



**Weill Cornell
Medicine**

**Annual
WCM Quality Improvement &
Patient Safety
Poster Symposium**

Abstracts and Posters

**20 May 2026
Weill Cornell Medicine**

Co-Sponsored by:

**Quality Improvement Academy
and**

**NewYork-Presbyterian Department of Nursing
and**

Physician Organization | Division of Quality and Patient Safety



Weill Cornell Medicine

May 20, 2026

Dear Colleagues,

First organized in 2012, the **Annual Weill Cornell Medicine Quality Improvement and Patient Safety Poster Symposium** continues to showcase our institution's commitment to recognizing, supporting and honoring grassroots initiatives aimed at improving care and the care environment for our frontline staff and our patients. Co-sponsored through Quality Improvement Academy – Weill Cornell (QIA), NewYork-Presbyterian Hospital's (NYP) Department of Nursing, and the Physician Organization's division of Quality and Patient Safety, we are proud to continue this interdepartmental and interdisciplinary celebration of quality and patient safety initiatives and innovations.

This year's event celebrates the 10th anniversary of QIA and honors the 19 members of the graduating QIA Class of 2026. Also highlighted are the 34 projects from 15 departments across WCM, NYP-Brooklyn Methodist, and NYP-Queens. Projects were selected through a peer-review process by QIA alumni, the Weill Department of Medicine's Quality Improvement Patient Safety Committee, NYP Nursing, and the WCM Housestaff Quality Council. Each project exemplifies the commitment to proactive improvement initiatives and the promotion of scholarly activities in quality and patient safety.

We are proud to present all the projects featured at this year's event within this e-catalog. Congratulations and thank you to our students, residents, fellows, nurses, faculty and clinical staff for their achievements and ongoing commitment to patient care.

With gratitude,

Jennifer I. Lee, MD
Director
Quality Improvement Academy

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Vice President & Chief Nursing Officer
NewYork-Presbyterian/
Weill Cornell Medical Center

Projects Featured

Quality Improvement Academy: Graduating Class of 2026

Building a Multidisciplinary Chronic Respiratory Failure Service

Michael Aboodi, MD; et al.

Weill Department of Medicine

From Overload to Optimization: Improving Physician Documentation Workflows

Aliza Cook, MD; et al.

Weill Department of Medicine

Implementation of Diagnostic Stewardship to Reduce Inappropriate Cytomegalovirus and Epstein-Barr Virus PCR Testing

David DiTullio, MD PhD; et al.

Weill Department of Medicine

Pilot of a Structured Diagnostic Pathway for Suspected Cellulitis to Improve Quality of Care

Ettaib Elmarabti, MD; et al.

Weill Department of Medicine

Improving Communication about Medications at Hospital Discharge

Kirsten Homma, MD; et al.

Weill Department of Medicine

Improving POCUS Competency in the WCM Internal Medicine Residency Program

Jennifer Huang; et al.

Weill Department of Medicine

Using Epic to streamline care for patients received Outpatient Parenteral Antimicrobial Therapy (OPAT)

Yesha Malik; et al.

Weill Department of Medicine

Improve Use of Patient Navigators to Increase Palliative Care Referrals for Oncology Patients with Cancer Pain and to Decrease Subsequent Avoidable ED and Hospital Readmissions

Anna Goehring, MD; et al.

Weill Department of Medicine

(NYP-BM)

Reducing Overutilization of Lower Extremity Dopplers and TTE with Bubble in Stroke Rule Out

Sofya Kostanyan, MD; et al.

Weill Department of Medicine

(NYP-BM)

Projects Featured

Quality Improvement Academy: Graduating Class of 2026

Improving the Tracking of Tobacco Cessation Education and Perioperative Tobacco-use Among Patients and Their Parents at a Single Preoperative Clinic

Michael Green, MD; et al.

Department of Anesthesiology

Increasing Daily Physical Activity after ED Discharge for Patients with Mild Cognitive Impairment

Loryn Fridle, PA-C; et al.

Department of Emergency Medicine

Identifying Barriers in Sepsis Bundle Compliance

Jeremy Torrisi, MD; et al.

Department of Emergency Medicine
(NYP-BM)

Improving Early Childhood Vaccination Rates in the Post-Pandemic Era: A Quality Improvement Approach

Allison Gorman, MD; et al.

Department of Pediatrics

Pediatric Foreign Body Emergency Pathway: a Multidisciplinary Collaboration to Standardize Care and Improve Patient Safety

Melissa Rose, MD; et al.

Department of Pediatrics

Decreasing Time to Administration of "STAT" Antibiotics in Inpatient Pediatrics

Tatyana Kopp, DO; et al.

Department of Pediatrics
(NYP-Queens)

Implementation of Nurse-Led Interdisciplinary Rounds in Labor and Delivery

Lori Gage, BSN, RNC-OB, Julia Schiefer, MSN, RNC-OB; Taylor Wu, MSN, RN; et al.

NYP-Department of Nursing

Assessing the Efficacy and Safety of 23.4% Sodium Chloride Administration via midline or Peripheral IV in Neurocritical Care Unit

Kaitlyn Twomey, MPAS, PA-C; et al.

NYP- Department of Physician Assistant

Projects Featured

Quality Improvement and Patient Safety (QPS) Poster Symposium

The Durable Impact of a High Value, Patient Centered Discharge Protocol in a Socioeconomically At Risk Population Following Coronary Artery Bypass Grafting

Charles Mack, MD; et al.

Department of Cardiothoracic Surgery

QPS Category: Clinical Effectiveness and Outcomes

Improving penicillin allergy documentation and management in the perioperative setting: A Quality Improvement Project

Harjot Singh, MD; et al.

Weill Department of Medicine

QPS Category: Clinical Effectiveness and Outcomes

Boosting Appropriate Prescribing of SGLT-2 Inhibitors in Heart Failure

Fares Salem, MD; et al.

Weill Department of Medicine

(NYP-BM)

QPS Category: Clinical Effectiveness and Outcomes

Promoting Evidence-Based Nursing Practice Through Lavender-Sandalwood Aromatherapy for Postoperative Pain Management in the Post-Anesthesia Care Unit

Rigel Doctore-Bauza, RN ; et al.

NYP-Department of Nursing

QPS Category: Clinical Effectiveness and Outcomes

Patient Wellness Initiative on a Cardiac Medicine Stepdown Unit

Mia Rodie, RN ; et al.

NYP-Department of Nursing

QPS Category: Clinical Effectiveness and Outcomes

Impact of a Standardized Intraoperative Safety Checklist on Cesarean Delivery Adherence and Maternal Outcomes: A Quality Improvement Project

Victoria De Barros; et al.

Department of Obstetrics & Gynecology

QPS Category: Clinical Effectiveness and Outcomes

An Integrated Digital Approach to Equitable Cancer Risk Assessment in a Diverse Gynecology Clinic

Hannah Peifer, MD; et al.

Department of Obstetrics & Gynecology

QPS Category: Clinical Effectiveness and Outcomes

Projects Featured

Quality Improvement and Patient Safety (QPS) Poster Symposium

Centralizing Patient Dismissal Reviews: Early Outcomes of a Standardized QPS Framework

Alyssa Cremeans, RN; et al.

Department of Physician Organization

QPS Category: Clinical Effectiveness and Outcomes

Developing a Standardized Enterprise-Level Operational and Financial Dashboard for Infusion Centers

Olivia Arnold, PharmD; et al.

Department of Pharmacy

QPS Category: Digital Data and AI

Diagnostic Stewardship to Reduce Beta-D-Glucan Testing Using Clinical Decision Support

Emi Hayashi, MD ; et al.

Weill Department of Medicine

QPS Category: Digital Data and AI

Evaluating a Comprehensive Crisis Management Model of Home-Based Palliative Care for High-Risk Care Transitions

Ian Kwok, MD; et al.

Weill Department of Medicine

QPS Category: Engagement, Culture, and Teams

Fostering Well-Being Through Community Engagement: The Perianesthesia Clinical Nurse Specialist (CNS) as a Bridge Between Staff and Community

Maria del Mar Rodriguez, RN; et al.

NYP-Department of Nursing

QPS Category: Engagement, Culture, and Teams

Improving Provider Comfort and Competency in Trauma-Informed Care for Adolescent Trafficking

Rachael Sverdlove, MD; et al.

Department of Pediatrics

QPS Category: Engagement, Culture, and Teams

Living with Risk: Virtual Peer Support for Individuals with Hereditary Cancer Syndromes

Emily Epstein; et al.

Department of Radiology

QPS Category: Engagement, Culture, and Teams

Reducing Waste Associated with Bloodline Set Ups – a High Value Care Quality Improvement Initiative

Deirdre Kelleher, MD; et al.

Department of Anesthesiology

QPS Category: Operational Improvement

Projects Featured

Quality Improvement and Patient Safety (QPS) Poster Symposium

Reducing Immediate Preprocedure Cancellations in Patients Taking SGLT-2i

Patricia Mack, MD; et al.

Department of Anesthesiology

QPS Category: Operational Improvement

Improving Access, Engagement, and Outcomes Through a Virtual Cardiac Rehabilitation Quality Improvement Initiative Following Cardiac Surgery

Charles Mack, MD; et al.

Department of Cardiothoracic Surgery (NYP-Q)

QPS Category: Operational Improvement

Time is Brain: A Quality Improvement Initiative to Reduce Door-to Thrombectomy Time at a Thrombectomy Capable Stroke Center

Maryna Skliut, MD; et al.

Department of Neurology

(NYP-BM)

QPS Category: Operational Improvement

Every Drop Counts: Reducing Blood Waste Through Multidisciplinary Collaboration

Melissa Moser, RN, BSN; et al.

NYP-Department of Nursing

(NYP-Q)

QPS Category: Operational Improvement

Closing the Loop: A Hospital-Wide System to Prevent Loss to Follow-Up in High-Risk Patients

Sruti Akula, MD; et al.

Department of Ophthalmology

QPS Category: Operational Improvement

Application of a Malaria Antigen Test for Blood Parasite Smears in a Region Non-Endemic for Plasmodium but Endemic for Babesia

Ashkan Shahbandi, MD; et al.

Department of Pathology and Laboratory Medicine

QPS Category: Operational Improvement

Standardizing Newborn Discharge Education to Improve Access and Reliability

Lauren Garcia, PA-C; et al.

Department of Pediatrics

QPS Category: Operational Improvement

Optimization and Standardization of an Emergency Department Follow-Up Office

Emilee Nawa, PA-C; et al.

Department of Emergency Medicine

QPS Category: Patient Safety and Harm Reduction

Projects Featured

Quality Improvement and Patient Safety (QPS) Poster Symposium

Standardized Inpatient CDI Education and Post Discharge Follow Up Pathway: Implement and evaluate the impact of a structured, patient-centered, post-discharge C. difficile

Carl Crawford, MD ; et al.

Weill Department of Medicine

QPS Category: Patient Safety and Harm Reduction

Breast Cancer Health Intervention Program: A Quality Improvement Initiative to Increase Early Detection and Screening of Patients at High Risk for Breast Cancer

Anisah Alladeen, MD; et al.

Department of Radiology

QPS Category: Operational Improvement

Clinical Integration of a Patient-Facing Digital Tool for Population-Focused Cancer Risk Screening in the Primary Care Setting

Enzo Bruscatto; et al.

Department of Radiology

QPS Category: Operational Improvement

Enhancing Apixaban Dosing Accuracy in Atrial Fibrillation Through Iterative Clinical Decision Support System Development

Michael E. Kaiser, MD; et al.

Weill Department of Medicine

(NYP-BM)

QPS Category: Patient Safety and Harm Reduction

Reducing Foley Duration in MOTS Patients on 8C

Kassandra Ramirez, PA-C; et al.

Weill Department of Medicine

QPS Category: Patient Safety and Harm Reduction

Closing the Gap: Improving Seizure to Bedside Response Times in the Epilepsy Monitoring Unit

Robert McInnis, MD; et al.

Department of Neurology

QPS Category: Patient Safety and Harm Reduction

Pancreatectomy 30-Day Outcomes with Disrupted Enhanced Recovery Implementation: A Retrospective Review of the ACS NSQIP Database

Sharon Baoas, RN; et al.

NYP-Department of Nursing

(NYP-BM)

QPS Category: Patient Safety and Harm Reduction

Adopting a Serious Illness Communication Model for Post-Acute Care Transitions in Medicare Beneficiaries

Amy Matthew, RN; et al.

NYP-Department of Nursing

QPS Category: Patient Safety and Harm Reduction

Projects Featured

Quality Improvement and Patient Safety (QPS) Poster Symposium

A Comfort-Centered Approach: Advancing Pediatric and Family Experience through Age-Appropriate Resources in the PACU

Colleen Ward, RN; et al.

NYP-Department of Nursing

QPS Category: Patient Safety and Harm Reduction

Standardized Protocol Implementation Increases Patient Follow-Up After Emergency Department–Initiated Medication Abortion

Miranda Duster, MD; et al.

Department of Obstetrics & Gynecology

QPS Category: Patient Safety and Harm Reduction

Implementation of a Novel VTE Risk Assessment and Prophylaxis Strategy for Otolaryngology Surgery

Richard J. Lu, MD; et al.

Department of Otolaryngology - Head and Neck Surgery

QPS Category: Patient Safety and Harm Reduction

Problem Statement

- Many large academic institutions have a multidisciplinary tracheostomy team that follows patients with tracheostomies (both on or off ventilators) to facilitate specialized care for these patients.
- This patient population often has unrecognized needs that require specific attention and specialized care

Objective/Aim Statement

- Develop a multidisciplinary chronic respiratory failure service that includes pulmonary physicians, respiratory therapists, nursing and speech-language pathologists.
- Round together on chronic respiratory failure patients (those with tracheostomies either on or off a ventilator) in step-down units Tuesdays and Thursdays to coordinate and optimize care and safety for these patients

Design/Methods

- Intermittently monitored compliance with a bundle of standard tracheostomy safety checks (such as spare tracheostomy availability, adequate signage at the door)
- Surveyed nurses that cared for patients with tracheostomies after managing the respiratory failure service for one year

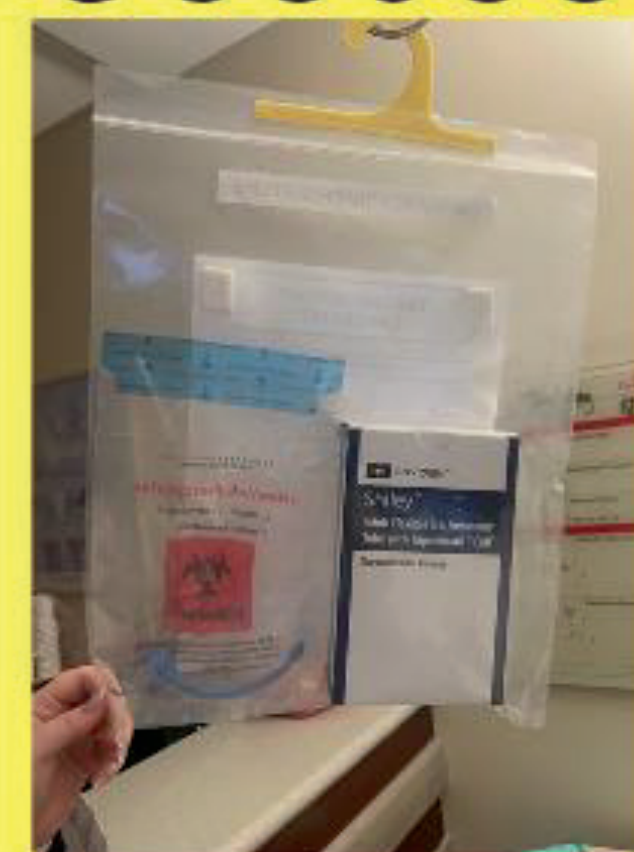
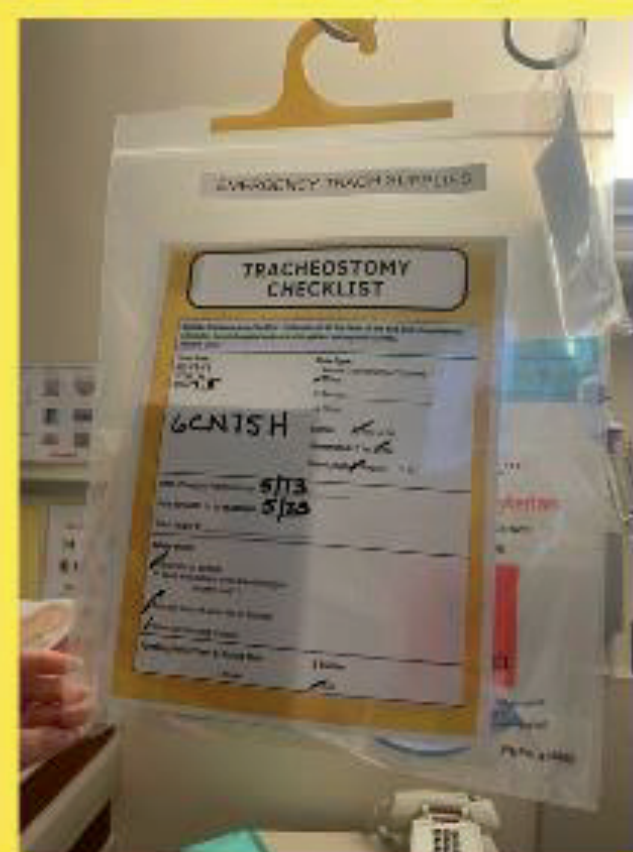
TRACHEOSTOMY CHECKLIST BAG

Purpose:

- Spare trach and obturator provide safe reinsertion to maintain an airway

Background:

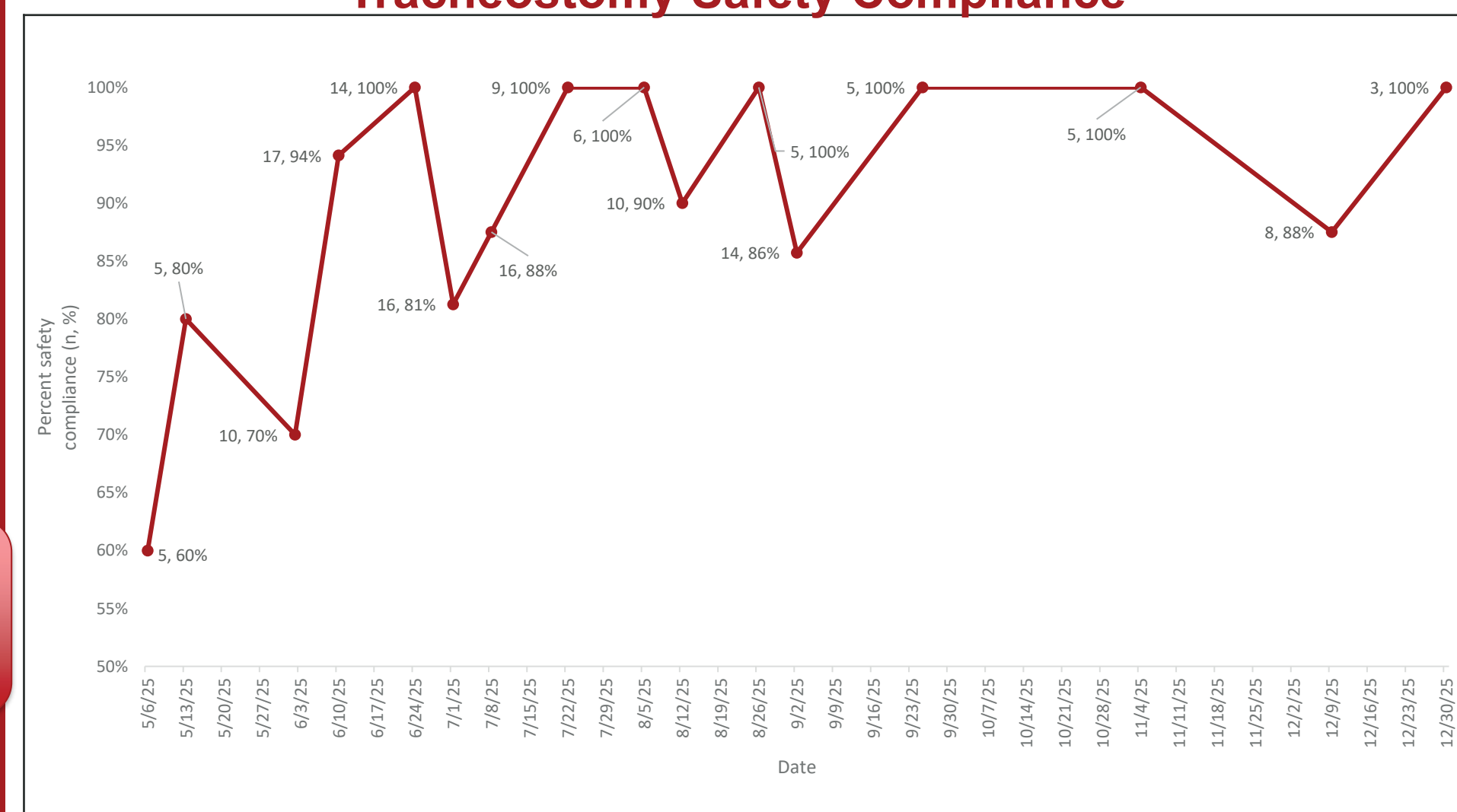
- Room clutter
- Inconsistent storage locations
- Head of bed difficult to access
- Incorrect trach/obturator



Workflow:

- Complete Tracheostomy Checklist
- Include trach item number (ex. 6CN75H)
- Hang on IV pole
- Check every shift and update as necessary (i.e. trach exchange, down size, etc)
- Transfers with patient (i.e. procedures, other units, imaging)

Tracheostomy Safety Compliance



Improved tracheostomy safety compliance (overall compliance with a bundle of tracheostomy safety checks improved from around 60% to between 85-100% and has persisted at that level)

Results

- 154 unique consults placed over this time period, approximately 2-3 new patients per week and 10-20 patients per session including follow ups
- Improved tracheostomy safety compliance (overall compliance with a bundle of tracheostomy safety checks improved from around 60% to between 85-100% and has persisted at that level)
- Qualitative survey after 1 year among nurses that care for tracheostomy patients (N=11):
 - 90% said the respiratory failure team was “very” to “extremely” helpful
 - 100% said the respiratory failure team has improved use of PMV (Very-Extremely helpful)
 - 100% said the team had increased decannulation rate (Agree- Strongly Agree)
 - 100% said the team improved tracheostomy safety
 - 85% said the team improved ventilator weaning
- Comments include
 - “Positively, helpful”
 - “So helpful, has definitely improved vent weaning and my own knowledge”
 - “They have made patients safer”

Conclusions/Lessons Learned

- The chronic respiratory failure service improved tracheostomy safety in a durable way

Next Steps

- Identify additional strategies to improve tracheostomy patient care (decanulation time, vent weaning) by analyzing epic data
- Continue to improve tracheostomy safety compliance
- Increase outpatient integration

BACKGROUND / PROBLEM

- The quality of healthcare data depends on clear documentation
- Undocumented conditions are invisible to quality metrics, reporting, and research
- The Quality Admission SmartTool (QAST) was designed to prompt providers to consider frequently missed conditions
- QAST only fires within specific provider workflows
- Several common provider workflows do not trigger QAST
- Completing QAST is low priority due to high documentation burden, competing clinical demands, and low incentive
- Workflow misalignment and low provider priority produce unreliable and variable QAST compliance
- Local surveys indicates that customization is important or very important to providers (92.2% attendings, 80% PAs, 100% residents) but that a recommended H&P template with customization support was strongly preferred by all groups (56% attendings, 72% PAs, 71% residents)
- Sustainable improvement requires low-friction solutions that align incentives and integrate with clinical workflows / values

AIM STATEMENT

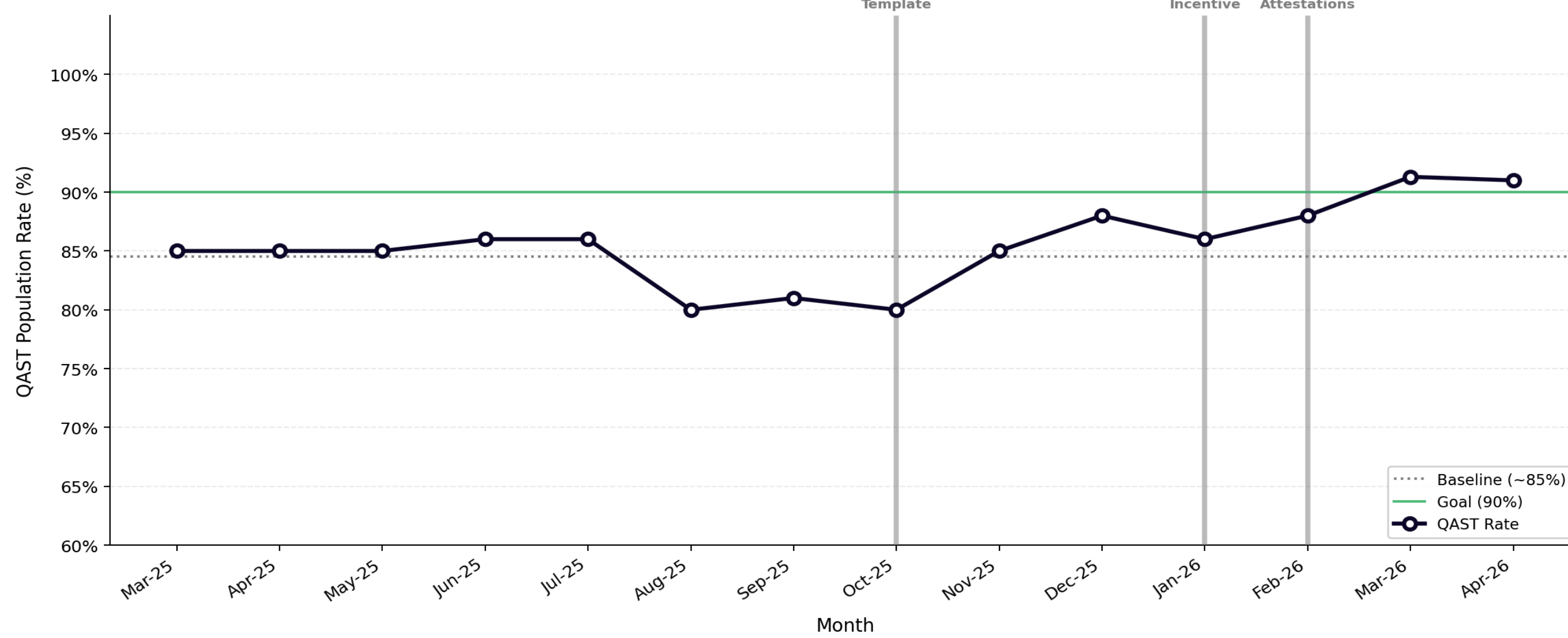
- By June 2026, increase the QAST documentation tool trigger rate to >90% across all H&Ps written by attendings, PAs, and residents on the general medicine service at Weill Cornell Medicine.

METHODS

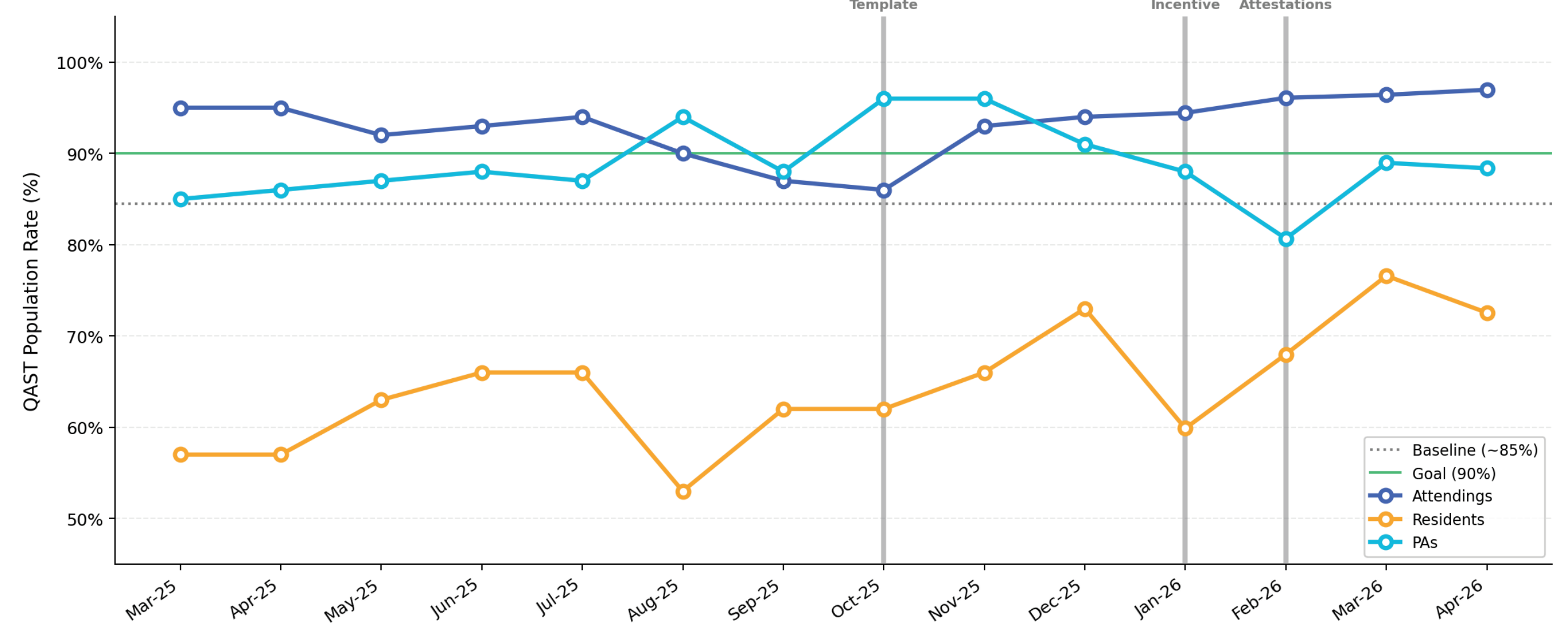
- **Setting:** Inpatient general medicine service, Weill Cornell Medicine / NewYork-Presbyterian
- **Design:** A prospective observational study with sequential quality improvement interventions
- **Study Population:** All attendings, residents, and PAs writing H&Ps on the general medicine service
- **Baseline Assessment:** Provider survey (N=134: 78 attendings, 35 PAs, 21 residents) examining documentation preferences, tool perception, and template preferences
- **Sequential Interventions**
 - Note Templates:** Standardized H&P templates co-designed with attendings to improve workflow and align with compliance requirements
 - Division Incentive:** Structural incentive to complete QAST-triggering note sections
 - QAST Added to Attestations:** Embedded QAST into required attending attestation workflow, reducing ability to bypass
- **Primary Outcome:** QAST trigger rate in H&Ps overall and by provider type (attendings, residents, PAs)
- **Secondary Outcome:** Case Mix Index (CMI) — referenced in conclusions
- **Process Measure:** H&P template utilization by provider type
- **Balancing Measures:** H&P note length and active documentation time (template user subgroup, N=10); QAST deletion rate by provider type

PRIMARY OUTCOMES

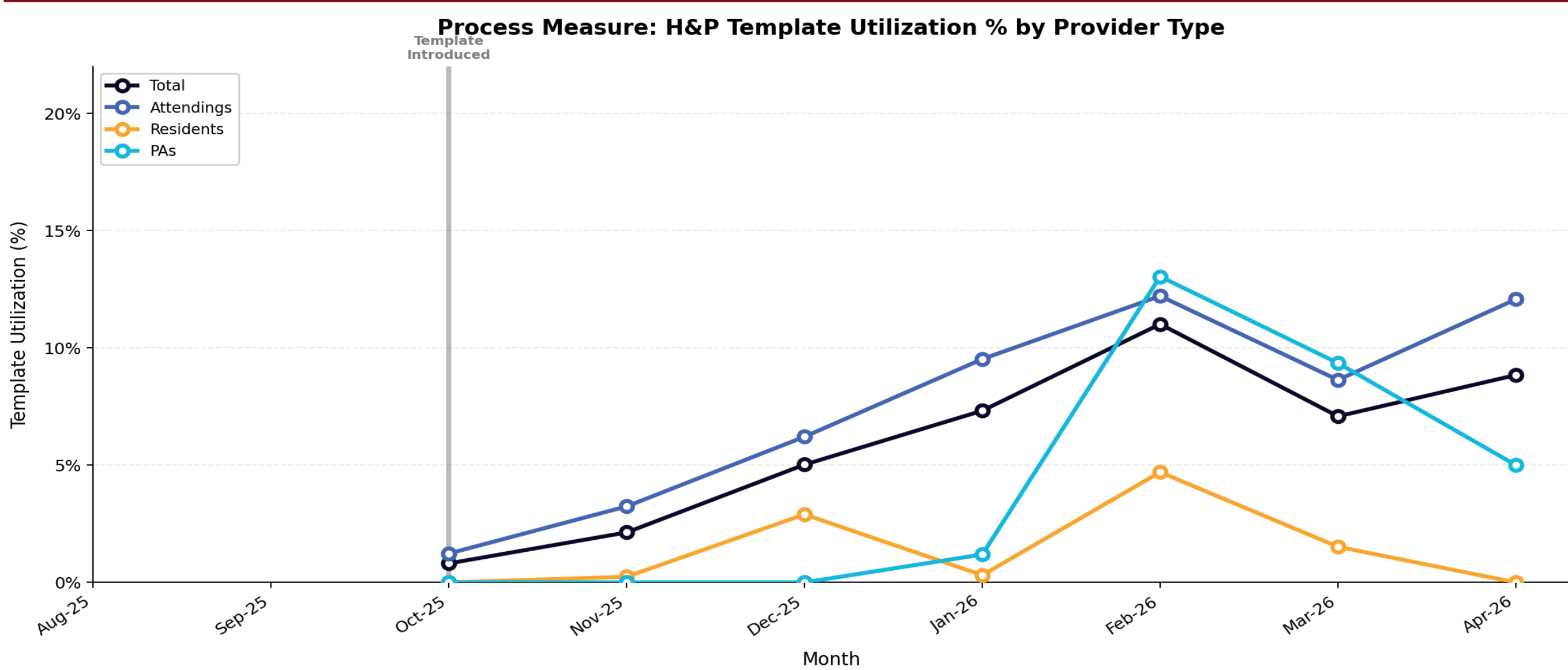
Primary Outcome: QAST Population Rate in H&Ps (All Providers)



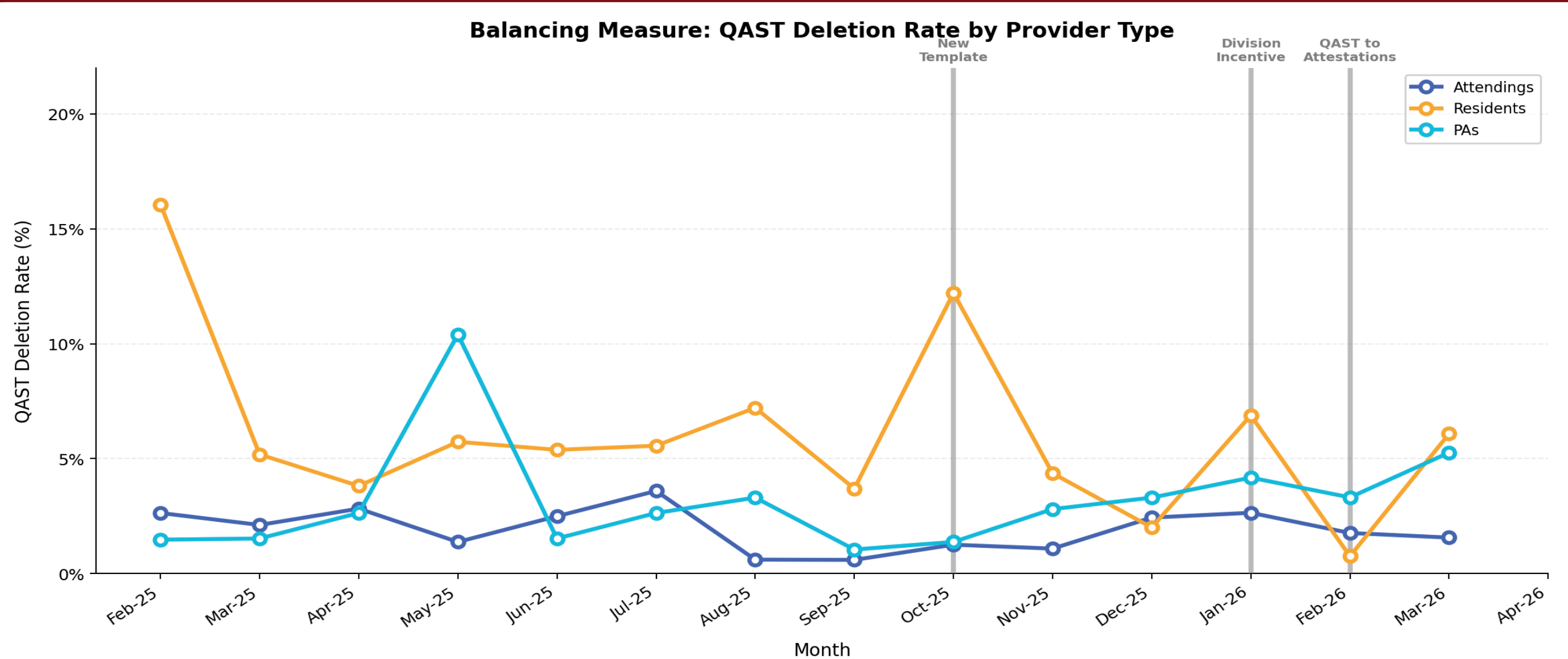
Primary Outcome: QAST Population Rate in H&Ps by Provider Type



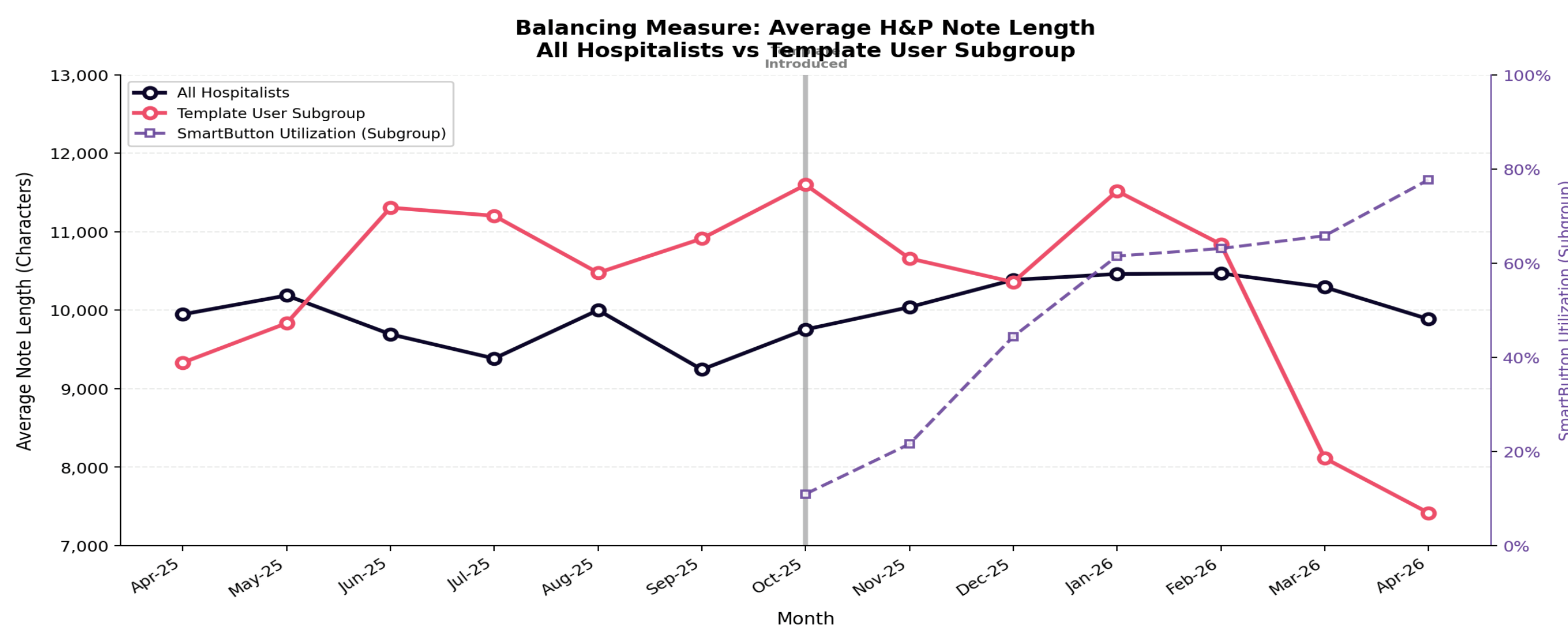
PROCESS MEASURE: H&P TEMPLATE UTILIZATION BY PROVIDER TYPE



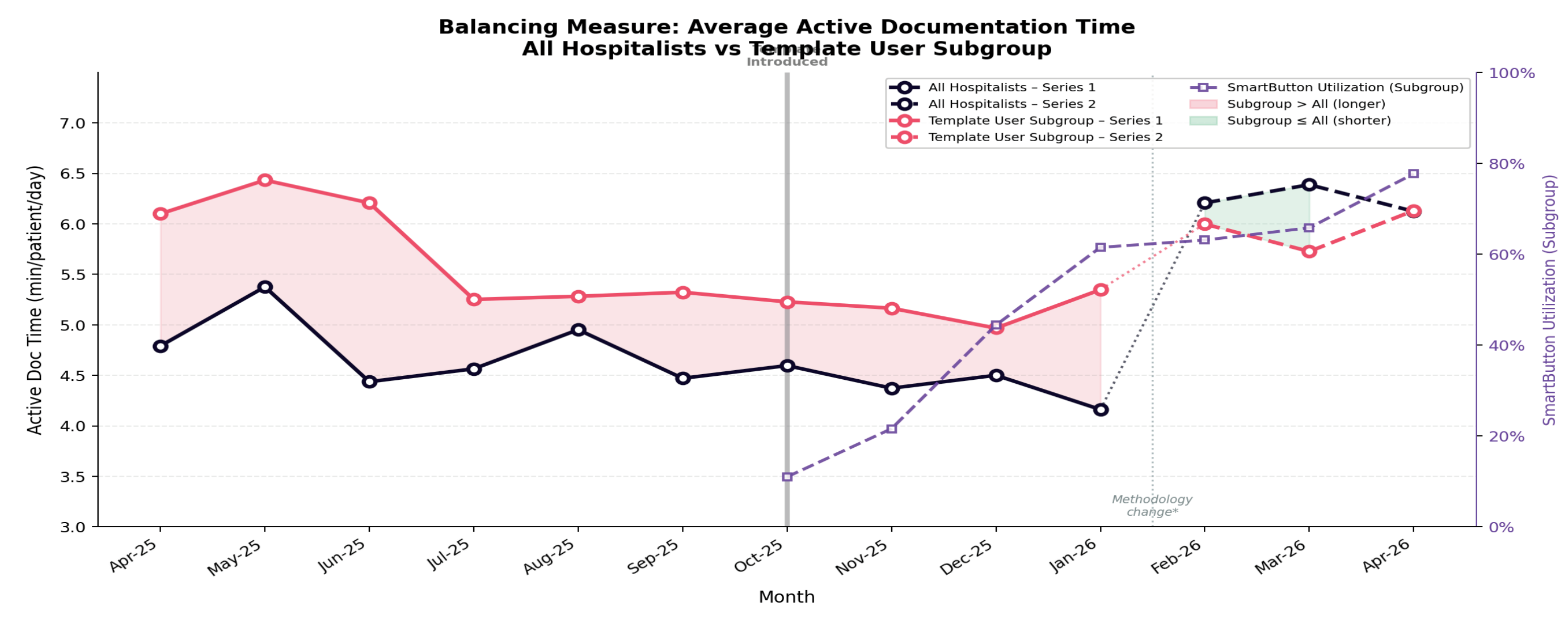
BALANCING MEASURE: QAST DELETION RATE BY PROVIDER TYPE



BALANCING MEASURE: AVERAGE H&P NOTE LENGTH — ALL ATT. HOSPITALIST VS TEMPLATE SUBGROUP



BALANCING MEASURE: AVERAGE ACTIVE DOCUMENTATION TIME — ALL ATT. HOSPITALISTS VS TEMPLATE SUBGROUP



*Active documentation time = Epic-measured active keystrokes/engagement in notes; does not reflect total time spent on documentation. †Series 2 includes ED documentation time; Series 1 does not.

CONCLUSIONS & LIMITATIONS

- Limitations: single site; observational design; low template utilization; attestation specific data not yet reliably retrieved
- Sequential interventions improved overall QAST trigger rates to goal across the general medicine service
- Provider type stratification reveals a persistent gap with residents potentially indicating unique workflows, constraints, and incentives
- Quality metrics (e.g. CMI) have remained stable suggesting interventions have not positively affected case complexity capture
- Preliminary data among the top 10 template utilizers suggest well-designed templates do not increase note length or documentation time

NEXT STEPS

- Evaluate quality of QAST completion to distinguish meaningful clinical engagement from checkbox behavior
- Explore specific impact of adding the QAST tool into attestations
- Trend average documentation time and note length with users
- Continue iterative co-design sessions with attendings / residents / PAs to improve note template usability
- Assess long-term sustainability of template-related QAST improvement

Problem Statement:

CMV and EBV testing is complicated

- Cytomegalovirus (CMV) and Epstein-Barr virus (EBV) diagnosis involves serology and/or molecular testing.¹
- Choice of testing depends on age, immune status, and clinical context, but diagnostics are often nonspecific.
- In immunocompetent patients, testing often does not change management.

Overtesting has negative consequences

- CMV and EBV nucleic acid amplification testing (NAAT) is nonspecific and particularly in immunocompetent patients, often does not change management.²⁻⁴
- Unnecessary testing can lead to potential harm, diagnostic delays, and increased costs.⁵
- When CMV or EBV reactivation is suspected in immunocompromised hosts, tissue sampling is the gold standard diagnostic test.¹

CDS is effective at guiding testing

- Clinical decision support (CDS) systems have been shown to reduce inappropriate testing.⁶⁻⁸

Objective/Aim:

Reduce inappropriate CMV/EBV serum testing by **10%** across **NYP inpatient services** by **April 2027**.

Methods:

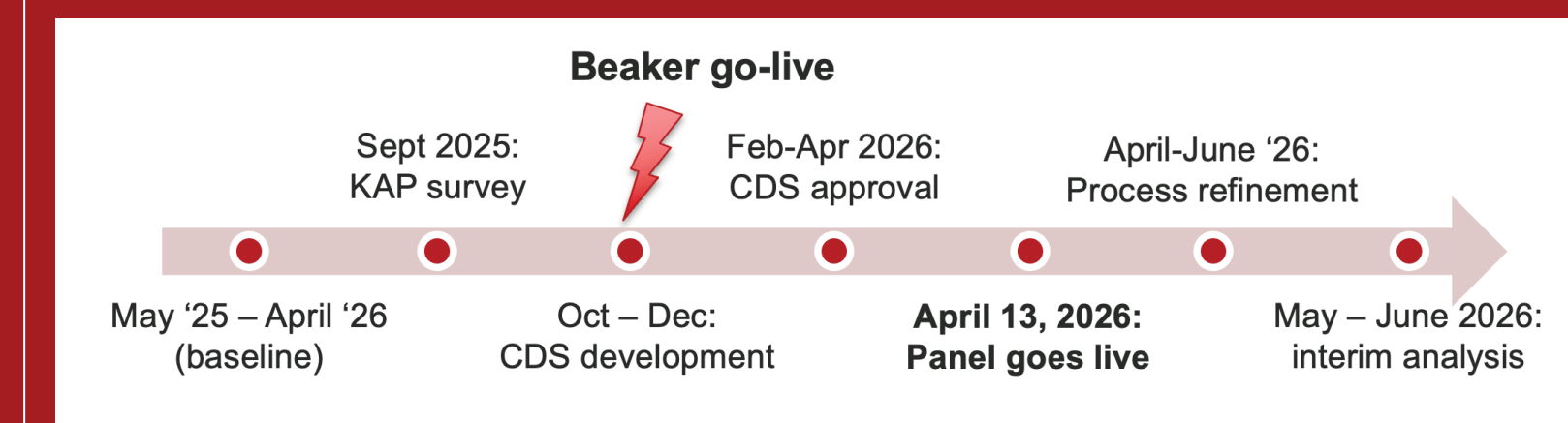
Approach

- We planned a series of Plan-Do-Study-Act (PDSA) cycles (Table 1).
- Timeline of methodology is summarized in Figure 1.
- This study was determined to be exempt from IRB review under the quality improvement exemption (#25-10029400).

Table 1. Plan-Do-Study-Act (PDSA) cycles

Cycle	Goal
1	Knowledge-Attitudes-Practices (KAP) survey of providers
2	Optimize test menu by removing duplicate orders
3	Develop order panel for pediatric and adult patients
4	Implement Order Panel
5	Implement OPA (recent orders, inappropriate NAAT testing)
6	Education and feedback to service lines
7	Possible; hard stop OPA if soft stop not effective
8	Audit of charts to determine appropriate ordering

Figure 1. Methodology and timeline



Knowledge-Attitudes-Practices (KAP) survey

- A 14-question KAP survey was used to solicit feedback as well as to assess current CMV/EBV ordering practices and understanding.
- Surveys were distributed to attendings, house staff, and advanced practice providers (APPs) in Medicine, Hematology, Transplant, Pediatrics, Critical Care, Obstetrics/Gynecology, and Neurology.

Appropriateness and Clinical Decision Support (CDS)

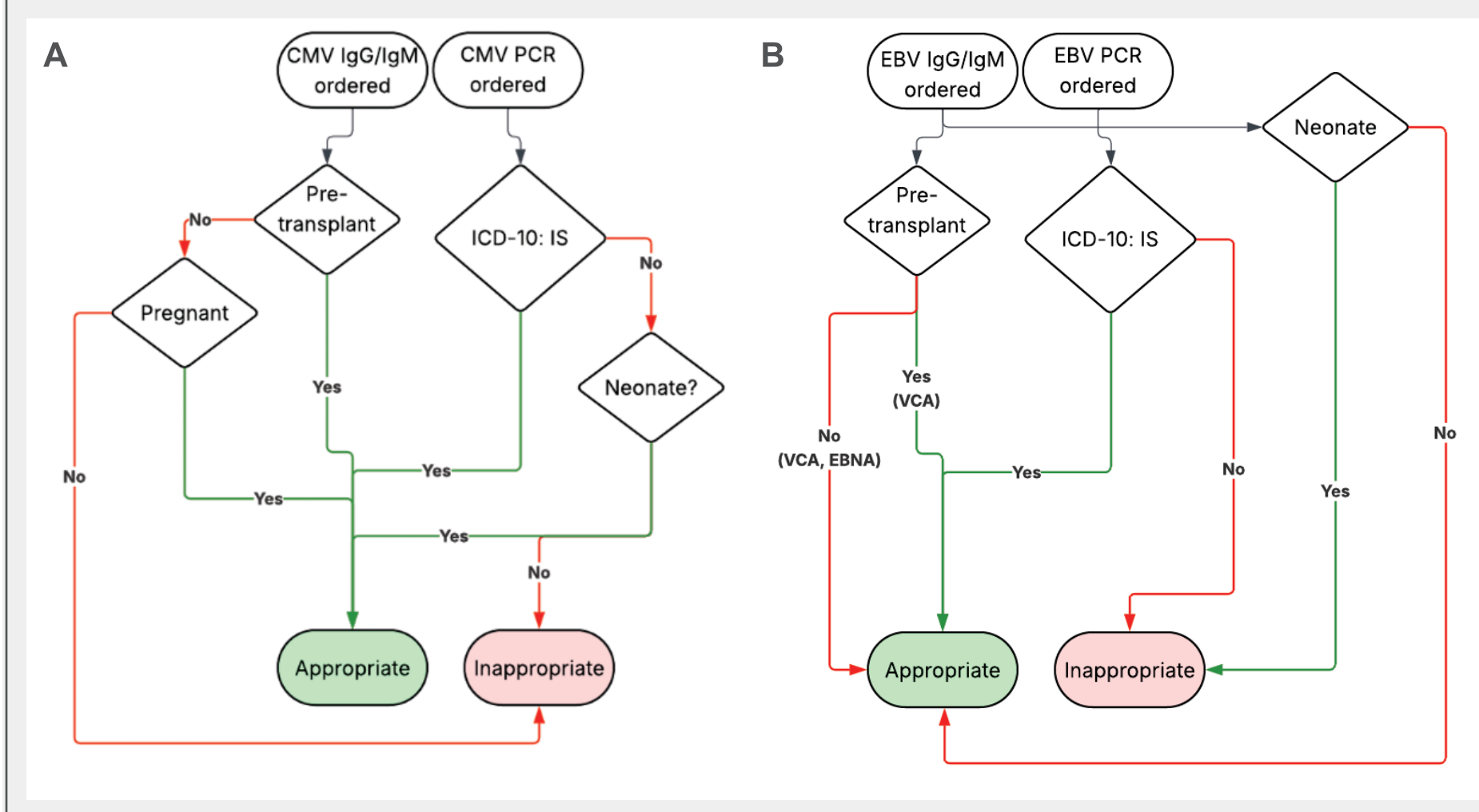
- Test recommendations were developed for CMV and EBV based on patient characteristics and published guidelines (Figure 2).
- Based on this guidance, appropriateness algorithms using structured electronic health record (EHR) data were developed (Figure 3).
- The primary outcome is number of appropriate tests sent in the year after implementation compared to the year prior.
- Secondary outcomes are total number of orders and days of antiviral therapy; process measures include stakeholder and regulatory meetings.

Figure 2. Test ordering recommendations

Patient Class	CMV				EBV					
	NAAT	IgG	IgM	IgG Avidity	NAAT	Heterophile	VCA IgG	VCA IgM	EBNA IgG	EA
Adult										
Immunocompetent	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Immunosuppressed	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Pre-Transplant	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Pregnant	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Pediatrics										
Immunocompetent	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Immunosuppressed	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Pre-Transplant	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Neonate/Infant	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

Green: Appropriate
Yellow: Can consider ordering
Red: Not recommended
NAAT: nucleic acid amplification test; CMV: cytomegalovirus; EBV: Epstein-Barr Virus; VCA: viral capsid antigen; EA: early antigen

Figure 3. Appropriateness algorithms for (A) CMV (B) and EBV ordering



Results:

KAP survey

- A total of n=89 respondents completed the survey across two campuses and 8 services (see Table 2).
- Knowledge scores were based on two clinical scenario questions and were scaled to 0-1; results varied substantially by service (Table 3).

Table 2. KAP survey respondent characteristics

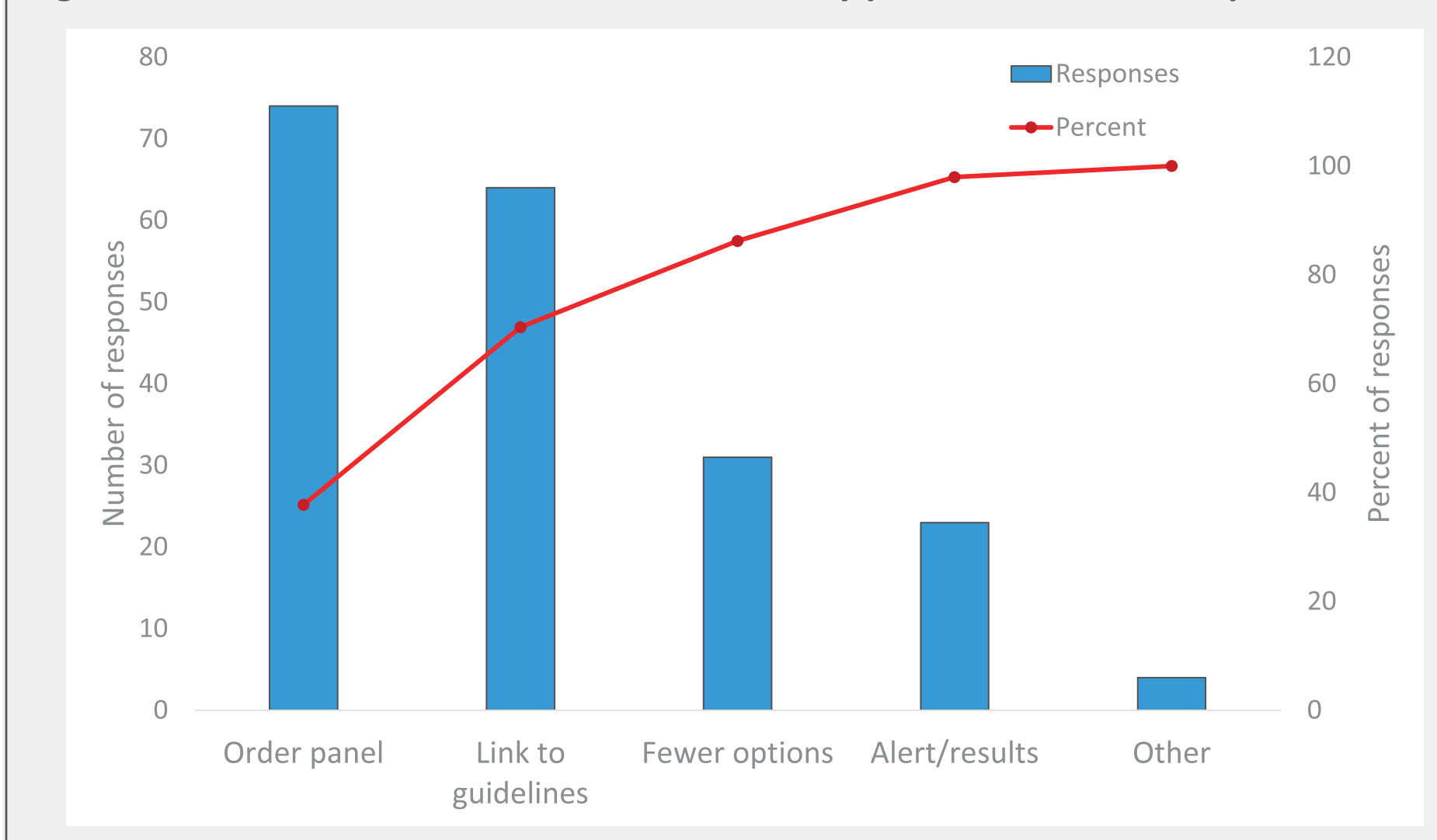
Characteristic	Number (%)
Primary campus	
WCM	79 (87.8)
LMH	20 (22.2)
Service	
Emergency Department	8 (8.9)
Medicine	31 (34.4)
Surgery	7 (7.8)
Pediatrics	21 (23.3)
Obstetrics	4 (4.4)
Neurology	11 (12.2)
Critical Care	9 (10.0)
Hematology/Transplant	11 (12.2)
Other	1 (1.1)
Role	
Advance Practice Provider	42 (46.2)
Resident	32 (35.2)
Attending	16 (17.6)

Table 3. Knowledge question scores by service

Service	Knowledge score mean (SD)
Emergency Department	0.44 (0.32)
Medicine	0.56 (0.36)
Surgery	0.29 (0.39)
Pediatrics	0.39 (0.36)
Obstetrics	0.25 (0.29)
Neurology	0.55 (0.35)
Critical Care	0.56 (0.43)
Hematology/Transplant	0.68 (0.34)

- A majority of respondents preferred an order panel to facilitate appropriate test selection (Figure 4).
- Knowledge scores were based on two clinical scenario questions and were scaled to 0-1; results varied substantially by service (Table 3).

Figure 4. Pareto chart of interventions ranked by providers in order of preference

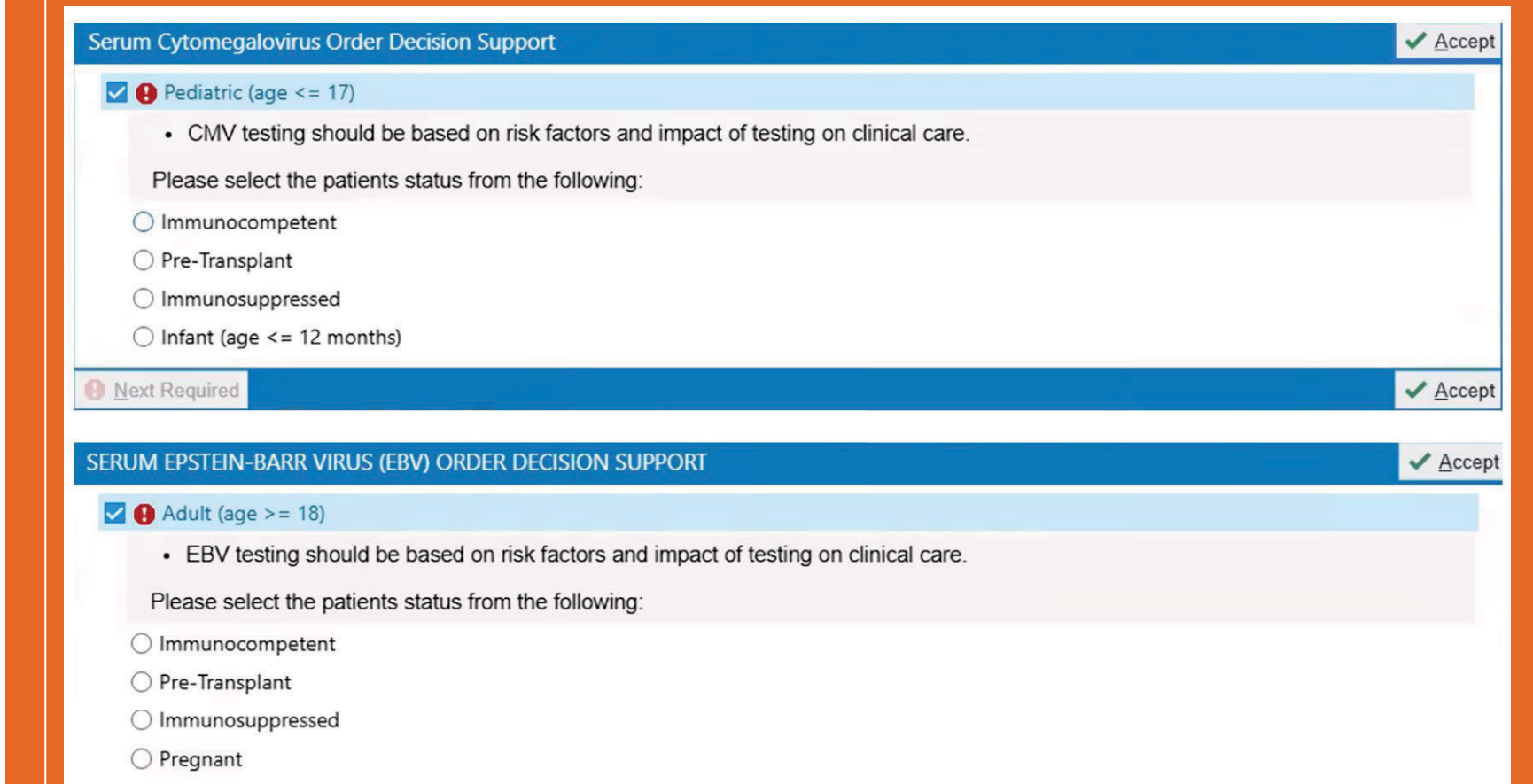


Clinical Decision Support implementation

- Four panels were developed using test recommendations and algorithms shown in Figures 2 and 3; sample panels are shown in Figure 5.

- Panels were activated on April 13, 2026.

Figure 5. Sample CDS order panels for CMV (top) and EBV (bottom)



- Control charts for the year prior to and the three weeks after implementation are shown for CMV in Figure 6.

- Educational interventions are ongoing to educate services about the availability and use of panels.

- EHR data has been obtained for the pre-intervention period and are shown in Table 4.

- Appropriateness score will be calculated at monthly intervals for the early post-intervention period to identify opportunities for further education.

Conclusions:

- Knowledge assessments suggest that providers would benefit from guidance around evidence-based CMV and EBV ordering.
- CMV and EBV CDS were successfully implemented into the EHR.
- While no clear change in order volume has been seen, it is early in the intervention, and total volumes may not reflect changes in appropriate ordering.

Table 4. Baseline characteristics for adults pre-intervention

Characteristic	CMV serology	CMV NAAT	EBV serology	EBV NAAT
Total (n)	735	1655	709	1197
Age, median (IQR)	58 (40-69)	63 (48-73)	52 (32-67)	63 (46-72)
Male sex, n (%)	386 (52.6)	884 (53.4)	361 (51.0)	648 (54.1)
Immune suppression, n (%)	306 (41.7)	1040 (63.0)	160 (22.7)	742 (62.2)
Hematologic	61 (8.3)	464 (28)	47 (6.6)	403 (33.7)
BMT	7 (1)	53 (3.2)	2 (0.3)	42 (3.5)
SOT	246 (33.9)	571 (34.5)	108 (15.2)	337 (28.2)
HIV	6 (0.8)	26 (1.6)	6 (0.9)	11 (0.9)
Medications	182 (24.8)	324 (19.6)	178 (25.1)	242 (20.2)
Pregnant	32 (4.4)	2 (0.1)	3 (0.4)	2 (0.2)
Level of Care				
Emergency	51 (7.0)	99 (6.0)	149 (21.2)	44 (3.7)
Acute/SDU	648 (88.9)	1445 (87.5)	521 (74.0)	1062 (89.2)
Intensive Care	30 (4.1)	107 (6.5)	34 (4.8)	85 (7.1)

Next Steps

- Control charts will be monitored weekly for overall trends, as well as trends by hospital unit/service.
- Appropriateness scores will be calculated monthly to assess primary outcome progress.
- Validation of appropriateness score algorithms with manual review will be undertaken in the coming weeks.

References

- Miller JM, Binnicker MJ, Campbell S, et al. *Clinical Infectious Diseases*. Published online March 5, 2024. doi:10.1093/cid/cia104
- Gupta S, Turbett SE, Klontz E, et al. *American Journal of Clinical Pathology*. Published online October 25, 2024. doi:10.1093/ajcp/aaae143
- Li X, Huang Y, Xu Z, et al. *BMC Infect Dis*. 2018;18(1):289. doi:10.1186/s12879-018-3195-5
- Al-Omari A, Aljamaan F, Alhazzani W, et al. *Ann Intensive Care*. 2016;6(1):110. doi:10.1186/s13613-016-0207-8
- Korenstein D, Chimonas S, Barrow B, et al. *JAMA Intern Med*. 2018;178(10):1401-1407. doi:10.1001/jamainternmed.2018.3573
- Delvaux N, Thienen KV, Heselmans A, et al. *Arch Pathol Lab Med*. Published online April 1, 2017. doi:10.5858/arpa.2016-0115-RA
- Goldzweig CL, Orshansky G, Paige NM, et al. *Ann Intern Med*. 2015;162(8):557-565. doi:10.7326/M14-2600
- Rock C, Abosi O, Bleasdale S, et al. *Clin Infect Dis*. 2022;75(7):1187-1193. doi:10.1093/cid/ciac074

Early Diagnostic Reassessment of Patients Admitted with Presumed Lower-Extremity Cellulitis Identifies Frequent Pseudocellulitis and Persistent Antibiotic Exposure

Ettaiab Elmarabti, MD., Jina Bai, PA., Kristi Chau, MPH, Jennifer Inhae Lee, MD., Monika Safford, MD., Anthony Ogedegbe, MD., Todd Cutler, MD.

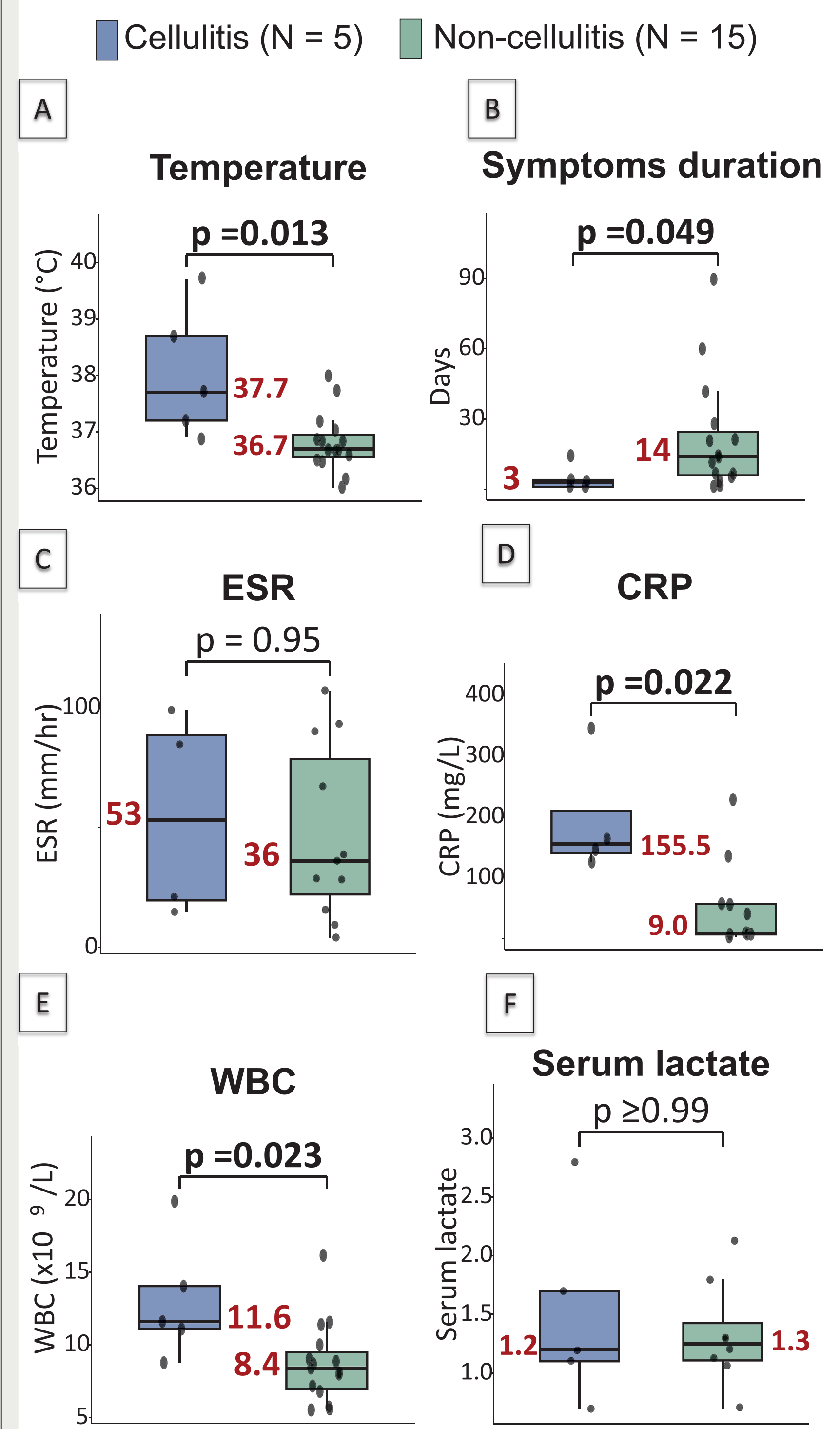
INTRODUCTION

Cellulitis is a common hospital admission diagnosis, but it is frequently misdiagnosed because there is no definitive diagnostic test, and many infectious and noninfectious conditions can mimic lower-extremity cellulitis. Misdiagnosis can lead to unnecessary antibiotic exposure, avoidable hospitalization, delayed treatment of alternative diagnoses, and increased healthcare utilization. Most cellulitis diagnostic studies use dermatologist or infectious disease specialist assessment as the reference diagnosis. Less is known about whether hospitalists can reliably identify cellulitis and distinguish it from mimics using clinical features available at the bedside. We evaluated diagnostic agreement between a hospitalist and an infectious disease specialist during early reassessment of patients admitted from the emergency department with presumed lower-extremity cellulitis. We also characterized alternative diagnoses, discharge diagnoses, antibiotic exposure, and clinical features associated with cellulitis and non-cellulitis on reassessment.

METHODS

We prospectively reevaluated patients admitted from the emergency department to the inpatient medicine PA service with a diagnosis of lower-extremity cellulitis. Each patient underwent early reassessment by a hospitalist and an infectious disease specialist using chart review, history, physical examination, and bedside POCUS. Reassessment impressions were not routinely communicated to the primary team unless withholding findings could affect patient safety or fall below standard care, such as identification of an abscess. Discharge diagnoses and antibiotic exposure were abstracted from the chart and compared with the hospitalist-ID reassessment diagnosis. Data were stored in REDCap. The project was reviewed by the IRB and determined to be exempt as quality improvement.

Figure 5: Clinical characteristics associated with Cellulitis vs. Non-Cellulitis (n= 20)

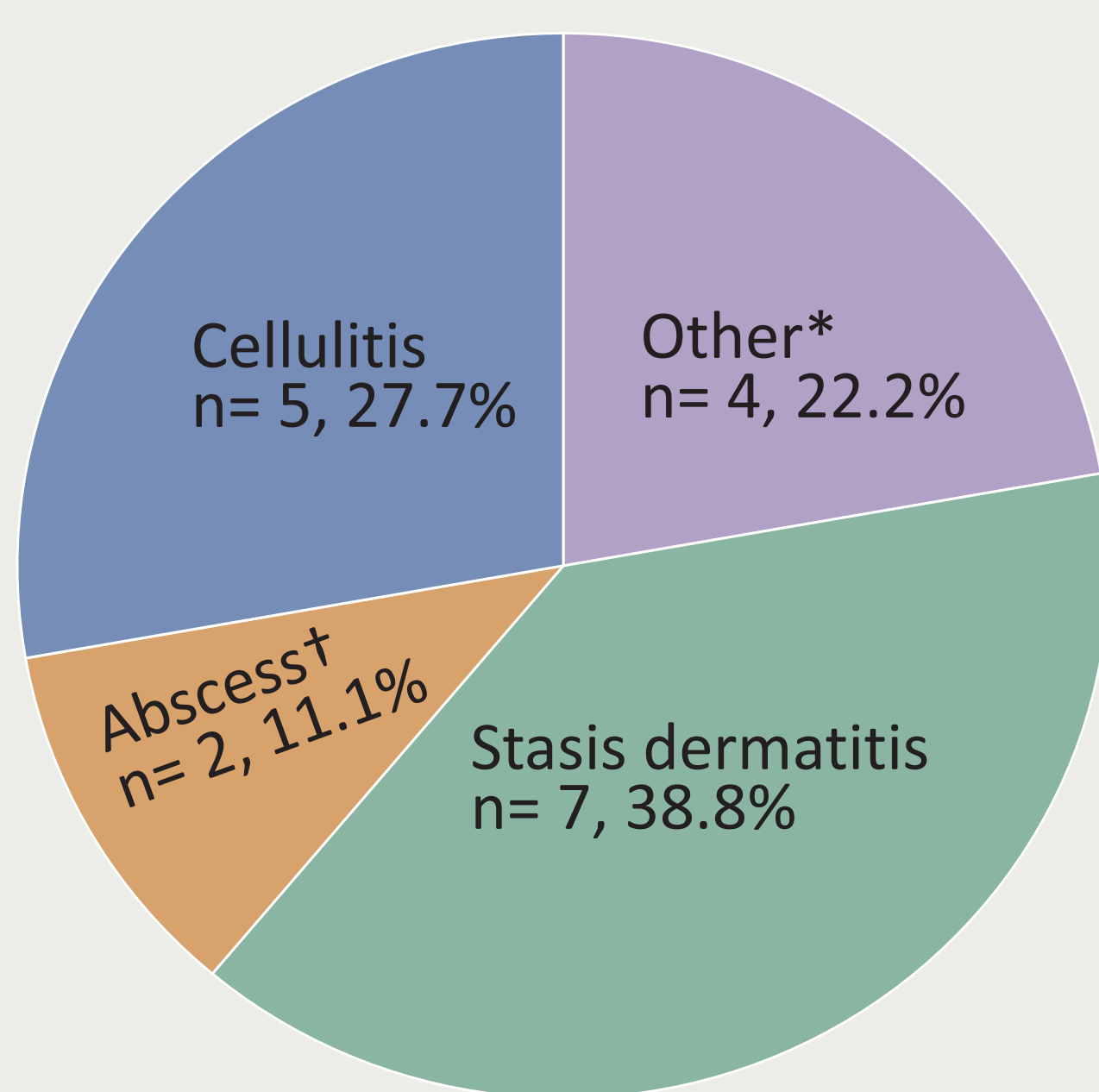


RESULTS

Figure 1: Hospitalist-ID agreement on cellulitis diagnosis and antibiotic plan

	Kappa n= 22	Kappa n= 17 (excluding first 5 patients)
Cellulitis diagnosis	0.773 (p < 0.001)	1 (p < 0.001)
Antibiotic plan	0.732 (p < 0.001)	0.761 (p < 0.001)

Figure 2: Reassessment diagnosis among patients with hospitalist-ID agreement (n=18)



*Other: Lymphedema (n=1), Local reaction to tsetse fly bite (n=1), volume overload (n=1), post thrombotic syndrome (n=1)
†one patient with an abscess was identified with POCUS by the reassessment team

72.3% of patients admitted with a presumptive diagnosis of cellulitis received an alternative diagnosis on reassessment

Figure 3: Discharge diagnosis compared with hospitalist-ID reassessment diagnosis (n=20)

		Re-assessment diagnosis		
		+	-	
Discharge diagnosis	Cellulitis	5 (TP)	9 (FP)	35.7% (PPV)
	Non-Cellulitis	0 (FN)	6 (TN)	100% (NPV)
		Sensitivity 100%	Specificity 40%	

+LR 1.67, -LR 0

Figure 4: History and exam features of patients (n=20)

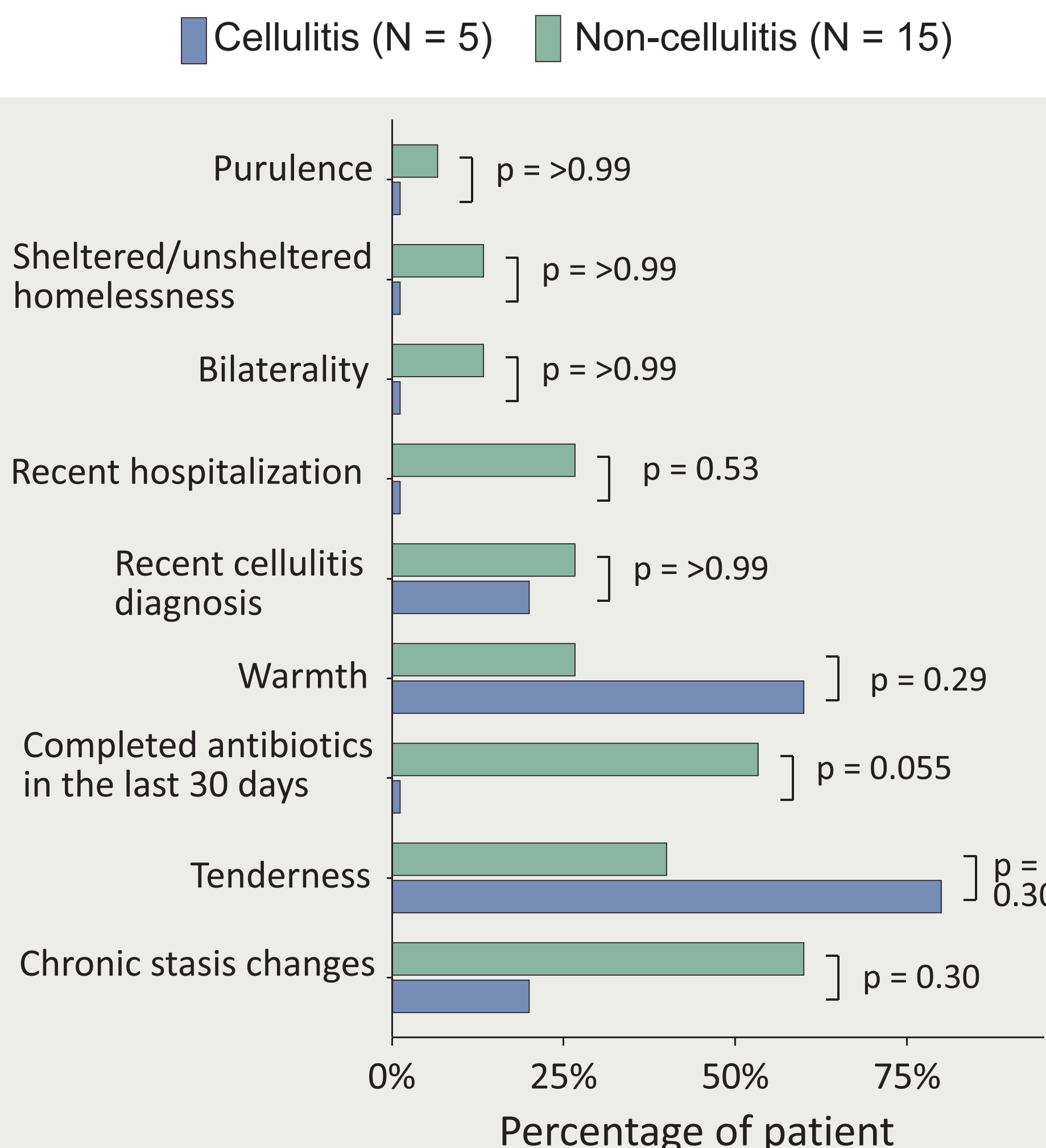


Figure 6: Antibiotic management among patients with agreed reassessment diagnosis (n=20)

Patients with agreed antibiotic plan	Patients deemed not to need antibiotics
18/20 (90%)	10/18 (55.5%)

CONCLUSIONS

- The hospitalist and ID specialist showed excellent agreement during the reassessment of patients admitted with presumed cellulitis. This suggests a potential role for structured hospitalist-led reassessment,
- 72% of patients admitted with presumptive cellulitis received an alternative diagnosis on reassessment. Over half were deemed not to require any antibiotics,
- Diagnostic errors are asymmetric; clinicians reliably recognize disease when it is present (sensitivity 100%) but unreliably recognize when it is absent (specificity 40%),
- Use of discriminating clinical features from history, physical exam, and laboratory data may improve diagnostic accuracy and antibiotic stewardship in patients admitted with presumed cellulitis.

Background

- Hospitalization and discharge are high-risk for medication errors¹
- 1 in 5 patients experience an adverse event after discharge and up to two thirds can be medication related²
- Medication confusion and nonadherence drives readmissions, morbidity, and healthcare costs³
- Pharmacist-led counseling reduces readmissions and ED visits and improves adherence^{4,5}

Problem Statement

- Internal Medicine doctors, advance practice providers (APPs), nurses, and pharmacists counsel patients asynchronously
- Each has different workflows to determine which patients should be counseled, when, and about what
- There is limited cross-disciplinary communication
- On average, Weill Cornell is not meeting the enterprise-wide target of ≥85% of patients discharged to home receiving pharmacist-led counseling (see Figure 1)

Root Causes



Project Goals

- Examine current inpatient pharmacy workflow and MD + APP practices for patient medication education
- Launch a pharmacy consult order to help improve workflow alignment and communication between Internal Medicine MDs + APPs and pharmacists
- Increase the percentage of patients who receive counseling about their medications from a pharmacist before they go home

Aim Statement

We aim to increase the percentage of adult inpatients discharged to home from Weill Cornell units 5N and 8C who receive medication education by a pharmacist to >85% between July 2026 and December 2026 by launching a pharmacy consult order

Study Design

- Prospective, mixed-methods intervention study
- 6-month pilot period
- Two intervention units (5N, 8C)
- Two control units (5C, 8N)
- Pre- and post-intervention analysis of Epic data and qualitative assessments of pharmacists' experiences with medication education and the consult order

Intervention

Inpatient consult order for pharmacist-led patient education about medication(s) (see Figure 4)

Figure 1: Percentage of patients discharged home from any unit at Weill Cornell Medical Center (WCMC) who received medication counseling by a pharmacist

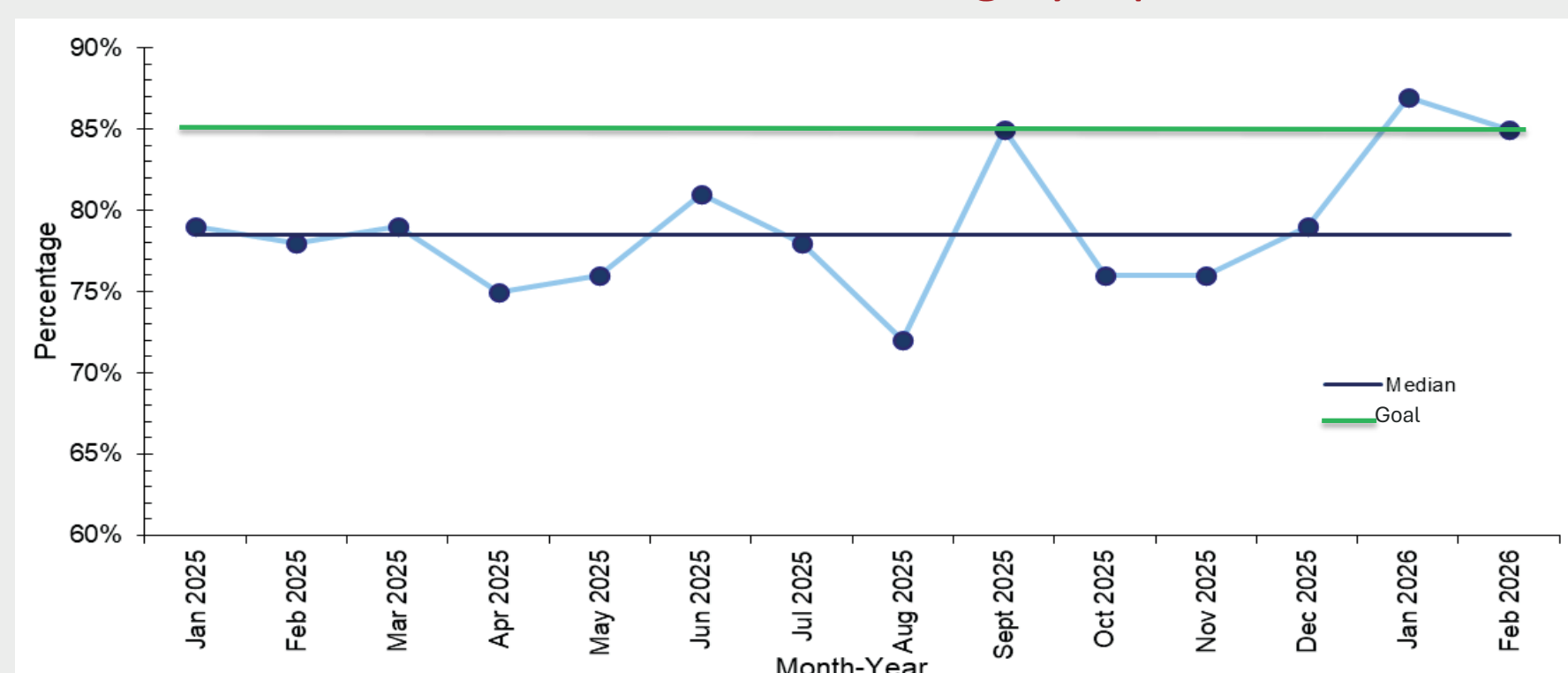


Figure 2: Percentage of patients discharged home from unit 5N at WCMC who received medication counseling by a pharmacist

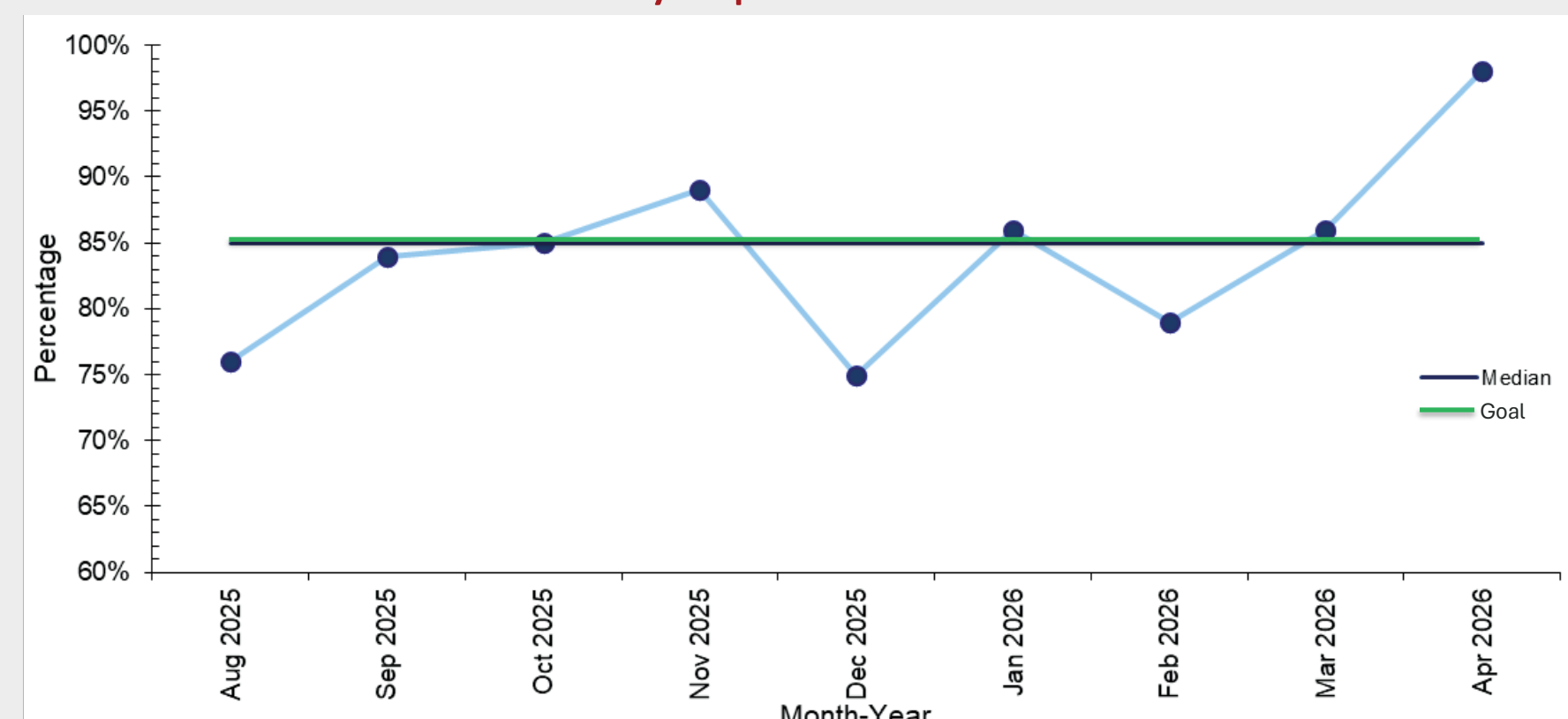


Figure 3: Percentage of patients discharged home from unit 8C at WCMC who received medication counseling by a pharmacist

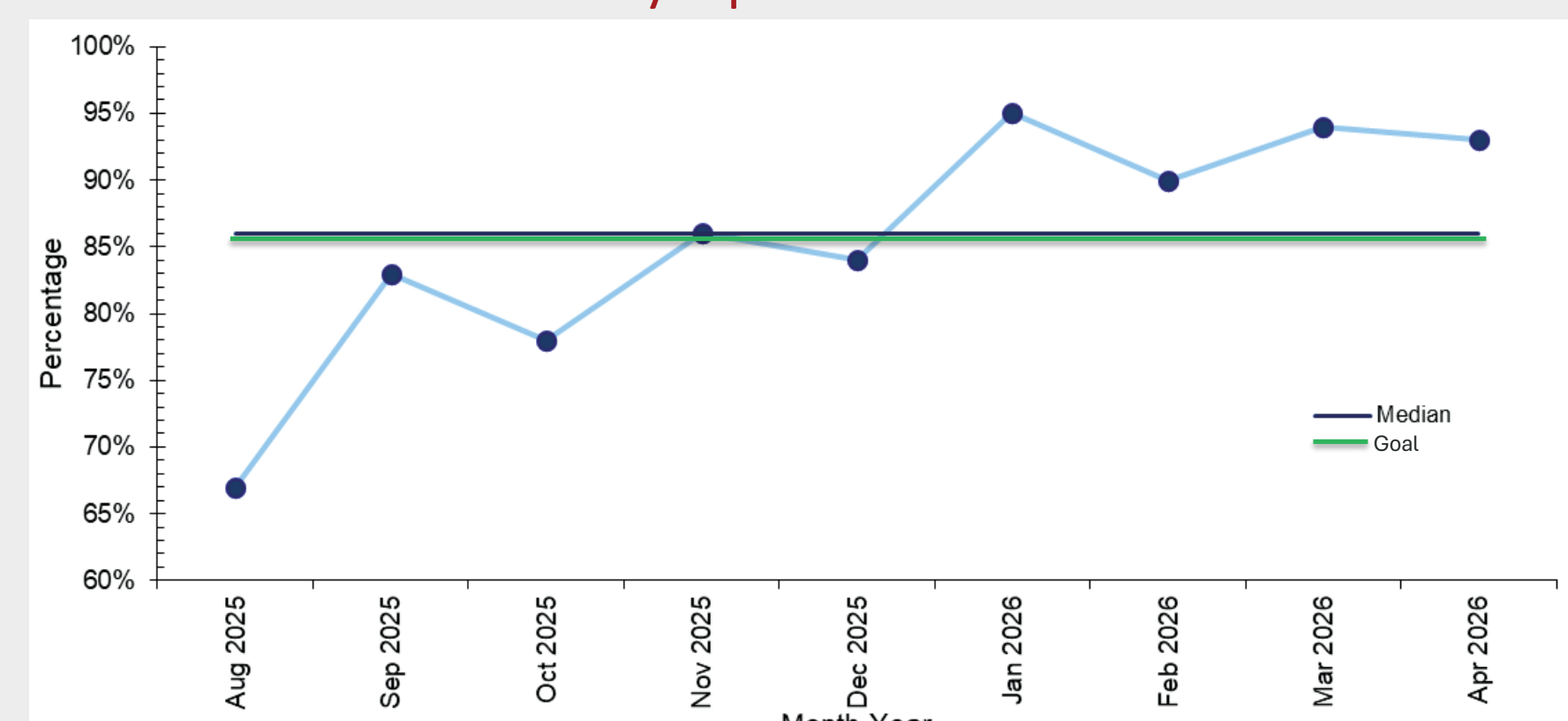


Table 1: Method of pharmacist education

Method of Instruction	Percentage
In-person	52.48%
Phone	19.86%
Telemedicine	0.64%
Unknown	39.55%

Table 2: Type of educational materials provided by pharmacists to patients during a counseling encounter

Type of education materials	Percentage
Disease state education materials	15.48%
Medication education materials	49.96%
Demo device	0.97%
Other	9.20%
Unknown	41.37%

Figure 4: Intervention

Measures

Outcome Measure
% of patients discharged to home who received medication counseling from a pharmacist on units 5N and 8C (see Figures 2 and 3)
Process Measures
pharmacy consult orders
consult notes
% of patients discharged to home who received medication counseling from a pharmacist + had a consult order
% of patients discharged to home who received medication counseling from a pharmacist + had a consult order + were on an Internal Medicine service
Balancing Measures
Time between pharmacy consult order placed and consult note written in Epic
Topics discussed during a pharmacist counseling encounter
Pharmacists' experiences with the pharmacy consult order

Challenges

- Complexity of the medication education process, involving multiple stakeholders, touchpoints, and workflows
- Data fragmentation across documentation systems, limiting efficient data capture and analysis
- Multi-level governance and approval processes for Epic modifications
- Competing operational demands impacting timelines for Epic build and implementation

Next Steps

- Finalize pharmacist workflow and Epic integration (e.g., notes, notifications, tracking columns)
- Train 5N and 8C pharmacists on consult process
- Launch Internal Medicine provider education and awareness campaign
- Build sustainable data and evaluation infrastructure with QIA data team
- Conduct baseline qualitative assessment of pharmacists' experiences with medication education
- Go-live!

