



# Trauma-Informed Care in Child Health Systems

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Recent progress in understanding the lifelong effects of early childhood adversities has clarified the need for an organized strategy to identify and intervene with children, adolescents, and families who may be at risk for maladaptive responses. Trauma-informed care (TIC) in child health care operationalizes the biological evidence of toxic stress with the insights of attachment and resilience to enhance health care delivery to mitigate the effects of trauma. The resulting pediatric health care delivery strategy promotes and restores resilience in children and adolescents, partners with families to support relational health, and reduces secondary trauma among pediatric health care clinicians. This policy statement summarizes what policy makers, legislators, and health care organizations need to consider in terms of infrastructure, resources, and financial support to facilitate the integration of TIC principles into all pediatric points of care. The accompanying clinical report describes the elements of TIC in the direct care of children, adolescents, and families and covers the spectrum from prevention to treatment. The recommendations in this statement and the clinical report build on other American Academy of Pediatrics policies that address the needs of special populations (such as children and adolescents in foster or kinship care, in immigrant and refugee families, or in poor or homeless families) and are congruent with American Academy of Pediatrics policies and technical reports concerning the role of pediatric clinicians in the promotion of lifelong health.

## INTRODUCTION

Over the past 2 decades, basic science has explained how cumulative adverse childhood experiences in the relative absence of safe, stable, nurturing relationships (SSNRs)<sup>1</sup> alter neurohormonal stress responses, gene expression, telomere length, brain development, and immunity, enabling researchers to elucidate how the body biologically embeds

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childhood trauma. Recent studies of toxic stress support assertions that the origins of lifelong health are in early childhood and that chronic stress in childhood strongly predicts adult health status.<sup>2,3</sup> In the context of expanding evidence, pediatricians and others involved in community-based early childhood systems need strategies to mitigate the damaging effects of early childhood trauma and to promote resilience in children and families. Trauma-informed care (TIC) offers an organizing principle for pediatric practice that improves awareness of the spectrum of trauma-related symptoms, promotes an emotionally safe environment of care, and provides specific interventions to mitigate the effects of trauma exposure.<sup>4,5</sup> This policy statement presents recommendations for policy makers, legislators, and health care organizations for implementation of TIC into pediatric health systems. The accompanying clinical report<sup>6</sup> presents best-practice guidance for TIC in the direct care of children and adolescents.

## BACKGROUND

TIC is defined by the National Child Traumatic Stress Network as medical care in which all parties involved assess, recognize, and respond to the effects of traumatic stress on children, caregivers, and health care providers. TIC also includes attention to secondary traumatic stress (STS), the emotional strain that results when an individual, whether a health care worker or parent, hears about or witnesses the traumatic experiences, past or present, of children.

## TIC Promotes Relational Health and Resilience

Every pediatric encounter presents opportunities to promote family resilience and relational health.<sup>7</sup> Informed by research in infant

mental health and neurodevelopment, early relational health refers to the establishment of foundational relationships during the first 3 years of life that are central to successful physiologic, emotional, and moral development of the young child.<sup>8</sup> Relational health, in a more general sense, is applicable to all age groups, is dyadic, and includes the capacity of both the child and caregiver to enter into a safe, secure, nurturing relationship allowing both to thrive.<sup>1,9,10</sup> Strong foundational relationships support resilience and buffer stress in children, so they can be considered primary prevention of stress-related disturbance. Trauma-informed practices also support relational health and family resilience as important protective factors for those who have been exposed to persistent adversity or potentially traumatic events (see Fig 1).

