SUMMARY | June 2019

Review of Trauma-Informed Initiatives at the Systems Level

Trauma-Informed Approaches: Connecting Research, Policy, and Practice to Build Resilience in Children and Families

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Submitted to

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Project Officers
Office of the Assistant Secretary for Planning and Evaluation
U.S. Department of Health and Human Services
Contract Number: HHSP233201500133I

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Executive Summary

The effects of childhood trauma can last well into adulthood. Trauma-informed (TI) approaches provide a framework that applies to all levels of a community or organization for preventing and addressing childhood trauma and building resilience in children and families. Despite growing efforts to integrate TI approaches into the delivery of services for children and families, there is limited research examining implementation and effectiveness. This research review summarizes current knowledge of TI initiatives at the systems level[a] in response to three questions:

1. How are child- and family-serving systems at the state or local level defining TI approaches?
2. What are the central activities and program components of a systems-level TI approach?
3. What outcomes are targeted by these approaches and what evidence of progress toward these outcomes has been demonstrated?

Results draw from 33 peer-reviewed studies identified through a robust search and review process.[b] Key findings of the studies, which evaluate TI efforts spanning nine service sectors, include:

- There is no broad consensus on what defines a TI approach. However, of the 20 studies that defined TI or described related principles or components, 13 referenced a framework developed by the Substance Abuse and Mental Health Services Administration (SAMHSA).
- TI approaches in the reviewed studies typically included program activities in three categories: training, trauma screening, and service improvements.
- Studies reviewed typically evaluated changes in program staff or caregiver knowledge and attitudes, implementation outcomes, and/or changes in staff skills and behaviors.
- Among studies measuring staff knowledge and attitudes after TI trainings, respondents generally reported high levels of knowledge of and satisfaction with training content and materials. However, some studies suggest that staff who receive training are still uncomfortable asking children and families about sensitive topics, such as trauma and substance abuse.
- Attitudes toward and understanding of trauma-informed care (TIC) generally improved after training.

[a] In this review, systems-level efforts refers to efforts to address the climate and conditions in which direct services are provided through development of organizational capacities such as organizational climate and culture, staff knowledge and skills, engagement and partnership, organizational infrastructure, and resources.

[b] This research review examines current knowledge about TI initiatives at the systems level (see footnote a). Though the initiatives included in this review are ultimately intended to improve outcomes for children and/or families impacted by trauma, the review does not summarize or discuss any child- and family-level outcomes reported in the studies.

- Studies examining the use of TI practices and availability and uptake of evidence-based treatments (EBTs) reported mixed results. Some projects could only partially implement their plans, noting challenges in staff and organizational resources, competing issues faced by implementing agencies, and insufficient funding.
- Many studies acknowledged the importance of organizational capacities to ensure an effective TI service system (e.g., readiness, organizational culture, collaboration and/or partnerships, sustainable financing, organizational linkages, leadership, policy supports, interconnected data systems, and/or data sharing), yet few studies actually measured these system components.

The studies reviewed suggest how to develop the evidence base for TI approaches at the systems level, support and strengthen current efforts, and conceptualize and plan future efforts. Specifically, there is a need to address:

- Current gaps in the research
- Methodological concerns that can impact efforts to build the evidence base
- Common barriers to developing TI service systems and implementing TIC

Introduction

Trauma results from an event experienced as physically or emotionally harmful or life threatening and can have lasting adverse effects on functioning and well-being.[1]

Traumatic experiences may originate outside the family (e.g., community violence) or within the family (e.g., physical, sexual, or psychological abuse and neglect).[2] When experienced by children or adolescents, such events may be referred to as adverse childhood experiences (ACEs).

ACEs can initiate strong, long-lasting emotions and physical reactions and affect development across the lifespan. A large body of research consistently links ACEs to health outcomes. Individuals who have experienced ACEs tend to have more physical and mental health problems as adults than those who have not.[3] Data from the 2016 National Survey of Children's Health found that 46 percent of American children had at least one ACE,[4] including 23 percent with an ACE in early childhood.

Why Take a Systems-Level Approach?

Broadly defined, a TI approach reflects an understanding of how to recognize and respond to the impact of traumatic stress in ways that promote healing and avoid retraumatization.[5] This includes offering services responsive to people who have experienced trauma in an overall environment that maximizes the outcomes of such services and promotes healing and recovery.[6]

TI service systems infuse and sustain trauma awareness, knowledge, and skills into their organizational cultures, practices, and policies to create a climate of empathy and respect. SAMHSA, for example, recognizes that a comprehensive TI approach must be adopted at two levels:

1. Clinical (i.e., direct service interventions for trauma)
2. System (i.e., climate and conditions in which direct services are provided)

The U.S. Department of Health and Human Services (HHS) and other federal agencies have invested in efforts to promote TI approaches—including efforts at the systems level. Many states and communities have also funded, designed, and implemented TI initiatives within and across child-serving sectors, such as child welfare, education, early care and education, and juvenile justice.

What Type of Information Is Presented?

This research review examines current knowledge about TI initiatives at the systems level drawn from published, peer-reviewed studies. In this review, systems-level efforts address the climate and conditions in which direct services are provided through the development of capacities such as organizational climate and culture, staff knowledge and skills, engagement and partnership, organizational infrastructure, and resources (e.g., staffing, information).[c] Though the initiatives included in this review are ultimately intended to improve outcomes for children and/or families impacted by trauma, the review does not summarize or discuss any child- and family-level outcomes reported in the studies.

Three research questions guided the review and the presentation of findings:

1. How are child- and family-serving systems at the state or local level defining TI approaches?
2. What are the central activities and program components of a systems-level TI approach?
3. What outcomes are targeted by these approaches and what evidence of progress toward these outcomes has been demonstrated?

Trauma-informed care (TIC) refers to services that incorporate an understanding of trauma into all aspects of care and service provision but do not treat trauma symptoms. *Trauma-specific interventions* are clinical treatments shown to treat trauma symptoms and promote recovery.

