# Evidence-based Practice Center Systematic Review Protocol

# Project Title: *Trauma Informed Care*

## I. Background and Objectives for the Systematic Review

Exposure to adverse and potentially traumatic experiences is common and may influence the health of millions of individuals. Trauma exposure has been associated with negative mental and physical health outcomes across the life span.[1-7] Additionally, trauma exposure can result in greater need for services from healthcare clinicians and social service providers. Organizations and systems, including healthcare systems, recognize the potential consequences of trauma exposure and/or experiences. In response, providers, systems, and organizations are working to both improve care and prevent trauma exposure and its consequences through approaches called Trauma Informed Care (TIC).

Both in theory and practice, definitions and models of TIC vary. A federal agency, the Substance Abuse and Mental Health Services Administration (SAMHSA) has led the way in defining TIC as a set of principles that reflect awareness of trauma exposure and its potential impact.[8] SAMHSA and others conceptualize these approaches as infused throughout an organization's structure and service delivery; i.e., the approaches are considered multilevel, or systems-based.[8-10] As such, components of TIC may be directed at different people or levels. Components directed at patients or clients may include 1) screening for trauma exposure 2) referral for various forms of additional assessment and treatment for those needs and/or interventions intended for preventing future trauma exposure and associated health conditions; and 3) interventions for health and behavioral needs thought to be related to trauma exposures.[11] Components directed at service providers may include 1) education/training on how trauma exposure can affect health; 2) education/training on how to discuss and assess/screen for current or past trauma exposures and associated behavioral health symptoms,[12] practices to prevent additional trauma exposure (including preventing re-traumatization) or on ways to identify the need for more service, and 3) delivering point of care interventions to promote wellbeing and prevent future adverse health outcomes. Structural components may include 1) establishing internal steering committees to guide trauma-informed change; 2) policies that trigger an administrative review whenever a potentially retraumatizing incident occurs (e.g., seclusion and restraint); 3) checklists to encourage trauma-informed practice; 4) changing new employee on-boarding processes to include required TIC training; and 5) wellness programs to improve staff self-care.[11]

Evidence-based guidelines already exist for the treatment of trauma-related conditions, including posttraumatic stress disorder, depression, and anxiety (such as prolonged exposure therapy, trauma-focused and general cognitive behavioral therapy [TF-CBT and CBT], and cognitive processing therapy).[13] This review will focus specifically on TIC models or components distinct from trauma-specific treatments (unless these treatments are embedded within a broader TIC approach). Specific to TIC, published systematic reviews have focused on certain forms/frameworks and applications,[11, 12, 14-16] without establishing the effectiveness of TIC or its components and/or the conditions under which TIC interventions may be most likely

to work. While the primary interest is understanding TIC within healthcare settings, we will include social service settings as part of systemwide, multisectoral strategies used in TIC for responding to trauma-related needs of patients/clients.

**Purpose of the review**. This review will examine the evidence of TIC approaches, frameworks, or models, and components to establish the state of the science of its effectiveness and potential harms. The intended audience includes health and social service practitioners, service-providing organizations, policymakers, researchers, and research funders.

## II. The Key Questions

The key questions were posted for public comment on 4/28/23 for three weeks. Researchers and clinicians comprised the 19 public commenters that responded. Based on the comments, we updated both Key Questions (KQ) to include organizational characteristics, added a category of organizational outcomes, and listed quality of life as an example of strengths-based outcomes. Several other comments were addressed through small edits throughout. We note the many thoughtful comments and insights offered by the public comments that would have expanded the scope of the review beyond what was feasible for the given time and resources. Many will be useful to consider for attention in the final report discussion section.

### Contextual Questions

- CQ1. How is Trauma Informed Care (TIC) defined in theory and research and according to professional guidelines or other clinical, system, or policy-level guidance or recommendations?
- CQ2. What are the organizational and clinical components of TIC, including components of different TIC models? Are common components of TIC found across settings, populations, conditions, and models?

### Key Questions

TIC for Adult Patients/Clients

- KQ 1. What is the evidence of benefits and/or harms of TIC on outcomes for patients/clients?
    - KQ 1a. Which components (e.g., education and training of providers about trauma, screening patients, delivering point-of-care interventions [note this is not meant to include established evidence-based treatments for trauma-related disorders], referring patients/clients for various forms of additional assessment and treatment for indicated needs) of TIC models, and organizational and practice characteristics, are associated with benefits and/or harms?
    - KQ 1b. Do outcomes vary by patient/client or clinical or organizational characteristics, including the nature, extent and timing of exposure (e.g., recent or ongoing vs. prior exposure in childhood)?

