childhood have been correlated with negative physical and mental health outcomes, poor social outcomes, and early mortality. Understanding the prevalence of trauma and its effects on lifelong health outcomes has been the focus of an evolving concept of care delivery known as trauma-informed care (TIC). The aim of this article is to provide a general overview of TIC and to review current best-practice recommendations and models of care, thereby providing NPs with practical ways to empower a trauma-informed approach to care in their daily practice setting.*

In the last 20 years, there has been a substantial amount of research connecting adverse childhood experiences (ACEs) and toxic stress in childhood to negative health and life outcomes in adulthood.[1] ACEs are defined as events such as physical, emotional, or sexual abuse; physical or emotional neglect; and various household challenges that occur from birth to the age of 17. Household challenges include having a parent with mental illness, a parent who is treated violently, or an incarcerated family member; substance use in the home; and parental divorce.[1-3] An ACE score is the cumulative number of events a person experienced during childhood. Negative effects are found to increase in a dose-response relationship. The higher one's ACE score, the more likely the person is to experience chronic diseases, depression, anxiety, substance use disorders, and negative social outcomes such as employment challenges, decreased graduation rates, incarceration, risk of revictimization, and homelessness.[1-3]

Literature review

The foundational Felitti et al. study, which examined more than 17,000 primarily middle-class individuals, found that ACEs correlated with a significant increase in morbidity and early mortality.[2] The results of this study have been replicated in various populations and countries.[3] The findings from this seminal study launched the development of investigational research aiming to understand the relevant biological, behavioral, physiological, and psychological causal pathways, as well as research into prevention measures and strategies to mitigate the negative effects from ACEs and toxic stress in childhood.

Exposure to toxic stress and trauma in childhood is prevalent. More than 15% of adults surveyed in the 2015-2017 Behavioral Risk Factor Surveillance system, which sampled data from more than 25 states, reported exposure to four or more ACEs, and 60% reported exposure to at least one ACE.[1] In the US, prevalence of ACE exposure is higher among those living in poverty, Black individuals, Native American/Alaska Native individuals, and the LGBTQIA community.[1,3,4]

ACEs and toxic stress in childhood have a strong association with an increase in the lifetime risk of developing diabetes, coronary heart disease, cancer, stroke, chronic obstructive pulmonary disease (COPD), obesity, kidney disease, and depression.[1] They have also been linked to a higher chance of engaging in maladaptive behaviors such as smoking, alcohol use disorder, and substance use disorder. Life outcomes affected by ACEs include decreased graduation rates, worse academic achievement, and an increase in lost time from work.[1,2]

Exposure to traumatic events in childhood has a lasting physiologic impact on brain development, the immune system, neurohormonal stress responses, gene expression, and telomere length in DNA.[5] These biologically embedded changes may constitute a causal pathway to negative health sequalae associated with ACEs.[5] ACEs in childhood are a strong predictor of adult health status.[5]

Trauma-informed care

Due to the growing body of research identifying the physiological, social, and psychological impact that childhood trauma has throughout the lifespan, there has been a call to action to implement trauma-informed care (TIC), also

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known as a trauma-informed approach to care, throughout healthcare systems. TIC is a framework of multidisciplinary care delivery that provides a more comprehensive approach to understanding and addressing trauma. It is a conceptual framework for which there is not a standard, universal definition. The US Substance Abuse and Mental Health Services Administration (SAMHSA) states, "A program, organization, or system that is trauma-informed realizes the widespread impact of trauma and understands potential paths for recovery; recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and responds by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively resist re-traumatization."[6]

To practice from a trauma-informed standpoint involves being aware of a patient's trauma history, events, and experiences and understanding how trauma may affect their health and health risk behaviors.[7,8] With TIC, all people involved realize the potential impact of trauma, assess and recognize signs of past or current trauma, respond to effects of traumatic events and toxic stress, avoid retraumatization, and work toward identifying and building resiliency.[5,6,8] This is accomplished by utilizing a framework of care that incorporates the key principles of TIC (see *Six key principles of a trauma-informed approach*).