A search of the research literature produced 1,973 studies (see appendix A for search terms used). To be included in this review, studies had to meet the following criteria:

- Be peer reviewed
- Describe an effort
    - Specified as a TI initiative or program
    - Implemented at a systems level (as defined above)
    - Intended to impact child and family outcomes, even if children and families were not the direct recipient of the strategies
- Include measurement and evaluation of implementation and/or systems-level outcomes

[c] For a discussion of organizational capacity, see Children's Bureau. (2018). *What is organizational capacity and what does it look like in child welfare?* Washington, DC: Author.

Of the 1,973 studies identified through the search, 33 studies met these inclusion criteria and were included in the review. (See appendix A for further details on the search methodology and appendix B for a list of studies reviewed.)

Given the research questions' focus on TI initiatives at the systems level, articles were excluded if they only focused on child and family outcomes and did not include the study of contextual, systems-level changes. For example, a study would not meet the inclusion criteria if it assessed the impacts of a clinical trauma treatment on child outcomes but did not include evaluation of changes in agency/organizational factors. The final set of studies reflect TI efforts conducted in and across nine service sectors (see exhibit 1).

Findings from the review are organized by each of the three research questions in the following sections, followed by implications.

Exhibit 1. Service Sectors Studied

Sectors	Number of studies
Child welfare	11
Mental health	7
K–12 education	4
Juvenile justice	3
Early care and education	2
Intimate partner violence	2
Medicine	2
Home visiting	1
Substance abuse	1

Research Question 1. How Are Child- and Family-Serving Systems at the State or Local Level Defining Trauma-Informed Approaches?

There is no broad consensus on what defines a TI approach. While most studies used well-known frameworks developed by organizations such as SAMHSA or the National Child Traumatic Stress Network (NCTSN), others provided their own definitions or descriptions.

Of the 20 studies that defined TI or described related principles or components, 13 referenced elements of a well-known framework developed by SAMHSA (see exhibit 2). Some studies used SAMHSA's framework on its own, while others combined it with other definitions, such as the one created by NCTSN.[7] NCTSN defines a TI service system according to specific activities rooted in a client-focused approach that builds "meaningful partnerships that create mutuality among children, families, caregivers, and professionals at an individual and organizational level." The approach also seeks to address "the intersections of trauma with culture, history, race, gender, location, and language, acknowledge the compounding impact of structural inequity, and [be] responsive to the unique needs of diverse communities." Exhibit 3 presents more information.

Many studies similarly emphasized respect for child and family histories, needs, and goals. For example, a study of a TI approach for home visitors and parent educators[8] stated that TI care is "based on a theoretical framework that emphasizes family self-determination, working from a strengths-based perspective, and the importance of engagement and rapport. . . Trauma

Exhibit 2. Assumptions and Principles of a Trauma-Informed Approach (SAMHSA Framework)

Assumptions

A TI program, organization, or system:

1. **Realizes** the widespread impact of trauma and understands potential paths for recovery
2. **Recognizes** the signs and symptoms of trauma in clients, families, staff, and others involved with the system
3. **Responds** by fully integrating knowledge about trauma into policies, procedures, and practices
4. Seeks to actively **resist retraumatization**

Key Principles

1. Safety
2. Trustworthiness and transparency
3. Peer support
4. Collaboration and mutuality
5. Empowerment, voice, and choice
6. Cultural, historical, and gender issues

informed care is about shifting the conversation from 'what's wrong with you?' to ‘what happened to you?’” (p. 229).

Exhibit 3. Key Activities of a Trauma-Informed Approach (NCTSN Definition)

1. Routinely screens for trauma exposure and related symptoms
2. Uses evidence-based, culturally responsive assessment and treatment for traumatic stress and associated mental health symptoms
3. Makes resources available to children, families, and providers on trauma exposure, its impact, and treatment
4. Engages in efforts to strengthen the resilience and protective factors of children and families affected by and vulnerable to trauma
5. Addresses parent and caregiver trauma and its impact on the family system
6. Emphasizes continuity of care and collaboration across child service systems
7. Maintains an environment of care for staff that addresses, minimizes, and treats secondary traumatic stress and increases staff wellness

Studies also emphasized the need for staff at all levels to understand trauma. Study authors described a “system-wide and coordinated approach”[9] that involves “the entire organization serving the child”[10] and “fully integrat(es) knowledge about trauma into policies, procedures, and practices.”[11]

Among the TI definitions reviewed, there was no explicit reference to staff’s own trauma histories or secondary traumatic stress,[d] despite acknowledgment by both SAMHSA and NCTSN of their importance. However, some efforts did seek to provide staff with information on secondary trauma and self-care.[12,13,14,15] For instance, the University of California, San Francisco’s Healthy Environments and Response to Trauma in Schools Program promoted staff wellness through onsite mental health consultation that focused on understanding and addressing burnout and secondary trauma in school staff via self-care and organizational strategies.[16]

[d] Secondary traumatic stress refers to physiological symptoms that resemble posttraumatic stress reactions, typically experienced by social workers, police officers, emergency workers, therapists, and others who work directly with trauma-affected individuals. For more information, see Bell, H., Kulkarni, S., & Dalton, L. (2003). Organizational prevention of vicarious trauma. *Families in Society: The Journal of Contemporary Social Services*, *84*(4), 463–470.

Research Question 2. What Are the Central Activities and Program Components of a Systems-Level Trauma-Informed Approach?

Although service sectors take different approaches to delivering TIC, some common program activities were implemented. Most program activities fall into three categories: training, trauma screening, and service improvements.

