Trauma-Informed Care in Primary Care: A Literature Review

Prepared for Kaiser Permanente and the National Council for Behavioral Health
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Evidence strongly supports that trauma is highly prevalent among individuals facing mental health and substance use disorder challenges. In order to achieve the “Triple Aim” of improved individual outcomes, improved population health outcomes, and lowered costs, primary care settings must effectively partner with patients who are managing complex behavioral health challenges. In an effort to prepare the primary care workforce to better address the impacts of trauma, Kaiser Permanente and the National Council for Behavioral Health (National Council) are collaborating to launch the Trauma-Informed Primary Care Practice Transformation Initiative, a three-year project intended to develop, test, and disseminate a scalable, field-informed change package specifically focused on advancing trauma-informed approaches in primary care. The following literature review provides a current synthesis of the relevant research and evidence to support the development and implementation of the change package.

The urgency to advance trauma-informed care (TIC) within primary care settings is widely acknowledged across the health care field. For individuals impacted by trauma, the common stressors inherent in the primary care setting may result in avoidance or overuse of health services and poor management of health conditions. The workforce is also distressed by striving to meet the increasing needs of patients impacted by individual and community trauma in a high demand, high volume environment. In 2015, in an effort to respond to this demand and better prepare primary care and safety net organizations to address trauma, Kaiser Permanente, in collaboration with the National Council and the New York University McSilver Institute for Poverty Policy and Research, facilitated the Trauma-Informed Primary Care Initiative (TIPCI). TIPCI was a pilot program designed to educate and train primary care and safety net organizations to advance trauma-informed approaches and practices and to inform models for replication using a learning community approach.

TIPCI included 14 Federally Qualified Health Centers (FQHC) who each formed a Core Implementation Team (CIT) to participate in the learning community. The CIT served as the bridge between the National Council faculty, the other Learning Community participants, and their organizations. Each CIT identified a cohort of patients to test the TIPCI protocol, selected a trauma-screening tool, and designed a workflow for assessment. The National Council provided technical assistance to the CIT members through a learning community, including a series of individual coaching calls, participant group calls, webinars, in-person meetings, and training on the Seeking Safety counseling model. Organizations completed self-assessments, developed action plans, and were given support to collect and submit data.

Initial results of TIPCI are positive. Program evaluation results show that all of the organizations that completed pre and post organizational self-assessments improved in five domain areas of trauma-informed care organizational practices (77%). Additionally, eight of ten agencies reported that their clients maintained a high treatment adherence (defined as attending at least 70% of appointments with the CIT agency) during the study period. Five of the participating agencies reported improvements in health outcomes among their clients (primarily reducing A1C levels).
clinic reported that 75% of an initial patient cohort was no longer identified as being high-risk as outcomes related to diabetes improved (McSilver Institute for Poverty Policy and Research, 2016). Through the work of the TIPCI, it became clear to Kaiser Permanente and the National Council that systems of primary care and their collaborators need a unifying framework to address trauma and improve the quality of care for patients.

The development and implementation of the change package are natural next steps building off the findings and successes to date in order to establish a guiding framework. This three-year project aims to address a lack of uniformity that has hindered widespread adoption and application of TIC, and to equip primary care providers with methods, tools, and resources, enabling them to effectively partner with patients and staff to achieve individual and community health and wellness. A 12 member, national Practice Transformation Team (PTT) will be convened to develop the change package. Once developed, the change package will be piloted through a learning community comprised of primary care clinics, FQHCs, school-based health centers and/or health centers co-located within behavioral health settings. With the assistance of an independent evaluator, the PTT will monitor both process and outcome measures and evaluate feedback provided by participating learning community groups. This effort will result in a practical toolkit that is specific enough for clinicians and practices to implement and measure progress, and yet generalizable enough to be scaled in multiple settings. Components of the change package will include standardized screening and assessment tools, evidence-based clinical interventions, implementation processes, relevant and replicable outcome measures, and potential critical policy changes. The change package will then be disseminated widely across the primary care field. This project will offer organizations scalable, field-informed, essential methods, tools and resources necessary to advance trauma-informed care.

This literature review provides the current findings supported through research and evidence guiding the development of the change package. To the best of our knowledge, a change package of this kind has not yet been created, thus there is a lack of direct evidence measuring the outcomes of this specific type of intervention on outcomes. However, a large body of relevant research and evidence exists and is discussed in this review that will provide guidance in the development of the change package. This literature review also identifies gaps in the existing body of knowledge specific to trauma-informed care in primary care and makes recommendations for further research in these areas.
The Rationale for Trauma-Informed Care

Trauma comes in many forms and impacts individuals regardless of socio-economic status, race, gender, or geography. The impact that unaddressed trauma has on individuals is long lasting and affects development, wellness, and stress response across the lifetime. Trauma can be experienced in many ways and includes physical, sexual, and emotional abuse; interpersonal violence; impacts from natural and man-made disasters; neglect; serious illness; surviving or witnessing violence; historical trauma; bullying; military trauma and war; and forced displacement, among many others (Substance Abuse and Mental Health Services Administration [SAMHSA], 2016). While the prevalence of trauma among populations varies due to the breadth of the different types of trauma, one study found that 83% of patients receiving services in 14 New England primary care clinics had experienced at least one traumatic event in their lifetime (Bruce et al., 2001). Individuals who have experienced trauma have been shown to be more likely to utilize costly health care services compared to individuals without a trauma history (Raphael, Zhang, Liu, & Giardino, 2009). Evidence supports that individuals who have experienced trauma might not seek care directly from behavioral health professionals, necessitating that primary care providers are equipped to appropriately identify and address trauma among their treatment population (National Institute of Mental Health, 2007). Addressing trauma in the primary care setting is critical to improve individual health outcomes, population health, and reduce costs of care. The following section provides guidance on the underlying frameworks and foundational science that supports the need to address trauma in primary care settings.
Defining Trauma

Multiple definitions of trauma exist in the literature. For the purposes of this review, we rely on the definition developed and utilized by SAMHSA that states:

Trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically or 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 (2014, p.7).

Further, SAMHSA (2014) defines trauma-informed care as, “an organizational structure and treatment framework that involves understanding, recognizing, and responding to the effects of all types of trauma” (p. 9). SAMHSA posits that trauma-informed care is grounded in four assumptions, known collectively as the four Rs.

A program, organization, or system that is trauma-informed:

1. **Realizes** the widespread impact of trauma and understands potential paths for recovery;
2. **Recognizes** the signs and symptoms of trauma in clients, families, staff, and others involved with the system;
3. **Responds** by fully integrating knowledge about trauma into policies, procedures, and practices; and
4. **Seeks to actively resist** re-traumatization (2014, p. 9).

Personal experience of violence including sexual abuse, physical abuse, severe neglect, loss, and/or the witnessing of violence, terrorism, urban violence, war/combat, motor vehicle accidents, and disasters are among the events that may result in a person feeling shocked, terrified, helpless, and/or overwhelms a person's ability to cope. A person's experience of trauma is subjective and unique to the individual. When exposed to a potentially traumatic event, one person may not be affected, while another may go on to develop significant post-traumatic stress symptoms. Thus, exposure to trauma will result in a wide variety of symptoms that may or may not be immediately recognizable as sequelae of a traumatic experience (SAMHSA, 2014).

Foundational Studies

There are several oft-cited foundational studies that have shaped the current understanding of trauma and its impacts in early-life and across the lifespan. One of the major studies identifying the impact early childhood trauma has on long-term health outcomes is the Adverse Childhood Experiences (ACE) study originally published in 1998. Researchers have since replicated and expanded on the findings of the ACE study leading to a better understanding of the correlation between trauma, behaviors, and the biological pathways in which trauma is mediated in our bodies (Centers for Disease Control and Prevention [CDC], 2015).
The Adverse Childhood Experiences (ACE) study.

Between 1995 and 1997, Kaiser Permanente, in collaboration with the U.S. Centers for Disease Control and Prevention (CDC), assessed over 17,000 individuals on the effects of experiencing a psychologically traumatic event during the first 18 years of life. The ACE study is now in its 19th year and has been replicated by hundreds of independent researchers with well over one million study participants. Major findings from the initial study showed a high prevalence of ACEs in the population and a strong correlation between experiencing a childhood adverse event and having a poor health outcome later in life (CDC, 2015).

The study methodology included embedding 10 ‘yes’ or ‘no’ questions about adverse childhood events within a larger health questionnaire that the patient took home to fill out prior to their medical appointment. If a person answered ‘yes’ to one of the ten questions, the ACE score was one, if he or she answered yes to two, the ACE score was two, etc. The researchers found that a third of the population had an ACE score of zero. If any one category was experienced, however, there was an 87% likelihood that at least one additional category was present. One in six individuals had an ACE score of four or more and one in nine had an ACE score of five or more. In the 1990s Dr. Felitti and his team concluded that approximately 50% of the general population could be assumed to have experienced at least one adverse event in childhood. More recent findings from a study conducted by the CDC in 2010 affirmed Felitti’s conclusion finding that 59% of the general population has experienced at least one adverse childhood experience before the age of 18 (CDC, 2010). Given the 87% likelihood that at least one additional category of trauma has been experienced, the numbers in the general population become staggering to ponder. This data supports Dr. Felitti’s statement, “Thus, every physician will see several patients with high ACE scores each day” (Nakazawa, 2015, p. 113).

In addition to uncovering the prevalence of ACEs in the study population, the study also revealed a relationship between ACEs and health outcomes. A positive correlation between ACE scores and poor health outcomes resulted in higher rates of depression, suicide attempts, hallucinations, drug abuse, memory impairment, smoking, liver disease, heart disease, and chronic obstructive pulmonary disease (COPD) among individuals with ACEs. For most categories of disease or poor health outcome, each additional ACE experienced increased an individual's risk of having the disease (Felitti et al., 1998) (see Table 1).

Table 1. ACE-Related Odds of Having a Physical Health Condition (Felitti et al., 1998, pp. 253-255).

