Chapter 2
Trauma and Trauma-Informed Care

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Objectives

- Define trauma and resilience.
- Review the prevalence of trauma and the effects of trauma and resilience on health.
- Define trauma-informed care.
- Describe principles and components of trauma-informed care.
- Describe a practical approach to implementing trauma-informed care (4 Cs).
- Review qualities of trauma-informed healthcare systems.

Eric Johnson is a 45-year-old man who is a landscape architect. He has poorly controlled hypertension and diabetes, untreated hepatitis C, undiagnosed chronic post-traumatic stress disorder, and drinks alcohol daily. During his childhood, an older cousin who used to take care of him while his parents were at work sexually abused Mr. Johnson. During a pediatric visit for his tetanus immunization at age 11, he felt like his mind left his body and he lost all control of his actions. Two health-care staff held him down to give him his shot as he struggled and screamed. He has been terribly afraid of doctors' visits since then. He has never told anyone about the sexual abuse. He still gets frequent nightmares about this abuse; the nightmares have been getting worse since his cousin contacted him recently. Today, Mr. Johnson

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Introduction

Traumatic events are common and can have lasting effects on a person's life and health and a community's well-being. The effects of trauma go far beyond its immediate psychological and physical effects. Experiencing trauma can alter individual biology and behavior over the life course; these changes have an impact on interpersonal and intergenerational relationships. Ultimately, traumatic events alter the well-being of not only individuals but also our communities and society. How a person responds to trauma is complex and dependent on many factors, including the resources of the individual and their supporting community. Trauma's effects can be mitigated by protective factors and resiliencies or compounded by other risk factors and vulnerabilities. Trauma experienced in childhood is particularly damaging. Childhood exposure to trauma can alter development and have particularly profound and lasting effects on health and well-being, including resulting in the development of chronic illness in adulthood. Exposure to one traumatic event increases the vulnerability of individuals and communities to future trauma. Communities subjected to historical and structural violence are disproportionally afflicted by trauma and its effects. Understanding the devastating and multiplicative effects of trauma on health and well-being and addressing the consequences of trauma are crucially important for healthcare providers and the systems in which they work. Preventing trauma and mitigating its adverse effects promote health equity.

Because trauma is both ubiquitous [1] and associated with many chronic illnesses and high-risk behaviors, all healthcare providers will care for patients with histories of trauma. Survivors of trauma may be "triggered", consciously or unconsciously, by situations they encounter in the healthcare setting [2, 3]. The use of physical restraints and the need to undress, undergo invasive procedures, wait in a room with a closed door, or see blood are all concrete ways that patients may be re-traumatized while obtaining medical care. Traumatic memories, provoked by healthcare encounters, may make medical care intolerable to a patient and contribute to worsened health outcomes [4]. Most importantly, the power imbalance between patient and provider can trigger a traumatic response. Effective and compassionate treatment for trauma survivors depends upon the healthcare setting becoming "trauma-informed." In this chapter, we present a practical model of care, "trauma-informed care," to respond to the multifaceted needs of people and communities exposed to trauma. Because trauma affects all of us directly and indirectly, "trauma-informed care" benefits us all.

Definition of Trauma and Types of Traumatic Events

It can be difficult to pin down a definition of trauma. The word trauma is often used to refer to both injurious events themselves and to their outcomes. Certainly, the outcomes of traumatic experiences vary greatly from person to person based on a wide spectrum of circumstances including genetic, epigenetic, biological, psychological, environmental, family, community, societal, historical, and other factors. How a person responds to a harmful event, or series of events, is now thought of as a process resulting from the interaction between the events themselves and the person, ameliorated or further undermined by their individual, familial, and community resilience or vulnerability and resources or lack thereof. When the harmful event causes lasting suffering, the event is considered traumatic. Trauma ruptures relationships, with oneself and others.

The Substance Abuse and Mental Health Services Administration (SAMHSA) defines individual trauma: "Individual trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or threatening and that has lasting adverse effects on the individual's functioning and physical, social, emotional, or spiritual well-being." [5] "*Complex trauma" or "complex psychological trauma" is defined as "resulting from exposure to severe stressors that (1) are repetitive or prolonged, (2) involve harm or abandonment by caregivers or other ostensibly responsible adults, and (3) occur at developmentally vulnerable times in the victims' life, such as early childhood:…"* [6] *but can also occur later in life* [6]. The concept of historical trauma refers to complex traumatic experiences that affect an entire community or cultural group over multiple generations [7, 8].

Individuals as well as entire communities or cultural groups can be traumatized. Catastrophic events and forces that traumatize both individuals and communities may be environmental disasters, famine, war, genocide, torture, human trafficking, terrorism, forced migration, mass incarceration, police violence [9], poverty, and "structural violence" involving systematic oppression or discrimination (e.g., racism, sexism, homophobia, transphobia, mistreatment and persecution of immigrants, etc.). Trauma can be conceptualized as being "contagious"; it may be passed on through individuals, families, communities, and society, often inter-generationally. Trauma's mode of transmission is most often through adverse power dynamics. When one searches for the origins, means of perpetuation, and factors that worsen trauma, ultimately one uncovers various forms of structural violence involving systematic oppression or discrimination. Interpersonal violence including family violence, abuse and neglect, and life events that reduce trust or a sense of safety and security, like the death of loved ones, divorce of one's parents, major illness, or other life upheavals are detrimental to individuals. Broader cultural, political, and societal factors that contextualize the trauma also need to be recognized and understood to promote healing and prevent future trauma.

Resilience and Protective Factors

Resilience is "the ability of an individual, family, or community to cope with adversity and trauma, and adapt to challenges or change [10]." Resilience has been described as acting to maintain health and equilibrium despite adversity by allowing people or communities to withstand, adapt to, and, then, recover from adversity [11]. Individual resilience is often conceptualized as being related to fixed intrinsic factors (genetics, temperament), but we now understand that even those factors are affected by our experiences and those of our forbearers through epigenetic, biological, and relational factors. Thus, resilience, like trauma, is best conceived of as a process that is constructed relationally and inter-generationally. Protective factors contributing to resilience occur at every level of the socioecological model, including the individual, family, community, or societal level [12]. Individual and family factors that protect against childhood maltreatment and violence, for example, include a child's IQ, a nurturing parent, grandparent or other supportive adults, parental employment, housing stability, and access to health and social services [13–15].

The Harvard Center for the Developing Child has created a visual model to help us understand that resilience occurs when the balance between adverse experiences or factors and positive experiences or factors "tips" in favor of positive outcomes. Positive experiences that support resilience include "facilitating supportive adult-child relationships, building a sense of self-efficacy and perceived control, providing opportunities to strengthen adaptive skills and self-regulatory capacities, and mobilizing sources of faith, hope, and cultural traditions [16]." The single most significant protective factor in preventing both childhood trauma and its adverse outcomes is the presence of a safe, stable, nurturing adult caregiver consistently present in a child's life [17]. The presence of a safe, stable, nurturing adult provides the attunement, support, and protection that buffer children from the adverse effects of traumatic experiences. Safe, stable, and nurturing relationships can effectively break the intergenerational transmission of abuse [18]. These resiliency-promoting, caregiving relationships flourish most fully in supportive communities; communities that focus on preventing abuse and supporting parents and caregivers also protect children from maltreatment [19]. In turn, communities thrive when they are supported by equitable and just societal policies. Across the US, communities are becoming "trauma-informed" in order to develop policies and programs that promote resilience and healing [20].

Early Trauma

One of the largest, most comprehensive studies of the effects of childhood trauma on adulthood disease, the "Adverse Childhood Experiences" (or "ACE Study"), highlighted the high prevalence of several types of trauma occurring during childhood (ACES) [21] including childhood emotional, sexual, and physical abuse, neglect, and family dysfunction (i.e., witnessing of parental domestic violence, parental separation or divorce, parental mental illness, parental substance use, or parental incarceration). Even in the predominantly white, middle class study

population, 63.9% of the participants had experienced at least one ACE category and 12.5% had experienced four or more ACE categories.

