

Xylazine-Related Wounds: Using Wound Care and Harm Reduction Best Practices to Improve Wound Healing and Patient Education for People Who Inject Drugs

Dustin Gibbons, BSN, RN; Greg Stafford, BSN, RN; Noël Arring, DNP, PhD, RN

BACKGROUND

- Xylazine is a non-opioid sedative used in veterinary practice (Rodriguez et al., 2008).
- In humans, it can cause decreased breathing, bradycardia, lower blood pressure, and infected wounds (CDC, 2024; McFadden et al., 2024).
- People who inject drugs (PWID) containing xylazine have higher prevalence of skin ulcers (38.5%) the those using unadulterated drugs (6.8%) (Rodriguez et al., 2008).
- Often mixed with drugs like fentanyl; Increasingly found in illicit drug supply (CDC, 2024).
- PWID often defer care due to stigma, lack of resources, lack of transportation, other socioeconomic factors (McFadden et al., 2024).

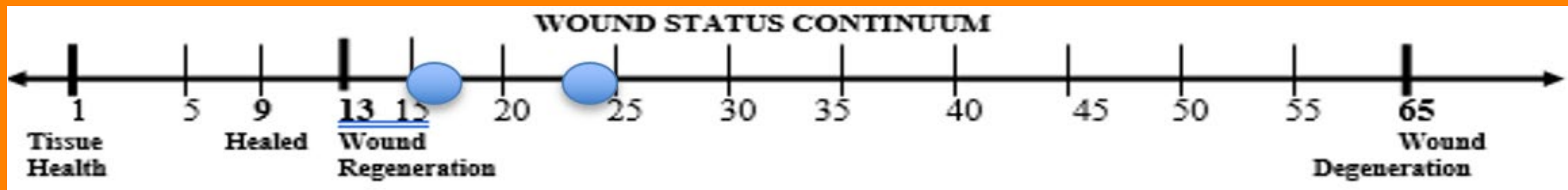
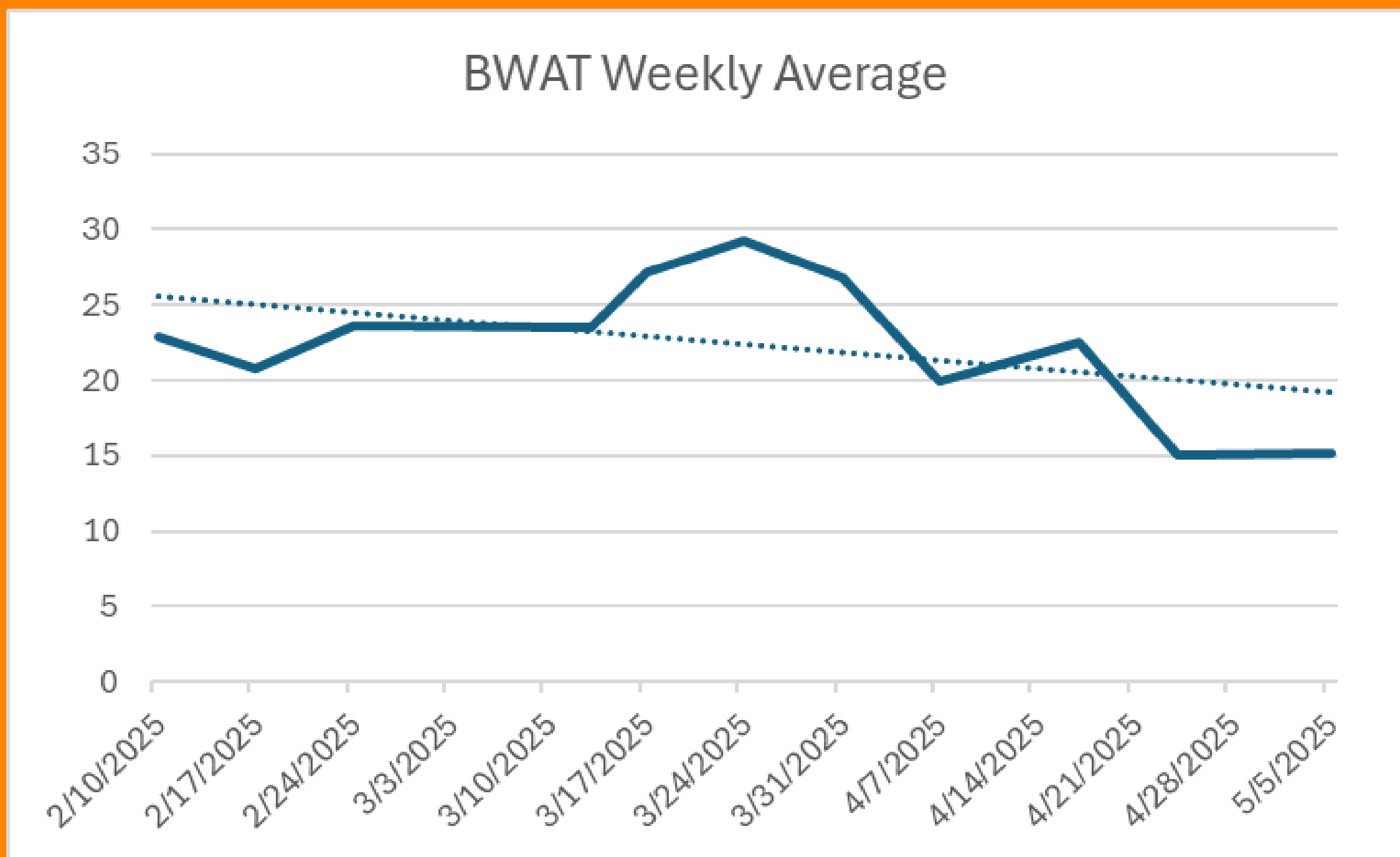
LOCAL PROBLEM