For TIC to be fully effective, it should be implemented at the organization and system levels. Professional organizations are beginning to call for systemwide changes to shift the paradigm of healthcare delivery toward a trauma-informed model. Policy statements written by the American Academy of Pediatrics (AAP) advocate for TIC.[5] The AAP's *Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents, 4th Edition* recommends inquiring about social determinants of health at all well-child visits, with a focus on promoting health and resiliency for family and communities.[9] Various models of TIC across multidisciplinary professions are beginning to emerge, including trauma-informed nursing practice.[10]

An NP-led initiative has proposed a trauma-informed primary care (TIPC) model.[11] This model builds on the TIC models utilized in the mental health field and advocates for routine trauma screening in the primary care setting. Five key concepts of TIPC are recognition (screening for trauma in primary care), realization (understanding and providing patient education about trauma's impact on health and health behaviors), response (patient-centered care and mutual decision making), respect (providing emotional safety by avoiding triggers and being aware of exams or procedures that may evoke distress or retraumatization), and resilience (knowledge of evidence-based treatment options for trauma, encouragement of resilience through building protective factors, promotion of physical and psychological well-being, and disease management).[11]

Another proposed model for providing a framework to conceptualize TIC and interventional management is the intergenerational and cumulative adverse and resilient experiences (ICARE) model. The ICARE model incorporates an understanding of the neurobiological and behavioral adaptations resulting from childhood trauma and has a strong focus on resilience research.[3] Resiliency factors that help to mitigate the effects of ACEs, including protective and compensatory experiences (PACEs), are an important aspect of the model. Coadministering the 10-item PACEs screening questionnaire with the ACEs questionnaire is recommended.[3,12] Screening for both ACEs and PACEs helps the provider to identify protective factors as well as ways to build resiliency with patients and within their family units (see *ACEs questionnaire* and *PACEs questionnaire*).[3,12,13]

Six key principles of a trauma-informed approach[6]

1. Safety
2. Trustworthiness and Transparency
3. Peer Support
4. Collaboration and Mutuality
5. Empowerment, Voice, and Choice
6. Cultural, Historical, and Gender Issues

Source: Substance Abuse and Mental Health Services Administration (SAMHSA). *SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach*; 2014. https://ncsacw.acf.hhs.gov/userfiles/files/SAMHSA_Trauma.pdf.

Practical applications

Legislative, healthcare system, and organizational change are paramount in comprehensively addressing and implementing a trauma-informed approach to care. However, trauma-aware providers working in systems that do not use a trauma-informed approach to care may wonder how they can personally integrate TIC into their day-to-day clinical practice. Incorporating the core

ACEs questionnaire

While you were growing up, during your first 18 years of life:				
Did a parent or other adult in the household **often**:	Swear at you, insult you, put you down, or humiliate you? ***Or*** Act in a way that made you afraid that you might be physically hurt?	YES	NO	If yes enter 1 _____
Did a parent or other adult in the household **often**:	Push, grab, slap, or throw something at you? ***Or*** **Ever** hit you so hard that you had marks or were injured?	YES	NO	If yes enter 1 _____
Did an adult or person at least 5 years older than you **ever**:	Touch or fondle you or have you touch their body in a sexual way? ***Or*** Try to actually have oral, anal, or vaginal sex with you?	YES	NO	If yes enter 1 _____
Did you **often** feel that:	No one in your family loved you or thought you were important or special? ***Or*** Your family didn't look out for each other, feel close to each other, or support each other?	YES	NO	If yes enter 1 _____
Did you **often** feel that:	You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? ***Or*** Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?	YES	NO	If yes enter 1 _____
Was your mother or stepmother:	**Often** pushed, grabbed, or slapped, or did she **often** have something thrown at her? ***Or*** **Sometimes** or **often** kicked, bitten, hit with a fist, or hit with something hard? ***Or*** **Ever** repeatedly hit over at least a few minutes or threatened with a gun or knife?	YES	NO	If yes enter 1 _____
Were your parents **ever** separated or divorced?		YES	NO	If yes enter 1 _____
Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?		YES	NO	If yes enter 1 _____
Was a household member depressed or mentally ill or did a household member attempt suicide?		YES	NO	If yes enter 1 _____
Did a household member go to prison?		YES	NO	If yes enter 1 _____
	Total number of "YES" answers = ACE Score: _____			

Adapted from Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood absue and household dysfunction to many of the leading causes of death in adults. The adverse childhood experiences (ACE) study. *AM J Prev Med.* 1998;14(4):245-258.

Source: Esden JL. Adverse childhood experiences and implementing trauma-informed primary care. *Nurse Pract.* 2018;43(12):10-21. doi:10.1097/01.NPR.0000547550.48517.e9.

tenets of TIC, current literature, and recommended best practices, the remainder of this article will aim to empower NPs to integrate TIC into their practice with practical application recommendations.