TIC for Child and Adolescent Patients/Clients

- KQ 2. What is the evidence of benefits and/or harms of TIC on outcomes for patients/clients?
    - KQ 2a. Which components (e.g., education and training of providers about trauma, screening patients, delivering point-of-care interventions [note this is not meant to include indicated evidence-based treatments for trauma-related disorders], referring clients for various forms of additional assessment and treatment for indicated needs) of TIC models, organizational and practice characteristics, are associated with benefits and/or harms?
    - KQ 2b. Do outcomes vary by patient/client (as well as parent) or clinical or organizational characteristics including the nature, extent, and timing of exposure (e.g., recent or ongoing vs. prior exposure)?

Table 1 provides details on the population, interventions, comparators, outcomes, timing, and setting (PICOTS) for the research questions.

**Table 1. Population, intervention, comparator, outcome, timing, setting (PICOTS)**

| PICOTS | KQ1 | KQ2 |
|---|---|---|
| **Population** | Adults 18 years and older, regardless of trauma exposure<br><br>1b. Patient/client and clinical characteristics including type, time since, and duration of trauma exposure; gender; race/ethnicity; age; clinical condition; or disorder (e.g., anxiety, depression, substance use) | Youth <18 years, regardless of trauma exposure<br><br>2b. Patient/client and clinical characteristics including type, time since, and duration of trauma exposure; gender; race/ethnicity; age; clinical condition; or disorder, (e.g., anxiety, depression, ADHD, conduct disorder, substance use) |
| **Intervention** | TIC models/components of care (e.g., education and training of providers about trauma, screening patients/clients for trauma exposure using ACEs or other tools, screening for symptoms, delivering point-of-care interventions, referring patients/clients for various forms of additional assessment and treatment for indicated needs)<br><br>1a. single or multi-component, individual or group, targeting organizations, providers, patients/clients, caregivers, or a combination, training, screening | TIC models/components of care (e.g., education and training of providers about trauma, screening patients/clients for trauma exposure using ACEs or other tools, screening for symptoms, delivering point of care interventions, referring patients/clients for various forms of additional assessment and treatment for indicated needs)<br><br>2a. single or multi-component, individual or group, targeting organizations, providers, patients/clients, caregivers, or a combination, training, screening |
| **Comparator** | No TIC model of care/usual or routine care (CAU)<br><br>Other TIC model or component(s) of care, evidence-based therapies for trauma-related conditions (e.g., prolonged exposure, cognitive processing therapy) or approaches (e.g., Collaborative Care) | No TIC model of care/usual or routine care (CAU)<br><br>Other TIC model or component(s) of care, evidence-based therapies for trauma-related conditions (e.g., trauma-focused CBT) or approaches (e.g., Collaborative Care) |

| PICOTS | KQ1 | KQ2 |
|---|---|---|
| **Outcome** | *Trauma-Specific:* Additional or repeat trauma exposure from the point-of-care in the course of care/service delivery (e.g., retraumatization)<br><br>*Process outcomes:* Health care outcomes/utilization/referral, provider burnout/mental health<br><br>*Organizational/ practice/ systems outcomes:* Intake and referral processes (e.g., wait times), disseminated policies, trainings, staffing (e.g., scribes), administrative requirements, access to treatment, workforce diversity<br><br>*Patient/client-centered outcomes:* Physical and mental health outcomes, functioning, clinical improvement, patient/client engagement, trust, comfort or satisfaction, and strengths-based outcomes (e.g., quality of life)<br><br>*Harms:* Includes displacement of evidence based care (e.g., screening for anxiety, depression, substance use, suicide risk), increase in patient/client aggression or other behavioral misconduct. | *Trauma-Specific:* Additional or repeat trauma exposure from the point-of-care in the course of care/service delivery (e.g., retraumatization)<br><br>*Process outcomes:* Healthcare outcomes/utilization/referral, provider outcomes burnout/mental health<br><br>*Organizational/ practice/ systems outcomes:* Intake and referral processes (e.g., wait times), disseminated policies, trainings, staffing (e.g., scribes), administrative requirements, access to treatment, workforce diversity, anti-racism principles<br><br>*Patient/client-centered outcomes:* Physical and mental health outcomes, functioning, clinical improvement, patient/client engagement, trust, comfort or satisfaction, and strengths-based outcomes (e.g., quality of life)<br><br>*Harms:* Includes displacement of evidence based care (e.g., screening for developmental milestones, ADHD, depression, anxiety, suicide risk, substance use), increase in patient/client aggression or other behavioral misconduct. |
| **Timing** | Any | Any |
| **Setting** | Routine or emergency healthcare in any setting that provides human or social services, including in nontraditional settings (e.g., HIV clinics providing behavioral health care) | Routine or emergency healthcare in any setting that provides human or social services, including in nontraditional settings (e.g., school-based clinics providing behavioral health care) |

