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Toward a National Trauma-Informed Integrated Behavioral Health Framework For Veterans, Active-Duty Service Members, And First Responders: A Critical Narrative Synthesis And Implementation Science Perspective

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Abstract

Background: Veterans, active-duty service members, and first responders are diagnosed with higher rates of posttraumatic stress disorder (PTSD), depression, substance use disorders, and suicide compared to the civilian population. Despite this, access to behavioral health care across federal, state, occupational, and community systems remains disjointed. Evidence-based trauma-focused treatments exist; however, their reach, adoption, and ongoing delivery have been variable. No comprehensive national initiative currently integrates trauma informed care, integrated behavioral health, and implementation science across these trauma-exposed occupational groups.

Objective: To integrate current evidence related to behavioral health need, delivery, and implementation with veterans, service members, and first responders; compare proposed framework to current models; and create the National Trauma-Informed Integrated Behavioral Health (NT-IBH) Framework as a theoretically based, operationally testable framework for study, practice, organizational transformation, and policy.

Methods: Scoping review with theory building. References were retrieved using multiple, focused searches of academic databases and federal agency repositories for systematic reviews, meta-analyses, clinical practice guidelines, and federal implementation strategies released during 2020–2026 (inception publications were included where relevant); each reference was manually cross-checked with the published literature. We conducted analysis using thematic analysis by constant comparison, coding with CFIR, RE-AIM, and the implementation outcomes taxonomy, and distinguishing data-derived observations from author interpretations and theoretical contributions.

Findings: The integration exercise surfaced five key cross-cutting observations: (a) high epidemiological concordance of trauma-related need across the three target populations (e.g., pooled prevalence approaching one in seven for PTSD among first responders experiencing standard occupational duties) with stark disparities in service infrastructure; (b) pervasive efficacy–implementation gap for trauma-focused psychotherapies; (c) strong evidence base for collaborative, integrated models of behavioral health that has not been systematically translated to first responder populations; (d) nascent and poorly-defined constructs of trauma-informed approaches to organizational change; and (e) fragmented suicide prevention infrastructure despite growing national alignment. From these observations emerged the six-level NT-IBH Framework, which addresses clinical, organizational, community, policy, implementation, and evaluation levels of influence. Evidence for each of its six features is established through formal comparison with five existing classes of models and presented here as five testable propositions.

Conclusions: An integrative testable theory-grounded architecture for implementation of trauma-informed principles is described in the NT-IBH Framework. The Framework provides alignment of trauma-informed principles and practices with integrated care delivery and implementation strategies within military, veteran and public safety systems. Propositions are presented as conceptually-based until validated and evidence supported conclusions are available. A staged evaluation research agenda is recommended. .

Keywords: trauma-informed care; integrated behavioral health; implementation science; veterans; military personnel; first responders; posttraumatic stress disorder; suicide prevention; critical narrative synthesis; conceptual framework

Introduction

Veterans, active-duty service members, and first responders represent populations with one of the largest, most urgent, and currently least resolved public needs in behavioral health services. These populations are linked by shared occupational exposure to the highest magnitude, repeated and role-based potentially traumatic events (Brewin et al., 2000); yet are served by non-comparable systems of care—a large centralized Federal health system for veterans, an embedded health system for active-duty service members, and a disparate assortment of employer-based, municipal, union-aligned, and volunteer community services serving first responders. It is this paradox—that our most critical behavioral health populations have the most similarity of risks but least similarity of services—that frames this review and subsequent efforts.

On the science side, the clinical landscape is for the most part mature. Trauma-focused psychotherapies have strong evidence supports in the recently released VA/DoD Clinical Practice Guideline and are recommended over pharmacotherapy as first line treatments (Management of Posttraumatic Stress Disorder and Acute Stress Disorder Work Group, 2023; Schnurr et al., 2024); collaborative care models have shown effectiveness across decades of randomized trials (Archer et al., 2012; Unützer et al., 2002); and measurement-based care implementation facilitates detection of non-response (Fortney et al., 2017; Lewis et al., 2019). The gaps are less in knowledge of effective treatments, and more in incomplete, ineffectual, and unsustainable implementation of those treatments into practice—a problem implementation science has been developing frameworks, strategies, and outcome taxonomies to address for over a decade (Damschroder et al., 2022; Powell et al., 2015; Proctor et al., 2011). What is lacking is a coordinated effort to synthesize the implementation literature into recommendations for deployment across our priority populations at a national scale.

Facilitating such synthesis are three concurrent developments. Foremost is that emerging epidemiological data indicates high PTSD and common mental disorder prevalence now known to be present across public safety populations—police, fire, emergency medical, and dispatch—affirms similar needs within military veteran populations (Carleton et al., 2018; Petrie et al., 2018; Wagner et al., 2020). Second, delays in release and subsequent updates to the 2023 VA/DoD Clinical Practice guideline sharply bifurcated recommendations for evidence-based practice from on-the-ground clinical delivery, focusing renewed attention on causes of implementation failure (Schnurr et al., 2024). Last, the National Strategy for Suicide Prevention was released in 2024 with explicit orientation to whole-of-society, cross-sector change that names veterans, service members, and public safety personnel as priority populations for national intervention (U.S. Department of Health and Human Services [HHS], 2024). Collectively, these three elements support, by policy if not current practice, an integrated effort to synthesize and deploy effective treatments for behavioral health across these populations.

Fittingly then, this article aims to accomplish two things. The first is evaluative: perform an integrative review of need, service delivery, and implementation outcome across veterans, service members, and first responders to draw common lessons and align priorities for coordinated implementation efforts. The second aim is constructive: introduce the National Trauma-Informed Integrated Behavioral Health (NT-IBH) Framework, a novel multi-level implementation framework that integrates foundational principles from trauma-informed care (SAMHSA, 2014), emerging models of integrated behavioral health delivery, and contemporary implementation science theory into a unified structure ripe for evaluation. The contribution intended is organized less around new tools and more around how existing tools should be built together. Namely, not what works but how existing evidence-based interventions should be structured, governed, implemented, and evaluated to optimize delivery across populations with shared risks but disparate systems. Where possible, these elements of the NT-IBH Framework are distinguished by evidence-supported conclusions and those forward-as-concept requiring research; what we treat here as a methodological necessity for framework papers.

2. Background

2.1 Shared exposure, divergent systems

Military and public safety occupations are distinct in mission, culture, and governance, but similar in trauma-related morbidity epidemiology. Seminal research programs assessing mental health after military deployment identified high PTSD/depression rates in returning combat veterans, along with elevated perceived barriers to care such as stigma and job-related concerns (Hoge et al., 2004). Bodies of work investigating outcomes among public safety personnel have reached similar conclusions: meaningful proportions of Canadian public safety personnel meet screening criteria for one or more mental disorders (Carleton et al., 2018); pooled prevalence of PTSD among ambulance workers is roughly one in ten (Petrie et al., 2018); police officers experience significant PTSD burden after routine, work-related critical incident exposure rather than exposure to large-scale disasters (systematic review evidence; Wagner et al., 2020); first responder PTSD prevalence pools at 14.3% worldwide under routine exposure conditions, with recent increases in prevalence and moderate risks across job types (meta-analysis; Arena et al., 2025). Findings from these programmatic bodies of research are convergent enough to justify conceptually grouping these three populations (i.e., treating them as a coherent policy

category-trauma- exposed occupational populations) while acknowledging known differences in exposure type, agency culture, and patterns of health service access.

The care service delivery structure differs widely between groups. Veterans who qualify for care through Veterans Health Administration (VHA) can theoretically access a health care system that has made substantial investments in nationwide provision of evidence-based psychotherapies (Karlin & Cross, 2014). Active-duty service members receive care from an embedded system where confidentiality and help-seeking are complicated by fitness-for-duty evaluations. First responders primarily rely on employee assistance programs, peer support interventions of varying quality, and community clinicians without public safety cultural competence or training in trauma-focused treatments (Haugen et al., 2012). It is this asymmetry in service system infrastructure, not differences in need, that the current framework aims to rectify.

2.2 The implementation problem

Kazdin and Blase (2011) made the case that individual psychotherapy alone will not "close the gap between those who need treatment and those who receive it" (p. 703)—arguably a stronger claim still for populations whose barriers to care are organizational and cultural as well as clinical. There are lessons to be drawn from PTSD care within the VHA, both positive and negative: national implementations have shown that large-scale systems can train thousands of clinicians to treatment competence (Karlin & Cross, 2014), but reach and sustained penetration have remained elusive across all populations—what might be termed an efficacy–implementation gap that is not bridged by guideline redevelopment alone (Schnurr et al., 2024). Implementation science provides the analytic lens that has been missing from this discussion: determinant frameworks such as the CFIR and its recent update tell us where implementation may succeed or fail (Damschroder et al., 2009, 2022), process models such as EPIS tell us the stages of implementation from exploration to sustainment (Aarons et al., 2011), evaluation frameworks such as RE-AIM tell us what dimensions of impact to consider (Glasgow et al., 1999, 2019), and the Implementation Outcomes Framework tells us how to differentiate implementation success from clinical effectiveness (Proctor et al., 2011). What is missing is a framework that integrates each of these elements—along with trauma- informed care and integrated behavioral health—to provide a multilevel blueprint that spans the three populations considered here. It is the development of this framework that this article attempts.