Training

Training was the most common type of program activity.[e] Training in TIC is intended to bring about changes in the knowledge, attitudes, and/or practices of clinicians, providers, staff, service delivery partners, and others who work with trauma-affected clients. Efforts to develop TI systems may also include training for parents, caregivers, and those who work in other partner systems, such as law enforcement and the courts. Exhibit 4 lists sample training topics.[f]

Exhibit 4. Sample Topics for Trauma-Focused Trainings

- Prevalence, causes, and consequences of trauma
- How to deliver services from a TI perspective
- How to reduce the potential for retraumatization when delivering services
- How to feel comfortable working with trauma-exposed clients
- How to correctly use screening and assessment instruments and refer clients to needed mental and behavioral health services
- How to deliver evidence-based trauma therapies with fidelity

[e] Secondary traumatic stress refers to physiological symptoms that resemble posttraumatic stress reactions, typically experienced by social workers, police officers, emergency workers, therapists, and others who work directly with trauma-affected individuals. For more information, see Bell, H., Kulkarni, S., & Dalton, L. (2003). Organizational prevention of vicarious trauma. *Families in Society: The Journal of Contemporary Social Services*, *84*(4), 463–470.

[f] In this review, mental health services refers to services to support psychological well-being, and behavioral health services treat both physiological and physical well-being (e.g., drug use treatment).

Some training activities took hours or days, such as a 1-hour training for healthcare professionals[17] and a 5-day training at a juvenile justice facility on implementing the TI Sanctuary Model.[18] Other training efforts were intensive and lengthy, such as the 9-month, city-wide training and learning collaborative model used to implement TIC in Baltimore's health department.[19,20,21]

In keeping with SAMHSA's framework, **several studies referred to trainings provided across all levels of an organization.** For example:

- As part of a system-wide effort to implement TIC in a child welfare agency in Kansas, all staff and foster parents received training on how trauma affects children's development and how to respond effectively.[22]
- An early education-mental health partnership known as Head Start Trauma Smart offered training in the Attachment, Self Regulation, and Competency (ARC) model[g] to therapists, Head Start staff in all positions (e.g., administrators, receptionists, bus drivers, teachers), parents, grandparents, close neighbors, and informal day care providers.[23]

Trauma Screening

The second most common program activity was screening children and families for trauma exposure and/or traumatic stress symptoms.[h] Although there are many standardized trauma screening instruments,[24] service providers may develop their own screenings if they need a shorter instrument that takes less time to administer, requires less extensive training, or costs less.[i] Service providers may also conduct a clinical assessment of trauma experiences and their impacts on health and behavior. Such activities help programs refer children and families to appropriate treatment and services.

Of the studies that reported screening, most centered on training staff and providers to use screening instruments and/or efforts to determine best practices for implementation. For example:

[g] ARC is a trauma-focused intervention framework developed by the Trauma Center at the Justice Resource Institute (www.traumacenter.org).

[h] Screening was reported in 11 of the 33 studies.

[i] Newly developed trauma screening instruments may be of variable quality, and many widely used screens do not have established psychometric properties (e.g., validity and reliability). For a discussion of this issue in the child welfare service sector, see Conradi, L., Wherry, J., & Kisiel, C. (2011). Linking child welfare and mental health using trauma-informed screening and assessment practices. *Child Welfare, 90*(6), 129-147.

- Clinicians in Philadelphia attended 2-day trainings on trauma screening and assessment and received ongoing consultation for 8 months to help build a TI public behavioral health system for the city's children and adolescents.[25]
- Also in Philadelphia, teachers attended a 90-minute training on a universal screening instrument to identify at-risk youth in a district-wide effort to integrate mental health services and TI practice into schools.[26]
- Child welfare caseworkers in Colorado attended a 9-hour training and received 16 weeks of consultation on administering, scoring, and interpreting screening instruments to assess posttraumatic stress among children in foster care.[27]
- Clinics focused on women's health in Baltimore tested a new TI approach to screening for intimate partner violence; clinic staff used a palm-sized safety information card to help recognize signs of abuse.[28]

Several studies referred to the development and testing of new screening instruments. For example:

- Connecticut developed and piloted a brief trauma screening measure[29] as part of an effort to create a TI child welfare system.
- A North Carolina effort to integrate TIC into the child welfare system created and tested the use of a new trauma screening tool that combined features from several existing screening tools; child welfare and project leaders developed different versions for younger and older children.[30]
- Researchers from Cincinnati Children's Hospital Medical Center–Trauma Treatment Training Center developed a new screening tool as part of the Head Start Trauma Smart study. The tool, which was developed for use with the child's parent or caregiver, includes questions about specific traumatic events, including accidents, loss, abuse and other types of violence.[31]

Service Improvements

A third common program activity was improving mental and behavioral health services.[j] Service systems often aim to improve outcomes for trauma-affected children and families by increasing the availability and quality of services and removing barriers to access. Among the studies reviewed, efforts to improve services focused on coordinating care and disseminating EBTs or practice-informed[k] services.

One-third of studies reported efforts to introduce or disseminate EBTs, such as Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) or Trauma Systems Therapy. For example:

[j] Expanding the availability of mental and behavioral health services was a focus of 11 of the studies.

[k] Practice informed refers to services that are not manualized or do not yet have an evidence base.

