



**Adverse
Childhood
Experiences**

Be the Change

Evidence Review - Developing Trauma informed Practice in Northern Ireland



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List of Abbreviations

ARC	Attachment, Regulation and Competency Framework	DHSSPS	Department of Health, Social Services and Public Safety NI
ARCHES	Addressing Reproductive Coercion in Health Settings	DIFRC	Denver Indian Family Resource Center
ARTIC	Attitudes Related to Trauma informed Care	DoH	Department of Health NI
BASC	Behavioural Assessment System for Children	DoJ	Department of Justice NI
BCHB	Behavioral Health System Baltimore	DSHS	?? (p.91)
BCR	Building Community Resilience	EAI	Early Authoritative Intervention
BERS-2C/2Y	Behavioural and Emotional Rating Scale, 2nd Edition	ECMH	Early Childhood Mental Health
BESD	Behavioral and Emotional Disturbance	EBP	Evidence-Based Practice
CAFAS	Child and Adolescent Functioning Assessment Scale	EBPAS	Evidence-Based Practice Attitudes Scale
CAMHS	Child and Adolescent Mental Health Services	EBT	Evidence-Based Treatment
CANS scale	Child and Adolescent Needs and Strengths scale	EDIF	Enrollment and Demographic Information Form
CAPS	Clinician Administered PTSD Scale	EITP	Early Information Transformation Programme
CARE	Children and Residential Experiences	EMDR	Eye-movement desensitisation and reprocessing
CASE	Centre for Adoption Support and Education	EQ-R2	Education Questionnaire-Revision 2
CBC	Clifford Beers Clinic	HEARTS	Healthy Environments and Response to Trauma in Schools
CBCL	Child Behavior Checklist	HMO	Health Maintenance Organisation
CBITS	Cognitive Behavioural Intervention for Trauma in the Schools	HSCB	Health and Social Care Board
CCCT	Core Curriculum on Childhood Trauma	HSCT	Health and Social Care Trust
CECI	Child Ecology Check-In	HSTS	Head Start Trauma Start
CFT	Child and Family Team	IDD	Intellectual and Developmental Difficulties
CGSQ	Caregiver Strain Questionnaire	IPS	Intensive Permanence Services
CGT	Cognitive Behavioural Therapy	IPV	Interpersonal Violence
CHET	Child Health and Education Tracking	IST	In-Service Training
CHKS	California Healthy Kids Survey	IT	Implementation Team
CIQ-RC-I	Revised: Caregiver-Intake	ITTIC	The Institute of Trauma and Trauma informed Care
CIS	Columbia Impairment Scale	KVC	KVC Kansas
CONCEPT	Connecticut Collaborative on Effective Practices for Trauma	LC	Learning Collaborative
CPS	Child Protective Services OR Collaborative Problem Solving (p. 34)	MAP	Model of Attachment Practice
CTAC	Child Trauma Assessment Center	MAYSI2	Massachusetts Youth Screening Instrument
CTISP	Chadwick Trauma informed System Project	MCTP	Massachusetts Child Trauma Project
CTS	Child Trauma Screen	MFQ	Mood and Feelings Questionnaire
CW	Child Welfare	NCFAS	North Carolina Family Assessment Scale
CWC	Child Welfare Committee	NCFAS-AI	American-Indian version of the NCFAS
CWS	Child Welfare System	NCTIC	North Central Secure Treatment Unit
CWTTT	Child Welfare Trauma Training Toolkit	NCTSN	National Center for Trauma informed Care
DCFS	Division of Child and Family Services	NHPS	National Child Traumatic Stress Network
DE	Department of Education NI	NHS	New Haven Public Schools
DECA	Devereux Early Childhood Assessment	NI	Northern Ireland

NICE	National Institute for Health and Care Excellence
NIRN	National Implementation Research Network (?? – check this – p.80)
NISRA	Northern Ireland Statistics and Research Agency
OFMDFM	Office of the First Minister and Deputy First Minister NI
OMH	Ongoing Mental Health
OoHC	Out-of-Home Care
PBL	Problem-Based Learning
PCP	Primary Care Provider
PC-PTSD	Primary Care PTSD screen
PFI	Patient-Focused Intervention
PK	Project Kealahou
PRN	(medication) = to be taken as needed (pro re nata)
PROQoL	Professional Quality of Life Scale
PSI	Parenting Stress Index
PTSD	Post-Traumatic Stress Disorder
QUB	Queen's University Belfast
RA	Restorative Approach
RADS-2	Reynolds Adolescent Depression Scale, Second Edition
REA	Rapid Evidence Assessment
REACH	Routine Enquiry About Childhood Adversity
RC	Risking Connection
RCMAS-2	Revised Children's Manifest Anxiety Scale, Second Edition
RCT	Regional Core Training OR Randomised Controlled Trial
RMQIC	Rocky Mountain Quality Improvement Center
RPI	Restrictive Physical Intervention
RRM	Restraint Reduction Meeting
RRRCC	Regional Review of Residential Child Care
RTC	Residential Treatment Center
RYDM	Resilience Youth Development Module
SAMHSA	Substance Abuse and Mental Health Services Administration
SAQ	Safety Attitudes Questionnaire
SBNI	Safeguarding Board for Northern Ireland
SCARED	Self-Report for Childhood Anxiety Related Disorders
SEHSCT	South Eastern Health and Social Care Trust
SOC	System-Of-Care
SPA	Safe and Positive Approaches
S/R	Seclusion / Restraint
SSUF	Statewide Strategic Use Fund

STAIR-A	Skills Training in Affective and Interpersonal Regulation for Adolescents
SUD	Substance Use Disorder
TA	Technical Assistance
TAC	Training for Adoption Competency
TARGET	Trauma Affect Regulation: Guide for Education and Therapy
TF-CBT	Trauma-Focused Cognitive Behavioural Therapy
TGCTA	Trauma and Grief Components Therapy for Adolescents
TIA	Trauma informed Approach
TIC	Trauma informed Care
TICS	Trauma informed Climate Scale
TICWS	Trauma informed Child Welfare System
TILTs	Trauma informed Leadership Teams
TIP	Trauma informed Practice
TIPC	Trauma informed Primary Care
TI-PRT	Trauma informed Psychiatric Residential Treatment
TISCI	Trauma informed System Change Instrument
TSC-C	Trauma Symptom Checklist for Children
TSRT	Trauma System Readiness Tool
TST	Trauma Systems Therapy
TTT	Train-the-Trainer
UCP	Unique Community Profile
UK	United Kingdom
UNOCINI	Understanding the Needs of Children in Northern Ireland
US	United States of America
VT	Vicarious Trauma
YCS	Youth Connection Scale
YSS	Youth Services Survey

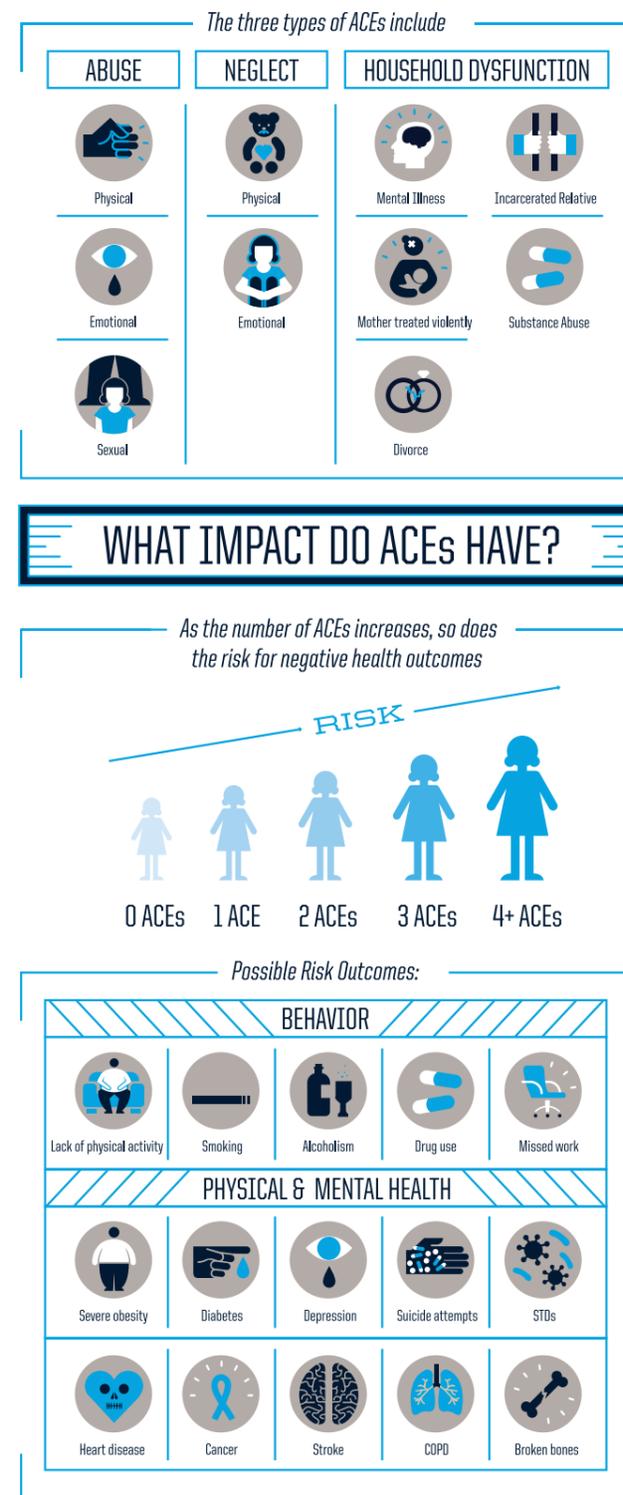
1. Introduction

There is a robust body of research indicating that severe or chronic adversity in childhood can have a significant, negative impact on a child’s development, well-being, health, life chances and future outcomes. Integrating trauma-awareness into practice across diverse service contexts is therefore essential to interrupt the cycle of generational adversities which can result in children being affected by the unresolved trauma experienced by their parents, extended families and communities. The Safeguarding Board for Northern Ireland (SBNI) took the strategic decision in 2017 to adopt a Trauma informed approach to safeguarding practice in search of better outcomes for children. To this end, the SBNI commissioned an evidence review to provide information on the available science in order to facilitate and support the adoption of Trauma informed practice across health, social care, justice, education, and community and voluntary systems in Northern Ireland (NI). It is anticipated that key themes drawn from this review will inform the development of coherent organisational cultures, policies and practices within these systems.

This report provides a synthesis of the evidence gathered through a systematic review of the literature utilising a rapid evidence assessment (REA)¹. The REA sought primarily to explore the evidence pertaining to organisational change processes required to implement Trauma informed care at a whole systems level and identify some of the inherent complexities to these processes. Chapter 1 provides an introduction to the concept of Trauma informed care, followed by an overview of the methods used to undertake the project in chapter 2. Chapter 3 examines the prevalence of childhood adversities in NI and provides estimates based on international and UK research. Chapters 4 to 8 present a detailed synopsis of the Trauma informed implementation literature according to the specific organisational systems to which they relate i.e. child welfare, health (including mental health), education, justice and adult social care, and a summary of system-specific key themes and findings. Chapter 9 summarises Trauma informed policy and practice developments in NI and across the United Kingdom (UK) and Republic of Ireland (RoI). Chapter 10 draws together key findings pertaining to the development of Trauma informed care, childhood adversity in NI, the core components of Trauma informed implementation and associated evidence of child and family outcomes and implementation effectiveness.

¹ A literature review following a systematic review methodology but with components of the process simplified to produce information in a shorter period of time.

1.1 Trauma informed Care: A Systems/ Organisational Change Process



The terms Trauma informed practice (TIP), Trauma informed care (TIC) and Trauma informed approaches (TIA) tend to be used interchangeably in the literature. They each refer to an organisational change framework which seeks to develop coherent cultures, policies and practices across systems of care (DeCandia, 2014). Trauma informed organisational cultures reflect an understanding of the widespread prevalence and effects of childhood adversity and trauma, and aim to promote potential paths for recovery while actively seeking to avert the possibility of re-traumatisation (SAMHSA, 2014). This whole systems approach differs from trauma-specific interventions designed to treat trauma-related symptoms and disorders. Instead, Trauma informed care brings focus to organisational change processes aimed at integrating Trauma informed principles across various levels of the system to create environments, policies and workforce practices designed to build collaborative relationships to promote recovery and prevent re-traumatisation. This report will refer to Trauma informed care or TIC as the most widely applied term in the literature.

Figure 1. Adversities Experienced and Negative Outcomes

source
rwjf.org/aces
Robert Wood Johnson Foundation

The Origins of Trauma informed Care: ACE prevalence and outcome

The development of Trauma informed care emerged from the findings of the seminal Adverse Childhood Experiences (ACE) study in the US (Felitti et al., 1998). This study and subsequent research in the US and UK established the prevalence of childhood adversities (inclusive of physical, sexual and emotional abuse; neglect; and household adversities) and a strong, graded relationship between the number of adversities experienced and a wide range of negative outcomes across multiple domains over the life course (Figure 1, Centre for Disease Control and Prevention, 2013) (Anda et al., 2006; Anda et al., 2010; Bellis et al., 2015; Hughes et al., 2017; Van der Kolk et al., 2005).

ACE study findings correlate well with research that confirms people who have experienced multiple adversities as over-represented in child and adult mental health, justice and child welfare systems (e.g. Bywaters et al., 2016; Devaney et al., 2012; Dierkhisinger et al., 2013; Kessler et al., 2010; Mauritz et al., 2013). Although recognised that knowledge of the precise prevalence of adversities, how they interact and impact on individuals and families, and how they might be effectively responded to is still in development (Davidson et al., 2010), this work has led to a greater recognition of the significance of early social experiences. This has in turn brought a shift in service orientation toward understanding client difficulties by considering 'what happened to this person?' rather than 'what is wrong with this person?' (Harris & Fallot, 2001).

Diverse Contexts, Cross-Over and Coherence

Trauma informed approaches have been developed and adapted for different health, justice, child welfare and social care contexts in the US (e.g. SAMHSA, 2014), UK (e.g. Bush, 2018), Ireland, Europe, Australia (e.g. Bateman et al., 2013) and New Zealand (Atwool, 2018), including mental health (e.g. Sweeney et al., 2016), substance misuse and violence (e.g. Levenson & Grady, 2016), domestic and sexual violence (e.g. Anyikwa, 2016), working with women (e.g. Elliot et al., 2005), juvenile justice (e.g. Dierkhisinger et al., 2018), child health (e.g. Quigg et al., 2018), child welfare (e.g. Atwool, 2018) and looked after children (e.g. Buckley et al., 2016; Furnivall, 2014) settings. While there is overlap with other good practice approaches, (such as more humane social work practices (e.g. Featherstone et al., 2014; informed choice and control e.g. Elwyn, 2012; increased service user involvement and co-production e.g. Gillard et al., 2013; and cultural and gender competence e.g. Schouler-Ocak et al., 2015)), TIC philosophy, principles and practices provide an overarching comprehensive and coherent framework across sectors and organisations.

1.2 Understanding / Defining Childhood Adversity, Trauma and Resilience

Adverse Childhood Experiences

While facing distressing experiences in childhood is common and normal, such as feeling stressed before exams or moving house, some children and young people grow up in environments or have experiences which are more emotionally demanding. These can be potentially traumatic and can have a long-lasting impact on their development, health and wellbeing. Such experiences include sexual and physical abuse and neglect within their home environment or community, the loss of a caregiver or sibling, or having to take on adult responsibilities. These experiences can be exacerbated by the child's wider social circumstances, such as poverty or discrimination on the basis of race, culture, ethnicity, gender or sexual identity. Since first conceptualised, ACEs have been defined in a range of ways. The following definition aims to expand more restrictive conventional definitions:

Adverse Childhood Experiences (ACEs) are highly stressful, and potentially traumatic, events or situations that occur during childhood and/or adolescence. It can be a single event, or prolonged threats to, and breaches of, the young person's safety, security, trust and bodily integrity. These experiences directly affect the young person and their environment, and require significant social, emotional, neurobiological, psychological or behavioural adaptation.

Adaptations represent children and young people's attempts to survive in their immediate environment (including family, peer group, schools and local community), finding ways of mitigating or tolerating the adversity by using the environmental, social and psychological resources available to them, establishing a sense of safety or control, making sense of the experiences they have had, the community or family that they are growing up in and the identity they are forming. (Young Minds, 2018, p.28)

Childhood Trauma

As noted, Trauma informed care is distinguished from trauma-specific services (such as eye-movement desensitisation and reprocessing (EMDR), or trauma-focussed cognitive behavioural therapy) which are designed to address particular individual patient symptomatology. TIC approaches have adopted the definition of trauma proposed by the US national Substance Abuse and Mental Health Services Administration (SAMHSA, 2014) to move beyond psychiatric diagnostic categories (such as post-traumatic stress disorder PTSD) towards a wider understanding of adverse experiences and their impact on a person's wellbeing.

SAMHSA's

Definition of Trauma:

'Individual trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically and emotionally harmful or life-threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional or spiritual well-being' (SAMHSA, 2014 p.7)

This conceptualisation usefully differentiates between three interlocking factors (the three E's): the traumatic event(s) which need not be life-threatening; how the event is experienced, which will be unique to the individual, their relational supports and socio-economic circumstances; and its effects. In addition to childhood trauma or adversity exposure, recent literature takes account of the experience of 'invisible trauma' (Sweeney et al., 2018) to acknowledge the intersections of trauma with culture, gender, race, sexuality, history and the compounding impact of structural inequalities and poverty (e.g. Atwool, 2018; NCTSN, 2016). Research has shown how the experience of trauma and adversity impacts individuals in a variety of ways over their life course, over and above trauma-related symptoms (Figure 2 Institute of Trauma and Trauma informed Care, 2015). Organisational TIC approaches use childhood adversity and trauma awareness as a lens to understand presenting behaviours/difficulties as (maladaptive) coping responses to people's life histories, and design services that better address the needs of all service users.

Effects of Trauma and Adversity

Trauma/ Adversity impacts an individuals ability to:	Trauma/ Adversity impairs:	Trauma/ Adversity shapes:	Trauma/ Adversity disrupts:	Trauma/ Adversity has been correlated to:
Trust	Memory	A persons Belief About Self and Others	Emotional Identification	Heart Disease
Cope	Concentration		Ability to Self Soothe	Obesity
Form Healthy Relationships	New Learning	Ability to Hope One's Outlook on Life	Ability to Control Expression of Emotions	Addiction
	Focus		One's Ability to Distinguish Between what's Safe and Unsafe	Pulmonary Illness
				Diabetes
				Autoimmune Disorders
				Cancer

Figure 2. Effects Of Trauma And Adveristy

Concerns regarding the conceptualisation of trauma

Concern has, however, been expressed about the broader conceptualisation of trauma, with fears that the term could lose its meaning with a myriad of diverse adverse life experiences subsumed under the term (e.g. Taggart in Sweeney et al., 2018). Similarly, it is suggested that the use of the term 'trauma' inadvertently 'medicalises' complex social experiences of adversity, potentially pathologising service users, leading to reductionist trauma-specific interventions when wider social problems require redress (e.g. Edwards et al., 2017; Ellis & Dietz, 2017). This points to the critical need to support service user development of their unique narrative, expressing and validating specific lived experience. A TIC approach also demands organisational leaders differentiate clearly between Trauma informed and trauma-specific interventions/practices, and understand the systemic change processes associated with TIC approaches which seek to enhance service provision for all. Trauma informed care is therefore seen as a universal approach, rather than simply a model for those people who have experienced trauma. In this way, trauma experience is recognised as the expectation from childhood adversity, not the exception (Te Pou, 2018). It is recognised that while children and young people who experience childhood adversity and trauma are negatively impacted by their experiences, not all will result in enduring mental health conditions or necessarily lead to a trauma-related diagnoses. This report uses the terms adversity and trauma interchangeably to encompass this broader range of experiences and effects, and recognises that many of the risky and challenging behaviours displayed by children and young people in the context of adversity represent creative adjustments or adaptations to their circumstances and are attempts (out of their awareness) to survive, manage and make sense of their experiences.

Resilience

However, it is important to remember that the effects of adverse childhood and traumatic experiences are unique to the individual and are mediated by a range of protective factors, which help children and young people develop resilience and manage their experiences, mitigating some of the worst effects of adversity and trauma. Important protective factors for children and young people include supportive relationships with caregivers, peers and extended networks. Resilience is recognised as not just a matter of individual traits and capabilities, but rather the child's access to a supportive network, raising the important challenge of how services engage and maximise the resources available to children within their informal and formal networks:

[...] resilience is not, and should not, be viewed as an issue of individual resources and capabilities. Resilience arises through children’s interactions with their social and physical ecologies, from families, through to schools and neighbourhoods. Scaffolding child development by supporting families, building healthy and happy school environments and communities, and addressing social inequalities in access to resources is crucial for enabling vulnerable children exposed to adversity to navigate their way to success. Resilience therefore depends on the structures and social policies that determine availability and access to resources’ (2018, Young Minds p.89).

**1.3
The Principles
of Trauma
informed Care**

With an awareness of the impact of adversity and trauma on people’s lives and behaviours over-time, TIC advocates developed a set of key assumptions and principles to help design responsive, holistic and effective systems of care. In bringing together a set of key principles, the effort was not to create a new set of rules, but rather to identify the core components of service culture, design and delivery that require attention. This includes paying attention to experience at all levels of the system, not only the service user/identified client, but also their caregivers (both families and professional caregivers), as well as practitioners, service managers and inter-agency interfaces.

**SAMHSA (2014)
Identified four
key assumptions
- the four ‘R’s:**

(i) that all people at all levels within the system have a basic realisation about childhood trauma and adversity and how it can affect families, groups, organisations and communities as well as individuals

(ii) practitioners are able to recognise the signs of trauma/ adverse experiences, which may be manifest by people accessing services as well as those providing services

(iii) the system of care responds by applying the principles of TIC to all areas of functioning – from the person who greets people at the door to the chief executive – with policies, carefully considered practices and language altered to appreciate the experiences of trauma and adversity of service users and their families, and mitigate the risks of inadvertent re-traumatisation and secondary traumatic stress experienced by the staff providing services. TIC is inclusive of trauma-specific interventions, whether assessment, treatment or recovery supports, but also incorporates trauma principles into the organisational culture

(iv) TIC seeks to resist re-traumatisation of service users and providers. Re-traumatisation is considered a significant concern, as people who have experienced multiple adverse life events often experience acutely exacerbated impact than those who have experienced a single trauma, resulting in decreased trust and willingness to engage in services (SAMHSA, 2014). Re-traumatisation can be present in any situation or environment that resembles an individual’s trauma experience, literally or symbolically, which may then trigger difficult feelings and reactions (SAMHSA, 2014).

While there are obvious practices that may be re-traumatising, such as restraint or isolation, the potential for re-traumatisation is thought to exist at all levels of care (for example see Figure 3: The Institute of Trauma and Trauma informed Care (ITTIC), 2015).

**Re-
Traumatisation:
What Hurts?**

SYSTEM	RELATIONSHIP
Policies, Procedures	Power, Control, Subversiveness
Having to Continually Retell Their Story	Not Being Seen/Heard
Being Treated as a Number	Violating Trust
Being seen as Their Label or Diagnosis	Failure to Ensure Emotional Safety
Procedures that Require Disrobing	Non Collaborative
No Choice in Service or Treatment	Does Things For Rather Than With
No Opportunity to Give Feedback About Their Experience with the Service Delivery	Use of Punitive Treatment, Coercive Practices and Oppressive Language

Figure 3.
Re-Traumatisation Potential

In addition to these four key assumptions, SAMHSA (2014) identified 6 principles: safety; trustworthiness and transparency; peer support; collaboration and mutuality; empowerment, voice and choice; and cultural, historical and gender issues.



Figure 4. Six Principles Of Tic

The Principles of Trauma informed Child and Family Service Systems

Adapted from SAMHA’s principles, the National Child Traumatic Stress Network (NCTSN, 2016) developed principles for Trauma informed child and family service systems change emphasising the need to (i) create environments, policies and practices that maximise service users’ physical and emotional safety, (ii) facilitate child and family recovery from adverse life events and (iii) enhance their capacity to thrive.

NCTSN (Figure 5) identified seven core areas that require attention, premised upon two underpinning principles that services (i) address inherent power differentials and build meaningful and collaborative partnerships with children, families, caregivers and other professionals (ii) respond to the unique needs of diverse communities, recognising and addressing the impact of poverty, and the intersections of gender, race, culture and other discriminatory systems. Specific areas for attention include: routine screening for trauma exposure; availability of evidence-based interventions and treatments for stress and associated mental health symptoms; increasing the awareness of children, families and providers of trauma exposure; enhancing the resilience and protective factors of vulnerable children and families; addressing parent and caregiver trauma; promoting continuity of care and cross-service collaboration; and maintaining staff wellbeing.

What is a Trauma informed Child and Family Service System?

A Trauma informed child and family service system is one in which all parties involved recognize and respond to the impact of traumatic stress on those who have contact with the system including children, caregivers, and service providers. Programs and agencies within such a system infuse and sustain trauma awareness, knowledge, and skills into their organizational cultures, practices, and policies. They act in collaboration with all those who are involved with the child, using the best available science, to maximize physical and psychological safety, facilitate the recovery of the child and family, and support their ability to thrive.

A service system with a Trauma informed perspective is one in which agencies, programs and service providers:

1. Routinely screen for trauma exposure and related symptoms
2. Use evidence-based, culturally responsive assessment and treatment for traumatic stress and associated mental health symptoms;
3. Make resources available to children, families, and providers on trauma exposure, its impact, and treatment;
4. Engage in efforts to strengthen the resilience and protective factors of children and families impacted by and vulnerable to trauma;
5. Address parent and caregiver trauma and its impact on the family system;
6. Emphasize continuity of care and collaboration across child-service systems; and
7. Maintain an environment of care for sta that addresses, minimizes, and treats secondary traumatic stress, and that increases sta wellness.

These activities are rooted in an understanding that Trauma informed agencies, programs and service providers:

8. Build meaningful partnerships that create mutuality among children, families, caregivers and professionals at an individual and organizational level; and
9. Address the intersections of trauma with culture, history, race, gender, location and language, acknowledge the compounding impact of structural inequity, and are responsive to the unique needs of diverse communities.

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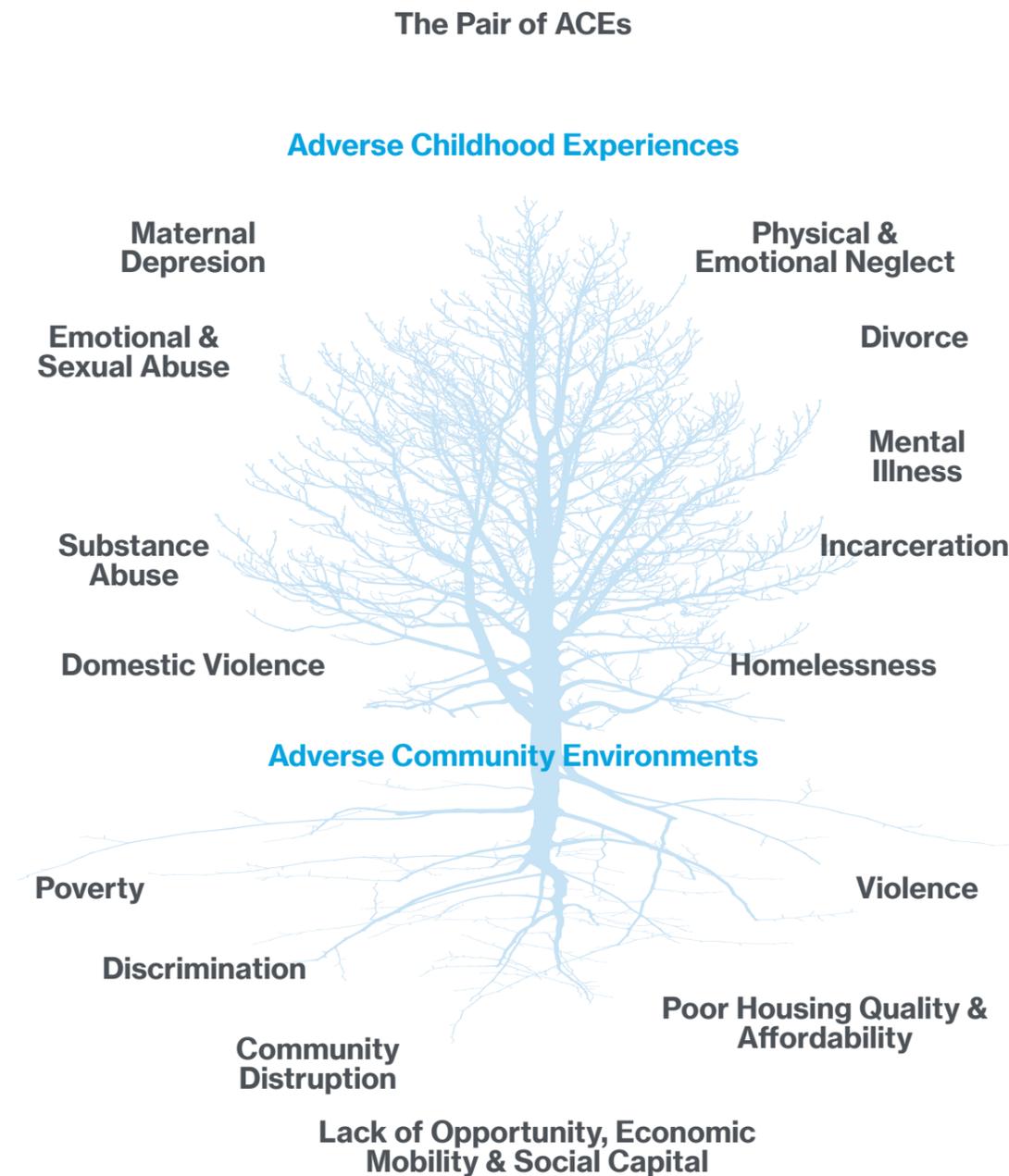
Figure 5. TIC And Family Services

1.4 Beyond Case Work: Addressing Structural Inequality and Building Community Resilience

Childhood trauma and adversity do not occur in a vacuum. Given the recognised links between poverty, inequality and the development of toxic stress and childhood adversity, it is recognised that models of Trauma informed care which seek to enhance the life chances of the most vulnerable children and families must go beyond service provision and individual case work (Ellis & Dietz, 2017; Larkin et al., 2014; Atwool, 2018). If systemic oppression is ignored, the emerging evidence warns that models of TIC risk maintaining the status-quo by perpetuating patterns of victim-blaming, silencing and shaming (Becker-Blease, 2017).

Building Community Resilience (BCR, 2018) advocates argue that ‘adverse childhood experiences’ (individual/family level ACEs) are linked to ‘adverse community environments’ (another set of ACEs, such as lack of opportunity, limited economic mobility, community violence, lack of affordable and safe housing, discrimination and the effects of poverty and unemployment) – what they call the ‘Pair of ACEs’ (Figure 6). Adverse community environments compound the lived experience of adversity by limiting the potential for the buffering effects of family and community resilience. BCR proponents have developed an approach which is focused on bolstering community resilience by fostering collaboration and developing strategic partnerships across multiple sectors and systems, not only those with a health-related mission – but also education, faith-based community, housing and justice – that can work together, bridging and linking with community members (Ellis & Dietz, 2017).

A public health model is thus proposed to achieve cross-sector, cross-departmental and community development collaboration (Atwool, 2018; Larkin et al., 2014). This is recognised to require political leadership (Atwool, 2018) and needs to address current financing models and structural impediments that do not always support partnership working (Ellis & Dietz, 2017).