Human neuroendocrine-immune networks respond to internal and external sensors that identify danger and safety by activating in dangerous circumstances and deactivating when danger has subsided.<sup>11</sup> Toxic stress responses occur with prolonged activation of the neuroendocrine-immune system and dysregulation of homeostasis (or allostasis if multiple systems are involved)<sup>12</sup> in the absence of buffering by SSNRs. Toxic stress responses can result in lifelong impairments in physical, mental, and relational health.<sup>13</sup>

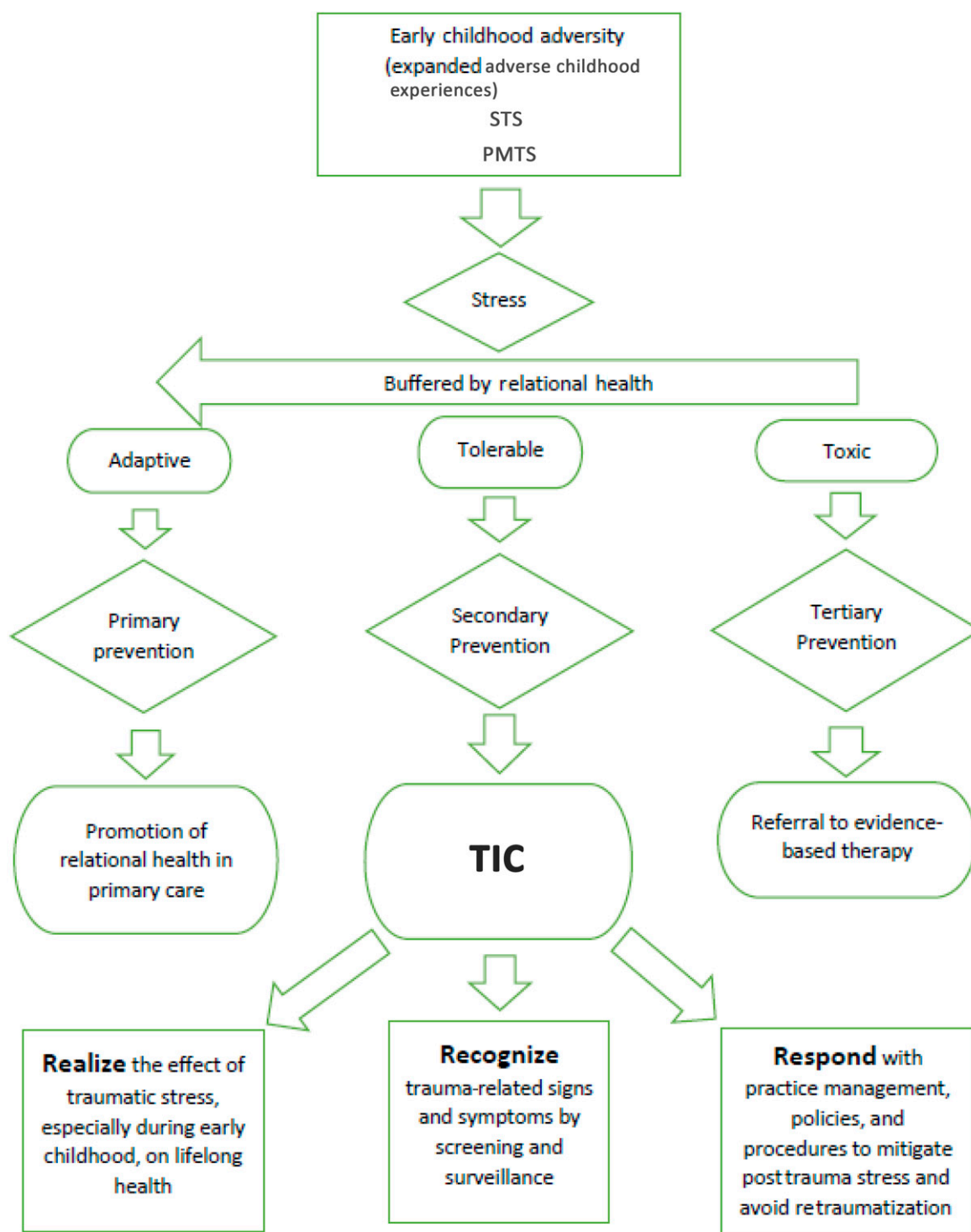
The concept of toxic stress adds an important physiologic basis to the study of attachment and our understanding of trauma. Trauma is defined as an event, series of events, or circumstances experienced by a person as physically or emotionally harmful that can have long-lasting adverse effects on the person's functioning and well-being (emotional, physical, or spiritual).<sup>14</sup> Attachment theory describes the

deep and enduring relationship between a child and adult caregiver that ideally provides a secure base from which the child can develop and explore the world.<sup>15</sup>

