

Nationwide efforts for trauma-informed care implementation and workforce development in healthcare and related fields: a systematic review

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ABSTRACT

There is building evidence that Adverse Childhood Experiences without early and proper intervention leads to subsequent short- and long-term behavioral, social, physical and mental health problems. Practitioners, researchers, and healthcare systems have been implementing trauma-informed care (TIC) in a variety of health and human services settings, resulting in improvements in clinical care and prevention of illness by identifying high risk populations. This has led to positive health outcomes including improved compliance, better access to mental health services and reduced health care costs. A systematic review was conducted of studies that focused on TIC implementation in healthcare settings, statewide TIC implementation, impact of adverse childhood experiences on health outcomes, impact of TIC on health outcomes, and evaluation of TIC implementation. A search was conducted in March 2019 to identify studies in PubMed, Medline, and other online literature. We limited our search to articles published in English after 2000. This article aims to review the components of TIC phases of implementation in healthcare settings, success stories across the nation to help the readers understand the importance of a paradigm shift to improve healthcare delivery and health outcomes and to prevent illness starting from childhood with a family centered care perspective.

Key words: trauma-informed care implementation and interventions, adverse childhood experiences, childhood trauma, primary-level interventions.

What is Trauma-Informed Care?

Trauma-informed care (TIC) in healthcare systems is a multilevel, organizational framework to understand and respond to the impact of trauma on both survivors and healthcare providers. Trauma, defined in this context, describes physical and psychological responses to a distressing event or events. Such trauma can be in response to a wide range of stressors, including but not limited to damaging relationships, abuse, neglect, exposure to

violence, poverty, homelessness, accident, war or natural disasters. These adverse experiences have been linked to health outcomes, and a large body of research has identified that when these events occur during childhood they have lasting and persistent effects on health.

The short- and long-term effects of adverse childhood experiences (ACEs) have been documented by a multitude of studies published over the last decades, as interest in health promotion and disease prevention has grown.¹⁻²⁴ Household dysfunction-related ACEs—such as physical, sexual, and emotional abuse, emotional and physical neglect, and mental illness, substance abuse, criminal activity, domestic violence, and parental

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absence—and societal-related ACEs such as community violence, poverty, foster care and discrimination can have negative effects on a child in all health domains: behavioral, physical and physiological, cognitive, social, and mental health.¹⁻²⁶ Health-risk behaviors are also associated with an increasing number of ACEs in a dose-response relationship for substance abuse, tobacco use, high-risk sexual behavioral, and overeating.^{3,5,10,11,13,27} A higher number of ACEs has been associated with metabolic risk biomarkers including obesity, high blood pressure, high total cholesterol, low high-density lipoprotein cholesterol levels, and high glycated hemoglobin.¹⁷

Moreover, individuals exposed to multiple ACEs may lead a “trauma-organized” lifestyle where traumatic events and relationships create a personality, behavior, and lifestyle which may further predispose them to further traumatic situations mental and physical illness throughout life.^{3,14,24,26,28-30} The leading causes of death among adults such as heart disease and stroke, chronic obstructive pulmonary disease, lung cancer, and liver disease are all associated with complex and multiple childhood trauma.^{7,8,14} Furthermore, individuals, who report a high number of ACEs are more likely to die prematurely, by up to 20 years earlier than individuals who report fewer or no ACEs.^{3,14,23} Individuals who report more ACEs are more likely to report poor or fair health, to have an overall lower sense of well-being, to have poorer access to medical/mental health services, to be less satisfied with their lives, and to have higher work related problems and rates of unemployment.^{3,11,22,23,31,32}