Ellis W. / Dietz W. BCR Framework Academic PEDs 2017

Figure 6
Pair Of ACEs

2. Methodology

This Rapid Evidence Assessment (REA) was commissioned with aim of answering three SBNI key questions:

1. What childhood adversity looks like in NI?
2. What is known about prevalence of various types of adversity in NI?
3. What are the key components of effective approaches used within systems to create Trauma informed practice, including methods of evaluation of effectiveness?

2.1 Background & Aims

The research team's expertise and knowledge of key research studies in the area of childhood adversity, both internationally and locally, as well as specific policy and practice developments in Northern Ireland, formed the basis of addressing questions 1 and 2. In answering question 3, a REA using systematic methods to identify, select and analyse the relevant literature was undertaken. The key features of the REA methodology are summarised below.

2.2 Search Methods and Terms

A systematic search for relevant articles was conducted using the databases: International Bibliography of the Social Sciences (IBSS); Science Citation Index Expanded (SCI-EXPANDED) --1970-present); PsycINFO (2002 - present); Ovid MEDLINE(ALL 1946 to August 31, 2018); SCOPUS; and ERIC.

A broad search strategy was used to identify articles with the terms "trauma-inform*", "trauma inform*", "trauma-focus*", "trauma focus*", "trauma-base*" or "trauma base*", in the title, abstract, keyword or subject headings (See Appendix A). Exclusion criteria included: non-English language papers, papers published before 2009; and conference proceedings, dissertations and other papers not published in journals. There were no limits placed in terms of methodology or study population. The key features of the REA methodology are summarised below.

2.3 Screening, Full-text Review, Data Extraction and Synthesis

The search identified 5527 potentially relevant articles. References were exported to an excel database and 3824 duplicates were removed (see Figure 7). The title and abstract of the remaining 2243 articles were screened against the following eligibility criteria:

- Focused on organisational level implementation of trauma-informed care; and
- Contained some evaluation component with associated data

In all, 2118 articles were excluded at screening primarily because they were discussion-based papers with no data presented or because they focused on trauma specific treatment such as CBT, psychotherapy etc. or a specific service/intervention which did not include wider, organisational implementation components. The full text of the remaining 125 articles were then reviewed against the eligibility criteria noted above, with the addition of a third criterion, that papers evaluating Trauma informed training had to utilise both a pre-training and post-training measure to effectively measure change over time. Forty-four articles were excluded at this point, primarily because they did not present evaluation data, they only evaluated training with a post-test or qualitative design, or they were non-systematic reviews. There was no full-text availability for five of these 44 papers.

This full-text screening identified 5 systematic reviews which identified definitions and components of TIC relevant to the juvenile justice system; (Branson et al., 2017) presented evaluation data on Trauma informed approaches within out of home care (Bailey et al., 2018), youth inpatient psychiatric and residential treatment settings (Bryson et al., 2017), inpatient mental health settings (Muskett, 2014) and organisation wide Trauma informed initiatives which involved a training component (Purtle, 2018). Twenty-one of the papers were individual studies already included within these systematic reviews. Evaluation and research design data were extracted from the reviews and, where necessary, supplemented with additional details from the original source. An additional forty-three papers were selected for full data extraction (See Appendix A). Data extraction entailed extracting key study data (country, system, setting, TIC model and core components, sample size and population, evaluation methods and findings and study limitations) and exporting to an MS Excel spreadsheet.

The process of data synthesis began with the identification of primary research studies and systematic reviews relevant to specific service systems (there was some overlap, particularly with regard to child residential care, treatment and psychiatric care). Primary research papers were then grouped within systems according to common settings, e.g. state-wide/regional child welfare initiatives, organisational/agency level child welfare initiatives, residential group care and/or treatment and fostering and adoption initiatives (See Appendix 2). A narrative approach to synthesis which outlined key findings in relation to outcomes, Trauma informed models, implementation components and evaluation methods for each study was adopted. This detailed account of implementation processes within specific system

settings is intended to act as resource for policy makers, service providers and practitioner in considering how best to implement Trauma informed approaches within their own area of practice. Summaries of key themes and findings then formed the basis of later discussion which drew together the evidence across systems and linked this with the wider literature and development in NI.

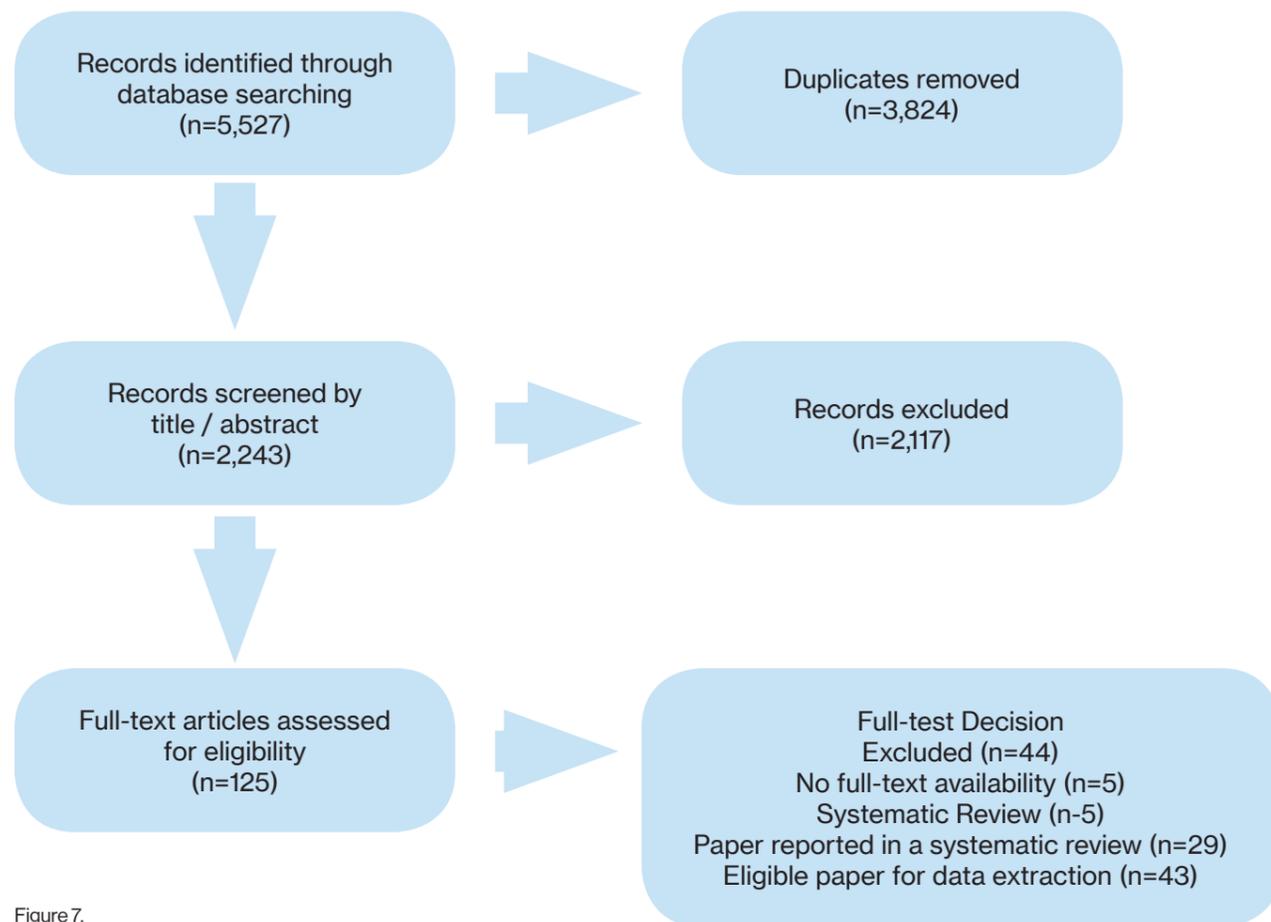


Figure 7.
Search And Extraction Process

2.4 Grey material search process

Database searches were supplemented by an electronic and manual search of relevant grey material. The electronic grey material search was undertaken via an initial Google search using the term 'Trauma informed care systems change'. QUB team members were also invited to identify relevant grey material known to them. Policy documents and journal articles were excluded from grey material searches. Relevant reports and/or briefing papers were thus identified, with additional documents located via snowballing strategies such as reference list reviewing.

Grey material was screened, and relevant documents used to highlight developments international, UK and NI policy and practice developments.

Limitations

Firstly, this review was limited to organisational interventions that were explicitly Trauma informed. Although this allowed for the application of systematic and replicable methods to be applied to evaluate the body of evidence, it excluded interventions that embrace principles of Trauma informed care without using the language of Trauma informed. Secondly, 3, the review was concerned with effective approaches used within systems, it excluded specific Trauma informed clinical interventions and trauma focused services/interventions which were not delivered as part of a wider programme of organisational change. Thirdly, although systematic search and data extraction methods were applied, this is a rapid evidence review rather than a systematic review. As such, to meet the project time scales, evaluation of research quality was limited to broad assessment of the study design and reported limitations. Fourthly, the evidence review was limited to the peer-reviewed outcome evaluations. Although the review process did include a search of on-line policy and practice literature, this literature was not included in the data extraction process, but rather used to inform discussion around international, UK and NI policy and practice developments.

This report will form the framework for a series of shorter papers (1) outlining the key messages from the Trauma informed implementation literature, providing an overview of the (2) child welfare specific literature, (3) health specific literature, (4) education specific literature, and (5) justice specific literature. It is intended that these system specific reports will be informed by more targeted searches of the on-line Trauma informed policy and practice searches in order to capture a wider range of evaluation evidence.

3. Prevalence of Adverse Childhood Experiences in Northern Ireland

In this chapter, findings from prevalence studies in other countries will be used to provide estimates for the prevalence of adverse childhood experiences in Northern Ireland (NI). As with all research, there are a range of limitations with the studies of adverse childhood experiences including: the relative lack of detail about the adversities; the issues with retrospective self-report; the difficulties with non-response and representativeness; the focus on childhood; and the lack of data on other important variables (Davidson et al., 2010). Nonetheless, these studies provide the best data available and the findings of the original ACE studies continue to be reinforced by research across different countries and groups. It is important to highlight from the start that these estimates have not been adjusted for any Northern Ireland specific issues, such as the number of areas with relatively high levels of deprivation and the impact of the Troubles. It is therefore likely that they are under-estimates of prevalence in Northern Ireland and are only intended to provide some indication of numbers. The importance of context specific factors mean that it is still imperative that there is prevalence research conducted in NI.

It is also important to acknowledge that the measurement of Adverse Childhood Experiences varies, to some extent, between studies. Hughes et al. (2017) conducted a systematic review of 37 ACE studies and identified the categories that were included in each:

- childhood physical abuse: 34
- household substance abuse: 34
- childhood sexual abuse: 33
- household mental illness: 31
- exposure to domestic violence: 31
- emotional, psychological, or verbal abuse: 30
- parental separation or divorce: 28
- household criminality: 27
- neglect: 14
- family financial problems: 4
- family conflict or discord: 4
- bullying: 3
- death of parent or close relative or friend: 3
- separation from family: 3
- serious childhood illness or injury: 3

other categories which were included in fewer than three studies Hughes et al. (2017) also reported that, across the 37 studies, the prevalence of an ACE score of 0 ranged from 12% to 67%, and for an ACE score of 4 or more, from 1% to 38%.

The population figures for NI used in this section are from NISRA's 2016 mid-year population estimates which were released in 2017. They reported that the total population of NI is estimated to be 1,862,137 million. This is made up of: 388,001 children aged 0 to 15; 47,566 young people aged 16 and 17; 1,128,815 adults aged 18 to 64; and 297,755 adults aged 65 and over (of those 208,301 are aged 70 and over; and 36,500 are aged 85 and over). The international research varies in the ages of those included in prevalence studies, so the estimates below match the ages used in the relevant research study.

3.1 Prevalence estimates provided by the original ACE studies

The original Adverse Childhood Experiences study was carried out by Felitti et al. (1998) at Kaiser Permanente's San Diego Health Appraisal Clinic. Kaiser is a private health provider, or Health Maintenance Organisation (HMO), which conducts health appraisals consisting of standardised questionnaires and tests for those who have this form of health insurance. In 1995-1996, all 13,494 adults who were Kaiser Health Plan members and had completed the standardised medical evaluation were sent the ACE Study questionnaire. There was a 70.5% response rate (9,508/13,494).

The original ACE Study questionnaire consisted of 17 questions about exposure to adversity before the age of 18 grouped into seven categories: psychological abuse (2 questions); physical abuse (2 questions); sexual abuse (4 questions); then four categories of household dysfunction; exposure to substance abuse (2 questions); mental illness (2 questions); violent treatment of mother or stepmother (4 questions); and criminal activity (1 question). The ACE score was the sum of each category with any exposure reported so could range from 0 to 7.

In this study, it was also possible to link the findings from the ACE Study questionnaire to the routinely collected health appraisal data and so 10 health risk factors could also be identified. These included smoking, severe obesity, physical inactivity, depressed mood, suicide attempts, alcoholism, any drug abuse, parenteral (injecting) drug abuse, a high lifetime number of sexual partners (≥ 50), and a history of having a sexually transmitted disease.

They reported that;

- 49.5% had an ACE score of 0
- 24.9% had an ACE score of 1
- 12.5% had an ACE score of 2
- 6.9% had an ACE score of 3
- 6.2% had an ACE score of 4 or more

If we use these percentages on the adult population of NI (those aged 18 and over - 1,426,570 people), then;

- 706,152 adults would have an ACE score of 0;
- 355,216 would have an ACE score of 1
- 178,321 would have an ACE score of 2
- 98,433 would have an ACE score of 3
- 88,447 would have an ACE score of 4 or more

The original study was conducted on adults asked about their exposure to adversity in childhood and if these findings are applied to those aged under 18 in NI (435,567 children), they provide estimates for the number of children who have been, or before their 18th birthday will be, exposed to adversity:

- 215,606 would have an ACE score of 0
- 108,456 would have an ACE score of 1
- 54,446 would have an ACE score of 2
- 30,054 would have an ACE score of 3
- 27,005 would have an ACE score of 4 or more

Again, it should be emphasised that this applies the findings from the original study of adult-respondents in California with health insurance in the mid-1990s to all NI adults and children at present, so it is important to be very cautious about these estimates.

In relation to the 10 risk factors, Felitti et al. (1998) reported that among those with an ACE score of 0, 56% had none of the risk factors and only 1% had four or more risk factors. This compared with those with an ACE score of 4 or more, of whom 7% had four or more risk factors.

A later study, by the same team (Dube et al., 2003), surveyed a second cohort of 17,421 people who had been assessed at Kaiser Permanente's Health Appraisal Center. In this second study the response rate was 68% and an additional category on parental separation or divorce was added (1 question) so providing an ACE score of 0 to 8. In this study the findings were:

- 36.1% had an ACE score of 0
- 26.0% had an ACE score of 1
- 15.9% had an ACE score of 2
- 9.5% had an ACE score of 3
- 12.5% had an ACE score of 4 or more

If we use these percentages on the adult population of NI (those aged 18 and over - 1,426,570 people), then

- 514,992 adults would have an ACE score of 0
- 370,908 would have an ACE score of 1
- 226,825 would have an ACE score of 2
- 135,524 would have an ACE score of 3
- 178,321 would have an ACE score of 4 or more

If these findings are applied to those aged under 18 in NI (435,567 children):

- 157,240 would have an ACE score of 0
- 113,247 would have an ACE score of 1
- 69,255 would have an ACE score of 2
- 41,379 would have an ACE score of 3
- 54,446 would have an ACE score of 4 or more

3.2 Prevalence estimates: recent population level ACE studies

There has been some research conducted to directly estimate the prevalence of ACEs among children (aged 0 to 17). Sacks et al. (2014) used the National Survey of Children's Health, which involved 95,677 interviews, to ask parents to report their children's ACE score based on eight categories, if the child had ever:

lived with a parent or guardian who got divorced or separated

lived with a parent or guardian who died; lived with a parent or guardian who served time in jail or prison

lived with anyone who was mentally ill or suicidal, or severely depressed for more than a couple of weeks

lived with anyone who had a problem with alcohol or drugs; witnessed a parent, guardian, or other adult in the household behaving violently toward another

been the victim of violence or witnessed any violence in his or her neighbourhood

experienced economic hardship "somewhat often" or "very often" (i.e., the family found it hard to cover costs of food and housing)

They reported that the prevalence of ACEs increases with age, except for economic hardship which was reported about equally for all ages. They found that parents reported that 54% of children had an ACE score of 0, 35% had an ACE score of 1 or 2, and 11% had an ACE score of 3 or more. They also found that the most common ACEs were economic hardship and parental divorce or separation.

Bellis et al. (2014) reported prevalence findings for 12,308 18-25 years olds in education across eight Eastern European countries. They used ten categories for ACEs before the age of 18 (parental separation or divorce; domestic violence towards the mother; emotional neglect; household member with mental health problems; physical abuse; emotional abuse; sexual abuse; household member incarcerated; household member with alcohol problems; household member with drug problems). The found variation across the countries of how the percentages of ACEs were distributed from 28.0% to 60.1% for no reported ACEs, and 2.3% to 14.1% for more than 3 reported ACEs.

Morgan et al.'s (2016) report ('Growing Up in Ireland'), an ongoing longitudinal study, found that, in their cohort of nine year olds, as reported by their parents, parental divorce was the most common adversity (although, in contrast to Sacks et al. (2014) economic hardship was not included as a specific ACE category) and that approximately 5% of this young cohort had already experienced two or more adversities (Williams et al., 2009).

Public Health Wales have conducted a population level household survey of ACEs (Bellis et al, 2015, Ashton et al., 2016a, 2016b). They included 2028 adults aged 18-69 although it should be noted that the participation rate was 49.1%. They included nine categories of ACEs (verbal abuse, physical abuse, sexual abuse, parental separation, domestic violence, mental illness, alcohol abuse, drug use and incarceration). They found that: 53% reported 0 ACEs, 20% reported 1 ACE, 13% reported 2-3 ACEs and 14% reported 4 or more ACEs.

If we apply the Public Health Wales findings to the equivalent population of 18 to 69-year olds in NI (1,218,269) this suggests:

- 645,683 would have an ACE score of 0
- 243,654 would have an ACE score of 1
- 158,375 would have an ACE score of 2-3
- 170,558 would have an ACE score of 4 or more

If these findings are applied to the whole adult population in NI (1,426,570) which is beyond the group included in the Public Health Wales survey:

- 756,082 would have an ACE score of 0
- 285,314 would have an ACE score of 1
- 185,454 would have an ACE score of 2-3
- 199,720 would have an ACE score of 4 or more

If applied to the population of NI who are aged under 18 (435,567) then it would suggest:

- 230,851 have experienced, or will experience, 0 ACEs
- 87,113 have experienced or will experience 1 ACE
- 56,624 have experienced or will experience 2-3 ACEs
- 60,979 have experienced or will experience 4 or more ACEs

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- 60,979 have experienced or will experience 4 or more ACEs

Authors	Country	Population	Measurement of ACEs	% with 0 ACEs	% with 1 ACE	% with 2 ACEs	% with 3 ACEs	% with 4 or more ACEs
Felitti et al. (1998)	United States	13,494 adults with a Kaiser Health Plan	Seven categories	49.5	24.9	12.5	6.9	6.2
Dube et al. (2003)	United States	17,421 adults with a Kaiser Health Plan	Eight categories (Parental separation or divorce added)	36.1	26.0	15.9	9.5	12.5
Public Health Wales (2015)	Wales	2028 adults aged 18-69 from general population	Nine categories (alcohol abuse and drug use separate categories)	53	20	--	13	14

Table 1
Summary of prevalence findings from key surveys

The prevalence findings from other populations may be useful to provide some indication of the possible prevalence of ACEs in NI but, as already mentioned, there are some aspects of the NI context that suggest that even the higher estimates based on other contexts may be under-estimates of the prevalence in NI. The more recent international ACE research has placed greater emphasis on the economic conditions of the child. Sacks et al. (2014) included economic hardship as an ACE category and found it to be the most commonly experienced. Ellis and Dietz (2017) have reinforced that children in the most deprived environments are at the highest risk of ACEs and have argued for the need to consider both adverse childhood experiences and adverse community environments. In a review of the research on the relationship between poverty and child abuse and neglect Bywaters et al. (2016, p.3) concluded

There is a strong association between families' socio-economic circumstances and the chances that their children will experience [child abuse and neglect]. Evidence of this association is found repeatedly across developed countries, types of abuse, definitions, measures and research approaches, and in different child protection systems.

McLafferty et al. (2015) have also identified, in the NI context, the heightened risk of mental health problems for those experiencing economic adversity.

	NI population	Estimate based on	Estimated number with 0 ACEs	Estimated number with 1 ACE	Estimated number with 2 ACEs	Estimated number with 3 ACEs	Estimated number with 4 or more
Children	435,567	Felitti et al. (1998)	215,606	108,456	54,446	30,054	27,005
Adults	1,426,570		706,152	355,216	178,321	98,433	88,447
Total population	1,862,137		921,758	463,672	232,767	128,487	115,452
Children	435,567	Dube et al. (2003)	157,240	113,247	69,255	41,379	54,446
Adults	1,426,570		514,992	370,908	226,825	135,524	178,321
Total population	1,862,137		672,231	484,156	296,080	176,903	232,767
Children	435,567	Bellis et al. (2015)	230,851	87,113	56,624		60,979
Adults	1,426,570		756,082	285,314	185,454		199,720
Total population	1,862,137		986,933	372,427	242,078		260,699

Table 2
Application of the prevalence findings to the NI population

The impact of the Troubles is another important aspect of the Northern Ireland context which may directly and indirectly impact on the level of ACEs. Bunting et al. (2013a) have reported the very high levels of Post-Traumatic Stress Disorder specifically and of mental health problems more generally (Bunting et al., 2013b). Betts and Thompson (2017, p.3) reported that Northern Ireland “has higher levels of mental ill health than any other region in the UK with 1 in 5 adults and around 45,000 of children here have a mental health problem at any one time.”

4. Trauma informed care in child welfare systems

The child welfare workforce interfaces with children and adults who have experienced trauma on an everyday basis. Indeed, it can be argued that no other child-serving system encounters a higher percentage of service users with trauma histories, whether it be in family support, child protection, foster, kinship or residential care. Experiences of maltreatment and neglect, parental mental ill health, domestic violence and substance misuse often co-occur, while removal from the family home and multiple placement moves can present additional stressors. Although professionals are often very aware of the trauma that has precipitated contact with the child welfare system, they may be less aware of the complex trauma history of parents and children, may not always link this with current behavioural or emotional problems or have access to appropriate resources to address these needs. In order to be Trauma informed, child welfare systems not only need effective trauma screening and assessment protocols at every level, but access to research-based trauma treatment services beyond generic mental health services (Ko et al., 2018). A wider systems approach that recognises the important role foster parents, adoptive parents, and courts can play in facilitating post-trauma recovery, is also necessary.

Despite burgeoning interest in this area, definitions and terminology regarding Trauma informed approaches vary across organisations and programmes, and the integration of Trauma informed principles into organisational culture is not always clearly operationalised. Nonetheless, common elements considered central to TIC implementation in child welfare settings are evident (Hanson & Lang, 2016).

These emphasise:

- Workforce Development – requiring training of all staff in awareness and knowledge on the impact of abuse or trauma, measuring staff proficiency in defined criteria to demonstrate trauma knowledge/practice, strategies/procedures to address/reduce secondary traumatic stress among staff and knowledge/skill in how to access and make referrals for evidence-based trauma focused practices
- Trauma-focused services – using standardised, evidence-based screening/assessment measures to identify trauma history and trauma-related symptoms or problems, including a child’s trauma history in the child’s case record/file/service plan and availability of trained, skilled clinical providers in evidence-based trauma-focused practices

- Organisational Change – Collaboration, service coordination, and information sharing among professionals within the agency related to Trauma informed services as well as with other agencies related to development of procedures to reduce risk for client re-traumatisation, promote consumer engagement and input in service planning and development of a Trauma informed system. Provision of services that are strengths-based, promote positive development and a positive, safe physical environment, written policies that explicitly include and support Trauma informed principles, and the presence of a defined leadership position or job function specifically related to TIC.

In an effort to develop more Trauma informed child welfare systems, various national initiatives, practice and training models have emerged. Of particular note is the work of the National Child Traumatic Stress Network (NCTSN) in the United States. Established by Congress in 2000, the NCTSN is a group of 70 treatment and research centres from across the United States that has been instrumental in implementing Trauma informed child welfare initiatives not just in the USA, but internationally. The development of Trauma informed practice in child welfare has also seen substantial federal funding with the Administration for Children and Families (ACF), a division of the United States Department of Health and Human Services (HHS), funding five-year demonstration grants in 2011 to develop and evaluate a range of strategies for improving care for children in the child welfare system suffering from exposure to trauma. Strategies included workforce development, trauma screening and referral, dissemination of trauma-focused EBTs, and improved collaboration between child welfare and behavioural health.

Within the NCTSN, there are multiple committees designed to address specific topic areas related to the field of child trauma. In particular, the Child Welfare Committee (CWC) of the NCTSN was created to support the development of products, interventions, and services for children involved in the child welfare system (Walsh et al., 2018). This CWC has been instrumental in recognising the importance of developing a Trauma informed curriculum for child welfare professionals, creating the first version of the Child Welfare Trauma Training Toolkit (CWTTT) in 2007. The CWTTT was updated in 2012 and comprises 14 modules, with the first six focused on providing an overview of trauma and its effects, with the remaining modules focusing on the “essential elements” of Trauma informed care and encouraging participants to identify concrete strategies that they can integrate into their daily practice (see Figure 8). The CWTTT is currently being revised.

Child Welfare Trauma Training Toolkit (CWTTT)

Child Welfare Trauma Training Toolkit identifies essential elements of Trauma informed child welfare practice to guide caseworkers to: (a) maximize the child's sense of safety, (b) assist children in reducing overwhelming emotion, (c) help children make new meaning of their trauma history and current experiences, (d) address the impact of trauma and subsequent changes in the child's behaviour, development, and relationships, (e) coordinate services with other agencies, (f) utilize comprehensive assessment of the child's trauma experiences and their impact on the child's development and behaviour to guide services, (g) support and promote positive and stable relationships in the life of the child, (h) provide support and guidance to the child's family and caregivers, and (i) manage professional and personal stress.

The CWTTT is both didactic and experiential and includes lecture elements as well as multiple activities to assist the participant in better integrating the material into their daily practice.

Figure 8.
Child Welfare Trauma Training Toolkit

The NCTSN has adapted the quality improvement methodology of the Breakthrough Series Collaborative (BSC), for use in the child trauma field. The BSC is a quality improvement model developed by the Institute for Healthcare Improvement (2003) to help health care organisations make “breakthrough” improvements in quality while reducing costs. It was designed to help organisations close the gap between evidence and practice by creating a structure in which interested organisations could easily learn from each other and from recognised experts in topic areas where they want to make improvements. Typically, BSCs involve a short-term (6 to 15-month) learning system that brings together a large number of teams to seek improvement in a focused topic area. In 2010, the NCTSN, with funding from the Substance Abuse and Mental Health Services Administration (SAMHSA), launched the Trauma informed Child Welfare Practice Breakthrough Series Collaborative, (TICWP BSC), which brought together nine teams from across the USA with a focus on developing Trauma informed child welfare practices (decisions, actions, policies, procedures, staffing, and supports for children and caregivers) that increased the probability that children who need out-of-home placement remain in a single, appropriate, and stable home whenever possible (Conradi et al., 2011).

Various specific Trauma informed models aimed at changing practice in specific settings have also been developed in recent decades. This is particularly evident within residential, group care and treatment settings where models such as Sanctuary, the Attachment, Self-Regulation, and Competency Framework (ARC) and Risking Connections have been commonly utilised as therapeutic treatment models as well as organisational

frameworks to support Trauma informed care within service systems. Sanctuary, for example, is described as an evidence-supported, Trauma informed, whole system organisational change process comprised of a number of components organising around the “Four Pillars” of shared knowledge, shared values, shared language, and a shared practice. The model provides a variety of training inputs and skill building tools including on-site consultation, implementation manuals, practice-based learning materials, fidelity checklists, toolkit lessons and psychoeducation manuals (Esakai et al. 2013).

While there is a clear trend towards the use of Trauma informed approaches within child welfare, it is important to acknowledge that this engenders certain tensions, particularly within social work. Much of the writing on Trauma informed social work positions the worker in a facilitative role, yet more often in child protection work, they are “uninvited intruders” whose intervention may itself be experienced as traumatic. Parents often have complex trauma histories and the statutory social work duty to assess parenting practice, ensure the safety of children and, where necessary, remove children from parental care, causes particular difficulties with the Trauma informed principle of creating a safe emotional environment for service users and avoiding re-traumatisation (Atwool, 2018). Focusing on presenting problems without appropriate attention to parental history can further exacerbate the situation, leaving trauma related needs unaddressed, parents’ feeling ignored and less likely to engage with support services as a result.

4.1 Review findings

The search of the peer reviewed literature identified a wide range of papers which focused on Trauma informed care in child welfare systems, ranging from state-wide initiatives targeting multiple system levels, to small programmes aimed primarily at workforce development and staff training (see Appendix B). Key models, implementation strategies and outcomes as they relate to state-wide/regional and organisation-wide frontline child welfare initiatives, residential care/treatment and fostering and adoption services are detailed below.

Regional/State Level Child Welfare Initiatives

The search of peer-reviewed literature identified ten publications which reported on eight state-wide initiatives to implement Trauma informed care in child welfare system in Colorado, Connecticut, Massachusetts, Montana, North Carolina, Washington, Arkansas and Michigan were identified.

One of the most comprehensive and extensively evaluated of these, was the Massachusetts Child Trauma Project (MCTP),

a 5-year state-wide systems-improvement initiative funded in 2011 by the Children's Bureau (Administration for Children and Families) and U.S. Department of Health and Human Services. The MCTP used a Breakthrough Series Collaborative (BSC) Method and Intensive Learning Community (ILC) workforce development training design to enhance the capacity of child welfare workers and child mental health providers to identify, respond, and intervene early and effectively with children traumatised by chronic loss, abuse, neglect, and violence. Implementation focused on three central activities:

1. Training: Basic and advanced child trauma trainings with CW staff using the National Child Traumatic Stress Network (NCTSN) Child Welfare Training Toolkit and workshops for foster parents (Caring for Children Who Have Experienced Trauma: A Workshop for Resource Parents)

2. Dissemination: State-wide dissemination of three trauma treatments with empirical support via community-based mental health organisations: ARC, Child-parent psychotherapy and trauma-focused cognitive-behavioural therapy (TF-CBT). Dissemination involved comprehensive training and consultation in the form of a learning collaborative (LC) model which brought together senior manager, clinical supervisors, clinicians and data managers who committed to a 1-year learning period and involved face-to-face learning sessions and intensive EBT consultation

3. Leadership and systems integration - Creation of Trauma informed Leadership Teams (TILTs), focused on installing and supporting a structure for TIC systems integration at the community level. These relied on leadership by CW management and participation by social workers, consumers, mental health providers, and other community service providers and stakeholders

A preliminary implementation evaluation indicated that clinicians had positive attitudes towards evidence-based practice and strong intentions to consistently engage in Trauma informed care, while the majority of child welfare workers (80%) reported being satisfied or very satisfied with the training they had received (Fraser et al., 2014). A year after implementation, Bartlett et al. (2016) found that, compared to pre-implementation assessment, the training produced significant improvements in mental health practitioners' assessment of individual and agency Trauma informed policies and practice and that this was strengthened by participation in learning collaboratives. Interviews also pointed to TILTS as key structures for TIC systems integration. At the end of the first year of implementation approximately 300 children had been enrolled

in one of the three evidence-based treatments with pre and post-test evaluation showing that children who received these interventions had significantly fewer post traumatic symptoms and behaviour problems after six months. More recently, a large scale comparison of 55,145 children who received care from the MCTP and 36,108 who did not, found that, although children in the intervention group had more maltreatment reports (both substantiated and unsubstantiated) than did their counterparts in the comparison group, they were 15% less likely to have a substantiated report, 12% less likely to experience physical abuse and 14% less likely to experience neglect. MCTP children had more out-of-home placements than control children, although there were no differences in the likelihood of having a placement by intervention group, and were 21% more likely to be adopted (although this may be associated with pre-existing differences in adoption rates within the comparison areas). Although limited by the lack of a control group (Bartlett et al., 2016), or lack of randomisation within a control group (Barto et al., 2018), the MCTP evaluation studies, taken together, provide promising results with regards to system wide implementation of Trauma informed approaches.