## III. Methods

**Criteria for Inclusion/Exclusion of Studies in the Review:** Studies will be included in the review based on the PICOTS framework outlined above and the study-specific inclusion criteria described in Table 2.

**Table 2. Study inclusion/exclusion criteria**

| Category | Criteria for Inclusion/ Exclusion |
|---|---|
| **Study Enrollment** | KQ1: Adult patients or professionals working with adult patients/clients.<br>KQ2: Pediatric patients/clients and parents or professionals working with pediatric patients/clients. |
| **Study Design** | Randomized controlled trials, non-randomized controlled trials, prospective cohort with concurrent comparator, interrupted time-series, and other quasi-experimental designs using appropriate analytic techniques will be included.<br><br>Single arm pre/post designs will be excluded unless they incorporate an experimental manipulation comparison within the larger pre/post design.<br><br>For CQs, we draw from single-arm pre/post, quality improvement, theory and conceptual papers, and other descriptive studies. |
| **Study Interventions** | Any intervention that was study author-identified as trauma-informed care, trauma-informed approach, trauma-informed model, trauma-informed framework, or a single component intended to be part of TIC, such as training for a trauma-informed approach.<br><br>Studies of interventions of treatments for trauma without being part of a trauma-informed approach are excluded. Likewise, studies are excluded unless they describe how the intervention itself was changed to be trauma-informed. For example, trauma-awareness training prior to a yoga class does not by itself make the yoga class trauma-informed; changes to how the class is actually conducted would be required. |
| **Outcomes** | Includes outcomes in Table 1. Studies must report at least one patient/client-related outcome that is patient/client-centered or documents some change in patient/client behavior due to the intervention.<br><br>Studies limited to implementation-related outcomes such as intervention feasibility, acceptability, uptake or adoption, and cost or sustainability are excluded. |
| **Timing** | There is no restriction of timing for included studies, including publication date, timeframe of intervention delivery, duration of intervention. |
| **Settings** | Include any healthcare or social service setting which may incorporate services intending to improve health outcomes, in any country. Healthcare settings may include inpatient, outpatient, emergency or urgent care, school-based behavioral health, HIV behavioral health. Social service settings intending to improve health outcomes may serve child welfare, military and Veterans, refugees, and people experiencing interpersonal violence (e.g., domestic violence, human trafficking), natural disaster, trauma-processes, and other trauma events not otherwise specified. |
| **Publication type** | Published in peer-reviewed journals with full text available (if sufficient information to assess eligibility and risk of bias are provided). Letters and abstracts are excluded due to the inability of such short publications to provide the information needed to fully describe interventions or allow risk of bias assessment. |
| **Language of Publication** | English only |

**Literature Search Strategies To Identify Relevant Studies to Answer the Questions:** We will search for peer-reviewed literature in the following databases: MEDLINE (via Ovid), APA PsycInfo (via Ovid), CINAHL, ERIC (via EBSCOHost), and Scopus (Elsevier B.V). The searches will include controlled vocabulary terms (e.g., MeSH), along with free-text words, related to TIC. Search strategies will not have any date restrictions but will be restricted to English language studies. All searches will be updated upon submission of the report for public

review. The proposed search strategy for Medline (via Ovid) is included in Appendix A and will be submitted for librarian peer review.

The reference lists of relevant existing systematic reviews will be scanned for additional eligible studies. Additional articles suggested to us from any source, including peer and public review, will be screened applying identical eligibility criteria. For CQs, we will conduct a grey literature search of relevant government agencies, national centers, professional organizations and societies for unindexed and/or unpublished literature, journal table of contents (e.g., contents from the journal Psychological Trauma) for unindexed literature. We will also search for grey literature from organizations. A list of grey literature sources is included in Appendix B.

