Department of Public Health
CITY OF PHILADELPHIA

Harm Reduction Wound Care Tool

Caring for people with substance use-associated wounds in community-based settings.

A photo of the skyline of Philadelphia, PA.

Welcome!

Thanks for being here. This tool has been created for nurses and other clinicians to use while caring for people with substance use-associated wounds in community-based settings. In addition to aiding and supporting decision making about wound care, this tool can be used to learn about harm reduction-oriented care for substance-use related wounds.

With this tool, you'll be able to:

1. Promote effective care for substance use-associated wounds.
2. Orient wound care-naïve clinicians to fundamental products, processes, and principles of chronic wound care, especially as they relate to substance use-associated chronic wounds.
3. Reinforce harm reduction values throughout the wound care exchange.
4. Facilitate the effective meeting of patient autonomy with clinician expertise.

Continue

How to Use this Tool

This tool is designed to educate and provide a step-by-step guide to wound care. Use the navigation menu on the left to quickly move between sections and find the information most relevant to you.

The tool includes two main use cases:

- **Learning** — Covers information about Xylazine and Trang Dope, the types of wounds it can cause and those affected by it, and the products commonly used in treatment.
- **Wound Care** — A practical, hands-on guide for the field. It includes Wound Assessment to help identify wound types, and a How-to Guide with step-by-step instructions for cleaning and treating specific tissue types.

You can also use the **Table of Contents** button in the bottom left corner at any time for quick access to all sections.

To open links in a new tab: **⌘+shift+click** (Mac) or **shift+ctrl+click** (Windows).

Disclaimer

While this tool provides clinical recommendations, it does not constitute certification to provide clinical care. As clinicians navigate care encounters it is imperative to remember that a medical visit is a small sliver of time in a person's constant and chronic experience of living in their body and managing their wounds. The patient is the most effective expert on their own wounds and has the final say over what happens to their body.

- This is for patients who are hemodynamically stable, without concerns for active withdrawal or systemic infection requiring intensive care. Patients with uncontrollable symptoms should be referred to a higher level of care.
- Brand names included in this tool are used to facilitate implementation of recommendations and do not represent endorsement or disapproval of any specific product.
- This toolkit contains images of wounds. All images were collected with express informed consent from those photographed for use in educational materials.

Welcome | Acknowledgements

This tool is made possible by funding from the Substance Use Prevention and Harm Reduction (SUPHR) Division of Philadelphia Department of Public Health (PDPH) and the Substance Use Response, Guidance and Education (SURGE) Program of the Health Federation.

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SUPHR Substance Use Prevention & Harm Reduction

SURGE Substance Use Response Guidance and Education

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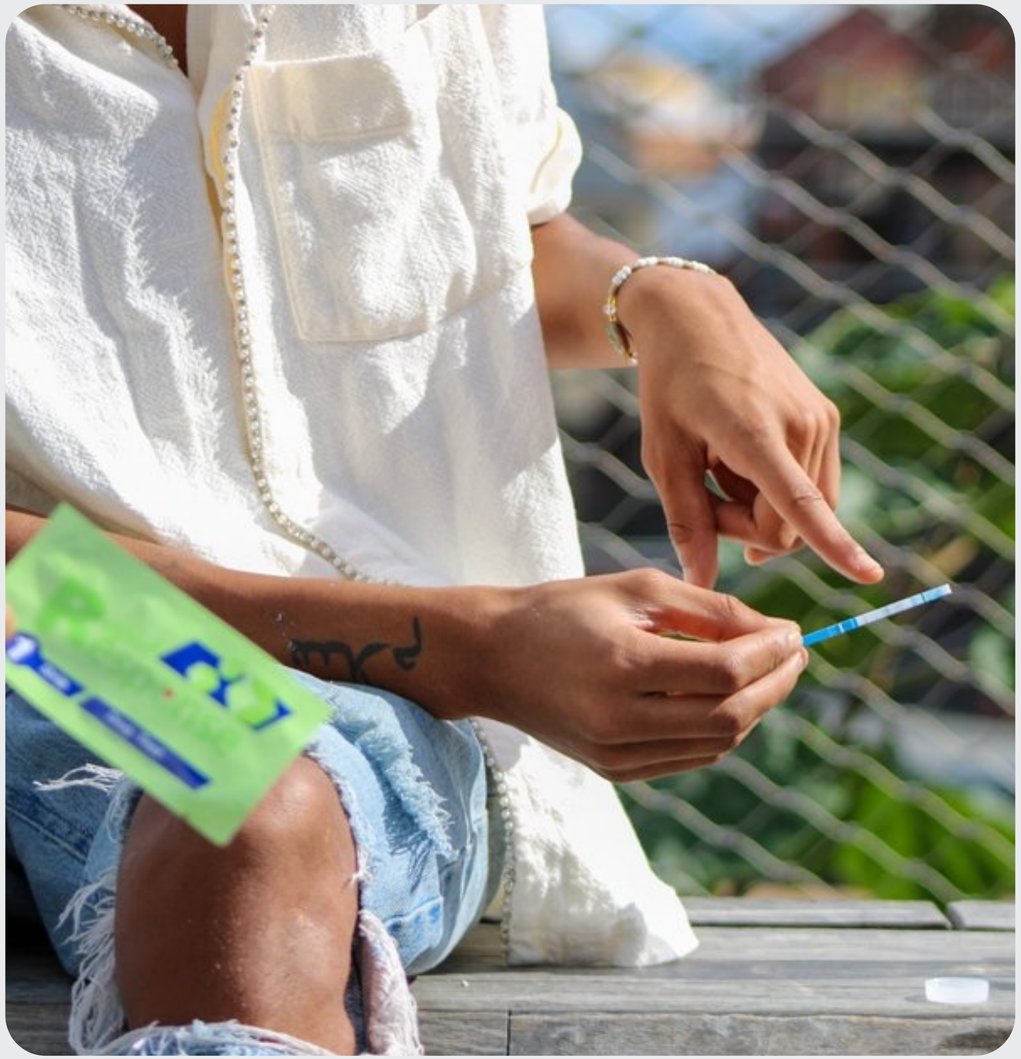


A photo of a person holding a drug testing strip for xylazine.

Dope

The unregulated, illicit drug supply in the United States is exceptionally unpredictable and dangerous. “Dope” colloquially describes the illicit opioid supply. At one point, the primary ingredient in that supply was heroin. Since 2016 in Philadelphia, and increasingly across the United States, dope primarily contains fentanyl, an illicitly manufactured opioid that’s 50 times more potent than heroin, but wears off much more quickly.[1] Fentanyl is rarely the only substance present in dope, however. Adulterants like other illicitly manufactured opioids, cannabinoids, stimulants, and tranquilizers are ubiquitous as well as contaminants or fillers like acetaminophen, diphenhydramine, lidocaine, corn starch, and manufacturing additives.[2] People who use drugs and people who deal drugs likely do not know what is in the dope they’re working with. Tools for checking the contents of drugs like test strips for fentanyl and xylazine, as well as mail-in drug checking services are available to facilitate educated decision making for people who use drugs and for the people who care for them.

Learn More:

- Get Free Naloxone and Fentanyl Test Strips in Philly
- UNC Drug Checking Program: UNC Street Drug Analysis Lab (streetsafe.supply)
- PA GroundHogs: Home
- SUPHR Drug Checking: Philadelphia’s Changing Drug Supply - Test Program

Tranq

"Tranq" describes xylazine, a non-opioid alpha-2 receptor agonist approved by the Food and Drug Administration (FDA) for sedation in veterinary medicine.[3] Xylazine is not approved for use in humans as it causes excessive central nervous system depressant effects, such as low blood pressure and sedation.[3–5] In Philadelphia, xylazine is primarily found with illicitly manufactured fentanyl, but, nationally, xylazine has also been found alongside other synthetic opioids, heroin, and benzodiazepines.[6,7]

Xylazine is thought to have synergistic effects when used with opioids. In combination, xylazine and opioids produce increased sedation, muscle relaxation, vasodilation, bradycardia, decreased perception of painful stimuli, and respiratory depression.[4,7] In Philadelphia, xylazine was added to the illicit drug supply in the early 2000s, but its presence increased rapidly in the late 2010s.[6] By 2019, xylazine was ubiquitous in the Philadelphia dope supply. People who use drugs may not know that xylazine is in the drugs that they are using and most people do not seek to consume xylazine.

"Tranq dope" is used to describe the illicit dope supply which, in the last 5 years, has come to typically include both opioids and sedatives.

The drug supply isn't just changing– it's getting more dangerous, and the people on the front lines are seeing it firsthand.

"Think of Xylazine and Medetomidine as a dictator. You get rid of one dictator, the next dictator comes up, it's the same thing's gonna happen and this one's probably gonna be worse."

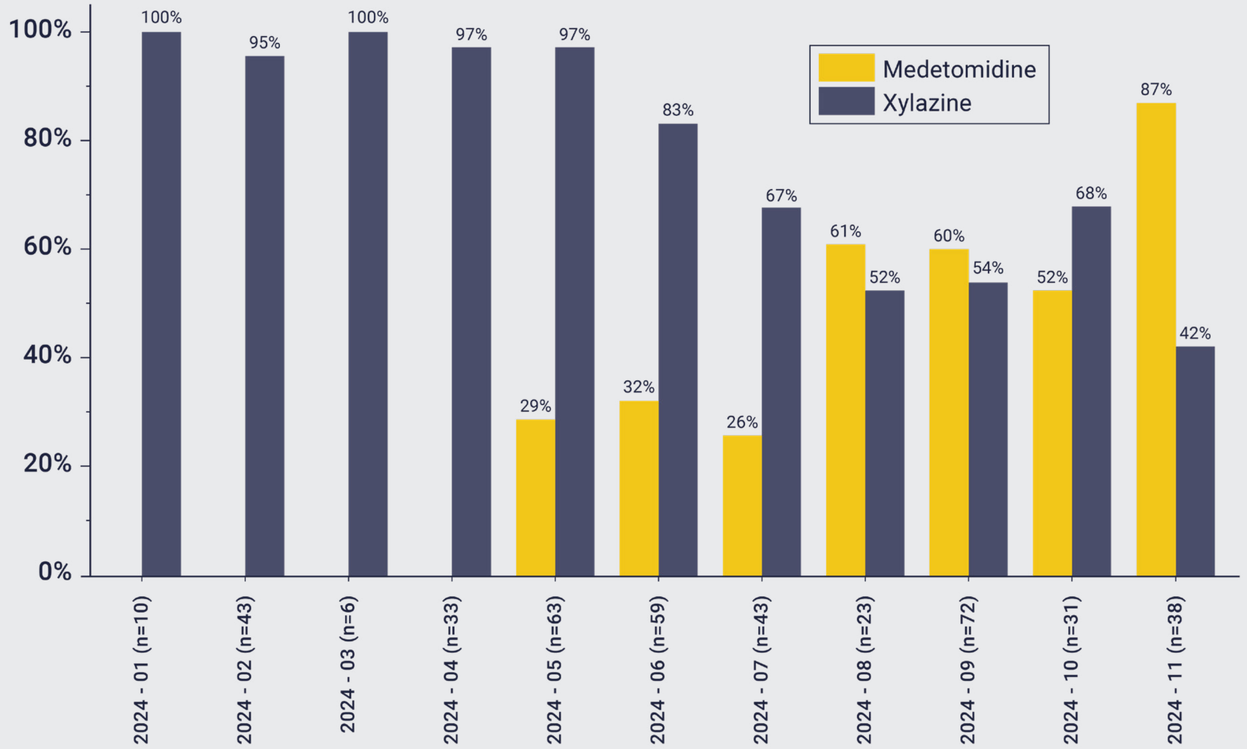
Tiffany Bogart, Wound Care Navigator

Watch the Video

Reminder, to open links in a new tab:
⌘+shift+click (Mac) or **shift+ctrl+click** (Windows)

