

Reducing 30-Day Readmissions in Patients with Alcohol Use Disorder (AUD)

Laveena Meriga DNP APRN AGACNP-BC

Project Faculty: Christina Cardy DNP APRN AGACNP-BC

PROBLEM STATEMENT:

- A needs assessment identified increased 30-day readmissions for AUD.
- Increased readmissions were attributed to increased use of benzodiazepines and inter-rater variability in the CIWA-Ar protocol.
- The current unadjusted 30-day hospital readmission rate at the clinical site of interest for AUD is 20.5%, compared with 18.5% nationally (Pyramid Analytics, 2021).

PROJECT PURPOSE:

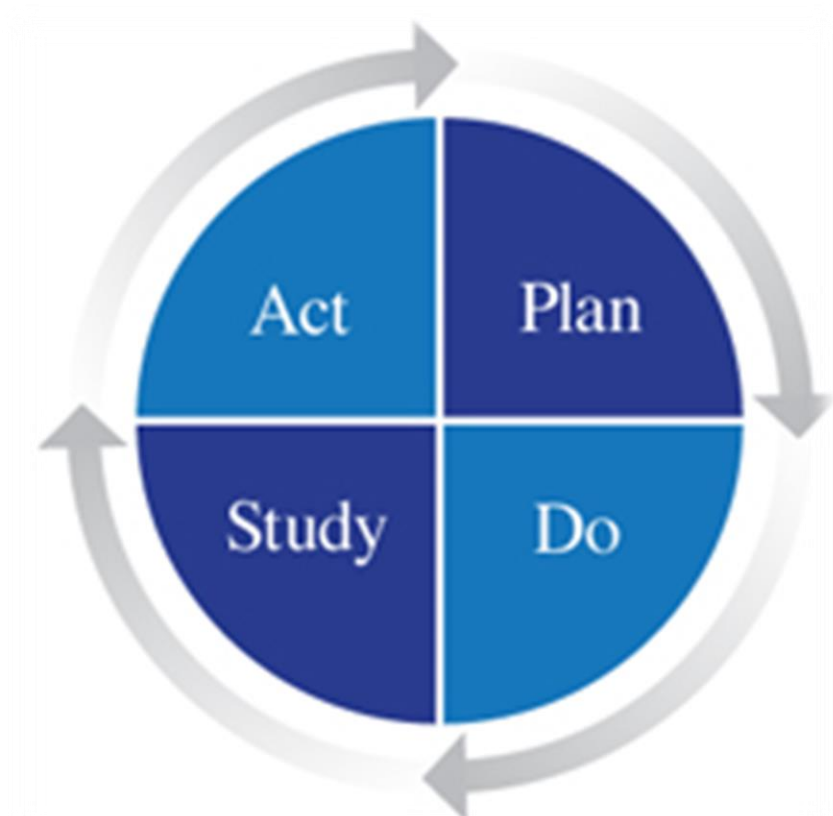
- Decrease 30-day hospital readmissions in veterans admitted with AUD to equal to or less than the 18.5% national benchmark.
- The overarching aim is to improve the current processes of care related to patients admitted with AWS and evaluate the effectiveness of the changes.

CLINICAL QUESTION:

- In Veterans admitted with a primary diagnosis of AUD, does implementation of the CIWA-Ar protocol and a revised AWS order set reduce 30-day hospital readmissions for AUD when compared to current practice over 90 days?

MODEL/NURSING THEORY:

- This QI project is guided by the IHI Model for Improvement with PDSA cycles.



METHODS:

- Subjects /Setting:** Veterans admitted to acute medicine wards with primary diagnosis of AUD from April through September 2023.
- Instruments/Tools**
 - ✓ CIWA-Ar tool
 - ✓ AWS order-set

INTERVENTION & DATA COLLECTION:

- Key stakeholders, including nurses from all acute medicine wards, were educated on the CIWA-Ar tool revision and AWS order-set changes.
- Visual reminders of protocol changes posted on each ward and handouts highlighting the changes were distributed to all nurses
- An elected nurse champion from each unit served as a resource to all nurses in adhering to revised changes.
- Chart review and data analysis of readmission rates and medication usage was completed pre-implementation and post-implementation.

