

# Same-Day Discharge (SDD) Initiative for Elective Percutaneous Coronary Intervention (PCI)

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## PROBLEM STATEMENT

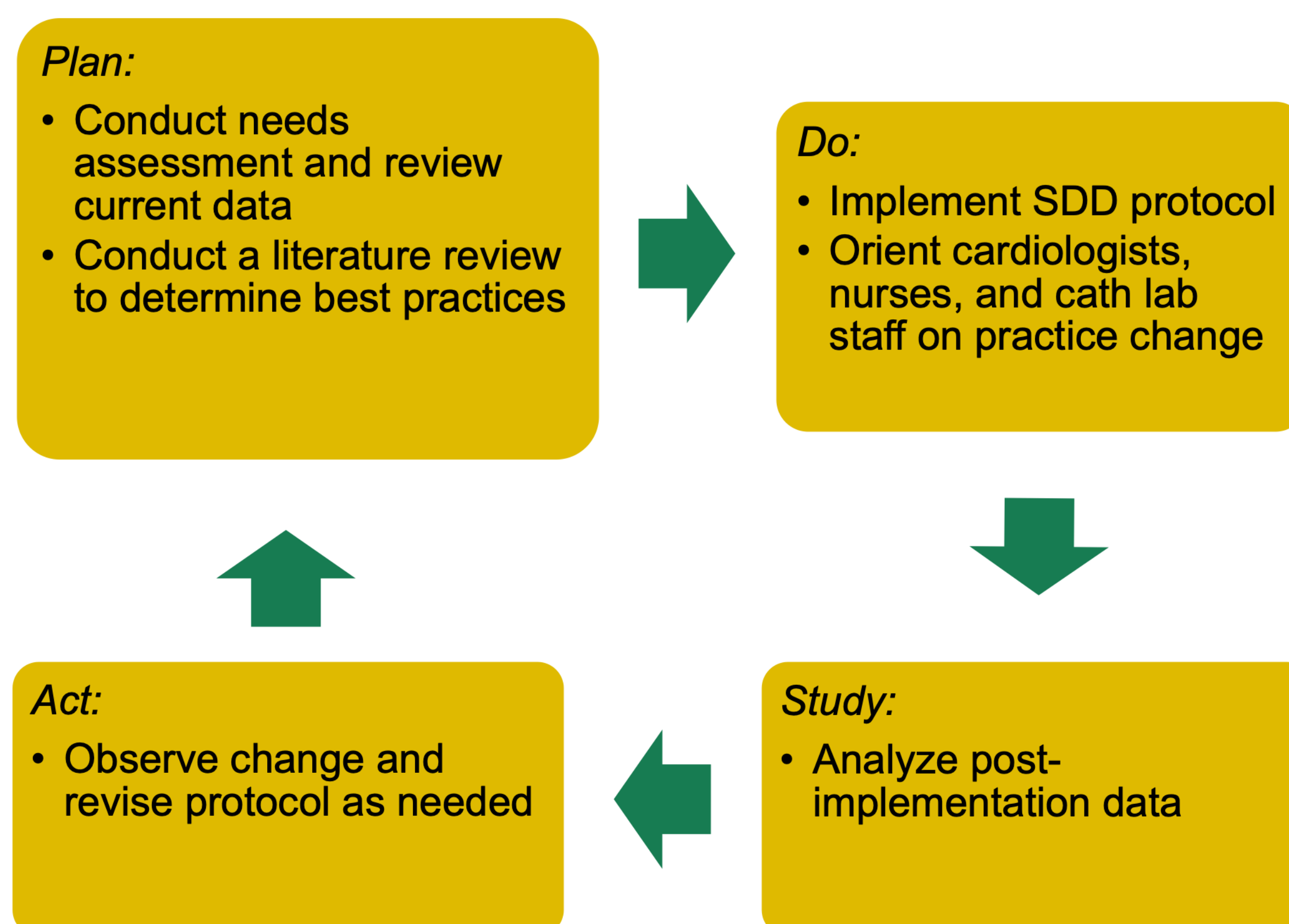
- 600,000 PCIs are performed annually
- Elective PCI is reimbursed as an outpatient procedure and payment remains the same regardless of LOS
- ↑ LOS = ↑ hospital costs
- The rate of SDD at the project setting is lower than the national average (8% vs 24%) and has an increased mean LOS for outpatient compared to other institutions (1.22 vs 1.11)
- Complication rates (death, emergency CABG, CVA, or repeat target vessel revascularization) were similar when compared to other institutions: 2.9% vs 2.93%
- Data supports the safety, cost benefit, increased patient throughput, and improved patient satisfaction associated with SDD