3. Methodology

3.1 Design and article identity

This is a critically appraised review with theoretical background/model development. This is not a systematic review, nor a meta-analysis, nor a numbered integrative review: there was no protocol, no searching of databases with number screened logged, no independent dual review, no appraisal tool used. None of those things were done, and the paper does not claim that they were. Rather, this is an article built upon the principles of knowledge expert-created critical review wherein the strength is in synthesis, analysis, and theoretical/model development versus enumeration…a genre of research whose value-added, when the methods are CLEARLY described (i.e. not trying to mimic systematic review methods), is justified in publication (Greenhalgh et al., 2018) and whose methodological steps (identification of problem, searching & engaging the literature, appraising, analyzing, and presenting) align with Whittemore and Knafl's (2005) description of a systematic review.

3.2 Evidence identification and verification

Searches were conducted on bibliographic databases and search engines (via iterative focused searches), as well as key federal websites (VA.gov, Defense.gov, SAMHSA.gov, Health.gov) and from reference lists of included reviews. We attempted to locate the most relevant and rigorous evidence available for each question area – systematic reviews and meta-analyses, randomized controlled trials, clinical practice guidelines, federal policy documents or department plans – published from January 20th, 2020, through July 20th, 2026. Only foundational publications predating this window were retained and those only if they introduced interventions, theories, or conceptual frameworks still considered salient. Each article included as evidence was verified against the published literature (authors, year, journal name, DOI, and PMID). Sources are not scored with an assessment tool; rather, they are weighted by study design using best available professional judgment: reviews and guidelines inform treatment and effectiveness claims, primary studies (observational and experimental) inform determinant claims, and federal sources provide context about policy. Weights applied to each study are transparently reported in Table 1 so readers may evaluate the strength of the evidence supporting each claim.

3.3 Analytic approach

Analysis was by constant comparison both within and between populations and evidence types. Results are presented by five domains, created iteratively throughout analysis: epidemiology and need; evidence and guidelines on treatment; delivery models; implementation determinants; and policy context. Implementation determinants were coded into updated version of CFIR domains (Damschroder et al., 2022), anticipated effects mapped onto RE- AIM

(Glasgow et al., 2019), and implementation outcomes used taxonomy defined by Proctor et al. (2011). Development of this preliminary framework followed principles of abductive logic: observed patterns spanning domains were reframed into candidate components that were: checked for their coherence to a priori theory (Section 7.1) and for plausibility given the data; and reviewed against existing models (Section 7.2) once the architecture was drafted. Note that throughout we maintain separate four types of claims: evidence-based findings, interpretive conclusions, conceptual propositions, and hypotheses for future research.

4. Findings of the Critical Synthesis

It was based on 19 sources of evidence (systematic reviews and meta-analyses, trials, guidelines, epidemiological surveys, reviews of implementation, and federal strategy reports) and 13 theoretical/methodological sources that informed the synthesis. To be as transparent as possible about the argument's underpinnings, major evidence sources and the consideration given to them are summarized in Table 1.

Table 1
Evidence Landscape: Principal Sources Informing the Synthesis

Source (Year)	Evidence Type / Design	Population / Scope	Principal Contribution to the Synthesis	Synthesis Weight
Alshahrani et al. (2022)	Systematic review and meta-analysis (15 controlled studies)	First responders (police, fire, EMS, mixed)	Psychological interventions produce large PTSD reductions (SMD = −0.86) with benefits for depression and anxiety; trials scarce among paramedics	High
Archer et al. (2012)	Cochrane systematic review and meta-analysis (79 RCTs)	Primary care patients with depression or anxiety	Collaborative care improves short- and medium-term outcomes across settings and populations	High
Arena et al. (2025)	Systematic review and meta-analysis	Active first responders, global	Pooled PTSD prevalence 14.3% under routine exposure; prevalence rising in recent years; comparable risk across occupations	High
Carleton et al. (2018)	National cross-sectional survey	Canadian public safety personnel, incl. dispatch and corrections	Substantial proportions screen positive for one or more mental disorders	Moderate (screening-based)

Source (Year)	Evidence Type / Design	Population / Scope	Principal Contribution to the Synthesis	Synthesis Weight
Fortney et al. (2017)	Consensus analysis	U.S. behavioral health systems	Measurement-based care framed as a tipping-point system property	Moderate
Haugen et al. (2012)	Early systematic review	First responders in treatment studies	Documented small, heterogeneous treatment literature and occupational barriers	Moderate (superseded in part)
Hoge et al. (2004)	Cohort survey	U.S. combat-deployed service members	Elevated PTSD and depression; stigma- and career-related barriers to care	Moderate (foundational)
Karlin & Cross (2014)	Implementation analysis	VHA national EBP dissemination	Competency-based national training achievable; reach and sustainment incomplete	High (implementation)
Kazdin & Blase (2011)	Conceptual analysis	Mental health service delivery	Individual psychotherapy model cannot alone close the treatment gap	Structural
Lewis et al. (2019)	Narrative review	Behavioral health clinicians	Fewer than one in five clinicians use standardized measures routinely; determinants specified	High (determinants)
Management of PTSD and ASD Work Group (2023)	Clinical practice guideline	Military and veteran PTSD care	First-line individual trauma-focused psychotherapy; recommendations against benzodiazepines and cannabis derivatives	Anchor
Petrie et al. (2018)	Systematic review and meta-analysis	Ambulance personnel	Pooled PTSD prevalence approximately 11%; elevated	High

Source (Year)	Evidence Type / Design	Population / Scope	Principal Contribution to the Synthesis	Synthesis Weight
			common mental disorders	
SAMHSA (2014)	Federal guidance	Cross-sector organizations	Four assumptions and six principles of the trauma-informed approach	Conceptual anchor
Schnurr et al. (2024)	Guideline synopsis	Military and veteran PTSD care	Stricter GRADE application; individual appraisal of psychotherapies with resulting downgrades	Anchor
Stanley & Brown (2012)	Intervention development study	Patients at suicide risk in emergency settings	Safety Planning Intervention including lethal means counseling	Moderate
Unützer et al. (2002)	Randomized controlled trial (IMPACT; N = 1,801)	Older primary care patients with depression	Collaborative care effective in complex, comorbid populations	High
U.S. HHS (2024)	Federal strategy	U.S. national	Whole-of-society suicide prevention architecture naming high-risk occupational populations	Policy context
Van Orden et al. (2010)	Theoretical synthesis	Suicide risk mechanisms	Acquired capability construct with direct occupational relevance	Structural
Wagner et al. (2020)	Systematic review	Police officers, routine critical incident exposure	Meaningful PTSD burden outside disaster contexts; heterogeneity drivers identified	High

Note. EMS = emergency medical services; SMD = standardized mean difference; RCT = randomized controlled trial; VHA = Veterans Health Administration; EBP = evidence-based psychotherapy; PTSD = posttraumatic stress disorder; ASD = acute stress disorder; SAMHSA = Substance Abuse and Mental Health Services Administration; HHS = U.S. Department of Health and Human Services. Thirteen theoretical/methodological sources (implementation frameworks, theories, and reporting standards) informed the analysis/framework development; references appear throughout the review but are not

listed as evidence sources nor were they given weights. Sources were located and confirmed as described in Section 3.2.

Table 1 visually depicts the asymmetry in evidence that underlies the synthesis: trials and implementation studies cluster in veteran samples and primary care settings, while the first responder literature (which now includes meta-analytic estimates of efficacy) continues to be dominated by observational/prevalence designs; implementation studies are notably absent. Five cross-cutting findings emerge from the synthesis; each is presented with qualifying information about the strength of the evidence.

Finding 1 — Convergent need, divergent infrastructure (evidence-supported). High rates of trauma-associated morbidity have been reported within each of these populations (Carleton et al., 2018; Hoge et al., 2004; Petrie et al., 2018; Wagner et al., 20). However, the concentration of collaboration among, and evidence-based focus among behavioral health systems rapidly decreases from veteran to service member to first responder communities (Haugen et al., 2012; Karlin & Cross, 2014).

Finding 2 — A persistent efficacy–implementation gap (evidence-supported). Recommended first-line trauma-focused psychotherapies are strongly supported (Management of PTSD and ASD Work Group, 2023) and can feasibly be scaled to broad reach within centralized delivery systems (Karlin & Cross, 2014), yet reach, penetration, and sustainment remain largely unmet even in well-resourced systems and are essentially unknown among first responders despite promising meta-analytic data demonstrating efficacy (Alshahrani et al., 2022; Schnurr et al., 2024).