References

- 1) Forster AJ, Murff HJ, Peterson JF, Gandhi TK, Bates DW. The incidence and severity of adverse events affecting patients after discharge from the hospital. *Ann Intern Med.* 2003;138(3):161-167. doi:10.7326/0003-4819-138-3-200302040-00007
- 2) Sani Y, Torkamandi H, Gholami K, Hadavand N, Javadi M. Role of pharmacist counseling in pharmacotherapy quality improvement. *J Res Pharm Pract.* 2016;5(2):132-137. doi:10.4103/2279-042X.179580
- 3) Becker C, Zumburn S, Beck K, et al. Interventions to Improve Communication at Hospital Discharge and Rates of Readmission: A Systematic Review and Meta-analysis. *JAMA Netw Open.* 2021;4(8):e2119346. Published 2021 Aug 2. doi:10.1001/jamanetworkopen.2021.19346
- 4) Kelly WN, Ho MJ, Bullers K, Klocksieben F, Kumar A. Association of pharmacist counseling with adherence, 30-day readmission, and mortality: A systematic review and meta-analysis of randomized trials. *J Am Pharm Assoc (2003).* 2021;61(3):340-350.e5. doi:10.1016/j.japh.2021.01.028
- 5) Kelly WN, Ho MJ, Smith T, Bullers K, Kumar A. Association of pharmacist intervention counseling with medication adherence and quality of life: A systematic review and meta-analysis of randomized trials. *J Am Pharm Assoc (2003).* 2023;63(4):1095-1105. doi:10.1016/j.japh.2023.04.024

Background/Problem Statement

Point of Care Ultrasound (POCUS) is becoming widely adopted as a tool to enhance diagnostic accuracy and clinical decision-making

- decreases the need for formal imaging, length of stay in ED, and overall hospital costs
- improves patient satisfaction and perceived care efficiency regardless of user's skill level

Only 35% of internal medicine (IM) residency programs have a structured POCUS curriculum

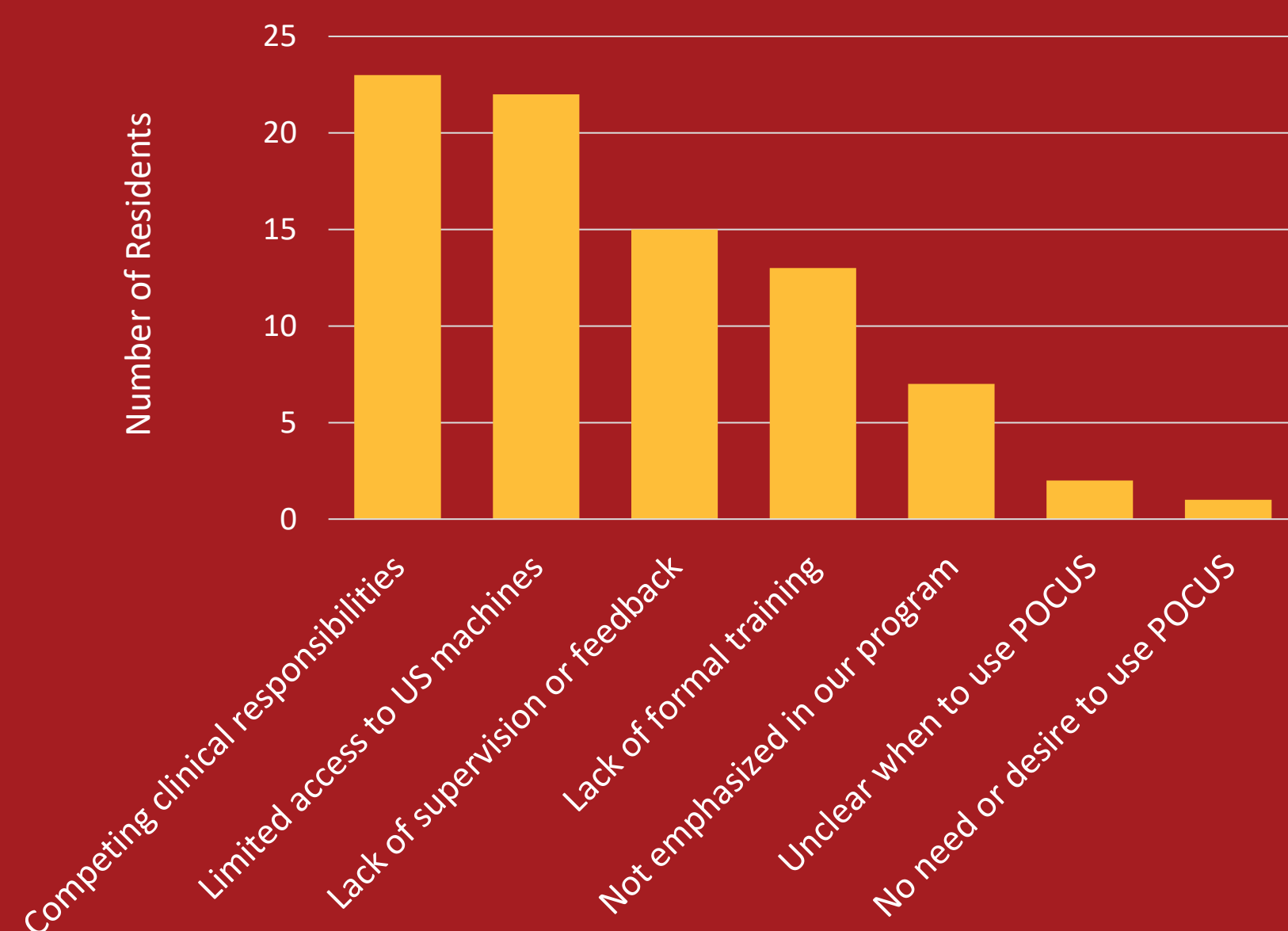
The NYP-WCM internal residency program has very few formalized opportunities to learn POCUS

POCUS Needs Assessment Survey 5/2025

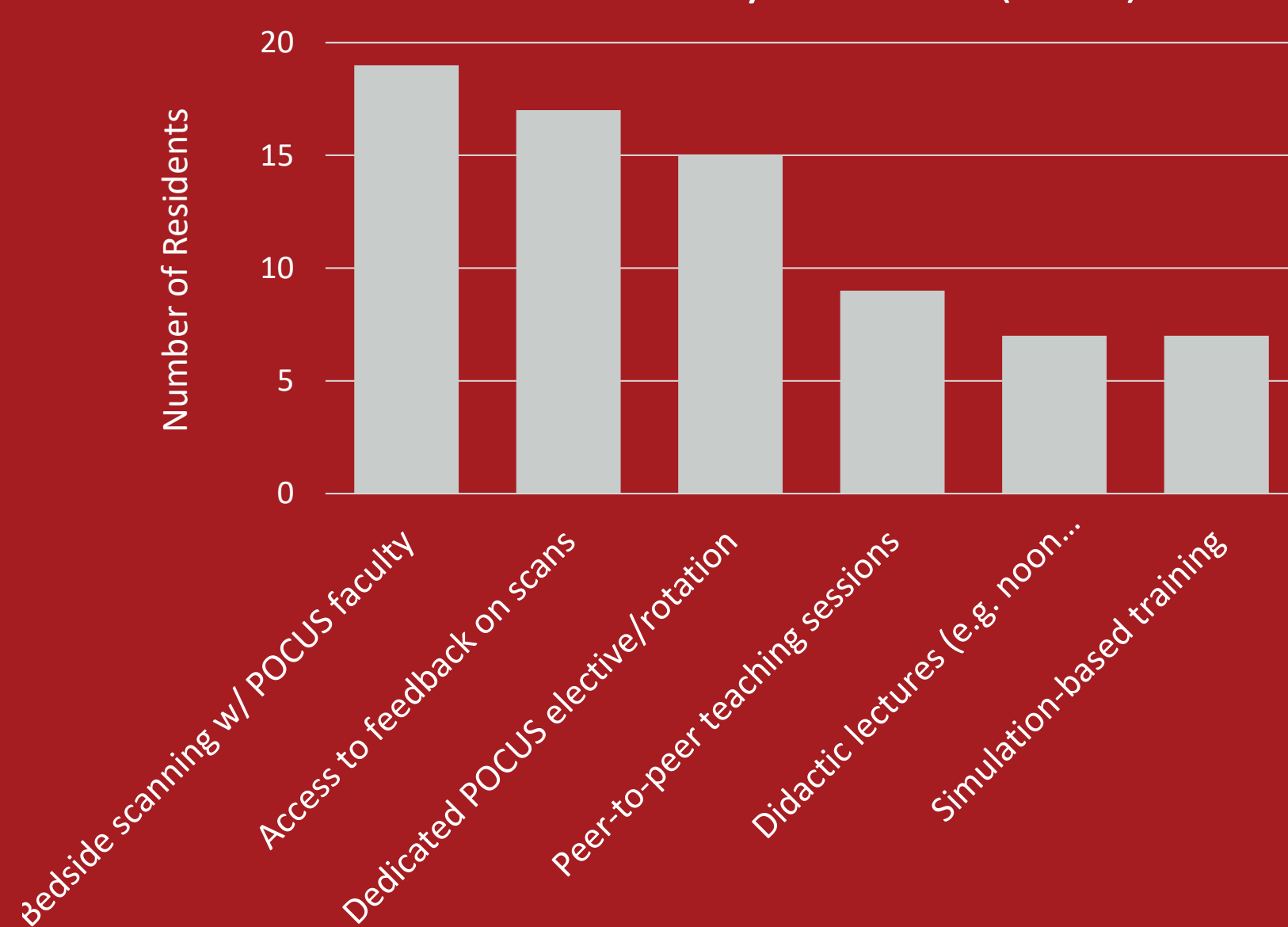
N = 27 (21% of residency) | 13 PGY1, 11 PGY2, 3 PGY3

- Over 80% of residents reported some sort of POCUS education exposure during residency
- Despite this, *majority of residents were "not confident at all" or "slightly confident"* in independently performing cardiac (59%), abdominal (66%), or renal/bladder (69%) POCUS
- *7% or fewer felt "very confident"* in performing POCUS for any application
- *79% "very interested" or "extremely interested" in receiving additional POCUS education* (the rest indicated "moderately interested")

Barriers to POCUS use in IM residents (n=27)



Most helpful learning formats for developing POCUS skills identified by residents (n=24)

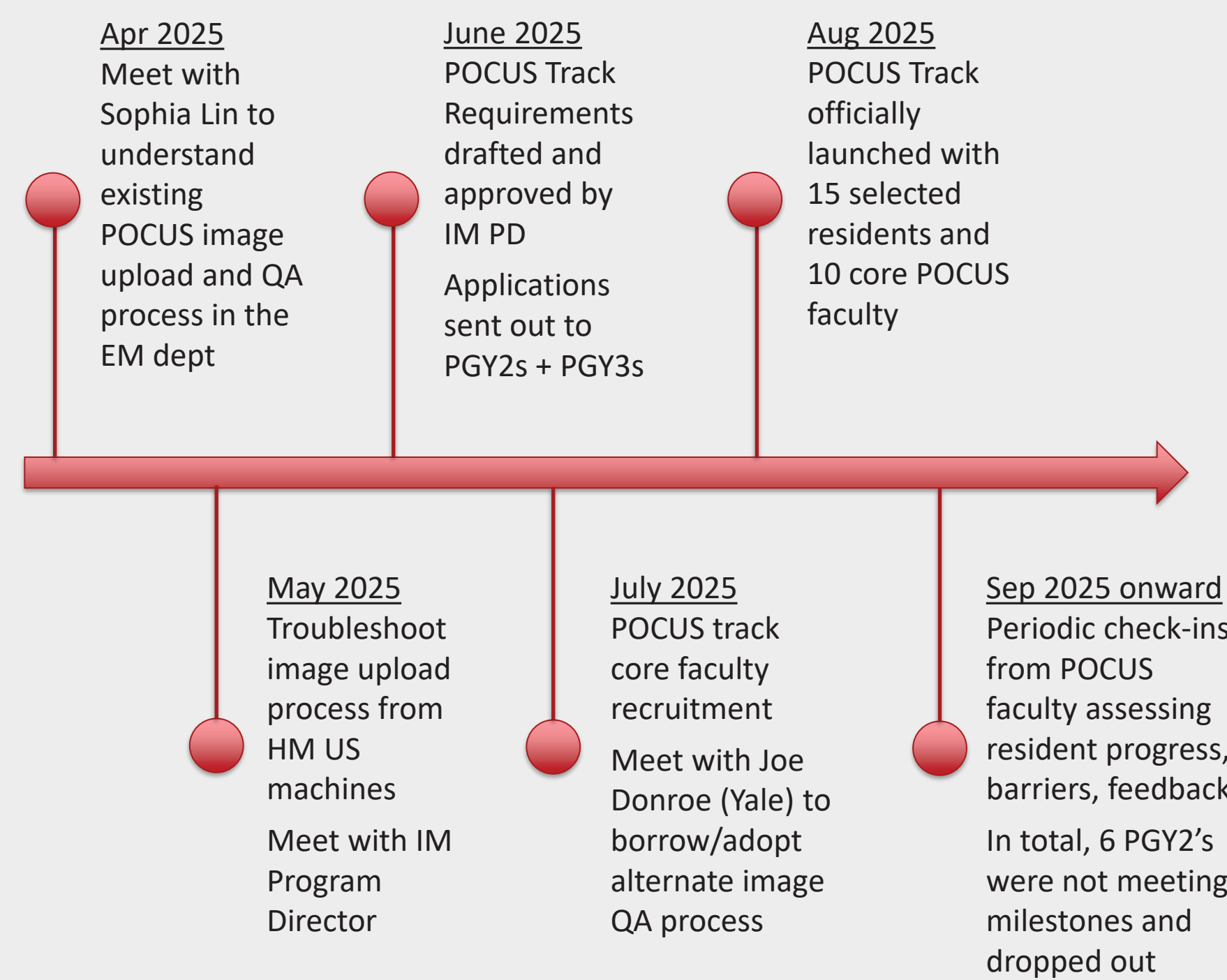


Aim Statement

Internal medicine residents participating in the POCUS track will have at least 80% of cardiac, lung, and renal image submissions be of acceptable quality for their portfolios, and will correctly interpret cardiac, lung, and renal images at least 80% of the time, for studies submitted April-June 2026

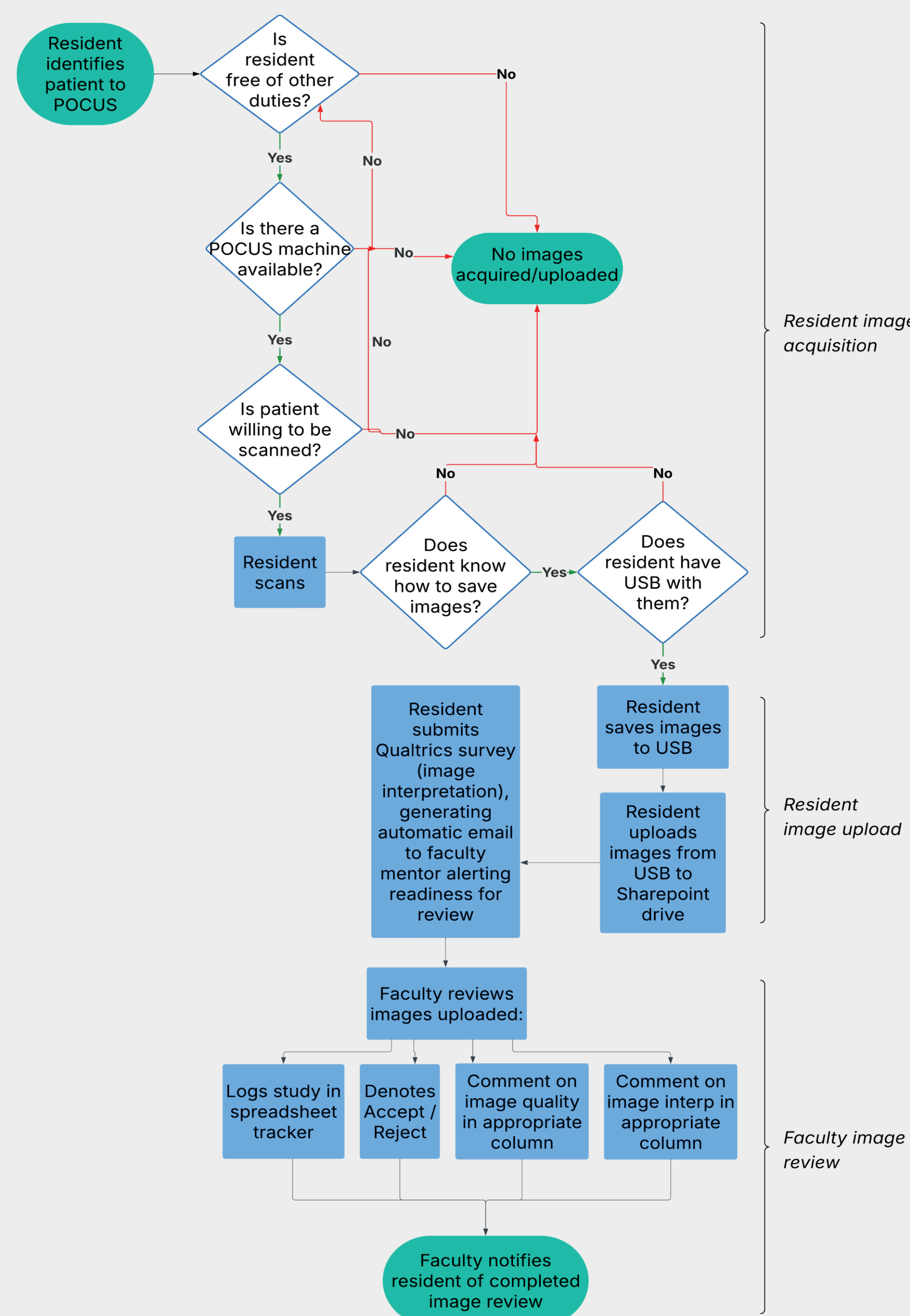
Design/Methods

Building and Implementing a POCUS Distinction Track

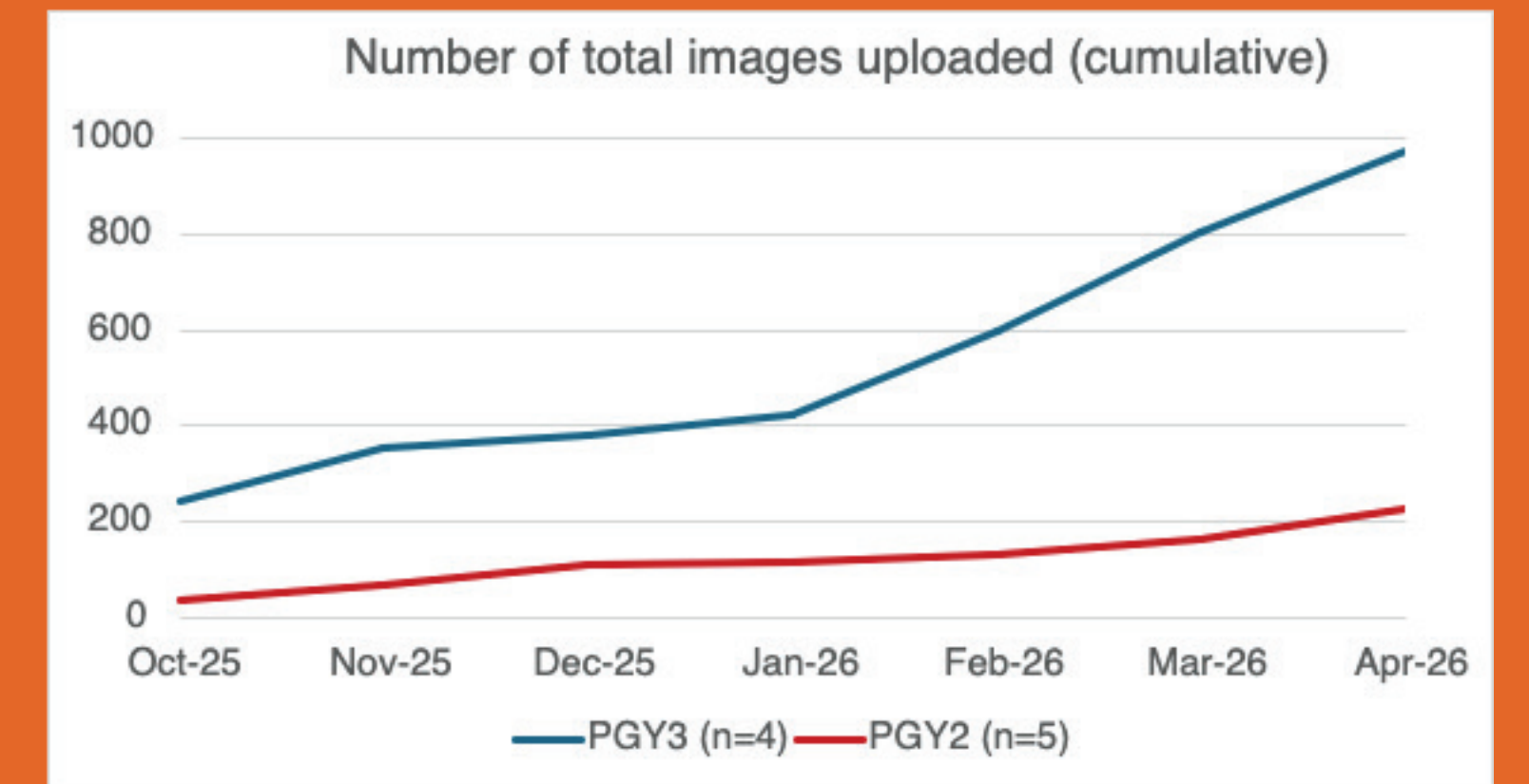


The largest component of the POCUS track is the completion of a portfolio consisting of 248 quality images across pre-defined organ systems

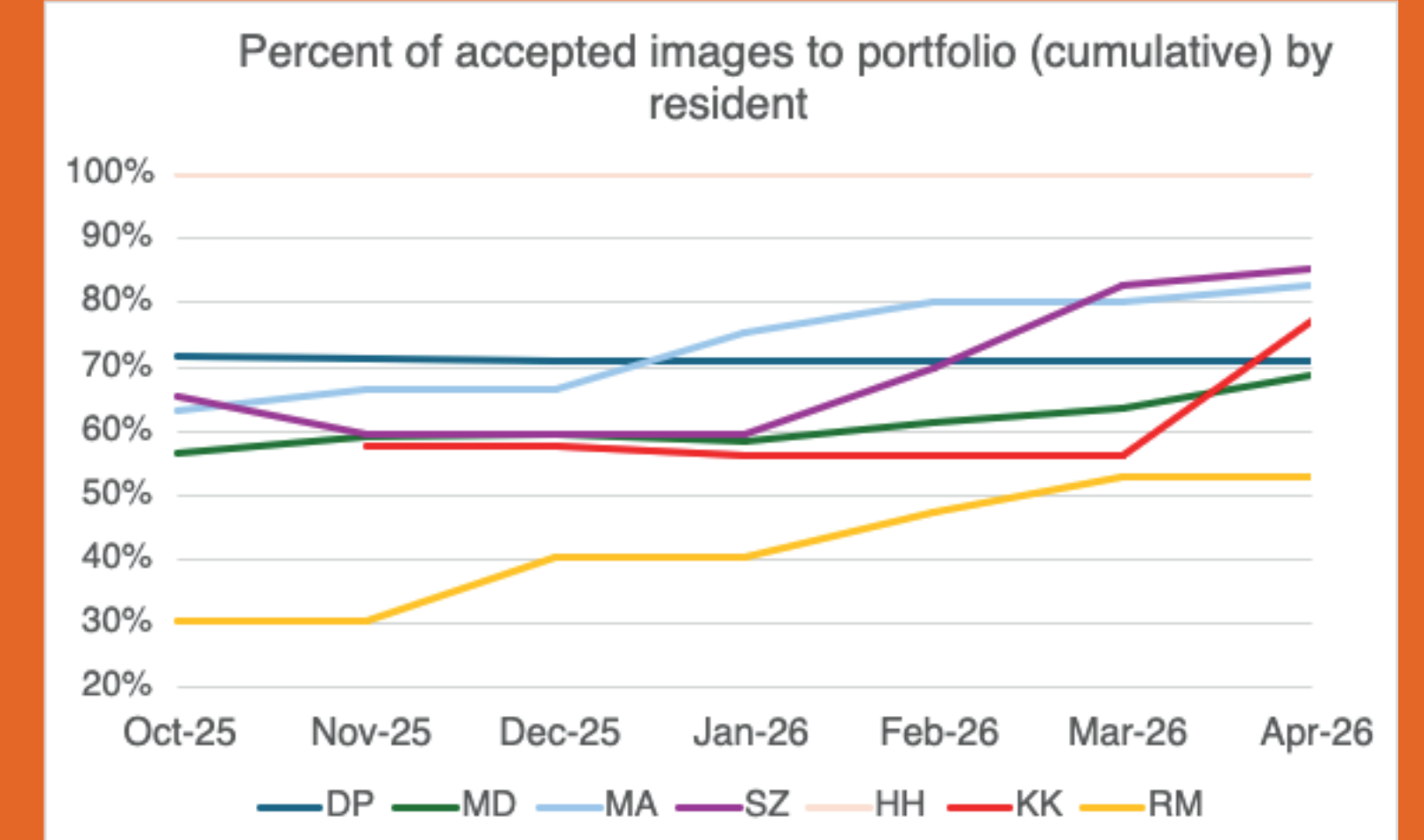
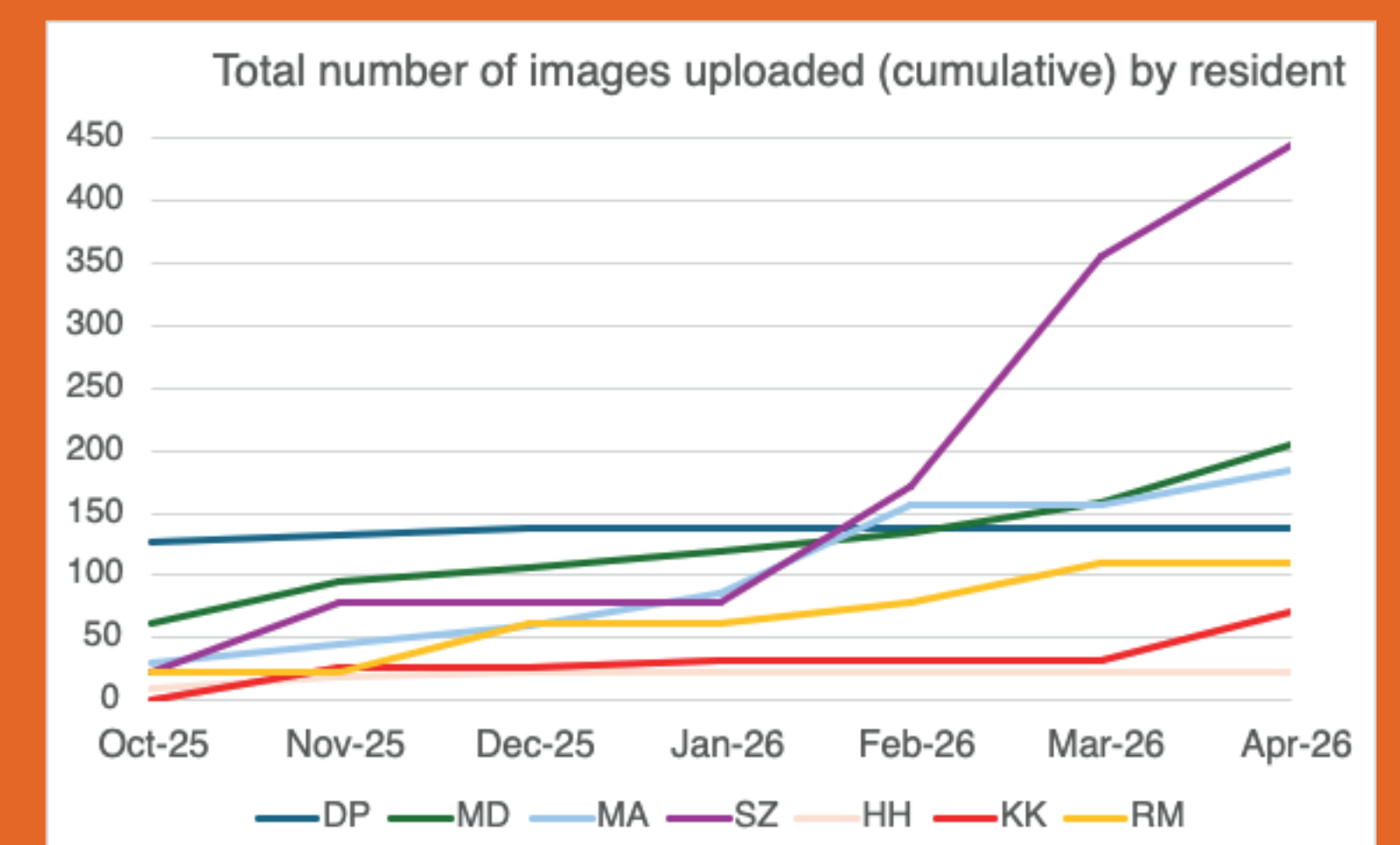
Process map for asynchronous image review



Results



Excludes the six PGY2's who dropped from the POCUS track



PGY3's are in cool colors (DP, MD, MA, SZ) and PGY2's are in warm colors (HH, KK, RM). Two PGY2's are not displayed due to uploading 0 images during this entire period. Increases in the percent of accepted images coincided with periods of increased image uploads (and presumably, more frequent scanning)

Conclusions/Lessons Learned

- Successfully created a curriculum for motivated residents to develop POCUS skills by providing a structured mechanism for faculty to provide feedback iteratively
- Significant barriers remain in the resident image acquisition and image upload steps
- Faculty found image review process cumbersome which led to variable and often significant lag time from image submission to image review

Next Steps

- Survey collecting qualitative data on POCUS track (currently in progress)
- Culture building among POCUS track residents to encourage increased scanning
- Incentivize residents to upload scans earlier
- Streamline image submission and review process (under development, via MS forms)

Using Epic to streamline care for patients receiving Outpatient Parenteral Antimicrobial Therapy (OPAT)

Weill Cornell Medicine Quality Improvement and Patient Safety Poster Symposium

Yesha Malik MD | May 20, 2026

Problem Statement

OPAT related documentation and communication is fragmented and not standardized. Treatment plans, lab reports, event documentation (including staff outreach for labs, patient queries etc.) occurs in multiple locations both inside and outside of the electronic medical record (EMR). There is no standardized way to document treatment plans and other events related to OPAT. In addition, there is no singular centralized location where all providers and clinical administrative staff can access data related to OPAT.

Objective/Aim Statement

Standardize OPAT documentation and workflows with a customized care navigator tool in Epic called OPAT Episodes of Care (EOC). This tool allows us to create standardized treatment plans using a SmartForm. It also creates a real time customized report that allows to track labs and follow up visits for each patient actively receiving OPAT.

We aim to increase OPAT related documentation (weekly labs, clinically significant events, ID follow up visits) at NYP/WCM and NYP/LMH by 50% by August 2026 as compared to 8/2025 - 3/2026.

Design/Methods

Interventional QI study with iterative PDSA cycles

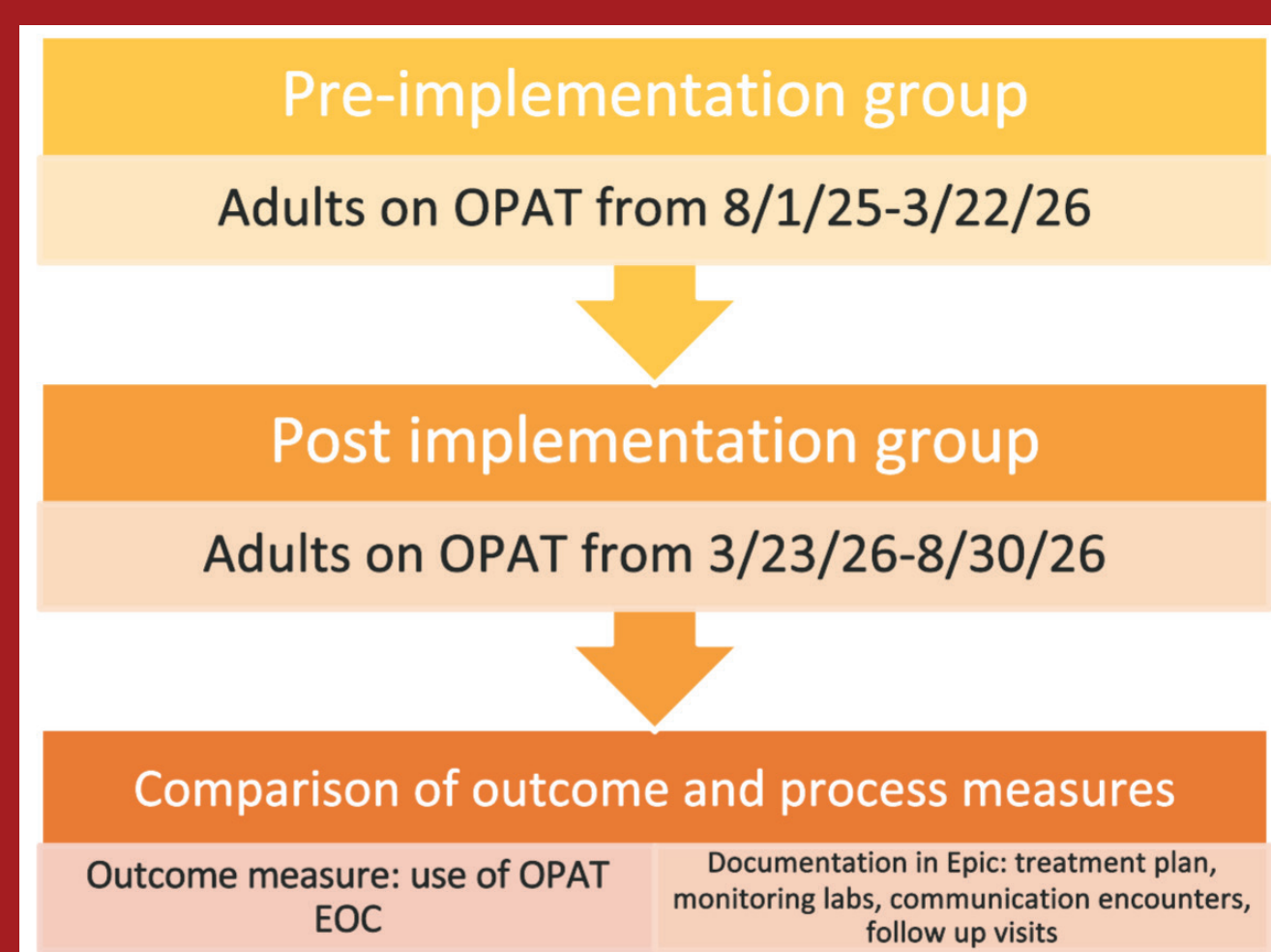


Table 1: Baseline demographic and clinical characteristics

Characteristic	N=183	Characteristic	N=183
Age	64.1	Insurance	
Gender		Commercial	41 (22%)
Female	72 (39%)	Medicare	108 (59%)
Male	111 (61%)	Medicaid	31 (17%)
Race		Worker's Comp	1 (0.5%)
Asian	19 (10%)	Uninsured/Self Pay	0
Black or African American	30 (16%)	Unknown	2 (1%)
Declined	11 (6.0%)	Discharge location	
Other combinations not described	24 (13%)	LMH	15 (8.2%)
White	99 (54%)	WCMC	168 (91.8%)
Ethnicity		Location of OPAT	
Declined	18 (9.8%)	Home	128 (69.9%)
Hispanic or Latino or Spanish origin	26 (14%)	SNF/SAR	54 (29.5%)
Not Hispanic or Latino or Spanish origin	139 (76%)	Infusion Center	0

Chart 1: P chart of the percent of patients with lab in Epic

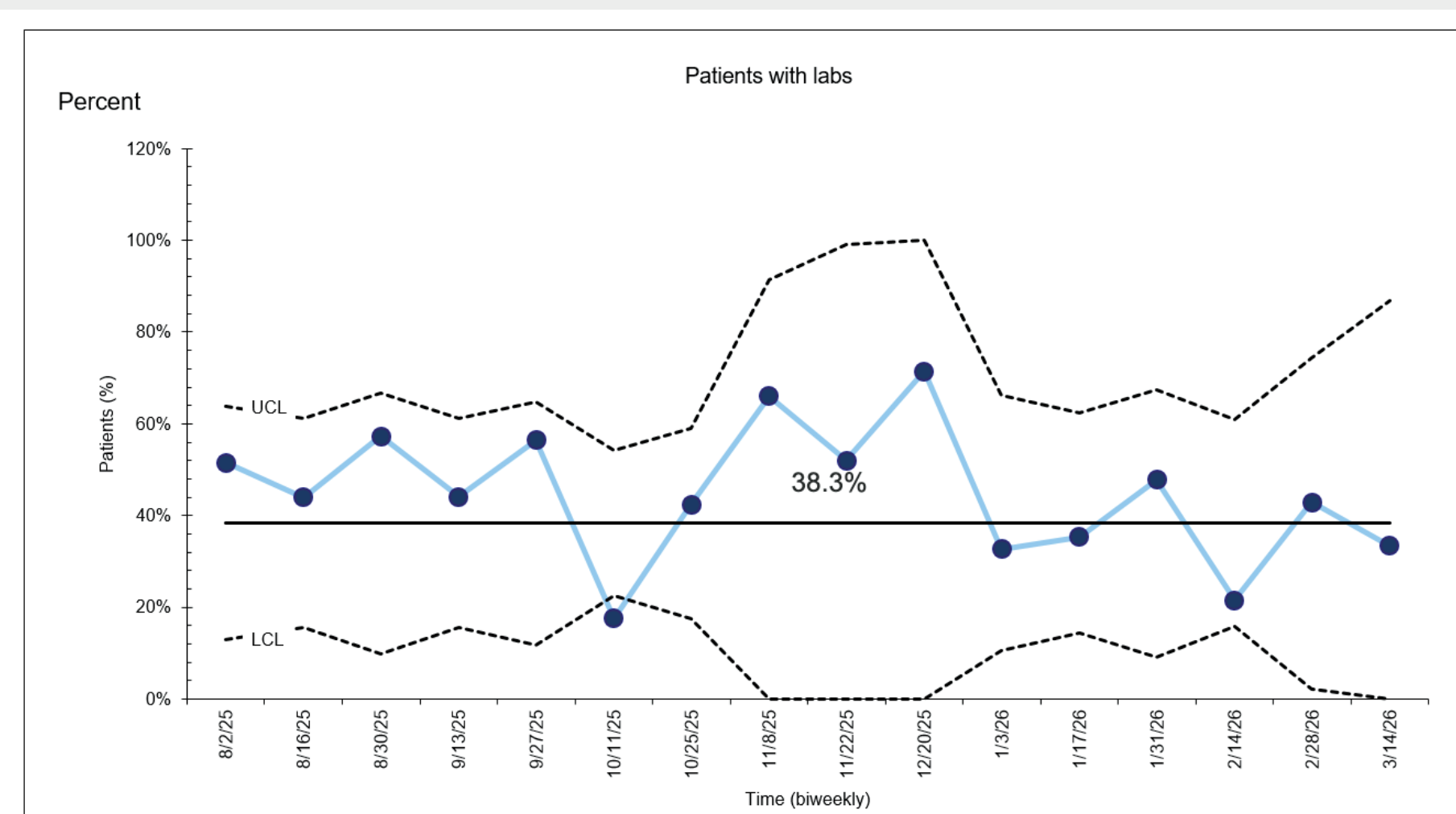


Chart 2: P chart of the percent of patients with event documentation in Epic

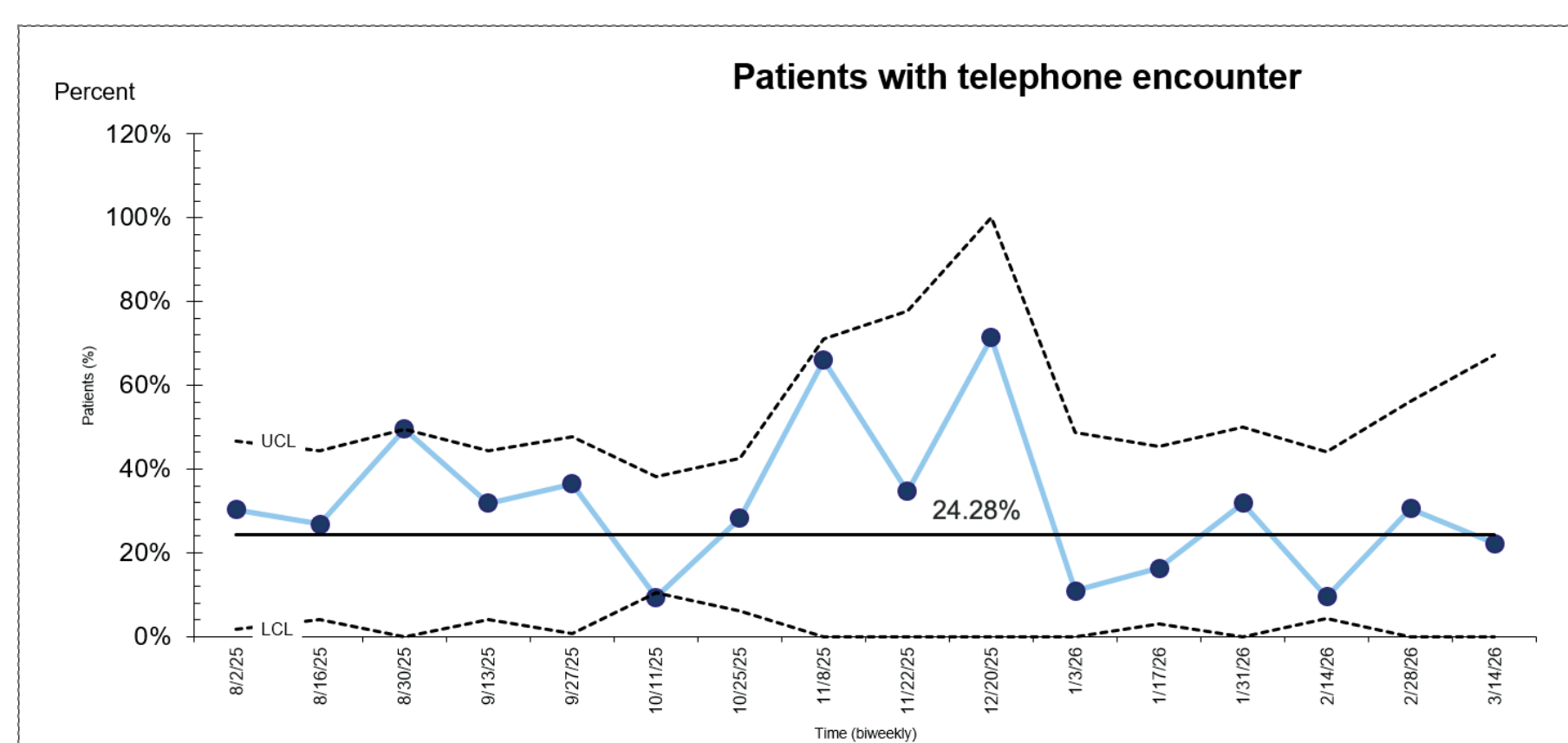
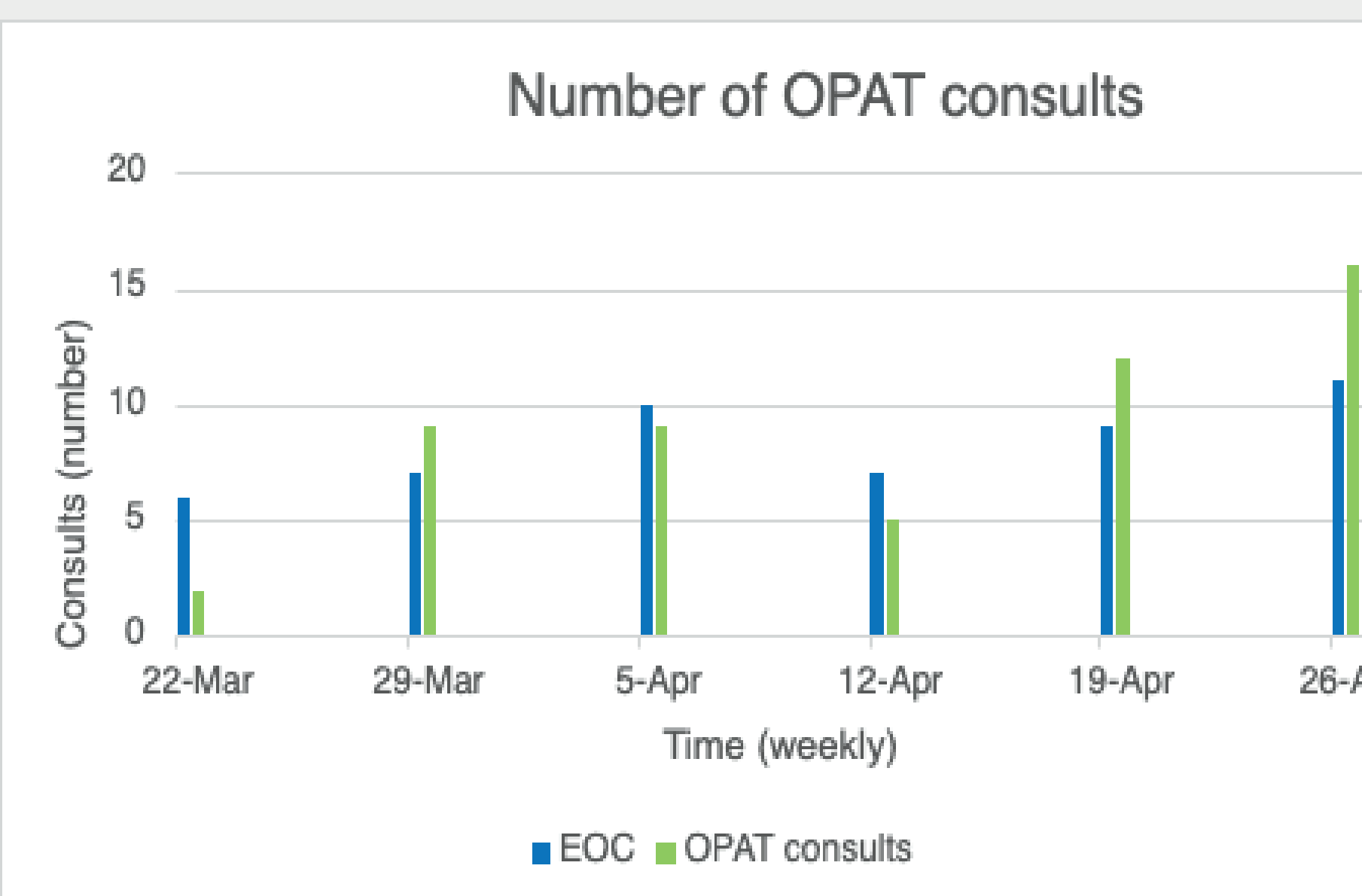


Chart 3: Number of consults post implementation using OPAT EOC



Results

Baseline cohort

Our baseline patient cohort included 183 patients discharged on OPAT between 8/1/25 and 3/23/26. The median age was 64 and a majority were male (61%). More than half were enrolled in Medicare insurance (59%). Almost 70% of the cohort completed their OPAT therapy at home with contracted third-party infusion company and nursing services (see table 1). There are a median of 28.8 OPAT patients monthly who require outpatient monitoring and follow up.

At baseline, 38.3% of patients on OPAT had lab reports documented in Epic (see Chart 1). Twenty four percent of patients had an OPAT related event documented in Epic (see Chart 2). Almost 70% of patients had an ambulatory follow up visit with ID during their treatment course or within 8 weeks of completion.

Conclusions/Lessons Learned

Improvement of OPAT related documentation is a complex and multifaceted issue. Thus far, we have seen positive uptake of our OPAT EOC tool within our division which is promising (Chart 3). It is an iterative process, and we will continue providing training, refining workflows, and soliciting feedback so that we can appropriately shape our intervention to create incremental improvement over time.

Next Steps

- Increasing uptake of OPAT EOC
- Ongoing education, collaboration to create a workflow tailored to our needs and to feedback
- Ongoing analysis of longitudinal data
- Continued efforts to improve OPAT care and delivery via use of Epic EMR

Special thanks to : Brock Daniels MD, Harjot Singh MD, Michael Henry MD, Ole Vilemeyer MD, Yuqing Qiu MS, Sajjad Abedian, Evan Sholle, Zhuoqing Li BS

Problem Statement

Due to federal limitations on opiate production and pharmacy dispensation caps, patients discharged from the hospital with cancer pain may have difficulty renewing their prescribed pain medications.

Patients with cancer frequently experience moderate to severe pain requiring opioid therapy

Transitions of care (hospital → home) are a high-risk period for inadequate pain control

Suboptimal discharge prescribing may lead to:

Poor symptom control Emergency department visits Hospital readmissions for pain

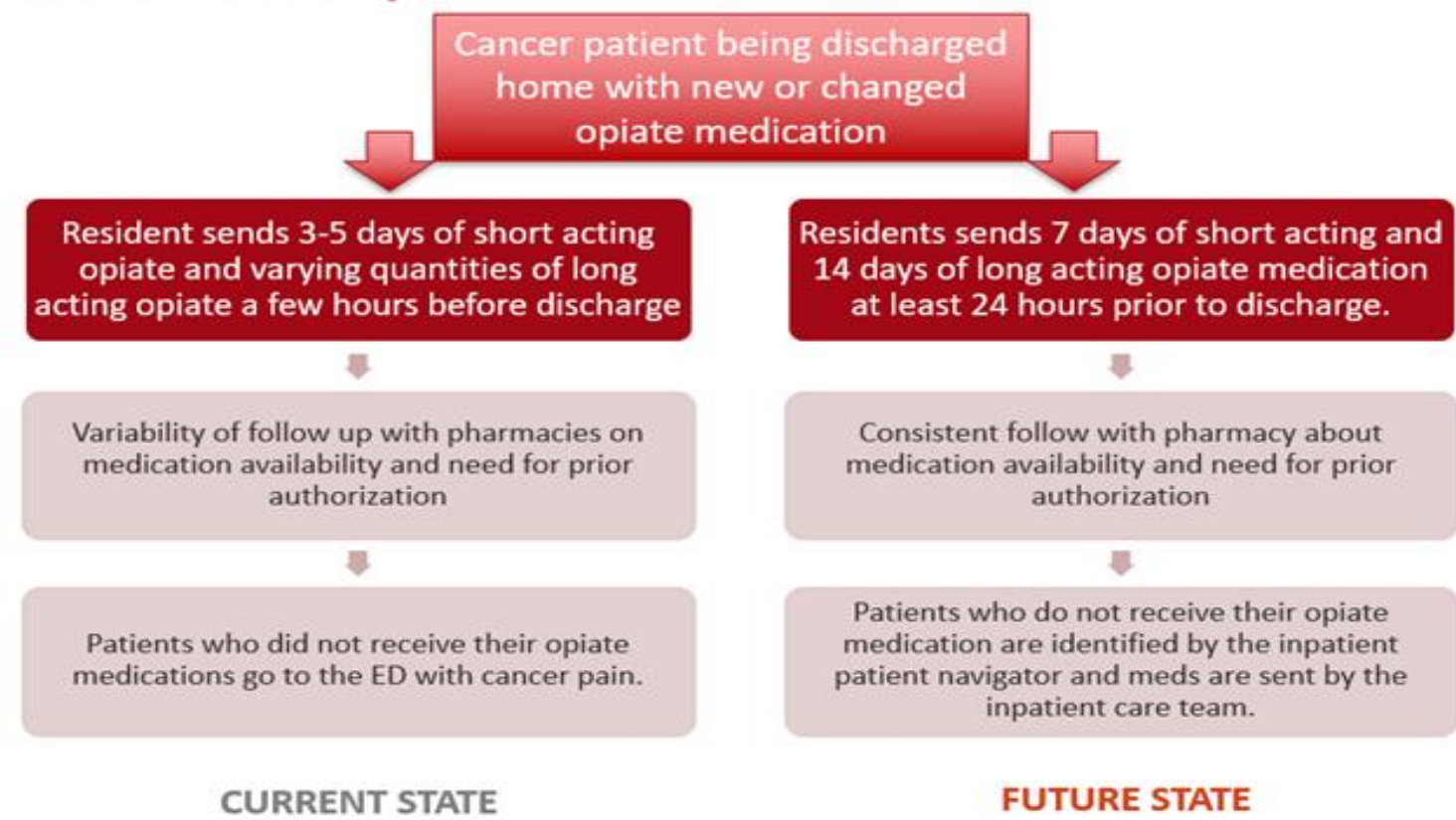
Project Aim

Improve appropriate opiate prescribing by 20% and reduce avoidable Emergency Room visits related to cancer pain by 20% for cancer patients discharged from a pilot inpatient oncology unit at NYP BMH over a 4 month period through the use of an Oncology Transitions of Care Program.

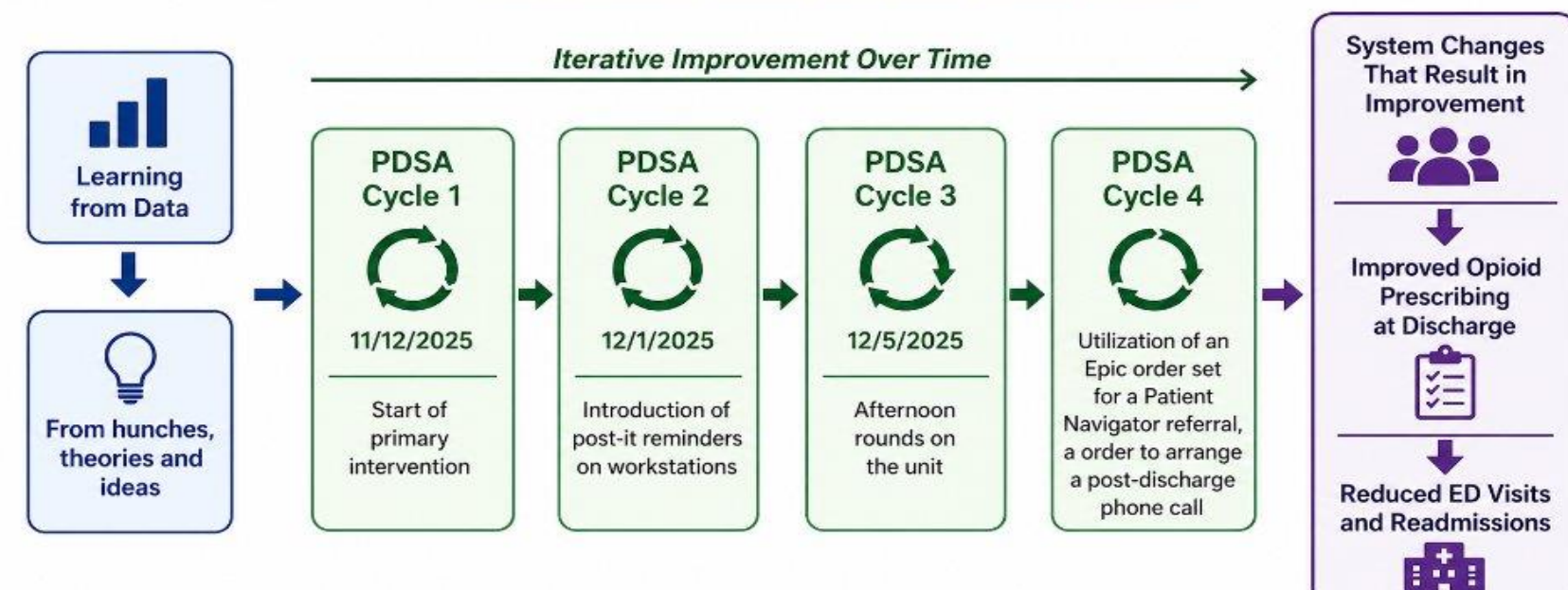
Methods

- Pre-intervention chart review of 55 patient encounters in an oncology unit at NYP BMH between June 2024 and August 2025.
- Post-intervention data collection (total of 27 patient encounters) between Nov 2025 and March of 2026.
- Utilization of Oncology transitions of care program.
 - Early discharge planning (>24 hours before d/c)
 - Appropriate opiate prescribing (7 days short acting and 14 days long acting opiate prescriptions.)
 - Interdisciplinary collaboration with pharmacy, nursing, case management in regards to med availability and need for prior authorization
 - Post discharge phone call by the inpatient patient navigator team 7-10

Process Map

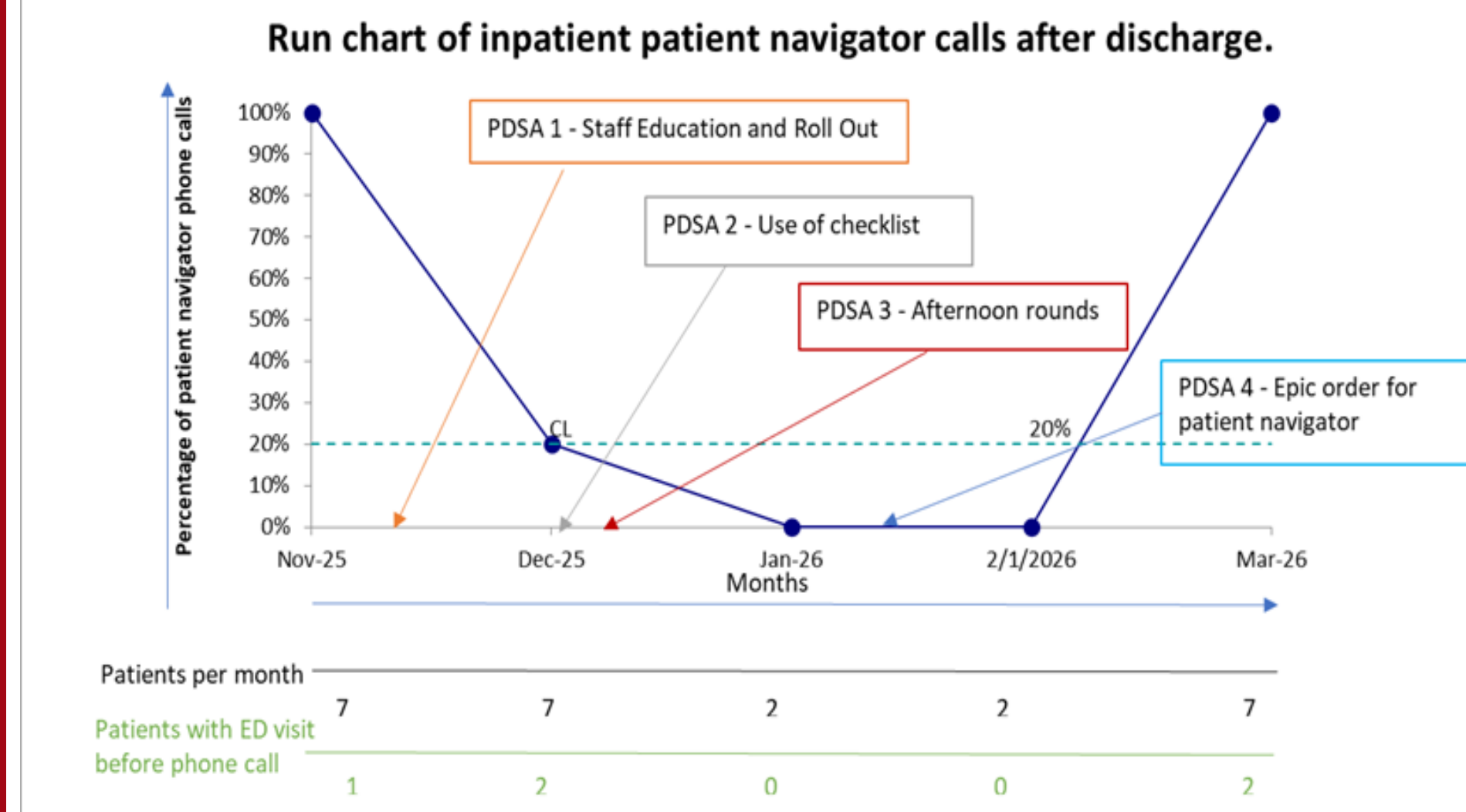


Iterative PDSA Cycles to Improve Opioid Prescribing at Discharge for Patients with Chronic Cancer Pain



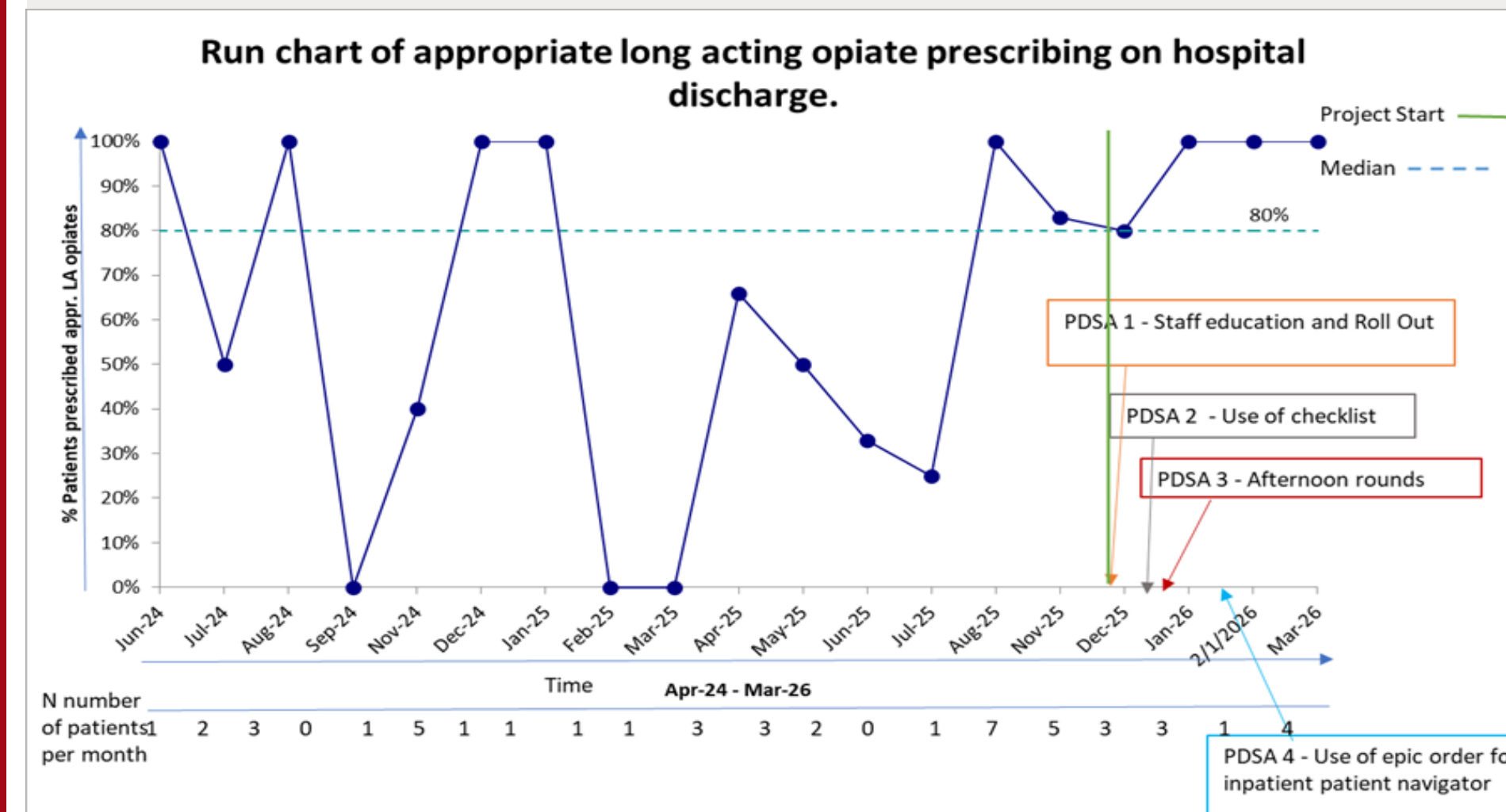
Results

Process Measures

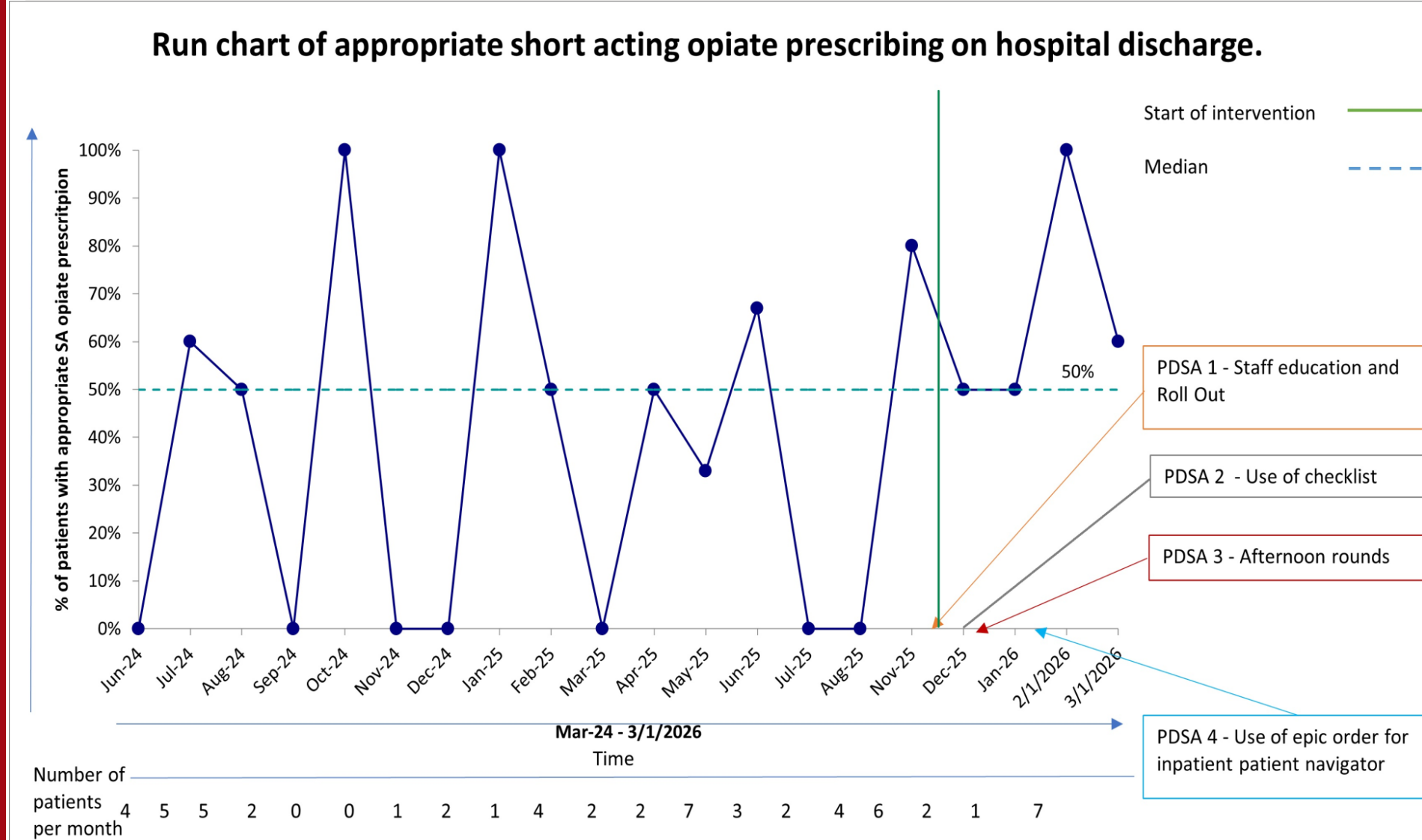


- Summary** – In this run chart we are tracking how often patients received a phone call from in the inpatient patient navigator after discharge.
- Obstacles:** difficulty sharing project patient list with inpatient patient navigators
- Solution** – Use of epic inpatient navigator order
- Result** – Improved utilization of post discharge phone call
- Limitations of data:** low patient numbers, will need to track the data over more time.

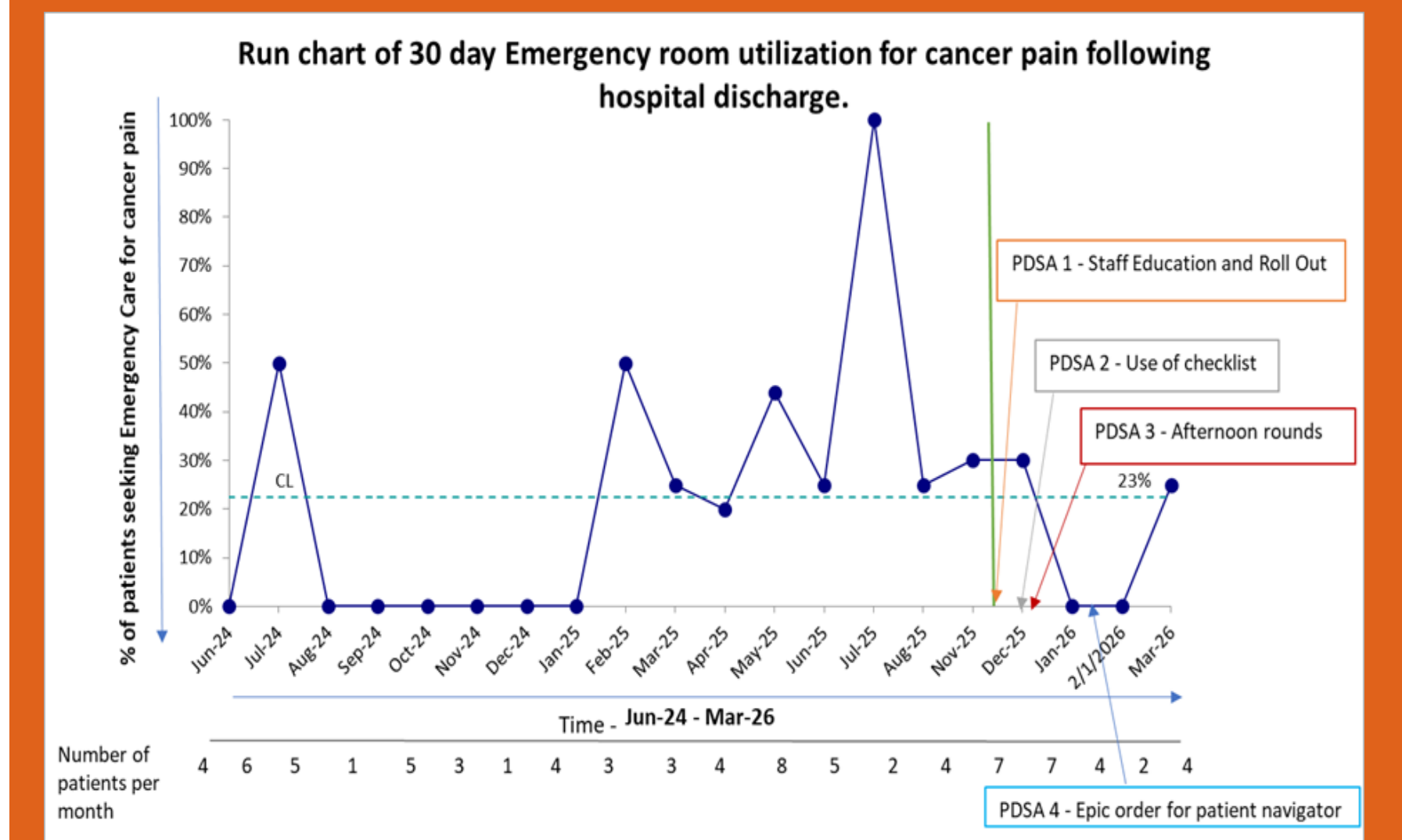
Outcome Measures



- Summary** - In this run chart we tracking long acting opiate prescribing trends.
- Obstacle** – while improving prescribing practices we did not achieve improve dispensation of the medication.
- Solution** – working on a improved communication tool with pharmacy using the epic chat.
- Results** - This run chart shows improvement of prescribing practices. Insufficient data to prove project aim. Numbers of patients per month are low ranging between 0 and 7.



- Summary** – This run chart track appropriate short acting opiate prescribing. (7 or more days).
- Obstacles** – ongoing shortages of opiates in the hospital and community pharmacies
- Solutions** – Working on oncology to create a collaborative agreement with pharmacies to increase their opiate dispensation quotas.
- Result:** Improved appropriate prescribing of short acting opiates. Insufficient data as patient numbers range from 0- 7 per month.



- Summary** - This is a run chart tracks avoidable utilization of the Emergency Room secondary to cancer pain within 30 days of discharge from the pilot unit.
- Obstacles/limitations** – ED utilization is a low/rare event and we are looking at small patient numbers.
- Result** - Overall, there are improving trends in use of the emergency room in the post intervention period. After further analysis of the patients who sought Emergency Room care for cancer pain, 50% of patients did so before 7 days after hospital discharge.

Conclusions/Learning Points

- The oncology transitions of care program requires an interdisciplinary approach and is a multi-step process which adds to the workload of front-line staff including doctors, nurses, case managers, and pharmacists. A simplified protocol will likely improve compliance and outcomes.
- Value of data is limited by small sample size, typically 2-6 patients per month. Higher patient numbers can be obtained once the project expands to other units.
- Earlier phone follow-up after hospital discharge (within 48 to 72 hours) may be more effective in preventing avoidable ED visits
- While opiates are being appropriately prescribed they are not always dispensed. Improved communication/collaboration with outpatient hospital pharmacy and community pharmacy will improve appropriate opiate dispensation.
- The study did not increase adverse effects due to opiates. (Balancing measure.)

Next Steps

- Communication pathway with retail pharmacy using epic chat: "BMH retail pharmacy."
- Use of community partnership pharmacies to improve successful opiate dispensation
- Use of Epic lists of admitted oncology patients with cancer pain to expand project to other hospital units.
- Revision and approval of practice advisory (OPA).
- Expanding the post discharge phone call to include outpatient oncology patient navigator teams to schedule post discharge phone call within 48 to 72 hours after discharge.
- Generate an epic smart list to support providers work flows.

Reducing Overutilization of low yield TTE with bubble in Stroke Rule-Out Patients

An Age-Based Approach to Improve Patient Selection and Reduce Unnecessary Testing

Annual Weill Cornell Medicine Quality Improvement and Patient Safety Poster Symposium

Sofya Kostanyan MD, Rubi Duran MD, Maurice Raffia MD, Aparna Dintakurti MD, Gabriella Jade Phillip MD, Regis Jefferson MD, Jaskaran Rangar MD, Maryna Skluit MD, Steve Brauer, Robert Kim, MD

May 2026

Problem Statement

Transthoracic Echocardiogram (TTE) with bubble and lower extremities dopplers are routinely ordered as part of stroke work to identify paradoxical emboli. However, detection of a patent foramen ovale (PFO) in patients over the age of 60 group rarely changes management. Early lower extremities dopplers prior to MRI leads to unneeded testing, patient discomfort, and increased healthcare cost.

Aim Statement:

To reduce inappropriate ordering of TTE with bubble and lower extremity dopplers **by 50%** in stroke rule out patients aged >60 at NYP Brooklyn Methodist Hospital by **March 2026**.

Design:

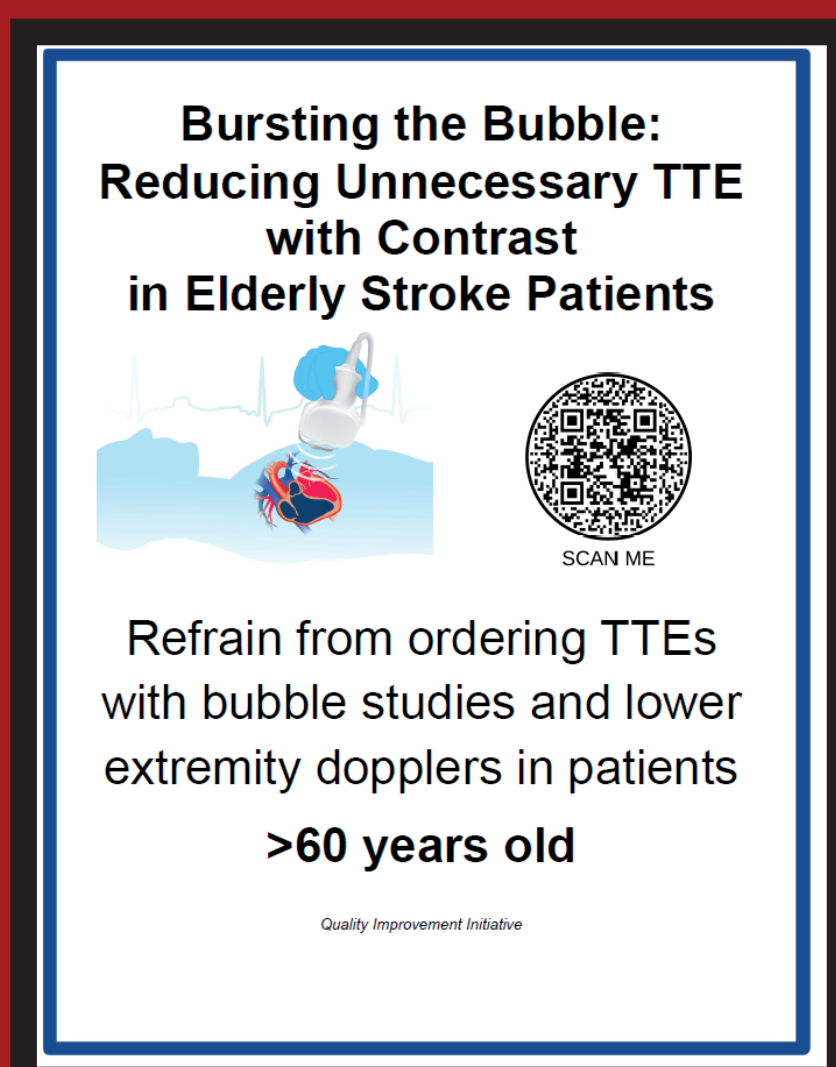
Single center, pre/post Quality Improvement initiative on the inpatient TIA/Stroke Rule-Out patients over the age of sixty.

Methods:

Patients that were admitted for stroke or TIA evaluation were identified using hospital based **Daily Stroke Tracker** and were entered into a secure Excel database for prospective analysis. The patients were then sorted by age criteria and data recorded from January 2024-December 2024, and from Aug 2025 – March 2025. Patients were excluded if they were younger than 60, had previously undergone a PFO evaluation, had a specialist-directed indication for bubble echocardiography or venous Dopplers (such as cryptogenic stroke without a clear source, structural heart disease evaluation, reduced ejection fraction, or hepatopulmonary syndrome), or had a clear indication for lower extremity study. Baseline retrospective data was assessed of patients admitted during 2024 and helped to establish the pre-intervention rate of testing.

Interventions:

- Visual reminder posters were placed at resident workstations (see below)
- Quarterly education sessions for residents
- Weekly reminder emails
- Bimonthly compliance reports
- Just in time feedback discussions with clinical teams.



Data was collected through EPIC chart review. For each eligible patient, we recorded whether a TTE with bubble study or lower extremity Dopplers were performed.

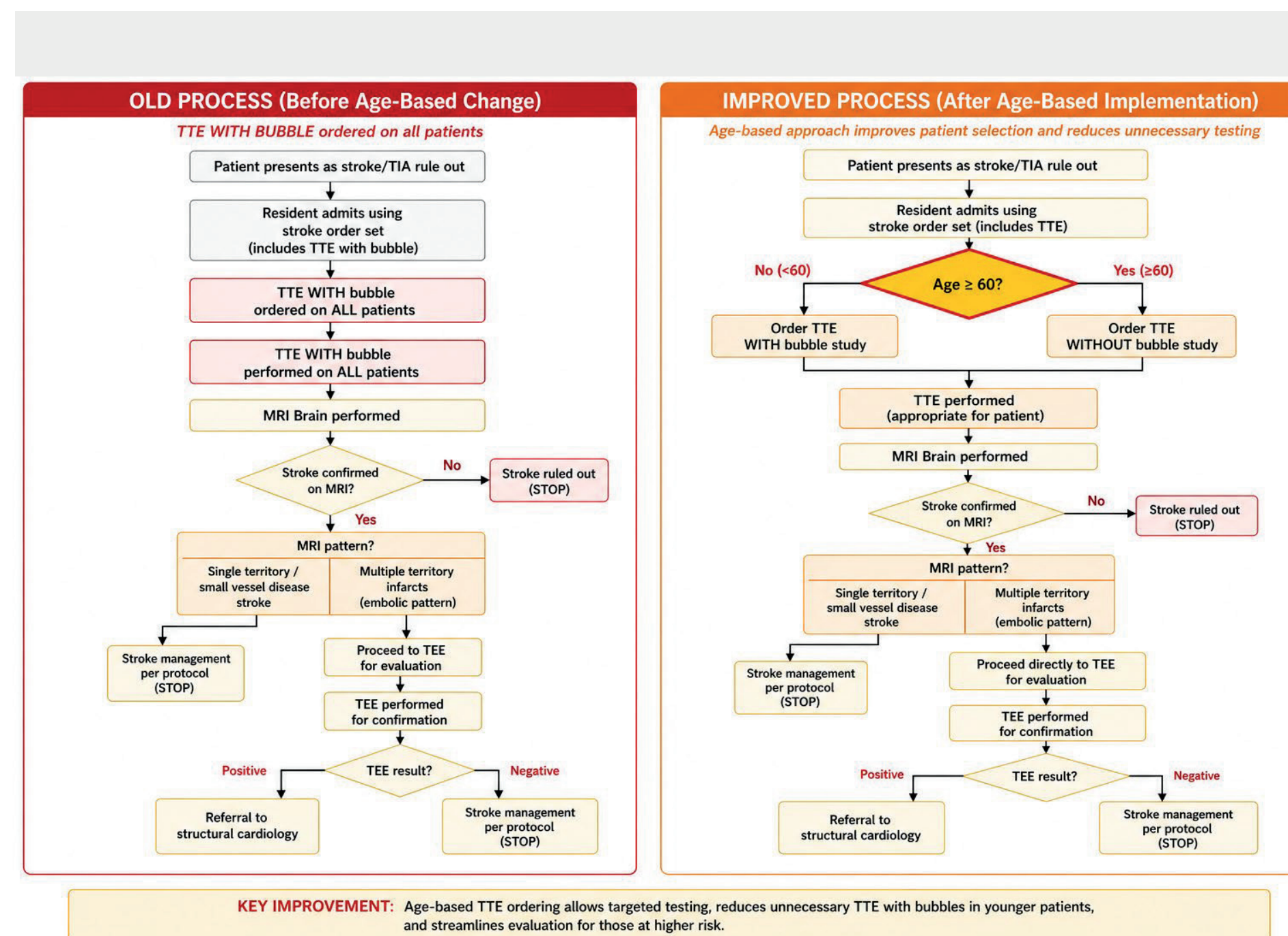


Figure 1. Process Map showing the test ordering flow from point of admission.

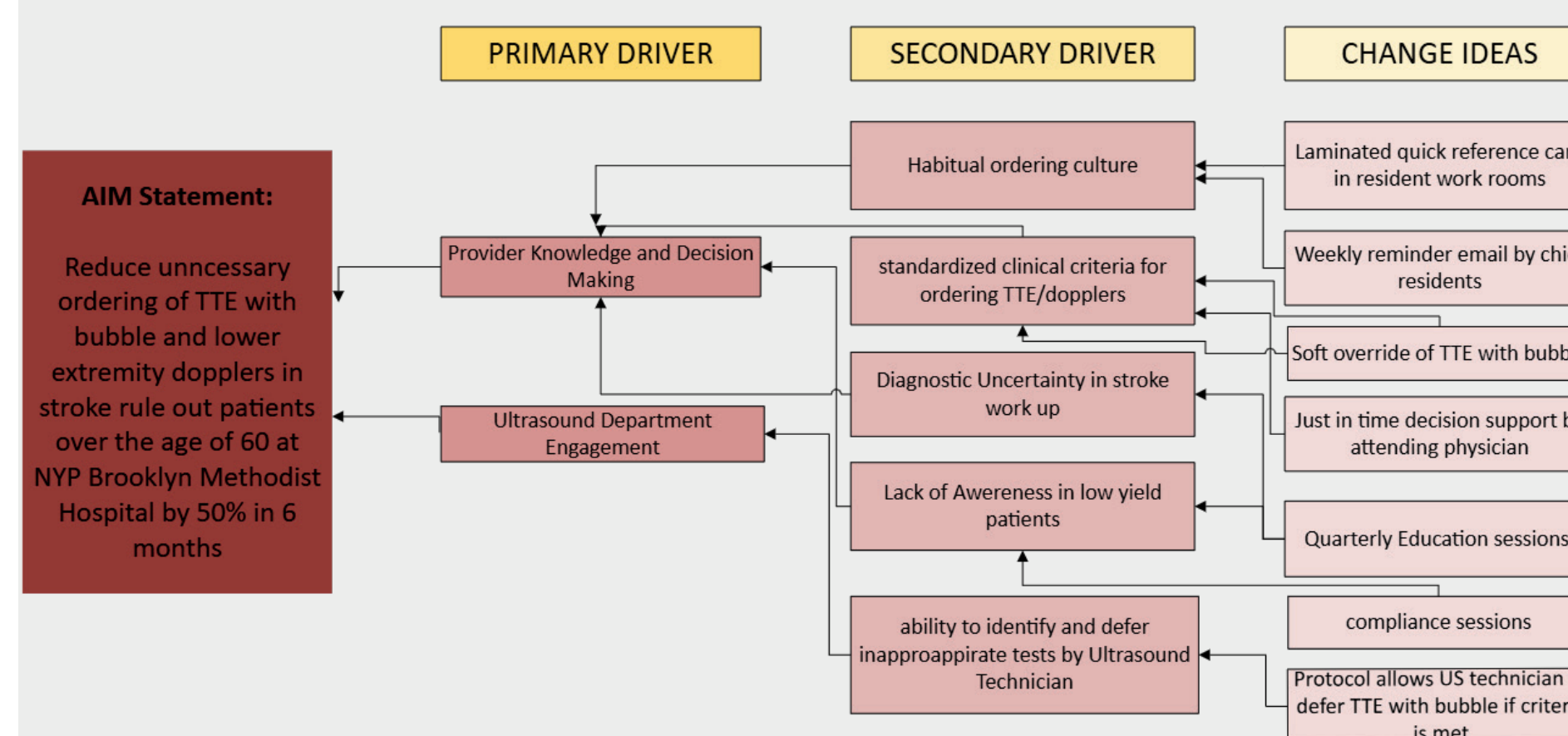


Figure 2. Driver Diagram

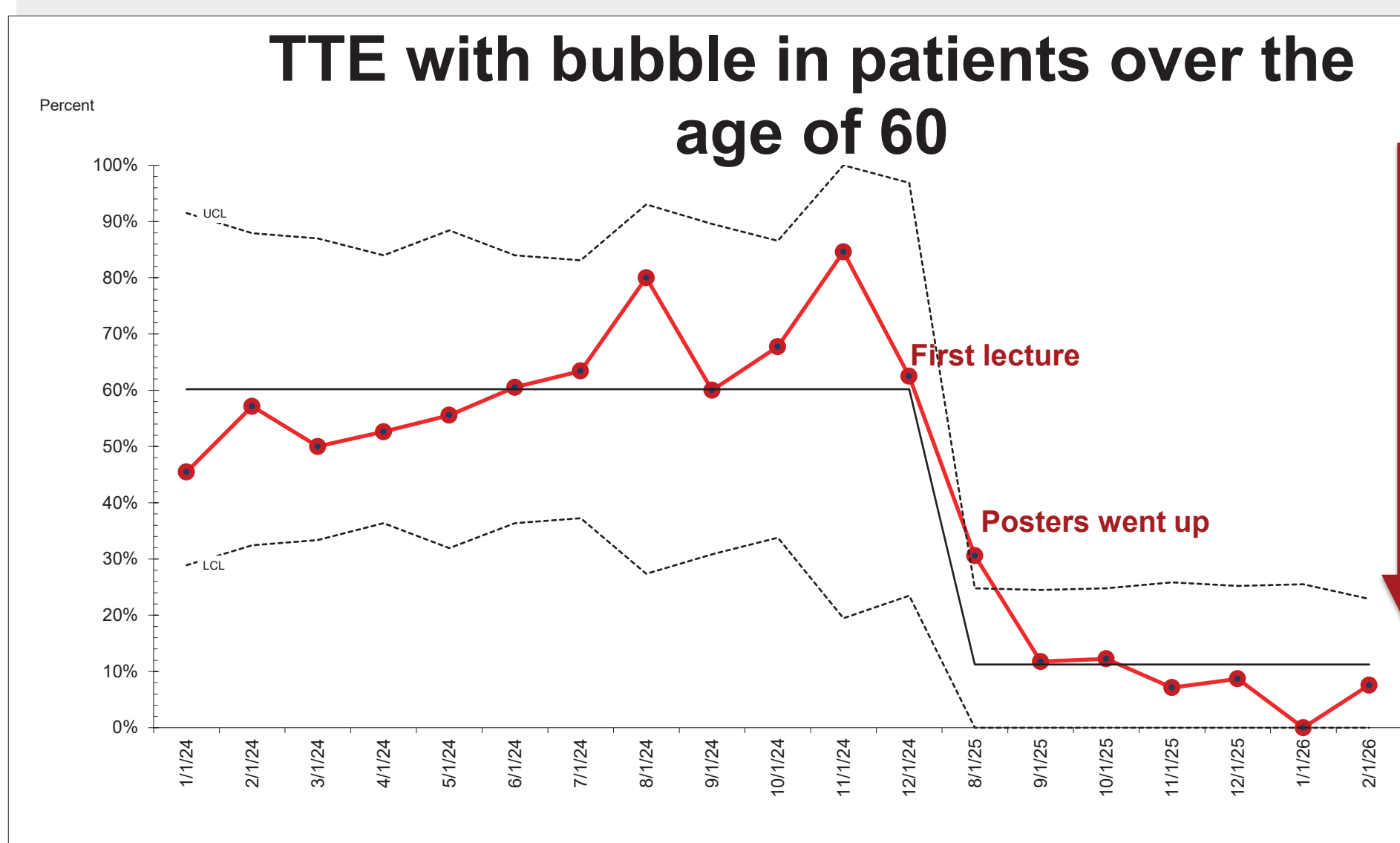


Figure 3. Impact of implementation of age-based guideline on TTE with bubble orders

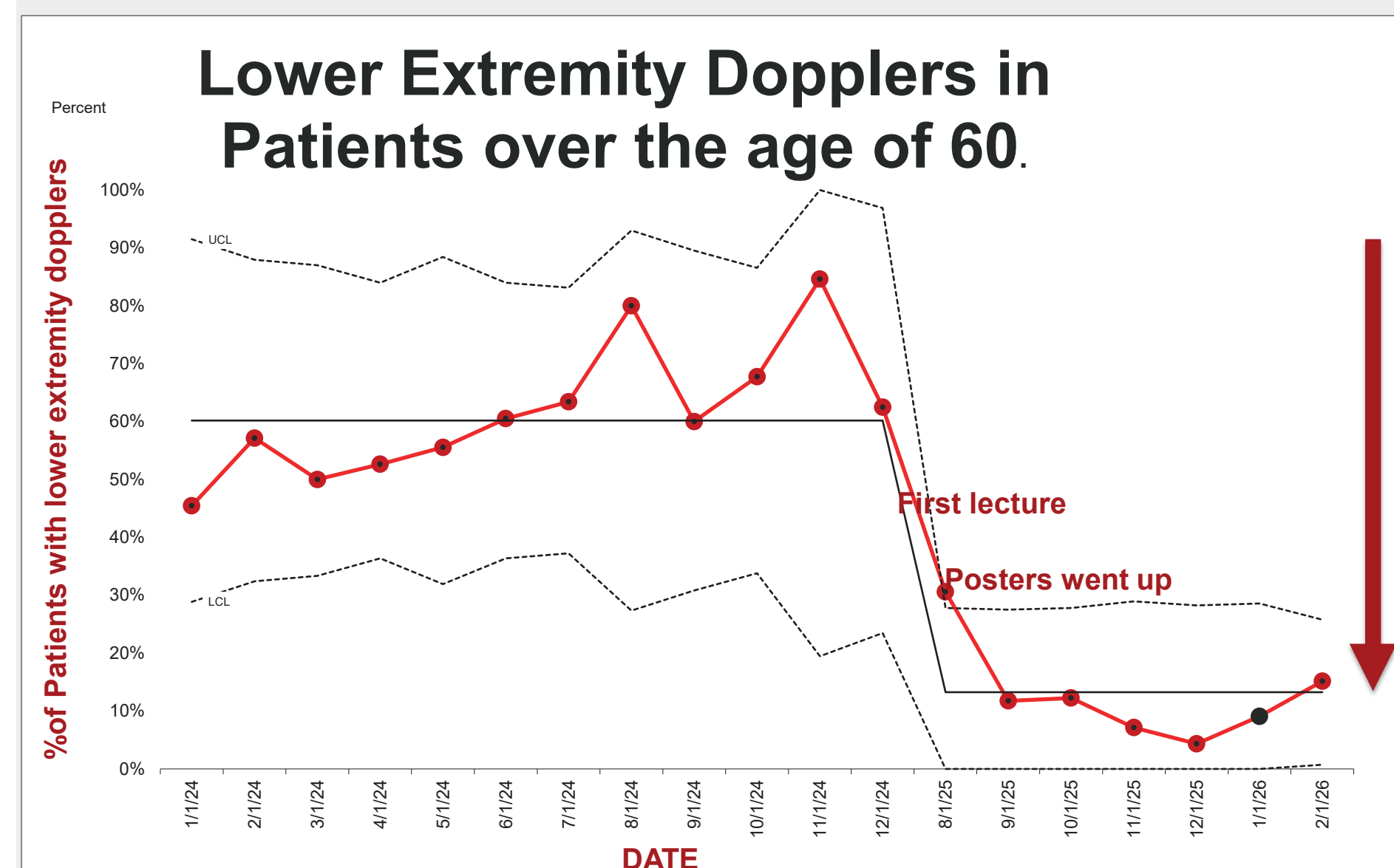


Figure 4. Impact of implementation of lower extremity dopplers orders

Measures:

Outcome Measures

- Percentage of stroke rule-out patients aged >60 receiving TTE with bubble
- Percentage receiving lower extremity venous Dopplers

Process Measures

- Completion of resident education sessions
- Distribution of weekly reminder emails
- Placement of visual reminder posters at resident workstations
- Bimonthly compliance reporting to clinical teams

Results:

Retrospective Data (2024)

- 329 stroke rule-out patients >60
- 55% (n) received TTE with bubble
- 60% received lower extremity Dopplers
- 4.6% (16 patients) had PFO identified
- 0 patients had PFO closure

Prospective Data (Aug 2025–Jan 2026):

- 281 stroke rule-out patients >60
- 5% received TTE with bubble
- 13% received lower extremity Dopplers
- X patients had Pfo detected

Change Observed:

- Bubble TTE ordering ↓ 91%
- LE Doppler ordering ↓ 78%
- Sustained reduction demonstrated on run chart after intervention rollout

Conclusions:

A simple, age-based guideline combined with education, reminders, and audit-feedback led to a dramatic and sustained reduction in low-value testing for older stroke rule-out patients.

Key lessons:

- Most unnecessary testing was driven by habit and uncertainty, not clinical necessity
- Visual reminders are most effective in sustaining change
- Reducing low-yield testing can improve value without compromising patient safety

Next Steps:

- Develop a hospital wide guideline for value-based stroke evaluation
- Explore applying a similar approach to reduce other low yield inpatient testing

Improving the Detection of Exposure to Tobacco and Other Inhaled Agents in Pediatric Preoperative Patients: A Feasibility Trial

Annual Weill-Cornell Medicine Quality Improvement and Patient Safety Poster Symposium

Michael D. Green, MD | May 20th, 2026

Problem Statement

- Respiratory-related etiologies=2nd most common cause of pediatric perioperative cardiac arrest.
- Pediatric Perioperative Respiratory Adverse Event (PRAE): associated **with \$80K in added costs.**
- Children w/ environmental smoke exposure (SHS) have **5x greater risk of PRAE**
- Pediatricians see family members > family members see their own physicians
- Improving pre-op detection of exposures to tobacco, vaping, marijuana, e-cigarettes and second-hand smoke (SHS) reduces risk of PRAE, but is not consistently being implemented

Objective/Aim Statement

1) Primary Feasibility AIM:

- 20% increase in non-null and/or updated documentation of inhalational agent exposure (IAE) including second-hand smoke, marijuana use, e-cigarette aerosols, and vaping by 5/30/2026

2) Primary Clinical AIM:

- 20% increase in patients or parents of patients who report being offered smoking cessation resources during the preoperative period by 5/30/2026 (dependent on successful implementation of primary feasibility aim)

Design/Methods (AIM 1)

Study Population: All patients scheduled for POP encounters through a single preop clinic

Timeline: 7/1/2025 to 5/30/2026

Outcome

- Rate of updated IAE documentation at time of POP
- Rate of reported smoking cessation offer by Day of Surgery (DOS)

Process

- Rate of updated SHS documentation at time of Pre-op
- Decreased difference between rates of billing for tobacco review and updated composite IAE exposure

Balancing

- Increased median rate of cancellation of cases
- Provider dissatisfaction

Design/Methods (cont'd):

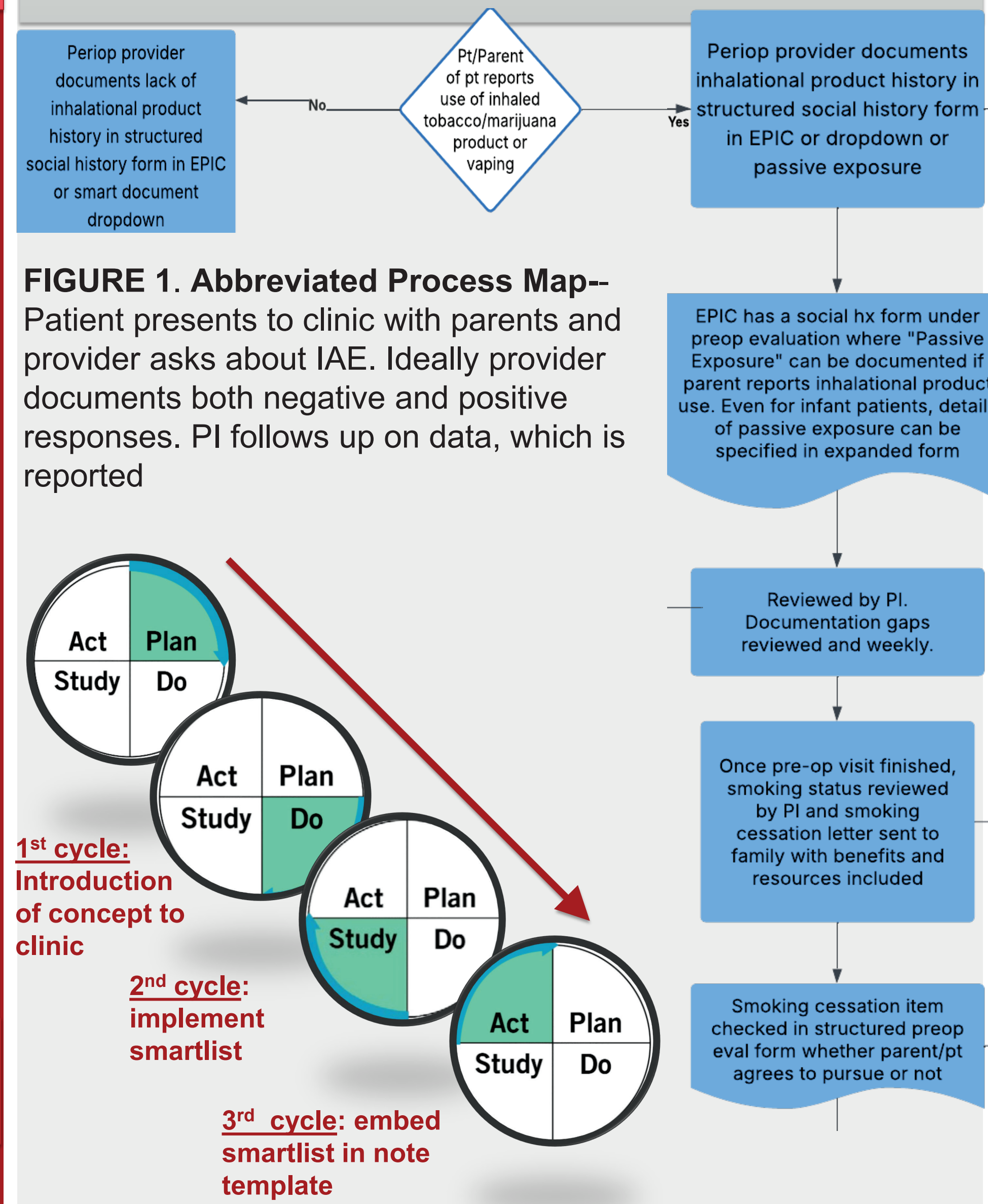


FIGURE 2. Anticipated PDSA cycles- currently amid 2nd PDSA cycle, introducing smartlist: **.smokingexposurepreop [1199578]**

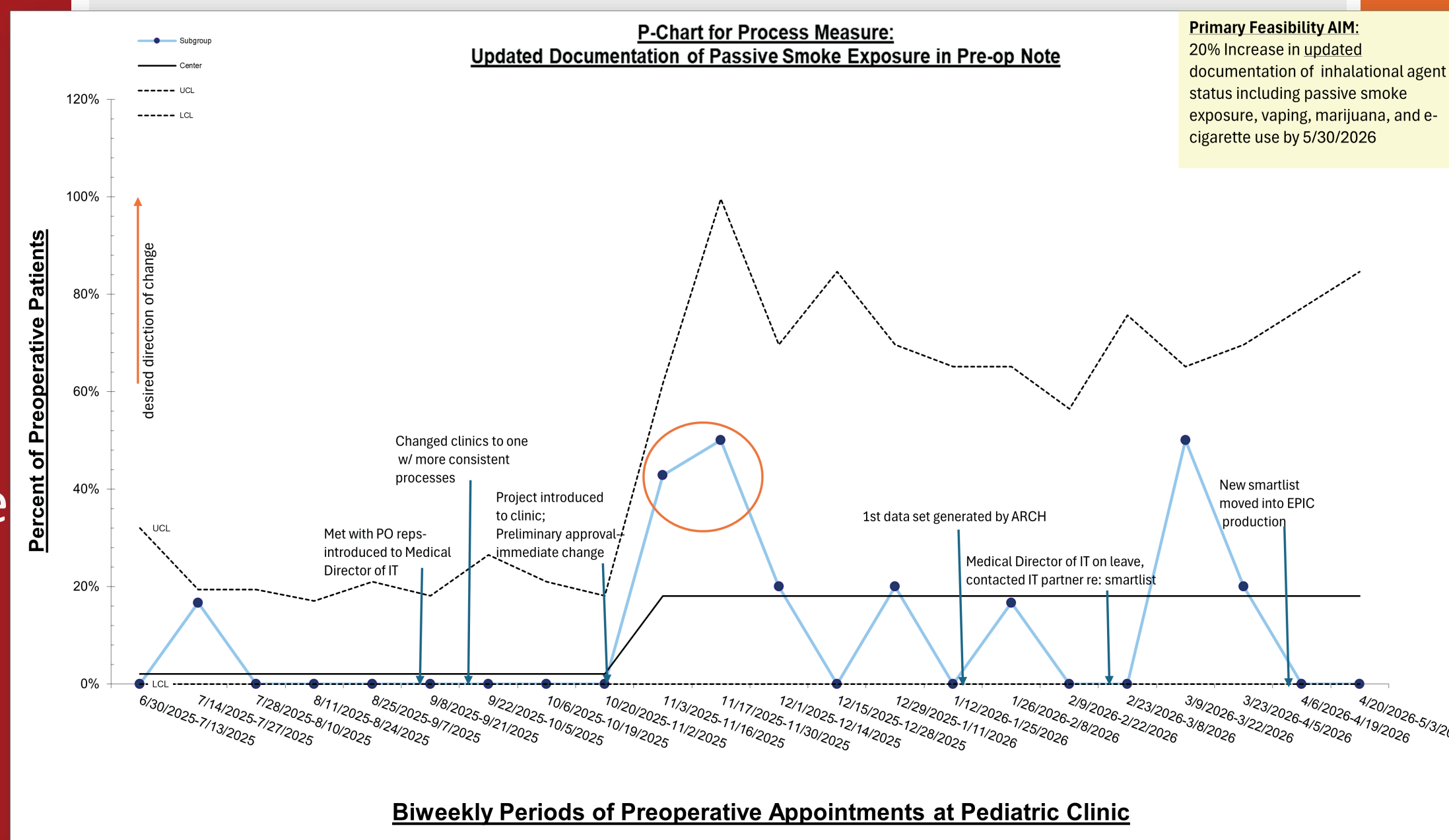


CHART 1. P-Chart for Process measure of documented updated exposure to second-hand smoke- see circle for special condition

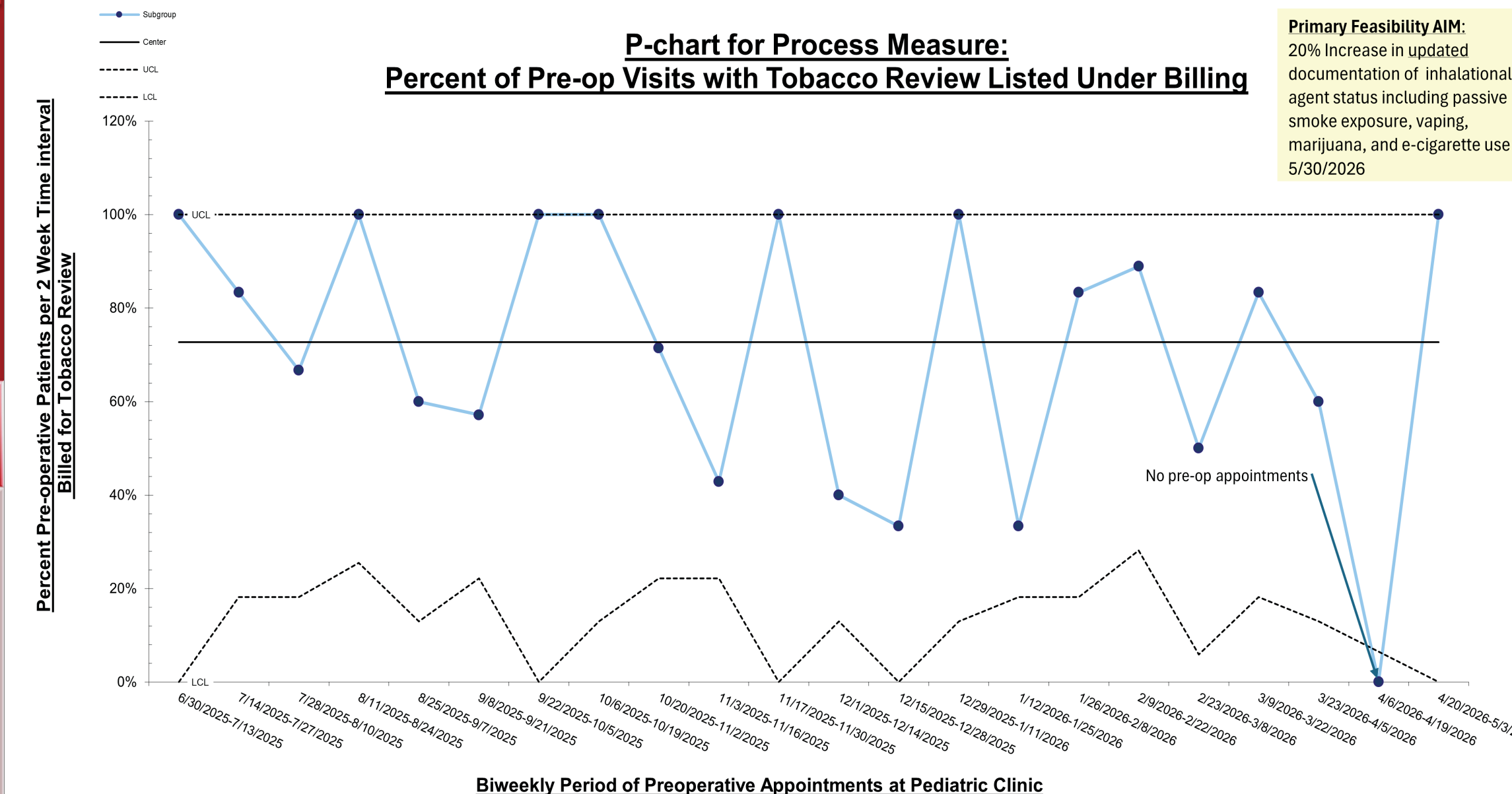


CHART 2. P-chart for process measure of documented Tobacco review under billing

Results:

CHART 1: "Updated Documentation of Passive Smoke Exposure":

- =rate providers were updating documentation for passive smoke exposure at the time of the appointment in note or social history
- Prior to 10/22/2025--Historical median of 2%
- Circle = Special condition for shift (2/3 rule)
- Median shift to 18%
- Met goal >20% increase for this one form of inhaled tobacco exposure
- Pre-op appts do not occur in this clinic every week especially around holidays (ie 4/2026)

CHART 2: "Percent Preop visits with Tobacco Review Listed Under Billing":

- A small fraction of providers do not have tobacco review listed under billing
- Most providers consistently do not remove tobacco review from billing
- Often reached 100% even prior to intervention

Conclusions

- SMART AIM was accomplished in a single measure due to only small efforts by a small number of providers
- Knowledge gaps are likely responsible for decreased success in other process measures
- Increased education/ease of workflow may not be enough to motivate change from clinic leaders

Limitations

Systems Barriers

- New workflow by clinic pediatricians- period of adaptability
- Changing clinics in the fall, due to lack of consistent processes

Personnel Barriers

- Physician's Organization representative on leave
- Time to create/move smartlist out of production by Physician's Organization representative

Next Steps

- Evaluate the use patterns of the smartlist at the clinic
- Meet directly with clinic leads to incorporate the smartlist into the note
- Consider inserting hard stops to ensure this documentation is completed
- Complete RedCap Database and surveys

Special Thanks:
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Allison Gorman, MD; Aliza Cook, MD

- References:**
- Christensen RE, Lee AC, Gowen MS, Rettiganti MR, Deshpande JK, Murray JP. Pediatric Perioperative Cardiac Arrest, Death in the Off Hours: A Report From Wake Up Safe: The Pediatric Quality Improvement Initiative. *Anesth Analg*. 2018 Aug;127(2):477-477. doi: 10.1213/ANE.0000000000003396. PMID: 29677059.
 - O'Connor ME, Groner J, Wissow L, et al. American Academy of Pediatrics, Section on Breastfeeding; Section on Tobacco Control; Committee on Psychosocial Aspects of Child and Family Health; Committee on Medical Liability and Risk Management. Providing Medical Care for Parents During the Pediatric Visit: Policy Statement. *Pediatrics*. 2026;157(2):e2025074113.
 - Jensen BP, Walley SC, Boykan R, et al. AAP Section on Nicotine and Tobacco Prevention and Treatment, Committee on Substance Use and Prevention. Protecting Children and Adolescents From Tobacco and Nicotine. *Pediatrics*. 2023; 151(5):e2023061806.
 - Mohr E, et al. Smoking Cessation Reduces Perioperative Complications: A Systematic Review and Meta-analysis. *The American Journal of Medicine* (2011) 124, 144-154.
 - Sharif M, et al. Enhancing the Electronic Health Record to Increase Counseling and Quit-Line Referral for Parents Who Smoke. *Academic Pediatrics* 2014;14:478-484.
 - Jensen BP, et al. Parent eReferral to Tobacco Quitline: a Pragmatic Randomized Trial in Pediatric Primary Care. *Am J Prev Med* 2019; 57(1):32-40.
 - von Unger-Sternberg BS, et al. Peri-operative Adverse Respiratory Events in Children. *Anaesthesia* 2015; 70, 440-444.
 - Akpan M, et al. Preoperative smoking cessation interventions: a systematic review and meta-analysis. *Peroperative Medicine* (2025) 14:5.
 - Irvine D, Meyer T, Thornton, Huang J, Cannabis and anesthesia: a 2025 update on perioperative considerations. *APSF Newsletter*:2026:1-9-12.
 - Jaraya A, Kamoun M, Ammar S, Faki W, Kola K. Predictors of perioperative respiratory adverse events among children with upper respiratory tract infection undergoing pediatric ambulatory iliofemoral surgery: a prospective observational research. *World Journal of Pediatric Surgery*. 2023;6:e000524. <https://doi.org/10.1159/wjps.2023.000524>

Problem Statement

Mild cognitive impairment (MCI) is underdiagnosed in an estimated 50–70% of affected adults. Furthermore, cognitive status directly affects ED disposition, treatment adherence, and post-discharge safety. Emergency Departments thus are a high-yield setting for MCI screening, but they also pose substantial challenges to formal diagnosis and assessment.