The MCTP in Massachusetts, together with Colorado, Connecticut, Montana and North Carolina, were also involved in state-wide implementation of trauma screening for children within the child welfare system as part of the ACF five-year funding of demonstration grants to address trauma in the child welfare system (Lang et al., 2017). The target groups, screening tools and process varied between states (see Figure 9) with Colorado and Massachusetts opting to screen children in all open cases, Connecticut and North Carolina opting to screen children coming into care and Montana opting to screen all children that were in contact with the Bureau of Indian Affairs of Child Welfare Services. In Massachusetts, the average rate of screening increased from 40.3% to 75.0% while in Colorado, 53% of open cases were screened over a 16-month period. Over the course of 36 months, child welfare workers in North Carolina completed a total of 9714 trauma screens across a range of child CWS services including assessment/investigation and out-of-home placement. Although there were wide variations in the number of children screened, screening generally resulted in identification of high rates of trauma exposure and was generally perceived favourably by child welfare workers and mental health professionals. However, the extent to which this may have led to improved assessment and treatment or improved child outcomes still remains to be evaluated. Interestingly, the evaluators also noted that implementation of trauma screening in each of the five CWSs has been a somewhat lengthy and

challenging process in comparison with other activities such as EBT dissemination and training staff in childhood trauma. While many of the challenges associated with trauma screening related to common systemic issues such as the size and scope of the CWS, the number of staff, competing demands, staff turnover etc., the authors noted that the biggest barriers tended to be due to unique local issues such as IT systems constraints, tribal culture, limited buy-in and local availability of EBTs.

Five State Screening Initiatives

COLORADO

Aimed to provide universal screening for all children aged birth to 18 involved in the CWS who had an open case for ongoing services, including voluntary and court-ordered child protective services (CPS) involvement (excluding children seen only in intake/investigations)

Tool: Child Trauma Assessment Centre (CTAC) screen

CONNECTICUT

Connecticut Collaborative on Effective Practices for Trauma (CONCEPT)
Aimed to screen all children aged 6 to 17 who were entering the care of the CWS following removal from the family of origin

Tool: Child Trauma Screen (CTS)

MASSACHUSETTS

Plan to screen all children aged birth to 18 following a CPS report that has been flagged for further assessment

Tool: the NCTSN-adapted Child Welfare Referral Tool (later incorporated into the Family Assessment and Action Plan)

MONTANA

Plan to screen all children that were in contact with the Bureau of Indian Affairs CWS

Tool: The Child Trauma Assessment Centre (CTAC) screen

NORTH CAROLINA

Aimed to screen children from birth to age 18 entering foster care. Screening children in other units (e.g. intake/investigations) was optional

Tool: 6 and 11-question versions of the Project Broadcast Screening Tool

'Creating Connections', a 5-year project in Washington State, also focused on introducing routine screening across child welfare agencies and systems. As the State already employed a robust screening system - called Child Health and Education Tracking (CHET) - prior to implementation, this was supplemented with the Child Related Anxiety Emotional Disorders which was initiated within CHET in July 2014. In addition, a new programme was implemented to provide ongoing screening (called Ongoing Mental Health [OMH] screening programme. Training on how to gather, interpret, and share screening data with child welfare professionals was initially conducted with CHET supervisors and followed by a 2-hr training to all state-wide CHET/OMH staff. Additionally, all child welfare professionals were required to complete in-service training [IST] while all newly hired child welfare professionals were required to complete regional core training [RCT]. Pre and post-test evaluation of the training with 44 CHET/OMH staff and 71 child welfare staff highlighted increased self-reported knowledge and skills and, in the case of CHET/OMH staff, increased confidence in administering the screen that was retained at six-month follow-up.

In addition to screening, Lang et al. (2016) outline the broader components of the Connecticut Collaborative on Effective Practices for Trauma (CONCEPT) state-wide implementation strategy. This entailed:

- Creation of a core team and subcommittee to guide Trauma informed systems change
- Development of a cohort of 40 "trauma champions" who organised one in-service training about trauma every month
- State-wide mandatory preservice and in-service trauma training for child welfare staff, involved implementation of the NCTSN Child Welfare Trauma Training Toolkit
- Creation of Worker wellness (i.e. self-care) teams created and quarterly trainings in self-care provided
- Revision of agency policies for alignment with Trauma informed practice
- Training in trauma-focused cognitive behavioural therapy for community-based service providers disseminated through two learning collaborative cohorts, each lasting 11 months, based on the Breakthrough Series Collaborative quality improvement methodology

Figure 9
Five State Screening Initiatives

Training was provided to 487 managers and supervisors in the spring of 2013 and to 1,164 caseworkers and clinical staff in the fall of 2014. Evaluation of the training component of the strategy, using a stratified random sample of 230 staff, found that perceptions of individual and agency capacity to provide Trauma informed care, measured via the Trauma System Readiness Tool, significantly increased at post-training follow-up two year later. However, only 45% of selected staff completed both pre-training and post-training assessment.

As with the MCTP and CONCEPT, the Arkansas initiative focused on developing trauma awareness and buy-in amongst leaders before targeting frontline child welfare staff. In Phase 1 all area directors, regional and local supervisors in the state's child welfare system attended one of ten, two-day, regional trainings. Training was structured around National Child Traumatic Stress Network (NCTSN) content and involved a train the trainer component. Phase 2 targeted all front-line child welfare workers over the course of a year and involved a one-day training workshop led by social workers designed to increase awareness of the effects of trauma on children, promote evidence-based screening, assessment and treatment and coordinated care with other service agencies. Training for child welfare professionals was conducted following dissemination of trauma-focused cognitive behavioural therapy (TF-CBT) to more than 150 mental health professionals across the state to maximize capacity for assessment and treatment referrals once child welfare workers were better informed about the effects of trauma on children.

To date, evaluation of the Arkansas initiative - as with others identified in this review - has concentrated primarily on identifying the effectiveness of the training. This has demonstrated significant increases in knowledge and self-reported use of Trauma informed practice three months after training completion amongst senior leaders and managers (Kramer et al., 2013) as well as among child welfare staff (Conners-Burrow et al., 2013). In the case of child welfare workers, the evaluation identified a significant increase in the use of Trauma informed practices targeting children both directly (e.g., asking children about worries they have, helping them identify and label emotions or telling them what to expect from the legal system) and indirectly (e.g., talking to foster parents about signs of trauma, helping parents understand the difference between 'bad' behaviour and signs of trauma and making referrals to therapists trained in evidence-based treatments for trauma). However, they noted that the effect size was small in the case of direct support services and moderate in respect of indirect support services. As part of the training child welfare workers were also

asked to create an action plan with three strategies for using Trauma informed child welfare practices and a random sample of those trained took part in a more in-depth follow-up interview to ascertain the extent to which these had been implemented. 43% reported that they were able to fully implement the strategy, while another 43.3% were partially implemented and 13.4% were unable to implement the strategy. The evaluators concluded that, while the training was highly successful in improving knowledge of Trauma informed care practices, there was considerable room for improvement in the consistent implementation of these practices.

In contrast with more top-down initiatives, the Michigan Children's Trauma Assessment Center (CTAC) placed a particular emphasis on a grassroots partnership approach; the CTAC provided training to community members that fostered interest and encouraged some to become champions. CTAC then engaged community members and local leaders, assessed their capacity and commitment to take on the initiative and then helped them develop a community initiative plan which identified areas to target using training, consultation, assessment and treatment capacity. A key tool in the assessment and planning process was the Trauma informed System Change Instrument (TISCI), designed to measure the extent to which a complex community system has changed as a result of a community initiative. Pre and post implementation completion of the TISCI by 631 child welfare professionals and foster parents in 9 counties (Henry et al., 2011) revealed a statistically significant increase in the extent in which both policy and practice had become more Trauma informed. Core elements for a TICWS were identified as: the development of champions; screening and identification of trauma in children; comprehensive assessment of the impact of trauma; development of a cadre of community therapists (public and private) for provision of evidence-based trauma treatment; establishment of common Trauma informed language and Trauma informed decision-making.

Similarly, the Chadwick Trauma informed System Project adopted a community-orientated approach to the dissemination of Trauma informed child welfare practices policies and resources to states across the United States (<https://ctisp.org/>). Formed in March 2010 as a Category II Centre within the National Child Traumatic Stress Network (NCTSN), the Chadwick Centre has been instrumental in the development of the Trauma informed Child Welfare Practice Toolkit, which is designed to help child welfare systems become more Trauma informed and offers detailed guidance on the application of Trauma informed practice from initial investigation through to permanency planning for children in care (see website for resources: [https://ctisp.org/Trauma informed-child-welfare-](https://ctisp.org/Trauma%20informed-child-welfare-)

practice-toolkit/). Three laboratory sites in San Diego were used to pilot project products and services and, while a specific outcome evaluation of the initiative was not identified within this review, Hendricks et al. (2012) reported on the implementation process and the findings from a Community Trauma informed Assessment in each pilot site. The assessment included observations from site visits, interviews with child welfare leadership, administration and scoring of the Trauma System Readiness Tool (n=280) and focus groups with staff and service users. Data was then used to create a unique community profile for each of the three sites outlining the strengths of the current system, challenges or areas for growth, concrete barriers to TICW, recommendations and strategies for implementation.

The assessment highlighted that all three sites had solid community partnerships and that child welfare administrators and staff understood the importance of being Trauma informed and expressed motivation and desire to learn more about trauma and Trauma informed policies and practices. Common barriers were lack of funding to fully support their programs and improvement strategies and it was recommended that more trauma training was needed, together with implementation of a structured trauma screening process, increased cross-system collaborations and increasing staff support.

While no peer-reviewed journal articles relating to regional initiatives in the UK were identified, the grey literature search identified a scoping study of the implementation of Routine Enquiry about Childhood Adversity (REACH) in the English Local Authority of Blackburn and Darwen (McGee et al., 2015). REACH training was delivered in two phases; the first phase to organisations providing universal services (n=4) and the second to organisations providing targeted services (n=5) in Blackburn in August 2013, and in November 2014.

The initiative was broader than child welfare and included NHS and statutory children and family health services as well as range of community organisations with a total of 110 staff members receiving the training. The REACH training programme aimed to increase health professionals' and practitioners' knowledge about the potential consequences of childhood adversity as well as increase their confidence in routinely asking and responding to disclosures. Programme organisations were provided with an enquiry tool covering ten ACE categories to take away and incorporate into their existing assessments. The project evaluation indicated that, by February 2015, almost 2,000 screens had been completed, with the bulk of these administered by health

visitors and school nurses (n=1500), followed by social services staff (n=180). Interviews with fifteen staff in the participating organisation indicated that, while implementation methods and the recording of ACEs varied between organisations, the most common method of undertaking REACH enquiry was through face-to-face discussions with clients. Interviewees reported that following the disclosure of childhood adversity, practitioners then asked clients if they required further support to help deal with their childhood trauma.

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Following the initial scoping and pilot, the Department of Health commissioned Lancashire Care NHS Foundation Trust (LCFT) to develop a standalone Implementation Pack to support services in developing, implementing and embedding routine enquiry (amongst clients aged 14+ years.) Three services across North West England volunteered to pilot the Implementation Pack including a Child and Adolescent Mental Health Service (CAMHS), drug and alcohol service, and sexual violence support service (Quigg et al., 2018). Within each service, a senior member of staff was tasked with using the Implementation Pack, and where necessary, other resources (e.g. from the REACH team and/or their own). The REACH model is based on a five-phased approach to assist roll-out through training and ongoing support:

1. Scoping: working with an organisation to help them understand what REACH is and assess their requirements (e.g. to be an ACE-informed service, and/or implement REACH). The information is used to develop a bespoke REACH programme package that is tailored to meet the organisation's needs.
2. Organisational readiness (checklist): used to assess if the service has appropriate processes in place to implement REACH safely. For example, through exploring the organisation's infrastructure, organisational commitment to being ACE-informed and/or implementing REACH. potential risks, staff training needs and data collection processes.
3. Training: bespoke training for staff so they become ACE-informed, and where relevant have the knowledge, skills and confidence to implement REACH (the length of training can range from a half-day session to two days depending on requirements).
4. Follow-up support/monitoring (over six months): provided to both the organisation and staff members engaged in REACH ensuring it is embedded within the service.
5. Evaluation: internal evaluation of the process and outcomes of the REACH programme.

However, evaluation of the implementation pack pilot (Quigg et al., 2018) indicated that were significant issues in embedding routine inquiry and the CAMHS service decided that it would not be implemented. Subsequently, the drug and alcohol service ceased using it and the sexual violence support service decided it would not continue post pilot, or it would only be implemented with certain clients.

The reasons for this were multi-faceted, and appeared to centre around three linked concerns:

1. The feasibility of implementing REACH (using the ACE-CSE questionnaire) through the use of the standalone Implementation Pack
2. Staff uncertainties around the rationale, appropriateness and value of REACH (using the ACE-CSE questionnaire) across these types of services
3. Implementation of the pilot within services that were going through an organisational restructure (resulting in a change in the pathfinder leadership team and staff implementing the pilot within services)

Although all pilot sites recognised the need to develop ACE-informed services, where it was implemented, it was generally reported as acceptable to practitioners and clients. However, it appeared that uncertainties about the benefits of routine inquiry and how this related to the minimisation of harm and promotion of recovery, were insurmountable. It was noted that the Implementation Pack - and potentially the academic literature - did not provide sufficient information on how to use the information gathered from routine enquiry on ACEs to inform service provision and the support offered to clients, particularly within the types of services included in the pilot. Overall, it was felt that clearer theoretical foundations, more developed guidance on responding to disclosures, particularly from children, and broader approaches beyond the provision of a standalone Implementation Pack, were required to ensure services and practitioners were ACE-informed.

Organisation/ Agency Level Child Welfare Initiatives

The review of peer-reviewed literature identified six papers which reported on Trauma informed initiatives implemented at an organisational/agency level.

Two studies applied the principles of therapeutic models more generally used in residential care and treatment to non-residential settings. The Alaska Child Trauma Centre implemented the ARC model in its treatment work with pre-school and school-aged children in the child protective system, while Middleton et al. (2015) described the application of the Sanctuary model to social services agencies (setting not specified). In evaluating the Alaska Child Trauma Centre, Arvidson et al. (2011) identified an average drop in Child Behaviour Checklist scores of 19 points for the 26 children who completed treatment and noted that 90% of children moved to permanent placements compared to previous permanency rates of only 40%. Middleton et al. (2015) focused on leadership responses to a 5-day training in the Sanctuary model and subsequent agency implementation based on interviews with five senior leaders from two agencies. They highlighted that leaders described experiences that were compatible with tenets of the 'transformational leadership model' (idealised influence e.g. role models; inspirational motivation; intellectual stimulation; individual consideration) in taking forward implementation of the model but did not report on specific outcomes arising from the implementation.

Lucero & Bussey (2012) discuss the implementation of a Trauma informed family preservation practice model for Indian Child Welfare services in the USA. The model encompassed both systemic and direct practice efforts that assist families facing multiple challenges. The components of direct practice interventions included strengths-based, culturally appropriate, and Trauma informed intake and family assessments; concentrated and family-focused case management services; and referrals for material resources (e.g. housing, food, legal services, transport, etc.). The components of systemic interventions include the establishment of protocols for early identification of American Indian families and children within the child welfare system and referral of these families to culturally appropriate family preservation services. An evaluation of family preservation services which served 73 families and 179 children over 3 years and involved two projects found a positive trend in one project in the levels of family safety as measured by the North Carolina Family Assessment Scale (NCFAS). In the other project, families showed significant positive change in the area of environment, and positive trends in the areas of caregiver capabilities, family safety, and child well-being. They also noted that there was only one re-report to child protection services

during the time families were engaged in the programmes and within six months of programme completion. This was highlighted as comparing favourably with national re-report rates.

Kenny et al. (2017) evaluated the impact of Trauma informed training to staff at five Child Advocacy Centres in Florida. This consisted of a half day programme based on National Child Traumatic Stress Network Trauma informed training. Using a pre-test/multiple post-test design to evaluate training with 203 staff who participated, they found that knowledge about Trauma informed care increased significantly between pre- and immediately post-training and was retained after 1 year. However, retention was low and only 12% completed the pre-test and the 1-year post-test follow-up.

The “Lemonade for Life” (Counts et al., 2017) initiative involved a pilot of training and routine use of the ACE questionnaire by family home visitors and parent educators in Kansas and Iowa. The training initiative was developed to help professionals who worked directly with families understand how to use ACE research as a tool to build hope and resilience. The programme included a three-hour online ACE module, a six-hour in-person training, and a ninety-minute coaching call approximately six weeks after the training. Core elements of the training included: 1) education and reflection on ACEs, including the home visitors’ own ACE score; 2) intentional practice and action; and, 3) hope theory and ways to foster hope and resilience. Participants also received materials that could be used with families during home visits including the ‘Amazing Brain’ handouts, a Strengthening Resiliency Plan; and a ‘Hope Map’. During the training, home visitors prepared their own script for introducing the ACE questionnaire, as well as guidance on what to say and what not to say to families. Participants also received a checklist to help them assess whether a family was ready and the timing was right to administer the ACE questionnaire and have a conversation about the results. Pre and post-test evaluation 6 weeks after training completion with 24 home visitors and parent educators revealed a significant increase in participants’ understanding of how early experiences influences life course; knowledge of and self-reflection on their own ACEs score; and knowing where to refer someone who is struggling with ACEs. Focus groups with participants identified three major themes: increased engagement between home visitors and families; families gained an understanding of the connection between life choices and ACEs; and the training and materials were easy for the home visitors and parent educators to understand and provided tangible tools for use in work with families.

Suarez et al. (2014) evaluated Project Kealahou (PK), a community project for female youth at risk for running away, truancy, abuse, suicide, arrest and incarceration in Hawaii. The project involved a 6-year collaborative effort among the mental health, education, juvenile justice, and child welfare service sectors to enhance Hawaii’s system-of-care (SOC) for youth with complex needs. Services provided included intensive case management, community supports by paraprofessionals (i.e., peer support for youth and caregivers), structured group activities and evidence-based treatments (e.g. Trauma-Focused Cognitive Behavioural Therapy and Girls Circle psychoeducational support groups). A longitudinal evaluation comprising one to two-hour-long structured interviews with 28 youth and 16 caregivers at intake and at six-month of PK services revealed significant improvement on measures of youth strengths, competence, depression, impairment, behavioural problems, emotional problems and decreased levels of caregiver strain. 28 youth and 16 caregivers completed both baseline and 6-month follow-up. Financial analysis indicated that these outcomes were obtained with a minimal overall increase in costs when compared to standard care alone (USD 365,803 vs USD 344,141).

Residential Care/Treatment

The review of peer-reviewed literature identified fifteen publications which reported on the implementation of Trauma informed frameworks and models in residential care and/or residential treatment. It also identified two recent systematic reviews which reviewed effective strategies for implementing trauma-informed care in youth inpatient psychiatric and residential treatment settings (Bryson et al., 2017) and organisation-wide, Trauma informed care models in out-of-home care (OoHC) settings (Bailey et al., 2018). The discussion below focuses on key findings from the systematic reviews together with example findings from individual studies (studies included in systematic reviews which met the review criteria, together with additional, recently published studies are presented in Figure 10).

Bailey et al.’s systematic review of out-of-home care was based on seven articles covering three organisational models: the Attachment Regulation and Competency framework (ARC), the Children and Residential Experiences programme (CARE), and the Sanctuary Model (see Figure 10 for an overview of models). The review noted that, while there was limited information provided on the effectiveness of the models, where available, evidence suggested that Trauma informed care models may have significantly positive outcomes for children in OoHC. For example, Izzo et al.’s (2016) time series evaluation of a three-year implementation of the CARE model in ten agencies

caring for children aged 7-18 years in residential home units, found that it led to significant reductions in aggression towards staff, property destruction, and incidents of running away. Results regarding aggression towards peers and self-harm were inconclusive. Organisations with poorer conditions at the start had the most consistent implementation process and more positive organisational climate was found to predict fewer incidents related to aggression towards peers and property destruction. Implementation of the CARE model involved:

- CARE Consultants work with each agency for 3 years to support programming.
- Development of a CARE Implementation Team (IT) that included agency leadership, supervisors, and key training and clinical staff.
- Building structures and processes that facilitate application of the CARE principles and their eventual integration into the agency culture.
- Training leadership and ITs in the CARE principles through a 5-day manualised program, and then preparing groups of agency-based trainers to deliver the same 5-day training to the remaining staff.
- Provision of quarterly on-site technical assistance visits by CARE Consultants provided to implementation teams and other agency staff.

(Akin et al., 2017) highlighted the different components of a large-scale implementation of Trauma informed care in out-of-home care programmes in three states in the USA, as well as usefully elucidating some of the challenges.

Implementation involved:

- Universal screening for trauma and behavioural health – various measures used across sites including: Young Child PTSD Checklist, Upsetting Events Survey, Child PTSD Symptom Scale, SDQ, CRAFFT, CSDC-XX version, CROPS
- Functional assessment for treatment determination and progress monitoring - various measures/tools used including: CANS, SDQ & ASQ-SE, CAFAS, PECFAS, ASQ-SE, PSI
- Data-informed case planning – workers/clinicians use data from screening and assessments to inform case planning

- Data-informed case planning – workers/clinicians use data from screening and assessments to inform case planning
- Evidence-based/informed treatment including: Practice, ARC, CPP, PCIT, Behavior Management Training for caregivers (RPC plus CARE), Caregiver mentoring program and Trauma Systems Therapy
- Service array reconfiguration: Data from screening, assessment and progress monitoring tools to be used to inform the CW and systems on services that are most effective

A descriptive case study of each state's experiences was produced, based on reports developed by each state's project director, focusing on the successes and challenges during the exploration, installation, and initial implementation phases of the projects.

Implementation successes were identified as: stakeholder and partner involvement in each stage of implementation;

multi-faceted needs assessment to identify the needs of the target population, evidence-based service gaps, practice and systemic challenges, and readiness for change streamlined training efforts and utilising established training processes and structures establishing the creation of teams to guide the overall projects

flexibility and using interim process evaluation results to adjust practices or approach leveraging Federal funds toward technological innovation in data systems

Challenges centred on staff turnover; different roles, mandates, responsibilities, and disciplines, agencies often have legitimate but competing agendas; project engagement with service users was largely unsuccessful; significant delays in implementation for a variety of reasons; competing initiatives and priorities; changing data systems and data-sharing came at a significant cost, which would probably not be affordable without federal funding; initiative fatigue; lack of resources and limited plans to provide coaching and supervision. The authors concluded that the evaluation showed that

even when consensus is strong about the need to address a significant and prevalent problem, such as trauma and behavioural health needs among children in foster care, the execution of a solution may be difficult and complicated (Izzo et al., 2016, p. 52).

Bryson et al.'s (2017) realist systematic review of effective strategies for implementing trauma-informed care in youth inpatient psychiatric and residential treatment settings was based on 13 articles which described TIC interventions in youth psychiatric or residential settings [there was a degree of overlap with articles identified by Bailey et al., (2018)]. Studies tended to emphasize the reduction of physical coercion in routine psychiatric and residential care with 9 of 13 studies having the reduction or elimination of seclusion and/ or restraint as a key aim, and all nine studies demonstrated targeted reductions in these outcomes. For example, Hodgdon et al.'s (2013) pre-test/post-test evaluation of the impact of the implementation of the ARC model in two Massachusetts residential treatment programs for young women ages 12–22, found that at 6-months post implementation there was a 50% reduction in the use of restraint. Similarly, in the UK, Deveau & Leich (2014) found that the introduction of Restraint Reduction Initiative in 10 children's homes & residential full-time homes for looked after children, reduced the frequency of restrictive physical interventions by 31.6% with the greatest reductions found in most restrictive supine floor restraints.

demonstrating reductions in treatment time and increases in positive discharges using the Fairy Tale Model. Bryson et al. (2018) identified five factors as instrumental in implementing Trauma informed care across the spectrum of initiatives:

1. senior leadership commitment – actions such as senior leaders making TIC a standing item in high level meetings, allocating resources, setting clear targets, communicating the rationale for the initiative with staff, and articulating a clear belief that TIC goals are achievable
2. sufficient staff support – comprehensive rather than one-off training to help staff understand the purpose of TIC and to develop staff buy-in, giving staff a common language. Post training support through recertification, ongoing training, coaching, and supervision
3. amplifying the voices of patients and families – involving patients and family members as well as staff in training, involving patients in incident debriefing
4. aligning policy and programming with Trauma informed principles – making changes to the physical environment of the unit to make the treatment space feel safe and welcoming for both patients and staff, including Trauma informed principles in mission and vision statements and posting these visibly in the unit

5. using data to help motivate change - establishing clear targets and goals, collecting data to monitor progress and regularly sharing with staff

Bryson et al. (2018) concluded that:

Trauma informed care initiatives which are comprehensive, theoretically grounded, and developmentally-informed and which seek to align all facets of treatment with the principles of safety, choice, and collaboration may reduce seclusion, restraint, and staff and patient injury rates. They may also add value by improving clinical outcomes. (p14)

While no NI-specific journal articles were identified in the search of the peer reviewed literature, a number of relevant publications were identified through searching the grey literature and following up references. MacDonald et al. (2012) review of therapeutic approaches to social work in residential child care setting highlighted how, following a Regional Review of Residential Child Care (RRRCC), children's homes across NI began piloting six therapeutic approaches:

- Belfast Trust – Social Pedagogy
- Northern Trust – Children and Residential Experiences (CARE) model
- South Eastern Trust – Sanctuary model
- Southern Trust – Resilience model and Attachment, Regulation and Competency (ARC) model
- Western Trust – Model of Attachment Practice (MAP)

The review highlighted that the models shared similar underpinning concepts and that, with the exception of Social Pedagogy, the significance of trauma and attachment in the lives of children was a key feature of all the approaches.

Interviews with 38 staff involved in implementing these models across NI showed that, initially, most were sceptical that the models offered anything new, over and above good social work practice skills, and were concerned about increases in workload. Over time, however, enthusiasm increased as staff learned more about the models and began to see the value in what they had to offer residential child care. In general, staff were satisfied with the training they received in the model and found the initial training received from the programme developers engaging and interesting and the practical activities beneficial. However, many were critical of the strategy of cascading training, from external trainers (often the model developer) to in-house champions or trainers, ostensibly because this substituted a trainer with extensive practice experience in a particular model, with someone who themselves has only had limited training and experience in implementation. Staff also felt that there was too much information to retain during the training sessions, and were in agreement that further reading was essential in order to successfully implement the models. All respondents emphasised the importance of ongoing training and support.

In addition to training, other factors identified as salient to successful implementation included: addressing system issues such as staff turnover, the numbers of young people in home and admission processes; giving staff opportunities and support to reflect on their practice; the fit of the model with existing culture, language and practice within the home; and the fit of the model with other organisational changes occurring at the same time. Overall, interviewees felt that all of the models had enhanced practice in some significant ways, bringing about positive culture change within homes, improving staff morale and confidence and changing the ways in which staff viewed or responded to the children in their care. Staff reported increased job satisfaction and being reminded of their original reasons for working in residential care; to help young people.

Key Residential/ Treatment Models

Attachment, Self-Regulation, and Competency Framework (ARC)

ARC is designed as both an individual level clinical intervention, to be used in treatment settings for youth and families, and as an organisational framework, to be used in service systems to support Trauma informed care. ARC principles can be applied in many settings that do not include individual therapy and/or as systemic points of intervention that go beyond individual therapy.

Core components: The model developers describe ARC as a strengths-based and component-based framework designed to deal with the problems and vulnerabilities that result from overwhelming stress (trauma) in children's earliest experiences of care. ARC is not a model per se, but a flexible framework which enables practitioners to choose from a menu of sample activities and interventions built around ten building blocks or key treatment targets, organised around one of the three domains: attachment, self-regulation and competency.

The three domains focus on: (a) building healthy attachments between children and their care-givers, particularly family members, (b) supporting children to develop skills to manage their emotions and physiological states, and thus increasing the child's self-regulation, (c) building the child's competency, by increasing their capacity and skills, and (d) working with children to integrate experiences of trauma, thereby increasing their self-understanding.

<https://arcframework.org/>

Figure 10
Key Residential Treatment Models

Key Residential/ Treatment Models

The Sanctuary Model

The Sanctuary Model represents a theory-based, Trauma informed, trauma-responsive, evidence-supported, whole culture approach that has a clear and structured methodology for creating or changing an organisational culture. The model is informed by four knowledge areas: the psychobiology of trauma, actively creating nonviolent environments, social learning principles, and understanding complex system change.

Core components: The Sanctuary model combines trauma theories, an enhanced therapeutic community philosophy and strategies to address post-traumatic symptoms, unhelpful coping strategies and disruptions to children's development.

1. Trauma theories – A Trauma informed community recognises our inherent vulnerability to the adverse effects of trauma and organises system-wide interventions aimed at mitigating these (Bloom, 2005). Sanctuary recognises that trauma can arise from discrete events and the impact of cumulative and less tangible experiences such as poverty. A Trauma informed culture can make sense of children's behaviour and, by using trauma-specific approaches, can help children to recover or heal.

2. Enhanced therapeutic community philosophy – Like the individuals they aim to help, organisations and the staff within them can misapply survival skills and produce dysfunctional (defensive) ways of behaving. This can result in environments that exacerbate children's problems. Sanctuary therefore addresses the need for systemic level change (the so-called parallel process). It has adopted a set of values (seven commitments), based on UK therapeutic community standards, to help individuals and organisations avoid trauma-reactive behaviours and to develop the organisational context necessary to provide a therapeutic environment for children.

3. The Sanctuary toolkit – This refers to a portfolio of skills designed to help teams and individual staff members work more effectively, particularly in difficult situations. They include community meetings, team meetings, safety plans, psycho-educational groups and SELF – a framework that equips staff and children with a non-technical language that provides a more helpful perspective on the recovery process.

<http://sanctuaryweb.com/Home.aspx>

Risking Connection (RC)

Risking Connection is based on the premise that the therapeutic relationship is the foundation for psychological growth and change. This concept is drawn from a considerable body of literature, which theorizes that the quality of the therapeutic relationship is paramount to successful treatment.

- The components of such a therapeutic relationship are described in RC as RICH: Respect, Information, Connection, and Hope. This model emphasizes:
- A framework for understanding common trauma symptoms
- A common inclusive language
- Relationships as the primary agent of change
- Respect for, and care of, both the client and the service provider (vicarious traumatisation) as critical to healing
- Strategies and tools to support adoption of the model in clinical, social, and organisational processes

The Six Core Strategies (6CS)

Six Core Strategies is a prevention-oriented and Trauma informed care framework aimed at reducing the use of restraint and/or seclusion.

- 1.** Define and articulate a goal for the reduction of restraint.
- 2.** Reflect upon the use of restraint and personal communication styles (Root Cause analysis)
- 3.** The use of measures (surveys) to ascertain needs and challenges with regards to aggression on the wards.
- 4.** Consumer Roles in inpatient settings
- 5.** Workforce Development- (Trauma informed care and training)
- 6.** Debriefing Techniques

<https://www.nasmhpd.org/content/six-core-strategies-reduce-seclusion-and-restraint-use>

Key Residential/ Treatment Models

The Fairy Tale Model

The Fairy Tale model is a phased model of Trauma informed treatment designed for children and teens as well as adults. It emphasises involvement of biological and foster families as well staff/parent education and Trauma informed case management.