RESULTS:

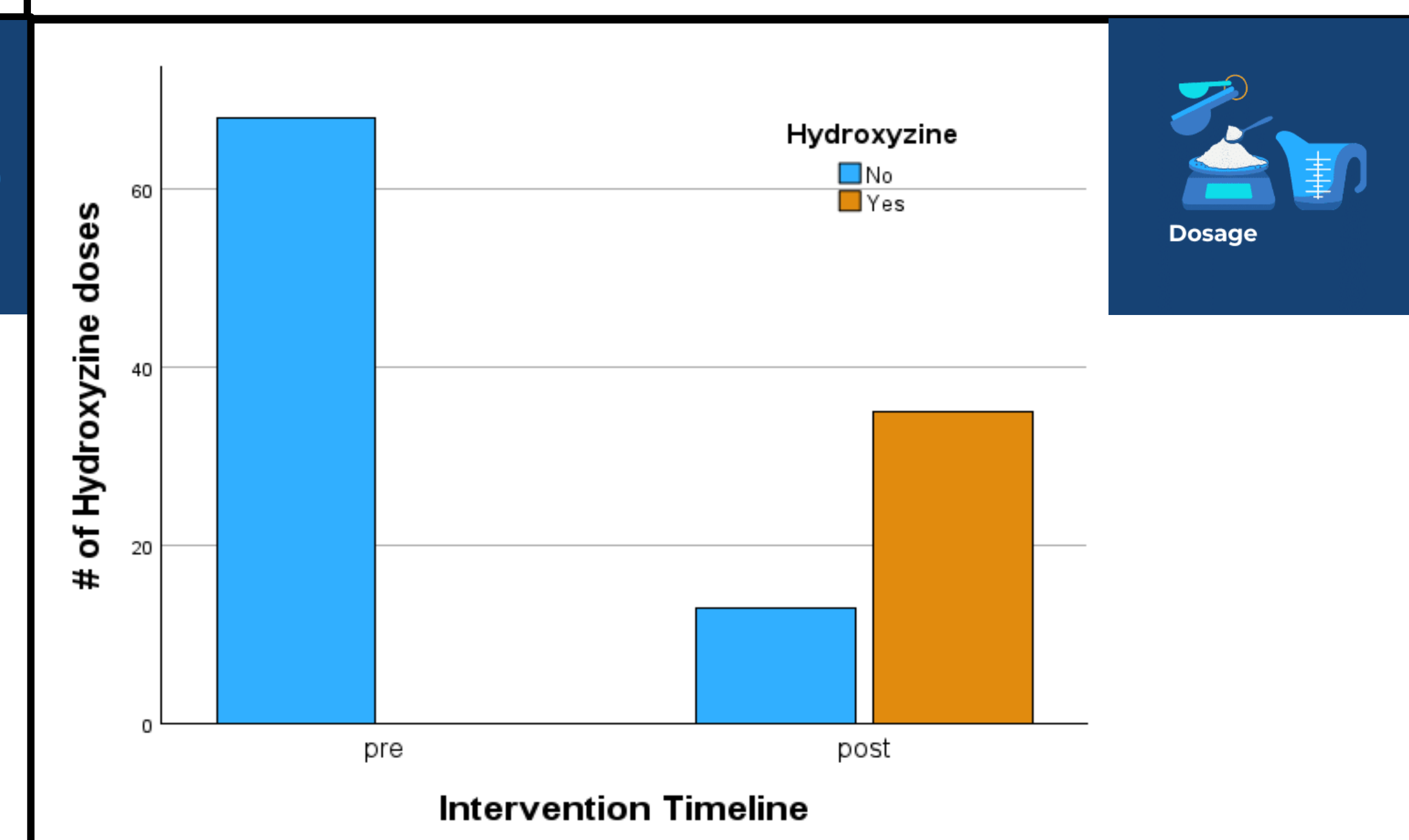
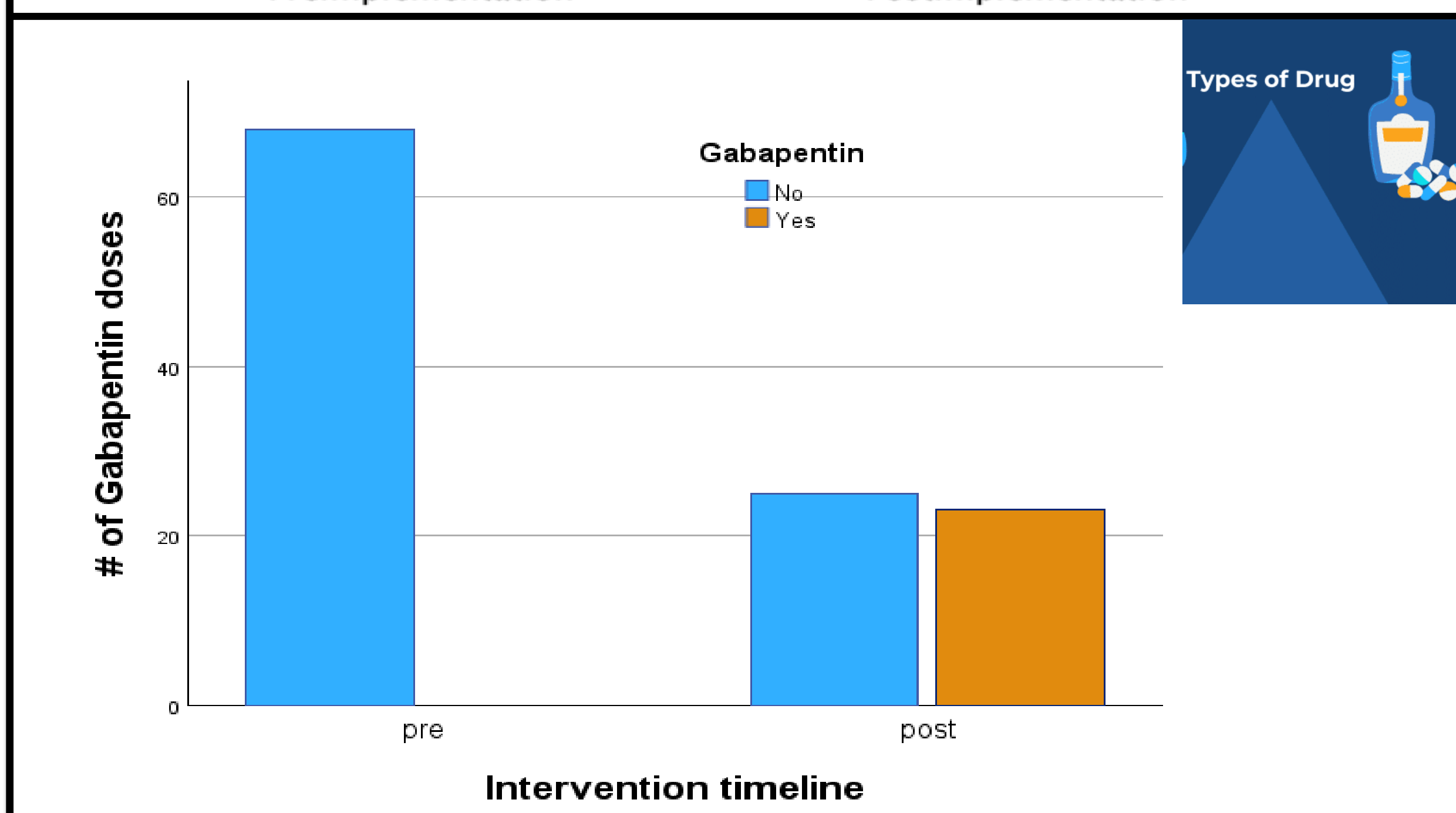
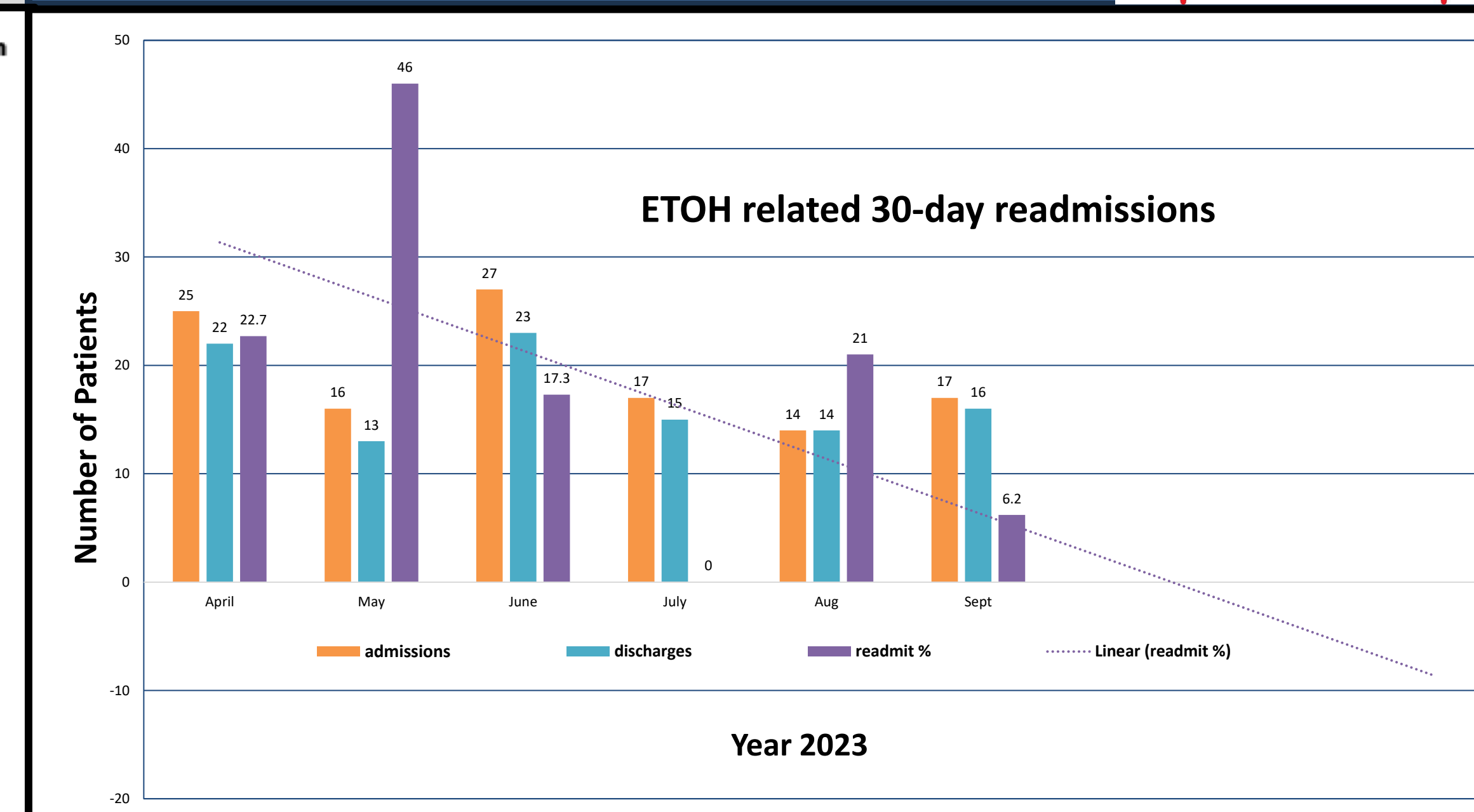