Mental health is associated with exposure to multiple ACEs, including learning and behavioral problems, somatic disorders, hallucinations, anxiety and obsessive-compulsive disorders, substance use disorders, depression and subsequent suicide attempts during adulthood as well as posttraumatic stress disorder, which may not always respond to traditional treatment.^{2,5,10-12,19-21,27,28,33-36} Previous studies have explored how ACEs create an

environment of traumatic toxic stress that can lead to prolonged activation of the stress response system, excess cortisol circulation, and disruption of the neuroendocrine and immune systems. When the stress response system remains on high alert, it can lead to remodeling of neurological pathways particularly in the hippocampus, amygdala, and prefrontal cortex.^{1,37-40} Lastly, many short- and long-term health problems in association with multiple ACEs increase healthcare utilization and costs in a dose-response curve pattern.^{22,41}

Core features of trauma-informed systems include the integration of trauma-informed concepts and principles into policies, procedures, and practices, and building awareness, recognition, and implementation of screening, assessment and treatment services for trauma.⁴²⁻⁴⁵ Thus, to provide TIC, there must be a commitment to these tasks throughout the organization with a resultant paradigm shift.^{46,47} This shift, then, facilitates the identification of trauma and creates pathways to holistic family well-being assessment and intervention, the prevention of long-term negative health outcomes and a reduction in healthcare costs.^{29,42-44,46,48,49}

TIC can also benefit medical professionals with a personal history of trauma or who have experienced work-related trauma.^{50,51} Trauma-informed organizations that use trauma-sensitive practices can decrease trauma-related triggers and improve staff health, resiliency, and efficiency while enhancing the quality of care for patients and families.⁵²⁻⁵⁵ TIC organizations strive to improve multiple practice domains: education of providers to change practice, early identification of children experiencing adversity, treatment through evidence supported and resiliency-focused services, and collaboration within and across agencies that serve children and families in the broader community.^{34,56-58}

The Substance Abuse and Mental Health Services Administration (SAMHSA) outlines six broad principles to implement TIC (Table I).⁵⁹

Table I. Broad principles of implementation of trauma-informed care.

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1. Safety: Conscious organizational effort to promote physical and emotional safety for all members and clients of the organization.
 2. Trustworthiness and Transparency: Organization makes decisions with transparency and engenders trust of staff and its clientele.
 3. Peer support: Individuals with histories of trauma involved with the organization are engaged to be critical resources for support.
 4. Collaboration and mutuality: All members of the organization can equally contribute to the healing of individuals impacted by ACEs.
 5. Empowerment, voice and choice: Clients are provided with family- and patient-centered approaches while developing plans of action that empower clients.
 6. Cultural, Historical and Gender Issues: Efforts are culturally sensitive and free of prejudices that arise from biases and stereotypes.
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These principles include safety, organizational trustworthiness and transparency, peer support, organizational collaboration amongst its members, empowerment of clients, and culturally sensitive care. Understanding how TIC is defined and adopting these principles are typically the first steps for organizations and states interested in implementing trauma-informed approaches.

Methodology

The purpose of this article was to conduct a systematic review of research on how trauma-informed care is being implemented in healthcare settings nationally and its effect on the quality of healthcare delivery and on health and other outcomes. We then review efforts by states to implement TIC in multiple systems of care including healthcare, education, juvenile justice, and child welfare settings. Finally, we report on the evidence base for interventions to prevent childhood adversity and trauma before concluding the review with recommendations for future efforts.

A systematic review was conducted of studies that focused on TIC implementation in healthcare settings, statewide TIC implementation, impact of adverse childhood experiences on health outcomes, impact of TIC on health outcomes, and evaluation of TIC implementation. A search was conducted in March 2019 to identify

studies in PubMed, Medline, and other online gray literature. Pubmed and Medline databases were searched using the following keywords: trauma-informed care implementation, adverse childhood experiences and trauma-informed care, trauma prevention, trauma-informed family centered healthcare, statewide trauma-informed care implementation.