Universal trauma precautions

Regardless of a provider's specialty, TIC concepts are applicable to all patient interactions. Due to the high prevalence of traumatic experiences and the

understanding that healthcare settings carry a risk of retraumatization or triggering of negative feelings from past traumatic experiences, the concept of universal trauma precautions has been recommended.[10,14,15] Use of universal trauma precautions in healthcare settings aims to provide patients with physical and emotional safety and transparency throughout all aspects of care. This approach also builds trust, regardless of whether a patient has a known trauma history.[15,16] This is created by building on a foundation of patient-centered communication and care, with the goal of reducing the potential for retraumatization.[15]

Safety and trust

With patient-centered communication and care, the patient maintains control by participating in creating healthcare goals and objectives through collaboration in the decision-making process with the provider as much as possible.[11,15] Offering the patient choice through mutual decision making assists in empowering the patient, as they have more control over their overall healthcare. Providers and all members of the healthcare team should use an empathetic, nonjudgmental approach while communicating with patients to help build a sense of trust and transparency.[10]

Use of universal trauma precautions in healthcare settings aims to provide patients with physical and emotional safety and transparency throughout all aspects of care.

Building safety and trust also includes avoiding retraumatization in the healthcare setting. People with a history of trauma can often develop anxiety, emotional distress, and flashbacks with certain aspects of healthcare, such as during exams and procedures that may trigger distressing emotions.[11,17] It is important for all members of the healthcare team to be aware of the elements of care that have been found to be common triggers for trauma survivors, which can include unexpected physical touch, painful procedures like phlebotomy, disrobing for an exam, seeing an unknown provider or feeling dismissed by a provider, breast exams, Papanicolaou tests and genital exams, rectal exams, computed tomography scans and MRIs, and dental procedures.[11,15,17,18]

Practical communication measures. Clear transparent communication can help to build trust in the patient-provider relationship. Providers should introduce themselves and their role. Body position should be kept at the same height or lower than the patient. Being mindful of their body language, providers should use nonthreatening open positioning. The patient's priorities for the visit should be elicited. Open nonjudgmental communication techniques should be utilized. One should avoid focusing on the computer, engaging in excessive charting during the exam, and placing the computer between the patient and oneself or keeping one's back to the patient. The patient should be asked what can be done to make them more comfortable during the appointment and exam. Clear guidance about what can be expected during the exam or procedure should be provided prior to initiation. The patient should be allowed time to ask questions and be informed that there will be time after the exam or procedure to ask questions as well. Plain language should be used and medical jargon avoided.[10,14,15]

Measures to avoid retraumatization. Active verbal consent should be obtained before touching a patient, as the patient should retain choice, control, and empowerment over their physical body throughout the visit.[10] Prior to any exam or procedure, what will transpire should be clearly described so that the patient can anticipate what will happen next; this can provide clear expectations and a sense of control regarding the exam or procedure. The choice of disrobing into a hospital gown should be left to the patient, as many physical exams can be assessed by moving clothing out of the way (after obtaining consent). If the exam or procedure requires disrobing, providers should limit the amount of time during which a patient is undressed and provide other linens for the patient to use in order to feel less exposed. History of present illness and review of systems should be obtained prior to the person changing into a gown in order to lessen feelings of vulnerability and the likelihood that the event will be triggering to the patient.[10,15,18] Providers should be mindful of the amount of time the patient is in the supine position and offer environmental changes such as a pillow or raising the head of the bed or exam table. If there are parts of an exam or procedure that are out of the patient's view, the option of using a mirror to see the exam should be offered.[15]

With certain invasive exams such as pelvic or rectal exams, it is important to communicate with the patient

PACEs questionnaire

When you were growing up, prior to your 18th birthday:		
1. Did you have someone who loved you unconditionally (you did not doubt that they cared about you)?	YES	NO
2. Did you have at least one best friend (someone you could trust, had fun with)?	YES	NO
3. Did you do anything regularly to help others (e.g., volunteer at a hospital, nursing home, church) or do special projects in the community to help others (food drives, Habitat for Humanity)?	YES	NO
4. Were you regularly involved in organized sports groups (e.g., soccer, basketball, track) or other physical activity (e.g., competitive cheer, gymnastics, dance, marching band)?	YES	NO
5. Were you an active member of at least one civic group or a non-sport social group such as scouts, church, or youth group?	YES	NO
6. Did you have an engaging hobby — an artistic or intellectual pastime either alone or in a group (e.g., chess club, debate team, musical instrument or vocal group, theater, spelling bee, or did you read a lot)?	YES	NO
7. Was there an adult (not your parent) you trusted and could count on when you needed help or advice (e.g., coach, teacher, minister, neighbor, relative)?	YES	NO
8. Was your home typically clean AND safe with enough food to eat?	YES	NO
9. Overall, did your schools provide the resources and academic experiences you needed to learn?	YES	NO
10. In your home, were there rules that were clear and fairly administered?	YES	NO

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Morris AS, Hays-Grudo J, Zapata MI, Treat A, Kerr KL. Adverse and protective childhood experiences and parenting attitudes: the role of cumulative protection in understanding resilience. *Advers Resil Sci.* 2021;2(3):181-192. doi:10.1007/s42844-021-00036-8.