The Fairy Tale model is so named because, in staff training, it is introduced with the telling of a fairy tale, in which each element of the story corresponds to one of the phases in treatment. For example, the hero's love for the princess (which moves him to try to slay the dragon) represents the treatment phase in which the client's motivation is identified and developed. The Fairy Tale model's phases of treatment are:

- evaluation including learning about the client's strengths, resources, trauma/loss history, life situation, and presenting problems identification and enhancement of the client's goals and motivation
- Trauma informed case formulation and treatment contracting
- stabilisation, potentially including case management, parent/staff training, problem-solving, and strategic avoidance of high-risk situations
- identification and enhancement of coping and affect tolerance skills
- resolution of trauma and loss memories
- consolidation of gains
- anticipation of future challenges.

CARE Model

The principal aim of the Children and Residential Experiences (CARE) model is the development of an organisational climate that is therapeutically beneficial; supporting and attending to the needs of each child within the organisation.

Core components: The CARE curriculum focuses on two areas of competence. One is organisational and is concerned with improving leadership and organisational support for change. The second emphasises the importance of enhancing consistency within and across team members in the ways in which they think about, and respond to, the needs of children in their care.

In developing consistent practice, CARE draws on evidence from a number of issues relevant to the development and the wellbeing of children in residential care, namely: strengthening attachments, building competencies, adjusting expectations to account for children's developmental stage and trauma history involving families in children's care and treatment enriching the environment.

http://rccp.cornell.edu/care/care_main.html

Sources: MacDonald et al. (2012);
Greenwald et al. (2012)

Fostering and Adoption

The review of peer-reviewed literature identified six publications which reported on the implementation of Trauma informed frameworks with regard to five foster/adoptive care initiatives.

The most extensively evaluated of these was the KVC initiative, a private organisation providing out-of-home care to children served by the Kansas Department for Children and Families. Implementation entailed system wide implementation of a Trauma Systems Therapy (TST) model and involved multiple components:

- Staff training
- Coaching, mentoring, and continuous quality improvement,
- Foster parent training
- Case consultation conference calls involving all members of the child's team
- TST tools and assessments
- Community partners training
- Birth parent training

Process evaluation of programme implementation between 2012-2014 showed that, in the first round of training, 384 KVC staff members and approximately 69% of KVC's 397 foster parents had completed the training (Redd et al, 2017). Data from interviews and focus groups indicated that staff considered repeated exposures to training using multiple modes as critical to successfully learn how to apply TST to their work and they particularly valued the additional supports provided through professional role-specific workbooks, YouTube videos, emails and monthly newsletters.

Fidelity measures administered quarterly to staff by supervisors, together with information about staff training completion dates were used to construct a "TST dosage score" for each member of the children's care-teams, which were then analysed in conjunction with data collected on child functioning and well-being to evaluate the impact of the initiative (Murphy et al., 2017). Findings showed that increases in children's exposure to TST (overall dosage) were associated with significantly greater improvements in functioning and behavioural regulation. Increases in children's exposure to TST (overall dosage) were

not associated with greater improvements in emotional regulation but higher levels of fidelity to TST in the child's first quarter in KVC, were. Additionally, TST fidelity in children's first quarter in care, as well as increases in fidelity over time, were significantly associated with greater placement stability. Increases across quarters in overall dosage amongst members of the care team who worked most closely with the children (inner circle), were associated with significant improvements in children's functioning and emotional regulation over time and increased placement stability., while "outer circle" members' implementation of TST in quarter one was significantly associated with improvements in functioning and placement stability.

Two initiatives specifically targeted adoptive care. The ADOPTS programme involved a 16-week structured application of the ARC treatment framework designed to be used as a brief outpatient intervention with adoptive children and their families. The intervention involved 16 individual sessions and 6 group sessions for both children and caregivers and weekly individual/family sessions addressing clearly delineated treatment targets. After receiving training in the model, clinicians received weekly supervision and monthly consultation, training, and technical assistance from one of the treatment developers. Pre and post-test evaluation (Hodgdon et al., 2016) also presented outcomes for children and found significant lowering of child mental health symptoms with 33.3% displaying symptoms at 12-month follow up, compared to 76% at baseline. The authors note that the effect size for the reduction in PTSD symptoms was large and the intervention produced reductions in child anxiety, depression, post-traumatic stress, dissociation, and anger, as well as significant reductions in care-giver stress.

The Training for Adoption Competency (TAC), developed by the Centre for Adoption Support and Education (CASE) in Virginia, was developed in response to an identified need for quality, adoption-competent mental health services for adoptive families. The TAC is a fully manualised programme which is described as having been replicated with 59 cohorts of more than 900 professionals in 16 states. It involved a 12-module curriculum for professionals, six monthly clinical case consultation sessions, and ongoing support in the form of debriefing, fidelity observations, and technical assistance. Evaluation of the programme comprised assessment of training fidelity using observation and feedback and pre and post-test evaluation of training outcomes involving 855 professionals employed in mental health, adoption, family service and residential care agencies (Atkinson and Riley, 2017). More than 300 fidelity

observations of training delivery confirmed full delivery, with fidelity, of nearly 100% of all content of all modules. TAC participants experienced an average gain in pre to post-test scores of 46.08 points while those in the control group of comparably qualified professionals experienced a gain of only 1.58 points (however details of how the control group were selected and sample size are not provided). Narrative descriptions of the ways in which practices were influenced by the training found that 60% of TAC participants reported improvement across five key aspects of change at the individual clinician level and 52% reported that TAC influenced the procedures, programming, and/or services in their organisation.

The Promoting Safe and Stable Families Programme targeted both foster carers and adoptive parents as part of a 5-year, federally funded project to install evidence-based, Trauma informed practices into the child welfare and mental health systems in one US state. The programmes aimed to enable statutory child welfare agencies to help keep children safe, allow them to remain safely with their families, and ensure safe and timely permanency for children in foster care, although specific implementation details were limited. Pre and post-implementation surveys of 512 foster carers and adoptive parents (Barnett et al., 2018) found that Trauma informed mental health services, but not child welfare services, moderated the relationship between child behavioural health needs and foster parent (but not adoptive parent) satisfaction and commitment. There was a significant interaction between child behavioural health needs and parent satisfaction and commitment (at low levels) of Trauma informed mental health services suggesting that these can buffer them against low satisfaction. However, the response rate for the survey was low (42%) and no validated measures were used.

Intensive Permanence Services (IPS) was developed by Anu Family Services, a treatment foster care agency that serves youth throughout Wisconsin and Minnesota, with the aim of helping youth in out-of-home placement achieve permanency and strengthen their connections to supportive adults. IPS was delivered in four phases and took approximately 24 months, on average, to complete. It involved:

- family search and engagement to identify and engage family members and other supportive adults who are important to the youth and may be willing to support the youth in their path to permanency

- helping prepare youth for permanency by addressing trauma, and psycho-education on grief and loss
- a focus on the impact of trauma on the brain, and the importance of supportive relationships, self-awareness, mindfulness and spiritual connections as core component of healing

A small qualitative evaluation based on interviews with IPS staff (Hall et al., 2018) identified three overarching characteristics as key to the IPS model: (a) using a youth-driven approach; (b) having an organisational culture of well-being; and (c) promoting overall systems changes in work with children, youth, and families in child welfare. Identified barriers to implementing IPS included: lack of preparedness of carers to deal with increases in the youth's pain-based behaviours during the healing process; carers' and referring workers' own feelings of guilt, shame, fear, and insecurity; youth lacking the cognitive abilities or insight to address past traumas or being otherwise unable to engage fully in the program. Hall et al. (2018) noted that, of the young people who were involved in the pilot project and completed at least 13 months, 80% (N = 20) achieved legal permanency while youth who were unable to complete IPS did not achieve legal permanency at this rate.

4.2 Summary

Although the child welfare workforce interfaces with service users who have experienced trauma on an everyday basis, greater attention needs to be paid, not just to presenting problems, but the complex trauma history of parents and children. The development of Trauma informed, child welfare requires a wider multi-level systems approach which recognises the role various stakeholders have to play in facilitating post-trauma recovery. Although terminology regarding Trauma informed approaches varies across organisations and programmes, workforce development, trauma-focused services and organisational change are common elements considered central to TIC implementation in child welfare settings (Hanson & Lang, 2016).

In an effort to develop more Trauma informed child welfare systems, various national initiatives, practice and training models have emerged, primarily led by the work of the National Child Traumatic Stress Network (NCTSN) in the United States. The NCTSN has been instrumental in developing the Child Welfare Trauma Training Toolkit (CWTTT) and, together with the Chadwick Trauma informed System Project, the Trauma informed Child Welfare Practice Toolkit. It has also pioneered the use of the Breakthrough Series Collaborative (BSC), a quality improvement model designed to help organisations close the gap between

evidence and practice, as method for implementing -informed child welfare practices. A range of specific Trauma informed therapeutic models such as Sanctuary, the Attachment, Self-Regulation, and Competency Framework (ARC) and Risking Connections, have been developed and implemented within residential, group care and treatment settings.

Child Welfare Initiatives

A total of 16 peer reviewed papers detailed a wide range of child welfare initiatives at both state/regional and organisational/agency levels, the vast majority of which were American. The Massachusetts Child Trauma Project (MCTP) was the most comprehensive evaluated state-wide initiative and the only one which presented data on case outcomes, reporting significant increases in practitioner' assessments of individual and agency Trauma informed policies and practice (Fraser et al., 2014; Bartlett et al., 2016), substantial increases in the amount of routine screening for trauma (Lang et al., 2017) and decreases in substantiated maltreatment reports among families serviced by the MCTP (Barto et al., 2018). Three organisational/agency level initiatives also evaluated case outcomes highlighting: a reduction in child behaviour problems following implementation of the ARC model in a community trauma treatment centre (Arvidson et al., 2011); increased family safety, caregiver capabilities and child well-being following participation in Trauma informed family preservation services (Lucero & Bussey, 2012) and after participation in a community project for at risk female youth (Suarez et al., 2014). With the exception of the MCTP outcome evaluation (Barto et al., 2018), most studies lacked a control or comparison group and were based on small sample sizes.

Results from training elements of the implementation were the most commonly evaluated and all reported positive impacts, commonly demonstrating increases in staff knowledge, awareness and confidence in Trauma informed principles and practice. Training models used across initiatives varied in terms of duration, ranging from 2hr training on the use of trauma screening tools (Kern et al., 2016) to involvement in year-long learning collaboratives (Fraser et al., 2014). Training generally targeted senior managers followed by front-line staff and were often based on training content developed by the National Child Traumatic Stress Network (NCTSN) with particular reference to in Child Welfare Training Toolkit, developed in conjunction the Chadwick Trauma informed System Project (Fraser et al., 2014; Bartlett et al., 2016; Kramer et al., 2013; Conners-Burrow et al., 2013; Lang et al., 2016; Hendricks et al., 2011). Results were primarily based on self-assessment with a number of studies utilising validated measures such as the Evidence-Based Practice Attitudes Scale (EBPAS),

the Trauma informed System Change Instrument (TISCI) or the Trauma System Readiness Tool (Fraser et al., 2014; Bartlett et al., 2016; Lang et al., 2016; Henry et al., 2011, Hendricks et al., 2011). Few studies were able to link training with observable changes in practice, although Lang et al.'s (2017) evaluation of five state-wide initiatives indicated significant increases in the number of screens administered as a concrete outcome of trauma screening training.

Training was usually part of a broader Trauma informed implementation strategy, particularly with regard to state/regional initiatives. Key elements of implementation focused on establishing leadership buy-in, developing strategic implementations plans and structures, assessing organisation readiness, providing basic and advanced training based on staff needs and incorporating follow-up and on-going staff support throughout the implementation process (see Table). For example, both qualitative and quantitative evaluation highlighted the importance of establishing trauma implementation leadership teams and learning collaboratives as integral to the success of the MCTP, while projects like the Michigan Children's Trauma Assessment Center (CTAC) and the Chadwick Trauma informed System Project emphasised more 'grassroots' approaches centred on developing community partnerships and implementation strategies based on collaborative community assessments and consultation. Access to appropriate EBTs to meet identified need were also emphasised by the MCTP and Lang et al. (2017) noted that lack of EBT availability, together with limited buy-in, could act as significant barriers to TIC implementation.

Residential Care/Treatment

Fourteen peer reviewed publications and two systematic reviews (with overlapping criteria) reported on the implementation of Trauma informed frameworks and model in residential care and/or residential treatment. Commonly used Trauma informed models included: Six core strategies, Risking Connection, Collaborative problem solving (CPS), the Fairy tale model, ARC and Sanctuary. Case outcomes were much more commonly evaluated in the residential care literature than the child welfare literature. Bryson et al.'s (2017) realist systematic review highlighted an emphasis on the reduction of physical coercion in routine psychiatric and residential care with 9 out of 13 studies identifying this as a key aim and all nine studies demonstrating reductions the use of seclusion and/ or restraint. A smaller number of studies evaluated treatment related outcomes, demonstrating reductions in treatment time and increases positive discharges using the Fairy Tale Model (Greenwald et al., 2012); decreases in overall PTSD symptoms, aggression, anxiety, attention problems, rule breaking, depression, thought problems, and somatic complaints using the ARC model

(Hodgdon et al., 2013); and reductions in aggression towards staff, property destruction, and incidents of running away using the CARE model (Izzo et al., 2016) .

Senior leadership commitment, sufficient staff training and support, the involvement of patients and family members as well as staff in training, involving patients in incident debriefing, aligning policy and programming and using data to help motivate change, were identified as integral elements of TIC implementation regardless of the model used (Bryson et al., 2017). A number of studies also emphasised making changes to the physical environment of the unit to make the treatment space feel safe and welcoming for both patients and staff, including incorporating Trauma informed principles in mission and vision statements and posting these visibly within the unit.

Fostering and Adoption

The review of peer-reviewed literature identified six publications which reported on the implementation of Trauma informed frameworks with regard to five foster/adoptive care initiatives. As with the residential care/treatment literature there was a strong focus on evaluating case outcome than in the child welfare literature. Evaluation of KVC's implementation of the Trauma Systems Therapy (TST) model showed a relationship between implementation and improvement in functioning and behavioural and emotional regulation (Murphy et al., 2017) while implementation of the ARC model with adoptive children and their families reducing child anxiety, depression, post-traumatic stress, dissociation, anger and care-giver stress. Similarly, implementation of Promoting Safe and Stable Families Program for foster carers and adoptive parents found that access to Trauma informed mental health services moderated the relationship between child behavioural health needs and foster parent satisfaction and commitment (Barnett et al., 2018). Initiatives used a range of strategies which included training or intervention with foster parents and birth parents (Redd et al., 2017; Hodgdon et al., 2016; Hall et al., 2018), on-going support and consultation for professionals following initial training (Redd et al, 2017; Atkinson and Riley, 2017; Hodgdon et al., 2016), monitoring and observation of program fidelity (Redd et al, 2017; Atkinson and Riley, 2017).

5. Trauma informed education systems

Schools have long been identified as a natural social system within which to address the health and emotional needs of children (St Leger.,2001; Fazel et al., 2014). However, while education systems have often tried to mitigate the impact of specific traumas on a school community via the development of School Crisis Plans and by responding to particular traumatic events that have impacted schools (Ko et al., 2008), traditionally, school psychologists, counsellors and teachers received little formal training about the impact of trauma more broadly, or how to help traumatised pupils achieve better educational outcomes. In considering the impact of childhood adversity, the most pertinent effects for the education system are impairment of cognitive functions including, IQ, memory, attention and language ability contributing to poorer academic performance, behavioural problems, poor attendance and higher dropout rates (Perfect et al., 2016). In the context of a burgeoning interest in childhood trauma and its widespread recognition as a major public health concern schools are seen as a vital context in which the potential long-lasting effects can be identified and mitigated (Lang et al., 2015; Chafouleas et al., 2016). Thus, the current dilemma for schools is how to balance their primary mission of education with the reality that many pupils need help in dealing with traumatic stress in order to be able to attend regularly and engage in the learning process (Ko et al, 2008).

The majority of the literature on developing Trauma informed Care in the education system, to date, has been generated within education systems in the USA, where there are provisions for Trauma informed practices in legislation via the Every Student Succeeds Act (ESSA, 2015), including grant support for services in schools using evidence-based interventions for childhood trauma. By 2016 there were 17 states where Trauma informed approaches at the school, district or state-wide level had been implemented (Overstreet & Chafouleas, 2016). It is also in this context that attempts have been made to clarify the key components of a tiered Trauma informed approach within the Education System, supported (as noted elsewhere) by the National Child Traumatic Stress Network (NCTSN) and the Substance Abuse and Mental Health Services Administration (SAMHSA). A three-tier model is espoused:

- Tier 1 is Universal and may involve changes in school policies, increasing teacher awareness and capacity, developing a strengthened social-emotional curriculum and ongoing mentoring practices for all teachers
- Tier 2 is Selective and may include consultation to help teachers develop strategies and behavioural plans to address challenging behaviours in class in a way that takes account of the child's trauma history and prevents secondary traumatisation or burnout
- Tier 3 is Targeted and focuses on mental health assessment of specific children and, where appropriate, evidenced-based Trauma informed interventions for these children and their families. This model has been used in elementary schools in the San Francisco Unified School District in their Healthy Environments and Response to Trauma in Schools (HEARTS) programme (Dorado et al., 2016) and in the Head Start programmes in the Appalachian region (Shambin et al., 2016). This is consistent with SAMHSA's four key assumptions for a Trauma informed system (SAMHSA, 2014, p. 9).

The most detailed multi-tiered Trauma informed Care framework for schools to date is that developed by Chafouleas et al. (2016). It builds on the foundations noted above but goes further in arguing that comprehensive 'blueprints' for implementation, professional development and evaluation are needed, given the layered complexities that surround Trauma informed care in schools. The three tiers are very similar to those described above (although they, somewhat confusingly, refer to Tier 2 as 'Targeted' and Tier 3 as 'Select'), indicating a high degree of consensus on the key components of a Trauma informed Care Approach within the Education system.

The logic that underpins a Trauma informed Care Approach in schools also applies, perhaps to an even greater extent, to the pre-school system. Young children are exposed to trauma at a disproportionate rate compared with older children (Lieberman, et al., 2011) and this early exposure places young children at increased risk of continued exposure during the rest of their childhood. (Grasso et al., 2016). Internalising and externalising symptoms, such as acting out, daydreaming and aggressive behaviour not only limits engagement with the learning process and may compromise a positive teacher pupil relationship but are often responded to by disciplinary actions by schools

increasing the risks of suspension or exclusion (Krezmien et al., 2006), which are higher for pre-school children (Gilliam & Sharhar, 2006).

Loomis (2018) draws attention to the relative lack of focus on the pre-school age group, highlighting the Head Start Trauma Start (HSTS) as the only programme designed specifically for pre-school children. The key components of a Trauma informed pre-school, are almost identical to the SAMHSA's four key assumptions, with the addition of 'psycho-education and supports to enhance relationships between parents and schools' (Loomis, 2018, p. 6). This has been informed by research demonstrating that attendance at a therapeutic pre-school programme was only effective when caregivers gained improvements in understanding their children's thoughts and feelings. Equally, it might be argued that this dimension should be added to the components of Trauma informed care approaches more generally, as it has been shown to be related to positive outcomes in Trauma informed interventions (Santiago et al., 2014) and many caregivers will have experienced trauma themselves (Toth et al., 2006). It would also be consistent with the recognised need for a continuity of trauma Informed care across all systems to most effectively address the needs of trauma exposed children (Ko et al., 2008).

Perhaps the greatest need is to promote a cross systems Trauma informed Care Approach. Without a Trauma informed Care Approach being well-embedded in the Education System, it is difficult to sustain Trauma informed interventions. To this end Chafouleas et al. (2016) have provided detailed guidance on how to implement and sustain all the components of the approach in a coordinated and balanced way. They highlight that effective systems approaches are defined by three basic features; common language, common experience, and common vision.

This requires substantial efforts to engage multiple stakeholders from multiple systems, both within and without the school context, and involves strong leadership and team-based strategic action planning to coordinate across agencies. Thus, the early stages of implementation should focus on the building of consensus for Trauma informed approaches and the development of staff competencies in Trauma informed care, with the clear aim of implementing such strategies that facilitate student engagement and classroom management.

Chafouleas et al. (2016) stress that, to be effective, foundational training must be augmented and deepened through more

intensive trainings that focus on specific Trauma informed classroom strategies and through coaching of teachers to increase their capacity to use Trauma informed skills. Throughout implementation process-based data collection is critical, as is the measurement of outcomes such as student behavioural and mental health functioning and school climate and safety.

Although less developed, there is some literature recognising the need for Trauma informed educational practice in third level education institutions, in particular for students enrolled on courses for human service professions. University level curricula should focus not only on increasing student awareness of the role trauma may play within the lives of different client and service user groups, but on recognising how their own experience of trauma may influence their perceptions and interactions with these groups and impact their ability to self-care and prevent vicarious traumatisation (Carello & Butler, 2015).

5.1 Review findings

There were 13 papers in total pertaining to Trauma informed care in the Education System (see Appendix C). The papers fell into two categories with four focusing on evaluating the implementation of Trauma informed approach in schools and nine focusing on evaluating the impact of trauma Informed training delivered within further/higher education to human services staff/students or the training of education professionals as part of wider Trauma informed initiatives.

School-based Initiatives

Two papers involved the implementation of Trauma informed initiatives in pre-school or primary school settings. Dorado et al. (2016) evaluated the impact of the HEARTS model in four kindergarten and elementary schools in the southeast sector of San Francisco. A single group pre-test/multiple post-tests design was used to assess if training increased staff knowledge about addressing trauma and use of trauma-sensitive practices (n=175), if there were improvements in students' school engagement and discipline (administrative data, 1 school) and if participation in therapy reduced trauma-related symptoms (n=88). Follow-up was at 1 and 5 years post intervention and findings showed significant positive changes in staff knowledge and use of trauma sensitive practices as well as pupil engagement. However, these findings were only based on self-report and retrospective post-test surveys in which staff rated how their knowledge, skills, and use of trauma-sensitive practices had changed over time. Nonetheless, there was also a significant decrease in disciplinary offence referrals at one-year post intervention and a significant

decrease in school suspensions at five years post intervention. Pupils who received the targeted trauma interventions also showed significant improvements in symptoms including adjustment to the trauma, affect regulation, and decreases in intrusive images and dissociation. However, the impact evaluation of the therapeutic intervention lacked a control group.

Shamblin et al. (2016) evaluated the Early Childhood Mental Health Consultation Model, implemented in five community pre-schools in the Appalachian counties of South-eastern Ohio, USA during the 2011-2012 school year. Two programmes used the model: The Partnerships Program Early Childhood Mental Health (in collaboration with Project LAUNCH) and Head Start (in collaboration with Hopewell Centres). The Partnerships Program utilised embedded consultants in schools to increase capacity and positive supports for teachers combined with on-site mental health interventions delivered to children. A total of 11 teachers received consultation and workforce development services to enhance their capacity to teach 217 students under their care and three ECMH consultants provided services.

The Head Start programme used the same model but differed in that consultants were available on request rather than embedded in the school setting. The By-Request-Model involved 550 Head Start children in 28 classrooms involving 28 teachers and home visitors.

The evaluation used pre and post-test measures of teacher confidence and child social, emotional and behavioural functioning administered at the beginning and end of the school year. Assessment of the classroom environment and teacher practices was also conducted by ECMH consultants using a structured scale. Findings indicated that teacher confidence and competence were significantly higher post intervention and, while there was no difference in terms of positive teacher practice, negative teacher practices were significantly reduced. Controlling for class size and composition, pre-test child functioning did not differ significantly between the programmes. However, post-test measures showed significantly higher resilience scores for the Partnerships Programme but not for the Head Start programme, suggesting that embedded consultant model was more effective than the 'as needed' model. The findings are strengthened by the use of independent observation of teaching practices, although they are limited by the small number of participating schools, classrooms and teachers.

Tier 1

universal supports - half-day training sessions with all school staff that established common language and understanding around the effects of complex trauma on learning-readiness and teaching readiness, behaviour, interactions, relationships, systems, and communities, as well as an overview of strategies for addressing these effects that could be implemented regardless of one's role in the school system. Initial trainings were then augmented and deepened through a series of follow-up trainings and collaborative consultation

Tier 2

interventions - HEARTS clinicians became embedded in the school's Coordinated Care Team providing a Trauma informed lens to school staff's development of behavioural support plans for at-risk students, as well as to the school's development of disciplinary policies that were less punitive and more supportive

Tier 3

interventions - HEARTS clinicians provided on-site, trauma-specific, culturally congruent therapy for trauma-impacted students based on the ARC model

Figure 11
Overview of HEARTS Model

Both Ijadi-Maghsoodi et al. (2017) and Perry and Daniels (2016) reported on Trauma informed initiatives in high schools. Ijadi-Maghsoodi et al. (2017) detailed the implementation of a school curriculum delivered in 2 high schools in a large, urban school district. The Resilience Classroom Curriculum consisted of nine modules taught during class time in a group-based, adaptable format and delivered by school social workers. The curriculum covered resilience skills, emotion regulation, communication, problem-solving, goal-setting, and managing stress reminders. Evaluation entailed a pre and post-test curriculum measurement of PTSD symptoms, resilience, school support and school climate (n=100) with follow up 9 weeks after curriculum completion, as well as focus groups with students (n=19), and social workers (n=10). Findings showed significant improvements in empathy, problem-solving and overall internal assets. Although, improved school support and lower PTSD symptomology were reported, changes were not statistically significant. Focus groups indicated that students and social workers felt that the curriculum fostered a sense of support, although students acknowledged that talking about feelings could be hard. Social workers highlighted how the curriculum offered a rare opportunity to destigmatize mental health issues, noted the need to manage pre-existing classroom dynamics and stressed that teacher buy-in was important for success.

Perry and Daniels (2016) evaluated a pilot programme in a New Haven (USA) school designed to address the negative mental health and social effects of adversity, trauma, and chronic stress on families. The programme involved three strands, professional development aimed at producing a culture shift by building staff capacity through training, care coordination involving intensive family support and clinical services involving whole class psychoeducation focusing on identified difficulties and trauma screening and small group trauma interventions to identify specific pupils (CBITS - a 10 session group programme with 1-3 one-to-one sessions). The evaluation involved a narrative description of the implementation process, indicating that: 32 staff, including regular education teachers, special education teachers, teacher's care aides, and the school principal, completed the training; 19 families received care coordination services, of all of whom lived within the City of New Haven and reported difficulties related to basic needs such as poverty, chronic unemployment, unstable housing, food scarcity, and/or limited community support; two fifth grade and two sixth grade classrooms (N = 77) participated in the three-day workshop series and 20 pupils participated in CBITS with 17 completing the 10 week programme. evaluation and satisfaction surveys with staff (n=32) and pupils (n=77) and the impact of CBITS (n=17). Satisfaction surveys showed that teachers were overwhelmingly satisfied with the training received (97%) and pupils reported having a better understanding of how to relax (95%), trusting others (92%) and how to worry less (91%). All the pupils who received CBITS met the criteria for PTSD and this reduced to 17% at follow up, although many participants still met the symptom criteria for one of the reaction indices. Findings were limited by the small sample size generated from one school and the lack of a control group in assessing the impact of therapeutic intervention.

Higher Education/ Professional Training Initiatives

Of the nine papers focused on higher education or professional training initiatives, three involved social work students (Layne et al., 2011; Strand et al., 2014; Wilson & Nochajski, 2016), one involved clinical health students (Strait & Bolman, 2017), one involved 2nd year dental students (Raja et al., 2015), one involved university-based training of community professionals working with gangs (Dierkhising & Kerig, 2018), and two involved the training of education professionals as part of wider Trauma informed initiatives (Counts et al., 2017; Damian et al., 2017; Suarez et al., 2014, already reported in earlier sections). Components of Trauma informed education curricula included:

- understanding the prevalence of trauma and adversity
- understanding the effect of trauma and adversity (often with reference to neuroscience and neurobiology)
- relating trauma to specific client group or discipline
- the principles of Trauma informed care
- how to apply TIC principles to specific client groups or disciplines
- identifying and assessing trauma
- developing confidence in discussing trauma with service users

Two social work curricula (Layne et al., 2011; Strand et al., 2014) explicitly referred to the use of case studies or vignettes to apply learning to practice situations, while Wilson and Nochajski (2016) incorporated a specific clinical self-care so that vicarious traumatisation and/or re-traumatisation among practitioners could be avoided or properly managed.

All nine studies showed evidence of increased awareness/knowledge of Trauma informed care and greater confidence and/or skills related to Trauma informed practice. All have significant quality issues including; small sample size (Dierkhising & Kerig, 2018; Damian et al., 2017; Counts et al., 2017), measurement of change only immediately after training (Raja et al., 2015; Strait & Bolman, 2017; Layne et al., 2011; Strand et al., 2014; Wilson & Nochajski, 2016; Dierkhising & Kerig, 2018; Counts et al., 2017), low response rates (Strait & Bolman, 2017; Dierkhising & Kerig, 2018), and heavy reliance on self-report measures (Layne et al., 2011; Counts et al., 2017; Damian et al., 2017; Strand et al., 2014). The only study to include a comparison group was

Dierkhising & Kerig (2018), although the response rate from the comparison group was low. There was no measurement of post-training behavioural change among participants in these training initiatives.

5.2 Summary

Of the 13 papers identified in the peer reviewed literature, only four focused on Trauma informed care schools. Three of these followed the tiered universal, selected and targeted approach to Trauma informed care recommended by SAMHSA (see Table 3) , while the fourth detailed the implementation of a trauma focused curriculum for students (see table for an overview of interventions provided at different levels). None used randomised designs, only one used a comparison group (Shamblin et al.,2016) with the rest using single group pre and post-test designs, and the majority of measures were self-report. Despite these limitations, they pointed to the positive impact of implementation in terms of: improvements in staff knowledge and confidence (Dorado et al., 2016; Shamblin et al., 2016); better understanding of trauma and coping strategies and/or resilience among children who participated in whole classroom interventions (Perry and Daniels, 2016; Ijadi-Maghsoodi et al.,2017); and improvements in trauma symptomology and/or emotional and behavioural functioning among children who participated in therapeutic interventions (Dorado et al., 2016; Shamblin et al., 2016, Perry and Daniels, 2016). Independent observation of classroom practice also showed a reduction in negative teacher practices (Shamblin et al., 2016) while data collected during the implementation of the HEARTS initiative demonstrated a reduction in both disciplinary offences and suspensions (Dorado et al., 2016).

Nine papers focused on the evaluation of higher education or professional training initiatives involving educators. Components of Trauma informed education curricula included: understanding the prevalence of trauma and adversity and its effect and relating this to the specific client group or discipline; understanding the principles of Trauma informed care and to how to apply these to TIC specific client groups or disciplines; and developing confidence in discussing trauma with service users and identifying and assessing trauma symptoms. All nine studies showed evidence of increased awareness/knowledge of Trauma informed care and greater confidence and/or skills related to Trauma informed practice, although findings were generally limited by the preponderance of single group pre and post-test designs, short follow-up periods, small sample size and/and reliance on self-report measures.