Tranq Dope

Figure 1: Prevalence of Xylazine and Medetomidine in Fentanyl Samples in Philadelphia, PA



Data source: Center for Forensic Science, Research and Education, PA Groundhogs, Philadelphia Department of Public Health

A Graph showing the Prevalence of Xylazine and Medetomidine in Fentanyl samples in Philadelphia, PA in the year 2024.

Medetomidine is another nonopiod sedative that has begun to replace xylazine as the main adulterant in dope, bringing with it new ‘side effects’ for people to learn how to respond to.

To learn more about how tranq effects users in Philadelphia, visit: https://www.substanceusephilly.com/tranqdata

Substance Use-Associated Wounds 101

A photo of a nurse placing a bandage on a patients wound.

Xylazine-Associated Wounds

Xylazine-associated wounds (XAW) are substance use-associated wounds.[8] Skin wounds associated with xylazine use (i.e., xylazine-associated wounds) are consistently described as partial to full thickness ulcers with progressive necrosis of the skin, soft tissues, and underlying structures such as tendon or bone. [9–20] Xylazine-associated wounds typically display delayed healing, and become chronic or recurring. Although xylazine-associated wounds commonly develop at sites of injection, they can appear regardless of the method of xylazine administration anywhere on the body (i.e. away from sites of injection, and/or in people who only smoke or snort their drugs).[11,21,22,22–24] Often, injuries to the skin and soft tissue (bug bites, pimples, sun/burns, bruises, blisters, cuts) develop into xylazine-associated wounds in people who use drugs.

The mechanisms that cause tissue damage and death and delayed wound healing seen in people who use tranq dope are not fully understood. However, inadequate blood flow from drug effects and/or damage to small vessels seems likely to contribute. Infection as the primary cause of XAW seems unlikely, though secondary skin and soft tissue infections are often seen.

Substance Use-Associated Wounds 101

Xylazine-associated wounds that develop at injection sites may initially appear as irregularly shaped areas of blistered skin with maroon-purple discoloration. Often wounds that develop spontaneously also initially present with blisters, but are often circular of varying sizes (these wounds are often described as resembling cigarette burns). These initial presentations can evolve into a layer of necrotic eschar overlying an ulcer that progressively increases in size and depth. Any small wound or wounds can develop into what we think of as a prototypical XAW: chronic, large, deep, with necrotic tissue intermixed with wound bed and intact skin.[17,22,25]

Initial Presentation of Xylazine-Associated Wound at Random Sites.

Initial Presentation of Xylazine-Associated Wound at Injection Site.

Substance Use-Associated Wounds 101

These wounds may heal in weeks, months, or years with distinct periods and/or areas of healing and deterioration; multiple wounds at various stages may be present simultaneously.

The following image displays the spectrum of presentations for xylazine-associated wounds:

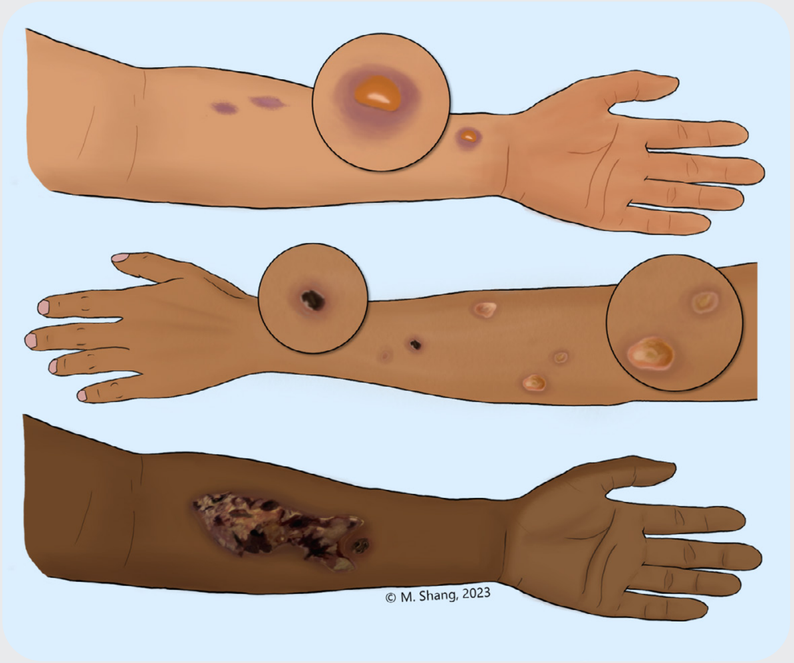


ILLUSTRATION: Three arms [26] d-scholarship.pitt.edu.

Early presentations of xylazine-associated wounds should be treated promptly to promote healing and avoid progression (e.g. small blisters and intact periwound can be treated with topical emollients and covered with a bandage).

When navigating the healthcare system feels overwhelming, the difference isn't just access — it's who shows up with you.

"It takes everything out of you, both mentally, physically, emotionally... What could have been better is just having like an advocate by my side that kind of walks you through the process."

Tiffany Bogart, Wound Care Navigator

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Xylazine-Associated Wound Care

Care for xylazine-associated wounds is based on the same principles and products as other chronic wound care.

Xylazine-Associated Wounds Heal

With regular wound care, xylazine-associated wounds can heal! Reliable shelter, nutrition, and access to medical care, as well as reducing use of dope containing xylazine, all support healing of xylazine-associated wounds. Early intervention with cleansing and dressing as wounds appear and develop can promote healing and help prevent xylazine-associated wounds from progressing.

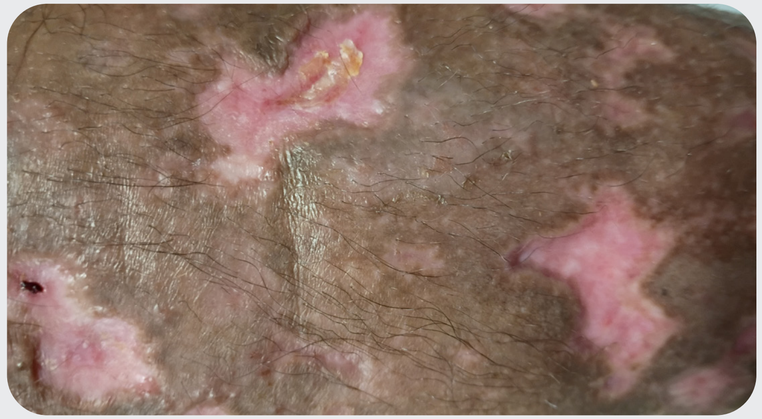
We can support patients in adhering to recommendations to do regular wound care by providing to-go dressing change supplies and fostering a clinical environment that they will want to return to. Establishing a wound care space that is culturally competent, de-stigmatizing, earnestly helpful, and supports self-management will facilitate regular, early intervention for substance use-associated wounds.

For many patients, wound care is about more than cleaning and bandaging — it's often the first time they feel seen, respected, and safe.

"What I will do is to make sure that I'm going out of my way to express respect for the person's experience and self."

Watch the Video

Rachel Neuschatz,
Harm Reduction Wound Care Nurse



Skin showing signs of healing.

Substance Use-Associated Wounds 101

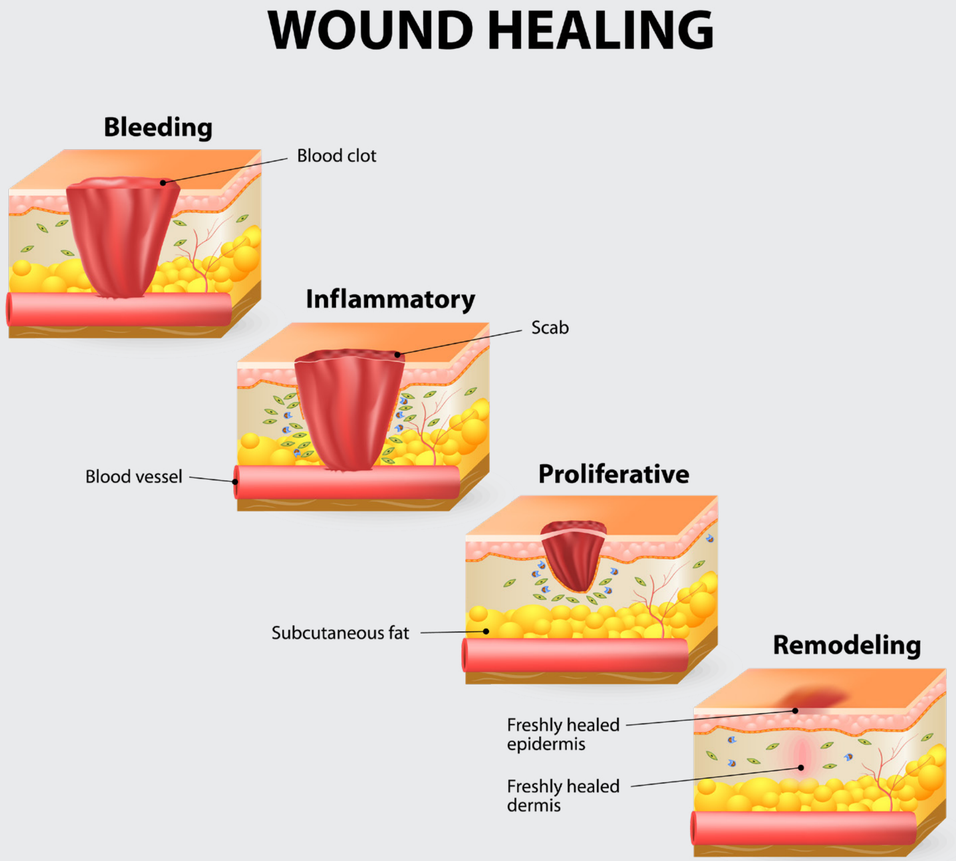
Wounds heal from the bottom up

Substance use-associated wound healing is often nonlinear. Immediate and ongoing goals are to maximize healing, minimize new tissue damage and complications, and facilitate continuing with care and self-management; eventual goals should be for wound closure.

