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Improving Provider Teach-Back to Support Diuretic Adherence in Heart Failure Patients

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Introduction

Background

- Heart failure (HF): a chronic, progressive ↓ cardiac output ¹²
- Affects ~26 million globally; ~5 million in the U.S ^{3,4}
- U.S. healthcare costs > \$39 billion annually ³; contributes to 1 in 9 deaths ⁴
- ↑ Incidence with age → rising admissions ²
- Accounts for 28% of hospital readmissions;**1 in 4 readmitted within 30 days** ^{3,8}
- Up to 25% of readmissions potentially preventable** ⁸
- Diuretic:** key for symptom control; nonadherence, often due to **limited patient understanding**, can lead to fluid overload and readmissions ^{1,7}

Problem Statement

- In the heart failure transitional care clinic in Los Angeles, **the 30-day HF readmission increased significantly in 2024 compared to 2023** despite a structured protocol
- An audit of 100 patient charts revealed that the leading cause of readmission was diuretic non-adherence, primarily due to polypharmacy challenges and confusion regarding medication instructions

PICO

- Among providers in a heart failure transitional care clinic (**P**), does Teach-Back Method (TBM) training (**I**), compared to standard care (**C**), affect provider adherence to TBM with heart failure patients to support diuretic adherence (**O**) over 2 months (**T**)?

Literature Synthesis

- Keywords**
 - Teach-back communication, teach back, teach-back, heart failure, cardiac failure, CHF
- 5 articles** from CINAHL and PubMed
 - 4 Systematic Reviews
 - 1 Meta-analysis
- Medium to high quality studies** per the
 - Melnik rapid critical appraisal tool



PRISMA Diagram



TOE/Appraisal

Synthesis summary

- TBM Effectiveness:** Teach-Back reduces 30-day HF readmissions and improves medication adherence
- Consistency of Outcomes:** TBM is effective across delivery modes, timing, provider types, and session lengths
- Provider Training:** Structured Teach-Back questions promote standardized, reliable patient education

Recommendation

- Provide **Teach-Back training for providers** to promote the use of structured, standardized questions and consistent education on diuretic instructions
- Implement at least one post-discharge Teach-Back session on diuretic management** with patients, conducted either in person or by telephone by heart failure providers

Methods

Purpose

- Increase provider utilization of TBM to improve diuretic adherence and reduce 30-day HF readmissions

Design

- Evidence-based QI project with a pre-post intervention

Project site

- Outpatient HF Transitional Care Clinic, private healthcare institution in Los Angeles

Participants

- HF providers- 2 nurse practitioners, 1 pharmacist
- Patients and/or patient’s caregivers enrolled in a heart failure clinic

Intervention

- 2-month** implementation period
- 30-minute teach-back training for providers (in person, as a group):
 - Pre-training survey
 - Training and instructional handouts
 - Teach-Back PowerPoint presentation
 - Introduction of SmartPhrase scripts
 - Role-play practice sessions
 - Post-training survey, Q&A
- EMR Smartphrase Integration



