The Management of Upper Extremity Wounds in Xylazine Users versus Non-Xylazine Users: A Cost Analysis

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INTRODUCTION: Patients with upper extremity (UE) wounds related to the use of intravenous drugs adulterated with xylazine incur greater hospital charges than patients with UE wounds related to use of intravenous drugs not containing xylazine. Operative management of xylazine-associated UE wounds will incur more costs than nonoperative management with local wound care.

METHODS: Electronic health records were queried to identify all patients with confirmed UE wounds associated with intravenous drug use (IVDU) from November of 2016 to February 2024. Total visit charges were collected, as well as charges for emergency room services, operating room services, medical supplies, laboratory work, pharmacy services, imaging services, therapy services, and room and board. The average charge value was calculated for xylazine users requiring surgery (XUs), nonoperative XUs, operative non-xylazine intravenous drug users (NXUs), and nonoperative NXUs. Group averages were compared using one-way analysis of variance (ANOVA) with Holm's Method post hoc testing.

RESULTS: Between 2016 and 2024, the average charge value associated with surgical management of UE wounds in XUs was $426,475.56 per person compared to $223,060.44 per person in NXUs ($p=0.006$). Operatively treated XUs also had significantly higher charges than XUs treated with local wound care ($p<0.0001$). When XUs and NXUs were treated nonoperatively ($119,167.79 vs. $75,111.35), there was no significant difference in hospital charges ($p=1.000$). In other words, the cost differential between XUs and NXUs is largely normalized when the UE wounds are treated with local wound care.

DISCUSSION AND CONCLUSION: The addition of xylazine to the drug supply has resulted in a significant financial burden for intravenous drug users, as well as the healthcare systems that treat them. Although surgically managed XUs incur significantly more charges than surgically managed NXUs, the findings suggest that conservative management of xylazine-associated wounds may help mitigate the financial disparity between XUs and NXUs, while also delivering comparable clinical outcomes.

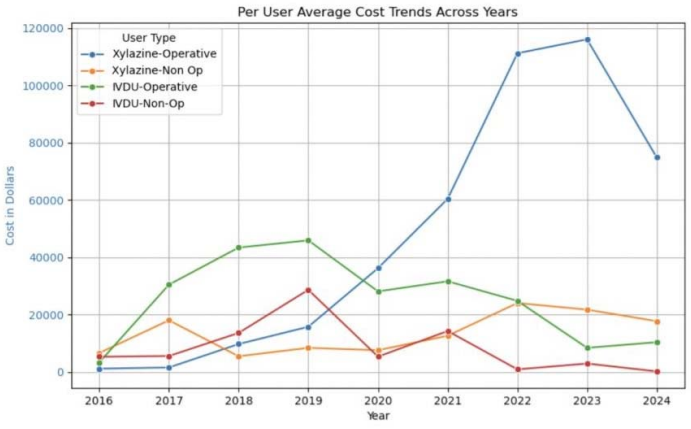

Figure 1. Annual charges per user amongst operative xylazine users (blue), nonoperative xylazine users (orange), operative non-xylazine users (green), and nonoperative non-xylazine users (red).