Like all wounds, xylazine-associated wounds heal from the bottom up, and close from the edges in. This healing process is facilitated by a moist wound environment and attached wound edges. Addressing contributing causes of inflammation, from necrotic tissue to bioburden to irritating products, can avoid further delaying healing.

While wounds remain open and the body is being exposed to xylazine, additional tissue injury should be minimized. Any new damage is at risk for delayed healing so use careful consideration before using sharp debridement. Treating secondary infection and providing supportive care for limb dysfunction can also help avoid further damage.

Most substance use-associated wounds develop over weeks to months; some people can endure complications like exposed or even infected underlying structures that remain relatively stable for similar amounts of time. All care, whether routine wound treatments or more advanced interventions (like amputations), should ensure adherence to robust informed consent along with ‘do no harm’ principles.



A graphic showing how wounds heal from the bottom of the wound bed upwards, and then the edges inward.

Stigma Reduction

Considerations When Working With People Who Use Drugs and/or are Unstably Unhoused

Photo of a wound Care sign outside of a wound care and supply location.

Building Trust

People who use drugs (PWUD) and people experiencing varying levels of housing instability deserve effective, respectful, dignified, and kind health care experiences. Unfortunately, most PWUD and people who are unstably housed have experienced stigmatizing treatment and sub-par care in healthcare settings. Healthcare practitioners must be aware of their own power to perpetuate stigma and re-traumatize patients and work proactively to make their patients feel safe, respected, and cared for in healthcare settings. Stigmatizing treatment is ineffective health care.

"I was so very lucky to have some of the different programs that offer free care to individuals like me. Not only did these programs provide medical treatment, but they also **took the time to listen to me, treat me with compassion and concern** as every human being should be treated. They even gave food/clothing/medical supplies to individuals that may need more help. **It is important to understand that it is a scary to be in when not knowing what is going on with your body.** Anyone struggling with these ailments should be treated with empathy and respect."

Ken Weidner

Pain

Xylazine-associated wounds, particularly when chronic, deep, or infected, are painful.[12–14,16,17] This pain is often exacerbated by opioid-induced hyperalgesia.[6,27,28] Strategies to manage pain during the dressing change include:

- Verbally reviewing steps prior to care so people know what to expect, warning patients prior to touching
- Soliciting information about locations and triggers of pain, so it can be avoided and minimized
- Thoroughly soaking dressings with (warm) water or saline before removing them.
- Having the patient remove or apply their dressings themselves.
- Offering patients “time-outs” or “breathers” to manage painful dressing changes.
- Understanding that often, people with xylazine-associated wounds continue to use opioids to manage their wound-related pain. Folks may choose to use immediately before getting wound care to manage pain during the dressing change and make the dressing change tolerable and possible.

Too often, the assumptions we make about patients get in the way of their care — especially when it comes to people who use substances or are unhoused.

“I think that there is an assumption a lot of times that because someone is unhoused or they’re using substances, that essentially those things mean that they don’t care for their health and that they are not able to take care of their health... And so that’s not true. Do not assume these folks don’t know how to take care of themselves and they’re not able to or willing.”

Lydia Williams, Family Nurse Practitioner

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“We’re just trying to get across how bad these sores are, the wounds. And when you do the medication—not enough medication, honestly, can take away this pain. I’m not gonna lie to you. And believe me, I tolerated a lot in the hospitals, in the rehabs, detox, everything, and I didn’t ask for meds, meds, meds ‘cause it’s not about that. But honestly, you couldn’t give us enough meds for it—I’m being honest—especially when it’s cold and raining and everything, they even get even worse, they get so much worse…”

Melissa Fryling

A graphic of ‘Wound Care is Love’ design.

Realities of Living Outside

Xylazine-associated wounds often include necrotic tissue and produce drainage, both of which contribute to odor. These smells are often exacerbated by patients' inability to safely and comfortably change their dressings or clothes, clean their wounds, and maintain their hygiene due to lack of access to running water or a private restroom. A smell or an old dressing does not indicate that a patient doesn't care about their wounds, their health, their appearance, or their impact on others. Many people with xylazine-associated wounds who are living outside express distress at their appearance and odor and appreciate offers of body wipes and scented products alongside a dressing change.

As a health care provider, it is imperative to manage your facial and vocal reactions to smell and necrotic tissue. Some tricks to manage your composure include:

- Viewing pictures of xylazine-associated wounds before you see them in real life
- Using a surgical or KN95 face mask to block odor
- Placing a few drops of essential oil under your nose
- Use an essential oil air spray/freshener or linen spray for the room
- Maintaining airflow in the wound care space
- Changing the trash frequently and/or bagging dressing change refuse

The experience of having and caring for wounds is dramatically affected by the climate, especially for people living outside.

Be sure to check your wound care products' temperature range of viability against your forecasted conditions for community-based wound care.

In the summer:

- **Xylazine-associated wounds may become inhabited by maggots.** This is an understandably distressing situation and may have associated pain. Maggots can be removed individually or by flushing with saline or water. Do your best to temper your reaction to bugs in the wound bed, validate your patient's experience and emotions, and offer reassurance around maggots not being harmful to the wound or the patient's health. Flies are attracted to odor–it can be difficult to avoid maggots when living unsheltered.
- After noting maggots in wounds and removing maggots. Dressings should be changed daily until no additional maggots are seen as some of the time there are eggs that will continue to hatch
- **Medical grade manuka honey solidifies in the cold and melts in the heat and often attracts bugs in the summer months** Alert your patients to these risks before using or handing out this product and consider switching to a comparative topical.

Stigma Reduction

In the winter:

- **Wounds heal themselves at body temperature.** Bringing a wound's temperature down by exposing that area of open skin to the cold will stall healing until the wound regains warmth. It is both uncomfortable and not clinically indicated to expose chronic wounds to low temperatures from open air or cold cleansing products.
- **Erecting a tent or other temporary shelter for community-based wound care can provide privacy and protection from the elements.** Setting up a properly vented portable heater that blows hot air across the floor of that enclosure can help make cold weather more bearable for the wound care experience.
- **Using baby bottle warmers to warm cleansers before use can help facilitate healing in cold conditions.** If you cannot keep those bottle warmers on hand for wound care, heating up products in a warm water bath then storing them in an insulated shopping bag or cooler with hand warmers can keep products comfortably warm for use in the community setting. Refer to the package insert of products to ensure that the temperature range/setting of the warmer you use does not degrade efficacy.
- **When you cannot provide a comfortable environment for a dressing change,** you can provide the products needed for that dressing change to your participant to use in a more comfortable setting.
- **Handing out hand warmers, socks, hats, gloves,** warm and dry layers, and mylar blankets to participants can help them cope with the cold.

Consentability

Sleeping or Nodding Off:

- People with xylazine-associated wounds who are unhoused or unstably housed are often sleep deprived. Patients falling asleep while receiving or waiting for wound care is not uncommon. If you can establish and maintain consent to treat while a patient is intermittently dozing, let them sleep when possible. It is an honor to provide a space where someone feels safe enough to doze off.
- It is impossible to distinguish between sleeping and nodding off (i.e. being high and sleeping). In a community-based setting, drug use prior to receiving care may be the best option for pain management available.

Altered Perceptions of Reality:

- If someone offers a version of reality that doesn't seem to match yours, it can be helpful to ask questions in a respectful manner and validate their experience and emotions.

Ultimately, it is your responsibility as a provider to establish consent before providing any contact or care. If consent cannot happen, the dressing change cannot happen.

Points of Advocacy when Referring to a Higher Level of Care

Active substance use is not a contraindication to receiving surgical and/or non-surgical care for xylazine-associated wounds.

The Impact of High Quality Care

"The wound care providers, they did a phenomenal job of just making it feel like I had a broken bone and not some kind of disease that was, you know, wrong with me from having this."

Watch the Video

Tiffany Bogart, Wound Care Navigator

Providing transportation, warm handoffs, and accompaniment, as possible, to/from higher levels of care can greatly ease the experience of engaging in care for PWUD and people who are unstably housed and increase the likelihood that patients will access services and stay through the duration of care.

Provide information about Patient Rights, informed consent, and effective strategies for self-advocacy to your patients.

Surgical Interventions:

- All surgical procedures, including those performed at the bedside, require adequate effective pain control and informed consent.
- Conservative over Aggressive Debridement: Surgical debridement or conservative sharp debridement can greatly expedite healing for xylazine-associated wounds by removing necrotic tissue that would have taken the body months to years to autolytically debride. While removing necrotic tissue promotes wound healing, any living tissue in a xylazine-associated wound has the potential to facilitate healing and should be spared from sharp debridement. Nonselective and/or aggressive debridement to re-start the healing process is not indicated for people with a known and nonmodifiable reason for delayed healing, like ongoing chronic xylazine exposure.[29]
- Despite the severe appearance of many xylazine-associated wounds, amputation should only be considered as a last resort treatment, to save a life or improve function. Many other interventions, like conservative debridement, coverage with a dermal substitute graft (e.g. biodegradable temporizing matrix), and regular wound care can lead to wound healing and limb salvage. Some xylazine-associated wounds look like those caused by necrotizing fasciitis, but they do NOT require the same treatment.[29]

Stigma Reduction

Pain and Dependency Management

Individuals with chronic xylazine exposure via the illicit fentanyl supply will often have opioid dependency with associated hyperalgesia and high opioid tolerance.[6,12–14,16,17,27,28]

To receive proper inpatient care, people with chronic xylazine exposure must have proper treatment for their pain and chemical dependencies.[30,31]

People may decide to leave the hospital before their treatment plan is complete for various reasons. If you think your patient may be leaving your clinical location soon, work to ensure continuity of care by providing to-go wound care supplies, information on community-based resources, and ways to reconnect with your care team.