Resilience is the dynamic process of adaptation to or despite significant adversity by using protective factors and learned skills to manage stressful circumstances.<sup>16</sup> Resilience may allow a person to experience tolerable rather than toxic stress in response to adversity. Some characteristics of resilient children include strong executive functions (self-control of attention and impulses) and a strong personal identity, often related to a cultural or faith tradition.<sup>17</sup> However, most important to both resilience and relational health is the capacity for young children to form at least one stable, caring, and supportive relationship.<sup>9,18</sup>

## Exposure to Trauma Is Common

Almost half of American children, or 34 million younger than 18 years, have faced at least one potentially traumatic early childhood experience.<sup>19</sup> More than 1 in 7 adults report exposure during childhood to 4 or more adverse childhood experiences such as abuse, neglect, or other household adversity,<sup>20</sup> including intimate partner violence or parental incarceration. Certain populations are at higher risk for trauma exposure, both physical and emotional. In surveys, poverty or financial stress is the most commonly reported childhood adversity, second only to loss of a parent.<sup>21,22</sup> Exposure to divorce, child maltreatment, sexual abuse, intimate partner violence, bullying, parental mental illness, parental substance use problems, and community violence are also common.<sup>21</sup> Specific populations at high risk for trauma include children and adolescents who



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**FIGURE 1** Pediatric approach to TIC.

identify as LGBTQ, have developmental or behavioral problems,<sup>23–25</sup> are in foster or

kinship care, are incarcerated, are living in deep poverty, or are immigrants. Potentially traumatic

environmental and community-level conditions include economic stress, school or community violence,

adverse experiences during and after immigration, natural disasters, pandemics, and mass-casualty events such as shootings or bombings.

Racism is a common cross-cutting risk factor. Racial, ethnic, or religious bigotry magnifies the risk inherent to other special populations.<sup>26</sup> Experiences ranging from hate crimes, police profiling, bullying, or microaggressions to covert discrimination are traumatic events and may be internalized as trauma by those who are victims, indirectly or directly, of the events.<sup>27,28</sup> Historical trauma refers to the collective, transgenerational emotional and psychological injury of specific ethnic, racial, or cultural groups and their descendants who have experienced major events of oppression such as genocide, forced displacement, or slavery.<sup>29,30</sup>

Originally applied to children of the Holocaust, the concept is now applied to American Indian and Alaskan native people, African American people, Mexican American people, Japanese American people, and other groups of people who have experienced mass trauma.<sup>30</sup> Investigators link historical “soul wounding” to current health and behavioral disorders including substance use disorder, domestic violence, and suicide, particularly in Indigenous communities.<sup>29,31</sup> Children separated from families during immigration and/or detained in group facilities overseen by the Office of Refugee Resettlement are a recent special population at severe risk for long-term sequelae resulting from forced family separation.<sup>32,33</sup>

### **The Effects of Early Life Trauma Are Felt Over the Life Course**

In November 2019, the Centers for Disease Control and Prevention reviewed the emerging literature linking early childhood adversity with adult illnesses<sup>20,34</sup> and

analyzed survey data from 25 states over 2 years.<sup>3,35</sup> Researchers concluded that reducing exposure to early childhood trauma and mitigating posttrauma effects would generally and significantly reduce adult morbidity and mortality. Using logistic regression modeling, they estimated potential reductions in incidence from low for obesity (1.7%) to high for heavy drinking, chronic obstructive pulmonary disease, and depression (23.9%, 27.0%, and 44.1%, respectively). Recommendations included creating healthy communities, supporting SSNRs, and developing programs that apply primary (reducing exposure to childhood adversity) and secondary prevention (mitigating the effects of exposure) on the basis of principles of TIC.