Communities where poverty and lack of access to optimal educational opportunities, employment, healthy food, and sufficient housing are prevalent have higher rates of adverse childhood events [22, 23]. ACEs differ not only by place (state) but also by race and ethnicity, with the prevalence of ACEs lowest among Asian non-Hispanic children in all regions and highest among black non-Hispanic children in most regions [24]. The original ACE study did not measure multiple forms of adversity and trauma experienced by children [25]. For example, the US General Accounting Office (GAO) has found that black students, boys, and children with disabilities experience disproportionate rates of discipline in US schools [26]. These disproportionate rates of discipline, inhumane forms of discipline, and educational quality disparities later increase the risk of poor social outcomes, like poverty or incarceration, and poor health outcomes [27, 28]. The burden of overall trauma in urban and rural underserved communities is thought to approach that of conflict-ridden developing countries [29]. The Institute for Safe Families in Philadelphia has developed an "Urban ACE score" that includes measures of witnessed community violence, adverse neighborhood experiences, bullying, and discrimination [30]. The World Health Organization has developed and is validating an "ACE International Questionnaire" that includes additional questions related to forced marriage, peer violence, exposure to community violence and war, and collective violence [31].

Because our experiences and relationships, in constant interplay with our genetic makeup, build our biology including our brains [32], adversity and trauma have profound health effects. Childhood trauma and adversity are at the root of many adulthood high-risk behaviors and diseases that often occur decades after the trauma (Fig. 2.1). Additionally, adverse experiences may have an effect on poor health out-

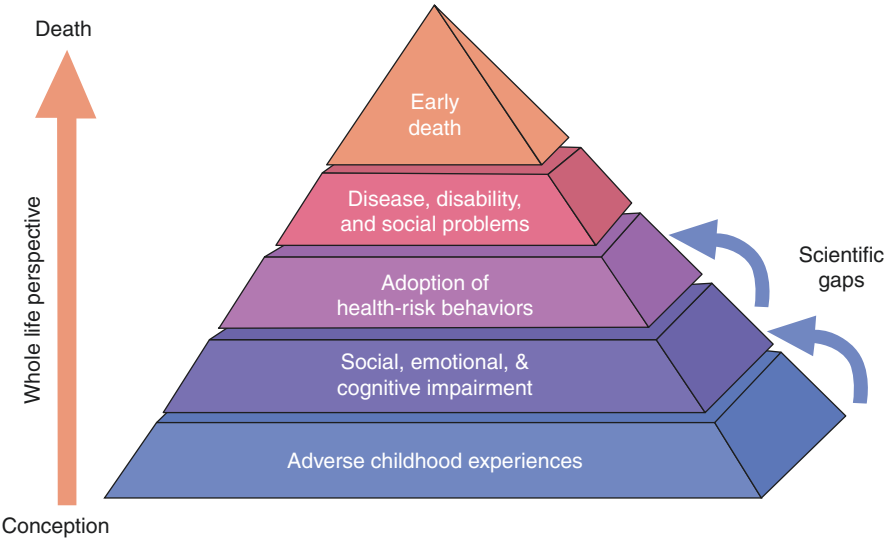

Fig. 2.1 Adverse childhood experience and lifetime health. From http://www.cdc.gov/violenceprevention/acestudy/pyramid.html

comes that is independent of adverse coping behaviors [33]. Retrospective and prospective studies have demonstrated that childhood trauma and adversity are associated with a risk of premature mortality [34, 35]. When considering the devastating health effects and adverse social outcomes associated with ACEs like lower educational attainment, graduation rates, teen pregnancy, and even higher incarceration rates, it is hard to fathom the longevity and pervasive effects of trauma [36].

Protective Factors and Resilience

Fortunately, protective factors like supportive relationships and resilience factors can mitigate the behavioral and health outcomes of ACEs [11, 13, 37]. In a recent study of both individual ACEs and social adversity, researchers found that having support from an adult that the child trusts can mitigate the impacts of childhood adversity. In this retrospective study, the presence of an "always available adult" (AAA), trusted during childhood, was associated with a lower prevalence of unhealthy behaviors (poor diet, smoking, and alcohol use) and poor mental health in adulthood. Having an AAA in one's life also mitigated the effects of ACEs on unhealthy behaviors and on poor mental health status [13].

In another retrospective study, childhood community resilience assets—including knowing where to get help, having opportunities to apply one's skills, being treated fairly, enjoying community culture, having supportive friends, having people to look up to, and having a trusted adult available—were found to be associated with better childhood health and high school attendance. These community resilience assets were also associated with mitigation of the negative effects of ACEs on the prevalence of childhood illnesses. Interestingly, different resilience factors were associated with mitigation of the prevalence of different childhood illnesses [37]. Thus, promoting community resilience promises to not only prevent ACEs but also to mitigate the harmful effects of ACEs once they have occurred. Promoting resilience through healthcare, as well as through multi-sector partnerships involving healthcare, is essential to achieving healthcare and health equity [11]. Table 2.1 provides an overview of these risk and protective factors for trauma and the conditions associated with trauma.

Trauma-Informed Care

Trauma-informed care has been defined as "a strengths-based service delivery approach that is grounded in an understanding of and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety for both providers and survivors, and that creates opportunities for survivors to rebuild a sense of control and empowerment [38]." There is emerging evidence that adopting trauma-informed care may improve patient and workplace outcomes [2, 39, 40]. *How can we build systems of trauma-informed care that promote resilience and healing?*

Table 2.1 Trauma-related conditions, risk and protective factors

Risk Factors	Conditions related to trauma	Protective Factors
Lack of safe, stable, nurturing relationships	**Psychiatric illnesses (anxiety, depression, PTSD, cPTSD, suicidality)**	Supportive family relationships
Young age	**Chronic illnesses (heart, lung, liver and other diseases)**	Well-resourced, safe communities
Female gender for intimate partner violence/sexual violence	**Sexually transmitted infections including HIV**	Financial security
Male gender for community violence	**Sleep disorders**	Employment
Minority status (Race, ethnicity, religion, sexual orientation, gender identity, other)	**Unwanted pregnancy and pregnancy at early age**	Stable housing
Psychiatric illness	**Childhood learning and behavior problems**	Higher educational status
Substance use	**Childhood learning and behavior problems**	Higher brain executive function
Disability (physical and mental)	**Poor educational attainment**	Community engagement
Family history of violence	**Substance use**	Good health
Homelessness	**Homelessness**	
Poverty	**Premature death (due to poor health, homicide, suicide)**	
	Future victimization or perpetration of violence	

Table 2.2 San Francisco Department of Public Health Trauma-informed Principles and Competencies[a]

Trauma understanding
Cultural humility and responsiveness
Safety and stability
Compassion and dependability
Collaboration and empowerment
Resilience and recovery

[a]http://www.leapsf.org/pdf/Trauma-Informed-Systems-Initative-2014.pdf

Trauma-Informed Care Mission and Principles

Ideally, a trauma-informed system is an "ecosystem" that supports and promotes health and well-being for all people who interact within that system. Defining and adopting a shared mission and core foundational principles lays the groundwork for trauma-informed care and guides healthcare transformation. SAMHSA has developed and disseminated trauma-informed principles that have influenced health system transformation nationally and internationally [41]. The San Francisco Department of Public Health has adopted foundational principles, based upon the SAMHSA principles and others (Table 2.2).

These foundational principles can guide the process of trauma-informed systems and care transformation. These principles are based upon a deep understanding of how trauma affects human beings and their relationships. They describe how healing from trauma may occur through relationships and experiences that are safe,

stable, compassionate, dependable, collaborative, empowering, and focused on the building of resilience.