See the Further Information section for evidence to back up these points!

Products and Preparation

Product Index

This section provides a quick reference to the wound care products used throughout this guide. It includes each product's intended use, common indications, and specific application areas.

A **helpful navigation menu** is included at the top of the section to help you quickly jump to the product type or area of care you need.

Use this section to guide product selection during assessment, prepare dressing kits, or review appropriate usage in the field.

Of Note: Proper Sanitation and Waste Disposal

Wound care creates a lot of waste and opportunity for cross-contamination. Therefore, be sure to wash or sanitize hands, equipment and space before and after providing care, repeating this process before handling supplies or when gloves become soiled.

Placing a clean underpad under tools and products, or sanitizing your patient's hands and having them hold products is ideal. Sanitize all multi-use tools and products between patients. Repeat this process as necessary. When products will be used with more than one patient, care should be taken to make sure that the open end of the product does not come into contact with anything that is not sanitized/sterile.

Between soiled dressings and all the wrappers that come with single use products, dispose of this waste appropriately and responsibly. Be especially mindful of properly disposing medical waste like heavily soiled dressings. If you do not have an appropriate, non-residential, waste bin available to you, take your trash with you to dispose of it properly.

Cleansers | **Periwound** | **Periwound + Wound Bed Topical** | **Wound Bed Topicals** | **Primary Dressings** | **Primary + Absorbent Dressings** | **Absorbent Dressing** | **Securement dressings**

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Products and Preparation

Cleansers | Periwound | Periwound + Wound Bed Topical | Wound Bed Topicals | Primary Dressings | Primary + Absorbent Dressings | Absorbent Dressing | Securement dressings

Type	Product	Also Known As	Description	Indications for Use	Cautions/Contraindications
Cleansers	0.9% Sodium Chloride Solution	Normal Saline	Most non-cytotoxic cleanser option	✓ Removing visible debris and nonviable tissue ✓ Gentle for folks who experience pain with other cleansers	
	Hypochlorous Acid	Vashe™	Antimicrobial, some debridement properties, pH 5.5 = normal skin pH, non-cytoxic	✓ High bioburden and need for debridement due to presence of necrotic tissue ✓ Odor ✓ S/s local infection or inflammation ✓ OK for folks who experience pain with other cleansers	
	Soap and water		Gentle, unscented cleanser, and clean tap water	✓ High bioburden and need for debridement due to presence of necrotic tissue	ⓘ Modulate amount of soap for pain
	Sodium Hypochlorite Solution (dilute bleach)	Anasept™, Di-Dak-Sol™ (diluted Dakins™ solution 0.0125%	Antimicrobial, minimally cytotoxic	✓ High bioburden and need for debridement due to presence of necrotic tissue ✓ Odor ✓ S/s local infection or inflammation	ⓘ Stinging
	Foaming Gentle Wound Cleanser	Skintegrity™, DermaKlenz™	Surfactant cleanser	✓ Removing visible debris and nonviable tissue ✓ Helps some with bioburden	ⓘ Stinging

Products and Preparation

Cleansers | Periwound | Periwound + Wound Bed Topical | Wound Bed Topicals | Primary Dressings | Primary + Absorbent Dressings | Absorbent Dressing | Securement dressings

Type	Product	Also Known As	Description	Indications for Use	Cautions/Contraindications
Periwound	Skin prep, barrier film (Hexamethyld-isiloxane / Acrylate Copolymer).	Cavilon™ No Sting Skin Barrier	Protects skin from adhesive stripping and irritation/maceration from drainage while enhancing adhesion, alcohol free, lasts up to 96 hours	✔ MUST explicitly state no sting, alcohol-free, and protects from fluids ✔ Moisture associated skin damage. ✔ Periwound skin protection.	ⓘ only protects, does not sooth or heal
	Moisture barrier ointment (Clear zinc or dimethicone skin barrier ointment/ cream)	Coloplast™ Critic-aid Clear Moisture Barrier Ointment; Sensi-care™Clear Zinc Skin Protectant	Soothes and protects, emollient; less greasy than petroleum jelly	✔ Scar tissue ✔ Moisture associated skin damage. ✔ Periwound skin protection.	
	Zinc oxide and petrolatum.	Unscented diaper cream	Soothes and protects; avoid scented	✔ Moisture associated skin damage ✔ Periwound skin protection ✔ Can be soothing for pain from irritating drainage.	

Products and Preparation

Type	Product	Also Known As	Description	Indications for Use	Cautions/Contraindications
Periwound + Wound Bed Topical	White petrolatum, petroleum jelly	Vaseline™, Aquaphor™, A&D	Soothes and protects, A&D/Aquaphor include vitamins to facilitate wound healing	✓ Safe on most wounds, periwound or scar tissue	
	Hydrophilic Wound Dressing (zinc oxide + petrolatum + CMC)	Triad™	Hydrophilic cream with CMC fiber and zinc oxide + petrolatum	✓ Promotes autolytic debridement ✓ Can be used to protect periwound skin ✓ Sticks to wet wound bed ✓ Can be soothing for pain from irritating drainage	ⓘ Desiccates already dry tissue
Wound Bed Topicals (Only)	Medical Grade Manuka Honey	Medihoney™	Antimicrobial and bacteriostatic properties(acidifies wound) and anti-inflammatory,	✓ Promotes autolytic debridement ✓ Normal for wound drainage to increase initially	ⓘ May sting ⓘ Protect periwound from this product ⓘ Can attract flies for unhoused patients in summer months ⓘ Use medical grade honey only - do not use supermarket honey ⓘ Do not use on intact skin
	Bacitracin zinc		Over-the-counter antibiotic ointment	✓ Infected wounds or wounds with high bioburden ✓ May promote autolytic debridement	ⓘ Caution with substitution with triple antibiotic for ongoing use (common sub-acute allergic reaction to neomycin)

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Type	Product	Also Known As	Description	Indications for Use	Cautions/Contraindications
Wound Bed Topicals (Only)		Silver, PHMB or similar in hydrogel	Broad spectrum antimicrobial	✓ Promotes autolytic debridement	! Avoid in heavily draining wounds or periwound maceration ! If it contains silver do not use with collagenase
	Mupirocin (rx only)		Antibiotic ointment active against strepstaphylococcus and streptococcus bacteria	✓ Infected wounds or wounds with high bioburden ✓ May promote autolytic debridement	
	Silver sulfadiazine (rx only)	Silvadene™	Broad spectrum antimicrobial	✓ Promotes autolytic debridement	! Re-assess use after 2 weeks ! Caution with granulation tissue already free of nonviable tissue, or new re-epithelialization ! Do not use with collagenase (Santyl™) ! Do not use during the third trimester of pregnancy ! Sulfa allergy
Primary Dressings (contact layer only, require secondary layer)	Oil emulsion (nonocclusive)	Adaptic™	Nonstick, allows drainage to pass through to separate absorptive layer	✓ Generally best option for harm reductive universal primary dressing	! Caution for maceration if already severe
	Occlusive petrolatum	Xeroform™	Nonstick, may promote autolytic debridement	✓ Mildly antimicrobial (bismuth) ✓ Exposed bone ✓ Dry adherent eschar	! Strong caution for periwound maceration (cut to fit wound)

Products and Preparation

Type	Product	Also Known As	Description	Indications for Use	Cautions/Contraindications
Primary + Absorbent Dressings (safe for contact layer)	Non-adherent pad	Telfa™	Limited sticking to wound bed, absorbs light drainage, can be primary or secondary layer		ⓘ Mild caution for maceration if already severe ⓘ Be alert for periwound allergic reaction
	Calcium alginate with silver	Algicel™, comes as sheets or rope (also without silver)	Absorbs heavy drainage, nonstick, broad spectrum antimicrobial, requires a secondary dressing.	✓ Use for infected wounds and wounds with signs of biofilm ✓ Can be used to fill in depth--may disintegrate once wet and be difficult to remove ✓ Promotes autolytic debridement	ⓘ Not to be moistened before use or used in combination with ointment or cream ⓘ Cut to fit size of wound to avoid periwound maceration ⓘ Only use in heavily draining wounds, will desiccate already dry tissue
	Carboxylemethyl Cellulose (CMC) with silver	Aquacel™, comes as sheets or rope (also without silver)	Absorbs heavy drainage, nonstick, broad spectrum antimicrobial, noncytotoxic, requires secondary dressing	✓ Use for local infection ✓ Good for autolytic debridement ✓ Can be used to fill in depth and for light packing-stitched so less likely to disintegrate than alginate	ⓘ Not to be moistened before use or used in combination with ointment or cream ⓘ Cut to fit size of wound to avoid periwound maceration ⓘ Do not cut perpendicular to the lengthwise stitches ⓘ Only use in heavily draining wounds, will desiccate already dry tissue
	Hydrocellular foam	Bordered/island (Mepilex™) or unbordered, with or without adhesive (silicone preferred)	Semiocclusive/ occlusive with backing, unbordered can be used as primary or secondary dressing.	✓ Absorbs drainage, nonstick, protects wound bed and underlying structures from shear force, low temp, trauma; ✓ Can be worn for up to 72 hrs if not saturated or otherwise indicated on the package instructions	ⓘ For bordered: apply skin prep for adhesion and/or provide tubular securement dressing for summer

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Products and Preparation

Type	Product	Also Known As	Description	Indications for Use	Cautions/Contraindications
Primary + Absorbent Dressings (safe for contact layer)	Super absorbent dressing	Super-Absorb Pad™, Exudry™	Polymer core absorbs heavy drainage and locks away from the wound bed (like maxipad/diaper), somewhat bulky, takes place of secondary layer	✓ Highly exudating wounds ✓ Nonstick contact layer	ⓘ Using topical interferes with absorption
	Gauze Border Dressing	Adhesive island dressing, composite dressing	Absorbs light to moderate drainage, takes place of secondary and securement layers	✓ Light exudate, need for a simple dressing	
Absorbent Dressing (secondary layer only)	Abdominal Pads	ABDs	Absorbs drainage	✓ Absorbs moderate to heavy drainage ✓ Provide cushion/protection from trauma ✓ Add multiple layers for greater absorbency	ⓘ Requires non-stick primary dressing