Finding 3 — Integrated behavioral health works but has not crossed sectors (evidence-supported for effectiveness; conceptual for cross-sector extension). Integrated care, and more specifically collaborative care, has been shown to positively impact depression and anxiety outcomes in a variety of settings (Archer et al., 2012; Unützer et al., 2002). Measurement-based care is the clinical driver of this approach (Fortney et al., 2017; Lewis et al., 2019). There are no studies with controlled evidence to suggest that integrated behavioral health within occupational systems benefit first responders. Expanding integrated behavioral health care into these systems is a suggestion of this review, rather than a finding.

Finding 4 — Trauma-informed care is normatively established but operationally underspecified (evidence-supported as critique). SAMHSA's four assumptions and six principles represent the dominant articulation of trauma- informed care (SAMHSA, 2014). However, implementation studies applying them to organizations are dominated by heterogeneous, weakly-measured versions, limiting causal inference about organizational-level effects. This underspecification is both a robust finding of the synthesis and a design input to the framework.

Finding 5 — Suicide prevention architecture is converging at the policy level but remains fragmented at the delivery level (evidence-supported). The recently released 2024 National Strategy for Suicide Prevention sets cross-sector goals and identifies high risk occupational populations (HHS, 2024). In addition, there are already discrete interventions like safety planning that have empirical support (Stanley & Brown, 2012). However, there is no mechanism to connect national strategy to the occupational settings where risk is concentrated (outside of federal system infrastructure).

The two continua that organize these findings, maturity of intervention evidence and maturity of delivery infrastructure, are displayed in Figure 1.

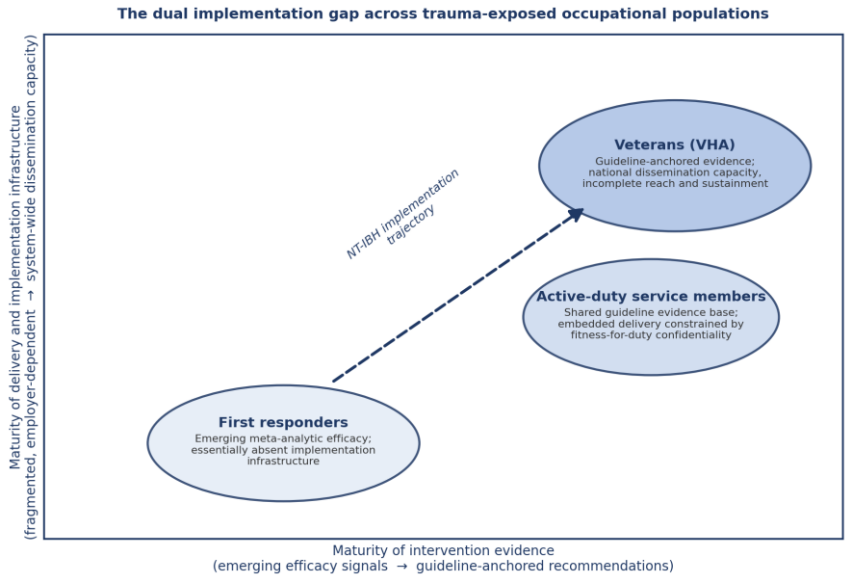


Figure 1. The dual implementation gap across trauma-exposed occupational populations.

Figure legend. Simplified graphic comparison of the three populations with respect to 2 axes from the conceptual framework underlying this synthesis: Across (roughly) the x-axis are levels of evidence for interventions moving from meta-analytic signals of efficacy to bona fide practice guidelines supported by systematic clinical review, whereas down the y-axis is infrastructure maturity ranging from patchwork access dependent on employer will versus health system readiness for dissemination. Veterans who receive care from the Veterans Health Administration are at the upper-right corner of both axes (Karlin & Cross, 2014; Management of PTSD and ASD Work Group, 2023); active-duty service members span the same level of evidence development but have confidentiality-limited infrastructure for delivery (Hoge et al., 2004); and first responders have burgeoning meta-analytic support for intervention efficacy (Alshahrani et al., 2022) but essentially no infrastructure for implementation. The dotted arrow represents the transition path the NT-IBH Framework attempts to enable. NT-IBH = National Trauma-Informed Integrated Behavioral Health; VHA = Veterans Health Administration. This figure makes the central point of the manuscript stated bluntly: The populations have far more difference in infrastructure than in need, so the bottleneck is structural, not medical.
Figure 1 also illustrates why no single-population model can be applied wholesale: the starting point for each population is unique, so a national solution must function at two levels of maturity simultaneously.

5. Narrative Evidence Synthesis
The five findings are elaborated below through domain-level synthesis. The cross-population evidence pattern that organizes this section is summarized in Table 2.

Table 2
Cross-Population Evidence Synthesis Matrix

Domain	Veterans	Active-Duty	First Responders	Cross-Cutting Interpretation
Epidemiology & need	Elevated PTSD/depression post-deployment; barriers to care (Hoge et al., 2004)	Same exposure base; fitness-for-duty complicates disclosure (Hoge et al., 2004)	Elevated PTSD across occupations, incl. routine exposure (Carleton et al., 2018; Petrie et al., 2018; Wagner et al., 2020)	Convergent need; heterogeneity partly measurement-driven (Finding 1; §5.1)
Treatment evidence	Strong first-line psychotherapy recommendations (Mgmt of PTSD & ASD Work Group, 2023)	Governed by same VA/DoD guideline	Thin controlled evidence; occupational adaptation understudied (Haugen et al., 2012)	Dual maturity levels require dual-track framework (§5.2)
Delivery models	Large-scale EBP dissemination achieved (Karlin & Cross, 2014)	Embedded care; integration constrained by confidentiality	Fragmented EAP/peer/community patchwork (Haugen et al., 2012)	Collaborative + measurement-based care as unified chassis (Archer et al., 2012; Fortney et al., 2017; Lewis et al., 2019)
Implementation determinants	Reach/sustainment gaps despite training success	Stigma & career-consequence culture (Hoge et al., 2004)	Governance fragmentation; workforce gaps	Inner-setting culture as master determinant (Damschroder et al., 2022)
Policy context	Centralized federal system	DoD/VA joint guideline apparatus	No dedicated national infrastructure	2024 National Strategy opens cross-sector window (HHS, 2024)

Note. PTSD = posttraumatic stress disorder; ASD = acute stress disorder; EBP = evidence-based psychotherapy; EAP = employee assistance program; HHS = U.S. Department of Health and Human Services. Section § numbers refer to subsections of this manuscript. When read column-wise, Table 2 documents within-population consistency. When read row-wise, however, it exposes asymmetries--diminishing returns on treatment evidence, thinning treatment infrastructure, and thinning policy attention as one progresses from the veteran column to the first responder column--that the conceptual framework outlined in Section §7 aims to address. The following subsections discuss each domain individually.

5.1 Epidemiology: reading heterogeneity as signal

Estimates of PTSD prevalence across trauma-exposed occupational populations range widely from study to study. The instinct is to dismiss this spread as noise. The meta-message from the synthesis presented here is that it's signal. Petrie et al. (2018) recently found pooled PTSD prevalence to be around 11% among ambulance workers; Wagner et al. (2020) highlighted surprisingly wide variability across samples of police exposed to routine critical incidents; Carleton et al. (2018) found that screening-derived prevalence from a large public safety sample was much higher than diagnostic-interview-derived prevalence reported in similar bodies of literature; and Arena et al. (2025), in pooling prevalence from across the world literature, found lifetime prevalence to be 14.3% under conditions of routine exposure (higher than what we see in disaster-exposed samples) and rising in recent years. The latter finding from Arena et al. (2025) merits special emphasis because it challenges the disaster-focused paradigm baked into much of how services are designed: extended, repeated, routine exposure to trauma - as opposed to discrete incidents - seems to be the bigger public health problem in terms of aggregate volume, and so services need to be designed around continuous prevention and care delivery at a population level, not around disaster-response models that activate once a critical incident happens. Many drivers of this spread are methodological in nature—self-report screens versus structured diagnostic interviews; volunteer-response sampling frames; cross-sectional studies sensitive to healthy-worker effects. Two brief points on these findings. First, the fact that we don't actually know prevalence because studies are spread so widely seems like a strong argument in favor of nationwide implementation of standardized measurement-based care as an attribute of the system of care itself. Second, healthy-worker and attrition effects suggest there may be considerable unmet need in separated, retired, and medically discharged personnel who fall through the cracks between agencies.