## PROJECT PURPOSE

- **Purpose:** to implement and analyze an SDD protocol for elective PCI in a cardiac procedural unit to improve health, cost, and patient satisfaction outcomes.
- **Practice Question:** Does implementation of an SDD protocol for elective PCI patients result in cost savings and decreased lengths of stay without compromising patient safety when compared to current practices?

## MODEL/NURSING THEORY

- Kurt Lewin's Change Theory (unfreeze, change, refreeze) and PDSA cycles



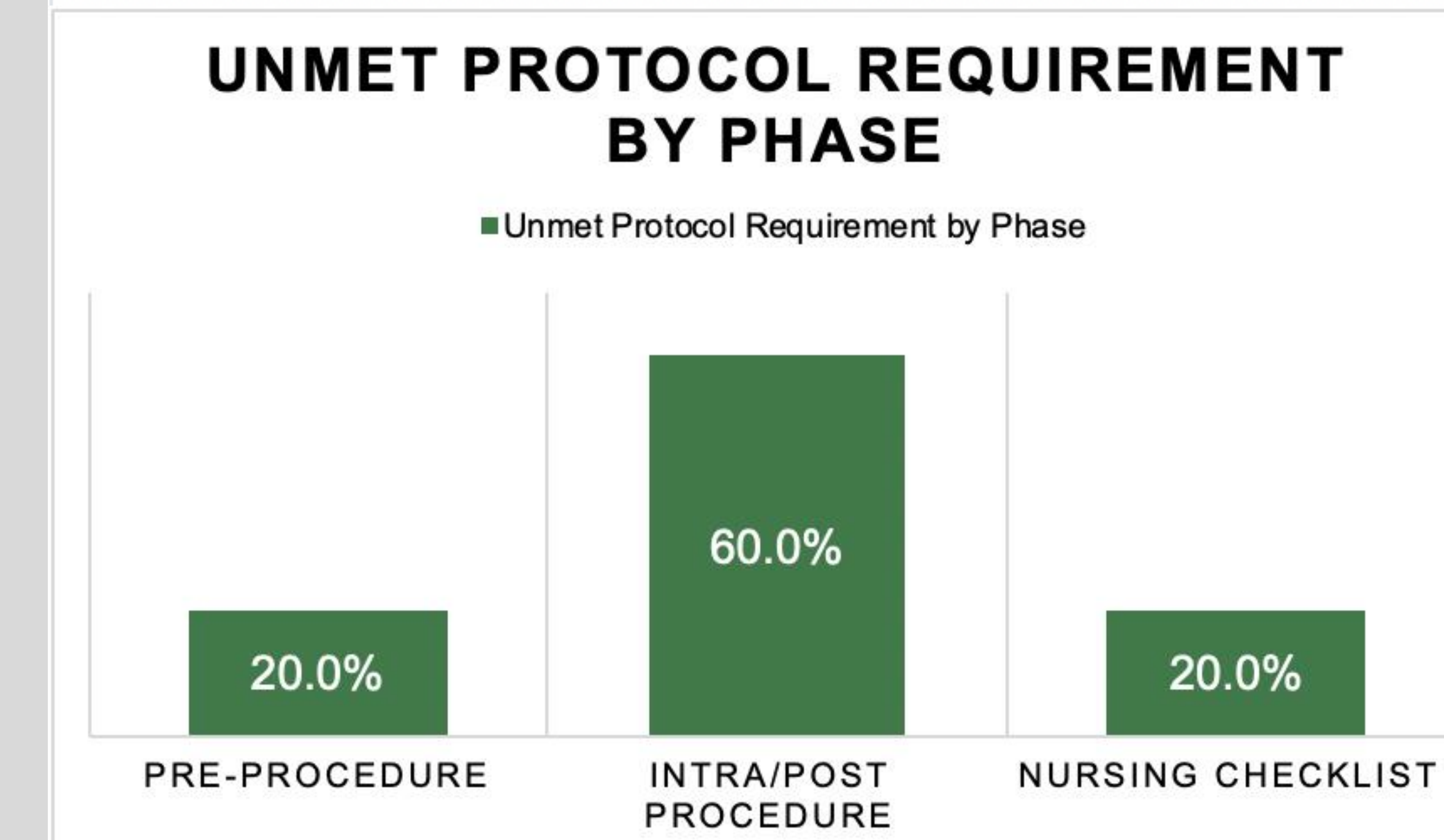
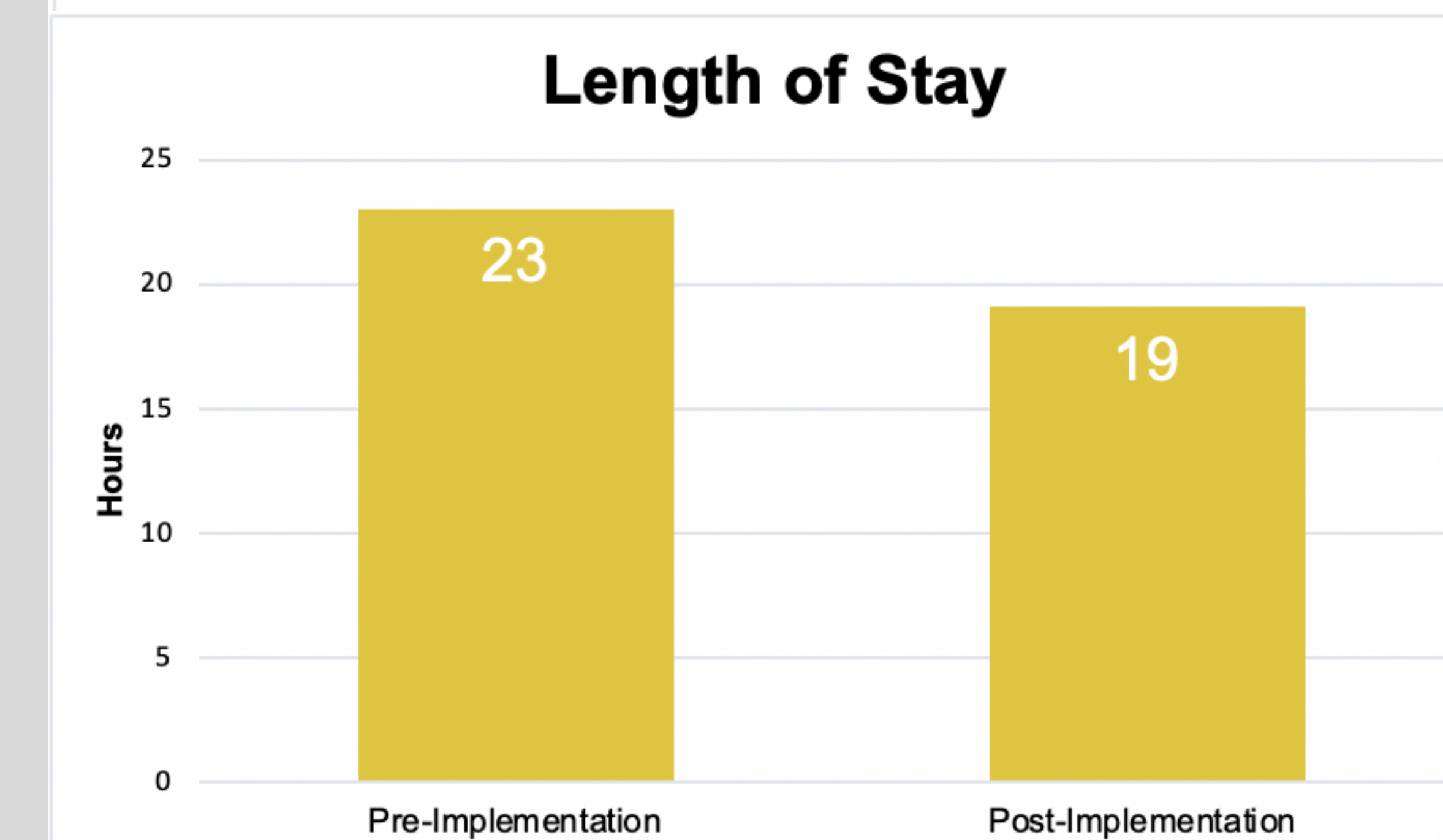
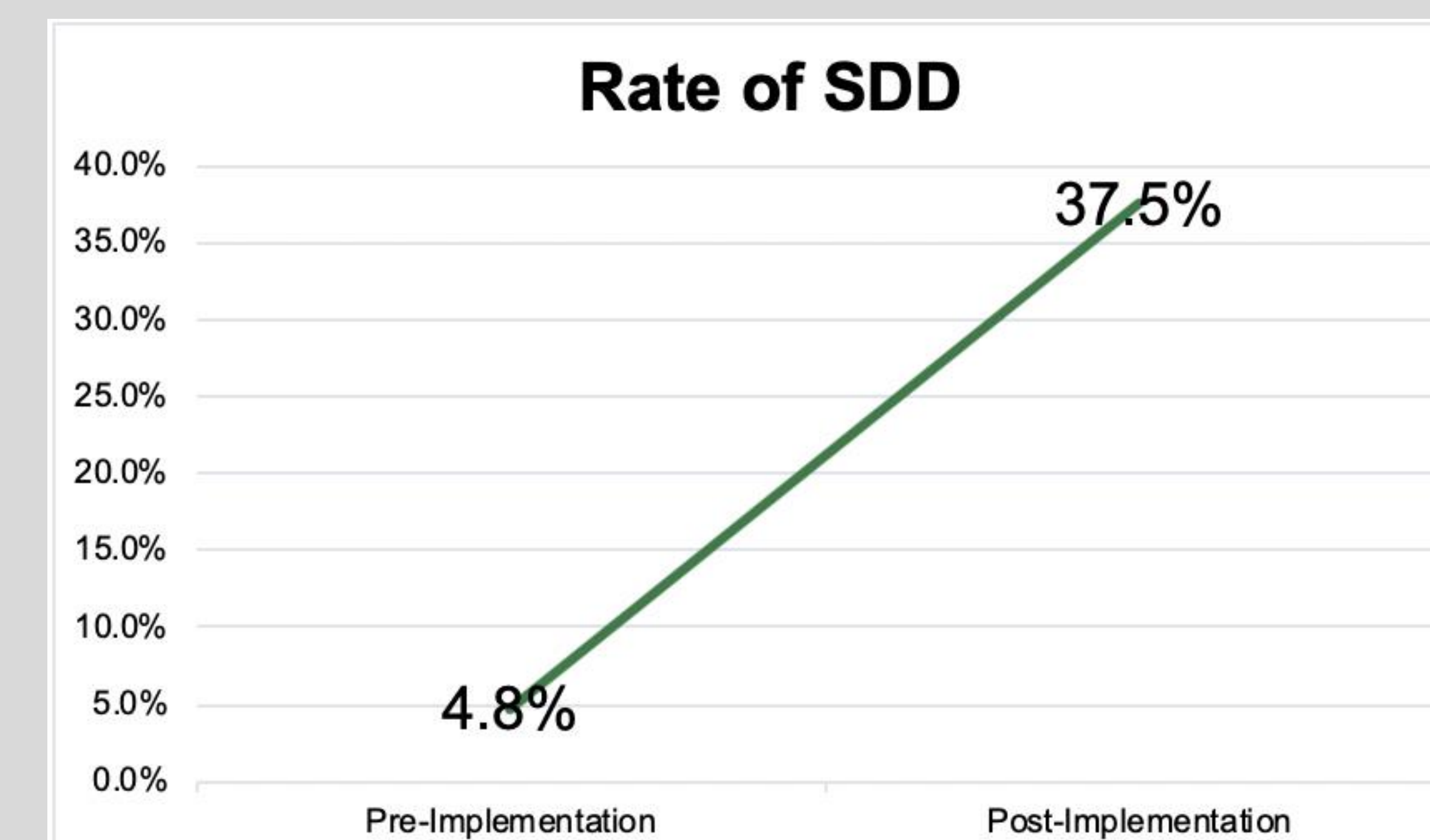
## METHODS