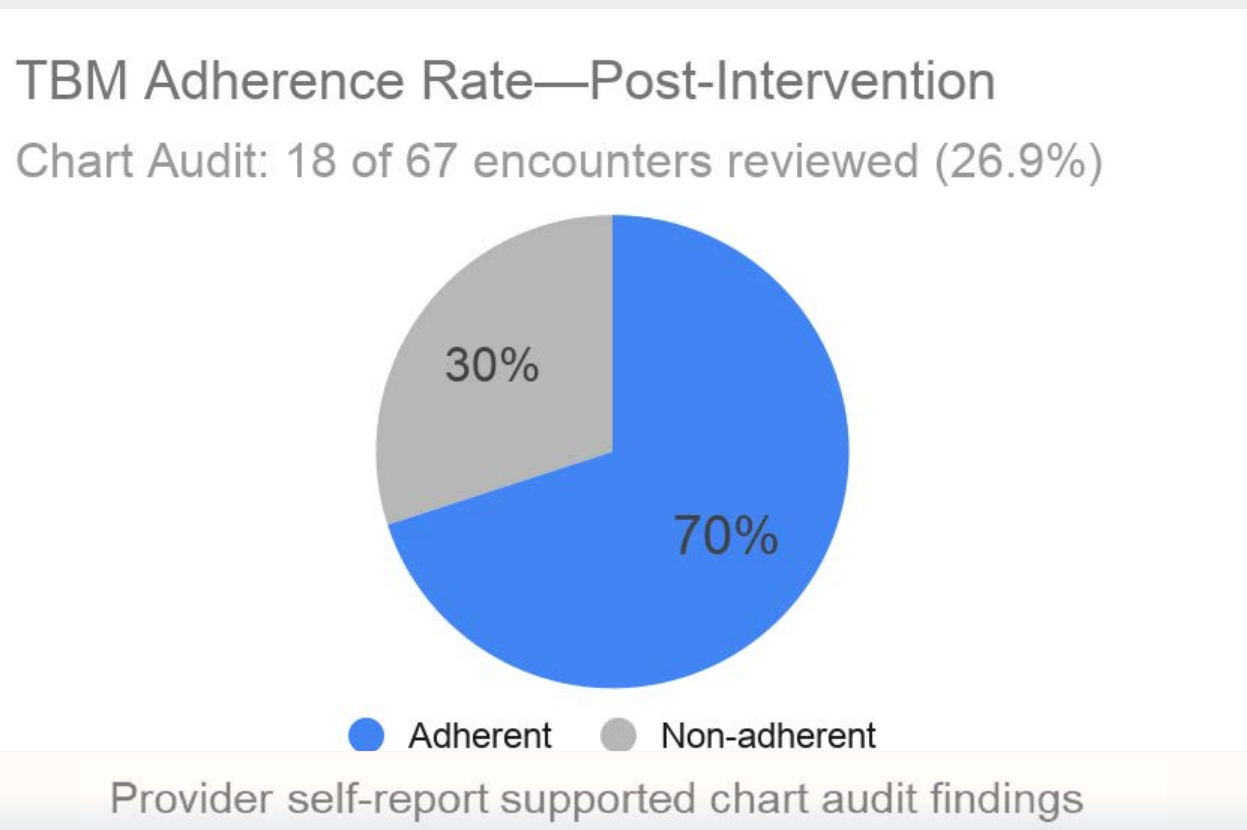
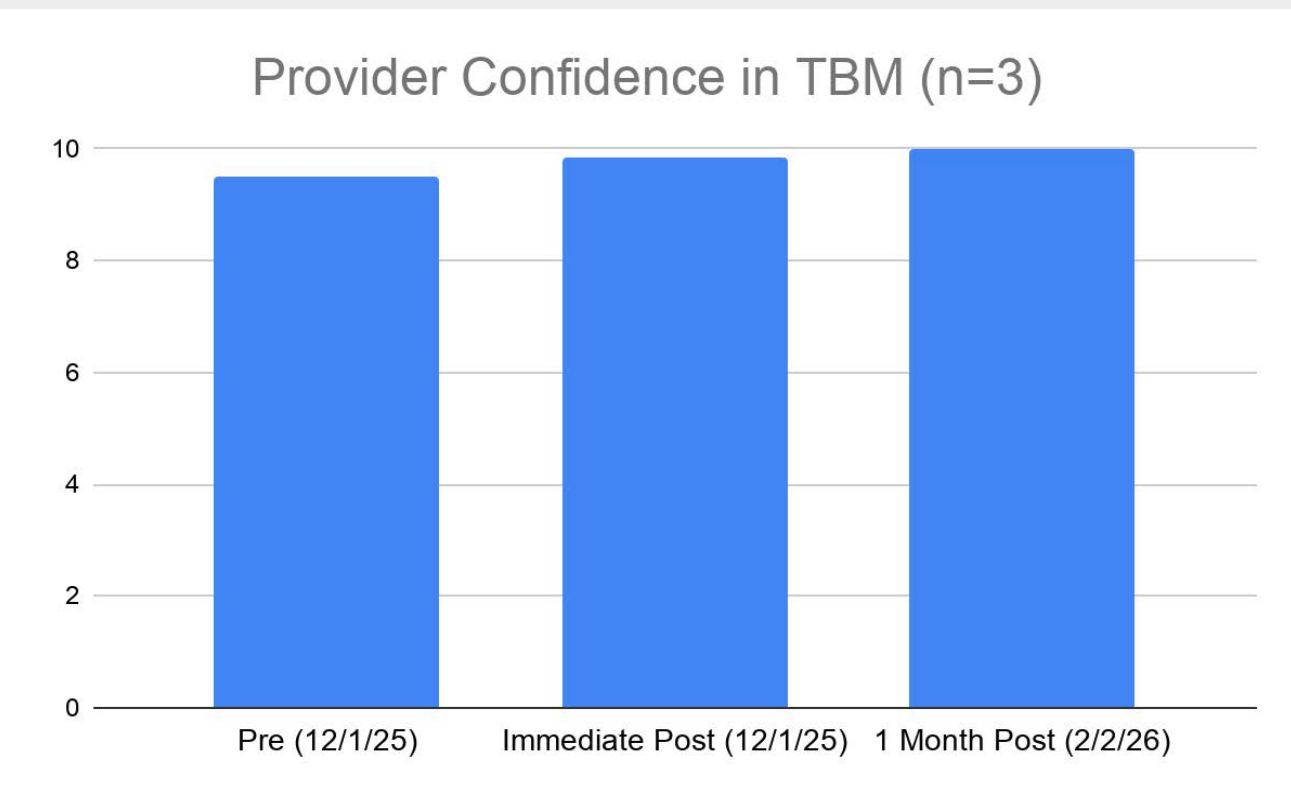
Training Materials