Cultural humility [42], one of the principles adopted by the San Francisco Department of Public Health, is a particularly helpful concept in addressing the healthy and equitable relationship-building between physicians and patients or others that is a pre-requisite for preventing and mitigating traumatic experiences. Cultural humility [42], which stands in contrast to cultural competence, calls for each of us to commit to life-long learning about our own identities so that we can better understand our own complex cultural identities and aspects of power and privilege (or lack thereof) in society. The practice of cultural humility, then, asks us to use our self-awareness and respect for others' self-determined, always evolving cultural identities to interact in ways that recognize, minimize, and mitigate power differentials. Finally, cultural humility asks us to mitigate power differentials on an organizational level by holding our powerful institutions, like hospitals, accountable to the community. Directly addressing self-determination of identity and power differentials in relationships is a promising perspective to lead individuals and organizations toward becoming more trauma-informed and resiliency–promoting.

Becoming trauma-informed is a journey, rather than a fixed set of interventions, that is guided by one's trauma-informed mission and foundational principles. Healthcare providers, staff, and systems become more trauma-informed as they delve deeply into how each of these trauma-informed principles influence their relationships, experiences, and work. Multiple conceptual and practical models of trauma-informed care have been developed [2, 43–45]. Most organizations that have embarked on a path of trauma-informed systems transformation understand that it is a process of culture change. The Sanctuary Model ® [45], for example, describes itself as, "a theory-based, trauma-informed, trauma-responsive, evidence-supported, whole culture approach that has a clear and structured methodology for creating or changing an organizational culture." Culture change is never complete; it is always evolving. Ultimately, striving for social justice and health equity is fundamentally necessary to create the conditions through which all people can heal from past traumatic experiences, remain unexposed to re-traumatization, and participate in preventing the transmission of trauma to others.

Trauma-Informed Care Is for Everyone

Trauma-informed care, built upon the foundational principles discussed above, creates an optimally healing environment for the patient, the patient's family, and the healthcare providers and staff [46, 47]. When all providers and staff in a clinic or hospital have been trained to understand that trauma and its sequelae can affect everyone (including each of their co-workers) and that many forms of trauma are hidden, it can deepen respect for the resilience of both patients and colleagues. Developing a shared understanding that maladaptive behaviors or ways of relating often have their roots in traumatic experiences promotes a climate of compassion

and respect. The devastating traumatic impacts of various forms of structural violence like racism can be highlighted and directly addressed. The legacy of historical trauma and its ongoing manifestations in affected communities can be integrated into the response to trauma [48]. Once healthcare providers and organizations understand that highly hierarchical and non-collaborative decision-making processes and policies or management practices perpetuate the dynamics of trauma and run counter to the principles of trauma-informed care, they can build more healing systems of care.

Creating an environment that exudes calm, safety, and compassion is a goal of trauma-informed systems. In trauma-informed systems, respectful approaches that earn patients' and communities' trust and cultivate resilience, positive coping strategies, and a sense of control are emphasized. Educational materials about trauma and resilience are made easily accessible. Programs to help mitigate the difficulties that traumatized patients may have in accessing care such as peer advocacy, patient navigation [49, 50], case management, and community outreach, improve the quality of care and extend treatment beyond the walls of the clinic or hospital [43, 50, 51]. Models of care using proactive outreach to patients and practical assistance to increase access and adherence to treatment result in increased care for patients [29], reduced violence recidivism, and improved cost-effectiveness [52]. The healthcare organization attends to their relationship with and impact in the community to examine institutional accountability for the perpetuation of inequities and commits to equitable partnerships that support community resilience and social justice.

Trauma-informed systems also build and support the resilience of providers and staff. Provider and staff well-being are required to maintain safety and compassion for patients. In particular, attending to the personal traumatic experiences of providers and staff and the phenomenon of "vicarious traumatization" (VT), defined as "the negative transformation in the helper that results from empathic engagement with trauma survivors and their trauma material, combined with a commitment or responsibility to help them," [53] is regarded as critically important to allowing providers and staff to respond with empathy to patient stories of interpersonal and structural acts of cruelty and betrayal.

Practical Application of Trauma-Informed Principles to Clinical Care: The 4 Cs

Maintaining a calm, supportive, non-judgmental, and resiliency-promoting demeanor that is stabilizing and reassuring to patients with a history of trauma can be challenging even for experienced clinicians; it requires a commitment to ongoing self-reflection, practice, and both individual and systems transformation. To help providers understand how to enact practices that support trauma-informed care transformation, one of the authors (LK) developed a simple 4 Cs paradigm in a concrete and memorable rubric. These 4 Cs are: *Calm, Contain, Care, and Cope*

Table 2.3 The Four Cs of Trauma-informed Care

Calm
Pay attention to how you are feeling when you are caring for the patient. Breathe deeply and calm yourself to model and promote calmness for the patient, yourself, and your co-workers
Practice calming exercises (deep breathing, grounding) with patients
Cultivate understanding of trauma and its effects to promote a calm, patient attitude toward others (patients and co-workers)
Re-design healthcare environments, policies, and practices to reduce chaos and promote calmness
Cultivate understanding of how resilience, justice, and equity build peaceful, calm communities and environments
Contain
Limit trauma history detail to maintain emotional and physical safety. Provide education, resources, and referrals to trauma-specific care without requiring disclosure of trauma
Model healthy relationship boundaries and earn trust by behaving reliably
Monitor patients' emotional and physical responses to education and inquiry about trauma
Practice calming techniques to help patient (or parent/caregiver and child dyad) regain composure
Normalize fear of returning to the healthcare setting if the triggering of a trauma response occurs; invite the patient to share what changes would make visits more tolerable and healing
Enact healthcare policies and practices that minimize re-traumatization of patients and staff
Form multi-disciplinary and multi-sector partnerships that reduce re-traumatization for patients and staff
Care
Practice self-care and self-compassion while caring for others
Share messages of support when patients disclose trauma or trauma symptoms
Normalize and de-stigmatize trauma symptoms and harmful coping behaviors (as common sequelae of trauma)
Practice cultural humility [42]
Adopt behaviors, practices, and policies that minimize and mitigate power differentials to reduce trauma and structural violence
Enact healthcare policies that promote self-care, compassion, and equity
Form equitable partnerships to extend CARE into the community
Cope
Emphasize coping skills, positive relationships, and interventions that build resilience
Inquire about practices that help the patient feel better and more hopeful
Document a "Coping Strategies" list instead of only "Problem Lists" and include patient's own words of wisdom and good self-advice in the "after-visit" summary
Improve identification and treatment of the mental health, substance use, and other sequelae of trauma
Connect patients and families with community organizations to increase social support and access to necessary resources
Promote equity within healthcare organizations, communities, and society

(Table 2.3). These 4Cs emphasize key concepts in trauma-informed care and can serve as touchstones to guide immediate and sustained behavior change. In this chapter, the 4Cs paradigm is expanded to apply to not only individuals [54, 55] but also healthcare organizations and multi-sector partnerships.

Calm

Calm Pay attention to how you are feeling when you are caring for the patient. Breathe deeply and calm yourself to model and promote calmness for the patient, yourself, and your co-workers. Practice calming exercises (deep breathing, grounding) with patients. Cultivate understanding of trauma and its effects to promote a calm, patient attitude toward others (patients and co-workers.)

Dr. Jorge García, a beloved provider in a busy family practice clinic in the Redwood Health System, made it a regular practice to pause for just a second before entering each patient's room. He paused to breathe deeply and allow himself to feel a deep sense of gratitude that his next patient, despite many stressful life circumstances, had come to this appointment. As he washed his hands at the beginning and end of each visit, he noticed the soothing sensations of water on his hands and silently offered his wishes for the well-being of his patient and himself.

Because human beings biologically "co-regulate" with one another [56, 57], healthcare providers and staff can use the relaxation of their own bodies and breath to create a calm, healing environment not only for patients but also for one another. Imagine how peaceful and healing a healthcare environment would feel if each person working within that environment practiced mindfulness, a practice of maintaining awareness of the current moment and gently acknowledging one's thoughts, emotions, and bodily sensations and breath. People can practice mindfulness in a myriad of different ways that are congruent with their cultural preferences. People who have experienced severe or chronic trauma may have difficulty regulating their emotional affect or staying present (and not dissociating) during stressful moments. Healthcare providers and staff who breathe peacefully with relaxed, expansive exhalations and speak calmly even when they encounter stressful situations model and spread a sense of calmness. Especially when paired with active compassion and self-awareness about power and privilege, this calmness can subtly assist a patient or co-worker who is responding to past or current trauma co-regulate into a less stressful physical and emotional state.