Objective

Design and refine an ED-based cognitive screening pathway linked to Community Tele-Paramedicine follow-up by evaluating feasibility, acceptability, and workflow integration using patient and stakeholder needs-assessment data.

What is Community Tele-Paramedicine?

Community Tele-Paramedicine (CTP) pairs Community Paramedics (CPs) with TELE Emergency Medicine Physicians to deliver a comprehensive in-home cognitive assessment, bringing diagnostic evaluation directly to the patient after ED discharge.



Scan QR code for a video of a CTP visit

Methods

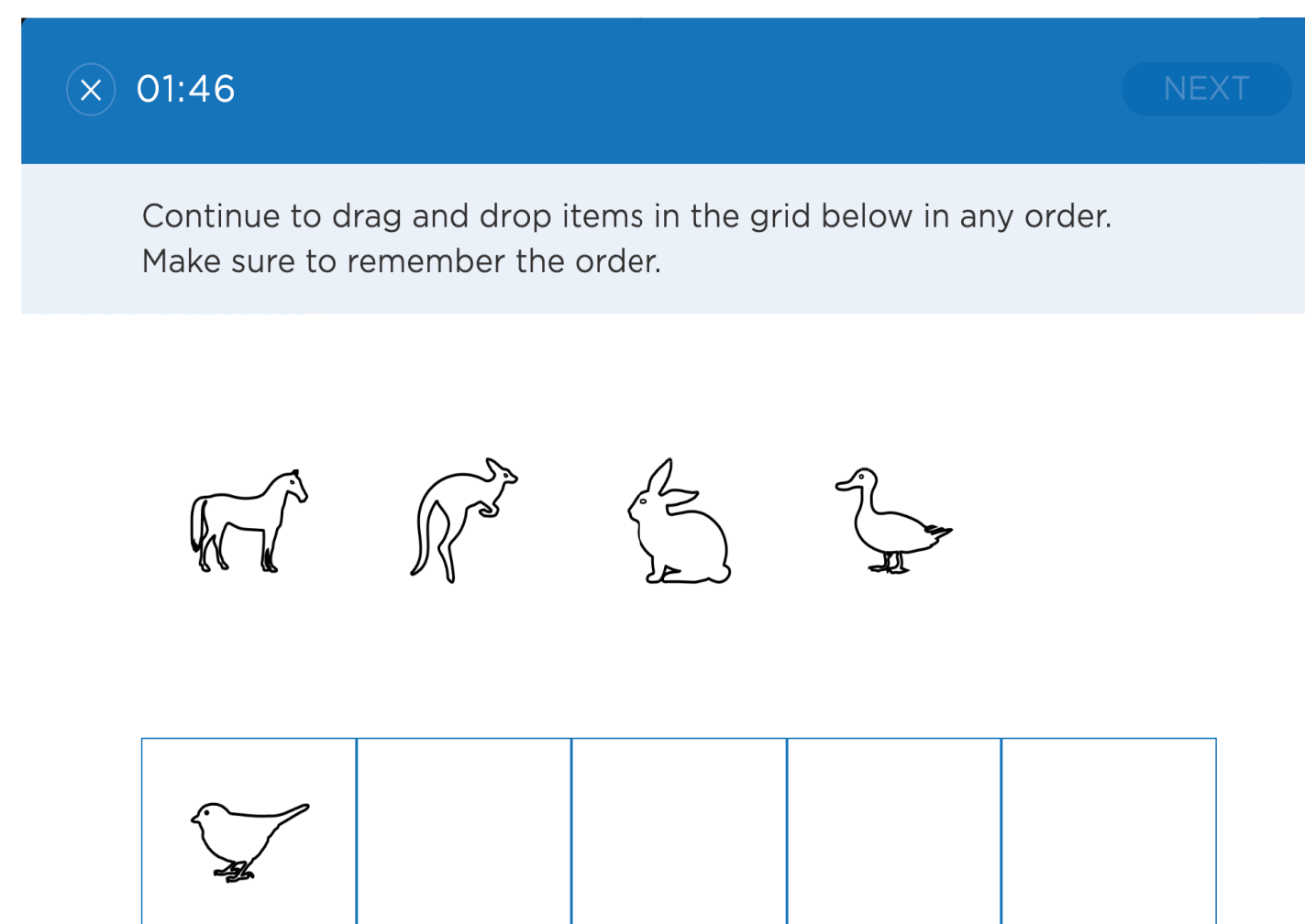
Phase 1: Needs Assessment. Prior to protocol implementation, we conducted a structured needs assessment to evaluate stakeholder perceptions of ED-based cognitive screening. Clinicians, patients, and research associates were surveyed across five dimensions: perceived importance of cognitive screening in the ED, time and workflow feasibility, available workflow supports and training needs, patient comfort and concerns about screening, and preferred follow-up pathways.

Phase 2: ED Cognitive Screening Pathway.

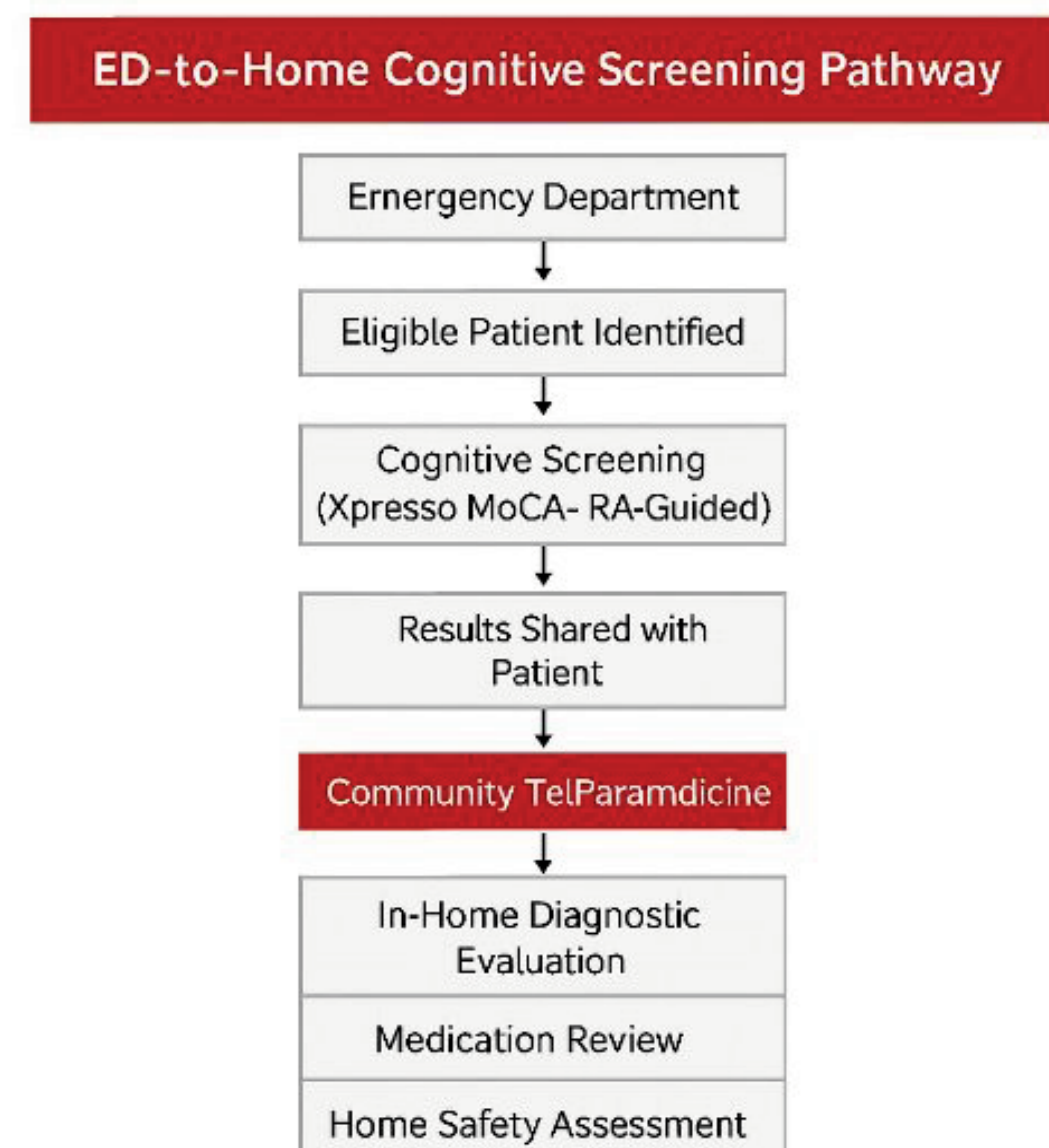
Eligibility. We screened ED patients aged 55–89 years. Eligible patients were English-speaking, clinically stable, and without known dementia, delirium, intoxication, or psychosis.

Two-Step Screening.

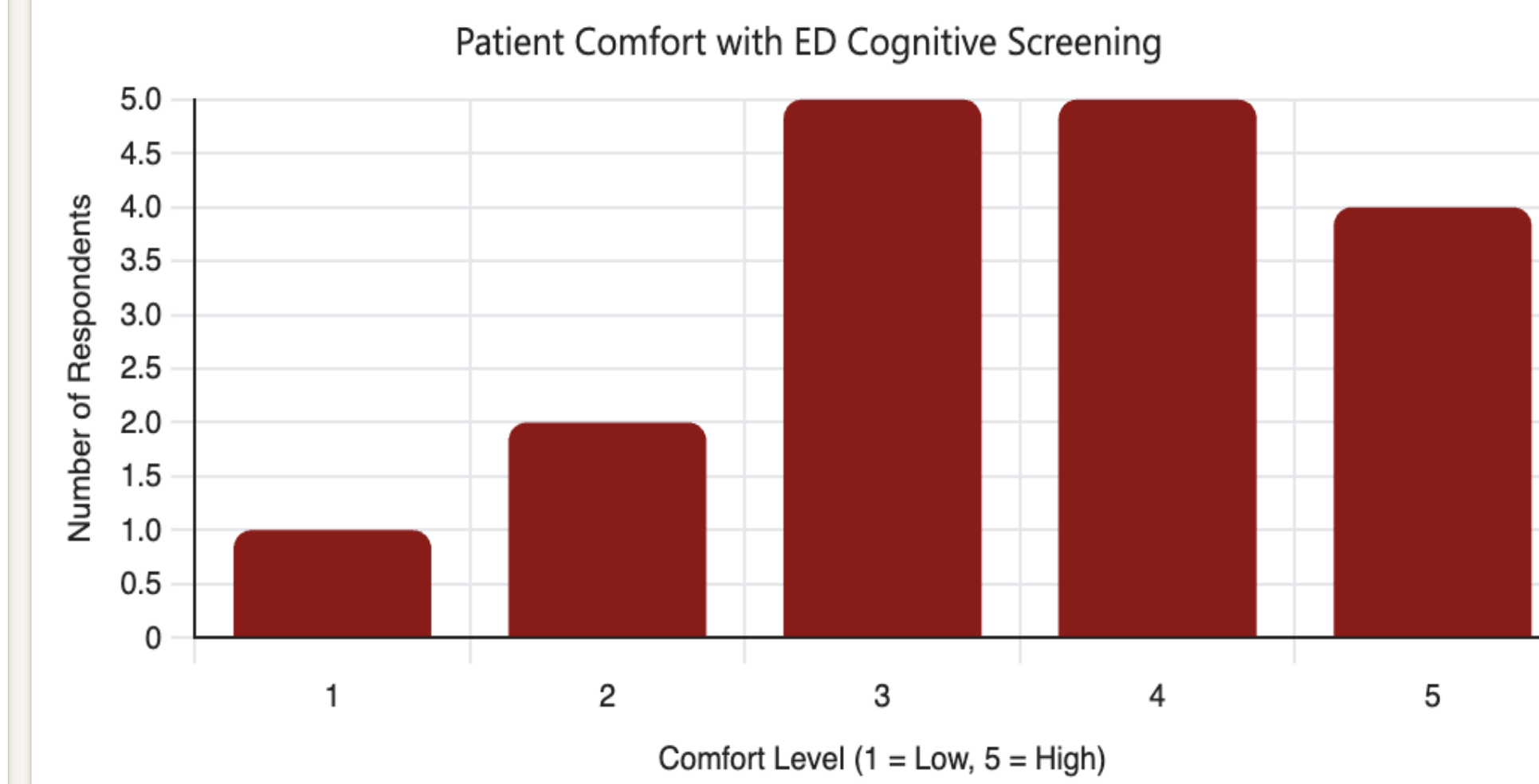
- Interested patients first completed a Delirium Triage Screen
- Patients with a negative delirium screen then completed the XpressO MoCA — an iPad-based, self-guided cognitive screening assessment.



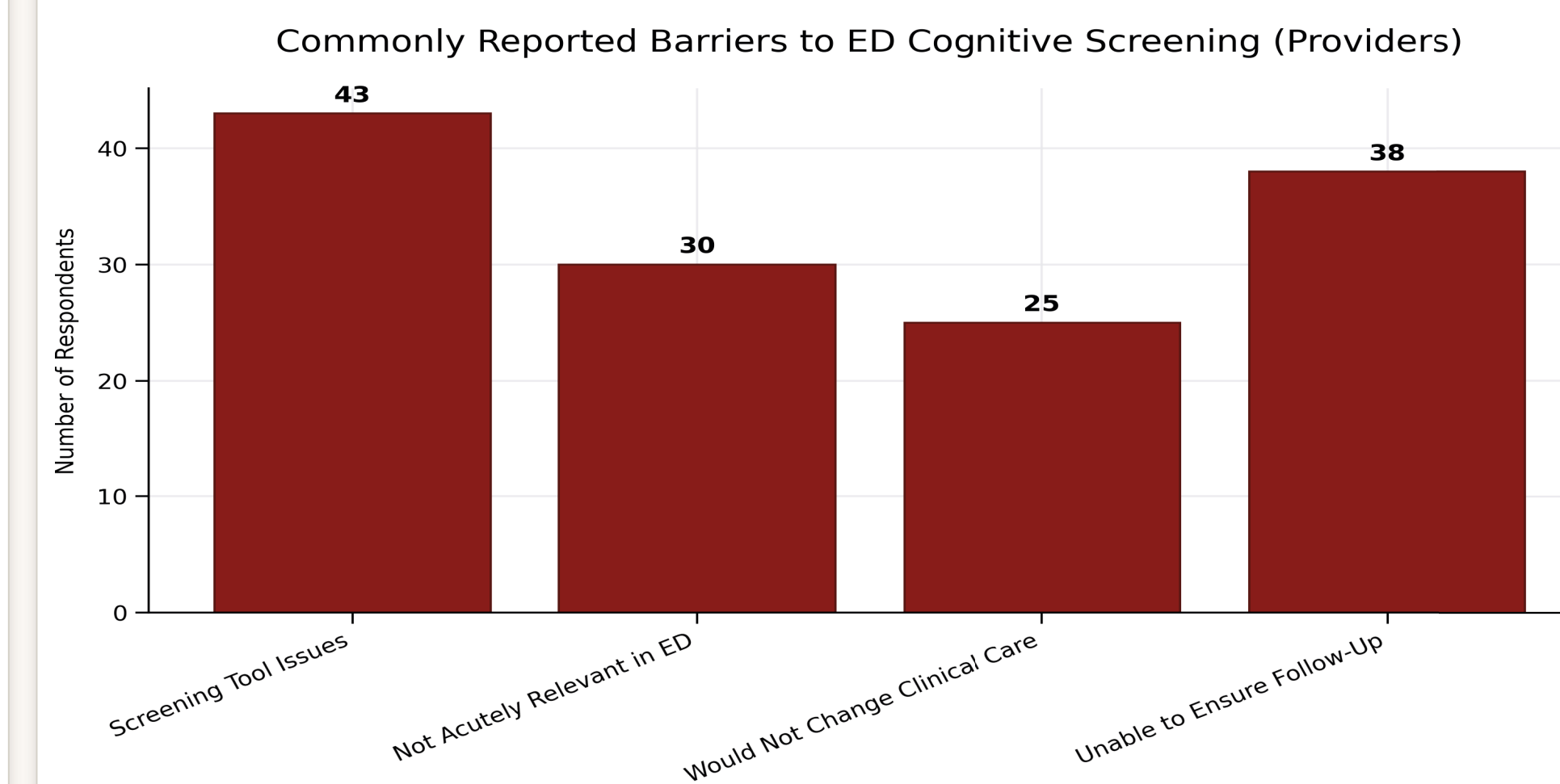
Results and Disposition. Patients with normal cognitive scores were reassured and needed no further screening-based intervention. Patients with results suggestive of MCI received tailored education, were offered Community Tele-Paramedicine (CTP) follow-up for a comprehensive in-home cognitive assessment and had their primary care provider notified to ensure continuity of care.



Needs Assessment Data



Needs Assessment data



Conclusions

- ED-based cognitive screening is perceived as valuable by both clinicians and patients when thoughtfully designed.
- Workflow integration, scripting, and training are critical to feasibility.
- Linking ED identification to structured home-based follow-up addresses a major gap in post-discharge care.
- Needs-assessment findings directly informed refinement of the screening protocol and referral pathway.

Next Steps

- Finalize screening workflow and RA training curriculum.
- Implement pilot launch of ED cognitive screening.
- Evaluate process measures (screening volume, referral uptake).
- Assess downstream outcomes including ED revisits and follow-up completion.
- Use pilot data to support future grant funding and broader dissemination.

Jeremy Torrisi MD, Anja von der Osten MD, Yuqing Qiu MS,
Chris Mendoza MD, Brenna Farmer MD, Brock Daniels MD | May 20th, 2026

Background

Sepsis remains a leading cause of in-hospital mortality and is associated with significant morbidity, healthcare utilization, and cost. Early recognition and timely initiation of evidence-based interventions—particularly antibiotics, lactate measurement, and blood cultures—are critical determinants of patient outcomes. Prior work has consistently demonstrated that delays in antibiotic administration are associated with increased mortality in patients with sepsis.

To standardize early care, institutions (including NYP) have adopted structured sepsis bundles, such as the 3-hour bundle (lactate measurement, blood cultures, and broad-spectrum antibiotics). However, adherence to these bundles in emergency department (ED) settings remains inconsistent due to challenges such as delayed recognition, competing clinical priorities, workflow fragmentation, and lack of standardized escalation pathways.

Problem Statement

At NYP Brooklyn Methodist Hospital, performance data since 2022 demonstrates compliance below the enterprise standard of 75% with the ED 3-hour sepsis bundle. This gap may be attributable to the absence of a formalized “Code Sepsis” pathway to facilitate rapid identification and coordinated response for high-risk patients.

Objective/Aim Statement

Increase compliance with the ED 3-hour sepsis bundle (lactate, blood cultures, antibiotics) to $\geq 75\%$ from August 2025 to January 2026 through implementation of a Code Sepsis pathway.

Design/Methods

- Designed and educated providers and nurses on novel Code Sepsis pathway (Figure 1), completed in July 2025
- Implement Code Sepsis in August 2025
- Bimonthly tracking of bundle compliance and mortality post-implementation, using July 2024-July 2025 data as both baseline data and for seasonal matching for all patients meeting CDC definition of sepsis (Figure 2)
- Analyze each individual sepsis bundle process measure (lactate measurement, blood culture collection and broad-spectrum antibiotic administration) pre- and post-Code Sepsis
- Review of failed cases both pre- and post-Code Sepsis to identify if reason for non-compliance differs after Code Sepsis implementation
- Review balancing measures pre- and post-Code Sepsis: door-to-provider and door-to-disposition

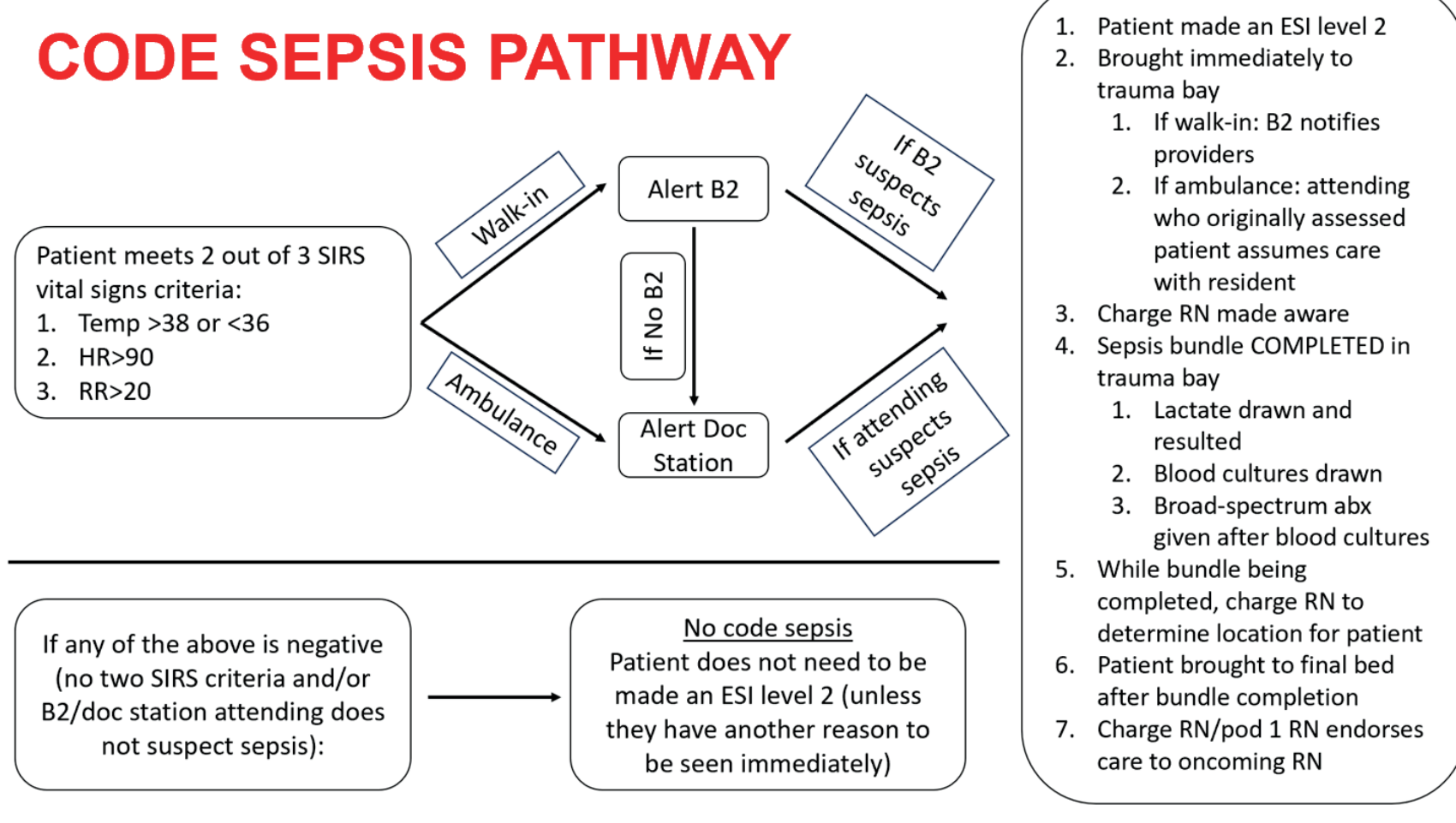


Figure 1: Code Sepsis pathway

CDC Definition of Acute Sepsis Event:

- Patient age at time of arrival is ≥ 18 years old AND
- Blood culture order collected AND
- >4 qualifying antimicrobial days (starting within ± 2 calendar days of a blood culture) AND
- ≥ 1 of the following eSOFA criteria starting within ± 2 calendar days of a blood culture:
 - Initiation of new vasopressor infusion
 - Initiation of mechanical ventilation
 - Doubling of serum Cr OR decrease by $\geq 50\%$ (excluding ESRD)
 - Total bilirubin ≥ 2 mg/dL and increased by 100% from baseline
 - Platelet count $\geq 50\%$ decline from baseline, with baseline ≥ 100
 - Serum lactate ≥ 2 mmol/L

Figure 2: CDC definition of sepsis patient

Overall: Pre- and Post-Code Sepsis			
Measures	Pre (July 2024 – July 2025) N = 1895	Post (Aug. 2025 – Jan. 2026) N = 937	p-value
3 Hour Compliance	74.35	80.04	0.001
Mortality	8.55	9.18	0.577
Lactate	90.50	92.42	0.091
Blood cultures	86.90	91.04	0.001
Antibiotics	81.10	84.74	0.017

Seasonal matching comparison: Pre- and Post-Code Sepsis			
Measures	Pre (Aug. 2024 – Jan.2025) N = 896	Post (Aug. 2025 – Jan. 2026) N = 937	p-value
3 Hour Compliance	72.88	80.04	<0.001
Mortality	7.81	9.18	0.295
Lactate	90.07	92.42	0.074
Blood cultures	85.71	91.04	<0.001
Antibiotics	79.69	84.74	0.005

Figure 3: Effect of Code Sepsis on sepsis bundle compliance, mortality and process measures for overall time period and seasonal matching

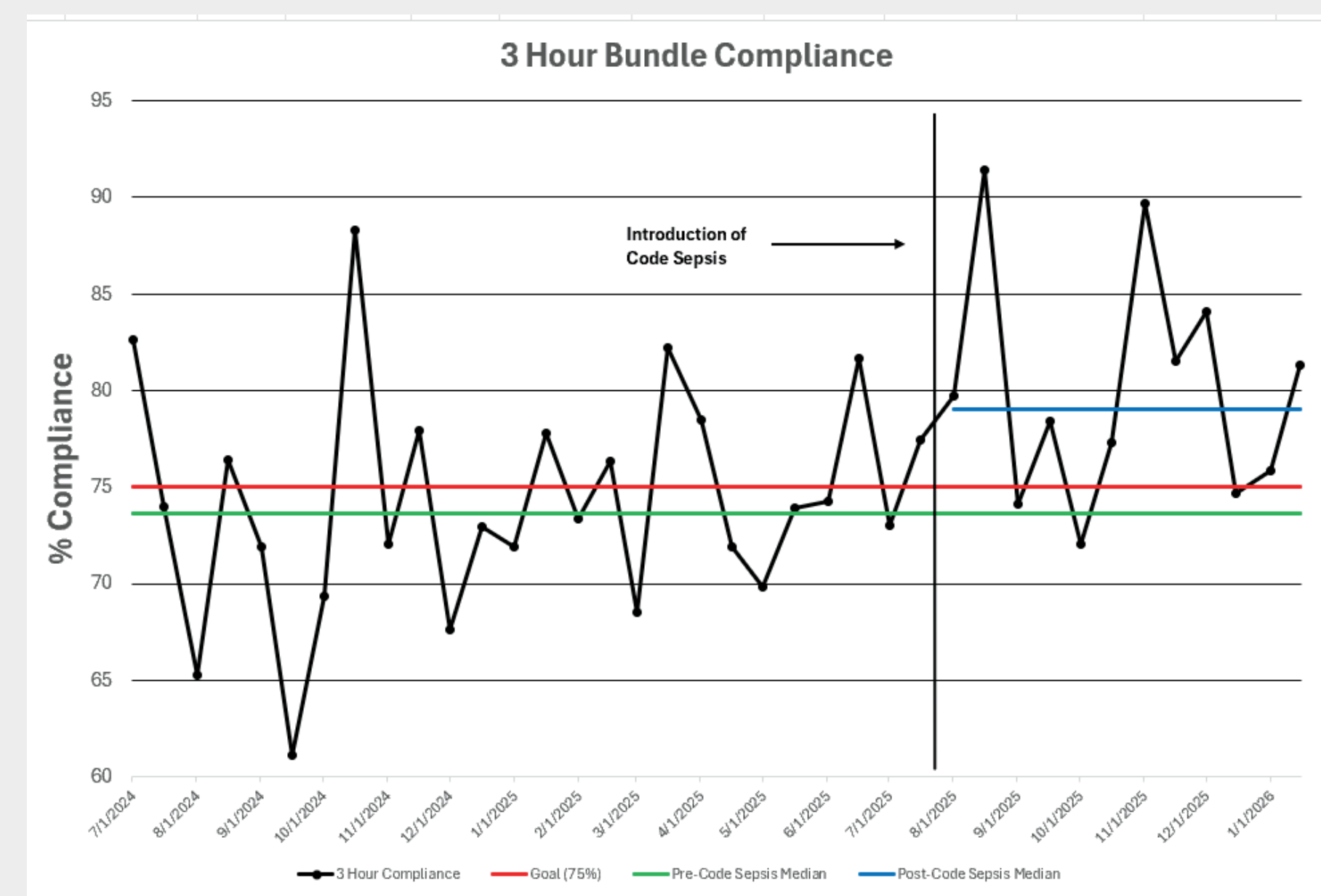


Figure 4: Run chart showing 3-hour sepsis compliance before and after Code Sepsis introduction with accompanying cohort medians

Overall: Pre- and post-code sepsis			
Measures	Pre (July 2024 – July 2025) N = 260	Post (Aug. 2025 – Jan. 2026) N = 152	p-value
Lactate not ordered within 45 minutes of end of 3 hour window	1.54	2.63	0.69
Antibiotics and/or blood cultures not ordered within 45 minutes of end of 3 hour window (>135 minutes)	40.77	53.95	0.01
Lactate did not result (but ordered >45 minutes before end of 3 hour window)	19.62	18.42	0.85
Antibiotics and/or blood cultures not administered quickly enough (but ordered >45 minutes before end of 3 hour window)	15.38	5.92	0.01
All others	22.31	19.08	0.50

Seasonal matching comparison: Pre- and post-code sepsis			
Measures	Pre (Aug. 2024 – Jan.2025) N = 142	Post (Aug. 2025 – Jan. 2026) N = 152	p-value
Lactate not ordered within 45 minutes of end of 3 hour window	2.68	2.63	1.00
Antibiotics and/or blood cultures not ordered within 45 minutes of end of 3 hour window (>135 minutes)	41.61	53.95	0.04
Lactate did not result (but ordered >45 minutes before end of 3 hour window)	15.44	18.42	0.59
Antibiotics and/or blood cultures not administered quickly enough (but ordered >45 minutes before end of 3 hour window)	12.75	5.92	0.07
All others	27.52	19.08	0.11

Figure 5: Analysis for reasons of why cases did not pass compliance both pre- and post-Code Sepsis for overall time period and seasonal matching

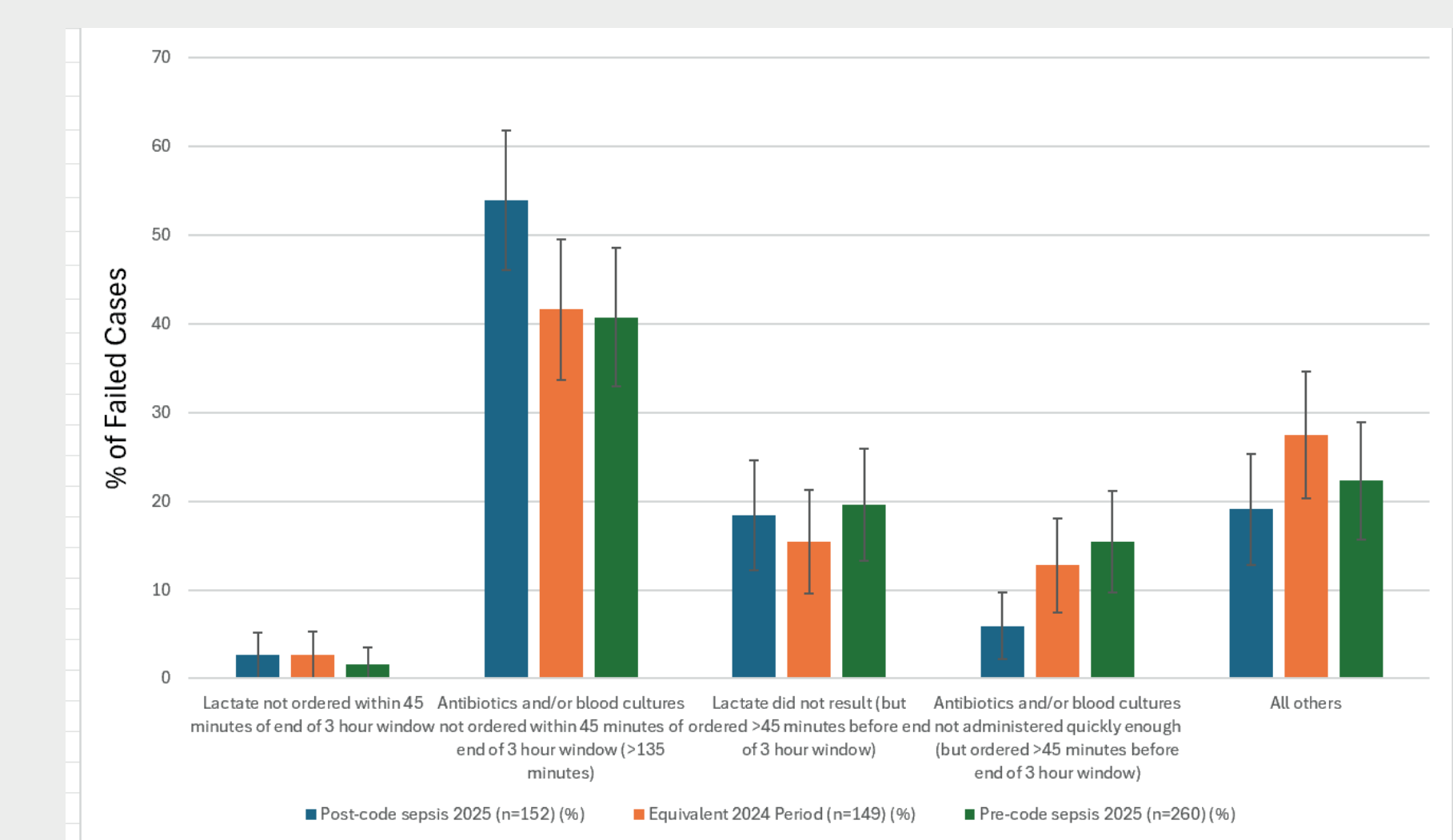


Figure 6: Analysis for reasons of why cases did not pass compliance both pre- and post-Code Sepsis for overall time period and seasonal matching

Overall: Pre- and Post-Code Sepsis			
Measures	Pre (July 2024 – July 2025) N = 13	Post (Aug. 2025 – Jan. 2026) N = 6	p-value
Door to Provider (min)	22.69	23.33	0.53
Door to Admit (hr)	5.33	5.50	0.20

Seasonal matching comparison Pre- and Post-Code Sepsis			
Measures	Pre (Aug. 2024 – Jan.2025) N = 6	Post (Aug. 2025 – Jan. 2026) N = 6	p-value
Door to Provider (min)	24.17	23.33	0.39
Door to Admit (hr)	5.50	5.50	0.97

Figure 7: Analysis of balancing measures both pre- and post-Code Sepsis for overall time period and seasonal matching

Results

- Code Sepsis implementation was associated with a **significant increase in 3-hour bundle compliance**, sustained over time and consistent in seasonal-matched analyses (Figure 3)
- Improvements driven by:
 - Blood culture collection**
 - Timely antibiotic administration**
 - No significant change in lactate compliance
- No significant change in sepsis mortality** observed (Figure 3)
- Run chart analysis showed a **sustained upward shift in compliance**, with performance exceeding the 75% NYP benchmark in **75% of post-intervention time points** vs 46% pre-intervention (Figure 4)
- Reasons for failure shifted post Code Sepsis intervention (Figures 5/6):
 - Pre-intervention: delays in **execution of ordered care** (nursing workflow)
 - Post-intervention: increased proportion of failures due to **delayed order placement** (provider workflow)
 - No change in lactate-related or unrelated failure patterns
- No adverse impact on ED throughput**, with stable door-to-provider and door-to-disposition times (Figure 7)

Conclusions/Lessons Learned

- A standardized Code Sepsis pathway **improved downstream reliability**, but exposed **upstream gaps in clinical decision-making**
- Code Sepsis implementation led to **sustained improvement in 3-hour bundle compliance**, exceeding institutional benchmarks without compromising ED throughput
- Gains were driven by improvements in **antibiotic administration** and **blood culture collection**, with **no change in lactate compliance**, highlighting variable responsiveness across bundle components
- No change in mortality** observed, likely limited by low sample size
- Primary bottleneck shifted after implementation:
 - Pre-intervention: delays in execution of ordered care**
 - Post-intervention: delays in provider recognition and order placement**

Next Steps

- Continue data collection to assess **mortality impact** (larger sample / longer follow-up)
- Target **provider-level barriers** to improve early recognition and order placement
- Develop interventions to improve **lactate compliance** (workflow + equipment access)
- Monitor for **durability of improvement** and potential Code Sepsis fatigue
- Refine Code Sepsis criteria to balance **sensitivity vs missed cases**
- Expand evaluation to clinical outcomes (ICU admission, LOS, mortality)

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Background

- Suboptimal vaccination rates are leading to resurgence of once eradicated diseases and come at a high societal physical and financial cost.
- QI methodology allows for data-based changes to be made in response to rapidly changing immunization needs.
- Decline in vaccination rates is multifactorial in nature including a growing problem of vaccine hesitancy, defined as the state of being conflicted or opposed to vaccination.

Smart Aim

We aim to increase the percentage of children who are up to date with Healthcare Effectiveness Data and Information Set vaccine combination 3 (HEDIS combo 3) by 24 months of age to 85% by December 2026

Methods

Study Design: Observational study with multiple planned sequential interventions

Patient Population:

- Primarily low-income patients presenting to an urban academic pediatric primary care clinic
- Children 24-35 months old with a visit in the last 18 months

Outcome Measure:

- % of children who had HEDIS Combination 3 vaccines by their second birthday
- Vaccine Doses: 4 Dtap, 3 IPV, 1 MMR, 3 HiB, 3 HepB, 1VZV and 4 PCV

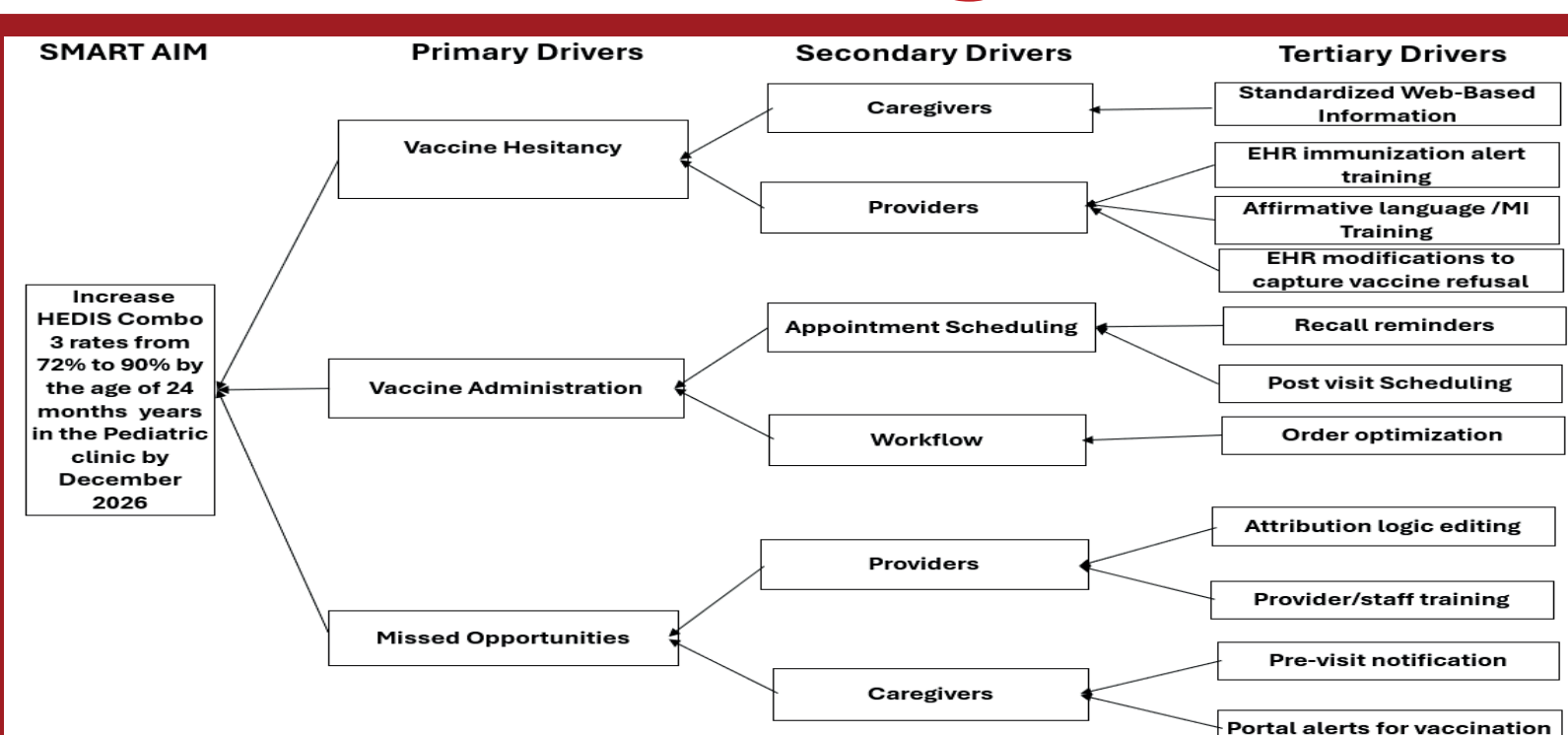
Process Measures:

- % of patients with documented immunization hesitancy
- % of missed opportunities for vaccination

Balancing Measure:

- Number of Well Child Visits

Driver Diagram



Interventions

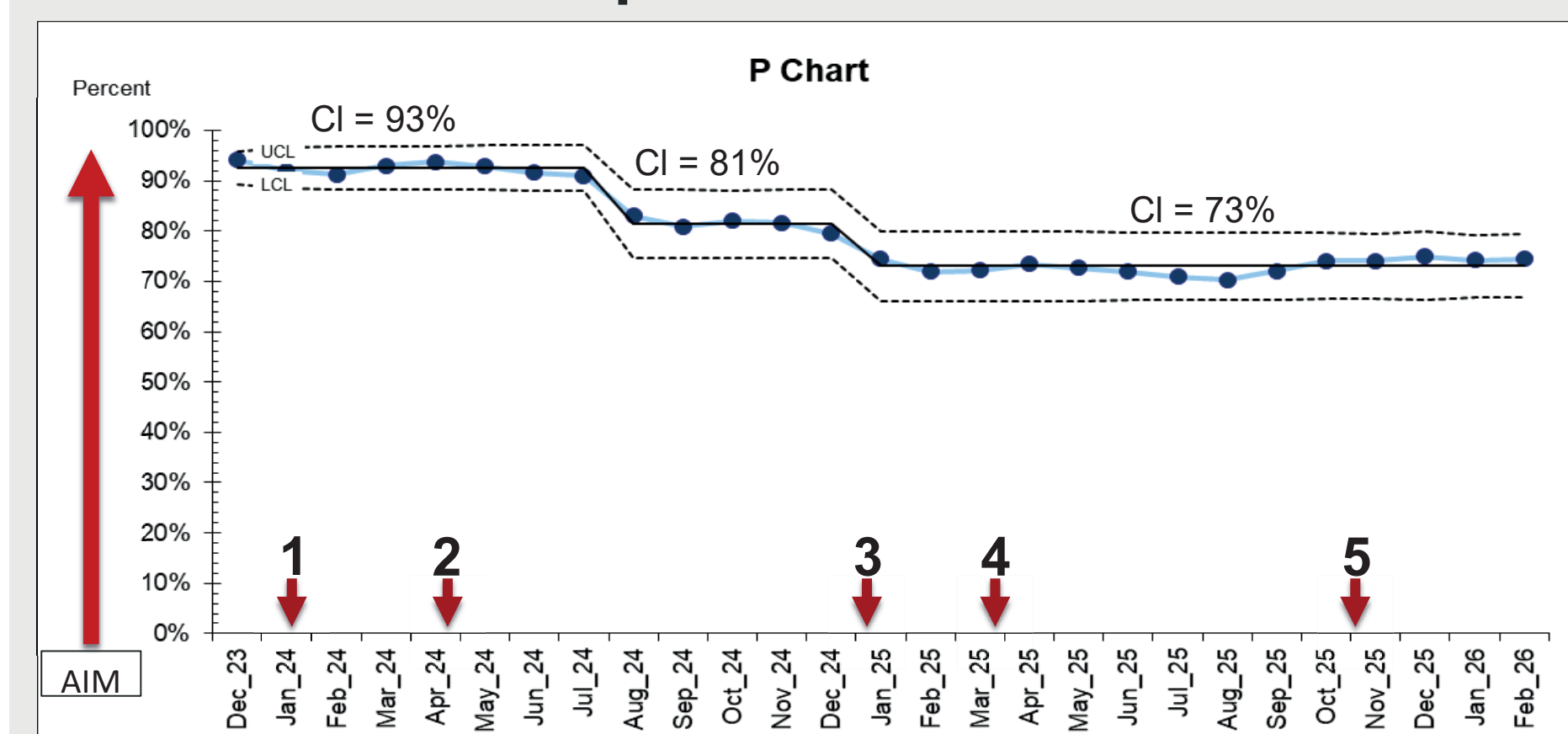
Number	Intervention
1	Provider and staff training regarding EMR alerts
2	EMR drop down to document vaccine declination and reasoning
3	Vaccine specific MI training for Trainees
4	Standardized patient information regarding future recommended vaccines
5	Standardized patient information for trusted online vaccine resources
5.5	Revised standardized patient information for trusted online vaccine resources

EMR drop down to document vaccine declination

Revised standardized patient information for trusted online vaccine resources

Outcome

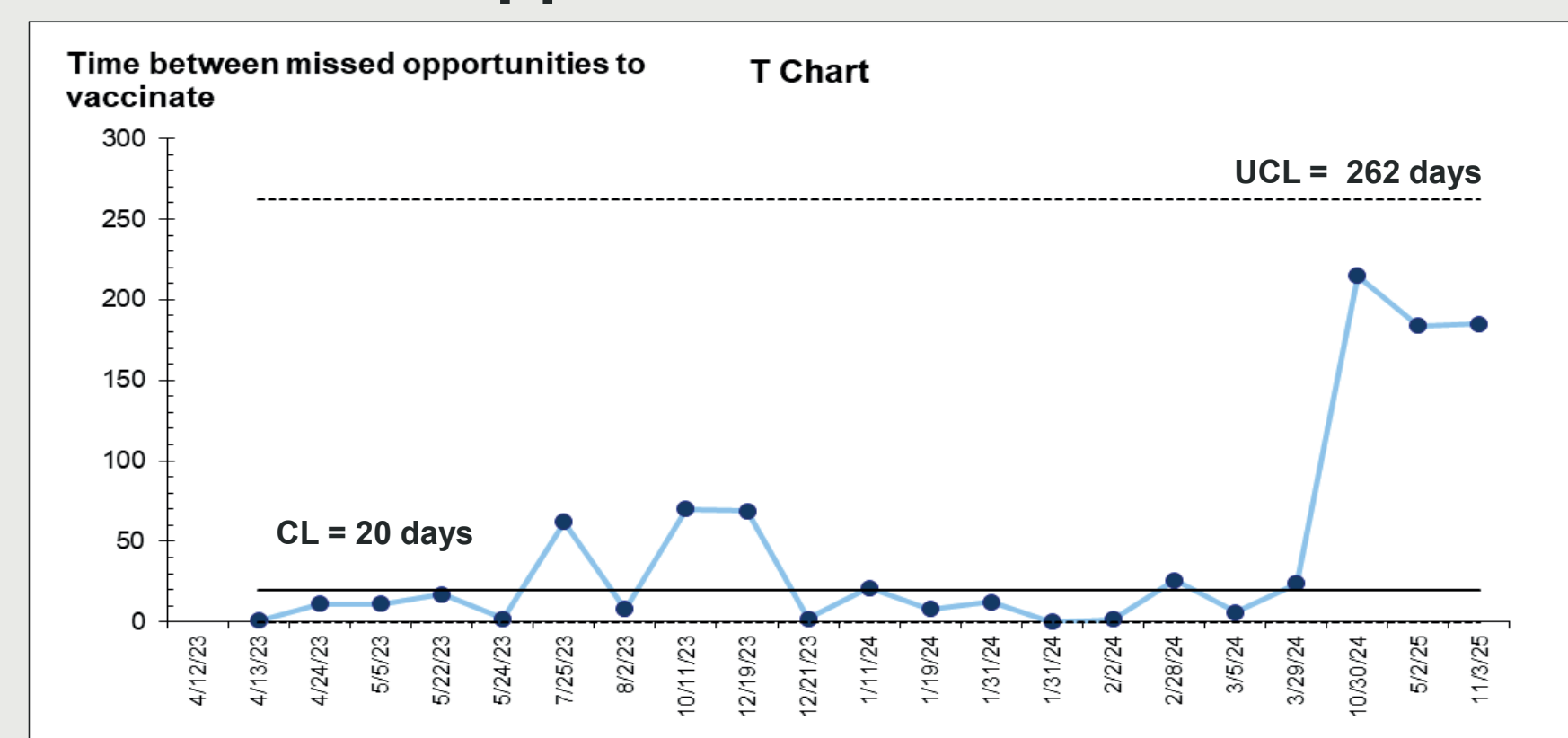
24-35 month-olds Up To Date with HEDIS Combo 3



Steady decline in HEDIS Combo 3 Immunization rates from 93% to 73% despite multiple interventions.

Process Measures

Missed Opportunities For Vaccination



The time between missed opportunities for vaccination increased 9-fold from 20 days to 185 days, indicating fewer occurrences.

Process Measure

Documentation of immunization declination has remained high at an average of 92% and within the confidence limit

Balancing Measure

No change in the median number of (94) well child visits in children 24-35 months old due to a potential dampening effect on parental incentive to return for routine care when vaccines are provided outside of well child visits.

Lessons Learned

- Alignment with organizational goals drives success
- EMR improvements can accelerate change
- Legislative and cultural challenges require sustained effort
- Ongoing work offers continued opportunities for improvement- Partnering with the Parent faculty advisory committee

Future Directions

- Standing immunization orders by age
- MI training of all staff and providers
- Redesign of recall processes
- Standardization of immunization discussion with virtual visits
- Pre-visit informational messaging to go to parents ahead of WCC with vaccine information

References

- Hill HA YD, Elam-Evans LD, .. et al. Decline in Vaccination Coverage by Age 24 Months and Vaccination Inequities Among Children Born in 2020 and 2021 — National Immunization Survey-Child, United States, 2021–2023. *MMWR Morb Mortal Wkly Rep.* 2024;73:844–853. doi:http://dx.doi.org/10.15585/mmwr.mm7338a3
- Zhou F JT, Leidner AJ, .. et al. Health and Economic Benefits of Routine Childhood Immunizations in the Era of the Vaccines for Children Program — United States, 1994–2023. *MMWR Morb Mortal Wkly Rep.* 2024;73:682–685. doi:http://dx.doi.org/10.15585/mmwr.mm7331a

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Maura Tully, Child Life Specialist
Caroline Gillenson, PhD
All the Staff, RNs and Doctors of the HT5 Clinic

Pediatric Foreign Body Emergency Pathway: a Multidisciplinary Collaboration to Standardize Care and Improve Patient Safety

Melissa Rose MD, Elizabeth Berg MD, Nicole Gerber MD, Michael Alfonzo MD, Joseph Picoraro MD, Elliott Gordon MD, Thomas Ciecierga MD, Kalliope Tsirilakis MD, Aliza Solomon DO, Kimberley Chien MD, Arielle Bergman MD, Kenny Castro Ochoa MD, Lily Barash MD, Michelle Ramos MD, Aaron Turkish MD, Alison Maresh MD, Steven Rosenblatt MD, Madeleine Drusin MD, Ameer Hassoun MD, Kerianne Brady MD, Christopher Kelly MD, Czer Anthony Lim MD, Laurie Malia MD, Kathleen Hardart MD, Stefan Worgall MD, Katharina Graw-Panzer MD, Angela Kadenhe-Chiweshe MD, Stephen Oh MD, William Middlesworth MD, Doreen Hsing MD, Eva Cheung MD, Nitsana Spigland MD, Andrew Goldstone MD, Shari Platt MD, Vikash Modi MD, Ali Mencin MD, Robbyn Sockolow MD, Snezana Nena Osorio MD

Background

- Children <5 years of age account for 75% of foreign body ingestions
- Approximately 98% of foreign body ingestions are accidental
- Esophageal foreign bodies, button batteries, multiple magnets and sharp objects require **emergent** removal
 - Esophageal button batteries to be removed in <2 hours
 - Other ingestions triaged for urgent removal versus observation
- Risk of delayed removal include perforation, hemorrhage and mortality
- Removal may involve multiple specialties: pediatric GI, pediatric ENT, pediatric pulmonology, pediatric CT surgery, pediatric surgery, pediatric radiology, pediatric anesthesia and PICU
- Weill Cornell is positioned as a tertiary care center for pediatrics and transfer may be required if needed pediatric services are not available at affiliated sites (NYP Queens, NYP Brooklyn Methodist, NYP Lower Manhattan Hospital)

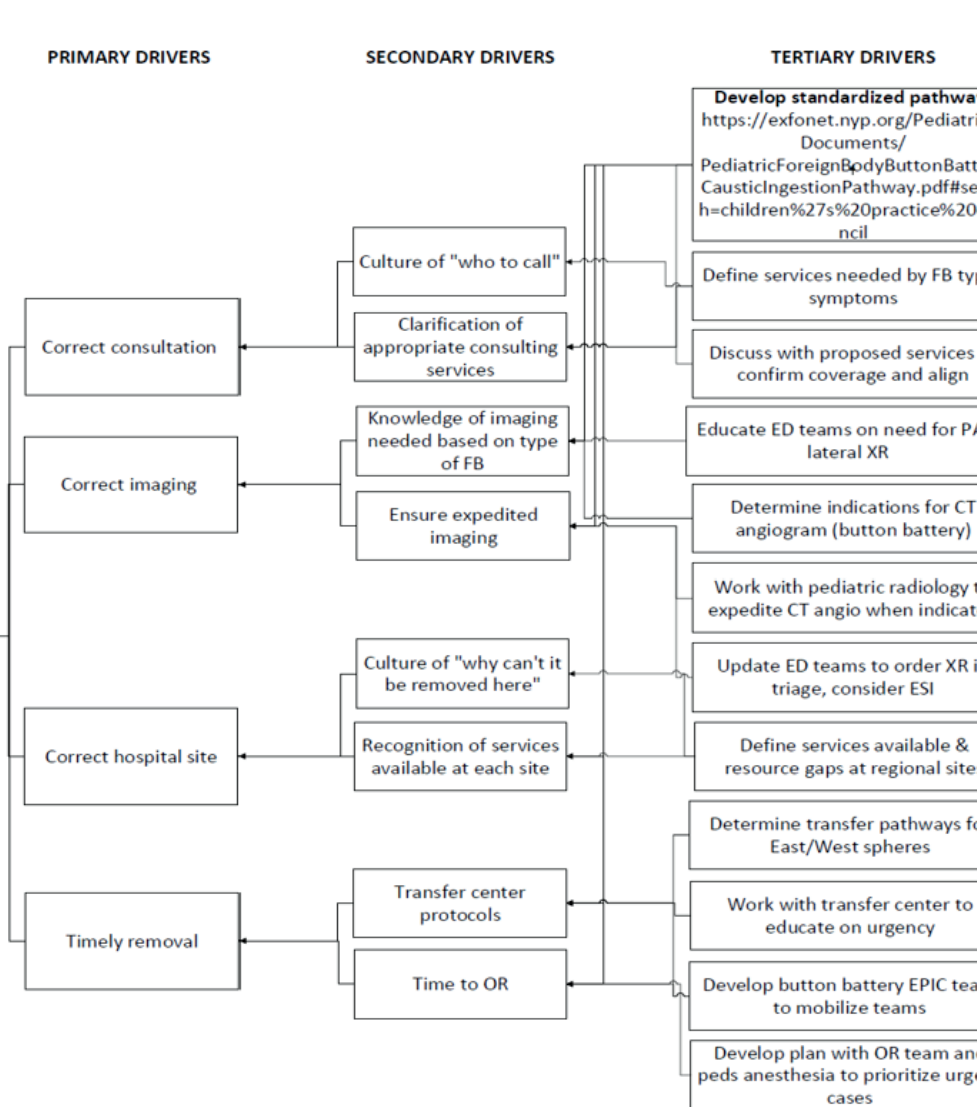
Objective

Problem statement: Lack of a standardized pathway for diagnosis and management of foreign body ingestions can lead to delayed removal of emergent/urgent foreign bodies and increased risk for morbidity/mortality.

Objective: Develop and implement a standardized, evidence-based foreign body emergency pathway to expedite emergent/urgent cases and improve patient safety.

SMART aim: By March 2026, we will increase the number of patients receiving care in agreement with a standardized foreign body pathway to 80%.

Driver Diagram



Methods

Study Design: Multi-site QI study with ongoing PDSA cycles

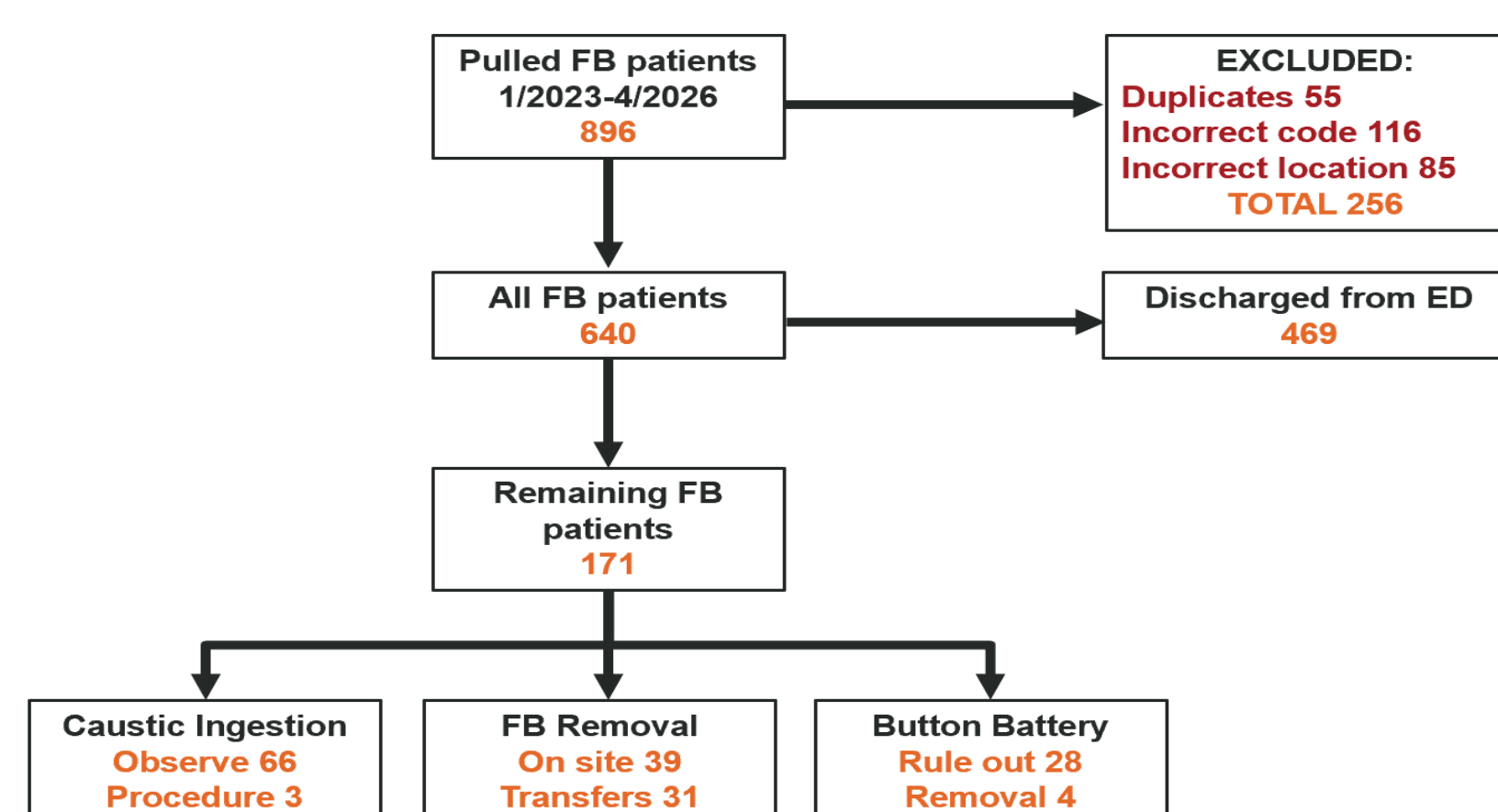
- Inclusion criteria:** Pediatric patients seen in the ED with qualifying foreign body ICD-10 codes from 1/1/2023-3/31/2026 at NYP/WCM, Brooklyn Methodist, Queens, or Lower Manhattan Hospitals
- Exclusion criteria:** no foreign body, alternative site

Data: Demographics (MRN, name, DOB, sex, language, insurance); imaging (time ordered, time resulted); procedures by CPT code; consult type; transfers

Study Measures:

- Outcomes Measures:** care received according to standardized foreign body or button battery pathway
- Process Measures:** time to appropriate imaging (time of ER triage to imaging order); standardized imaging obtained (XR or CT angiogram); time to indicated consultation (from ER triage to consult order); correct consultation; time to OR (time of ER triage to OR start)

Balancing Measures: transfer time; number with unnecessary consults



Results

Figure 1: Process Measure – Time to Appropriate Imaging: ER triage to imaging order

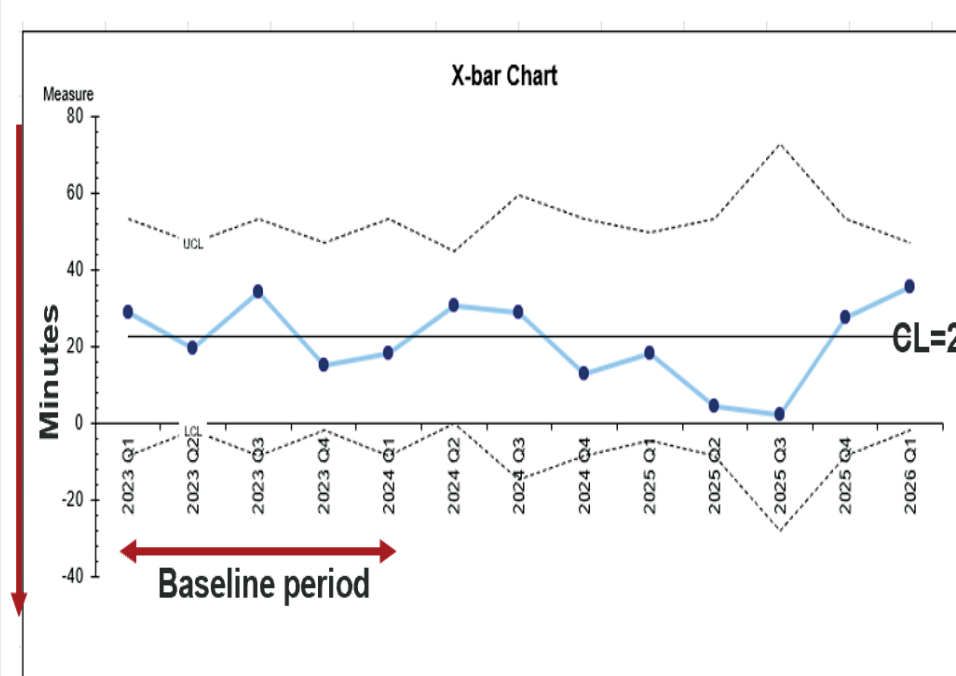


Figure 2: Process Measure – Time to Appropriate Consult: ER triage to consult order

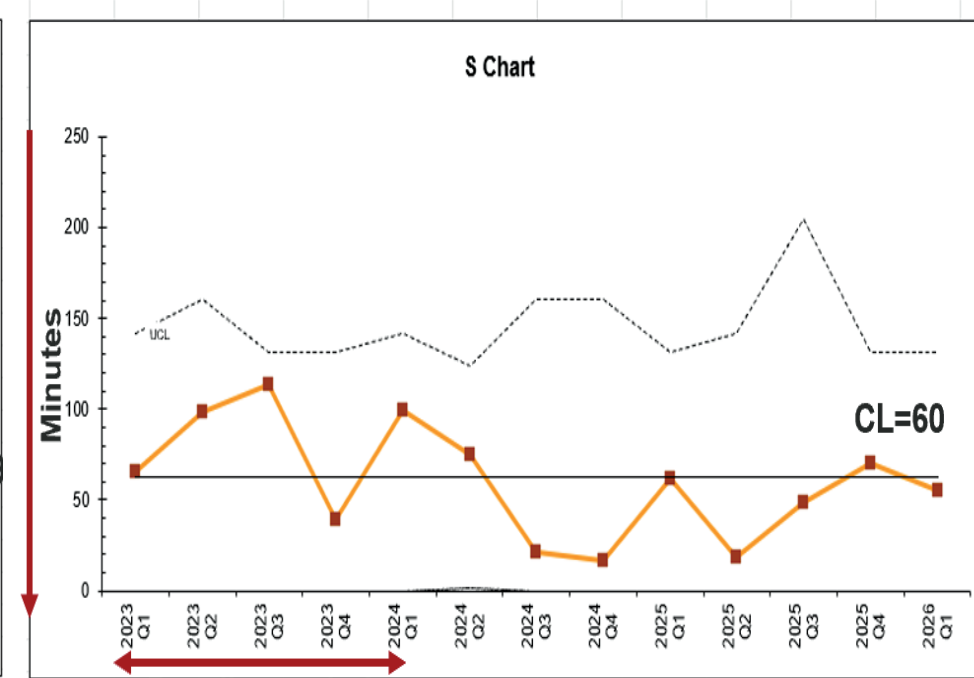
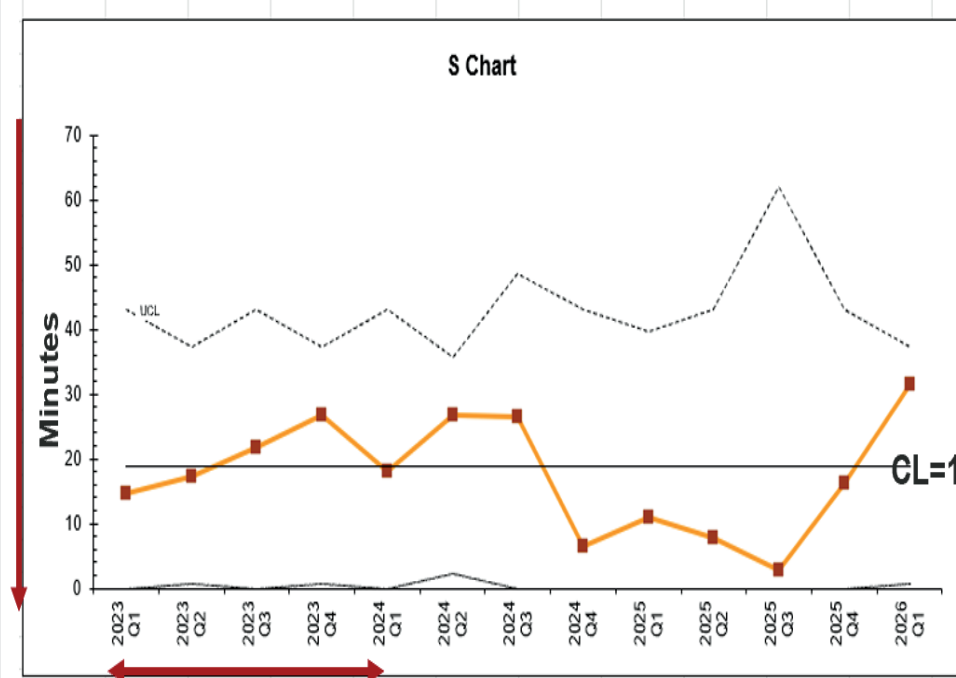
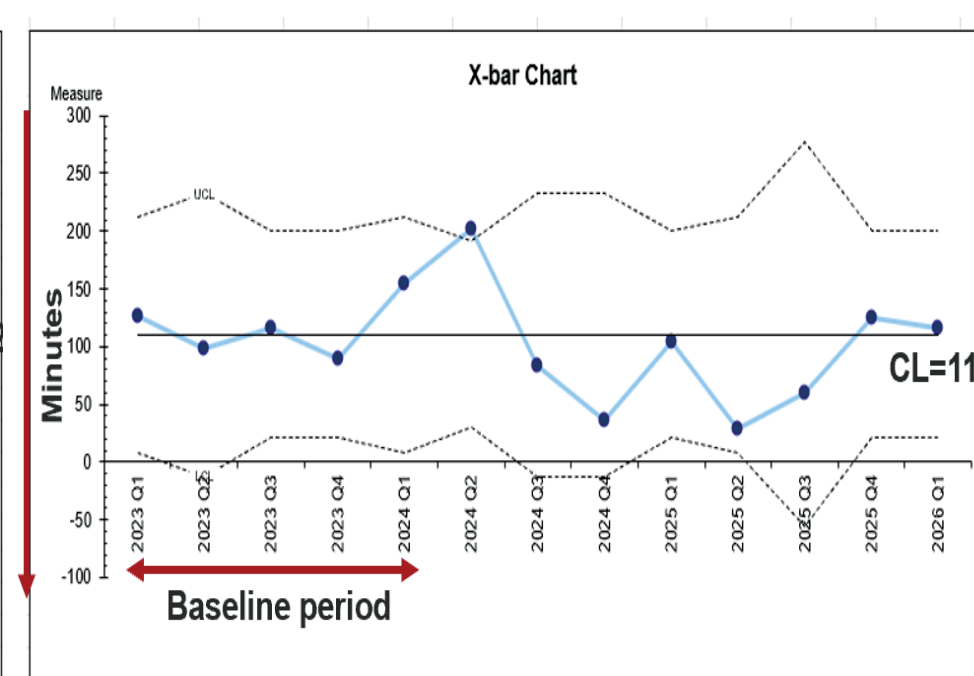
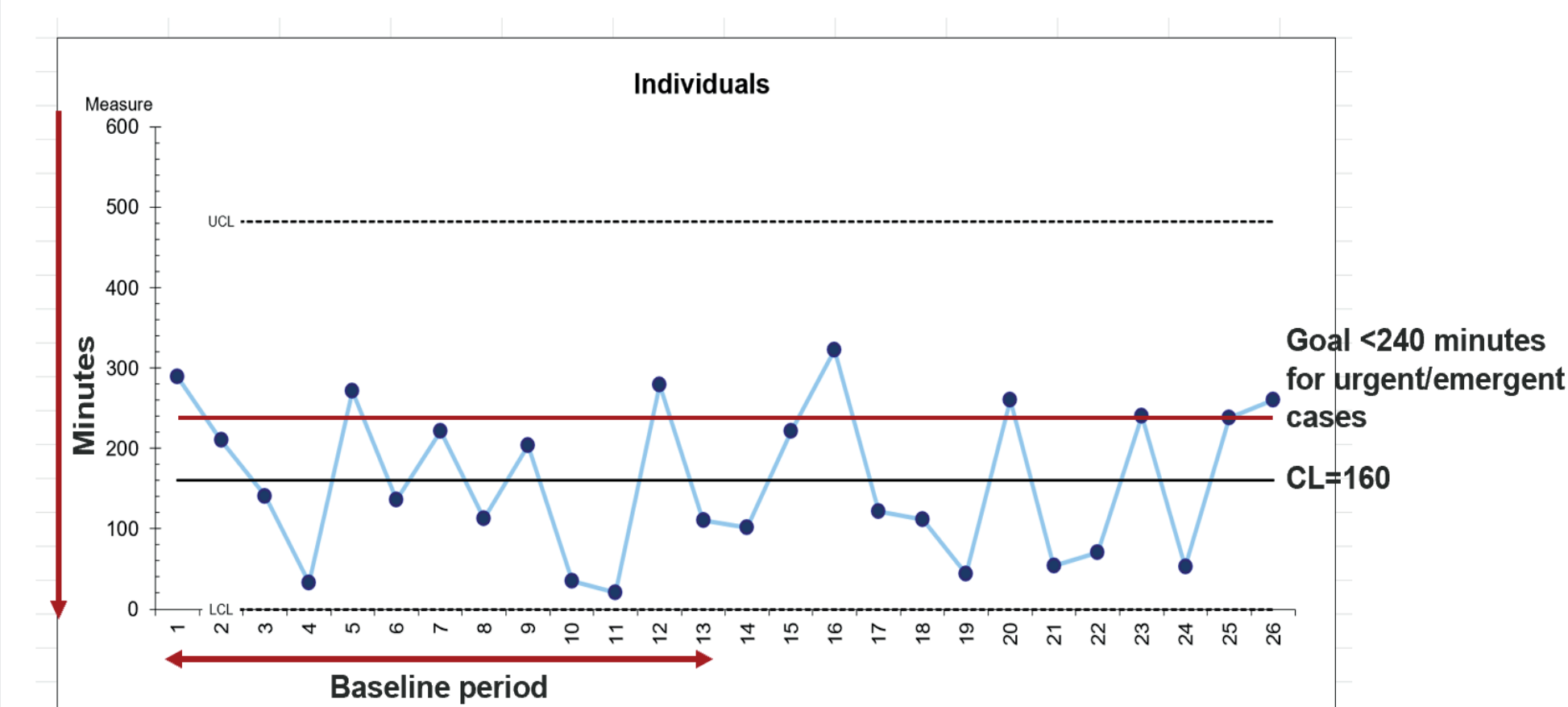


Figure 3: Process Measure – Time to OR for Urgent/Emergent Cases: ER triage/transfer arrival to OR start, goal <240 minutes



Results

Figure 4: Process Measure – Appropriate Consultation: correct consult called to expedite

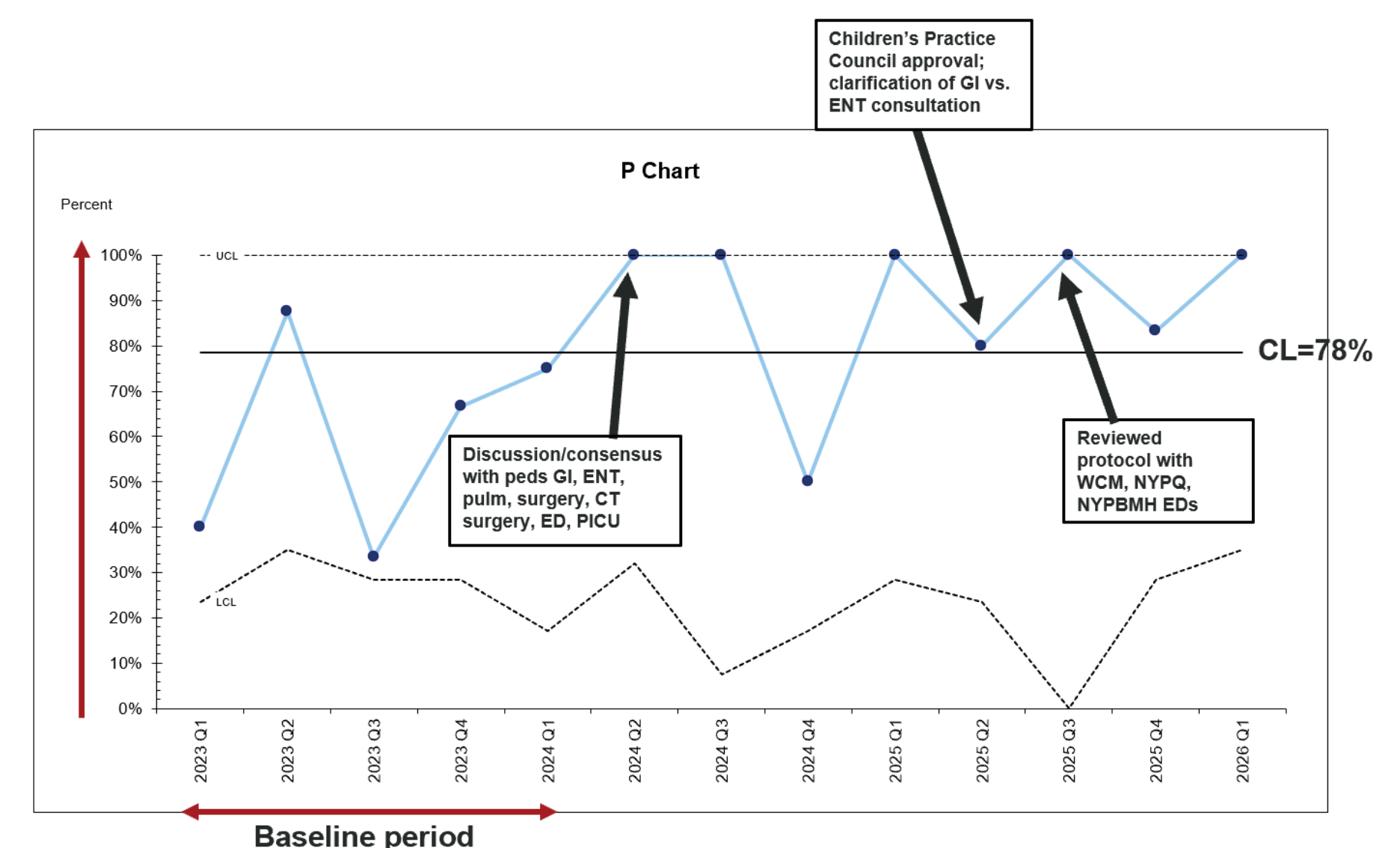
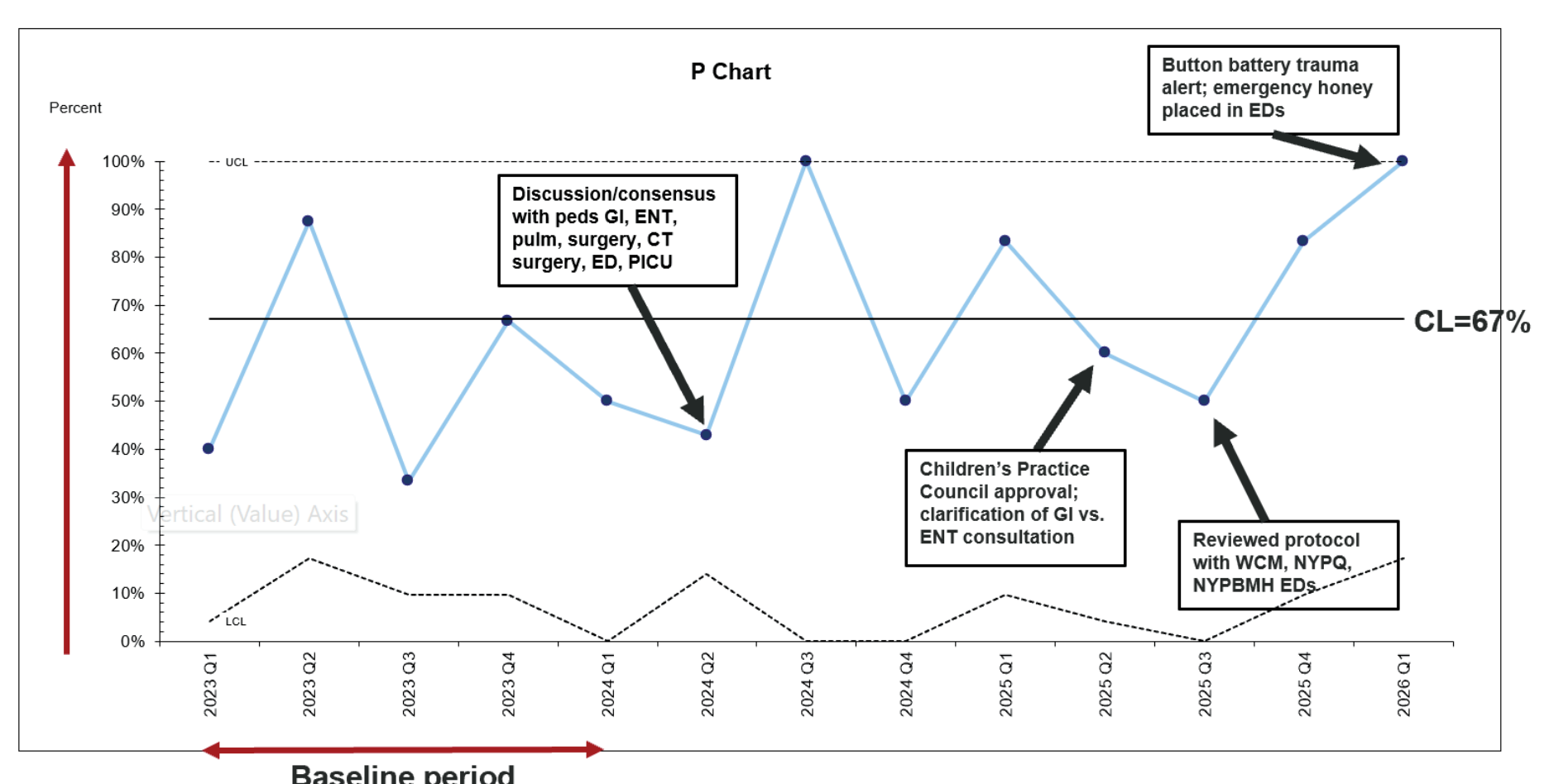


Figure 5: Outcome Measure – Percent Compliant with Foreign Body Pathway: Percent compliance per quarter improved from 40% to 100%



Conclusions

Conclusions:

- Compliance with a standardized foreign body pathway has improved over time with ongoing PDSA cycles: goal >80%, currently 100%
- Esophageal button battery impaction remains a rare event; however, we are now prepared as an institution when this occurs due to multidisciplinary team alignment and creation of a trauma alert system
- Time to OR remains variable and <300 minutes for urgent/emergent cases, with a goal of consistently <240 minutes
- Time to appropriate imaging remains <40 minutes, with recent increase in duration and consideration for intervention in an upcoming PDSA cycle
- Contacting the correct consult has improved, currently 100%, and will continue to address timeliness of initial consult order

Limitations:

- Small sample size
- Rare even for button batteries

Next steps:

- Implementation of button battery alert system and increased awareness
- Readdress need to expedite imaging and consult orders in urgent/emergent cases
- Ongoing PDSA cycles to ensure continued quality improvement and patient safety

Decreasing Time to Administration of STAT Antibiotics in a Level 3 NICU Through Implementation of a Late Onset Sepsis Protocol

Quality Improvement Academy | Annual WCM Quality Improvement & Patient Safety Poster Symposium

Tatyana Kopp, DO, Divya Keerthy, MD, Thaydene Samuels, PA, Marie LoBuglio, PA, Regina Langer, BS, PharmD, Natasha Cruc-Vicente, MSN, RN-C, Tatjana Barnica, MSN, RN, Jason Cohen, PT, MA, MBA, Nicholas Lee, MHA, Kalliope Tsirilakis, MD, Priyanka Tiwari, MD, Snezana Nena Osorio, MD | May 2026

Background

Sepsis continues to be a leading cause of morbidity and mortality amongst NICU patients. Standard of care for sepsis patients is to administer antibiotics as quickly as possible, ideally within 1 hour of sepsis recognition/concern.

- In 2023 we looked at average antibiotic administration times within the NYPQ Pediatric Dept.
- NICU administration of STAT antibiotics averaged 78min. from order placement to administration with only 38% of antibiotics being administered within the hour.

Aim Statement

To implement a late onset sepsis bundle at NYP-Queens NICU and achieve administration of STAT antibiotics within 1 hour of order placement via adherence to the proposed protocol to $\geq 80\%$ by July 2026.

Design

Observation study with sequential planned experimentation.

Study Measures:

Outcome Measure

Time from antibiotic order placement to administration with a goal of 60min or less.

Process Measures

- % Antibiotics orders as "STAT"
- Time from order -> medication leaving pharmacy in minutes
- Time from medication arrival on unit -> administration in minutes
- % Lumbar Puncture attempted
- % Urine Culture attempted
- % Correct antibiotics ordered

Balancing Measure

Number of medication administration errors

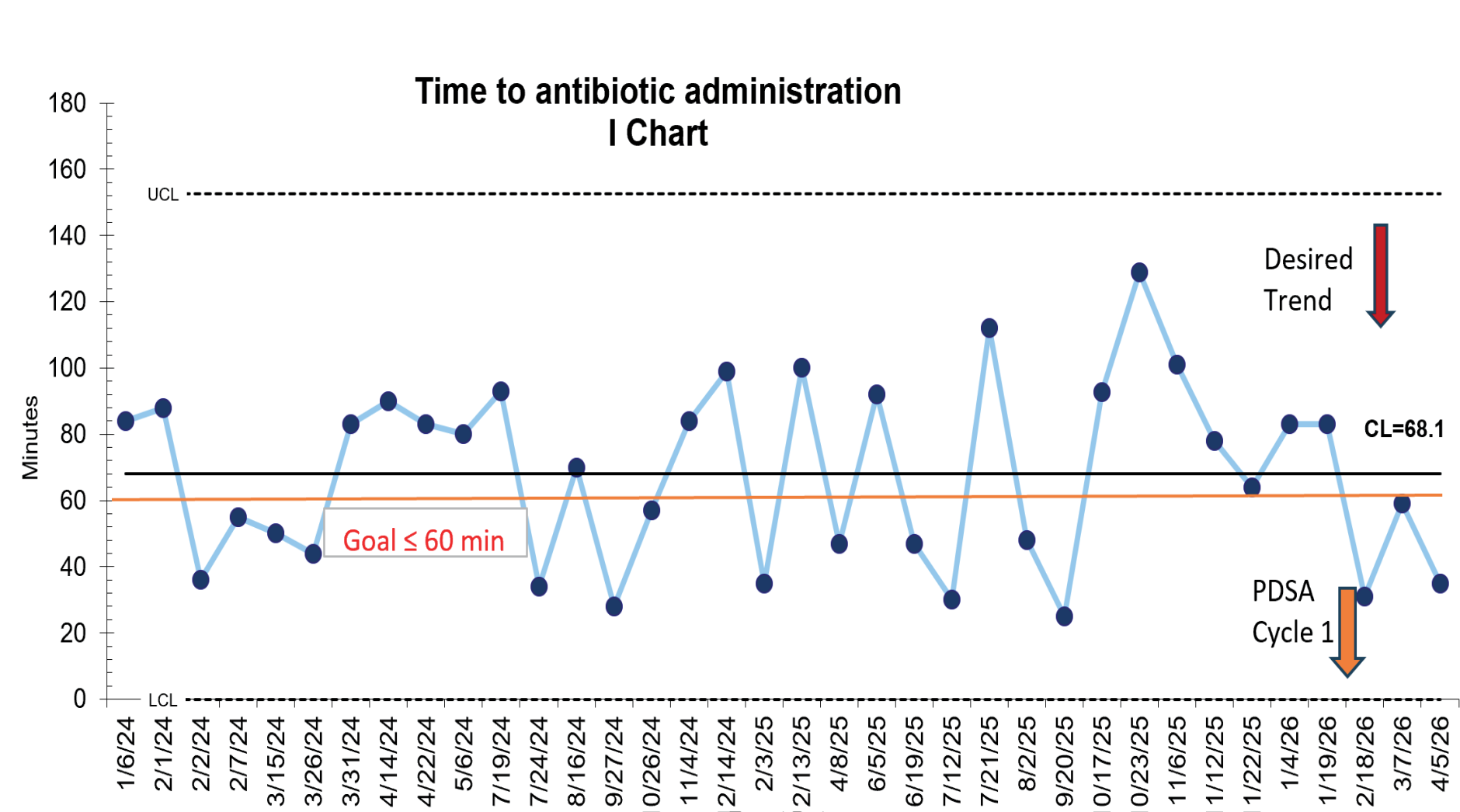
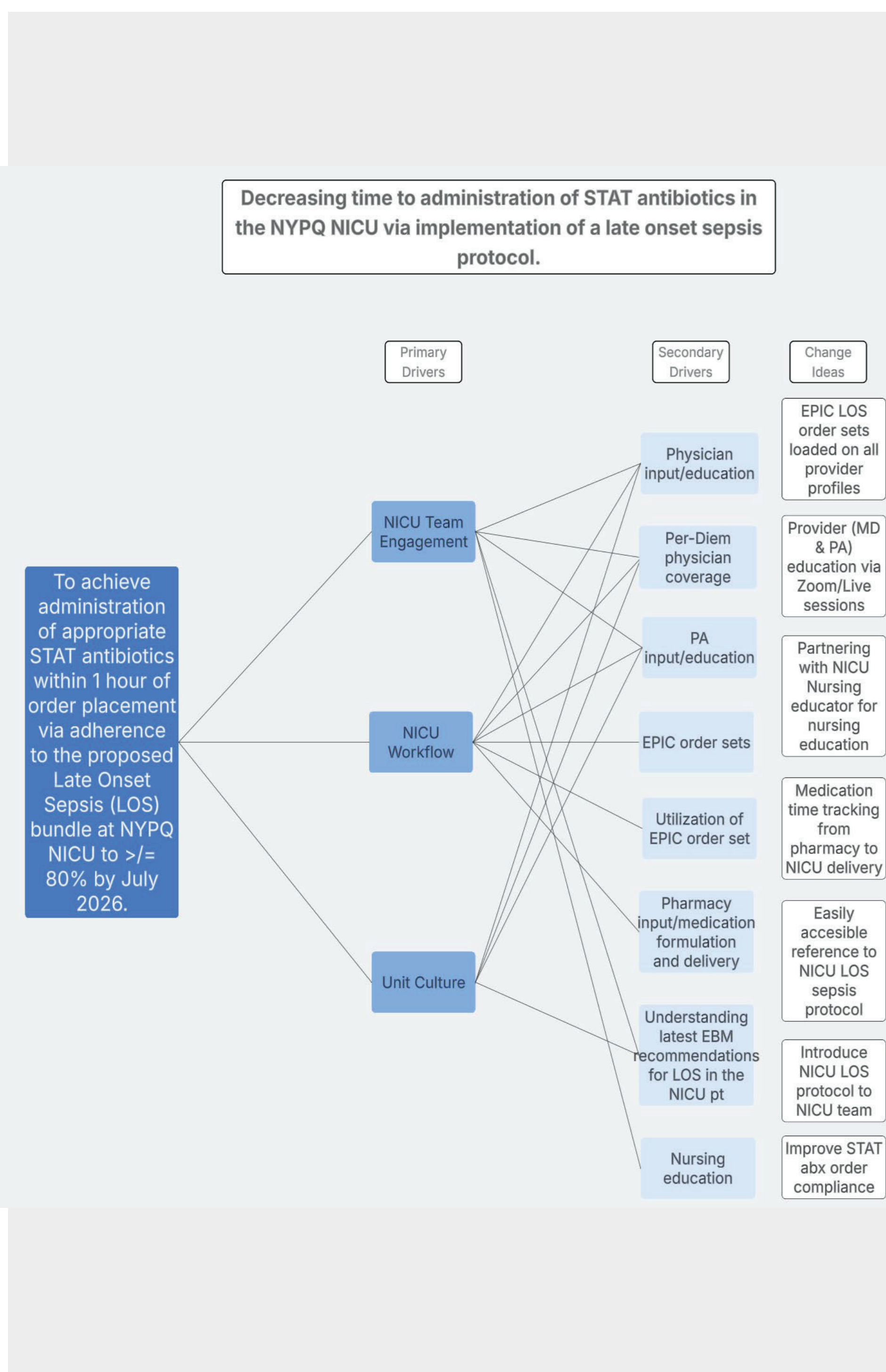
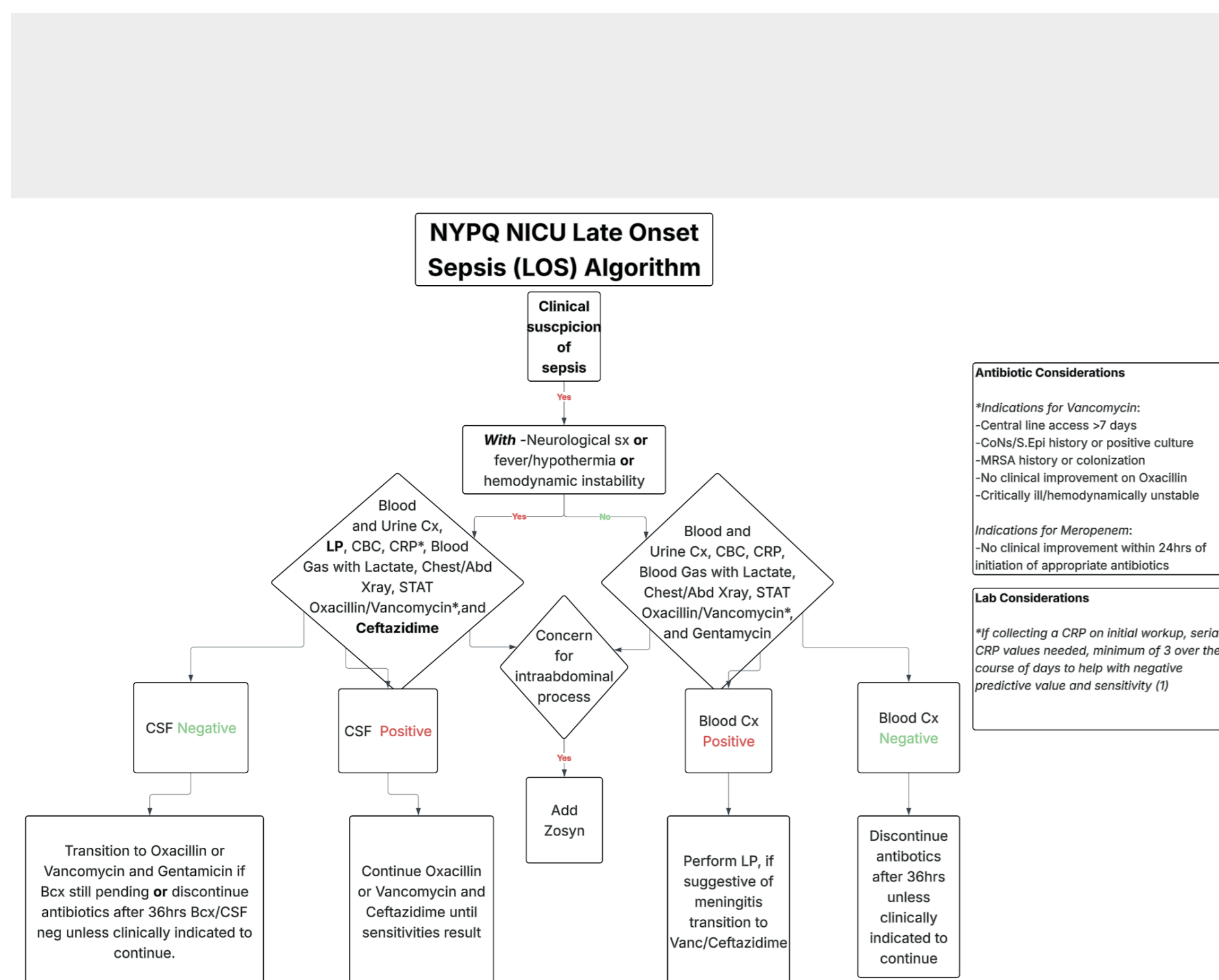
Data Collection: EMR Review

Data Analysis : We used I charts to display and analyze data and we applied Associates for Process Improvement rules to detect special cause variation

Interventions were tested through 2 PDSA cycles:

1) LOS protocol was created based on latest literature recommendations and our local antibiogram. Feb. 2026 the new protocol was implemented with team huddles continuing with both day and night shift

2) In January 2026 team huddles began introducing the NICU team to the upcoming project.



