

Study Finds Narx Score Effectively Helps Researchers Evaluate Narcotic Overdose Risk in Bariatric Surgery

Prior research found obesity to be related to increased use of prescription opioids due to chronic pain and more than 6% of bariatric surgery patients may begin new persistent opioid use. Researchers at the University of Michigan Medical School, Michigan Medicine, and Henry Ford Health System used Narx Scores to see if they could help identify at-risk patients who may benefit from additional follow-up care to prevent complications and additional opioid use.

Methodology

Number of Patients: 306

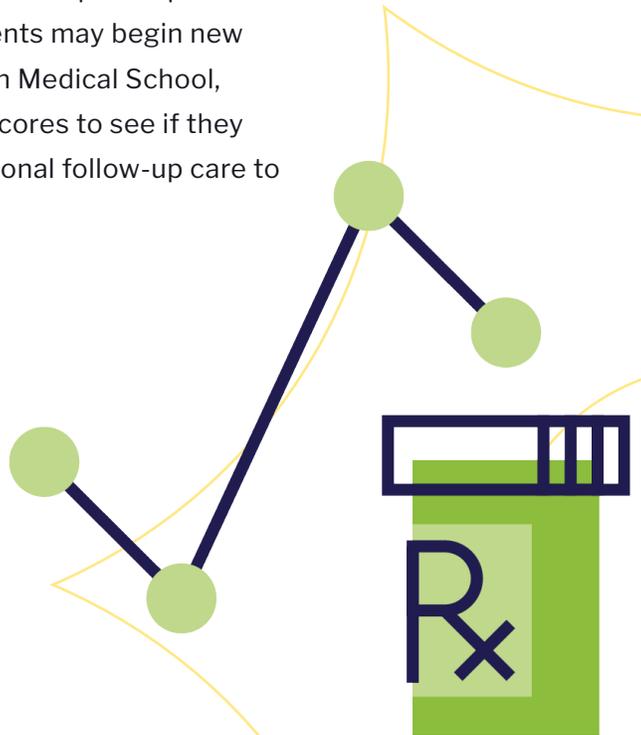
Timeframe: 2018-2020

Methods: Researchers evaluated bariatric surgery patients by their Narx Score before undergoing operation at a single-center academic bariatric surgery program. The scoring is based on each patient’s risk factors found from the Prescription Drug Monitoring Program (PDMP).

Risk factors from PDMP data that contribute to a patient’s Narx Score include:

- The number of controlled substance prescribers
- The number of pharmacies that dispensed a controlled substance
- The amount of morphine milligram equivalents (MME) dispensed
- The number of days prescriptions of a similar type overlap different prescribers

Narx Scores range from 000 to 999. In the overall population of patients evaluated through NarxCare, about 75% of patients score below 200, meaning they are at a lower risk of prescription drug misuse. The risk of unintentional overdose death approximately doubles for every 100-point increase in the score. About 24% of patient’s scores typically fall between 201-650 and only 1% are above 650.





Results

About **32%** of patients were in the upper tercile with a Narx Score between 200-999, meaning these patients **were more likely to misuse narcotics after bariatric surgery**. Patients in the lower tercile had a Narx Score of 000.

There was no significant difference between groups* with respect to the prevalence of several chronic conditions (i.e., conditions related to metabolic dysfunction, mobility disorder, and psychological disorders), indicating that 1) Narx Scores do not implicitly identify patients with such conditions and 2) healthcare utilization between groups within 30 days after discharge was not associated with these conditions.

In addition, 8% of patients in the upper tercile experienced preventable ER visits within 30 days after surgery compared to 0% of patients in the lower tercile.

Both groups were prescribed 75 morphine milligram equivalents (MME) at discharge, indicating that Narx Scores were not used in the practice of discriminatory acute pain management. **However, upper-tercile patients were 83% more likely to be prescribed more than 10 tablets of an additional opioid than lower-tercile patients within 30 days after surgery. About 67% of these patients were prescribed the secondary opioid from a different provider.**

**After correcting for multiple testing.*



Conclusion

The study's discussion says, "obtaining Narx Scores preoperatively may help tailor opioid prescribing practices and also identify at-risk patients who may benefit from additional strategies to further decrease opioid use and preventable ER visits." In this instance, preventable ER visits are visits caused by opioid misuse after bariatric surgery. The authors added, "We believe that Narx Scores can help providers identify at-risk patients who may benefit from more rigorous presurgical counseling as well as additional clinic or telehealth follow-up after surgery."

The results from the current small study add valuable evidence to the clinical utility of Narx Scores. We encourage more outside investigators to replicate these results using larger and more demographically diverse patient populations.

This research was independent from Bamboo Health; the company and/or its employees were not involved in the design, support, funding, or any other aspect of this project. It was published on April 11, 2022 by the journal *Surgical Endoscopy*.

To learn more about this solution, visit our [NarxCare page](#).

Pharmacists and clinicians use NarxCare scores as indicators to further review details in the patient's prescription history as they attend to the patient. NarxCare scores and reports are intended to aid, not replace, medical decision-making. None of the information presented should be used as sole justification for providing or refusing to provide medications.

Citation: Yang, P., Bonham, A.J., Carlin, A.M. et al. Patient characteristics and outcomes among bariatric surgery patients with high narcotic overdose scores. *Surg Endosc* (2022). <https://doi.org/10.1007/s00464-022-09205-x>