Whenever healthcare providers and staff are interacting with patients, it is important that they observe patients and their caregivers for signs of emotional dysregulation that could be indications of the triggering of traumatic memories or a trauma response. Observing when patients become anxious, talk more quickly or loudly or, conversely, stop talking or appear to be dissociating from the present moment can help healthcare providers and staff attend to adjusting their approach to make the healthcare visit more tolerable. When a healthcare provider observes that a patient seems dysregulated or overwhelmed, the healthcare team can elicit the patient's preferred calming practices and teach additional skills that activate the calming parasympathetic system [58]. Patients may utilize prayer, meditation, breathing techniques, visualization, repetition of a special word, muscle relaxation, music, self-care and meditation digital apps, and other skills to re-orient to the present moment and gain more calmness. It is critically important to normalize the fear of returning to an environment that the patient has found triggering and inquire as to how best to accommodate the patient to allow for continued engagement in healthcare.

In pediatric practice, observing the emotional regulation of the caregiver, the child, and the dyadic interactions of the caregiver and child can also provide clues to the healthcare provider about the effects of traumatic experiences on both the caregiver and child. Healthcare providers can coach caregivers in teaching their children calming practices and breathing exercises through playful shared activities like gently blowing soap bubbles, reading books together, or soothing touch to make the healthcare environment less triggering for both the caregiver and child [59]. By coaching a caregiver, rather than stepping in to calm a child, the healthcare provider can enhance a mutually healing relationship between caregivers and children to contribute to breaking the intergenerational cycle of trauma transmission [11, 18, 59–61].

Practicing mindfulness to promote a calm environment does not mean that healthcare providers and staff should avoid conflict. Human beings, our interactions, and relationships are complex and bound to result in conflict. Through practicing mindfulness, we can learn to move toward conflict more calmly rather than recoiling or reacting in ways that exacerbate stressful situations. Practicing mindfulness and remaining in touch with our thoughts, emotions, bodily sensations, and breath can render stress and trauma less contagious and damaging [62].

Despite experiencing a high burden of trauma, the patients cared for by Dr. Jorge García have better diabetic control than the average for his health system. Dr. García understands that there are many evidence-based factors that contribute to these improved outcomes including his compassion, stellar clinical skills, attention to detail, Spanish language and cultural concordance with many of his Latino patients, the well-functioning team-based care in his clinic, and the excellent continuous quality improvement program. Yet, Dr. García also feels that his deep understanding of trauma-informed care and how to promote a calm, healing environment strongly contributes to the good outcomes for his patients and team.

There are specific trauma-informed attitudes that help healthcare providers and staff maintain a calm perspective and demeanor. When one understands the near universal prevalence of trauma, one can recognize the importance of adopting trauma-informed care practices with everyone in the environment including one's co-workers and patients. When one deeply understands how trauma affects neurodevelopment and behavior, one does not expect behavior change to happen quickly (for oneself, one's patients, or co-workers). An understanding of the effects of trauma can support healthcare providers and staff in adopting evidence-based approaches like harm reduction and motivational interviewing with a more wholehearted sense of patience. When one understands neuroplasticity and the power of respectful, safe, stable, and nurturing relationships to promote healing from trauma, one can focus on patient-centered and colleague-centered resilience-building and relationship-building practices [58].

The Redwood Health System decided to embark upon organizational culture transformation to become trauma-informed. Learning from other health systems, they realized that this transformation would require years of sustained focus. At the same time, they wanted to make some rapid changes that would promote a more healing environment. They held a series of meetings with key stakeholders to adopt

foundational trauma-informed principles. They embarked on initiatives to teach and support mindfulness practices and prevent vicarious traumatization for their staff, including the behavioral health staff. They asked staff to begin each meeting with different evidence-based practices to promote well-being, like taking turns leading a brief gratitude exercise or 1 min guided meditation. The health system also decided to remodel their environment's physical spaces and staffing patterns to be more soothing and peaceful for patients and staff.

Organizations that are in the process of becoming trauma-informed have recognized the importance of promoting a calm, peaceful environment through hiring practices, workforce development and support, management training, improved workflows, and alteration of the physical environment. Whenever possible the healthcare environment should be altered to minimize noise, harsh lighting, cramped and uncomfortable spaces, and chaos. Involving all of the stakeholders who will utilize a space in designing the physical and human environment is critically important. Aspects of the environment that promote a sense of peacefulness and security for one person may feel uncomfortable and, even threatening, to another person; for example, some staff and patients may be comforted by physical barriers between people or abundant security staff, and others may find these disturbing. Workflows that are clear and efficient can promote a calm environment as well. Addressing vicarious traumatization requires a multi-pronged approach that ideally includes offering all staff training in mindfulness-based stress reduction techniques.

The Redwood Health System realized from the start of this process that if they really wanted to become trauma-informed and resiliency-promoting, they would need to focus on transforming their relationship with the community. They knew that they had a lot to learn from community members and the community-based organizations in their region. They immediately changed their policies to provide childcare and stipends to patient advisory board members to foster community stakeholder leadership. They began attending community meetings as listeners. They began a process of learning how they could support existing trauma-informed systems' work in their community. They quickly learned that the community was not satisfied with their hiring processes, pointing out that the Redwood Health System did not hire diverse staff from the community.

Promoting peacefulness and healing in the community requires an explicit commitment to promoting equity. Inequitable power differentials are root causes of trauma and the mode of transmission of trauma [63]. Societal structures and policies that create and perpetuate these inequitable power differentials drive health and healthcare disparities. Large healthcare organizations wield a great deal of power in a community and, thus, have the opportunity and responsibility to behave as responsible, accountable anchor institutions. They can adopt best principles and practices of healthcare institution-community partnerships that can support and facilitate multi-sector trauma-informed systems initiatives [64]. When healthcare institutions fully embrace trauma-informed care, they can learn how to function as structural facilitators in building community resilience and equity.

Contain

Contain Asking the level of detail of trauma history that will allow the patient to maintain emotional and physical safety, respects the timeframe of the healthcare interaction, and allows you to offer the patient important treatment options. Providing education, resources, and referrals to trauma-specific care without requiring disclosure of trauma details facilitates an interaction that does not emotionally overwhelm the provider or the patient.

The medical assistants (MAs) in the Redwood Health System's women's clinic implemented a "universal education" protocol about interpersonal violence (IPV) and reproductive coercion that was based upon a program implemented and studied at Planned Parenthood [65]. *Alicia Greene, an MA, invited a woman who came to the clinic to discuss birth control options into the exam room alone. Ms. Greene shared a wallet-sized educational card about IPV and reproductive coercion and said, "Our relationships affect our health. If we have stress in our relationships or someone is hurting us that can cause or worsen many health problems. We always share information about how partners can try to control whether you get pregnant by doing things like poking holes in condoms or throwing out birth control pills. At our clinic, we always offer hidden birth control methods like an IUD with the string cut short so your partner cannot feel it or a Depo-Provera shot that your partner won't know you had. Feel free to ask the provider for a hidden method of birth control. Also, if you or any of your family members or friends are being hurt by someone, this card explains how to get help. Would you like to take one or more of these cards to share with friends?"*

There is a paucity of evidence about patients' experiences with various models of trauma-informed care. One of the more robust areas of research has been the study of addressing intimate partner violence (IPV) with adult patients, especially women. Directly addressing adulthood IPV compassionately and non-judgmentally has been found to be safe, effective, and acceptable [70]. Once a patient discloses IPV, the patient receives brief counseling and referral to resources. Yet, in most healthcare settings, IPV screening rates are low and IPV disclosure rates after screening are far lower than the expected IPV prevalence [66]. Providers have reported many barriers to implementing IPV screening including a fear of opening "Pandora's Box" [67]. Patients may have many reasons for not disclosing IPV to providers including shame, lack of trust, fear of the person who has threatened and hurt them, fear about lack of confidentiality, fear about adverse consequences like imposed separation from children, and more [68]. Thus, with a "screening" model of care, only the small fraction of people who are experiencing IPV, and are screened and disclose IPV, ever receive education about life-saving resources.