Results

- Baseline data (2024–2025) showed a mean administration time of 70 minutes, with 36% of antibiotics given within 60 minutes of ordering (See I chart)
- Since protocol implementation in February 2026, three Late Onset Sepsis cases have occurred, all with antibiotic administration times under 60 minutes.
- There have been no medication administration errors recorded since protocol implementation.

Conclusions/Lessons Learned

- While additional post-implementation data are needed to fully assess impact on antibiotic administration times, ongoing monitoring is in place.
- NICU staff have provided strong positive feedback regarding protocol usability and workflow integration.
- Interdisciplinary staff huddles have facilitated identification of key communication gaps between pharmacy and bedside nursing, leading to targeted improvements that support timely antibiotic delivery.

Next Steps

- EPIC order bundles will be developed for Late Onset Sepsis patients and made available to all NICU ordering providers as part of our 2nd PDSA cycle.
- Process measures will be further evaluated using additional data from the Pharmacy EMR.
- Anticipated challenges in the coming months include inconsistent physician staffing, with expectations of returning to baseline staffing levels by September 2026.
- A long-term goal is to extrapolate findings from this project to the pediatric inpatient unit to optimize antibiotic administration times across care settings and the entire pediatric department at Queens.

References

- Coggins SA, Glaser K. Updates in Late-Onset Sepsis: Risk Assessment, Therapy, and Outcomes. *Neoreviews*. 2022 Nov 1;23(11):738-755. doi: 10.1542/neo.23-10-e738. PMID: 36316254; PMCID: PMC9675597.
- Hopkinsmedicine.org/NICU-LOS Clinical Pathway _ 2025-08-20
- Sullivan BA, Nagraj VP, Berry KL, Fleiss N, Rambhia A, Kumar R, Wallman-Stokes A, Vesoulis ZA, Sahn R, Ratcliffe S, Lake DE, Moorman JR, Fairchild KD. Clinical and vital sign changes associated with late-onset sepsis in very low birth weight infants at 3 NICUs. *J Neonatal Perinatal Med*. 2021;14(4):553-561. doi: 10.3233/NPM-200578. PMID: 33523025; PMCID: PMC8316489.
- Celik IH, Hanna M, Canpolat FE, Mohan Pammi. Diagnosis of neonatal sepsis: the past, present and future. *Pediatr Res*. 2022 Jan;91(2):337-350. doi: 10.1038/s41390-021-01696-z. Epub 2021 Nov 2. PMID: 34728808; PMCID: PMC8818018.
- McGovern M., Giannoni E., Kuester H. et al. Challenges in developing a consensus definition of neonatal sepsis. *Pediatr Res* 88, 14–26 (2020). <https://doi.org/10.1038/s41390-020-0785-x>
- Stoll BJ, Hansen N, Fanaroff AA, Wright LL, Carlo WA, Ehrenkranz RA, Lemons JA, Donovan EF, Stark AR, Tyson JE, Oh W, Bauer CR, Korones SB, Shankaran S, Laptook AR, Stevenson DK, Papile LA, Poole WK. To tap or not to tap: high likelihood of meningitis without sepsis among very low birth weight infants. *Pediatrics*. 2004 May;113(5):1181-6. doi: 10.1542/peds.113.5.1181. PMID: 15121927.

Julia Schiefer MSN, RNC-OB, C-EFM | Lori Gage BSN, RNC-OB, C-EFM
Taylor Wu MSN, RN, C-EFM | Corrina Oxford-Horrey, MD | May 20, 2026

Background

- Interdisciplinary rounds on the labor and delivery unit are primarily led by obstetric providers, with limited or inconsistent participation from nursing staff.
- Limited nursing involvement is associated with decreased nurse engagement and a unilateral decision-making model.
- Reduced interdisciplinary collaboration may compromise communication and shared understanding of patient care plans.
- Evidence shows that interprofessional rounds improve communication, teamwork, and participant engagement compared with traditional rounding models (Sharma et al., 2023).
- Effective interdisciplinary communication requires structured, setting-specific processes that support consistent information exchange and incorporation of patient values during care transitions (Odone et al., 2022).

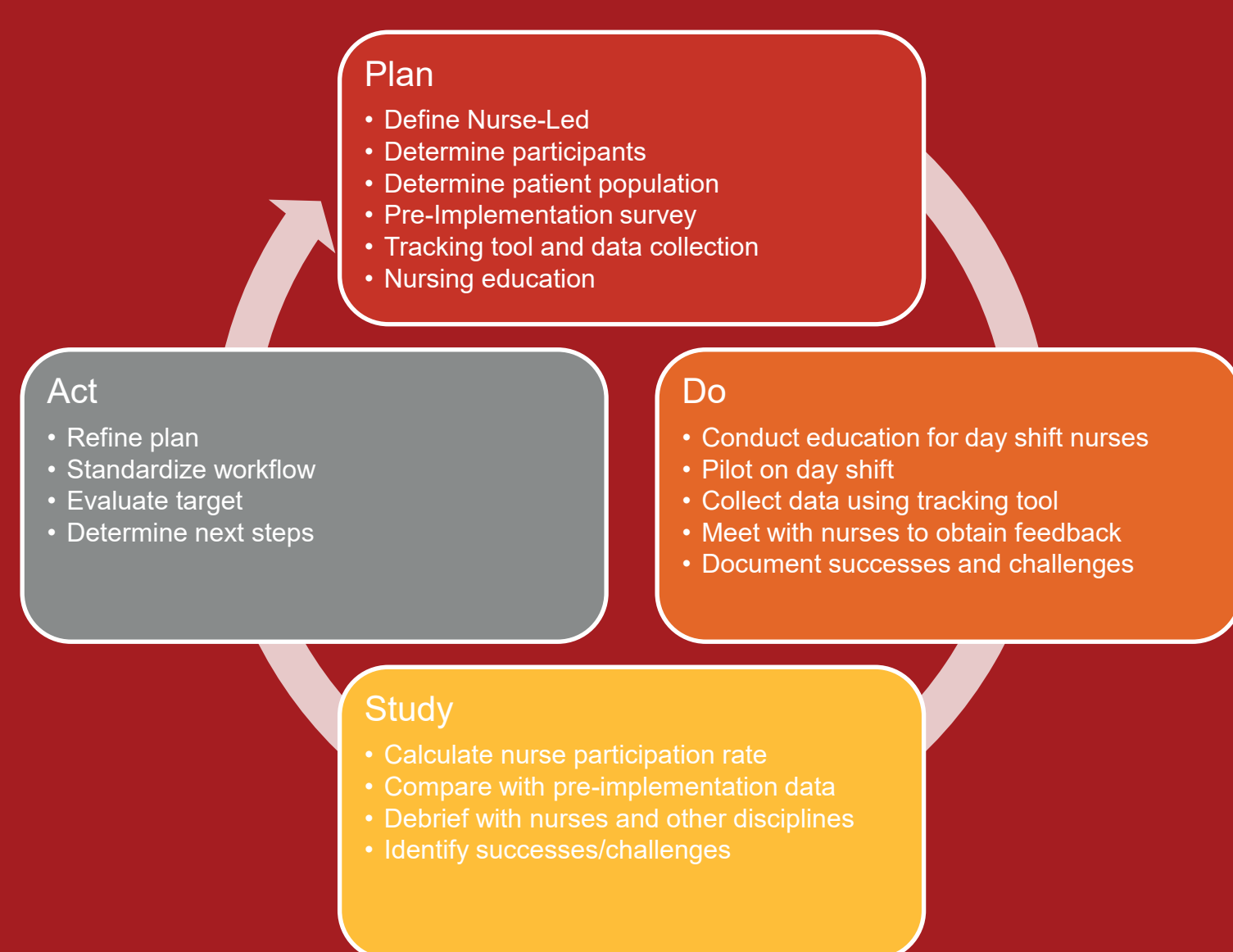
Problem Statement

On the labor and delivery unit, interdisciplinary rounds are primarily led by obstetric providers with limited nursing participation, contributing to decreased nurse engagement. The absence of a nurse-led interdisciplinary rounding model limits shared decision-making and consistent communication during weekday rounds.

Objective/Aim Statement

The aim of this quality improvement initiative is to enhance labor and delivery nurse engagement by implementing nurse-led interdisciplinary rounds, targeting at least 75% nurse participation in weekday rounds by May 2026.

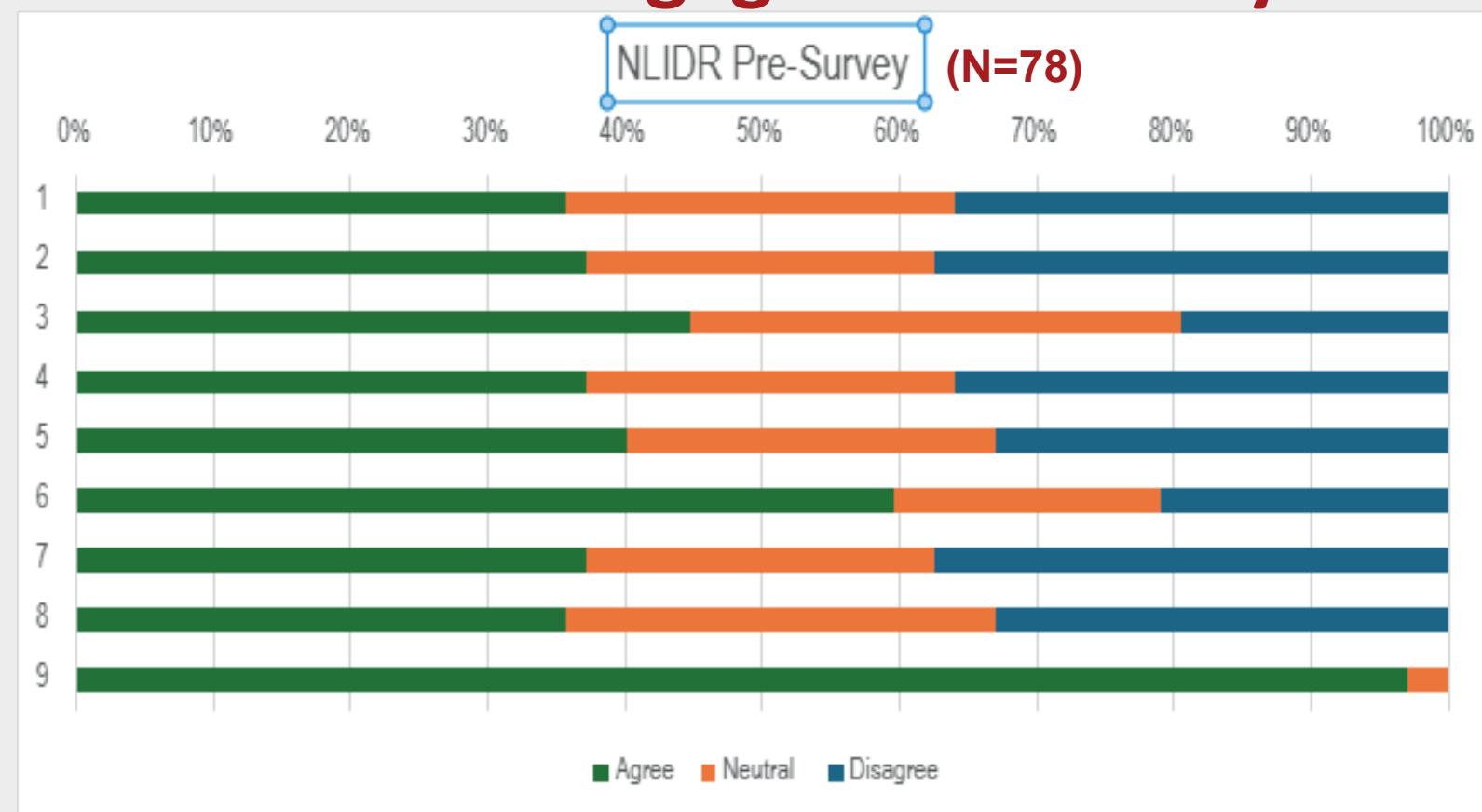
Design



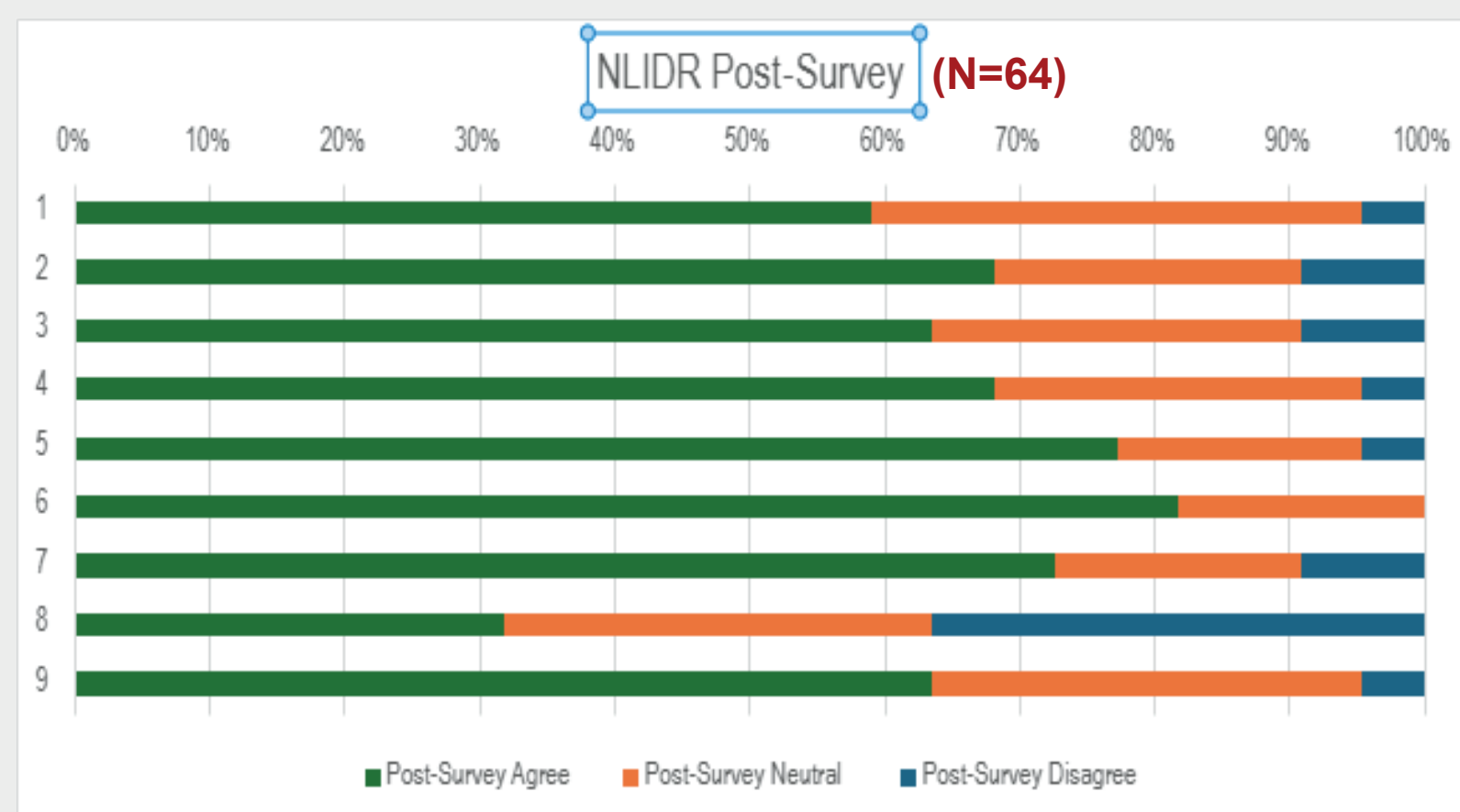
Methods

- Baseline nurse engagement assessed via pre-implementation survey
- Standardized education provided on the IPASS-OB nurse-led rounding framework
- Nurse-led interdisciplinary rounds implemented during weekday rounds
- All nurses assigned to labor patients attend sign-out
- Pre- and post-implementation data collected using a validated assessment tool
- Post-implementation survey completed five weeks after go-live

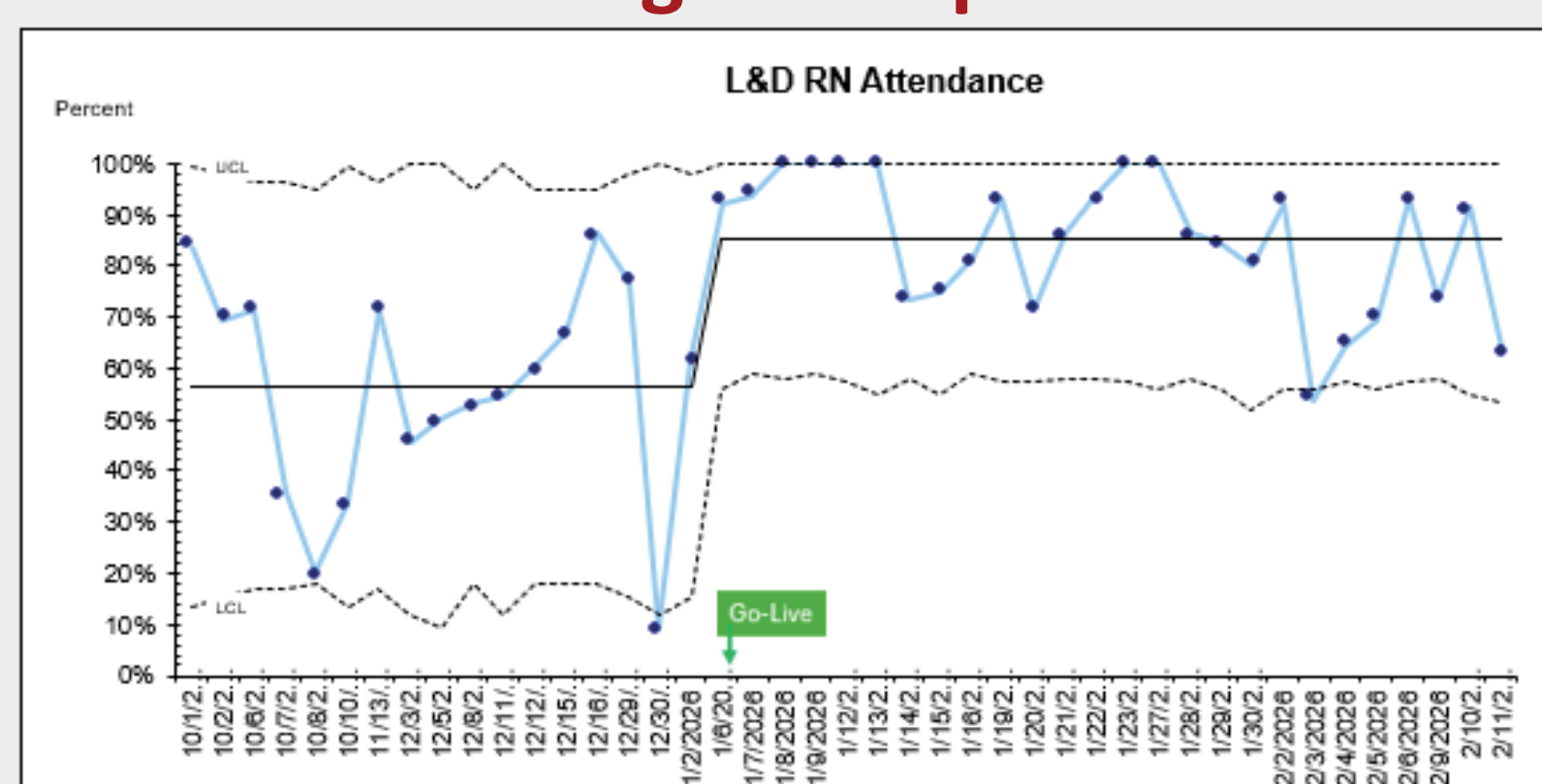
Nurse Engagement Survey



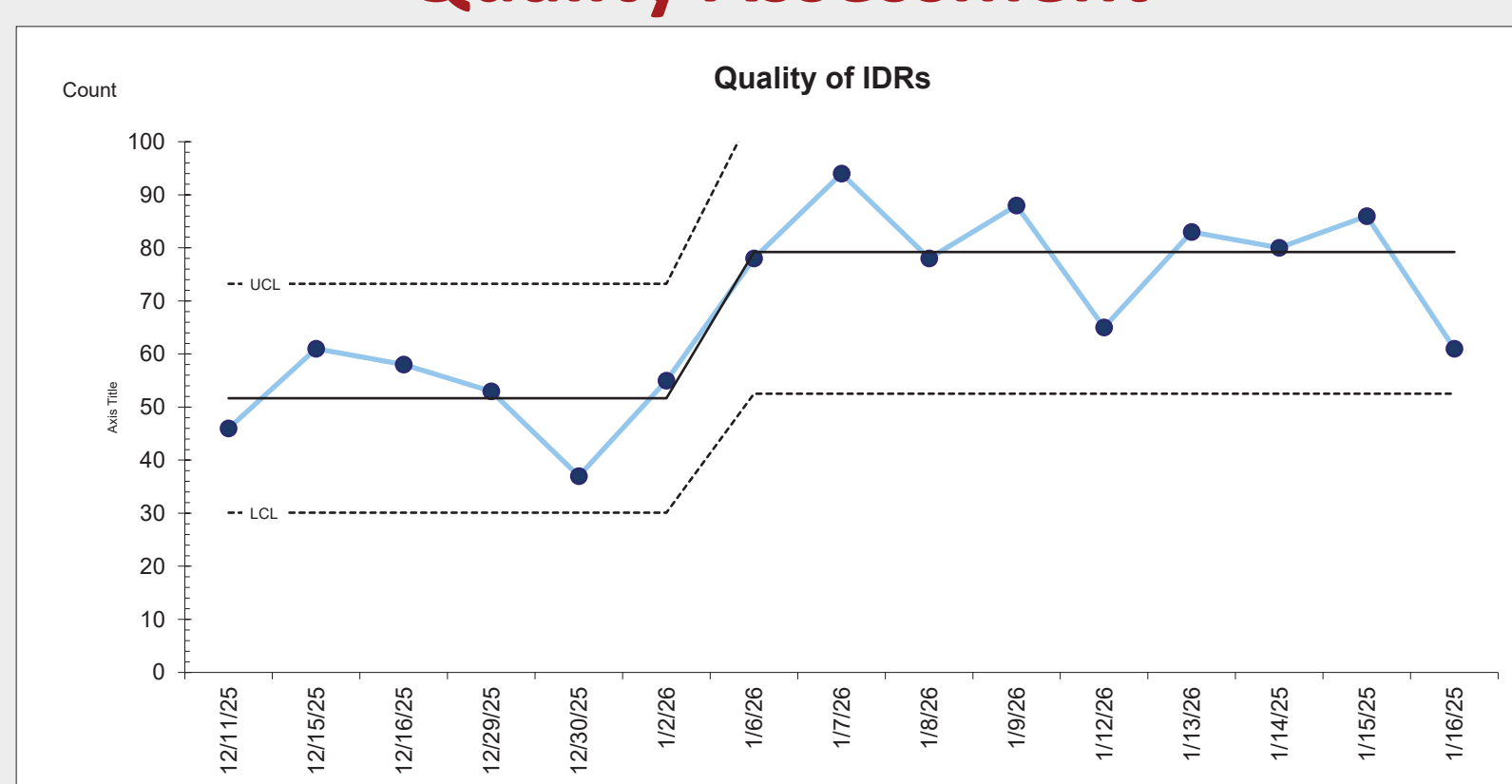
1. I feel engaged in decision-making about patient care during IDR.
2. I feel recognized as a key member of the care team during IDR.
3. I feel respected as a key member of the care team during IDR.
4. I am satisfied with the level of collaboration with other disciplines during IDR.
5. Communication between nurses and other team members is effective during IDR.
6. I feel informed about my patients' care plans during IDR.
7. I have sufficient opportunity during IDR to actively contribute to input to care planning.
8. I experience frequent delays or miscommunication during care coordination.
9. I believe interdisciplinary collaboration during IDR improves patient outcomes.



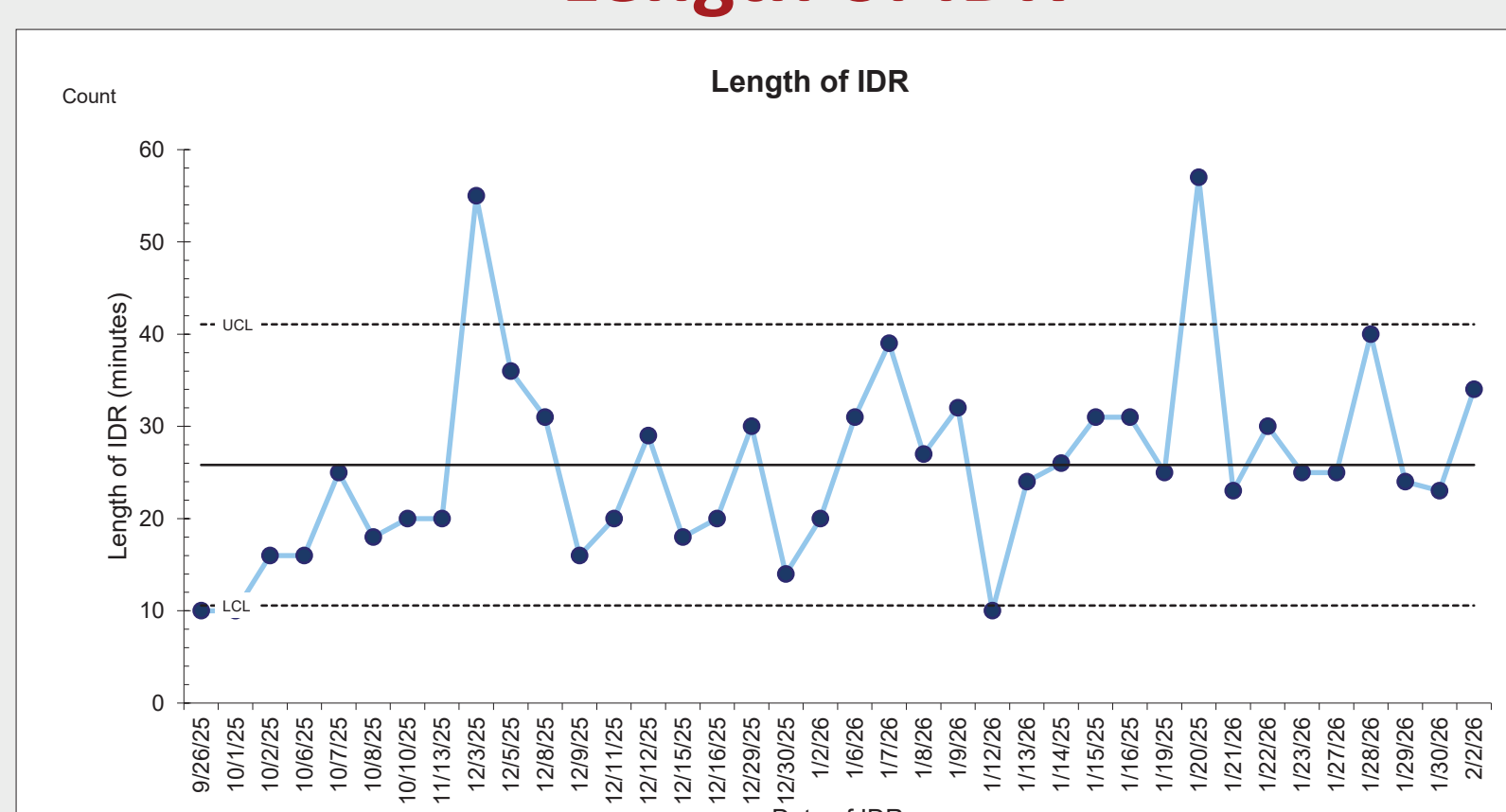
Nursing Participation



Quality Assessment



Length of IDR



Results

- Nurse engagement ratings increased significantly following the implementation of nurse-led interdisciplinary rounds (IDRs).
- Nurse participation in interdisciplinary rounds improved from 55.81% pre-implementation to 85.09% post-implementation, exceeding the project target.
- Overall quality of interdisciplinary rounds improved, with enhanced communication, shared understanding of care plans, and increased nursing contribution noted.
- The implementation of nurse-led IDRs did not result in a significant change in the duration of rounds, indicating improved engagement without added time burden.

Conclusions/Lessons Learned

- Nurse-led interdisciplinary rounds (IDRs) were associated with increased nurse engagement, participation, and attendance, as well as improved overall quality of rounds (i.e. good catches and near misses).
- Structured nurse-led IDRs support more effective interdisciplinary collaboration, communication, and shared decision-making.
- Increased nursing presence during rounds enhances situational awareness and strengthens the collective care planning process.
- Incorporating nurse-led IDRs into unit guidelines may promote sustainability, enhance patient safety, and reduce adverse events related to communication and decision-making.

Next Steps

- Expand nurse-led IDRs to 24/7 coverage for labor patients May 2026
- Standardize education for new RNs using OB I-PASS
- Incorporate handoff tool in training for new residents and PA's
- Ensure continued leadership presence to support consistency
- Incorporate nurse-led IDRs into unit guidelines for sustainability

References

- Odone, A., Bossi, E., Scardoni, A., Balzarini, F., Orlandi, C., Arrigoni, C., Signorelli, C., & Garancini, P. (2022). Physician-to-nurse handover: A systematic review on the effectiveness of different models. *Journal of Patient Safety*, 18(1), e73–e84. <https://doi.org/10.1097/PTS.0000000000000701>
- Sharma, S., Hashmi, M. F., & Friede, R. (2023). Interprofessional rounds in the ICU. In *StatPearls*. StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK507776/>
- Vatani, H., Sharma, H., Azhar, K., Kochendorfer, K. M., Valenta, A. L., & Dunn Lopez, K. (2024). Required data elements for interprofessional rounds through the lens of multiple professions. *Journal of Interprofessional Care*, 38(3), 453–459. <https://doi.org/10.1080/13561820.2020.1832447>

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Peripheral Intravenous Administration of 23.4% Hypertonic Saline for Sustained Intracranial Hypertension and Acute Brain Herniation in 2 South NSICU – A Pilot Feasibility Study

Weill Cornell Medicine Quality Improvement and Patient Safety Symposium | May 20, 2026

Kaitlyn Twomey PA-C, Judy Ch'ang MD, Abdalla Ammar PharmD, Abigail Coppola RN, Jennifer I. Lee MD, Hooman Kamel MD, Santosh Murthy MD, Alex Merkler MD, Lauren Mordente RN

Problem Statement:

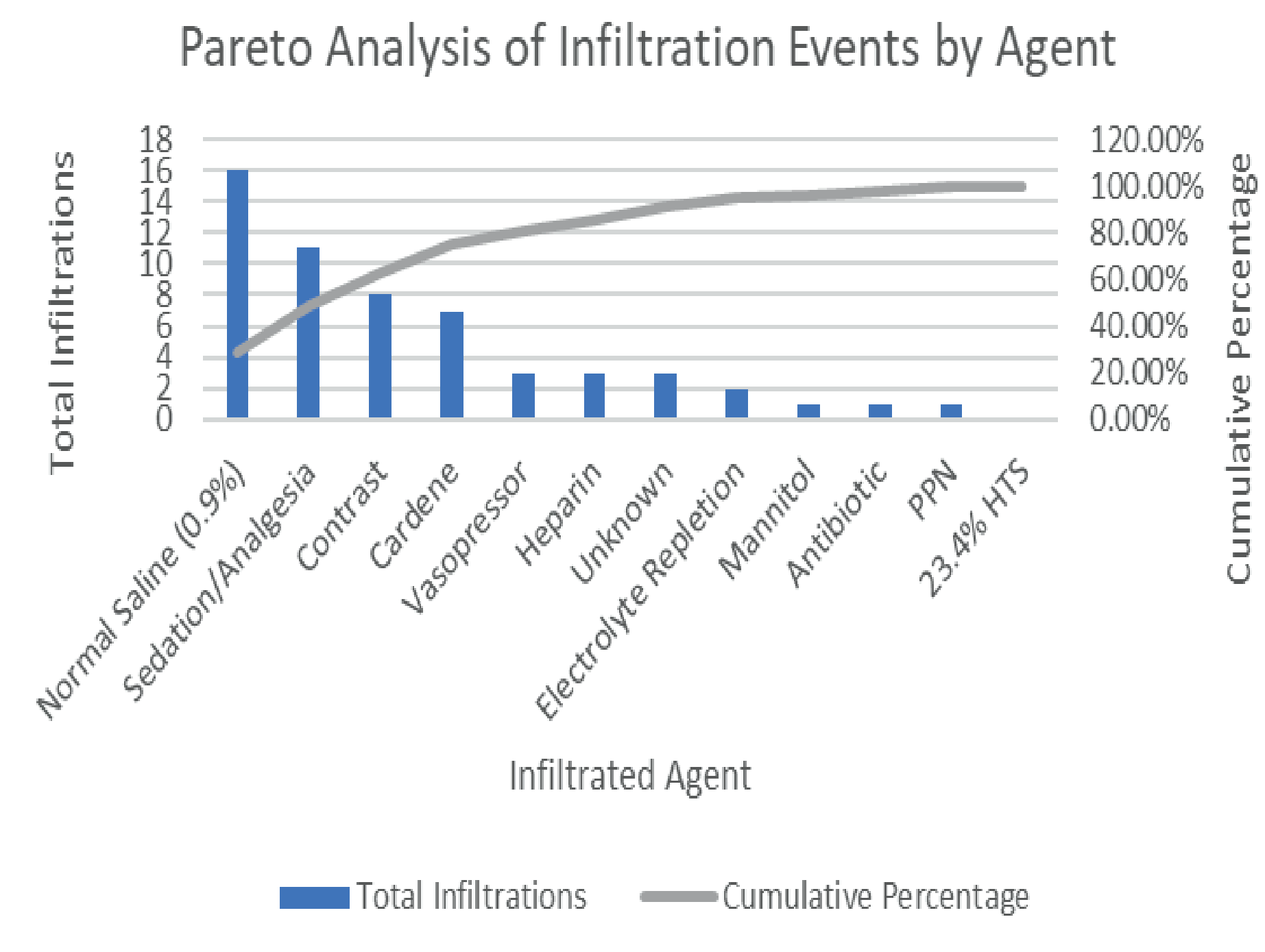
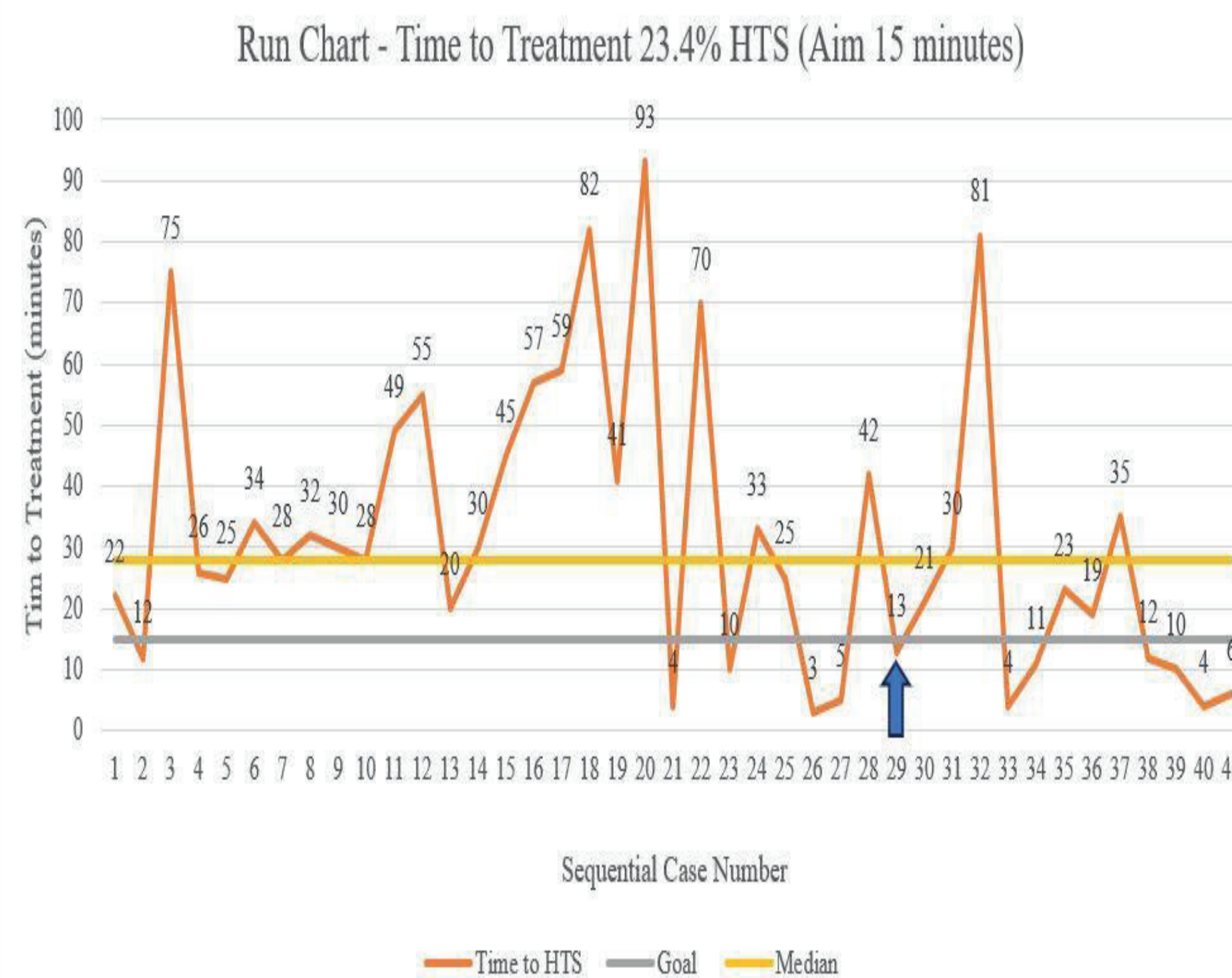
Sustained intracranial hypertension, defined as intracranial pressure (ICP) >20 mmHg for ≥5 minutes, and acute cerebral herniation are neurologic emergencies requiring immediate intervention to prevent irreversible brain injury and death. Hypertonic 23.4% saline (HTS) is a life-saving therapy used for treatment of these conditions. Due to its high osmolarity and risk of tissue injury with extravasation, institutional policy at NYP restricts its administration to central venous access. Consequently, treatment necessitates emergent central line placement under non-ideal conditions, which increases the risk of line-related complications, requires procedural expertise that is not immediately available, and introduces delays in management.

Objective/Aim Statement:

This study aimed to implement peripheral administration of 23.4% HTS via a well-functioning upper extremity peripheral intravenous (IV) line with close site monitoring for up to 48 hours in the WC Neurological Intensive Care Unit (NSICU). Objectives were to expedite delivery of HTS when central access is not immediately available, compare safety and efficacy with central administration, and reduce central line utilization. We aimed to administer the first dose of HTS within 15 minutes of event recognition in 100% of eligible cases, while maintaining clinical efficacy and avoiding an increase in peripheral IV related complications. Additionally, we sought to achieve peripheral administration in ≥75% of eligible patients by March 2026.

Design/Methods:

- Pilot feasibility study from 9/8/25-3/27/26.
- **Inclusion Criteria:** Those within pilot unit experiencing sustained intracranial hypertension or clinical/radiographic concern for cerebral herniation requiring HTS.
 - Acute change in level of consciousness with pupillary dilatation, abnormal motor posturing, or Cushing's triad.
- **Exclusion Criteria:** non-emergent indications, absence of a well-functioning IV, peripheral administration beyond 48 hours, or an existing central line.
- Administration via well-functioning peripheral IV: upper extremity, proximal to hand, ≥20-gauge, blood return present, 2 provider verification.
- IV site assessment hourly for the first hour, then every 4 hours, for complications including pain, swelling, erythema, or extravasation. Adverse events recorded via Keepsafe. Neurologic examinations, ICP measurements, and medication administration were documented using existing unit-based electronic flowsheet practices.
- Data was collected via biweekly electronic medical record queries (Epic Slicer Dicer) and manual chart review. Primary outcomes included time from event recognition to treatment and markers of clinical efficacy (pre/post ICP and serum sodium). Balancing measures included peripheral IV related complications and subsequent central line placement.



Results:

During the pilot period, 25 administrations of 23.4% HTS were recorded (12 central, 13 peripheral). Fourteen patients met eligibility criteria, 13 (93%) received peripheral treatment, exceeding the 75% target.

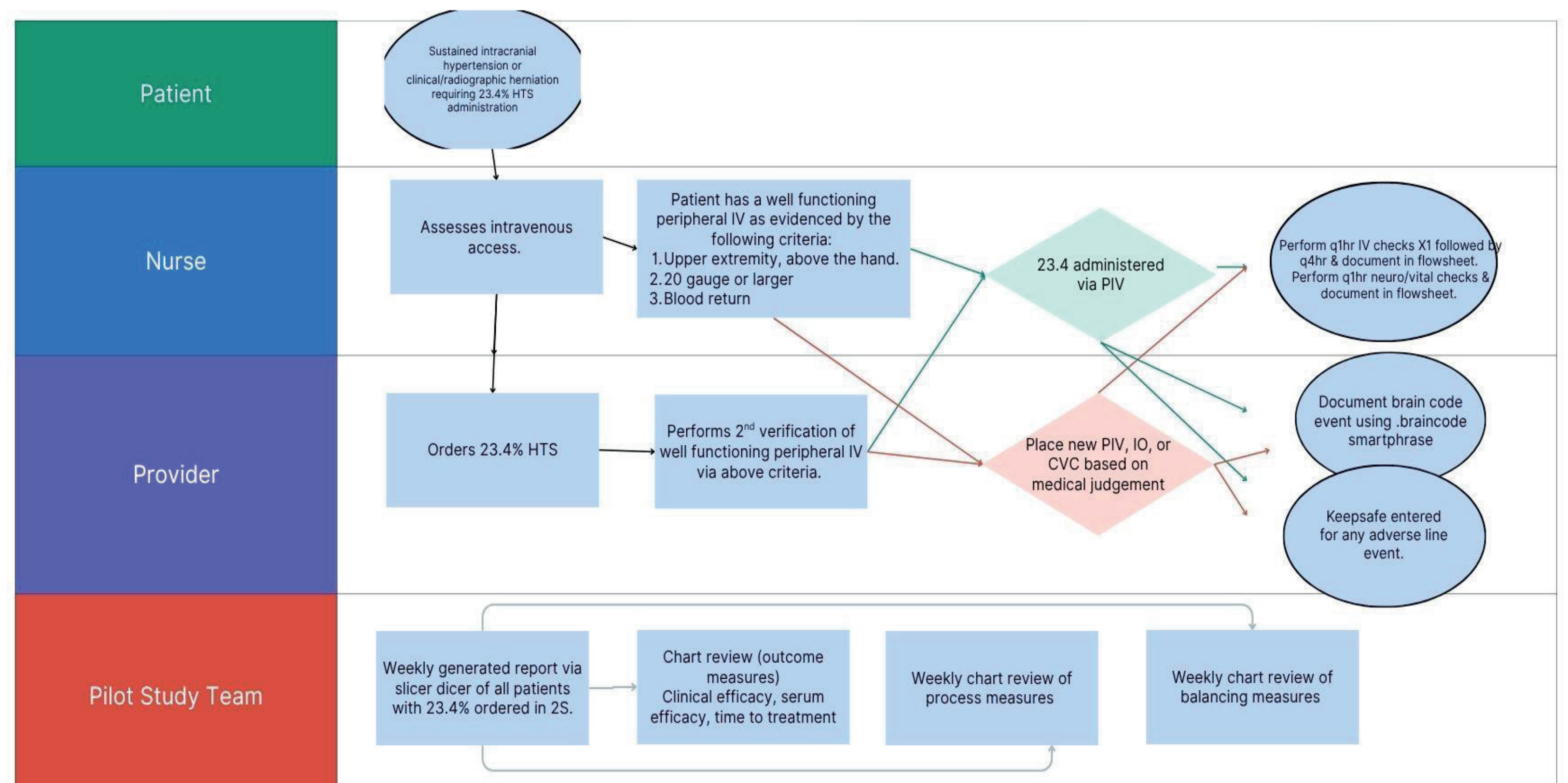
No peripheral IV related adverse events were identified. During the same period, 34 peripheral IV infiltrations were documented unit-wide, none associated with HTS. Among patients receiving peripheral administration, central line placement was avoided in 10 cases (77%). Central lines were avoided in 40% of patients with ICP crisis during pilot study.

Among patients with ICP monitoring, there was no significant difference in median ICP reduction between central and peripheral administration (-38 mmHg vs -30.5 mmHg, p=0.50). However, a greater median increase in serum sodium was observed in the peripheral group (+8 vs +3.5 mEq/L, p=0.0025). Mean time to treatment went from baseline of 31 minutes to 13 minutes during the pilot, achieving the goal of 15.

Conclusions/Lessons Learned/Next Steps:

Peripheral administration of 23.4% HTS in emergent neurologic events is feasible with multidisciplinary engagement. No peripheral IV related complications were observed, supporting the safety of this approach in appropriately selected patients. Peripheral administration demonstrated comparable reduction in ICP and statistically significant increase in serum sodium. Central line placement was avoided in 40% of patients with ICP crisis. Mean time to treatment improved from 31 to 13 minutes. As sample size increases, these findings support reevaluation of hospital policy and potential expansion to additional units.

23.4% via PIV SOP



The Durable Impact of a High-Value, Patient-Centered Discharge Protocol in Socioeconomically At-Risk Patient Cohort Following Coronary Artery Bypass

Arnar B. Ingason MD PhD¹, Alexander C. Gregg MD MSCE¹, Iosif Gulkarov MD^{1,2}, Araceli Dela Cruz Carrera² DNP ANC-C, Eilon Ram MD¹, Mario Gaudino MD PhD MSCE¹, Christopher Lau MD^{1,2}, Leonard N. Girardi MD¹, Charles Mack MD^{1,2}

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Statement of the Problem: (Health Care Quality): As cardiac surgery increasingly operates within value-based reimbursement models, healthcare systems face pressure to improve quality metrics such as discharge disposition, readmission rates (RAR) and length of stay (LOS). However, durable, cost-neutral interventions that sustain improvements in outcomes, particularly among socioeconomically vulnerable populations, remain insufficiently characterized.

Objective: We evaluated the sustained durability of a previously implemented patient-centered discharge protocol designed to increase the proportion of patients discharged home while simultaneously reducing 30-day RAR and hospital (LOS) following coronary artery bypass grafting (CABG) in an at-risk community.

Methods: All isolated CABGs from 2012 through 2025 were included. The study cohort was stratified into three periods: pre-protocol (2012-2016), protocol (2017-2020) and protocol maintenance (2021-2025). Distressed Community Index (DCI) was used to assess socioeconomic distress. DCI scores are continuous, with those greater than 61 (maximum 100) indicating an at-risk community. The discharge protocol included perioperative education on recovery expectations and early warning signs. Post-discharge follow-up included a phone call within 24 hours, an office visit within 48-72 hours and weekly visits. The cardiac surgery team was the primary care team for 30 days post discharge. The outcomes included: rate of discharge-to-home, 30-day RAR and LOS.

Results: This study included 1550 patients in total. The median DCI was 67(IQR 49, 79). Overall, discharge-to-home rates increased across study periods (75%[440/587] vs. 83.4%[402/482] vs. 88.8% [427/481], $p<0.001$) (P for Trend =0.005), while 30-day RAR declined (12.3%[72/587] vs. 6.2%[30/482] vs. 4%[19/481], $p<0.001$) (P for Trend <0.001) (**Figure 1**). Median LOS decreased following protocol implementation and remained stable thereafter (6 days [IQR 5, 8] vs. 5 days [IQR 4, 6] vs. 5 days [IQR 4, 6], $p<0.001$). On MVA, the protocol period was independently associated with increased rate of discharge-to-home (Odds Ratio[OR] 1.70 95% Confidence Interval[CI]: 1.19-2.45, $p=0.004$) and decreased risk of 30-day RAR (OR 0.50 95% CI: 0.31-0.81, $p=0.005$), and reduced LOS (β -Coefficient -0.99 95%CI: -1.69 to -0.28, $p=0.006$) (**Figure 2**). Similar associations were observed in the protocol maintenance period, which was associated with increased rate of discharge-to-home (OR 5.56 95% CI: 3.32-9.69, $p<0.001$) and decreased risk of 30-day RAR OR 0.29 95%CI: 0.15-0.53, $p<0.001$). DCI was not independently associated with any outcome over the study period (all $p>0.05$).

Conclusion: Implementation of a patient-centered discharge protocol was associated with sustained or improved quality outcomes in an at-risk population, including higher rates of discharge-to-home and reductions in both 30-day RAR and LOS. Importantly, these practices appeared to attenuate the influence of socioeconomic distress, as measured by the DCI on postoperative outcomes throughout the study period. These findings support the feasibility of maintaining high-value, patient-centered discharge pathways without increasing cost.

Figure 1:

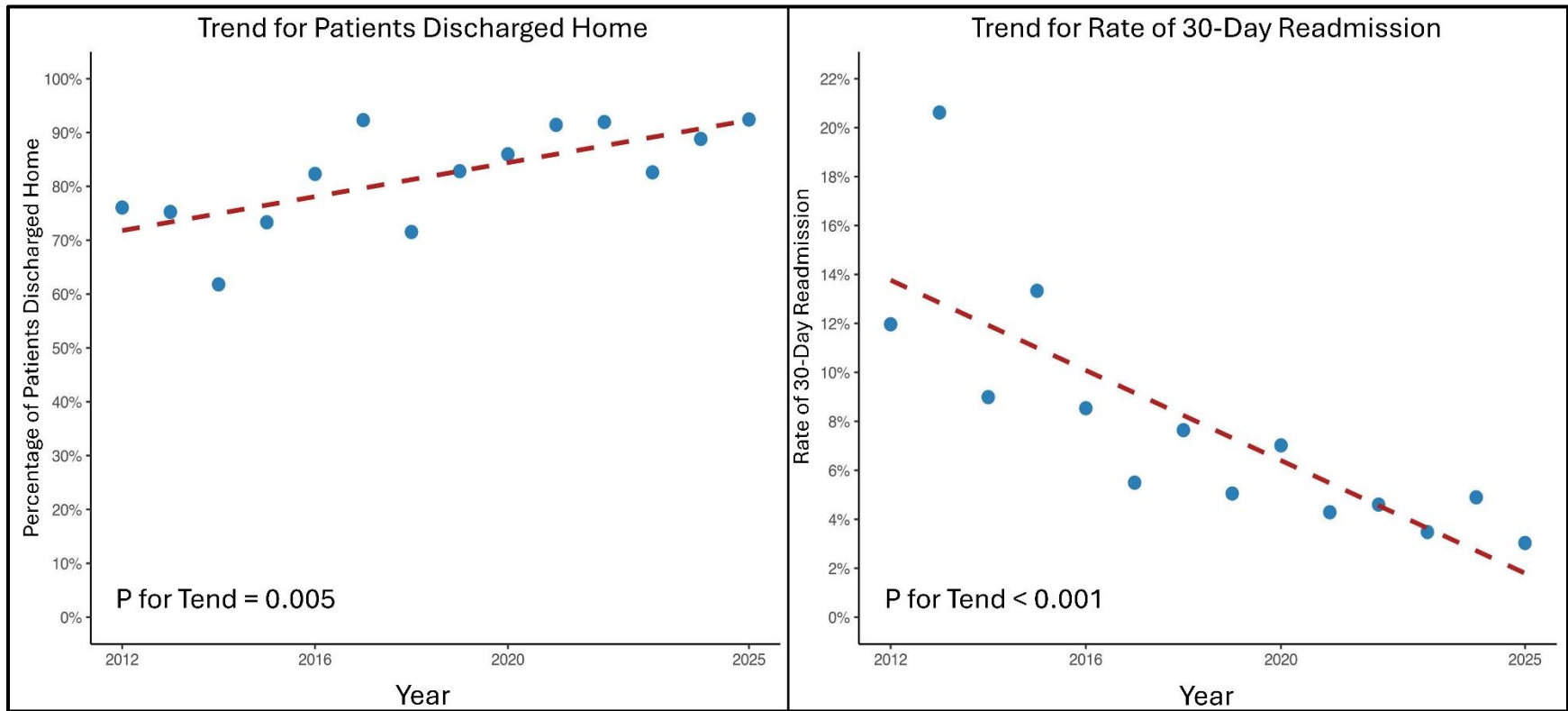
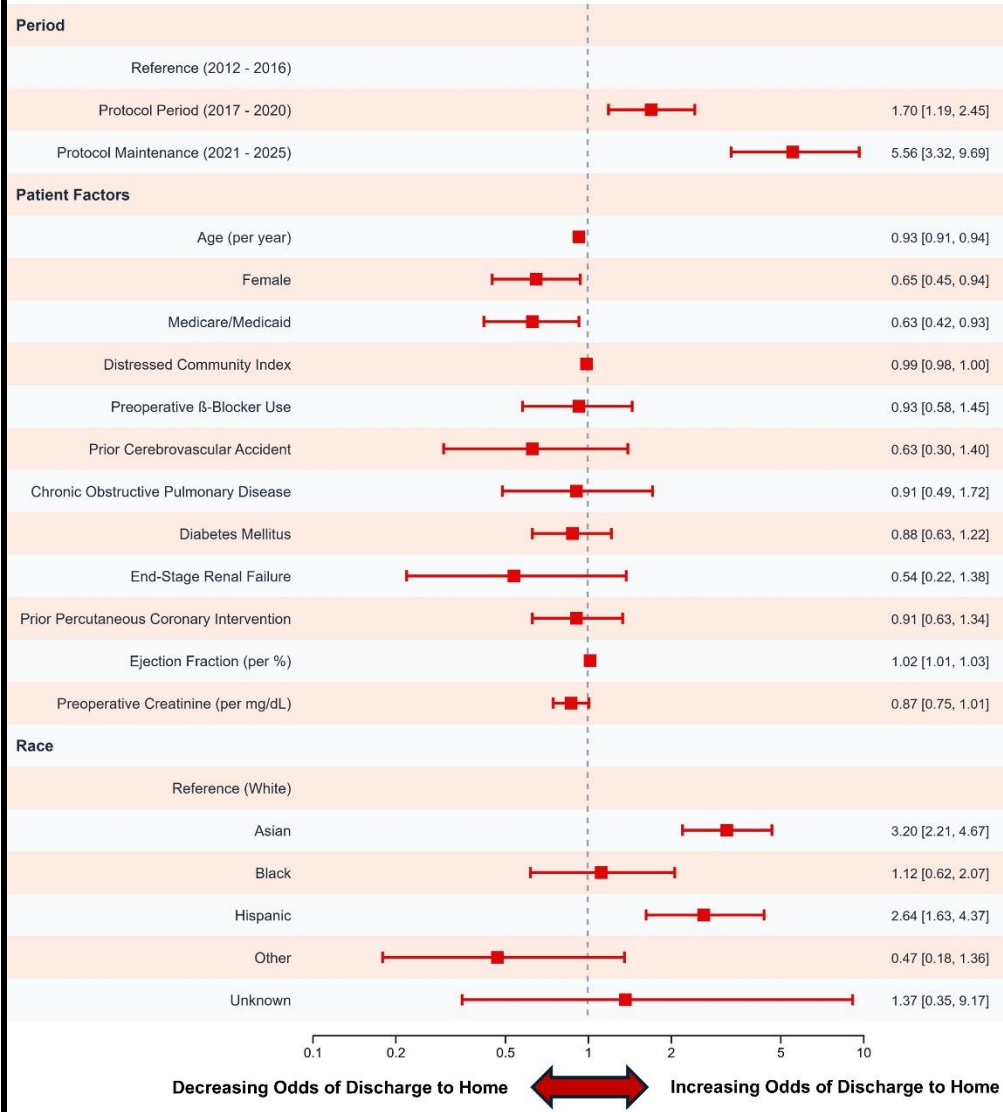
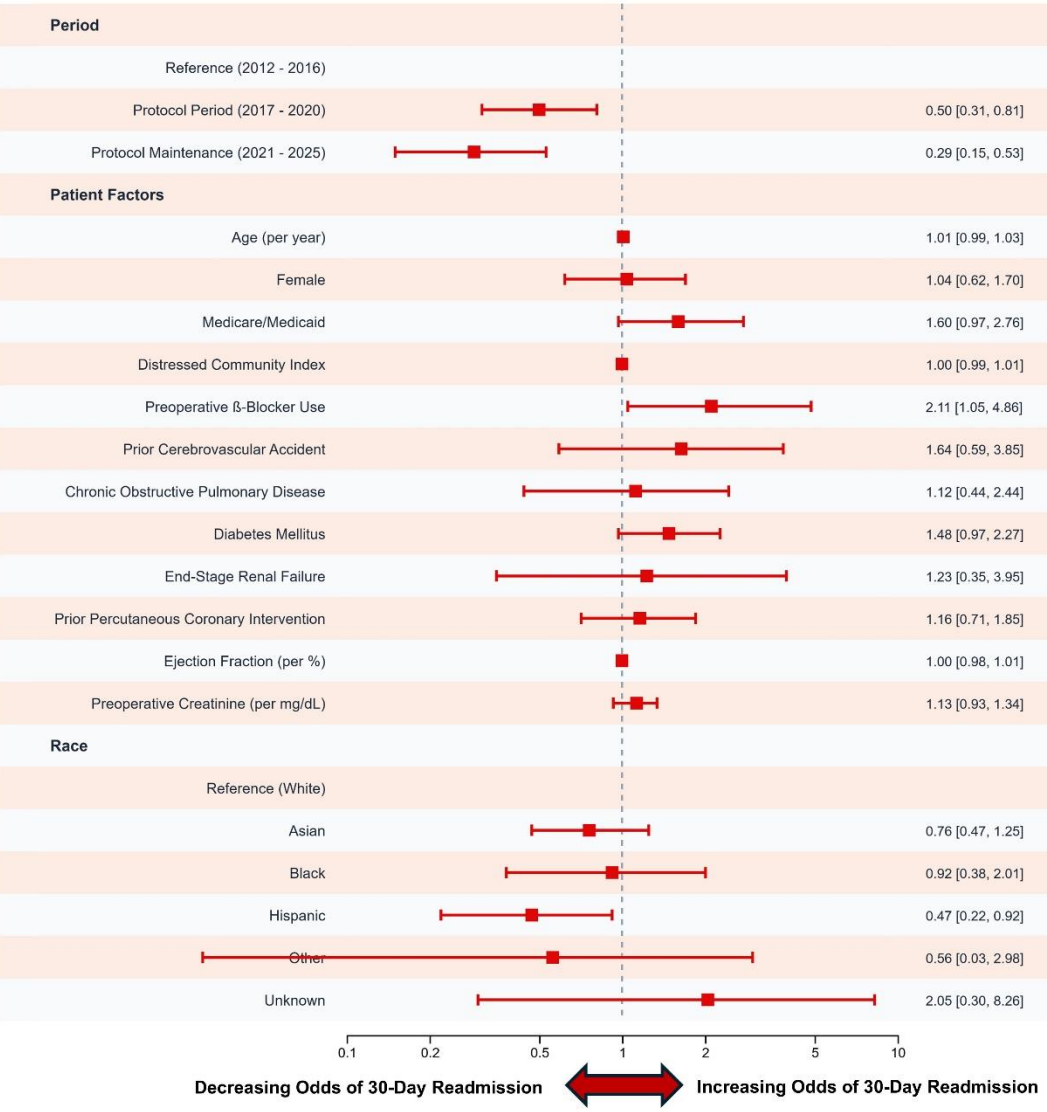


Figure 2:

Multivariable Regression for Discharge to Home



Multivariable Regression for 30-Day Readmission



The Durable Impact of a High-Value, Patient-Centered Discharge Protocol in Socioeconomically At-Risk Patient Cohort Following Coronary Artery Bypass

A. B. Ingason, A. C. Gregg, I. Gulkarov, A. Dela Cruz Carrera, E. Ram, M. Gaudino, C. Lau, L. N. Girardi, C. Mack

Wednesday, May 20th 2026

Problem Statement: As cardiac surgery increasingly operates within value-based reimbursement models, healthcare systems face pressure to improve quality metrics such as discharge disposition, readmission rates and length of stay. However, durable, cost-neutral interventions that sustain improvements in these outcomes, particularly among socioeconomically vulnerable populations, remain insufficiently characterized.

Objective: In the context of ongoing shifts toward value-based reimbursement, we evaluated the sustained durability of a previously implemented patient-centered discharge protocol designed.

Design/Methods:

This was a retrospective study performed using a prospectively collected database at a regional tertiary center, including all isolated CABGs from 2012 – 2025.

The study cohort was stratified into three periods: pre-protocol (2012-2016), protocol (2017-2020) and protocol maintenance (2021-2025).

Distressed Community Index (DCI), was used to assess socioeconomic distress. Scores are continuous, with those greater than 61 (maximum 100) indicating an at-risk community.

The outcomes of interest included: rate of discharge-to-home, 30-day readmission rate and length of stay (LOS).

Multivariable analysis assessed for independent association with outcomes.

Table 1. Demographics	Overall (n=1550)	2012-2016 (n=587)	2017-2020 (n=482)	2021-2025 (n=481)	p-value
Age, years	66 [59, 72]	65 [58, 72]	66 [59, 72]	66 [59, 72]	0.45
Female	305 (19.7)	116 (19.8)	92 (19.1)	97 (20.2)	0.91
Race					<0.001
White	607 (39.2)	282 (48)	184 (38.2)	141 (29.3)	
Asian	772 (49.8)	260 (44.3)	260 (53.9)	252 (52.4)	
Black	95 (6.1)	45 (7.7)	31 (6.4)	19 (4)	
Hispanic	255 (16.5)	108 (18.4)	74 (15.4)	73 (15.2)	0.27
Other	39 (2.5)	0	5 (1.0)	34 (7.1)	
Unknown	37 (2.4)	0	2 (0.4)	35 (7.3)	
Distressed Community Index	67 [49, 79]	65 [49, 79]	67 [53, 79]	65 [53, 79]	0.34
Medicare/Medicaid	1064 (68.6)	380 (64.7)	345 (71.6)	339 (70.5)	0.03
Preoperative β -Blocker Use	1362 (87.9)	500 (85.2)	411 (85.3)	451 (93.8)	<0.001
Prior Cerebrovascular Accident	63 (4.1)	14 (2.4)	11 (2.3)	38 (7.9)	<0.001
COPD	74 (4.8)	39 (6.6)	12 (2.5)	23 (4.8)	0.007
Diabetes Mellitus	733 (47.3)	259 (44.1)	239 (49.6)	235 (48.9)	0.15
End-Stage Renal Failure	57 (3.7)	16 (2.7)	27 (5.6)	14 (2.9)	0.03
Prior PCI	301 (19.4)	117 (19.9)	111 (23.0)	73 (15.2)	0.008
Ejection Fraction (%)	50 (40-60)	45 (40-50)	55 (45-62)	55 (48-63)	<0.001

Table 2. Outcomes	Overall (n=1550)	2012-2016 (n=587)	2017-2020 (n=482)	2021-2025 (n=481)	p-value
Operative Mortality	13 (0.8)	7 (1.2)	1 (0.2)	5 (1.0)	0.18
Discharge-to-Home	1269 (81.9)	440 (75)	402 (83.4)	427 (88.8)	<0.001
30-Day Readmission	121 (7.8)	72 (12.3)	30 (6.2)	19 (4.0)	<0.001
Length of Stay (Days)	5 [4, 7]	6 [5, 8]	5 [4, 6]	5 [4, 6]	<0.001

Table 3. Multivariable Regression	Discharge to Home		30-Day Readmission		Length of Stay	
	OR (95% CI)	P-value	OR (95% CI)	P-value	β -Coefficient (95% CI)	P-value
Period						
Pre-Protocol (2012 – 2016)	Reference		Reference		Reference	
Protocol (2017 – 2020)	1.70 (1.19-2.45)	0.004	0.50 (0.31-0.81)	0.005	-0.99 (-1.69 to -0.28)	0.006
Protocol Maintenance (2021 – 2025)	5.56 (3.32-9.69)	<0.001	0.29 (0.15-0.53)	<0.001	-0.63 (-1.41 to 0.16)	0.12
Age, years	0.93 (0.91-0.94)	<0.001	1.01 (0.99-1.03)	0.35	0.07 (0.04 to 0.10)	<0.001
Female	0.65 (0.45-0.94)	0.02	1.04 (0.62-1.70)	0.86	0.87 (0.13 to 1.60)	0.02
Race						
White	Reference		Reference		Reference	
Asian	3.20 (2.21-4.67)	<0.001	0.76 (0.47-1.25)	0.28	-0.76 (-1.47 to -0.04)	0.04
Black	1.12 (0.62-2.07)	0.72	0.92 (0.38-2.01)	0.84	0.64 (-0.65 to 1.93)	0.33
Hispanic	2.64 (1.63-4.37)	<0.001	0.47 (0.22-0.92)	0.04	-0.07 (-0.96 to 0.82)	0.88
Other	0.47 (0.18-1.36)	0.14	0.56 (0.03-2.98)	0.58	1.89 (0.00 to 3.78)	0.050
Unknown	1.37 (0.35-9.17)	0.69	2.05 (0.30-8.26)	0.37	-1.44 (-3.60 to 0.73)	0.19
Medicare/Medicaid	0.63 (0.42-0.93)	0.02	1.60 (0.97-2.76)	0.08	0.09 (-0.58 to 0.76)	0.79
Distressed Community Index	0.99 (0.98-1.00)	0.11	1.00 (0.99-1.01)	0.96	0.01 (-0.01 to 0.03)	0.22
Preoperative β -Blocker Use	0.93 (0.58-1.45)	0.75	2.11 (1.05-4.86)	0.053	-0.27 (-1.16 to 0.62)	0.55
Prior Cerebrovascular Accident	0.63 (0.30-1.40)	0.24	1.64 (0.59-3.85)	0.30	-0.24 (-1.73 to 1.24)	0.75
COPD	0.91 (0.49-1.72)	0.75	1.12 (0.44-2.44)	0.79	2.56 (1.25 to 3.88)	<0.001
Diabetes Mellitus	0.88 (0.63-1.22)	0.43	1.48 (0.97-2.27)	0.07	0.26 (-0.33 to 0.85)	0.38
End-Stage Renal Failure	0.54 (0.22-1.38)	0.20	1.23 (0.35-3.95)	0.74	2.02 (-0.01 to 4.04)	0.051
Prior PCI	0.91 (0.63-1.34)	0.63	1.16 (0.71-1.85)	0.54	0.11 (-0.61 to 0.84)	0.76
Ejection Fraction (%)	1.02 (1.01-1.03)	0.003	1.00 (0.98-1.01)	0.60	-0.03 (-0.05 to -0.01)	0.003
Preoperative Creatinine	0.87 (0.75-1.01)	0.07	1.13 (0.93-1.34)	0.18	0.66 (0.32 to 0.99)	<0.001

Results:

Overall, discharge-to-home rates increased across study periods (75% vs. 83.4% vs. 88.8%, p<0.001) (P for Trend = 0.005, Figure 1), while 30-day readmissions declined (12.3% vs. 6.2% vs. 4%, p<0.001) (P for Trend <0.001, Figure 2) (Table 2).

Median length of stay decreased following protocol implementation and remained stable thereafter (6 days vs. 5 days vs. 5 days, p<0.001).

On MVA, the protocol period was independently associated with increased rate of discharge-to-home (Odds Ratio [OR] 1.70 95% CI: 1.19-2.45, p=0.004) and decreased risk of 30-day readmission (OR 0.50 95% CI: 0.31-0.81, p=0.005) and reduced length of stay (β -Coefficient -0.99 95% CI: -1.69 to -0.28, p=0.006) (Table 3).

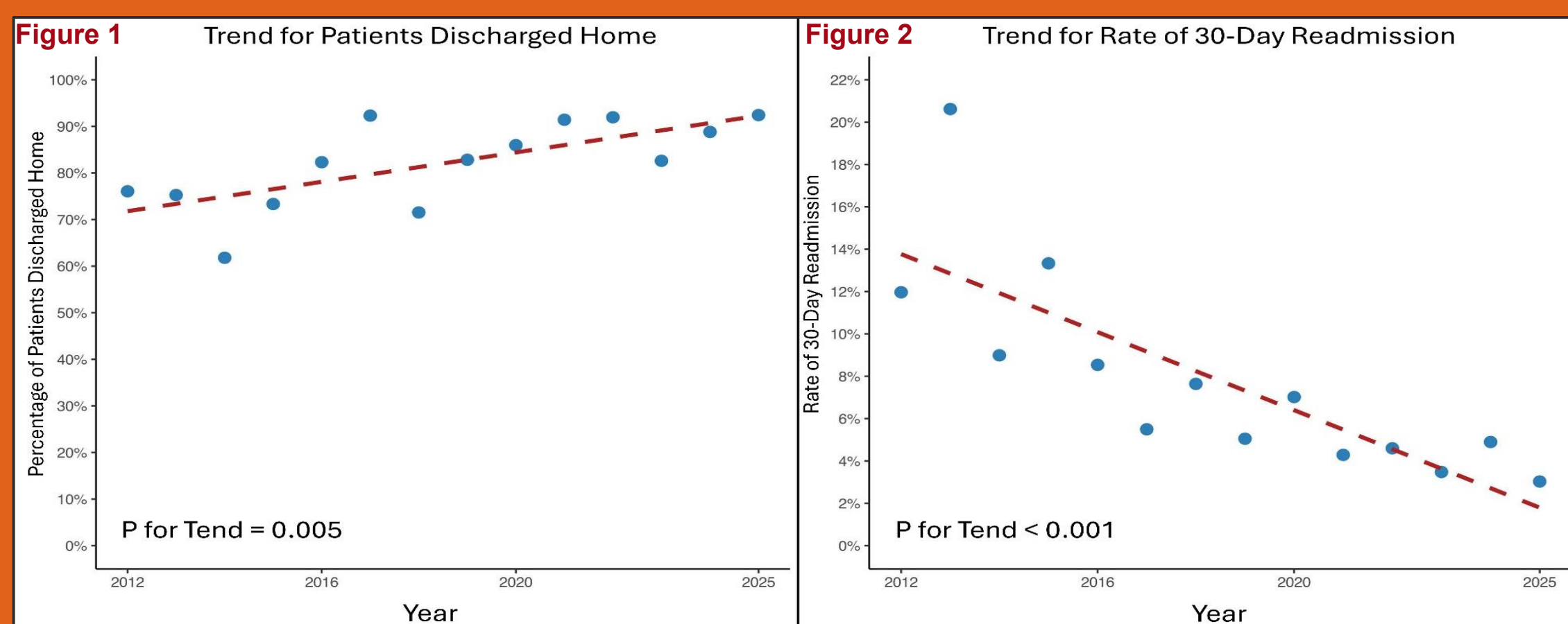
Similar associations were observed in the protocol maintenance period, which was associated with increased rate of discharge-to-home (OR 5.56 95% CI: 3.32-9.69, p<0.001) and decreased risk of 30-day readmission (OR 0.29 95% CI: 0.15-0.53, p<0.001). DCI was not independently associated with any outcome over the study period (all p>0.05).

Conclusion:

Ongoing implementation of a patient-centered discharge protocol was associated with sustained or improved quality outcomes in an at-risk population, including higher rates of discharge-to-home and reductions in both 30-day readmissions and LOS.

Importantly, these practices appeared to attenuate the influence of socioeconomic distress, as measured by the Distressed Community Index, on postoperative quality outcomes throughout the study period.

Collectively, these findings support the feasibility of maintaining high-value, patient-centered discharge pathways without increasing cost.



Title: Improving penicillin allergy documentation and management in the perioperative setting: A Quality Improvement Project

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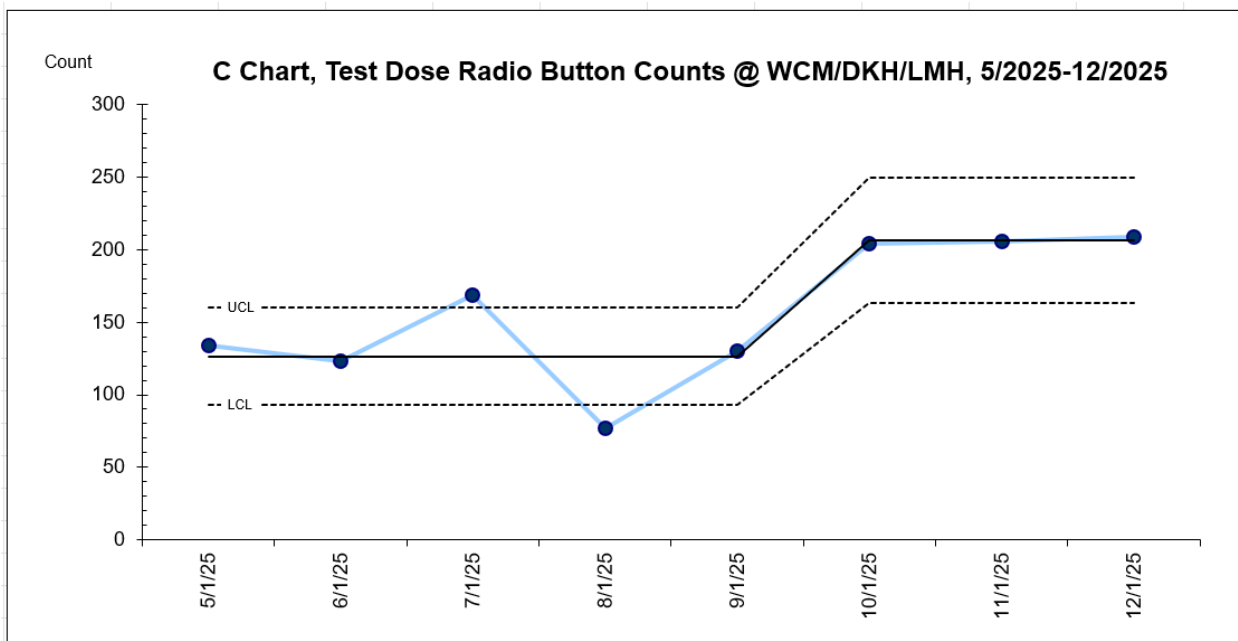
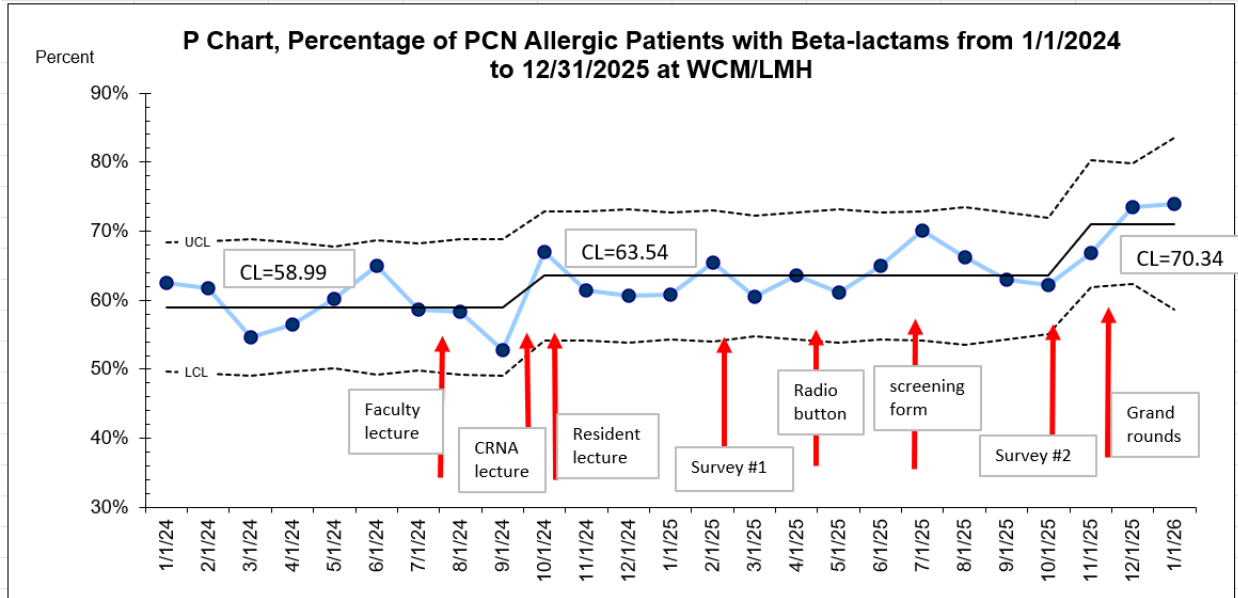
Statement of Problem:

Approximately 10% of patients report a penicillin (PCN) allergy, yet fewer than 1% are true. Mislabeling of PCN allergies leads to avoidance of beta-lactam (BL) antibiotics and increased use of alternates resulting in 50% higher rates of surgical site infections. Despite institutional guidelines, there is variation in perioperative allergy assessment and documentation. This QI project aimed to increase BL prophylaxis use among adult surgical patients with a reported PCN allergy by 20% from 1/1/2024-6/30/2024 to 7/1/2024-12/31/2025.

In collaboration with anesthesiology, ID, and allergy, we implemented 7 iterative PlanDoStudyAct (PDSA) cycles across 3 perioperative sites, including education, surveys, BL test dose button, chart audits, updated screening forms, and a centralized BL allergy summary tab to consolidate allergy histories and prior BL use. Primary outcome was the percentage of surgical patients with reported PCN allergy who received a BL among those receiving any prophylactic antibiotics. Process measures include frequency of the test dose radio button use and screening form completion. Balancing measures included allergic reactions. We applied Associates for Process improvement rules to determine special cause variation.

In patients with PCN allergy undergoing surgery and required prophylaxis, BL use increased from 58.99% to 63.54% after education and increased further to 70.34% after remaining interventions, nearly an 18% increase (Figure 1). Of our baseline chart review of 137 patients, 95.6% patient charts listed reactions, 15.3% listed documentation of allergy management, and 25.4% had preoperative screening forms. Only 9.5% of OR charts listed intraoperative documentation of allergy management. The process measure of test button use increased from 126.6 to 206.3 (Figure 2). A chart review of 120 uses of the test dose button showed that 10.8% of charts met anaphylactic indication for test dose. There was one anaphylactic event unrelated to BL use.

In this QI study, we successfully improved BL utilization among patients with a PCN allergy requiring surgical prophylaxis. While education led to a small increase, scalable interventions of updated forms and computer interventions led to greater and sustained increases in BL.





Problem Statement

- Inconsistent documentation and management of reported penicillin allergies in the perioperative setting leads to overuse of second-line antibiotics, despite most patients being eligible for safe beta-lactam use
- In the OR, antibiotics are administered directly from in-room medication management cabinet, separate from inpatient workflow. Documentation of test dose administration is variable.
- NYP protocols for reported penicillin allergy management are not universally known by clinicians and deviations occur

Background:

- Approximately 10% of patients report a penicillin (PCN) allergy, yet fewer than 1% have a true immunologic allergy. (CDC 2024)
- Mislabeling of PCN allergies leads to avoidance of first-line, beta-lactam antibiotics and increased use of second-line agents such as clindamycin or vancomycin.
- In surgical patients, this practice has been associated with 50% higher rates of surgical site infections. (Blumenthal 2018)
- Cefazolin remains the preferred prophylactic antibiotic for most surgical procedures, and evidence demonstrates minimal cross-reactivity between penicillin and other cephalosporins.

Objective/Aim Statement

- To safely increase beta-lactam use by 25% among perioperative patients with reported penicillin allergy presenting for surgery at WCM from 1/1/2025 - 12/31/2026, as compared to 1/1/2024 - 12/31/2024.

Design/Methods

- Iterative QI project at WCM, DHK, LMH Anesthesia Sites with multiple PDSA cycles. API methods used to detect special cause
 - PDSA Cycle 1: Education on PCN Allergy management for residents, CRNAs, Faculty (7/1/2024 – 10/31/2024)
 - PDSA Cycle 2: Create and conduct provider survey on periop management to identify gaps and opportunities (12/13/2024 – 5/6/2025)
 - PDSA Cycle 3: Perform subset chart review to documentation cascade for N=137 pts (2/13/2025 – 5/2025)
 - PDSA Cycle 4: Create and implement *test dose button* in EPIC operative charting area (5/7/2025)
 - PDSA Cycle 5: Update the screening form to include a specific PCN allergy question (7/1/2025)
 - PDSA Cycle 6: Survey #2 to providers about test dose button and assess test dose guidance adherence (10/8/2025)
 - PDSA Cycle 7: Create summary tab to easily see prior allergy management (10/21/2025)
 - PDSA Cycle 8: Present project at Anesthesia Grand Rounds (11/2025)
- Measures:
 - Primary: % Beta lactam use among PCN all patients. Process: Test dose button. Balancing: Anaphylaxis, Keepsafes

PDSA cycle 1: Education/Guideline

Intolerance	Patients are not considered to have an allergy and can receive any beta lactam, including penicillins
Non-anaphylaxis	Patients can receive full dose cephalosporins with dissimilar side chains
Anaphylaxis	Patients can receive test dose cephalosporins with dissimilar side chains (test doses involve giving the medication in 2 divided doses of 10% and 90%)

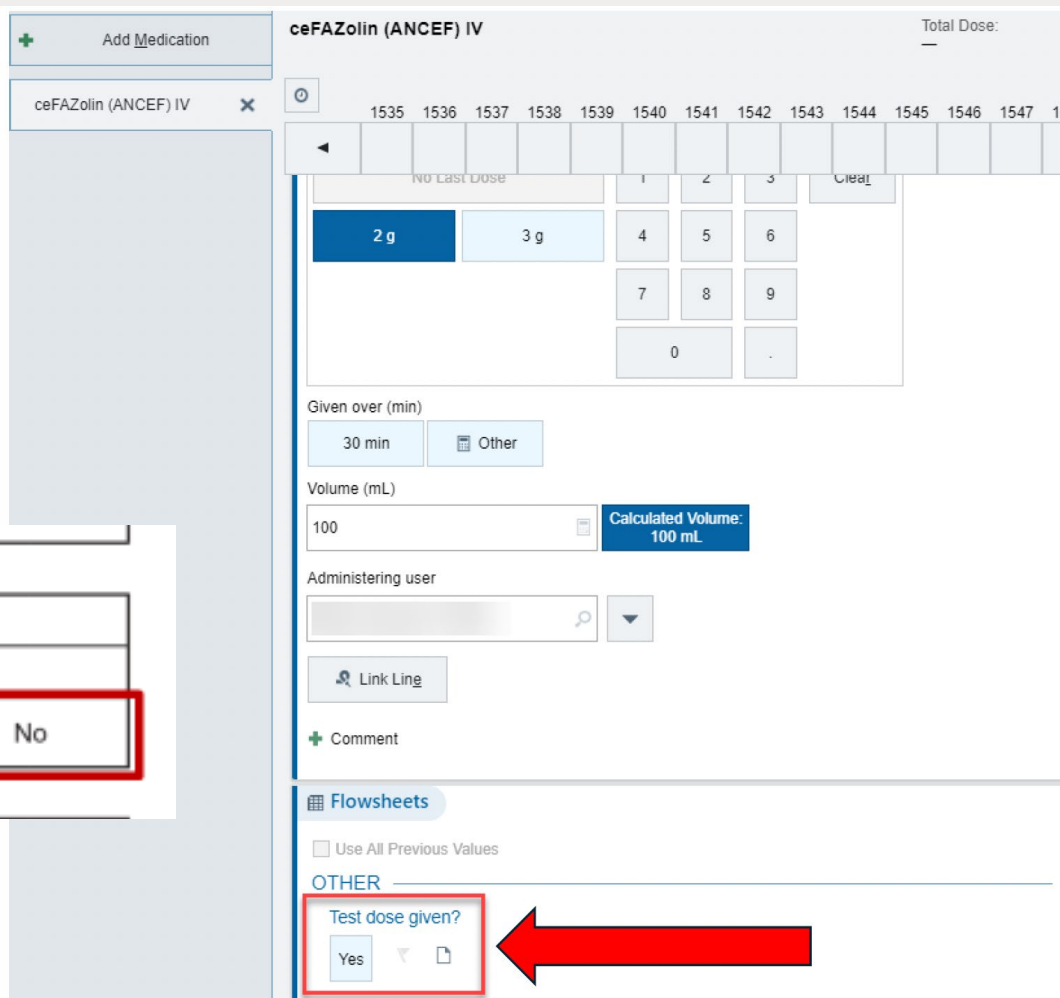
PDSA cycle 5: New Pre-op screening Questions

List all your allergies and reactions:

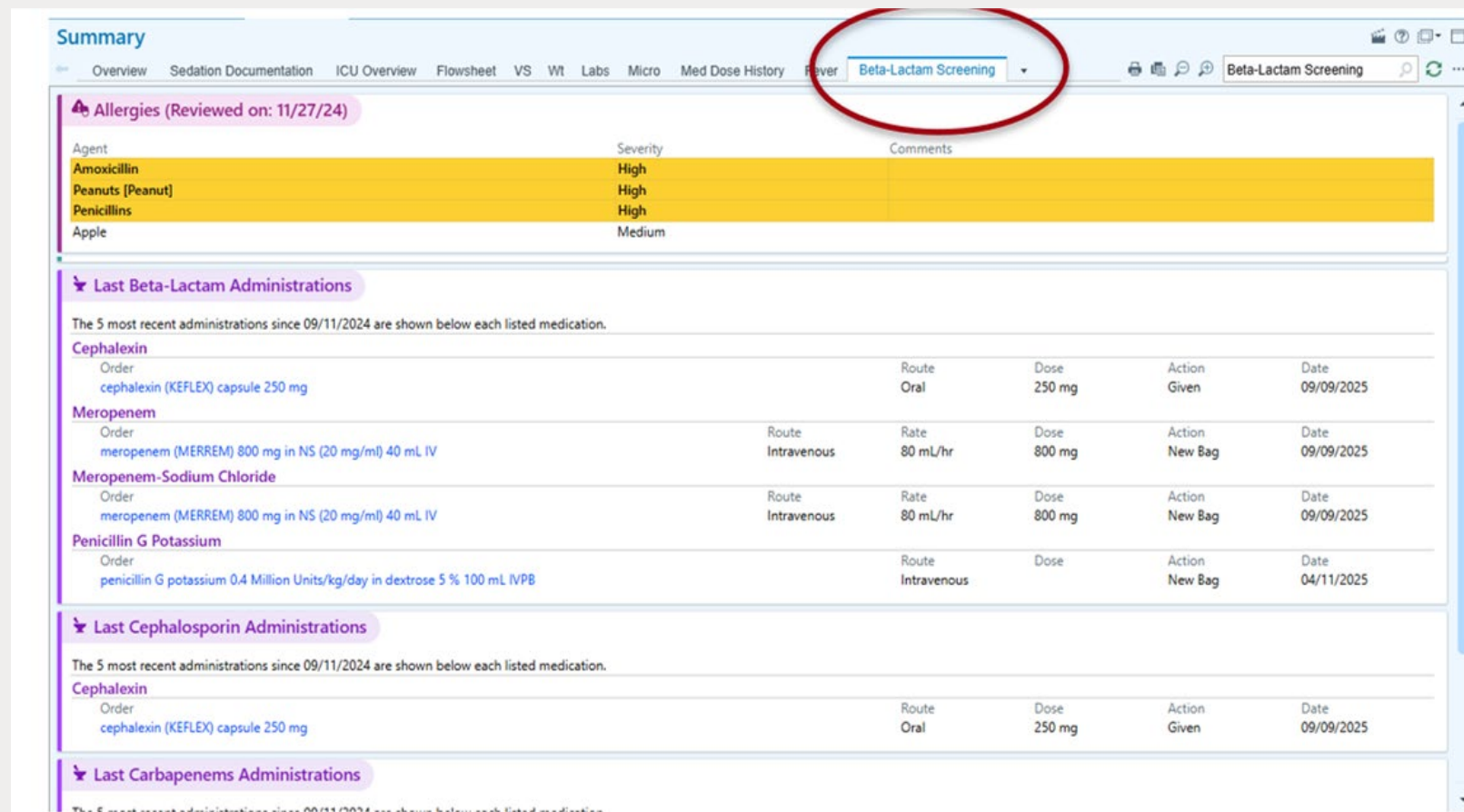
Do you have a penicillin/cephalosporin allergy? ex: Penicillin, Amoxicillin, Cephalexin (Keflex®), Cefazolin (Ancef®)? If yes, what was the reaction:			
Yes	No		

Hospitalizations

PDSA cycle 4: Test Dose Button



PDSA cycle 7: Beta-Lactam Summary Tab



Results

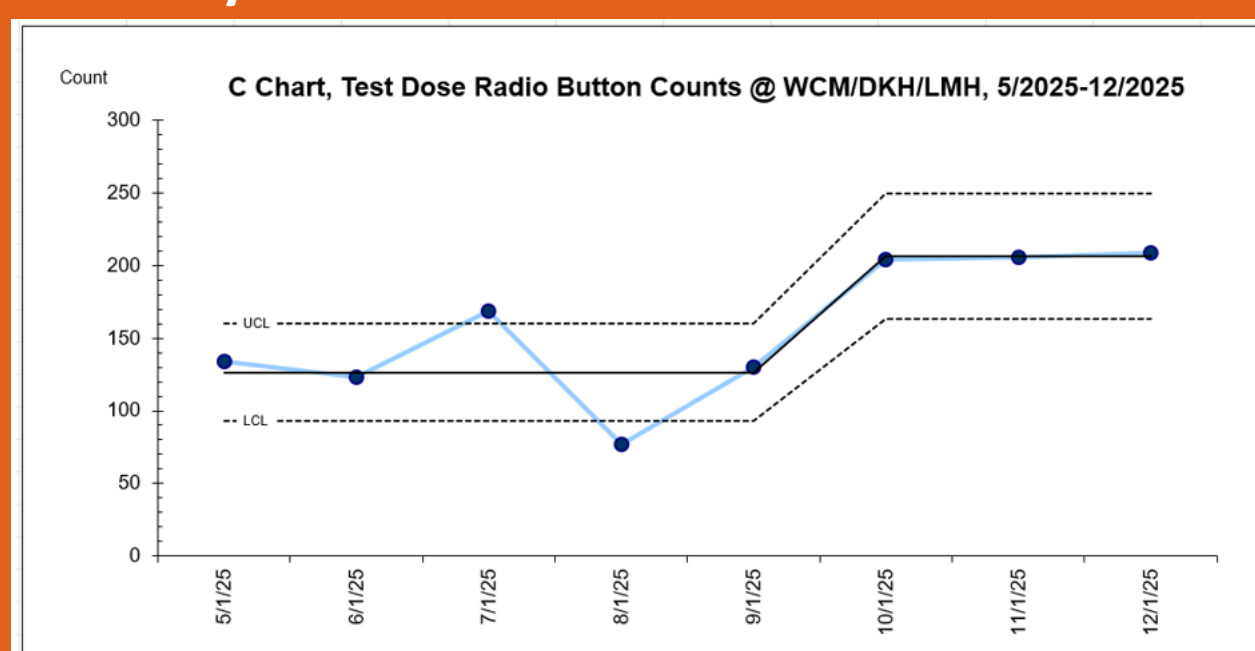
PDSA Cycle 2: Survey #1

Category	Recommendations	Count
EPIC Improvements - Documentation	-Required documentation of PCN reaction from the patient -When charting Ancef, note if PCN allergy is not applicable -Make it easier to update/remove PCN allergy based on prior tolerance -Standardized method to document allergy changes when cefazolin is tolerated -Append "known cefazolin/cephalosporin safe" to allergy documentation (2) -Auto-pull previous cephalosporin tolerance into allergy record	7
EPIC Improvements - Management	-Include clear guideline reminders in EPIC for PCN allergy case management (3) -Avoid another BPA pop-up -Test dose event button in anesthesiology intra-op timeline with pre-filled options (2) -Alert for "cefazolin is appropriate" or "test dosing recommended"	7
Education & Resources	-Define test dose (e.g., 200mg from 10mL syringe) -Pharmacy's penicillin allergy algorithm should be easier to find (e.g., Cornell Anesthesia app) -Anesthesiology department education on allergy documentation, management & EPIC updates (3) -Cheat sheet for documenting antibiotic plans -Institution support for distinguishing mild vs. severe reactions (rash vs. SJS)	7
Workflow & Coordination	-Discuss antibiotic plan with the surgeon before surgery -Surgeons should finalize antibiotic choice during H&P -Ensure all allergies are discussed with OR team in timeout -Encourage allergist consultation for scheduled cases to reassess PCN allergies before surgery	4

PDSA Cycle 3: Chart review

N=137 Baseline Cascade:
 95.6% storyboards with reaction sxs
 15.3% documented allergy mgmt
 25.4% preoperative screening forms
 9.5% OR charts allergy mgmt

PDSA Cycle 4: Test Dose Button Utilization

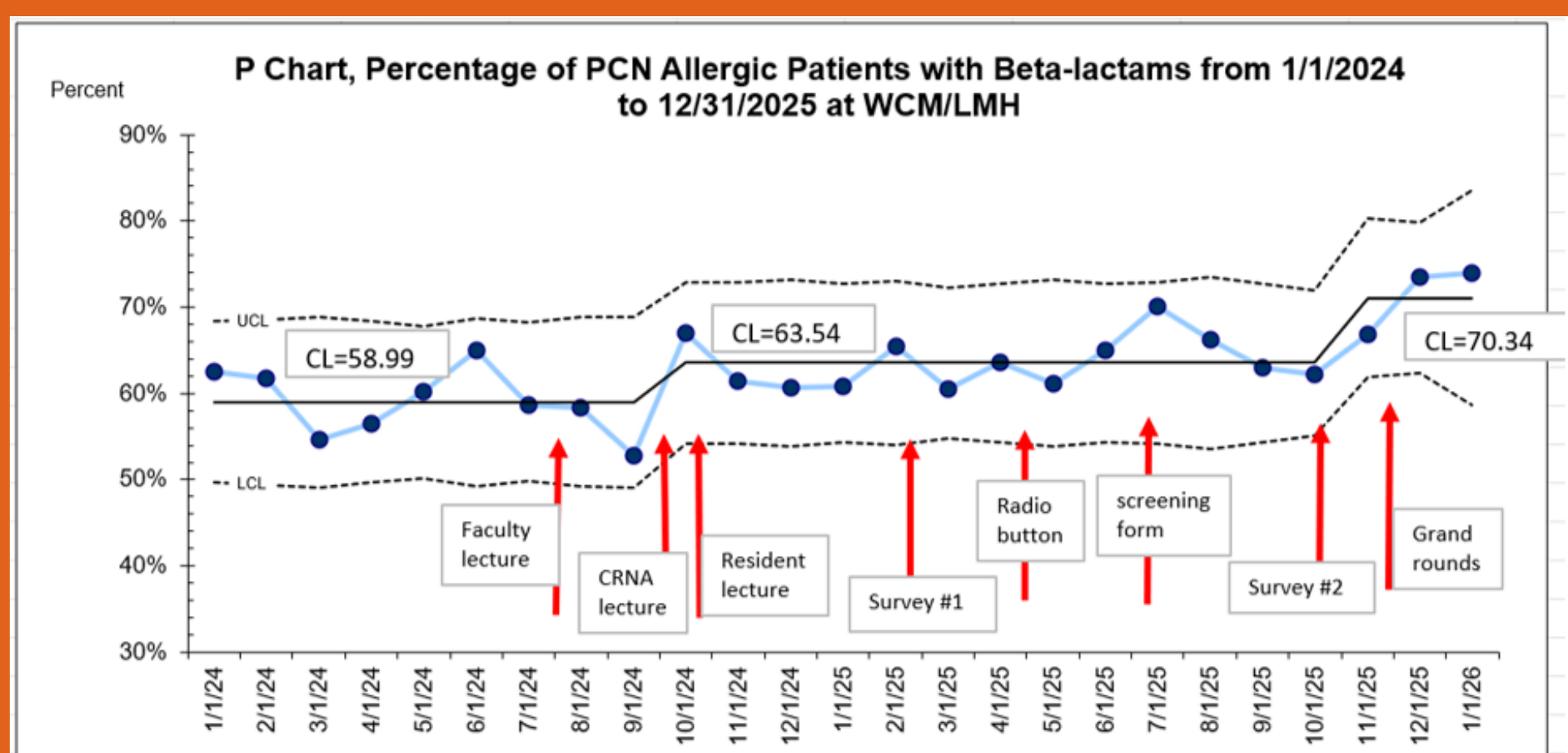


PDSA Cycle 6: Survey #2

N= 35 providers
 60.7% unaware of test button implementation
 N= 120 test dose uses
 10.8% (n=13) of charts met anaphylactic category appropriate for test

Primary Outcome:

% patients (surgery, PCN allergy, need abx) who got any beta-lactam ABX
 % patients (surgery, PCN allergy, need abx) who got any ABX



Conclusions

- In this QI study, we successfully improved beta-lactam utilization among patients with a penicillin allergy requiring surgical prophylaxis.
- While education led to a small increase, updated forms and EPIC interventions led to greater and sustained increases in beta lactam use in patients with a history of PCN allergy
- While test dose use often inappropriate, it suggests greater awareness of allergy management.
- This intervention could be scaled to other NYP campuses.

Quality Improvement Project Abstract

Sweet Hearts”: Boosting Appropriate Prescribing of SGLT-2 Inhibitors in Heart Failure”

Project Team and Roles:

Project manager/Data Analysis: Fares Salem

Data Collection and Analysis via Slicer Dicer: Sarang Modi, Aaron Kim, Eleonora Archak

Education Material Creation and Distribution : Claire MacMillan, Swetha Rajkumar, Joseph Hanna

Project Advisors: Ranjit Nair, Christopher Spinelli

Project: “Sweet Hearts: Boosting Appropriate Prescribing of SGLT-2 Inhibitors in Heart Failure.”

Sponsor: NewYork Presbyterian/Brooklyn Methodist Hospital Department of Internal Medicine

Project Start Date:10/2024

Problem Statement or Scientific Question

Despite strong evidence supporting sodium–glucose cotransporter-2 inhibitors (SGLT-2i) for heart failure (HF), these medications remain underutilized in hospitalized patients. Randomized clinical trials have demonstrated that SGLT-2 inhibitors significantly reduce cardiovascular mortality, all-cause mortality, and heart-failure–related hospitalizations in patients with both heart failure with reduced ejection fraction (HFrEF) and preserved ejection fraction (HFpEF). National ACC/AHA/HFSA guidelines therefore recommend SGLT-2 inhibitors as part of guideline-directed medical therapy (GDMT) regardless of diabetes status. However, real-world registry data show persistent gaps in prescribing, particularly on general medicine services where HF patients are frequently admitted. At our institution, baseline analysis demonstrated that 68 of 93 eligible hospitalized HF patients (73%) were discharged without an SGLT-2 inhibitor, highlighting a major implementation gap between evidence and practice.

Background/Project Intent

This quality improvement (QI) project aimed to address underutilization of SGLT-2 inhibitors in hospitalized HF patients and improve post-discharge medication adherence. Initial interventions focused on provider education and decision support tools to increase discharge prescribing. Early results demonstrated improvement but also revealed challenges in medication initiation and persistence after discharge. The goal of the project was therefore expanded to improve both

appropriate prescribing and post-discharge adherence by implementing workflow-based interventions within the electronic medical record (EMR) and strengthening discharge processes.

Methodology

A multidisciplinary quality improvement team was assembled including internal medicine physicians, pharmacists, patient navigators, cardiology consultants, and hospital quality advisors. Residents and attending physicians led patient identification and prescribing decisions; pharmacists assisted with medication reconciliation and insurance barriers; patient navigators supported discharge education and follow-up coordination; cardiology consultants provided guidance on eligibility and complex heart failure management; and quality advisors supported study design and data tracking.

The project was implemented on the general medicine service at NewYork-Presbyterian Brooklyn Methodist Hospital using a Plan-Do-Study-Act (PDSA) framework.

Baseline analysis:

Electronic medical record (EMR) data were reviewed using EPIC Slicer Dicer to identify hospitalized patients with heart failure with reduced or preserved ejection fraction (HFrEF or HFpEF) eligible for SGLT-2 inhibitor therapy. This analysis identified a gap between guideline recommendations and real-world prescribing patterns and informed targeted interventions.

PDSA Cycle 1 interventions included:

- Provider education on SGLT-2 inhibitor indications, renal safety thresholds, and HFpEF benefits
- Decision-support tools outlining eligibility and contraindications
- Chart review to track prescribing, medication initiation, and early persistence

Cycle 1 analysis identified barriers including inconsistent eligibility documentation, limited discharge counseling, and inadequate outpatient follow-up.

PDSA Cycle 2 now complete and included:

- Implementation of an EMR-embedded documentation prompt to flag eligible HF patients during discharge
- Standardized documentation of eligibility assessment, counseling, and follow-up planning
- Reinforced provider education
- Expansion to two general medicine units
- Prospective tracking of medication initiation, adherence, and cardiology follow-up after discharge

Outcome, process, and balancing measures are being monitored through EMR chart review and pharmacy dispense data during the ongoing intervention period.

Results

Cycle 1 (10/2024 - 05/2025)

Baseline analysis demonstrated significant underutilization of SGLT-2 inhibitors. Among 93 eligible HF patients, only 25 patients (27%) were discharged on an SGLT-2 inhibitor.