- To boost the number of children who receive evidence-based trauma treatments, Philadelphia provided training, consultation, and technical assistance on the implementation of TF-CBT to behavioral health and other health staff.[32]
- Connecticut's child welfare system created two learning collaborative[l] cohorts to disseminate TF-CBT to behavioral health clinics.[33]
- A private child welfare agency in Kansas integrated Trauma Systems Therapy across its continuum of care, including case management, child-placing agency services, foster care, hospital and residential treatment services, and community-based therapy services.[34,35]

Efforts also included the introduction or expansion of practice-informed services. For example:

- An agency in the southwestern United States provided TI supportive housing stabilization services[m] to survivors of intimate partner violence.[36]
- A Hawaii-based program included TI structured group activities and community supports provided by peer paraprofessionals for at-risk girls.[37]
- A public charter school for court-involved youth introduced cool-down/recovery rooms as an alternative to traditional school discipline approaches.[38]

Eight studies reported efforts to improve care coordination for trauma-affected individuals served by multiple systems (e.g., behavioral health and child welfare). For example:

- In New Haven, Connecticut, an effort to address trauma and ACEs in public schools included care coordination to promote TI engagement with families while connecting them with needed resources.[39]
- In San Francisco, a TI school-based program included coordinated care team meetings to provide integrated responses[n] to at-risk students.[40]
- Philadelphia sought to improve coordination across providers by creating linkages among behavioral health agencies, pediatric hospitals, child advocacy centers, the child welfare and juvenile justice systems, and other child-serving sectors.[41]

[l] A learning collaborative is an approach that brings together teams to work over a period of months on improvement in a focused topic area. For more information, see Ebert, L., Amaya-Jackson, L., Markiewicz, J. M., Kisiel, C., & Fairbank, J. A. (2012). Use of the breakthrough series collaborative to support broad and sustained use of evidence-based trauma treatment for children in community practice settings. *Administration and Policy in Mental Health and Mental Health Services Research, 39*(3), 187-199.

[m] Housing stabilization services typically include housing information, referrals, case management, and other services to renters and homeowners facing housing crises.

[n] For example, clinicians were embedded in the school's Coordinated Care Team to provide a TI perspective during the development of behavioral support plans and disciplinary policies.

Research Question 3. What Outcomes Are Targeted by These Approaches and What Evidence of Progress Toward These Outcomes Has Been Demonstrated?

What Outcomes Are Targeted?

The studies reviewed primarily examined three categories of outcomes: staff and caregiver attitudes, staff skills and behaviors, and implementation outcomes. Few studies measured elements of system change despite talking about its importance. Although some of the included studies also reported child and family outcomes (e.g., behavioral health outcomes), those outcomes are beyond the scope of this review and not discussed here.

Staff and Caregiver Attitudes

Twenty-four studies captured changes in staff and/or caregiver knowledge and attitudes, typically by self-report surveys; many of these studies assessed similar constructs.

Knowledge was the most common construct assessed, with 14 studies measuring increases in staff knowledge of TI principles and practices. In a study of Tennessee's child welfare system, researchers measured whether staff trained in TIC improved their trauma-specific knowledge through pre- and posttests designed by faculty trainers (Kuhn et al., 2018).[42]

The second most common construct was satisfaction with TIC trainings and approaches. This concept was typically measured by a satisfaction survey administered post training.[43,44]

A third construct of interest was change in staff perceptions of the feasibility and acceptability of implementing a TI approach. For instance, Arkansas staff working in mother-child residential treatment programs completed surveys about the feasibility and acceptability of training and curriculum materials presented to them in trainings.[45] Feasibility was measured by a question on participants' intention to implement the program. Acceptability was assessed by questions about

participants' understanding of the program's goals, knowledge of how to use materials, and perceptions of the quality of the materials.

Several studies measured change in staff and caregiver perceptions of their capacity and confidence to deliver TIC. A study in rural Appalachian schools used the Teacher Opinion Scale, a measure of teacher confidence and hopefulness in reducing challenging child behaviors,[46] before and after the schools implemented a TI approach.

Staff Skills and Behaviors

Six studies measured changes in staff skills and behaviors. For example:

- A New Hampshire study of TIC in the child welfare system measured post-training improvements in staff TIC practices, such as trauma screening, case planning, referrals for trauma-focused treatment, progress monitoring, and collaboration with mental health providers.[47] The evaluators created a survey for staff based on a review of TIC-related literature and existing scales and input from content experts.
- As part of an intervention to integrate TI school mental health services, the School District of Philadelphia examined changes in teachers' classroom management skills using observational measures and data on student referrals for challenging behavior.[48]

Implementation Outcomes

Thirteen studies measured implementation outcomes using several different indicators of program functioning.

The most common outcomes measured were rates of trauma screening and assessment and rates of mental health diagnoses of trauma-affected youth. One study looking at the introduction of TIC across five state and tribal child welfare systems measured proportions of children screened for trauma and examined strategies for increasing screening rates.[49] The study of TIC in Philadelphia's behavioral health system measured rates of posttraumatic stress disorder diagnoses in community behavioral health agencies across 3 years.[50]

Another common outcome was the increased availability of EBTs in the community or service system. Studies of TIC in Philadelphia's public behavioral health system[51] and Connecticut's child welfare system[52] measured increases in the number of TF-CBT providers and the number of children and youth receiving the therapy over 4 and 3 years, respectively.

Some studies measured the quality and fidelity of implementation. The study of the TIC effort in Philadelphia schools measured two aspects of fidelity: (1) trainers' fidelity to the training curriculum as teachers were being trained in a classroom management practice model and (2) teachers' subsequent fidelity to the program model in which they had been trained.[53]

Many studies discussed the importance of systems change, yet only four included related measures. It is increasingly understood that TI approaches should involve systems and organizational changes to develop key capacities, such as those shown in exhibit 5; however, only a few studies measured these elements. For example:

- Studies of TI initiatives in the Connecticut[54] and Massachusetts[55] child welfare systems measured organizational readiness to implement a TI approach using the Trauma Systems Readiness Tool. That tool measures both individual- and agency-level capacity.
- The study of TIC in Baltimore included pre-and-post measurement of organizational culture to examine the effects of TIC training on organizational culture and professional quality of life. These constructs were measured through a survey that covered safety climate and morale, work environment factors (e.g., managerial support), and team factors (e.g., teamwork climate and collaboration).[56]
- In the study of TIC in New Hampshire's child welfare system, researchers developed a survey to measure both collaboration between child welfare staff and partnering community-based mental health providers and system-level performance following a multifaceted, statewide TIC intervention.[57]

Exhibit 5. Capacities That May Support Trauma-Informed Service Systems

- Readiness and organizational culture
- Collaboration and/or partnerships
- Sustainable financing
- Organizational and communication linkages
- Leadership
- Policy supports
- Interoperable data systems and/or data sharing

What Evidence of Progress Toward These Outcomes Has Been Demonstrated?