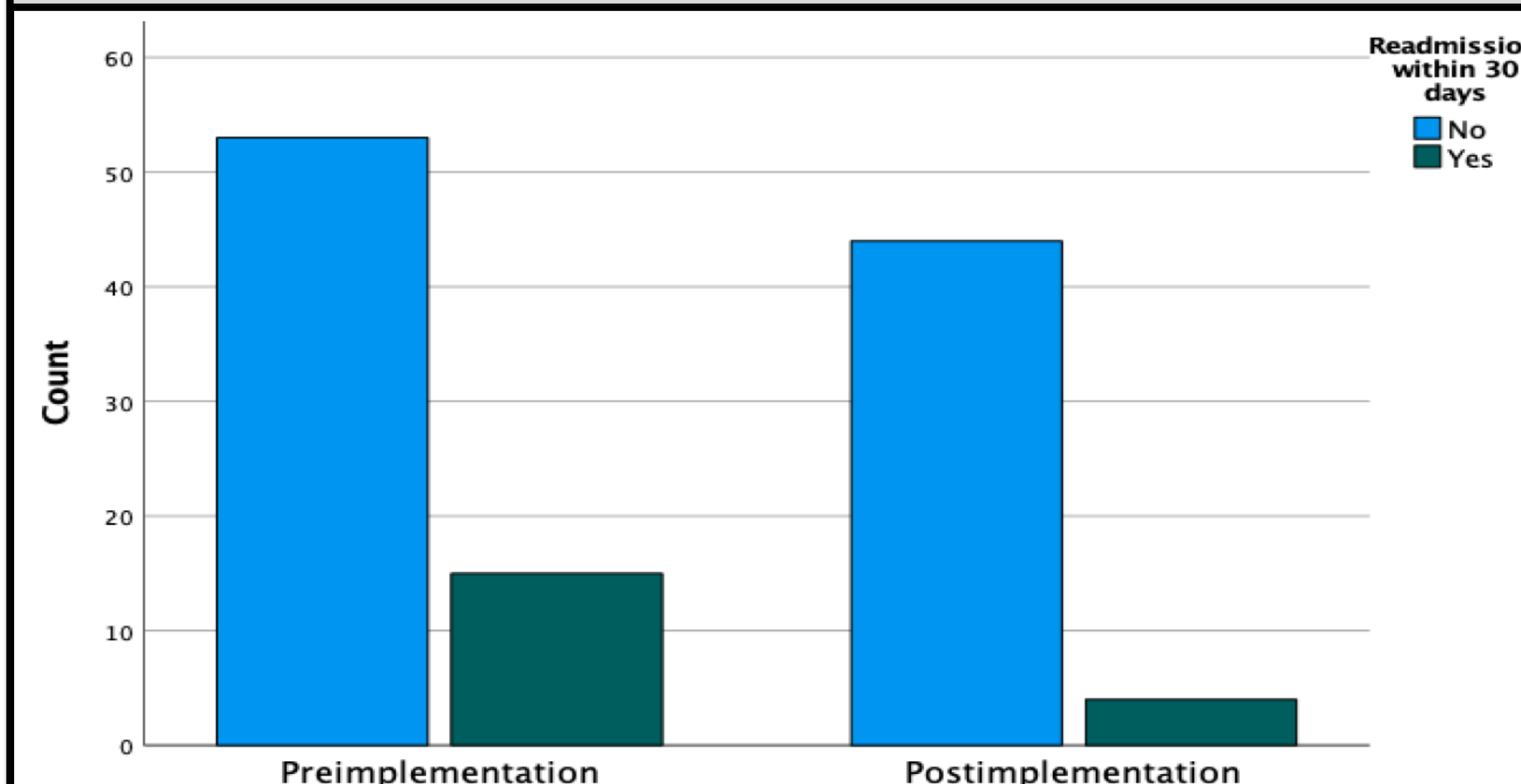
- Implementation of the revised AWS order set and CIWA-Ar protocol **significantly** decreased 30-day readmission rates by 14% (p=0.04) and
- Ativan administration was decreased from average of 92 doses pre-implementation to 61 doses post-implementation.
- Utilization of gabapentin and hydroxyzine increased by 47.9% ($\chi^2 = 40.6, p < .001$) and 72.9% ($\chi^2 = 71.0, p < .001$) respectively.