### **There Is Need for a Child-Specific Trauma Nosology**

The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5) presents a list of trauma-related disorders ranging from mild (adjustment disorder) to severe (posttraumatic stress disorder [PTSD]).<sup>36</sup> Two additional categories, reactive attachment disorder and disinhibited social engagement disorder, are specific to young children (please see the DSM-5 for complete diagnostic criteria). This nosology can be expanded to describe other presentations common in pediatric health care settings: developmental trauma disorder (DTD), pediatric medical traumatic stress (PMTS), and STS, the last being most relevant for health care workers, family members, and caregivers.

### **DTD**

The diagnosis of PTSD, as outlined in the current DSM-5, does not adequately describe the variable presentations of trauma manifestations in children across developmental stages.<sup>37</sup> Children

with complex trauma histories often exhibit heterogeneous developmental symptoms as well as difficulties with intimate relationships and with regulation of attention and impulse control.<sup>38</sup> DTD is a proposed new diagnostic category that incorporates these differences and attempts to better describe the disturbances that occur in multiple developmental domains.<sup>39</sup> The omission of DTD in the DSM-5 has been controversial,<sup>40</sup> and the search for a better nosology of trauma, including DTD, is ongoing.<sup>41</sup>

### **PMTS**

PMTS refers to the distress that patients and family members experience during hospitalization for a perceived life-threatening diagnosis or while living with or caring for individuals with life-altering chronic conditions.<sup>42</sup> PMTS is underrecognized and rarely addressed despite its high prevalence.<sup>43,44</sup> Up to 80% of ill or injured children and their families may have traumatic stress reactions after a life-threatening illness, injury, or procedure.<sup>45</sup> In some surveys, up to 20% of parents of children admitted to a PICU develop PTSD within a few months.<sup>45</sup> The suffering of family members and caregivers is often not addressed because of existing structural and reimbursement obstacles for multigenerational care.

Although research on PMTS (and on pediatric postintensive care syndrome)<sup>46,47</sup> is ongoing, researchers in 1 study found that approximately 10% of children developed PTSD 3 to 5 months after major surgery, and 28% developed posttraumatic stress symptoms (PTSS) resulting in functional disability by parent report.<sup>48</sup> PTSS can also occur after a severe injury or diagnosis of an illness such as cancer. In another family study,

more than 10% of children had persistent functional impairment from PTSS at 6 weeks and 1 year after a potentially life-threatening injury or diagnosis, and 15% of mothers and 8% of fathers met criteria for PTSD at 1 year.<sup>49</sup>

## **STS**

As described earlier, STS may occur in parents, other family members, and health care workers such as physicians, nurses, other hospital staff, first responders, and therapists. STS may have many of the same long-term effects on health that affect children exposed to trauma.<sup>50</sup> Some health care workers may also develop disabling posttrauma symptoms that can interfere with quality of life both at work and home. Health care workers may have their own trauma histories that contribute to their reactions when exposed to the suffering of others. Nonclinical staff may also experience STS triggered by their own trauma histories, especially if the health care facility is located in an area with high adversity and nonclinical staff live in the vicinity.

