

Trauma Informed Injection Site Protocol

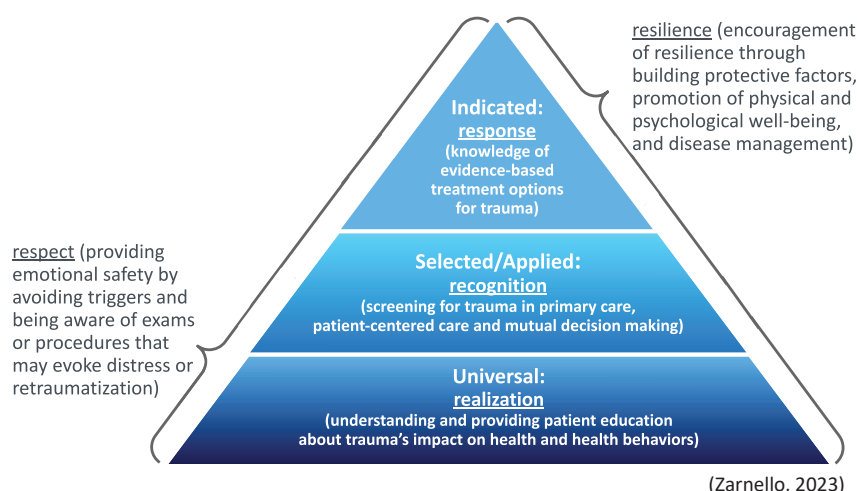


Trauma-informed practices around blood, injury and injection

Just as a health professional learns universal precautionary approaches related to blood-borne pathogens, follows protocols to reduce infection and uses evidenced-based practices for patients with injection-site-related infections, so too can a health professional learn universal precautions around trauma exposure, follow protocols to reduce unnecessary harms and use evidence-based practices to reduce trauma symptoms related to blood, injury and injections for people who inject opioids and other drugs.

The following are public health trauma-informed harm reduction recommendations for healthcare workers who work with people who inject opioids or other substances.

Public Health Trauma Informed Prevention Model for Healthcare (primary care)

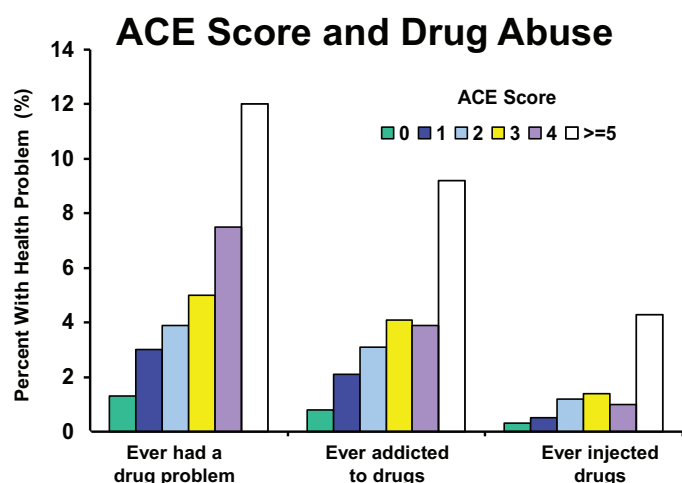


(Zarnello, 2023)

Universal precautions

Workforce information and knowledge

All staff benefit from knowing that there is a well documented step-wise exponential association between trauma exposure and injection drug use—see graph below.



Source: Overview of the Adverse Childhood Experiences Study, 2012 slide presentation by Robert F. Anda, MD

An increased number of childhood trauma exposures are associated with the increased odds of earlier initiation of multiple opioid misuse behaviors. Likewise, earlier initiation increased the risk of a trajectory from opioid pill misuse to opioid injection use (Anda, 2012; Guarino et al., 2021).