5.2 Treatment evidence and the limits of guideline revision

The latest VA/DoD clinical practice guideline is the strongest evidence-based review of PTSD treatments to date, favoring individual trauma-focused psychotherapy over medications and advising against benzodiazepines and cannabis products (Management of PTSD and ASD Work Group, 2023; Schnurr et al., 2024). Two key changes in the 2023 update are that GRADE was applied more rigorously, and that psychotherapies were evaluated individually rather than as a group, leading to downgrades from previous iterations for several formerly accepted treatments (Schnurr et al., 2024). This isn't evidence retreating so much as the bar for "what works" going up, but it does increase the challenge of implementation by placing a heavier delivery burden on fewer treatment options. Guidelines, of course, dictate what providers should be offering; they do not dictate the capacity of systems to provide them. What we know about VA rollout tells us that system-wide, competency-based national training is possible (Karlin & Cross, 2014). What we know about rollout, and what the guideline itself devotes significant discussion to, is that creating a supply of trained clinicians does not ensure reach to the population in need. Among first responders, by contrast, there have been positive signals in the efficacy literature, but the overall evidence base is still lacking maturity: recent systematic review and meta-analysis of fifteen controlled studies found that psychological interventions have large effects on PTSD symptoms (standardized mean difference = −0.86) and secondary benefits for depression and anxiety symptoms (Alshahrani et al., 2022). The same study highlights the immaturity of the literature—there are the fewest trials where prevalence is the highest (only two studies recruited paramedics), and the interventions studied are varied and generally not tailored to participants' occupational experiences, which was true even of older literature (Haugen et al., 2012). The comparison here is useful, I think. In veterans' healthcare, the limitation is no longer tool development but implementation. In first responder systems, efficacious tools are now starting to emerge but the system to deliver and implement those tools at scale is virtually non-existent. To my mind, this means that any national strategy will have to operate at two levels of maturity simultaneously, and no current example of single-population pathway-to-care meets this requirement.

5.3 Integrated behavioral health as the delivery chassis

The collaborative care evidence base is one of the most replicated in all of mental health services research: across 79 randomized trials, the Cochrane synthesis found consistent benefits for depression and anxiety (Archer et al., 2012), and in complex, comorbid populations through the IMPACT trial (Unützer et al.,

2002). Measurement-based care is the model's clinical engine — without routine outcome monitoring, stepped care cannot step(Fortney et al., 2017) — yet fewer than one in five behavioral health clinicians use standardized measures routinely, for reasons (workflow burden, attitudes, informatics gaps) that map directly onto CFIR inner- setting and individual-level constructs (Lewis et al., 2019). The higher-order interpretation: integrated behavioral health and measurement-based care are not two innovations, but one, with shared determinants. Motivating the framework decision to treat measurement infrastructure as a cross-cutting layer rather than a clinical add-on.

5.4 Trauma-informed care: from philosophy to specification

Trauma-informed care occupies an awkward place in this literature: normatively dominant, operationally diffuse. SAMHSA's (2014) articulation – four assumptions around six principles – was intended as a guide, not a specific intervention, and organizational literature has followed suit: studies vary widely in definitions of a trauma-informed organization, what components are enacted, how change is assessed, frustrating strong causal inferences. The synthesis takes this not as a reason to give-up but as a specification problem that implementation science is equipped to address: principles can be translated into discrete, auditable organizational practices which can each have fidelity indicators and linked ERIC strategies (Powell et al., 2015). Specification without reification is a key design tenet of the NT-IBH Framework.

5.5 Suicide prevention and the policy window

Suicide risk is concentrated in these populations of concern, and theoretical work has highlighted mechanisms with occupational implications: one mechanism hypothesized by the interpersonal theory of suicide, "acquired capability," predicts risk among individuals who are accustomed to pain and death (Van Orden et al., 2010). Evidence for interventions exists for components (e.g., safety planning decreases suicidal behaviors in the emergency department setting; Stanley & Brown, 2012) including, importantly, lethal means safety restrictions for populations who carry guns as part of their jobs, and Zero Suicide provides a framework for assembling components into a health-system level approach (Brodsky et al., 2018). The 2024 National Strategy provides, for the first time in 10 years, a national framework engaging all of society (HHS, 2024). What is missing between these tiers is clear: the Strategy provides vision, clinical science provides tools, and Zero Suicide provides a way to guide health systems – what's missing is occupation-focused prevention plans that are embedded within and owned by the organizations that employ these high-risk populations. The NT-IBH Framework aims to, in part, fill that void.

6. Critical Analysis

Three tensions surfaced by the synthesis warrant explicit treatment; the framework's credibility depends on confronting them.

First, the centralization paradox. The largest successes in implementation to date within this literature were realized in the most centralized system imaginable (Karlin & Cross, 2014). However, that population with the largest gap in infrastructure—the first responders—works in the sector least amenable to centralization: thousands of municipal employers, county employers, volunteer organizations, and private companies. Any system designed with the expectation of a VHA-level mandate will crumble when it meets public safety leadership. For this reason, the NT-IBH Framework is inherently federated—national guidelines for standard-setting and metrics, but implementation left to the organizational and community level—to align with CFIR's distinction between outer-/inner-setting (Damschroder et al., 2022) and fulfill normalization process theory's requirement that practices be grounded in the local activities of individuals (May & Finch, 2009).

Second, the confidentiality–integration tension. Integrated behavioral health assumes information sharing among members of the care team. In military and public safety populations, there are fitness-for-duty programs where disclosure may have occupational repercussions (Hoge et al., 2004). Blindly adopting models of integration may only serve to perpetuate some of the stigma-based issues the model is trying to overcome. Solutions to this problem are built into the framework by making a clear delineation between clinical information and occupational decision making and elevating the confidentiality structure to a primary design consideration, not an afterthought. This is a hypothesis. Whether this is sufficient remains to be tested (see Research Questions).

Third, the evidence asymmetry problem. The danger of cross-population synthesis is to allow the mature evidence base from veterans to "speak" for all three populations. The synthesis here avoids that error: when VHA experience is extended to first responder settings it is as a hypothesis, not a finding; where the framework extends veteran findings to peers or family members, it does so transparently; and the staged evaluation design (Section 7.3, Level 6) sequences hypothesis-testing to permit validation. Claiming too much about cross-population transportability is the very mistake that has led to so many poorly specified trauma-informed efforts to date.

7. Development of the National Trauma-Informed Integrated Behavioral Health (NT-IBH) Framework

7.1 Theoretical integration

The overarching theoretical structure of the NT-IBH Framework is by level of function. Trauma-informed care theory (SAMHSA, 2014) provides the normative anchor—that which guides what care feels like and doesn't do. Ecological systems theory (Bronfenbrenner, 1979) provides the logic of nested systems that justifies six tiers. Behavior change theory and psychological flexibility theory (Hayes et al., 2006) inform the focus on function rather than symptom reduction at the clinical level and inclusion of resilience-based transdiagnostic components along with disorder-specific protocols. Organizational readiness theory (Weiner, 2009) informs the sequencing rule such that commitment to change and change efficacy are evaluated before rollout. CFIR informs the determinant taxonomy used at all levels (Damschroder et al., 20 22); EPIS informs the temporal pacing (Aarons et al., 2011); normalization process theory (May & Finch, 2009) informs sustainment logic at each level by focusing considerations on coherence, cognitive participation, collective action and reflexive monitoring among direct care staff; and RE- AIM along with the Implementation Outcomes Framework (Proctor et al., 2011) informs the grammar of evaluation. Interpersonal theory of suicide (Van Orden et al., 20 10) informs the occupational specificity of suicide prevention work. Two constructs cut across all levels of function: health equity and interprofessional collaborative practice. Equity is baked in via required stratified measurement (by race, ethnicity, sex, rank/role, rurality, and separation status); and interprofessionalism is baked in at the clinical level through team-based role specifications.
Figure 2 presents the resulting architecture in full.

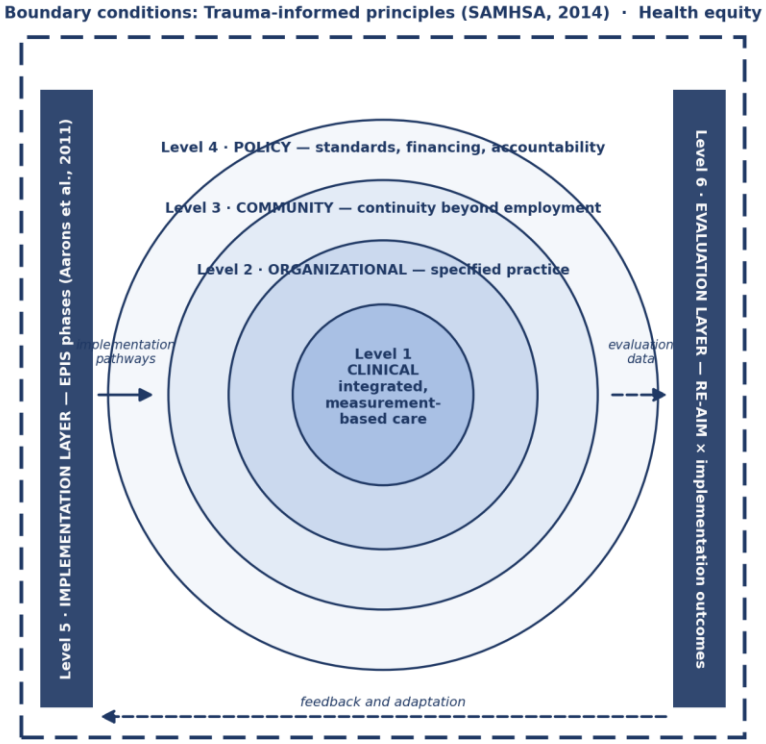


Figure 2. The National Trauma-Informed Integrated Behavioral Health (NT-IBH) Framework.

