

Left Atrial Appendage Occlusion Same-Day Discharge

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PROBLEM STATEMENT

- Under current clinical operations of Left Atrial Appendage Occlusion (LAAO) program, 100% of patients undergo a screening transesophageal echocardiogram (TEE), TEE-guided device delivery under general anesthesia, and overnight hospitalization.
- Multiple studies have examined the safety and feasibility of SDD after LAAO. However, none of these studies have fully integrated non-invasive methods such as cardiac-computed tomography angiogram (CTA) and intra-cardiac echography (ICE) for device sizing and delivery (Tan et al., 2020).

PROJECT PURPOSE

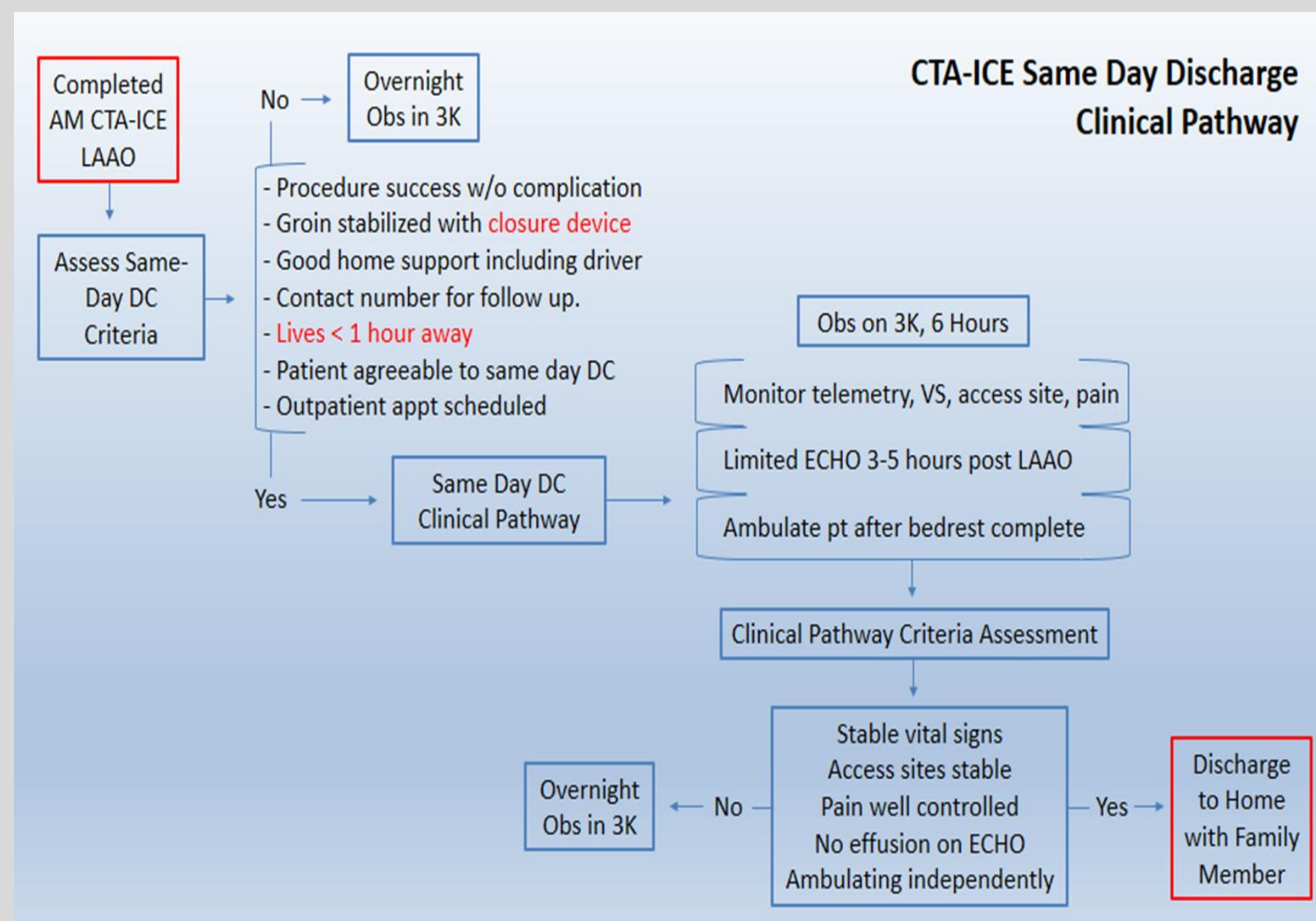
- Purpose:** to design and implement minimalist LAAO procedure protocols for LAAO screening CTA, ICE-guided device delivery under conscious sedation, and same-day discharge (SDD) to decrease length of stay
- Practice Question:** In non-valvular atrial fibrillation (NVAF) patients undergoing LAAO procedure, do standardized minimalist protocols decrease length of stay or affect 45-day clinical complications compared to current practice over 4 months?