- **Participants:** Nurse Practitioners, Fellows, Medical Director, Nurse Manager, Interventional Cardiologists, Bedside Nurses, and the Cath PCI Data Registry Specialist
- **Setting:** 1,010-bed not-for-profit hospital in Tampa, FL with 6 cardiac catheterization labs
- **Measures:** Pre- and post-intervention LOS and the rate of SDD
- **Intervention & Data Collection:**
  - Official protocol implementation based from the consensus recommendations from the *Society for Cardiovascular Angiography and Interventions*
  - Formal education provided to providers at cardiology section meetings and to nursing staff at cath lab huddles
  - Retrospective chart review was completed over 8 weeks

Same Day Discharge	
<b>Pre-procedure Suitability (determined by admitting provider)</b>	
Scheduled as elective PCI	
Stable angina symptoms	
LVEF >30%	
Cr < 2.5 and eGFR > 60	
INR < 1.8 femoral access or 2.5 radial access	
No allergies to contrast, ASA, P2Y12-ADP receptor antagonists	
Pt has ride home, lives less than one hour away	
Pt does not live alone	
Able to be contacted by phone	
Patient and family comfortable with SDD	
Baseline comorbidities (i.e. DM, CHF, COPD, PAD, ESRD) stable	
<b>Intra-procedure/Post-procedure Suitability (determined by interventionalist)</b>	
Successful procedure (<20% stenosis and TIMI 3 flow)	
Uncomplicated CTO attempt	
No dissection or thrombus	
Fully loaded with DAPT	
No compromise of side branch >= 2mm in diameter	
No post procedure echo not required	
No HD instability during procedure	
Sheath size </= 8Fr with adequate hemostasis	
No need for GPI infusion	
Absence of post procedure CP, CHF, contrast reaction, access site complication, EKG changes	
Physician: OK for same day discharge _____	
<b>Prior to discharge (Nursing checklist)</b>	
Monitored for 4-6 hours (see MD order)	
4 hours for TR band	
4 hours for closed femoral access	
6 hours for manual femoral access	
Evaluation by APRN or fellow with post procedure note	
If previously not on DAPT- DAPT in hand through meds to beds	
At baseline functional and mental status	
Has FU instructions, appt made if possible	
Complete discharge instructions/AVS given to patient	
Pt has copy of stent card	
Pt has work release if needed	
<i>After completion of checklist, please put in Meghan's office for follow up phone call and tracking.</i>	

## RESULTS

	Patients	Age	Sex
Pre-Implementation	N=21	55-90	17 males 4 females
Post-Implementation	N=8	49-74	4 males 4 females



## DISCUSSION

- Resulted in an overall increased patient throughput with opportunity for further improvement
- Strong stakeholder support noted
- Limited sample size due to COVID-19 pandemic with subsequent cancelled elective cases
- Future cases and metrics will need to be reviewed in order to assess statistical significance
- Further work is needed to optimize scheduling to decrease the number of late afternoon cases and/or consider a second afternoon Advanced Practice Provider (APP) to safely discharge patients in the evening
- Patient exclusion included: elevated creatinine, radial artery spasm, bleeding, patient preference, late case, and one episode of physician preference
- Adjustments could be made to increase SDD eligibility through individual bleeding, mortality, and acute kidney injury (AKI) assessment

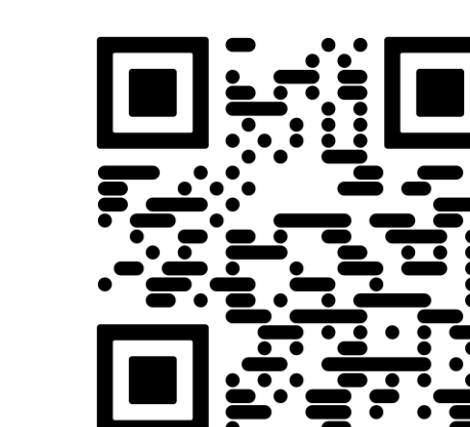
## IMPLICATIONS FOR ADVANCED PRACTICE NURSING

- This collaborative QI project requires advanced, ongoing clinical decision-making, systems thinking, and analysis of evidence-based care
- Organizational concerns and fiscal impacts should be further analyzed

## SUSTAINABILITY

- Recommend continuing updates at bimonthly cardiology section meeting to promote culture change
- Support NP in SDD champion role
- Re-educate after COVID-19 abates

## REFERENCES



**SDD protocol → Decreases LOS & increases the rate of SDD**  
 Improving *patient throughput and cost efficiency*