A detailed description of all the outcomes reported in the 33 studies is beyond the scope of this research review; rather, the review focused on outcomes in four key areas: training and education results, use of TI practices, availability and update of EBTs, and systems change.

Training and Education Results

Most studies found that training resulted in improvements to staff and/or caregiver knowledge and attitudes. For example:

- Studies that measured satisfaction with training reported high levels of participant satisfaction with and acceptance of the training content and materials.[58,59,60]
- Among the many studies that measured improvements in participants' attitudes toward and understanding of TIC, most reported positive outcomes.[61,62,63,64,65,66,67,68,69]
- However, the study of TIC in Philadelphia's behavioral health system reported no improvement in staff knowledge and attitudes after training.[70]

There is some evidence that training-related knowledge may last. For example:

- Post-training gains in staff knowledge were still evident in a 3-month follow-up study of a TI training in Arkansas' child welfare system.[71]
- In a study of TIC in Florida-based child advocacy centers, staff knowledge of TIC remained elevated 12 months after training.[72]
- Evaluators in the Colorado study found a positive association between the dosage of training and consultation for caseworkers and their subsequent ability to correctly classify mental health issues and match children with these issues to EBTs.[73]

Some evidence suggests that training may not improve staff openness to using TI approaches[74] and in some cases, may decrease their use.[75] For example:

- Training may increase frontline workers' concerns about asking children and families about sensitive topics (e.g., trauma and substance abuse).[76,77,78]
- Training may also highlight system-level barriers to implementing TIC, such as competing professional demands and lack of tangible resources.[79,80]

Training coupled with ongoing support, supervision, and consultation may mitigate concerns associated with training alone and facilitate lasting practice changes. To promote continued consistency and compliance with TI practice standards, some agencies engaged in consultation and coaching through learning collaboratives;[81,82] monthly or weekly interactions with training curriculum developers[83] or Ph.D.-level psychologists;[84] or monthly consultations with other direct service staff trained as trauma specialists.[85]

Use of Trauma-Informed Practices

Studies that measured changes in the use of screening, assessment, and other TI practices over time demonstrated mixed results. For example:

- In the study of TIC in a Kansas-based private child welfare agency, evaluators found that more child-serving staff implemented Trauma Systems Therapy with greater fidelity over time.[86]
- The use of TI practices in identifying, assessing, and referring children to trauma-specific treatments increased over time in studies of San Francisco's school district[87] and the state of South Carolina.[88]

- A paper describing five statewide and tribal projects to implement universal trauma screening for children in the child welfare system reported mixed results. While screening was generally perceived favorably by child welfare workers and mental health professionals, wide variations were observed in the number or proportion of children screened (e.g., 10 or fewer children screened at each tribal site in Montana,[o] 53 percent screened in Colorado, 75 percent screened in Massachusetts).[89]
- Evaluators studying implementation of a TI approach in New Hampshire's child welfare system found that TI practice changes, such as screening and case management, were not maintained despite initial positive staff reception. This finding may be related to the sudden expansion of the state's opioid crisis and other factors stretching child welfare resources.[90]
- Staff in Arkansas' child welfare system could only partially implement TI practice action plans established at the time of training. When surveyed about implementation barriers, staff indicated that factors such as heavy caseloads, lack of staff, and limited resources interfered with implementation of their chosen action plan strategies.[91]

Availability and Uptake of Evidence-Based Treatments

A few studies showed increases in the availability of EBTs and the number of trauma-affected children and youth treated with such approaches, though findings were mixed. For example:

- In the study of TIC in Philadelphia's behavioral health system, over 4 years, the number of agencies providing TF-CBT increased from 3 to 14, and the number of providers offering TF-CBT increased in both general outpatient and specialty settings (e.g., residential, Hispanic/Latino-oriented programs).[92] The number of youth starting and completing TF-CBT also increased each year.
- Efforts to integrate TI approaches into Connecticut's child welfare system led to an additional 13 community-based agencies offering TF-CBT, for a total of 29 agencies across the state.[93]
- Yet, in Massachusetts' child welfare system, agencies that participated in a learning collaborative to implement three EBTs[p] fell short of enrollment goals for the number of children receiving the therapies.[94]

Systems Change

Four studies reported on system change outcomes, with mixed results. For example:

- In the study of a TI initiative in the Connecticut child welfare system, researchers used the Trauma System Readiness Tool[q] and found improvement from program year 1 to year 3 in some

[o] The authors reported screening challenges in tribal communities because of difficulties traveling across Montana's rural geography, lack of resources in partner communities, and other factors.

[p] The three EBTs were TF-CBT, Child-Parent Psychotherapy, and ARC.

[q] The Trauma System Readiness Tool was developed by the Chadwick Trauma-Informed Systems Project to assess child welfare staff perceptions of understanding and capacity to use TI principles and practices.

indicators of organizational readiness and capacity (e.g., regular supervision from a supervisor who is trained in TIC) but no improvement in others (e.g., general collaboration with local mental health agency staff).[95]

- Researchers also used the Trauma System Readiness Tool to measure organizational readiness and capacity in Massachusetts' child welfare system; they found favorable responses regarding perceptions of agency-level policy and practice supports during the first project year.[r],[96]
- Agency staff in Baltimore reported improvements in organizational culture after a 9-month TIC implementation training.[97]
- In the study of TIC in New Hampshire's child welfare system, researchers found little change over 5 years in the collaboration between child welfare staff and community-based mental health providers.[98]

[r] This study did not report change over time.