MODEL/NURSING THEORY

- LEAN Quality Improvement Model
- Kotter's Change Management Theory

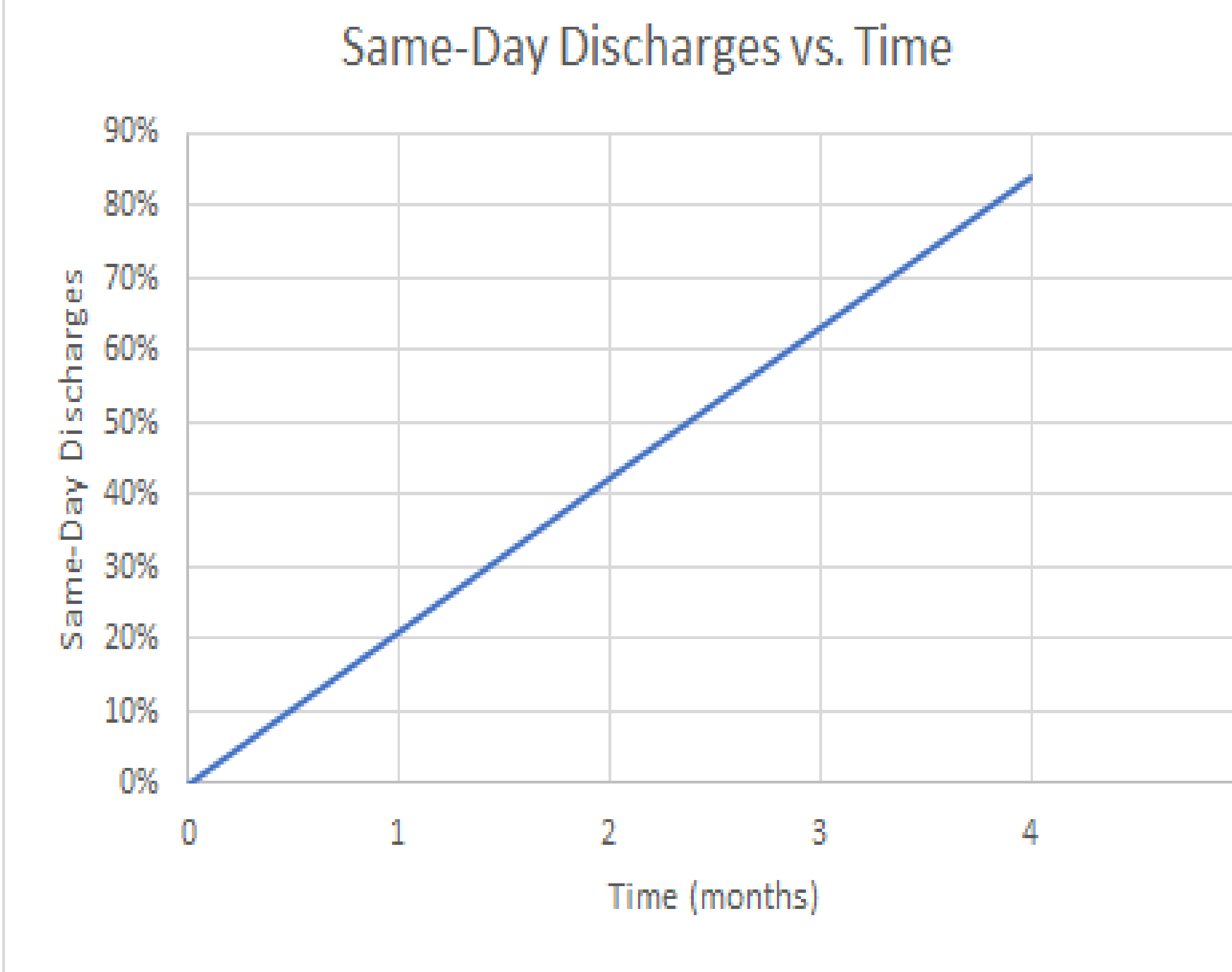
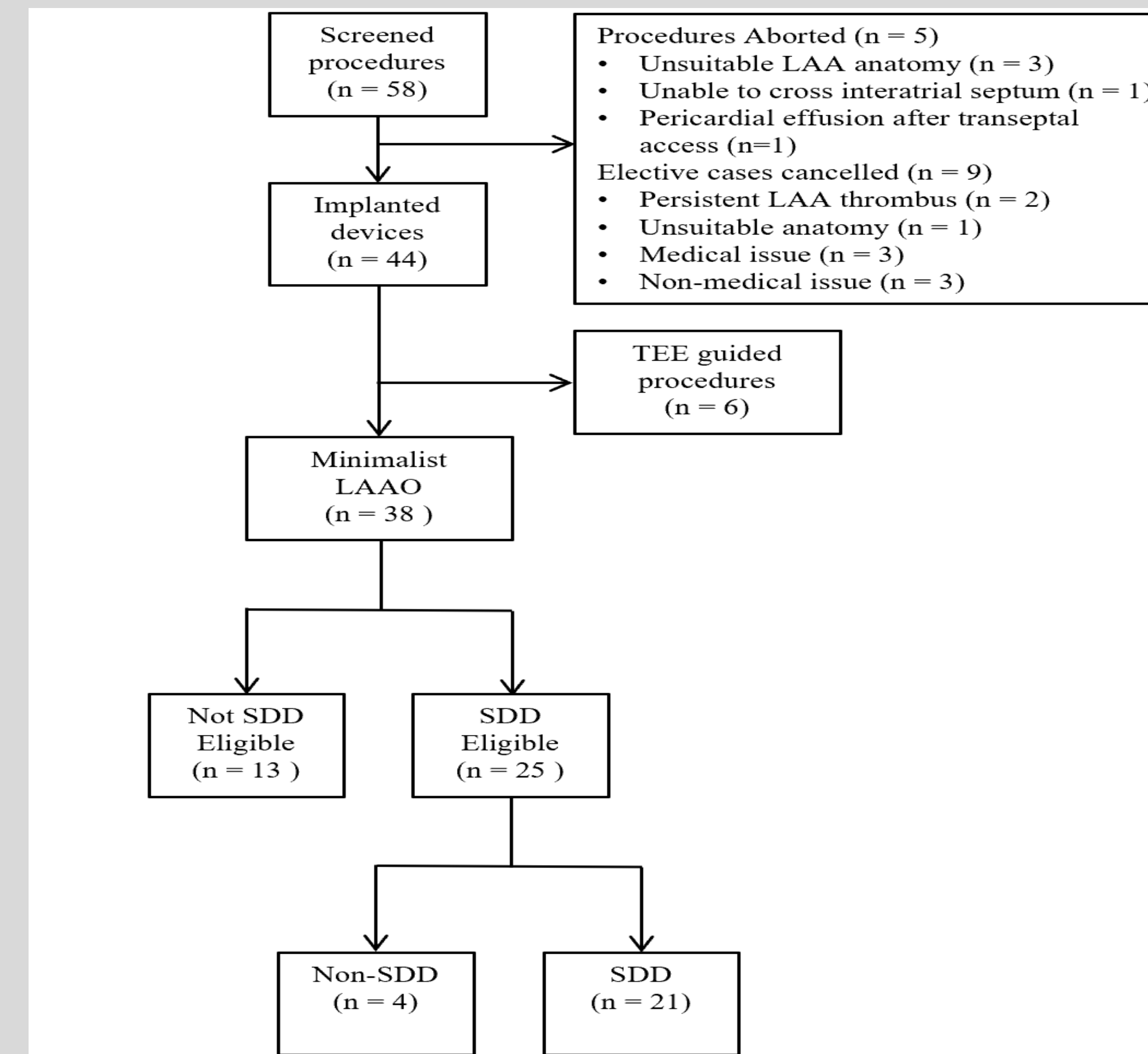
METHODS