<table>
<thead>
<tr>
<th>Health Condition</th>
<th>0 ACEs</th>
<th>1 ACE</th>
<th>2 ACEs</th>
<th>3 ACEs</th>
<th>4+ ACEs</th>
</tr>
</thead>
</table>

Compared with people with zero ACEs, those with four categories of ACEs had a 240% greater risk of hepatitis; were 390% more likely to have COPD; and 250% more likely to have a sexually-transmitted disease. They were twice as likely to be smokers, 12 times more likely to have attempted suicide, seven times more likely to misuse alcohol, and 10 times more likely to have injected street drugs. People with high ACE scores are more likely to have more marriages, more broken bones, more drug prescriptions, more depression, more auto-immune diseases, and more work absences (Felitti et al., 1998).

The ACE study findings are startling, showing the direct correlation between childhood trauma and long-term consequences including chronic disease and shortened lifespan. As mentioned above, this study was a catalyst for the trauma-informed movement and led to further inquiries into the way trauma impacts us.

**The impact of trauma on neurobiology.**

The original ACE study identified the prevalence of trauma, as well as the correlation trauma has to poor health outcomes. Researchers, building off these findings, are studying the biological pathways that mediate trauma impacting our long-term health outcomes. Research findings indicate that our bodies’ ability to regulate and respond to stress plays a key role in long-term health.
humans have evolved biological pathways to respond to threats or stressors, different types of stress exist leading to different long-term outcomes. Our bodies react differently to short-term, acute stress than to chronic or “toxic” stress and our bodies’ ability to respond to stress changes based on exposure to toxic stress over time.

The American Academy of Pediatrics (AAP) (2012) identifies three types of stress responses and their impacts on body systems: positive, tolerable, and toxic. Positive stress responses result in brief increases in heart rate and mild elevations in hormone levels. An example of an early childhood positive stress response would be reacting to an immunization.

A tolerable stress response occurs when an individual faces a threat or challenge that results in the body’s systems reacting to stress for a longer time period, for example, losing a loved one. This reaction can be mitigated by relationships. In contrast, a toxic stress response occurs when:

A child experiences strong, frequent, and/or prolonged adversity—such as physical or emotional abuse, chronic neglect, caregiver substance abuse or mental illness, exposure to violence, and/or the accumulated burdens of family economic hardship—without adequate adult support. This kind of prolonged activation of the stress response systems can disrupt the development of brain architecture and other organ systems, and increase the risk for stress-related disease and cognitive impairment, well into the adult years (American Academy of Pediatrics [AAP] Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, and Section on Developmental and Behavioral Pediatrics, 2012, p. e225).

The work of Bruce Perry, PhD, MD, senior research fellow at The Child Trauma Academy, analyzes the relationship between trauma, health behaviors, and negative health events, complementing the work of Anda et al. (2008) and Felitti (2010). Perry’s findings support the American Academy of Pediatrics' Committees’ statement on the impacts of chronic toxic stress. Perry argues that experiences of abuse and neglect (trauma) create significant neurological damage that, if not repaired, carries with us throughout our lives. Perry points to the impairment of the autonomic nervous system (ANS) as evidence of neurological damage. Among its many functions, the ANS is commonly understood as controlling our “flight or fight” stress response. The ANS affects all domains of functioning, including emotional, behavioral, interpersonal, and cognitive throughout a person’s lifetime (Perry, 2002).

Table 2, below, adapted from Perry and Szalavitz’s book, The Boy Who Was Raised as a Dog: And Other Stories from a Child Psychiatrist’s Notebook—What Traumatized Children Can Teach Us about Loss, Love and Healing (2007), shows behavioral corollaries to relevant parts of the brain. As discussed above, neural systems are state-dependent, meaning that they adapt to stressors or perceived threats. Perry’s research supports that our neurological systems not only react, but respond, according to an arousal continuum. Stages of arousal include calm, alert, alarm, fear and terror. As an individual moves along the continuum different parts of the brain become activated while others shut down. Perry and his colleagues state:
The more threatened, the more ‘primitive’ (or regressed) thinking and behaving becomes. An individual in a state of alarm will be less capable of concentrating, more anxious and more attentive to “non-verbal” cues, such as tone of voice, body posture, and facial expressions (Perry, B. D., Griffin, Davis, Perry, J. A., & Perry, R. D., 2015).

A person’s place on the arousal continuum affects their cognition and their sense of time, greatly impacting their decision-making abilities. Perry and his colleagues note that youth who are traumatized will often be in a state of low-level fear. (Perry et al., 2015). Identifying where an individual is on the arousal continuum can help practitioners better understand a patient’s behavior and inform the creation of appropriate, effective treatment plans.

Table 2. The relationship between internal state, cognitive style, brain systems, and sense of time (Perry and Szalavitz, 2007)

<table>
<thead>
<tr>
<th>Internal state</th>
<th>Calm</th>
<th>Alert</th>
<th>Alarm</th>
<th>Fear</th>
<th>Terror</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive style</td>
<td>Abstract</td>
<td>Concrete</td>
<td>Emotional</td>
<td>Reactive</td>
<td>Reflexive</td>
</tr>
<tr>
<td>Regulating brain region</td>
<td>NEOCORTEX Cortex</td>
<td>CORTEX Limbic</td>
<td>LIMBIC Midbrain</td>
<td>MIDBRAIN Brainstem</td>
<td>BRAINSTEM Autonomic</td>
</tr>
<tr>
<td>Dissociative continuum</td>
<td>REST</td>
<td>AVOIDANCE</td>
<td>COMPLIANCE</td>
<td>DISOSSCATION</td>
<td>FAINTING</td>
</tr>
<tr>
<td>Arousal continuum</td>
<td>REST</td>
<td>VIGILANCE</td>
<td>RESISTANCE</td>
<td>DEFIANCE</td>
<td>AGGRESSION</td>
</tr>
<tr>
<td>Sense of time</td>
<td>EXTENDED FUTURE</td>
<td>DAYS Hours</td>
<td>HOURS Minutes</td>
<td>MINUTES Seconds</td>
<td>NO SENSE OF TIME</td>
</tr>
</tbody>
</table>

Bessel van der Kolk, MD, professor of psychiatry at Boston University School of Medicine, in an interview (2013), put the impact of trauma on the body very simply when he said, “Trauma is about an organism that is scared. Trauma affects every system in one's organism. It affects your immune system. It affects your heart rate. It affects your bowels. Every system in your body becomes a traumatized system” (The National Institute for the Clinical Application of Behavioral Medicine, 2013, p. 13). A traumatized human system is often referred to as dysregulated. For this paper, dysregulation is defined broadly as impairment in the regulation of a metabolic, physiological, or psychological process.
Stephen Porges, MD (2011) also studied the physiological origins of dysregulation due to trauma. He contends that, unlike lower mammals, human nervous systems are more advanced, allowing us to regulate our fear responses socially in addition to the typical fight, flight, or freeze responses of other mammals. Porges found, however, that trauma impacts our ability to use social cues to mitigate fear (2011). To state it simply, the information we obtain through our senses, including what our instincts tell us, provides information to our nervous system about our sense of safety. If we do not feel safe, we look to our social environment, including the people closest to us to help modulate our fear response. Generally, when a person with normal neurological development enters a situation in which they are unsure, they look to those around them to determine the level of alarm that is appropriate. Seeing others calm, they too are calmed. Unfortunately, individuals who have experienced trauma have stress response systems that do not function properly due to chronic activation as described above. Consequently, they also miss social cues that could result in a misalignment between situation and response. When this person enters a situation in which they are unsure, they are overwhelmed with physical responses, such as an elevated heart rate, asynchronous breathing, and muscle tightening. A cascade of physiological responses then ensues, in turn, launching the person into more primitive nervous system responses, namely fight, flee, or freeze, which impedes their ability to utilize higher brain processes.

The existing body of literature analyzing the impacts of trauma on our bodies’ systems and long-term health outcomes is growing. The importance of understanding these effects is especially important in light of the impact trauma has on care utilization discussed in the section below.

**Care Utilization Patterns**

Research supports that individuals who have experienced trauma utilize services at higher rates than the general population. Additionally, survivors of trauma often seek services in primary care settings rather than behavioral health settings. The following section discusses studies demonstrating the patterns of utilization exhibited by trauma survivors.

**Trauma survivors’ provider selection.**

Studies show that trauma survivors utilize primary care services more often than specialized behavioral health services. The National Institute of Mental Health (2007), using data from the World Health Organization, found that:

Most of those who sought care for mental disorders received help from the general medical sector (primary care doctors, nurses) rather than specialized mental health services (psychiatrists, psychologists), religious or community counselors, or complementary and alternative medicine providers (including traditional healers). Among those receiving services, a substantial number of survey respondents reported that they did not receive minimally adequate services. The survey defines minimally adequate services as at least eight visits to any service sector, or being in ongoing treatment at the time of the interview,
or receiving a medication for at least one month with four or more visits to a medical professional over a 12-month period (paragraph 6).

Thus, primary care offers the unique opportunity to address both acute and chronic health conditions and, perhaps more importantly, address health conditions upstream and prevent unnecessary penetration into the health care system.

Another study by Marsac, Cirili, Kassam-Adams, and Winston (2011) analyzed care utilization patterns of 243 children who had experienced a traffic-related injury resulting in hospitalization. The researchers analyzed the type of care sought by parents for their children after discharge and found that parents overwhelmingly brought their children back to primary care for non-medical support rather than seeking comfort and help from other sources. This behavior increased proportionately to the parent’s distress rather than distress indicated by the injured child. One researcher explained this phenomenon, “distressed survivors . . . may avoid mental health treatment that might focus on traumatic reminders, and instead these individuals may seek health care (and support) from primary care providers for physical health complaints” (Polusny et. al, 2008, p.80).

Trauma survivors seek care in primary care settings for behavioral health related issues for a variety of reasons and often present physical symptoms emanating from underlying traumas. It is important that primary care providers are well-equipped to identify and understand a symptomatic presentation that might include trauma.

**Care utilization rates of trauma survivors.**

Studies support that trauma survivors utilize care at higher rates than the general population. A study by Mills, Hoof, Baur, and McFarlane (2012) found that when determinants of seeking care from any health professional were examined, the general level of distress, rather than any specific disorder or disease, was the greatest predictor of service use. Mills et al. followed 806 children over 20 years to determine need, enabling factors, and predisposing factors, including trauma, associated with the use of health services. They found that the levels of service use for those with affective or anxiety disorders were “considerably higher than for the population” (p. 518). Based on these findings, it is logical to assume individuals who have suffered trauma, and therefore face higher levels of stress would be likely to have higher utilization of care rates. Mills et al. also found that individuals studied were more likely to seek care from primary care settings rather than behavioral health supporting the findings of the studies discussed above (2012).