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Products and Preparation

Type	Product	Also Known As	Description	Indications for Use	Cautions/Contraindications
Securement dressings	Medical Tape	Transparent, silk, Medipore™, Hypafix™	Holds dressings in place	✓ Can be used to create custom border dressings (Medipore™ or Hypafix™)	! May not be necessary if overwrap used
	Conforming gauze roll		Wraps to hold primary and absorptive layers in place		! Conforming preferred over kerlix/ fluff ! Caution not to wrap too tight ! May not be necessary if tubular retention dressing used
	Elastic wrap bandage (hook and loop)	ACE™ wrap	Wraps to hold primary and absorptive layers in place, easily adjusted	✓ Variable swelling ✓ Can be re-used ✓ Semi-breathable ✓ Protects from environment/soiling	
	Tubular elastic retention netting	IV dressing netting in various sizes	Holds dressings in place	✓ Variable swelling ✓ Good for patients who need to access their wound bed but keep the dressing in place ✓ Can be re-used ✓ Super breathable, good in hot weather ✓ Can be used in place of gauze roll for easy on/of ✓ Can hide presence of wound/ dressing	! Size appropriately to avoid tourniquet effect

Products and Preparation

Type	Product	Also Known As	Description	Indications for Use	Cautions/Contraindications
Securement dressings	Self-adherent or cohesive bandage	Coban™, Colfex™, athletic wrap	Wraps to hold primary and absorptive layers in place	✓ Need for dressing to last a couple days ✓ Protects clothes from soiling by drainage, and dressing from soiling by environment	ⓘ Needs gauze roll underwrap to prevent skin breakdown ⓘ Caution not to wrap too tightly, may create tourniquet effect ⓘ Avoid use in patients with sensory deficits. ⓘ Variable swelling ⓘ Hot weather
	Tubular elastic cloth sleeve	Tubigrip™, spandigrip™ in various sizes	Holds dressings in place	✓ Good for patients who need to access their wound bed but keep the dressing in place ✓ Can be re-used ✓ Semi-breathable ✓ Protects from environment/soiling ✓ Can be used in place of gauze roll for easy on/off ✓ Can hide presence of wound/ dressing	ⓘ Size appropriately to avoid tourniquet effect

A Clinic on the Go: The Wound Care Nurse's Bag

A photo of a nurses' bag with products.

Supplies for space/prep:
- Underpads (chux)
- Equipment wipes
- Trash and/or biohazard bags
- Hand sanitizer
- Gloves
- Alcohol prep pads
- Tongue depressors/cotton-tipped applicators
- Shears/scissors
- Rulers
- Pen/permanent marker

Cleansing:
- Woven 4x4s
- Normal saline
- Di-Dak-Sol, Vashe, or similar

Ointments etc:
- No-Sting Skin Prep
- A&D
- Zinc barrier ointment
- Triad
- Medihoney
- If access to rx: mupirocin and Silvadene
- If not: bacitracin or antimicrobial hydrogel

Dressings:
- Oil emulsion
- Nonadherent pads
- ABD pads
- Foam bordered dressings
- Gauze bordered dressings
- Fabric bandaids
- Silver alginate or CMC
- Super-absorbent pads
- Xeroform
- Transparent film

Securement:
- Conforming gauze rol
- Ace bandages
- Tubular elastic sleeve and netting
- Self-adhesive bandages
- Silk tape and Hypafix

Additions:
- To-go wound care supply kits
- Hand warmers
- Socks
- Iodine swab sticks
- Snacks
- Schedule for local walk-in care/services
- Wound self care how-to guides

A photo of ‘To Go Supplies’ packaged in small bags.

To Go Supplies

To maximize the number of dressing changes done with appropriate (instead of improvised) materials, it is recommended to provide patients with wound care supplies to-go, either in addition to or instead of completing a dressing change with a provider.

It is supportive of good wound and patient outcomes to provide over the counter supplies to patients who are self-managing their chronic conditions, particularly if a patient experiences barriers to accessing care or storing supplies.[32,33] Having pre-made kits on hand (which can be individualized as needed) can make this process smoother for everyone.

Products and Preparation

A photo of wound care products.

First Aid/Wound Prevention Kit:

- 3 x hand sanitizing wipes
- 3 x BZK wipes
- 2 x A&D packets
- 4 x bacitracin packets
- 2 x 2x4” fabric adhesive bandages
- 4 x 1x3” fabric adhesive bandages
- 2 x knuckle or fingertip fabric adhesive bandages
- 1 x community wound care/supplies schedule
- 1 x Tranq and wound care info pamphlet

Tranq Wound Care Kit:

- 1 x underpad (chux)
- 6 x alcohol hand sanitizing wipes
- 4 x large exam gloves
- 4 x 3ml saline bullets (pinks)
- 4 x woven gauze 4x4s (surgical sponges)
- 6 x BZK wipes
- 4 x A&D packets
- 6 x bacitracin packets
- 4 x 3x4” nonadherent pads
- 2 x ABD pads
- 2 x 4” gauze roll
- 1 x tape (1-2 yards)
- 1 x 2” ace bandage
- 3 x 2x4” fabric adhesive bandages
- 6 x 1x3” fabric adhesive bandages
- 1 x Protein supplement
- 1 x No-rinse bath wipes
- 1 x community wound care/supplies schedule
- 1 x Tranq and wound care info pamphlet

Wound Assessment

Tissue Type Index

This section outlines the tissue types one may encounter during wound care. For each tissue type, you'll find a visual description, how to identify it in the field, and step-by-step guidance on how to clean and manage it safely. This information is designed to support decision-making and help you choose the right products and techniques based on what you see in the wound bed.

Image	Tissue Type	Description	To Do
	Dried drainage on intact skin	Drainage from chronic wounds is inflammatory and can cause intact skin to breakdown into a new/larger wound. Drainage can also macerate and damage wound edges.	Gently remove during cleansing; if adherent/ too painful, apply emollient to soft for later removal. Protect periwound to prevent further skin breakdown.
	Dry skin	Skin is visibly ashy, flaking, cracked, calloused. May feel like pulling/stretching, itching. Scar tissue (re-epithelialized) has less ability to self-moisturize; dry gauze wicks away skin's normal moisture/oils.	Apply emollient to prevent new damage from cracking or scratching.
	Maceration	Edges or periwound skin is over-saturated with moisture and has begun to break down, appears whitened.	Cleanse gently, dry and protect with barrier ointment/ film to prevent further breakdown. Limit use of moisture-donating products, use absorptive dressing/manage exudate, cut dressing to size to avoid contact with edges/periwound. Caution with occlusive dressings.

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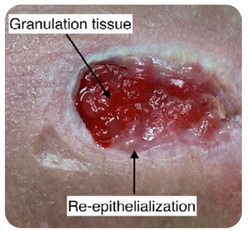
Wound Assessment

Image	Tissue Type	Description	To Do
	Rolled edges	Wound edges form rounded, elevated walls around the wound bed. Can be sign of repeated trauma/picking, overly dry wound, and/or shear rubbing force Interrupts re-epithelialization and delays wound closure	Apply emollient if due to overly dry wound, cover with foam to protect from shear, or offer appropriately sized clothes/shoes if relevant. Cover to prevent picking, offer trauma-informed info on importance of wound edges and how to care for them. If healing is the goal for the wound consider referral to higher level of care surgeon/ outpatient wound center to re-open wound edges
	Attached edges	Wound edges form a gently sloping/flush border between periwound and wound bed. Edges must be attached in order for wound to re-epithelialize and close	Sign of healing! Maintain moisture but avoid autolytic debridement, and protect.
	Newly re-epithelialized skin	Healing is happening! Pink/silver, smooth, shiny, and delicate, especially at first. Will become scar tissue/new skin over time.	Delicate healthy tissue! Maintain moisture but avoid autolytic debridement, and protect.

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Wound Assessment

Image	Tissue Type	Description	To Do
	Scar tissue (re-epithelialized skin)	Healing is happening! Scar tissue never obtains more than 80% of the tensile strength of intact skin. It will be even weaker in the case of swelling, drying, or trauma to the skin.	Healthy tissue! Apply emollient.
	Biofilm	Mucous layer of bacteria/microbes living on the wound bed. Assume presence in chronic wounds, sometimes visible as clear shiny mucus, or when assuming color of particular microbe (as in green biofilm from pseudomonas A). Contributes to inflammation, drainage, and odor.	Remove/disrupt with woven gauze during cleansing if possible, soak wound bed in cleanser-moistened gauze. Apply topical and cover to autolytically debride. Clean and protect periwound from pseudomonas drainage.
	Eschar	Brown/black, dead/necrotic/nonviable tissue, often dry, hard or leathery. Contributes to inflammation, drainage, and odor.	Apply topical and cover to autolytically debride. can apply topicals underneath/under edges of large area to help it lift off.

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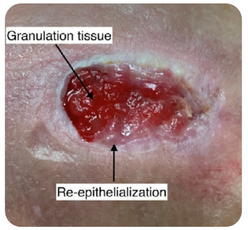
Wound Assessment

Image	Tissue Type	Description	To Do
	Slough	Yellow/grey mucousy/fibrous tissue Dead/necrotic/nonviable. Contributes to inflammation, drainage, and odor.	Remove/disrupt with woven gauze during cleansing if possible, soak wound bed in cleanser-moistened gauze. Apply topical and cover to autolytically debride.
	Granulation Tissue	Red/pink bumpy/cobbled tissue. Sign of healing--fills in depth from the bottom of the wound bed upwards.	Healthy tissue! Maintain moisture and protect.

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Wound Assessment

Image	Tissue Type	Description	To Do
	Hypergranulation tissue	Granulation tissue raised above the level of the periwound skin Blocks re-epithelialization and delays wound closure Sign of heavy drainage and/or inflammation.	Limit use of moisture-donating products, use absorptive dressing/manage exudate, caution with occlusive dressings. Manage inflammation (debride biofilm and nonviable tissue, be alert for subacute allergic reactions, counsel on appropriate ways to alleviate edema).
	Exposed underlying structures	Visible underlying structures like tendon, ligament, muscle, or bone in the wound bed are vulnerable to drying out and infection.	Cover visible bone with nonstick, occlusive dressing Maintain moisture, cushion from trauma and protect from environment. Identify and discuss higher levels of care with the person to promote care and avoid additional damage.