Implications

The studies reviewed suggest implications for how to develop the evidence base for TI approaches, support and strengthen current efforts, and conceptualize and plan future efforts. Specifically, there is a need to:

- Address current gaps in the research
- Address methodological concerns that can impact efforts to build the evidence base
- Account for common barriers to developing TI service systems and implementing TI care

Gaps in Studies Reviewed

More work is needed to better align TI objectives, underlying theories, program components, and research. Although most of the studies used SAMHSA's framework to define TI, more can be done to align TI efforts with SAMHSA's underlying assumptions. In particular, more research is needed to examine assumptions 3 and 4—respectively, whether efforts are applying the principles of a TI approach to all areas of the system or program's functioning and resisting retraumatization of clients and staff (see exhibit 2).[99]

More work is needed to understand efforts to change system- and organizational-level capacities essential to successful TI service systems (e.g., formal organizational linkages, policy reforms, and other capacities). The implementation studies included in the review examined many of these systems capacities; the impact studies generally did not. For example, there is a need to better understand how varying levels of organizational readiness or different collaborative models might impact implementation trajectories, systems changes, and distal outcomes, such as child well-being or community resilience.

Only one study in this review measured secondary traumatic stress among frontline staff. This study found that a 9-month citywide TIC training heightened participants' knowledge of their own traumatic stress and need for self-care.[100] Future research should examine how to prevent client and staff retraumatization, secondary traumatic stress, or vicarious trauma.[s]

[s] Vicarious trauma refers to development of negative changes in psychological well-being because of the cumulative impact of witnessing trauma or adversity over time. For more information, see Koury, S. P., & Green S. A. (2017). Developing trauma-informed care champions: A six-month learning collaborative training model. *Advances in Social Work, 18*(1), 145-166.

More information is needed on how common program activities, such as trainings, translate into more effective TI practice behaviors and what conditions are needed to facilitate practice change. Training to increase trauma knowledge was the most common program activity, and trauma knowledge was the most frequently measured outcome. However, more research is needed to understand if and how increased trauma knowledge impacts individuals' actual practice and job performance or the overall objectives of the TI approach. Studies that measured changes in the use of TI practices over time demonstrated mixed results. More research is needed to understand how TI efforts can sustain practice change over time.

More research is needed to describe what has been learned about whether and how systems-level changes affect child and family outcomes. While this review focused on systems-level results and excluded papers that reported only child- and family-level outcomes, there was little discussion in studies reviewed about how TI efforts at the systems level influenced child and family health and well-being.[t] Among studies meeting the review criteria, few measured the concept of community resilience, a society-level measure of well-being.

Few of the studies included cost measurement or analyses. Future research should evaluate return on investment and evidence of effectiveness to help demonstrate the value of TI approaches.

Methodological Concerns

Measuring systems outcomes is challenging and resource intensive, and it takes time to see impacts. It is important to use designs that can move the field beyond descriptive, case, and implementation studies to rigorous impact studies. Standard research designs to measure impacts, such as randomized-controlled trials (RCTs), are difficult to conduct at the systems level. Researchers may not be able to draw a control group (i.e., those not treated with a TI approach) to conduct RCTs. Alternative methods such as historical matched comparison groups, propensity score matching, or waitlist control designs may be needed to determine the outcomes of TI approaches.

Results are often not generalizable because many studies rely on small sample sizes. In some cases, results come from a single agency with unique contextual and implementation factors.

Many studies did not measure practice change. Those that did often relied on participant reports rather than observation or administrative data. There is a need for studies that

[t] It may be that these studies included systems-level outcomes and child and family outcomes, but that the authors reported those two types of outcomes in separate articles.

experiment with creative and rigorous data collection approaches that can provide clear evidence of whether training and education translates into practice change.

Common Barriers to Implementing Trauma-Informed Approaches

Studies commonly noted resource challenges that impacted projects. Insufficient funding and staffing can undermine implementation of TIC. High caseloads, high staff turnover rates, and inadequate financial resources must be addressed to enable a resource-intensive TI approach to take hold and endure.[u]

Screening for trauma symptoms or exposure requires careful training to avoid retraumatizing children and families. Expanded or universal screening can be an important goal, however, particularly in service sectors where trauma is prevalent among children and families.[101]

Agencies often need survey instruments that meet needs beyond reliability and validity (e.g., administered by frontline staff in minimal time, accessed in the public domain at no cost, translated into multiple languages, screens for both trauma exposure and symptoms). There is continued need to develop and test instruments that are lean and inexpensive but have strong psychometric properties.

Interagency and cross-system coordination and collaboration are vital components of a TI systems approach, but it can be difficult to develop and maintain such partnerships. Facilitative leadership can create the policies and infrastructure needed to link agencies and systems with attention to sharing data and referring and monitoring shared clients.

It is not unusual for frontline staff to express discomfort asking clients about trauma symptoms and exposure, even after participating in TI training. Studies in this review revealed the need to improve workers' confidence with discussing painful and private issues like children's fears or emotions or parents' substance use. This issue may be particularly salient in sectors where staff may not have experience addressing trauma or think that TI approaches fall outside their professional purview (e.g., education, pediatrics). Staff may also be uncomfortable because of their

[u] See the discussion of the high cost of implementing EBTs in Fraser, J. G., Griffin, J. L., Barto, B. L., Lo, C., Wenz-Gross, M., Spinazola, J., … Bartlett, J. D. (2014). Implementation of a workforce initiative to build trauma-informed child welfare practice and services: Findings from the Massachusetts Child Trauma Project. *Children and Youth Services Review, 44*, 233–242.

own histories of trauma. Future efforts should develop and test approaches for monitoring practice behaviors to pinpoint instances of staff discomfort and the need for additional support and coaching. They should also address the possibility of staff members' own trauma and ways to prevent secondary traumatic stress and vicarious trauma.

Conclusion and Future Directions

With increased understanding of the long-term impacts of ACEs and trauma, there is heightened demand for approaches that incorporate TI knowledge and practices into care for children and families. Service systems in multiple sectors are developing and implementing a wide array of interventions at the organizational and clinical levels, including training and awareness activities, screening, care coordination, and trauma-specific treatments.