In another study analyzing the utilization rates of 432 Medicaid-eligible mother-child dyads, Holland et al. found that high distress reports of mothers resulted in high, costly healthcare utilization for children (2012). Further, high distress of the mother resulted in decreased prevention-related activities on behalf of the child. The researchers noted that the children in their study had high rates of emergency department visits and hospitalizations and low rates of preventive visits compared to the U.S. general pediatric population.
When discussing the results of this study, the impacts of poverty should not be overlooked. Poverty has been shown to increase the risk of family stress, child abuse and neglect, substance misuse, mental health challenges, and domestic violence (Wilson, 2005). Those in poverty tend to live near one another, clustering in neighborhoods and regions. High concentrations of poverty are associated with higher crime rates, underperforming schools, poor housing and health conditions, as well as limited access to services and job opportunities. Lack of access to services, increased exposure to violence, and a higher risk of victimization that exists in these communities often results in greater potential for experiencing trauma and re-traumatization among residents (Kneebone, Nadeau & Berube, 2011). Poverty can present significant parenting stressors as well. In another study examining parental stress and healthcare utilization, the investigators, using the National Survey of Children’s Health, again found that among 86,895 participants, there was a significant relationship between high parenting stress and pediatric emergency department utilization (Raphael et al., 2009).

**Underutilization of services.**

Seemingly paradoxical, while evidence supports that trauma survivors have higher utilization rates for services, the evidence also supports that they underutilize and have a lack of access to other services.

One study analyzing mental health service utilization after experiencing a physical trauma found that 74% of individuals who met screening criteria for PTSD or depression at a 6-month follow-up interview had not received mental health services (Wong, Schell, Marshall, Jaycox, Hambarsoomians, & Belzberg, 2009). Researchers of this study conducted 6 and 12-month interviews with 462 study participants at four trauma centers in the Los Angeles area. The study participants were adults who had suffered a physical trauma. The researchers analyzed symptoms of depression and PTSD, alcohol consumption, distress, physician referral and mental health service utilization. The researchers found that the utilization of mental health services was very low, failing to meet the need for mental health services based on the screening data. Only 26% of individuals who had an objective need for services had received mental health services at their 12-month interview. The researchers of this study found that a physician referral was the most important factor in predicting whether individuals received mental health care. Individuals who received a physician referral were eight times more likely to get mental health services (Wong et al, 2009).

In another study, Becker et al. analyzed characteristics and utilization patterns of a population of 2,729 women with co-occurring psychiatric diagnoses and trauma histories (2005). The researchers found that the study population were high utilizers of certain services, yet were in need of other critical services. They found that 20.5% of the study population were hospitalized; 54.5% were in a residential treatment program; 35.9% were in the emergency department; 60% had been in a medical clinic and 21.7% received detoxification services in the three months prior to the study. Despite these high rates of service utilization, researchers found that 40% of the study population reported they did not get the services they needed. The top six services most frequented reported
as needed included: mental health treatment; help dealing with trauma issues or trauma treatment; assistance obtaining benefits; medical services; help with a legal problem; and substance abuse treatment (Becker et al., 2005).

In order to better understand the reasons why trauma survivors do not obtain certain services, Kantor, Knefel, and Leuger-Schuster conducted a literature review analyzing findings of 36 studies (quantitative, qualitative and mixed methods) analyzing perceived barriers of utilizing mental health services among trauma survivors (2017). Numerous key themes emerged among the qualitative studies regarding barriers including: low mental health literacy; lack of access to services or language barrier; concerns related to stigma, shame and rejection; lack of knowledge and treatment-related doubts; trauma specific barriers (e.g., did not want to talk about trauma); expenses; mistrust and concerns about confidentiality; alternative ways of dealing with mental health problems; fear of negative social consequences (e.g., impact on career); lack of encouragement to seek professional help; negative experiences with professional help; prioritizing the needs of others; among others (p.60). The findings from the quantitative studies reviewed supported the themes found among the qualitative studies. The following key barriers themes are ranked in order of numbers of times they were cited in the literature: concerns related to stigma, shame and rejection; fear of negative social consequences; alternative ways of dealing with mental health problems; lack of knowledge and treatment-related doubts; other; expenses; mistrust and concerns about confidentiality; time constraints; low mental health literacy; availability/resources; lack of encouragement to seek professional help; prioritizing needs of others; trauma-specific barriers; and negative experiences with professional help (p.63).

Because the literature supports that trauma survivors are both high utilizers of certain services and under-utilizers of other services, it is imperative that providers understand the factors influencing care utilization among this population. As demonstrated by Wong et al., primary care providers can play a critical role in assisting trauma survivors in obtaining the services that will help them recover best (2009).

Legislative Efforts to Address Trauma

Efforts to improve our nation's healthcare system are not new, as advocates have been fighting for reforms for over a century. However, since the passage of the Patient Protection and Affordable Care Act (ACA) in 2010, political efforts to improve care while containing costs has been at the forefront of a national debate. Legislators, advocates, and lobbyists have attempted to enact numerous pieces of legislation since the ACA in order to enhance or repeal its provisions. This includes many efforts to strengthen care for individuals with behavioral health challenges including establishing integrated and holistic care settings.

In 2013, the Excellence in Mental Health Act established trauma-informed care as a criterion for certification as a Certified Community Behavioral Health Clinic (CCBHC). Further, the Excellence in Mental Health Act required CCBHCs to engage in partnerships with a range of health system
partners, from primary care to hospitals, Veterans Affairs centers, and more (National Council for Behavioral Health, 2015). This was a watershed moment for trauma-informed care in our country as this was the first-time trauma-informed care had been a nationally codified essential for good patient care.

As demonstrated by the evidence discussed in this section there are numerous factors providing a strong rationale to better equip primary care providers to identify and treat trauma among their patients. The high prevalence of trauma in primary care populations coupled with trauma’s long-term negative impacts across the lifespan, if left unaddressed, results not only in poorer individual and population health outcomes, but higher utilization of costly care and services. A national recognition to improve care for individuals while improving the efficiency of our healthcare system has been nationally discussed since the introduction of the ACA in 2010 and trauma-informed approaches have been recently identified as an essential component in achieving those goals.
Supporting Frameworks of Trauma-Informed Care

As discussed in the introduction, there is a lack of specific evidence and research directly related to the implementation of trauma-informed care in primary care; however, this body of research is emerging and is discussed below. Furthermore, relevant studies and recommendations do exist that can be applied to the implementation of trauma-informed care in primary care settings. These include models of care for specific symptoms or illnesses and models of care for specific populations. Therefore, the three primary supporting frameworks discussed in this section include: trauma-informed care implementation in primary care (limited sources); models of care for specific symptoms and models of care for specific populations.

Diagram 1. Supporting frameworks of a Trauma-Informed Care in Primary Care Change Package

To date, there is no comprehensive model or best-practice for trauma-informed care implementation in primary care. There is a distinct gap in information that synthesizes survivors’ collective experience in primary care; the subsequent recommendations about how to effectively treat survivors; and what model to use to implement changes in practice to account for the prevalence of survivors in a practice. A trauma-informed care model that synthesizes care for a trauma survivor does not exist. As of 2015, a systematic review of the literature specific to trauma-informed care in primary care settings found only 16 empirical studies (Reeves, 2015). Reeves’ (2015) review of the literature was specific to midwifery, gynecology, obstetrics, and general primary care and was limited to patients who experienced sexual or physical abuse. No studies addressed implementation specifically. Studies to date have mainly focused on psychological trauma within specific populations such as veterans or children, or the treatment of the symptoms of trauma or underlying traumatic event. This includes domestic violence, sexual abuse, and depression.
Even though the studies discussed above are limited in their application to the creation of the change package, they do provide relevant information to guide its development. Additionally, there are chronic care models to address depression (Katzelnick, Von Korff, Chung, Provost, & Wagner, 2005) and key ingredients for successful implementation of trauma-informed care (Menschner & Maul, 2006; SAMHSA, 2014; Fallot & Harris, 2001) that can be used to inform the development of an effective implementation approach.

**Models of Care for Specific Symptoms**

As mentioned above, there are several studies focused on the implementation of models to address specific symptoms or conditions within the primary care settings. One such model, discussed here, focused on addressing depression. Katzelnick, Von Korff, Chung, Provost, and Wagner (2005), undertook a change process to determine if implementation of a chronic care model could produce positive outcomes for patients experiencing depression. They utilized a change process advanced by the Institute for Health Improvement that relied on Wagner's Chronic Disease Management Model (Wagner, 1998). The six components of the chronic care model focused on addressing depression are:

1. **Clinical Information Systems**: Establishing a patient registry is essential for longitudinal follow-up. The registry needs to provide data on both patient and population levels. Feedback from the information system helps inform care for individual patients.

2. **Practice Redesign**: Systems that are reactive are redesigned to be proactive keeping the patient as healthy as possible. It involves clearly defined roles for all providers of care. Providers usually work together as a team.

3. **Decision Support**: This starts with explicit treatment guidelines and ongoing interactive continuing medical education activities. It also includes collaboration between specialists and primary care providers.

4. **Self-Management**: This includes more than patient education. The goal is for clinicians and patients to work together to define problems, set priorities, establish goals and create treatment plans.

5. **Community Resources and Policies**: Can support or expand a health system's care. Includes community policies, such as insurance benefits and pharmaceutical samples.

6. **Health System**: Includes senior leadership support and the inclusion of the model into business plans and financial planning. Important that system incentives support the model.

In this study, primary care provider teams paid to participate in a learning collaborative in which they received three learning sessions with experts in the field of depression or change, and learned the proper use of depression screening tools and the Plan-Do-Study-Act method of rapid change. Key staff from each site also had access to faculty through email, conference calls, and monthly reports. Participants also received a toolkit containing depression screening tools, medication management information, and patient education and self-management materials. Finally, participants were provided a train-the-trainer model.
Findings can be summarized in two major areas. The first area includes results about processes that were effective for implementation in the participating medical clinics. The elements that proved effective included: faculty developing key concepts that were depression specific actions for improving care thus framing the change for all participating clinics; the provision of depression-specific diagnostic tools; participant access to training on the screening tools and basic concepts; and the train-the-trainer models. Additionally, the Plan-Do-Study-Act (PDSA) cycles including the three fundamental questions reflected in Diagram 2 were noted as an effective element.