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Wound Assessment

Use this section as a guide for recording your initial assessment. Write or type in the form fields below.
Recorded wound assessments should include: [34]

Location on the body

Size
Including width, length, and depth/elevation–recorded dimensions are at widest, longest, deepest, tallest points

Degree of Tissue Injury
Partial-thickness i.e. only epidermis and dermis or full-thickness i.e. epidermis, dermis, subcutaneous and deeper layers of tissue affected. Including whether underlying structures like tendons or bone are visible

Tissue Types Visible in Wound Bed
Granulation, re-epithelialization, slough, eschar, etc.) May indicate approximate percentage of each

Amount and Type of Drainage
Serous, serosangineous, purulent, etc.

Assessment of the Wound Edges and Periwound
Edges attached, rolled, undermined, and/or macerated

Signs and Symptoms of Infection
Locally around the wound or systemically in the body

Patient's Report of Pain
In and around the wound as well as the motor function and any changes in sensation of associated joints and limbs

For more information, visit the **National Library of Medicine's Wound Assessment Table** on Wound Assessment:
https://www.ncbi.nlm.nih.gov/books/NBK591822/table/ch10integumentary.T.wound_assessment/

Wound Assessment

Signs and Symptoms of Local Infection:

- Increased pain/tenderness/irritation
- Increased drainage, or any purulence (caution to not confuse products of autolytic debridement for purulent drainage)
- Increased local swelling or changes in consistency of skin to touch (e.g. increased bogginess or firmness/induration)
- Increased local redness
- Local warmth to touch
- Persistent odor after cleansing

Are these signs increasing or decreasing over time?

How does your patient feel about seeking a higher level of care for antibiotics?

It is important to note that none of these symptoms alone indicate infection. There is cause for concern when these symptoms appear in combination.[35(p9),36]

Clinical Pearls: When collaboratively choosing dressing types or performing a dressing change with a patient, asking these questions can help guide decision making:

- **When can the patient next change their dressing?**
- **Can the patient store their wound care supplies somewhere between dressings?**
- **How many dressing changes can you provide the patient to go?**
- **Does the dressing need to be amended for individualized use? Does the patient need to use a spot on or near the wound bed sometime soon to inject?**

How to Guide

A photo of a wound care nurse talking with a patient after cleaning their wound.

Nurse-led care in a community setting.

This How-To Guide provides step-by-step instructions for treating wounds associated with xylazine and other substance use. It walks you through the process—from establishing consent in the community, to assessing and cleaning specific tissue types using recommended products and dressings, and finally, planning for follow-up care.

Before you begin, refer to the helpful icon key on the next page to understand how visual cues are used throughout each step.

The steps include: (click steps below to quickly navigate to that section).

Step 1: Establish Consent
Step 2: Remove the Dressing
Step 3: Assess the Periwound and Edges
Step 4: Assess the Wound Bed and Drainage
Step 5: Cleanse and Dress the Wound
Step 6: Follow-Up Planning

Use the included navigation bar below to help you through this section.

Icon Guide

On the following pages, helpful informational alerts will be included throughout the wound cleaning process. Read the accompanying information below and make decisions accordingly. Refer back to this section when needed for guidance.

Considerations for wounds with excess drainage

When cleansing:

- Ensure that you are gently and thoroughly removing debris from the wound and periwound before assessing the wound (e.g. for smell, tissue type).

When dressing:

- Avoid primary dressing laying over macerated edges or periwound by cutting to the size of the wound bed.
- Avoid occlusive dressings (e.g. xeroform, transparent film) which keep drainage from leaving the wound bed or periwound as well as dressings which donate moisture to the periwound.
- Minimize/avoid topicals that donate moisture (hydrogels, etc.)
- Consider keeping the contact layer on and changing the absorbent layer out when soaked to simplify dressing changes (i.e. oil emulsion changed once daily, ABD layer changes 2-3 times daily)

Send your patient off with multiple dressing changes worth of supplies. Do your best to replace any soiled clothing for the patient.

Considerations for wounds with insufficient moisture

Wounds cannot close without some moisture on the wound bed! Necrotic tissue and biofilm require a moist environment to autolytically debride. Talk with your patient about any reasoning they may have for leaving their wound open to air. Problem solve to move forward with a dressing that works for the patient and provider.

When cleansing:

- Thoroughly soak any dressing prior to removing the dressing from the wound to avoid sticking.

When dressing:

- Be absolutely sure to use non-adherent contact layer (oil emulsion, nonadherent pad, xeroform, foam)
- Use a topical or dressing to donate moisture and be sure to cover the wound bed when dressing.
- Consider the appropriateness of using an occlusive or semi-occlusive dressing.

Sign of shear force/picking

Picking is a normal human behavior! Practice compassion when talking with your patient.

- Counsel patient on avoiding damage to wound bed, periwound skin, and underlying structures.
- Offer harm reductive interventions (e.g. cleansing hands before touching the wound, covering with a wrap or elastic sleeve to keep out of sight/make picking more difficult).
- Offer replacements for too tight shoes and clothes as well as other problem solving around wounds being rubbed.

Considerations for wounds with increased bioburden

When cleansing:

- Consider using a non-cytotoxic antimicrobial cleanser and soaking wound bed in cleanser-moistened gauze.
- Ensure that you are gently and thoroughly removing debris from the wound and periwound before assessing the wound (e.g. for smell).

When dressing:

- Consider using an antimicrobial topical dressing.

Previous Next

How to Guide

Icon Guide | 1 Establish Consent | 2 Remove Dressing | 3 Assess Periwound | 4 Assess Wound Bed | 5 Securement Dressing | 6 Follow-up Planning

Sign of healing

Provide positive feedback to your patient: wound healing is happening!

When cleansing:

- Consider switching away from products with cytotoxicity like Dakins™ Solution ¼ strength or stronger, to solutions less harsh for healing tissue (like normal saline, Di-Dak-Sol, Anasept, or Vashe).
- Be careful to not harm newly formed tissues when cleansing. Consider irrigating or soaking the wound bed for cleansing rather than abrading/rubbing.

When dressing:

- Consider switching away from products with more cytotoxicity like those imbued with silver.
- Be sure to maintain balanced moisture to ensure proper wound healing.
- Apply emollient to scar tissue which is drier than regular skin.

Assess for Infection: Signs and Symptoms of Local Infection

After cleaning a wound you will assess for infection.
It is important to look out for the following:

- Increased pain
- Increased drainage, purulence
- Increased local swelling
- Increased local redness
- Increased local warmth to touch
- Changes in consistency of skin to touch (e.g. increased bogginess or firmness)
- Persistent odor after cleansing

Are these signs increasing or decreasing over time?
How does your patient feel about seeking a higher level of care for antibiotics?

Assess for Moisture: What does the dressing need to do?

- How much is the wound draining?
- When can the patient next change their dressing?
- How many dressing changes can you provide the patient to go?
- Does the patient need to use a spot on or near the wound bed sometime soon to inject?

When you should refer patients to higher levels of care.

After assessing and cleaning each tissue type, you must also **Assess for infection** and **Assess Drainage.** Depending on severity of symptoms, patients should either be referred to an outpatient provider who can prescribe antibiotics or an Emergency Department. For guidance on how to best support the patient during this transition, see the **Points of Advocacy When Referring to Higher Levels of Care** section **(pg 17).**

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Step 1: Always Establish Consent

First things first. Always establish verbal consent with a patient prior to beginning any treatment.

1. Have you received enthusiastic consent to perform this dressing change?
2. Would the patient prefer to perform the dressing change themselves?
3. Have you checked in with the patient? How are they feeling today and how is their wound doing in their estimation?
4. Is there focal pain in or around the wound that you need to be especially gentle with?
5. What dressings and products have worked well or not worked at all for the patient in the past? Is there something they'd like to use or avoid for this dressing change today?
6. Does the patient have any allergies or sensitivities to products?

Once you have established consent, move onto the next step: **Remove Dressing.**

TIP: Show the patient this video for a helpful overview of the wound care process from start to finish, presented from a do-it-yourself patient perspective.

Video Link: https://www.youtube.com/watch?v=zYM8XRu9N84&t=2s

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Step 2: Remove the Dressing

Is the wound currently dressed?

Yes:

- Sanitize/wash hands and put on clean gloves, repeat this process when moving from cleaning to dressing
- Gently remove the existing dressing.
- If the dressing sticks, soak it to loosen; if still stuck, apply A&D/ vasline/similar under or through the gauze to loosen
- Encourage patient participation if appropriate.
- Go slowly and carefully to avoid damaging injured or healing tissue, or causing pain.

No:

- Explore their reasons for leaving the wound open to air without judgment.
- Provide education and resources to support consistent wound coverage going forward.

Next: Visual Assessment

- Once the wound is fully uncovered, **assess and identify all present tissue types.**
- Proceed to **Step 3: Assess the Periwound.**

Once the wound is fully uncovered, assess and identify present tissue types. Move onto the next step: **Assess Periwound.**

Step 3: Assess the Periwound and Wound Edges

Evaluate the skin surrounding the wound (periwound) and follow the steps below to clean and protect it using the recommended products.

Signs and symptoms of local infection (cellulitis) usually appear in the periwound–also assess for redness/darkened skin, induration/fluctuance, warmth, local edema.

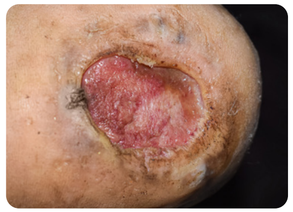
Select the periwound tissue type below to navigate directly to a detailed walkthrough.

Dried drainage on intact skin

Dry, cracked, or ashen skin

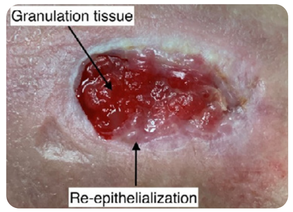
Maceration

Rolled edges



Attached edges

Newly re-epithelialized skin/scar tissue



Previous Next

Periwound Tissue Type: Dried drainage on intact skin

Dried drainage on intact skin

Action:
Wet/soak and gently cleanse away. If very stuck or too painful, apply emollient (like A&D) for later removal.

Products & Primary Dressing:
Soothe and protect intact skin with the following:

- A&D ointment or other petrolatum (vaseline, aquaphor, etc.)
- Moisture barrier ointment (e.g. unscented diaper ointment, Zinc, Dimethicone)
- Barrier film (e.g. No Sting Skin Prep).

Periwound Tissue Type: Dry, cracked, or ashen skin

Dry, cracked skin

Action:
Cleanse gently.