- The project site was a harm reduction exchange (HRE) in Tennessee.
- HRE lacked a standardized wound care protocol.
- The purpose of this project was to implement a standardized wound care protocol which included using the Bates-Jensen Wound Assessment Tool (BWAT) for use during wound-care related visits.
- The project aims were:
 - 25% improvement of BWAT score for patients with wounds
 - 50% of patients with wounds will receive wound care using standardized wound care protocol every two weeks

METHODS

- The Johns Hopkins Evidence-Based Practice Model was used as the project framework (Dang et al., 2022).
- Literature appraisal provided good evidence for improved wound healing based on DIME principles (Debridement, Infection control, Moisture balance, and Edge preparation) and using the BWAT (Bates-Jensen, 2006; McFadden et al., 2024).
- Pre-implementation workflow was developed and adjusted during the project through PDSA (Plan-Do-Study-Act) cycles.
- BWAT score was measured at initial visit and subsequent follow-up visits for 12 weeks.
- Standardized self-care supply given after each visit with education on self-care for wounds.
- Self-Management Assessment Scale (SMASc) completed by patients at each visit (Öberg et al., 2019).

Wound care for patients with xylazine-related wounds improved after implementing a standardized wound care protocol.



	Beginning scores	12-week mean	% change
Knowledge	7.6	8.2	7.9
Goals for future	5.4	7	29.6
Daily routines	6	7.7	28.3
Emotional adjustment	4.4	5.3	20.5
Social support	5.6	6.2	10.7



Scan the QR code to review the executive summary and references.

INTERVENTIONS

- All patients with wounds choosing to participate in the project received standardized wound care using the BWAT and DIME principles, received home care education with a supply kit, and completed the SMASc at each visit (Tools used with permission from authors).

BATES-JENSEN WOUND ASSESSMENT TOOL

Complete the rating chart to assess wound status. Evaluate each item by picking the response that best describes the wound and entering the score in the item score column for the appropriate date. If the wound has healed/resolved, score item 1, 2, 3, & 4 as 0.

Location: Assessment site: Circle (identify right (R) or left (L) and use "X" to mark site on body diagram).

Item Assessment Date Score Date Score

1. Examine Type 1 = 10% to 100% of wound covered
2 = Bloody
3 = Serous/purulent: thin, watery, pale and pink
4 = Serous: thin, watery, clear
5 = Purulent: thick or thick, opaque, tan/yellow, white or red/white color

6. Examine Anesthet 1 = None, dry wound
2 = None, wound moist but no observable eschar
3 = Small
4 = Moderate
5 = Large

8. Skin Color 1 = Pink or normal for ethnic group
2 = Bright red & or blanch to touch
3 = White or grey/pale or hyperpigmented
4 = Dark red or purple & or non-blanchable
5 = Black or hyperpigmented

9. Skin Color Surrounding Wound 1 = 10% swelling or edema
2 = Swelling edema extends <4 cm around wound
3 = Swelling edema extends >4 cm around wound
4 = Pruritus edema extends <4 cm around wound
5 = Crusting and/or pitting edema extends >4 cm around wound

10. Peripartum Tissue Edema 1 = None present
2 = Edema, <1 cm around wound
3 = Edema, 1-4 cm around wound
4 = Edema, 4-6 cm around wound
5 = Edema, >6 cm around wound

11. Peripartum Tissue Infection 1 = None present
2 = Single, body red, <25% & > 25% of wound filled
3 = Single, body red, <25% & > 25% of wound filled
4 = Single, body red, <25% & > 25% of wound filled
5 = No granulation tissue present

12. Granulation Tissue 1 = 100% wound covered, surface intact
2 = 75% to <100% wound covered & or epithelial tissue extends <1 cm into wound bed
3 = 50% to <75% wound covered & or epithelial tissue extends <1 cm into wound bed
4 = 25% to <50% wound covered
5 = < 25% wound covered

13. Epithelial Tissue 1 = 100% wound covered, surface intact
2 = 75% to <100% wound covered & or epithelial tissue extends <1 cm into wound bed
3 = 50% to <75% wound covered & or epithelial tissue extends <1 cm into wound bed
4 = 25% to <50% wound covered
5 = < 25% wound covered

TOTAL SCORE

SIGNATURE

Self-Management Assessment Scale (SMASc)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. I have enough knowledge about my condition	1	2	3	4	5
2. I have good social support, which makes it easier for me	1	2	3	4	5
3. I have done what support me to make self-management work	1	2	3	4	5
4. I find it is everyday life despite my illness	1	2	3	4	5
5. I know how to handle the illness in daily life	1	2	3	4	5
6. I have good daily routines	1	2	3	4	5
7. I have received sufficient amount of information	1	2	3	4	5
8. I feel satisfied with my situation	1	2	3	4	5
9. I have a plan for how to deal with my illness	1	2	3	4	5
10. I have concrete plans for any future self-management	1	2	3	4	5

RESULTS

- 55% participation rate, with 53% return rate for follow-up care, falling short of the project aim.
- Mean starting BWAT score 24; after 12 weeks mean score was 16; 33% improvement, exceeding project aim.
- Mean beginning and ending SMASc scores showed improvement in self-management across all five domains: knowledge, goals for the future, daily routines, emotional adjustment, and social support.

CONCLUSIONS

- Standardized wound care protocol was a successful evidence-based practice change.
- Using an assessment tool, providing standardized supply kits, and educating patients on wound care can lead to wound healing, reduce burden of wounds on patients, and allow HRE to save time and resources.
- The HRE has affirmed the sustainability of this protocol and continues to use it post-implementation.