The studies reviewed illuminate the complexity of these endeavors, including the commitment and capacities needed to implement TI components and common challenges measuring impacts. The review also raises research gaps to be addressed in future efforts. Despite the use of search terms designed to reflect systems-level strategies and outcomes in diverse sectors, results were limited or nonexistent in sectors such as early care and education, home visiting, and intimate partner violence.

Federal investments in TI initiatives have resulted in rigorous studies and empirical knowledge in some areas. For example, HHS's Children's Bureau funded demonstration grants of state- and community-level collaborations to integrate TI practices into child welfare and behavioral health settings. Although not a focus of this research review, many state and community initiatives work to address trauma and ACEs and to provide information about promising strategies; implementation challenges and solutions; and outcomes for systems, children, and families.

Growing knowledge of TI efforts and impacts presents a timely opportunity to share lessons learned and invest in initiatives to expand the evidence base. Drawing from insights gleaned across sectors, discussions could address ways to:

- **Operationalize TI approaches to ensure comprehensive and authentic changes in policies, procedures, and practices.** For example, while training and awareness activities are often included in TI change efforts, they need to help individuals develop related skills and use them in practice.
- **Understand what conditions and contexts are needed to promote effective change.** Reviewed studies commonly noted implementation barriers that impacted TI approaches. The studies illustrate the need for organizational capacities that support effective implementation and drive change. Capacities and conditions include a supportive climate and culture, processes that facilitate staff knowledge and skills, cross-sector engagement and formal partnerships, organizational infrastructure for long-lasting change, and resources—including financial resources—for sustainability. There is also a need to understand how varying levels of organizational capacities or different collaborative models impact implementation trajectories, systems changes, and distal outcomes, such as child well-being.

- **Operationalize and measure intended outcomes.** Few of the studies assessed systems changes, yet many state- and community-level TI initiatives specify these as intended outcomes. There is a need for measurement strategies grounded in theory and designed to show clear links between strategies and short-, intermediate-, and long-term outcomes.
- **Identify and promote promising strategies and innovations from diverse perspectives.** There are many creative approaches to addressing trauma and building resilience, but too often, this work occurs in silos. Expanding opportunities to exchange ideas and build partnerships could lead to more collective impacts.

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Appendix A. Research Summary Methods

A review of empirical literature was conducted to identify articles examining trauma-informed (TI) efforts across multiple sectors. Searches were conducted using select search terms in PsychInfo and PubMed databases. A multistage approach was taken, in which articles were located using specified search terms, and abstracts were then reviewed to ascertain alignment with the specified criteria. Information was abstracted and coded (transferred and organized into key categories) in a spreadsheet. Identified article abstracts and coded material were reviewed periodically with the Office of the Assistant Secretary for Planning and Evaluation (ASPE) federal project officers. Search terms were modified during the abstraction period based on this collaboration.

The final search terms involved combinations of keywords listed below. Most searches combined the term *trauma-informed* with one or two other keywords reflecting:

- Diverse sectors *(behavioral health, child care, schools, juvenile justice, education, child welfare, child health services, juvenile justice)*
- Types of care associated with community/systems TI initiatives *(integrated community care, integrated mental health, integrated clinical care),*
- Targets of intervention or strategies *(adverse childhood experiences, resiliency, community resilience, intervention and children)*
- Outcomes *(implementation, organizational outcomes)*

Results were limited to peer-reviewed, empirical articles published in the last decade and written in English.

To be included in this review, each study had to meet the following criteria:

- The effort/program/activities described in the article was/were—
    - Specified as a TI initiative or program
    - Implemented at a systems level
    - Intended to impact child and family outcomes, even if children and families were not the direct recipient of the strategies
- Include measurement and evaluation of implementation and/or systems outcomes

Studies were excluded from this review if they met the following criteria:

- Research took place outside the United States.

- The type of trauma addressed by the initiative was not common to vulnerable children and families, such as trauma experienced by military veterans, trauma caused by a natural disaster, etc.
- The effort/program/activity described in the study was solely direct service (e.g., individual, family-level intervention).

Initial searches yielded 1,973 results for 15 unique search terms. However, the vast majority of these articles did not meet the inclusion criteria for this review based on title or abstract review. After removing studies that failed to meet the inclusion criteria, this review was based on 33 articles (see appendix B) reflecting 9 different service sectors.

The inclusion criteria resulted in a few notable limitations.

This review focused on TI initiatives at the systems level. As such, it does not specifically examine the implementation and/or effectiveness of *clinical* interventions (also referred to as trauma-specific treatments) at the child and family levels. Although all the TI approaches reflected in this review intended to impact child and family outcomes, this review only included studies that evaluated implementation and/or systems outcomes (child and family outcomes may have been included in the study but were not summarized in this review). Thus, a summary of the impacts of TI initiatives on child and family outcomes is outside the scope of this review.

This review only included peer-reviewed, published studies. This criterion may have resulted in a bias toward studies that evaluate the impact of targeted interventions (e.g., staff trainings) with available and measurable indicators (e.g., staff knowledge). Additional TI initiatives implemented at a systems level (e.g., by communities and community organizations) may not be well represented in the peer-reviewed literature. The grey literature (e.g., non peer-reviewed, publicly available documents, such as online summaries or evaluation reports) may have resulted in a more thorough discussion of difficult-to-measure constructs, including systems change and community resilience, and raised different gaps and barriers.