In terms of prevalence, a recent study of young adults who reported non-medical use of prescription opioids or heroin, 89% of participants reported at least one ACE and 46% reported four or more ACEs, a well-supported threshold indicating elevated risk for negative health consequences. By comparison, 72% of the California adult general public reported at least one ACE and 20% reported four or more, as reported in the ACEs Aware Progress Report: 2019–2023. By these measures, any program working with people who use intravenous drugs, should apply universal precautions around trauma exposure with all patients. (Guarino et al., 2021; California Surgeon General's Office, 2024)

Common Signs of Trauma: Unsafe Behaviors (selected list)

- Impulsivity
- Heavy smoking
- Sharing needles
- Suicide ideation or attempt
- Neglecting personal hygiene
- Using other illicit substances
- Falling asleep while smoking
- Accidentally leaving the stove on
- Physical fighting with a partner
- Driving or using heavy machinery while under the influence of drugs or alcohol (DUI)
- Not keeping up with medical treatments

Education of all patients on trauma's negative impact on behaviors and health

Trauma survivors are more likely than people without a trauma history to turn to self-harm, including self-injury, to manage negative emotional states. A large body of evidence clearly shows that trauma exposure and—even more predictability—ongoing PTSD symptoms increase the risk of engaging in a wide variety of self-harming behaviors, including substance abuse. Trauma exposure severity is shown to increase the severity of substance abuse, self-harming behaviors and mental health symptoms. Research demonstrates that when someone is engaging in one unsafe behavior, they are highly likely to engage in other self-harming behaviors. These overlapping layers result in a detrimental dynamic that cumulatively burdens the person who, left to struggle on their own, is at risk of more substance abuse and self-harm.

(For more information, see Trauma Informed California, *Self-Injury: a compendium of trauma informed interventions for people who self injure*: <https://trauma-informed-california.org/wp-content/uploads/2024/01/Self-InjuryInterventionsCompendiumJanuary2024.pdf>).

In a clinical setting where patients use intravenous drugs as well as other substances and unsafe behaviors, everyone benefits from knowing the strong research basis indicating that high doses of individual level abuse and neglect, specifically in early childhood, dramatically increase the risk for a wide variety of serious, chronic and infectious health conditions. A growing understanding of the epigenetic and immune-system changes that occur when a child is exposed to unbearable stress has revealed that many of the individual-level behaviors and resulting personal health conditions are less likely to be consciously chosen and more likely to be driven by metabolic and hormonal changes that operate below the consciousness of the person. A trauma-informed program places the responsibility of abuse on the perpetrator, not the victim.

(See the *ACEs Aware Progress Report: 2019–2023*. https://www.acesaware.org/wp-content/uploads/2024/05/UCAAN_ProgressReport_CP10_050824.pdf).

Selected/Applied: A standard policy for drawing blood from people who use intravenous drugs

It is well known that drawing blood from non-typical sites is complicated, especially when the patient has habitually injected substances. People who inject drugs may have scarred and sclerosed veins that may be impossible for the health worker to locate and access. The use of a syringe for a difficult venipuncture may be necessary; thus strict adherence to standard precautions is mandatory. Physician permission is required when looking outside the traditional areas for venipunctures, e.g., the antecubital, the back of the hand, feet or ankles.

Yet, the patient may be in desperate need of life-dependent laboratory results. Therefore, it is recommended to consider sedating patients who inject opioids and other drugs to allow a blood draw to proceed.

In concert with agency risk managers and legal counsel, a clear policy can be developed on drawing blood from patients who use intravenous needles. Ultimately, following established policies and using safety devices will help healthcare workers to decrease the known challenges and risks when drawing blood from patients who use intravenous needles (Appold, 2014).

Indicated: EPBs to help BII phobic patients

Blood injury injection (BII) phobia is a mental health diagnosis in which people are likely to faint at the sight of blood, the anticipation of physical injury or the anticipation of an injection or even avoid medical situations entirely (Wani et al., 2014).

While individuals who use intravenous drugs may appear nonchalant towards needles, in fact they may have a serious phobia in response to needles. A British study of 45 women who used intravenous drugs and experienced being injected by other drug users found that most of

the women had a strong fear of needles, met criteria for needle phobia and reported being fearful of needles prior to their first experience of injection drug use. For some, their fear of needles continued during their later injection experiences. Alternatively, some intravenous drug users may experience the positive aspects of drug-taking as mitigation of their needle phobia along with other negative symptoms. Injection drug users may also rely on trauma-related defense mechanisms, such as dissociation and detachment, when injecting themselves, which can compound the cycle of chemical dependence they find themselves in (Tompkins et al., 2007).