The second area of findings of the Katzelnick et al. (2005) study included processes that positively affected patient outcomes. These processes included: establishing and maintaining a patient registry; care coordination; diagnostic assessment; and pro-active follow-up. Results of the study were promising, in that 56.1% of the patients had a 50% improvement in depression severity. Further, 20 of the 23 teams completed the change process (Katzelnick et al., 2005).

Recommendations for Care of Specific Populations

As discussed above, the existing literature provides research to better understand implementing models to address specific symptoms or conditions as well as to better address specific populations. The following section discusses recommendations specific for children, survivors of domestic violence, and survivors of sexual abuse.
Children.

Dr. Nadine Burke Harris has a large body of work in peer-reviewed medical journals as well as among several media outlets focusing on the negative effects of adversity among children. In a study published in 2011, she and her colleagues found a relationship between adversity and two factors: behavior problems and obesity (Burke, Hellman, Scott, Weems, & Carrion, 2011). In a more recent study, Burke and colleagues sought to determine the mechanism by which adversity negatively affects children. Bucci, Marques, Oh, and Burke's (2016) key findings state,

When a child is exposed to stressors, such as early life adversity, the body's natural stress response can become maladaptive or toxic to the body. . . the toxic stress response results from a disruption of the circuitry between neuroendocrine and immune systems, and it affects multiple biological systems, laying the foundation for long-term health outcomes (p. 403).

Following the publication of these findings, the AAP published clear steps to begin addressing adversity in medical settings. As discussed in an earlier section, evidence supports that unless substantial remediating experiences occur in the life of a child exposed to adversity, it is likely that as that child grows into adulthood, the effects of toxic stress will remain. The focus of the AAP work is specific to screening and assessment of trauma. However, their recommendations have broader implications for implementation (AAP, 2014):

To be successful in implementing activities related to identification and treatment of exposure to trauma, a practice needs:

- A champion who recognizes the importance of the issue and is able and willing to move it forward
- A significant number of staff, including other clinicians and front office and back office staff, who are willing and ready to change
- A practice environment that supports open, honest questions, dialogue, feedback, and confidentiality
- Opportunities to educate and train staff prior to and during implementation
- An established goal or vision: what do you want to accomplish?
- Financial resources available to support practice change (p. 3)

The AAP further addresses staff readiness with these specific reminders:

Physicians and all levels of staff need to actively acquire new skills and frameworks to identify and respond to ACEs and trauma as successfully as possible, including:

- Understanding that listening is therapeutic.
- Making the connection between the emotional brain and the thinking brain is the first step toward healing and integration.
Physicians often carry the mind-set of needing to make all things right, right now. Another approach to consider is focusing on what solutions . . . patients, and families can come up with for addressing their own challenges.

Self-care is so important; this is difficult work. Put your own oxygen mask on first, before helping others.

This is not something to be done in isolation. The [patient’s] health is dependent on multiple systems working together. Find like-minded partners in your community for support for you and the [patient].

Your [patient] can be a great resource for you. Consider asking them what they would like to see in the practice to address these issues. This could even be formalized with the development of a [patient] advisory group. (p. 3)

Survivors of domestic violence.

The Academy on Violence and Abuse (2011) published a set of competency guidelines for health professionals who serve patients that experienced violence. The competencies are comprehensive and bear reviewing. What follows are requirements for individual learners. Learners should be able to:

- Demonstrate general knowledge of violence and abuse.
- Demonstrate clinical skills appropriate to one’s profession and specialty including the ability to identify, assess, intervene and prevent violence and abuse.
- Communicate effectively with the patient/client and family.
- Communicate effectively with the physical and behavioral health care team.
- Intervene to promote safety and reduce vulnerability.
- Recognize the individual and cultural variation in relationships and distinguish healthy from abusive patterns.
- Identify and assess relationship health.
- Know legal issues in treating and reporting family violence that apply to one’s profession in the jurisdiction of practice.
- Know the ethical requirements of one’s profession regarding violence and abuse.
- Engage in multi-disciplinary collaboration and outreach in response to violence and abuse.
- Practice effective self-care.
- Obtain the training and skills necessary to advance the field.
- Apply the concept of systems-based practice. (Academy on Violence and Abuse, 2011, p. 11-16)

These competencies would be highly transferable and applicable to the practitioner who treats survivors of trauma. They may be considered for revision and adoption in a trauma-informed practice.
Survivors of sexual abuse.

Havig (2008) conducted a systematic review of patients’ experience in health care. She specifically addressed the experiences of those with a history of childhood sexual abuse. This review outlined overarching lessons learned from separate studies conducted by 23 researchers. Many of the suggestions provided in this article are applicable for those with histories of trauma, regardless of the type. The researcher distilled the articles into four themes related to the experience of medical exams and care interactions: safety and privacy, informing before performing, triggers and trauma reactions, and flexibility of care. The list of 22 items below represent these themes. Of primary consideration, researchers asked providers to maintain a keen sense of the power differential that is present within interactions between patients and providers. The suggestions were:

1. Provide health care provider continuity or assist the patient in finding a sensitive provider
2. Inform the patient of the procedure before performing it
3. Ask permission
4. Omit unnecessary procedures
5. Be collaborative when making referrals
6. Be accountable for your mistakes as a physician
7. Be alert to unspoken signs of distress
8. Assume patient may dissociate and write information down for those who do
9. Prepare for patient flashbacks
10. Delay invasive procedures until necessary
11. Show patient exam equipment
12. Have a third person present
13. Understand that survivors may be ambivalent about their health
14. Coordinate care and make decisions in collaboration with the patient
15. Offer provider gender options
16. Recognize and respond to trigger reactions
17. Enhance privacy with walled rooms rather than curtains, gowns rather than paper drapes
18. Demonstrate sensitivity to disrobing, touch and body-positioning issues, i.e. ask and warn before touching a patient each time
19. Offer same-day appointments that allow for patient readiness
20. Allow for breaks
21. Do check-ins
22. Create a “stop” signal for the patient to use, if needed.

Teram, Stalker, Hovey, Schachter, and Lasiuk (2006) noted the gender inequity present in research pertaining to sexual abuse in that nearly all samples consisted of females. They argue that though men and woman share similar fears about encounters with physicians, the reception men receive upon disclosure of sexual abuse is often quite harmful and retraumatizing. Their research
participants cited incidences of physicians suggesting that the underage male was just experimenting with his sexuality if he reports sexual abuse by an older female. Others reported assumptions of homosexuality by professionals when males disclosed abuse by other males. The authors suggest that sensitive providers should make special efforts toward inclusion of males with any messages or inquiries about abuse, such as “men and women who have been victimized as children are welcome here.” (Teram, Stalker, Hovey, Schachter & Lasiuk, 2006, p. 500).

*trauma-informed care does not encourage the use of the word ‘victim’

**Health Equity**

Striving for health equity is a core tenet of a trauma-informed care approach. It is widely understood that the disparities in health outcomes that continue to persist in the U. S. and elsewhere are due to racial, social, and economic inequalities that disproportionately advantage certain groups while harming other groups. The topic of health equity is deserving of inquiry and discussion far beyond the scope of this paper; however, this section will provide foundational information on this topic, resources for further investigation and resources for implementation.

**Defining health equity.**

Public health practitioners often use term health equity, however, its meaning can vary across different groups. Among organizations and projects, it is important to have a common understanding on its definition in order to apply interventions and efforts to achieving equity-related goals as well as establish metrics to measure progress. A review of the literature reveals that the definition of health equity differs depending on the source. This should be taken into consideration in the development of trauma-informed materials related to health equity so that a common definition can be agreed upon and used.

Healthy People 2020 defines health equity as:

Attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities (2017, para. 5).

The Robert Wood Johnson Foundation defines health equity in a slightly different way,

Health equity means that everyone has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care (2017, p. 2).

While both definitions focus on the attainment of health equity, they differ in several ways. The Healthy People 2020 definition explicitly states that inequalities are avoidable, while the Robert Wood Johnson Foundation does not make this direct assertion (though it could be argued that this is
implied). Additionally, the Robert Wood Johnson Foundation definition is focused on actionable steps in order to obtain health equity, while the Healthy People 2020 definition is not as specific. While both definitions are similar in spirit, they do differ. For organizations applying a health equity focus, it is important that the stakeholders involved understand the goals in which they are working toward.

**Social determinants of health.**

Social determinants of health are the driving forces that result in health inequities. These include employment, income, housing, transportation, child care, education, and discrimination. The social determinants of health are the conditions of where people “live, work, learn and play.” (Robert Wood Johnson Foundation [RWJF], 2017, p. 14). These factors happen largely outside of the health care system yet are estimated to contribute up to 80% of our health status (County Health Rankings, 2017). Alarming health disparities that result from the social determinants are seen across the country. For example, in the City of Baltimore there is a more than a 20-year difference in life expectancy between two adjacent neighborhoods (Baltimore City Health Department, 2017). Additionally, in the U.S. infants born to black women are more than twice as likely to die in their first year than infants born to white women (Kaiser Family Foundation, 2015).

The ways in which social determinants of health impact our health status are complex and varied. Social determinants of health impact our health directly and indirectly. The experience of inequality is in and of itself a trauma and thus a stressor. Everyday experiences of racism and discrimination affect our stress-response systems in the same manner experiencing other types of trauma does, as described in an earlier section. Social determinants of health also impact our health outcomes indirectly due to limiting access to education, employment, medical care, and other opportunities and resources that impact our health (RWJF, 2017).

**Impact of racism.**

There is a growing body of research demonstrating the impact racism has on persons of color. This research provides explanations and theories linking racism and trauma and calls for new approaches to providing care to individuals who have suffered in this way (Lebron et al., 2015). Individuals and groups suffer not only due to overt acts of racism and discrimination, but research supports that the legacy of slavery and institutionalized racism is passed on to generations in the form of historical trauma. Historical trauma has resulted in a range of mental health and physical health disparities. The term “Post Traumatic Slave Syndrome” developed by Dr. Joy DeGruy Leary describes how enslaved persons have adapted their attitudes and behaviors in order to survive and how the historical influence of slavery has been passed onto future generations. In addition to formally identifying this type of trauma experienced by individuals, there have been calls to add traumatic experiences due to oppression to the DSM (Lebron et al.).
Cultural competency and health literacy.