Products & Primary Dressing:
Soothe and protect intact skin with the following:

- A&D ointment or other petrolatum (vaseline, aquaphor, etc.)
- Moisture barrier ointment (e.g. unscented diaper ointment, Zinc, Dimethicone)

Periwound Tissue Type: Maceration

Maceration

Action:
Cleanse and dry as much as possible.

Products & Primary Dressing:
Soothe and protect intact skin with the following (apply minimally to avoid donating excess moisture)

- A&D ointment or other petrolatum (vaseline, aquaphor, etc.)
- Triad
- Moisture barrier ointment (e.g. unscented diaper ointment, Zinc, Dimethicone)
- Barrier film (e.g. No Sting Skin Prep).

Consider managing exudate with a superabsorbent dressing or alginate/CMC in place of a wound bed topical ointment.

Periwound Tissue Type: Rolled edges

Rolled edges

Action:
Cleanse gently.

Assess for infection (especially undermined areas) and a need for moisture donation. Avoid picking or over-drying by covering wound with dressing and offering counseling on protecting the periwound.

Products & Primary Dressing:
Soothe and protect from drying and picking with the following:

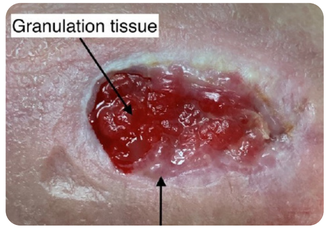
- A&D ointment or other petrolatum (vaseline, aquaphor, etc.)
- Moisture barrier ointment (e.g. unscented diaper ointment, Zinc, Dimethicone)
- Cushion from shear force with foam dressing.
- Remove from sight/easy reach with elastic sleeve or other nonirritating outerwrap

How to Guide

Periwound Tissue Type: Attached edges | Newly re-epithelialized skin/scar tissue

Attached edges

Newly re-epithelialized skin/scar tissue



Action:
Cleanse gently.

Products & Primary Dressing:
Protect new skin with the following:

- A&D ointment or other petrolatum (vaseline, aquaphor, etc.)
- Moisture barrier ointment (e.g. unscented diaper ointment, Zinc, Dimethicone)
- Barrier film (e.g. No Sting Skin Prep).
- Cover with non-adherent dressing
- If new skin is within the wound bed or impacted by wound drainage, be careful not to donate too much extra moisture to avoid autolytic debridement

After cleansing each periwound, continue on to the next step: **Assess Wound Bed.**

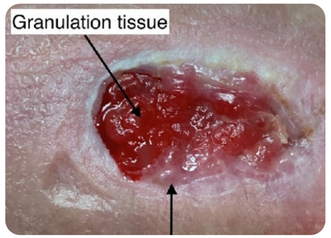
Step 4: Assess the Wound Bed and Drainage

Assess each wound bed tissue type and follow the recommended steps to cleanse the area using appropriate products. This section also outlines additional actions based on **signs of infection** and the amount of drainage. Select the wound bed tissue type below to navigate directly to a detailed walkthrough.

Eschar

Slough

Granulation tissue

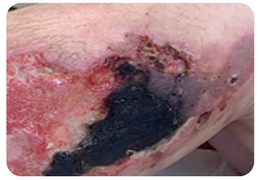


Hypergranulation tissue

Exposed underlying structures

Wound Bed Tissue Type: Eschar

Eschar



Action:
Cleanse gently with an antimicrobial cleanser if tolerated.

Consider soaking with diluted sodium hypochlorite solution for its debridement properties.

Infection Present

With scant drainage.

Products & Primary Dressing:

- Apply antimicrobial topical for autolytic debridement (antimicrobial hydrogel, silvadene, honey) + nonadherent contact layer

Absorbent Dressing

- Cover with ABD pad to soak up drainage produced by topical and autolytic debridement.

With considerable drainage

Products & Primary Dressing (choose one):

- Apply silver calcium alginate/CMC as primary layer cut to size of wound bed.
- OR apply antimicrobial topical (like antimicrobial hydrogel, silvadene, honey, antibiotic ointment) to non-occlusive oil emulsion to size of wound bed

Absorbent Dressing:

- Cover with ABD pad as a secondary dressing to soak up drainage.

No infection

With scant drainage.

Products & Primary Dressing (choose one):

- Cut and apply occlusive petrolatum contact dressing to the size of eschar or wound bed.
- OR apply topical for autolytic debridement (medical grade manuka honey, hydrophilic dressing, A&D, or similar) + nonadherent dressing
- Optional: Apply extra product directly onto and under dry patches of eschar as tolerated.

Absorbent Dressing:

- Use an ABD pad to soak up drainage produced by topical and autolytic debridement.

With considerable drainage.

Products & Primary Dressing (choose one):

- Apply calcium alginate/CMC as primary layer cut to size of wound bed
- OR apply topical + nonadherent dressing cut to size of wound bed.
- OR use super absorbent dressing alone (no topical, no additional contact or absorbent layer)

Absorbent Dressing: Use an ABD pad to soak up drainage.

Wound Bed Tissue Type: Slough

Slough

Action:

Do your best to remove with woven gauze when cleansing as tolerated.

Consider soaking with diluted sodium hypochlorite solution for its debridement properties.

Infection Present

With scant drainage.

Products & Primary Dressing:

- Apply topical for autolytic debridement (antimicrobial hydrogel, silvadene, honey, antibiotic ointment) to nonadherent dressing.

Absorbent Dressing:

- Cover with ABD pad as secondary dressing to soak up drainage.

With considerable drainage

Products & Primary Dressing (choose one):

- Apply silver calcium alginate/CMC as primary layer cut to size of wound bed.
- OR apply a modulated amount of antimicrobial topical (silvadene, honey, antibiotic ointment) to non-occlusive oil emulsion cut to size of wound bed.

Absorbent Dressing:

- Cover with an ABD pad as a secondary dressing to soak up drainage

No infection

With scant drainage.

Products & Primary Dressing (choose one):

- Cut and apply occlusive petrolatum contact dressing to size of wound bed.
- OR apply topical for autolytic debridement (medical grade manuka honey, or A&D, or similar) + nonadherent dressing.

Absorbent Dressing:

- Use an ABD pad to soak up drainage produced by topical and autolytic debridement.

With considerable drainage

Products & Primary Dressing (choose one):

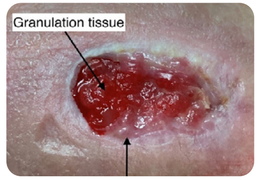
- Apply calcium alginate/CMC as primary layer cut to size of wound bed
- OR apply scant topical (triad, honey A&D/similar) + nonadherent dressing cut to size of wound bed.
- OR apply dry nonadherent dressing (no topical) cut to size of wound bed
- OR use super absorbent dressing alone (no topical, no additional contact or absorbent layer)

Absorbent Dressing:

- Cover with Use an ABD pad to soak up drainage.

Wound Bed Tissue Type: Granulation tissue

Granulation tissue



Action:
Cleanse gently.

Infection Present

With scant drainage:

Products & Primary Dressing:

- Apply antimicrobial topical to maintain moisture (antimicrobial hydrogel, silvadene unless used for >2 weeks already, honey, antibiotic ointment) to nonadherent dressing.

Absorbent Dressing:

- Cover with a non-adherent pad or ABD pad as secondary dressing to soak up drainage.

With considerable drainage

Products & Primary Dressing (choose one):

- Apply silver calcium alginate/CMC as primary layer cut to size of wound bed.
- OR apply antimicrobial topical (antimicrobial hydrogel, silvadene unless used for > 2 weeks already, honey, antibiotic ointment) to non-occlusive oil emulsion to size of wound bed.

Absorbent Dressing:

- Cover with an ABD pad as a secondary dressing to soak up drainage.

No infection

With scant drainage:

Products & Primary Dressing (choose one):

- Cut and apply occlusive petrolatum contact dressing to size of wound bed.
- OR apply topical to maintain moisture (medical grade manuka honey, or A&D, or similar) + nonadherent dressing.

Absorbent Dressing:

- Use an ABD pad to soak up drainage produced by topical.

With considerable drainage

Products & Primary Dressing (choose one):

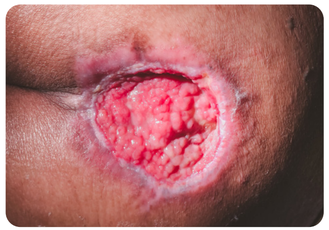
- Apply calcium alginate/CMC as primary layer cut to size of wound bed
- OR apply scant topical (triad, honey A&D/similar) + nonadherent dressing cut to size of wound bed.
- OR apply dry nonadherent dressing (no topical) cut to size of wound bed
- OR use super absorbent dressing alone (no topical, no additional contact or absorbent layer).

Absorbent Dressing:

- Cover with Use an ABD pad to soak up drainage.

Wound Bed Tissue Type: Hypergranulation tissue

Hypergranulation tissue



Action:

Wipe up as much moisture as possible, soak in antimicrobial cleanser.

Consider using a dry nonadherent dressing, absorbing drainage with a super absorbent dressing or alginate/CMC, and manage bioburden and other causes of inflammation. If relevant, discuss other causes and management of edema and inflammation.

Wound Bed Tissue Type: Exposed underlying structures

Exposed underlying structures

Action:

Cleanse gently

- Alert patient to the appearence of underlying structures in their wound bed and counsel on protecting structures.
- Assess for limb dysfunction and need for supportive brace. Consider escalating care.
- Primary Dressing: apply nonadherent occlusive dressing to exposed bone only, such as multiple layers of xeroform, or foam.
- Provide dressing and supplies to protect from drying out, infection, and trauma.

After cleansing each wound bed, continue on to the next step: **Securement Dressing.**

Previous Next

Step 5: Securement Dressing

Choose a securement layer based on patient preferences, environmental factors, and clinical needs.
Consider longevity, drainage, comfort, and ease of re-access.

Patient Preference.

Does your patient have a preferred securement method?

Yes:

- Use their preferred securement layer.
- Be sure to pack up a to go bag of a couple dressing changes worth of the products you used today and any other products the patient may like to try out.

No:

- Proceed to clinical considerations.

Clinical Considerations.

Ask:

- Is there **variable swelling?**
- Is it **hot/humid** outside?
- Is there **excess drainage?**
- Will the patient need to **re-access** the wound area soon?