We limited our search to articles published in English after 2000 that mentioned “trauma-informed” or “trauma-informed care” in the abstract, title, or key words. 792 articles and their references were screened if they met any of the following criteria:

- Definition of trauma-informed care, childhood trauma, and adverse childhood experiences
- Discussion of trauma-informed care implementations and interventions, and subsequent changes in practice
- Evaluations of the impact of trauma-informed care on child and family health outcomes
- Discussion of primary-level interventions to prevent childhood adversity and trauma
- Discussion of barriers and gaps to implementation of trauma-informed care

One hundred and forty-four articles met the inclusion criteria. The full texts of these articles

were obtained and classified according to the following categories: 59 articles discussed TIC and ACEs, 38 articles discussed the implementation of TIC in healthcare, 14 articles discussed changes in practice related to TIC, 19 articles discussed the impact of TIC on child and family health outcomes, 29 articles discussed statewide TIC efforts, 8 articles discussed primary prevention of childhood adversity and trauma, and 8 articles discussed barriers and gaps related to implementation of TIC.

Implementation of Trauma-Informed Care in Healthcare

Many healthcare organizations view TIC as a priority, and numerous studies have reported on the screening of patients for ACEs over the last decade although progress continues to be slow considering the vast healthcare network.⁶⁰⁻⁶⁴ Healthcare organizations' commitment to TIC varies substantially and is influenced by different factors at the organizational and individual level.^{65,66} Organizations and communities that have most successfully implemented TIC have reviewed and amended TIC procedures and policies, provided training to all staff and aligning staff hires with TIC training, followed recommended guidelines, and adopted refinements in TIC, such as service user involvement and ongoing staff training using system-level approaches.⁶⁷⁻⁷²

Healthcare systems remain an important setting for identifying children and families who have been exposed to trauma. Pediatricians and other childcare providers are integral to the process of implementing TIC, especially if they work in a trauma-informed system and are properly trained.^{61,63,73-75} Within these systems, they ideally have the support and knowledge to recognize, assess and refer traumatized children and their families from inpatient, outpatient, or rehabilitation settings to much needed services within and outside the healthcare system.^{61,74,76,77}

Most trauma-informed organizations begin by establishing a stakeholder group to look at the available policies, procedures, and

practices to determine how they might better align with a TIC paradigm.^{53,61,65} In some institutions, organizational leadership has implemented institution-wide training and education for their staff and administrators to ensure TIC principles are practiced across the organization.^{66,67,69,72-74,78-80} Various curricula have been developed and piloted for healthcare professionals in different settings, which were designed to ultimately result in more effective patient-centered communication and intervention around ACEs.⁸¹⁻⁸⁴ Existing programs have also discussed self-awareness and self-care in order to mitigate the impact of trauma that healthcare providers may have experienced themselves.⁸⁵⁻⁸⁸

In other institutions, front-line providers have created 'grass-roots' training to increase TIC awareness among fellow workers and administrators in their departments, which subsequently led to an institutional paradigm shift.^{50,61,67,81,83,89,90} When the leadership at all levels of an institution identify TIC as a priority, administrators may also change their hiring practices, staff training policies, and their work environments.⁶⁷ Consequently, each organization can create collaborative, safe, and patient-centered environments while proactively preventing secondary traumatic stress.⁸⁰

Universal screening of trauma and resiliency, preferably embedded in routine intake procedures, has been adopted as an important component of TIC in healthcare and other settings, and assumes that most patients have experienced some childhood trauma and all patients possess some resiliency.^{5,67,74,78,80-83,89-92} The assessment of ACEs during routine screening within healthcare settings has resulted in finding more cases in need of trauma-informed interventions. Consequently, some institutions are investigating how they might better integrate behavioral and mental healthcare services with primary care. Researchers stress the importance of the co-localization of behavioral health and primary care providers, supported with an adequate

number of social workers, to better address the needs of patients with a history of childhood trauma; these practices have led to substantial benefits for patients.^{61-63,65-67,93-98} One prime example of this integrated behavioral health in primary care practice is the Montefiore Hospital Pediatric primary care clinics, which we will review in more detail in a later section.^{95,96} Implementation of TIC has resulted in changes in healthcare practice.