Figure legend. The NT-IBH Framework is depicted as four nested ecological rings: clinical, organizational, community, and policy levels (Bronfenbrenner, 1979). These concentric rings are cut by two vertical planes spanning all levels: (1) implementation (left plane), organized as EPIS phases (Aarons et al., 2011), and (2) evaluation (right plane), organized as RE-AIM dimensions crossed by implementation outcomes (Glasgow et al., 2019; Proctor et al., 2011). Health equity and trauma-informed principles (SAMHSA, 2014) form boundary conditions of the frame and are influential at each level. Solid directional arrows indicate implementation processes through which higher-order conditions facilitate lower-order delivery; dashed arrows indicate feedback loops through which evaluation findings inform adaptation. NT-IBH = National Trauma-Informed Integrated Behavioral Health; EPIS = Exploration, Preparation, Implementation, Sustainment; RE-AIM = Reach, Effectiveness, Adoption, Implementation, Maintenance; SAMHSA = Substance Abuse and Mental Health Services Administration. Figure graphically conveys manuscript's main theoretical claim that current evidence-based elements need reorganization across levels rather than replacement.

7.2 Comparative positioning against existing frameworks

A framework justifies its existence not by claiming it, but by showing you what other models fail to address. Table 3 compares the NT-IBH Framework to the five families of models most pertinent to it.

Table 3
Comparison of the NT-IBH Framework with Existing Model Families

Model / Framework Family	Intended Scope	Principal Strengths	Unresolved for Trauma-Exposed Occupational Populations	NT-IBH Contribution
SAMHSA trauma-informed approach (SAMHSA, 2014)	Cross-sector organizational guidance	Normative clarity; four assumptions and six principles with broad uptake	Deliberately unspecified: no delivery model, implementation pathway, fidelity criteria, or evaluation architecture	Renders principles as auditable practices tied to ERIC strategies and staged evaluation
Sanctuary Model (Bloom, 1997)	Whole-organization trauma-informed culture change	Operationalized organizational method with certification structure	Human-services origin; resource-intensive; limited public safety application; thin controlled evidence	Occupationally adapted, federated specification designed for thousands of small agencies
Collaborative care / CoCM (Archer et al., 2012; Unützer et al., 2002)	Primary care behavioral health integration	Strongest trial base in mental health services research	Not trauma-specific; silent on occupational confidentiality, fitness-for-duty, and agency culture	Embeds collaborative, measurement-based care as the clinical engine within an occupational architecture
Zero Suicide model (Brodsky et al., 2018)	Health-system suicide prevention	Multilevel integration of clinical and administrative components	Bounded by the health system; does not reach employing agencies where occupational risk concentrates	Extends suicide-safer design to employer, community, and policy levels with occupational lethal means salience
Implementation frameworks (CFIR, EPIS, RE-AIM, NPT; Aarons et al., 2011; Damschroder et al., 2022; Glasgow et al., 2019; May & Finch, 2009)	General-purpose determinant, process, and evaluation analysis	Analytic rigor; cumulative evidence base; field-standard status	Deliberately content-free: they specify how to implement and evaluate, not what a trauma-informed occupational behavioral health system is	Supplies the population-specific content model that these frameworks are then used to implement and evaluate

Note. NT-IBH = National Trauma-Informed Integrated Behavioral Health; SAMHSA = Substance Abuse and Mental Health Services Administration; CoCM = collaborative care model; CFIR = Consolidated Framework for Implementation Research; EPIS = Exploration, Preparation, Implementation, Sustainment; RE-AIM = Reach, Effectiveness, Adoption, Implementation, Maintenance; NPT = normalization process theory; ERIC = Expert Recommendations for Implementing Change. Some guidelines existing prior to NT-IBH include trauma-informed care model manuals designed for primary care practices. Taken together, Table 3 positions the NT-IBH Framework within the research landscape by highlighting the absence it fills: other models are rich in content but lack implementation guidance (trauma-informed care), robust in clinical approach but silent on workforce matters (CoCM, Zero Suicide), deep on organizational factors but health sector specific (SANCTUARY), or detailed on implementation but lacking content (CFIR, EPIS, RE-AIM, NPT). To date, no model is content-specific to trauma-exposed occupational populations, spans the entire patient population, and is explicit on implementation. NT-IBH's strength lies at that intersection—and not within any one facet alone.

7.3 Framework architecture

The framework comprises six interdependent levels, each specified in Table 4 with purpose, mechanism, strategies, determinants, and outcomes.

Table 4
NT-IBH Framework Components

Level and Purpose	Core Mechanism	Key Implementation Strategies	Barriers → Facilitators	Primary Outcomes and Relevance
1. Clinical — guideline-concordant, trauma-informed, measurement-based care	Stepped collaborative care: universal screening; first-line trauma-focused psychotherapy; safety planning; outcome-driven stepping	Training with sustained consultation; audit and feedback; clinical reminders	Workforce training gaps; measurement burden → guideline clarity; telehealth	Fidelity, penetration, effectiveness; increased reach of first-line treatment
2. Organizational — specified trauma-informed organizational practice	Leadership accountability; confidentiality architecture; supervised peer support; readiness gating (Weiner, 2009)	Champion identification; leadership engagement; readiness assessment	Culture equating help-seeking with unfitness; data-flow fears → credible peer leaders; command endorsement	Acceptability, adoption, climate change; reduced structural stigma
3. Community — care continuity beyond employment boundaries	Regional hub-and-spoke networks; separation/retirement transition protocols; community clinician training pipelines	Network weaving; centralized technical assistance	Jurisdictional fragmentation; rural workforce scarcity → telehealth; regional compacts	Reach; equity-stratified penetration; closes the service-boundary gap (Section 5.1)
4. Policy — national standards, financing, and accountability	Strategy alignment (HHS, 2024); collaborative care financing; model confidentiality statutes; national minimum data standard	Funding mechanisms; policy mandates; data infrastructure	Financing fragmentation; legislative variability → existing national strategy architecture	Cost, sustainability, system penetration; infrastructure parity

Level and Purpose	Core Mechanism	Key Implementation Strategies	Barriers → Facilitators	Primary Outcomes and Relevance
5. Implementation — governs enactment of Levels 1–4	Phased EPIS pathway with bounded adaptation (Aarons et al., 2011)	Facilitation; implementation teams; determinant-tailored strategy selection (Powell et al., 2015)	Premature scale-up; adaptation drift → determinant-driven strategy selection	Feasibility, fidelity, sustainability
6. Evaluation — renders the framework falsifiable	RE-AIM × implementation outcomes, staged and equity-stratified (Glasgow et al., 2019; Proctor et al., 2011)	Audit systems; data dashboards; external evaluation	Absent data standards; attribution complexity → minimum dataset (Level 4)	All eight implementation outcomes; accountability and iterative refinement

Note. NT-IBH = National Trauma-Informed Integrated Behavioral Health; ERIC = Expert Recommendations for Implementing Change; EPIS = Exploration, Preparation, Implementation, Sustainment; RE-AIM = Reach, Effectiveness, Adoption, Implementation, Maintenance; HHS = U.S. Department of Health and Human Services. Source of implementation strategies: ERIC compilation (Powell et al., 2015); Source of outcomes: Proctor et al. (2011). Evidence-Based Practice Elements of FRAME Narrative description of Table 4. The text below summarizes the table by describing the underlying logic required at each level and the evidence used to support the design decisions.

Level 1 — Clinical. Purpose: Provide guideline-consistent, trauma-informed, measurement-based integrated care via a stepped care pathway grounded in collaborative care (Archer et al., 2012), which includes universal validated screening; first-line trauma-focused psychotherapy (Management of PTSD and ASD Work Group, 2023); embedded safety planning with lethal means counseling (Stanley & Brown, 2012); and outcome monitoring to inform stepping decisions (Fortney et al., 2017). The primary challenge has been workforce; clinicians providing care to first responders in the community are often not trained in trauma-focused care (Haugen et al., 2012), which we have attempted to overcome with training+consultation and audit-with-feedback (Powell et al., 2015).

Level 2 — Organizational. Purpose: turn the trauma-informed concepts mentioned above into operational definitions and audit criteria at employing agencies: executive accountability, confidentially by means of physically separating clinical information from fitness-for-duty determinations, structured peer support including set standards for training and supervision, and clearance of psychological readiness as a gatekeeper to deployment (Weiner, 2009). The issue of greatest concern is the confidentiality-vs.-integration dilemma discussed in Section 6. Separation of databases is one solution that is operationally defined and measurable.