Following Cycle 1 interventions, 57 eligible patients were identified during the intervention period. Of these:

- 35 patients (61%) were prescribed an SGLT-2 inhibitor at discharge
- 21 patients (37%) had an active outpatient prescription, representing a 10% absolute increase in prescribing compared with baseline

Medication initiation and persistence analysis revealed additional barriers:

- 29 of 35 patients (83%) filled at least one SGLT-2 inhibitor prescription
- 6 patients (17%) never initiated therapy
- Among those initiating therapy, 19 of 29 patients (66%) remained on active therapy

Reasons for non-initiation or discontinuation included medication cost, lack of outpatient follow-up, and incomplete discharge education. Patients with scheduled cardiology follow-up demonstrated higher rates of medication persistence compared with those without follow-up. These findings highlighted the importance of addressing both inpatient prescribing and post-discharge adherence to achieve sustained therapeutic benefit.

Cycle 2 (11/2025 - 04/2026)

Baseline analysis demonstrated that out of 185 patients included in the study, 71 (38.4%) had symptomatic heart failure with NYHC Class II or greater. A substantial treatment gap was identified, with 73.7% (42/57) of SGLT2 inhibitors–eligible heart failure patients not receiving therapy despite preserved renal function and no contraindications.

Cycle 2 post-interventions results, pending complete analysis:

Value Proposition

Improving inpatient initiation of SGLT-2 inhibitors has the potential to significantly reduce HF readmissions, improve adherence to guideline-directed medical therapy, and enhance long-term cardiovascular outcomes. By integrating EMR-based decision support, provider education, and

discharge workflow optimization, this project provides a scalable model for bridging the gap between evidence-based guidelines and real-world clinical practice.

Conclusions

This quality improvement initiative demonstrated that targeted provider education and decision-support interventions can improve SGLT-2 inhibitor prescribing at hospital discharge among eligible heart failure patients. However, early analysis also revealed that medication initiation and long-term persistence remain important challenges that extend beyond prescribing alone. These findings highlight the importance of addressing post-discharge processes, including patient counseling, medication access, and outpatient follow-up. PDSA Cycle 2 is currently underway and will evaluate whether EMR-based workflow interventions, expanded unit implementation, and structured discharge documentation further improve medication initiation and sustained adherence. If successful, this approach may provide a scalable model for improving implementation of guideline-directed medical therapy in hospitalized heart failure patients.

Take-Home Message

Bridging the gap between heart failure guidelines and real-world practice requires structured inpatient processes. Integrating EMR decision support, provider education, and coordinated discharge planning can improve both prescribing and adherence to SGLT-2 inhibitors in hospitalized heart failure patients.

References

1. McMurray JJV, Solomon SD, Inzucchi SE, et al. Dapagliflozin in Patients with Heart Failure and Reduced Ejection Fraction. *N Engl J Med*. 2019;381:1995–2008.
2. Packer M, Anker SD, Butler J, et al. Cardiovascular and Renal Outcomes with Empagliflozin in Heart Failure. *N Engl J Med*. 2020;383:1413–1424.
3. Anker SD, Butler J, Filippatos G, et al. Empagliflozin in Heart Failure with a Preserved Ejection Fraction. *N Engl J Med*. 2021;385:1451–1461.
4. Solomon SD, McMurray JJV, Claggett B, et al. Dapagliflozin in Heart Failure with Mildly Reduced or Preserved Ejection Fraction. *N Engl J Med*. 2022;387:1089–1098.
5. Heidenreich PA, Bozkurt B, Aguilar D, et al. 2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure. *Circulation*. 2022;145:e895–e1032.
6. Greene SJ, Fonarow GC, DeVore AD, et al. Prescription Patterns of SGLT2 Inhibitors in Patients Hospitalized for Heart Failure. *JAMA Cardiol*. 2023.
7. Vaduganathan M, Greene SJ, Butler J, et al. Inpatient Initiation of SGLT2 Inhibitors for Heart Failure: Implementation and Outcomes (INSIGHT-HF). *J Am Coll Cardiol*. 2022.



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Background:

This quality improvement (QI) project aimed to address underutilization of SGLT-2 inhibitors in hospitalized HF patients and improve post-discharge medication adherence. Initial interventions focused on provider education and decision support tools to increase discharge prescribing. Early results from Cycle 1 of this project (10/2024 - 05/2025) demonstrated improvement but also revealed challenges in medication initiation and persistence after discharge. The goal of the cycle 2 of this project was therefore expanded to improve both appropriate prescribing and post-discharge adherence by implementing workflow-based interventions within the electronic medical record (EMR) and strengthening discharge processes.

Objective/AIM statement:

This project aims to:

1. Increase appropriate prescribing of SGLT-2 inhibitors on discharge by 10%, and
2. Increase post-discharge adherence to SGLT-2 inhibitors by at least 5%,

among eligible heart failure patients over a three-month period, through expanded patient inclusion, strengthened provider education, and implementation of an electronic documentation prompt within the EMR.

Design/Methods:

Patient Population

Adults with HFrEF or HFpEF admitted to general medicine units (Infill 5 and Minor 8) between January–March 2026 who met eligibility criteria for SGLT2-inhibitor therapy.

Exclusion Criteria:

- Current SGLT2-inhibitor use
- Prior intolerance to SGLT2 inhibitors
- Type 1 diabetes mellitus
- eGFR <20 mL/min/1.73m²
- Chronic/recurrent UTI
- History of euglycemic DKA

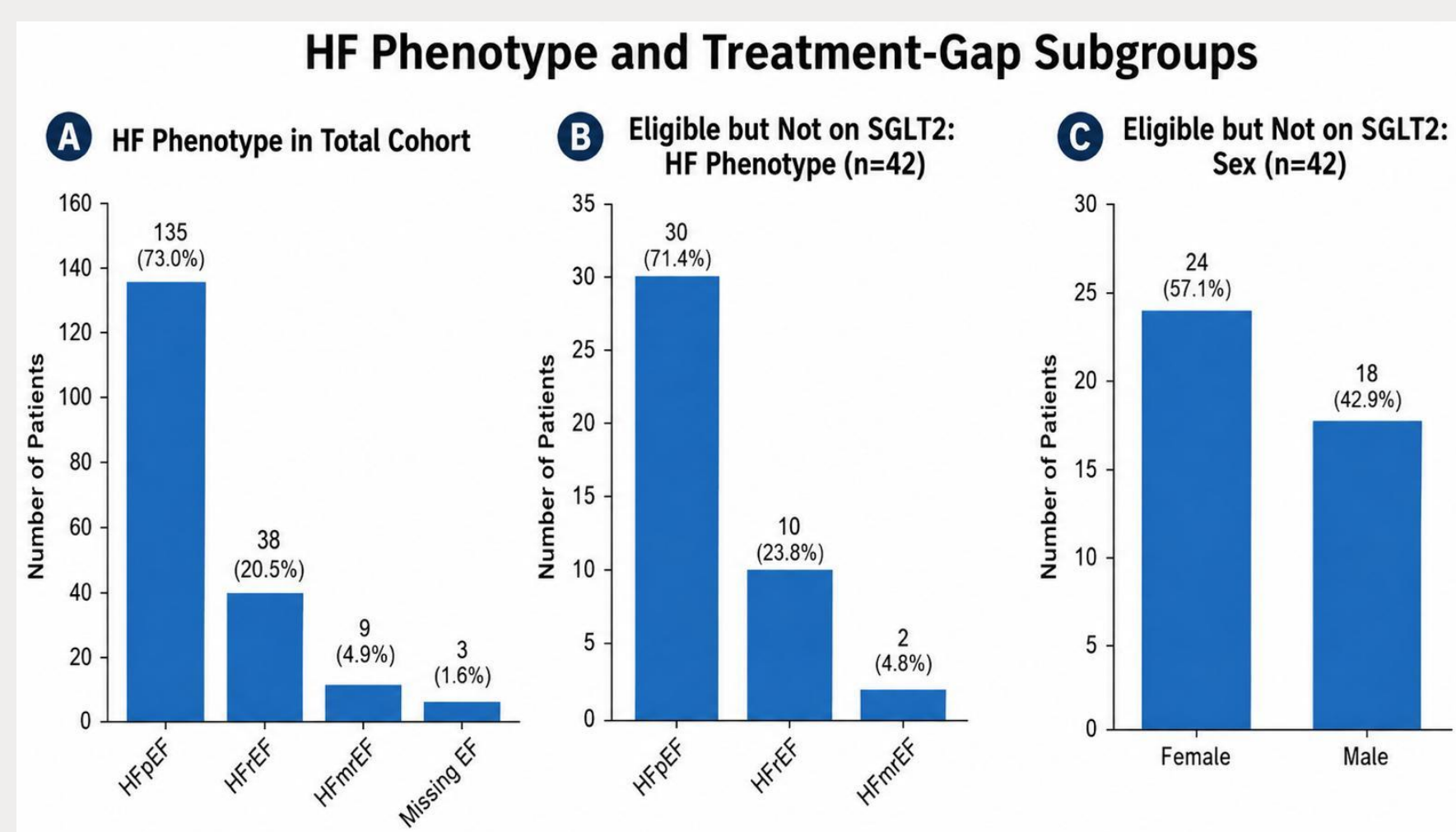
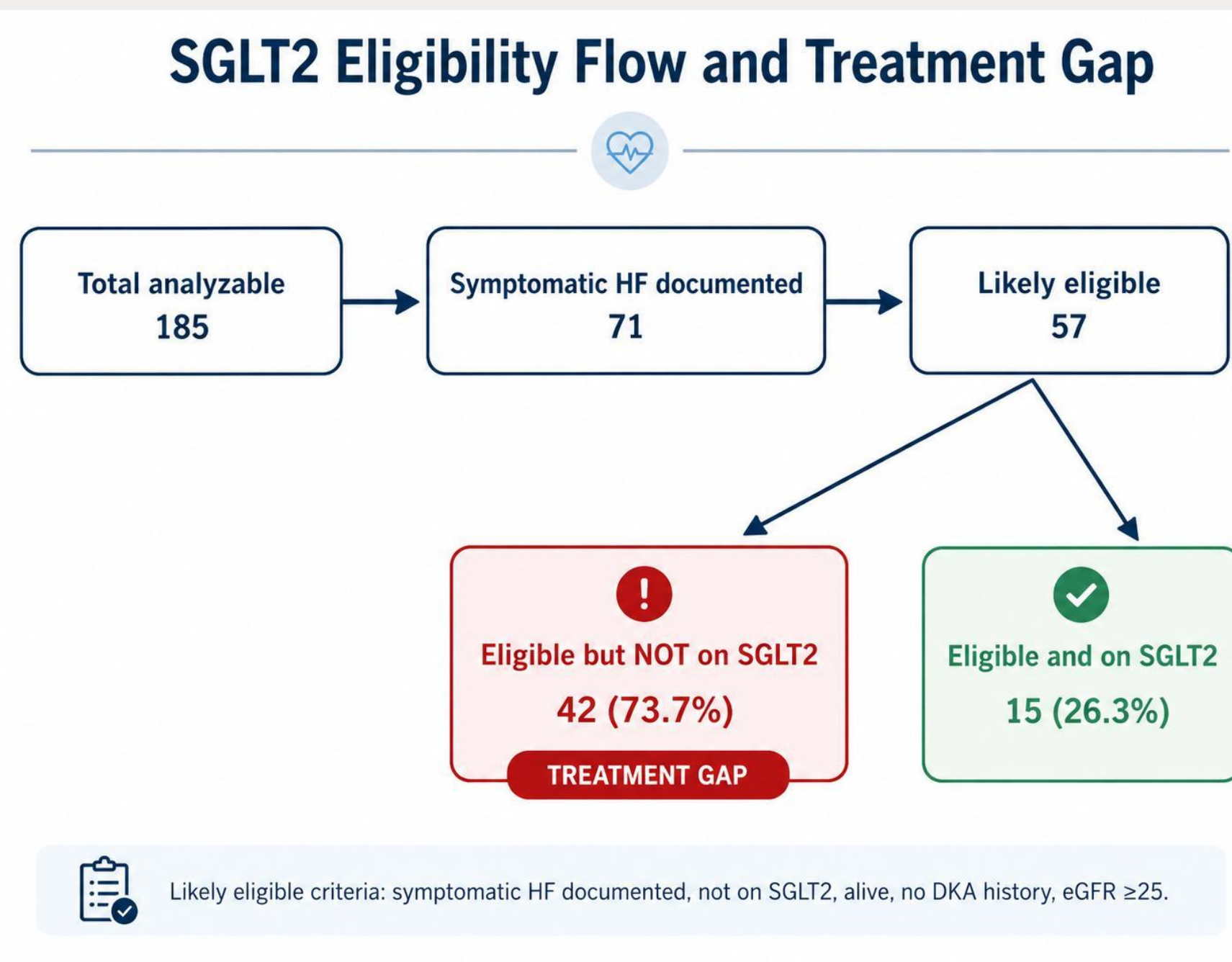
Intervention & Data Collection

A multidisciplinary intervention including provider education, EMR-based discharge prompts, and standardized discharge counseling was implemented across two medicine units. Eligible patients were identified using EPIC SlicerDicer and chart review. Pre- and post-intervention prescribing, medication initiation, and adherence outcomes were analyzed.

Results:

Cycle 1 post intercentiona analysis:

- Post-intervention analysis identified 57 eligible patients during PDSA Cycle 1.
- **35 patients (61%)** were prescribed an SGLT-2 inhibitor at discharge.
- Active outpatient prescriptions increased to 37% (21/57 patients), representing a 10% absolute improvement from baseline.
- Among prescribed patients, **83% (29/35) initiated therapy** by filling at least one prescription.
- Six patients (17%) never initiated therapy, highlighting ongoing post-discharge barriers.
- Of patients who initiated therapy, **66% (19/29) remained on active treatment at follow-up**



Drivers of Non-Initiation and Non-Adherence

- Although inpatient prescribing improved, significant attrition occurred during medication initiation and long-term persistence.
- Common barriers to initiation included medication cost, insurance limitations, inadequate discharge counseling, and limited outpatient follow-up.
- Reasons for discontinuation included progression of CKD/ESRD, change in clinical indication, death, and loss to follow-up.
- Several barriers were identified as modifiable, particularly medication access, patient education, and follow-up coordination.
- Patients with cardiology follow-up after discharge **demonstrated higher rates of sustained SGLT-2 inhibitor use**, highlighting the importance of structured post-discharge care coordination.

Conclusion:

- Targeted provider education and decision-support interventions improved appropriate SGLT-2 inhibitor prescribing among eligible hospitalized heart failure patients.
- During PDSA Cycle 1, discharge prescribing rates increased from 27% (25/93 patients) pre-intervention to 37% (21/57 patients) post-intervention, representing a 10% absolute improvement.
- Despite improved prescribing, early analysis identified ongoing barriers to medication initiation and long-term adherence after discharge.
- Key post-discharge challenges included medication access, patient counseling, and outpatient follow-up coordination.
- PDSA Cycle 2 (January–March 2026) data analysis is currently underway across Infill 5 and Minor 8 and will evaluate the impact of EMR-based workflow prompts, standardized discharge documentation, and expanded unit implementation on medication initiation and persistence.
- This initiative may provide a scalable model for improving implementation of guideline-directed medical therapy in hospitalized heart failure patients.

Limitations:

- Complex insurance regulations, the need for prior authorization, and lack of generic formulations can impede SGLT2 inhibitor prescribing
- Physician knowledge gaps regarding the benefits of SGLT2 inhibitors and a preference for specialist referrals might hinder adoption

Next Steps:

1 Implement an automated EMR-based prompt that auto-populates relevant clinical data and identifies patients as eligible or ineligible for SGLT-2 inhibitor therapy.

2 Implement standardized patient and provider education focused on the benefits, eligibility criteria, and renal safety considerations of SGLT-2 inhibitors in heart failure management.

References:

- Zhang, Z., Wang, C., Tu, T. et al. Advancing Guideline-Directed Medical Therapy in Heart Failure: Overcoming Challenges and Maximizing Benefits. *Am J Cardiovasc Drugs* 24, 329–342 (2024). <https://doi.org/10.1007/s40256-024-00646-4>
- Vardeny, O., & Vaduganathan, M. (2019). Practical Guide to Prescribing Sodium-Glucose Cotransporter 2 Inhibitors for Cardiologists. *JACC. Heart failure*, 7(2), 169–172. <https://doi.org/10.1016/j.jchf.2018.11.013>
- Anker SD, et al. Empagliflozin in heart failure with a preserved ejection fraction. *New England Journal of Medicine*. 2021;385(16):1451–1461. doi: 10.1056/NEJMoa2107038.
- Wagdy K, Nagy S. EMPEROR-Preserved: SGLT2 inhibitors breakthrough in the management of heart failure with preserved ejection fraction. *Glob Cardiol Sci Pract*. 2021;2021(3) doi: 10.21542/gcsp.2021.17.
- Kittleston, M, Panjra, G, Amancherla, K. et al. 2023 ACC Expert Consensus Decision Pathway on Management of Heart Failure With Preserved Ejection Fraction: A Report of the American College of Cardiology Solution Set Oversight Committee. *JACC*. 2023 May, 81 (18) 1835–1878. <https://doi.org/10.1016/j.jacc.2023.03.393>

Title: Promoting Evidence-Based Nursing Practice Through Lavender-Sandalwood Aromatherapy for Postoperative Pain Management in the Post-Anesthesia Care Unit

Author: Rigel Doctore-Bauza, MSN, BSN, RN

Department: New York Presbyterian Weill Cornell F10 PACU, Columbia University School of Nursing

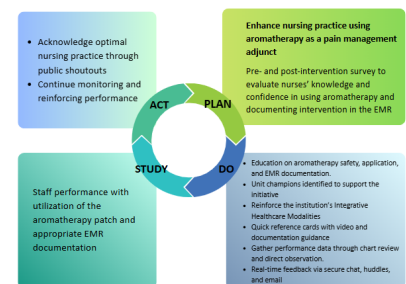
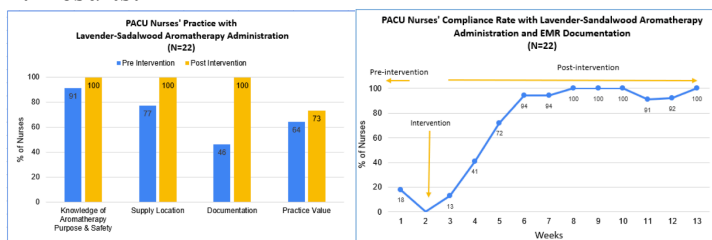
1. Statement of the Problem:

- Acute postoperative pain has shifted from opioid-focused approaches to multimodal strategies that integrate pharmacologic and non-pharmacologic interventions to enhance patient comfort and reduce opioid-related risks.
- The Joint Commission, Center for Disease Control and Prevention, and the American Society of Anesthesiologists support aromatherapy as a safe adjunct for postoperative pain management.
- Practice guidelines at our institution promote integrative therapies, yet utilization in PACU remains variable. From April to June 2025, 18% of PACU nurses implemented and documented aromatherapy.

2. Objective/Aim of the study: This project aims to increase PACU nurses' utilization and documentation of lavender sandalwood aromatherapy from 18% to 95%, through staff education on its application, benefits, safety and proper documentation.

3. Project Design/Methods: The PDSA quality improvement framework guided the assessment, planning, intervention, and evaluation

4. Results:



- Pre- and post-intervention surveys yielded (N=22) responses
- Nurses' knowledge of aromatherapy (purpose, safety, application, and documentation) improved 100% post-intervention, with a 73% increase in perceived clinical value
- Aromatherapy documentation compliance increased from 13% to 100% by week 8, with sustained performance through week 12
- Overall, the project demonstrated successful adoption and sustainability of aromatherapy as a non-pharmacologic intervention in postoperative pain management

5. Conclusion: Targeted education and reinforcement significantly improved nurses' utilization and documentation of aromatherapy in the PACU. This project demonstrated sustained practice change and successful integration of a non-pharmacologic intervention into multimodal pain management.



Problem Statement

- Acute postoperative pain, once primarily managed with opioids, shifted toward multimodal pain management due to concerns about opioid-related harm, integrating pharmacologic and non-pharmacologic strategies to improve comfort and reduce opioid exposure while supporting holistic, patient-centered care (Horn & Kramer, 2021).
- National guidelines from The Joint Commission, Centers for Disease Control and Prevention, and the American Society of Anesthesiologists endorsed aromatherapy as a safe, effective adjunct to postoperative pain management (Sargalski, 2024).
- At New York Presbyterian Weill Cornell F10 Post Anesthesia Care Unit (PACU), institutional guidelines support the use of integrative health modalities. From April to June 2025, 18% of PACU nurses implemented and documented aromatherapy.
- Targeted nurse education enhanced competency in integrative pain management, with Suzan van Veen et al. (2024) and Batiha (2025) demonstrating that structured training increased nurses' confidence and skill in providing evidence-based, non-pharmacologic interventions.

Objective/Aim Statement

- The aim is to increase PACU nurses' utilization and documentation of lavender-sandalwood aromatherapy from 18% to 95%, through staff education on its application, benefits, safety, and proper documentation.

Designs/Methods

This quality improvement (QI) project utilized the Plan-Do-Study-Act (PDSA) framework.

Plan

- Week 1: Conduct a pre-intervention survey to identify staff knowledge gaps in aromatherapy benefits, contraindications, documentation, and related nursing practices.
- Week 3-13: Conduct a post-intervention survey to evaluate nurses' knowledge gains and confidence in using and documenting aromatherapy

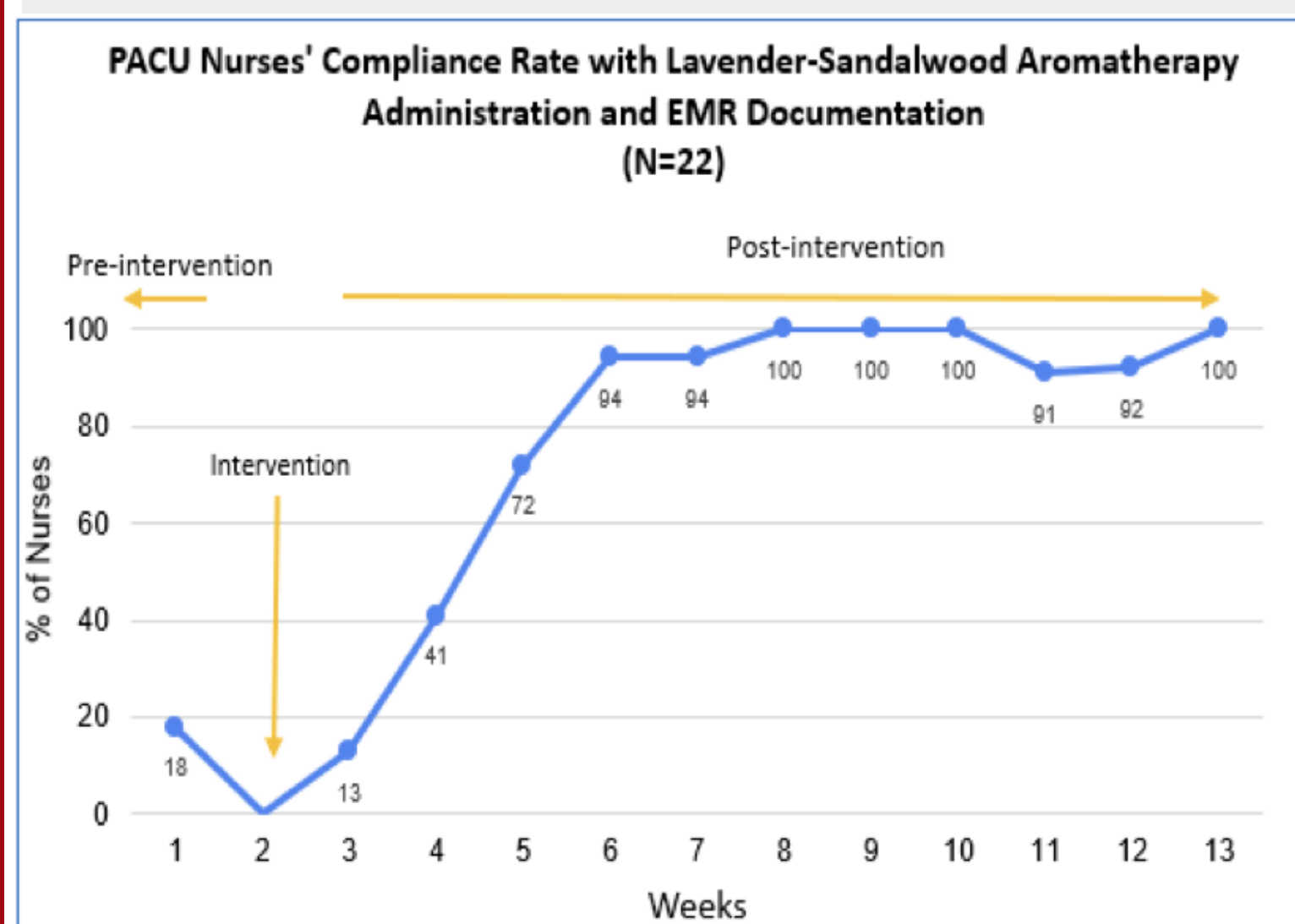
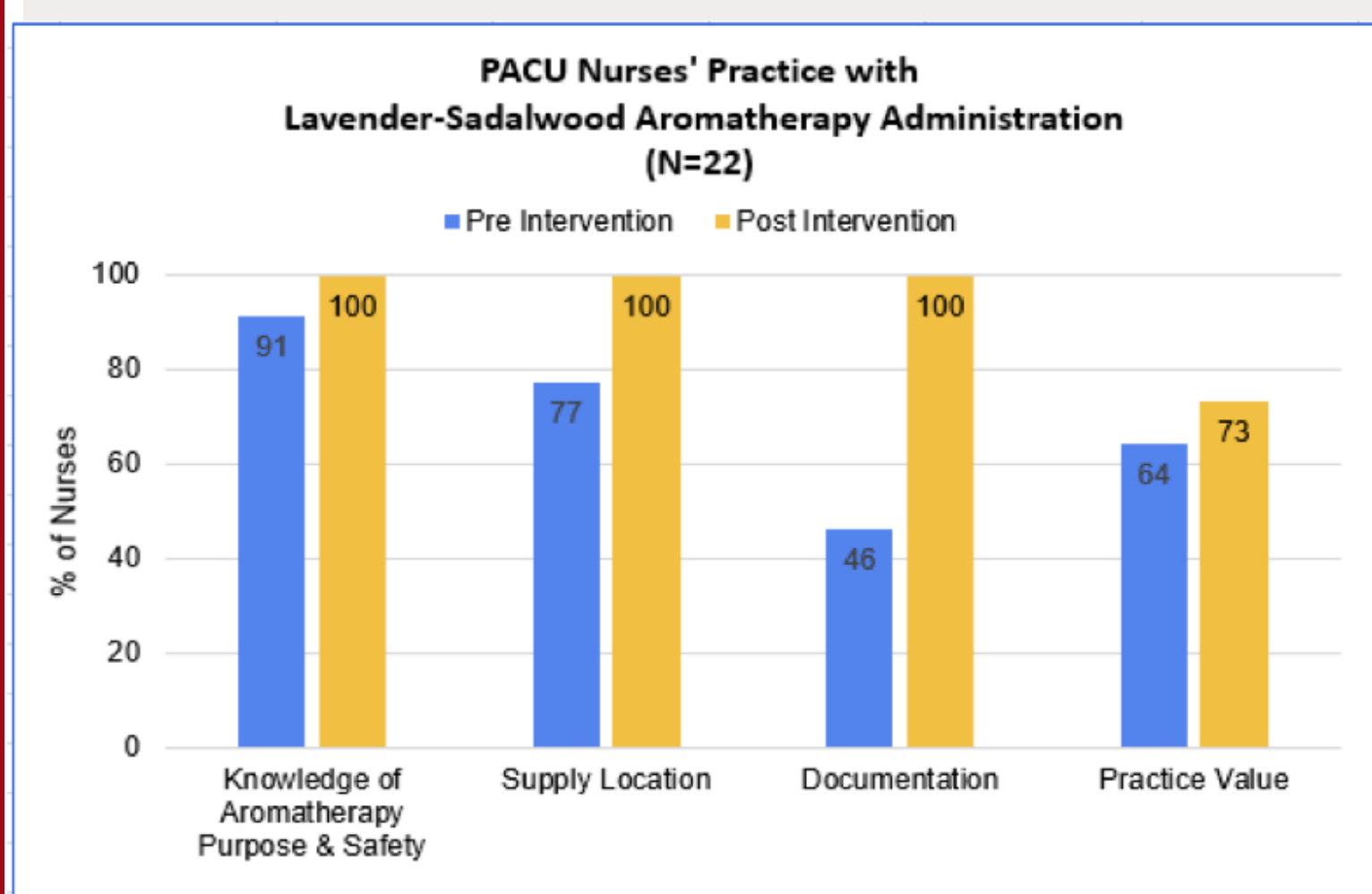
- Week 3-13: Quick reference cards with video instructions and documentation guidance were distributed to staff to support aromatherapy application.
- Quality outcomes were displayed on the quality dashboard, and Guidelines were placed at each computer-on-wheels for timely access.
- Chart review and direct observation to monitor nurses' practice related to the application and documentation of the aromatherapy patch. Weekly results were shared via huddles, EPIC chat, and email. Best practices were reinforced.

Study

- Following the intervention, from week 3 through week 13, findings from chart reviews, direct observations, and post-intervention surveys indicated a steady improvement in nursing practice with the use of the aromatherapy patch.

Act

- Additional measures, including real-time feedback to staff, were implemented post-week 3 to address challenges and ensure compliance with aromatherapy administration
- Acknowledge optimal nursing practice through thank-you notes and public shout-outs



Results

- A pre- and post-intervention survey yielded (N=22) responses.
- Pre-intervention findings showed that nurses' knowledge of purpose and safe patch application, location, documentation on the EMR, and perception of its clinical value were 91%, 77%, 46%, and 64%, respectively. Post-intervention findings showed 100% across and a 73% improved perception of clinical value
- Post-intervention data showed baseline compliance at 13%, steadily improving by Week 4, reaching 100% by Week 8, and largely sustained thereafter, with minor dips in Weeks 11–12.
- Overall, the intervention significantly enhanced knowledge, documentation, and consistent practice, demonstrating effective staff adoption and sustained aromatherapy use in postoperative care.

Conclusions/Lessons Learned

- Integrating aromatherapy into PACU workflows enhances holistic, nurse-driven pain management while promoting professional growth and a healing environment.
- Consistent reinforcement improved aromatherapy utilization and documentation, aligning with organizational multimodal pain management standards.
- Standardized protocols and accessible supplies facilitated seamless incorporation into postoperative care.
- This intervention demonstrates that structured education supports reliable use of non-pharmacological pain management, strengthening the use of evidence-based practice.

References



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Patient Wellness Initiative on a Cardiac Medicine Stepdown Unit

Mia Rodie, BSN, RN-BC, Jennifer Luby, BSN, RN, PCCN, Christina Sepe-Dolan, BSN, RN, PCCN

Nursing

Statement: Cardiac patients in step-down units are at a critical transition point from intensive care to a lower acuity setting and often experience increased anxiety, depression, social isolation, and stress, commonly referred to as “cardiac blues” (Murphy, 2023). These challenges can hinder recovery, negatively impact patient experience, and increase the risk of readmission. Despite this, mental health support is often underemphasized in inpatient units, contributing to suboptimal outcomes.

Objective: This quality improvement project aimed to evaluate whether interdisciplinary wellness interventions reduce feelings of anxiety, depression, and social isolation among cardiac step-down patients.

Project Design: This project was conducted over three months; participants attended weekly multidisciplinary wellness sessions designed to promote psychological well-being. Interventions included light movement exercises, mindfulness activities, art-based sessions, and group activities facilitated by an interdisciplinary team, including nursing staff, nursing students, chaplains, physical therapists, occupational therapists, and recreational therapists. Psychological distress was measured using the Hospital Anxiety and Depression Scale (HADS), a validated 14-item self-report tool assessing anxiety and depression designed for inpatient units. Scores were collected pre-and-post wellness sessions. In addition, Question 28 from the HCAHPS survey, which assesses patients’ overall mental and emotional health, was analyzed post discharge. A thematic analysis of patient feedback was also conducted to identify common experiences and perceptions of the intervention.

Results: Results demonstrated an overall improvement in perceived mental well-being. Approximately 30% of patients reported excellent mental health pre-intervention, increasing to approximately 45% and 47% during months with consistent session implementation. A decrease was observed during April which had limited sessions, suggesting outcomes were influenced by session consistency. Thematic analysis revealed positive patient perceptions of increased social connection, improved mood, and enhanced overall hospital experience.

Conclusions: Feedback from patients, staff, and nursing students was overwhelmingly positive. A key barrier was session timing overlapping lunch and MD rounds, which limited participation. Adjusting session timing may improve attendance and patient engagement. Future efforts will focus on sustaining and expanding the program through continued interdisciplinary collaboration.



Patient Wellness Initiative on a Cardiac Medicine Stepdown Unit

Annual Weill Cornell Medicine Quality Improvement & Patient Safety Poster Symposium

Mia Rodie, BSN, RN, Jennifer Luby, BSN, RN | May 20, 2026

BACKGROUND

- *Cardiac patients in step-down units* are often at a critical juncture in their recoveries, transitioning from intensive care to a less acute environment.
- This period is not only physically demanding but also *mentally challenging*. Addressing these mental health needs is essential for holistic patient care and successful recovery. Greater perceived social isolation has been associated with an increased risk of death and healthcare use among heart failure patients (Manemann, 2024).
- Research reveals that the first step to improving cardiac outcomes is admitting that social health plays a large role in health outcomes (Poli, 2023).
- Targeted interventions to reduce social isolation and enhance social support may improve patient outcomes. Developing programs or strategies to address these social factors may be beneficial.

PURPOSE

The purpose of this quality improvement project was to assess whether *interdisciplinary wellness interventions* lead to decreased feelings of social isolation, depression, and anxiety among cardiac medicine patients.

Wellness Session Comparison Pre and Post HADS

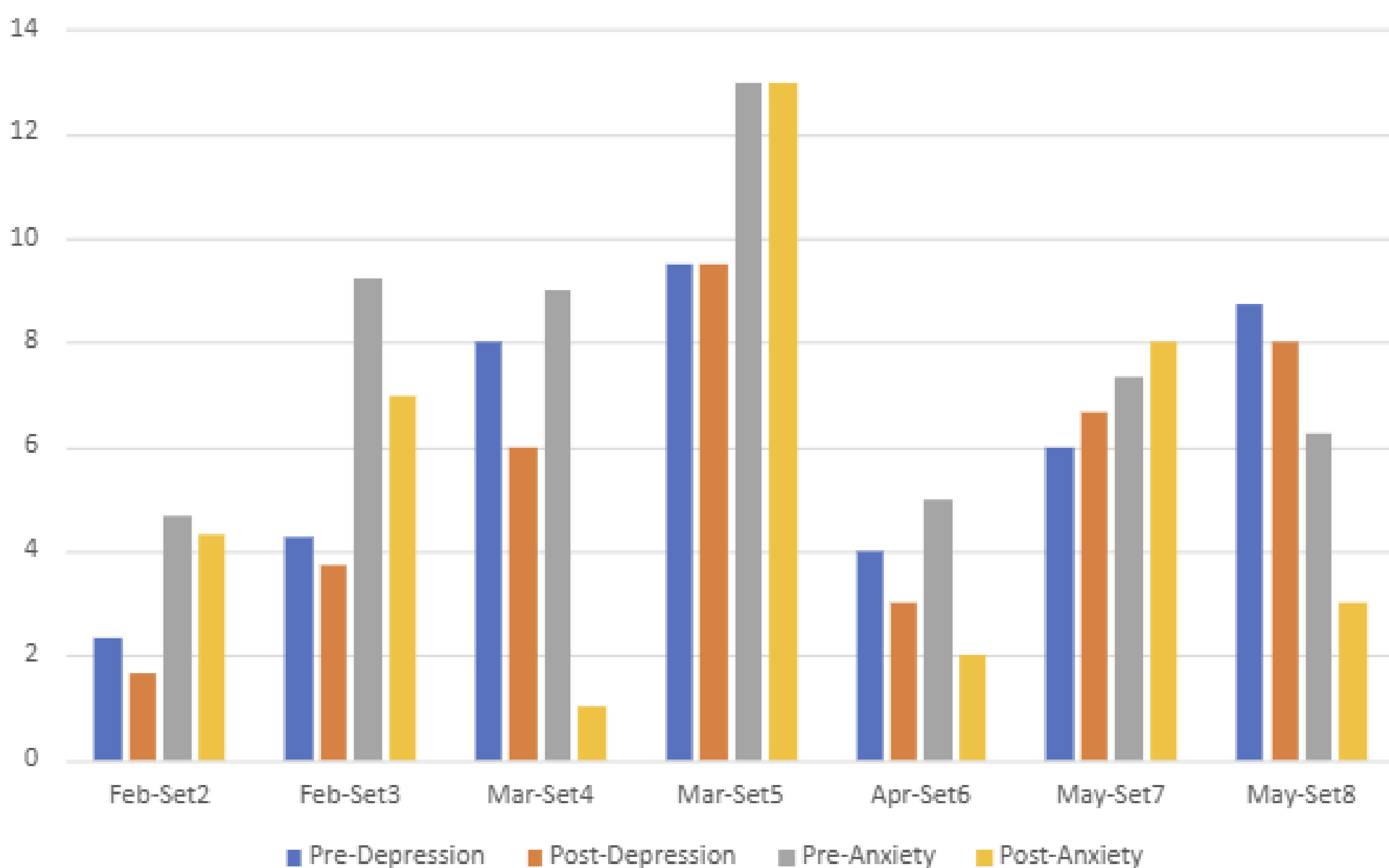


Table 1. Pre and Post averages of anxiety and depression measured by the Hospital Anxiety and Depression Scale.

Analysis of Patient Feedback

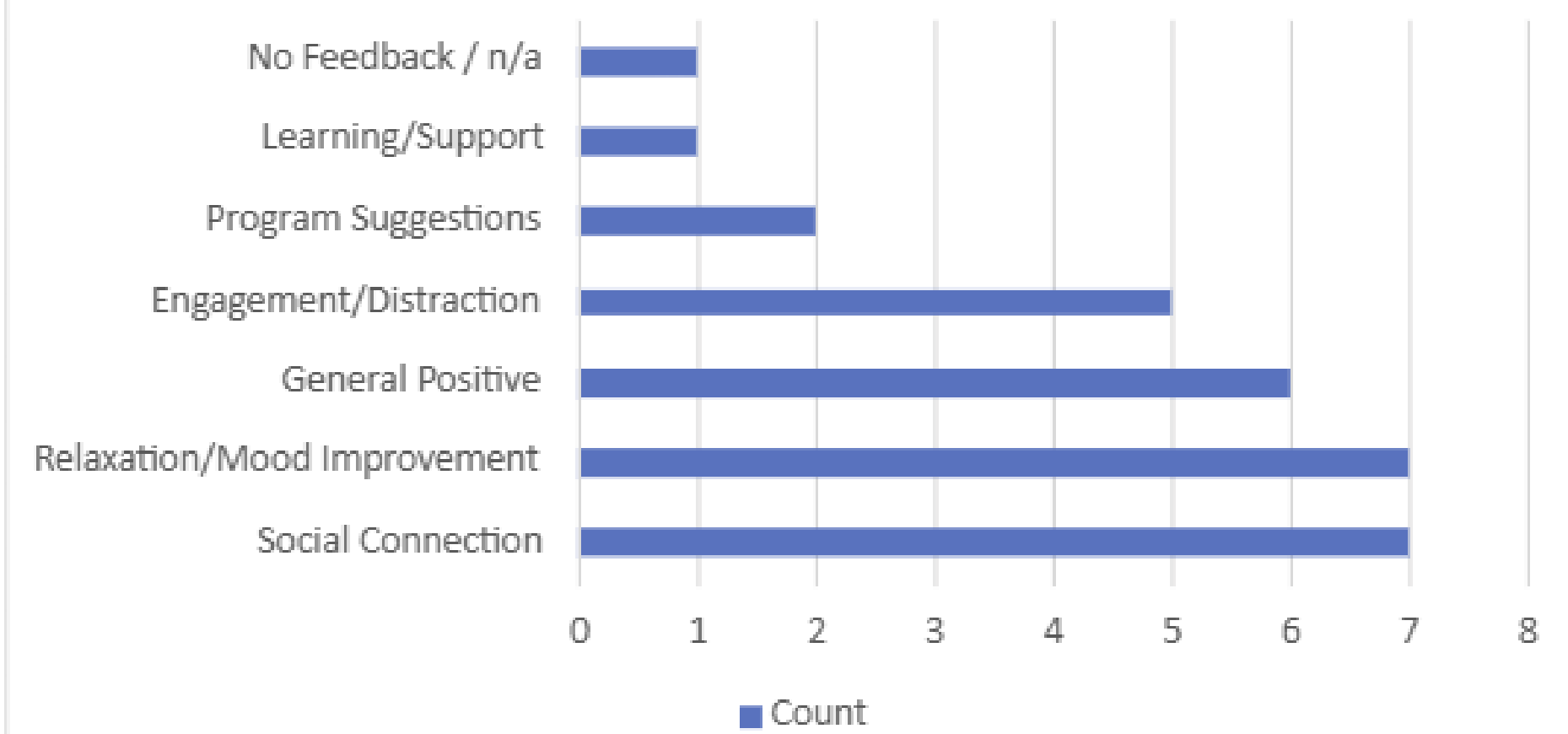


Table 2. Thematic analysis of patient feedback of wellness sessions.

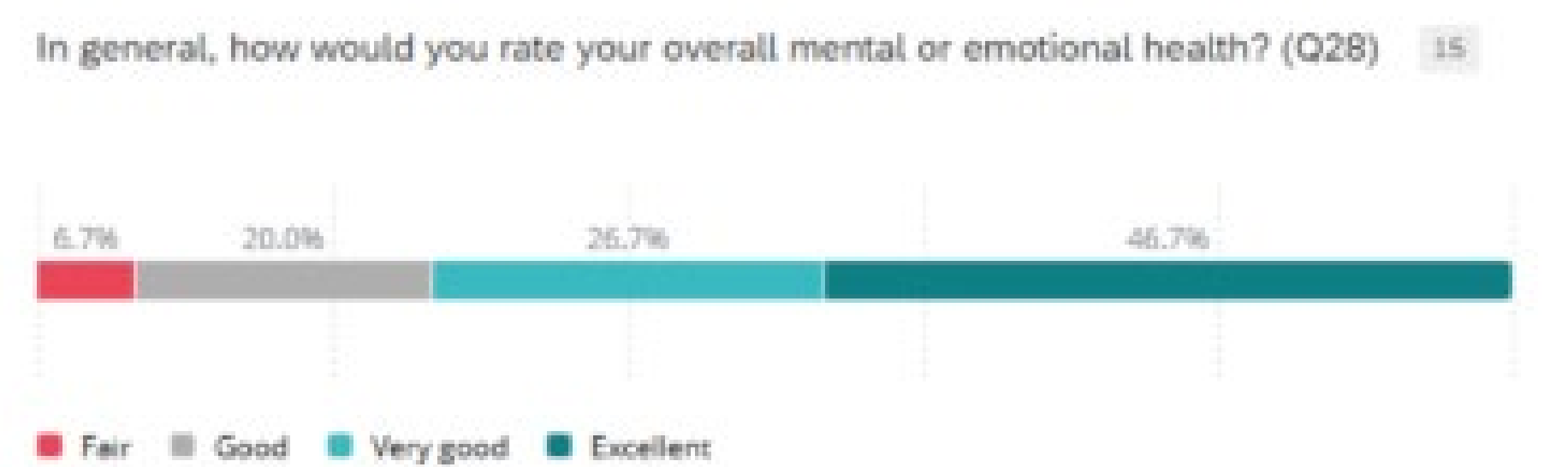


Figure 1. HCAHPS results of patient overall mental health.

Methods

- **Design:** QI intervention; Pre- and Post-Anxiety Assessment
- **Intervention:** Participants engaged in a series of multidisciplinary wellness sessions, which included light movement exercises, mindfulness activities, art-based “paint and sip” sessions, social game days, and group exercises.
- **Multi-disciplinary approach:** Weekly sessions facilitated by a multidisciplinary team, including nursing staff, nursing students, chaplains, physical therapists, occupational therapists, and recreational therapists.
- **Measures:** *Hospital Anxiety and Depression Scale (HADS)*, a 14-item self-report instrument that includes two subscales measuring anxiety (7 items) and depression (7 items); collected (pre- and post-intervention). *HCAHPS*: Question 28 from the HCAHPS survey that is administered to patients upon their discharge from the hospital. The question reads: **In general, how would you rate your overall mental or emotional health?**

Results

- **HCAHPS Pre:** ~30% of patients reported excellent mental and emotional health
- **HCAHPS Post:** ~45% (Month#2) and ~47% (Month#3) reported excellent mental and emotional health (Fig 1.)
- **HADS Findings:** Depression scores decreased, on average, slightly (8.75 → 8.0), while anxiety scores showed a more substantial reduction (6.25 → 3.0), suggesting the intervention was particularly effective in lowering anxiety (Table 1.)

References



Project Name: Impact of a Standardized Intraoperative Safety Checklist on Cesarean Delivery Adherence and Maternal Outcomes: A Quality Improvement Project

Authors: Victoria de Barros, Anna Daoud, MD, MPH, Nader Daoud, & Daniel Skupski, MD

Statement of the Problem: Severe maternal morbidity (SMM) affects over 50,000 birthing individuals annually in the United States. Cesarean delivery accounts for approximately one-third of all births in the US, carries higher complication rates than vaginal delivery. Despite existence of evidence-based guidelines for perioperative and intraoperative cesarean technique, adherence to these practices is inconsistently measured and highly variable across institutions, representing a modifiable target for quality improvement.

Objective/Aim of the Study: This study aims to evaluate whether implementation of a standardized intraoperative safety checklist for cesarean delivery improves adherence to evidence-based best practices and reduces composite obstetric morbidity for individuals who deliver at NewYork-Presbyterian/Queens (NYPQ).

Project Design/Methods: A 23-item safety checklist was developed through literature review of evidence-based guidelines and distributed to all cesarean delivery personnel at NYPQ via a multimodal educational intervention including a live presentation, email communication, and unit-wide poster placement in Labor & Delivery. Compliance with evidence-based practices from the implemented checklist were documented through direct observation by a study team member during scheduled, urgent, and emergent cesarean deliveries. Pre- and post-checklist implementation was compared. Demographics and obstetric outcomes were obtained via chart review and documented in RedCap. Adverse obstetric outcomes included hemorrhage (QBL >1000–1499 mL and QBL >1500 mL), need for a blood transfusion; surgical site infection, bacteremia, endometritis, sepsis, coagulopathy, urinary tract infection, readmission, intensive care unit (ICU) admission, unplanned neonatal intensive care unit (NICU) admission, hysterectomy, return to the operating room, acute kidney injury or renal failure, eclampsia, stroke, pulmonary embolism, amniotic fluid embolism, rectus sheath hematoma, and injury to adjacent organs. Statistical analysis was performed using RStudio 4.5.2. Checklist compliance was compared by Welch's t-test and Mann-Whitney U test. Categorical outcomes were compared by Fisher's exact test. Outcome analysis was limited to complete records.

Results: A total of 190 cesarean deliveries were included (pre-checklist n=80, post-checklist n=110). Overall checklist adherence improved significantly in the primary analysis (79.0% ± 7.7% vs. 90.3% ± 7.0%; p<0.001). Seven of 23 checklist items demonstrated statistically significant improvement (Fisher's exact, p<0.05), with the largest gains in compliance with vaginal preparation with chlorhexidine or povidone-iodine (15.0% vs. 94.5%, p<0.001) and post-uterine-closure glove change (0.0% vs. 87.2%, p<0.001), see *Table 1*. The most significant improvement in compliance with the checklist practices overall was in scheduled cesarean deliveries (pre/post; 78.5% vs. 91.5%; p<0.001) compared to unscheduled (urgent and emergent) cesarean deliveries, though checklist adherence statistically improved across all levels of cesarean delivery urgency. There were no differences in checklist adherence across patient race, ethnicity or insurance type. There was also no statistically significant difference in the umbrella metric of any adverse outcome (20.0% pre vs. 34.3% post, p=0.129). Numerically, a composite hemorrhage metric increased from 12.5% to 22.4% (p=0.305), composite infection increased from 0.0% to 9.0% (p=0.082), and other adverse outcomes decreased from 10.0% to 7.5% (p=0.725).

Conclusions: Implementation of a comprehensive cesarean safety checklist was associated with a clinically and statistically significant improvement in adherence across urgency categories. These findings demonstrate that standardization of surgical practice is achievable through a brief, low-resource multimodal educational intervention, even across a large multidisciplinary team. Notably, several practices

with low baseline adherence showed the greatest improvement, reinforcing the value of interdisciplinary education and direct observation in identifying actionable targets and suggesting the presence of awareness gaps rather than logistical barriers. Although improvement in adherence did not translate to significant adverse outcome improvements in this sample, this likely reflects insufficient power rather than a true absence of clinical effect, highlighting the importance of adequately powering future quality improvement studies to detect whether improvements in surgical practice adherence translate to meaningful reductions in maternal morbidity.

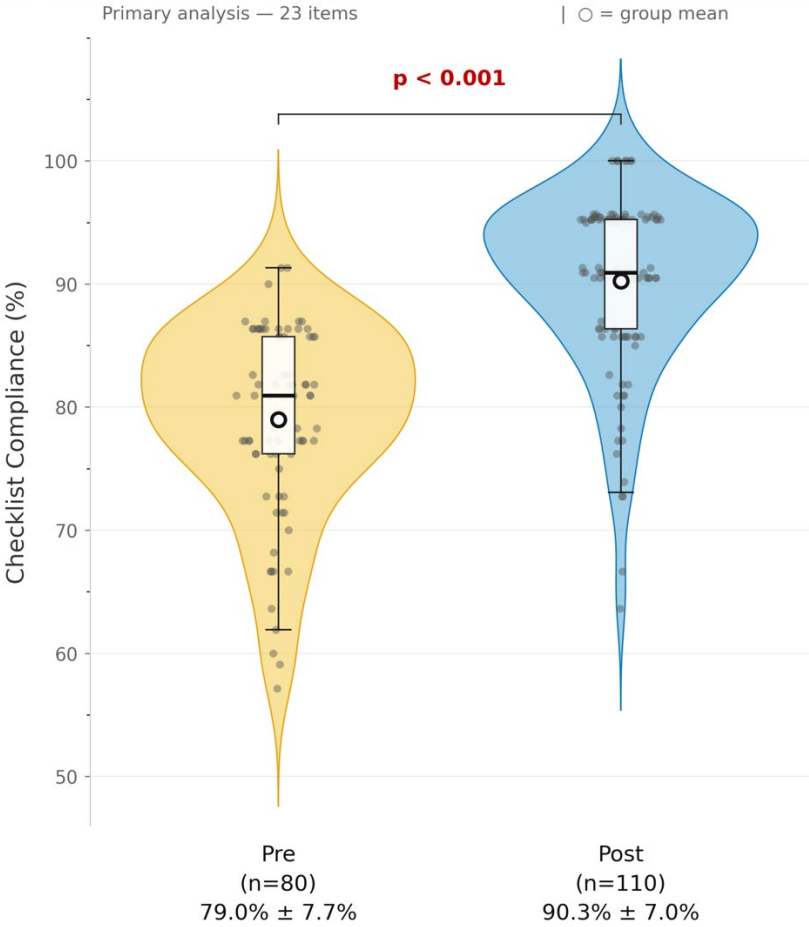
Tables/Figures:

Table 1. Evidence-based metric compliance, pre- and post-checklist implementation.

Checklist Metric	Pre-Intervention (n=80)	Post-Intervention (n=110)	p-value
Overall compliance	79.0% ± 7.7%	90.3% ± 7.0%	<0.001
<i>Individual checklist items:</i>			
1. Preoperative huddle performed	93.8%	94.5%	0.817
2. Hemorrhage risk assessment included in huddle	91.2%	90.9%	0.935
3. Tranexamic Acid prophylaxis if high risk of postpartum hemorrhage	57.1%	70.0%	0.344
4. Prophylactic antibiotics ≤60 min pre-incision	97.5%	93.5%	0.305
5. Correct antibiotic type/dose	97.5%	98.1%	1.000
6. Left lateral tilt	90.0%	89.0%	0.824
7. Compression stockings	100.0%	99.1%	1.000
8. Clippers used (not razor)	100.0%	100.0%	1.000
9. Correct skin prep	97.5%	100.0%	0.178
10. Vaginal prep (Chlorhexidine or Betadine)	15.0%	94.5%	<0.001
11. No bladder flap (unless indicated)	86.2%	88.0%	0.728
12. Blunt uterine entry	92.5%	99.1%	0.043*
13. Blunt uterine incision expansion (cephalon-caudad direction)	83.8%	89.0%	0.293
14. Oxytocin ≤3 min post-delivery	98.8%	100.0%	0.428
15. Misoprostol/Methergine prophylaxis if moderate or high risk of postpartum hemorrhage	70.0%	86.0%	0.013
16. Spontaneous placental removal	88.8%	96.3%	0.077
17. Uterine cavity not wiped (sweep)	1.2%	11.9%	0.005
18. Glove change after uterine closure	0.0%	87.2%	<0.001
19. Peritoneum not closed	73.8%	95.4%	<0.001
20. Rectus muscles not reapproximated	76.2%	85.3%	0.113
21. Subcutaneous reapproximation if >2cm	100.0%	100.0%	1.000
22. Subcuticular skin closure	100.0%	99.1%	1.000
23. Quantitative blood loss measurement performed	100.0%	99.1%	1.000

Figure 1. Overall checklist compliance pre- and post- checklist implementation

Overall Checklist Compliance: Pre vs. Post Intervention



Impact of a Standardized Intraoperative Safety Checklist on Adherence to Cesarean Best Practices and Maternal Outcomes

Victoria de Barros, Anna Daoud, MD, MPH, Nader Daoud & Daniel Skupski, MD

BACKGROUND

50,000+

birthing individuals affected by severe maternal morbidity (SMM) annually in the US

- Cesarean delivery accounts for approximately 1/3 of all US births and carries higher complication rates than vaginal delivery.
- Evidence-based intraoperative guidelines exist but adherence is inconsistently measured and highly variable across institutions, representing a modifiable target for quality improvement.

OBJECTIVE

Evaluate whether a structured educational intervention improves adherence to 23 evidence-based best practices and reduces composite obstetric morbidity for individuals who deliver at NewYork-Presbyterian/Queens (NYPQ).

METHODS

Pre-Intervention Observation

2 months
n = 80

Multimodal Educational Intervention

- Live didactic presentation
 - Email communication
 - Unit-wide poster in Labor & Delivery
- to
- Attendings
 - Residents
 - Physician assistants
 - Nursing team
 - Anesthesiology team

Post-Intervention Observation

4 months
n = 110

Did adherence and outcomes improve?

Design: Prospective cohort quality improvement pilot study comparing pre- and post- intervention populations

Checklist: 23-item checklist developed via review of evidence-based peri- and intraoperative guidelines for cesarean delivery.

Observation: Compliance documented by direct observation during scheduled, urgent, and emergent cesarean deliveries during daytime shift.

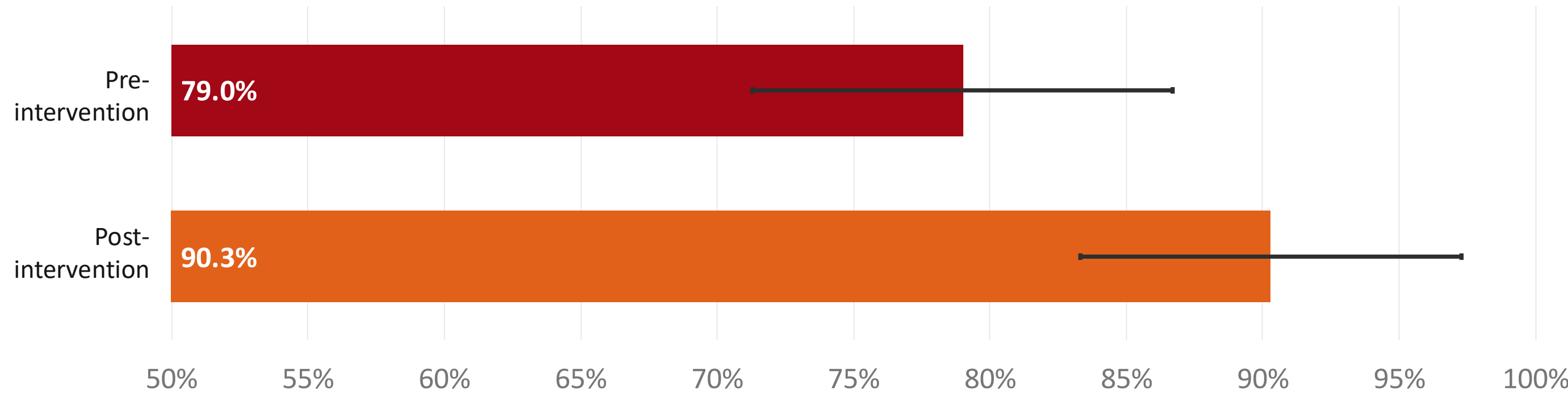
Primary Outcome: Overall checklist adherence rate (%)

Secondary Outcomes: Composite severe maternal morbidity (SMM) rate, composite hemorrhage rate, composite infection rate (%)

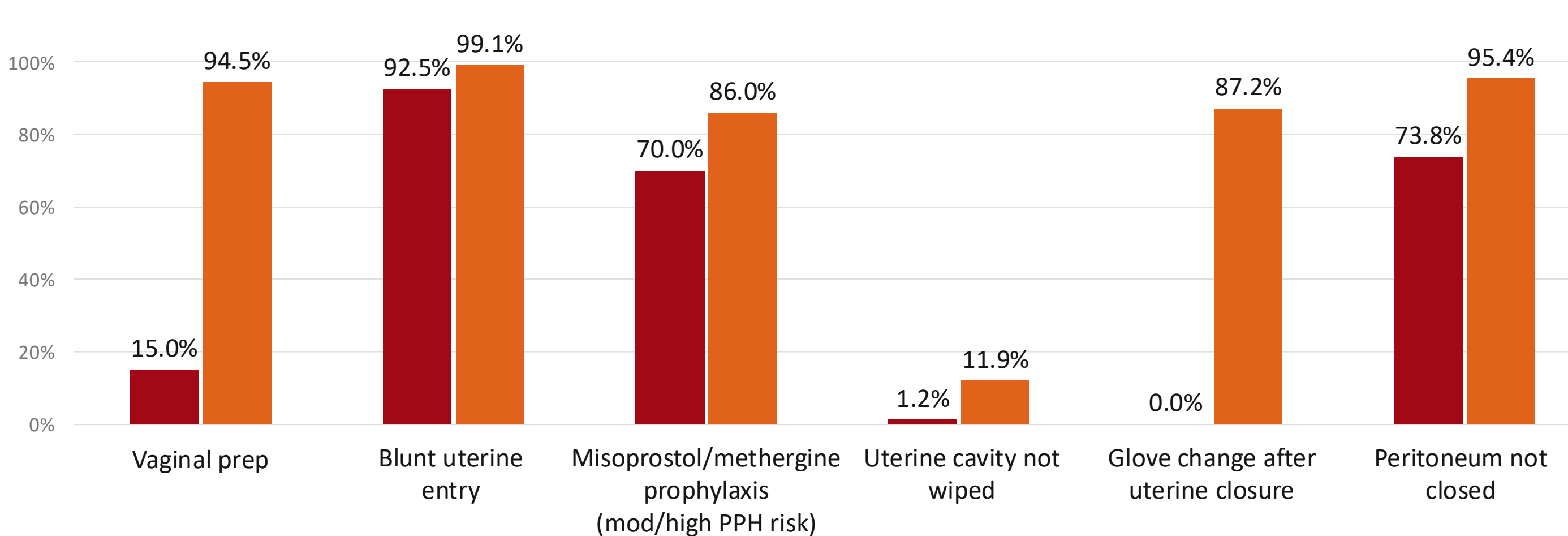
Analysis: Checklist compliance compared by Welch's t-test and Mann-Whitney U test. Categorical outcomes compared by Fisher's exact test.

RESULTS

Overall Checklist Adherence



Checklist Items with Significant Improvement



Checklist Metric	Pre-Intervention (n=80)	Post-Intervention (n=110)	p-value
Overall compliance	79.0% ± 7.7%	90.3% ± 7.0%	<0.001
Preoperative huddle performed	93.8%	94.5%	0.817
Hemorrhage risk included in huddle	91.2%	90.9%	0.935
TXA prophylaxis if high PPH risk	57.1%	70.0%	0.344
Prophylactic antibiotics ≤60 min pre-incision	97.5%	93.5%	0.305
Correct antibiotic type/dose	97.5%	98.1%	1.000
Left lateral tilt	90.0%	89.0%	0.824
Compression stockings	100.0%	99.1%	1.000
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Oxytocin ≤3 min post-delivery	98.8%	100.0%	0.428
Misoprostol/Methergine prophylaxis if moderate/high PPH risk	70.0%	86.0%	0.013
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Rectus muscles not reapproximated	76.2%	85.3%	0.113
Subcutaneous reapproximation if >2cm	100.0%	100.0%	1.000
Subcuticular skin closure	100.0%	99.1%	1.000
Quantitative blood loss measurement performed	100.0%	99.1%	1.000

Highlighted = statistically significant improvement (p<0.05)

Outcome	Pre-intervention % (95% CI)	Post-intervention % (95% CI)	p-value
Any adverse outcome	20.0% (10.5-34.8%)	34.3% (24.1-46.3%)	0.129
Composite hemorrhage	12.5% (5.5-26.1%)	22.4% (14.1-33.7%)	0.305
Composite infection	0% (0.0-8.8%)	9.0% (4.2-18.2%)	0.082

95% Wilson score intervals. Pre n=40, Post n=67 (complete records).

- No differences in checklist adherence were observed across patient race, ethnicity, or insurance type.
- The greatest improvement occurred in scheduled cesarean deliveries (pre/post; 78.5% vs. 91.5%; p<0.001), though adherence improved significantly across all urgency levels
- There was no statistically significant difference in any adverse outcome metrics.

CONCLUSIONS

- Implementation of a 23-item cesarean delivery safety checklist significantly improved in adherence across all urgency categories.
- Many practices with the lowest baseline adherence showed the greatest gains, suggesting the presence of awareness gaps rather than logistical barriers.
- The multimodal educational intervention was brief and low-resource, yet effective across a large multidisciplinary team, demonstrating that standardization of surgical practice is achievable.
- No statistically significant reduction in adverse outcomes was observed, likely reflecting insufficient power (n=190) rather than true absence of clinical effect.
- Future studies should be adequately powered to evaluate whether improvements in surgical practice adherence translate to meaningful reductions in maternal morbidity.

REFERENCES

- Attanasio LB, Goff S, Hardeman R, Laws H, Srinivas S. Severe Maternal Morbidity by Race and Ethnicity and Birth Mode Among Individuals With a Prior Cesarean Birth. JAMA Netw Open. 2025;8(6):e2513578. doi:10.1001/jamanetworkopen.2025.13578
- Identifying Severe Maternal Morbidity (SMM). (2024, May 15). Maternal Infant Health. <https://www.cdc.gov/maternal-infant-health/php/severe-maternal-morbidity/icd.html>
- Barnea ER, Inversetti A, DiSimone N, the FIGO Childbirth and Postpartum Hemorrhage Committee. FIGO good practice recommendations for cesarean delivery: Prep-for-Labor triage to minimize risks and maximize favorable outcomes. Int J Gynecol Obstet 2023;163:57-67.
- Mackeen, A. D., Sullivan, M. V., & Berghella, V. (2024). Evidence-based cesarean delivery: preoperative management (part 7). American Journal of Obstetrics & Gynecology MFM, 6(5), 101362-. <https://doi.org/10.1016/j.ajogmf.2024.101362>
- Mackeen, A. D., Sullivan, M. V., & Berghella, V. (2025). Evidence-based cesarean delivery: intraoperative management from skin incision until placental delivery (Part 8). American Journal of Obstetrics & Gynecology MFM, 7(1), 101576-. <https://doi.org/10.1016/j.ajogmf.2024.101576>
- Mackeen, A. D., Sullivan, M. V., & Berghella, V. (2025). Evidence-based cesarean delivery: intraoperative management following placental delivery until skin closure (part 9). American Journal of Obstetrics & Gynecology MFM, 7(1), 101548-. <https://doi.org/10.1016/j.ajogmf.2024.101548>

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Title: An Integrated Digital Approach to Equitable Cancer Risk Assessment in a Diverse Gynecology Clinic

Authors: Hannah G. Peifer, MD, MPH*, Enzo G. Bruscato, BS, Amanda Laterza Ozarowski, MS, CGC, Michelle Primiano, MS, CGC, Siena Gioia, BS, Max Kirby, BA, Christina Pardo, MD, MPH, Ravi N. Sharaf, MD, MS**, Melissa K. Frey, MD, MS**

*Department of Obstetrics and Gynecology

**Drs. Frey and Sharaf are co-senior authors and contributed equally to this work.

Statement of the Problem: Several national medical organizations recommend universal cancer risk assessment. Despite this, most individuals who qualify for cancer genetic testing and enhanced breast cancer screening are not identified, with significant racial and ethnic inequities across access and uptake. Stark disparities persist in breast cancer outcomes between Black and white women, regardless of subtype or stage at diagnosis.

Objective: We aim to sustainably integrate personalized digital cancer risk assessment into the daily workflow of a gynecology clinic that serves primarily racial and ethnic minority patients and patients with public insurance.

Methods: In an effectiveness-implementation quality improvement (QI) study in an urban academic gynecology practice serving patients with public insurance, a digital tool (DT) for cancer risk assessment launched to collect patient information to identify those who meet NCCN (National Comprehensive Cancer Network) criteria for hereditary cancer screening and generate a Tyrer-Cuzick (TC) score. All new gynecology patients > 18 years were invited to complete the DT via secure portal-based text messaging and email. Those who completed the DT were notified in real time of their cancer risk status (normal or elevated). Pre-implementation, the QI team met with key stakeholders in the clinic to discuss the initiative. For the initial 6 weeks post-implementation, a member of the QI team was physically present at the clinic. The team helped providers format their electronic health record so that results from the digital tool would be apparent on their clinic schedules. Data were collected through chart review. Statistical analysis was performed using Stata version 19 (StataCorp LLC, College Station, Texas).

Results: During the 6 weeks pre-implementation, 131 new gyn visits were seen (median age 42), and family cancer history was documented in 112 (85.5%) visits. At least 14 (10.7%) patients were eligible for genetic testing under NCCN criteria based on chart review; among them, 1 was counseled, and 3 had prior testing (28.6%). Only 1 patient had a TC score calculated (0.76%). In the initial 6 weeks post-implementation, 171 new patients were seen (median age 41), of which 153 were sent the DT, with 82 (53.6%) completing it. Among this group, 18 (22.0%) met NCCN criteria for genetic testing, and 12 (14.6%) had a TC score exceeding 20%. 21 of 24 (87.5%) patients meeting NCCN criteria and/or with an elevated TC score were counseled and/or referred to the Genetics and Personalized Cancer Prevention Program (GPCP). Comparing the 6 weeks post-implementation with the QI team present to the following 20 weeks to date, there was no significant difference in DT completion rates (53.6% vs. 51.7%, respectively, $p = 0.68$). In the absence of the QI team, there was a significant increase in “missed patients” during this time (0% vs. 44.3%, respectively, $p = 0.0001$). For “missed patients” or patients with abnormal results on the DT with no documentation of counseling or GPCP referral, the QI team contacted the provider and encouraged follow-up with the patient. Given concern regarding missed patients, the QI team implemented a smart phrase and re-educated providers. In the first 6 weeks post-QI team, 11 of 16 (68.8%) elevated-risk patients were missed. In the subsequent 9 weeks after the smart phrase was introduced, 13 of 26 (50%, $p = 0.23$) elevated-risk patients were missed. Targeted re-education was performed with providers who were not using the smart phrase. In the following 5 weeks, 3 of 19 (15.8%, $p = 0.02$) elevated-risk patients were missed.

Conclusions: The QI initiative demonstrated a short-term sustainable effort to screen patients for increased cancer risk and estimate lifetime breast cancer risk. We identified challenges in follow-up, with improvement noted after implementation of a smart phrase and re-education. Further efforts to ensure patients are not missed and to monitor subsequent follow-up will be undertaken. This quality improvement project is working iteratively to implement a scalable, equitable, and practical model for delivering universal personalized risk-based cancer prevention.



Problem

- Several national medical organizations recommend universal cancer risk assessment.
- Most individuals who qualify for cancer genetic testing and enhanced breast cancer screening are not identified, with significant racial and ethnic inequities across access and uptake.
- Stark disparities persist in breast cancer outcomes between Black and white women, regardless of subtype or stage at diagnosis.

Objective

To sustainably integrate personalized digital cancer risk assessment into the daily workflow of a gynecology clinic that serves primarily racial and ethnic minority patients and patients with public insurance

Methods

- Effectiveness-Implementation QI study

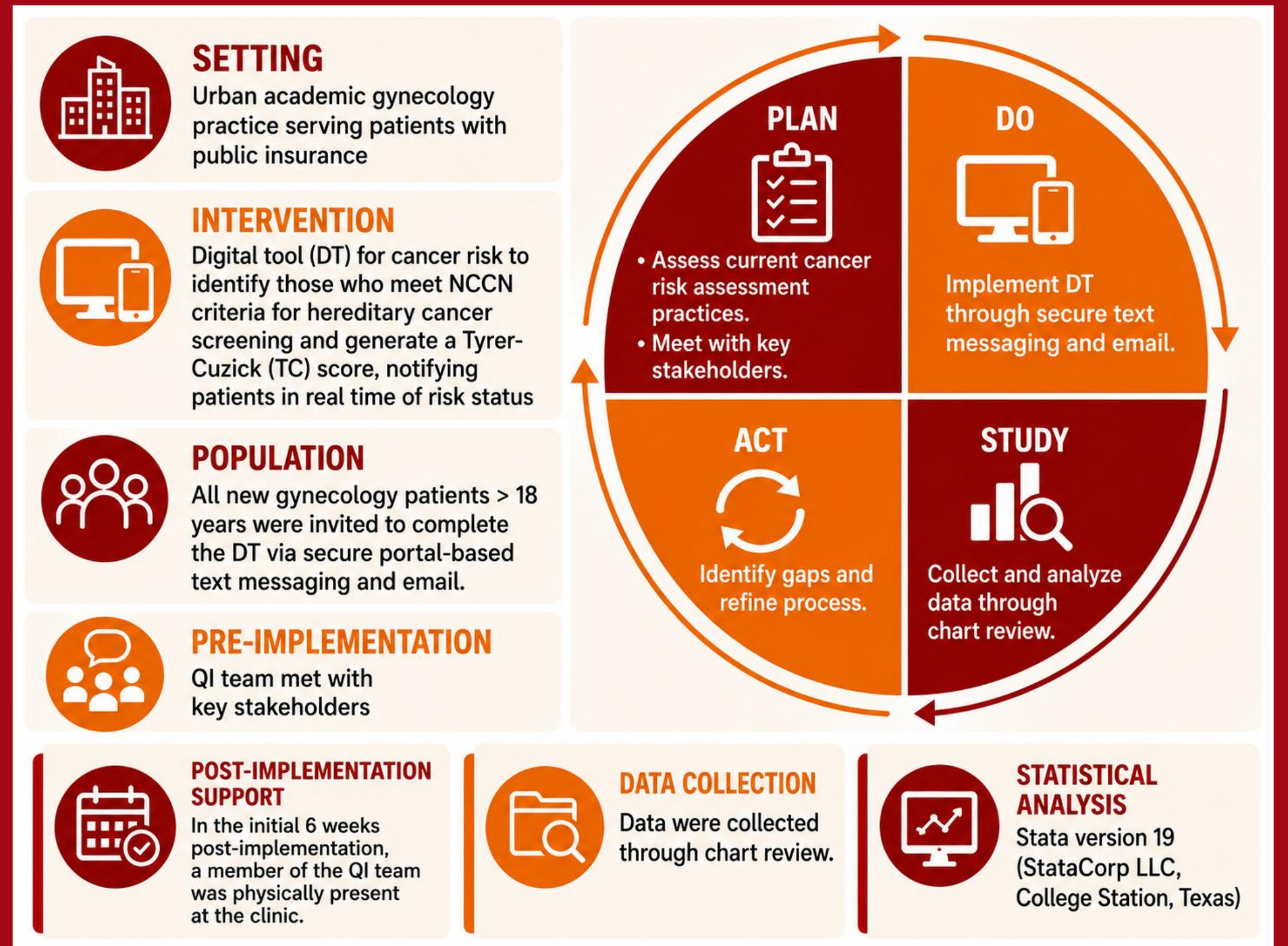
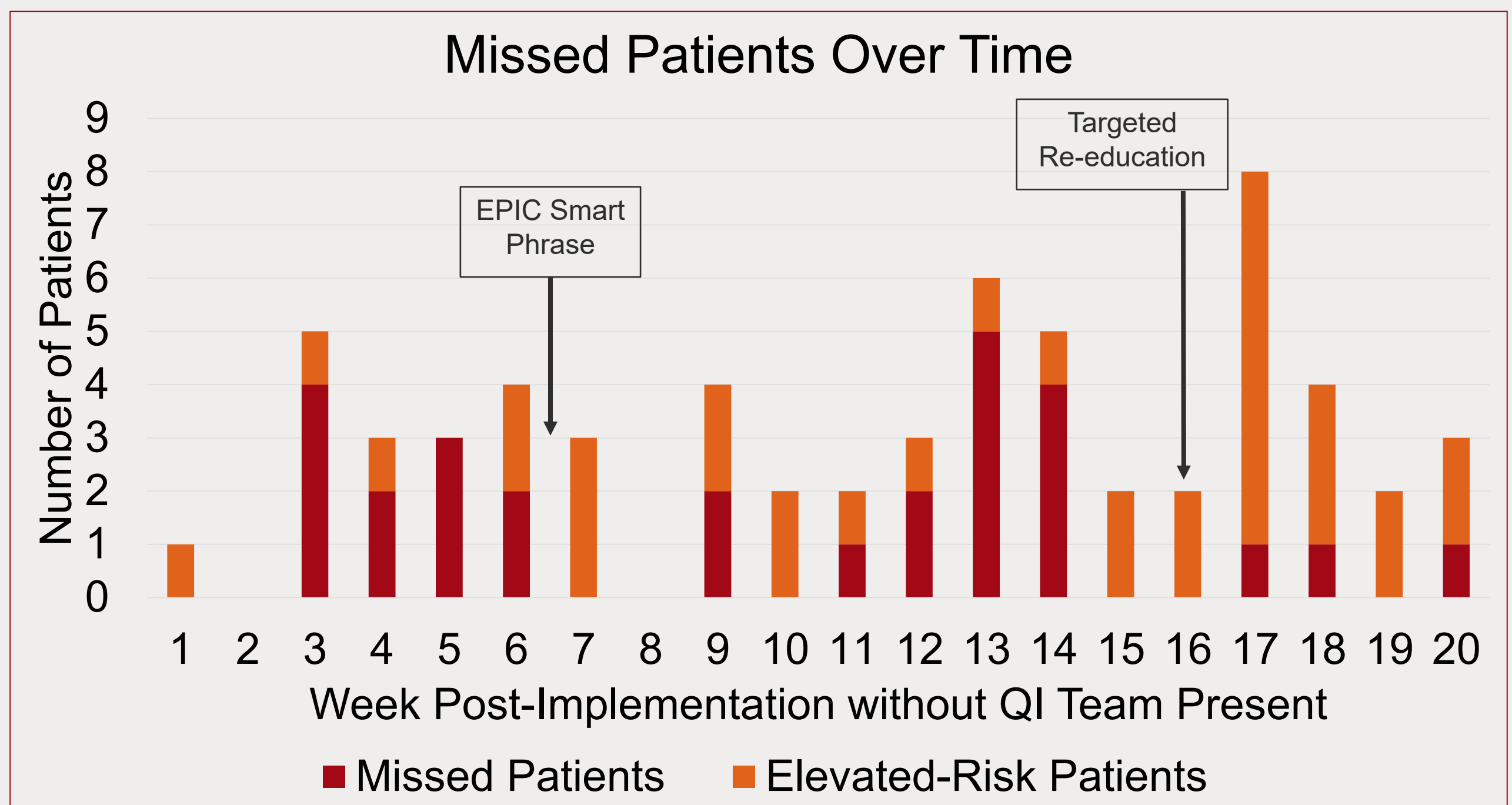


Table 1: Cancer Risk Assessment Pre- vs. Post-Implementation

	Pre-Implementation (6 weeks, n = 131) n / n (%)	Post-Implementation with QI Team (6 weeks, n = 153) n / n (%)	p-value
Completed DT / Received DT	-	82 / 153 (53.6)	-
Meet NCCN criteria for genetic testing	14 / 131 (10.7)	18 / 82 (22.0)	-
TC Score Calculated	1 / 131 (0.76)	77 / 153 (50.3)	< 0.001
TC Score ≥ 20%	0 / 1 (0)	12 / 82 (14.6)	-
Meet NCCN and/or TC Score ≥ 20%	14 / 131 (10.7)	24 / 82 (29.3)	-
Referred to GPCP	0 / 14 (0)	14 / 24 (58.3)	< 0.001
Documented discussion of risk/Genetic testing already done/Prior GPCP Referral/Declined GPCP Referral	4 / 14 (28.6)	7 / 24 (29.2)	0.97
Cancelled Appointment	-	3 / 24 (12.5)	-
No documented discussion of risk or GPCP referral (missed)	10 / 14 (71.4)	0 / 24 (0)	< 0.001



Results

DT COMPLETION RATES

POST-IMPLEMENTATION (QI TEAM PRESENT)
6 WEEKS
53.6% DT COMPLETION RATE

FOLLOWING PERIOD (QI TEAM NOT PRESENT)
20 WEEKS TO DATE
51.7% DT COMPLETION RATE

p = 0.6875
No significant difference

MISSED PATIENTS
In the absence of the QI team, there was a significant increase in "missed patients," with 11/16 (68.8%, p = 0.0000) missed in the first 6 weeks without the QI team present and 27/61 (44.3%, p = 0.0001) missed in the total 20 weeks post-implementation without the QI team present.

FOR MISSED PATIENTS:
QI team contacted the provider and encouraged follow-up with the patient. → If no timely follow-up was documented, the QI team contacted the patient directly.

SMART PHRASE IMPLEMENTATION

IMPLEMENTED SMART PHRASE
QI team implemented a smart phrase.

9 WEEKS AFTER SMART PHRASE INTRODUCED
13 of 26 (50%) patients were missed.
p = 0.23

Subsequently, targeted re-education was performed with providers who were not using the smart phrase.

FOLLOWING 5 WEEKS
3 of 19 (15.8%) elevated risk patients were missed.
p = 0.02

Conclusions/Lessons Learned

- The QI initiative demonstrated a short-term sustainable effort to screen patients for increased cancer risk and estimate lifetime breast cancer risk.
- Challenges in follow-up, with improvement noted after implementation of a smart phrase and re-education

Next Steps

- Further efforts to ensure patients are not missed and to monitor subsequent follow-up
- Monitor downstream effects of screening (e.g. cancer genetic testing results, enhanced breast cancer screening)
- Understand who is not completing the Digital Tool

Centralizing Patient Dismissal Reviews: Early Outcomes of a Standardized QPS Framework

Alyssa Cremeans, MSN, RN; Giovanna Hoyte, MPA | Division of Quality and Patient Safety

Problem Statement: Patient dismissal from a clinical practice carries medical, ethical, and legal implications. Patient and visitor dismissals across the Physician Organization (PO) were historically led by individual departments. When dismissal processes lack standardization, organizations risk inconsistent decision-making, inequitable outcomes, and legal exposure. In response, the Division of Quality and Patient Safety (QPS) was tasked with reviewing all dismissal requests, requiring a formalized framework to ensure dismissal decisions are timely, consistent, and well-documented.

Objective/Aim: Develop/implement a formalized dismissal review process within QPS that ensures consistent, equitable, and timely evaluation of patient and visitor dismissal requests across the PO.

Project Design/Methods: To facilitate a dismissal, an internal review is first conducted with departmental leadership. The department then submits a dismissal request for QPS to review in SafetyZone, an event reporting system designed to facilitate a standardized review. In July 2025, QPS implemented a Dismissal Toolkit to guide standardized decision-making. In the Fall of 2025, a two-person dismissal review committee was established, consisting of an Administrative QPS Manager and a Clinical QPS Manager. For every dismissal request submitted in SafetyZone, each manager conducts an independent chart review within one business day. Interviews with involved personnel are conducted on an as-needed basis. The committee then agrees on a recommended course of action prioritizing staff and patient safety, and adherence to the Toolkit. Recommendations are escalated to the Director of Nursing and Patient Safety for approval and additionally escalated to the Chief Quality Officer (CQO) for cases involving potential staff or patient harm. The Office of General Counsel (OGC) is consulted to assess possible dismissals from the PO or tripartite. Upon final approval, the Administrative Manager communicates the decision to departmental leadership.

Results: SafetyZone dismissal requests submitted between November 2025 and March 2026 were reviewed. After duplicates and rescinded requests by departments were removed, 55 requests were analyzed. Inappropriate behavior accounted for 47.3% of requests (n=26), followed by no-shows at 41.8% (n=23) and noncompliance at 10.9% (n=6). No dismissal requests were submitted for non-payment. Overall, 78.2% of requests (n=43) were approved and 21.8% (n=12) were modified. Of the 43 approved requests, four requests were additionally escalated to the OGC for dismissal from the PO (n=3) and the tripartite (n=1). Inappropriate behavior had the highest approval rate: of the 26 requests, 88.5% were approved (n=23). Of the 23 no-show requests, 73.9% were approved (n=17). Noncompliance had the lowest approval rate, with 50% approved (n=3). The CQO was consulted on 29.1% of cases (n=16). The mean turnaround time from submission to departmental communication was 4 days. Excluding cases escalated to the OGC, which averaged 14 days, mean turnaround was 3 days and median was 2 days.

Conclusions: Departments would benefit from training on the Dismissal Toolkit for no-show and non-compliance cases, where lower approval rates suggest uncertainty about when situations warrant a dismissal vs. a warning. The 14-day average turnaround for escalated cases points to an opportunity to streamline the legal escalation pathway through clearer criteria and timelines. Tracking whether cases downgraded to a warning letter result in subsequent dismissal requests would help evaluate the effectiveness of the warning step. Future evaluation should examine these metrics over a longer period to identify trends and determine how consistently the standardized system is applied.

Centralizing Patient Dismissal Reviews: Early Outcomes of a Standardized QPS Framework

2026 Quality in Care Symposium,

Alyssa Cremeans, MSN, RN; Giovanna Hoyte, MPA | May 20, 2026

Weill Cornell Medicine Physician Organization, Division of Quality and Patient Safety

Problem Statement

Patient dismissal from a clinical practice carries medical, ethical, and legal implications. Patient and visitor dismissals across the Physician Organization (PO) were historically led by individual departments. When dismissal processes lack standardization, organizations risk inconsistent decision-making, inequitable outcomes, and legal exposure. In response, the Division of Quality and Patient Safety (QPS) was tasked with reviewing all dismissal requests. QPS oversight required a formalized review framework to ensure dismissal decisions are timely, consistent and well-documented.

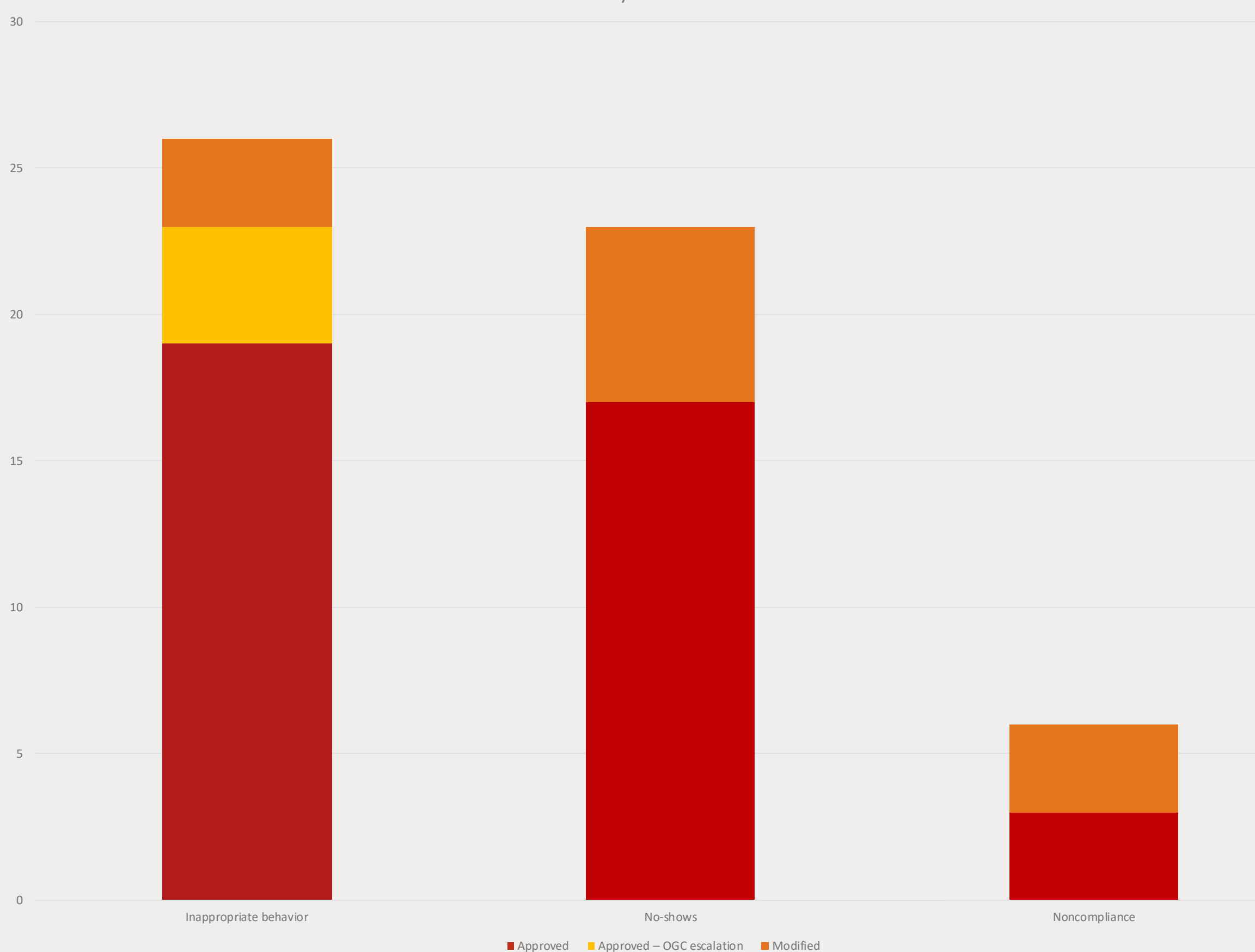
Objective/Aim Statement

To develop and implement a formalized dismissal review process within QPS that ensures consistent, equitable, and timely evaluation of patient and visitor dismissal requests across the PO.

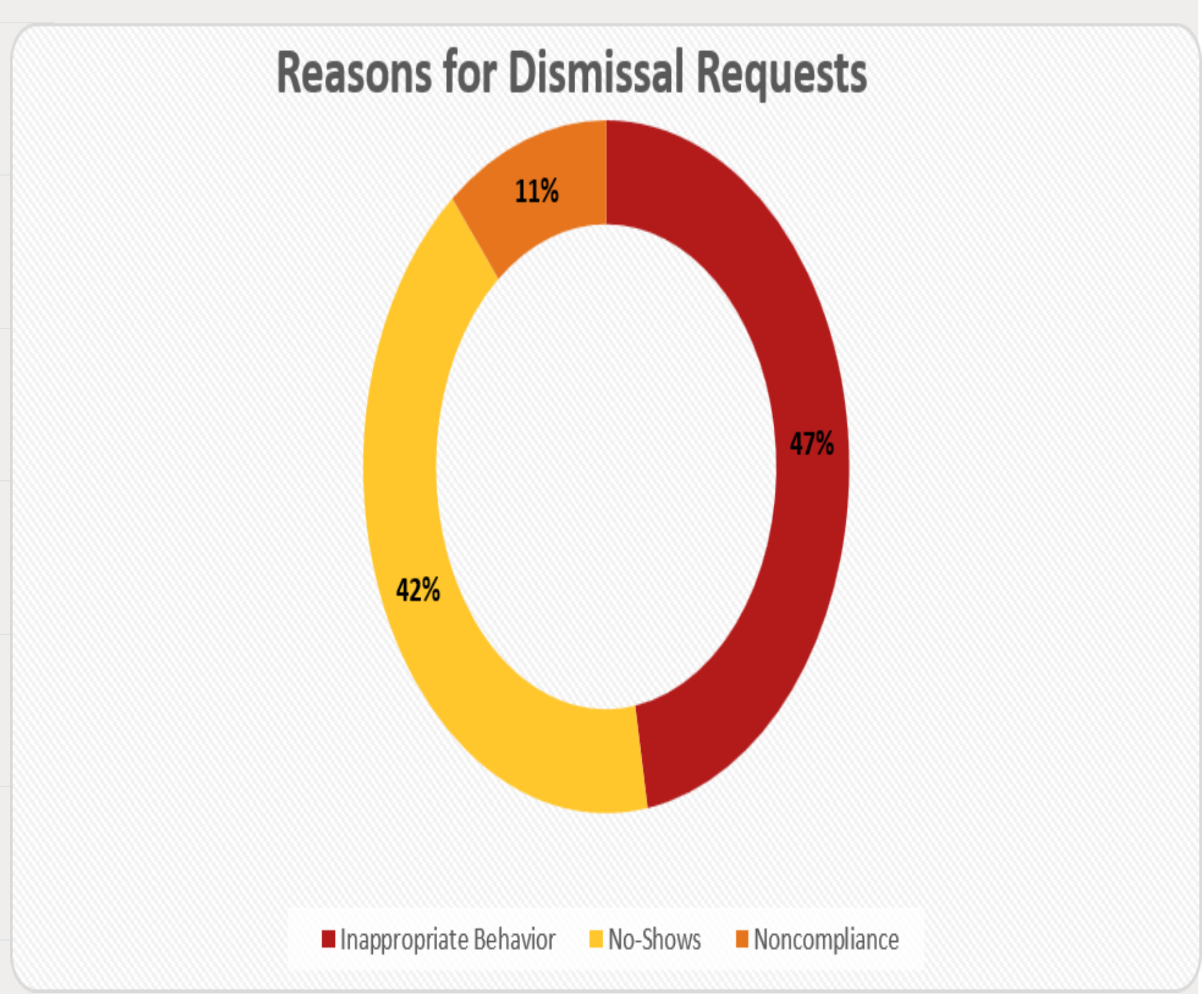
Design/Methods

To facilitate a dismissal, an internal review is first conducted with departmental leadership. The department then submits a dismissal request for QPS to review in SafetyZone, an event reporting system designed to facilitate a standardized review. In July 2025, QPS implemented a Dismissal Toolkit to guide standardized decision-making, including defined warning and dismissal triggers. Development was informed by relevant organizational policies and evidence-based practice guidelines. In the Fall of 2025, a two-person dismissal review committee was established, consisting of an Administrative QPS Manager and a Clinical QPS Manager. For every dismissal request submitted in SafetyZone, each manager conducts an independent chart review within one business day. Interviews with involved personnel are conducted on an as-needed basis. The Administrative Manager leads reviews for non-payment, the Clinical Manager leads reviews for non-compliance, and both share equal review of inappropriate behavior and no-show requests. The committee then agrees on a recommended course of action prioritizing staff and patient safety, and adherence to the Toolkit and organizational policies. Recommendations are escalated to the Director of Nursing and Patient Safety for approval. Cases involving potential staff or patient harm are additionally escalated to the Chief Quality Officer (CQO). The Office of General Counsel (OGC) is consulted to assess possible dismissals from the PO or tripartite enterprise. Upon final approval, the Administrative Manager communicates the decision to departmental leadership.

Outcomes by Reason for Dismissal



Reasons for Dismissal Requests



Results

SafetyZone dismissal requests submitted between November 2025 and March 2026 were reviewed. After duplicates and requests rescinded by departments were removed, 55 requests were analyzed. Submissions were distributed across the review period as follows: 10 in November, 13 in December, 11 in January, 9 in February, and 12 in March. Inappropriate behavior accounted for 47.3% of requests (n=26), followed by no-shows at 41.8% (n=23) and noncompliance at 10.9% (n=6). No dismissal requests were submitted for non-payment.

Overall, 78.2% of requests (n=43) were approved and 21.8% (n=12) were modified. Of the 43 approved requests, four requests were additionally escalated to the OGC. All four escalations to the OGC involved cases of inappropriate behavior. Of these, 75% (n=3) were escalated to dismissal from the PO and 25% (n=1) were escalated to dismissal from the tripartite. Of the 12 modified requests, 50% (n=6) were dismissal requests for no-shows, followed by 25% (n=3) for noncompliance and 25% (n=3) for inappropriate behavior. Ten of the 12 modifications resulted in a warning letter to the patient. Of the remaining two, one required no action (the patient had established care elsewhere), and the other resulted in a warning letter to the spouse since it was determined the spouse was behaving inappropriately, not the patient.

Approval rates varied by reason for dismissal. Inappropriate behavior had the highest approval rate: of the 26 requests, 88.5% were approved (n=23), including those that were escalated to OGC, while 11.5% were modified (n=3). Of the 23 no-show requests, 73.9% were approved (n=17) and the remaining 26.1% (n=6) were modified to warning letters. Noncompliance had the lowest approval rate, with 50% approved (n=3) and 50% modified (n=3).

The CQO was consulted on 29.1% of cases (n=16), with the remainder resolved at the Director level. CQO involvement was highest for inappropriate behavior, which accounted for 10 of the 16 cases, followed by no-shows (n=5) and noncompliance (n=1). The mean turnaround time from submission to departmental communication was 4 days. Excluding cases escalated to OGC, which averaged 14 days, mean turnaround was 3 days and median was 2 days.

Conclusions/Lessons Learned

Departments would benefit from training on the Dismissal Toolkit, particularly for no-show and noncompliance cases, where lower approval rates suggest uncertainty about when these situations warrant a dismissal versus a warning. Additionally, implementing de-escalation training may reduce the volume of dismissal requests for inappropriate behavior. The 14-day average turnaround for escalated cases to OGC points to an opportunity to streamline the legal escalation pathway through clearer criteria and timelines. Tracking whether cases downgraded to a warning letter result in subsequent dismissal requests would help evaluate the effectiveness of the warning step. Future evaluation should examine these metrics over a longer period to identify trends and determine how consistently the standardized system is applied.

Developing a Standardized Enterprise-Level Operational and Financial Dashboard for Infusion Centers

Authors

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Executive Sponsor: Kimberly Baker; Data Shared Services, New York, NY

Problem Statement

Hospital-based infusion centers rely on coordinated scheduling, clinical care, and authorization workflows to deliver timely therapy. However, critical operational, clinical, and financial data are often fragmented across pharmacy, clinical operations, billing, and scheduling systems. This fragmentation limits visibility into patient access, throughput, and barriers to care, contributing to missed opportunities to optimize capacity and reduce delays in treatment initiation. As demand for infusion services continues to grow, healthcare organizations require integrated analytics to improve access, enhance operational efficiency, and support reliable, high-quality care delivery across multiple sites.

Objective/Aim of the Study

To design and implement an enterprise-level analytics dashboard that integrates operational, clinical, and financial data to improve visibility into patient access and throughput, identify barriers to timely infusion therapy, standardize performance measurement across sites, and support data-driven quality improvement and operational optimization.

Project Design/Methods

A multidisciplinary team representing pharmacy, infusion operations, revenue cycle, and enterprise analytics collaborated to develop a system-wide infusion dashboard across NewYork-Presbyterian Hospital Enterprise. The initiative was supported at the executive level to ensure alignment, governance, and adoption.

Data were extracted from Epic Clarity and processed through an enterprise analytics layer, incorporating all infusion encounters and associated operational and revenue cycle activity. Standardized key performance indicators were developed through an enterprise data dictionary and governance structure to ensure consistency across sites. These included measures of access and throughput such as no-show rates and chair utilization, as well as indicators of barriers to care including authorization-related denials. Financial metrics were included to support sustainability but were not the primary focus of performance measurement.

The dashboard was developed using automated ETL pipelines to enable near real-time data refresh and incorporated role-based visualization and drill-down functionality from enterprise to

departmental levels. An iterative, PDSA-informed development approach was used to incorporate user feedback and refine functionality.

Results

The dashboard established a unified, enterprise-wide platform for monitoring infusion center performance and provided near real-time visibility into access, capacity, and barriers to care. Standardization of KPI definitions enabled consistent measurement across infusion sites.

The platform allows leaders to identify variation in no-show rates, visit volume, and chair utilization, highlighting opportunities to improve patient access and optimize capacity. In addition, the dashboard provides transparency into authorization-related delays and other process barriers impacting timely therapy initiation. By consolidating previously siloed data, the tool enhances operational awareness and supports proactive identification of inefficiencies in care delivery.

Standardized reporting also reduced reliance on manual data aggregation and improved consistency in performance review processes, establishing a shared framework for evaluating infusion operations across the enterprise.

Conclusions

The implementation of an enterprise infusion dashboard provides a foundational tool for advancing quality improvement by improving visibility into patient access, operational performance, and barriers to care. By integrating fragmented data sources and standardizing performance metrics, the platform enables a transition from retrospective reporting to proactive, data-driven management.

This work supports organizational growth by identifying opportunities to expand access, optimize capacity, and reduce delays in therapy initiation. Future efforts will focus on leveraging these insights to drive targeted quality improvement initiatives, including reducing no-show rates, improving chair utilization, and decreasing authorization-related delays. Additional enhancements, including predictive analytics and integration of patient experience metrics, will further strengthen the platform's ability to support efficient, accessible, and high-quality infusion care.



Authors: Prav Singh; Justin Ngai, MSN, RN-BC-NE-BC; Stanley Martinez; Kalista Cox; Olivia Arnold, PharmD, MHA; Cindy Ippoliti, PharmD; Patrice Dupart, PharmD, MSHCM, CPEL; Kimberly Baker

Problem Statement

Hospital-based infusion centers operate in highly complex environments requiring coordination across scheduling, clinical care, and revenue cycle processes.

However, performance monitoring is often limited due to fragmented data systems and lack of standardized metrics.

This fragmentation:

- Limits visibility into patient access and throughput
- Prevents identification of delays (e.g., no-shows, authorization barriers)
- Contributes to variability in operational performance across sites
- Restricts enterprise-wide benchmarking and improvement

As demand for infusion services grows, improving access and optimizing capacity are critical to supporting organizational growth and timely, quality patient care.