Changes in Practice due to Trauma-Informed Care Implementation

Although there are numerous efforts to implement TIC in healthcare settings, the literature is sparse on whether it improves the quality of healthcare delivery. The first line of studies report on systems assessment and workforce development.^{50,99,100} These efforts showed that training can result in a paradigm shift toward more TIC practices.⁷⁶ Many practitioners have gone further and reported on how adopting TIC, with its emphasis on patient empowerment and shared decision making, has improved provider-patient communication, which in turn, has led to improved patient satisfaction, medical information recall, compliance and decreased healthcare costs.^{48,49,101,102} In a study that evaluated patients' perception of care delivery before and after primary care physicians completed a six-hour TIC course, providers in the study group were rated higher than providers in the control group on the Partnership Scale.⁷⁶

Implementation of TIC can lead to the holistic care of the patient and their family, addressing their needs through the development of a therapeutic relationship, increased screening and/or by referral to specialists with subsequent improvement in the quality of healthcare delivered. Flynn et al.⁷⁵ reviewed multiple studies on the implementation of TIC in primary healthcare settings and found that most TIC programs quadrupled the proportion of trauma screening (from 12-21% for different variables to 46-88%) and improved physician knowledge, attitudes, and confidence to

identify and work with traumatized patients. Briggs et al.⁶⁰ from the Montefiore Hospital Network screened children for trauma using the Healthy Steps model and referred them to behavioral health clinicians embedded in their primary care clinics. The percentage of families referred to services increased from 16% to 26%, and the percentage of families who complied with treatment increased from 20% to 63% with a warm hand-off.⁶⁰

Glowa et al.⁶⁴ reported that in a family practice clinic, by screening for ACEs, practitioners gained new information about their patients. As a result, they discussed the impact of ACEs on their patients' health and the need for intervention almost three times more often with patients with four or more ACEs than with patients with fewer than four ACEs.⁶⁴ Kottenstette and colleagues⁶¹ assessed children and families for trauma using the Family Well-being Assessment model in a child abuse clinic. They reported that recognition of referral for needed services among caregivers increased by close to tenfold (from 5.1% to 47.0%), which more than doubled the rate of referrals, mostly to mental health services.⁶¹ The same model was implemented in the Emergency Department and the burn unit of the same institution, which increased the recognition of families and patients suffering from multiple trauma, dramatically.^{62,63}

Impact of Trauma-Informed Care Interventions on Child and Family Health Outcomes

Despite the implementation of TIC spreading across healthcare and other family-serving systems, there are few published studies examining its impact on child and family outcomes. Some studies report on how the integration of multiple family serving systems statewide can impact children and families exposed to trauma. One notable multisystem intervention is the Hawaii Department of Health's Project Kealahou, which included the State's mental health, juvenile justice, education, and child welfare systems.¹⁰³ They provided services to girls at risk for truancy and

incarceration that included case management, peer support, group activities and therapy. The intervention resulted in improvements in the girls' competence, depression symptoms, and behavioral problems and a reduction in caregiver strain.¹⁰³

The Massachusetts Child Trauma Project (MCTP), another multisystem, statewide project, aimed to improve the safety, permanency, and well-being of maltreated children by training child welfare workers and mental health providers on TIC, disseminating information on evidence-based treatment, and integrating the systems of care in their State. Barto et al.¹⁰⁴ examined provider and family outcomes at pre- and post-intervention. They found that not only the child protection capacity among providers increased, but also recidivism for substantiated maltreatment decreased by 12% for physical abuse, 14% for neglect and 15% for any maltreatment among children.¹⁰⁴ Bartlett et al.¹⁰⁵ found that children in the MCTP study had fewer posttraumatic symptoms and behavior problems at six-month follow-up. Azeem et al.¹⁰⁶ reported on how trauma-informed interventions changed practices in an inpatient child and adolescent psychiatric setting after hospital staff were trained using six core TIC strategies. They reported that episodes of seclusion/restraints in youth decreased from 93 episodes in the pre-intervention to 31 post-intervention.¹⁰⁶