Appendix B. Research Summary Articles

Research Summary Articles	
1	Beidas, R. S., Adams, D. R., Kratz, H. E., Jackson, K., Berkowitz, S., Zinny, A., ... & Evans Jr., A. (2016). Lessons learned while building a trauma-informed public behavioral health system in the City of Philadelphia. *Evaluation and Program Planning, 59*, 21–32.
2	Conners-Burrow, N. A., Kramer, T. L., Sigel, B. A., Helpenstill, K., Sievers, C., & McKelvey, L. (2013). Trauma-informed care training in a child welfare system: Moving it to the front line. *Children and Youth Services Review, 35*, 1830–1835.
3	Counts, J. M., Gillam, R. J., Perico, S., & Eggers, K. L. (2017). Lemonade for life—A pilot study on a hope-infused, trauma-informed approach to help families understand their past and focus on the future. *Children and Youth Services Review, 79*, 228–234.
4	Damian, A. J., Gallo, J. J., & Mendelson, T. (2018). Barriers and facilitators for access to mental health services by traumatized youth. *Children and Youth Services Review, 85*, 273–278.
5	Damian, A. J., Gallo, J. J., Leaf, P., & Mendelson, T. (2017). Organizational and provider level factors in implementation of trauma-informed care after a city-wide training: An explanatory mixed methods assessment. *BMC Health Services Research, 17*(1), 750.
6	Damian, A. J., Mendelson, T., Bowie, J., & Gallo, J. J. (2018). A mixed methods exploratory assessment of the usefulness of Baltimore City Health Department's trauma-informed care training intervention. *American Journal of Orthopsychiatry.*
7	Day, A. G., Somers, C. L., Baroni, B. A., West, S. D., Sanders, L., & Peterson, C. D. (2015). Evaluation of a trauma-informed school intervention with girls in a residential facility school: Student perceptions of school environment. *Journal of Aggression, Maltreatment & Trauma, 24*(10), 1086–1105.
8	Decker, M. R., Flessa, S., Pillai, R. V., Dick, R. N., Quam, J., Cheng, D., ... & Miller, E. (2017). Implementing trauma-informed partner violence assessment in family planning clinics. *Journal of Women's Health, 26*(9), 957–965.
9	Dorado, J. S., Martinez, M., McArthur, L. E., & Leibovitz, T. (2016). Healthy Environments and Response to Trauma in Schools (HEARTS): A whole-school, multi-level, prevention and intervention program for creating trauma-informed, safe and supportive schools. *School Mental Health, 8*(1), 163–176.
10	Elwyn, L. J., Esaki, N., & Smith, C. A. (2017). Importance of leadership and employee engagement in trauma-informed organizational change at a girls' juvenile justice facility. *Human Service Organizations: Management, Leadership & Governance, 41*(2), 106–118.

11	Fitzgerald, M. M., Torres, M. M., Shipman, K., Gorrono, J., Kerns, S. E., & Doresey, S. (2015). Child welfare caseworkers as brokers of mental health services: A pilot evaluation of Project Focus Colorado. *Child Maltreatment, 20*, 37–49.
12	Fraser, J. G., Griffin, J. L., Barto, B. L., Lo, C., Wenz-Gross, M., Spinazola, J., … Bartlett, J. D. (2014). Implementation of a workforce initiative to build trauma-informed child welfare practice and services: Findings from the Massachusetts Child Trauma Project. *Children and Youth Services Review, 44*, 233–242.
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14	Hanson, R. F., Saunders, B. E., Ralston, E., Moreland, A. D., Peer, S. O., & Fitzgerald, M. M. (2018). Statewide implementation of child trauma-focused practices using the community-based learning collaborative model. *Psychological Services.*
15	Holmes, C., Levy, M., Smith, A., Pinne, S., & Neese, P. (2015). A model for creating a supportive trauma-informed culture for children in preschool settings. *Journal of Child and Family Studies, 24*(6), 1650–1659.
16	Jankowski, M. K., Schifferdecker, K. E., Butcher, R. L., Foster-Johnson, L., & Barnett, E. R. (2018). Effectiveness of a trauma-informed care initiative in a state child welfare system: A randomized study. *Child Maltreatment*.
17	Kenny, M. C., Vazquez, A., Long, H., & Thompson, D. (2017). Implementation and program evaluation of trauma-informed care training across state child advocacy centers: An exploratory study. *Children and Youth Services Review, 73*, 15–23.
18	Kerns, S. E., Pullmann, M. D., Negrete, A., Uomoto, J. A., Berliner, L., Shogren, D., ... & Putnam, B. (2016). Development and implementation of a child welfare workforce strategy to build a trauma-informed system of support for foster care. *Child maltreatment, 21*(2), 135–146.
19	Kramer, T. L., Sigel, B. A., Conners-Burrow, N. A., Savary, P. E., & Tempel, A. (2013). A statewide introduction of trauma-informed care in a child welfare system. *Children and Youth Services Review, 35*(1), 19–24.
20	Kuhn, T. M., Cyperski, M. A., Shaffer, A. M., Gracey, K. A., Adams, M. K., Billings, G. M., & Ebert, J. S. (2018). Installing trauma-informed care through the Tennessee Child Protective Services Academy. *Psychological Services.*
21	Lang, J. M., Campbell, K., Shanley, P., Crusto, C. A., & Connell, C. M. (2016). Building capacity for trauma-informed care in the child welfare system: Initial results of a statewide implementation. *Child maltreatment, 21*(2), 113–124.
22	Lang, J. M., Ake, G., Barto, B., Caringi, J., Little, C., Baldwin, M. J., ... & Stevens, K. (2017). Trauma screening in child welfare: Lessons learned from five states. *Journal of child and adolescent trauma, 10*, 405–416.
23	Mcintyre, E. M., Baker, C. N., & Overstreet, S. (2018). Evaluating foundational professional development training for trauma-informed approaches in schools. *Psychological Services.*

24	Murphy, K., Moore, K. A., Redd, Z., & Malm, K. (2017). Trauma-informed child welfare systems and children's well-being: A longitudinal evaluation of KVC's bridging the way home initiative. *Children and Youth Services Review, 75*, 23–34.
25	Perry, D., & Daniels, M. (2016). Implementing trauma-informed practices in the school setting: A pilot study. *School Mental Health, 8*, 177.
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