In response to these barriers, a new approach called "Universal Education" (UE) has been developed and tested in reproductive healthcare; it was found to be effective in addressing reproductive coercion regardless of disclosure [65]. The UE approach has three main components. A healthcare provider relates an educational message about how trauma might relate to the patient's presenting complaint or concern, explicitly describes the trauma they are referring to (like IPV or reproduc-

tive coercion), and, then, offers resources without requiring disclosure. Because UE has been found to be successful in reproductive healthcare, all family planning visits should include UE about both reproductive coercion and IPV at least. More recently, leaders in promoting and studying a UE approach have discovered that many patients appreciate a fourth component of UE: offering a patient UE materials to "take for a family member, friend, or people in your community" engages the patient as an active stakeholder in preventing the transmission of violence and other forms of trauma. Altruism is powerfully healing; this participation of the patient in helping others can become a vital component in healing from traumatic experiences [69]. Because screening for IPV has been found to be safe and effective, one can also follow UE with direct inquiry about IPV [70]. To prevent misunderstandings and unexpected consequences of discussions about trauma, healthcare providers and systems should always explain the limits of confidentiality governing an interaction.

Dr. Melissa Jones, a provider in the Redwood Health System Adult Medical Clinic, has a new patient, Mr. Eric Johnson, who looks nervous and smells of alcohol when she greets him. Dr. Jones, who has reviewed his chart, sees that his blood pressure and diabetes are poorly controlled and that he has untreated hepatitis C. Having been trained in providing trauma-informed care, she assumes that so many poorly controlled medical problems and alcohol use may have their roots in childhood trauma. She calms herself before entering his room. After she listens without interruption to his concerns and elicits that he began drinking alcohol at age 10, she gently reflects, "In my experience, when a patient tells me that he began drinking at age 10, it is often because he was experiencing very difficult things during childhood. We are just meeting each other for the first time today, so we don't need to go into those details right now. I do want you to know that I am open to discussing those things in the future or referring you to a counselor who specializes in helping people who have had difficult or painful circumstances in childhood if you think that would be helpful."

Addressing childhood trauma or ACEs with adults is an area of current, active exploration [71]. For many patients, it can be so powerfully healing to reveal the weighty trauma burden that one has been carrying for decades to a trusted, reliable, and compassionate healthcare provider. Many patients may not consciously realize the connection between their distressing symptoms and prior or ongoing traumatic experiences; making this connection may provide new insights and motivation to seek healthier coping techniques and support. Yet, many patients may either not be ready to disclose detailed trauma histories (to themselves or others), or may be ambivalent about this, or even unsure of how they feel about disclosure. For people who have difficulties negotiating relationship boundaries due to childhood abuse, judging whether it feels safe or not to disclose a detailed trauma history may be challenging at best and re-traumatizing at worst.

In a recent study in a safety-net clinic with integrated behavioral health services, a majority of the patients surveyed believed that they would be comfortable completing an ACE questionnaire and a PTSD screening tool (the PC-PTSD) and having these results shared with a treating clinician. They also felt that their clinician would

be able to provide helpful information [71]. This study and others do not yet elucidate the full experience of adult patients or healthcare providers after the administration of a trauma questionnaire. There remains controversy in adult medicine and pediatrics over whether to administer the ACE or other trauma questionnaires [72, 73] such as resilience or coping measures, screening tools to diagnose mental health or other sequelae of trauma [74, 75], or some combination of these to patients [76]. Although the UE approach described above has not been widely tested for all forms of trauma, the rationale and method are trauma-informed; patients can receive important educational messages about the impact of trauma on health, support, and resiliency-promoting referrals without having to disclose details about traumatic experiences.

Dr. Melissa Jones notices that after she reflects about the possibility that Mr. Johnson could have experienced "very difficult things in childhood", he gets tears in his eyes, starts breathing much more quickly and sweating, and stares blankly at the wall. Dr. Jones has noticed that her remarks have triggered an emotional reaction. She also does not want to be forceful about asking Mr. Johnson to trust her upon their first meeting when he may have been hurt (and, thus, his trust betrayed) by a caregiver when he was a child; she wants to model earning his trust over time. She pauses and inquires, "Mr. Johnson, I wonder if we could both take a deep breath and allow ourselves to feel the weight of our bodies sinking into the healing energy of the earth. Let's feel our feet connecting firmly and solidly to the floor." After she and Mr. Johnson take a few deep breaths together, she explains, "I want this clinic to feel like a safe and healing place for you, so that you always feel like you can return for further appointments. Coming to a clinic can feel frightening for many people. Please let me know if there are things that I could do to help you feel as safe as possible here. And, please let me know if I could introduce you to one of our behavioral health clinicians who can support people in coping with stress, painful experiences, and feeling safer."

Providers who are experienced in trauma-informed care pay close attention to the response of patients to education and questions about traumatic experiences. One way to obtain clues to the time of onset of traumatic events without explicitly inquiring about these events is to ask the age of onset of poor mental health and substance use. When a patient reveals that they began using alcohol or other drugs at a very young age, this is virtually pathognomonic for trauma and adversity. Sadly, many depressed patients who have experienced childhood trauma are unable to remember a time in their lives that they were not depressed. Even when patients feel relieved that they have revealed a traumatic event to a healthcare provider, they may still feel ambivalent about returning for another visit; they may feel that the intensity of the visit was difficult to tolerate, that the provider is judging them, or that they feel overexposed and vulnerable. Providers can reassure patients that it is normal to have all sorts of complicated feelings after disclosing a trauma history; providers can explicitly state that they are greatly looking forward to seeing the patient again and offer any possible accommodations.

Modelling reliable and trustworthy behavior is critically important. By definition, people who were cared for by unreliable or abusive caregivers likely experienced many broken promises and betrayals of trust. While it is natural for healthcare

providers and staff to want to generously extend themselves to provide care to someone who has suffered immensely, a good rule of reliability is to not make any promises that one is not assured of being able to keep; under-promising and over-delivering are preferable.

As part of their trauma-informed care transformation initiative, The Redwood Health System's Trauma-informed Advisory Board, consisting of inter-professional staff and patients who had experienced a high burden of trauma, examined all of their workflows and practices and asked themselves questions like, "How many times does a patient have to re-tell their trauma story to get the help they need in our system?", "How much information about sensitive trauma history details should be documented in the electronic health record and who should have access to this information?", "How can we provide information and access to trauma-specific services without requiring our patients to disclose trauma history details?", "How can we partner with the many other professionals serving our patients (lawyers, case managers, school administrators, advocates, police, etc.) in ways that don't re-traumatize our patients or staff?", and "How can our staff share experiences and information with one another in ways that don't traumatize one another?"

Care

Care Practice self-care and compassion for yourself, the patient, and your co-workers. Adopt a compassionate attitude toward oneself and others, sharing messages of support, de-stigmatizing adverse coping behaviors, and adhering to the practice of cultural humility to promote healing.

Ms. Sullivan is a 32-year-old mother of two boys who recently completed her GED and started community college classes. When she first met Dr. Garcia, she suffered from severe bouts of pancreatitis due to alcohol use, was using heroin, and had lost custody of her sons during a recent incarceration. When he learned Ms. Sullivan had started drinking alcohol at age 11, Dr. Garcia assumed it was likely that she had a history of childhood trauma. He built rapport with her, referred her to behavioral health, a methadone program and a post-incarceration transitions program. After she transitioned to suboxone and enrolled in college classes, he referred her to a legal aid organization to re-gain custody of her sons. Over time, Dr. Garcia and the behavioral health clinicians learned about Ms. Sullivan's very severe childhood trauma. Dr. Garcia repeatedly reminded Ms. Sullivan, "Of course you started drinking at age 11. You were trying to cope with an impossibly painful situation." Ms. Sullivan attributes her recent accomplishments to her faith in God and the help she has obtained from the Redwood Health System Clinic. "They believed in me. For years, I have felt like a failure, like my life didn't matter. They helped me see that I was drinking and using dope to cope with the abuse and pain. They treated me with dignity…like I matter as a person and a mother. I still have nightmares and struggle a lot, but I have hope and dreams too."