To improve efficiency and accuracy in the screening process and management of the process, we will upload all search results to a web-based screening tool, PICO Portal™ (www.picoportal.net). PICO Portal uses machine learning to sort and present first those citations most likely to be eligible. Two team members will independently screen titles and abstracts of results initially. As the machine learning system is trained, we will move to one screener when we reach a 90 percent recall rate of citations eligible for full-text screen and then not screen citations remaining past a 95 percent recall rate of citations eligible for full-text screen. Screening will be conducted by two team members independently at the full-text level using the same online system.

A Supplemental Evidence And Data for Systematic review (SEADS) portal will be available and a Federal Register Notice will be posted for this review.

**Data Abstraction and Data Management:** For all study designs, data fields to be extracted will include author, year of publication, sponsorship, setting, subject inclusion and exclusion criteria, intervention and control characteristics, sample size, follow-up duration, participant baseline age, race/ethnicity (including method of obtaining race/ethnicity where available), clinical characteristics (e.g., presenting concerns), and results and timing of outcomes and adverse effects. Since there is no established consensus taxonomy for TIC interventions, we will use an empiric approach, noting all reported intervention components and relevant information related to what is delivered by who in what frequency/intensity/dosage, mode of delivery, or any other characteristic that may distinguish how the intervention was designed and delivered. Relevant data will be extracted into standardized extraction forms by one investigator and reviewed and verified for accuracy by a second investigator.

For CQs, we will first focus on studies included for the KQs and grey literature sources. Because the amount of published literature on theories and forms of empirical inquiry into TIC is vast, we will then focus on the studies that were excluded at full text, and relevant theoretical papers identified during the screening process, until saturation of models and ideas is reached.

**Assessment of Methodological Risk of Bias of Individual Studies:** Risk of bias of included KQ studies by outcome will be assessed using the Cochrane Risk of Bias Tool 2.0 for RCTs and the ROBINS-I for observational studies.[17, 18] Components include participant group assignment (random sequence generation, allocation concealment), blinding (performance and detection bias), completeness of follow-up (attrition bias), analyses and outcome reporting consistent with predefined protocols (selective reporting bias) and other issues (such as appropriateness of analytic approach).

One investigator will independently assess risk of bias for eligible studies by outcome; a second investigator will review each risk of bias assessment. Investigators will consult to

reconcile any discrepancies in risk of bias assessments. Overall risk of bias assessments for each study-outcome will be classified as low, high, or unclear based upon the collective risk of bias across components and confidence that the study results for a given outcome are believable given the study's limitations.

**Data Synthesis:** We will organize results by setting, intervention/comparison, and then by targeted outcome for each KQ. We anticipate settings will be the feature most likely to allow grouping of interventions. After setting, we will empirically group interventions as best we are able according to overall intervention design. We will summarize the results in evidence tables, and synthesize evidence for each unique intervention-outcome comparison with meta-analysis when possible and appropriate. We will assess the clinical and methodological heterogeneity and variation in effect size to determine appropriateness of pooling data.[19] We will synthesize data using a Hartung, Knapp, Sidik, and Jonkman (HKSJ)[20] random effects model. We will calculate risk ratios (RR) and absolute risk differences (RD) with the corresponding 95 percent confidence intervals (CI) for binary outcomes and weighted mean differences (WMD) and/or standardized mean differences (SMD) with the corresponding 95 percent CIs for continuous outcomes if combining similar outcomes measured with different instruments. The HKSJ method is more conservative than the commonly used DerSimonian-Laird approach which may result in overly narrow confidence intervals that can lead to Type 1 error.[20] If meta-analysis is not possible, we will present results in a narrative 'Summary of Findings' table, as well as text.

For CQs, we will use a thematic approach, noting the principles and domains of the models and then cross-walking those against each other for common themes and elements. We will note the presence or lack of consistency principles, domains, and the intervention components used to operationalize them, within and between settings and the populations they serve. We will also attend to processes of care and staffing. Results will be provided in narrative form with supplementary tables.

**Grading the Strength of Evidence (SOE) for Major Comparisons and Outcomes:** Two investigators will independently assess strength of evidence for each intervention/comparison/outcome finding for included studies. Strength of evidence assessments will be presented to the entire team for consensus.

We will rate the evidence for outcomes when 1) at least two studies with sufficiently similar designs and populations examined the sufficiently similar interventions in a comparable manner, or 2) a single study of low to moderate risk of bias and sufficiently large study population such that the study is powered to detect statistically significant differences in the outcome.