Level 3 — Community. Purpose: reach beyond employment limits to include families, National Guard, reservists, and resource-strained communities by partnering with hub-and-spoke networks, building pipelines to train community providers, and instituting transition agreements when separating and retiring-bridging the service-gap mentioned in 5.1-using telemedicine as the standard tool for equity.

Level 4 — Policy. Purpose: work to establish the national standard-setting, financing, and accountability requirements needed to support the federated system – including alignment with the 2024 National Strategy for Suicide Prevention (HHS, 2024), coverage of collaborative care in the workplace and community settings, workforce development investment, model confidentiality legislation, and a national minimum data set to allow for uniform cross-sector tracking.

Level 5 — Implementation. Purpose: framework levels suggest how Levels 1–4 are operationalized via phased EPIS pathway (Aarons et al., 2011)—exploration, preparation, implementation, sustainment—with facilitation, training with consultation, audit and feedback, and normalization work (May & Finch, 2009). Local adaptation occurs within the boundaries of specified fidelity-critical components; all else is customizable.

Level 6 — Evaluation. Purpose: make the framework falsifiable using a bifocal lens: the RE-AIM dimensions (Glasgow et al., 2019) crossed by Proctor et al.'s (2011) implementation outcomes, with equity prioritization pre-specified. This would also make evaluation

pragmatic: implementation outcomes would be primary endpoints early on; clinical and service outcomes would become primary endpoints only after penetration criteria have been met, so that effectiveness decisions about programs not reaching intended populations cannot be prematurely made.

The novelty of the framework described in Table 4 is not found in its individual components (each of which is based on existing evidence or theory) but in how they are built together: in the federated governance approach to overcoming the centralization paradox; in approaching confidentiality and measurement as infrastructure layers; in how the bifocal lens supports both veteran and first responder evidence simultaneously; and in how evaluation is sequenced. To make these claims about our framework's architecture falsifiable, we list them below as hypotheses.

7.4 Propositions for empirical test

The next five propositions flow logically from the synthesis above and represent the framework's hypotheses-ready core. Proposition 1 (federated architecture). Compared to centralized-mandate alternatives, federated architectures (national standard-setting/measurement + devolution of implementation ownership to organization/community) will be more widely adopted and sustained within decentralized public safety systems, as logically inferred from the centralization paradox (Section 6) and normalization process theory (May & Finch, 2009). Proposition 2 (confidentiality architecture). Structural separation of clinical information from fitness-for-duty decision-making will improve treatment initiation and reduce stigma-related treatment refusals relative to integrated-record alternatives, as logically inferred from the confidentiality–integration tension (Section 6) and published evidence of confidentiality concerns as a barrier to care (Hoge et al., 2004). Proposition 3 (unified innovation). Joint implementation of collaborative care and measurement-based care will achieve greater fidelity and penetration than stepwise implementations of either component alone, as logically inferred from their shared determinant structure (Section 5.3; Lewis et al., 2019). Proposition 4 (specification). Specification of trauma-informed care principles into auditable organizational practices will produce measurable change in organizational trauma-informedness where principle-level buy-in does not, as logically inferred from the principle-level specification critique (Section 5.4). Proposition 5 (staged evaluation). Delayed evaluation of effectiveness behind penetration thresholds will produce fewer false-negative conclusions about program effectiveness relative to concurrent designs, as logically inferred from staged evaluation theory (Section 7.3, Level 6). Potential study designs capable of testing each proposition are woven into the research agenda below (Section 11).

8. Implementation Science Perspective

Through the lens of revised CFIR (Damschroder et al., 2022), many of the framework's key determinants fall into clusters by domain: financing fragmentation and cross-agency governance in the outer setting; stigma as help-seeking viewed as synonymous with unfitness, the master determinant onto which other factors load most heavily (Hoge et al., 2004) in the inner setting; clinician openness to standardized measurement (Lewis et al., 2019) and leadership engagement at the individual level. Most of the actionable advice comes from implementation process: Use facilitated, team-based processes, designate champions. Implementation is social first, technical second because normalization work sustains change (May & Finch, 2009). Selecting implementation strategies should also flip from convention and match to diagnosis: provide training with ongoing consultation rather than train-thons to address workforce shortages (Karlin & Cross, 2014), embed informatics into workflow and use audit with feedback to increase measurement use (Lewis et al., 2019), and use opinion-leader and peer-network methods rather than broad-scale didactic campaigns to change culture. Table 5 summarizes this mapping of determinants to strategies.

Table 5
Implementation Strategies Mapped to CFIR Domains

CFIR Domain	Representative Barrier	Representative Facilitator	Matched Strategy	Rationale / Source
Innovation	Perceived complexity of	Guideline endorsement of	Workflow-embedded informatics	Lewis et al. (2019)

CFIR Domain	Representative Barrier	Representative Facilitator	Matched Strategy	Rationale / Source
	measurement-based care	first-line treatments		
Outer setting	Financing fragmentation across municipal employers	National strategy alignment	Regional financing compacts; billing extension	HHS (2024)
Inner setting	Culture linking help-seeking to unfitness	Credible leadership & peer endorsement	Opinion-leader and peer-network strategies	Hoge et al. (2004); May & Finch (2009)
Individuals	Clinician attitudes toward standardized measures	Trained champions	Training + sustained consultation	Karlin & Cross (2014); Lewis et al. (2019)
Implementation process	Workshop-only dissemination	Facilitated, team-based implementation	Facilitation; audit & feedback	Powell et al. (2015)

Note. CFIR = Consolidated Framework for Implementation Research (Damschroder et al., 2022); strategies follow the ERIC compilation (Powell et al., 2015). ERIC = Expert Recommendations for Implementing Change.

Two aspects of Table 5 should be highlighted: first, the mapping is diagnostic, not menu-driven. Each outlined strategy has an identified determinant documented in literature (Powell et al., 2015); second, the row for inner-setting contains more weight than others because if the culture that creates the association between help-seeking and unfitness is not acknowledged and adjusted using peer and leadership channels that the target population finds credible, every strategy we enact will be less effective than it could be (May & Finch, 2009). Figure 3 illustrates the timeline logic of these strategy deployments.

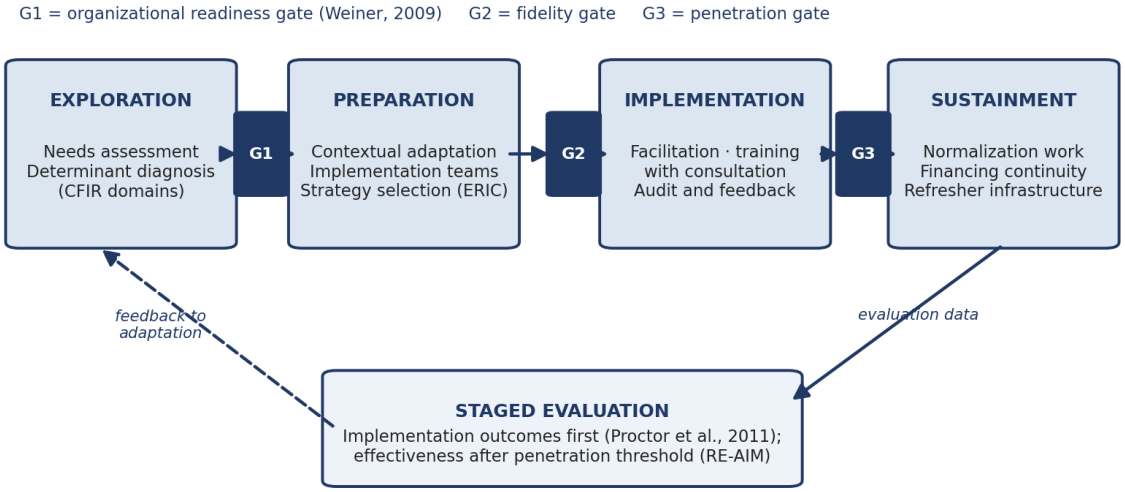


Figure 3. Implementation pathway of the NT-IBH Framework.

Figure legend. Phased EPIS implementation pathway including exploration, preparation, implementation, and sustainment phases (Aarons et al., 2011) with decision gates inserted at three key points: Gate 1 (G1), the organizational readiness gate that must be cleared before program deployment (Weiner, 2009); Gate 2 (G2), the fidelity gate that must be cleared before program scale-up; and Gate 3 (G3), the penetration gate that must be

cleared before effectiveness is formally evaluated. Solid arrows indicate the flow of implementation activities and evaluation data moving forward through the system; the dashed arrow indicates feedback of evaluation findings to ongoing contextual adaptation. EPIS = Exploration, Preparation, Implementation, Sustainment; CFIR = Consolidated Framework for Implementation Research; ERIC = Expert Recommendations for Implementing Change; RE- AIM = Reach, Effectiveness, Adoption, Implementation, Maintenance. Gate decision points operationalize the staged implementation evaluation logic inherent in Level 6 and Proposition 5 by blocking decisions about program effectiveness for programs not adequately implemented.