## **Burnout and STS**

Preliminary evidence exists of a synergistic effect among STS, depression, and burnout in affected health care workers.<sup>51</sup> STS in combination with burnout has been associated with a significant increase in the frequency of medical errors.<sup>52,53</sup> Depression, anxiety, and suicide are greater risks for physicians than for the general population. In the United States, the rate of suicide among female physicians is 130% higher than among women who are not physicians; the rate for male physicians is 40% higher than for men who are not physicians.<sup>51</sup> Burnout includes a spectrum of pathologic conditions that develop in the context of occupational stress

and is almost twice as prevalent among physicians. The risk among nurses for burnout, depression, and STS is even higher. More than half of nurses reported suboptimal mental or physical health,<sup>54</sup> approximately 35% reported a high degree of emotional exhaustion,<sup>55</sup> and 18% reported depression in national surveys. Reports of posttraumatic stress among health care workers related to the coronavirus disease 2019 pandemic prompted worldwide concern for increased awareness and trauma-informed support for the mental health of all involved.<sup>56</sup>

## **CORE ELEMENTS OF TRAUMA-INFORMED SYSTEMS**

Core principles that can be helpful for policy development, outlined by the National Council on Behavioral Health (2019)<sup>57</sup> are outlined in the following sections. Implementation of TIC at a practice level is described in detail in the accompanying clinical report.<sup>6</sup>

### **Safe Physical and Emotional Environment**

The health care organization, workspace, and every encounter should be characterized by compassion, cultural humility, equity, collaboration, and safety for families and employees. An emotionally safe workplace includes acknowledgment of and particular attention to racial and gender discrimination, including implicit bias both in rendering care and workplace human relations. A review of health care settings from the viewpoints of patients, families, and staff can uncover practices, processes, or details in the environment that are potentially traumatizing.

### **Leadership Commitment to TIC**

Hospital and health system leadership can annually review policies and procedures to ensure a

safe work environment and setting to provide TIC, to reduce STS and burnout, and to promote sensitivity to the needs of trauma survivors.<sup>58</sup> The alignment of financial and human capital resources to support an optimal health environment in all levels and locations of care is extremely important. Surveys designed to assess system readiness for implementation are available and can be adapted for pediatric health care settings.

Surveillance and standardized screening to assess staff and patients for trauma exposure, symptoms, and strengths are important components of trauma-informed pediatric care. Universal screening, when implemented within the larger context of trauma-informed approaches and endorsed and supported by administrative leadership, reduces stigma and allows standardized responses such as time off or referral to an employee assistance program. Families and youth may be queried at the point of care, such as at the time of hospital admission. Formal screening should always be for the benefit of children and adolescents, avoid retraumatization, and identify protective as well as risk factors.<sup>59</sup> More specific information about screening is included in the accompanying clinical report.<sup>6</sup>

### **Patient and Family Empowerment**

Involvement of families and youth in the development of TIC policies and practices, particularly regarding cultural, historical, and gender issues, is essential to building an environment of support and mutuality.<sup>14</sup> Both formal and informal structures, such as Family Advisory Councils and family-centered rounds,<sup>60</sup> create a cultural expectation of collaboration and enable the health care team to understand the strengths and vulnerabilities of individual families



and of the populations served. When appropriate, tribal elders, traditional healers, and other faith community leaders can be included in developing individual care plans or institutional quality-improvement efforts. A whole-person, whole-family, whole-community perspective promotes improved awareness of how cultural backgrounds affect the perception of trauma, safety, and privacy.<sup>61,62</sup>

### **TIC Continuous Through the Health Care System**

TIC, from a public health perspective, includes primary, secondary, and tertiary prevention strategies. Primary prevention is a comprehensive approach that addresses social determinants of health (such as structural racism, poverty, and violence) that are often root causes of community trauma.<sup>63</sup> Promotion of relational health and other resilience factors (such as strong executive function and self-efficacy) may be considered primary prevention.<sup>64</sup> Following the fourth edition of *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*, promotion of early childhood relational health is a core purpose of both pediatric primary care and early childhood education.<sup>65</sup>

The National Child Traumatic Stress Network includes the promotion of child and family resilience, enhancement of protective factors, awareness of parent or caregiver trauma, and involvement of families in program development and evaluation as secondary prevention.<sup>66</sup> Trauma-informed therapies (eg, trauma-focused cognitive behavioral therapy) for symptomatic children and youth are considered tertiary prevention. These therapies are especially important for high-risk populations as identified earlier.<sup>67–70</sup>

Attachment-based dyadic therapies, such as parent–child interaction therapy, may serve to prevent development of persistent traumatic stress symptoms in high-risk families<sup>71</sup> and may be considered both secondary and tertiary prevention.