We will evaluate overall strength of evidence for outcomes for KQs 1-2 within each comparison, based on five required domains: 1) study strengths and limitations (risk of bias); 2) directness (single, direct link between intervention and outcome); 3) consistency (similarity of effect direction and size); 4) precision (degree of certainty around an estimate); and 5) reporting bias.[20] Based on study design and risk of bias, we will rate study limitations as low, medium, or high.[21] Consistency will be rated as consistent, inconsistent, or unknown/not applicable (e.g., single study) based on whether effects are similar in direction and magnitude, and statistical significance of all studies for each outcome assessed. Directness will be rated as either direct or indirect based on the need for indirect comparisons when inference requires observations across studies (i.e., reaching the conclusion requires more than one step). Precision will be rated as precise or imprecise based on the degree of certainty surrounding each effect estimate or

aggregated finding. An imprecise estimate is one for which the confidence interval is wide enough to include clinically distinct conclusions. For outcomes found to have at least moderate or high strength of evidence, we will evaluate reporting bias by the potential for publication bias, selective outcome reporting bias, and selective analysis reporting bias by comparing reported results with those mentioned in the methods section and an assessment of the grey literature to assess potentially unpublished studies. Other factors we may consider in assessing strength of evidence include dose-response relationship, the presence of confounders, and strength of association.

Based on these factors, the overall strength of evidence for each intervention/comparator/ outcome will be rated as:

- **High:** Very confident that estimate of effect lies close to true effect. Few or no deficiencies in body of evidence, findings believed to be stable.
- **Moderate:** Moderately confident that estimate of effect lies close to true effect. Some deficiencies in body of evidence; findings likely to be stable, but some doubt.
- **Low:** Limited confidence that estimate of effect lies close to true effect; major or numerous deficiencies in body of evidence. Additional evidence necessary before concluding that findings are stable or that estimate of effect is close to true effect.
- **Insufficient:** No evidence, unable to estimate an effect, or no confidence in estimate of effect. No evidence is available, or the body of evidence precludes judgment.

**Assessing Applicability:** Applicability of studies is generally determined according to the PICOTS framework. Study characteristics that may affect applicability include, but are not limited to, the population from which the study participants are enrolled, diagnostic assessment processes, narrow eligibility criteria, and patient and intervention characteristics different than those described by population studies.[22] In particular, we will consider setting, trauma exposure, and race/ethnicity of study participants, when determining study groupings and potential sensitivity analyses to inform for whom the review findings may apply.

## IV. References


1. Gardner M, Thomas H, Erskine H. The association between five forms of child maltreatment and depressive and anxiety disorders: A systematic review and meta-analysis. Child abuse & neglect. 2019;96:104082.
2. Humphreys KL, LeMoult J, Wear JG, et al. Child maltreatment and depression: A meta-analysis of studies using the Childhood Trauma Questionnaire. Child abuse & neglect. 2020;102:104361.
3. Kuzminskaite E, Penninx BW, van Harmelen A-L, et al. Childhood trauma in adult depressive and anxiety disorders: an integrated review on psychological and biological mechanisms in the NESDA cohort. Journal of affective disorders. 2021;283:179-91.
4. Lee C, Tsenkova V, Carr D. Childhood trauma and metabolic syndrome in men and women. Social Science & Medicine. 2014;105:122-30.
5. LeMoult J, Humphreys KL, Tracy A, et al. Meta-analysis: exposure to early life stress and risk for depression in childhood and adolescence. Journal of the American Academy of Child & Adolescent Psychiatry. 2020;59(7):842-55.
6. Nanni V, Uher R, Danese A. Childhood maltreatment predicts unfavorable course of illness and treatment outcome in depression: a meta-analysis. American Journal of Psychiatry. 2012;169(2):141-51.