Providing care in a manner that is understood by the patient is critical to achieving a positive health outcome. Cultural barriers including language could impede the transfer of information between provider and patient. Health literacy strives to ensure people's access to health information and their capacity to use it effectively. As poverty and trauma are linked to low literacy rates (Foster, 2007; Herndon, et al., 2011; Trueba, 1988; Goswami, 2004), health literacy is critical to patient empowerment and trauma-sensitive practices.

SAMHSA provides guidance on creating culturally competent care settings in its Treatment Improvement Protocol No. 59. While this guide is specific to the behavioral health setting, it can be applied in other care settings as well. SAMHSA states that the core attitudes of culturally competent counselors include: respect, acceptance, sensitivity, commitment to equality, openness, humility and flexibility (SAMHSA, 2017, p. 50). Each attitude has accompanying behaviors described in detail in the Treatment Improvement Protocol. Moreover, SAMHSA provides guidance on tools and metrics that can be used to measure progress toward creating a culturally competent health care setting.

As stated above, understanding issues of health equity including social and racial equity, are critical to implementing a trauma-informed approach in primary care. A full discussion of this topic was beyond the scope of this paper, however. Practitioners should have clear definitions and goals related to health equity at the outset of planning to implement a trauma-informed approach.

Trauma-Informed Care Implementation

While the current literature specific to trauma-informed care implementation in primary care is limited, as discussed above, emerging relevant literature does exist to inform this process. Additionally, two other areas of research that can inform the implementation of the change package include research on the implementation of trauma-informed care in other settings and models for managing change effectively.

In 2001, Maxine Harris and Roger Fallot's book entitled Using Trauma Theory to Design Service Systems. New Directions for Mental Health Services laid a foundation for subsequent development of trauma-informed behavioral health systems. Harris and Fallot (2001) identified five core values of a trauma-informed system that include safety, trustworthiness, choice, collaboration, and empowerment. They argued that if a program's culture reflects each of these values in each contact, physical setting, relationship, and activity, and that this culture is evident in the experiences of staff as well as consumers, then the program's culture is trauma-informed (Harris & Fallot, 2001).

Building upon Harris and Fallot's work and that of many others, SAMHSA (2014) published a Treatment Improvement Protocol (TIP) guide specifically addressing Trauma-Informed Care in Behavioral Health Services. Though specific to behavioral health, the following strategies guiding implementation can be useful in primary care settings:
• Show Organizational and Administrative Commitment to TIC
• Use Trauma-Informed Principles in Strategic Planning
• Review and Update Vision, Mission, and Value Statements
• Assign a Key Staff Member to Facilitate Change
• Create a Trauma-Informed Oversight Committee
• Conduct an Organizational Self-Assessment of Trauma-Informed Services
• Develop an Implementation Plan
• Develop a Disaster Plan

Publications that focus on trauma-informed care within primary care are recently beginning to emerge. In an article, published within the Curbside Consultation section of the American Academy of Family Physicians website by authors Ravi and Little (2017), a succinct real-world scenario anchors trauma-informed concepts into actionable items. Additionally, in an issue brief for the Center for Health Care Strategies (2016), the authors outlined key ingredients for successful implementation of trauma-informed care. These include:

• Leading and communicating about the transformation process
• Engaging patients in organizational planning
• Training clinical as well as non-clinical staff members
• Creating a safe environment
• Preventing secondary traumatic stress in staff
• Involving patients in their own treatment process
• Screening patients for trauma
• Training staff in trauma-specific interventions
• Engaging referral sources and partnering organizations

In addition to the work of Ravi et al. (2017) and the Center for Health Care Strategies (2016) as well as the information specific to the care of children (Burke et al., 2011, Burke et al., 2016, AAP, 2011) discussed above, models for managing change may also be applicable in this context as change is an inevitable outcome of implementation. Two models that may be helpful for managing complex change are those of Kotter (1996) and Gronlund and James (2008).

Kotter’s model (1996) is not based on empirical research, however, it is widely used due to its application in a wide range of scenarios (Appelbaum, Habashy, Malo, & Shafiq, 2012). Kotter
delineates eight steps that he believes are the natural building blocks of sustained change. The eight steps are categorized into three categories: creating a climate for change; engaging and enabling the organization; and implementing and sustaining change (see Table 3). For a detailed description of each of these steps, see Kotter’s book, *Leading Change* (1996).

Table 3. Kotter’s 8-Step Process for Leading Change

<table>
<thead>
<tr>
<th>Creating a climate for change</th>
<th>Engaging and enabling the organization</th>
<th>Implementing and sustaining change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Increase urgency</td>
<td>4. Communication for buy-in</td>
<td>7. Don't let up</td>
</tr>
<tr>
<td>2. Build guiding teams</td>
<td>5. Enable action</td>
<td>8. Make it stick</td>
</tr>
<tr>
<td>3. Get the right vision</td>
<td>6. Create short-term wins</td>
<td></td>
</tr>
</tbody>
</table>

Like Kotter, Gronlund and James (2008), focus on change management. However, their work has its foundation in education where it is applied to staff development. Where Kotter’s work is about implementation processes, Gronlund and James recommend necessary components for management of change. They posit that when assessing implementation processes for efficacy, if one encounters overarching themes of confusion, for example, then likely a clear vision is missing or has not been articulated to those responsible for the change. Both models may be useful to assist with framing implementation processes.

Table 4 below illustrates Gronlund and James’ recommendations of necessary components for successful change management (2008). The Table also shows the expected results of a change management process when one of the five critical components (vision, skills, incentives, resources, and action plan) is missing. These expected results range from confusion to frustration and actual change when all components are present (Gronlund & James, 2008).

Table 4. Gronlund and James’ components of successful change management (2008)
Components for Trauma-Informed Care Implementation

The following section describes the specific components that should be considered for inclusion in a trauma-informed care change package for primary care. These include a discussion of screening and assessment tools; direct inquiry methods; documentation and charting; creating safe environments; encouraging patient adherence; the inclusion of lived experience; evidence-based interventions methods; staff training; and staff wellness.

Screening and Assessment

The necessity of screening for trauma in primary care is evidenced by the prevalence of individuals who have experienced trauma seeking services in primary care and is emphasized repeatedly in the literature (Shannon, O’Dougherty, & Mehta, 2012; Pietrzak, Goldstein, Southwick, & Grant, 2012; Polusny, Ries, Schiltz, Calhoun, Clemensen, & Johnsen, 2008; Brown, & Schneidman, 2004). Felitti, one of the original researchers of the ACE study and whose work is described above, placed the emphasis on assessment this way:

In all of medicine, it is important to understand that there are only three sources of diagnostic information: patient history, physical examination, and laboratory tests. While patients overwhelmingly assume diagnosis derives from lab tests, experienced physicians will tell you that about 75-80% of the time diagnosis derives from the patient history. Moreover, a meaningful medical history will be comprehensive, and not merely limit itself to the obvious symptom of the moment (Personal communication, November 18, 2013).

While the ACE study has been discussed at length in this review, it is important to understand that it is not a recommended screening tool to identify and treat trauma in primary care settings. Anda and Felitti urge professionals to use other resources given that the 10 ACE questions were intended for research purposes only. Other tools do exist and some have been used in primary care. A thorough review of the existing literature specific to screening for trauma in primary care reveals the use of the following five tools most frequently. Below is a summary of the tools with their originating authorship.

Table 5. Summary of screening tools to identify trauma in primary care settings

<table>
<thead>
<tr>
<th>Screening Tool</th>
<th>Intended Population</th>
<th>Administration</th>
<th>Related research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have</td>
<td>Have</td>
<td>Have</td>
<td>(missing)</td>
</tr>
<tr>
<td>Have</td>
<td>Have</td>
<td>Have</td>
<td>Have</td>
</tr>
<tr>
<td>Test Name</td>
<td>Administered to</td>
<td>Administered as:</td>
<td>Questions</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
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Evidence supports that screening for PTSD will not necessarily identify individual experiences of trauma. Weisberg et al. (2002) examined the relationship between PTSD, trauma, and self-
reported non-psychiatric medical conditions in a sample of 502 primary care patients with one or more anxiety disorders. Of 502 participants with at least one anxiety disorder, 17% reported no history of trauma, 46% had a history of trauma but no PTSD, and 37% met DSM-IV criteria for PTSD. Given these findings, two screening tools were included in Table 5 that measure common ‘non-medical’ or behavioral drivers for patients seeking care in a medical system: depression and anxiety. These are often symptoms of trauma but may not show up on a PTSD screening tool nor warrant a diagnosis of PTSD.

**Direct Inquiry**

It is well-understood that communicating about trauma histories in clinical settings is challenging. Barriers exist impeding this type of communication between patient and provider that originate not only with the patient, but with the provider as well. Discussing trauma histories can cause patients to feel shame and stigma, as well as be retraumatizing. Providers of care might feel ill-equipped to properly solicit this type of sensitive information from patients, might lack the time to address the issues, and/or could feel as if they are unprepared to address patients appropriately.

Chung et al. (2012) conducted a qualitative evaluation that identified barriers in primary care settings to addressing trauma-related mental health problems among low-income minorities. Time was identified as a primary barrier to addressing both psychosocial issues and mental health issues with patients. Eighty-two percent (82%) of practitioner respondents reported that they did not have adequate time to address these issues in their primary care settings (Chung et al., 2012).

In addition to time as a barrier, these same authors analyzed qualitative data on other reasons why addressing trauma in primary care settings is challenging. The researchers found differences in providers’ comfort levels addressing trauma-related issues compared to mental health issues. Specifically, while 18.2% of clinician respondents were “very comfortable” addressing mental health issues, only 4.5% were “very comfortable” addressing trauma-related issues. Fifty-nine percent (59%) were “comfortable” addressing mental health issues; 50% addressing trauma-related issues. Zero respondents reported that they were “not comfortable” addressing mental health issues; however, 4.5% of respondents reported that they were “not comfortable” addressing trauma-related issues.