Providing TIC services to women is likely to benefit the wellbeing of children indirectly. For instance, providing interventions involving trauma-informed and trauma sensitive principles for women with mental health issues, substance use disorders, and histories of domestic violence was found to be associated with improved parenting capacity.^{107,108} In a meta-analysis of a nine-site quasi-experimental intervention (N = 2,729 women), mental health and substance use agencies implemented trauma-informed interventions that included case management, integrated treatment for co-occurring disorders, counseling, training on parenting, and consumer involvement

including peer support. They reported that post-traumatic symptoms, drug use severity, and mental health symptoms decreased.^{107,108}

While the above studies show evidence of TIC implemented in larger systems of care leading to positive health outcomes for children and their caregivers, other studies reported on improvements in health outcomes as a result of TIC implementation directly in healthcare settings.^{49,103-108} Machtinger et al.⁵², for instance, developed a trauma-informed primary care (TIPC) framework for women which showed enhanced healing and healthier environments for themselves, their families including their children and the community. Other studies reported on how Integrated Behavioral Health (IBH) in pediatric clinics proved to be a sustainable and effective method to address and ameliorate pediatric behavior problems, many of which stem from trauma. As a result of this intervention, parents felt more empowered and less stressed-out.^{60,97,98} Additionally, the Montefiore Hospital network's implementation of TIC in pediatric primary care along with IBH, which included social workers, behavioral health clinicians and child and adult psychiatrists, resulted in improved treatment compliance, better health outcomes, increased competence of primary care providers and even reduced healthcare costs.^{95,96} This hospital successfully converted itself into an Accountable Care Organization, the offshoot of The Patient Protection and Affordable Care Act, allowing them to address modifiable social determinants of health, such as individual, family, and societal trauma.⁷⁷

Flynn et al.⁷⁵, conducted a meta-analysis of studies focusing on ACEs and TIC implementation. Their analysis showed that it was difficult to compare study outcomes because they neither explored similar interventions nor used similar outcome measures. As a result, they reported that only half of the studies conducted in primary healthcare settings included patient outcomes. Furthermore, the studies reported mixed results related to child behavior, reported maltreatment, and referral.⁷⁵ However, Marie-

Mitchell and Kostolanski¹⁰³ in their review of 20 randomized controlled trials, reported that 17 of the studies they reviewed examined parent-child relationship outcomes and 15 examined child health outcomes. They also reported that, due to varying ACE assessment tools, screening practices, scopes of intervention and a wide range of outcome measures, the results between studies were difficult to compare. Yet, it is noteworthy that generally, programs had a stronger impact on parent-reported parent-child relationship outcomes, and that medium and high intensity intervention programs were more likely to improve measured health outcomes.¹⁰⁹

In summary, promising TIC interventions have started to emerge in mental health and pediatric and adult primary healthcare settings. There is a need to conduct multi-center prospective studies to assess and compare trauma-informed intervention modalities and treatments to better assess the impact of TIC on child and family health outcomes.

Statewide Efforts to Build Workforce Capacity and Integrate Systems Serving Families

Although healthcare settings are practical assessment and intervention entry points for children and families that are struggling with the impact of multi-trauma, the same population may also engage with school, child welfare, and juvenile justice systems.^{79,100,103,105} States committed to multisystem TIC approaches demonstrate the importance of working across multiple systems when developing interventions for children and families who are often involved in more than one system.^{57,67,72} This 'trauma-informed systems' approach promotes shared beliefs, values, and practice approaches among organizations, some of which are multilevel interventions that provide workforce training along with policy changes, while others offer targeted services, such as child welfare screenings across multiple agencies.^{72,105,110,111} In fact, with the recognition that cross-system TIC implementation may improve health, social, and educational

outcomes simultaneously, numerous states have started efforts to build capacity to deliver TIC across systems serving children and their families, including child welfare, education, health and mental health systems.^{103,112}