7. Nelson J, Klumparendt A, Doebler P, et al. Childhood maltreatment and characteristics of adult depression: meta-analysis. The British Journal of Psychiatry. 2017;210(2):96-104.
8. Administration SAMHSA. SAMHSA's concept of trauma and guidance for a trauma-informed approach. HHS Publication No. (SMA). 2014.
11. Harris ME, Fallot RD. Using trauma theory to design service systems: Jossey-Bass/Wiley; 2001.
12. Ko SJ, Ford JD, Kassam-Adams N, et al. Creating trauma-informed systems: Child welfare, education, first responders, health care, juvenile justice. Professional psychology: Research and practice. 2008;39(4):396.
13. Han H-R, Miller HN, Nkimbeng M, et al. Trauma informed interventions: A systematic review. PloS one. 2021;16(6):e0252747.
14. Purtle J. Systematic review of evaluations of trauma-informed organizational interventions that include staff trainings. Trauma, Violence, & Abuse. 2020;21(4):725-40.
15. Guideline Development Panel. Clinical practice guideline for the treatment of posttraumatic stress disorder (PTSD) in Adults. American Psychological Association: Adopted as APA Policy February 24, 2017 2017. https://www.apa.org/ptsd-guideline/ptsd.pdf
16. Brown T, Ashworth H, Bass M, et al. Trauma-informed care interventions in emergency medicine: a systematic review. Western Journal of Emergency Medicine. 2022;23(3):334.
17. Bailey C, Klas A, Cox R, Bergmeier H, Avery J, Skouteris H. Systematic review of organisation-wide, trauma-informed care models in out-of-home care (OoHC) settings. Health Soc Care Community. 2019;27:e10–e22. https://doi.org/10.1111/hsc.12621
18. Bendall S, Eastwood O, Cox G, et al. A systematic review and synthesis of trauma-informed care within outpatient and counseling health settings for young people. Child maltreatment. 2021;26(3):313-24.
19. Sterne JAC SJ, Page MJ, Elbers RG, Blencowe NS, Boutron I, Cates CJ, Cheng HY, Corbett MS, Eldridge SM, Emberson JR, Hernán MA, Hopewell S, Hróbjartsson A, Junqueira DR, Jüni P, Kirkham JJ, Lasserson T, Li T, McAleenan A, Reeves BC, Shepperd S, Shrier I, Stewart LA, Tilling K, White IR, Whiting PF, Higgins JPT. RoB 2: a revised tool for assessing risk of bias in randomised trials. *BMJ*. 2019;366:i4898. doi: 10.1136/bmj.l4898. PMID: 31462531.
20. Sterne JA HM, Reeves BC, Savović J, Berkman ND, Viswanathan M, Henry D, Altman DG, Ansari MT, Boutron I, Carpenter JR, Chan AW, Churchill R, Deeks JJ, Hróbjartsson A, Kirkham J, Jüni P, Loke YK, Pigott TD, Ramsay CR, Regidor D, Rothstein HR, Sandhu L, Santaguida PL, Schünemann HJ, Shea B, Shrier I, Tugwell P, Turner L, Valentine JC, Waddington H, Waters E, Wells GA, Whiting PF, Higgins JP. ROBINS-I: a tool for assessing risk of bias in non-randomised studies of interventions. *BMJ*. 2016;355:i4919. doi: 10.1136/bmj.i4919. PMID:
21. Fu R GG, Grant M, Shamliyan T, Sedrakyan A, Wilt TJ, Griffith L, Oremus M, Raina P, Ismaila A, Santaguida P, Lau J, Trikalinos TA. Conducting quantitative synthesis when comparing medical interventions: AHRQ and the Effective Health Care Program. *Journal of Clinical Epidemiology*. 2011;64(11):1187-97. doi: 10.1016/j.jclinepi.2010.08.010. PMID: 21477993.
22. IntHout J IJ, Borm GF. The Hartung-Knapp-Sidik-Jonkman method for random effects meta-analysis is straightforward and considerably outperforms the standard DerSimonian-Laird method. *BMC medical research methodology*. 2014;14(1):25. doi: 10.1186/1471-2288-14-25. PMID: 24548571.

23. Berkman ND, Lohr KN, Ansari M, et al. Grading the strength of a body of evidence when assessing health care interventions for the effective health care program of the Agency for Healthcare Research and Quality: an update. 2013

24. Atkins D, Chang S, Gartlehner G, et al. Assessing the Applicability of Studies When Comparing Medical Interventions. 2010 Dec 30. In: Methods Guide for Effectiveness and Comparative Effectiveness Reviews [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2008-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK53480/

## VI. Definition of Terms

| | |
|---|---|
| ACEs | Adverse childhood experiences |
| ADHD | Attention deficit/hyperactivity disorder |
| AHRQ | Agency for Healthcare Research and Quality |
| APA | American Psychological Association |
| CAU | Care as usual |
| CBT | Cognitive-behavioral therapy |
| CINAHL | Cumulated Index to Nursing and Allied Health Literature |
| CQ | Contextual question |
| EPC | Evidence-Based Practice Center |
| ERIC | Education Resources Information Center |
| KI | Key informant |
| KQ | Key question |
| MeSH | Medical subject headings |
| PICOTS | Population, intervention, comparator, outcome, timing, setting |
| PTSD | Posttraumatic stress disorder |
| SAMHSA | Substance Abuse and Mental Health Services Administration |
| TIC | Trauma-informed care |

## VIII. Review of Key Questions

The EPC refined and drafted the key questions after review of the public comments, and input from Key Informants. This input is intended to ensure that the key questions are specific and relevant.