Measures & Data Analysis

- Primary Outcomes**
 - Provider confidence level in TBM** (via survey)
 - Descriptive analysis using mean scores from a 10-point numeric rating
 - Provider adherence to TBM** (via chart audits, provider self-report)
 - Descriptive analysis using frequency distributions and percentages
- Secondary Outcomes**
 - Patient adherence to diuretic** (via EMR report)
 - Descriptive analysis using frequency distributions and percentages
 - 30-day HF readmission rate** (via regional heart failure report)
 - Chi-square test of independence

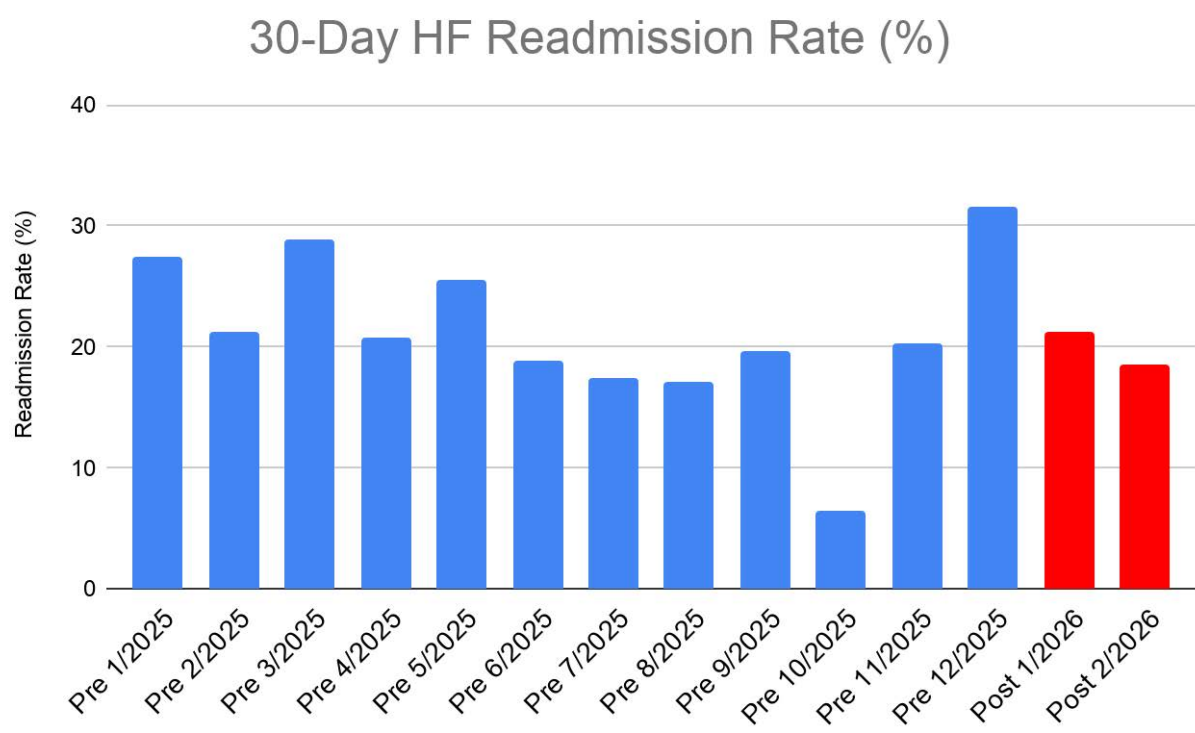
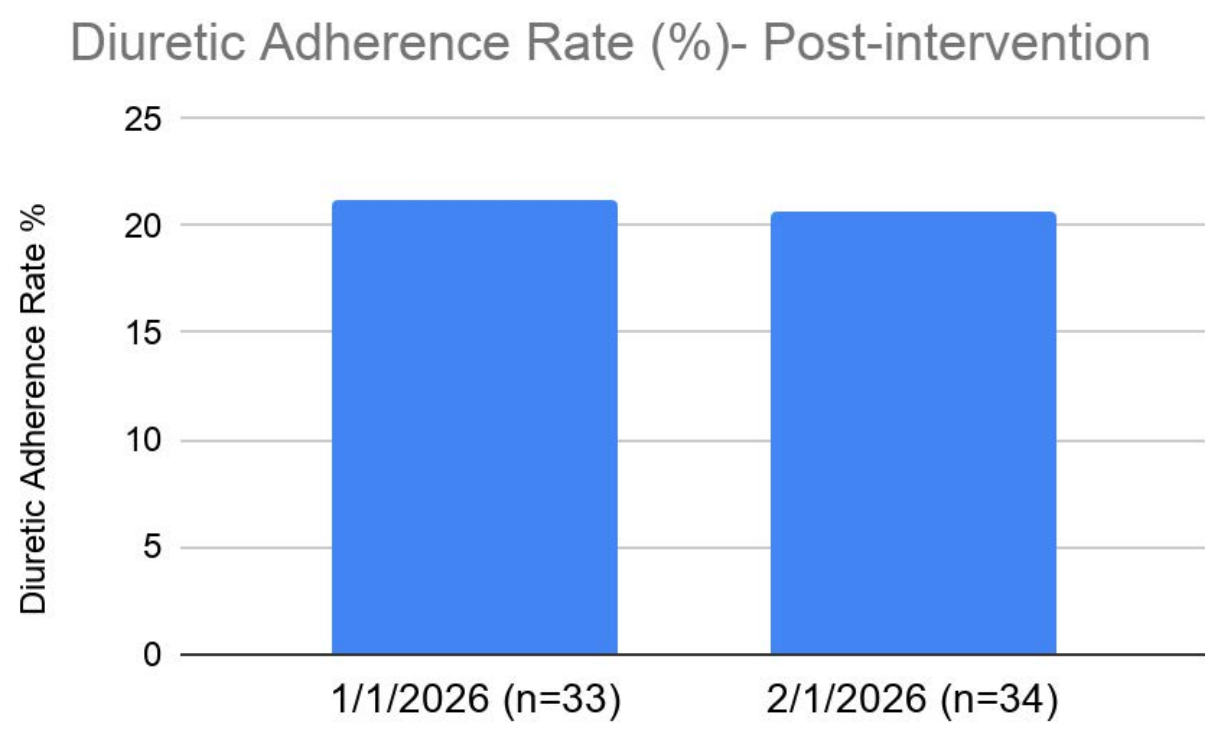
Results

Primary outcomes



Results (Cont.)

Secondary outcomes



30-Day Readmission Rate

- Pre-intervention average: **22%**
- Post-intervention average: **20.3%**
- No significant change in readmissions** ($\chi^2=0.17$, $p=0.68$)

Conclusion

Result Interpretation

- TBM training with EMR integration effective; ↑ provider confidence (met goal), TBM adherence near target
- No improvement in diuretic adherence or 30-day readmissions
- Provider confidence ≠ patient outcomes; confidence alone is insufficient**
- Likely limited by inconsistent TBM use (~70%) & EMR documentation gaps

Clinical Implication

- TBM training with validated tools and standardized scripts **improve provider adherence**
- Consistent TBM use** is required to impact patient understanding and outcomes
- Reliable EMR workflows and documentation** are essential for implementation and evaluation

Summative Evaluation

- Improvements in provider-level outcomes did not translate into patient-level improvements**
- Barriers:** documentation gaps, EMR data extraction challenge, workflow disruptions (nurse strike, seasonal variation, new staff onboarding), short implementation
- Future Recommendations:** EMR care gap alerts, include LVN/MA in adherence monitoring, standardize information retention, expand TBM to GDMT, evaluate long-term impact

References



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