Objective/Aim Statement

To develop and implement a **standardized enterprise-level dashboard** that integrates operational and financial data across infusion centers to:

- Improve visibility into patient access and capacity to support growth
- Identify barriers to timely care delivery
- Enable standardized KPIs across sites
- Support data-driven quality improvement to expand access and efficiency

Design/Methods

A structured, multi-phase approach was used:

1. Data Integration

- Consolidated data from Epic Clarity into Enterprise analytics platform
- Integrated scheduling, billing, and clinical data into a unified data mart

2. KPI Standardization

- Developed enterprise data dictionary
- Standardized definitions for KPIs

3. System Architecture

- Automated ETL pipelines
- Near real-time data refresh
- Role-based access and governance controls

4. Visualization Design

- Interactive dashboard with Enterprise & site-level views, drill-down functionality, domain-specific pages

KEY QUALITY MEASURES:

Patient Access & Throughput

Operational visit volume, no-show rate, chair turn rate

☺ Reflects timeliness and access to infusion appointments

Reliability & Barriers to Care

Prior authorization denial rate, infusion-related denial rate, write-off rate

☺ Reflects delays & barriers in care delivery

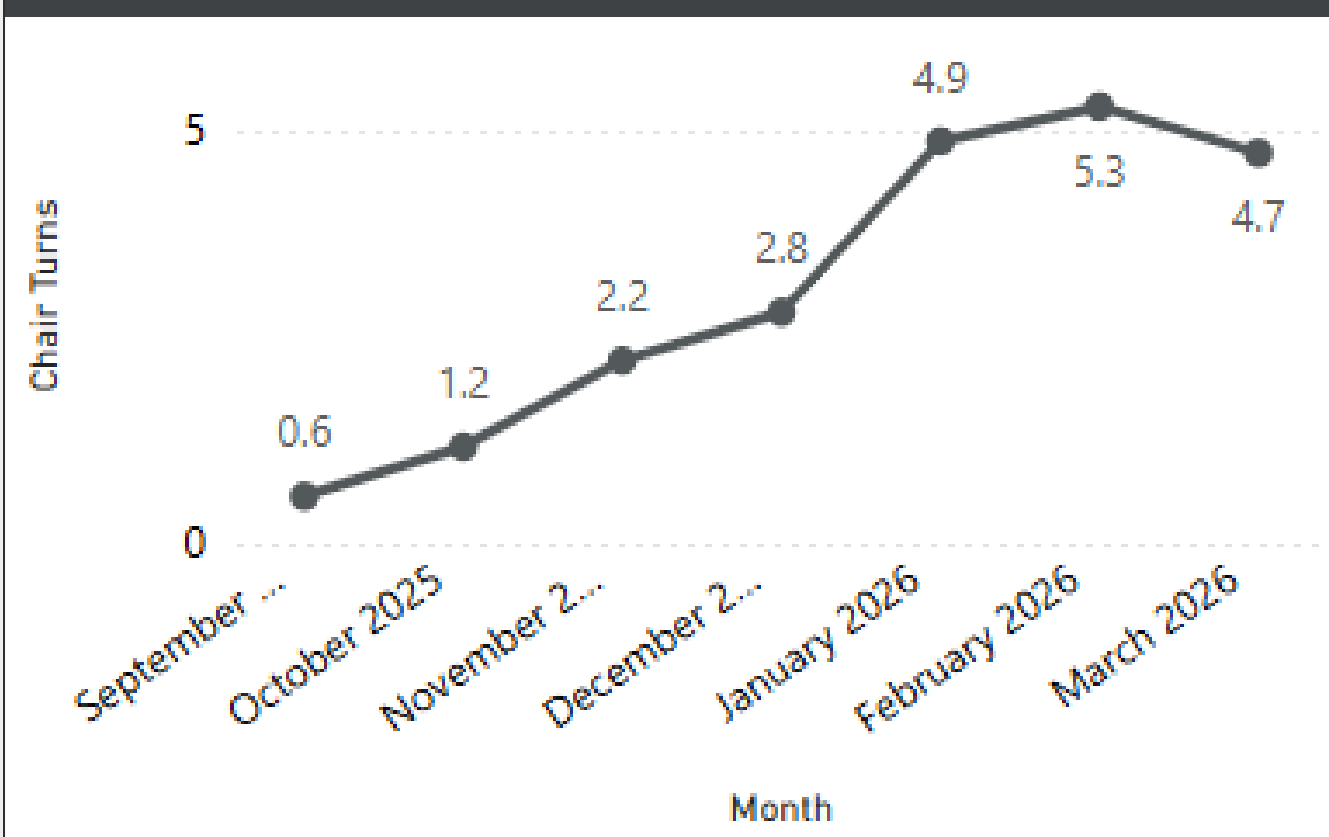
Overview Domain:

Provides all-encompassing view of volume, financial, and denials/write-off metrics. Available filters for drill-down:

Campus	Department	Time Frame Displayed
All	Multiple selections	Month
Date Range	Financial Class	Visit Type
9/1/2025 - 3/31/2026	All	All

Volume Domain:

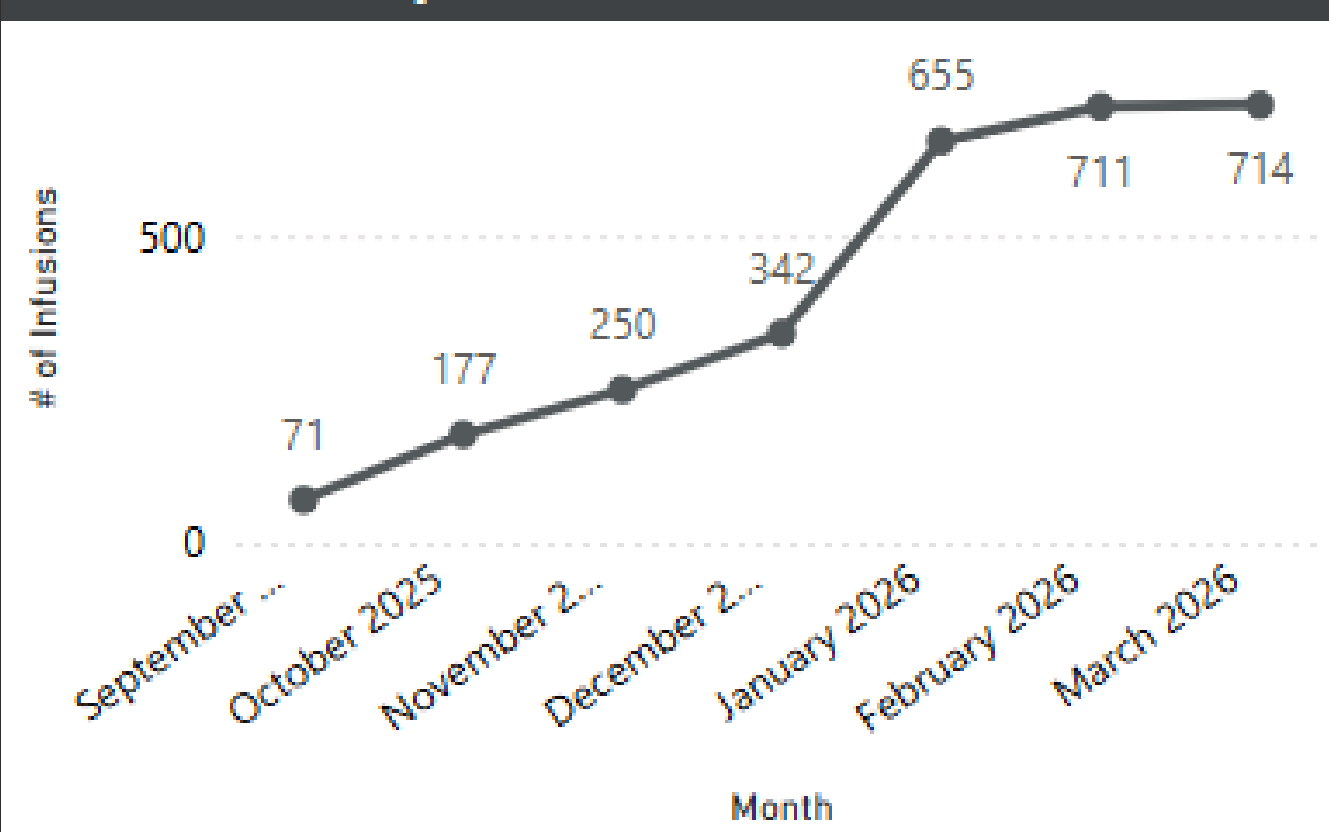
Chair Turns by Month



Chair Turns: Helps optimize capacity so more patients can be seen

Chair Turn Rate: $\frac{(\text{Visits with Infusion Administration})}{(\text{\# of Days Infusion Center is Open} \times \text{Number of Chairs Available})}$

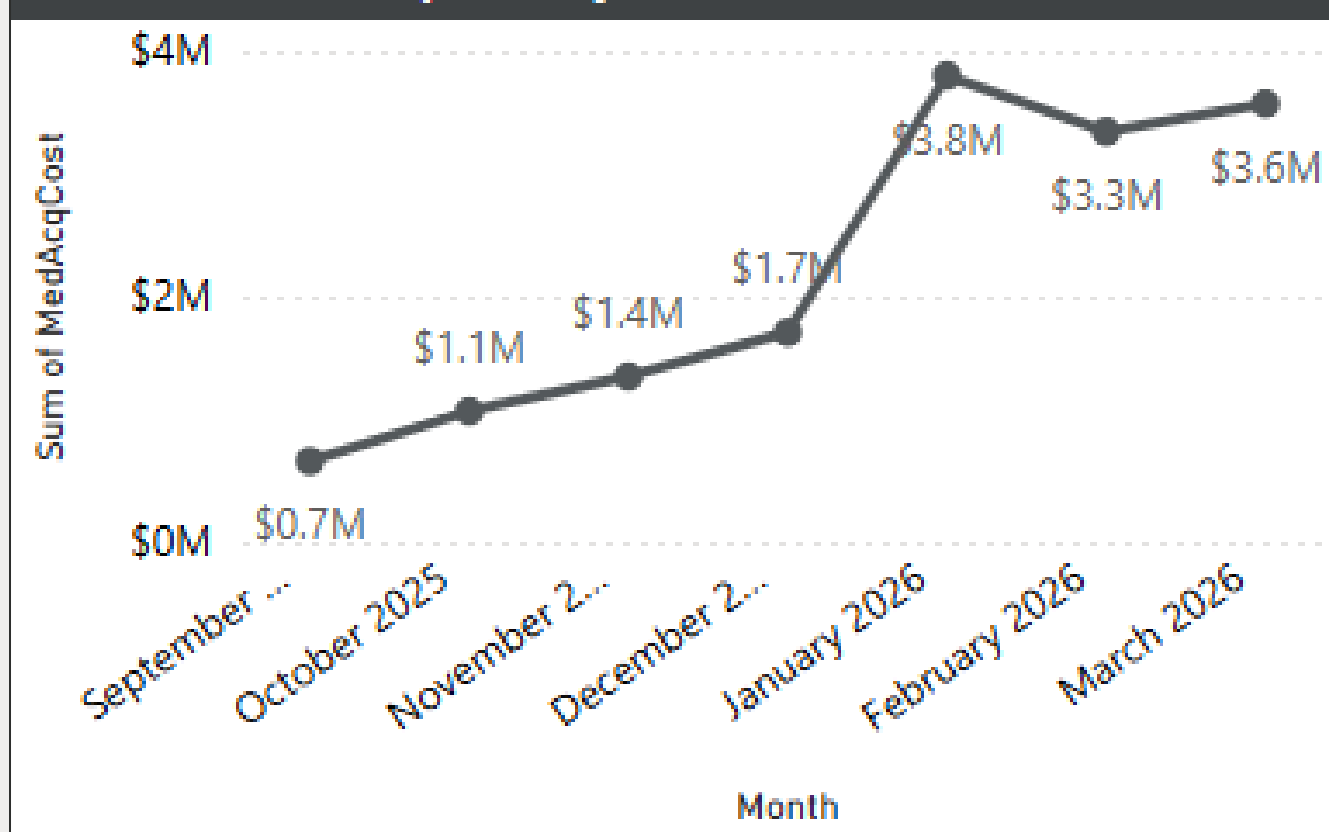
of Infusions by Month



Infusion Volume: Provides objective measure of growth

Financial Domain:

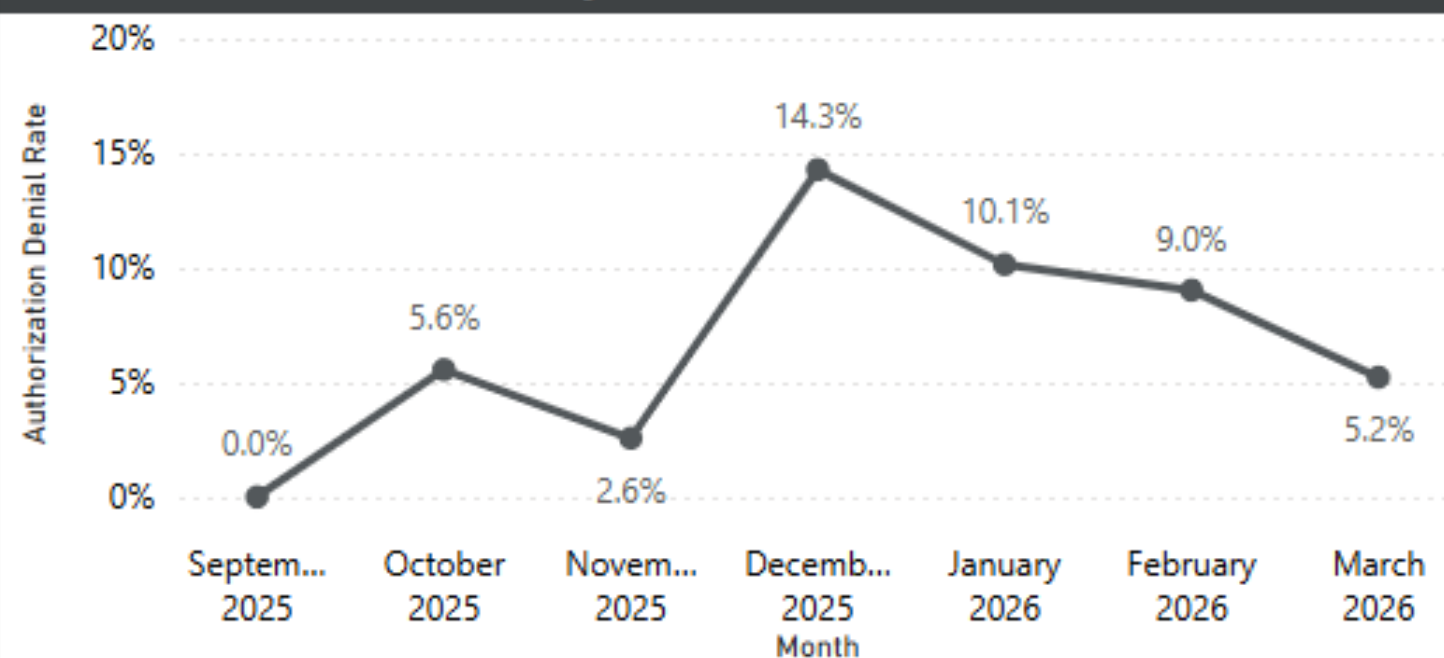
Sum of MedAcqCost by Month



Medication Spend Trend: Assists in identifying cost patterns to support consistent access to therapy and high-value care

Denials Domain:

Authorization Denial Rate by Month



Authorization Denial Rate: Supports the identification of barriers to timely care and medical benefit coverage trends

Additional metrics and drill-down capabilities exist within the dashboard. The above charts provided are just a few examples

Results

Enterprise Dashboard Implementation

- Developed a unified dashboard integrating previously siloed data sources
- Established 5 core domains:
 - Overview
 - Volume
 - Financial
 - Denials
 - Medications

Standardization of Metrics

- Implemented consistent KPI definitions across all infusion centers
- Enabled accurate cross-site comparison and benchmarking

Improved Access & Capacity Visibility

- Identifies variation in no-show rates and visit volume
- Highlights unused capacity and scheduling inefficiencies

Identification of Barriers to Care

- Detects authorization-related delays
- Surfaces process breakdowns affecting timely treatment

Discussion

EARLY INSIGHTS*

Platform has established a foundation for improving access and supporting growth by enabling:

- Identify site-to-site variation in access and throughput
- Detect underutilized capacity within infusion centers
- Highlight authorization-related delays impacting care delivery
- Improve transparency into infusion operations across the Enterprise

*Previously inaccessible due to fragmented reporting systems

LESSONS LEARNED

- Standardized KPIs enable cross-site alignment and growth planning
- Integrated data reveals access gaps and capacity constraints
- Data visibility enables targeted QI
- User-centered system design supports adoption and scalability

LIMITATIONS

- No post-implementation outcome data available at time of analysis
- Dependent on accuracy and consistency of source data

Next Steps

Utilize the dashboard to drive growth by improving access and reducing barriers:

- Reduce no-shows to improve access
- Optimize chair use to expand capacity
- Decrease authorization delays
- Establish benchmark KPIs and target QI interventions

Words: 381

Figures: 2

Title: Diagnostic Stewardship to Reduce Beta-D-Glucan Testing Using Clinical Decision Support

Background: Beta-D-glucan (BDG) is a blood test that supports invasive fungal infection diagnoses, but is often over-ordered approximately 50% of the time, particularly in low-risk patients or for fungi not associated with BDG production. High rates of inappropriate use and frequent false positives, often driven by certain clinical scenarios or medication interactions, can lead to repeat testing and unnecessary procedures and treatment. While audit-and-feedback interventions can reduce test misuse, they are not feasible or sustainable for most hospitals. We implemented diagnostic stewardship of BDG through a guideline-based order panel with embedded decision support and interruptive alerts to replace a standalone test (figure 1). This quality improvement (QI) study aimed to reduce the use of BDG in the adult inpatient setting by 20% by 3/2026.

Methods: From 3/5 -10/25/25, a multi-disciplinary team implemented this QI project at 8 campuses using iterative Plan-Do-Study-Act cycles. The primary outcome was the number of weekly BDG tests ordered across all campuses. Process measures included the number of interruptive alerts, the rate of duplicate tests, and adherence to order panel recommendations regarding appropriate host factors for BDG testing. Data was collected via the electronic health record. Statistical process charts (SPC) were used to display and analyze data, and Associate Process Improvement rules were applied to detect special cause variation.

Results: Across the health system, the average weekly serum BDG orders decreased by 17% (figure 2). The false-positive and repeat-test alerts fired on average 76 and 8 times/week, respectively. Due to frequent false-positive alerts, low-impact factors (e.g., piperacillin-tazobactam) were removed, reducing average weekly false positives from 101 in the first half of the intervention to 52. 77% of the false positive alerts were among patients on internal medicine, critical care, and oncology services. Based on chart review of 50 medicine, critical care, and oncology patients, approximately 51% of false-positive OPAs led to successful test interruption (i.e. delayed BDG ordering by ≥ 6 hours). The percentage of weekly duplicate tests decreased from 23% pre-intervention to 20% during the intervention. Accurate adherence to the order panel in this subset was 76%.

Conclusion: In this study, we successfully implemented scalable, BDG diagnostic stewardship, reducing and sustaining weekly BDG orders of 17%, nearly reaching the 20%

goal after 32 weeks. Optimization of the OPAs, provider feedback, and education may lead to further improvements.

Figure 1a: Order Panel

Adult Serum Fungitell/BDG Decision Support

- Serum BDG should only be used if clinical concern for candidemia / invasive candidiasis, pneumocystis pneumonia (PJP), or invasive aspergillosis (IA).
- If concern for endemic mycoses (histoplasmosis, blastomycosis, coccidiomycosis), cryptococcus, or non-aspergillus mold infections, other diagnostic tests such as antigen/antibody tests or cultures are recommended.

A) Immunocompromising condition (click to see list)

B) Immunocompetent but with candida score 3 or higher

C) New pulmonary symptoms with radiographic findings consistent with invasive aspergillosis or PJP

D) None of the above

Figure 1b: False Positive Alert

⚠ Risk for False Positive BDG

Your patient received the following which is associated with falsely positive BDG tests:

IVIG within the last 3 weeks - 6/9/2025 10:58 AM
CRRT/HD in the last 72H - 6/9/2025
Albumin administration date in last 72H - 6/9/2025 10:58 AM
Piptazo administration date in the last 48H - 6/9/2025 10:59 AM

Are you sure you want to proceed with the test?

[SERUM FUNGITELL/ BETA-D-GLUCAN DECISION SUPPORT](#)

Figure 1c: Repeat Testing Alert

✔ Adult Serum Fungitell / BDG Positive in last 7 days

Your patient had a serum beta-d-glucan ordered in the last 7 days.

Serum Beta-D-Glucan result date - 6/9/2025, value - 0

Trending serum beta-d-glucan for therapeutic monitoring in known fungal infections is not routinely recommended.

Recommend repeat only if all the following are met:

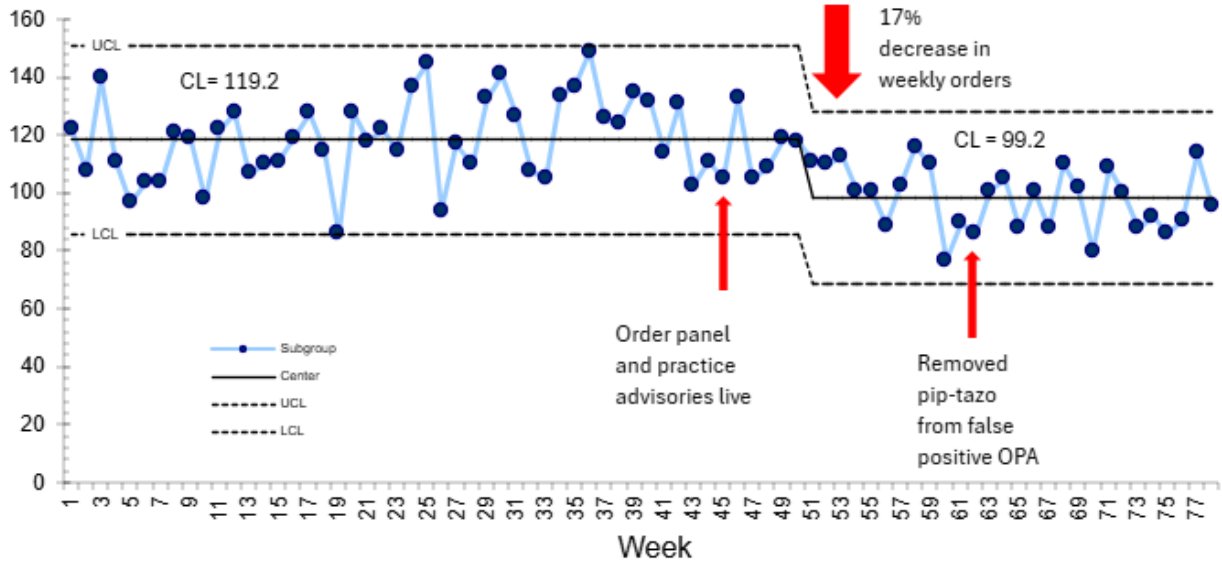
- There is clinical concern for candidiasis, pneumocystis pneumonia, or invasive aspergillosis
- Initial serum BDG was positive (ie > 80) and team sending repeat to confirm positive test

Are you sure you want to proceed with test?

[SERUM FUNGITELL/ BETA-D-GLUCAN DECISION SUPPORT](#)

Figure 2: Weekly Serum BDG Orders

Weekly Enterprise Wide BDG Orders 4/29/2024 to 10/26/2025



Diagnostic Stewardship to Reduce Beta-D-Glucan Testing Using Clinical Decision Support

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Problem Statement

Based on the literature, 49% of serum beta-D-glucan (BDG) tests were inappropriate and diagnostic stewardship has been effective in optimizing testing.^{1,2} BDG is currently orderable as a stand-alone test. While there are professional guidelines for proper ordering, there is no guidance at our hospital system.

SMART Aim

To reduce serum BDG tests at our hospital system among patients (>18 years) by 20% in 3/5/2025 -11/30/2025 compared to 1/1/2024 - 3/4/2025 by using clinical decision support in electronic medical record (EMR) to guide proper ordering.

Design/Methods

A multidisciplinary team conducted a QI project across 8 campuses (1/1/24–11/30/25) using iterative PDSA cycles. The primary outcome was the number of biweekly BDG tests ordered. Process measures included interruptive alerts, duplicate test rates before vs. after the intervention, and adherence to order panel recommendations. Data were extracted from the EHR and analyzed using statistical process charts (SPC) and associate process improvement (API) rules to identify special cause variation.

- Cycle 1: Create order panel in EMR to guide evidence-based BDG ordering.
- Cycle 2: Launch interruptive alerts to reduce false positive and duplicate tests.
- Cycle 3: Chart audit of randomly selected patients to assess order appropriateness before and after the intervention.

Clinical Decision Support

Order Panel

Adult Serum Fungitell/BDG Decision Support

- Serum BDG should only be used if clinical concern for candidemia / invasive candidiasis, pneumocystis pneumonia (PJP), or invasive aspergillosis (IA).
- If concern for endemic mycoses (histoplasmosis, blastomycosis, coccidiomycosis), cryptococcus, or non-aspergillus mold infections, other diagnostic tests such as antigen/antibody tests or cultures are recommended.

A) Immunocompromising condition (click to see list)

B) Immunocompetent but with candida score 3 or higher

C) New pulmonary symptoms with radiographic findings consistent with invasive aspergillosis or PJP

D) None of the above

Interruptive Alert: False Positive

⚠ Risk for False Positive BDG

Your patient received the following which is associated with falsely positive BDG tests:

IVIG within the last 3 weeks - 6/9/2025 10:58 AM

CORTEX in the last 72h - 6/9/2025

Albumin administration date in last 72h - 6/9/2025 10:58 AM

Pipazo administration date in the last 48h - 6/9/2025 10:58 AM

Are you sure you want to proceed with the test?

Interruptive Alert: Duplicate test

⚠ Adult Serum Fungitell / BDG Positive in last 7 days

Your patient had a serum beta-d-glucan ordered in the last 7 days.

Serum Beta-D-Glucan result date - 6/9/2025, value - 0

Trending serum beta-d-glucan for therapeutic monitoring in known fungal infections is not routinely recommended.

Recommended repeat only if all the following are met:

- There is clinical concern for candidiasis, pneumocystis pneumonia, or invasive aspergillosis
- Initial serum BDG was positive (ie > 80) and team sending repeat to confirm positive test

Are you sure you want to proceed with test?

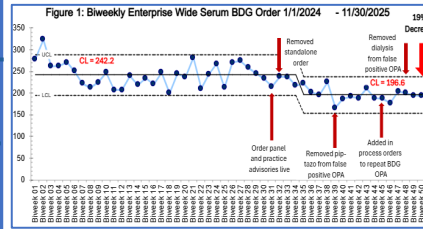
References

Fabre, V., Markou, T., DeMallie, K., Mehta, S., Shoham, S., Tamma, P. D., Zhang, S., & Cosgrove, S. E. (2018). Single Academic Center experience of unrestricted B-D-Glucan implementation. *Open Forum Infectious Diseases*.

Colson, J. D., Kendall, J. A., Yamamoto, T., & Mizusawa, M. (2024). A diagnostic stewardship intervention to improve utilization of 1,3 β-D-glucan testing at a single academic center: Five-Year experience. *Open Forum Infectious Diseases*.

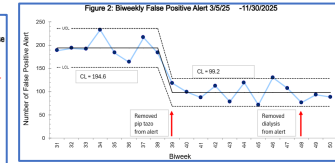
Results

Primary Outcome

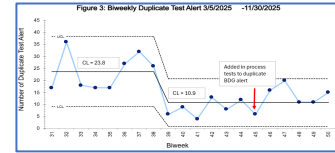


Median biweekly BDG orders during the pre-intervention period was 242 and decreased by 19% to 197 in the post-intervention period.

Process measures



Frequent false positive alerts driven by pip-tazo decreased after it was removed from the criteria, while removing dialysis had smaller impact.



Duplicate alerts were less common and declined over time. Expanding criteria to include recent in process BDG orders did not significantly change alert frequency.

Secondary Outcome

Table 1: Order Appropriateness

Patient Groups	Pre-Intervention Period (n = 48)	Intervention Period (n = 49) Per team Assessment	Intervention Period (n = 49) Per chart review
A = Immunocompromised	32/48 (67%)	40/49 (80%)	26/49 (53%)
B = Candida score ≥ 3	1/48 (2%)	2/49 (14%)	1/49 (2%)
C = Pulmonary IFI	4/48 (8%)	2/49 (14%)	6/49 (12%)
D = No risk factor for IFI	12/48 (25%)	5/49 (12%)	16/49 (33%)
Appropriate BDG orders	37/48 (77%)	44/49 (90%)	33/49 (67%)

Overall, the number of appropriate orders did not differ significantly between the pre- and post-intervention periods.

Secondary Outcome

Hospital	Table 2: Comparison of Duplicates Orders Pre vs Post by Campus		
	Pre N = 1,280	Post N = 744	p-value ¹
Academic hospital 1	0.24	0.18	0.2
Academic hospital 2	0.27	0.23	0.3
Complex Care 1	0.08	0.03	0.072
Complex Care 2	0.11	0.11	0.9
Community hospital 1	0.14	0.13	>0.9
Community hospital 2	0.08	0.02	0.13
Community hospital 3	0.0478	0.0426	>0.9
Community hospital 4	0.0313	0.0000	0.5

¹ Wilcoxon rank-sum test

No statistical significance observed, but a consistent decline in duplicate testing per patient during the intervention period.

Conclusions

BDG stewardship reduced biweekly orders by 19%, nearing the 20% goal. Although appropriateness did not improve, decreased use may reflect greater awareness of false positives and fewer duplicate tests. Order abandonment analysis may clarify this trend. This approach is a scalable, sustainable model for fungal test stewardship and could be further strengthened when combined with provider education.

Title: Evaluating a Comprehensive Crisis Management Model of Home-Based Palliative Care for High-Risk Care Transitions

Authors: Ian B. Kwok, MD; Valeria Ramos Prado; Manali Saraiya, MD; Susan Guiry, MSN, APN, ACHPN; Brian Foote, MTS; Lois Perelson-Gross, DMin; Jasmine Lucena; Milagros Silva, MD; James Lai, MD, ScM, MHS

Department: Department of Medicine, Division of Geriatrics and Palliative Medicine

- 1. Statement of the Problem:** Patients experiencing high-risk care transitions often face complex, intersectional challenges (e.g. refractory pain/symptoms, communication challenges, psychosocial/existential distress) that traditional care coordination models struggle to address. These transitions, which disproportionately affect vulnerable populations (e.g. patients with advanced cancer and dementia), are associated with major barriers to routine ambulatory care, leading to poor clinical outcomes and significant health system costs.
- 2. Objective/Aim of the study:** The NYP Palliative Care at Home initiative is a multi-stage, system-wide intervention to implement a comprehensive crisis management model of home-based palliative care across a variety of complex clinical scenarios. Two component studies are described herewith the following aims: 1) to assess the feasibility of a preliminary home-based palliative care model targeting high-risk care transitions; and 2) to evaluate the efficacy of this preliminary model for two target populations: i) patients with advanced cancer living at home with symptom crises and/or urgent transition planning needs; and ii) patients with cognitive impairment/dementia living at home with urgent transition planning needs.
- 3. Project Design/Methods:** To assess feasibility, an observational, retrospective cohort approach was applied, using descriptive statistics to characterize the model's patient population, including referral sources, patient demographics, and program length of stay. Patients were stratified by qualifying diagnosis for palliative care referral and interventions performed by the home visit team (including pain/symptom management, transition planning, and caregiver/psychosocial/spiritual support). To evaluate the efficacy of this model for both target populations, we measured rates of re-admissions, conversions to hospice, and non-hospice related deaths over the course of each patient's length of stay, to be followed by propensity score matching with a control population.
- 4. Results:** Over two years (2024-2026), 216 home-based palliative care referrals were received (average age, 84.0; 57% female; most represented diagnoses: cancer, 32%; dementia, 29%; and heart failure, 22%), and 244 home visits were conducted. See Table 1 for home visit descriptive statistics.
- 5. Conclusions:** A preliminary home-based palliative care model was successfully implemented for high-risk care transitions. Early results show that pain/symptom management and goals of care were consistently addressed for two key patient populations facing significant barriers to outpatient management. Additional analysis is planned to confirm effectiveness in comparison with an appropriately matched control population. The feasibility of this model supports a valuable opportunity to harness palliative care expertise — at strategic, high-risk moments. Even a modest-sized palliative care team was capable of efficiently (often within 1-2 visits) unraveling intersectional challenges associated with high health system utilization. Further qualitative investigation of potential referring clinicians may reveal opportunities to apply this model across a wider range of diseases and specialties, including advanced heart failure, pulmonary diseases, end-stage renal disease, and transplant surgery.



Problem Statement

Patients experiencing high-risk care transitions often face **complex, intersectional challenges** that traditional outpatient care coordination models struggle to address.

- e.g. refractory pain/symptoms, communication challenges, psychosocial/existential distress
- Disproportionately affect vulnerable populations (e.g. patients with advanced cancer and dementia)
- Associated with major barriers to routine ambulatory care, leading to poor clinical outcomes, significant health system costs

Objective/Aim Statement

The NYP Palliative Care at Home initiative is a multi-stage, system-wide intervention to implement a **comprehensive crisis management model** of home-based palliative care (Figure 1) across a variety of complex clinical scenarios:

- 1) To assess the feasibility of a preliminary home-based palliative care model targeting high-risk care transitions
- 2) To evaluate the efficacy of this preliminary model for two target populations:
 - i) patients with advanced cancer living at home with symptom crises and/or urgent transition planning needs
 - ii) patients with cognitive impairment/dementia living at home with urgent transition planning needs

Design/Methods

- To assess feasibility, an observational, retrospective cohort approach was applied, using descriptive statistics to characterize the model's patient population, including referral sources, patient demographics, and program length of stay.
- To evaluate the efficacy of this model for both target populations, we are measuring rates of re-admissions, conversions to hospice, and non-hospice related deaths over the course of each patient's length of stay, to be followed by propensity score matching with a control population.

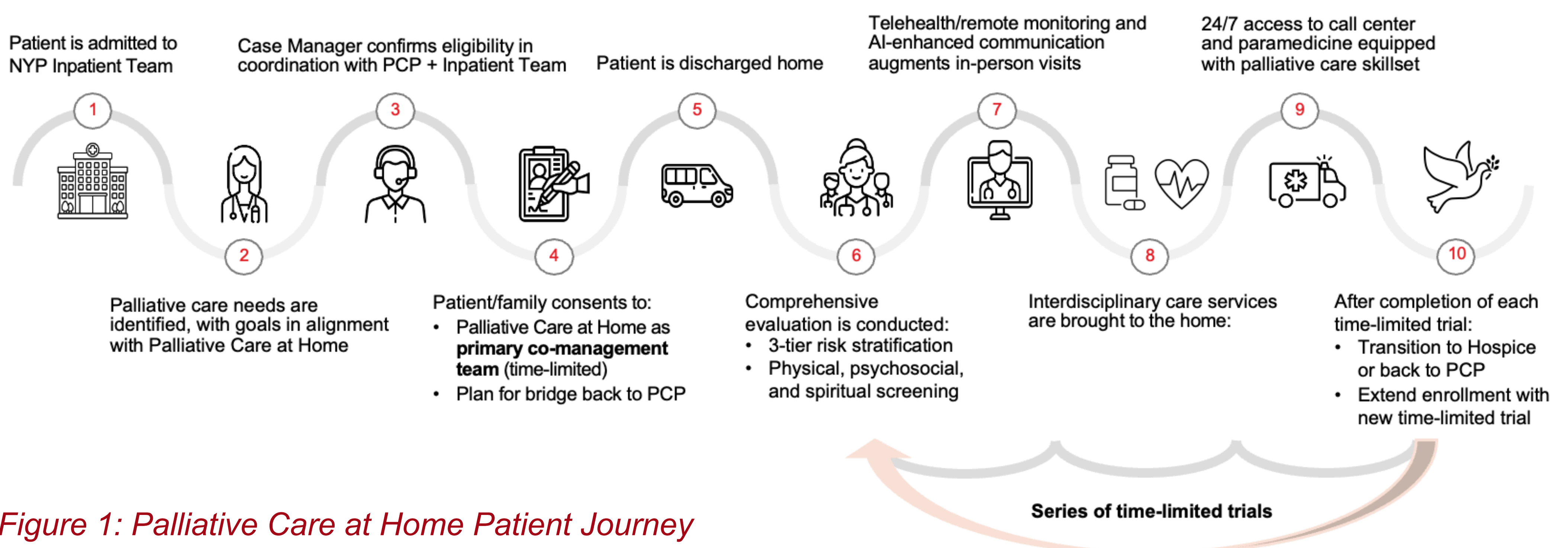


Figure 1: Palliative Care at Home Patient Journey

Results

Over two years (2024-2026), 216 home-based palliative care referrals were received (average age, 84.0; 57% female; most represented diagnoses: cancer, 32%; dementia, 29%; and heart failure, 22%), and 244 home visits were conducted. Home visit descriptive statistics are presented in Table 1; these patterns were consistent across both target patient populations.

Conclusions/Lessons Learned

A preliminary home-based palliative care model was successfully implemented at WCM for high-risk care transitions. Early results show that pain/symptom management and goals of care were consistently addressed for two key patient populations facing significant barriers to outpatient management. **The feasibility of this model supports a valuable opportunity to harness palliative care expertise — at strategic, high-risk moments.**

	Cancer	Dementia	All Diagnoses
Total home visits	60 (100%)	94 (100%)	244 (100%)
Pain/symptom management	43 (72%)	45 (48%)	144 (59%)
Caregiver/psychosocial/spiritual support	29 (48%)	38 (40%)	139 (57%)
Advance care planning discussions	41 (68%)	58 (62%)	176 (72%)
Major documented changes to advance directives	18 (30%)	32 (34%)	81 (33%)
Hospice (referral/enrollment)	10 (17%)	22 (23%)	39 (16%)
Total deaths	10 (100%)	7 (100%)	24 (100%)
Deaths at home	5 (50%)	6 (86%)	12 (50%)
Deaths in hospital	4 (40%)	1 (14%)	11 (46%)
Deaths in inpatient hospice facility	1 (10%)	0 (0%)	1 (4%)

Table 1: Descriptive Statistics

Next Steps: NYP Palliative Care at Home

- Additional analysis is planned to confirm effectiveness in comparison with an appropriately matched control population.
- This model is being applied to new subspecialty clinical partnerships, targeting populations with advanced disease burden, including advanced heart failure, pulmonary diseases, end-stage renal disease, and transplant surgery.
- Key innovation features in development:
 - 1) Technology integration including remote monitoring and multimodal AI solutions,
 - 2) Adaptive team model to engage in complex and timely problem solving and lastly
 - 3) Home palliative care certification to set high standards for interspecialty education and interconnected growth

Fostering Well-Being Through Community Engagement: The Perianesthesia Clinical Nurse Specialist (CNS) as a Bridge Between Staff and Community

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Statement of the Problem: Nurse well-being is essential for patient safety, staff retention, and overall organizational performance. In high-acuity environments such as the perioperative setting, nurses face significant workflow demands and stressors that may negatively impact engagement, satisfaction, and resilience. Traditional well-being strategies often focus on the clinical environment alone, overlooking opportunities to enhance fulfillment through meaningful activities beyond direct patient care. There is a need for innovative, sustainable approaches that promote staff thriving while also contributing to community health.

Objective/Aim of the Study: This project aimed to enhance perioperative staff well-being by engaging nurses in structured, community outreach initiatives while simultaneously addressing community health needs.

Project Design/Methods: A quality improvement initiative was implemented across five perioperative units at our institution. Guided by the CNS leadership and principles of staff engagement and organization well-being, the project integrated community outreach into unit culture using a structure, collaborative approach. The CNS partnered with institutional community outreach coordinators and external organizations, including The Bowery Mission, Turn to Us, and local housing communities. Unit-based champions were identified to promote participation and support staff involvement. Interventions include: - Coordinated volunteer opportunities communicated through emails and staff huddles - Engagement of 6-8 and for some event 20 staff member per event - Team-building activities, e.g. fundraising through meal preparations, bake sales, etc. - Pre- and post-event briefings to enhance coordination and

continuous improvement Process measures included staff participation rates and number of outreach events. Outcome measures included qualitative staff feedback, perceived well-being and community impact metrics.

Results: Over 30 staff members participated in multiple outreach initiatives, demonstrating sustained engagement across 5 units. Qualitative feedback obtained during debriefings demonstrated increased satisfaction, personal fulfillment, and strengthened team camaraderie. Community impact outcomes included: - Over 250 individuals reached through health screening, e.g. blood pressure, vision testing and health education - Distribution of 925 toys to children across two public schools and residential housing communities -Preparation and delivery of full-course meals for approximately 40 residents per event (4-5 events per year) External partners expressed appreciation for the ongoing collaboration, highlighting strengthened relationships between the hospital and the community.

Conclusions: CNS-led community engagement initiatives are a feasible and effective strategy to promote nurse well-being, teamwork, and professional fulfillment in the perioperative setting. Embedding outreach opportunities into unit practice fosters a culture of engagement while extending the impact of nursing beyond hospital walls. Future research should explore the long-term effects of community engagement on nurse well-being, burnout and organizational outcomes.



Background

- Nurse well-being is essential for patient safety, staff retention, and organizational outcomes.
- Perioperative staff face high acuity and workflow pressures, requiring approaches beyond the clinical environment to support thriving
- Community outreach and volunteering improve well-being, foster purpose, and strengthen team connections
- Within this context, the CNS, with institutional leaders and community partners, has created opportunities for perioperative staff to participate in community-focused initiatives
- These initiatives enhanced staff morale while simultaneously addressing community health needs

Methods



Results

- Over 30 perioperative nursing staff participated across 12 community outreach events in 2025
- Informal feedback from participants during debriefings reflected increased satisfaction, personal fulfillment, and team camaraderie
- Participation levels demonstrated sustained interest among the staff, with representation from all four units across multiple events
- Measured outcomes included more than 250 vital health screenings, including BP, vision tests, and education to underserved community members
- The collection of 925 toys for the 800 children of two Public Schools
- Two teams of 10 volunteers prepared four fresh full-course meals for 40 residents

Discussion

- This initiative highlighted how CNS-facilitated community engagement can positively influence both staff well-being and community health.
- This project underscored the importance of collaboration across teams and organizations. It proposes a practical model that could be adapted by other high-stress clinical settings seeking to enhance staff resilience while addressing community needs.

Improving Provider Comfort and Competency in Trauma-Informed Care for Adolescent Trafficking

Problem statement: Pediatricians are among the first health care professionals to interact with victims of CSEC, especially within the first year of victimhood. Commercial sexual exploitation of children (CSEC) is when an individual <18 years of age engages in sexual acts for items of perceived value, such as food, shelter, money, with or without coercion. All forms of CSEC are considered abuse. CSEC, which includes domestic minor sex trafficking (DMST), was reported to be as high as 4.9% among US adolescents, with about 244,000–325,000 minors at risk each year. This percentage may be higher, considering inadequate identification by health professionals. Various reasons can prompt a victim's visit, including concern about potential STI, pregnancy, suicidality, assault, or trauma. According to literature, only 24.1% of health professionals received training on human trafficking. Of this small percentage, even less were trained on trauma informed care. This gap in care is widened by the lack of official protocols, organized approaches, and screening guidelines necessary to identify this population within the PED or clinic setting.

Specific Aims: This QI project seeks to address this gap in knowledge among pediatric residents at NYP-BMH. The aims of this project are to teach the residents to recognize the risk factors and potential indicators of CSEC, to feel confident in applying trauma-informed strategies with patients, and increase intervention rates among this community by incorporating three screening questions from the AAP Clinical Report On Child Sex Trafficking into the outpatient adolescent clinic template.

Methodology: This QI project will address these goals through a series of didactic lectures, followed by anonymous surveys. The lectures and surveys will be given over a 12-month period, at the designated months: 0, 3, 6, 9, 12. The anonymous survey questions are based off of SOAR Online: SOAR to Health and Wellness training modules. Study data were collected and managed using REDCap electronic data capture tools hosted at Weill Cornell Medical Center.

Results: Data has been collected for two didactic sessions thus far. Pediatric residents demonstrated low scores in recognizing and addressing Commercial Sexual Exploitation of Children (CSEC) on the baseline survey, highlighting a significant gap in training and preparedness. Following each didactic session, post-lecture survey scores improved across key domains of describing, identifying, and screening for trafficking-related risk factors, suggesting that structured education can rapidly improve resident knowledge and confidence. Importantly, resident awareness of potential victims seen within the last 3 months increased. At baseline, 85% of residents said they never had a victim of CSEC, which decreased to 50% of residents reporting never having seen a victim of CSEC within the last three months.

Conclusions: Despite practicing in a high-risk clinical environment, residents reported infrequent recognition of trafficking victims, reinforcing the likelihood of under-identification without standardized screening approaches. However, through continued educational sessions, residents began identifying victims more frequently. Small sample size and unequal baseline vs post-lecture survey response rates limit statistical interpretation, though the observed trends support the intervention's effectiveness. Continued implementation and data collection will be needed to assess the durability of knowledge gains and whether improved confidence translates into sustained screening and timely intervention.

Problem Statement

Providers are among the first health care professionals to interact with victims of the Commercial Sexual Exploitation of Children (CSEC), According to one study, 82.5% of trafficked minors were seen at their local hospital within 1 year before identification (1). Despite this, a disproportionately low level of providers recall treating a victim of CSEC within the last 3 months. This gap in care is widened by the lack of official protocols, organized approaches, and screening guidelines necessary to identify this population (2).

Objective

To address this gap in knowledge among pediatric residents at a community hospital in Brooklyn. The aims of this project are to teach pediatric residents to recognize the risk factors and potential indicators of CSEC, to feel confident in applying trauma-informed care strategies with patients, and to increase screening rates among this community in the outpatient clinic.

Methods

Refer to Figures #1 - 4

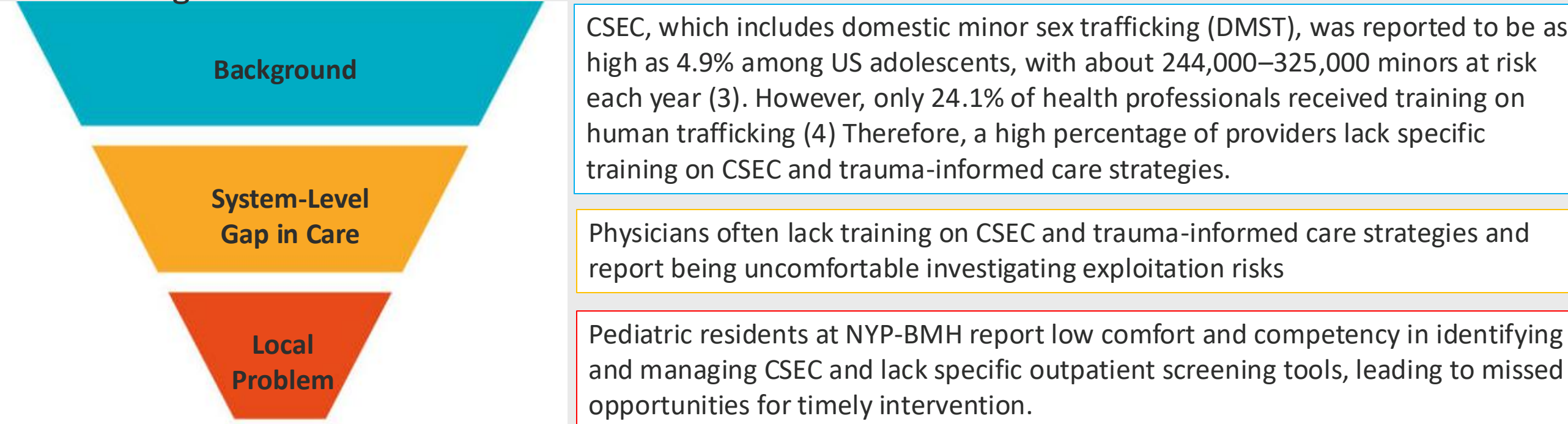


Figure 2: Inverted Pyramid Highlighting the Measurable System-Level Gap in Care

Include the following 3 questions from the AAP Clinical Report on Child Sex Trafficking into the outpatient clinic Adolescent EPIC template:

1. Has anyone ever asked you to have sex in exchange for something you wanted or needed (money, food, shelter, or other items)?
2. Has anyone ever asked you to have sex with another person?
3. Has anyone ever taken sexual pictures of you or posted such pictures on the Internet?

- Collect, analyze, and discuss data from anonymous learner feedback forms on a three-month basis to track resident self-evaluation
- Modify the initiative for optimal fit and integration into the work process



Figure 3: Ongoing and Evolving PDCA Cycle

- Identify resident barriers to CSEC comfort, competency, and screening
- Identify barriers to QI implementation
- Define goals and measures for implementation success
- Choose and operationalize specific strategies to address barriers, leverage facilitators, and plan content
- Identify individuals and roles

- Organize five didactic teaching sessions over a one-year period
- Identify topics of discussion and create lecture materials
- Create anonymous surveys based off the [SOAR Online: SOAR to Health and Wellness training modules](#)
- Reach out to subject experts in the field

Results

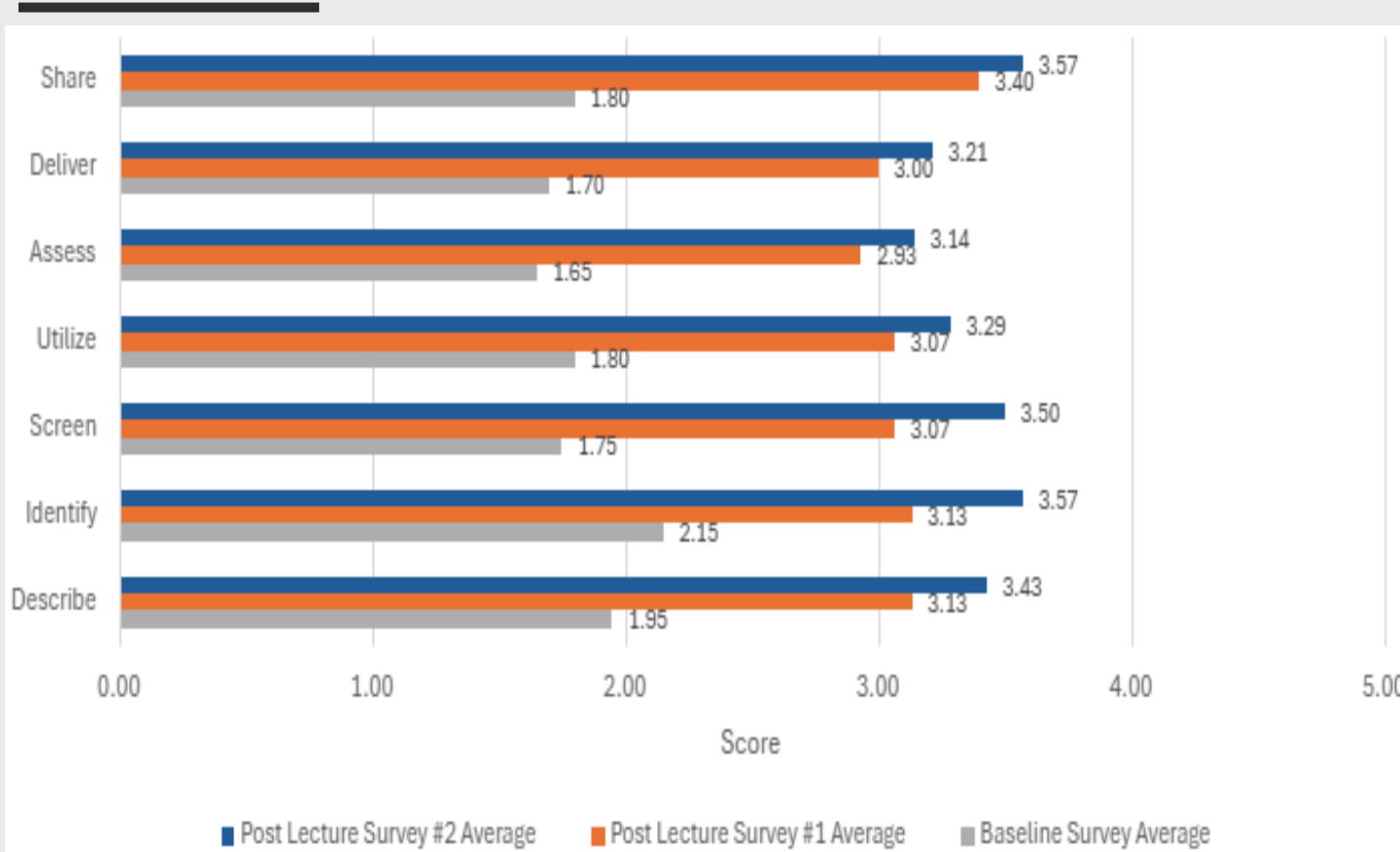


Figure 5: Baseline and Post Lecture SOAR Surveys Average Score Comparison

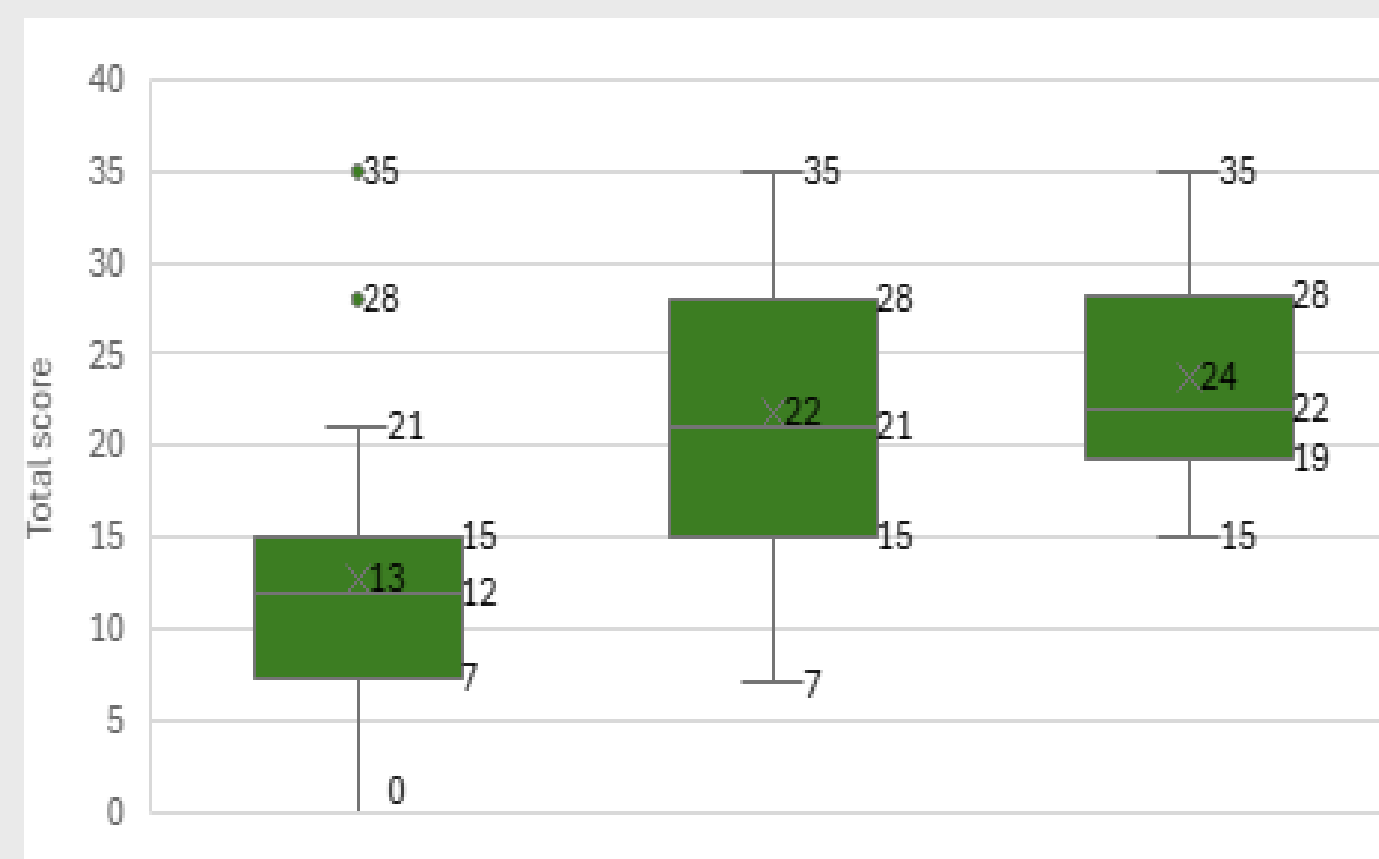


Figure 6: Distribution of Baseline and Post Lecture Scores

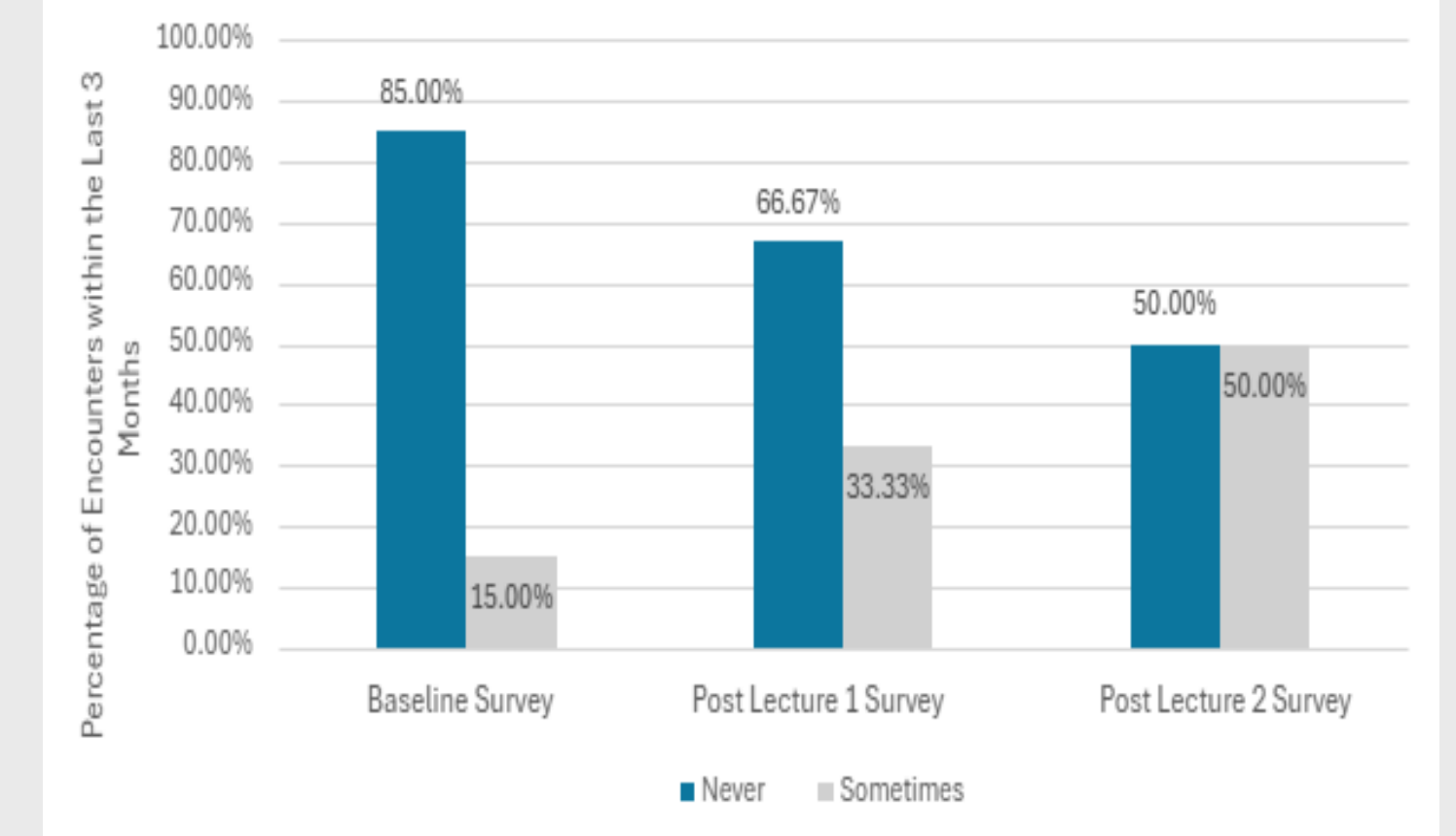


Figure 7: Reported Frequency of Encounters of Adolescent Sexual Trafficking Victims

Conclusions

- Pediatric residents demonstrated low scores in recognizing and addressing Commercial Sexual Exploitation of Children (CSEC), highlighting a significant gap in training and preparedness.
- Despite practicing in a high-risk clinical environment, residents reported infrequent recognition of trafficking victims, reinforcing the likelihood of under-identification without standardized screening approaches.
- Following each didactic session, post-lecture survey scores improved across key domains of describing, identifying, and screening for trafficking-related risk factors, suggesting that structured education can rapidly improve resident knowledge and confidence.
- At baseline, 85% of residents said they never had a victim of CSEC, which decreased to 50% of residents reporting never having seen a victim of CSEC within the last three months.
- Small sample size and unequal baseline vs post-lecture survey response rates limit statistical interpretation, though the observed trends support the intervention's effectiveness.
- Continued implementation and data collection will be needed to assess the durability of knowledge gains and whether improved confidence translates into sustained screening and timely intervention.

Next Steps

- Deliver the remaining three didactic sessions in this QI initiative and coordinate supplemental lectures
- Continue to collect and discuss data to evaluate the success of implementation
- Collaborate with outpatient clinic leadership to include screening questions from the AAP Clinical Report on Child Sex Trafficking into the adolescent clinic note template

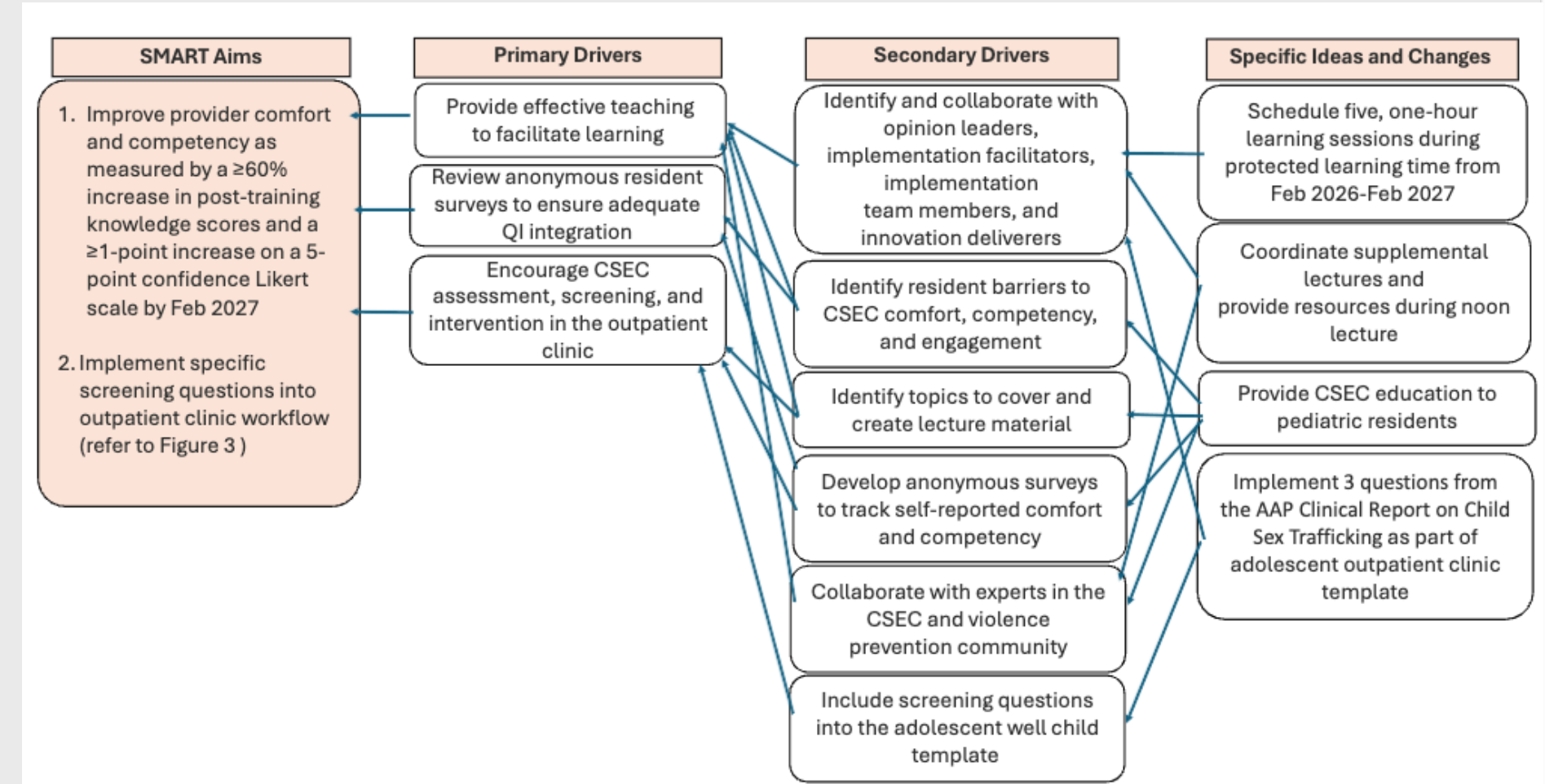


Figure 1: Driver Diagram of QI Project Methodology

What is your year of residency? 1 2 3

Rate your level of confidence in your ability to do the following, using the scale of 0 = Not confident to 5= very Confident:

	0	1	2	3	4	5
To describe the types of human trafficking and potential risk factors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identify individual and environmental indicators of trafficking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Screen and identify individuals who may have experienced trafficking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utilize a trauma-informed, person-centered, multidisciplinary approach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assess the unique needs of individuals who have experienced trafficking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deliver appropriate services to individuals who have experienced trafficking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Share the importance of trafficking awareness and responsiveness with others in your work environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How would you rate your comfort on CSEC and trauma-informed care? 0 1 2 3 4 5

How would you rate your competency on CSEC and trauma-informed care? 0 1 2 3 4 5

In your professional capacity, how frequently do you encounter an individual who is experiencing trafficking, at risk of trafficking, or has experienced trafficking? Never (0 x every 3 months) Sometimes (1x every 3 months) Often (1-3x every 3 months) Very Often (3-5x every 3 months) Very Frequently (>5x every 3 months)

Figure 4: Example of Baseline and Post-Session Anonymous Survey Questions

Living with Risk: Virtual Peer Support for Individuals with Hereditary Cancer Syndromes

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Statement of the Problem

Individuals with hereditary cancer syndromes (e.g., *BRCA1/2*, *Lynch*) can have >80% lifetime cancer risk across multiple organ systems, requiring ongoing surveillance, complex risk-reducing decisions, and family communication across generations. This sustained risk is associated with distress, uncertainty, and decisional conflict, which can create barriers to prevention. Many individuals with hereditary cancer predisposition variants, particularly those without a personal history of cancer, do not identify with traditional oncology populations and lack access to tailored psychosocial support. Geographic barriers and the rarity of some syndromes further limit access, and scalable support models remain limited despite guideline recommendations.

Objective/Aim

To implement and evaluate a scalable peer support intervention to reduce distress and isolation, improve psychosocial well-being, and support communication, risk-management adherence, and decision-making among individuals with hereditary cancer risk.

Project Design/Methods

We conducted a quality improvement (QI) initiative within the Genetics and Personalized Cancer Prevention Program (GPCP) by implementing a virtual peer support group for individuals navigating hereditary cancer syndromes. The group, facilitated by a genetic social worker (LMSW), met twice monthly via Zoom. The program was piloted July–December 2024, paused to implement changes, and relaunched January 2025. The intervention was refined using iterative Plan–Do–Study–Act (PDSA) cycles informed by participant feedback. Adaptations included expanded scheduling with dates shared in advance, an online sign-up system to improve attendance, and enrollment via patient portal. Based on interest, bimonthly question-and-answer sessions with multidisciplinary specialists were added. Program evaluation included patient-reported distress using a 0–10 Numeric Rating Scale (NRS) administered within two weeks of attendance, and the validated Multidimensional Impact of Cancer Risk Assessment (MICRA) administered February 2026 via REDCap. Both used a retrospective pre–post design to account for response shift bias. Demographics, attendance, satisfaction, and perceived impact on decision-making and adherence were also assessed.

Results

Sixty-one participants aged 25–77 (median 42) attended at least one session (range 1–18; median 4); all were women, 82% with no personal history of cancer. Pathogenic variants included *BRCA1/2*, *CHEK2*, *ATM*, *PALB2*, *BRIP1*, *MSH2*, *MSH6*, *RAD51C/D*, *SDHB/C*, and *PTEN*. Among 31 participants who completed the NRS, mean distress decreased from 6.6 to 4.2 (mean change –2.4, $p < 0.001$); 70% of those with baseline severe distress (>5) improved to non-severe levels. Among these respondents, 67% agreed or strongly agreed that participation improved their overall well-being, and 61% reported they would be unlikely to seek peer support without this program.

Twenty participants completed the MICRA, demonstrating significant reductions in total score (81.2 vs. 34.5; mean change –46.8, $p < 0.001$), with reductions in distress (16.5 to 9.4) and uncertainty (19.6 to 13.8) subscales; positive experience scores remained stable. Peer connection was identified as most valuable by 85% of participants, followed by educational speakers (55%), surgery discussions (50%), and emotional support (45%). Eight participants (21%) reported the group influenced their decision to undergo risk-reducing surgery.

Conclusions

A virtual peer support intervention is a feasible, low-resource approach to addressing psychosocial needs in hereditary cancer care. Participation was associated with reduced distress and uncertainty, improved well-being, and support for decision-making and adherence. Delivered within a clinical genetics program and facilitated by a genetic social worker, this model expands access to psychosocial care and may improve engagement in prevention. The all-female composition highlights the need for targeted strategies to engage men and other underrepresented populations. This approach is adaptable to other settings integrating behavioral health into genomics services.



Living with Risk: Virtual Peer Support in Hereditary Cancer

Emily S. Epstein LMSW, Pranya Gaddipati BA, Tina Karimaghiaie, BA, Steve Lopez, BA
Sulekha Junnarkar BA, Michelle Primiano MS CGC, Susan Marchal LCSW, Ivy Song LMSW,
Kate Cornelius-Schechter BA, Ruby Baden-Lasar, BA, Ravi N. Sharaf MD MS, Melissa K. Frey, MD

Problem Statement

- Individuals with hereditary cancer syndromes (e.g., BRCA1/2, Lynch) can have >80% lifetime cancer risk across multiple organ systems, requiring ongoing surveillance, complex risk-reducing decisions, and family communication across generations.
- Hereditary cancer risk is associated with distress, uncertainty, isolation, and decisional conflict that may create barriers to prevention and risk reduction.
- Geographic barriers and syndrome rarity further limit access to psychosocial support despite strong patient interest (**82% of hereditary cancer patients were interested in embedded social work services when offered.**)

Project Design/Methods

- We conducted a quality improvement (QI) initiative within the Genetics and Personalized Cancer Prevention Program (GPCP) by implementing a virtual peer support group for individuals navigating hereditary cancer syndromes.
- The group, facilitated by a genetic social worker (LMSW), met twice monthly via Zoom. The program was piloted July–December 2024 and relaunched January 2025.
- The intervention was refined using iterative Plan–Do–Study–Act cycles informed by participant feedback. Based on interest, bimonthly question-and-answer sessions with multidisciplinary speakers were added. Program refinements included expanded scheduling, online sign-up, and enrollment via patient portal.
- Program evaluation included patient-reported distress using a 0–10 Numeric Rating Scale (NRS) administered within two weeks of attendance, and the validated Multidimensional Impact of Cancer Risk Assessment (MICRA) administered February 2026 via REDCap. Both used a retrospective pre–post design to account for response shift bias. Demographics, attendance, satisfaction, and perceived impact on decision-making and adherence were assessed.

Objective/Aim

To implement and evaluate a scalable peer support intervention to reduce distress and isolation, improve psychosocial well-being, and support communication, risk-management adherence, and decision-making among individuals with hereditary cancer risk.

Table 1. Demographics of Support Group Participants (n=61)

Age, median (range)	42 (25-77)
Cancer diagnosis within past year	11 (18%)
Time since genetic testing	7 days -19 years (median 10 months)
Genetic testing \geq 3 years	21 (34%)
Total session attended	1-18 (median 4)
Pathogenic variants	BRCA1/2; Lynch; CHEK2; ATM; PALB2; BRIP1; RAD51C/D; SDHB/C; PTEN

Results

- 61 individuals** (all women; ages 25–77, median 42) attended at least one session; **82% had no cancer diagnosis** in the past year
- Median time from genetic testing to participation was 10 months (range 7 days–19 years); 34% joined >3 years after testing (Table 1).
- NRS mean distress (n=31) decreased from **6.6 to 4.2** (mean change -2.4 ; $p<0.001$) (Figure 1).
- Total MICRA score (n = 20) decreased from **81.2 to 34.5** ($p<0.001$), with significant reductions in distress(**16.5→9.4**) and uncertainty(**19.6 → 13.8**); positive experience remained stable (Figure 2).
- 8 participants (**21%**) reported the group influenced their decision to undergo risk-reducing surgery.
- 85% identified peer connection as the most valuable aspect of participation; **80% were satisfied or very satisfied**, and **85% would recommend the group** (Figure 3).

Figure 1. Reduction in Distress (NRS) (n= 31)

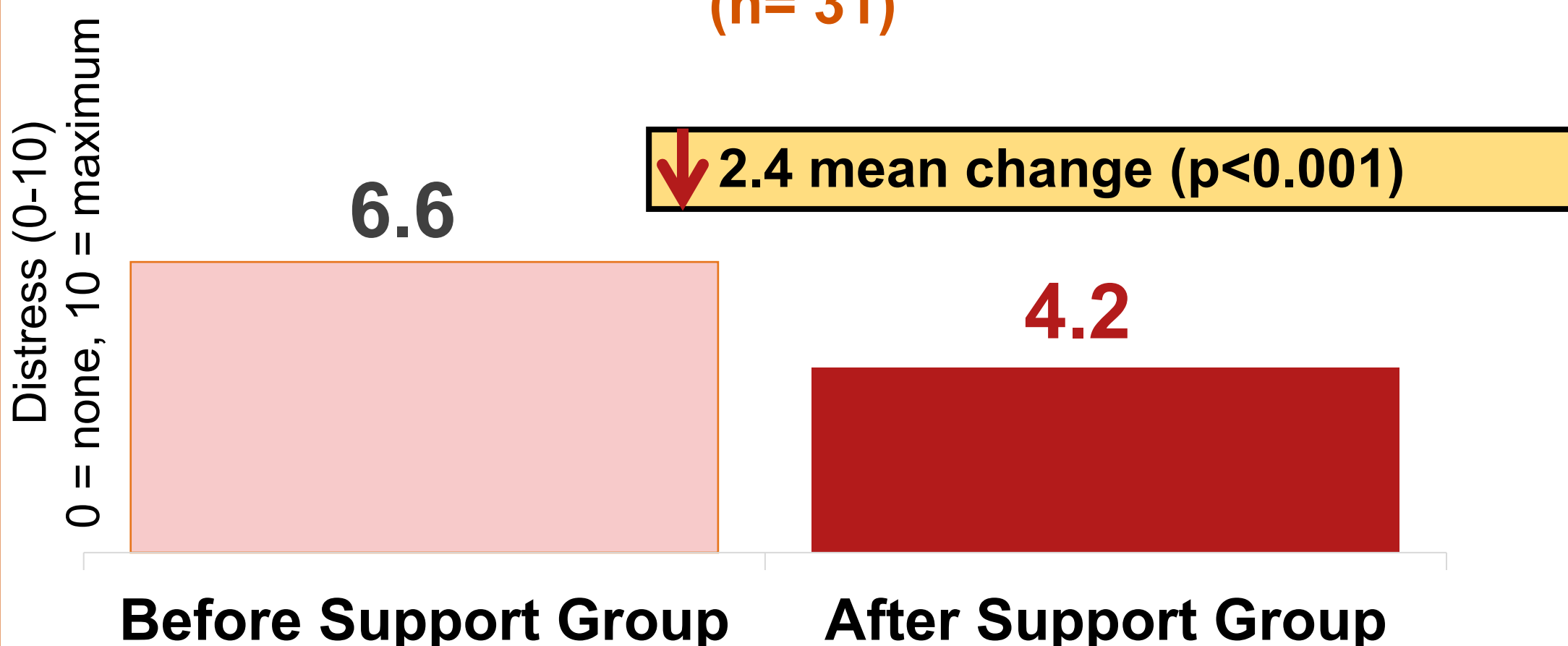


Figure 2. Changes in Psychosocial Outcomes (MICRA) (n=20)

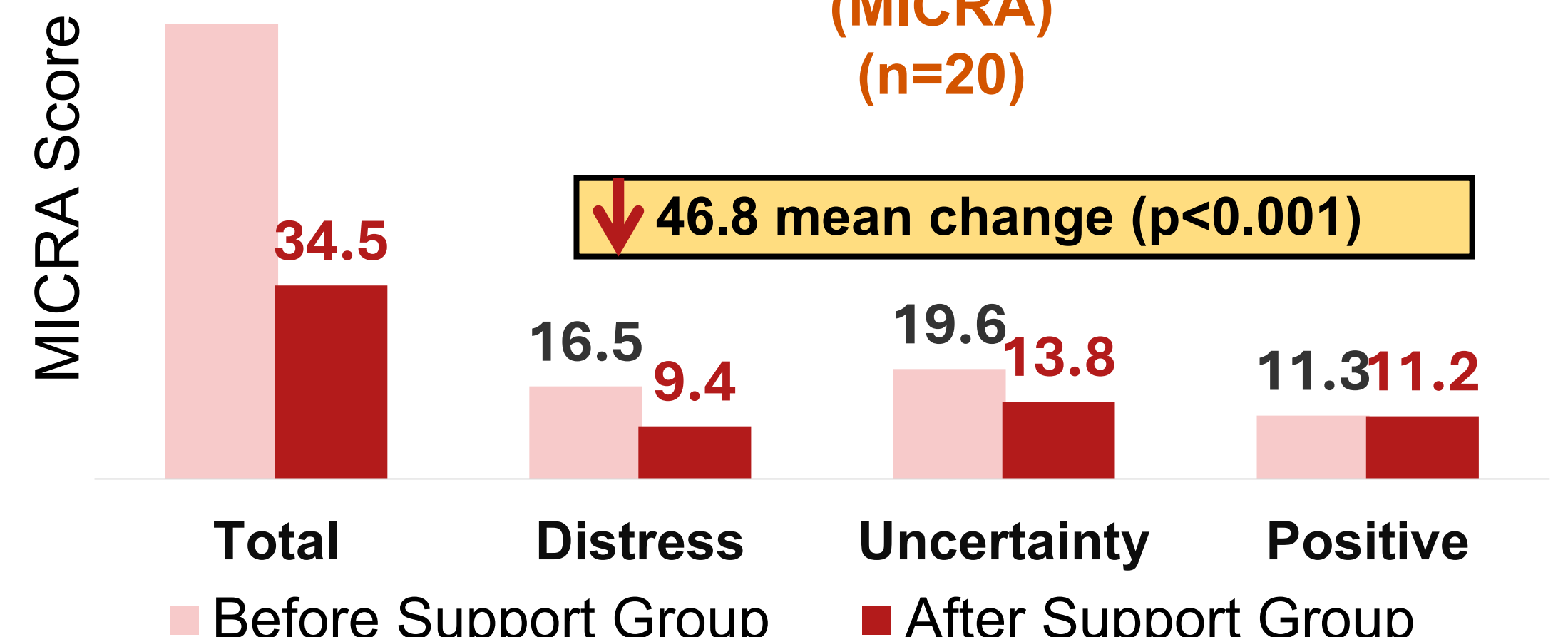
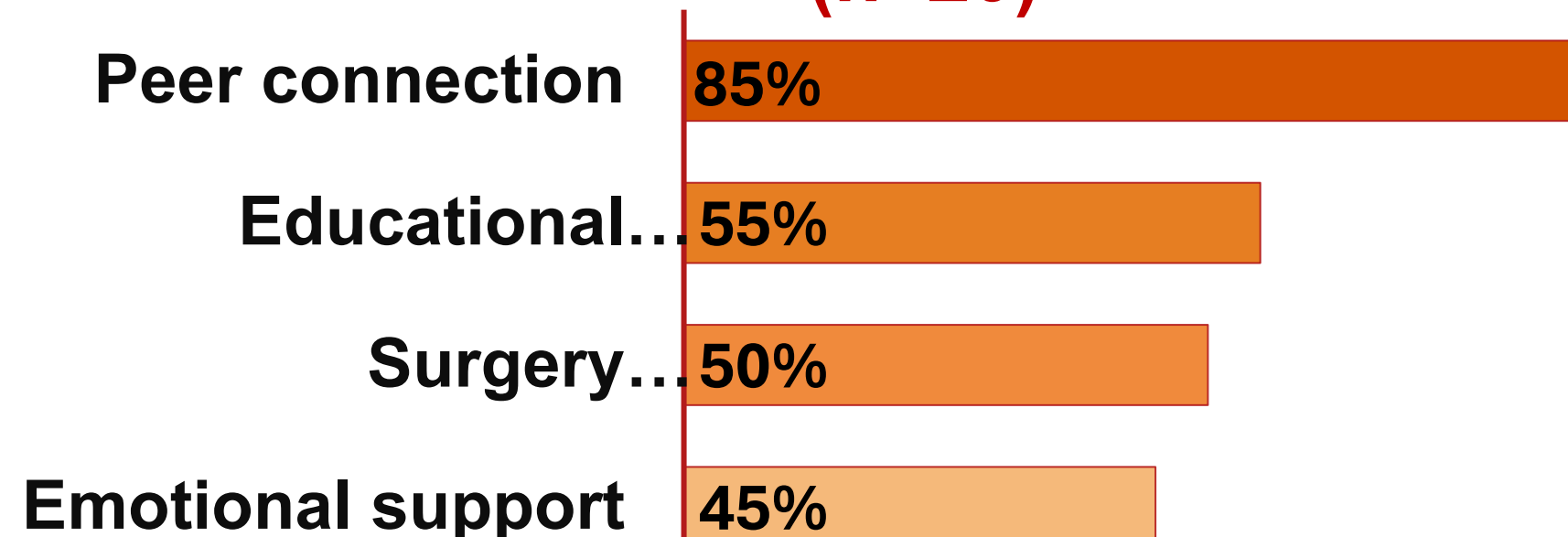


Figure 4. Most Valuable Aspects of Participation (n=20)



Conclusions/Next Steps

- A virtual peer support group is a feasible, low-resource approach to addressing psychosocial needs in individuals with hereditary cancer risk navigating care outside of traditional oncology settings, offering a practical model for integrating behavioral health into cancer genetics programs.
- Participation was associated with reduced distress and uncertainty, improved well-being, and high patient satisfaction.
- Future efforts should evaluate long-term impact on adherence and risk-reducing intervention uptake and expand engagement of men and other underrepresented populations.

References

Cella D, Hughes C et al. *Health Psychol.* 2002.; Gaddipati P, et al. *Gynecol Oncol Rep.* 2026.; Knerr S, et al. *Breast Cancer Res Treat.* 2023.

Title: Reducing Waste Associated with Bloodline Set Ups **Authors:** Mary Carter Mullen, MD, Julian Rowe, MD, Dale Tager, MD, Aaron Weinberg, Diego Bauza, Patricia Mack, MD, Deirdre C. Kelleher, MD **Department:** Weill Cornell Medicine Department of Anesthesiology

Problem: Bloodline setups (Y-tubing and fluid-warming cassettes) are routinely prepared for our neurosurgical anesthetics, despite low blood transfusion rates (3%), leading to financial and environmental waste. **Objective:** During the intravenous fluid shortage of September 2024, bloodline setups were replaced with “just-in-case” capped extension tubing (“leashes”). This practice appeared safe and prompted an attempt to change practice permanently, reducing costs, financial burden, and clinician workload. **Methods:** During the first PDSA cycle of this QI project, we investigated the clinician time, acquisition cost, and carbon footprint impact of this new practice along with the patient safety balancing measures of patient temperature and set-up time in an emergency. All components with packaging of bloodline and alternative set-ups (without fluid bag) were weighed and converted to carbon equivalents. Acquisition costs were calculated based on procurement data. Recovery room temperature data was trended before and after a time of fluid warmer shortage. Faculty and residents were informally interviewed on timing of setting up a bloodline and risk of not having a bloodline immediately available. Patient and surgical factors readily available were investigated to stratify transfusion risk. **Results:** We found the use of a leash saves over \$43,000 and 138-181 gallons of gasoline equivalents annually (Table). To confirm the safety of this change, we confirmed that blood products requiring warming were only transfused in less than 3% of neurosurgical patients. Review of historical data from a previous fluid warmer shortage compared to recent data revealed no differences in first recorded temperature on arrival to the recovery room. Informal survey of clinicians including trainees and attending anesthesiologists, found that clinicians believe it is not too burdensome to set up blood tubing in an as-needed fashion rather than at the start of every case and takes only a few minutes. Unfortunately, there were no detectable surgical or patient factors that could help predict the need for transfusion. **Conclusions:** Given the potential financial and carbon emission savings of our new as-needed blood tubing system the lack of identifiable patient safety concerns (setups rarely needed, no detectable postoperative hypothermia, and clinician agreement that it is not a burden to set up the tubing in real time), the neurosurgical anesthesia division permanently switched to the use of “leashes”. All educational material was updated to codify the change. **Update:** During our second PDSA cycle, we looked at hysterectomy (all approaches) and nephrectomy (all approaches and partial/total) cases. Hysterectomies had low transfusion rates (3.2%) while nephrectomies were higher (9.7%). Cost and environmental savings were case volume and transfusion rate dependent. We are now investigating if we can stratify transfusion risk in nephrectomy cases.

Table. Estimated annual acquisition cost, weight, and carbon emission equivalents of three set-up options: bloodline, regular infusion tubing, and leash. Abbreviations: CO₂e, carbon dioxide equivalents; IV, intravenous.

	Cost	Weight	CO ₂ e Range
Bloodline Set-up	\$46,180.08	509.6 Kg	1324.9 - 1737.6 Kg
Regular IV tubing	\$24,328.80	185.5 Kg	482.3 - 632.5 Kg
Leash	\$2,745.36	37.9 Kg	98.7 - 129.4 Kg

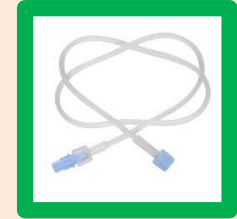
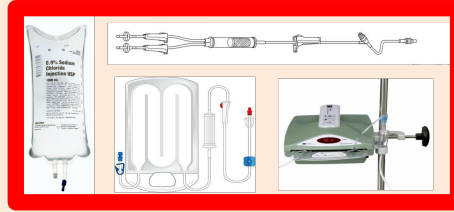
Background

- Our standard institutional practice for all neurosurgical cases included a blood line setup, however, blood transfusions remain rare.
- Warmed IV fluids do not contribute substantially to patient temperature management, raising core temperature by only ~1/2 degree with likely no clinical benefit.¹
 - Warmed IV fluids not indicated below flow rates of 35cc/min
 - Only indicated for large volume blood transfusion

Components of Bloodline Setups vs “Leash”

Blood Setup: Primed blood Y-tubing, fluid warming cassette with ranger, stopcock, extension tubing, fluid bag

Unused Set up: No blood was transfused



Problem

Universal use of blood setups in neurosurgical procedures with low transfusion rates can be wasteful, resulting in financial loss, time waste, and excess carbon emissions.

Financial & Environmental Impacts

- Less than 3% of adult neurosurgery patients received blood products
- There was no detectable pattern (surgeon, case type) to predict when blood was needed
- With 97% of setups “unused”, over \$43k and 1600Kg of CO₂e could be saved with “leashes”

Objective

- Reduce unnecessary bloodline setups in adult neurological surgery cases by 15% over 1 year
- Determine safety and savings of making fluid conservation practices standard.

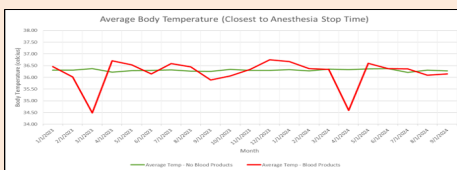
Methods

- Calculate cost & environmental burden of bloodline setup vs alternatives (basic IV tubing or short extension tubing “leash”)
 - Weigh all components + packaging (except fluid)
- Review PACU temperature data before & after fluid warmer cartridge shortage
- Calculate transfusion rates for neurosurgical cases
- Survey clinicians for comfort with alternative options

	Neuro	Hysterectomy	Nephrectomy
Annual cases (n)	2301	463	339
Transfusion Rate (%)	3.0%	3.2%	9.7%
Acquisition Costs (\$)			
Bloodline Set-up	\$46,180.08	\$9,269.12	\$6,331.14
Regular IV tubing	\$24,328.80	\$4,883.20	\$3,335.40
Leash	\$2,745.36	\$551.04	\$376.38
Weight (Kg)			
Bloodline Set-up	509.6 Kg	102.2 Kg	69.9 Kg
Regular IV tubing	185.5 Kg	37.2 Kg	25.4 Kg
Leash	37.9 Kg	7.6 Kg	5.2 Kg
CO ₂ e (Kg)			
Bloodline Set-up	1324.9 - 1737.6 Kg	265.9 - 348.8 Kg	181.6 - 238.2 Kg
Regular IV tubing	482.3 - 632.5 Kg	96.8 - 127 Kg	66.1 - 86.7 Kg
Leash	98.7 - 129.4 Kg	19.8 - 26 Kg	13.5 - 17.7 Kg
Potential Savings			
Cost (\$)	\$43,434.72	\$8,718.08	\$5,954.76
Weight (Kg)	471.6 Kg	94.6 Kg	64.7 Kg
CO ₂ e (Kg)	1226.2 - 1608.2 Kg	246.1 - 322.8 Kg	168.1 - 220.5 Kg

Historic Temperature Data

No detectable difference in PACU temperatures when warmers used in transfusions only (Feb-Oct 2023)



Conclusions

Use of blood warmer over leash when blood is not given is:

16x the cost, 13x the weight/CO₂ emissions

Unmeasured Savings: CO₂ emissions from transporting supplies to the hospital, Labor & space saved from having to keep greater stock of supplies, Labor, cost, and CO₂e from transporting & disposing of supplies

Next Steps & PDSA Cycle

- The “leash” is now the “Cornell standard” for 2nd IVs in neuro cases (email & presentation, revised setup guidelines & trainee “bootcamp”)
- Review purchasing records to determine procurement decrease
- **Proposed PDSA Cycle 2:** Investigate other areas of bloodline waste: robotics, **hysterectomy** and major gynecological procedures, prostatectomies, **nephrectomies** and major urologic procedures, orthopedics
 - **PDSA Cycle 2 Methods:** Investigated local transfusion rate for **hysterectomies** (any approach) and **nephrectomies** (partial and total, any approach) from **July 1, 2024 to June 30, 2025** using **de-identified EMR data**. Calculated potential annual savings related to supply purchase (financial) and weight and emissions of plastic supplies with packaging (environmental).
 - **PDSA Cycle 2 Findings:** Case volume dictates overall savings: **Neuro >> Hysterectomy > Nephrectomy**; Higher transfusion rates for nephrectomies may indicate need for pre-emptive bloodline setup. (Table)

Rethinking our setups can have positive financial and environmental impacts. However, weighing **Savings vs Preparedness** should be considered in all cases.

Optimizing Perioperative Management of SGLT-2i Medications

Patricia Fogarty Mack MD FACHE FASA, Aaron Weinberg, MPA, CSSGB, Diego Bauza MSN, RN, Christina Dinapoli FNB-PC DNP, Kyra Kwok BS, Robert Uzzo MBA, Adriano Bellotti MD PhD, Balaji Pandian MD MBA

Sodium-glucose co-transporter-2 inhibitors (SGLT2i), including canagliflozin, dapagliflozin, empagliflozin, and ertugliflozin, are increasingly prescribed for indications such as diabetes mellitus (DM), heart failure (HF), and renal insufficiency (CRI).¹ Despite their therapeutic benefits, these medications carry a risk of euglycemic diabetic ketoacidosis (eDKA), particularly in the perioperative setting. While the FDA requires a 3 or 4 day hold of these medications prior to a procedure in which the patient needs to maintain NPO status, many cardiologists and nephrologists believe this is not necessary when patients do not have diabetes. The APSF reports there is evidence that patients without DM do not develop eDKA.²

A retrospective analysis was conducted over a 24-month period at a single academic institution, examining adult inpatient and outpatient surgical and procedural cases. Data was extracted on SGLT2i medication usage and indications, as well as cancellation and postponement data for patients on these medications.

The percentage of patients taking SGLT2i medications increased from 3.14% to 5.31% of all cases in patients over the age of 18. Of those, 62% had a diagnosis of diabetes, with 38% of patients prescribed SGLT2i for heart failure or renal insufficiency indications without diabetes mellitus. In 2024 there were 8 same day cancellations and 22 preoperative case postponements (1 day prior to the procedure) due to patients not holding SGLT2i appropriately. One of the day-of-surgery cancellations and 23% of the postponements were in patients who did not have a diagnosis of diabetes. The amount of personnel time spent calling patients to confirm medication management, and coordinating care with surgeons, endocrinologists and cardiologists was substantial, especially in the face of workforce shortages. The time spent just with patients on a pre-operative phone call was estimated at 36 nurse practitioner hours per month, assuming a 5 minute phone call. Additionally, a procedure being postponed a few days prior or even more so, cancelled on the day surgery, due to lack of proper medication management is a significant source of patient dissatisfaction, proceduralist frustration and lost revenue for physicians and hospitals alike.

In July 2025, the preoperative phone call was moved from 1 day pre-procedure to 3 days preprocedure. This resulted in a decrease in same day and day prior to surgery cancellations as shown below.

Time Period	Day of Surgery Cancellation		Postponed Day Prior to Surgery	
	Diabetes	Non-Diabetes	Diabetes	Non-Diabetes
2024	7	1	18	5
Jan – June 2025	3	1	19	6
July – Dec 2025	0	0	1	0

SGLT2i inhibitors are increasingly used for heart failure and renal insufficiency. While out rescheduling of the preoperative phone call has reduced the same day cancellation, many nurse practitioner hours would be saved by our preoperative optimization center if EPIC medication lists were accurate and if they did not have to coordinate with patient and proceduralists to ensure the medications were held in the 2% of SGLT2i patients who do not have diabetes. We plan to engage a multidisciplinary team to develop institutional guidance to this effect and reassess cancellations and postponements in the next quarter.

1. Raiten JM, Morlok A, D'Ambrosia S, Ruggero MA, Flood J. Perioperative Management of Patients Receiving Sodium-Glucose Cotransporter 2 Inhibitors: Development of a Clinical Guideline at a Large Academic Medical Center. *J Cardiothorac Vasc Anesth.* 2024 Jan;38(1):57-66. doi: 10.1053/j.jvca.2023.10.011. Epub 2023 Oct 10. PMID: 37932195.
2. Hwang SM, Abcejo AS, Jacob AK, et al. Editorial: Euglycemic ketoacidosis concerns in perioperative use of SGLT2 inhibitors: re-examining current recommendations. *APSF Newsletter.* 2025:13–15

Optimizing Perioperative Management of SGLT-2i Medications

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Background and Problem Statement

The use of sodium-glucose transport protein 2 inhibitors (SGLT-2i) for both patients with diabetes and those taking the medication for cardiac and renal indications has been increasing.

- In 2022 the FDA issued guidance to hold the medications 3 – 4 days prior to procedures due to the risk of eDKA.
- Non-diabetic patients may have lower eDKA risk.
- Informing patients about the FDA guidance is challenging in terms of clinician accountability and patient understanding.

January 2024 – June 2025: Preoperative Evaluation Center (PEC) called patients **one day** prior to surgery to confirm medication compliance

- Time Consuming – 5 minutes per call
- Equivalent of 37 hours of nurse practitioner time per month
- Patients often had not been given this information by the surgeon or did not understand the instructions.

Waste

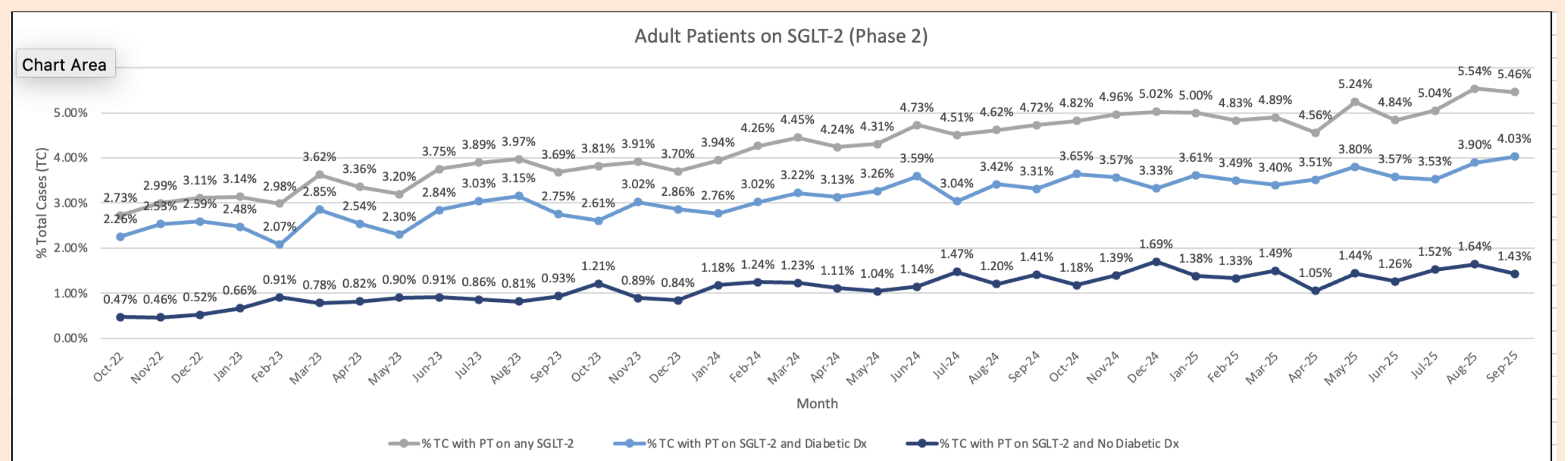
This resulted in many emails, phone calls and haiku messages between anesthesiology and surgery.

Frequently cases moved forward due to patient factors or urgent surgery.

Postponements the day prior to and day of surgery cancellations, lead to:

- Poor patient experience
- Surgeon dissatisfaction
- Anesthesiologist dissatisfaction
- Possibly increased risk of eDKA in those patients who had to proceed
- Operating room inefficiency
- Lost revenue

Increase in Adult Patients Taking SGLT-2i



ACC Letter re: FDA Guidance

NYP Guidance

Total Average monthly volume approximately 8000 procedures > about 444 SGLT-2i patients per month

New Process

July - December 2025: - patients were contacted **three** days prior to surgery, and the anesthesiology team reviewed the medication hold instructions with the patients, ensuring patient understanding and compliance.

Cancellation/Postponement by Anesthesiology due to SGLT-2i Non-Compliance

Time Period	Day of Surgery Cancellation		Postponed Day Prior to Surgery	
	Diabetes	Non-Diabetes	Diabetes	Non-Diabetes
2024	7	1	18	5
Jan – June 2025	3	1	19	6
July – Dec 2025	0	0	1	0

Next Steps

- Review incidence of eDKA from 2020-2024 vs 2024 -2025
- Coordinate perioperative management protocols with with Endocrinology and Cardiology
- Optimize EPIC diagnosis data – DM vs Non-DM
- Continue Alert for SGLT-2 for Diabetes only
- Implement postoperative monitoring handoff for non-compliant patients
- Implementation of EPIC prompts/order set for correct lab ordering in patients who did not correctly hold SGLT-2i preoperatively
- Discuss eliminating medication hold requirement for non- diabetics with enterprise leadership

References

1. Raiten JM, Morlok A, D'Ambrosia S, Ruggero MA, Flood J. Perioperative Management of Patients Receiving Sodium-Glucose Cotransporter 2 Inhibitors: Development of a Clinical Guideline at a Large Academic Medical Center. J Cardiothorac Vasc Anesth. 2024 Jan;38(1):57-66. doi: 10.1053/j.jvca.2023.10.011. Epub 2023 Oct 10. PMID: 37932195.
2. Hwang SM, Abcejo AS, Jacob AK, et al. Editorial: Euglycemic ketoacidosis concerns in perioperative use of SGLT2 inhibitors: re-examining current recommendations. APSF Newsletter. 2025:13–15

Improving Access, Engagement and Outcomes Using Virtual Cardiac Rehabilitation Following Cardiac Surgery

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Statement of the Problem (Health Care Quality): Cardiac rehabilitation is an AHA/ACC/SCAI Class 1A recommendation that has been shown to reduce mortality and readmission rates, and improve quality of life after cardiac surgery. Despite its well-established benefits, cardiac rehabilitation remains a significantly underutilized resource, with only approximately 20% of patients enrolling after cardiac surgery. Of those patients who enroll in cardiac rehabilitation; upwards of 50% withdraw prior to completion.

Objective: To improve access and compliance with cardiac rehabilitation following cardiac surgery by utilizing a smartphone virtual application(app)-based technology in an underserved patient population.

Methods: We utilized app-based smartphone virtual technology and artificial intelligence (AI) to enhance patient engagement and compliance with postoperative cardiac rehabilitation. The program includes 36 sessions over 3 months using a smartphone app with a certified licensed exercise physical therapist and supervision with a cardiologist specialized in cardiac rehabilitation. Patients received wearable devices including pulse oximeter, telemetry (electrocardiogram [EKG] monitoring) and blood pressure cuff and were monitored in real time using Bluetooth™ technology. Sessions include guided exercise customized to the patient. In addition, each patient receives comprehensive education regarding medication compliance, nutrition and overall health maintenance. One hundred consecutive patients were referred to this virtual cardiac rehabilitation (VCR) program following cardiac surgery. Compliance with the rehabilitation program, 30- and 90-day readmissions and mortality were monitored.

Results: One hundred consecutive patients were referred to VCR following cardiac surgery procedures. Median age was 67.5 years [Interquartile Range (IQR) 55.8, 74.0]. Forty-one percent (38/93) were female. Referrals were made upon discharge and up to 2 weeks following discharge. Of the 100 patients referred to VCR 93 (93%) enrolled (**Figure 1**). The median time from referral to enrollment was 3 days [IQR 2-6 days] compared to a national benchmark of 35 days for in-person rehabilitation. The median time from discharge to enrollment was 10 days [IQR 5-20 days] compared to a benchmark of 80 days (in-person rehabilitation). Enrolled patients attended 97% of the sessions scheduled (**Figure 2**). There were no 30- or 90-day readmissions or mortality over the duration of follow-up.