- Participants:** NVAF patients undergoing elective LAAO procedure
- Setting:** Private, not-for profit, 1,007 bed academic hospital in West Central Florida
- Instruments/Tools:** Pre- and post-SDD and 45-day complications
- Intervention and Data Collection:**
 - Minimalist protocols for CTA-ICE guided LAAO delivery and SDD clinical pathway introduced
 - Operators and staff underwent formal education and training centered around new protocols
 - Patient exclusion included: serum creatinine >2.0 mg/dL, pre-procedure planning TEE, use of general anesthesia, TEE-guided device delivery
 - Retrospective chart review was completed over a 4-month period
 - Data recorded: Pre-procedure planning with CTA or TEE, procedure guidance with ICE or TEE, implant success, 45-day complications, and SDD



RESULTS

- 84% of patients who followed the minimalist LAAO procedure protocols and SDD clinical pathway underwent SDD



DISCUSSION

- Implementation of minimalist LAAO CTA-ICE and SDD protocols resulted in a significant increase in SDD without an increase in 45-day complications
- LAAO SDD is safe and feasible with use of these streamlined protocols
- Accessibility to cardiac CTA imaging and ICE in the cardiac catheterization laboratory is necessary for implementation of these protocols
- Modifications to CTA-ICE SDD Clinical Pathway could be made to make those patients undergoing TEE guidance LAAO eligible for SDD
- Inclusion of non-medical patients as eligible for SDD would have resulted in 88% SDD

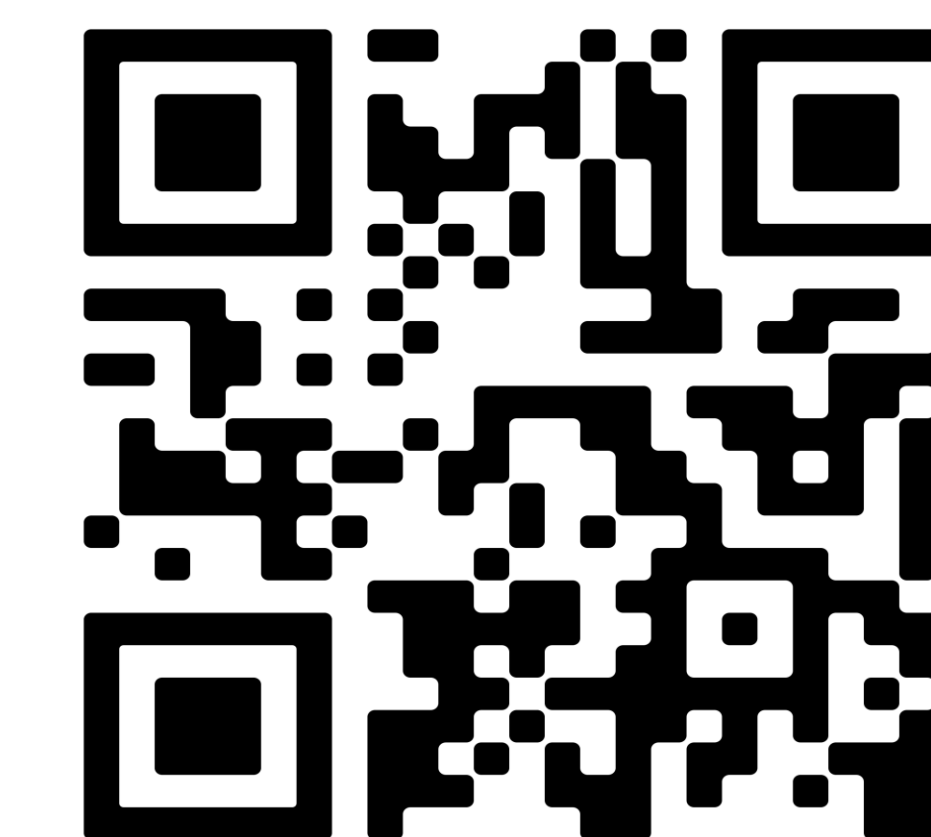
IMPLICATIONS FOR ADVANCE PRACTICE NURSING

- Fiscal impacts and resource utilization could be further analyzed
- Additional pathway optimization may lead to a reduction in procedural complication rate
- Consider replication of protocols in other outpatient procedures and organizations that perform LAAO procedures

SUSTAINABILITY

- 100% adaptation of protocols by operators
- Continue data capture to monitor quality and protocol adherence

REFERENCES



This project demonstrates that LAAO SDD is safe and feasible (84% SDD).