Through qualitative data analysis, Chung et al. identified four major themes of clinician-reported barriers that primary care providers face when attempting to address trauma-related issues:

1. The term trauma is more commonly associated with physical rather than emotional injury. This connotation can make trauma discussions confusing, especially when emotional trauma accompanies physical trauma.
2. Trauma is normalized and not considered to be a mental health problem. Patients with trauma histories may not perceive the consequences of the trauma as a reason to seek help.
3. Trauma is commonly encountered in primary care and negatively affects clinical outcomes. Both administrators and clinicians agreed that there is high trauma exposure among their patients. Clinicians observe an association between somatic symptoms and trauma, especially childhood sexual abuse, among high users of health care.

4. Primary care providers express discomfort about discussing trauma with their patients. In contrast with discussing depression, clinicians avoid the topic of trauma because the specifics of patients’ trauma histories can be overwhelming. (p. 6-7).

Specifically addressing the issue of being “overwhelmed” by patients’ trauma histories, the researchers highlighted this quote by a primary care practitioner to further explain provider discomfort in addressing trauma:

One of the things that is a reality for doctors is a lot of the times, they don't even want to ask certain questions because you're opening “Pandora's box.” That you don't have the resources with which to even go there. ...that they've had the trauma of having to cross borders,... I don't even want to ask them frankly, “How did it go? What problems are you confronting?” because I don't want to know that Pandora's box. Even those of us that think we're on top of our patients, we see that in the last year or so, we see increasing numbers of victims of torture. ...The first training session we had, ...they explained various techniques of torture. Well, for some of our staff, ... they were just not prepared. And they may have been seeing victims of torture and they didn't know what to ask or what to see (Chung et al., 2012, p. 7).

Research supports that not only are providers reluctant to ask about trauma histories, but that patients are also aware of this reluctance (Shannon, O'Dougherty & Mehta, 2012). In a study conducted to identify barriers to communication about trauma histories in primary care, researchers found that patients were not asked about their histories of trauma and felt that is was appropriate to talk about this topic only if the doctor initiated the conversation (Shannon et al., 2012). They further found that patients did not consider the impact of trauma on them as a health-related issue. Seventy-four percent (74%) reported that they want to talk to their doctors about it, but some indicated that they understood that providers do not have the time. Eighty percent (80%) of the patients also expressed interest in learning more about the impact of stress and trauma on their health. Other studies have concluded similarly.

A study conducted by Robohm and Buttenheim (1996) found that 82% of participants reported that they had never been asked about their abuse experiences, but 93% believed they should have been. In another study by Friedman et al. (1992) in which both the physicians and patients were queried, only 30% of physicians indicated that inquiry about abuse history should routinely occur, whereas 68% of the patients in the study (for whom histories of abuse were a reality) favored routine inquiry. Furthermore, 89% of patient respondents felt that the physicians could help in some way if they knew of their trauma history. Of special note, researchers urge
clinicians to ensure the patient has not yet disrobed when making direct inquiries about their histories of trauma (Roberts et al., 1999; Schachter et al., 2004).

As the findings above support, inquiring about individuals’ trauma histories in primary care settings can be challenging, but are necessary to appropriately address and understand underlying causes of poor health. Due to the challenges primary care practitioners have with addressing issues related to trauma, it is critical that practitioners feel well-equipped in how to appropriately discuss and respond to trauma histories. Identifying and developing the appropriate structures, processes, and resources are critical to enhancing practitioners' comfort levels in addressing these issues.

Documenting Trauma Histories

Documenting trauma histories in patient medical records is recommended not only for behavioral health, but primary care settings as well. Research has shown that trauma histories can be left out of patients’ medical records even though this is a crucial component to understanding an individual's health. In a study conducted by Havens et al. (2012), the researchers found that even when adolescents have been given a diagnosis of PTSD through an assessment with trained behavioral health specialists, only 26% of the youths’ medical charts contained this information. Thoughtful inclusion of a patient’s trauma history and how that history affects their ability to attain and maintain health and wellness should be considered. At times when the patient and provider have discussed the influence of adversity on the patient’s health and have concluded the patient’s history as relevant, it makes sense to include enough information in the chart so that the patient is not required to repeat their stories or explain or justify their behavior multiple times to multiple people. Judicious use of patient information can have a positive impact on their sense of safety.

Creating Safe and Engaging Environments

Creating environments where clients and patients feel safe is important for all individuals, however, it is especially important for individuals who have experienced trauma. Frankel et al. (2017) places patient safety at the core of the psychological safety framework for any medical team. He states, “in safe and reliable organizations, patients and their families are as much members of the care team as clinicians and other health care staff.” (p. 25). He outlines the key components for engaging patients:

1. Psychological Safety: patients are encouraged to share questions, concerns, and opinions without judgment from the team. Patients are also encouraged to share about their signs, symptoms and treatment adherence without fear of being shamed.
2. Negotiation: patient’s priorities are surfaced with an attitude of ‘what matters to you’ rather than ‘what is the matter with you’.
3. Transparency: clinicians' transparency about potential clinical gaps encourage more patient participation, if necessary.
4. Reliability: patient's experience is taken into consideration to help illuminate gaps in processes.

5. Improvement and Measurement: organizations are encouraged to share data about improvement efforts with patients to further engagement (Frankel et al., 2017).

**Encouraging Patient Adherence**

An important sign that a patient might not feel safe within a healthcare setting is non-adherence or non-compliance. Unfortunately, a patient's inability to comply or follow through with practitioners' recommendations can lead to a dismissal from care settings. To best address trauma-related issues in primary care, it is essential that a person's behavior, whether viewed as negative or positive, is understood through a trauma-informed lens. Dismissal from programs is counterproductive to improving individual's health and is not supported by current research.

Sometimes referred to as aberrance or aberrant behavior in the clinical setting, non-adherence can include: unexplained missed appointments; undisclosed medication or illicit drug use; not following a health regimen; and/or disruptive behavior while in the clinic. While some practices still engage in the use of patient dismissal, in a trauma-informed environment, dismissal should be viewed as a last resort and treatment failure. As a safe relationship is the cornerstone of physiological regulation, the threat of dismissal of patients for aberrance is the antithesis of safety and harmful to the patient's well-being in general (Bloom et al., 2003). Primary care practices should revise office policies on dismissal considering this information. One recommended action is that practices adopted the use of patient advisory panels to address issues of adherence, collaboration, non-compliance and safety.

As early as 1992, Donovan and Blake in the *Journal of Social Science and Medicine* recognized the need for a different view of patient behavior that did not focus on increasing patient compliance, but instead enhancing the doctor-patient relationship. Most practitioners would agree that good outcomes for patients are dependent in large part on patient adherence to treatment regimens (Martin, Williams, Haskard, & DiMatteo, 2005). Studies have concluded that adherence is multi-faceted, and many have suggested ways in which physicians and clinics can improve outcomes including: enrolling patients in treatment readiness programs; developing materials that are easily understood; education; and encouragement. However, these methods have had limited success (Martin et al., 2005). Furthermore, the works of Porges (2011), Perry, (2007), and Harris, (2001) suggest that attainment of health, adherence to regimens, and maintenance of wellness may, in fact, depend upon fundamental regulation of a patient's nervous system (as discussed in an earlier section). These findings support the need to address patient non-adherence in a collaborative, holistic manner that recognizes the many factors influencing patients' behavior.
Including Individuals with Lived Experience

Including the voice of lived experience in all aspects of an organization is a critical element of a trauma-informed approach. Including consumers’ opinions, experiences and suggestions is established practice among behavioral health providers. The use of client surveys, focus groups, satisfaction questionnaires, and advisory panels have been utilized to better understand the client’s experience to inform practice decision-making. In addition to collecting information from clients to inform practice decisions, organizations that are trauma-informed often employ “peer supports.” Peer supports are persons with lived experience of trauma, addiction, and/or mental health challenges who are trained to support others who have similar experiences. There is abundant literature that supports the use of peers in this manner in behavioral health (Chinman et al., 2015; Chapin et al., 2013; Kelly et al., 2014; Davidson, Bellamy, Guy, & Miller, 2012; Lawn, Smith, & Hunter, 2008).

While there is a robust breadth of research studying the use of peers in behavioral health settings, there is less evidence documenting the inclusion of lived experience in primary care or other medical settings. The research reviewed included evidence of primary care practices utilizing patient experiences in order to inform practice improvement and the inclusion of peer models within disease-specific patient populations. There is limited application of these studies’ findings to the inclusion of lived experience within trauma-informed primary care settings.

With regard to integrating the voice of learned experience into primary care settings, there is precedent set regarding the use of patient experiences to gather practice improvement data. Some medical groups have utilized patient advisory panels, for example, as part of their on-going quality improvement projects. Though these can perhaps be construed as including the voice of those with lived experience, the available literature about the overall effectiveness of the use of these panels is scarce (Albrecht, Payne, Stone, & Reynolds, 1998; Heisler, 2010; Pfieffer, 2011).

Additionally, a small body of research exists about the use peer models among certain patient populations outside of behavioral health settings. Peer models within patient populations appear to have mixed results. In a study with those who have a multiple sclerosis diagnosis, Uccelli, Mohr, Battaglia, Zagami, and Mohr (2004) concluded that support groups did not provide a consistent improvement in quality of life or depression in patients with multiple sclerosis. They also suggested that patients who have better mental health functioning could be at risk for deterioration in support groups. In a literature review about peer-supported programs (group and individual peer interactions) with patients who have cancer, Hoey, Ieropoli, White, and Jefford (2008) also found mixed results. They found that though there was an overall high level of satisfaction with the model, psychosocial indicators remained mixed. They suggested that one-on-one peer support may be more effective than group models. In a study that looked at the effectiveness of peer support in primary care among patients who experience depression, results again showed no improvement in depression scores among those interacting with peers. A confounding variable within this study was the use of telehealth as the only modality of interaction (Hunkeler et al., 2000). Further, we may not
be able to logically equate the use of peer models with the inclusion of those with lived experience in medical settings as peer models in medical milieus may be vastly different than those within behavioral health milieus.

As discussed above, the availability of research analyzing the inclusion of lived experience within primary care and other medical settings other than behavioral health is limited. The application of these specific findings to a trauma-informed primary care setting is undetermined. However, a large body of research exists analyzing the inclusion of lived experience in behavioral health settings that could be applied to a trauma-informed primary care setting.