Understanding of the contribution of trauma to the development of illness, adverse coping behaviors, emotional regulation, and ways of relating is important to provide effective and trauma-informed care. Harmful coping behaviors are common in people with adverse experiences and range from smoking, over-eating, inactivity, alcohol and other drug use to reacting to stress with violence, avoidance to hyper-passivity [77, 78]. Traumatic experiences, which are existentially threatening by definition, often shatter a person's sense of safety, control, and self-worth. Following trauma, guilt, shame, anger, and difficulty regulating emotions [41] are not uncommon and can make seeking and receiving healthcare challenging, triggering, and destabilizing. Self-protective, but ultimately harmful, behavioral responses to trauma or the sequelae of trauma such as self-harm, or substance use may lead to estrangement from oneself or those who seek to be helpful. The immense burden of guilt and shame about both the experience of victimization and harmful coping behaviors can be compounded when the trauma itself or a person's responses are stigmatized. When the trauma involves painful experiences that breach trust in relationships, as happens in interpersonal violence, structural violence, and historical violence, the person or community who has experienced trauma may be particularly attuned to whether healthcare providers and staff are behaving in a trustworthy and compassionate manner. Because most forms of trauma are rooted in abuses of power and oppression and the medical profession has participated in many abuses of power throughout history, trust must be earned; any behaviors, procedures, or policies that create differentials in power may feel threatening and re-traumatizing.

So, how can we behave in ways that support resilience and healing? SAMHSA has suggested a fundamental paradigm shift in the approach to patients; they suggest that all healthcare providers, including those providing substance use services, should stop asking patients "What's wrong with you?" and, instead, help patients understand that their adverse emotional, behavioral, relational, and health outcomes stem from "What happened to you?" Reframing the approach to patients in this way reduces shame, guilt, and blame. This approach reaffirms the value and humanity of every patient (and staff member) and inspires compassion for oneself and others.

Emotional, behavioral, and psychological responses to the trauma such as substance abuse, over-eating, depression, and anxiety can be destigmatized by acknowledging them as attempts to deal with stress and suffering. Understanding that self-harm is a common post-traumatic coping strategy can be healing for patients. Indeed, this approach has been studied in mental health and substance use settings and has been shown to be more beneficial to patients than usual care [39]. Attending to the root causes of traumatic experiences (e.g., colonization, racism, misogyny, etc.) as conceptualized by a patient or community de-stigmatizes the adverse outcomes of trauma and honors resilience in the face of overwhelming structural and interpersonal violence [7, 8].

Responses to disclosures of current or past trauma can be simple, non-judgmental, and compassionate. When patients share past trauma, providers can state, "Thank you for sharing this with me. I am sorry that happened. We are here to help. Can you tell me how you feel this experience is still affecting you?" It is

important to remember that patients may have extremely complicated feelings toward people who hurt them, especially if those people were caregivers or partners, and to refrain from any immediate criticism of the person who hurt the patient. There are excellent sources of information on responding to current interpersonal violence and assessing safety [79].

Adhering to the practice of cultural humility [42] is essential to providing trauma-informed care. Practicing cultural humility helps providers and other staff celebrate self-defined, complex cultural identities and understand how culture may affect trauma exposure, trauma responses, and available and appropriate resources. Practitioners of cultural humility, aware of how power and privilege affect our cultural experiences and identities, continually attempt to minimize power differentials in relationships. Because power imbalances and being or feeling powerless or dehumanized are central to the causes and experiences of trauma, the practice of cultural humility is foundational in building healing, resiliency-promoting relationships.

After 2 years of the Redwood Health System's organizational culture transformation to become trauma-informed, staff and leadership are gratified that they have made some significant changes including teaching mindfulness skills to all staff and many patients, remodeling physical spaces to be more soothing and peaceful, and improving their integration of behavioral health into primary care. At the same time, this process of culture change raises many difficult issues for the Redwood Health System; they realize that it is not only the patients who feel traumatized in the health system but that many staff, especially those with less decision-making power, feel a heavy burden of stress at work. Many staff report that they do not feel fully respected. They describe a "culture of blame" in the workplace and unfair treatment of many staff and patients, especially those from racial/ethnic minority communities. The Redwood Health System re-addresses the composition of their Trauma-informed Advisory Board to include more patients and frontline staff from minority and marginalized communities in this leadership group. The newly formed advisory board re-approves of the trauma-informed principles previously adopted by the health system. The concept of cultural humility resonates deeply with them; they also advise that specific, widespread training on racism is needed to achieve an equitable experience for all patients and staff.

Compassion, humility, and respect should be reflected throughout the trauma-informed healthcare system. Organizations embarking on trauma-informed transformation advocate for reducing organizational hierarchies, diversifying their staff, addressing trauma and secondary trauma for all staff, and implementing trauma-informed principles and practices including cultural humility and other practices that support inclusion and equity. A culture of respect and equity aids in the care of patients directly—patients who are particularly sensitive to judgment, for example, may notice when healthcare staff and co-workers treat one another well and feel that this trauma-informed healthcare environment is more psychologically safe. The insightful observations and ideas of diverse staff with important lived experience may inform and improve patient care. When compassionate, respectful, and equitable collaboration is the lived experience of the healthcare staff, the healthcare environment becomes a healing ecosystem for everyone.

Understanding the influence of trauma on graduation rates and educational attainment, the Redwood Health System decides to partner with the local school district. Healthcare providers, teachers, and school administrators work together to begin a "trauma-informed schools" initiative. The school district adopts a policy based on the trauma-informed practice of asking, "What has happened to you?" whenever children behave in ways that might connote distress. When students are stressed, a more proactive, immediate response is taken. There are daily check-ins with students and a "peace" room where students can go to calm down and learn mindfulness skills. The school district examines their disciplinary practices and discovers large disparities in detentions and suspensions by race/ethnicity, gender, and disability status. Disciplinary action is completely revamped such that behavioral health support replaces suspension. The school also adopts a range of changes in their curriculum to reflect and celebrate the diverse cultural backgrounds of the students attending the schools. Over the next 4 years, graduation rates improve for all students, and disparities in graduation rates diminish.

Cope

Cope Emphasize coping skills, positive relationships, and interventions that build hope and resiliency. Inquire about practices that help the patient feel better. Provide evidence-based treatment for the sequelae of trauma including substance use and mental illness. Celebrate cultural practices that increase well-being and social connection.

After witnessing Mr. Eric Johnson's reaction to her comments about trauma, Dr. Melissa Jones asks him to complete the PC-PTSD. His answers indicate that he may have PTSD, but he refuses to talk to a behavioral health clinician. Dr. Jones asks Mr. Johnson, "When you feel most stressed, what do you do to cope?" When Mr. Johnson says he drinks alcohol to deal with stress and fall asleep, Dr. Jones says, "It sounds like alcohol really helps you feel better. Tell me more about exactly how it makes you feel." "I can't go to sleep without drinking. Once I drink enough I stop thinking. I feel calmer. But then a few hours later I start to feel worse than I felt when I started drinking." Dr. Jones validates his experience, "I hear that alcohol really helps you feel calmer at first, but then you start to feel worse when it wears off." She asks him whether he can think of anything else in his life that helps him feel calm. He says, "Sometimes when I listen to music, I don't drink as much." Dr. Jones learns that even though Mr. Johnson listens to many different types of music, he only notices this calming effect when listening to R and B. Mr. Johnson likes Dr. Jones suggestion that he listen to R and B more often; he agrees he can do this for 20 min each morning and night. He declines an SSRI medication to treat the symptoms of PTSD but says he "will think about it." In the printed "after-visit summary", Dr. Jones writes, "You said that 'sometimes when I listen to music, I don't drink as

much.'" At his next visit, Dr. Jones, observes, "I am so happy to see that you are taking care of yourself by coming back for a second visit." Mr. Johnson once again declines an SSRI and referral to see behavioral health but agrees to look at the patient education materials about PTSD on the VA's National Center for PTSD website with her and download their PTSD Coach app.