Conclusion: VCR using a smart phone app may improve patient enrollment and compliance when compared to in-person cardiac rehabilitation. The data indicate that this virtual program may also improve post-operative outcomes with fewer 30-day and 90-day readmissions. These outcomes may also have implications for success in the CMS-TEAM payment model

Figure 1:

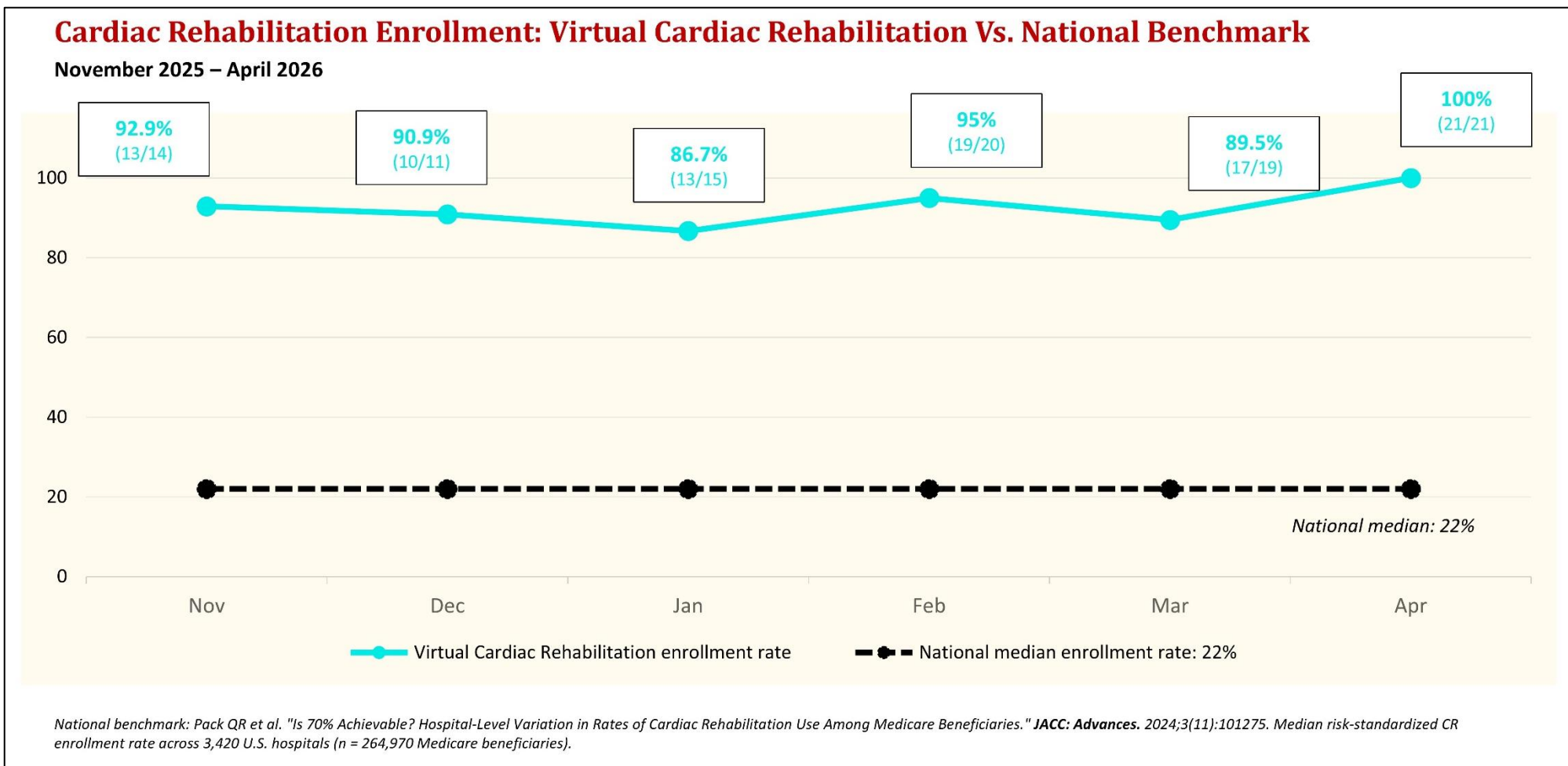
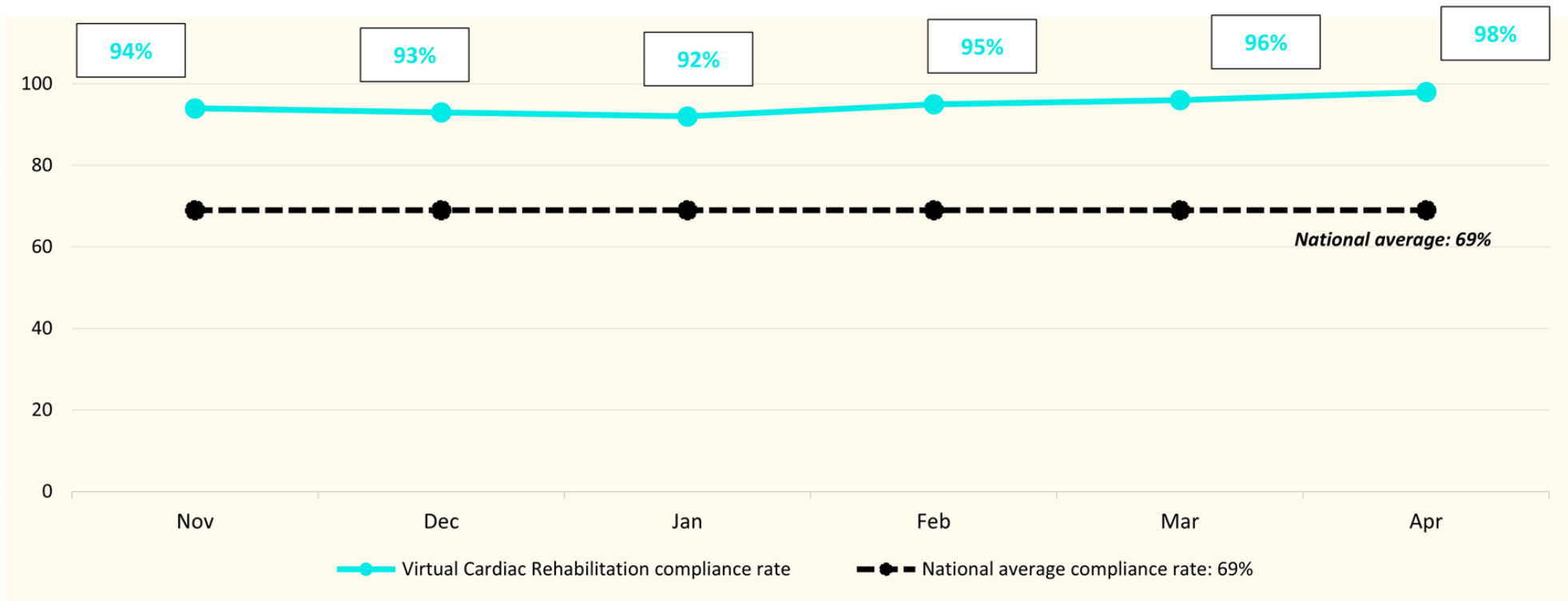


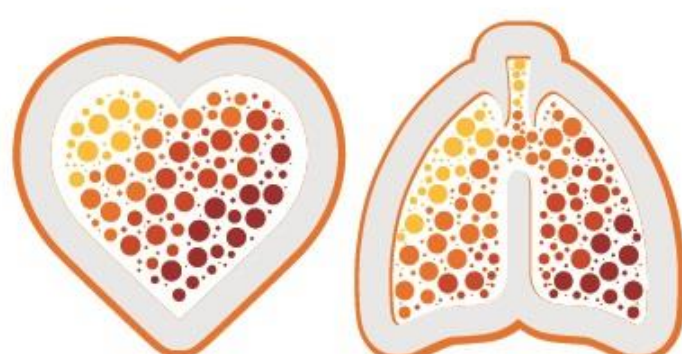
Figure 2:

Cardiac Rehabilitation Compliance: Virtual Cardiac Rehabilitation Vs. National Benchmark

November 2025 – April 2026



National benchmark: Ritchey MD et al. "Tracking Cardiac Rehabilitation Participation and Completion Among Medicare Beneficiaries." *Circulation: Cardiovascular Quality and Outcomes*. 2020;13:e005902. Mean sessions attended: 24.8 ± 12.0 of 36 prescribed (~69%) among Medicare CR enrollees (n = 89,327).



Improving Access, Engagement and Outcomes Using Virtual Cardiac Rehabilitation Following Cardiac Surgery

A. Gregg, A. Ingason, K. McTigue, A. Haider, T. Shah, I. Gulkarov, C. Mack

Wednesday, May 20th 2026

Problem Statement:

Despite being a Class IA recommendation, participation in cardiac rehabilitation following cardiac surgery remains suboptimal.¹ Of those eligible patients for cardiac rehabilitation following cardiac surgery, only 20-70% are enrolled.² Furthermore, of those patients that do subsequently enroll, an estimated 50% exit the program prior to completion.^{2,3}

Objective/Aim Statement:

The objective of this study was to address the global underutilization of cardiac rehabilitation, particularly in a distressed community with limited socioeconomic resources.

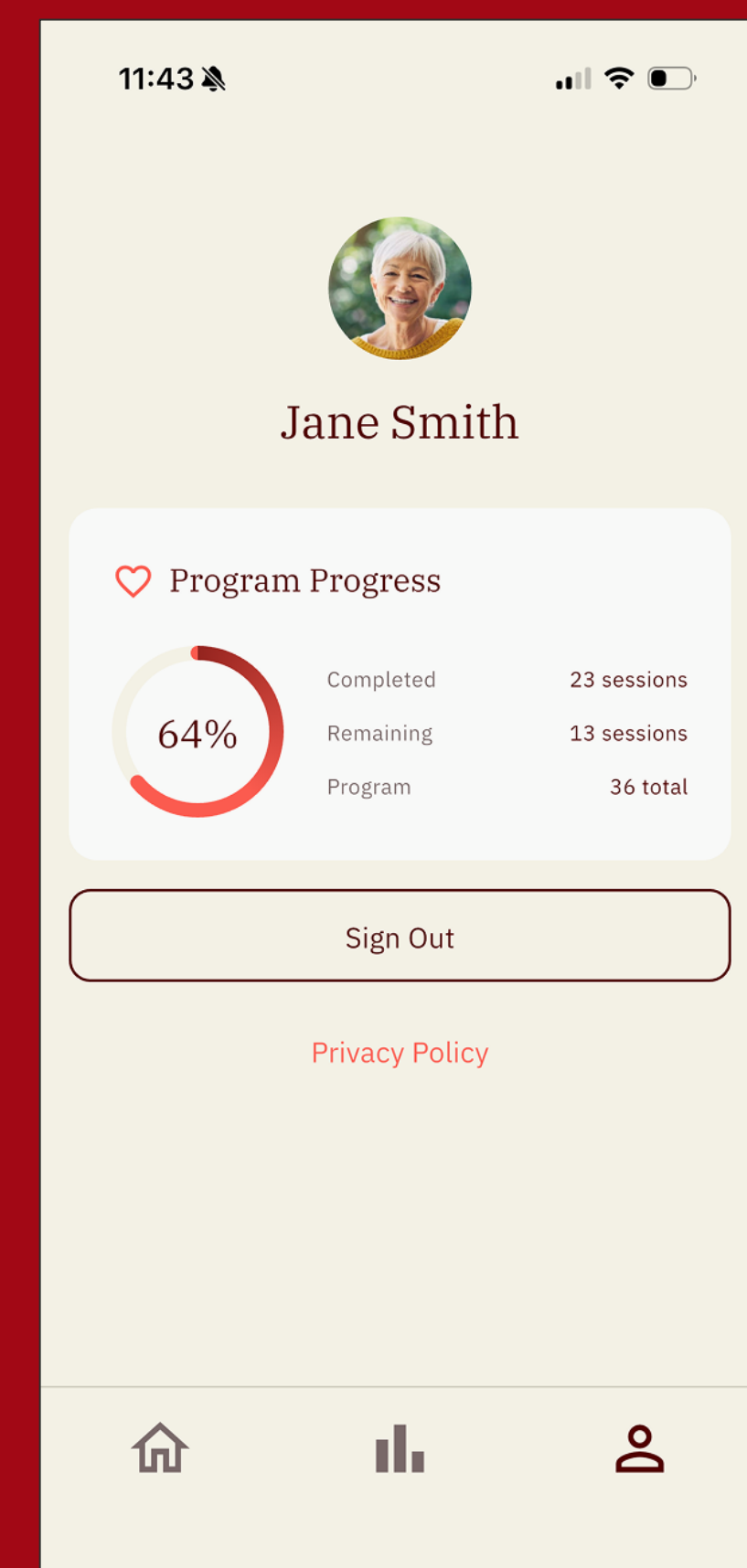
Design/Methods:

This was a prospective, single-center study utilizing novel artificial intelligence (AI) and mobile technology to provide remote Virtual Cardiac Rehabilitation (VCR). The VCR program consisted of exercise, medication compliance, nutrition, outpatient follow-up and overall health maintenance individualized to each patient's profile and risks factors. All patients were monitored with wearable devices including EKG, blood pressure cuff and pulse oximeter using Bluetooth®. Surgeons and referring cardiologists received detailed patient progress reports. One hundred consecutive patients were referred to virtual cardiac rehab upon discharge and up to 2 weeks following discharge.

The **primary outcomes** consisted of time from referral to enrollment, overall enrollment rate and the cumulative session attendance.

Secondary outcomes included 30-day and 90-day readmission rates, as well as overall survival.

National benchmarks (NB) for traditional cardiac rehabilitation served as comparator



Results:

Of the 100 patients referred to VCR, 93 patients enrolled

Time from referral to enrollment:

3 days (IQR 2–6)
(National Benchmark 35 days)

Time from discharge to enrollment:

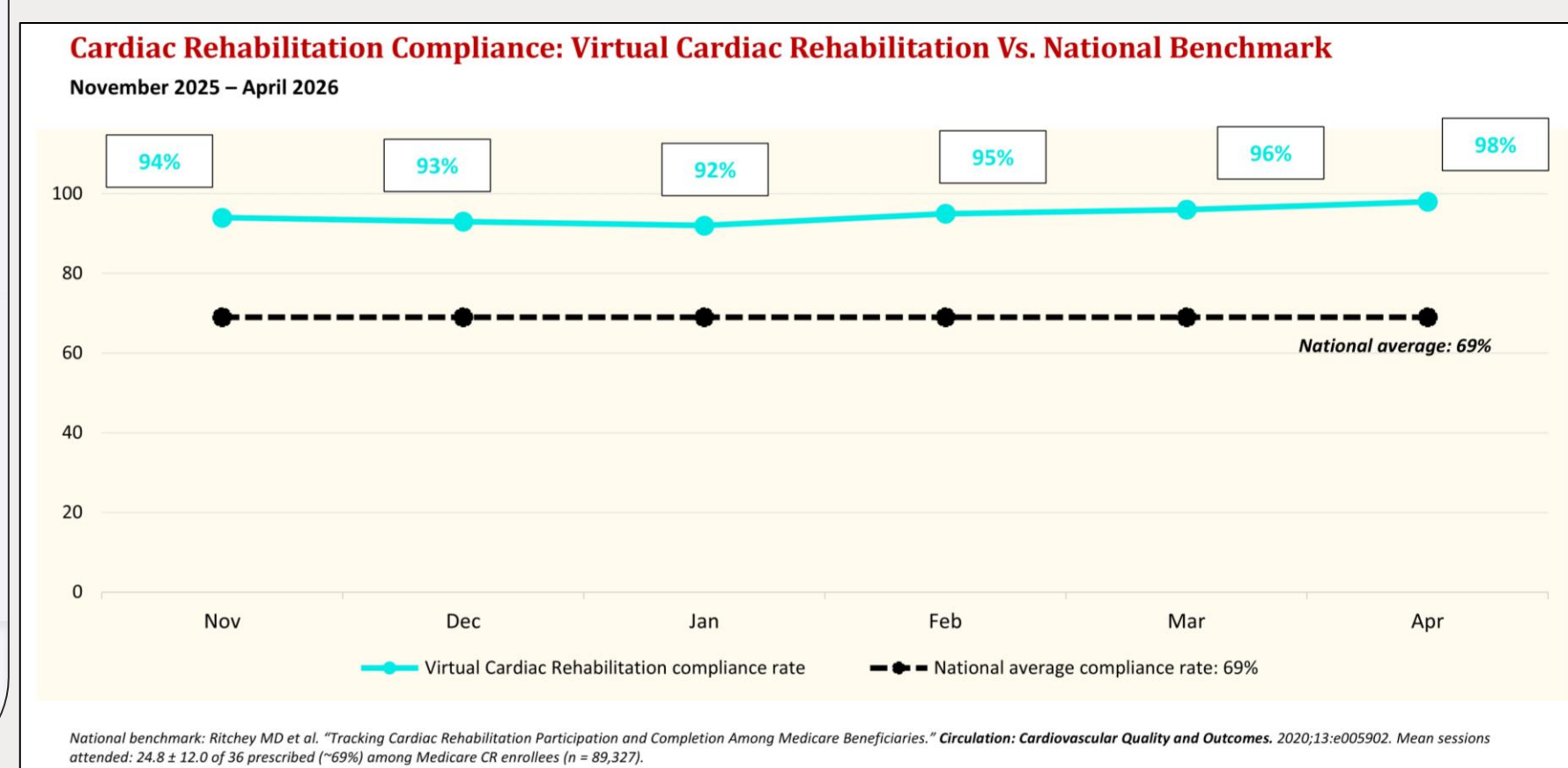
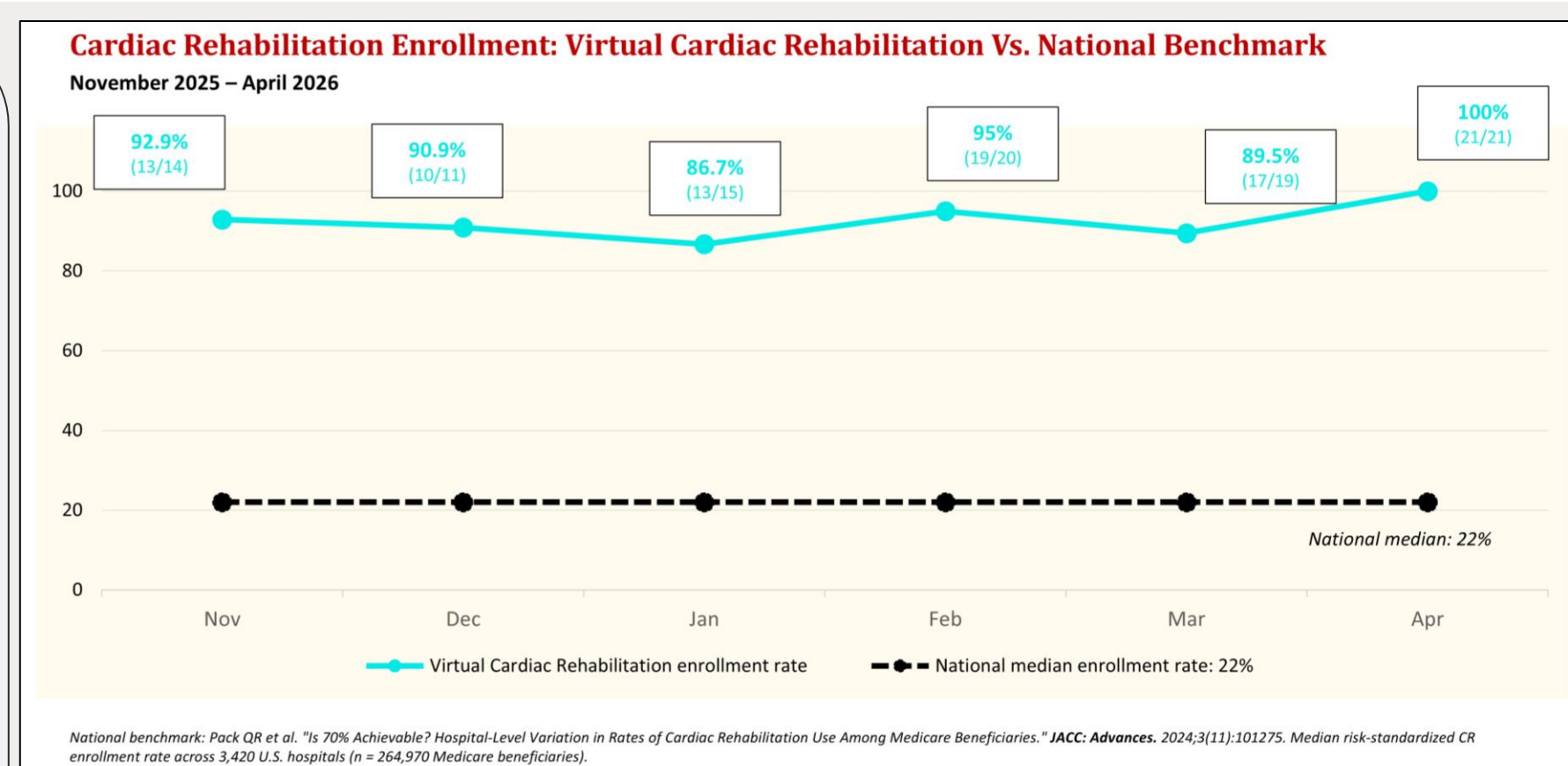
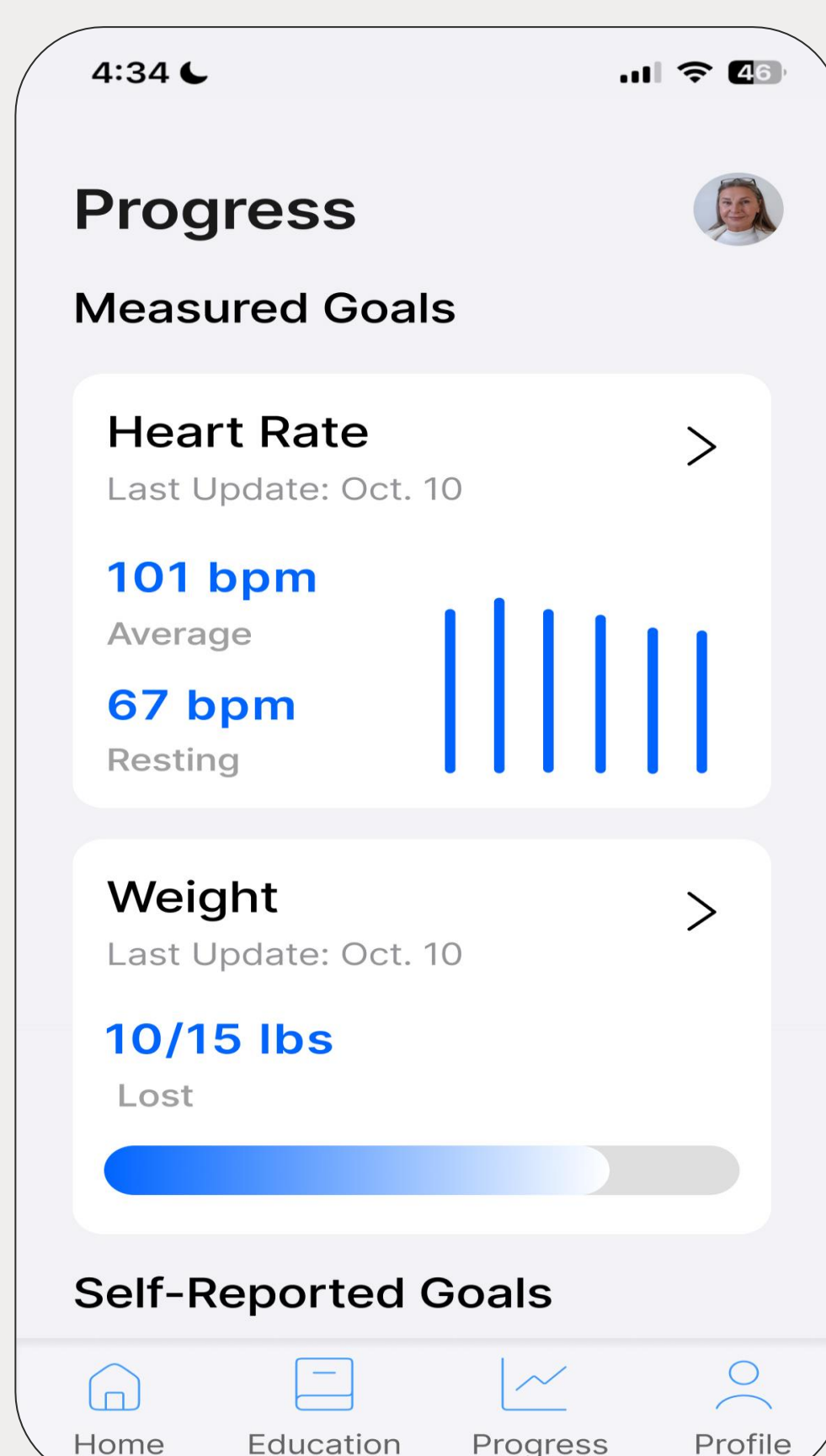
10 days (IQR 5–20)
(National Benchmark 35 days)

Session Compliance: 97%

698 sessions completed of 720 available

There was one 30-day readmission and no 90-day readmissions.

There was no mortality during follow-up.



Conclusions:

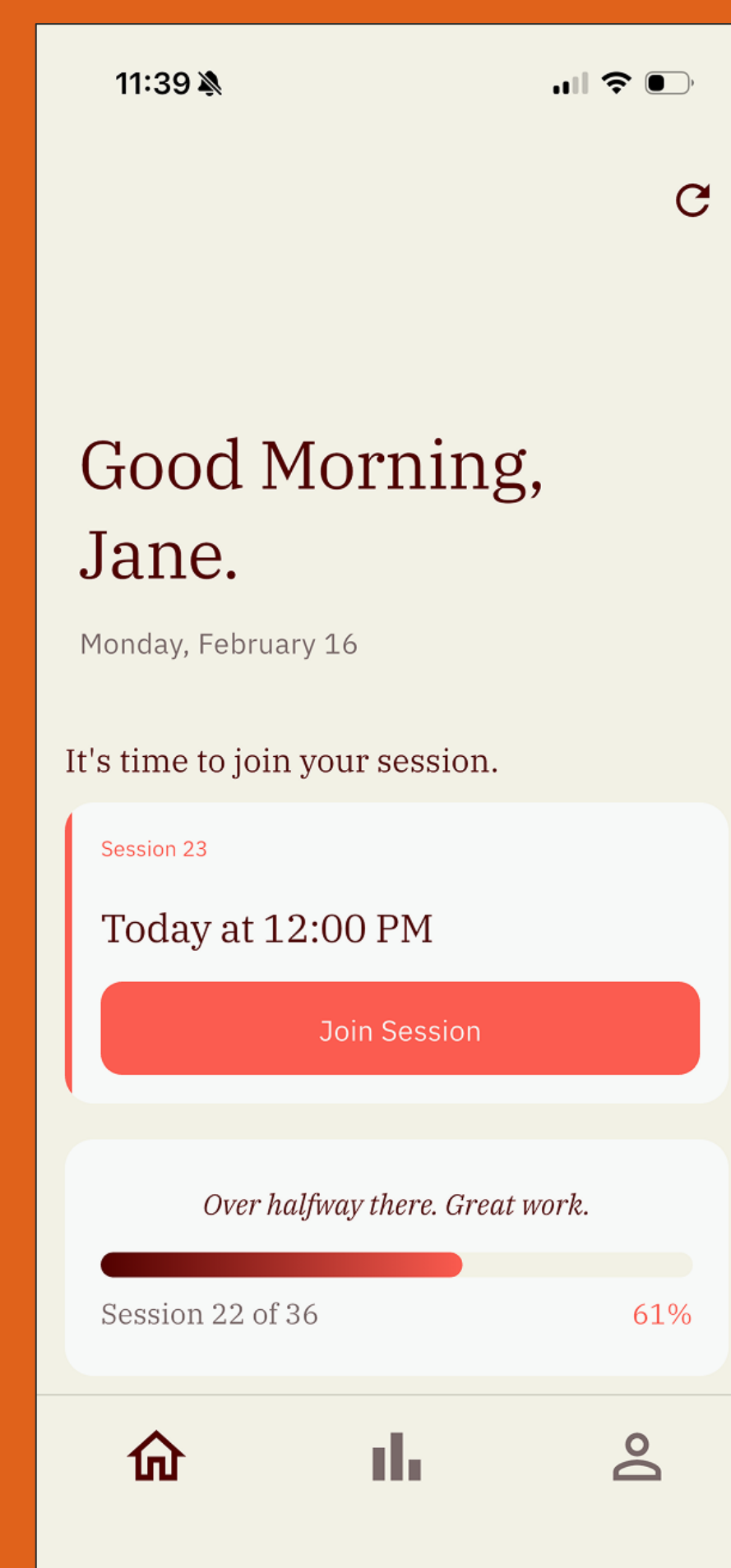
Virtual cardiac rehabilitation using a smartphone app augmented by AI may improve access to cardiac rehabilitation following discharge after cardiac intervention in an underserved patient population with limited socioeconomic resources.

Virtual cardiac rehabilitation may also have the potential to improve enrollment and compliance when compared to in-person cardiac rehabilitation, based on current literature.

A comprehensive VCR program that includes medication compliance, nutrition, outpatient follow-up and overall health maintenance may further have the potential to reduce postoperative mortality, decrease readmissions and improve quality of life, consistent with data from traditional cardiac rehabilitation.

References:

1. Lawton JS, Tamis-Holland JE, Bangalore S, et al. 2021 ACC/AHA/SCAI Guideline for Coronary Artery Revascularization: Executive Summary. *JACC* 2022;79:197-215. doi: doi:10.1016/j.jacc.2021.09.005
2. Pollack LM, Kompaniyets L, Chang A, et al. Cardiac Rehabilitation Trends Among Commercially Insured Adults in the United States, 2017–2023. *Circulation: Cardiovascular Quality and Outcomes* 2025;18:e012067. doi: doi:10.1161/CIRCOUTCOMES.125.012067
3. Ibsen C, Katholm KK, Jakobsen A, et al. Reducing dropout rates in cardiac rehabilitation among cardiac patients in a vulnerable situation: systematic development and feasibility testing of the Heart Priority Programme. *BMC Health Serv Res* 2024;24:1579. doi: 10.1186/s12913-024-12073-x



Time is Brain: A Quality Improvement Initiative to Reduce Door-to-Thrombectomy Time at a Thrombectomy Capable Stroke Center.

Authors: M. Skliut, S. Brauer, C. Weiss, F. Ahern, C. Mendoza, J.T. Schwarz, M. Ayad

Background:

Endovascular therapy (EVT) has transformed the outcomes of treatment for patients with large vessel occlusion (LVO) and stroke. Success of this therapy largely depends on the speed and ease of access to treatment. Systems of care have been developed in New York City to ensure timely access to this treatment. Door-to-puncture (DTP) time has emerged as one of the critical performance metrics, yet in-hospital delays remain a major obstacle to achieving this goal.

Objective:

To identify the sources of delay in the EVT pathway and implement targeted interventions to reduce door-to-puncture times for patients presenting directly to our Emergency Department (ED).

Methods:

This single-center Quality Improvement (QI) project was conducted at NewYork-Presbyterian Brooklyn Methodist Hospital using Plan-Do-Study-Act (PDSA) cycle and mini root cause analysis (mini-RCA) over a 36-months period: January 2023 to December 2025. Interventions were implemented in July of 2024. DTP times were collected for patients who underwent mechanical thrombectomy. Key drivers of delay were identified through a multidisciplinary workflow analysis involving Emergency Medicine, Neurology, and Neurointerventional (INR) teams. Pre- and post-intervention data was compared.

Interventions included:

1. Implementation of "Possible LVO" code
2. Creation of standard pathway to transport patients to INR biplane suite
3. Implementation of the post-procedure huddle
4. Standardization of data abstraction approach
5. Real time feedback and monthly performance review

Results:

A total of 78 patients were included (pre-intervention 36, post-intervention 42). Median DTP time decreased from 101 min to 80 min. The percentage of patients achieving target DTP < 90 min increased from 28% to 50%.

Conclusions:

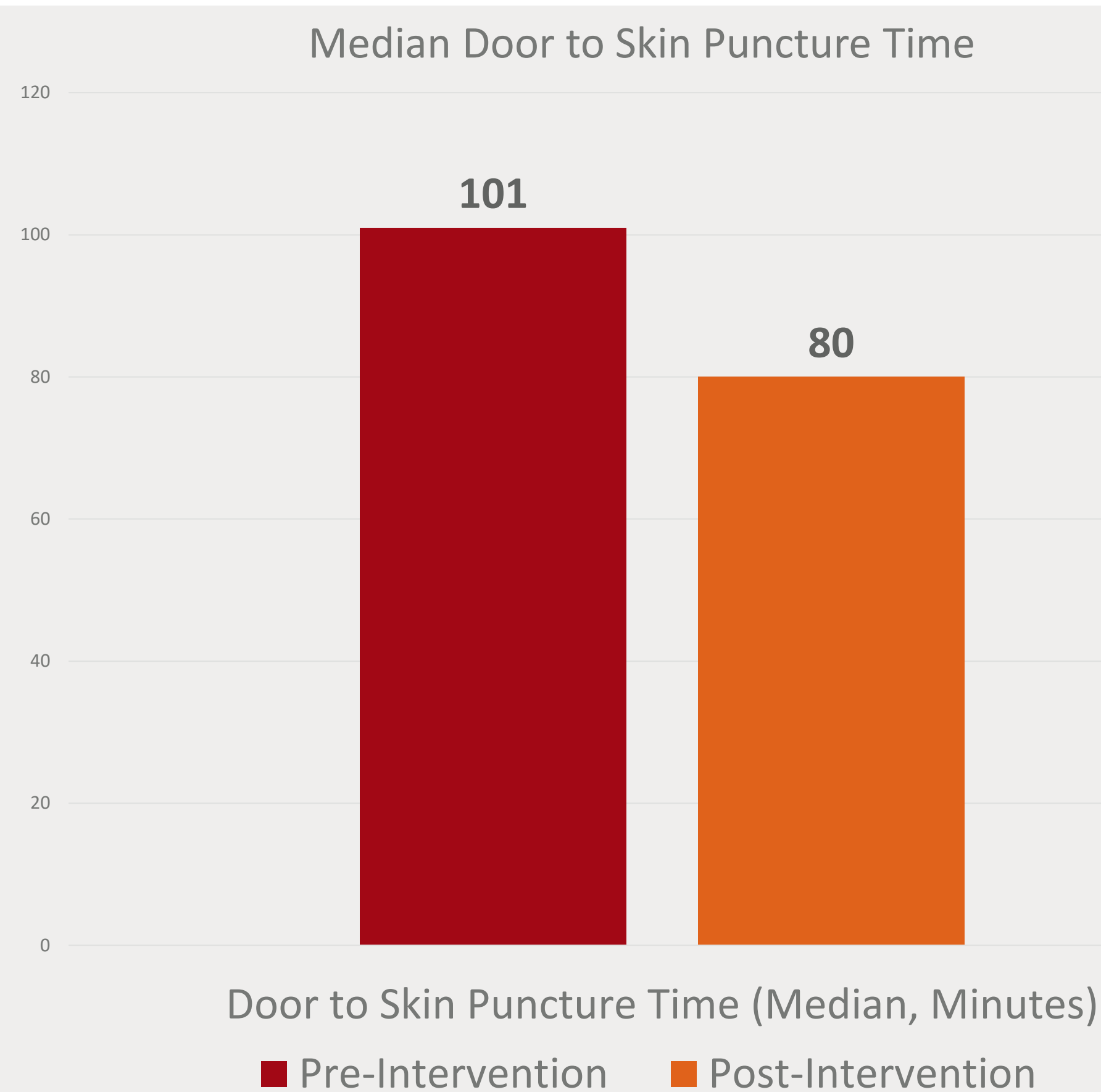
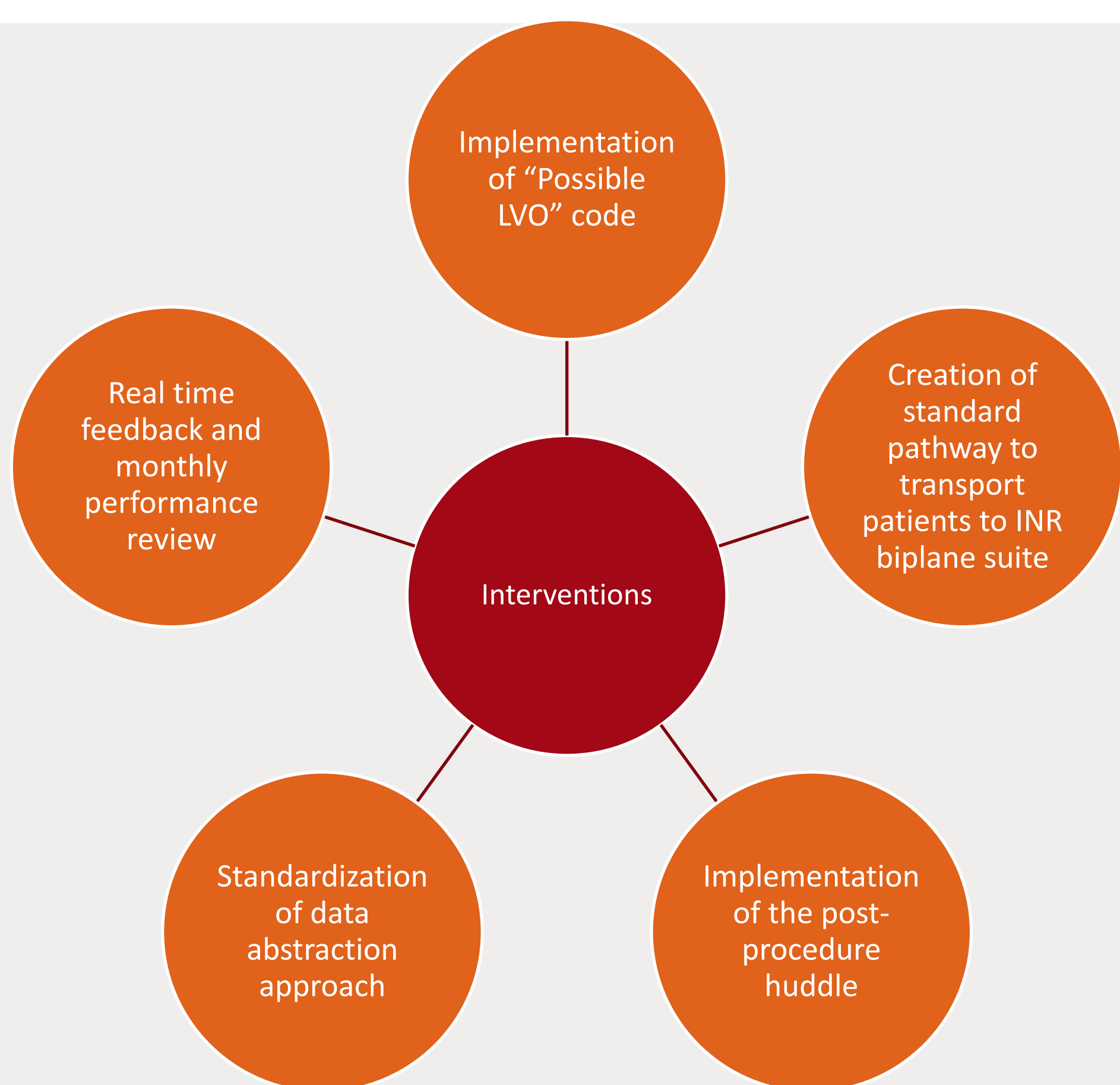
The multidisciplinary QI initiative significantly reduced door to puncture times at our Thrombectomy-Capable Stroke Center. Key elements included early team activation, parallel workflow process, and continuous performance feedback. These interventions can be adopted at other centers to improve stroke care efficiency.



Problem Statement: Endovascular therapy (EVT) has transformed the outcomes of treatment for patients with large vessel occlusion (LVO) and stroke. Success of this therapy largely depends on the speed and ease of access to treatment. Systems of care have been developed in New York City to ensure timely access to this treatment. Door-to-puncture (DTP) time has emerged as one of the critical performance metrics, yet in-hospital delays remain a major obstacle to achieving this goal.

Objective/Aim Statement: To identify the sources of delay in the EVT pathway and implement targeted interventions to reduce door-to-puncture times for patients presenting directly to our Emergency Department (ED).

Design/Methods: This single-center Quality Improvement (QI) project was conducted at NewYork-Presbyterian Brooklyn Methodist Hospital using Plan-Do-Study-Act (PDSA) cycle and mini root cause analysis (mini-RCA) over a 36-months period: January 2023 to December 2025. Interventions were implemented in July of 2024. DTP times were collected for patients who underwent mechanical thrombectomy. Key drivers of delay were identified through a multidisciplinary workflow analysis involving Emergency Medicine, Neurology, and Neurointerventional (INR) teams. Pre- and post-intervention data was compared.



Results: A total of 78 patients were included (pre-intervention 36, post-intervention 42). Median DTP time decreased from 101 min to 80 min. The percentage of patients achieving target DTP < 90 min increased from 28% to 50%.

Conclusions: The multidisciplinary QI initiative significantly reduced door to puncture times at our Thrombectomy-Capable Stroke Center. Key elements included early team activation, parallel workflow process, and continuous performance feedback. These interventions can be adopted at other centers to improve stroke care efficiency.

Next Steps: Maintain current workflow process to establish its sustainability longterm. Continue rigorous QI metrics monitoring. Share findings with multidisciplinary team and other thrombectomy centers.



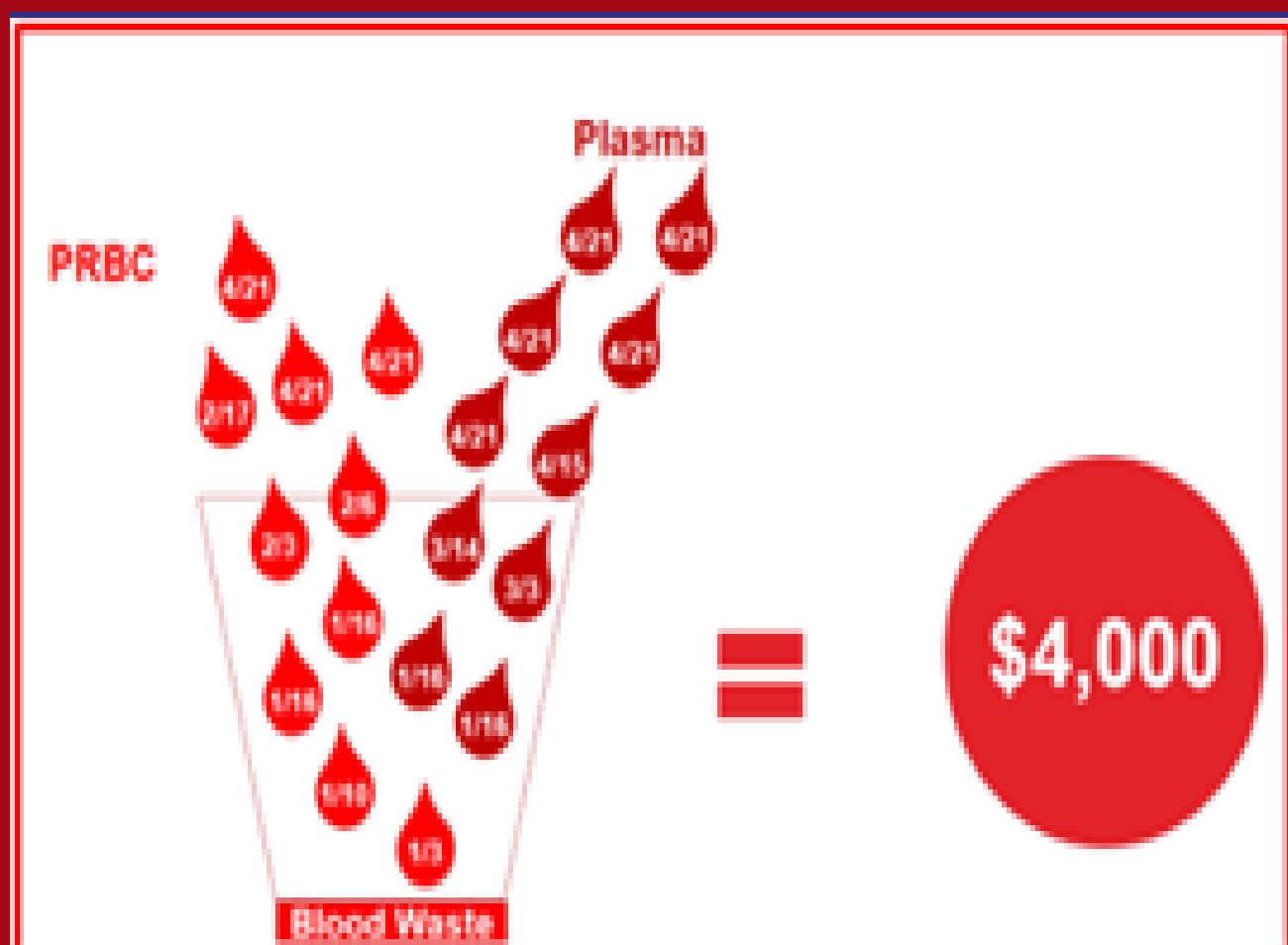
Every Drop Counts: Reducing Blood Waste Through Multidisciplinary Collaboration

Quality Improvement and Patient Safety Poster Symposium

Melissa Moser, RN, CNOR & May Saulan DNP MPAAOCNS CNOR | May 20, 2026

Background

- Level 1 Trauma Center in New York equipped with 21 Operating Rooms and a 535-bed capacity. Providing comprehensive surgical and trauma services requiring consistent and reliable blood supply.
- Quarterly blood drive program to help with blood supply shortage issue. Further highlighting the need to increase efforts to reduce blood product waste.
- Between January- April 2025, the OR experienced emerging blood product waste -20 blood products amounting to \$4k.



✓ Aim

- To reduce blood product waste in the Operating Room

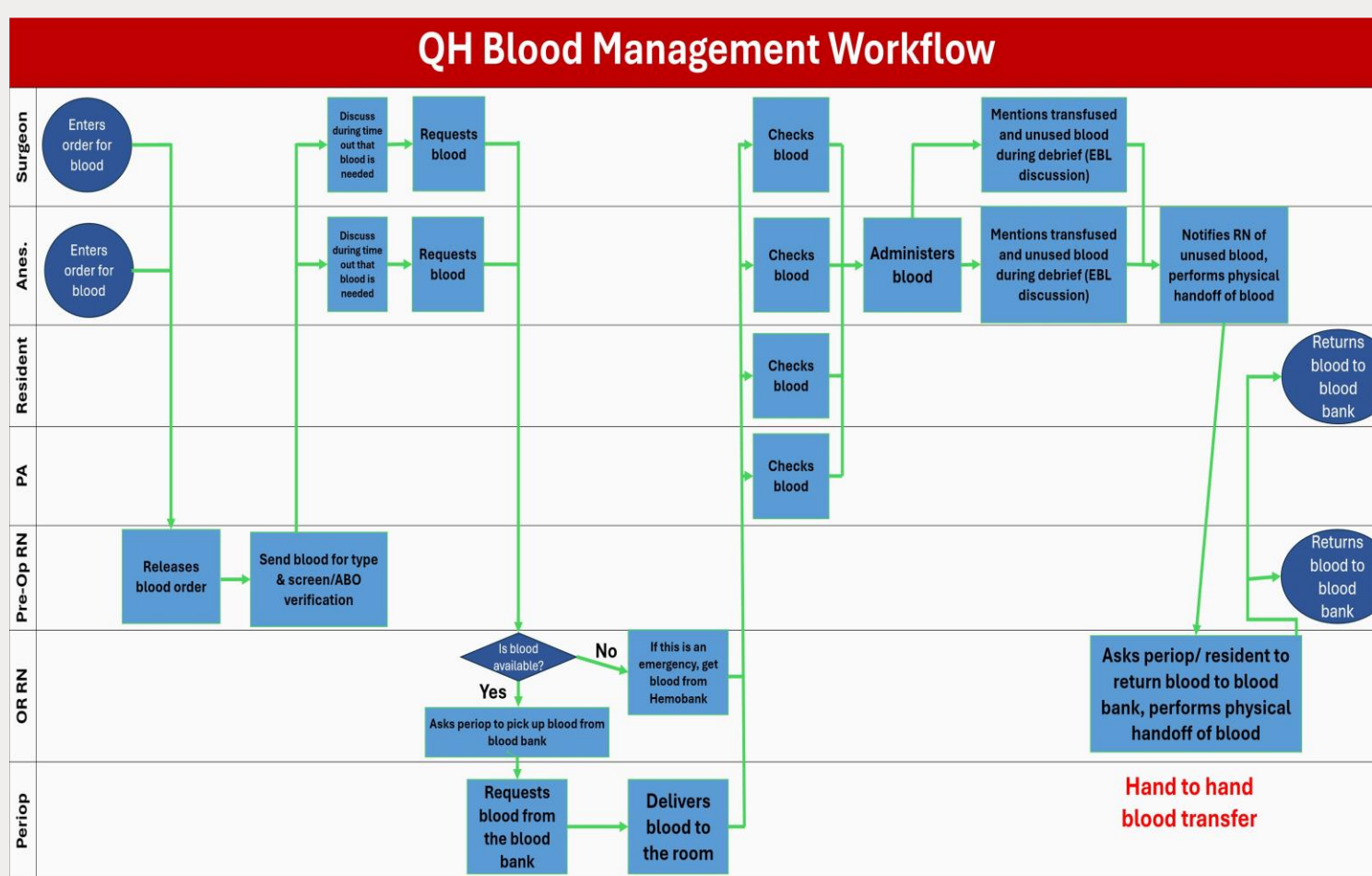
Description of Team

Multidisciplinary team was formed to review blood management process:

- ✓ Perioperative leaders
- ✓ Frontline OR staff
- ✓ Anesthesia & Surgical team
- ✓ Blood Bank (BB) team

Methods

An A3 Quality Improvement methodology was utilized to conduct an in-depth analysis of the blood wastes issue and implement actionable and sustainable strategies to resolve the problem



Blood Management Process Map

References available upon request

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 &
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Outcomes

- **Improved communication:** Blood products added in Time out, Debrief and RN to RN/anesthesia hand-off
- **Enhanced multidisciplinary collaboration:** Strengthen teamwork across clinical disciplines
- **Positive staff feedback:** Reports on increased satisfaction in efforts to save blood
- **Cost saving:** Reduced expense with blood waste
- **Exceed performance target:** Surpassed goal on blood waste
 - 89% improvement on blood waste
 - 100% compliance on blood management process



Key Learnings

- Clarifying everyone's role in blood management builds accountability & collaboration
- Focusing on system issues and team participation in blood waste strategies reduces waste
- Monthly reviews of quality metrics identifies improvement areas

Next Steps

- Ongoing monitoring for compliance and investigation of further blood waste
- Duplicate this process to other NYP Periop sites

Closing the Loop: A Hospital-Wide System to Prevent Loss to Follow-Up in High-Risk Patients

Sruti Akula, MD; Kyle Kovacs, MD

Statement of the Problem:

Loss to follow-up is a common and preventable systems failure that places patients with high-risk diagnoses at risk for irreversible morbidity. Across specialties, missed follow-up can lead to delayed treatment, disease progression, and avoidable complications. Current workflows rely on passive scheduling systems with limited mechanisms to notify providers when high-risk patients disengage from care. A scalable intervention is needed to identify high-risk patients and trigger timely provider intervention when follow-up breaks down.

Objective/Aim of the Study:

To develop and implement a hospital-wide electronic health record (EHR)-based alert system that identifies high-risk patients and notifies providers in real time when follow-up appointments are missed or canceled.

Project Design/Methods:

This quality improvement initiative is being implemented across NewYork-Presbyterian Hospital using the Epic EHR platform. Providers activate an opt-in “high-risk follow-up” flag within the patient chart. If a flagged patient misses or cancels a scheduled appointment, an automated in-basket alert is sent to the responsible provider to prompt outreach and care coordination.

Implementation is occurring in phased rollouts beginning with ophthalmology and expanding to additional specialties. Plan-Do-Study-Act (PDSA) cycles are being used to refine alert criteria, optimize usability, and minimize alert fatigue.

Results:

Early pilot implementation demonstrates feasibility and adoption across participating departments. The opt-in design improves provider awareness of missed follow-up events while minimizing unnecessary alerts. Expansion across additional specialties and ongoing data collection are underway.

Conclusions:

A hospital-wide EHR-based alert system provides a scalable approach to address loss to follow-up across clinical settings. By shifting from passive scheduling to active surveillance, this intervention strengthens continuity of care for high-risk patients and has the potential to reduce preventable morbidity across specialties.



Closing the Loop: A Hospital-Wide EHR Alert System to Prevent Loss to Follow-Up in High-Risk Patients

Sruti Akula, MD | Kyle Kovacs, MD

Problem Statement

- Loss to follow-up is a common and preventable systems failure that places patients with high-risk diagnoses at risk for irreversible morbidity
- Current workflows rely on passive scheduling systems with limited mechanisms to notify providers when high-risk patients disengage from care
- A scalable, system-level intervention is needed to actively identify high-risk patients and trigger timely intervention when follow-up breaks down

Objective/Aim Statement

- A hospital-wide EHR-based alert system that identifies high-risk patients across specialties and notifies providers in real time when follow-up appointments are missed or canceled

Design/Methods

- Setting: NewYork-Presbyterian Hospital using the Epic EHR platform
- Team: Multidisciplinary, representing multiple departments
- Diagnosis Mapping: High-risk conditions mapped to ICD-10 codes and integrated into a standardized alert framework



Results

- Early pilot implementation demonstrates strong feasibility
- The opt-in design allows targeted identification of high-risk patients while maintaining provider control and minimizing unnecessary alerts
- Initial observations show improved provider awareness of missed follow-up events and increased rates of timely patient outreach
- Expansion across additional specialties is ongoing, with data collection in progress to assess impact on follow-up completion and clinical outcomes

Conclusions/Lessons Learned

- A hospital-wide EHR-based follow-up alert system provides a scalable solution to address loss to follow-up across diverse clinical settings
- By shifting from passive scheduling to active surveillance, this intervention enables earlier provider intervention and strengthens continuity of care for high-risk patients

Next Steps

- Evaluate long-term clinical and economic impact
- Assess scalability to other health systems

Application of a Malaria Antigen Test for Blood Parasite Smears in a Region Non-Endemic for Plasmodium but Endemic for Babesia

Ashkan Shahbandi, M.D., Ph.D.; Carmela Bacani; Lars Westblade, Ph.D.; Jeffrey Kubiak, M.D., Ph.D.

Department of Pathology & Laboratory Medicine, Weill Cornell Medicine, New York, NY

Rapid antigen tests are a useful screening tool for Plasmodium species, offering faster turnaround times and reduced technical expertise requirements compared to traditional microscopy. However, real-world data from US academic medical centers are limited, and performance characteristics may vary by patient population and disease prevalence. Our hospital instituted screening of all blood smears with a malaria antigen test to improve turnaround times and diagnostic yield. We aimed to validate this rapid malaria antigen test as a universal screen for blood parasite smears, and evaluate its performance compared to the gold standard of microscopy in a setting non-endemic for Plasmodium, but endemic for Babesia. We conducted a retrospective review of all blood smears before and after implementation of rapid malaria antigen testing in April 2023 in a New York City-based hospital over a study period from January 2022 to December 2025. All antigen and blood smear results were extracted from the laboratory information system and paired by accession number. Performance characteristics including sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were calculated for unique patients, excluding repeat positives for the same patient. Blood smear malaria positivity rates were compared pre- and post-intervention using a chi-squared test. Turnaround time, defined as the interval from specimen receipt in the laboratory to result reporting, was assessed for antigen tests performed in 2024–2025. Of 884 matched samples from unique patients with paired rapid antigen and microscopy testing, 12 were true positives, 3 were false positives, 1 was a false negative, and 868 were true negatives. The malaria rapid antigen test demonstrated a sensitivity of 92.3% (12/13; 95% CI: 64.0–99.8%) and specificity of 99.7% (868/871; 95% CI: 99.0–99.9%). PPV was 80.0% (12/15; 95% CI: 51.9–95.7%) and NPV was 99.9% (868/869; 95% CI: 99.3–100.0%). The blood smear malaria positivity rate among unique patients was 2.5% (10/400) pre-intervention and 1.4% (13/901) post-intervention ($p=0.18$). Median turnaround time for antigen testing was 32 minutes (IQR: 26–43 minutes). The rapid malaria antigen test demonstrated excellent sensitivity and specificity with short turnaround time, although microscopy is still required for confirmation of positive results. These findings support the use of rapid malaria antigen testing as a reliable screening tool for blood smears, enabling faster clinical decision-making while maintaining accuracy, particularly in Babesia-endemic regions where malaria is rare and rapid exclusion of Plasmodium can reduce diagnostic uncertainty.



Application of a Malaria Antigen Test for Blood Parasite Smears in a Region Non-Endemic for *Plasmodium* but Endemic for *Babesia*

Ashkan Shahbandi, M.D., Ph.D.; Carmela Bacani; Lars Westblade, Ph.D.; Jeffrey Kubiak, M.D., Ph.D.

Problem Statement:

Rapid antigen tests are a useful screening tool for *Plasmodium* species, offering faster turnaround times and reduced technical expertise requirements compared to traditional microscopy. However, real-world data from US academic medical centers are limited, and performance characteristics may vary by patient population and disease prevalence. This is particularly relevant in the Northeastern US, where Babesiosis is endemic and frequently mimics malaria on smear, creating diagnostic uncertainty.

NewYork-Presbyterian/Weill Cornell Medical Center instituted screening of all blood smears with the BinaxNOW Malaria antigen test to improve turnaround times and diagnostic yield. **We aimed to verify this test as a universal screen for blood parasite smears, and evaluate its performance compared to the gold standard of microscopy in a setting non-endemic for *Plasmodium*, but endemic for *Babesia*.**

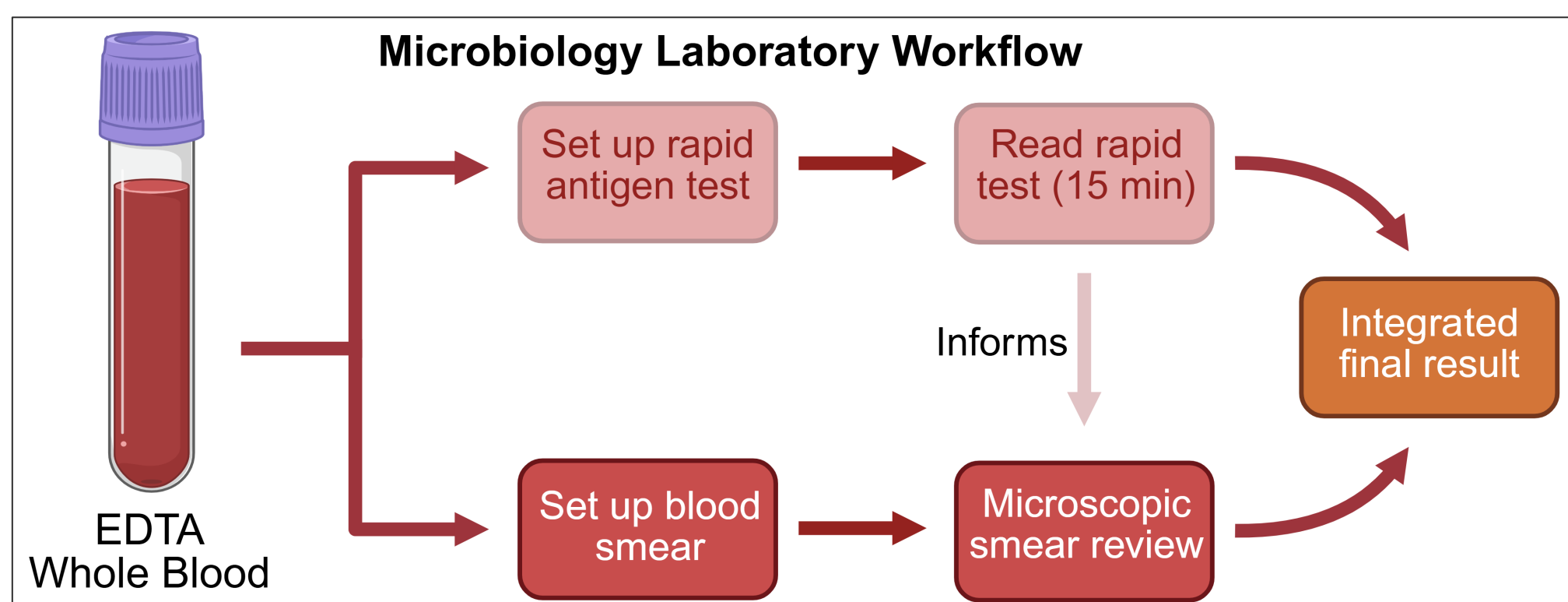


Figure 1: Microbiology Laboratory Workflow

Results:

Among 884 unique patients with paired testing, the rapid antigen test demonstrated sensitivity of 92.3% (95% CI 64.0–99.8%), specificity of 99.7% (95% CI 99.0–99.9%), PPV of 80.0%, and NPV of 99.9% (95% CI 99.3–100.0%) (Figure 2). Malaria positivity rates were stable pre- and post-intervention (2.50% vs. 1.44%, $p=0.18$). Median blood smear TAT decreased from 174 to 132 minutes following implementation ($p<0.001$), and the antigen test itself returned results in a median of 32 minutes (Figure 3). Notably, 94.1% of post-intervention smear-positive/antigen-negative cases were *Babesia* (Table 1).

Category	Metric	Value
Study population	Total blood parasite smears, 2022–2025	1,819
	Total rapid antigen tests, post-intervention	1,154
	Unique patients with paired testing	884
TAT (all smears)	Pre-intervention median TAT	174 min (IQR: 138–243)
	Post-intervention median TAT	132 min (IQR: 102–168)
	Reduction	42 min ($p<0.001$)
TAT (positive smears)	Pre-intervention median TAT	277 min (IQR: 204–359)
	Post-intervention median TAT	183 min (IQR: 158–235)
	Reduction	94 min ($p=0.001$)
Rapid antigen TAT	Median	32 min (IQR: 26–43)
	Babesia	
	Total Babesia-positive smears	20
	Babesia PPV	94.10%

Table 1: Study Population Metrics

Methods:

We conducted a retrospective review of blood parasite smears and paired rapid malaria antigen tests before and after assay implementation (January 2022–December 2025) at NYP/Weill Cornell. Results were extracted from the LIS and matched by accession number; performance metrics (sensitivity, specificity, PPV, NPV) were calculated for unique patients. Malaria positivity rates were compared pre- and post-intervention by chi-square, and turnaround time was assessed for both assays (Figure 1).

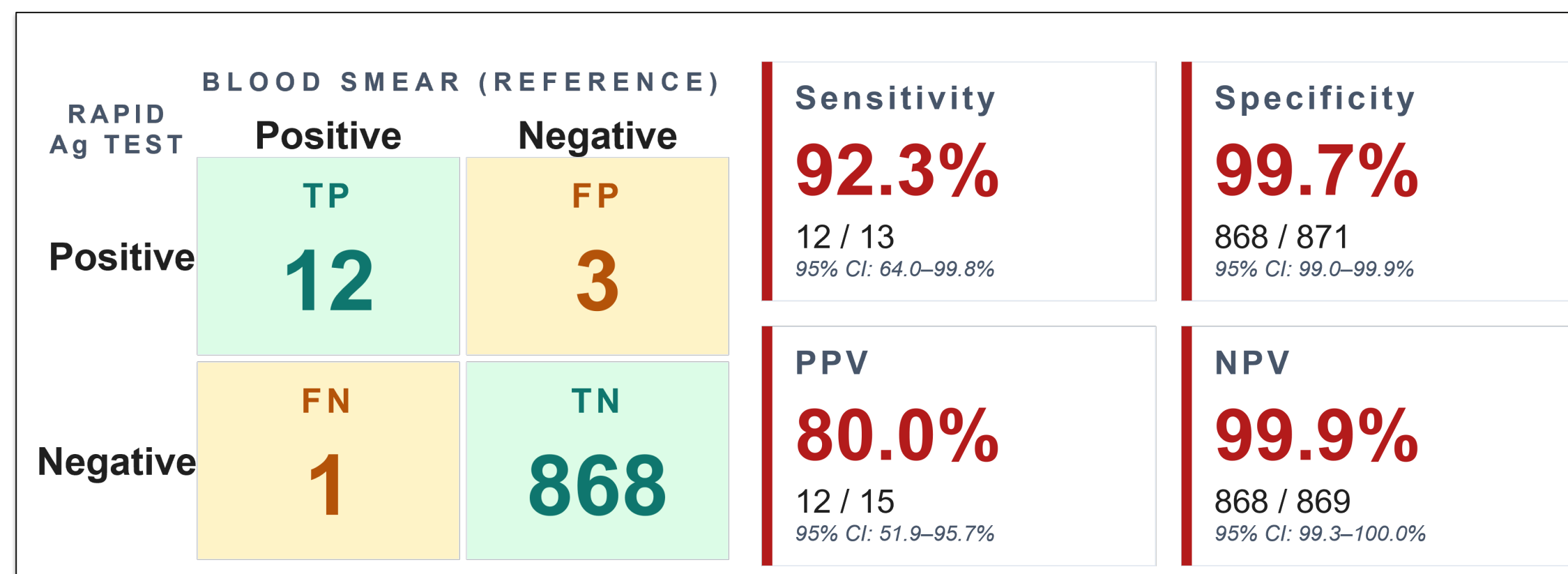


Figure 2: BinaxNOW Malaria Test Performance Metrics

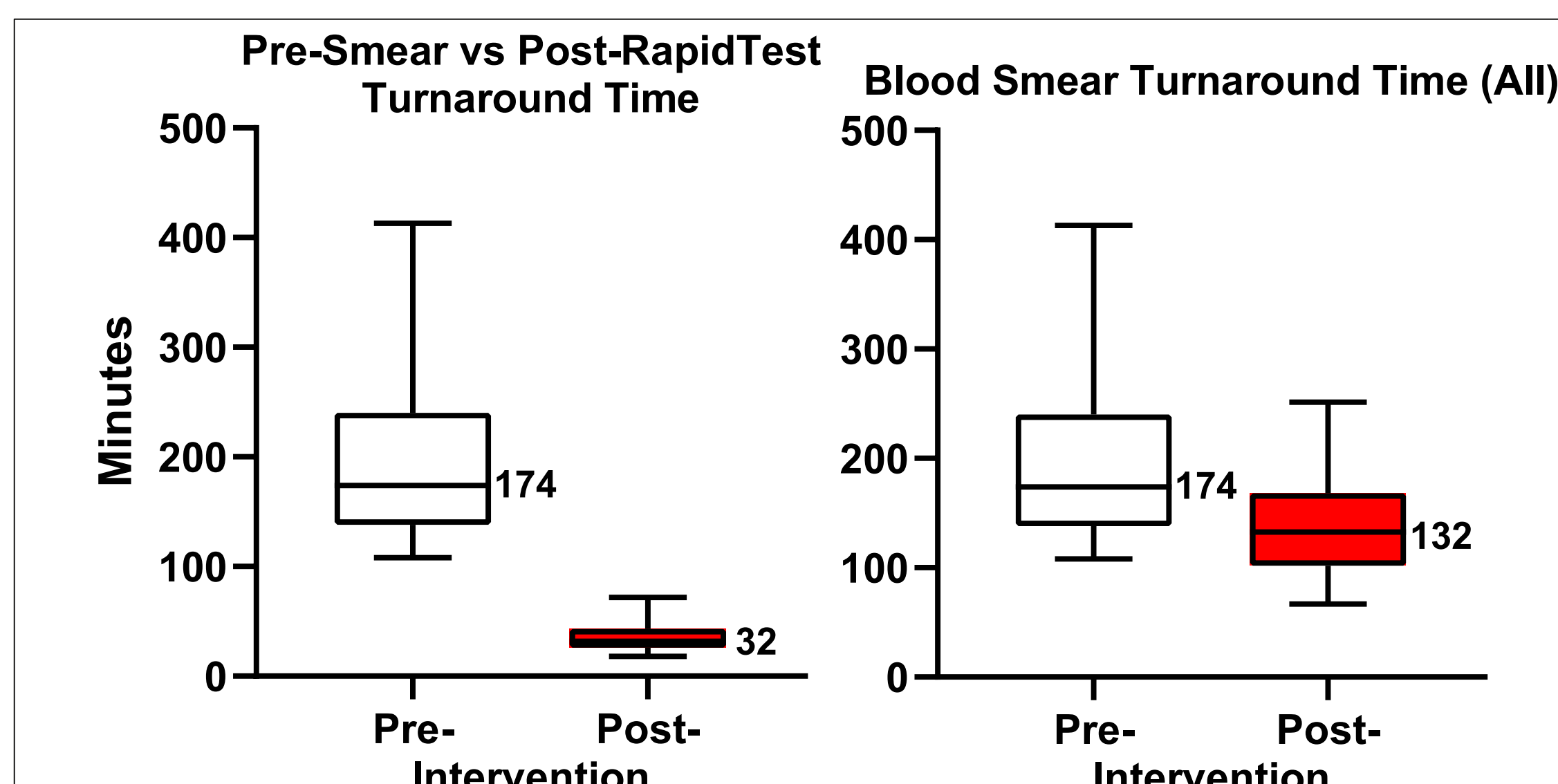


Figure 3: Impact of Intervention on Lab Turnaround Time

Conclusions:

The BinaxNOW malaria antigen test demonstrated **strong diagnostic performance and meaningfully reduced turnaround time** at a *Babesia*-endemic academic medical center. These findings support the use of rapid malaria antigen testing as a reliable screening tool for blood smears, **enabling faster clinical decision-making while maintaining accuracy**, particularly in *Babesia*-endemic regions where malaria is rare and rapid exclusion of *Plasmodium* can reduce diagnostic uncertainty. These findings support broader implementation of paired rapid antigen testing and smear microscopy at academic medical centers in *Babesia*-endemic regions.



Standardizing Newborn Discharge Education to Improve Access and Reliability

Annual Weill Cornell Medicine Quality Improvement and Patient Safety Poster Symposium

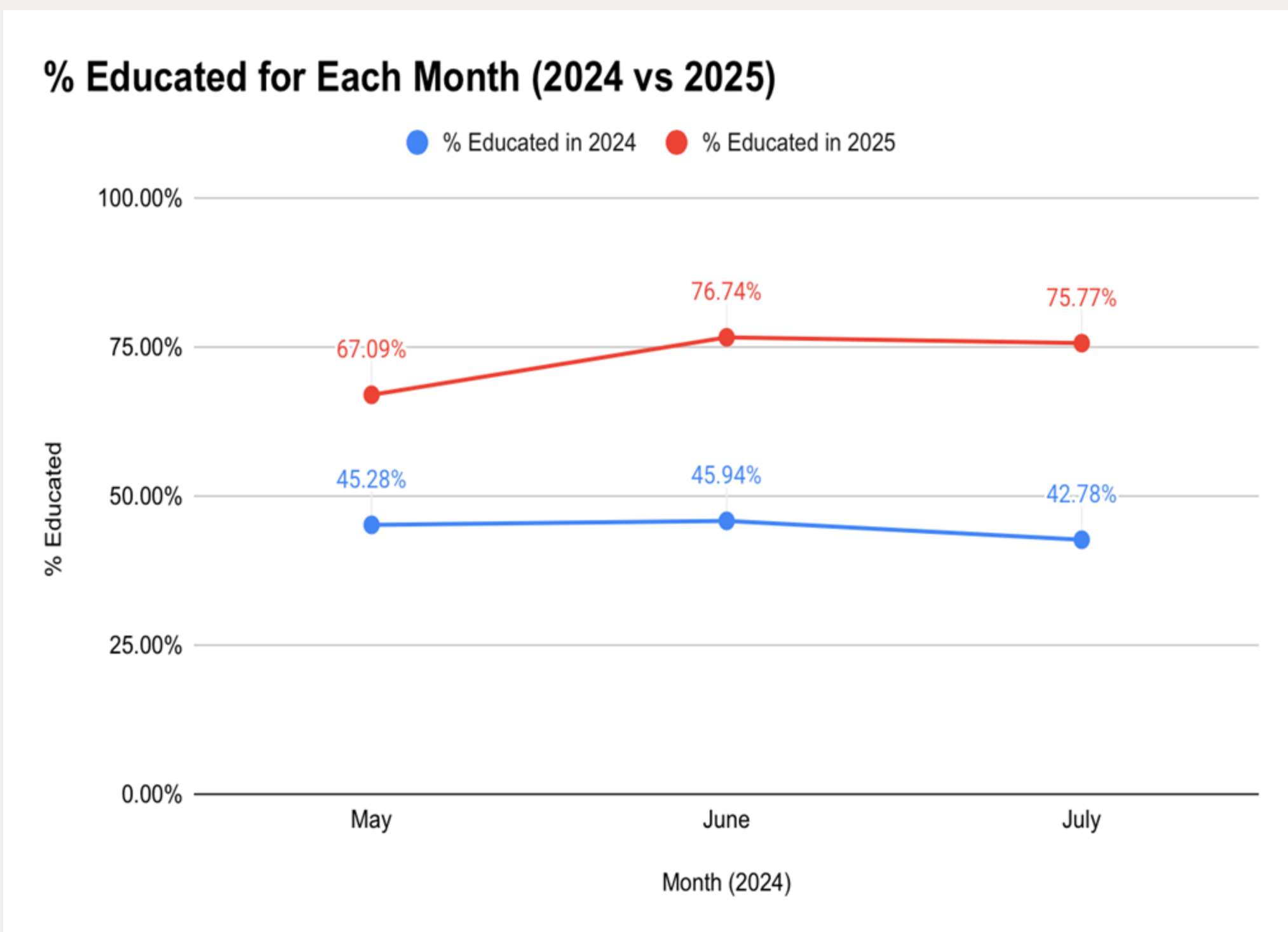
Lauren Garcia, PA-C, Susan Bostwick, MD, Erin Kelly, PA-C, Nicole Simon, PA-C,
Taylor Sewell, MD, Paul Martin, MD, | Wednesday, May 20th, 2026

Problem Statement: Newborn discharge education is essential for a safe transition from hospital to home.¹ At NYP/ACH, live daily classes limited accessibility due to fixed timing, staffing constraints, and workflow interruptions. This model contributed to educator fatigue, barriers to staff entering rooms during sessions, and delayed discharges from one-on-one make-up sessions. It also created variability in education delivery, preventing families from receiving standardized information. Inconsistent education affects caregiver confidence, newborn safety practices, and adherence to recommended care guidelines.² A more flexible, scalable approach was needed to ensure equitable access to standardized newborn discharge education.

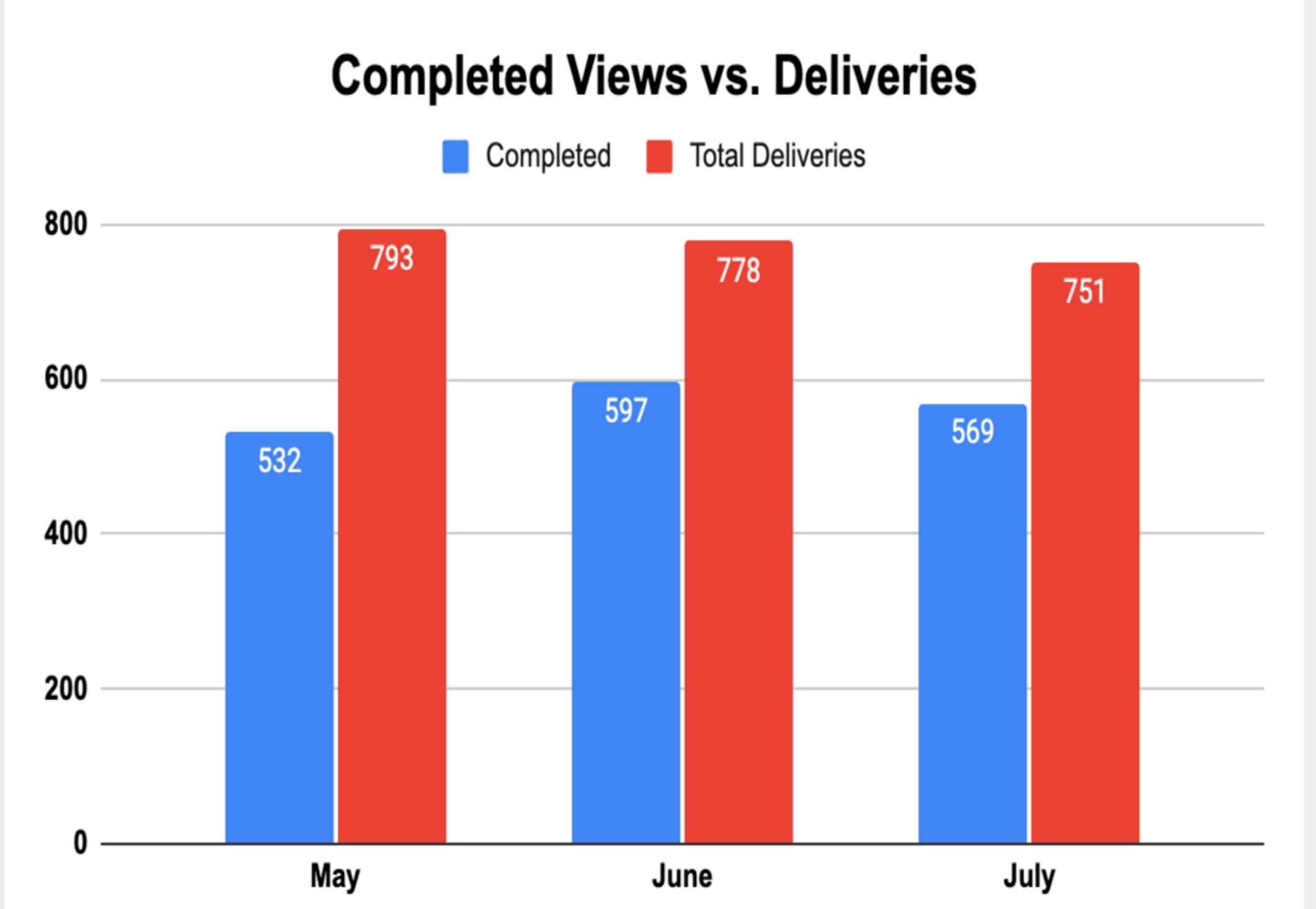
Objective/Aim Statement: To improve accessibility and consistency of newborn discharge education by implementing a standardized, on-demand video viewable throughout the hospital stay.

Design/Methods: The Plan, Do, Study, Act Methodology was implemented beginning from May 2023 to August 2025 at NYP/ACH to develop a standardized educational video covering essential newborn care topics. Limitations of live education sessions were identified. Evidence-based content aligned with American Academy of Pediatrics guidelines was created, reviewed and refined by nursing and physician leadership, the NYP marketing team, and interdisciplinary stakeholders, with input from the Family Advisory Council to ensure clarity and comprehension. Content included safe sleep practices, feeding guidance, umbilical cord care, signs of illness, and when to seek medical attention. Supported by a NYP ProPX grant, the video was recorded and integrated into the existing patient education workflow via the Pcare platform available on hospital TVs and MyChart, eliminating the scheduled daily live Zoom sessions. Staff were educated on the new workflow, encouraging families to view prior to discharge at their convenience. Participation data were presented to stakeholders to increase penetration. Outcomes were assessed by comparing live session attendance with post-implementation Pcare views, defining “completed” view as 86% of the video watched. After successful rollout at NYP/ACH, implementation expanded across campuses, standardizing discharge instructions. Data below reflect NYP/ACH only.

Comparison of Monthly Education Rates (2024-2025)



Completed View Compared to Total Deliveries (May-July)



Results: The on-demand discharge education video increased engagement to an average of 73.2% of all the deliveries over a three-month period in 2025, compared to the average 44.66% for previous live Zoom sessions the year prior, representing a 65% increase in discharge class engagement for postpartum families (figures 1-2). Additionally, as of March 2026, it was the most viewed educational video on Pcare for NYP/ACH. Limitations of data include the newborns that are admitted to the neonatal intensive care unit, which is an estimated to be 10% of all deliveries and are included in the denominator but are not routinely offered the video, suggesting the percentage of well-baby postpartum families educated may be higher.

Conclusions/Lessons Learned: Implementation of an on-demand newborn discharge education video improved accessibility and standardized caregiver education cross-campus, allowing more families to receive essential newborn care prior to discharge while reducing schedule constraints for families and providers. The recorded module gave staff flexibility and ensured consistent messaging on newborn care and safety. Standardized digital education may be an effective strategy to enhance caregiver preparedness and support smoother hospital-to-home transitions.

Next Steps: Subsequently, we have translated subtitles in Spanish, Chinese, Arabic, increasing access to non-English speaking patients and future implementations will focus on broadening accessibility with additional languages.

References:

1. Lemyre B, Jefferies AL, O’Flaherty P. Facilitating discharge from hospital of the healthy term infant. *Paediatrics & Child Health*. 2018;23(8):515-522. doi:<https://doi.org/10.1093/pch/pxy127>
2. Benitz, W. E. “Hospital Stay for Healthy Term Newborn Infants.” *PEDIATRICS*, vol. 135, no. 5, 27 Apr. 2015, pp. 948–953, <https://doi.org/10.1542/peds.2015-0699>.

Optimization and Standardization of an Emergency Department Follow-Up Office

Emilee Nawa, MS, PA-C; Matthew Laghezza, MS, MBA, PA-C; Rahul Sharma, MD, MBA; Matthew McCarty, MD

Background: Transitions of care after Emergency Department (ED) discharge represent a high-risk period for patient harm. Missed abnormal results, delayed communication of incidental imaging findings, and inadequate follow-up coordination contribute to preventable adverse events and unplanned return visits.^{1,2} We optimized a centralized Emergency Department Follow-Up Office across a multi-campus health system to enhance post-discharge safety, standardize communication workflows, and reduce variability in follow-up processes. The Follow-Up Office is staffed daily by an Advanced Practice Provider (APP) with at least five years of institutional experience and is supported by a dedicated patient access telephone line. Core responsibilities include systematic review of post-discharge laboratory and imaging results with closed-loop communication with patients when abnormal results are identified. Structured callback workflows include mailed notification for patients unreachable by telephone and urgent courier-delivered letters for time-sensitive or potentially life-threatening findings. Additional responsibilities include next-day wellness checks for patients discharged after computed tomography (CT) imaging for the chest or abdomen/pelvis to reinforce discharge plans and clarify incidental findings. Standardized protocols were also developed for outpatient follow up, specifically management of those diagnosed with sexually transmitted infections (STIs). The office additionally assists with addressing pharmacy-related barriers following ED discharge.

Methods: Review of this quality improvement initiative was conducted over a four-month period (November 2025-February 2026) at New York Presbyterian Weill Cornell Medical Center (WCM) and Lower Manhattan Hospital (LMH). Operational metrics included total telephone encounters by campus, reason for outreach, and resulting safety actions/interventions. Standardized documentation templates, letter workflows, STI result protocols, and inpatient support processes were implemented to reduce practice variability and improve reliability of follow-up care. Implementation of standardized documentation and notification workflows enabled systematic tracking via the electronic medical record (EMR).

Results: Over the four-month study period, the ED Follow Up Office managed 4,567 telephone encounters across our campuses: Adult ED WCM (57.6%), Adult ED LMH (24.5%), Pediatric ED WCM (13.4%), Pediatric ED LMH (3.9%), and Virtual Urgent Care (0.6%). The most frequent indications for patient outreach were CT imaging follow-up (38.8%), abnormal laboratory results (36.1%), wellness checks (15.9%), pharmacy-related issues (7.9%), and positive blood cultures (1.3%). Connection with patients was made for 63.5% of encounters. Voicemail messages were left in 28.4%, while 8.1% involved incorrect number or inability to leave a voicemail. Among patients not reached by phone, 235 letters were sent (5.1% of encounters) via mail, with additional electronic notification through the patient portal when available. Only 2 urgent courier-delivered letters were sent (0.04% of encounters). Additional safety interventions included changing prescription pharmacies or initiating new prescriptions for 561 patients (12.3%). The recommendation for immediate ED return after follow-up telephone encounter occurred with 77 patients encounters (1.7%), with 71.4% of patients complying with the recommendation after review in the EMR.

Conclusion: A centralized ED Follow-Up Office provides a structured safety surveillance mechanism during the vulnerable post-discharge period. Through closed-loop abnormal result management, standardized communication protocols, and proactive outreach to high-risk populations, this model strengthens care transitions and reduces system variability. Integrating a dedicated follow-up clinician within the emergency care model allows for consistent monitoring of post-discharge results, reliable patient communication, and timely coordination of care needs that extend beyond the initial ED visit. This model can represent a scalable quality improvement strategy to mitigate preventable harm and enhance reliability in emergency care delivery.

References:

1. Mikhaeil JS, Jalali H, Orchanian-Cheff A, Chartier LB. Quality Assurance Processes Ensuring Appropriate Follow-up of Test Results Pending at Discharge in Emergency Departments: A Systematic Review. *Ann Emerg Med.* 2020 Nov;76(5):659-674. doi: 10.1016/j.annemergmed.2020.07.024. Epub 2020 Aug 25. PMID: 32854963.
2. Roy CL, Poon EG, Karson AS, Ladak-Merchant Z, Johnson RE, Maviglia SM, Gandhi TK. Patient safety concerns arising from test results that return after hospital discharge. *Ann Intern Med.* 2005 Jul 19;143(2):121-8. doi: 10.7326/0003-4819-143-2-200507190-00011. PMID: 16027454.

Optimization and Standardization of an Emergency Department Follow-Up Office

Emilee Nawa, MS, PA-C; Matthew Laghezza, MS, MBA, PA-C; Rahul Sharma, MD, MBA; Matthew McCarty, MD

Background

Transitions of care after Emergency Department (ED) discharge are a high-risk period for patient harm. Missed abnormal results, delayed communication of incidental imaging findings, and inconsistent follow-up processes contribute to preventable adverse events and unplanned return visits.^{1, 2} To address these gaps, our multi-campus health system optimized a centralized ED Follow-Up Office to enhance post-discharge safety, standardize communication workflows, and reduce variability in follow-up processes.

The office is staffed daily by an experienced Advanced Practice Provider (APP) and supported by a dedicated patient access telephone line. Core functions include systematic review of post-discharge laboratory and imaging results using closed-loop communication with patients for abnormal findings. Structured workflows include mailed notification for unreachable patients and urgent courier-delivered letters for time-sensitive results. Additional responsibilities include next-day wellness checks after computed tomography (CT) imaging, standardized protocols for sexually transmitted infections (STIs), and assistance with pharmacy-related barriers.

Design/Methods

A four-month review (Nov 2025-Feb 2026) of this quality improvement initiative was conducted at New York Presbyterian Weill Cornell Medical Center (WCM) and Lower Manhattan Hospital (LMH). Operational metrics included total telephone encounters by campus, reason for outreach, and resulting safety actions/interventions. Standardized documentation templates, letter workflows, STI result protocols, and inpatient support processes were implemented to reduce practice variability. All follow-up activities were systematically tracked in the electronic medical record (EMR) for improved reliability and consistency of post-discharge care.

Results

Table 1

Indications	% of Encounters
CT Imaging	38.8%
Abnormal Labs	36.1%
Wellness Checks	15.9%
Pharmacy Changes	7.9%
Positive Blood Cultures	1.3%

Table 2

Phone Call Outcome	% of Encounters
Connection Made	63.5%
VM Left	28.4%
Incorrect Number or Unable to Leave VM	8.1%

Table 3

Interventions	% of Encounters
Prescription Changed	12.3%
Letter Sent	5.1%
Advised to Return to ED	1.7%
Courier Letter Sent	0.04%

- Over the four-month study period, the ED Follow Up Office managed 4,567 telephone encounters across five care sites: Adult ED WCM (57.6%), Adult ED LMH (24.5%), Pediatric ED WCM (13.4%), Pediatric ED LMH (3.9%), and Virtual Urgent Care (0.6%).
- The most common indications for outreach were CT imaging follow-up, abnormal laboratory results, wellness checks, pharmacy-related issues, and positive blood cultures (Table 1).
- Most patients were successfully contacted, but voicemails (VM) were left in 28.4%, and 8.1% had incorrect or unreachable numbers (Table 2).
- For patients not reached by phone, 235 letters were sent via mail (additional electronic notification through the patient portal when available). Only 2 urgent courier-delivered letters were sent (Table 3).
- Safety interventions also included changing prescription pharmacies or initiating new prescriptions for 561 patients (Table 3).
- A total of 77 patients were advised to return to the ED (Table 3). After EMR review, 71.4% of the patients complied with the recommendation.

Conclusions

- A centralized ED Follow-Up Office creates a structured safety net during the post-discharge period.
- Closed-loop result management and standardized communication strengthen care transitions and reduce variability.
- A dedicated follow-up clinician ensures consistent monitoring, reliable patient communication, and timely coordination of ongoing care needs.
- This model offers a scalable strategy to reduce preventable harm and improved reliability in emergency care delivery.

References

1. Mikhaeil JS, Jalali H, Orchanian-Cheff A, Chartier LB. Quality Assurance Processes Ensuring Appropriate Follow-up of Test Results Pending at Discharge in Emergency Departments: A Systematic Review. *Ann Emerg Med.* 2020 Nov;76(5):659-674. doi: 10.1016/j.annemergmed.2020.07.024. Epub 2020 Aug 25. PMID: 32854963.
2. Roy CL, Poon EG, Karson AS, Ladak-Merchant Z, Johnson RE, Maviglia SM, Gandhi TK. Patient safety concerns arising from test results that return after hospital discharge. *Ann Intern Med.* 2005 Jul 19;143(2):121-8. doi: 10.7326/0003-4819-143-2-200507190-00011. PMID: 16027454.

Title: Standardized Inpatient *Clostridioides difficile* infection (CDI) Education and Post Discharge Follow Up Pathway

Authors: Carl V. Crawford, MD, Harjot K. Singh, MD, Tiffany Min, NP

Department: Department of Medicine

Statement of the Problem:

Clostridioides difficile infection (CDI) remains one of the most common healthcare-associated infections in the United States that drives morbidity, mortality, and cost. Current care models emphasize inpatient management but neglect the vulnerable 30-day post-discharge period, when patients face the highest risk for recurrence secondary to modifiable and unmodifiable risk factors, and medication lapses. Structured transitions of care (TOC) have been shown to improve outcomes for complex diseases, and one is needed for patients with CDI.

Objective/Aim of the study:

- Identify areas of concern in disease education and follow-up workflows that may contribute to increased CDI recurrence (rCDI) and health care utilization.
- Assess whether high risk patients who receive standardized education and given specific follow-up to CDI specialists have improved outcomes.

Study Design: Retrospective analysis using descriptive statistics of adult patients diagnosed with CDI at WCM-NYP over a 7-month period with minimum of 8 weeks follow up.

Intervention: Creation of a Gastroenterology and Infectious Diseases partnership to address: Prevention of rCDI, medication adherence, live bacteriotherapeutic treatment, diet and lifestyle modification and ensure follow up appointment within 1-2 weeks of discharge.

Variables: Patient demographics, diagnostic testing, severity classification, treatments, hospitalization details, morbidity, readmission, mortality, and risk factors for recurrence.

Results:

- 89 patients with positive CDI polymerase chain reaction (PCR) tests were reviewed in this study. 63/89 patients were toxin negative. 26/89 patients were toxin positive.
- 38 colonized patients (61%) were treated with vancomycin or fidaxomicin.
- 26 actively infected patients (100%) received vancomycin or fidaxomicin treatment.
- 55 of 89 patients (62.5%) experienced at least one hospital readmission or ED revisit after the qualifying CDI hospitalization.
- 32 of 89 patients needed new non-CDI systemic antibiotics after 3 months from their initial hospitalization but only 9 of 32 patients (28%) received CDI prophylaxis.
- 97.5% of patients had no documented explanation of the nature of their infection
- 28.1% of patients had follow up scheduled (range 3 days to 6 months)

Conclusions/Lessons Learned:

CDI is a clinical and financial burden because of risks for recurrence as high as 60%. A large proportion of colonized patients in our study may be potentially overtreated, and prophylaxis underutilized increasing the risk for rCDI. Almost all patients were missing documented CDI-specific discharge education as well as follow up with a specialist within 2 weeks putting them at risk for recurrence or over/undertreatment. This preliminary data supports the initiative for GI and ID to partner to enhance patient education and standardize timely outpatient management for those admitted with CDI to reduce complications of this debilitating disease.

Future Directions: Determine the clinical and economic impact of direct referral to the “Cdiffnomore” Team in management and prevention of rCDI.

Problem Statement:

Clostridioides difficile infection (CDI) remains one of the most common healthcare-associated infections in the United States. While therapeutic options have expanded, recurrent CDI (rCDI) continues to drive morbidity, mortality, and cost.

Current care models emphasize inpatient management but neglect the vulnerable post-discharge period, when patients face the highest risk for sequelae of infection including psychosocial stress and recurrence secondary to medication non-adherence and both modifiable and unmodifiable risk factors. This gap disproportionately affects older adults, patients with multiple comorbidities and individuals with limited health literacy or access to specialty care.

Structured transitions of care (TOC) have been shown to improve outcomes in heart failure, inflammatory bowel disease, and liver transplant here at WCM, but one is needed for patients with CDI.

Objective/Aim Statement:

- Identify areas of concern in disease education and follow-up workflows that may contribute to increased CDI recurrence (rCDI) and health care utilization.
- Assess whether high risk patients who receive standardized education and given specific follow-up to CDI specialists have improved outcomes.

Design/Methods:

Study Design: Retrospective analysis (descriptive statistics)

Participants: Adult patients diagnosed with CDI across inpatient and emergency department (ED) settings at WCM-NYP

Study Time Period: 7 months

Intervention: Creation of comprehensive care team

Variables:

- Patient demographics and social factors
- CDI diagnostic testing and severity classification
- CDI treatments (i.e., standard-of-care antibiotics, prophylaxis practices, antibiotic exposures, and use of live bacteriotherapeutic products),
- Hospitalization details (i.e., length of stay, discharge disposition, discharge education, and care transition processes, including specialty CDI care follow up scheduling).
- Longitudinal outcomes (2 to 12 months beyond discharge): (i.e., CDI recurrence, ED visits, hospital readmissions, ICU admissions, and mortality)
- Relevant comorbidities included a history of inflammatory bowel disease, use of PPI, and immunocompromised states for further risk stratification.

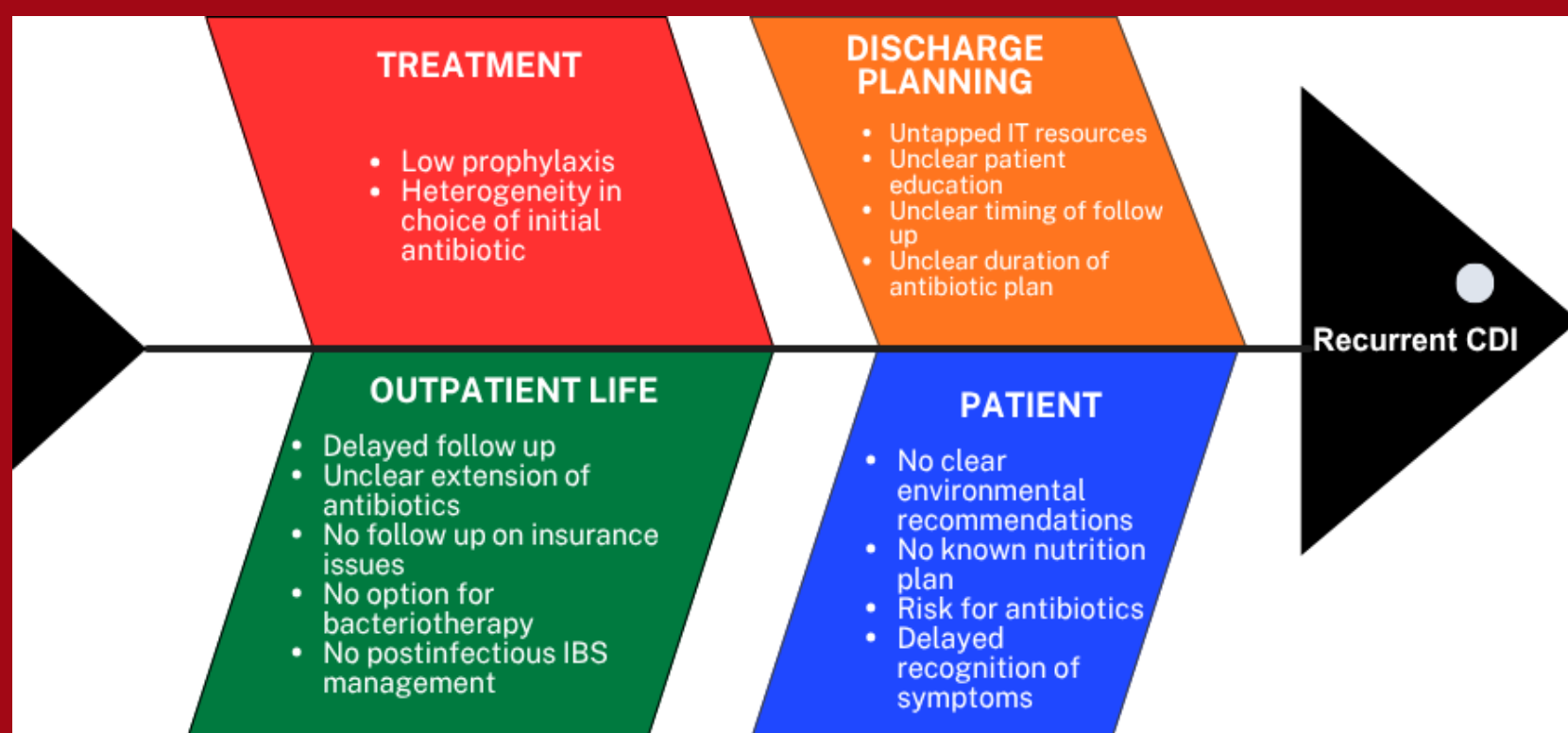


Figure 1. Ishikawa Root Causes for Recurrent CDI

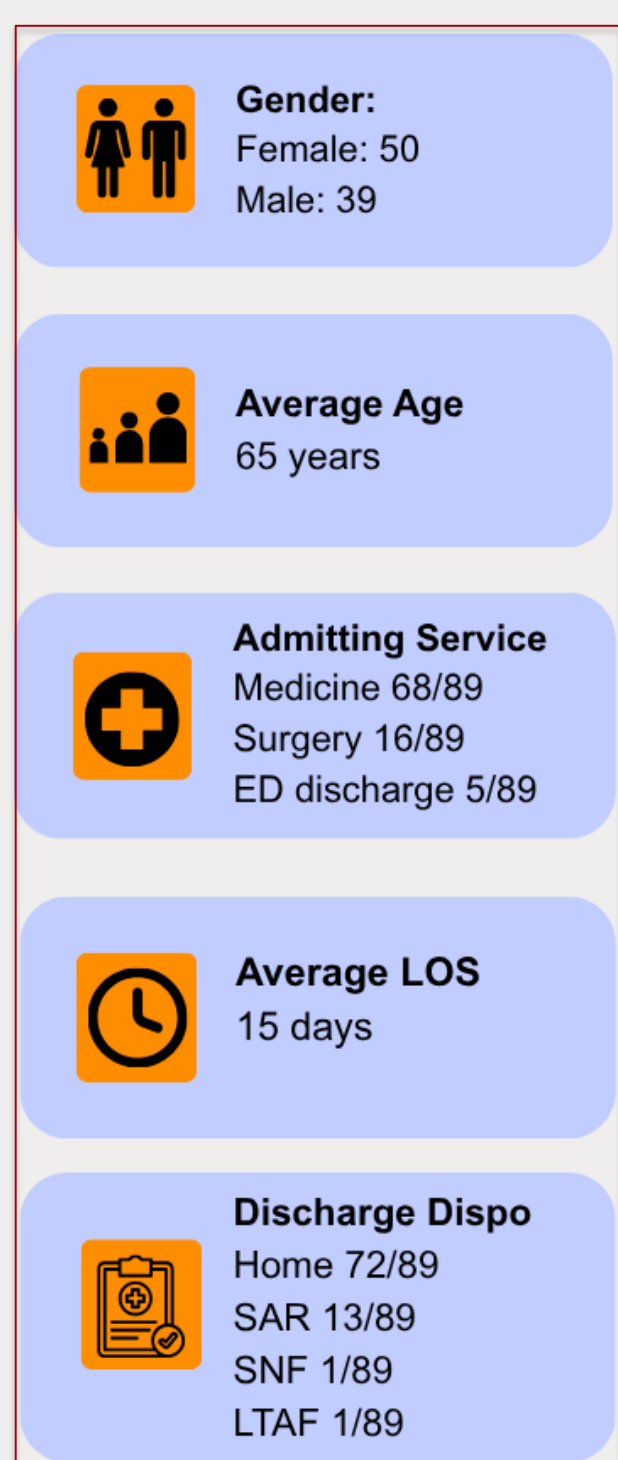


Figure 2. Patient Demographics

Results:

- A cohort of 89 patients with a positive CDI PCR were reviewed in this study. 63 out of 89 patients were CDI PCR positive and toxin negative. 26 out of 89 patients were CDI PCR positive and toxin positive.
- Among the 63 patients who were PCR positive and toxin negative, 38 patients (61%) were treated with vancomycin or fidaxomicin due to clinical symptoms.
- All 26 patients who were PCR positive and toxin positive received vancomycin or fidaxomicin treatment.
- 55 of 89 patients (62.5%) experienced at least one hospital readmission or ED revisit after the index CDI hospitalization. Most readmissions were for non-CDI diagnoses.
- 32 of 89 patients needed new non-CDI systemic antibiotics after 3 months from their initial hospitalization.
 - 9 of 32 patients received CDI prophylaxis – most commonly oral vancomycin.