Evidence-Based Trauma-Specific Interventions

The utilization of evidence-based interventions is a necessary component in the implementation of trauma-informed care in primary care settings. Trauma-informed care in primary care is predicated on the value that patients will not be retraumatized, will be screened for trauma, and will have care that takes into consideration their history of adversity and how it impacts their health. A trauma-informed primary care practice will also understand the importance of providing services and treatment based on the needs of the individual. Primary care practitioners must be equipped with the proper tools to not only screen for underlying trauma, but to be able to recognize when the needs of the client are beyond the scope of the primary care practice and require a referral to a specialized behavioral health practitioner. This section discusses current evidence-based tools specific to trauma that can assist practitioners in responding appropriately to clients as well as identifying when to refer to a higher level, or specialty-level, of care.

Motivational Interviewing.

Motivational Interviewing (MI) is an evidence-based approach that the practitioner can apply in numerous health care situations to increase patients’ engagement in and adherence to treatment. It is a patient-centered approach, based on principles of collaboration, autonomy, and evocation. This approach includes learnable techniques that assist in allowing the patient to speak about the advantages of behavioral change and treatment supported by research indicating that the patient’s verbal commitment towards change is directly correlated to future behavioral change. Researchers found that MI helps patients adopt a healthier lifestyle while contributing to the professionalism of physicians and their sense of satisfaction from work (Rollnick, Miller, Butler, & Aloia, 2008; Emmons & Rollnick, 2001). Knight, McGowan, Dickens, and Bundy (2006) conducted a systematic review of MI in health care settings. They found eight studies of the use of MI in the fields of diabetes, asthma, hypertension, hyperlipidemia, and heart disease. Knight et al. concluded that “the majority of studies found positive results for effects of MI on psychological, physiological, and life-style change outcomes” (Knight et al., 2006, p. 319).
**Trauma-Focused Cognitive Behavioral Therapy.**

Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) are effective models of psychotherapy appropriate for trained behavioral health providers to administer. Primary care providers can make referrals for CBT. Recent developments in the treatment of trauma combine effective forms of psychotherapy and somatic (body) therapies that were developed with brain science information in mind (Lane, Ryan, Nadel, & Greenberg, 2015; Pearlman & Courtois, 2005; Solomon & Heide, 2005). Although often intensely interpersonal, these therapies are also psychological and neurological in their focus and application. This group of therapies relies on innate instinctual resources, rather than medications, to bring about healing. They differ in some ways, but the one thing they have in common is combining talk therapy with a focus on the body. As with any therapy, but especially due to the intensity of the emotions involved, it is important that the patient finds or is assisted in finding a therapist in whom they can trust and develop a bond. The following is a summary of different types of CBT:

**Eye Movement Desensitization/Reprocessing.**

Eye Movement Desensitization/Reprocessing (EMDR) was developed by psychologist Francine Shapiro after she noticed her own stress reactions diminishing when her eyes swept back and forth as she walked through a park. It is conducted by licensed mental health professionals who have taken specific training in this complex approach, thus a primary care practitioner can refer a patient for this service. It combines elements of a range of therapeutic approaches with eye movements or other forms of rhythmical stimulation, such as hand taps or sounds. Theories as to why EMDR is effective are still evolving. Some speculate that the rapid unique therapeutic element of EMDR - the eye movements or other rhythmical stimulation - might help the brain access and process traumatic material. EMDR has been most effective with single-incident trauma, but its uses continue to evolve in addressing longer histories of emotional or physical trauma, and in balancing other aspects of a person's life (Shapiro & Forrest, 2016; Solomon & Heide, 2005; Konuk et al., 2006).

**Seeking Safety.**

Seeking Safety was developed by Lisa Najavits. Originally designed to address addiction, Seeking Safety is a present-focused, coping skills therapy to help people attain safety from trauma and/or substance abuse. The treatment is available as a book, providing both client handouts and clinician guidelines. Najavits believes that this model has application beyond those who experience addiction and trauma (Najavits, Weiss, Shaw, & Muenz, 1998; Desai, Harpaz-Rotem, Najavits, & Rosenheck, 2008; Najavits, 2004). It is often used as a group therapy model but can be used individually.

**Somatic Psychotherapies.**

The term somatic, coined by Tomas Hanna, means mind/body or more precisely brain/body. The idea is that to change the body, we must engage the brain and change the brain - not only how...
we think and feel, but also the neurological connections themselves. The body, its sensations, and direct sensory experience are referenced throughout the therapeutic process. Somatic therapies include the following.

**Somatic Experiencing (SE).**

Developed by Peter Levine, this approach evolved in part from observations of how animals literally “shake off” traumatic experiences, allowing the body to process stress chemicals completely until they return to normal levels. The Somatic Experiencing (SE) therapist may be a licensed professional or unlicensed, but with some mental health training. All SE therapists complete an extensive training program, in which they learn to observe the body, facial expressions and gestures carefully and to help the person “thaw” a response that was “frozen” in a traumatic situation. An example would be a person who is observed making short gestures that almost appear to be a "pushing" motion with their hands, but that stop abruptly - the therapist might have the person complete the gesture in full, and notice how the body’s tension level changes (Payne, Levine, & Crane-Godreau, 2015; Levine, 1997).

**Hakomi Method.**

The Hakomi Method, originated by Ron Kurtz, is a system based on five therapeutic principles: mindfulness, organicity, non-violence, the mind-body connection, and unity. It is a body-centered approach that, in part, the therapist helps the client experiment with small changes in gesture or other movements, to see what differences occur in the processing of emotionally charged content. An example would be when a client is observed making a certain gesture or displaying a certain posture when talking about his/her attacker. The therapist might suggest the gesture or posture be changed to a different one as an experiment, and then to notice the changes in feelings or thoughts (Barstow, 1985; Price, 2002).

**Somatic Psychology.**

Somatic Psychology was developed by Pat Ogden. This treatment merges somatic therapies, neuroscience, attachment theory, and cognitive approaches, as well Hakomi Method. The approach often uses physical expression to process the energy stored in the body following a trauma to reset the neurological system into better balance. An example would be when a client is asked to push the attacker away by forcefully pushing against a wall or against a pillow held by the therapist, to allow the body's neurological and musculature systems to reset themselves to a more normal level (Ogden, Minton, & Pain, 2006; Ogden & Minton, 2000; Forester, 2007).

**Staff Training**

There is a distinct gap in the literature specific to training medical providers about trauma-informed care. To date, one study has been conducted. Green et al., (2015) adapted a theory-based approach to working with trauma survivors, Risking Connection, into a six-hour proprietary
continuing medical education (CME) course called Trauma-Informed Medical Care (TI-Med). Green went on to pilot a study to evaluate the feasibility and preliminary efficacy of TI-Med with 30 primary care providers and their patients (n=400). The researchers concluded that patients rated primary care providers significantly higher after training on a scale encompassing partnership issues and suggested that TI-Med is a promising initial approach to teaching trauma-informed communication skills to primary care providers.

**Staff Wellness**

Very little information exists about physician wellness pertaining to vicarious trauma or burnout in physicians due to trauma disclosure from patients. Studies that exist generally address the profession of nursing or the effects of loss of sleep on doctors still in their residencies. In 2004, Brown and Schneidman published a research brief concluding that though there are diversion programs for physicians who have substance use disorders and an annual conference on physician wellness, there remains a clear lack of information and formal support for physicians should they need to address workplace stress or trauma. One exception is a model that originated in London in the 1950s called Balint groups after the founding psychoanalysts, Michael and Enid Balint (American Balint Society, 2017). Balint groups are designed to address the connection between the provider and the patient by facilitating a conversation that allows the physician to safely explore their biases, thought processes, and feelings about a patient in their care. Balint groups are active in the United States and can be accessed through membership in the American Balint Society (Brock & Stock, 1989; Rabinowitz, Kushnir, & Ribak, 1996; Johnson, Nease, Milberg & Addison, 2004).

This section discussed several core components to consider when implementing a trauma-informed approach in primary care. While gaps in the literature exist, the existing body of evidence provides guidance for adapting effective practices in other settings to that of primary care. The need for practitioners and patients to feel safe and adequately supported is critical to the improving health, therefore identification of the tools, resources and best practices at each level of patient engagement will support the implementation’s success.

**Measurement and Policy**

In the previous sections, we discussed core components of a trauma-informed primary care practice including: screening and assessment, direct inquiry, charting, the creation of safe and engaging environments, adherence, trauma specific interventions as a referral resource, staff training, staff wellness, and the inclusion of the voice of those with lived experience. In order to understand whether those components are successful or not, practitioners and practices must be equipped to effectively measure their impact in a variety of ways. Measurement should include tracking processes and outcomes. This section discusses approaches to measure impacts of implementing a change package.
Outcome Measures

As stated earlier, there appears to be no direct research tackling the topic of trauma-informed care implementation in primary care. Therefore, there is very little guidance pertaining to the measurement of outcomes. The research, however, does provide several examples of ways in which patient outcomes have been measured when exposed to a medical environment that has become more patient-centered, and/or the providers have been educated on topics specific to traumatic events, such as domestic violence or educated on trauma in general. Green et al. (2016) discuss a program in which physicians were provided a training module that utilized a personalized curriculum grounded in Risking Connections. Thirty primary care providers were trained and 400 of their patients were surveyed. Patient outcome measures regarding communication included; the rapport the patient felt with the provider; the level of partnership they felt able to engage in with the provider; and the amount of information they received. Results showed an increase in patient-centeredness and provided some preliminary evidence that providers’ knowledge and application of trauma-informed care may be a method by which outcomes can be measured (Green et al., 2016). Speedling and Rose suggest that patient satisfaction is a necessary but insufficient measure of the doctor-patient relationship and concluded that the amount of patient participation and collaboration is a better construct to measure related to overall satisfaction (1985).

The research on patient-centered care may be the best pool of information from which to pull possible patient outcome measures for a trauma-informed practice improvement model. Common outcome measures in this arena can be found below in Table 6.