Healing from trauma, while often a slow and challenging process, can occur through compassionate relationships that support the building of helpful coping techniques, confidence, self-esteem, resilience, and hope [80]. Once providers understand that coping skills that have adverse health and life consequences, like substance use, may have been attempts to survive trauma by achieving short-term positive effects like a reduction of anxiety and fear, they are able to be more helpful. Inquiring about the specific desirable mental and physical short-term effects of ultimately harmful coping techniques can provide the provider with important clues; the provider can ascertain which trauma symptoms are most distressing to the patient and what effects the patient most desires. These clues can assist the patient and provider in a search to find positive coping skills that have both short-term and long-term benefits.

Asking a patient, a question like "When you feel stressed, how do you cope?" is a simple and rapid way to elicit the patient's current coping practices, regardless of whether those practices have adverse effects. Especially when the patient is using a coping technique with adverse effects like substance use, cutting, over-eating, under-eating, binging on food, self-induced vomiting, gambling, or other techniques, it is important to explore the short-term benefits. For example, vomiting may induce a parasympathetic response that, in the short-term, markedly reduces anxiety. Substances may induce euphoria, eliminate intrusive thoughts, quell nightmares, reduce social phobia, or enable sexual activity. Exploring, without judgment, "What do you most like about smoking?" or "Can you describe to me exactly how cutting makes you feel?," can help the patient and provider gain a deeper understanding of the negative effects of trauma and the patient's most desired outcomes. Then, over time, as the provider demonstrates a non-judgmental attitude and trustworthy behavior, the provider and patient can explore other coping strategies that might achieve some of the same desired effects.

Purposefully exploring positive and strengths-based questioning can also give the healthcare provider clues about the patient's preferred individual and social strategies to build resilience. Healthcare providers can ask about a broad range of skills, behaviors, and interventions that build upon strength, resiliency, social connectedness, and hope. Healthcare providers can ask the patient questions like, "What are you doing or thinking when you have brief moments of feeling happy or calm?" "What thoughts or actions or people give you hope?" "What were you thinking or doing the last time you laughed?" "What do you think a best friend would say to you about this?" "Are faith or spirituality important to you?" "Can you think of something or someone you feel grateful for today?" "What do you do to take care of yourself or others?" "Can you describe someone in your past or current life who has been supportive to you?" "What do you think will help you heal?"

Healthcare providers can ask about self-care practices, exercise, music, art, religion or prayer or spirituality, caregiving for children or others or pets, nature, cooking and food, hobbies, volunteer or paid work, spending time with friends or loved ones, supportive people in one's community, helpful organizations or institutions, and more. These skills, behaviors, experiences, relationships, and interventions are the resiliency-building tools that the patient and provider can use to promote healing. Providers can engage patients in building positive self-regard and positive attachment to the healthcare system by acknowledging suffering while also inquiring about resiliency factors. Adding a "Solutions List" or "Preferred Coping List" in addition to a "Problem List" to our medical documentation can communicate these preferred healing tools to the healthcare team.

As discussed earlier, resiliency has been conceptualized in different ways with some proposing measurements of personal traits and others measurements of personal, relational, and contextual factors that buffer one from the negative effects of adversity. Resilience at the interpersonal and community level has been found to not just be associated with lower ACE scores but to mitigate the health effects of ACEs, even when controlling for socioeconomic status (SES) [13, 37]. In fact, having multiple relational resiliency factors (given opportunities to succeed, having supportive friends and a role model) was associated with a 2/3 reduction in the prevalence of poor childhood health (adjusted for SES) across all categories of ACE scores [37]. Reinforcing and building resilience occurs through helping patients who have experienced trauma and its negative sequelae experience positive coping strategies and through moments of healthy social connectedness with themselves and other supportive people and societal structures [81]. Over the long-term, through a process of reinforcing and building resilience, the patient can begin to re-frame the experience of victimization into a narrative of survival.

In order to focus on building positive coping techniques and resilience, the healthcare system must improve its ability to recognize and provide evidence-based treatment for the adverse and disabling mental health consequences of trauma. There are myriad mental health consequences of trauma, including depression, anxiety, PTSD, complex PTSD (cPTSD), and substance use. There is evidence that PTSD is under-diagnosed, under-treated, and ineffectively treated in healthcare systems [82, 83]. There are effective, evidence-based treatments for each of these mental health sequelae of trauma. For patients with PTSD and cPTSD, trauma-focused psychotherapies are the first line therapy. Trauma-focused cognitive behavioral therapy and exposure-based treatments, that is, having survivors repeatedly think about or re-tell their experiences in ways that ultimately allow one to appreciate oneself as a survivor rather than victim, are thought to be the most effective [84]. Child-parent psychotherapy in which a child and parent participate in dyadic therapy is effective even in children with a high burden of trauma [85]. Mindfulness meditation, yoga, and other somatic and creative therapies for the psychological sequelae of trauma all show promise in helping adults and children heal from trauma [62, 86–88]. A full discussion of trauma-focused treatment is beyond the scope of this chapter.

Patients with complex traumatic stress disorders, such as cPTSD, not only have the distressing symptoms of PTSD but also suffer from great difficulties in regulating their emotions, negative self-appraisal, and disrupted inter-personal relationships. When caring for patients with cPTSD, it is especially important for providers to practice calming techniques to assist with emotional regulation, remain closely attuned to power differentials, and model healthy and respectful relationship behaviors with clear boundaries. Promising therapies that promote healing for patients with cPTSD are being developed [89]. Ensuring that mental health services are trauma-informed and do not perpetuate oppressive, traumatic forces is critically important to promoting optimal healing [90]. Combining mental health treatment with traditional cultural healing practices, based on centuries of evidence of reported efficacy, may make mental health treatment more accessible and healing for patients [91]. Adapting evidence-based mental health therapies for different cultural groups is essential [91].

Cope for providers

At the Redwood Health System, the providers and behavioral health clinicians report that they feel overwhelmed and disheartened by patients' traumatic experiences, especially when patients share visually graphic details about highly traumatic experiences. Everyone agrees that they need a more robust program to address secondary or vicarious traumatization.

Vicarious Traumatization

Healthcare providers as well as other professionals from police officers and emergency service personnel to social workers, child protective services workers, and hotline dispatchers frequently are exposed to the trauma suffered by others. Vicarious trauma (VT), or the exposure to the trauma experiences of others, is an occupational challenge for all of these professions [92]. It is considered inevitable that people exposed to the suffering of others will change—they may develop PTSD-like symptoms or become more afraid, cynical, or withdrawn; they may also be more grateful for what they have and appreciative of the resilience of those that they help.

Reactions and responses to vicarious trauma will invariably be different from person to person and from time to time [92]. Each individual working with victims of trauma, as does each patient, brings their own set of vulnerabilities and strengths to their work. Factors that may make providers more vulnerable to this occupational risk include: prior traumatic experiences; substance use or mental illness; social isolation; difficulty expressing feelings; lack of experience, preparation, orientation, training, and supervision in the work; frequency and intensity of exposure to trauma; and lack of an effective and supportive processes for discussing the traumatic exposures [93, 94].

Vicarious traumatization, secondary traumatic stress (STS), and compassion fatigue (CF), all describe negative reactions to exposure to trauma in others that range from emotional reactions very similar to PTSD to detachment and fatigue [94]. Responses that are more neutral occur when a person's own coping strategies, resilience, and support systems help them manage the changes in their worldview. Indeed, exposure to trauma can have positive effects. Vicarious resilience refers to the way that some people may be able to draw inspiration from the resilience they see in their patients [57]. Compassion satisfaction, or the sense of reward and meaning that comes from working with patients who have survived traumatic experiences, can also help protect against the more damaging consequences of exposure to trauma.