9. Clinical Implications

Three implications follow for clinicians. First, present offering guideline-concordant trauma-focused psychotherapy as the default, documenting departure from this recommendation (Management of PTSD and ASD Work Group, 2023). Second, monitor for therapeutic non-response to standardized outcome measurement protocols. However, rather than shifting into administrative drift, use structured tools to guide reassessment of cases not responding to care (Fortney et al., 2017). Third, attend to occupational context as clinical content: Routinely assess for exposure history, fitness-for-duty concerns, fears about disclosure, and access to lethal means. Adapt safety planning to account for occupational firearm access (Stanley & Brown, 2012). None of these three implications demands new evidence, but all require attention to implementation. Table 6 translates these clinical practice implications into auditable elements of practice and proposed fidelity indicators.

Table 6
Clinical Translation Matrix

Framework Element	Clinical Practice Translation	Fidelity Indicator
Universal screening	Validated PTSD/depression/suicide-risk screens at defined intervals	% eligible screened
First-line treatment default	Trauma-focused psychotherapy offered before/alongside pharmacotherapy	% initiating first-line modality
Measurement-based stepping	Outcome review at each defined interval; non-response triggers reassessment	% sessions with recorded measures
Occupationally informed safety planning	Lethal means counseling adapted to duty firearm access	% at-risk patients with documented plan
Confidentiality architecture	Clinical record separation from fitness-for-duty processes	Audit of data-flow compliance

Note. PTSD = posttraumatic stress disorder. Indicators of fidelity are presented as auditable proportions to facilitate the audit- and- feedback strategies outlined in Table 5. Table 6 translates principles into observables--indicators that a clinic, agency, or evaluator can actually count--the essential first step in the fidelity monitoring upon which Levels 5 and 6 are built.

10. Policy Implications

Taken together, the framework suggests four components of policy: infrastructure equity, federal funding for first responder behavioral health programs matched to data demonstrating similar levels of need (Arena et al., 2025; Carleton et al., 2018; Petrie et al., 2018) instead of legacy budget allocations; payment parity, expanding integrated care billing codes to workplace and community settings; privacy protection, model legislation that bifurcates employee health records from personnel actions—the number one reported stigma preventing care utilization; and outcomes alignment, a standardized set of minimum national data metrics aligned with 2024 National

Strategy's objectives for data collection (HHS, 2024). These are recommendations based on a review of evidence; none is an assertion that these recommended policies have been researched themselves.
Table 7 maps each policy element to a concrete instrument and an accountability metric.

Table 7
Policy Translation Matrix

Framework Element	Policy Instrument	Accountability Metric
Infrastructure parity	Need-benchmarked federal investment for first responder behavioral health	Per-capita service capacity by sector
Financing alignment	Collaborative care reimbursement in occupational/community settings	Claims-based uptake
Confidentiality protection	Model state legislation separating clinical and employment data	Enactment count; disclosure-fear survey trends
Measurement standardization	National minimum dataset for trauma-exposed occupational populations	Data submission coverage
Strategy alignment	Integration with 2024 National Strategy implementation structures (HHS, 2024)	Cross-referenced action-plan milestones

Note. HHS = U.S. Department of Health and Human Services.

As Table 7 indicates, none of these instruments requires new clinical science; each requires institutional action, underscoring that policy-level constraints are institutional rather than evidential.

11. Future Research Directions

Specifically, the framework calls for: prioritized development of an agenda that includes: longitudinal surveillance at the national level of receipt of services–not simply prevalence– among first responders (including separated service members and retirees); hybrid type effectiveness–implementation research trials of integrated, measurement-based care into public safety employee health settings, rigorously evaluating the portability across sectors of this integration, which the FRAMEWORK posits as a hypothesis; construction and validation of a discrete trauma-informed practice quality measure for organizations, which cannot advance as a body of literature without this action; prospective, multi-site research to evaluate the NT-IBH framework itself, including the proposed confidentiality-architecture; and equity-oriented subgroup analyses regarding differential reach and impact. Candidate designs are provided in Table 8 .

Table 8
Future Research Priorities

Priority	Question	Candidate Design
1. Surveillance	What is service receipt (not merely prevalence) among active and separated first responders?	National linked-data surveillance; cohort studies spanning separation
2. Transportability	Does collaborative, measurement-based care embedded in public safety occupational health improve outcomes?	Hybrid type 1–2 effectiveness–implementation trials

Priority	Question	Candidate Design
3. Specification	Can trauma-informed organizational practice be measured reliably?	Instrument development + psychometric validation
4. Framework evaluation	Does the NT-IBH architecture improve implementation and clinical outcomes over usual dissemination?	Multi-site stepped-wedge or interrupted time series with staged RE-AIM/Proctor outcomes
5. Equity	Are reach and outcomes equitable across race, ethnicity, sex, rank, and rurality?	Pre-specified stratified analyses within Priorities 2 and 4

Note. NT-IBH = National Trauma-Informed Integrated Behavioral Health; RE-AIM = Reach, Effectiveness, Adoption, Implementation, Maintenance. The order of Table 8 was intentional: surveillance/measures development precedes trustworthy trials and framework evaluation; equity analyses are pre-specified within (not added on to) these designs.

12. Strengths and Limitations

he paper's strengths are its upfront discussion of what was and was not done; clear distinctions between evidence-derived results, interpretive conclusions and hypotheses; organization of theory by function instead of reference; and a framework distilled to the level of elements, drivers, interventions, contrast to prior models, and anticipated criteria for evaluation—making it falsifiable rather than aspirational. Its weaknesses are consequent upon its methodology. As a purposive, judgement-based narrative review, identification of sources was necessarily selective; whilst each piece of evidence was assessed in isolation and its influence is described, no listed screening, dual verification, or standardized evaluation tool was utilized, and a future registered review may well reach alternative conclusions. Coverage of the evidence landscape is uneven across populations, and generalizations from the veteran and primary care literature bodies to first responder populations are noted wherever made. The review and framework are largely grounded in the U.S. policy landscape, and may not generalize to global contexts although the federated reasoning may be applicable to other federations with fragmented public safety networks. Lastly, the framework offered is itself untested: it will not have predictive value until the research recommendations from Section 11 are implemented, and changes to federal initiatives may soon outdate the policy references.

13. Conclusion

Because this review identified heterogeneous treatment landscapes connecting coherent populations defined by shared trauma- related need (veterans, active-duty service members, first responders), the National Trauma-Informed Integrated Behavioral Health Framework was designed to both reflect and address this paradox of evidence. Namely, that there appears to be convergent trauma-related need served by sharply divergent infrastructure; mature clinical science constrained by siloed or otherwise incomplete implementation; and national policy vision and ambition lacking a delivery-level architecture that might allow translation at scale. To that end, the Framework integrates trauma-informed care principles, measurement- based care collaborative care, and implementation science into a six- level, federated, and explicitly falsifiable architecture. Its purpose is intentionally architectural: it specifies how existing evidence- based tools and techniques might be organized, governed, financed, implemented, and evaluated across three unique but at-risk populations not served by a common system of care. It is thus hypercritical that the framework itself be evaluated—and its value will be determined not by logical or scientific rigor but by performance under the staged program of implementation research it outlines. This is standard accountability and a condition this manuscript is held to as well.

Declarations

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Data availability: All sources synthesized are cited in the reference list; search documentation is available from the corresponding author.

Author contributions: Solely responsible for conceptualization, methodology, evidence synthesis, framework development, writing (original draft), and writing (review and editing), and approved the final manuscript.

Use of artificial intelligence: Generative artificial intelligence was employed, under the author's direction, to aid in drafting, literature organization, and formatting. The author fully reviewed and revised

all aspects of the content, validated all cited references to the published record, and takes responsibility for the integrity, accuracy, and originality of this work. In accordance with COPE and ICMJE recommendations, AI-assistive tools are not listed as authors.