## IX. Key Informants

Key Informants are the end-users of research; they can include patients and caregivers, practicing clinicians, researchers, relevant professional and consumer organizations, purchasers of health care, and others with experience in making health care decisions. Within the EPC program, the Key Informant role is to provide input into the decisional dilemmas and help keep the focus on Key Questions that will inform health care decisions. The EPC solicits input from Key Informants when developing questions for the systematic review or when identifying high-priority research gaps and needed new research. Key Informants are not involved in analyzing the evidence or writing the report. They do not review the report, except as given the opportunity to do so through the peer or public review mechanism.

Key Informants must disclose any financial conflicts of interest greater than $5,000 and any other relevant business or professional conflicts of interest. Because of their role as end-users, individuals are invited to serve as Key Informants and those who present with potential conflicts may be retained. The AHRQ Task Order Officer (TOO) and the EPC work to balance, manage, or mitigate any potential conflicts of interest identified.

## X. Technical Experts

Technical Experts constitute a multi-disciplinary group of clinical, content, and methodological experts who provide input in defining populations, interventions, comparisons, or outcomes and identify particular studies or databases to search. They are selected to provide broad expertise and perspectives specific to the topic under development. Divergent and conflicting opinions are common and perceived as healthy scientific discourse that results in a thoughtful, relevant systematic review. Therefore, study questions, design, and methodological approaches do not necessarily represent the views of individual technical and content experts. Technical Experts provide information to the EPC to identify literature search strategies and recommend approaches to specific issues as requested by the EPC. Technical Experts do not do analysis of any kind nor do they contribute to the writing of the report. They have not reviewed the report, except as given the opportunity to do so through the peer or public review mechanism.

Technical Experts must disclose any financial conflicts of interest greater than $5,000 and any other relevant business or professional conflicts of interest. Because of their unique clinical or content expertise, individuals are invited to serve as Technical Experts and those who present with potential conflicts may be retained. The TOO and the EPC work to balance, manage, or mitigate any potential conflicts of interest identified.

## XI. Peer Reviewers

Peer reviewers are invited to provide written comments on the draft report based on their clinical, content, or methodological expertise. The EPC considers all peer review comments on the draft report in preparation of the final report. Peer reviewers do not participate in writing or editing of the final report or other products. The final report does not necessarily represent the views of individual reviewers. The EPC will complete a disposition of all peer review comments. The disposition of comments for systematic reviews and technical briefs will be published three months after the publication of the evidence report.

Potential Peer Reviewers must disclose any financial conflicts of interest greater than $5,000 and any other relevant business or professional conflicts of interest. Invited Peer Reviewers may not have any financial conflict of interest greater than $5,000. Peer reviewers who disclose potential business or professional conflicts of interest may submit comments on draft reports through the public comment mechanism.

## XII. EPC Team Disclosures

EPC core team members must disclose any financial conflicts of interest greater than $1,000 and any other relevant business or professional conflicts of interest. Related financial conflicts of interest that cumulatively total greater than $1,000 will usually disqualify EPC core team investigators.

## XIII. Role of the Funder

This project was funded under Contract No. 75Q80120D00008 from the Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services. The Task Order Officer reviewed contract deliverables for adherence to contract requirements and quality. The authors of this report are responsible for its content. Statements in the report should not be construed as endorsement by the Agency for Healthcare Research and Quality or the U.S. Department of Health and Human Services.

## XIV. Registration

This protocol will be registered in the international prospective register of systematic reviews (PROSPERO).

## Appendix A: Search Strategy

Ovid MEDLINE(R) ALL <1946 to April 19, 2023>

1 (trauma informed adj3 (approach or care or educat* or framework* or healthcare or method* or model* or practice* or training or treatment*)).mp.

2 (trauma sensitive adj3 (approach or care or educat* or framework* or healthcare or method* or model* or practice* or training or treatment*)).mp.