Model	Universal	Targeted	Selected
Hearts Model Dorado et al. (2016)	Half-day trainings with all school staff	Clinicians embedded in the school's Coordinated Care Team to assist development of behavioural support plans for at-risk students and families	HEARTS clinicians provided on-site therapy for trauma-impacted students Early Childhood Mental Health Consultation Model
Early Childhood Mental Health Consultation Model Shamblin et al. (2016)	Embedded or 'on request' consultants provide universal consultation and training for staff	Embedded or 'on request' consultants provide targeted consultation focused on strategies that teachers can use for individual children who present with challenging classroom behaviours	Embedded or 'on request' consultants provide on-site mental health interventions delivered to children
New Haven Pilot Programme Perry & Daniels (2016)	Professional development aimed at producing a culture shift by building staff capacity through training	Care coordination involving intensive family support to at risk children/families and whole class psychoeducation where teachers identify behaviour problems	Small group trauma interventions to specific pupils (CBITS)
The Resilience Classroom Curriculum Ijadi-Maghsoodi et al. (2017)	Nine modules taught during class time in a group-based, adaptable format and delivered by school social workers		

Table 3.
Trauma informed educational systems

6. Trauma informed health systems

Numerous studies confirm the association between experiences of childhood adversity and trauma with an array of physical and mental health difficulties. While it is important to note that not all individuals exposed to childhood trauma will experience, or seek treatment for mental illness as an adult (Boyce & Harris, 2011), exposure is related to increased health care utilisation over the long term (Ko et al., 2008). Indeed, it has become apparent that those who have experienced trauma, and who may require Trauma informed care, are not a discrete sub-set but rather represent the greatest proportion of people accessing mental health services (Muskett, 2014). Routine health care appointments can be a gateway for identification of trauma exposure or traumatic stress reactions and while individuals are less likely to access mental health services directly, primary health care providers, such as GPs, accident and emergency staff and health visitors, often provide a point of entry to more specialist services (Ko et al, 2015). A history of trauma can influence how patients experience and engage with health care, particularly non-urgent routine or preventative services. Many traumatic events involve some physical violation and the necessity for close inter-personal proximity and physical contact in many health examinations or routine screening can prevent trauma survivors from seeking preventative health care (Raja et al, 2015a).

What do we mean by Trauma informed Health Care?

Raja et al (2015a) define TIC as every part of a service having 'a basic understanding of how trauma impacts on the life of an individual seeking services'. They draw a distinction between trauma-specific services, which are specialised to the treatment of trauma symptoms with specifically targeted interventions and therapies, and Trauma informed services, which focus on wider systemic or organisational change aimed at integrating Trauma informed principle across various levels of the system and/or various professional groups. Raja et al. (2015a) have conceptualised this distinction between Trauma informed and trauma-specific care as a pyramid (see Figure 12). At the base of the pyramid is patient-centred communication and care, intended to reduce anxiety, increase patient choice and control and help establish rapport for all patients. This does not require screening patients for a trauma history or knowledge of an individual's trauma history, but rather, involves small changes both to provider behaviour and to the health system practice, that can be employed with all patients but may be particularly helpful for those with a trauma history who may be more anxious during medical appointments. For example, in the case of physical examinations, this may involve the medical practitioner clearly outlining what parts of the body will be involved, allowing the patient to ask questions

and offering choices that will not hinder the examination but can also increase patients' sense of control.

The next level of the pyramid is educating practitioners to understand the health effects of trauma, to promote more insightful and empathic engagement so that when, discussing life style choices that impact on health such as smoking or substance misuse, they are aware that this might be related to coping behaviours and traumatic histories. For example, this can entail educating dental students about how some patients may present in dental settings, both in the immediate aftermath of violence with acute orofacial injuries, oral manifestations of sexually transmitted infections or paediatric dental neglect, and over the long term through manifestations of dental anxiety, reluctance to engage in preventive care, and using overeating and smoking as ways to cope with traumatic memories (Raja et al., 2015b).

The third level of the pyramid involves inter-professional collaboration. This can entail maintaining a list of referral sources across disciplines for patients, keeping referral and educational material on trauma readily available to all patients in the waiting room, as well as making appropriate referrals to specialist services, thereby allowing the medical practitioner to acknowledge a patient's trauma history and needs without going beyond the boundaries of their own competence and role. Moving up the pyramid, health care practitioners should be helped to understand their own history and reactions, and the stress this can generate. Finally, at the top of the pyramid is screening for trauma, accompanied by the appropriate resources to offer those who are then assessed as needing specific support.

Ko et al. (2008) note that one advantage of implementing TIC in health care settings is that they tend to be characterised by well-established process for quality assurance and continuous quality improvement which can help facilitate assessment and integration of Trauma informed practices within existing frameworks. However, as with other system, they recognise that any drive to develop a more Trauma informed health care system and workforce needs to be mindful that a climate of continuous reorganisation and upheaval in the context of scarce resources and low staff morale will likely make staff engagement challenging. Thus, there is a need for more than an expectation that individual practitioners will engage differently with service users – it will require system-wide change and commitment, with specific policies that allow services to move away from risk-averse, coercive or controlling practices and identified champions and mentors (Sweeney et al, 2016).



Figure 12
The Trauma informed care pyramid.

What do we mean by Trauma informed Mental Health Care?

Trauma informed care in mental health services should aim not only to treat trauma symptoms but be founded on the commitment to doing no further harm to trauma survivors (Muskett, 2014). Proponents of TIC note that some aspects of mental health care can be counter-therapeutic and even re-traumatising to trauma survivors. Controlling or coercive practices such as the use of seclusion, restraint or pressure to accept medication, and inpatient environments with locked wards, search protocols and mixed-sex populations can be perceived as emotionally unsafe, unsupportive and disempowering. This in combination with trauma symptoms can establish a pernicious loop which is a barrier to effective treatment and care (Muskett, 2014). Controlling practices such as seclusion and restraint conflict with professional ethics of care and compassion potentially leading to stress and burn-out for practitioners. Organisations that prioritise risk management encourage 'power over' or coercive relationships which reinforce the trauma survivor's sense of helplessness. Thus, it is imperative that mental health services become Trauma informed, organised and delivered in ways that enable safety and trust, to guard against perpetrating 'institutional re-traumatisation' (Sweeney et al, 2016).

A Trauma informed approach in mental health services requires a shift in thinking from 'what is wrong with you?' to 'what has happened to you?' and reframes complex behaviour as meaningful in terms of helping the individual cope with situational or relational triggers. Thus, 'survivors in crisis are not viewed as manipulative, attention-seeking or destructive but as trying to cope in the present moment using any available resources' (Sweeney et al 2016, p179). Acknowledgement that childhood adversity and abuse play a role in adult mental illness also requires a broadening of the lens to understand mental distress not just in medical and pharmacological terms, but also as a familial and social

issue. Trauma informed mental health services should seek to create environments that are physically and psychologically safe, building trusting, collaborative relationships with service users and reducing or eliminating coercion and control.

Despite the compelling evidence of the links between adversity, trauma and mental ill health, there can remain strong resistance to the notion that trauma and childhood abuse plays a causal role in psychosis and mental distress. As Sweeney et al. (2016) observe, historically, such claims have been seen as “family blaming” and, instead, there has been a greater focus on the biological basis of mental distress. Equally, the emotional impact of witnessing individual’s accounts of pain and suffering, can act as a barrier to practitioners engaging with notions of trauma. They also note that continuous change and upheaval in UK health services can make many wary and weary of new initiatives, and make the introduction of new conceptualisations of care particularly challenging.

While much of the impetus for Trauma informed approaches has come from the USA, there have been associated policy developments in the UK. More than a decade ago, the English Department of Health (2003) published recommendations regarding routine enquiry about abuse in mental health settings. Case studies in four areas piloting routine enquiry indicated that there was widespread recognition by staff of the importance of knowing if a service user has experienced violence or abuse and an appreciation of the links such experience can have to mental health. The main barrier, however, remained staff resistance to asking the question, primarily because of a lack of confidence (McNeish and Scott, 2008) and it is not clear what extent this has become a routine part of current practice. Other examples of a move toward Trauma informed mental health care include the recognition of inclusion of trauma in some NICE guidelines (2014) and Scotland’s Mental Health Strategy 2012-2015, which established a key priority that general services, including primary health care and mental health services, should be aware of the impacts of psychological trauma.

6.1 Review findings

There were 27 papers in total pertaining to Trauma informed care in health care and mental health systems included in this review (see Appendix D). Seven papers reported on health initiatives in either primary or secondary care, four papers described Trauma informed initiatives in the area of substance abuse, thirteen papers reported on Trauma informed mental health initiatives, and three reported on multi-professional initiatives including health professionals. There were also two relevant systematic reviews

pertaining to TIC in psychiatric inpatient facilities (Muskett, 2014) and similar facilities for youth (Bryson et al., 2017), as well as a third systematic review focused on TIC implementation using a training component across multiple service systems (Purtle, 2017).

Primary/Secondary Health Initiatives

Eight papers reported on health initiatives in either primary or secondary care with six focusing on the impact of training on participants and two focusing on Trauma informed interventions in family planning clinics.

Green et al. (2015) adapted the Risking Connections manual for training primary care providers. Adaptations were based on input from targeted providers and patients, focus groups with providers to review draft training content and feedback from a two-session training pilot at a local primary care site. The final curriculum entailed a 6-hour curriculum delivered in two sessions at least one week apart and included responses to trauma, group exercises, useful screening tools, the importance of relationships, the role of self-awareness and self-care and use of a case studies throughout to illustrate training points. The training was delivered to family medicine residents and community physicians from four primary care clinics in the Washington DC metropolitan area. Thirty participants were randomised to training or waiting-list (delay) conditions: the training group were assessed at pre-training, post training and at follow (timing not specified); the waiting list group were assessed as two pre-training points and after training. Patient centeredness scores were derived from 3 taped visits between each primary care provider and standardized patients played by actors. Ratings of taped visits were assigned through use of the Roter Interactional Analysis System and analysis demonstrated a significant increase in patient centeredness score in the training group. Further research (Green et al., 2016) based on patient assessment of the level of patient-provider rapport (n=400) found significant differences on perceptions of clarity of information from providers but significant increases in perceptions of shared decision-making between patients and providers. Although limited by a small sample size, effect sizes were moderate.

Training was usually part of a broader Trauma informed implementation strategy, particularly with regard to state/regional initiatives. Key elements of implementation focused on establishing leadership buy-in, developing strategic implementations plans and structures, assessing organisation readiness, providing basic and advanced training based on staff needs and incorporating follow-up and on-going staff support throughout the implementation process (see Table). For example, both qualitative and quantitative evaluation

highlighted the importance of establishing trauma implementation leadership teams and learning collaboratives as integral to the success of the MCTP, while projects like the Michigan Children's Trauma Assessment Center (CTAC) and the Chadwick Trauma informed System Project emphasised more 'grassroots' approaches centred on developing community partnerships and implementation strategies based on collaborative community assessments and consultation. Access to appropriate EBTs to meet identified need were also emphasised by the MCTP and Lang et al. (2017) noted that lack of EBT availability, together with limited buy-in, could act as significant barriers to TIC implementation.

Four other papers evaluated Trauma informed training provided to 47 perinatal health-care professionals and personnel in the USA (Choi and Seng; 2015); 34 nurses at two hospital emergency departments in Victoria, Australia (Hall et al., 2016); 94 health-care providers at one paediatric hospital in the USA (Weiss et al., 2017); 24 home visitors and parent educators in Kansas and Iowa (Counts et al., 2017); and 88 health, law enforcement, social services and education professionals as part of the 'healing Baltimore' initiative (Damian et al., 2017). Components of training included the effects of trauma, trauma symptomology, Trauma informed care, how best to respond to patients and the use of the ACE questionnaire with parents. The 'Healing Baltimore' training (Damian et al., 2017) took place over the longest time period, nine months, and participants received a series of monthly technical assistance, coaching and feedback sessions from national trauma experts on how to utilise Trauma informed practices at their agencies. Hall et al. (2016) emphasised different psychological models for understanding trauma and its impact and also focused on the effects of stress on mental health professionals. Similarly, Counts et al. (2017) encouraged home visitors and parent educators to reflect on their own experiences of ACES. All reported increases in trauma knowledge and awareness at either an individual or agency level and/or more positive attitudes toward, and confidence in, using TIC principles. Damian et al. (2017) also highlighted improvements in compassion satisfaction and compassion fatigue.

Two papers evaluated the implementation of Trauma informed initiatives in family planning clinics in Western Pennsylvania (Miller et al., 2017) and Baltimore (Decker et al., 2017). Both used the ARCHES (Addressing Reproductive Coercion in Health Settings) model, a Trauma informed intervention to address intimate partner violence and reproductive coercion with women seeking care in family planning clinics. The intervention sought to educate women about available resources and harm reduction strategies and had three major elements:

- enhanced, universal assessment that supports recognition of abuse for patients who may not recognise it
- harm reduction counselling to minimise the health impact of abuse
- provision of information and supported referrals to violence support providers, that is, offering to connect patients with domestic violence advocates in real time

Qualitative evaluation of the initiative in Western Pennsylvania (Miller et al., 2017) involving semi-structured interviews with providers, administrators and patients (n=72) indicated that the intervention increased provider confidence in discussing intimate partner violence and reproductive coercion. Providers noted that asking patients to share the educational information with other women facilitated the conversation while patients described how receiving the intervention gave them important information, made them feel supported and less isolated, and empowered them to help others. Barriers to implementation were identified as lack of time and not having routine reminders to offer the intervention. A mixed methods evaluation of the Baltimore initiative involved a pre and post-test survey of 132 patients with follow up at 3 months, as well as in-depth interviews with patients and providers (n=35). Findings showed that two thirds (65%) of women reported receiving at least one element of the intervention on their exit survey immediately following the clinic-visit. Patients reported that clinic-based interpersonal violence (IPV) assessment was helpful, irrespective of IPV history. They also reported greater perceived caring from providers, confidence in provider response to abusive relationships, and knowledge of IPV-related resources at follow-up compared to those who did not received the intervention.

Substance Misuse Initiatives

Four papers described Trauma informed initiatives in the area of substance abuse with one reporting on the implementation of a Trauma informed initiative in residential addiction treatment unit (Hales et al., 2018); one reporting on the impact of training delivered to substance misuse providers in outpatient clinics (Lotzin et al., 2017) and two exploring the characteristics of Trauma informed care and facilitators to implementation from the perspective of professionals, researchers and/or services users (Kirst et al., 2017; Shier & Turpin; 2017)

Hales et al. (2018) documented a multi-stage TIC project in a non-profit residential addiction treatment agency in the USA. Implementation included:

- Recruitment of mentors and trainers responsible for training all staff on trauma and TIC. Between the winter of 2015 and spring of 2016, over 170 trainings and meetings took place across the agency, focusing on trauma, TIC, team-building, solution-focused language, motivational interviewing, addiction and trauma
- Reflective conversations facilitated by a senior advisor and program directors during staff meetings. Encouraging staff to take an intentional look at policies, practices and procedures for potential re-traumatisation
- Information on trauma and TIC was also given to the clients in order to explain the purpose behind the organisational change process and their role in its implementation
- The final stage was staff coaching, where ongoing, real-time coaching was provided to all the programs in group and one-to-one formats. In one 4-month span, 155 hours of staff coaching was provided across the agency, with additional hours foreseen

The impact of the initiative on organisational climate, policies, procedures, and practices and staff and client staff satisfaction, was evaluated using a longitudinal design with pre, mid and post-test measures administered over a two-year period (2015-17). Following TIC implementation, positive changes were observed with regard to workplace satisfaction, climate, and procedures, client satisfaction and the number of planned discharges. However, retention between Time 1 and Time 3 was low (50%) and all measures were based on self-report

Lotzin et al. (2017) describe the provision of training to substance use disorder providers in outpatient clinics in the USA. Training involved a 1-day 'Learning how to ask' session with a short refresher session at 3-months follow-up. Training content focused on the different types of traumatic events, empirical findings on the prevalence of trauma and risk factors, symptoms of PTSD and basic guidelines on how to ask about, and respond to reports of, traumatic events. Effectiveness was evaluated using a randomised controlled trial (n=148) with follow up at 3 and 6 months. Results demonstrated that increases in the frequency of asking patients about exposure to traumatic events were significantly higher in the intervention than control group between baseline and follow-up at three months with the increase maintained retained at 6 months. Similarly, increases in trauma knowledge, attitudes toward trauma inquiry and confidence in trauma inquiry were significantly higher in the intervention than the control group between baseline and 3-month follow-up and

between 3- and 6-months follow-up. However, retention in the intervention group was low (43%), although somewhat higher in the control group (57%).

Shier & Turpin's (2017) qualitative study explored what organisational, programmatic and interpersonal characteristics of addictions treatment characterized a Trauma informed practice framework from the perspective of patients in three community residential addictions treatment centres (n=41) in Canada. The research focused on the core values of safety, trustworthiness, choice, collaboration and empowerment. Patients identified physical safety, confidentiality, reassurance, rule enforcement, and peer relationships as central components of safety, and trust as involving comfort in sharing, staff availability, non-judgment, positive relationship dynamics, and caring. Choice helped patients obtain control over important elements of treatment and was thought to help offset many of the triggers encountered by people with a history of trauma by offering opportunities them to avoid treatment activities that may no longer make them feel safe. Collaboration between peers and staff was viewed as a catalyst to encouraging positive relationship and community building, and it was felt that staff could use this to model a cooperative alliance. Patients perceived empowerment as being manifested through comfort in sharing, trigger management, trauma awareness, and understanding.

Kirst et al.'s (2017) study also used qualitative methods to explore facilitators and barriers in implementing Trauma informed practices and delivering trauma-specific services in mental health and addiction service settings from the perspective of service providers, consumers and research experts (n=19) in Canada. Service provider/experts identified a number of key facilitators to implementation of service delivery: organisational support and leadership; inter-sectoral service integration; staff awareness of trauma; building a safe environment; quality of the consumer-provider relationship; and staff supports. Challenges were reported as: provider reluctance to address trauma; lack of accessible services; and time-consuming, under-resourced nature of the work. Service users' positive perceptions were around the services meeting their needs, providing them with opportunities to learn practical coping skills, and giving them the space to talk about experiences. Their negative experiences were characterised by encounters with providers who were unwilling to talk about trauma. Some service users mentioned feeling judged, some felt that disruptive group members could be problematic, and some noted the shortage of Trauma informed programmes.

Mental Health Initiatives

Thirteen papers reported on mental health initiatives, four of which focused specifically on inpatient, hospital-based services, eight of which reported on mental health/child welfare initiatives involving combinations of youth residential treatment, therapeutic group care and/or inpatient care, and two which reported on training involving mental health professionals. The majority of these papers were included within the systematic reviews of Trauma informed care in psychiatric inpatient facilities (Muskett, 2014) and youth inpatient and residential treatment facilities (Bryson et al., 2017). The following section outlines the key findings from these systematic reviews, with the inclusion four more recently published studies identified as part of this review.

Both Muskett (2014) and Bryson et al., (2017) highlighted the use of multiple strategies as more effective in the implementation of Trauma informed care across a range of inpatient and residential mental health settings. Key implementation elements identified by Muskett (2014) included:

- Leadership practices – the allocation of responsibility for driving the agenda to a clearly-identified executive or senior leader within the organisation
- Collection and use of data (including adverse incident reporting) to inform and change practices
- Automatic screening of client trauma histories at point of admission whenever possible
- Workforce development - The most effective staff orientation and ongoing staff development programmes included active learning opportunities of topics, such as substance abuse and trauma, therapeutic safety and boundaries, establishing, maintaining and terminating therapeutic relationships, de-escalation, strengths-focused care planning, and consumer participation and empowerment
- Attention to the physical environment as a significant, positive (and relatively inexpensive) Trauma informed care strategy
- Quality of nurse–patient relationship as critical to client perceptions of the quality and effectiveness of care, focusing on therapeutic relationships and interventions to build self-determination and autonomy

Both reviews noted a preoccupation with seclusion and restraint practices as a key outcome of Trauma informed care, with multiple articles specifically focusing on reducing rates of restraint and seclusion. Nine of the thirteen studies reviewed by Bryson et al. (2017) had the reduction or elimination of seclusion and/or restraint as a key aim, and all nine studies demonstrated targeted reductions in these outcomes. Three studies also detailed reductions in patient and staff injury rates. For example, Hodgdon et al.'s (2013) pre-test/post-test evaluation of the impact of the implementation of the ARC model in two Massachusetts residential treatment programs for young women ages 12–22, found that at 6-months post implementation there was a 50% reduction in the use of restraint.

This study was one of the few to also measure patient mental health outcomes, showing significant decreases in overall PTSD symptoms, as well as decreases in aggression, anxiety, attention problems, rule breaking, depression, thought problems, and somatic complaints. In addition to the ARC model, commonly used Trauma informed residential models identified by Bryson et al. (2017) included: Six Core Strategies; Risking connection; Collaborative problem solving (CPS); the Fairy Tale model, and Sanctuary.

More recently, Barnett et al. (2018) have also added to the outcomes literature, evaluating the implementation of an adaptation of Six Core Strategies and the Risking Connection in a US youth residential treatment centre and accompanying special needs school specialising in autism spectrum disorders, behaviour disorders, and vocational development. The initiative was implemented over a three-year period and entailed:

- Needs assessment with staff and leaders
- Building buy-in and planning with agency administrators,
- Creating internal trainers and supervision leaders - implementation of a series of trauma training and reflective practice groups using a train-the-trainer model
- Internal sustainment of ongoing trainings and reflective practice groups through staff incentives.

Evaluation of the programme took the form of a staff survey administered 12 months into implementation as well as analysis of routinely collected administrative data. Survey responses indicated a general positive experience of the initiative. Over the course of the study period, there was a 22% decrease in critical incidents and no effect on staff turnover. Frequency of participation in the trainings and supervision groups were not significantly correlated with job satisfaction or felt safety, but both were significantly and positively associated with self-reported Trauma informed skills.

Boel-Studt (2017) evaluated the implementation of Trauma informed psychiatric residential treatment (TI-PRT) in a large Mid-Western Behavioural Health Agency in the USA. Implementation included organisational and clinical components:

- Organisational components: all TI-PRT staff received orientation, ongoing training, and supervision in understanding trauma and in working effectively with trauma-affected youth; all members, including the staff and youth, engaged in safety planning and each member documents his or her safety plan and kept it with them at all times; members identified a mission (i.e., goals and objectives that they hoped to accomplish); member check-ins occurred daily among youth and staff to discuss any issues or red-flags
- Clinical components: Youth received individual trauma-focused therapy including EMDR or TF-CBT in a trauma recovery group-based curriculum 2 times per week. The groups were led by staff who were trained in the curriculum and are comprised of approximately 8–10 youth matched by age. Programme staff and therapists also worked with caregivers to provide trauma education and teach skills to help them support their child's treatment

An additional two studies, both published in 2018, involved evaluation of Trauma informed training initiatives for youth residential treatment staff in the USA (Denison et al., 2018) and child and adolescent mental health service staff in Australia (Palfrey et al., 2018). As with other training evaluations, both produced increases in self-reported Trauma informed knowledge and skills. Palfrey et al. (2018) followed up attendees 12 months after training and noted evidence of continued interest in TIC, with 80% having gone on to receive further training in a trauma-specific intervention.

Multi-Professional Initiatives Including Mental Health Professionals

Project Kealahou, a community project for female youth at risk for running away, truancy, abuse, suicide, arrest and incarceration in-Hawaii, involved a 6-year collaborative effort among the mental health, education, juvenile justice, and child welfare service sectors to enhance Hawaii's system-of-care (SOC) for youth with complex needs. Services provided included intensive case management, community supports by paraprofessionals (i.e., peer support for youth and caregivers), structured group activities and evidence-based treatments (e.g. Trauma-Focused Cognitive Behavioural Therapy and Girls Circle psychoeducational support groups). A longitudinal evaluation comprising one- to two-hour-long structured interviews with 28 youth and 16 caregivers at intake and at six-month of PK services (Suarez et al., 2014) revealed significant improvement on measures of youth strengths, competence, depression, impairment, behavioural problems, emotional problems and decreased levels of caregiver strain 28 youth and 16 caregivers completed both baseline and 6-month follow-up. Financial analysis indicated that these outcomes were obtained with a minimal overall increase in costs when compared to standard care alone (\$365,803 vs \$344,141).

6.2 Summary

Health care and non-residential settings

In health care and non-residential settings, much of the work on TIC took the form of educating staff about trauma and its effects, covering topics including the neurobiological impact of traumatic stress, implications for childhood development and for physical and mental health, the social consequences of trauma, and indicators of traumatic stress or PTSD. Most of the training was delivered in brief one-off sessions and the outcomes measured primarily using participant self-report measures. Unsurprisingly, most staff reported an increase in trauma knowledge and awareness and more positive attitudes towards, and confidence in, using TIC principles. The most robustly evaluated of the TIC training programmes for health care workers was the 'Risking Connections' programme reported on by Green et al (2015; 2016). The training was evaluated with a randomised control trial design, albeit with small numbers and resulted in significant increases in patient-centredness as measured by observed simulated visits with actors playing standardised patients, as well as a significant increase in patients' self-reported perceptions of patient-provider shared decision-making. This is an important finding as shared decision-making is likely to enable patients to feel more in control of their care, and this sense of empowerment is key to ensuring that services are not re-traumatising to trauma survivors (Muskett, 2014).

What is also striking from these evaluations of staff training is that a relatively small investment of time by staff and trainers appeared to deliver some longer-term benefit in terms of staff attitudes and confidence in relation to TIC. Although the vast majority of papers measured shortly after training completion, one exception to these brief designs was the evaluation by Palfrey et al (2018) who followed up attendees 12 months after training. They noted evidence of continued interest in TIC, for example 80% had gone on to receive further training in a trauma-specific intervention. This finding perhaps gives some indication of how the benefits of initial training might be sustained i.e. through increased appetite and opportunities for further in-depth training. However, it would be useful to identify what might help health practitioners embed new knowledge in changed approaches to working.

Inpatient psychiatric and residential treatment care

While training was a core component of all Trauma informed initiatives, implementation in inpatient psychiatric and residential treatment settings tended to be more comprehensive and systemic in their reach, focusing on individual staff and organisational level factors. Indeed, a number of systematic reviews highlighted the use of multiple strategies as more effective in the implementation of Trauma informed care across these settings. In the main, these interventions used specific Trauma informed multi-level frameworks such as Sanctuary, ARC, Six Core Strategies, and CARE, and combined trauma education with training in specific ways of working, changes to organisational policy and practices and on-going support for staff. The core components of the most comprehensive of these organisation-wide interventions are outlined in figure 13 below. A majority of these studies focusing on reducing rates of restraint and seclusion, demonstrating targeted reductions in these outcomes. However, evaluation of the impact on patients' mental health was much rarer, although there was some evidence of reductions in PTSD symptomology.

Only a small number of studies focused on residential addictions treatment with one multi-level initiative demonstrating positive results with regard to workplace satisfaction, climate, and procedures as well as increases in client satisfaction and the number of planned discharges. A randomised controlled trial evaluation of screening training delivered to professionals working in this field also suggested that this could significantly increase routine inquiry rates and that improvements were maintained six months after training (Lotzin et al., 2017).

Core components of organisation-wide TIC initiatives

6. Core Strategies: part of larger national Building Bridges initiative across USA
- Leadership – leaders set goals to eliminate use of restraints, and were available for support and consultation
 - Standing agenda item included use of seclusion and restraint
 - Dashboards of seclusion and restraint for each unit/facility shared in real time
 - Including youth and family; visiting by family any time
 - Staff were offered training on Trauma informed care
 - Staff training in verbal de-escalation techniques
 - Dedicated staff (ASAP Team) to provide immediate peer support for staff who experienced trauma
 - Debriefing after incident (staff and youth) with a focus on chain analysis
 - Individualised child treatment plan
 - Introduction of sensory methods (pet therapy, visits to animal shelter, music therapy, cooking, swimming)

Caldwell, et al. (2014)

Patient-Focused Intervention (PFI) Model

- Inclusion of trauma-focused questions into initial psycho-social assessments (past trauma, triggers that evoke anxiety, coping skills inventory)
- Staff training in de-escalation techniques and “show of support” instead of a “show of force”.
- Multi-disciplinary patient assessment with the specific intent of assessing feeling of safety, pain control, and medication response.
- Safety committee analysed monthly data on use of seclusion and restraint
- Daily leadership reviews of S/R
- Peer specialist employed as a patient advocate to liaise with staff and management

Goetz & Trujillo (2012)

Creating Trauma informed Care Environments Curriculum

- Use of Learning Collaborative model - a year-long process in which the provider teams use self-assessment to identify a Trauma informed practice to implement in one unit of their facility
- Systematic debriefings of S/R
- Policies and procedures ensuring children and youth knew program expectations
- Child & youth choice and control
- Collaboration, power sharing, empowerment
- Caregiver involvement
- Preparation for placement transition
- Formal service policies
- Trauma screening, assessment, service planning
- Administrative support for program-wide Trauma informed services
- Staff training & education

Hummer et al (2010)

Un-named approach implemented across 5 paediatric psychiatric inpatient units

- Half-day Trauma informed training which included the nature of trauma and its effects on patients' experiences, physiology, and psychological processes, along with instructions on how to minimize engaging in behaviours that could exacerbate trauma related reactions from patients
- Rules and language - standardized training seminar on the effect of rules and language on patients' perceptions and establishment of a team for each unit that was tasked with reviewing and modifying unit rules and policies to be less restrictive to patients or eliminating unit rules that were too restrictive.
- Changes to physical environment - involved making inexpensive physical changes, including repainting walls with warm colours, placement of decorative throw rugs and plants, and rearrangement of furniture to facilitate increased patient-patient and patient-staff interaction
Involvement of patients in treatment planning - all unit staff attended a half-day standardized training seminar on the rationale for and clinical benefits of involving patients in the treatment planning process

Borckardt et al (2011)

Trauma informed psychiatric residential treatment (TI-PRT)

Organisational components:

- Staff training and supervision in understanding trauma and in working effectively with trauma-affected youth;
- Staff and youth, engage in safety
- Staff and youth identify a mission (i.e., goals and objectives);
- Daily check-ins among youth and staff to discuss any issues

Clinical components:

Youth receive individual trauma-focused therapy including EMDR or TF-CBT and participate in a trauma recovery group-based curriculum 2 times per week.

- Therapists provide caregivers with trauma education and skills to help them support their child's treatment.

Family-centred approach to include families in decision-making and treatment planning.

Boel-Studt (2017)

Figure 13.
Organisation-wide TIC initiatives

7. Trauma informed care in the justice system

It is now well established that trauma disproportionately affects young people and adults whose lives intersect with the justice system (Miller et al., 2011). In fact, it is probable that exposure to childhood trauma is a key risk factor for subsequent juvenile justice involvement (Kerig & Becker, 2010). For example, estimates suggest that 70-90% of young offenders have experience of one or more traumatic experience including: high rates of physical and sexual abuse, witnessing domestic violence, and exposure to school or community abuse or violence. (Abram et al., 2004; Ford et al., 2008). Moreover, young people may respond to traumatic stress in ways which increase their chances of arrest, for example, using drugs to cope with distressing memories or running away from a family home (DeHart & Moran, 2015; Ford et al., 2006; Kerig & Becker, 2010).

Accumulated evidence also suggests that trauma continues to impact the lives of individuals within the justice system. Juvenile offenders with histories of trauma have higher rates of recidivism, dual diagnosis, school dropout and suicide attempts (Cauffman et al., 2015; Haynie et al., 2009; Wasserman & McReynolds, 2011; Wolff et al., 2015). Within juvenile justice residential settings, many difficult behaviours can be understood within the context of a young person's traumatic history. For example:

- Young people who resist or delay showering may eventually identify an aspect of the showering process as a trauma reminder (Pickens, 2016)
- Extreme reactions to perceived threats are often evident in group activities particularly when young people might fear they are being seen as weak or failing. Such reactions may be an attempt to maintain psychological and physical safety, and can be extremely difficult for staff to manage (Pickens, 2016)
- A positive association has been found between exposure to harsh punishments (i.e. seclusion) while incarcerated and continued criminal behaviour on release (Ko et al., 2017)

More specifically, prisons are demanding settings for Trauma informed care as their focus is on containing perpetrators, not housing victims. The prison environment is seen to be full of unavoidable triggers, such as strip searches, discipline from authority figures, and restricted movement (Owens et al., 2008). These practices are likely to increase trauma-related behaviours and symptoms which can be difficult for prison staff to manage (Covington, 2008).