EBP treatments to alleviate BII phobic responses

1. Box Breathing

Hyperventilation due to shallow and rapid breathing may cause hypocapnia (or hypocarbia), which can lead to cerebral blood flow reductions, neurocardiogenic syncope and orthostatically-induced syncope (i.e., fainting). Yet, patients who breathe more deeply during exposure to needles report stronger symptoms of dizziness, lightheadedness and faintness (Ritz et al., 2010).

To manage BII phobic symptoms, evidence indicates the effectiveness of a particular respiration-focused coping strategy called Box Breathing, as one can draw in their mind a square box while doing the activity. It is recommended to give written instructions to the patient to follow a set of simple steps, such as those outlined below.

Box Breathing:

- Close eyes, if preferred.
- Breathe in through the nostrils.
- Hold the in-breath, without inhaling or exhaling for 4 seconds.
- Slowly count to four while exhaling for 4 seconds.
- Hold the exhale, without inhaling or exhaling for 4 seconds.
- Repeat at least 3 times.
- Repeat the steps for 4 minutes, when possible.

Common Trauma-related Co-occurring Diagnoses

People who inject opioids and other drugs are at high risk of having several trauma-related co-occurring health conditions

- HIV, Hepatitis and STDs
- PTSD, anxiety and depression
- Bipolar disorder and schizophrenia
- Chronic pain and hyperalgesia
- Hypertension and diabetes
- Sleep-disordered breathing
- Cardiovascular disease
- Neurocognitive impairment

2. Applied Tension (AT)

Applied Tension (AT) is a common treatment to help BII-phobic individuals prevent fainting and recover more quickly after fainting. AT involves tensing muscles, which raises blood pressure, making the patient less likely to faint. It is recommended to have written instructions with a set of simple steps for the patient to follow, such as the following:

Applied Tension (AT):

- Sit comfortably and breathe the entire time.
- Tense arms, legs and core muscles by squeezing the muscles.
- After 10–5 seconds, a warm sensation in the head should develop.
- Relax the body for 20–30 seconds to return to a normal state, avoiding longer feelings of relaxation, as that can cause blood pressure to drop.
- Repeat the cycle 5 times.

3. Mindfulness

Mindfulness-based stretching and deep breathing exercises have been shown to normalize cortisol levels and reduce PTSD symptom severity. Studies have shown that the use of a mindful attentional state permits regulated access to the dissociated ego state, so that dissociated cognitive resources can be recovered and the dissociated structure deactivated. In fact, a single session of a mindfulness-based trauma-release intervention can result in significant and durable reduction of needle phobia. (Smith & Hartelius 2020; Kim et al., 2013)

4. CBT and Exposure Based Treatments

When combined with psycho-education and applied muscle tension, Cognitive Behavioral Therapy (CBT) demonstrated considerable improvement in mitigating needle phobia as evidenced by reductions in anxiety and the willful seeking of medical care following treatment. Increased psychoeducation, cognitive restructuring and distress tolerance skills (e.g., ice pack, written self-instructions) were used to strengthen the patient's situational control during *in vivo* needle exposure. Group-based, modified CBT intervention was effective in reducing a variety of phobic responses, including fear, disgust and fainting. (Chapman & DeLapp, 2013; Mason et al., 2022)

5. EMDR

Eye Movement Desensitization and Reprocessing (EMDR) therapy may be particularly useful for phobic conditions with high levels of anxiety that have a traumatic origin or a clear beginning and for which it is understandable that resolving the memories of the conditioning events would positively influence its severity (de Jongh, 2015).

Conclusion

People who use intravenous opioids and other drugs benefit from receiving healthcare from workers who acknowledge the profound if often disguised negative impact of early childhood, interpersonal and intergenerational trauma, especially multiple chronic exposures. Under the guidance of the California Surgeon General, healthcare has been charged to re-examine its approach to understanding the causes of disease and disability by becoming trauma-informed. This is even more imperative when working with people who inject opioids and other drugs, as the epidemiological data clearly shows extremely high rates of early trauma exposure, earlier involvement in substance use and faster transition to injection. Using trauma-informed approaches, based in science, can reduce the risk that healthcare interventions cause additional harms (i.e., iatrogenic effects) and can increase the probability that clinical interventions have the curative effects desired.

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