### **Recruitment and Training of a Trauma-Informed and Compassionate Workforce**

Recruitment and pre-employment practices may help discern the capacity for empathy among prospective employees.<sup>72</sup> Training and education of all administrators, clinicians, and staff, both clinical and nonclinical, can promote the appreciation of the lifelong effects of trauma on child and adolescent development and family resilience and the implementation of trauma-aware practices. Continuous quality-improvement programs translate new knowledge and skills about childhood trauma into supervision, training, and patient care.

Prevention of STS requires specific training of all staff to raise awareness, promote resilience, and explore the interaction among STS, burnout, depression, substance use, and professional quality of life. Supportive supervision and peer mentoring offer opportunities for all employees to reflect on their own trauma histories and to promote compassion, nonjudgmental attitudes and collaboration.<sup>73</sup>

### **Coordination of Care Across Family-Serving Systems in the Community**

Trauma-informed health care systems establish and support collaborative, interdisciplinary relationships among community and public health agencies that serve children and adolescents to coordinate care for children, adolescents, and families exposed to trauma. Schools,<sup>74</sup> juvenile justice

programs,<sup>75</sup> mental health professionals,<sup>76</sup> home visiting services, child welfare systems,<sup>76</sup> and foster care agencies<sup>77</sup> are natural partners for pediatric health organizations in promoting community resilience. Many have established TIC programs. Community early intervention programs can help prevent and mitigate adversity and often have the advantage of caring for young children in their natural environment as home visitors.<sup>78–80</sup>

## **RECOMMENDATIONS FOR SYSTEM-LEVEL IMPLEMENTATION**

### **Federal and State Funding**

Federal agencies such as the Centers for Disease Control and Prevention can continue and expand research to improve understanding of the developmental effects of trauma and the efficacy of specific interventions for historically resilient populations. Urgently needed are successful strategies to interrupt the intergenerational transfer of family violence. Strategies are also crucial to blunt the impact of historical trauma in communities of color and in American Indian and Alaskan native populations in the United States.<sup>30</sup> It is particularly important to identify the origins of and successfully mitigate community violence, including racism, misogyny, and religious, ethnic, and cultural bias.

State-level resources can be directed to implementation, dissemination, and evaluation of trauma-informed community programs, such as interagency and multigenerational strategies for opioid dependency. One example of a state interagency, multigenerational treatment program is Ohio START (Sobriety, Treatment and Reducing Trauma).<sup>81</sup> States could develop a communication infrastructure to

facilitate data sharing, improve interdisciplinary/interagency cooperation, and engage community partners including foundations and academic institutions.

Federal guidelines can require that state Medicaid programs ensure comprehensive coverage for all children and adolescents and pregnant mothers without regard for legal or immigration status and mandate that coverage include mental health and substance use disorder services. Financing that increases access to high-quality, comprehensive, coordinated, culturally competent health care for high-risk populations is a high priority. Federal and state regulations can require all insurers, including Medicaid and private health insurers, to include coverage for TIC elements, including surveillance, screening, diagnosis, counseling, case management, follow-up, community collaboration, mental health care, and home visiting.

### **Large Health Systems, Insurers, and Managed Care Organizations**

In large health systems, leadership can align its mission and financing with the core elements of trauma-informed systems.<sup>82</sup> Supporting TIC includes payment for trauma-informed, integrated mental health services, care coordination, rigorous case management, and seamless referral networks for intensive treatment. Prevention of secondary trauma, including care of affected health care workers, should be built into the mission of the health system.