Exposure to traumatic stressors may also impact front-line criminal justice staff. Many front-line staff have been exposed to stressors such as witnessing violence, experiencing violence and hearing details of traumatic experiences. This can lead to secondary traumatic stress among staff (Pickens, 2016). Whilst findings are mixed in relation to the precise impact of traumatic stress reactions on staff, (with studies ranging from minimal impact to upwards of 35 percent of staff endorsing core diagnostic criteria for PTSD), work-related traumatic stress symptoms are prevalent. These have been connected to impaired job performance among front-line justice-system staff (Denhof & Spinaris, 2013; Hatcher et al., 2011; Skogstad et al., 2013). The absence of adequate self-care, coupled with the impact of work and secondary traumatic stress dissatisfaction with the job, absenteeism and high staff turnover is prevalent (Pickens, 2016).

Whilst TIC represents a significant shift in thinking and practice for many organisations, it is seen to have important implications for individuals' well-being, creating a responsive professional environment for staff, promoting collaboration between organisational systems such as juvenile detention and mental health systems and enabling young people to develop more healthy skills and behaviours which might also have a positive influence on community settings (Pickens, 2016). Moreover, juvenile detention centres have the opportunity to provide a supportive environment that give young people access to resources to recover from trauma while under constant supervision (Ko et al., 2008). However, the lack of consensus on the definition of TIC is considered a primary barrier to creating Trauma informed systems (Hanson & Lang, 2016; 2010; Wall et al., 2016). Developing a Trauma informed common language in secure detention may be problematic, and be perceived to be in contradiction to punitive measures which are seen to serve the primary goal of deterring future criminal behaviour (Pickens, 2016).

7.1 Review findings

The review identified six empirical studies which evaluated TIC interventions within the justice sector as well as a systematic review identifying definitions and key components of Trauma informed care within the justice system (see Appendix E). All six empirical studies evaluated systems in the USA. Three of these related to approaches within residential juvenile justice settings specifically (Elwyn et al., 2015; Elwyn et al., 2017; Marrow et al., 2012), and one related to approaches within a range of residential facilities including a secure residential facility (Caldwell et al., 2014). The remaining two papers evaluated Trauma informed multi-agency service provision, of which justice was part (Damian et al., 2017; Suarez et al., 2014).

Definitions and Domains of Trauma informed Care in the Justice System

In their systematic review, Branson et al. (2017) examined published definitions of a Trauma informed juvenile justice system in an effort to identify the most commonly named core elements and specific interventions or policies. Ten publications met the review inclusion criteria. Ten core TIC domains were identified, and these were largely consistent with those found in other service systems (see Figure 14).

Core Domains of Trauma informed Care for Juvenile Justice

Clinical Services

1. Screening & assessment
2. Services & interventions
3. Cultural competence

Agency Context

4. Youth & family engagement/involvement
5. Workforce development & support
6. Promoting a safe agency environment
7. Agency policies, procedures, & leadership

System-level

8. Cross-system collaboration
9. System-level policies & procedures
10. Quality assurance & evaluation

Figure 14.
Core Domains Of Trauma
informed Care

Whilst there was a high level of consistency within the literature around these core domains, there was less agreement around the specific interventions or policies considered essential components of TIC in juvenile justice. There was also less agreement about how to implement particular practices or policies and the potential barriers of implementation at a systems level. Nonetheless, Pickens (2016) identified a number of potential strategies for implementing TIC which can support these domains.

Interventions to support Trauma informed approaches in clinical services:

The creation of Trauma informed systems is supported by self-assessment of organisational level practises. Self-assessment and external assessment tools can be used to identify organisational strengths and staff needs using specific tools:

- The Trauma informed Organisational Toolkit for homeless services (Guarino et al., 2009)
- Trauma informed Organisational Capacity Scale (American Institutes for Research [AIR], 2015)
- Attitudes Related to Trauma informed Care (ARTIC) (Baker et al., 2016)
- NCTSN: Trauma informed self-assessment tool for juvenile justice court systems

Interventions to support Trauma informed approaches in an agency context

Specific Trauma informed psycho-education training can provide an opportunity to counter punitive approaches while understanding the factors that drive maladaptive behaviours. Such training should include awareness raising around healthy stress responses and the adverse impact of trauma on how young people perceive and respond to stress. Training models include:

- Sanctuary and Think Trauma Curriculum (NCTSN, 2012)
- Trauma Affect Regulation: Guide for Education and Therapy (TARGET) - one of the most established group and individual interventions geared toward justice-involved youth (Ford et al., 2012)
- Trauma and Grief Components Therapy for Adolescents (TGCTA)
- Skills Training in Affective and Interpersonal Regulation for Adolescents (STAIR-A)

Dynamic individualised care plans which respond to new information regarding trauma triggers, healthy coping skills development and reinforcement, and best practices for disciplinary methods have also been found to support Trauma informed approaches (Branson et al., 2017). This requires information-sharing across disciplines including mental health professionals.

Interventions to support Trauma informed approaches at a systems level:

Supporting consistent recognition of traumatic stress reactions across multiple systems involves stakeholders from each system collaborating and sharing their respective information about the young people in their care. While confidentiality policies provide a safe guard for young people, confidentiality can also become an obstacle to information-sharing if agencies fail to design Trauma informed policies that facilitate communication. Consistency and structured environments are seen as a foundation of Trauma informed systems, and it is important therefore to quickly reconcile disconnects between design and effective execution of safety plans and ensure safety is promoted consistently across settings. The implications of a systemic Trauma informed approach are increased capacity for collaboration and communication when infrastructures are designed for sharing trauma-based information and enacting safety planning.

Residential Juvenile Justice and Secure Accommodation Initiatives

Of the four papers which described residential juvenile justice or secure accommodation initiatives, two evaluated the implementation of the Sanctuary Model at the North Central Secure Treatment Unit Girls Program (NCSTU) in Pennsylvania (Elwyn et al., 2015; Elwyn et al., 2017). Key organisation leaders underwent a five-day training course before returning to their agency to implement the Sanctuary model. A core team was established with a representative group of employees from all levels and departments. The team acted as the primary change agents to implement the model and were provided with technical assistance from a trained Sanctuary Model faculty during a three-year implementation period. A multiple group pre-test/post-test design with a two-year follow up was used to evaluate the impact of Sanctuary model on staff and residents at a juvenile justice facility. The study used administrative data to measure outcomes with national data on outcomes used as a non-equivalent control group (Elwyn et al., 2015). Post implementation, there was a reduction in staff grievances, improved relationships within the staff team and between staff and residents, a reduction in assaults on staff, reduced youth misconduct and fewer staff interventions such as restraint and seclusion. Further investigation of the implementation process using qualitative interviews and focus groups with staff (n=45) also pointed to positive changes with regard to safety, staff attitudes and relationships, unit atmosphere, accountability, and relationships with residents (Elwyn et al., 2017). However, staff also highlighted the importance of leadership and employee engagement suggesting that, while the Sanctuary Model was a necessary component, it was not sufficient by itself to bring about the changes reported.

Marrow, et al., (2012) evaluated the impact of staff training in a project referred to as TARGET - Trauma Affect Regulation: Guide for Education and Therapy, which was initiated in 2 units in a single juvenile justice facility. This was a multifaceted initiative comprising three components:

- a one-day psycho-educational general trauma training on childhood traumatic stress for all staff that provided services on the mental health units and administrators responsible for those units
- two-day training on Trauma Affect Regulation: Guide for Education and Therapy (TARGET) principles. This training was followed by three months of supervision and consultation on the implementation of the TARGET group
- modifications to the unit environments with a goal of reducing trauma triggers (especially noise) and providing safe places and tools youth could use to practice self- calming skills introduced within the groups

Evaluation entailed a non-randomised comparison involving 38 young people in one unit who received the intervention with 34 in another unit who received treatment as usual. Baseline evaluations using a range of PTSD and mental health measures were completed as part of the standard intake process and young people reassessed at 3 months. Results demonstrated significant reductions in young peoples' depression. Threats toward staff, use of physical restraints and seclusion rates for young people in the intervention program units were significantly reduced, with greater hope and optimism recorded.

Similarly, Caldwell et al. (2014) used administrative data to ascertain if TIC implementation reduced the use of restraints and seclusion. This initiative implemented Six Core TIC Strategies across three sites: an inpatient psychiatry unit, a secure residential unit and a group home. This was part of a larger national initiative 'Building Bridges', which sought to integrate the principles of TIC in residential and community settings. The process of implementation included:

Multi-Agency TIC Initiatives Involving Justice

Two papers evaluated Trauma informed multi-agency service provision, of which justice was part (Damian et al., 2017; Suarez et al., 2014). Damian, et al. (2017) evaluated the training of law enforcement, Social Services, Health and Education professionals in Baltimore, on how to utilise Trauma informed practices in their agencies. Professionals engaged in a nine-month multi-agency training programme, based on SAMHSA's Concept of Trauma and Guidance, which focused on educating

participants in implementing TIC principles throughout their agencies. Participants also received monthly technical assistance, coaching and feedback sessions from national trauma experts on how to use Trauma informed practices at their agencies. Pre and post-test evaluation of provider and organisational level factors associated with the implementation of Trauma informed care (n=88), with follow up at nine months, found a significant improvement in organisational culture and climate as well as increases in compassion satisfaction and reductions in compassion fatigue. Interviews with 16 staff identified four major themes relevant to the SAMHSA TIC principles. Two related to changes in organisational-level factors: implementing more flexible, less-punitive policies towards clients; and adopting Trauma informed workplace design. Two related to changes in provider-level factors: heightened awareness of staff's own traumatic stress and the need for self-care and a greater sense of camaraderie and empathy for colleagues.

Suarez et al. (2014) evaluated Project Kealahou – a six-year collaborative project among mental health, education, juvenile justice, and child welfare service sectors to enhance Hawaii's system of care for female youth with complex needs (reported in-depth in the child welfare system section). The programme comprised intensive case management, community supports for youth and their caregivers, structured group activities, psycho-educational support groups and evidence-based trauma treatments. A longitudinal evaluation of Project Kealahou services (Suarez et al., 2014) revealed significant improvement on measures of youth strengths, competence, depression, impairment, behavioural problems, emotional problems and decreased levels of caregiver strain at six-month follow-up.

7.2 Summary

Trauma disproportionately affects young people and adults whose lives intersect with the justice system at many levels. Exposure to childhood trauma is considered a key risk factor for subsequent juvenile justice involvement with trauma continuing to impact the lives of individuals within the justice system. Juvenile offenders with histories of trauma have higher rates of recidivism, dual diagnosis, school dropout and suicide attempts. Within justice settings, many behaviours considered to be difficult can be understood within the context of a young person's traumatic history. Exposure to traumatic stressors may also impact front-line criminal justice staff contributing to job dissatisfaction, absenteeism and high staff turnover is prevalent.

The creation of Trauma informed systems has important implications for staff well-being and for individuals engaged with justice. Ten core TIC domains have been identified as forming the basis of Trauma informed organisational systems, as follows: (a)

Clinical Services, namely screening and assessment; (b) services and interventions; (c) cultural competence; (d) Agency context, namely youth and family engagement; (e) workforce development and support; (f) promoting a safe agency environment; (g) agency policies, procedures, and leadership (h) System-level, namely cross-system collaboration (i) System-level policies and procedures (j) quality assurance and evaluation.

Whilst there was a high level of consistency within the literature around these core domains, there was less agreement around the specific interventions or policies considered essential components of TIC in juvenile justice.

Turning to the empirical evidence, there is limited published material describing and evaluating Trauma informed interventions in this sector. Another key gap in the extant literature is the limited discussion of how to implement particular practices or policies and the potential barriers at the agency or systems-level. The review has identified six papers, all based within the USA, the majority of which explore training initiatives. For example, while there is unanimous agreement that all staff should undergo training on trauma, there was much less consensus around the specific areas that training should cover. Training programmes varied in length, including one day, five days and one day per month for nine months. Training alone has been shown ineffective in helping staff achieve fidelity to evidence-based practices. Training was presented as part of a wider system of organisational change in which Trauma informed approaches were being implemented within the whole system. In two projects this was a state-wide initiative. In each setting, systems change was supported by a range of other measures including: establishing staff as primary change agents, debriefing after incidents for both staff and residents, ongoing peer support for staff, 'technical assistance' provided by 'experts', modifications to the physical environment for example to reduce noise levels.

Unsurprisingly, most staff reported an increase in trauma knowledge and awareness and more positive attitudes toward, and confidence in, using TIC principles. A common theme in these studies has been focus on reduction of seclusion and restraint with each evaluation identifying significant reduction. Finally, in terms of the strength of the findings, the evaluation designs have tended to consider pre and post-test evaluations and combine administrative data such as outcome data on seclusion and restraint, qualitative findings, and standardised measures for example around emotional ratings. However, several limitations have been noted particularly around small sample sizes and difficulty attributing specific factors to outcomes particularly when other initiatives were ongoing within agencies.

8. Trauma informed Adult Social Care Systems

There were limited empirical studies focusing specifically on Adult Social Care systems; it may be that Adult Social Care is not widely seen as a unified category for service delivery. This may reflect the practice environment where services are provided in multi-disciplinary settings. Adult Social Care is, arguably, a difficult system to define clearly as there is considerable overlap with, for example, Mental Health Systems. For the purposes of this review, where papers address overlapping systems, they have been discussed as part of their core subject.

With respect to Intellectual and Developmental Disabilities (IDD) Wigham et al. (2011) we note that reliable prevalence rates for trauma in the IDD population are lacking. Cross-culturally, research has suggested that the IDD population is at greater risk of exposure to negative and potentially traumatic life events. For example, it has been found that individuals with IDD are between 3 and 6 times more likely than persons without IDD to be abused or neglected (Hulbert-Williams et al., 2013). Scotti et al. (2012) reported that 79% of individuals with IDD were exposed to at least one potentially traumatic event, with individuals exposed to, on average, 2.8 events. Events such as institutionalisation, dependency on caregivers and being physically restrained, are more common in the IDD population (Hulbert-Williams et al., 2013; Wigham et al., 2013).

A useful table of examples of the application of Trauma informed Care principles within the IDD day program is provided by Kessler and Isham (2017: 167).

TIC Principle	Group	Example
Choice	Staff	Actively engage in deciding daily activities and purchasing resources for individuals
	Individuals	Able to choose which staff member they want to work with; refusals to participate in activities are honoured and not labelled as noncompliant.
Collaboration	Staff	Work alongside clinicians to develop treatment plans; work with peers to strategize and create new opportunities for individuals.
	Individuals	Provided with opportunities for group experiences and socialisation
Empowerment	Staff	Afforded opportunities to provide input into program operations and to develop skillsets by attending voluntary trainings.
	Individuals	Provided with ongoing opportunities to actively explore new interests and activities; encouraged to calm through the use of coping strategies and self-management skills.
Safety	Staff	Discussion and review of safety needs among staff with management at daily meetings; afforded opportunities for debriefing following physical interventions.
	Individuals	Physical layout of the site offered a safe environment in which individuals could be as independent as possible; provided with supervision levels that were reviewed and modified routinely according to progress.
Trust	Staff	Able to make decisions without relying on a top-down authoritative process; trained to recognize that trust from individuals may need to be earned over time.
	Individuals	Afforded active listening, communication, and learning opportunities to develop trust with staff.

Table 4.
Application of TIC principles within the IDD day program

8.1 Review Findings

Only four papers were identified in the literature review specifically pertaining to the Adult Social Care System and all were evaluations of the impact of TIC staff training (see Appendix F). Three related to services for people with Intellectual and developmental disabilities (IDD) (Keesler, 2016; Keesler & Isham, 2017; Frankish, 2016) and will be considered first. The remaining paper by Lotzin et al. (2016) focuses on the impact of a one-day Trauma informed training on healthcare staff in outpatient services for people with substance use disorders (SUD).

Keesler (2016) explored staff understandings and perceptions within a Trauma informed day programme for individuals with intellectual/developmental disabilities through semi-structured interviews with 20 staff (17 current and 3 former) approximately 19 months after the programme began. It was part of a larger research project that used a mixed-methods approach to obtain a preliminary understanding of the impact of TIC in IDD services (see also, Keesler and Isham, 2017, below). The TIC day programme integrated the principles of TIC into its policies and practices; choice, collaboration, empowerment, safety and trust (Harris & Fallot, 2001). Staff members completed the mandatory agency training (e.g. first aid, health and safety, proactive skills and physical interventions for maladaptive behaviours) and participated in ongoing training by the programme's leadership on the following: trauma and stress, concepts associated with TIC, developing an environment for learning and healing, and a shared decision-making process (Harris & Fallot, 2001). The staff demonstrated satisfactory knowledge of trauma with particular sensitivity for its manifestation among individuals with intellectual/developmental disabilities and its impact on individuals' current presentation. The study noted that some staff members overgeneralized trauma as any negative experience. The staff gained a good overall understanding of TIC and identified challenges associated with TIC at various levels of implementation, including individuals (difficulty adjusting given their previous experiences more traditional or restrictive approaches to their care), staff (ensuring consistency of implementation; some being 'set in their ways') and management (flattened hierarchy could be associated with the perception of less support), and inter-organisational relations (resistance from other agencies).

Keesler and Isham (2017) evaluated a self-contained, Trauma informed day care program for IDD staff working with individuals in the final phase of local deinstitutionalisation in north-east USA. The training included behavioural training in proactive and preventative measures as well as physical interventions, knowledge regarding trauma and stress, concepts associated with Trauma informed Care, developing an environment for learning and healing, and shared decision-making. The main evaluation measure was a 36-item TIC measure to measure staff experiences of the organisational culture, including the principle of choice, collaboration, empowerment, safety, and trustworthiness. This was supplemented by clinical data to measure challenging behaviours, physical interventions, staff/individual injuries and PRN medication usage. The TIC measure had been administered to all staff by the program director at two time points (i.e., approximately four months after the program opened and again 12 months later) during routine staff meetings. Non-significant differences were noted for all TIC subscales and full-scale scores. However, except for 'collaboration', which increased over time, a slight decrease was noted in all other subscale means between 4 months and 12 months. Themes from staff interviews (n=18) comprised three categories; (a) making a difference (a satisfying work experience), (b) recognising progress (improvements in individuals' communication, behaviour, coping abilities, and tolerance; openness to physical contact; and happiness; the elimination of triggers), and (c) compromising factors (lack of choice for some individuals, feeling vulnerable to aggressive outbursts). The study demonstrated significant reductions in challenging behaviour and the use of PRN medications, and a significant increase in the use of least restrictive techniques (e.g. deflection and touch cues) with non-significant changes in all other physical interventions.

These interlinked studies were both limited by relatively small sample size and the lack of control groups.

Frankish (2016) conducted a pre and post-test evaluation of impact of the training of all direct support staff trained in models of emotional development and how to assess a client's emotional level (n=10). Managers of services were also trained to support the staff to provide the level of support needed, and to understand the systemic effects of trauma so as to be able to provide Trauma informed-care. The training, supervision, support and individual therapy for clients (where needed) was provided by psychologists and psychotherapists trained in Disability Psychotherapy. The main findings reported are that, at post-test, all service users were living in ordinary houses in ordinary locations, with staff support and that there was a reduction in problem behaviour. However, the study's findings generalisability is limited by its very small numbers, the lack of standardised measures and a control group.

Lotzin et al. (2017) undertook a cluster-randomized controlled trial of 'Learning how to ask', a one-day Trauma informed training (Read et al., 2007). 148 healthcare providers working in outpatient services for people with substance use disorders (SUD) across two German federal states were randomised into either an intervention group or waiting control group. The intervention was the 'Learning how to ask' training with a short refresher session after 3 months. The training included basic guidelines on how to ask about, and respond to, reports of traumatic events which were practiced in role plays. It was hypothesized that professionals of the intervention group would show a greater change from baseline in the frequency of asking about traumatic events at 6-month follow-up compared to an untrained control group. This was indeed the case with increases in frequency of asking patients about exposure to traumatic events being significantly higher in the intervention than control group between baseline and 3 -months follow-up and increase was retained at 6-months follow-up. The authors noted 'findings suggest that healthcare professionals can acquire skills in trauma inquiry and response from short trainings, which may enhance systematic assessment of traumatic events' (p. 2). The findings are limited by the 43% pre-test/6-month follow-up retention in the intervention group and 57% pre-test/6-month follow-up retention in control group.

8.2 Summary

The Adult Social Care System appears to be underrepresented in the literature and does not, as yet, have robust evaluation of the impact of Trauma informed Care. There do not seem to be any general protocols for TIC implementation within Adult Social Care services or any systematic review of the extent to which the approach is being implemented in this sector.

the 43% pre-test/6-month follow-up retention in the intervention group and 57% pre-test/6-month follow-up retention in control group.

9. Trauma informed Care: UK and NI policy and practice developments

9.1 Policy and legislation relating to Trauma informed Care

The growing evidence and discourse about the detrimental impact of early adverse social experiences on children's life chances has been influencing social policy developments in NI for a decade, spawning a number of NI practice initiatives, based on elements of Trauma informed care principles, which have been developed and implemented in different child and family settings. In this section, the importance of considering overarching social policy and legislation is briefly discussed from a global perspective, followed by an overview of the relevant policy context in England, Scotland and Wales and respective practice developments. The chapter concludes with a summary of the NI policy context and relevant practice initiatives.

Many articulations of the Trauma informed Care Approach begin with its significance with a particular system, typically stating that it is important that everyone within that system understand the principles of TIC and ensure that these are considered within that system's policies and procedures (SAMHSA, 2014). While this is both laudable and necessary, and a major part of this review, there is a more fundamental context at which a Trauma informed Care Approach can operate that can, potentially, maximise benefits for vulnerable populations. This includes an upstream focus on social policy and legislation; a perspective that has received less attention in the literature to date perhaps due, in part, to its inherently political implications. Of greatest salience are those policies and legislation that address the social problems most strongly related to trauma, such as violence, lack of family support, homelessness, and addiction (Bowen & Murshid, 2016).

Although no population is immune to experiencing trauma, some types of trauma are disproportionately experienced by certain groups because of deeply entrenched structural inequalities. This provides the impetus to move beyond broad notions of trauma as a universal experience and address its specific socio-political and economic roots (Farmer, 2010). 'Intersectionality-informed' understanding (Collins, 2000) holds that discrimination, privilege, and human rights violations occur as a consequence of the combination of the identities to which an individual may subscribe, and that a Trauma informed approach can address intersectionality by taking measures to prevent overt discrimination through policy and legislation. In an example used by Bowen & Murshid (2016, p. 227), an undocumented immigrant from a low-income family in the Middle East may face discrimination on the basis of race, ethnicity, social class, gender, and nationality.

An example of TIC relevant policy change at an organisational/system level includes a shift in drug policy in addiction services in the USA from a no tolerance philosophy to a harm reduction and recovery-oriented approach. This can be viewed as largely consistent with the Trauma informed principle of enhancing safety for vulnerable individuals by maximising the possibility of engagement with services, rather than decreasing the likelihood of engagement (Bowen & Murshid, 2016). Another example is the provisions of the Family Violence Option of the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (Pub L No. 104–193, 110 Stat. 2105) in relation to the economic needs of people suffering interpersonal violence (IPV). This legislation enabled US states to screen for IPV, waive federal requirements pertaining to work requirements and time limits on receiving Temporary Assistance to Needy Families benefits, and refer individuals to community services, thereby helping people impacted by IPV to leave abusive relationships and access timely assistance. More generally, Children Now, a children’s rights research, policy and advocacy lobby network in California, in their statement of policy priorities to strengthen Trauma informed care state, ‘Without question, the top priority is to defend Medicaid and the Affordable Care Act because together they provide the majority of care for children exposed to trauma’ (Children Now, 2017, p. 2). These supra-system, Trauma informed social policy initiatives provide a degree of rights-based safety for vulnerable populations and the necessary underpinning for sustained and effective TIC within multiple sub-systems of services delivery.

9.2 NI Policy Context

Current strategic drivers in NI clearly embed Trauma informed principles, with growing attention to early intervention, relationship-based practice, and whole family and systemic approaches. This is particularly apparent in the four workstreams of the Early Intervention Transformation Programme (EITP, 2014), a cross-departmental initiative (DHSSPS, DoH, DE, DoJ, OFMDFM) developed in collaboration with Atlantic Philanthropies, which seeks to deliver improvement in long term outcomes for children and young people across NI via early intervention. Other interrelated policies include ‘Making Life Better’ NI Public Health Framework 2014; Infant Mental Health Framework 2016; Protect Life Strategy 2016; and the Children and Young People’s Strategy Consultation Document 2017-2027. Awareness of the critical impact of adverse experiences in childhood (in particular domestic and sexual violence, child and parental mental health, and neglect) are explicitly set out in the strategic plan of the Safeguarding Board NI (2018-22) with a clear direction toward embedding Trauma informed care principles through the introduction of strength-based, safety-orientated approaches to stabilise and strengthen a child and family’s situation.

New legislation has also been introduced in NI that may assist with the Trauma informed care principles of collaborative practice across agencies and sectors in the best interests of children and young people. This legislation, entitled the Children’s Services Co-operation Act (Northern Ireland) 2015, aims to improve co-operation between named children’s authorities and other children’s service providers. The Act also provides an opportunity to share resources (staff, goods, services, accommodation) and the pooling of funding. The Act forms part of an overarching framework designed to improve the well-being of children and young people, including the draft Programme for Government and the Children and Young People’s Strategy, Community Plans, and a wide number of more specific strategies which work to achieve the outcomes in the Children and Young People’s Strategy.

A recent publication by the Democratic Unionist Party (Martin, 2018) exploring the relevance of Adverse Childhood Experiences research for NI and calling for NI to be a ‘Trauma informed Country’ (p.5) gives some indication of the reach of this research into political discourses in NI and its potential implications.

9.3 Northern Ireland Practice Initiatives

Widespread introduction of new ways of thinking and working into a context of uncertainty, flux and pressurised resources - which many feel currently characterises NI public services - risks demoralising the practitioners it aims to equip. It is therefore important to acknowledge and build on existing work and recent NI initiatives that lay a foundation for a more comprehensive systemic approach to Trauma informed care across the region. The NI ACE initiative, detailed below, is one example of a project aimed at embedding trauma awareness in frontline practice. It explicitly sought to enhance awareness among child and family social workers of the potential impact of childhood adversity in adult life as a means to enhance assessment, decision-making and intervention planning for children and their families. There are other practice initiatives in various stages of implementation across the region, some of which refer explicitly to the concepts of multiple adversities or trauma and its effects, while other practice approaches are in keeping with TIC principles and might be referred to in the health literature as ‘universal trauma precautions’ (Raja et al, 2015a) i.e. ways of engaging with service users that are likely to be helpful to individuals who may, or may not, have experienced trauma. The Think Family NI initiative was introduced in 2009 and is currently governed by the Children and Young People’s Strategic Partnership (www.hscboard.hscni.net/partnerships/think-family-northern-ireland). This approach recognises that mental illness has an impact on family members as well as on the individual

with the actual diagnosis or difficulty. In particular, parental mental illness can have an adverse effect on children, while the stress of parenting can be deleterious to adult mental health. The approach embraces Trauma informed tenets of choice and communication, both between the individual service user and worker, and across the various services that support the family. This approach enhances partnership and communication across adult and children's statutory and voluntary sector agencies working with different members of the one family, and equips practitioners across multiple systems with a common set of questions to frame family conversations. The Think Family project has established an infrastructure of relationship and communication channels around the topic of mental illness and its potentially adverse impact on family members. This existing approach is a potential vehicle for developing Trauma informed planning and service delivery to families impacted by mental illness.

Signs of Safety (Turnell, 2012) is currently being rolled-out as the approach to child safeguarding across Northern Ireland. This approach aims to minimise the more controlling and coercive tendencies of child welfare social work and promote collaborative practice with children and their families. Although Signs of Safety does not explicitly reference trauma or the impact of traumatic experiences for children and parents, it does echo the recommendations in many of the reviewed papers in that it recognises the fundamental importance of service user-practitioner relationships and aims to enhance the decision-making opportunities of parents and everyone naturally connected to the child, including the child themselves. It also encourages social workers to help the family identify problem-solving ideas before imposing their own. It is encouraging that child welfare social workers across the region are already being trained to incorporate principles of partnership and empowerment into their practice, key components of Trauma informed care.

The Building Better Futures framework for assessing and enhancing parenting in child protection (Houston et al, 2018) is in its second year of implementation in selected Family Intervention Teams in each of the Health and Social Care Trusts. Building Better Futures provides child and family social workers with a conceptual framework to actively engage parents in the assessment and enhancement of their parenting capacity when there are concerns about how their care-giving is impacting on their children. Building Better Futures similarly reflects TIC principles of communication, trust, empowerment and personal growth. It is a relationship-based model that enables skills of engagement and offers techniques and strategies that help practitioners forge trust and partnership working with parents. It also equips practitioners to recognise and respond to negative reactions within relationships especially

when individuals feel threatened, for example by the extent of the authority delegated to statutory social services, or there is the potential of loss. The Building Better Futures model explicitly recognises parents' own history, experiences and context as key influencers of their parenting behaviour. It encourages social workers to shift their thinking to consider 'what happened to this person?' rather than 'what is wrong with this person?' (Harris & Falot, 2001). Practitioners working with the model have been equipped to integrate knowledge of the impact of childhood adversity into their assessment of parental strengths, resilience and coping as well as areas of risk and concern.

Finally, following a Regional Review of Residential Child Care (RRRCC), children's homes across NI began piloting six therapeutic approaches which are explicitly grounded or in keeping with many of tenets of Trauma informed care:

- Belfast Trust – Social Pedagogy
- Northern Trust – Children and Residential Experiences (CARE) model
- South Eastern Trust – Sanctuary model
- Southern Trust – Resilience model and Attachment, Regulation and Competency (ARC) model
- Western Trust – Model of Attachment Practice (MAP)

There are also examples of trauma-focused projects in other sectors across Northern Ireland. One such example in the education sector is the Therapeutic, Education and Support Services in Adoption (TESSA) project, funded by the Big Lottery Fund, which recognises the adverse histories of children adopted from care, and the prevalence of trauma effects among adopted children. It aims to support adoptive families across NI who have children between the ages of two and 12 years, offering a range of therapeutic interventions. It also offers schools a free half-day training in attachment and developmental trauma and, if required, strategies and services to support individual children with specific issues. This, with an accompanying leaflet for school staff, helps teachers, classroom assistants and other staff members understand how children with a history of trauma and attachment difficulties often struggle to learn so that they can help support a child's emotional regulation, behaviour and learning in the school environment.

An example of a TIC relevant NI justice initiative is the Vulnerable and Intimidated Witnesses Police Service Guide from the Department for Justice (2011) Code of Practice for Victims of Crime. This initiative recognises that vulnerable and intimidated witnesses, many with a significant history of adverse childhood experiences, may need access to special measures from their very first contact with the police, and is designed to afford them equal access to the criminal justice system, and an opportunity to give best evidence at trial. It heightens awareness among PSNI staff of the issues such witnesses may face, provides police officers with prompts to help identify those who may be vulnerable or intimidated, and sets out practice principles and specific special measures that can be used to enable witnesses as they give evidence.