prior to the exam to explain what will happen during it and offer the option of having a chaperone present. This is also the time to discuss a way for the patient to signal distress or discomfort, which can be verbal or physical, such as raising a hand.[15,18] The provider should be receptive to this and be prepared to pause or stop the exam. The provider should ask for verbal consent/permission prior to speculum or digital insertion. Some studies have even recommended offering the patient the option of self-insertion for speculum exams.[18] Throughout the exam, the provider should communicate with the patient regarding the next actions they will take and should avoid using false reassurances, which may mimic language used by an abuser.[19] Certain phrases that may be triggering include: "hold still, don't move"; "this will only hurt for a little bit"; and "it will be over soon."[19,20] Instead of placating comments, it is better to ask the patient, "What can I do to help you feel safe in this moment?"[20]

Screening for trauma

Screening for trauma is an integral aspect of TIC.[5-7] However, a provider must assess the length of their patient-provider relationship and take into consideration their ability to provide evidence-based interventions for positive screens. For example, for a dermatology provider who may only see a patient for a limited number of interactions, it may be more appropriate to simply implement general universal trauma precautions as opposed to universal screening measures.[15]

Areas of care conducive to universal trauma screening and interventions have been identified as primary care, pediatric, and women's health settings.[5,7,11,18,21] The CDC calls for "enhanced primary care," which involves universal screening measures and providing appropriate referrals for intervention in primary care settings.[22]

There have been a variety of studies assessing the feasibility of ACE screening and methods by which to screen. ACE screening is usually completed via a self-report questionnaire or a screening interview.[7,21] It is recommended that providers include a framing statement prior to screening that explains the reason for the screening and the association of traumatic events with lifelong effects on both physical and mental health.[7,15] A common concern regarding screening for trauma is that it will trigger past trauma; however, research has indicated that trauma survivors do not report distress with screening, and many express that screening for trauma history, such as a history of abuse, in primary care is appropriate, important, and relevant to their medical care and health history.[17]

Screening for childhood trauma in an appropriate care setting provides the opportunity to deepen the patient-provider relationship. It also provides an opportunity to discuss, evaluate, and promote resiliency factors, or PACEs. For patients screening positive for a history of childhood trauma, the provider should be ready to offer appropriate referral information.[3,8,11,18] Professional multidisciplinary collaboration with behavioral health providers is recommended; this may in the future create more opportunities for integrated mental healthcare in the primary care setting.[3] Prior to initiating screening practices, providers should begin to generate a local referral list of trauma-informed mental health therapists and counselors and identify those who specialize in evidence-based interventions for trauma, such as eye movement desensitization and reprocessing treatment.[11] Mindfulness-based, mind-body techniques have been shown to help mediate dysregulation of the stress response system caused by traumatic events.[23] Some of these practices include diaphragmatic breathing exercises, yoga, meditation, guided imagery, Tai chi, and biofeedback.[23]

For expectant mothers and newborns whose parents have a positive screen, programs such as the Nurse Family Partnership Program, utilizing primary prevention, have demonstrated positive outcomes in helping prevent the intergenerational transmission of ACEs.[22] Along with a behavioral health referral, adolescents with a positive screen may benefit from programs such as Big Brothers, Big Sisters to help foster resiliency through one-on-one mentoring from a safe and supportive adult.[22]

Conclusion

The body of TIC research continues to grow and evolve. TIC is a relatively new framework, and further research is needed to better evaluate outcome measures of TIC applied in healthcare settings. Studies have identified measurable improvements in levels of patient-provider partnership, patient-provider communication, patient satisfaction, and medical adherence as well as increases in trauma screening and referrals to mental health specialists in healthcare organizations where TIC has been implemented.[24] However, significant research gaps remain. Further research is needed to assess quantitatively the effectiveness of TIC implementation for specific health outcomes from a longitudinal perspective. Future research should include the effect of TIC on engagement in care, adherence to the treatment plan, and healthcare utilization as well as on health outcomes of chronic diseases associated with ACEs such as glycemic control, hypertension management, and COPD or asthma exacerbations. Further studies are also needed to clarify clinical practice guidelines and evaluate evidence-based practices and interventions that help to mitigate the effects of trauma.

Due to the high prevalence of trauma and its potential to impact physical health, mental health, and social outcomes significantly throughout one's lifetime, the medical community needs to incorporate a TIC approach for all patients. This paradigm needs to be implemented in all healthcare organizations and clinical practice settings. As this change is occurring, trauma-aware healthcare professionals can begin to implement their own practice changes utilizing the TIC model, universal trauma precautions, and screening measures in appropriate practice settings. NP

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