### **Academic Centers and Children's Hospitals**

Academic health centers train and educate the next generation of physicians, nurses, and ancillary health personnel and can promote

the transformation to TIC in all health settings through education, research, and advocacy. Children's hospitals and health systems can model mental health integration<sup>83</sup> and trauma-informed practices throughout all service lines.<sup>84</sup> Because children's hospitals embrace population health management and community advocacy, they may serve as the anchor institution collaborating with community agencies to address social adversity at the neighborhood level while promoting TIC services.<sup>85</sup> Together with community pediatric care systems, academic health centers and children's hospitals can integrate core elements of education into workforce training for health care workers and community partners such as first responders, child welfare workers, teachers, and juvenile justice personnel.<sup>86,87</sup>

## **SUMMARY OF RECOMMENDATIONS**

### **Federal and State Government**

- Continue and expand research funding for the National Institutes of Health, Centers for Disease Control and Prevention, Substance Abuse and Mental Health Services Administration, and other federal agencies to improve the understanding of the root causes and developmental effects of trauma and effective interventions.
- Support epidemiological research of at-risk populations emphasizing prevention, early identification, and mitigation of the effects of community trauma.
- Facilitate interdisciplinary and interagency cooperation and data sharing to promote seamless care, research data collection,

and amplification of promising practices in TIC.

- Engage national partners, foundations, and academic institutions in cross-systems planning to support early relational health.
- Support curriculum development and implementation through mechanisms such as the Agency for Healthcare Research and Quality.
- Expand health care coverage and payment for enhanced services such as integrated mental and social care.
- Mandate coverage for TIC services by government and private payers, including screening, diagnosis, office-based management, counseling, case management, community collaboration, and home visiting.

### **Large Health Systems and Managed Care Organizations**

- Commit to becoming a trauma-informed system of care and integrate clinical practice of TIC into all services.
- Recruit, retain, and train a trauma-informed workforce.
- Expand and improve system-wide strategies for identification and treatment of all children and adolescents affected by traumatizing experiences.
- Build seamless referral networks for intensive treatment when indicated.
- Develop care models and fair payment mechanisms to promote implementation of TIC, including practice-level case management.
- Promote system-wide trauma-informed quality-improvement programs.
- Support engagement by including family advisors and employees in service planning and quality improvement, with particular emphasis on cultural, ethnic, gender, and racial concerns.

- Develop, implement, and evaluate policies and procedures to reduce retraumatization and STS and to identify, support, and refer for treatment health care workers who are symptomatic from traumatic stress.

#### **American Academy of Pediatrics, American Academy of Pediatrics Chapters, and Academic Institutions**

- Develop curricula on trauma and resilience for trainees, practicing pediatricians, and their teams.
- Support community collaboration with agencies that serve children and adolescents to create a seamless trauma-informed system of care.
- Develop and share quality improvement and maintenance of certification modules at state, chapter, and national levels.
- Develop a comprehensive research agenda for TIC in pediatric health systems.
- Partner with organizations such as the National Child Traumatic Stress Network to investigate new models of integrated care including pediatric and psychiatric telenetworks.
- Include questions about TIC in periodic surveys of pediatricians.
- Evaluate intervention and treatment strategies in collaboration with federal and state initiatives and mental health partners.
- Provide workshops, seminars, or online modules to train cross-system professionals about childhood trauma and resilience.

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## ABBREVIATIONS

DSM-5: *Diagnostic and Statistical  
Manual of Mental  
Disorders, Fifth Edition*  
DTD: developmental trauma  
disorder  
PMTS: pediatric medical  
traumatic stress  
PTSD: posttraumatic stress  
disorder  
PTSS: posttraumatic stress  
symptoms  
SSNR: safe, stable, nurturing  
relationship  
STS: secondary traumatic stress  
TIC: trauma-informed care

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