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Reducing Readmissions after TAVR through Enhanced Transitional Care

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INTRODUCTION

TAVR has transformed the management of severe AS. However, 30-day readmissions remain a significant challenge, averaging **8.6% nationally** and **costing ~$16,000 per event**, highlighting the need for effective transitional care strategies. [1-5]

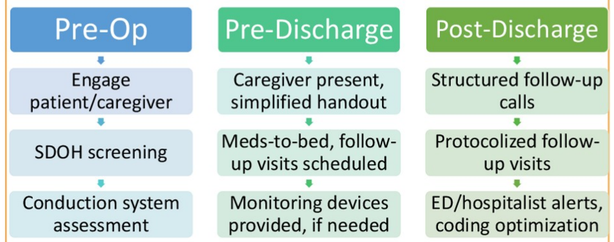
BACKGROUND

This QI project aimed to reduce readmissions, despite challenges from the COVID-19 pandemic and regional disasters (hurricanes, freeze, flood). It was evaluated in three phases:

- **Pre-implementation** (2018–2019): standard practice
- **Implementation** (2020–2021): tested standardized discharge and follow-up
- **Post-implementation** (2022–Q2 2025): sustained practice with continued monitoring.

METHODS

- **Study population***:* Between 2018 and Q2 2025, 360 patients underwent TAVR across three phases: pre-implementation (n=99), implementation (n=81), and post-implementation (n=180)[4].
- **Framework***:* PDSA cycles and affinity diagrams guided improvements.
- **Data sources***:* STS/ACC TVT Registry™[5] and EMR dashboards.

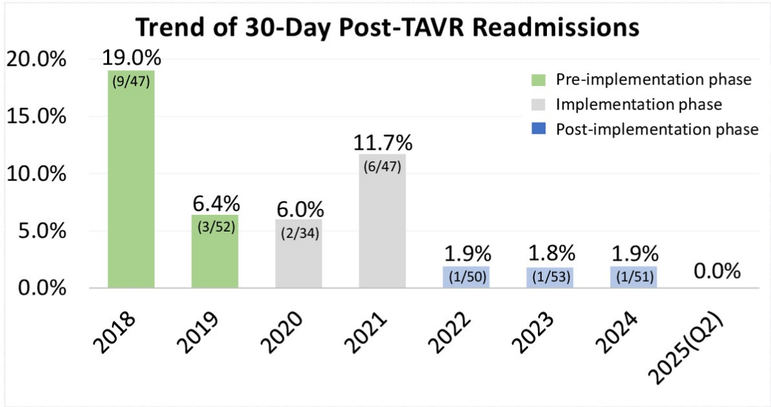


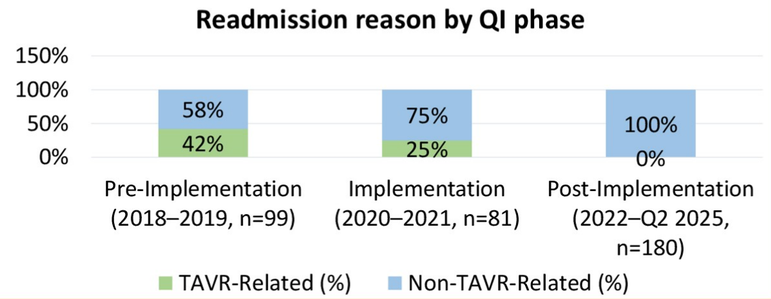
RESULTS

Cost and Utilization Impact	
Home monitoring equipment cost[4]	$574
Estimated institutional readmission cost savings[4]	$173,200
Net savings[4]	**$172,626**

Estimated cost savings were calculated based on avoided readmissions (average direct institutional cost ~$16,000/event) applied to reductions seen across 173 patients across implementation and post-implementation phases.

Patient Characteristics	Overall Cohort (2018 – Q2 2025) [4]
Age, years (mean ± SD)	76.9 ± 8.2
STS PROM, % (mean ± SD)	5.1 ± 3.5
Indication: Low/Intermediate/High/ Inoperable, n (%)	57 (16%) / 235 (65%) / 90 (25%) / 15 (4%)
Pre-existing conduction system disease, n (%)	127 (35%)
Frailty ≥2/4, n (%)	173 (48%)





VALUE PROPOSITION

- **Patients**: Improved recovery, fewer readmissions, reduced LOS.
- **Providers**: Streamlined workflows, proactive complication detection.
- **Payers**: >$170K net savings and stronger cost control [2-4].
- **Society**: Scalable, low-cost care model supporting population health and equity.

Abbreviations: AS: aortic stenosis; ED: emergency department; EMR: electronic medical record; LOS: length of stay; PSA: plan-do-study-act; QI: quality improvement, SDOH: social determinants of health; STS/ACC TVT: Society of Thoracic Surgeons, American College of Cardiology, Transcatheter Valve Therapies; STS PROM: Society of Thoracic Surgeons Predicted Risk of Mortality; TAVR: transcatheter aortic valve replacement.

CONCLUSION

- An enhanced transitional care pathway with early follow-up, Meds-to-Beds, and home monitoring reduced 30-day readmissions from **12.7% to 1.9% (85%),** despite external challenges.
- Improved patient engagement and streamlined workflows decreased LOS and lowered costs, demonstrating the financial value and scalability of this approach for structural heart programs.

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DISCLOSURES

Misty Theriot, RN: Edwards Lifesciences – Speaker's Bureau. Edward Bergen, DO, Joseph Lugo, MD, Janie Fuselier, MSN have no disclosures.