NI ACE Initiative: The project most explicitly linked with the Adverse Childhood Experience research is the NI ACE initiative. Emerging from discussions about the Early Authoritative Intervention (EAI) Strategy (DHSSPS, 2013), the SEHSCT ACE pilot initiative (2015-16) sought to develop ACE-awareness among frontline child and family practitioners to assist them to identify and analyse the impact of adverse experiences on children and families over time, as a means to improve decision-making and provide timely and appropriate interventions to better meet children's needs (McBride, 2016). With the support of QUB colleagues, an NI adapted 15-item

ACE questionnaire was developed as a means for routine inquiry and consideration of ACEs during initial assessment processes

With its straightforward question and response format, it was hoped parent/caregiver childhood trauma might be identified early in the social work process, offering practitioners different ways to understand parent/caregiver behaviours – and assist parents/caregivers consider the impact of their own childhood experiences on their current situation and their wishes for their own children. In addition, a children's ACE risk matrix tool was developed to assist practitioners consider children's experience across the different adversity domains to inform assessments and decision-making.

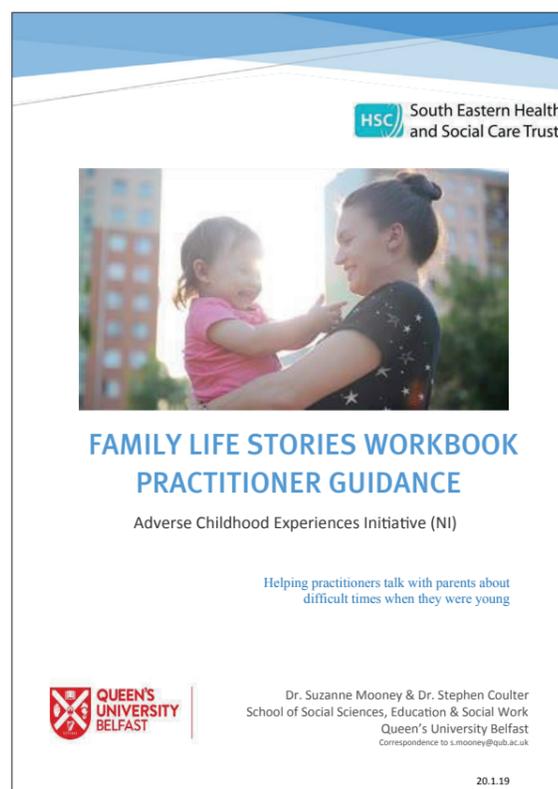


Figure 15.
QUB and SEHSCT Family Life
Stories Workbook

While the use of the ACE questionnaire with parents in NI was found to have clear potential benefits (McBride, 2016), it was recognised as challenging for statutory practitioners in child welfare/protection settings where involvement with Social Services may be uninvited and unwelcome, and where there existed concerns for children's wellbeing. These challenges led to the development of a Family Life Stories practice workbook and guidance (Mooney et al., 2018) (Figure 15) to assist practitioners use the ACE research and embed associated Trauma informed care practice principles to enhance service user-practitioner engagement.

A package of three training sessions (ACE-awareness and integration into UNOCINI assessment; TIC and Family Life Stories; ACEs and Attachment over the Life Course) was developed and training workshops delivered regionally 2017-18. This practitioner training targeted Children's Services Social Work staff with 780 staff trained across HSC Trusts (excluding SEHSCT) (McBride correspondence, 2018). General ACE-awareness training has also been delivered to all Sure Start Managers across NI, coordinated through the Health and Social Care Board (HSCB). In addition to these regional outcomes, the SEHSCT have continued to deliver general ACE awareness training to their Social Work staff in a range of settings (e.g. residential care, children with disabilities, fostering and adoption, early years, family centres, children's court services) and have trained over 760 staff from different disciplines (including nursing, psychology, allied health professionals) in pertinent service contexts, such as CAHMS, Education and Justice settings (McBride correspondence, 2018).

It is clear, therefore, that the principles of Trauma informed care are in keeping with many initiatives already underway in NI, across social care including child protection, the looked-after population, and to some extent, adult mental health, education and justice. It is notable that there is a significant proportion of the children's social services workforce in NI who are already trauma-aware to some extent and are applying some of the TIC principles and their knowledge of adverse childhood experiences in their assessments and ongoing work with children and families. It is likely, therefore, that this workforce will be receptive to developing their knowledge in this field.

9.4 English Policy Context

Understanding the prevalence and impact of ACEs and Trauma informed care has been in development across the UK for a number of years, with the first national prevalence study taking place in England (Bellis et al., 2014) corroborating the trend identified in the original ACE study (Felitti et al., 1998) of a strongly correlated relationship between childhood adverse experiences and poor health across the life course. ACEs discourses became accepted and embedded in the Five Year Forward View for Mental Health (2016) prepared by the Mental Health Taskforce for NHS England, NHS planning guidance for 2016/17-2020/21 (NHS England, 2015a), and other public policy across health, social care and education, such as 'Health Matters: Giving Every Child the Best Start in Life' (Public Health England, 2016) and 'Promoting children and young people's emotional health and wellbeing: A whole school and college approach' (Lavis & Robson, 2015). Associated interventions targeted areas such as perinatal mental health through Family Nurse Partnerships; early years support and education; whole school/college interventions; and early intervention for mental health prevalent in young people such as self harm. Young Minds, a leading UK charity which seeks to ensure best practice mental health services for children and young people recently produced an edited publication (Bush, 2018) 'Addressing Adversity: Prioritising adversity and Trauma informed care for children and young people in England', supported by Public Health England and NHS England, which brings together current discourses across mental health, education, justice and children's services and examples of emerging good practice in England.

Enquiring about adverse experiences in childhood emerged as a priority issue for England in order to facilitate early intervention. This was explicitly highlighted in national policy documents such as the Future in Mind report (NHS England, 2015b) and the Tackling Child Sexual Exploitation report (HM Government, 2015), developing a momentum to extend routine enquiry in mental health, sexual health and substance misuse contexts. The Routine Enquiry into Adversity in Childhood (REACH) initiative was developed by Lancashire Care NHS Foundation Trust as a practical framework to help organisations and services to develop and adopt routine ACE enquiry outlining training and implementation processes. The REACH model has since been rolled out and evaluated across different health and social care services including health visiting, substance misuse, domestic violence, children's services, early help and mental health services (Real Life Research, 2015; McGee et al., 2015) with different potential benefits and challenges emerging (Quigg et al., 2018). The REACH project has most recently been extended to General Practice with a multi-site pilot in the North West of England from April to October 2017, supported by NHS England,

9.5 Welsh Policy Context

Public Health Wales and Lancashire Care NHS Foundation Trust. A preliminary evaluation concluded that there was initial support for the acceptability of ACE enquiry in General Practice by both patients and practitioners but recommended further research and evaluation before wider implementation (Hardcastle & Bellis, 2018).

Wales has been one of the pioneer UK regions in taking forward ACE awareness as a public health concern, with a growing body of research, policy and practice initiatives which have reciprocally influenced and been influenced by governmental priorities. An ACE prevalence study was undertaken in Wales (Bellis et al., 2015), identifying an increased risk of health-harming behaviours (Bellis et al., 2015), low mental wellbeing (Ashton et al., 2016a) and early development of chronic disease (Ashton et al., 2016b). This body of work encouraged the Welsh Government to emphasise the importance of all children in Wales having a safe and nurturing childhood. These ambitions were made explicit in national strategy documents such as Taking Wales Forward 2016-21 (Welsh Government, 2016) and Prosperity for All: The National Strategy (Welsh Government, 2017) which set out the importance of investment in the early years as a means of preventing adverse childhood experiences, and the priority of creating ACE-aware public services. Accompanying legislative change enshrined in the Wellbeing of Future Generations (Wales) Act (2015) enabled public services to work together and provide an integrated approach to enhancing children's wellbeing over the life course. More recent work has taken the focus toward how individuals and communities can be assisted to develop resilience as an important mechanism to protect those who experience ACEs from detrimental outcomes. While evidence suggests that the single most common factor in assisting children develop resilience is having at least one positive and stable relationships with a supportive parent, caregiver or other adult (Bellis et al., 2017), it is recognised that other sources of resilience contribute to overall wellbeing of children (National Scientific Council on the Developing Child, 2015), and that the science of resilience remains in development (Hughes et al., 2018). A recent national survey of ACEs and sources of resilience in Wales, commissioned by Public Health Wales, has been conducted with a particular focus on mental illness (Hughes et al., 2018) and childhood health and educational attendance (Bellis et al., 2018). While a number of factors are identified as increasing children's resilience to the impact of multiple ACEs and, in particular, the detrimental impact on their mental health over the life course (including social and emotional skills; childhood participation in sports; engagement in community and social groups; cultural traditions; connectedness to schools; peer support and friendship networks; and early intervention), Hughes et al. conclude that 'those

who require the most help may be hardest to reach' (Hughes et al., 2018, p. 8). While challenges therefore remain, awareness of the prevalence of ACEs on the Welsh population, their impact and how the most deleterious effects might be averted are well and truly on the Welsh Government's map, with early years and mental health established as two of the five priority areas identified in Prosperity for All: The National Strategy (Welsh Government, 2017).

9.6 Scottish Policy Context

The 'Polishing the Diamonds' briefing paper by the Scottish Public Health Network (Couper & Mackie, 2016) sought to bring together what was known about the prevalence and impact of adverse childhood experiences from other parts of the UK (e.g. Bellis et al., 2014 & 2015) and consider the relevance for Scotland, pointing to a range of possible Public Health actions and interventions. Drawing on the work of Mark Bellis, they suggested that there should be a three-pronged focus on prevention, resilience and enquiry (Couper & Mackie, 2016:18). Specific attention was drawn to the challenge of how government and public services communicate about the role of social conditions in child maltreatment and adversity, and the known links between poverty, lack of access to healthcare, poor educational outcomes, and child abuse and neglect, suggesting the need to envisage anti-stigma campaigns, not unlike some public health mental health communication messages. Potential areas for action in the three strategic priorities included:

Preventing ACEs: tackle social isolation and increasing community connectedness; mitigate the impact of recession and austerity; tackle inequality and absolute poverty; universal and targeted parenting programmes to address parental and family risk factors; multi-agency teams working across professional and organisational boundaries to holistically address multiple household needs.

Building resilience: develop new frameworks for integrating policies and programmes across sectors and maximise effectiveness of all early childhood policies and programmes.

Enquiry: build on the routine enquiry REACh initiative the North of England as a means of ensuring that adverse childhood experiences are known so that practitioners can plan appropriate interventions. (Hardcastle & Bellis, 2018).

NHS Health Scotland went on to establish the Scottish ACEs Hub as a means to help inform and shape the actions outlined in this report which were recognised to interface with existing policy areas such as The Early Years Framework (2008) and The Child Poverty Strategy for Scotland (2011). The ACE hub, in conjunction with the Scottish Government and other partners is involved in

raising awareness and understanding about ACEs; contributing to developing the evidence base on ACEs; and furthering policy and practice approaches to prevent ACEs and mitigate their effects. Like Wales, ACEs research is influencing the political agenda with the Scottish Programme for Government (2017-18), explicitly referencing its commitment to preventing and mitigating ACEs. A number of reports have been produced focusing on education and justice. These include NHS Scotland's report 'Reducing the Attainment Gap' (White, 2017) which reviewed health and wellbeing strategies in schools that could have a potential impact on reducing inequalities in educational outcomes. Reports by NHS Scotland (2017) and Justice Analytical Services (2018) align with the National Community Justice Strategy and looked at the links between childhood adversity, offending and victimhood, making a strong case for intervening at the earliest stage possible; targeting those most at risk of experiencing childhood adversity as well as those already in the Justice system; taking action to reduce offending and health inequalities; and working toward a Trauma informed justice system. The Scottish Government, as part of the Survivor Scotland Strategic Outcomes and Priorities 2015-2017, also commissioned NHS Education Scotland to plan and deliver training for the Scottish workforce who have contact with people who have experienced adversity and trauma. The National Trauma Training Framework, published in May 2017, seeks to improve workforce capacity to recognise and respond to the individual needs of people with ACEs and adult experiences of trauma, including enabling workers to have a conversation with the people they work with about what has happened to them in order to better respond. The implementation plan for this training is currently underway. NHS Health Scotland, NHS Education Scotland and the Scottish Government have also been progressing the debate about routine enquiry, hosting workshops and seminars in 2017 to consider where and how ACEs might be safely asked about (see <http://www.healthscotland.scot/events/2017/june/aces-routine-enquiry-seminar>), and implementing pilot initiatives.

9.7 Republic of Ireland Policy Context

While ACEs and TIC are not as well-established within current policy and political discourses in the Republic of Ireland, this too is changing, with recent work looking at Trauma informed approaches with children in care (Buckley et al., 2016) and those impacted by homelessness and addiction (Lambert & Emerson, 2017). The cross-sector Irish ACEs and Trauma informed Forum has been set up to 'share ACE related and Trauma informed knowledge, practice and initiatives in an Irish context'. One initiative of note is the Multiple Adverse Childhood Experiences project, launched in September 2018. Targeting five cross-border areas of social disadvantage,

this partnership project is led by CAWT (Cooperation and Working Together) and funded by the European Union's INTERREG VA Programme. Partner organisations include the Health Service Executive (ROI), Tusla (ROI), Public Health Agency (NI), Health and Social Care Board (NI), Western Health and Social Care Trust (NI), and Southern Health and Social Care Trust (NI). This initiative aims to transform the lives of vulnerable children and their families who are at risk of multiple adversities by identifying, intervening early and provide nurturing support within their own homes and communities. Target groups include children within the age groups of 0-3 and 11-13 years and their families, and the stated objectives to develop an adversity matrix and risk stratification tool which will allow for early identification of vulnerable families, and develop a range of interventions.

9.8 Current debates

While the ACE and resilience research and associated policy and projects have been largely welcomed across the UK and Ireland, with clear potential benefits identified - greater understanding of children's behaviours, including challenging behaviours; opportunity to reconfigure public services to more readily meet the needs of children impacted by ACEs; and strengthen support for the important caregiving adults in children's lives, including families, communities, foster carers and youth workers) - there are also some dissenting voices who encourage caution. For example, recent communication from the Children's Commissioner for Wales (Holland, 2018) outlines potential pitfalls to what is referred to as 'the prevailing ACEs talk in Wales at the moment'. She outlines the risk that children and families' social problems are seen as a result of individual behaviour with insufficient attention to the social conditions and social inequalities which exacerbate ACEs; the risk of children being labelled with the number of ACEs they have, limiting understanding of differential impact; ACE numbers being used as a threshold for service access; and concerns re. privacy, including how children and young people are asked about their experiences, and how this information is stored and shared. The Office of the Children's Commissioner argues for the importance of embedding a children's rights approach into the current ACE discourse about improving public services. Such an approach would embed universal human rights for all children (including non-discrimination and equality, empowerment, participation and accountability) as a means to build a shared understanding of the roots and impact of ACEs, and sustain the development of a child-centred approach across sectors, thus avoiding potential pitfalls.

10. Discussion

Such discourses highlight the importance of how emerging ACE programmes and Trauma informed NI social policies communicate about ACEs, the aspects they choose to highlight, and what measures are taken to improve the life chances of children and adults who have experienced childhood adversity and trauma in order to avoid re-stigmatising the very populations ACE research seeks to assist.

Trauma informed care is a whole system organisational change process which seeks to embed theoretically coherent models of practice across diverse settings and roles, including child welfare, family support, juvenile justice, mental health and education. It emerged from the findings of the seminal Adverse Childhood Experiences (ACE) study in the USA (Felitti et al., 1998) with subsequent international and UK research establishing the same, strongly correlated relationship between the number of childhood adversities experienced (inclusive of physical, sexual and emotional abuse; neglect; and household dysfunction), and a wide range of negative outcomes across multiple domains over the life course (Anda et al., 2006; Anda et al., 2010; Bellis et al., 2015; Hughes et al., 2017; Van der Kolk et al., 2005). In recognising the impact of childhood adversity on child and adult outcomes, Trauma informed services strive to build trustworthy collaborative relationships with children and the important adults in their lives, as well as improve consistency and communication across linked organisations and sectors, with the aim of enhancing child and family capacity for resilience and recovery, and reducing organisational practices that may inadvertently exacerbate the detrimental effects of severe adversity. Although most widely implemented in the USA, where it was first developed, TIC is gaining momentum as a comprehensive practice framework across the UK, Europe, Australia and New Zealand with a growing body of context-specific implementation guidance and associated evaluation generating some evidence of positive effects.

This chapter draws together the key findings from the review of the Trauma informed implementation literature, summarising what is known about the prevalence of childhood adversity in Northern Ireland and presenting an overview of Trauma informed frameworks used to guide organisational implementation across different systems and settings. In discussing the findings from the evidence review and wider literature, consideration is given to the extent to which there is evidence that TIC implementation has led to improved outcomes for children and families, as well as the ways in which individual initiatives have incorporated change across the key implementation domains of workforce development,

Trauma informed services and organisational change, as well as the associated evidence of effectiveness. Given that the majority of evidence has been generated in relation to child welfare systems, and in light of the significant overlap in key themes across systems, discussion of the review findings primarily focuses on this area of service provision. Outcome evidence from health, justice, education and adult social care is briefly summarised, together with selected findings which add to the body of knowledge derived from child welfare initiatives or exemplify particularly robust methodological approaches. Key components of Trauma informed implementation and associated benefits and challenges are identified and the implications for NI discussed.

10.1 NI prevalence estimates

There has not yet been a population level prevalence survey of ACEs conducted in Northern Ireland and this is urgently needed to accurately inform service development. Until Northern Ireland data is available, it is necessary to use research from other countries to provide some estimates of the prevalence of ACEs in Northern Ireland. These estimates should be viewed with caution as there are Northern Ireland specific issues, including the number of areas with high levels of deprivation and the impact of the Troubles, which suggest prevalence in Northern Ireland may be higher than in other countries.

Hughes et al. (2017) conducted a systematic review of 37 ACE studies and highlighted that there is some variation in the ACE categories used. They also reported that, across the 37 studies, the prevalence of an ACE score of 0 ranged from 12% to 67%, and for an ACE score of 4 or more, from 1% to 38%. In order to provide estimates for Northern Ireland three important ACE studies (Felitti et al., 1998; Dube et al., 2003; Bellis et al., 2015) have been used. The number of categories also varied in these studies (7 in Felitti et al., 1998; 8 in Dube et al., 2003; and 9 in Bellis et al., 2015). Estimates based on all three and for children, adults and the total population are provided in the main report. It should be noted that these studies focused on the adult population but their findings have been used to estimate the number of children who have or will experience ACEs. To provide an illustration here, based on the Dube et al. (2003) findings it is estimated that, in the Northern Ireland population of 1,862, 137: 672,231 will have an ACE score of 0; 484,156 will have an ACE score of 1; 296,080 will have an ACE score of 2; 176,903 will have an ACE score of 3; and 232,767 will have an ACE score of 4 or more.

10.2 TIC Organisational Frameworks

Given that TIC requires change at multiple levels of an organisation, advocates have developed guidance for implementing a Trauma informed approach. Building on Harris and Fallo's (2001) preliminary work, SAMHSA's (2014) identified ten implementation domains (see Table 5) and proposed a series of questions to consider in each domain (2014, p.14-16). Similarly, Branson et al. (2017) and Hanson & Lang (2016) have identified multiple implementation domains as the basis of Trauma informed justice and child welfare systems, centred around the broad implementation categories of clinical services, agency content and system level changes (Branson et al., 2017) and workforce development, Trauma informed services and organisational changes (Hanson and Lang, 2016). Education and health-based frameworks have incorporated similar features and components, emphasising tiered approaches to TIC which support trauma sensitive awareness and practice with all patients and students, more targeted approaches for those displaying some levels of trauma-related need, moving towards screening for trauma and referral to trauma specific services for those with identified trauma symptomology. While the different components of TIC are context-dependent, and there are minor variances in articulation and structuring between the different frameworks, considerable commonality is apparent with the broad implementation domains of workforce development, trauma focused services and organisational change (Hanson & Lang, 2016) reflected across each.

GENERIC SAMHSA (2014)	JUSTICE Branson et al. (2017)	CHILD WELFARE Hanson & Lang (2016)	EDUCATION (Dorado et al., 2016; Shambin et al., 2016)	HEALTH
	Clinical Services:	Workforce Development:	Universal:	
Governance & leadership	Screening and assessment	Training of all staff on the impact of abuse or trauma	School policies, increasing teacher awareness and capacity	Patient-centred communication and care - reducing anxiety, increasing patient choice and control and help establish rapport for all patients
Policy	Services and interventions	Measuring staff knowledge/ practice	Developing a strengthened social-emotional curriculum	Educating practitioner to understand the health effects of trauma
Physical environment	Cultural competence.	Strategies/ procedures to address staff traumatic	Ongoing mentoring practices for all teachers.	
Engagement and involvement	Agency Context:	Knowledge/ skills in accessing evidence-based services		
Cross sector collaboration	Youth and family engagement			
Screening, assessment and treatment	Workforce development and support			

GENERIC SAMHSA (2014)	JUSTICE Branson et al. (2017)	CHILD WELFARE Hanson & Lang (2016)	EDUCATION (Dorado et al., 2016; Shambin et al., 2016)	HEALTH
Training and workforce development Progress monitoring and quality assurance Financing Evaluation	Promoting a safe agency environment Agency policies, procedures System-level: Cross-system collaboration, System-level policies and procedures Quality assurance and evaluation	Trauma-focused services: Screening/assessment to identify trauma history and symptoms Child's trauma history included in case record/plan Availability of evidence-based trauma-focused practices Organisational Change: Collaboration, coordination, and information sharing (internal and external) Procedures to reduce risk for client re-traumatisation Promotion of consumer engagement Provision of strength-based services Safe physical environment Written policies that include/support TIC principles Presence of a defined leadership position or job function specifically related to TIC	Selective: consultation to help teachers develop strategies and behavioural plans to address challenging behaviours in class preventing secondary traumatisation or burnout. Targeted: Mental health assessment of specific children Appropriate, evidenced based Trauma informed interventions for children and their families	Inter-professional collaboration - keeping referral and educational material on trauma readily available to all patients Practitioners understanding their own history, reactions, and stressors this can generate Screening and referring to appropriate trauma specific services/ treatment for

Table 5
Core Implementation Areas and Domains

10.3 Trauma informed Outcomes

Regional/ Organisational Level Child Welfare Initiatives

Although there were numerous peer reviewed papers detailing state/ regional and organisational/agency level child welfare initiatives involving frontline social workers and family welfare staff, only a small number reported specifically on outcomes for children and/or their families. The Massachusetts Child Trauma Project (MCTP) was the most comprehensively evaluated of these and the only state-wide initiative which presented data on case outcomes, reporting significant increases in practitioner's assessments of individual and agency Trauma informed policies and practice (Fraser et al., 2014; Bartlett et al., 2016), substantial increases in the amount of routine screening for trauma (Lang et al., 2017) and decreases in substantiated maltreatment reports among families serviced by the MCTP (Barto et al., 2018). Three organisational/agency level initiatives also evaluated case outcomes highlighting: a reduction in child behaviour problems following implementation of the ARC model in a community trauma treatment centre (Arvidson et al., 2011); increased family safety, caregiver capabilities and child well-being following participation in Trauma informed family preservation services (Lucero & Bussey, 2012) and after participation in a community project for at risk female youth (Suarez et al., 2014). With the exception of the MCTP outcome evaluation (Barto et al., 2018), most studies lacked a control or comparison group and were based on small sample sizes. As such, while there were positive trends observed, the effectiveness of large scale, system wide initiative remains an area requiring significant further evaluation.

Residential Care/Treatment, Inpatient Psychiatry, Mental Health & Health-based Initiatives

Outcomes were more frequently measured with regards to TIC initiatives in residential care and treatment settings with a strong emphasis on the reduction of physical coercion in routine psychiatric and residential care evident. One systematic review highlighted this as the central aim of nine out of the thirteen studies reviewed (Bryson et al., 2017), with all nine studies demonstrating reductions in the use of seclusion and/or restraint. A much smaller number of studies evaluated treatment related outcomes, demonstrating reductions in treatment time and increases in positive discharges (Greenwald et al., 2012), decreases in overall PTSD symptoms, aggression, anxiety, attention problems, rule breaking, depression, thought problems, and somatic complaints (Hodgdon et al., 2013), and reductions in aggression towards staff, property destruction, and incidents of running away (Izzo et al., 2016). As there was considerable overlap between residential child welfare initiatives and mental health initiatives, these outcomes pertain to both systems of care. One additional study published after Bryson et al.'s (2017) systematic review, used a quasi-experimental to evaluate Trauma informed psychiatric residential treatment for young people (TI-PRT), demonstrating significant increases in youth functioning, fewer seclusion incidents and shorter lengths of time in care (Boel-Studt,

2017). Additionally, one of the few studies assessing residential addictions treatment (Hales et al., 2018) found that multistage TIC implementation increased both client satisfaction and the number of planned discharges. Outside of mental health and treatment settings, there were no child or family outcome evaluations of health-based TIC programmes or initiatives.

Foster and Adoptive Care Initiatives

While the literature on TIC implementation in foster/adoptive care services was much more limited, service user outcomes were reported in two studies. The ADOPTS program, a 16-week brief outpatient intervention with adoptive children and their families found that the intervention reduced child anxiety, depression, post-traumatic stress, dissociation, and anger, as well as reducing care-giver stress (Hodgdon et al., 2016). Similarly, system wide implementation of Trauma Systems Therapy (TST) in KVC, a private out-of-home-care organisation in Kansas, produced significant improvements in functioning, emotional and behavioural regulation and placement stability (Murphy et al., 2017). While neither study benefitted from a control group, the KVC study employed an innovative analytical approach, using the extent to which staff members had been trained in TST and showed fidelity to the TST model at quarterly supervision sessions to calculate children's exposure to TST 'dosage'. While it might be expected that overall TST dosage amongst members of the care team who worked most closely with the children would be associated with significant improvements, more surprisingly, the dosage amongst those who worked more distally with the child was also significantly associated with improvements in functioning and placement stability, suggesting that it may be the confluence of the TST skills of the child's entire care team that produces better outcomes rather than specific individuals.

Education and Justice Initiatives

In total, six papers evaluated TIC child outcomes in relation to either the education or justice system, although none used randomised designs and only two used a comparison group (Shamblin et al., 2016; Marrow et al., 2012). Despite these limitations, findings from school-based initiatives pointed to the positive impact of implementation in terms of better understanding of trauma and coping strategies and/or resilience among children who participated in whole classroom interventions (Perry and Daniels, 2016; Ijadi-Maghsoodi et al., 2017); improvements in trauma symptomology and/or emotional and behavioural functioning among children who participated in school-based therapeutic interventions (Dorado et al., 2016; Shamblin et al., 2016, Perry and Daniels, 2016), and decreases in disciplinary offences and suspensions (Dorado et al., 2016). Similarly, and in keeping with the literature on residential care/treatment, evaluation of TIC implementation in residential juvenile justice or secure accommodation was associated with

reduced youth misconduct and reduced assaults on youth by peers (Elwyn et al., 2015), reduced staff and youth grievances (Elwyn et al., 2015), improved youth mental health and greater levels of optimism and hope (Marrow et al., 2012), fewer threats toward staff (Marrow et al., 2012) and fewer incidents of restraint or seclusion (Elwyn et al., 2015; Caldwell et al., 2014; Marrow et al., 2012).

10.4 Workforce Development Training

Training was, by far, the most commonly evaluated element of TIC implementation across child welfare initiatives with studies commonly demonstrating increases in staff knowledge, awareness and confidence in Trauma informed principles and practice. Training provision and content varied considerably in terms of duration, ranging from 1-hour training (Denison et al., 2018) to involvement in year-long learning collaboratives (Fraser et al., 2014). Training in state-wide initiatives generally targeted senior managers followed by front-line staff and were often based on training content developed by the National Child Traumatic Stress Network (NCTSN) with particular reference to in Child Welfare Training Toolkit, developed in conjunction the Chadwick Trauma informed System Project (Fraser et al., 2014; Bartlett et al., 2016; Kramer et al., 2013; Conners-Burrow et al., 2013; Lang et al., 2016; Hendricks et al., 2011). Results were primarily based on self-assessment, with a number of studies utilising validated measures such as the Evidence-Based Practice Attitudes Scale (EBPAS), the Trauma informed System Change Instrument (TISCI) and the Trauma System Readiness Tool (Fraser et al., 2014; Bartlett et al., 2016; Lang et al., 2016; Henry et al., 2011, Hendricks et al., 2011) to assess changes in practitioner attitudes and practice. Although none of these measures involved independent observation of practice, they did demonstrate that practitioners were positive about evidence-based practice, had strong intentions to consistently engage in Trauma informed practice (Fraser et al., 2014; Hendricks et al., 2011) and felt that their practice had become significantly more Trauma informed as a result of training (Henry et al., 2011).

Conversely, while staff training was a key component of TIC in residential/treatment settings, few reported on training specific outcomes, primarily because the evaluation focus tended to be on the impact of the overall initiative on services user outcomes. The fact that many agencies implemented multiple intervention components at the same time, as part of wider, whole system changes, limited the ability of studies to determine the extent to which outcomes were attributable to the training as opposed to other intervention components (Purtle, 2018). The few studies which evaluated training produced mixed results with Crable et al.'s (2013) randomised controlled trial of 1 day Trauma informed training finding no significant changes in knowledge about traumatic stress while evaluation of 3-day training in the use of the Risking Connections model found it increased staff

knowledge, favourable TIC beliefs and self-reported TIC behaviour (Baker et al., 2012). A large-scale evaluation of 'Training for Adoption Competency' provided to 855 professionals employed in mental health, adoption, family service and residential care agencies across 16 States (Atkinson and Riley, 2017) also found that those who received training showed substantial gains in TIC knowledge while a group of comparably qualified professionals experienced little gain (Atkinson and Riley, 2017).

Across the health, education, justice and social care literature, much of the work on TIC took the form educating staff about trauma and its effects, producing the same positive results observed in child welfare initiatives but, likewise, beset with the same methodological difficulties. However, one study evaluating delivery of the 'Risking Connections' training programmes for health care workers, was particularly robustly evaluated through use of a randomised control trial design (Green et al., 2015; 2016), albeit with small numbers. The trial produced significant increases in patient-centredness as measured by observed simulated visits with actors playing standardised patients, as well as a significant increase in patient's self-reported perceptions of patient-provider shared decision-making. This is important given that patient choice and empowerment are key elements of TIC in health care and that this is one of the few studies which linked training with observable and independently evaluated changes in practice. Similarly, Palfrey et al.'s (2018) 12-month follow up of training delivered to mental health professionals was an exception to the brief follow-up periods used in most training evaluation designs. There was evidence of continued interest in TIC at follow-up, with 80% having gone on to receive further training in trauma-specific interventions, suggesting the potential for a relatively small investment of staff and trainer time to deliver some longer-term benefits.

On-going Staff Support

Various initiatives across settings stressed the importance of on-going staff support as crucial to maximising the impact of initial training and embedding TIC in practice. Strategies to address this included the use of learning collaborative (Fraser et al., 2014; Lang et al., 2016; Hummer et al., 2010), coaching, mentoring and monitoring of fidelity to the Trauma informed model through supervision (Redd et al., 2017), on-going consultation and coaching from model developments/trainers or other experts (Deveau & Leich, 2014, Izzo et al., 2016; Hodgdon et al., 2016; Atkinson & Riley (2017), and continuous staff training, booster sessions and/or recertification processes (Redd et al., 2017; Barnett et al., 2018, Holstead et al., 2010; Dorado et al., 2016). For example, after an initial five-day training for residential staff in the CARE model, consultants provided quarterly onsite technical assistance to implementation teams and

other agency staff through observation and feedback, training and coaching for front-line supervisors, developing routines for reflective practice, and addressing organisational barriers to creating a more therapeutic milieu (Izzo et al., 2016). Implementation of an adapted model of Six Core Strategies and Risking Connections for residential youth treatment focused on creating internal trainers and supervision leaders who provided ongoing trainings and reflective practice groups (Barnett et al., 2018). Participation was incentivised by offering a raise in hourly pay rate to staff who met specific training criteria. While there were no empirical evaluations of the effect these additional supports had on TIC implementation or staff and service user outcomes, qualitative findings indicated that staff valued the multiple training modes and additional supports that were provided.