Yes to any:

- Consider wrapping in **elastic bandage wrap** or **tubular dressing** (e.g. elastic netting or sleeve) for flexibility and breathability.
- Pack a to-go bag as noted above.

No to all:

- Can use **self-adherent wrap** for a longer-lasting securement if desired (ideal if dressing will stay on for a couple of days), or still ok to use any above.
- Pack a to-go bag as noted above.

After securing the dressing, continue on to the next step: **Follow-up Planning.**

Previous Next

Step 6: Follow-up Planning

Harm reduction care follow-up planning relies on providing information and, ideally, the means to use it, to people receiving care. Make a plan for follow up with your patient and provide information on:

- **Where and when they can access services like those you provide**
  Provide schedules for local low- and no-barrier services, including accessible walk-in wound care hours, nearby clinics, and locations that distribute wound care kits. When possible, also share information about additional services available at these sites, such as meals or groceries, showers, clothing, and other medical care.

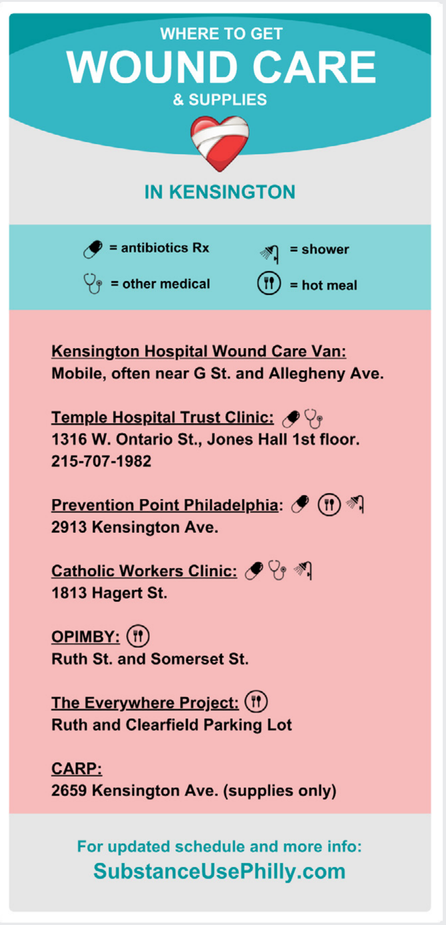
- **Discuss signs of progressing infection or dysfunction, and when/where patient should seek care**
  Review the red-flag signs of worsening infection or other concerns, along with options for higher levels of care. Discuss available supports such as transportation, warm handoffs, accompaniment, or advocacy services. When possible, provide transportation passes to help ensure follow-up care.

- **Provide supplies and discuss their use and recommended substitutions**
  Always provide tailored supplies and clear information for wound self-management. This allows people to safely reproduce the dressing applied during the visit and to follow the agreed-upon care plan between appointments.

  Review the recommended supplies with them and explain the rationale for each item. This helps ensure that effective substitutions can be made if certain supplies are unavailable.

  When possible, provide additional items that support wound care and comfort, such as:
  - Replacement clothing or shoes soiled by wound drainage
  - Snacks and water
  - Basic hygiene products to support wound prevention

If person is interested and able, discuss linkage to primary care, specialty care (HIV, DM, cardiology, etc.), substance use treatment, and orthopedics or burn surgery evaluation.



A graphic showing where patients can get wound care, supplies, and other helpful resources.

Video Resources

Click on the video thumbnail or play buttons to watch the videos

Xylazine-Associated Wound Care

In this 11-part micro-learning series, hear from three dedicated wound care professionals as they share their experiences navigating the complexities of the field, offering insights to help guide your own path.

- Play Video 1 — The Challenges of the Drug Supply and Unstable Housing
- Play Video 2 — Challenging Assumptions About Patient Engagement
- Play Video 3 — Making Wound Care Accessible
- Play Video 4 — How Nurses Cultivate Supportive Care Environments
- Play Video 5 — Establishing Trust in Harm Reduction-Oriented Care
- Play Video 6 — The Impact of High Quality Care
- Play Video 7 — Empowerment and Self Care
- Play Video 8 — Healing
- Play Video 9 — Consentability For People on Tranq Dope
- Play Video 10 — Person-Centered Care
- Play Video 11 — Transitions of Care

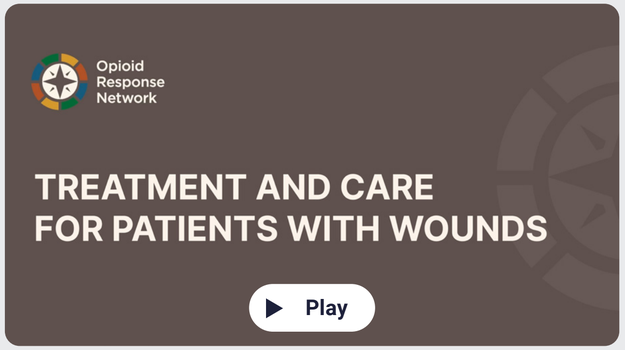
Xylazine: Caring For Your Wounds

A step-by-step self-care demonstration. See how it's done and learn how to safely care for your own wound.

Developed by Thomas Jefferson University.

Treatment and Care for Patients with Wounds

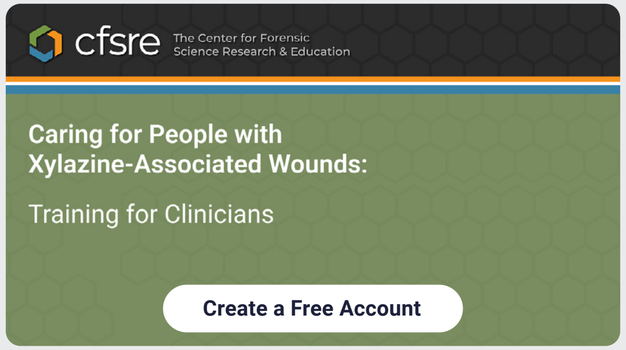
Address wounds in people who use drugs, especially from Xylazine in the drug supply.



Developed by Columbia University Medical Center Department of Psychiatry Division on Substance Use Disorders in partnership with the Opioid Response Network.

Caring for People with Xylazine-Associated Wounds: Training for Clinicians

A webinar learning series.



Developed by PA DOH and PDPH SUPHR. Create a free account to access and receive CNE/CME credit. CRS CE credit is also available.

Glossary

Wound Care Terms

Antibiotic
Describes an antibacterial agent. These kill bacteria but do not kill viruses or fungi (like an antimicrobial would). Some are broad-spectrum, some will work only against particular pathogens.

Antimicrobial
Describes an agent which kills or stops the growth of microbes like bacteria, viruses, or fungi. Some are broad-spectrum, some will work only against particular pathogens.

Autolytic Debridement
The process by which the body breaks down dead tissue, using its own enzymes when tissue is kept moist. Facilitated by maintaining moisture and keeping the wound covered.

Bioburden
The degree of microbial contamination on a specific surface like a wound bed. The presence of necrotic tissue and biofilm, which feed and house microbes, increase a wound's bioburden. Any wound that is open for more than 2 weeks is considered to have a clinically relevant bioburden.

Cytotoxic
Describes agents which are harmful to living human cells. If a product stings a patient, you can assume that it is cytotoxic. The goal is to balance protecting body cells (including those that grow new tissue/skin and fight infection) by minimizing cytotoxicity with reducing bioburden via antimicrobial action.

Drainage/Exudate
Liquid expressed by the wound (e.g. serous, serosanguinous, or purulent drainage). A certain amount of some drainage is expected from all wounds.

Infection
The multiplication of microorganisms leading to signs/symptoms. Infections affecting only the wound bed are treated topically while infectious invasion into surrounding skin, soft tissues (cellulitis), and body structures are treated with systemic (PO/IV) antibiotics.

Necrosis
Tissue death leading to necrotic tissue like eschar and slough. This tissue is nonviable and needs to be debrided.

Non-cytotoxic
Describes agents which are not harmful to living human cells. Cytotoxicity is a spectrum. An acceptable level of cytotoxicity may be determined by what a patient is able to tolerate and as well as an assessment of the wound bed's need for decontamination.

Glossary

Occlusive
Describes a surface that does not allow the flow of liquids and/or gases through itself. Products exist on a spectrum from occlusive to semi occlusive to non-occlusive. Some products may be occlusive to only liquids and allow vapors to pass while others may occlude liquids and gases. Exercise caution when using occlusive products with exudate as maceration and/or hypergranulation may occur and many pathogens (e.g. Pseudomonas A.) flourish in anaerobic environments.

Periwound
Area of skin directly surrounding the wound which is affected by the wound's presence and at risk for skin breakdown due to drainage, maceration, dryness, etc. Must be kept clean, protected and strengthened in order to prevent the wound from enlarging. Signs and symptoms of infection are most often assessed in the periwound.

Purulent Drainage
Thick, often milky discharge from a wound. May be white, tan, gray, yellow, green. When presenting in combination with other signs and symptoms of local infection, it indicates infection of the wound bed. However, clinicians should differentiate infective purulent drainage from tissue that's been broken down as a result of autolytic debridement.

Serous Drainage
Normal wound exudate; can be clear to yellow and translucent (like plasma part of blood).

Serosanguinous Drainage
Normal wound exudate; can be Pink to orange to red/rust-colored. Contains some serous and some bloody drainage.

Shear Force
A force acting parallel to the surface of the body (i.e. rubbing). Shear force can cause undermining/rolled edges. Areas under shoes/belts/similar are particularly at risk.

Wound Bed
Area of open skin bounded by the wound edge and surrounded by the periwound. Assess the wound bed for presence of various tissue types, including: eschar or slough which may obscure wound bed, granulation or hypergranulation tissue, re-epithelialization/scar tissue, and exposed underlying structures.

Wound Edge
The border of the wound bed (where it meets the periwound). Assess for maceration, and whether the edges are attached (good!) vs. rolled or undermined (needs some TLC). Wound closure occurs from attached edges inward, so these edges are vital to healing!

Department of Public Health
CITY OF PHILADELPHIA

Welcome
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Substance Use-Associated Wounds 101
Stigma Reduction
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Wound Assessment
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Further Information

Questions, concerns, feedback?
Email dph.opioid@phila.gov

Check out more of our work here:
www.substanceusephilly.com | https://surge.healthfederation.org/

You can apply harm reductive wound care to any wound!

- About the WOCN Society | WOCN Society
  - Wound Treatment Associate Program | WOCN Society
- WoundSource and Wounds International have great, open access information on wound care

Learn more here:

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