Trauma-informed systems of care, therefore, also strive to become vicarious trauma-informed by attending pro-actively and compassionately to the vicarious trauma of healthcare providers and staff. There are online toolkits for helping providers with vicarious trauma [95]. Healthcare systems can implement policies and programs to mitigate the negative reactions to exposure to trauma and support the positive reactions. For example, the supervision of clinicians, especially those with less experience, will include discussing vicarious trauma. Increasing opportunities for self-care through flexible work schedules, reasonable workloads and work hours, small breaks, time and support for individual and group reflection, and accessible therapeutic support are examples of steps to take in making an organization vicarious trauma-informed. Practice of the 4 Cs synergistically benefits staff as well as patients. Creating a nurturing culture of appreciation and inspiration for patients and staff bolsters compassion satisfaction, curtails isolation, and builds a shared sense of hope for healing from trauma.

Mr. Eric Johnson, who lives in a neighborhood that was previously a community with mostly African American/Black residents but is rapidly becoming gentrified and is now predominantly populated with white residents, alludes to feeling very worried that he might be evicted. Dr. Melissa Jones asks him whether he is behind on rent. Mr. Johnson looks slightly offended and proudly explains that he has never been late with a single rent payment in his entire life. Dr. Jones, who identifies as white but is acutely aware of the pervasiveness of racism and discrimination, asks Mr. Johnson, who identifies as African American, whether he thinks he is being treated unfairly in some way by his landlord. Mr. Johnson, who has found Dr. Jones to be extremely respectful and compassionate, tells her that the new owner/landlord of his building is harassing all of the residents who live in rent-controlled units, but especially the residents who are African American. Dr. Jones tells Mr. Johnson that she is extremely saddened by but not at all surprised by his experience; she describes the new Redwood Health System medical-legal partnership program and tells him that the lawyer running the program is very skilled in handling cases related to discrimination. Mr. Johnson agrees to see the lawyer.

Optimizing healing and building resilience necessitates providing essential structural social supports like food, housing, employment, financial benefits, legal assistance, immigration assistance, and advocacy to address various forms of discrimination and oppression. It is important to ask ourselves how we can collaborate

with advocacy, social services, legal services, and other resources without re-traumatizing our patients. Recognizing that some societal institutions like law enforcement may be major sources of trauma for minority communities [9, 96] and that medicine has participated in traumatic racist and oppressive practices [97–99] is important in providing trauma-informed care. Developing partnerships with individuals and organizations that are trauma-informed and equity-promoting also prevents re-traumatization and increases trust. Acknowledging and naming the trauma that results from discrimination and oppression and actively engaging in advocating for justice for patients and communities is an essential trauma-informed practice.

Recognizing that stressors, such as food or housing insecurity, can be adverse experiences of their own, trauma-informed practices also need to have deep knowledge of the resources in the community to make individualized referrals. Bolstering resilience for one member of the family may not be sufficient; the entire family may need support. Of course, barriers to accessing services, whether due to logistics such as transportation, coverage, or lack of social support, also need to be assessed and mitigated. Providing universal education about resources and offering these resources without requiring full disclosure or recitation of one's traumatic experiences reduces re-traumatization. Embedding "patient navigators" who actively facilitate access to these structural supports in the healthcare setting is more effective than routine care [49, 50]. Co-locating access to essential structural supports in the healthcare setting whenever possible is likely even more effective than facilitating off-site referrals [100].

Medical-legal partnerships, collaborative programs with legal aid professionals embedded in healthcare settings, can assist healthcare providers in addressing some of these barriers and other social inequities that undermine health and resilience. These partnerships have been shown to improve patients' ability to obtain healthcare coverage, debt relief, and avoid utility shutoffs, as well as reduce hospital admissions, readmissions, emergency department use, and patient stress [101]. Physicians who work with legal partners are more likely to discuss the unmet social needs of their patients. Screening tools to assist in legal need assessment also exist, such as the I-HELP framework for identifying unmet legal needs—*I*ncome and insurance (food stamp eligibility, benefits, etc.), *H*ousing and utilities (eviction prevention, housing conditions), *E*ducation and *E*mployment (accommodations for disease/disability/ getting IEPs), *Legal* status (incarceration issues; immigration), and *P*ersonal and family (IPV, child support, payee, estate planning) [102].

Prevention: Reducing Trauma to Achieve Health Equity

The Redwood Health System restructures their community benefits program to partner more effectively with community-based organizations, hires new "navigators" from community-based organizations to work on community engagement initiatives, and commits to functioning as an anchor institution that supports social and health equity. The CEO initiates a metric-driven process to monitor their hiring of diverse

members of the local community, sourcing of supplies from locally and minority-owned businesses, housing subsidies for employees, and more. One of the first community navigators hired by the Redwood Health System is Ms. Sullivan. She has now graduated from community college with a degree in early childhood education. As a community navigator, she provides training and resources on the intergenerational effects of trauma and resiliency-based parenting practices. She connects patients and community members with various evidence-based programs to prevent child abuse like the Nurse-Family Partnership program and a pioneering parent/caregiver-child urban gardening program that is being supported and evaluated by the Redwood Health System. Ms. Sullivan's own children, who have benefited from child-focused trauma therapy, are thriving.

Collaboration in promoting resilience and healing should also extend into the community. This may mean working with community organizations to support an individual patient or family in multifaceted ways. On the other hand, collaboration with community can also mean extending the scope of the health system's activities to partnering with the community as a whole on broad issues of trauma prevention and health promotion. This might involve working with schools or churches on health education programs or by participating in programs of community development that address root causes of trauma. The Wraparound Project at the University of California, San Francisco, for example, works with those exposed to gun violence [103]. Founded by a trauma surgeon in response to the epidemic of young minority men being injured and killed by gun violence, it provides not just treatment of physical wounds and behavioral and psychiatric support but substance use treatment, educational support, vocational training, housing assistance, and tattoo removal. It partners with schools, churches, and community violence prevention organizations not only to prevent recidivism in the patients enrolled in the program but also to prevent violence in the community at large.

The Redwood Health System's commitment to equity grows each year. They have developed a robust institutional diversity, inclusion, and equity program in the health system. They are making progress in diversifying their staff, and staff satisfaction scores are increasing. Their employees feel proud to work for an organization that cares about their well-being and that of their surrounding community. Their community engagement and anchor institution initiatives are growing. They begin to advocate for policy changes to promote equity. The Redwood Health System advocates locally for a living wage initiative, affordable housing, and a Sanctuary City policy and, nationally, for the preservation and strengthening of the Affordable Care Act.

Ideally, trauma-informed care will prompt examination of all of the ways in which injustice and inequity cause and perpetuate trauma and its associated health disparities [104, 105]. Healthcare systems and staff can address the discrimination and oppression that cause trauma through fostering diversity, inclusion, and equity within their own organizations. Healthcare systems and staff, who see how the structural roots of trauma are based in oppression, look beyond the walls of the clinic or hospital [98]. They understand that access to employment that pays a living

wage and education that promotes social mobility, especially in locations with large income and wealth disparities, markedly reduces trauma. They know that sufficient income and the means to secure stable housing, healthy food, affordable transportation, access to nature [106], recreation, cultural resources, and other social supports reduce trauma and promote resilience. They commit to dismantling discriminatory policies and programs that have resulted in social and health inequities. Trauma-informed healthcare systems and staff advocate for equity for individuals, families, and communities, especially for those who are most marginalized and under-resourced, to generate shared resilience and communal healing.

Key Concepts

- Trauma is a nearly universal human experience but is more common in vulnerable populations.
- Childhood trauma results in later adulthood high-risk behaviors and disease.
- Individual, family, community and societal risk and protective factors and resiliency affects the prevalence and experience of all types of violence and trauma.
- Trauma-informed care holds promise for improving health outcomes and helping to break the cycle of intergenerational transmission of trauma.
- Trauma-informed systems change is a process that leads to equity.

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