Shamblin et al.'s (2016) evaluation of a three-tiered school-based initiative offered an interesting comparison of an 'embedded' consultant model versus an 'on request' consultant model. In both models, specialist consultants provided Trauma informed training to all staff, targeted support to increase capacity and support to teachers in managing challenging classroom behaviours, and on-site mental health interventions delivered to children with trauma symptoms. In the 'embedded' model, consultants were situated on-site and in the 'on-request' model, consultants were located elsewhere and provided services as and when needed. Evaluation findings indicated that teacher confidence and competence were significantly higher post intervention and that independently observed negative teacher practices were significantly reduced. Although pre-test child functioning did not differ significantly between the programmes, post-test resilience scores were significantly higher in the embedded model, indicating this was more effective than the 'as needed' model. Although, limited by the small number of participating schools, classrooms and teachers, particularly in relation to the 'embedded' model, this supports the view that the provision of on-going, easily accessible support not only benefits staff, but students also.

Self-care

Self-care also featured as a component of TIC implementation in a number of initiatives, although it was not as widespread as the practice related supports discussed above. The Connecticut Collaborative on Effective Practices for Trauma (CONCEPT) created 'Worker wellness' teams who provided quarterly trainings in self-care (Lang et al., 2016). Similarly, implementation of Six Core Strategies inpatient psychiatry, secure residential and group home settings (Caldwell et al., 2014) involved a team of staff, called the ASAP Team, who provided peer support and immediate support for staff who experienced trauma. In other initiatives, training in TIC

included an emphasis on self-care and (Brown, Baker, & Wilcox, 2012; Barnett et al., 2018; Wilson and Nochajski, 2016; Green et al., 2015; Green et al., 2016). For example, training in the ARC model of residential care emphasized ‘the self of the treater,’ focusing on vicarious traumatisation and countertransference (Brown, Baker, & Wilcox, 2012), while Wilson and Nochajski’s (2016) social work curriculum contained teaching in clinical self-care with the aim of avoiding or properly managing vicarious traumatisation among practitioners.

Specific evaluations of the impact of TIC initiatives on staff trauma or stress were more limited and findings somewhat mixed. Baker et al. (2012) noted that experience of vicarious traumatisation actually increased after TIC training but also highlighted qualitative findings suggesting this was potentially due to increased awareness. Barnett et al.’s (2018) evaluation of the impact of the ARC model indicated that it had no effect on staff turnover and that frequency of participation in the trainings and supervision groups were not significantly correlated with job satisfaction or felt safety. Similarly, evaluation of an eight-week university course on trauma, delivered to gang intervention workers as part of a strategy to develop Trauma informed juvenile justice systems (Dierkhising & Kerig, 2018), found that no significant differences in levels of secondary traumatic stress in comparison with group of similar professionals who did not complete programme. The ‘Healing Baltimore’ nine-month initiative (Damian e al., 2017) found that, post-training, social services, health, education and legal professionals reported significant improvements in organisational culture and climate (as measured by Safety Attitudes Questionnaire) and as well as increased compassion satisfaction, being able to derive pleasure from your work (as measured by the Professional Quality of Life Scale (PROQoL)]. However, scores on the compassion fatigue scale of PROQoL also significantly increased, suggesting that training heightened awareness of providers’ burnout and secondary traumatic stress. This was supported in qualitative interviews which confirmed heightened awareness of participants own traumatic stress and need for self-care and but also pointed to a “greater sense of camaraderie and empathy for colleagues” (Damian et al., 2017).

10.5 Trauma-Focused Services Screening and Assessment

As part of the ACF five-year funding of demonstration grants to address trauma in the child welfare system, five States in the USA were also involved in state-wide implementation of trauma screening for children within the child welfare system; Massachusetts, Colorado, Connecticut, Montana and North Carolina, as (Lang et al., 2017). The target groups and process varied between states with some opting to screen children in all open cases, others opting to screen

children coming into care. Screening tools included the Child Trauma Assessment Center (CTAC) screen, the Child Trauma Screen (CTS), the NCTSN-adapted Child Welfare Referral Tool and the Project Broadcast Screening Tool. Implementation led to significant increases in screening, although there were wide variations in the number of children screened. For example, in Massachusetts, the average rate of screening increased from 40.3% to 75.0% while in Colorado, 53% of open cases were screened over a 16-month period. A screening initiative in Washington State (Kerns et al., 2016) made use of existing strategies and IT systems by introducing a screen for Child Related Anxiety Emotional Disorders into the Child Health and Education Tracking (CHET) screening system. Similarly, screening efforts in Massachusetts also emphasised embedding screens in existing systems, eventually incorporating the Child Welfare Referral Tool into their Family Assessment and Action Plans (Lang et al., 2017). Screening generally resulted in identification of high rates of trauma exposure and was generally perceived favourably by child welfare workers and mental health professionals (Lang et al., 2017), although the extent to which this may have led to improved assessment and treatment or improved child outcomes was not specifically evaluated

Routine Enquiry about Childhood Adversity (REACH) was also introduced in the English Local Authority of Blackburn and Darwen (McGee et al., 2015). The initiative was broader than child welfare and included NHS and statutory children and family health services as well as range of community organisations with a total of 110 staff members receiving the training. Programme organisations were provided with an enquiry tool covering ten ACE categories to take away and incorporate into their existing assessments and the project evaluation indicated that, by February 2015, almost 2,000 screens had been completed, with the bulk of these administered by health visitors and school nurses (n=1500), followed by social services staff (n=180). Following on from this, the Department of Health commissioned Lancashire Care NHS Foundation Trust (LCFT) to develop a standalone Implementation Pack to support services in developing, implementing and embedding routine enquiry (amongst clients aged 14+ years.) which was then piloted by three services across North West England: a Child and Adolescent Mental Health Service (CAMHS); a drug and alcohol service; and sexual violence support service.

However, evaluation of the implementation pack pilot (Quigg et al., 2018) indicated that were significant issues in embedding routine inquiry and the three services eventually decided not to continue with the initiative post pilot. Although reasons for this were multi-faceted, and all pilot sites recognised the need to develop

ACE-informed services, it appeared that uncertainties about the benefits of routine inquiry and how this related to the minimisation of harm and promotion of recovery, were insurmountable. It was noted that the Implementation Pack, and potentially the academic literature, did not provide sufficient information on how to use the information gathered from routine enquiry on ACEs to inform service provision and the support offered to clients, particularly within the types of services included in the pilot. Overall, it was felt that clearer theoretical foundations, more developed guidance on responding to disclosures, particularly from children, and broader approaches beyond the provision of a standalone Implementation Pack, were required to ensure services and practitioners were ACE-informed. The negative findings from this evaluation are particularly informative in considering the challenges of implementing screening initiatives and are illustrative of how winning 'hearts and minds' is integral to implementation. They also highlight the need for a clear, theoretically grounded and empirically evidenced rationale to underpin the introduction of any such initiatives.

Three health related papers evaluated the implementation of Trauma informed screening /assessment initiatives. In one of the most robust studies, Lotzin et al. (2017), undertook a cluster-randomised controlled trial of 'Learning how to ask' training provided to professionals working in outpatient services for people with substance use disorders. At 6-month follow-up the intervention reported higher frequency of asking patients about exposure to traumatic events than the control group, although findings were based on self-report. Miller et al. (2017) and Decker et al. (2017) both evaluated the introduction of universal assessment to support the recognition of domestic abuse and reproductive coercion in family planning clinics. The intervention also entailed harm reduction counselling and the provision of information and supported referrals to violence support providers. Qualitative interviews (Miller et al., 2017) indicated that the intervention increased provider confidence in discussing intimate partner violence, while patients described how the intervention gave them important information and made them feel supported and less isolated. Quantitative evaluation (Decker et al., 2017) indicated that patients found the interpersonal violence (IPV) assessment helpful, irrespective of their IPV history, while those who received the intervention reported greater caring from providers, greater confidence in provider response to abusive relationships, and greater knowledge of IPV-related resources at follow-up, compared to those who did not.

Nonetheless, the challenges highlighted by Quigg et al. (2018) were not unique to the REACH project, albeit they were reported as having a much less substantial impact on implementation in

other initiatives. Lang et al. (2017) noted that implementation of trauma screening in each of the five child welfare systems had been a somewhat lengthy and challenging process in comparison with other activities such as EBT dissemination and training staff in childhood trauma. While many of the challenges associated with trauma screening related to common systemic issues such as the size and scope of the child welfare system, the number of staff, competing demands, staff turnover etc., the authors noted that the biggest barriers tended to be due to unique local issues such as IT systems constraints, tribal culture, limited buy-in and local availability of EBTs. Significant difficulties around IT and data sharing systems were also observed out in an initiative which implemented universal screening for child trauma and behavioural health in out-of-home care facilities in three US states (Akin et al., 2017).

teachers, particularly in relation to the 'embedded' model, this supports the view that the provision of on-going, easily accessible support not only benefits staff, but students also.

Evidence-based treatment and trauma focused services

The Massachusetts Child Trauma Project (Fraser et al., 2014), the Arkansas state-wide initiative (Kramer et al., 2013), CONCEPT in Connecticut (Lang et al., 2016) and Michigan Children's Trauma Assessment Center (CTAC) [Henry et al., 2011], all included incorporated strategies to build treatment capacity through training and dissemination of evidence-based treatments such as Trauma Focused CBT, child-parent psychotherapy and the ARC model. In the Arkansas project, Trauma informed training for child welfare staff was conducted following dissemination of trauma-focused cognitive behavioural therapy (TF-CBT) to more than 150 mental health professionals across the state to maximize capacity for assessment and treatment referrals once child welfare workers were better informed about the effects of trauma on children. In residential group care, treatment and secure juvenile justice settings, the majority of implementation initiatives adopted specific Trauma informed models such as Six core strategies, Risking Connection, Collaborative problem solving (CPS), the Fairy tale model, ARC and Sanctuary (Bryson et al., 2017; Bailey et al., 2018; Elwyn et al., 2015; Elwyn et al., 2017; Caldwell et al., 2014; Marrow et al., 2012). Implementation of the Fairy Tale model in a residential unit in New York also involved training in EMDR and treatment was conducted by a multi-disciplinary team, including residential direct care staff as well social workers who typically led the treatment teams, provided case management, as well as some individual and family therapy (Greenwald et al., 2012).

While there was no specific evaluation of the treatments offered

in state-wide initiatives, a variety of initiative across residential settings, including group care, mental health treatment and juvenile justice settings care, indicated that implementation of therapeutic models led to a significant reduction in the use of restraint and/or seclusion (Bryson et al., 2017), with a small number demonstrating improved mental health outcomes for residents (Greenwald et al., 2012; Hodgdon et al., 2013; Izzo et al., 2016), as well as children in the foster care system (Hodgdon et al., 2016). Other Trauma informed services provided as part of the implementation process included intensive permanence services for young people in foster care delivered in four phases (Hall et al., 2018); the use of sensory tools such as pet therapy, visits to animal shelter, music therapy, cooking and swimming (Caldwell et al., 2014); behaviour management training for caregivers, a caregiver mentoring program and Trauma Systems Therapy for caregivers (Akin et al., 2017); intensive case management, community supports by paraprofessionals (i.e. peer support for youth and caregivers) and structured group activities as well as evidence-based treatments (e.g., Trauma-Focused Cognitive Behavioral Therapy and Girls Circle psychoeducational support groups) [Suarez et al., 2014]; and strengths-based, culturally appropriate, Trauma informed intake and family assessments accompanied by concentrated and family-focused case management services and referrals for material resources (e.g. housing, food, legal, transport, etc.) [Lucero and Bussey, 2012].

traumatic stress and need for self-care and but also pointed to a “greater sense of camaraderie and empathy for colleagues” (Damian et al., 2017).

School-based initiatives also emphasised increased availability and access to trauma specific treatment and were particularly well evaluated. Intervention took the form of ‘culturally congruent therapy’ for trauma-impacted students based on the ARC model (Dorado et al., 2016), Cognitive-Behavioural Intervention for Trauma in Schools for pupils with specific trauma symptoms (Perry and Daniels, 2016); and Parent–child Interaction, Trauma-Focused CBT and Parent–child psychotherapy (Shamblin et al., 2016). Pupils who received these trauma specific interventions showed significant improvements in symptoms including adjustment to the trauma, affect regulation, and decreases in intrusive images and dissociation (Dorado et al., 2016), improved resilience (Shamblin et al., 2016) and reduced PTSD symptoms (Perry and Daniels, 2016), although none of the three study designs utilised a control group. Trauma focused services provided as part of these initiatives included embedding clinicians in the school’s Coordinated Care Team to provide a Trauma informed lens to the development of

behavioural support plans for at-risk students (Dorado et al., 2016) and whole class psychoeducation in classrooms with identified difficulties and challenging behaviours (Perry & Daniels, 2016). Additionally, Ijadi-Maghsoodi et al. (2017) detailed the application of the Resilience Classroom Curriculum, delivered to whole classrooms by social workers. Pre and post-test evaluation, with follow up 9 weeks after curriculum completion, showed significant improvements in empathy, problem-solving and overall internal assets but not improved school support or lower PTSD symptomology.

Leadership buy-in and strategic planning

Many of initiatives highlighted above were part of broader, organisation wide Trauma informed implementation strategies aimed at changing organisational culture and practices, particularly with regard to state-wide initiatives. Key elements of implementation focused on establishing leadership buy-in, often through providing initial training to agency directors and senior management, establishing implementation teams, developing strategic implementations plans and structures, and assessing organisation readiness (Fraser et al., 2014; Kramer et al., 2013; Lang et al., 2016; Henry et al., 2011; Hendricks et al., 2011; Elwyn et al., 2015; Elwyn et al., 2017). For example, both qualitative and quantitative evaluation highlighted the importance of establishing trauma implementation leadership teams focused on installing and supporting a structure for TIC systems integration at the community level, as integral to the success of the MCTP (Fraser et al., 2014). Projects like the Michigan Children’s Trauma Assessment Center (CTAC) and the Chadwick Trauma informed System Project emphasised more ‘grassroots’ approaches centred on developing community partnerships and implementation strategies based on extensive collaborative community assessments and consultation (Hendricks et al., 2011).

Hendricks et al. (2017) used the using the Trauma System Readiness Tool (TSRT) to assess the strengths and barriers of existing policies, procedures and service provision and inform the development of implementation plans. Leadership was less commonly emphasised in residential care initiatives, although the adoption of organisation wide Trauma informed models, by their nature, involved leadership buy-in. The Sanctuary Model, in particular, was emphasised as model which targeted key leaders in initial training phases, who then returned to their agency to form a Core Team of representatives across all levels and departments who would act as the primary change agents going forward (Elwyn et al., 2017; Elwyn et al., 2015; Middleton et al., 2015).

Developing policy, procedures and data systems

A number of papers also drew attention to the specific changes made to policies, processes and data systems as part of the implementation process (Lang et al., 2016; Hummer et al., 2010; Caldwell et al. 2014; Akin et al., 2017). The CONCEPT initiative in Connecticut (Lang et al., 2016) involved a multidisciplinary core team which reported directly to the Department for Children and Families (DCF) and provided leadership oversight of planning and implementation. Several subcommittees reported to the core team including data/evaluation, screening/workforce development, policy, and trauma-focused EBP implementation. The policy workgroup developed a standardised policy review tool to modify policies and practice guides to ensure consistency with Trauma informed principles. For example, the Family Assessment and Response (differential response) practice guide was modified to include consideration of the child's and caregiver's exposure to trauma, through assessing the common signs of traumatic stress in children, and assessing the impact of the parent's own trauma on his or her ability to care for the child. At the time publication, nine policies and ten accompanying practice guides had been formally approved and disseminated to staff.

Bryson et al.'s (2017) systematic review of inpatient and youth residential treatment noted that in the therapeutic community model, the environment and culture of the organisation are seen as therapeutic tools themselves. Thus, organisations were encouraged to make changes to the physical environment of the unit to make the treatment space feel safe and welcoming for both patients and staff, to include Trauma informed principle in mission and vision statements and to post these visibly to act as reminders of TIC goals. For example, changes made to physical environment in a paediatric psychiatric hospital included repainting walls with warm colours, placement of decorative throw rugs and plants, and rearrangement of furniture to facilitate increased patient-patient and patient-staff interaction (Borckardt et al., 2011). Among other TIC components, teams were also established for each unit and tasked with reviewing and modifying unit rules and policies to be less restrictive to patients or eliminating unit rules that were too restrictive. Interestingly, a multiple-baseline evaluation with random implementation of intervention components, found that these environmental changes were uniquely associated with a significant reduction in the rates of seclusion and restraint, suggesting that fairly minor and inexpensive changes can make a significant difference.

A case study evaluation of 'Creating Trauma informed Care Environments' curriculum in residential treatment facilities (Hummer et al., 2010), found that knowledge of issues related to trauma and recovery were most clearly articulated in policies and procedures

regarding confidentiality, child and youth rights and responsibilities, and seclusion and restraint policies and procedures (including de-escalation). Policies were also in place to identify child and youth preferences regarding de-escalation and children and youth were informed of the grievance procedures, including how children and youth could contact the state abuse registry. Similarly, in a secure residential unit, the Sanctuary Model was integrated into the resident handbook, treatment plans were changed to reflect TIC principles and signs detailing the seven TIC commitments were posted around the facility (Elwyn et al., 2017). In some units (Hummer et al., 2010; Caldwell; 2014), procedures were changed to include systematic debriefings following staff use of seclusion and restraint, requiring documentation of de-escalation attempts prior to a seclusion or restraint episode, youth debriefing with staff, and staff debriefing on the event and how it might have been prevented.

Goetz & Trujillo's (2012) account of implementing a Patient-Focused Intervention (PFI) Model in a behavioural health services hospital centre for adolescents and adults offered a particularly compelling account of assessment and data-driven procedural changes made to increase patient safety and reduce the use of restraint. Efforts included: the introduction of 'Caring Rounds', a multidisciplinary set of rounds with the specific intent of assessing each patient's feeling of safety, pain control, and medication response; establishing a management and safety committee which analysed monthly data on the use of seclusion and restraint; and daily leadership reviews of seclusion and restraint initiated to involve more staff. Another initiative in a residential addictions treatment agency (Hales et al., 2018) introduced reflective conversations facilitated by a senior advisor and program directors during staff meetings with the aim of reviewing policies, practices and procedures for potential retraumatisation

A qualitative case study evaluation of the TIC implementation process in out-of-home care facilities in three states (Akin et al., 2017), highlighted how embedding screening and assessment in practice required the development of electronic systems to collect and score data as well as policy amendments to facilitate information sharing between agencies. This presented particular challenges and in one state, despite agreement on the value of screening and assessment, resistance to embedding screening data into the state's child welfare information system and integrating data systems was a barrier to collaboration, although this was eventually resolved through stakeholder engagement and piloting a paper-based process for a limited period of time. In another state, competing priorities and simultaneous rollouts of two different screening tools within the child serving system of care posed significant challenges. This

caused significant delay and, eventually, led to the state revising their implementation plans and substituting the SDQ for the CANS to achieve effective information sharing and collaboration.

Engaging with Youth and Families

Engagement with children, youth and caregivers was also an important element of the implementation process in a number of initiatives, although it was not as widespread as it could have been, particularly in state level child welfare initiatives. Service user involvement took a variety of forms: including patients and/or caregivers in training initiatives (Fraser et al., 2014; Holstead et al., 2010); caregiver involvement and systematic debriefing of youth following the use of seclusion or restraint (Hummer et al., 2010; Caldwell et al., 2014); getting service user perspectives on the use of restraint (Holstead et al., 2010; Caldwell, 2014); employing a peer specialist to act as a patient advocate and liaison to the treatment team and administration Goetz & Trujillo (2012); engaging family members and other supportive adults as part of permanence planning for youth in foster care (Hall et al., 2018); engaging psychiatric patients in treatment planning (Borckardt et al., 2011); conducting focus groups with service users as part of a community Trauma informed site assessment (Hendricks et al., 2011); and including service users in leadership teams (Fraser et al., 2014). While Akin et al. (2017) noted that, in the context of an out-of-home care, efforts to engage with service users were largely unsuccessful, Caldwell et al. (2014) highlighted the effective and meaningful use of service user involvement to bring about organisational change. In this initiative youth were invited to share their experiences of restraint with staff, highlighting how restraint resulted in a loss of self-respect and dignity and in feeling less safe when watching peers be restrained. It was reported that this input, together with the involvement of family members, was central to the initiative's success in reducing seclusion and restraint by 67 to 100% across sites.

10.6 Implications for Northern Ireland

Whilst there is a growing body of evidence for the effectiveness of TIC (e.g. Markoff et al., 2005, Muskett, 2014), this review has highlighted a number of research gaps and variety of methodological difficulties. Although the evidence of the positive impact of Trauma informed approaches in a variety of residential settings is fairly consistent, and is developing along positive lines in relation to school-based initiatives, there remains a lack of youth outcome evaluation in relation to large scale, multi-level child welfare initiatives and health-based initiatives. Notable exceptions to this are evaluations of the MCTP initiative in child welfare and the KVC initiative in out-of-home care. Where data is available, the generalisability of study findings are frequently limited by the use of non-randomised designs, lack of a control or comparison, small sample sizes and/

or lack of standardised, validated measurement tools. Evaluation of Trauma informed trainings are especially particularly limited by the preponderance of pre and post-test designs with short follow-up periods and a reliance of self-report measures.

In addition, there is limited evidence of effectiveness for TIC at an organisational or systems level and, where organisation wide initiatives are linked with outcomes, it is generally not possible to isolate which implementation elements contributed to implementation success. This gap is noted elsewhere in the literature and likely reflects the challenges of evaluating whole organisation or systems changes more generally, as there can often be a disconnect between the aims and objectives of systems change and standard evaluation methodologies which largely measure individual level changes (Enshoff et al., 2007; Foster-Fishman & Behrens, 2007; Foster-Fishman et al., 2007). Nonetheless, the overall findings from this review, and others (Purtle et al., 2017; Bryson et al., 2017), suggest that Trauma informed organisational interventions which incorporate multiple components appear to have the most meaningful impacts on service user outcomes.

Although intervention components varied across systems, there was considerable commonality in the extent to which they centred on the implementation domains of workforce development, the provision of trauma focused services and organisational change. Consistency was also evident with regard to implementation components within these domains, although the extent to which they were incorporated within individual initiatives varied considerably. Table 6 summarises the cross-system implementation components identified in this review, offering a framework for developing and benchmarking Trauma informed initiatives within the NI context. Such developments need to acknowledge and build on existing work and recent NI initiatives, such as the NI ACE initiative, Signs of Safety, Think Family etc., providing the foundation for a more comprehensive systemic approach to Trauma informed care across the region. In thinking about Trauma informed initiatives in specific settings, the review also points to a number of particularly comprehensive implementation models with robust evaluation results that could potentially be adapted for use in NI:

- Frontline child welfare - the Massachusetts Child
- Trauma Project (MCTP)
- Outcome of care – the KVC model and the ADOPTS model
- Education – the HEARTS model for schools
- Residential group care, treatment and juvenile justice settings – the Sanctuary model

WORKFORCE DEVELOPMENT

- Training**
- Basic and advanced training based on staff needs
 - Train the Trainer
 - Learning Collaboratives
 - Access to on-going consultation and supervision
-
- Staff Safety and well-being**
- Training in vicarious traumatisation and self-care strategies
 - Access to support services for staff
 - Staff/team debriefing after a significant incident

TRAUMA FOCUSED SERVICES

- Screening and Assessment**
- Where appropriate, selecting a trauma screening tool or trauma focused assessment model and training staff in the use of the model
 - Incorporation of TIC principles into existing data systems or assessment processes
 - The use of TIC screening/assessment and its impact on practice and services is routinely discussed at team meetings and senior management fora
-
- Evidence-based Treatment**
- Increased community treatment capacity before more generic treatment
 - Dissemination of selected EBT treatment models

ORGANISATIONAL CHANGE

- Leadership buy-in strategic planning**
- Leadership training
 - Development of implementation plans
 - Creation of multidisciplinary implementation teams
 - Identification champions
 - Identification of specific goals/targets
 - Identifying organisational preparedness
 - TIC fit with policies and procedures
 - Resources
-
- Collaboration**
- Clear referral pathways
 - Common language and understanding of TIC across systems, staff levels and disciplines
 - Collaborative case conferences/care team meetings
 - Community partnerships
-
- Physical Environment**
- Creating a welcoming environment
 - Establishing initiatives to reduce restraint/seclusion
 - Publicly posted mission statements which highlight commitment to TIC and trauma awareness
 - Creating 'safe spaces' where services users can go to calm down
-
- Service User Involvement**
- Inclusion of youth and/or caregivers in TIC training
 - Incorporating service user perspectives in training
 - Involvement in Trauma informed organisational assessment
 - Involvement in leadership/implementation team
-
- Monitoring and Review**
- Utilising or adapting current systems to monitor progress
 - Routine audit or research to measure progress
 - Regular communication with staff about progress
 - Monitoring model/implementation fidelity

While TIC offers an opportunity to bring purposeful, effective practice coherence across service settings with enhanced outcomes for children and their caregivers, it is recognised that effective implementation of TIC is not without challenges and that these need to be addressed in the development phase of any proposed implementation strategy. Leadership commitment is required from the outset to support organisational level culture and systems change, embedding meaningful service user and practitioner involvement in Trauma informed service design and development, and establishing routine research and evaluation processes to drive change. Reviewing system and organisational level policy and procedures to ensure 'fit' with Trauma informed principles is also required to provide the necessary framework to support changes in service delivery and individual practice.

Evidence from the review highlights that, for routine screening or routine enquiry to be implemented effectively, it needs to be supported by efficient and fit-for-purpose IT and data-sharing systems, and achieve buy-in of all staff through dissemination of a sound theoretical and empirical rationale to underpin the implementation (Quigg et al., 2018). Assessment of the level and availability of evidence-based trauma treatments and Trauma informed support services is another key consideration. Lack of services to provide support to meet identified needs can act as significant barrier to staff engagement. Successful initiatives, particularly at the state-wide level, all incorporated significant efforts to build capacity amongst community mental health and other service providers.

Given that lack of understanding of the experience and impact of trauma (Sweeney et al., 2018), and reluctance to ask about early adversity are identified as barriers to TIC (Huntington et al., 2005; Quigg et al., 2018; Read et al., 2017; Xiao et al., 2016), it is essential to equip the NI workforce with effective, professionally relevant and comprehensive trauma awareness training. The evidence suggests that while one-off training sessions can deliver some gains, staff will maintain interest and more effectively embed TIC in practice if offered repeated supportive opportunities for reflection and learning. TIC represents a significant shift in thinking and practice for many organisations and, to be effective, training needs to account of the 'needs and norms' of specific professional groups. Professional reluctance to shift from dominant biomedical causal models of mental health or normative use of control-orientated coercive practices (such as restraint and seclusion) in group care and justice settings (Sweeney et al., 2018) need to be recognised and addressed in training content. Involving staff in the design and delivery of training content is one of a number of ways this might be achieved.

Additionally, more generic system pressures such as high caseloads, workload pressures, lack of quality supervision, high staff turnover and underfunding all need to be considered in implementation planning and installation as these will mitigate against the sort of relational practice proposed by TIC frameworks and the amount of time staff have to commit to new initiatives (Atwool, 2018; Sweeney et al., 2018). Indeed, time itself is arguably the most important consideration of all. Funders, commissioners and senior managers need to be aware that the kind of whole system change envisaged by TIC will not happen quickly and that, in the words of one author, "allocating process time for the slow and organic changes that must take place to accommodate the new way of practicing should be factored into TIC implementation plans" (Bryson et al., 2017, p. 12).

A. Methods

A systematic search for relevant articles was conducted using the databases: International Bibliography of the Social Sciences (IBSS); Science Citation Index Expanded (SCI-EXPANDED) --1970-present); PsycINFO (2002 - present); Ovid MEDLINE(ALL 1946 to August 31, 2018); SCOPUS; and ERIC. A broad search strategy was used to identify articles using the following terms:

SCOPUS	TITLE-ABS-KEY (("trauma-inform*" OR "trauma inform*" OR "trauma-focus*" OR "trauma-base*" OR "trauma focus*" OR "trauma base*")) AND (LIMIT-TO (DOCTYPE , "ar ") OR LIMIT-TO (DOCTYPE , " ip ")) AND (LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012) OR LIMIT-TO (PUBYEAR , 2011) OR LIMIT-TO (PUBYEAR , 2010) OR LIMIT-TO (PUBYEAR , 2009)) AND (LIMIT-TO (LANGUAGE , "English "))
22/08/18	
MEDLINE	("trauma-inform*" or "trauma inform*" or "trauma-focus*" or "trauma-base*" or "trauma focus*" or "trauma base*").ab. or ("trauma-inform*" or "trauma inform*" or "trauma-focus*" or "trauma-base*" or "trauma focus*" or "trauma base*").ti. or ("trauma-inform*" or "trauma inform*" or "trauma-focus*" or "trauma-base*" or "trauma focus*" or "trauma base*").kw. or ("trauma-inform*" or "trauma inform*" or "trauma-focus*" or "trauma-base*" or "trauma focus*" or "trauma base*").sh. limit to (english language and yr="2009 -Current" and journal article)
22/08/18	
IBSS	((("trauma-inform*" OR "trauma inform*" OR "trauma-focus*" OR "trauma-base*" OR "trauma focus*" OR "trauma base*") OR ("trauma-inform* practice" OR "trauma inform* practice")) Additional limits - Date: After 31 December 2008; Source type: Scholarly Journals
22/08/18	

PSYCHINFO	("trauma-inform*" or "trauma inform*" or "trauma-focus*" or "trauma-base*" or "trauma focus*" or "trauma base*").ab. or ("trauma-inform*" or "trauma inform*" or "trauma-focus*" or "trauma-base*" or "trauma focus*" or "trauma base*").ti. or ("trauma-inform*" or "trauma inform*" or "trauma-focus*" or "trauma-base*" or "trauma focus*" or "trauma base*").mh. 2237 Advanced Display Results More limit 1 to (english language and yr="2009 -Current") limit 2 to journal article
22/08/18	
ERIC	TI ((("trauma-inform*" OR "trauma inform*" OR "trauma-focus*" OR "trauma-base*" OR "trauma focus*" OR "trauma base*"))) OR AB ((("trauma-inform*" OR "trauma inform*" OR "trauma-focus*" OR "trauma-base*" OR "trauma focus*" OR "trauma base*"))) OR KW ((("trauma-inform*" OR "trauma inform*" OR "trauma-focus*" OR "trauma-base*" OR "trauma focus*" OR "trauma base*")))) Limiters - Date Published: 20090101-20181231; Journal or Document: Journal Article (EJ); Language: English Search modes - Boolean/Phrase
22/08/18	
WOS	Indexes=SCI-EXPANDED, SSCI Timespan=2009-2018 (TI=("trauma-inform*" OR "trauma inform*" OR "trauma-focus*" OR "trauma-base*" OR "trauma focus*" OR "trauma base*")) AND LANGUAGE: (English) AND DOCUMENT TYPES: (Article) Indexes=SCI-EXPANDED, SSCI Timespan=2009-2018 (TS=("trauma-inform*" OR "trauma inform*" OR "trauma-focus*" OR "trauma-base*" OR "trauma focus*" OR "trauma base*")) AND LANGUAGE: (English) AND DOCUMENT TYPES: (Article) Indexes=SCI-EXPANDED, SSCI Timespan=2009-2018
22/08/18	

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