States have focused their efforts in several areas: assessing whether and to what extent systems are trauma-informed, improving worker capacity through workforce training, disseminating information about trauma-informed practice, and integrating systems that serve families and children.^{103,105} The assessment of a program is often an initial step to explore TIC readiness, available tools and gaps, and to develop training programs for workers and interventions for families and children in the child welfare and mental health systems. For instance, California, Oklahoma, and New Hampshire developed a process to evaluate how trauma responsive their child welfare systems were, with the goal of generating recommendations for statewide improvements. Bassuk et al.¹⁰⁰ developed and validated a brief assessment tool to measure the level of TIC in health and human services to determine training needs, evaluate their practice, and develop trauma-informed policies.

Trauma-informed workforce initiatives within the child welfare system range from trauma education training programs in Louisiana, Tennessee, and Arkansas to multisystem approaches in South Carolina.^{110,113-115} Project Best, a statewide initiative in South Carolina, for example, relied on interprofessional collaboration to impact systems, resulting in improved trauma-informed practices and positive feedback about the community-based learning collaborative component.¹¹⁰

In a multifaceted, statewide program spanning child welfare, mental health, and juvenile justice in New Hampshire, the Partners for Change Project implemented case planning for youth who had been screened for trauma, multisystem collaboration, and evidence-based trauma treatments across systems, resulting in improvements in case planning, trauma

screening, mental health referrals, and overall system performance.¹¹⁶ Because the child and family population in child welfare and juvenile justice system is known to have much higher healthcare needs, including physical, mental health and preventive care, implementing TIC in these systems could eventually have a significant impact on health care needs and outcomes of this vulnerable population.^{79,99,104,117}

Healthcare and educational systems also interact frequently. It is well known that schools are overwhelmed with behaviorally challenged students, the majority of which receive healthcare; thus, TIC implementation in both systems may enhance health and educational outcomes simultaneously.^{79,118-121} Massachusetts and Washington were among the first two states to provide guidelines for TIC implementation within schools.¹²² Given the growing connection between trauma and the impact on student outcomes, school systems have made major strides in training their workforce.^{118,119,123} A strong commitment from school leadership is paramount to successfully implementing training.^{124,125} States have been legislating that schools train their personnel about trauma and ways to mitigate toxic stress (e.g., Nevada, Iowa, Delaware, Wisconsin), using models ranging from intensive two-day training to year-long training.^{120,126,127} Both approaches have increased teachers' ability to respond to trauma, however, the year-long training was more effective.¹²¹

Wojciak and Smith¹²⁷ conducted a quasi-experimental study evaluating a year long, school wide, trauma-informed intervention with all school staff in an elementary school. Compared to the staff at control schools, staff participating in "We Can! Building Relationships and Resilience," reported significant increases in their understanding of the impact of trauma on student learning and behavior, their ability to work with students who have experienced trauma, and worker collegiality. In states like Washington and Massachusetts, principals have also reported reductions in office referrals and suspensions when trauma-informed practices were implemented in their schools.^{128,129}

Primary Prevention of Childhood Adversity and Trauma

Programs that focus on population-level primary prevention that can reduce the incidence of ACEs are recognized as having the most potential for long-term impact. Poole et al. conducted a systematic review of programs that included a primary prevention campaign to prevent childhood trauma.¹³⁰ Programs included messages that focused on positive parenting, child development and expectations and asking for help. Although studies generally found positive results, Poole concluded that most studies did not measure changes in the risk factors targeted in the campaign: only one program, Triple-P, had rigorous, controlled evaluations to indicate the positive impact at the individual and population levels.¹³¹⁻¹³⁴ The challenge to the practice community when only one program is evidence-based is the lack of options or implementation strategies for diverse populations and varying levels of funding.

Strategies to reduce ACEs through environmental or policy approaches are promising but largely absent from the published evidence base. Great potential to reduce the burden of ACEs lies with policies that address the social determinants of health inequity, such as programs that reduce poverty, improve housing, or increase access to services such as healthcare and/or education.¹³⁵⁻¹³⁷ Thus far, no published studies have examined ACEs as outcomes of these larger policy approaches.