Table 6. Common patient-centered care outcome measures

<table>
<thead>
<tr>
<th>Outcome measures</th>
<th>Method(s)</th>
<th>Research</th>
</tr>
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<tbody>
<tr>
<td>• Better recovery from discomfort</td>
<td>2. Self-report of health, using the Medical Outcomes Study Short Form-36;</td>
<td></td>
</tr>
<tr>
<td>• Better emotional health 2 months post</td>
<td>3. Medical care utilization variables of diagnostic tests, referrals, and visits to the family physician, assessed by chart review</td>
<td></td>
</tr>
<tr>
<td>• Fewer diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Increase in adherence</td>
<td>Use of a numeric rating scale to measure the presence of</td>
<td>Robinson, J. H., Callister, L. C., Berry, J. A., &amp; Dearing, K. A. (2008). Patient-centered care</td>
</tr>
<tr>
<td>• Improved health outcomes</td>
<td></td>
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<tr>
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<tr>
<td><strong>Increased Knowledge</strong>&lt;br&gt;• Increased knowledge&lt;br&gt;• More accurate risk perceptions&lt;br&gt;• Greater number of decisions consistent with patients' values&lt;br&gt;• A reduced level of internal decisional conflict for patients&lt;br&gt;• Fewer patients remaining passive or undecided</td>
<td><strong>Shared Decision Making</strong></td>
<td>Stacey, D., Bennett, C. L., Barry, M. J., Col, N. F., Eden, K. B., Holmes-Rovner, M., ... &amp; Thomson, R. (2011). Decision aids for people facing health treatment or screening decisions. <em>Cochrane Database of Systematic Reviews</em>, 10(10).</td>
</tr>
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Further, outcome measures pertaining to physician-patient relationships should also be included in the realm of quality improvement. Though it is not within the scope of this review to comprehensively summarize quality improvement efforts in primary care, Safran et al. published results of a statewide demonstration project designed to measure patient experiences with individual primary care physicians while attempting to control for other variables that might influence patients' perception of their care (2006). The conclusion the researchers drew is relevant to this project in that they advocate for measuring the performance of individual physicians and their clinics. They state, “The analytic findings underscore the validity and importance of looking beyond health plans to individual physicians and sites as we seek to improve health care quality.” (Safran et al., 2006, p. 13). Additionally, Safran published a patient survey that may inform the evaluation effort for this project.
No list of viable outcome measures would be complete without an examination of cost-avoidance. If the implementation of trauma-informed care has an impact on health outcomes, one should, in time, see a reduction in cost among certain populations who are high utilizers of services. Results from the original ACE study and subsequent studies provide evidence of cost-avoidance and suggests an outcome measure that can be empirically studied as well. V. J. Felitti writes:

Lest anyone think this is some theoretical point to debate, it is important to understand that several years ago an outside data-mining firm tested the incorporation of this medical questionnaire with its trauma-oriented questions into our comprehensive medical evaluation of 125,000 adult patients over a two-year period. To our surprise, they demonstrated this single change coincided, during the year subsequent to evaluation, with a 35% drop in doctor office visits and an 11% decrease in Emergency Room visits compared to the prior year's utilization by that group (Personal communication, November 18, 2013).

As the section above emphasizes, the ability to measure a range of processes and outcomes is critical to ensuring that the interventions and changes taking place are achieving the outcomes they are intending. While the information provided in this review is limited in its direct application to trauma-informed practice in primary care, there is a large body of research on program evaluation that could be applied to this change package.

Necessary Policy Changes

Significant progress has been made at the local, state, and national levels to improve health care; however, opportunities exist to strengthen policy in order to better support the widespread adoption of trauma-informed care. There are numerous areas in which policy can be introduced or amended in order to provide better access to trauma-informed care; however, this discussion is limited to two specific barriers. These include federal restrictions on sharing of information and billing restrictions.

Federal and state regulations exist to protect patients from breaches of privacy and confidentiality. These protections were put in place to prevent the disclosure of an individual's medical history resulting in numerous potential negative consequences. At the federal level efforts have been made to instill additional protections for individuals with substance use challenges. Confidentiality of Alcohol and Drug Abuse Patient Records (last amended in 2017), commonly known by its citation, 42 CFR Part 2, is a federal regulation that prohibits disclosure and re-disclosure of specific patient health information (that of substance use disorders) unless consent is obtained. While this regulation serves its intention, to prevent the unauthorized disclosure of protected health information, it can prevent treating providers from sharing information with one another about a common client.

In February 2016 SAMHSA issued a notice of proposed rulemaking to amend these regulations in a way that would ease the burden on integrated care practices. The final rule went into effect in January 2017 and does ease certain disclosure requirements put in place when the
regulation went into effect. For example, patients can now use a general designation (e.g. “my treatment providers”) to permit disclosure of their information. (Confidentiality of Alcohol and Drug Abuse Patient Records, 2017). The latest amendment to 42 CFR Part 2 is movement in the right direction providing protections to patients while easing the burden on treatment providers eager to engage in integrated care practices. Since a trauma-informed approach treats individuals holistically, being able to obtain all of the relevant information about a person is critical to helping the person achieve wellness.

Another policy barrier to trauma-informed care involves restrictions on same-day billing. A same-day billing restriction means that a provider cannot bill for more than one service in a day. These restrictions can impede a holistic practice from being able to provide different services to a client in one visit (Houy & Bailit, 2015; Roby & Jones, 2016; Medicaid and CHIP Payment and Access Commission, 2015). A deep discussion on same-day billing restrictions is beyond the scope of this review due to the complexity of the restrictions and state-based variation. The SAMHSA-HRSA Center for Integrated Health Solutions has compiled state-based surveillance data on existing billing nuances and restrictions (2017). This information should be taken into consideration throughout the development and implementation of the change package.

While the scope of discussion on policy is limited in this review, a trauma-informed approach embraces policy as an important tool to impact individual and population health. Afifi et al. state that practical health policy should take a whole-population approach in which upstream (policy), midstream (prevention), and downstream (intervention) models would have the greatest overall impact on the health of society. Additionally, Afifi contends that trauma-informed approaches translate into good public health policy (2008). One way in which trauma-informed care can promote good public health policy may be through its emphasis on resilience, both as an outcome for patients but also for providers of care.

Resilience

Effective trauma-informed interventions will include an understanding of how each person in the role of caregiver can promote resilience. Researchers increasingly view resilience not as a fixed attribute but as an alterable set of processes that can be fostered and cultivated (Masten, 2001; Padrón, Waxman & Huang, 1999). For the purposes of this literature review resilience, adapted from work done by Reivich et al. (2011) is defined as:

- Emotional regulation: The ability to control our emotions, attention, and thus our behavior
- Impulse control: The ability to manage expression of our feelings
- Causal analysis: Accurate identification of the cause of adversity
- Self-efficacy: The sense that we can solve problems and succeed
- Realistic optimism: Being positive about the future and realistic
- Empathy: Able to read others behavior, to understand their states, and build relationship
Reaching out: The continued drive to take on more challenges and opportunities

Reivich and her colleagues (2011) originally developed this concept as part of a resilience training model for the United States Army. Their work is predicated on the understanding that people, even adults, can learn the skills of resilience. There is, however, a relative absence of resilience research that focuses on adults (Burton, Pakenham, and Brown, 2010). One of the few models that provide a framework that includes adult resilience focuses on risk and protective factors at key developmental milestones (Werner, 1993). Werner followed a cohort of children from early childhood through age 32. She found that adulthood provided unique opportunities for promotion of protective factors, such as spiritual engagement, employment, and social network building. Werner emphasized that interactive processes – between the individual and environment and between risk and protective factors – are the crucial underpinnings of developing resilience (Werner, 1993).

Risk factors in the patient's environment are many. The array is broad and may include ACEs, poverty, racism, social isolation, and hopelessness, as well as others. Protective factors such as faith, optimism, close relationships, and a sense of meaning could also be present. Given that the interactive process between risk and protective factors will play a role in a person's ability to build resilience, primary care and specifically a trusted relationship between provider and patient could be a natural opportunity to boost protective factors both for the patient and the provider. Thus, each of the seven aspects of resilience listed above could be used to provide a framework to providers and others to model resilience within everyday interactions, especially when interacting with patients. For example, if a patient identifies as having challenges with emotional regulation (the first aspect of resilience), within the relative safety of the provider-patient relationship, the provider could educate the patient about regulation and demonstrate his or her own regulation by taking deep breaths when under pressure, or perhaps acknowledging the patient's emotion and collaborating about ways to help manage them. Interestingly, when adult resilience is studied, two specific populations are the focus; the military and medical professionals. For the purposes of this literature review, information on medical professionals is provided.

Provider modeling of resilience is predicated on the assumption that providers possess resilience skills. Research suggests this may not be the case. Sood, Prasad, Schroeder, and Varkey, (2011) state that physician distress is common. In fact, Daskivich et al., (2015) state that physicians in practice have a substantially elevated risk of suicide compared to the general population. Thus, it is critical for a trauma-informed primary care practice to provide attainable opportunities for providers to enhance their resilience. Promoting resilience can take several forms. Epstein and Krasner (2013) suggest that institutional support is necessary for providers to build capacity for mindfulness, to self-monitor, and to set healthy limits. Epstein et al. (2013) also suggest that the promotion of healthy engagement with (rather than withdrawal from) difficult challenges at work helps build resilience is providers. Zwack and Schweitzer (2013) assert that successful coping leads to resilience and argues that a renewal of stress management curriculum could benefit providers. Sood et al.,
(2011) tested a resilience training called Stress Management and Resiliency Training (SMART) with 40 physicians in a randomized trial and found significant improvement in resilience, stress, anxiety, and overall quality of life among those studied. Both patients and providers could benefit from enhanced opportunities for resilience.

Conclusion

When trauma-informed care is implemented well, it prevents trauma survivors from abandoning effective care providers; prevents patients from encountering persons that further traumatize them; intervenes in ways that promote positive behavioral changes in staff and patients alike; and eventually, influences policy to sustain a dedication to a trauma-informed approach. This literature review provides foundational research and guidance in order to develop a change package that will prepare primary care providers to address trauma in their practices. This effort will result in a scalable approach inclusive of strategies, processes and tools that will be disseminated widely across the primary care field. Necessary components include standardized screening and assessment tools, evidence-based clinical interventions, implementation processes, relevant and replicable outcome measures, and potential critical policy changes. The findings from this literature will support the development of these components leading to the advancement of trauma-informed care in primary care nationwide.
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