3 1 or 2

4 limit 3 to english language

APA PsycInfo <1987 to April Week 3 2023>

1 trauma-informed care/ 769

2 (trauma informed adj3 (approach or care or educat* or framework* or healthcare or method* or model* or practice* or training or treatment*)).mp.

3 (trauma sensitive adj3 (approach or care or educat* or framework* or healthcare or method* or model* or practice* or training or treatment*)).mp.

4 or/1-3

5 limit 4 to (all journals and english language)

CINAHL Plus full text EBSCOHost

Limiters - Research Article; Peer Reviewed; English Language; Exclude MEDLINE records; Publication Type: Journal Article, Randomized Controlled Trial, Research, Review, Systematic Review

MH "Psychological Trauma/PC") OR trauma-informed n3 (approach or care or educat* or framework or healthcare or method* or model* or practice*) OR trauma sensitive n3 ( approach or care or educat* or framework or healthcare or method* or model* or practice*)

ERIC (via EBSCOHost)

Limiters - Journal or Document: Journal Article (EJ); Publication Type: Journal Articles; Language: English Expanders - Apply equivalent subjects Search modes - Boolean/Phrase

SU "Trauma Informed Approach" OR ( trauma sensitive* N3 (approach or care or educat* or framework* or healthcare or method* or model* or practice* or treatment*) ) OR ( trauma informed N3 (approach or care or educat* or framework* or healthcare or method* or model* or practice* or training or treatment*) )

Scopus

INDEXTERMS ( "trauma informed care" ) OR TITLE-ABS-KEY ( "trauma informed" W/3 approach OR care OR educat* OR framework* OR healthcare OR method* OR model* OR practice* OR treatment* ) OR INDEXTERMS ( "trauma informed approach" ) OR TITLE-ABS-KEY ( "trauma sensitive" W/3 approach OR educat* OR framework* OR healthcare OR method* OR model* OR practice* OR treatment* ) AND ( LIMIT-TO ( SRCTYPE , "j" ) ) AND ( LIMIT-TO ( DOCTYPE , "ar" ) OR LIMIT-TO ( DOCTYPE , "re" ) ) AND ( LIMIT-TO ( LANGUAGE , "English" ) )

**Appendix B: Grey Literature Search Source Examples**

1. Substance Abuse and Mental Health Services Administration (SAMHSA) https://store.samhsa.gov/product/SAMHSA-s-Concept-of-Trauma-and-Guidance-for-a-Trauma-Informed-Approach/SMA14-4884
    a. Broad-scale organizations that reference SAMHSA guidelines:
        i. Federal agencies
            1. Agency for Healthcare Research and Quality (AHRQ)
            2. CDC's Office of Readiness and Response (ORR)
            3. Defense Health Agency (DHA)
            4. Indian Health Services (IHS)
            5. Office of Justice Programs (OJP)
            6. U.S. Department of Education (ED)
            7. Youth.gov
        ii. National Centers
            1. National Center for Assisted Living (NCAL)
            2. National Center for Domestic Violence, Trauma, and Mental Health
            3. National Center for Posttraumatic Stress Disorder
        iii. Professional healthcare organizations
            1. American Medical Association (AMA)
            2. American Nurses Association (ANA)
            3. American Psychiatric Nurses Association (APNA)
            4. American Speech-Language-Hearing Association (ASHA)
            5. National Medical Association (NMA)
2. National Child Traumatic Stress Network (NCTSN): Funded by SAMHSA's Center for Mental Health Services https://nctsn.org/trauma-informed-care
3. Trauma-Informed Care Implementation Resource Center at the Center for Health Care Strategies: Funded by the Robert Wood Johnson Foundation https://traumainformedcare.chcs.org/what-is-trauma-informed-care/
4. American Psychological Association https://apa.org/members/content/trauma-informed-series
    a. Trainings
        i. Guidelines on Trauma Competencies for Education and Training
        ii. Trauma-Informed Culturally Competent Care in an Integrated Health Setting (with the National Association of Social Workers)
    b. Journals' special issues
        i. *Psychological Services*, "Trauma-informed care for children and families"
        ii. *Practice Innovations*, "Evidence-based relationship variables in working with affectional and gender minorities"
        iii. *Psychological Trauma*, "Trauma-focused training and education"
    5. American Psychiatric Association https://www.psychiatry.org/
6. United Nations (UN) https://unitad.un.org/news/unitad-provides-trauma-informed-approach-training
7. Campaign for Trauma Informed Policy and Practice https://www.ctipp.org/ctipp-can