The evidence-base for effective primary prevention strategies to reduce the burden of ACEs, although growing steadily, lags far behind community readiness to implement these strategies. There is critical need to grow the evidence base for programs that impact primary, secondary, or tertiary prevention of ACEs. Investment in program development, implementation, rigorous evaluation, and effective strategies for translation are an important federal research investment.

Barriers and Gaps Related to Implementation of Trauma-Informed Care

Despite ongoing efforts to implement TIC practices in healthcare and statewide efforts, there are still several barriers that have prevented wide-scale implementation of TIC. The need for comprehensive training, especially in trauma-sensitive approaches and language to increase provider comfort and competency to implement TIC has long been recognized. Studies investigating screening and identification of trauma victims consistently emphasizes this need, because most providers fear that asking about trauma will offend their clients.¹³⁸ Consequently, even with physical evidence of abuse, 88% of residents of a domestic violence shelter reported they were not asked about trauma or offered assistance by their dentists.¹³⁹

Provider fear is, in fact, often unfounded because the majority of trauma survivors welcomes questions about their trauma and assistance to address it.^{138,139} The need to be understood by their provider is a repetitive theme in this population.^{62,140} Kottenstette et al.⁶¹ and Fassel et al.⁶² reported that their two-generational screening models for childhood trauma, family resiliency, and healthcare needs was well-received by clients; 98% and 75% of patients reported this model “could help their providers provide better healthcare” to them.

The same studies that report healthcare provider gaps in confidence and knowledge regarding addressing trauma in their patients also report a keen desire among providers for training in trauma sensitive methods to address clients’ psychological distress effectively and confidently.^{141,142} Barriers to asking about trauma may include the providers’ discomfort with their own trauma history and the need for self-protection to avoid secondary trauma, compassion fatigue, and burn out.^{138,139,143,144} Because one of the strengths of TIC is its focus on self-care and awareness of a provider’s own needs, compassion satisfaction, and

peer support, it may mitigate secondary traumatization and contribute to the providers’ resilience.^{59,144} Thus, implementation of TIC may enhance provider competencies, offer opportunities to strengthen the provider and patient relationship, and improve the identification of patients that require early and comprehensive interventions.

There is accumulating evidence that communities and systems of care including healthcare are energized to understand TIC, develop their workforce, implement trauma responsive practices, and evaluate outcomes for their clients. Statewide initiatives with strong collaborations among healthcare, mental health, child welfare, juvenile justice, and education systems have great potential to enhance well-being, decrease re-victimization, improve health, social, and educational outcomes and promote change at a societal level.^{26,104}

To improve care for families and their children, healthcare systems should engage in and lead statewide initiatives to implement TIC across systems, like Hawaii, Massachusetts, Ohio, Wisconsin, Iowa and other states.^{26,103} Through these collaborative efforts, different systems may learn from one another and, in addition, children and families served by these systems are likely to benefit from more synergistic comprehensive and family-centered approaches to care. Healthcare can borrow concepts like capacity building, trauma-informed systems, and assessment from statewide cross-system collaboration.

Healthcare systems moving toward accountable care designation also seems to hold the promise of a healthier population while being cost-effective. This life-course approach to disease prevention may offer opportunities at every age to build resilience as recommended by The American Academy of Pediatrics.⁷⁷ Policy makers should prioritize funding for Integrated Behavioral Health to help increase access to care in order to address difficulties early before escalation to improve health outcomes.⁹⁸

Given the plasticity of the brain, all patients receiving healthcare have the potential to benefit from family- and patient-centered, trauma-informed, resiliency-focused care, which must to be implemented in all components of our healthcare systems.^{66,67,69,72,79,80,145,146} Because the earlier the family-centered interventions are implemented, the higher the potential for better health outcomes, child-serving healthcare systems should work toward this paradigm shift now.^{67,79,80}

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