References

1. Aarons, G. A., Hurlburt, M., & Horwitz, S. M. (2011). Advancing a conceptual model of evidence-based practice implementation in public service sectors. Administration and Policy in Mental Health and Mental Health Services Research, 38(1), 4–23. https://doi.org/10.1007/s10488-010-0327-7
2. Alshahrani, K. M., Johnson, J., Prudenzi, A., & O'Connor, D. B. (2022). The effectiveness of psychological interventions for reducing PTSD and psychological distress in first responders: A systematic review and meta-analysis. PLoS ONE, 17(8), Article e0272732. https://doi.org/10.1371/journal.pone.0272732
3. Archer, J., Bower, P., Gilbody, S., Lovell, K., Richards, D., Gask, L., Dickens, C., & Coventry, P. (2012). Collaborative care for depression and anxiety problems. Cochrane Database of Systematic Reviews, 2012(10), Article CD006525. https://doi.org/10.1002/14651858.CD006525.pub2
4. Arena, A. F., Gregory, M., Collins, D. A. J., Vilus, B., Bryant, R., Harvey, S. B., & Deady, M. (2025). Global PTSD prevalence among active first responders and trends over recent years: A systematic review and meta-analysis. Clinical Psychology Review, 120, Article 102622. https://doi.org/10.1016/j.cpr.2025.102622
5. Bloom, S. L. (1997). Creating sanctuary: Toward the evolution of sane societies. Routledge.
6. Brodsky, B. S., Spruch-Feiner, A., & Stanley, B. (2018). The Zero Suicide Model: Applying evidence-based suicide prevention practices to clinical care. Frontiers in Psychiatry, 9, Article 33. https://doi.org/10.3389/fpsyt.2018.00033
7. Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Harvard University Press.
8. Carleton, R. N., Afifi, T. O., Turner, S., Taillieu, T., Duranceau, S., LeBouthillier, D. M., Sareen, J., Ricciardelli, R., MacPhee, R. S., Groll, D., Hozempa, K., Brunet, A., Weekes, J. R., Griffiths, C. T., Abrams, K. J., Jones, N. A., Beshai, S., Cramm, H. A., Dobson, K. S., … Asmundson, G. J. G. (2018). Mental disorder symptoms among public safety personnel in Canada. The Canadian Journal of Psychiatry, 63(1), 54–64. https://doi.org/10.1177/0706743717723825
9. Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. Implementation Science, 4, Article 50. https://doi.org/10.1186/1748-5908-4-50
10. Damschroder, L. J., Reardon, C. M., Widerquist, M. A. O., & Lowery, J. (2022). The updated Consolidated Framework for Implementation Research based on user feedback. Implementation Science, 17, Article 75. https://doi.org/10.1186/s13012-022-01245-0
11. Fortney, J. C., Unützer, J., Wrenn, G., Pyne, J. M., Smith, G. R., Schoenbaum, M., & Harbin, H. T. (2017). A tipping point for measurement-based care. Psychiatric Services, 68(2), 179–188. https://doi.org/10.1176/appi.ps.201500439
12. Glasgow, R. E., Harden, S. M., Gaglio, B., Rabin, B., Smith, M. L., Porter, G. C., Ory, M. G., & Estabrooks, P. A. (2019). RE-AIM planning and evaluation framework: Adapting to new science and practice with a 20-year review. Frontiers in Public Health, 7, Article 64. https://doi.org/10.3389/fpubh.2019.00064
13. Glasgow, R. E., Vogt, T. M., & Boles, S. M. (1999). Evaluating the public health impact of health promotion interventions: The RE-AIM framework. American Journal of Public Health, 89(9), 1322–1327. https://doi.org/10.2105/ajph.89.9.1322
14. Greenhalgh, T., Thorne, S., & Malterud, K. (2018). Time to challenge the spurious hierarchy of systematic over narrative reviews? European Journal of Clinical Investigation, 48(6), Article e12931. https://doi.org/10.1111/eci.12931
15. Haugen, P. T., Evces, M., & Weiss, D. S. (2012). Treating posttraumatic stress disorder in first responders: A systematic review. Clinical Psychology Review, 32(5), 370–380. https://doi.org/10.1016/j.cpr.2012.04.001
16. Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. Behaviour Research and Therapy, 44(1), 1–25. https://doi.org/10.1016/j.brat.2005.06.006
17. Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. The New England Journal of Medicine, 351(1), 13–22. https://doi.org/10.1056/NEJMoa040603
18. Karlin, B. E., & Cross, G. (2014). From the laboratory to the therapy room: National dissemination and implementation of evidence-based psychotherapies in the U.S. Department of Veterans Affairs health care system. American Psychologist, 69(1), 19–33. https://doi.org/10.1037/a0033888
19. Kazdin, A. E., & Blase, S. L. (2011). Rebooting psychotherapy research and practice to reduce the burden of mental illness. Perspectives on

Psychological Science, 6(1), 21–37. https://doi.org/10.1177/1745691610393527
20. Lewis, C. C., Boyd, M., Puspitasari, A., Navarro, E., Howard, J., Kassab, H., Hoffman, M., Scott, K., Lyon, A., Douglas, S., Simon, G., & Kroenke, K. (2019). Implementing measurement-based care in behavioral health: A review. JAMA Psychiatry, 76(3), 324–335. https://doi.org/10.1001/jamapsychiatry.2018.3329
21. Management of Posttraumatic Stress Disorder and Acute Stress Disorder Work Group. (2023). VA/DoD clinical practice guideline for management of posttraumatic stress disorder and acute stress disorder (Version 4.0). U.S. Department of Veterans Affairs & U.S. Department of Defense. https://www.healthquality.va.gov/guidelines/MH/ptsd/
22. May, C., & Finch, T. (2009). Implementing, embedding, and integrating practices: An outline of normalization process theory. Sociology, 43(3), 535–554. https://doi.org/10.1177/0038038509103208
23. Petrie, K., Milligan-Saville, J., Gayed, A., Deady, M., Phelps, A., Dell, L., Forbes, D., Bryant, R. A., Calvo, R. A., Glozier, N., & Harvey, S. B. (2018). Prevalence of PTSD and common mental disorders amongst ambulance personnel: A systematic review and meta-analysis. Social Psychiatry and Psychiatric Epidemiology, 53(9), 897–909. https://doi.org/10.1007/s00127-018-1539-5
24. Powell, B. J., Waltz, T. J., Chinman, M. J., Damschroder, L. J., Smith, J. L., Matthieu, M. M., Proctor, E. K., & Kirchner, J. E. (2015). A refined compilation of implementation strategies: Results from the Expert Recommendations for Implementing Change (ERIC) project. Implementation Science, 10, Article 21. https://doi.org/10.1186/s13012-015-0209-1
25. Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., Griffey, R., & Hensley, M. (2011). Outcomes for implementation research: Conceptual distinctions, measurement challenges, and research agenda. Administration and Policy in Mental Health and Mental Health Services Research, 38(2), 65–76. https://doi.org/10.1007/s10488-010-0319-7
26. Schnurr, P. P., Hamblen, J. L., Wolf, J., Coller, R., Collie, C., Fuller, M. A., Holtzheimer, P. E., Kelly, U., Lang, A. J., McGraw, K., Morganstein, J. C., Norman, S. B., Papke, K., Petrakis, I., Riggs, D., Sall, J. A., Shiner, B., Wiechers, I., & Kelber, M. S. (2024). The management of posttraumatic stress disorder and acute stress disorder: Synopsis of the 2023 U.S. Department of Veterans Affairs and U.S. Department of Defense clinical practice guideline. Annals of Internal Medicine. https://doi.org/10.7326/M23-2757
27. Stanley, B., & Brown, G. K. (2012). Safety planning intervention: A brief intervention to mitigate suicide risk. Cognitive and Behavioral Practice, 19(2), 256–264. https://doi.org/10.1016/j.cbpra.2011.01.001
28. Substance Abuse and Mental Health Services Administration. (2014). SAMHSA's concept of trauma and guidance for a trauma-informed approach (HHS Publication No. SMA 14-4884). U.S. Department of Health and Human Services.
29. Unützer, J., Katon, W., Callahan, C. M., Williams, J. W., Jr., Hunkeler, E., Harpole, L., Hoffing, M., Della Penna, R. D., Noël, P. H., Lin, E. H. B., Areán, P. A., Hegel, M. T., Tang, L., Belin, T. R., Oishi, S., & Langston, C. (2002). Collaborative care management of late-life depression in the primary care setting: A randomized controlled trial. JAMA, 288(22), 2836–2845. https://doi.org/10.1001/jama.288.22.2836
30. U.S. Department of Health and Human Services. (2024). National strategy for suicide prevention. https://www.hhs.gov/nssp
31. Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E., Jr. (2010). The interpersonal theory of suicide. Psychological Review, 117(2), 575–600. https://doi.org/10.1037/a0018697
32. Wagner, S. L., White, N., Fyfe, T., Matthews, L. R., Randall, C., Regehr, C., White, M., Alden, L. E., Buys, N., Carey, M. G., Corneil, W., Fraess-Phillips, A., Krutop, E., & Fleischmann, M. H. (2020). Systematic review of posttraumatic stress disorder in police officers following routine work-related critical incident exposure. American Journal of Industrial Medicine, 63(7), 600–615. https://doi.org/10.1002/ajim.23120
33. Weiner, B. J. (2009). A theory of organizational readiness for change. Implementation Science, 4, Article 67. https://doi.org/10.1186/1748-5908-4-67
34. Whittemore, R., & Knafl, K. (2005). The integrative review: Updated methodology. Journal of Advanced Nursing, 52(5), 546–553. https://doi.org/10.1111/j.1365-2648.2005.03621.x