Revised CIWA-Ar protocol for benzodiazepine orders:

- For score of 8-10, **AND vital sign instability (HR >100/min and SBP >160mmHg, DBP >100mmHg)**, administer 1 mg lorazepam. Reevaluate every 2 hours x 72 hours.
- For score 11-14, **AND vital sign instability (HR >100/min and SBP >160mmHg, DBP >100mmHg)**, administer 2 mg lorazepam. Reevaluate every 2 hours x 72 hours. **Notify primary team for face-to-face assessment.**
- For score ≥ 15 , administer 2 mg Lorazepam. Reevaluate every 1hour x 72 hours. **Notify primary team for face-to-face assessment if CIWA score remains 15 and greater on 2 consecutive assessments.** Prepare patient for transfer to higher level of care.
- If patient does not meet vital signs criteria for medication administration per standard protocol, provider will assess if medication dosing is indicated.

Medications added to current AWS protocol:

- Gabapentin: 300 mg TID x 5 days (fixed dose regimen)
- Hydroxyzine 25 mg q6h PRN for anxiety



DISCUSSION:

- Implementation of the revised CIWA-Ar tool along with the revisions in AWS order-set significantly decreased the 30-day readmission rates in AUD veterans.**
- Use of ancillary medications has shown decreased need for benzodiazepines.
- The ancillary medications were bundled in the order set which increased compliance to the revised order set on admission.
- The revised CIWA-Ar protocol was effective in guiding nursing assessment and facilitating provider collaboration to limit using benzodiazepines when not indicated.
- Providers prescribed hydroxyzine more often than the gabapentin.
- Compliance to the revised protocol from both internal medicine and nursing staff requires ongoing education to maintain best practices.

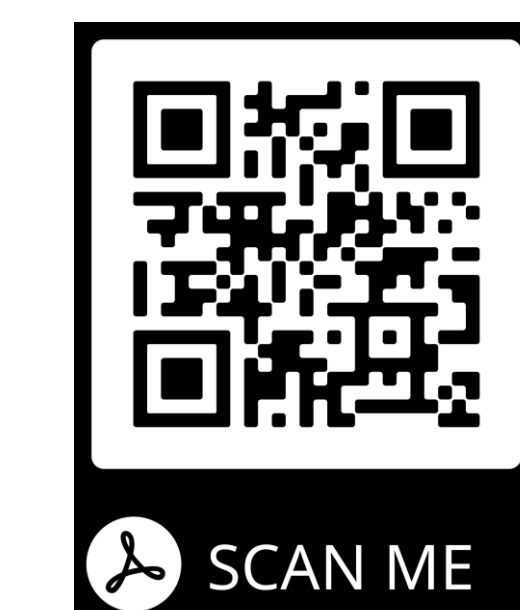
IMPLICATIONS FOR ADVANCED PRACTICE NURSING:

- Decreasing readmission rates and unindicated benzodiazepine doses promotes patient safety and satisfaction, reduces use of hospital resources, and reduces hospital costs.
- The new revised process could facilitate teamwork among various disciplines in the acute care setting.
- Integrating revised protocol could promote standardized care and safety among the various interdisciplinary team members.
- The new revised process could foster increased collaboration between nursing staff and medical providers promoting safe medication administration leading to positive patient outcomes.

SUSTAINABILITY:

- The revised CIWA-Ar protocol has objective element of vital sign instability, which would assist nurses in documenting accurate scores.
- The revised process is not specific to acute medicine wards and can be extended to other departments including critical care and emergency departments and improve compliance and sustainability.

REFERENCES:



In Veterans admitted with a primary diagnosis of AUD, implementation of the revised CIWA-Ar protocol and AWS order-set significantly reduced 30-day readmissions and use of unintended benzodiazepine doses.