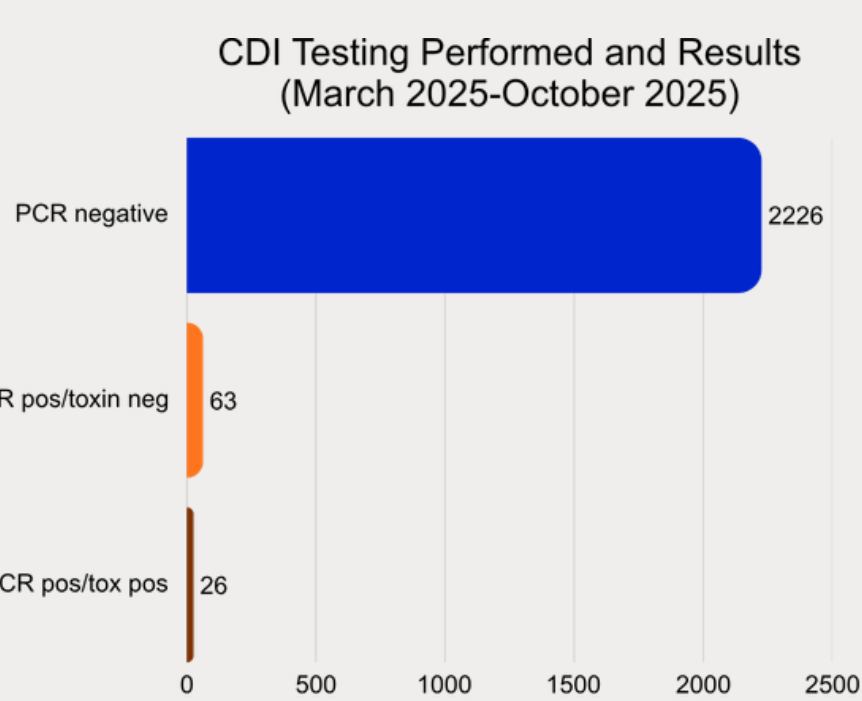


Table 1. CDI Testing Cohort

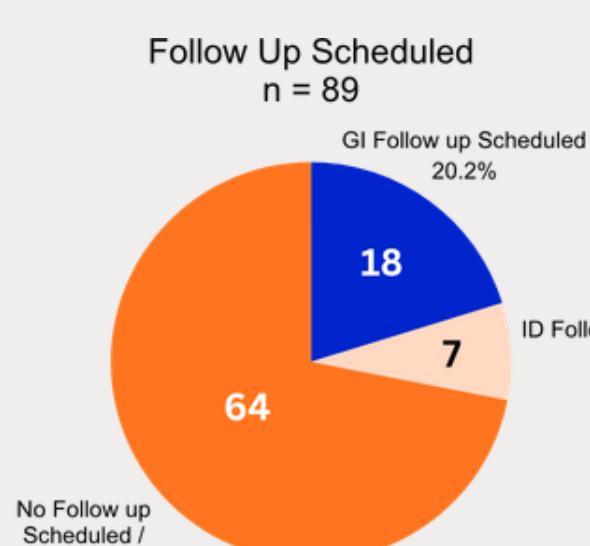


Figure 3. CDI Follow-up Distribution

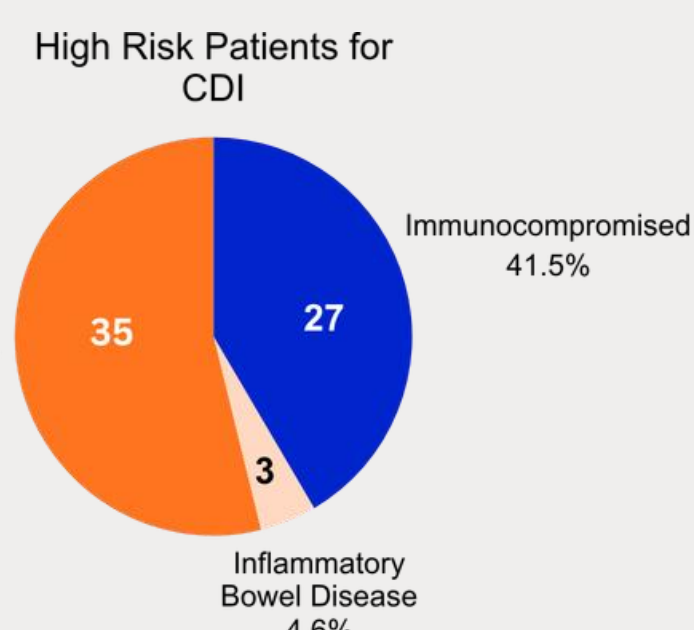


Figure 4. CDI Risk Factors

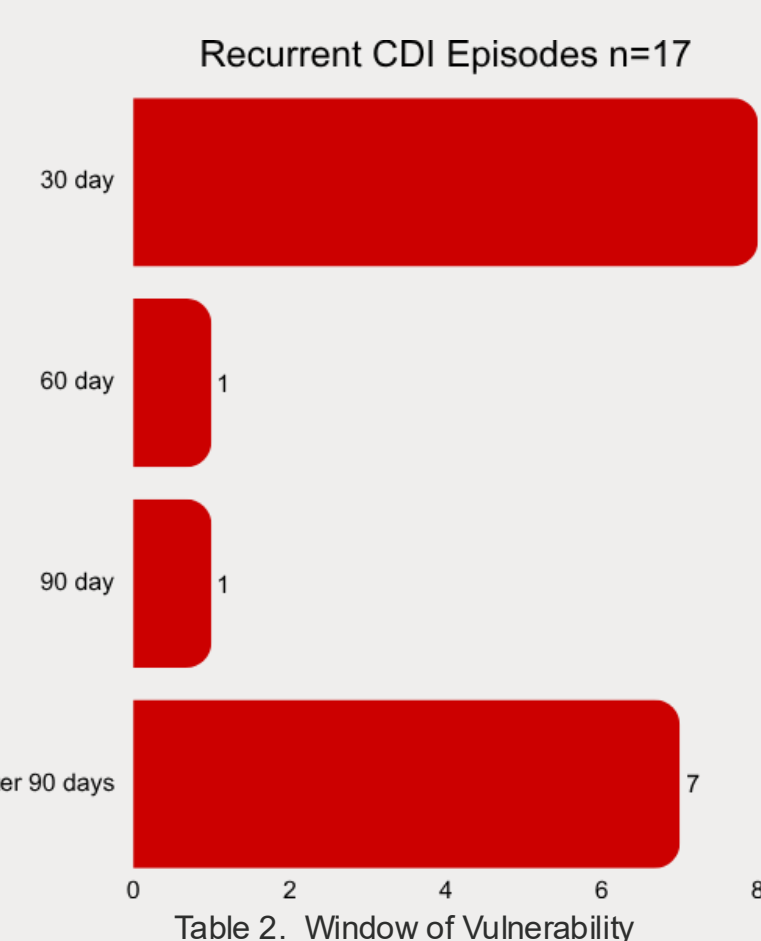


Table 2. Window of Vulnerability

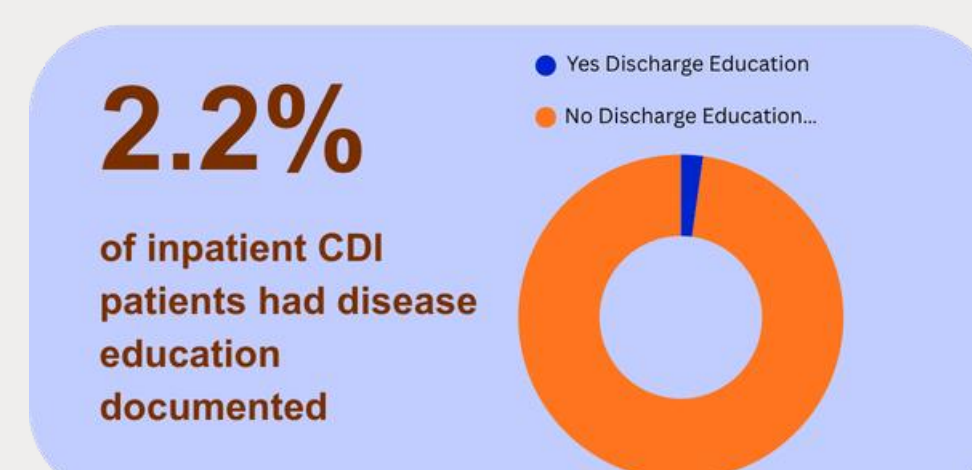


Figure 5. Patient Education Documentation

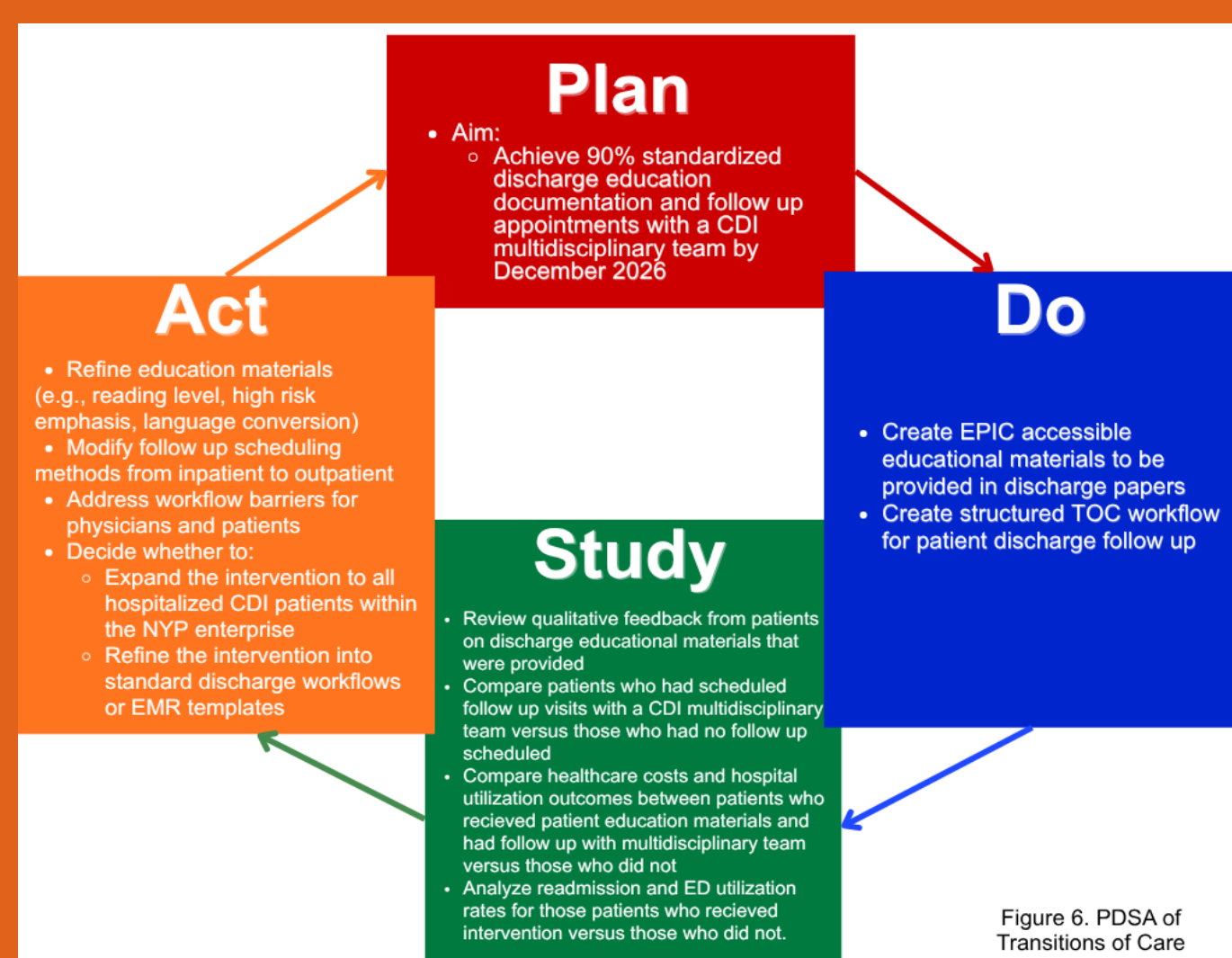


Figure 6. PDCA of Transitions of Care

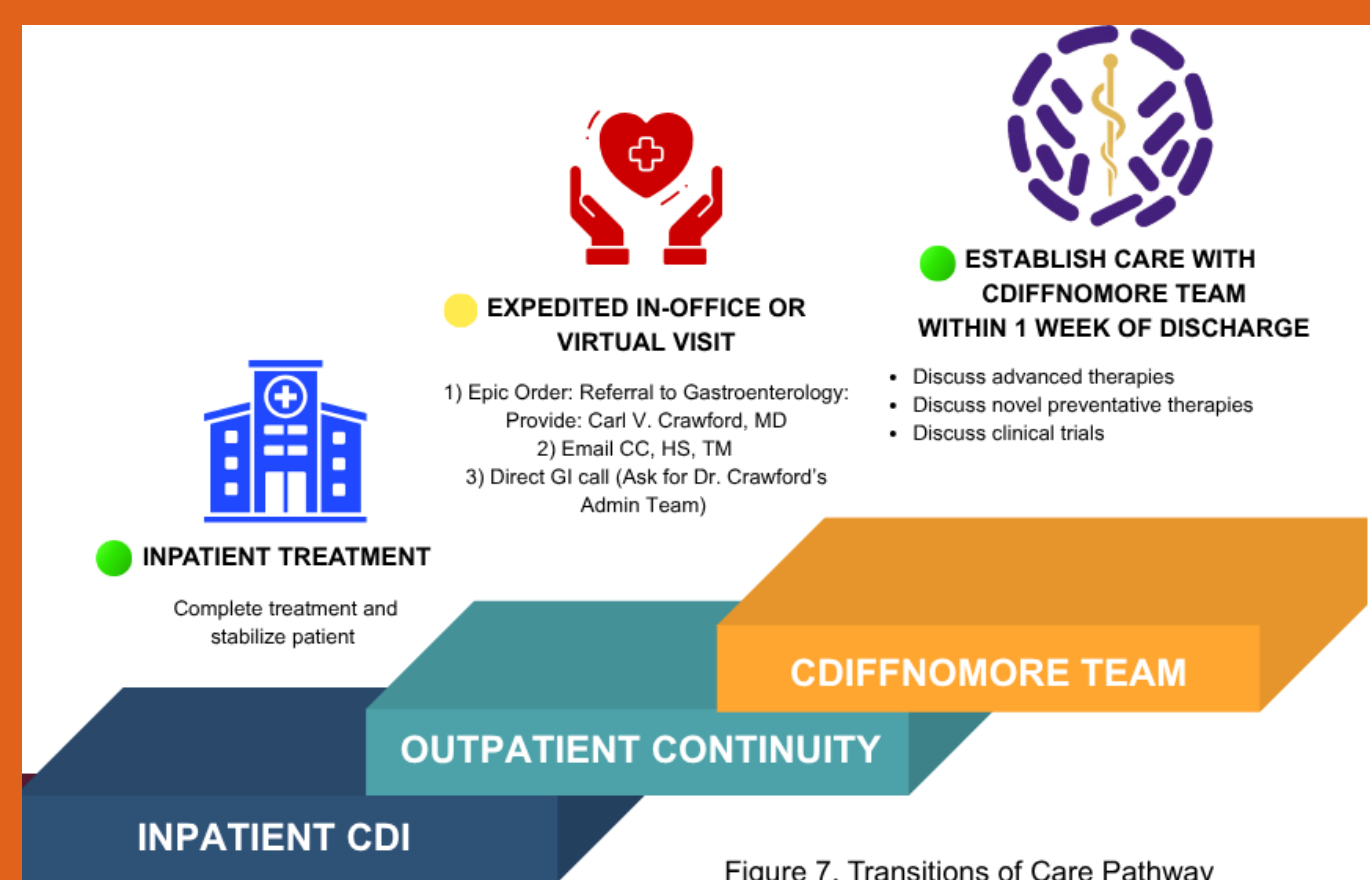


Figure 7. Transitions of Care Pathway

Conclusions/Lessons Learned:

Clostridioides difficile infection (CDI) imposes a substantial clinical and financial burden on hospitals and patients during and potentially after treatment. The analysis of 89 hospitalized patients with positive CDI testing were of advanced age, immunocompromised, had exposure to ICU, and had a prolonged length of stay. In most cases, CDI was not the primary admitting diagnosis; rather, patients were hospitalized for conditions such as sepsis, cardiopulmonary disease, postoperative or surgical complications, renal or metabolic disorders, and oncologic or immunocompromised conditions.

Despite a high prevalence of established risk factors for CDI recurrence, preventive strategies were inconsistently implemented. The 97.5% of patients missing documented CDI-specific discharge education, and the 90% missing a clear CDI-specific follow-up plan highlights missed opportunities for supporting vulnerable patients.

Improving standardized discharge education while awaiting timely CDI-specific follow-up, can allow for comprehensive strategies for high-risk patients to reduce readmissions, prevent rCDI, and meaningfully decrease overall healthcare utilization.

Next Steps:

- Create a prospective CDI registry to track emerging trends
- Create education modules for physicians
- Complete interactive website for patients and healthcare providers
- Refine a formal transitions of care pathway offering multidisciplinary input and offerings for robust outpatient educational and clinical care
- Determine the clinical and economic impact of direct referral to a comprehensive care management team committed to preventing rCDI hospitalizations.



Figure 8. Patient and Provider Facing Materials



cdiffnomore.org

Breast Cancer Health Intervention Program: A Quality Improvement Initiative to Increase Early Detection and Screening of Patients at High Risk for Breast Cancer

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Statement of the Problem Identification of patients at high risk for breast cancer remains suboptimal during routine breast imaging, leading to missed opportunities for early detection, genetic evaluation, augmented screening, and targeted prevention. These gaps disproportionately affect populations with existing disparities in breast cancer outcomes, including Black and Ashkenazi Jewish patients.

Objective This quality improvement initiative aimed to increase high-risk breast cancer identification and improve referrals for genetic counseling and high-risk MRI screening from less than 1% to at least 20% by implementing the Ambry Genetics CARE digital risk assessment tool into routine breast imaging workflows.

Project Design This quality improvement initiative was conducted at a single urban academic medical center and facilitated through the ACR Learning Network ImPower Program. The Ambry CARE digital risk assessment tool was implemented into the routine workflows of a breast imaging center and three referring physician practices. A fishbone analysis identified root causes of under-identification across five domains: provider knowledge, patient-centered workflows, patient confidence, healthcare access, and patient engagement. Guided by these findings, targeted interventions were implemented through iterative Plan-Do-Study-Act cycles, including EPIC integration, automated radiologist worklist flags, expanded staffing with a genetic counseling assistant and patient navigator, standardized referral protocols, and physician and patient education regarding cancer risk and screening pathways. Baseline data from 2003 to 2023 were compared with post-CARE implementation data from October 2024 to July 2025. Outcome measures included the proportion of patients identified as high-risk, referred for genetic counseling, and scheduled for breast MRI screening. Process measures included reduced manual data entry and improved radiologist identification of high-risk patients through automated visual worklist flags.

Results Baseline analysis from 2003–2023 showed that fewer than 1% of approximately 33,000 annual breast imaging patients were identified as high-risk and received subsequent MRI or genetic testing. After 10 months of CARE implementation, 318 patients were assessed, and high-risk identification increased to 21.4% (68/318; $p < 0.0001$), an approximately 20-fold increase. Among assessed patients, 23% (73/318) accepted genetic counseling referrals, 6% (19/318) were scheduled for screening MRI, and 28% of high-risk patients (19/68) were scheduled for MRI. Process improvements included reduced manual data entry and improved radiologist identification through automated worklist flags.

Conclusions Integrating a digital risk assessment tool into routine breast imaging significantly improved high-risk patient identification, supporting a systematic, technology-driven approach to early detection, personalized screening, genetic evaluation, and targeted prevention. Future steps include evaluating mutation-positive patients, cancers detected through enhanced screening, and expansion to additional clinical sites.

Breast Cancer Health Intervention Program

A Quality Improvement Initiative to Increase Early Detection and Screening of Patients at High Risk for Breast Cancer

Lisa Americo, MD* · Anisah Alladeen, BS* · David Dillon, PhD · Melissa B. Reichman, MD · Katerina Dodelzon, MD FSBI · Brooke Crawford O'Neill, MSN, RN · Sasha J. Davis, MPH · La Keshia D. Barnes, BSN, RN · Robert Min, MD, MBA · Marina Corines, MD · Kemi Babagbemi, MD FACR

STATEMENT OF THE PROBLEM

Identification of patients at high risk for breast cancer remains suboptimal, leading to missed opportunities for early detection and contributing to disparate outcomes.

These gaps disproportionately affect: Black and Ashkenazi Jewish patients.

Impact: Limits opportunities for augmented screening, genetic evaluation, and targeted prevention.

OBJECTIVE / AIM

Implement the Amby Genetics CARE (*Comprehensive Assessment, Risk, and Education*) digital risk assessment tool into routine breast imaging workflows, with a focus on Black and Ashkenazi Jewish patients.

Primary Goals: Increase high-risk patient identification and improve referrals for genetic counseling and high-risk MRI screening from <1% to at least 20%

METHODS

Setting: Single urban academic medical center + 3 referring practices (ACR Learning Network — ImPower Program)

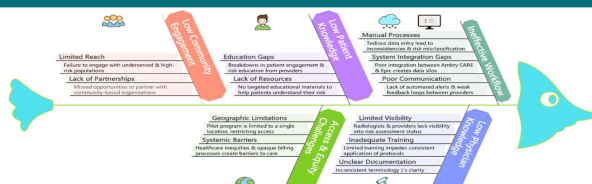
Root Cause Analysis: Fishbone analysis across 5 domains: Provider Knowledge · Patient-Centered Workflows · Patient Confidence · Healthcare Access · Patient Engagement

Interventions (PDSA Cycles):

- EPIC EHR integration with automated radiologist worklist flags
- Standardized referral protocols
- Expanded staffing: genetic counseling assistant + patient navigator
- Provider & patient education on cancer risk and screening pathways

Comparison: Baseline 2003–2023 vs. post-CARE Oct 2024–Jul 2025 (n=318 assessed)

Cause and Effect: Low Identification / Screening of High-Risk Breast Cancer Patients



ROOT CAUSES AND INTERVENTIONS



Figure 1: Fishbone Diagram — Root Causes and Interventions

CARE Intervention Impact: Improved Identification of High Risk Women



Figure 2: Identification of Patients at Increased Risk with CARE — Pre- vs. Post-Intervention Comparison (n = 318)

Figure 1: Fishbone Diagram — Root Causes and Interventions | Figure 2: CARE Intervention — Pre- vs. Post-Intervention Comparison (n = 318)

21.4%
patients identified as high-risk (68/318; vs. <1% baseline)

~20x
increase in high-risk identification (p<0.0001)

23%
accepted referrals for genetic counseling (73/318)

6%
of all assessed patients scheduled for screening MRI (19/318)

28%
of high-risk patients scheduled for screening MRI (19/68)

2,998
patients identified over 10-yr baseline (<1% of ~33,000/yr)

KEY RESULTS

Following a 10-month CARE implementation period, high-risk identification increased from <1% to **21.4%** — an approximately **20-fold increase** (p<0.0001). EHR integration reduced manual data entry; automated worklist flags improved radiologist identification of high-risk patients.

CONCLUSIONS

Integration of a digital risk assessment tool into routine breast imaging workflows **significantly improved identification of high-risk patients**, demonstrating the effectiveness of a systematic, technology-driven approach.

Future Directions:

- Evaluate gene mutation-positive patients identified
- Assess cancer diagnoses made through enhanced screening
- Expand CARE implementation to additional clinical sites

Clinical Integration of a Patient-Facing Digital Tool for Population-Level Hereditary Cancer Risk Screening in the Primary Care Setting

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Statement of the Problem

Population-wide cancer risk screening is a national health policy priority concordant with recommendations from several relevant national medical societies. However, most patients at high risk of developing cancer remain unidentified and thus unable to benefit from risk management strategies.

Objective

We implemented a quality improvement (QI) initiative to integrate a patient-facing digital cancer risk screening tool (CRST) into the workflows of 12 Weill Cornell Medicine (WCM) primary care clinics to identify patients at high risk of developing cancer and guide them to appropriate risk management pathways.

Methods

The CRST was sent to primary care patients three days and one day prior to their well visit via secure portal-based text message and email. Patients complete the CRST on their personal devices using their personal and family medical history. The CRST assesses patients' eligibility according to the National Comprehensive Cancer Network (NCCN) for genetic testing for hereditary cancer predisposition syndromes and generates a Tyrer-Cuzick breast cancer risk estimate for eligible female patients. Results are available in real time to both the patient and provider to inform risk management.

Results*

From 7/21/25 to 2/28/26, 15020 patients were sent the CRST. The study population was 56.8% (8530) female, 42.0% (6301) male, and 1.3% (189) unreported. The racial distribution was: 58.6% (8806) White, 11.9% (1794) Asian, 4.8% (717) Black or African American, 0.1% (16) American Indian or Alaska Nation, 0.1% (8) Native Hawaiian or other Pacific Islander, 6.2% (938) other combinations, 2.3% (338) multiple races, 14.7% (2202) declined, and 1.3% (201) unreported. The ethnic distribution was: 74.4% (11172) not Hispanic or Latino, 6.7% (1012) Hispanic or Latino, 17.5% (2634) declined, and 1.3% (202) unreported.

Of the patients sent the CRST, 47.6% (7156/15020) completed it. Of patients who completed the CRST, 29.0% (2075/7156) met current NCCN eligibility criteria for genetic testing for hereditary cancer predisposition syndromes. Of the 7156 patients who completed the CRST, 4010 were female patients eligible to have their lifetime risk of developing breast cancer calculated according to the Tyrer-Cuzick model; 20.8% (836/4010) received a lifetime risk estimate $\geq 20\%$, which is considered high risk. In total, 33.4% (2389/7156) of patients met genetic testing eligibility criteria, had a high lifetime risk of breast cancer, or both. 1060 (7.1%) patients received a referral to the WCM Genetics and Personalized Cancer Prevention program for risk counseling and/or genetic counseling. After a six-week follow-up from the conclusion of the study period, 582 (3.9%) had scheduled their appointments, and 342 (2.3%) had completed their appointments. 45 (0.3%) patients with high lifetime risk of breast cancer completed a breast MRI. 283 (1.9%) patients completed genetic testing, yielding 33 patients with pathogenic variants, 3 patients with likely pathogenic variants, and 100 patients with variants of unknown significance. Identified pathogenic variants are given in Figure 2. Risk management for patients with pathogenic variants is ongoing. Patients at high risk of breast cancer or meeting genetic testing eligibility criteria not initially referred by their primary care provider have been contacted via secure portal message by the QI team to be made aware of their risk assessment results and be offered risk management with GPCP. Follow-up is ongoing.

*Percentages are calculated using denominator=15020 except where otherwise specified.

Conclusions

This QI initiative demonstrates sustainable integration of cancer risk screening into primary care clinical workflows using a digital patient-facing screening tool. Actionable pathogenic variants in WCM primary care patients identified through this initiative now inform personal cancer risk management strategies. We have demonstrated that national society guideline-concordant population-level cancer risk screening is feasible and generates potentially life-saving personalized health knowledge.

Clinical Integration of a Patient-Facing Digital Tool for Population-Level Hereditary Cancer Risk Screening in the Primary Care Setting

Enzo G. Bruscato BS, Tina Karimagahe BA*, Max Kirby BA, Jill M. Rieger MD, Serena Mulhern MD MS, Meredith F. Lash-Dardia MD, Brooke C. O'Neill MSN AGPCNP, La Kesha Barnes BSN RN, Nitisha Ponnappan BA, Siena Gioia BS, Grace Pucel BS, Julia Ciesielka BS, Che Martin PhD, Keith Hentel MD, Adam R. Stracher MD, Melissa K. Frey MD MS, Ravi N. Sharaf MD MS, Amanda Laterza Ozarowski MS CGC, Michelle Primiano MS CGC | *co-first author

Background

- Population-level hereditary cancer risk screening is a national health priority.
- Most high-risk patients remain unidentified and cannot benefit from risk management.
- We implemented a quality improvement (QI) initiative to integrate a patient-facing digital cancer risk screening tool (CRST) into the workflows of 12 academic primary care clinics to identify patients at high risk of cancer and guide them to appropriate risk management.

Methods

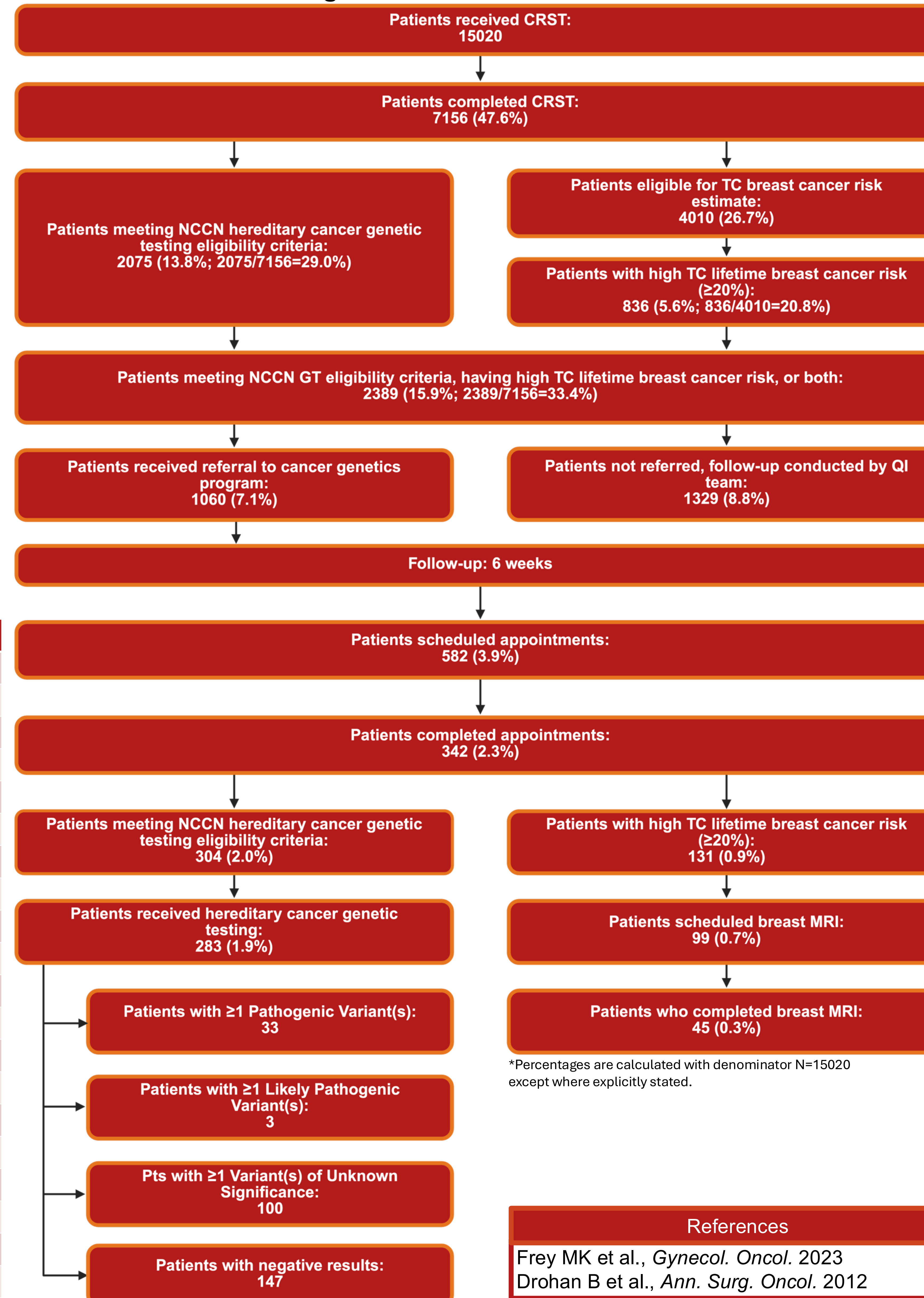
- Patients receive the CRST three days and one day pre-appointment via secure portal-based SMS and email.
- Patients complete the CRST on personal devices with personal & family medical history.
- The CRST assesses National Comprehensive Cancer Network (NCCN) hereditary cancer genetic testing (GT) eligibility and generates a Tyrer-Cuzick (TC) breast cancer risk estimate for eligible female patients to inform risk management.

Table 1. Demographics (N=15020)

Characteristic	N (%)
Age, median, years; IQR	46.9; 36.9-59.9
Sex	
Female	8530 (56.8%)
Male	6301 (42.0%)
Unreported	189 (1.3%)
Race	
White	8806 (58.6%)
Asian	1794 (11.9%)
Black or African American	717 (4.8%)
American Indian or Alaska Nation	16 (0.1%)
Native Hawaiian or Other Pacific Islander	8 (0.1%)
Other combinations not described	938 (6.2%)
Multiple races	338 (2.3%)
Declined	2202 (14.7%)
Unreported	201 (1.3%)
Ethnicity	
Hispanic or Latino or Spanish Origin	1012 (6.7%)
Not Hispanic or Latino or Spanish Origin	11172 (74.4%)
Declined	2634 (17.5%)
Unreported	202 (1.3%)

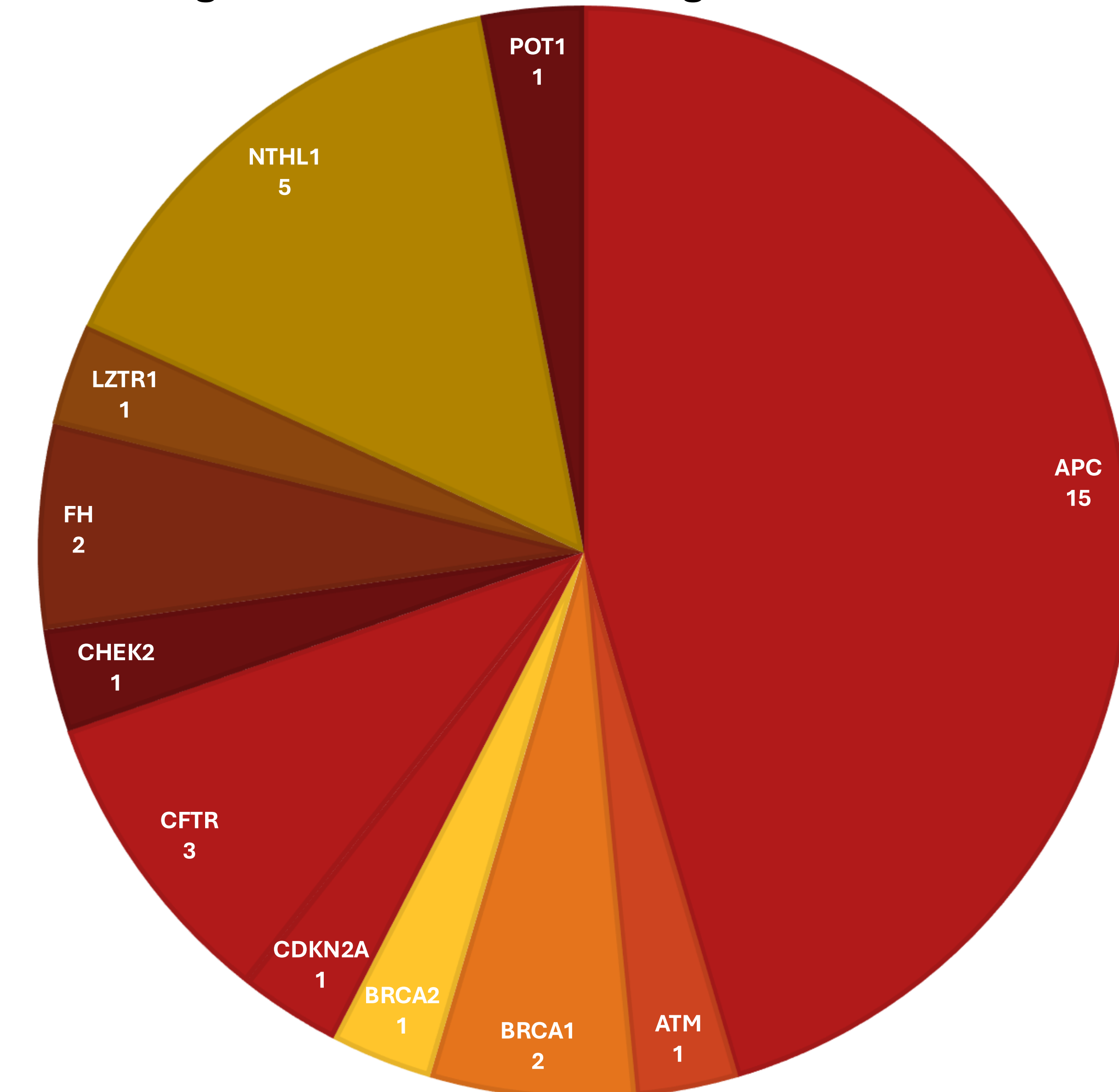
Results

Figure 1. Results* 7/21/25 – 2/28/26



- Risk management for patients carrying pathogenic variants (Fig. 2) is ongoing.
- Patients with high breast cancer risk or meeting GT eligibility criteria not initially referred by their primary care provider (Fig. 1) have been contacted via secure portal message by the QI team to be made aware of their risk screening results and be offered risk management with the cancer genetics program. Follow-up is ongoing.

Figure 2. Identified Pathogenic Variants



Conclusions

- This QI initiative demonstrates sustainable integration of cancer risk screening into primary care clinical workflows using a digital patient-facing screening tool and has identified actionable pathogenic variants to inform personalized cancer risk management strategies.
- National society guideline-concordant population-level cancer risk screening is feasible and generates potentially life-saving personalized health knowledge.

References

Frey MK et al., *Gynecol. Oncol.* 2023
Drohan B et al., *Ann. Surg. Oncol.* 2012

Title: Score to Protect: Enhancing Anticoagulation in Atrial Fibrillation

Authors: Michael E. Kaiser, MD MPH, Vincenzo Cimino, DO, Khaled Halwani, DO, Laura Bradel, MD

Department: Internal Medicine/Cardiology

1. Statement of the Problem: *In December of 2024 we found out that 137 patients admitted to the Telemetry unit with atrial fibrillation (afib), 99 were anticoagulated with apixaban. Of these 99 patients, 15% were improperly anticoagulated by dosage.*

2. Objective/Aim of the study: *We aim to increase appropriate dosing of apixaban by 50% within 3 months with the addition of an approved clinical decision support system (CDSS) EMR tool incorporated into a standardized telemetry admission note template. The CDSS will recommend appropriate dosage adjustment based on the dosing criteria for age, function and weight.*

3. Project Design/Methods: *This quality improvement project was developed for patients with atrial fibrillation, specifically focusing on those admitted to the Telemetry unit. An initial patient sample was extracted using Epic/SlicerDicer. Based on the data gathered, a Clinical Decision Support System (CDSS) was designed to aid in appropriate apixaban dosing. The CDSS underwent multiple levels of approval, including review by the Cardiology Clinical Leadership Group (CLG), Clinical Documentation, and several quality assurance teams. Once approved, the CDSS was embedded into a standardized Telemetry admission/progress note for consistent use across the unit. To enable data tracking, the CDSS includes a smart element that allows us to monitor each note containing a complete CDSS. Currently, PDSA Cycle 1 is still underway, and the data presented represents only a portion of the total patient encounters captured over the initial one-month period.*

4. Results: *We extracted data from patients over a one-week period (April 30 to May 7, 2025), of 57 patients admitted to the Telemetry unit, 52 new Telemetry admission or progress notes were collected, each with a completed Clinical Decision Support System (CDSS) entry. Of these, 32 were for patients without atrial fibrillation (AFib), and 14 for those with AFib. 3 CDSS's were improperly scored. 3 patients either had a watchman placed, AMA'ed, or had active VTE. Among the 14 AFib patients, 9 were anticoagulated with apixaban, and 22.2% were found to be improperly dosed. To assess uncertainty around the observed improper dosing rate, a 95% binomial confidence interval (CI) was calculated. Among 9 anticoagulated AFib patients, 2 (22.2%) were improperly dosed. Using the Wilson score method—appropriate for small samples and extreme proportions—the 95% CI was 0.064 to 0.55. This wide interval reflects the limited sample size and underscores the need for additional data.*

5. Conclusions: *The interim data collected during PDSA Cycle 1 highlighted the need for further education of residents on proper apixaban dosing protocols. Additionally, the data collection tool should be refined to include only patients with atrial fibrillation, in order to avoid confounding results from unrelated note entries. These minor but important adjustments are expected to significantly enhance our ability to identify and correct improper apixaban dosing.*



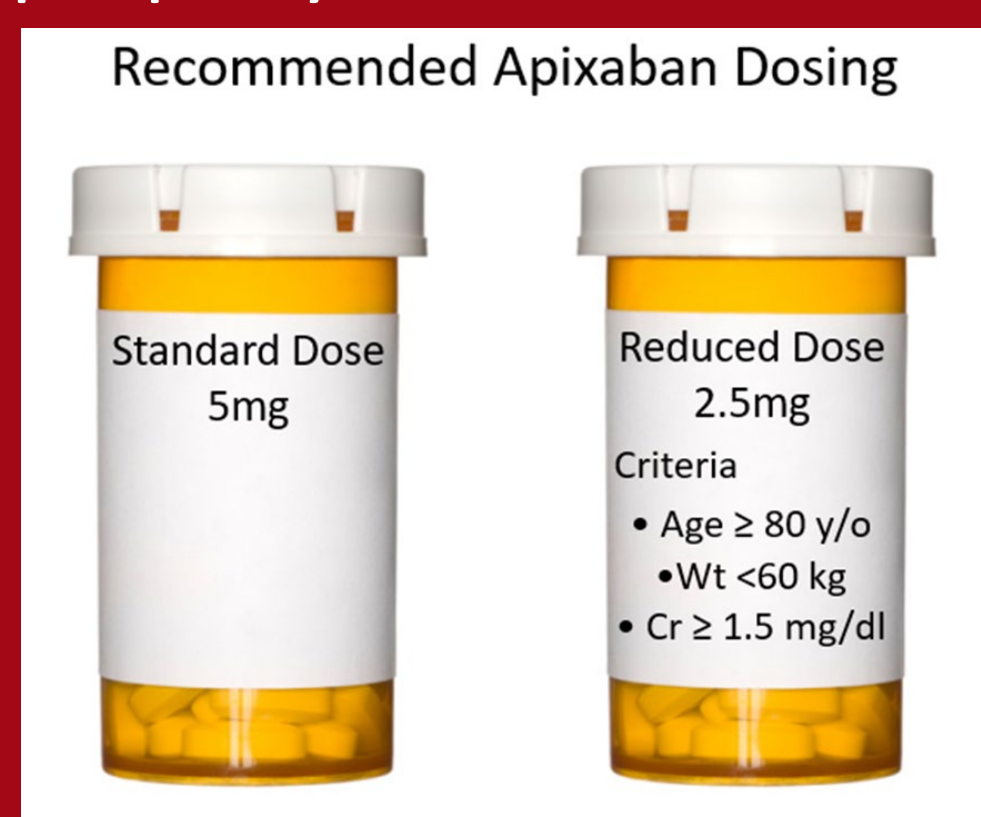
Score to Protect: Enhancing Anticoagulation in Atrial Fibrillation

Annual Weill Cornell Medicine Quality Improvement and Patient Safety Poster Symposium

Michael E. Kaiser, MD MPH | May 21st, 2025

Problem Statement

- Proper dosing of Apixaban can be challenging, as there are standardized dosing guidelines for dose reductions in select patients.
- In December of 2024 we found that of 137 patients admitted to the Telemetry unit with atrial fibrillation (afib), 99 were anticoagulated with apixaban. Of these 99 patients 15% were improperly dosed.

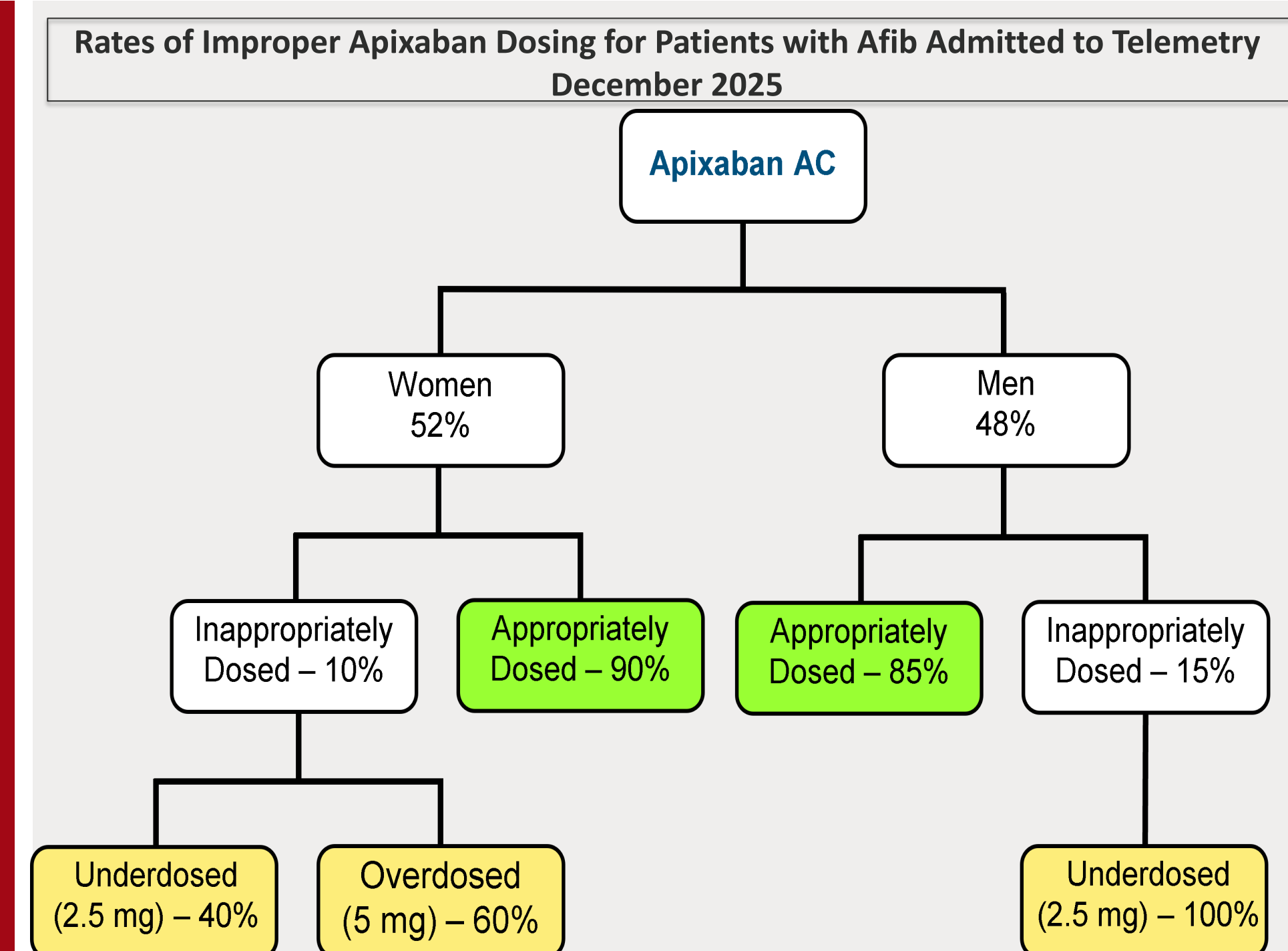


Objective/Aim Statement

- We aim to increase appropriate dosing of apixaban by 50% within 3 months with the addition of an approved clinical decision support system (CDSS) EMR tool incorporated into a standardized telemetry admission note template. The CDSS will recommend appropriate dosage adjustment based on the dosing criteria for age, function and weight.

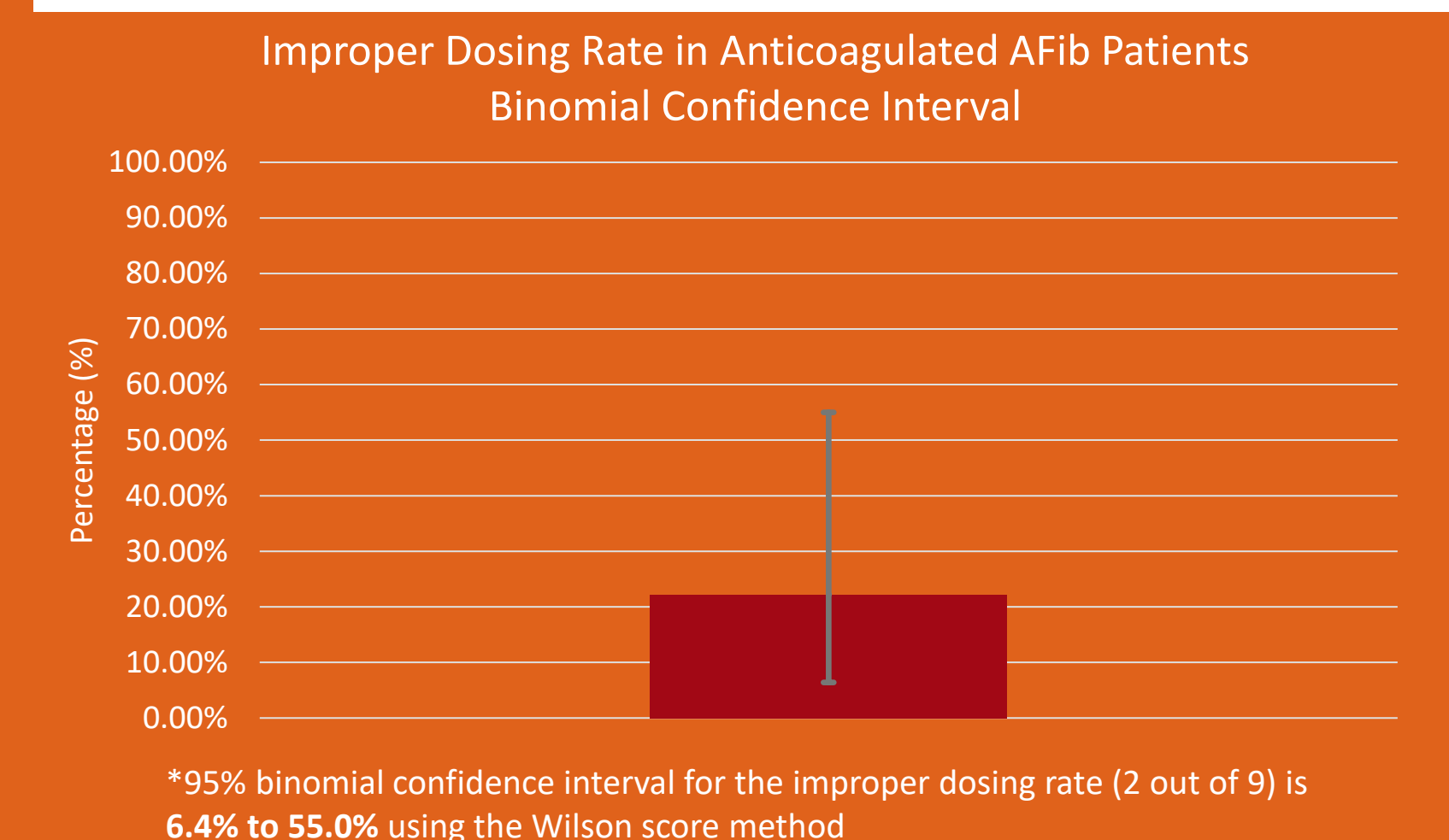
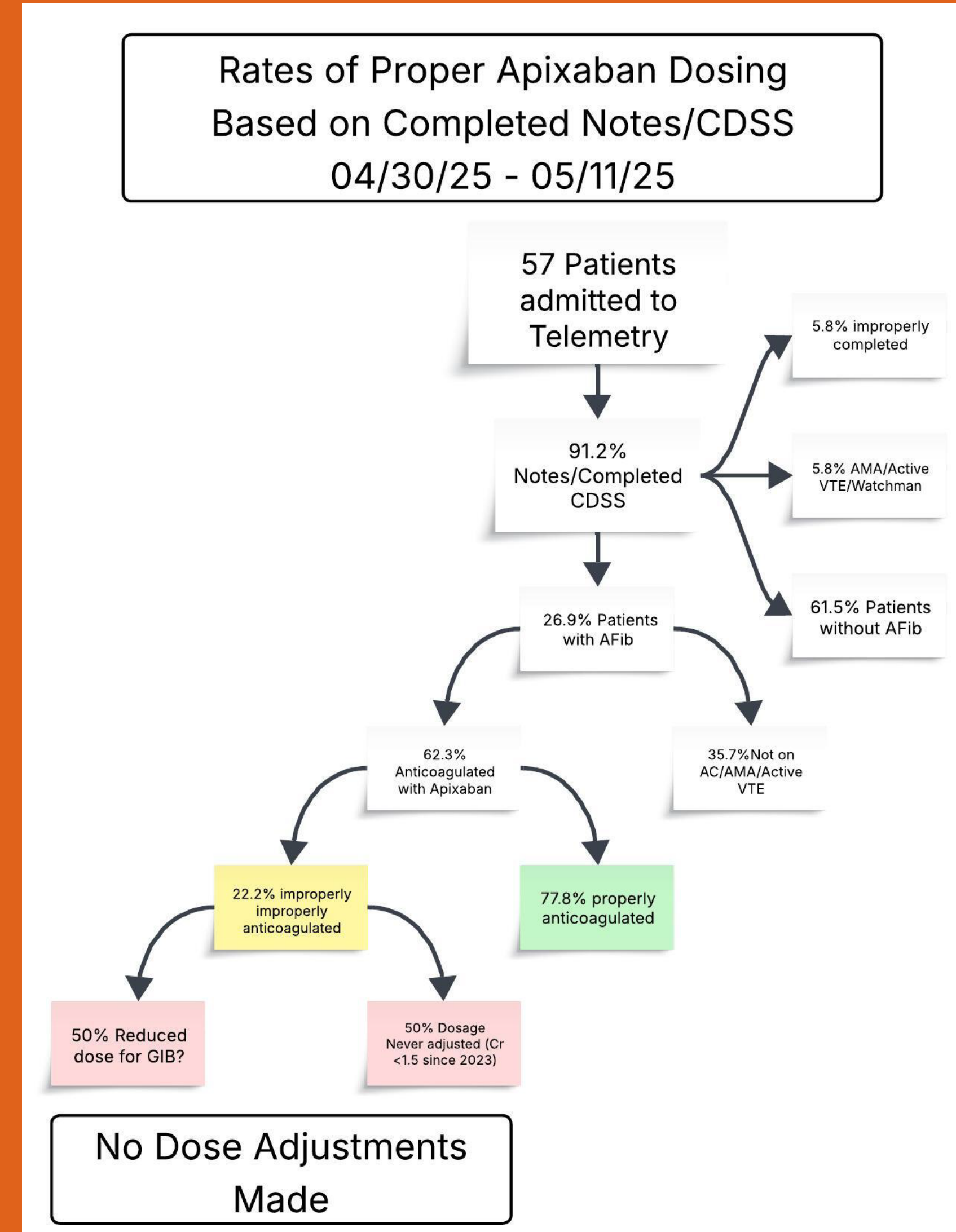
Design/Methods

- Creation of a CDSS integrated into a standardized note that will provide real time feedback on apixaban dosing to increase rates of proper administration.
- This is allowing for the creation of a Telemetry Data Base, where additional information can be extracted for further analysis.



Measure Type	Measures
Outcome Measures	<ul style="list-style-type: none"> Increase the rate of appropriate anticoagulation (AC) dosing by 50% Increase provider knowledge and confidence in AC dosing by 5%
Process Measures	<ul style="list-style-type: none"> Provide AC dosing and EMR intervention education to 100% of providers Achieve 100% AC dosing adjustment evaluation within 24 hours of admission
Balancing Measures	<ul style="list-style-type: none"> Confirm that the increased workload for tool utilization does not exceed 5% Confirm the intervention increases the inappropriate dosing rate by 0%

Results



Conclusions/Lessons Learned

- Discrepancies in CDSS's completed were primarily related to inconsistent note utilization rather than system performance.
- The CDSS accurately scored all patients whose medication reconciliations were completed prior to note entry, reinforcing the value of integrated workflows.

Next Steps

- Modify the CDSS to be applied only to patients with AFib
- Enhance education measures for proper apixaban dosing

References

1. ELIQUIS. Label via DailyMed. Food and Drug Administration. Updated date: 2024-08-02.
2. Zeltouni M, Giczevska A, Lopes RD, et al. Clinical and Pharmacological Effects of Apixaban Dose Adjustment in the ARISTOTLE Trial. *J Am Coll Cardiol*. 2020;75(10):1145-1155. doi:10.1016/j.jacc.2019.12.060.
3. Shahmoradi, Leila et al. "Clinical decision support systems-based interventions to improve medication outcomes: A systematic literature review on features and effects." *Medical Journal of the Islamic Republic of Iran*, vol. 35, 27. 22 Feb. 2021, doi:10.47176/mjiri.35.27.
4. Syrowatka A, Motala A, Lawson E, et al. *Computerized Clinical Decision Support To Prevent Medication Errors and Adverse Drug Events: Rapid Review*. 2024 Feb. In: *Making Healthcare Safer IV: A Continuous Updating of Patient Safety Harms and Practices* [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2023 Jul. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK600580/>.
5. Armando, Lucrezia Greta et al. "Clinical decision support systems to improve drug prescription and therapy optimisation in clinical practice: a scoping review." *BMJ Health & Care Informatics*, vol. 30, 1 (2023): e100683. doi:10.1136/bmjph-2022-100683.
6. Calloway, Stacy et al. "Impact of a clinical decision support system on pharmacy clinical interventions, documentation efforts, and costs." *Hospital Pharmacy*, vol. 48, 9 (2013): 744-52. doi:10.1310/hjph4809-744.
7. Syrowatka, Ania, et al. *Computerized Clinical Decision Support To Prevent Medication Errors and Adverse Drug Events: Rapid Review*. Making Healthcare Safer IV: A Continuous Updating of Patient Safety Harms and Practices. Agency for Healthcare Research and Quality (US), February 2024. 2022;15(6):e2022059674. doi:10.1542/peps.2022-059674.
8. Joseph MM, Mahajan P, Snow SK, Ku BC, Saidinejad M. Optimizing Pediatric Patient Safety in the Emergency Care Setting. *Pediatrics*. 2022;150(5):e2022059674. doi:10.1542/peps.2022-059674.
9. Reddy VV, Mithius Winkler S, Miller MA, et al. Left Atrial Appendage Closure With the Watchman Device in Patients With a Contraindication for Oral Anticoagulation: The ASAP Study (ASA Plavix Feasibility Study With Watchman Left Atrial Appendage Closure Technology). *J Am Coll Cardiol*. 2013;61(25):2551-6. doi:10.1016/j.jacc.2013.03.035.
10. Holmes DR, Reddy VV, Buchbinder M, et al. The Assessment of the Watchman Device in Patients Unsuitable for Oral Anticoagulation (ASAP-TOO) Trial. *Am Heart J*. 2017;189:68-74. doi:10.1016/j.ahj.2017.03.007.

QPS Poster Session Abstract Format

Title: Reducing Foley Duration in MOTS Patients on 8C

Authors: Kassandra Ramirez, MBA, MMS, PA-C

Department: Medicine - PA

1. Statement of the Problem: Shorter duration of postoperative foley catheters are associated with improved patient outcomes, including a decreased risk of catheter-associated urinary tract infections (CAUTI), earlier ambulation, and reduced length of stay¹. On the Medical Orthopedic Trauma Service (MOTS), foley catheter removal was generally targeted for postoperative day one (POD1). However, timing was left to the providers' discretion, resulting in variability in removal practices and trial of void (TOV) periods extending overnight. This inconsistency leads to increased delirium risk in elderly patients. Additionally, circadian influences on urine storage and voiding suggest that delayed initiation of TOV may prolong time to successful voiding post-foley removal². This highlighted an opportunity to standardize foley catheter removal timing to improve patient outcomes and workflow efficiency.

2. Objective/Aim of the study: Standardize POD1 foley catheter removal to optimize daytime TOV, align with routine peri-care workflows, and reduce overall catheter duration by 6-8 hours.

3. Project Design/Methods: This process improvement project was conducted using quantitative data analysis at New York Presbyterian/Weill Cornell Medical Center, on MOTS patients with foley catheters located on unit 8 Central. The intervention followed a Plan-Do-Study-Act cycle, including creation and implementation of a standardized foley removal pathway and staff education. Data was collected for four months pre- and four months of post-implementation. Data was obtained from the electronic health records, including foley placement and removal times, discontinuation order timing, and total foley catheter duration. Pre- and post-implementation data were compared using descriptive statistics and run charts.

4. Results: As a result of pathway implementation and staff education, average foley catheter duration decreased by 8.15 hours. Additionally, the proportion of patients with foley duration greater than 48 hours decreased from 25% to 10%. Of note, median time from foley discontinuation order to removal increased from 1.7 to 2.2 hours, which warrants further investigation and is a potential opportunity for intervention.

5. Conclusions: Implementation of a standardized foley removal pathway reduced overall foley duration by 8 hours. Informal 8 Central nursing feedback suggested the intervention streamlined the existing workflow, supporting its sustainability and potential to reduce long-term CAUTI risk.

Future considerations include implementing a standardized single-order process for foley removal with automatic discontinuation and limiting foley placement to the PACU to minimize foley duration when surgical delays occur.



Problem Statement

Shorter duration of postoperative foley catheters are associated with improved patient outcomes, including a decreased risk of catheter-associated urinary tract infections (CAUTI), earlier ambulation, and reduced length of stay¹. On the Medical Orthopedic Trauma Service (MOTS), foley catheter removal was generally targeted for postoperative day one (POD1). However, timing was left to the providers' discretion, resulting in variability in removal practices and trial of void (TOV) periods extending overnight. This inconsistency leads to increased delirium risk in elderly patients. Additionally, circadian influences on urine storage and voiding, suggest that delayed initiation of TOV may prolong time to successful voiding post-foley removal². This highlighted an opportunity to standardize foley catheter removal timing to improve patient outcomes and workflow efficiency.

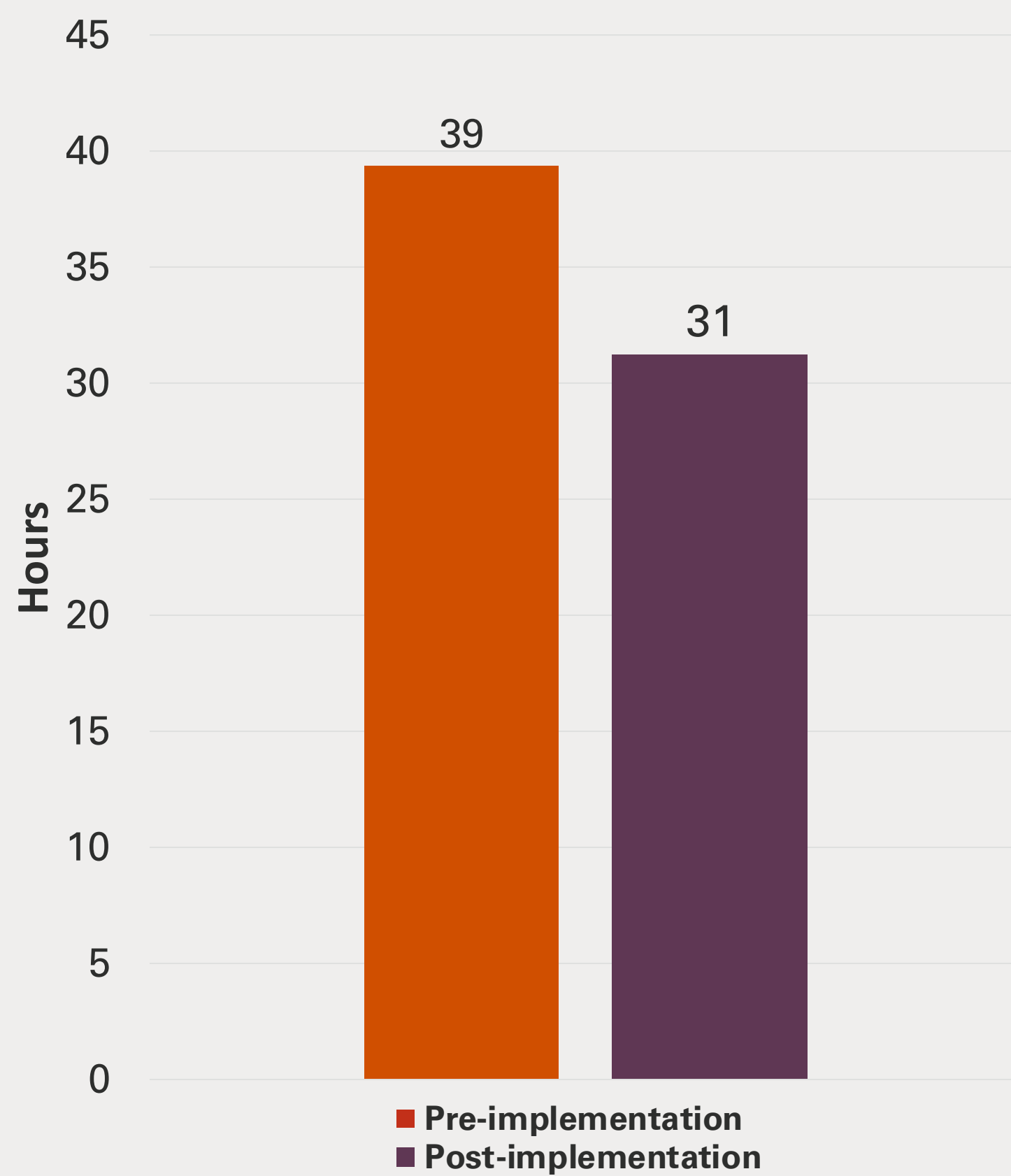
Objective/Aim Statement

Standardize POD1 foley catheter removal to optimize daytime TOV, align with routine peri-care workflows, and reduce overall catheter duration by 6-8 hours.

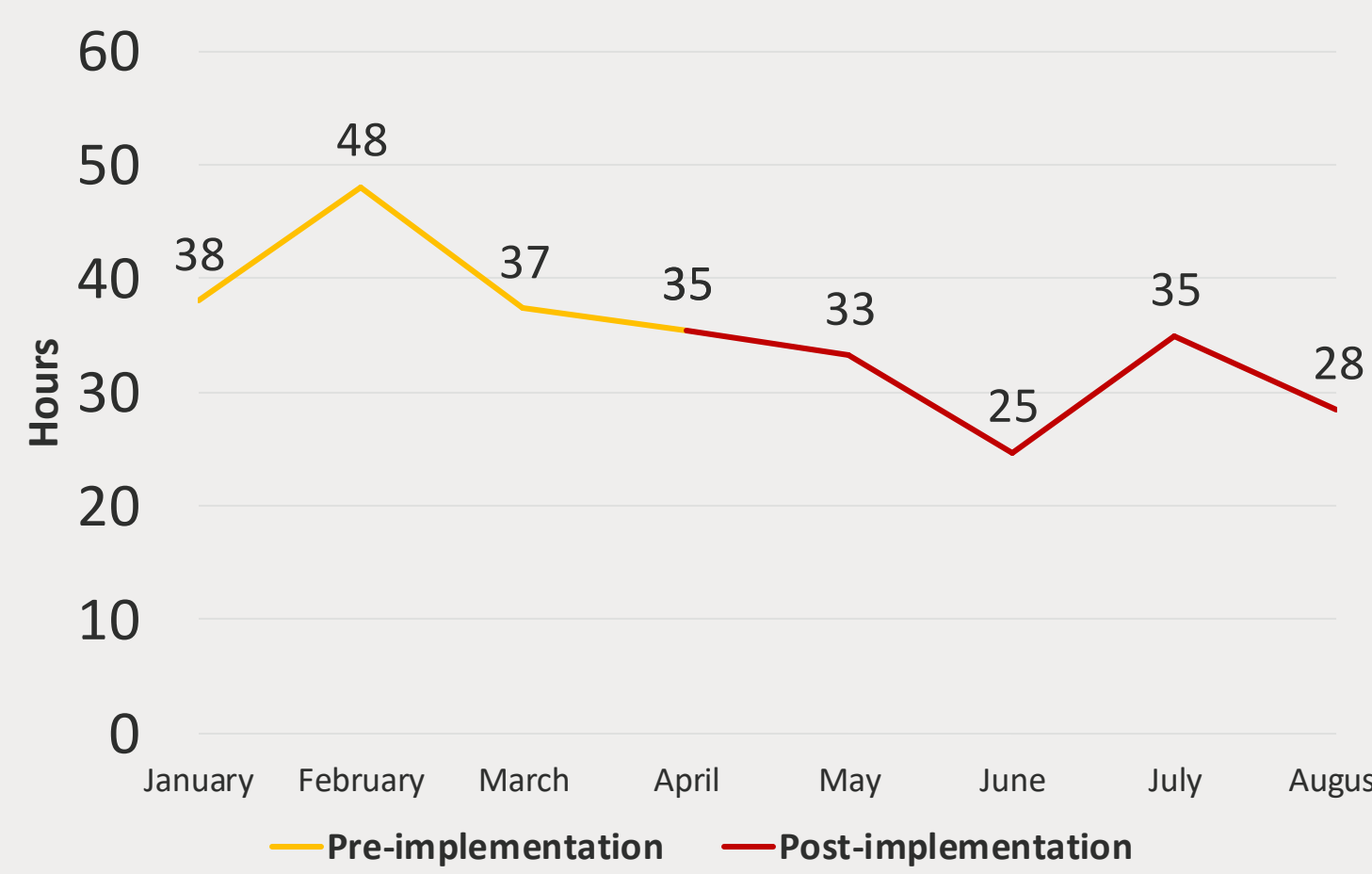
Design/Methods

This process improvement project was conducted using quantitative data analysis at NewYork Presbyterian/Weill Cornell Medical Center, on MOTS patients with foley catheters located on unit 8 Central. The intervention followed a Plan-Do-Study-Act cycle, including creation and implementation of a standardized foley removal pathway and staff education. Data was collected for four months pre- and four months post-implementation. Data was obtained from the electronic health records, including foley placement and removal times, discontinuation order timing, and total foley catheter duration. Pre- and post-implementation data were compared using descriptive statistics and run charts.

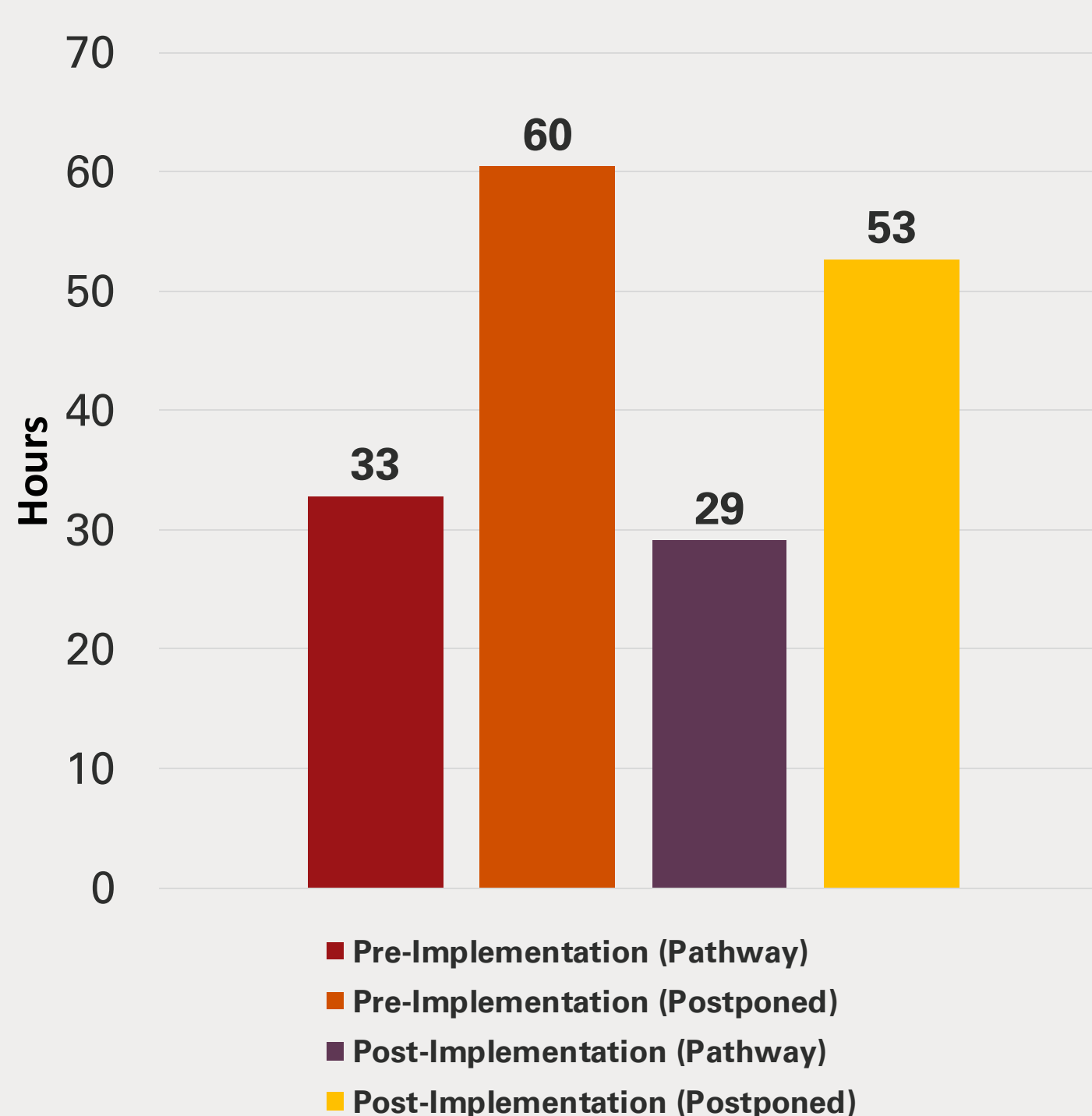
Average Foley Duration in MOTS Patients



Monthly Average of Foley Duration



Hours of Foley Duration: Pathway vs. Postponed Surgery



Results

As a result of pathway implementation and staff education, average foley catheter duration decreased by 8.15 hours. Additionally, the proportion of patients with foley duration greater than 48 hours decreased from 25% to 10%. Of note, median time from foley discontinuation order to removal increased from 1.7 to 2.2 hours, which warrants further investigation and is a potential opportunity for intervention.

Conclusions

Implementation of a standardized foley removal pathway reduced overall foley duration by 8 hours. Informal 8 Central nursing feedback suggested the intervention streamlined the existing workflow, supporting its sustainability and potential to reduce long-term CAUTI risk.

Limitations

This project was conducted on one unit and service, limiting generalizability. Foley catheter duration varies by procedure across surgical services.

Next Steps

Future considerations include implementing a standardized single-order process for foley removal with automatic discontinuation and limiting foley placement to the PACU to minimize foley duration when surgical delays occur.

References

[1] Centers for Disease Control and Prevention. *Guideline for Prevention of Catheter-Associated Urinary Tract Infections*. 2009; p. 44. <https://www.cdc.gov/infection-control/media/pdfs/Guideline-CAUTI-H.pdf>
 [2] Ramsey S, Zagorodnyuk V. Role of circadian rhythms and melatonin in bladder function in health and diseases. *Autonomic Neuroscience*. 2023;246(103083). <https://doi.org/10.1016/j.autneu.2023.103083>

Closing the Gap: Improving Seizure-to-Bedside Response Times in the EMU
Daniel Bolotin*, Anne Reisch*, Chris Chornay, Pallavi Juneja, Ushna Khan, Robert McInnis
Neurology, Weill Cornell Medicine

Statement of the Problem

Epilepsy Monitoring Unit (EMU) admissions intentionally increase seizure risk to facilitate diagnosis and treatment, making rapid bedside response a critical patient safety requirement. Although national standards require continuous observation, there is no consensus definition of acceptable response time, and prior studies demonstrate substantial variability, particularly overnight. Risk of post-convulsive cardiorespiratory collapse is highest within 1–3 minutes, emphasizing the importance of rapid intervention. A near-SUDEP event in 2025 prompted evaluation of seizure response processes at our institution.

Objective/Aim of the Study

To improve seizure response times for convulsive seizures, targeting bedside response ≤ 45 seconds for $\geq 90\%$ of events and elimination of responses > 90 seconds.

Project Design/Methods

We conducted a pre–post quality improvement study comparing 174 days before and 117 days after a sentinel event. Root cause analysis identified modifiable contributors to delays, including alarm configuration and workflow inefficiencies, informing a PDSA cycle. Interventions included optimization of alarm settings, staff education, and EEG software upgrade incorporating AI-based seizure detection with automated alerts. For each seizure, we recorded electrographic and clinical onset, seizure type, notification method, staff arrival time, and shift (day vs night). Post-intervention data were further divided into early and late phases to assess for transient vigilance effects. Outcomes included time to bedside, proportion meeting target thresholds, and response time variability.

Results

Forty-three convulsive seizures were analyzed (21 pre-intervention, 22 post-intervention). Electrographic onset preceded clinical onset by a median of 60 seconds. Median response time improved from 45 to 34 seconds, and the proportion of seizures reached within 45 seconds increased from 47.6% to 59.1%. Events exceeding 90 seconds decreased from four to two. Response time variability improved substantially, with standard deviation decreasing from 176 to 57 seconds and range narrowing from 0–780 to 0–240 seconds. When post-intervention phases were analyzed, attainment of the ≤ 45 -second target declined over time (63.6% to 45.5%), while variability continued to improve (standard deviation 72 to 40 seconds).

Conclusions

Targeted interventions following a sentinel event improved median response time, reduced extreme delays, and markedly enhanced reliability, particularly overnight. However, some early gains attenuated over time, suggesting vigilance decay. Persistent overnight delays and the electrographic-to-clinical lag indicate that earlier seizure detection remains an important opportunity. Future interventions focused on continuous monitoring, including video EEG observation and automated detection systems, may further improve response times and patient safety.



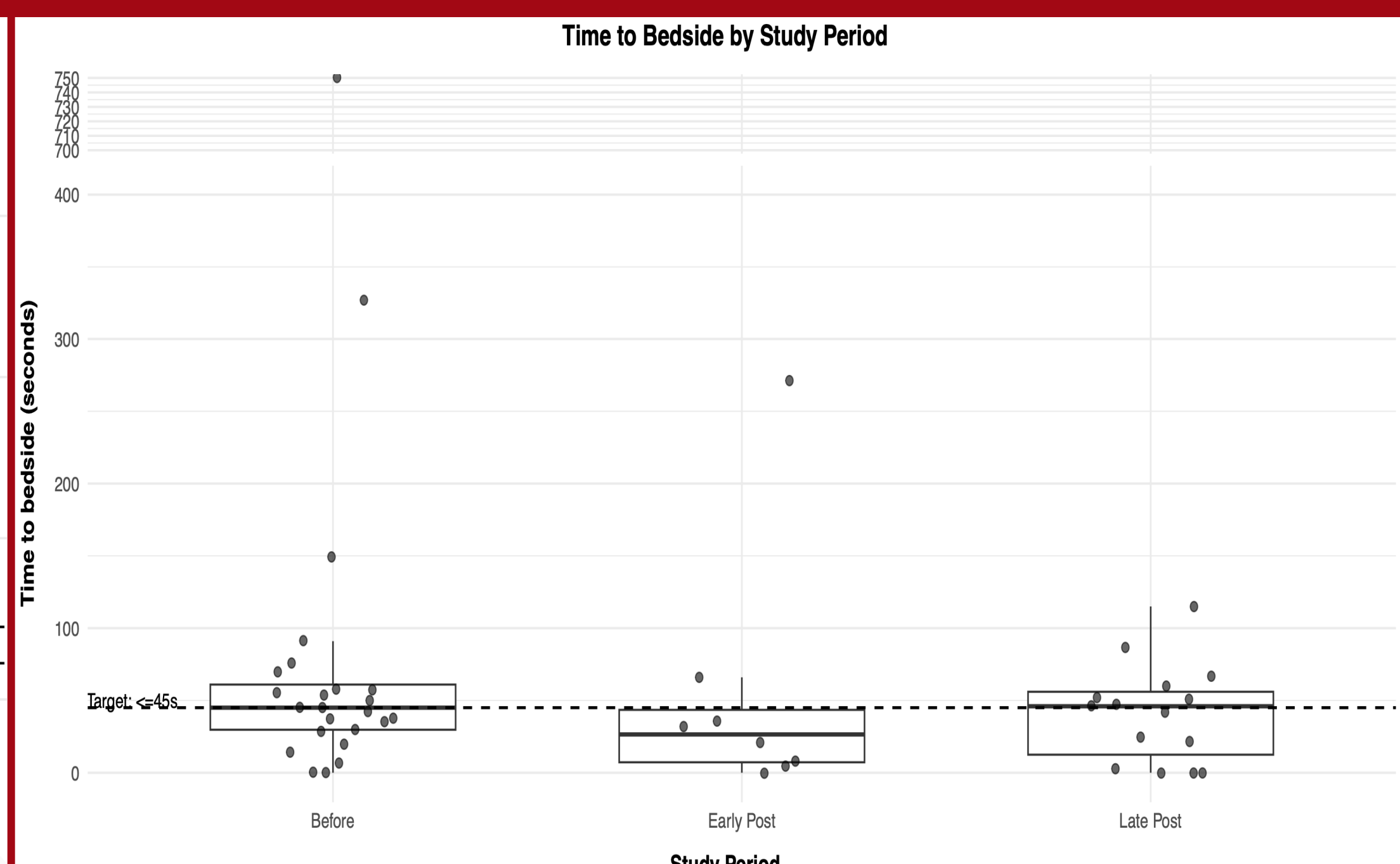
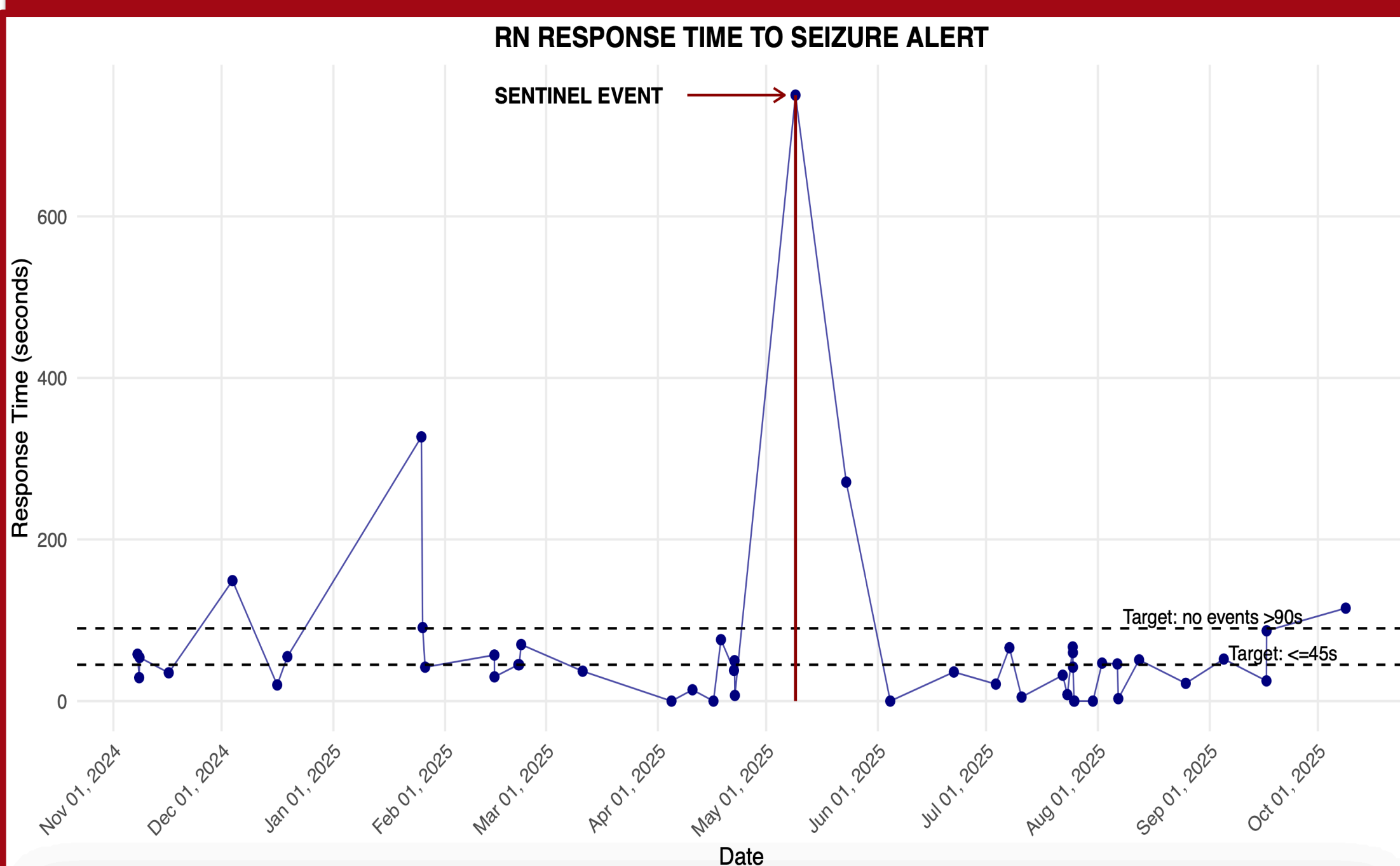
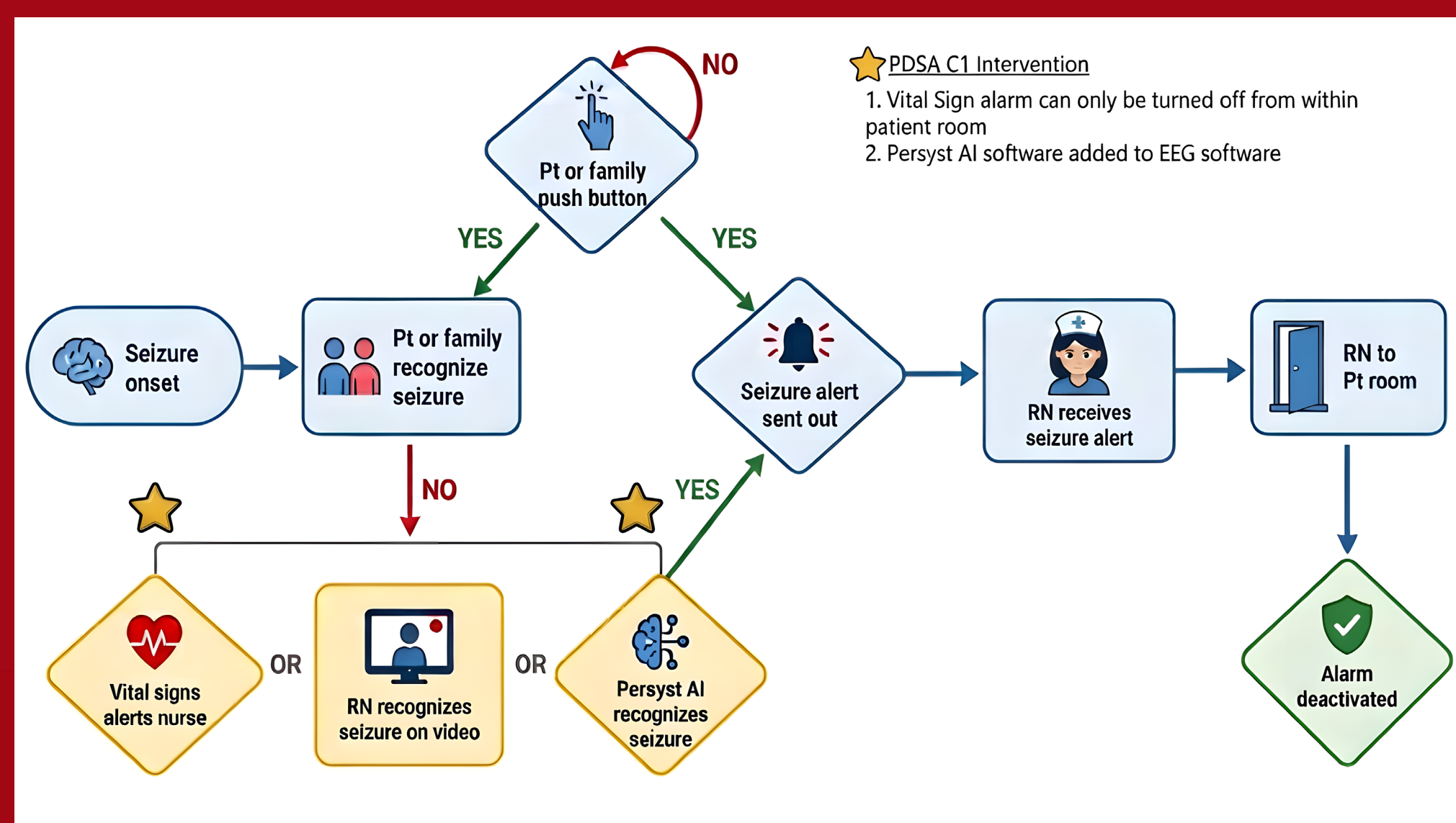
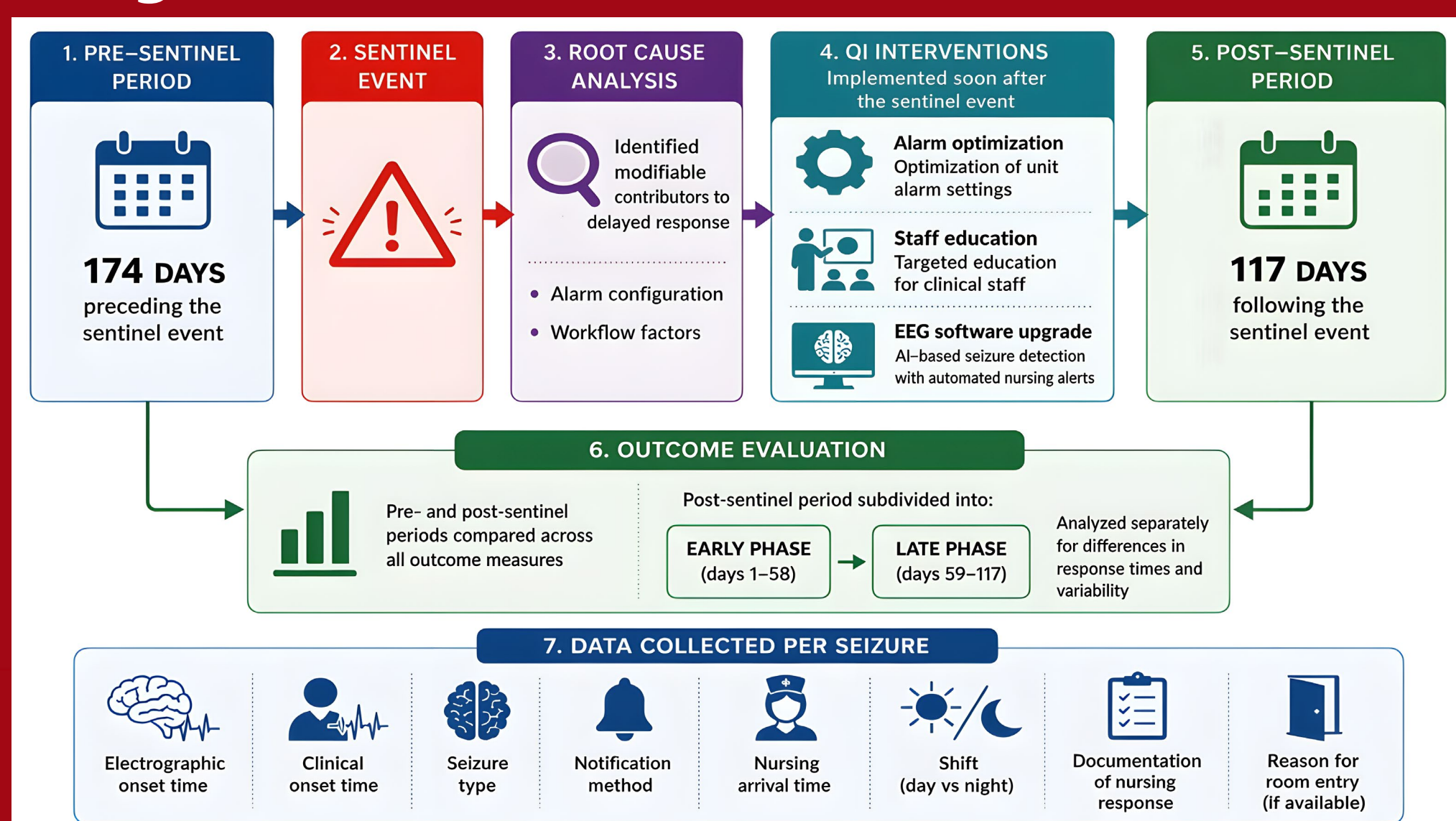
Background:

- Epilepsy Monitoring Unit (EMU) admissions increase seizure risk intentionally to support diagnosis and treatment
- Rapid bedside response is therefore a critical patient-safety priority
 - Guidelines require continuous monitoring and timely intervention, but no standardized definition of "timely" exists [1]
 - Reported response times vary widely, especially overnight [2]
- Sudden unexplained death in epilepsy (SUDEP) has been found to occur within a narrow window, with the highest risk of cardiorespiratory collapse occurring within 1–3 minutes following convulsive seizures [3]
- Institutional trigger: A near-SUDEP event (2025, overnight EMU admission) prompted close evaluation of response processes

Aim Statement:

- Improve nursing response times to convulsive seizures, with bedside arrival $\leq 45s$ for $\geq 90\%$ of events and elimination of responses $>90s$ ("outliers").

Design/Methods:



Response Time to Bedside by Study Period and Shift

	Before			Early Post			Late Post		
	Total	Day	Night	Total	Day	Night	Total	Day	Night
Number of seizures	24	14	10	8	4	4	15	10	5
Time to bedside, median (IQR), s	45.0 (29.8–61.0)	38.5 (15.5–57.8)	52.0 (39.8–66.2)	26.5 (7.2–43.5)	14.5 (6.0–32.2)	34.0 (25.2–94.8)	46.0 (12.5–56.0)	23.5 (0.8–49.8)	52.0 (47.0–60.0)
≤ 45 seconds, n (%)	13 (54.2%)	9 (64.3%)	4 (40.0%)	6 (75.0%)	3 (75.0%)	3 (75.0%)	7 (46.7%)	6 (60.0%)	1 (20.0%)
≥ 90 seconds, n (%)	4 (16.7%)	2 (14.3%)	2 (20.0%)	1 (12.5%)	0 (0.0%)	1 (25.0%)	1 (6.7%)	1 (10.0%)	0 (0.0%)
Standard deviation, s	155.7	82.4	221.3	89.9	29.5	124.1	33.8	40.1	10.0
Range, s	0–750	0–327	29–750	0–271	0–66	5–271	0–115	0–115	42–67

Day shift defined as 7:00 AM to 6:59 PM; night shift defined as 7:00 PM to 6:59 AM. Target response time was bedside arrival ≤ 45 seconds.

Conclusions/Lessons Learned

- Following RCA-informed system changes after a near-SUDEP event, bedside responses became more reliable, with fewer extreme delays. Night-time responses were generally slower.
- Median responses times drifted modestly over time, while reduced variability persisted --- suggestive of a system-level change rather than sole effect of transient vigilance.

Next Steps

- A repeat PDSA cycle will implement a video-EEG sitter to further improve response times.

REFERENCES:
 [1] Lado FA, Ahrens SM, Riker E, et al. Guidelines for specialized epilepsy centers: executive summary of the report of the National Association of Epilepsy Centers guideline panel. *Neurology*. 2024.
 [2] Ryvlin P, Nashef L, Lhatoo SD, et al. Incidence and mechanisms of cardiorespiratory arrests in epilepsy monitoring units (MORTEMUS): a retrospective study. *Lancet Neurol*. 2013.
 [3] Witek N, Cornes S, Hegde M. Staff response times in the epilepsy monitoring unit: a study of diurnal/nocturnal variability. *Neurodiagn J*. 2017.



Pancreatectomy 30-Day Outcomes with Disrupted Enhanced Recovery Implementation: A Retrospective Review of the ACS NSQIP Database

Sharon Baoas, DNP-ANP, Jae Leeahn, MD, Jeremy Fontirroche, MD, Ellis Scott, MD, Dr. Pieter

Smit, MD, James Rucinski, MD, Michael Zenilman, MD, Michael Wayne, MD

• Problem Statement

NYP-BMH Division of Hepatobiliary

- Despite technological and therapeutic advances, pancreatic surgery continues to carry significant morbidity and mortality.
- Although introduced in 2017, widespread adoption of the ERAS pathway has been limited by case complexity
- Compliance has historically been limited and was further disrupted by the implementation of a new EMR system in 2021

• ERAS Components

- PREOPERATIVE PHASE**
- Preoperative patient education and counseling with discharge planning
 - Preoperative carbohydrate loading
 - Immuno-nutrition drink 3-5 days before surgery
 - VTE prophylaxis
 - Skin bathing

- INTRAOPERATIVE PHASE**
- PAIN MANAGEMENT
 - Fluid goal directed therapy
 - Opioid sparing anesthesia – acetaminophen, gabapentin and NSAIDS
 - Maintenance of room temperature > 36.5 Celsius

- POSTOPERATIVE PHASE**
- Early feeding
 - Prevention of postoperative nausea and vomiting
 - Fluid goal directed therapy
 - Opioid sparing analgesia
 - Early ambulation

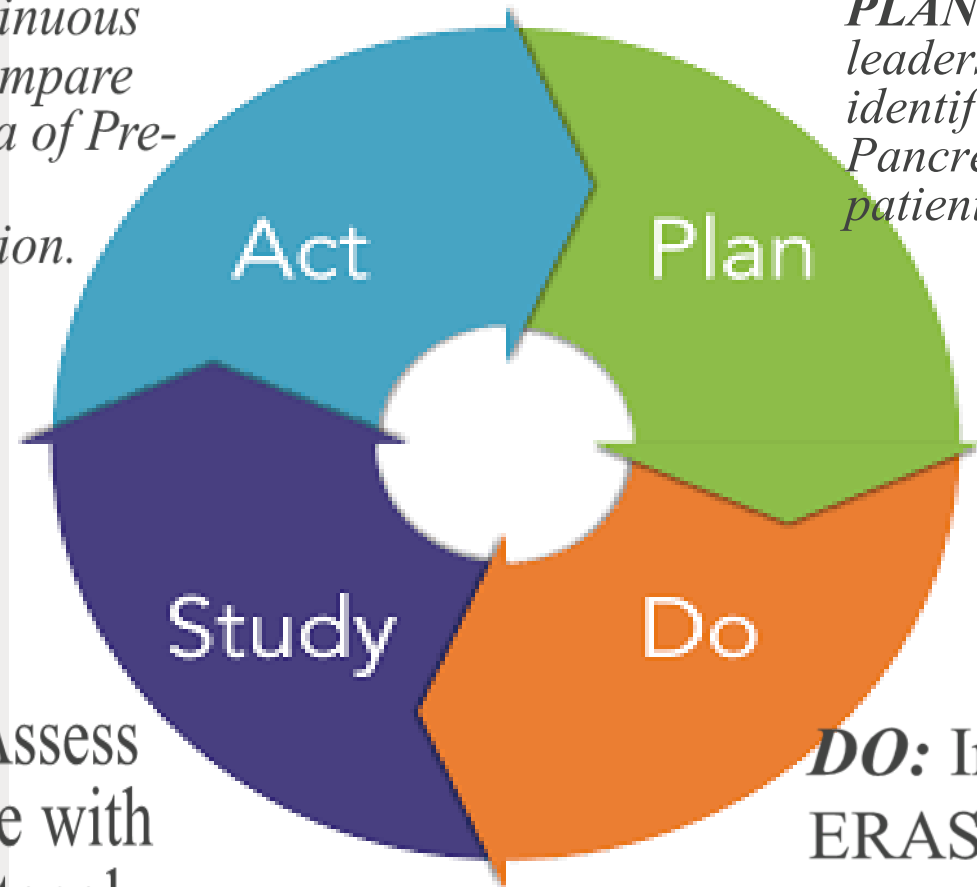
• Objective/Aim Statement

The purpose of this study is to evaluate the impact of an ERAS protocol for pancreatectomy on selected outcomes

- Surgical site infections (SSI)
- Length of stay (LOS)
- Hospital 30-day readmission rates

Theoretical Framework: Plan Do Study Act

ACT: Continuous feedback, compare baseline data of Pre- and Post implementation.



PLAN: Clinical leadership team identifies issues for Pancreatic surgical patients

STUDY: Assess compliance with ERAS protocol

DO: Implement ERAS order set

Design/Methods

All adults who underwent Pancreatectomy using retrospective observational study stratified by cancer and noncancer

- Retrospective data collection period: January 2018 to December 2021 (post ERAS implementation phase)
- Retrospective data collection period: January 2022 to December 2025 (disrupted ERAS phase)

Inclusion Criteria

- Patients older than 18 years old male and female elective Pancreatectomy cases

Exclusion Criteria

- Patients transferred from other hospitals, emergent cases and nursing home patients

Data Collection

- Chart review and abstraction from American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) database

Data Analysis

- T-test / Wilcoxon for continuous variables
- Fischer's exact test for categorical

• Results

30-day readmissions by status

30 days readmissions	2018 to 2021		P value	2022 to 2025		P value
	Cancer	No cancer		Cancer	No cancer	
No	98 (90.7%)	43 (78.2%)	0.027	72 (85.7%)	40 (83.3%)	0.5
Yes	10 (9.3%)	12 (21.8%)		12 (14.3%)	7 (14.6%)	
>2					1 (2.1%)	

• Conclusions/Lessons Learned

- Creating a protocol is not enough to alter the current practice a strategy is needed
- Adopting the ERAS protocol requires a shift in health care
- Requires constant collaboration and communication
- Monitor ERAS protocol compliance
- Next Steps
- Examine current adherence and the barriers impacting full compliance
- Calculate cost analysis
- Assess patient-reported outcomes and surgical experience



Adopting a Serious Illness Communication Model For Post-Acute Care Transitions in Medicare Beneficiaries Weill Cornell Medicine Quality Improvement and Patient Safety Symposium

Amy Mathew, DNP, MSN, MPH, RN | May 20, 2026

Problem Statement

Medicare FFS beneficiaries who are readmitted from a post-acute facility are 4 times as likely to die in the 100 days after discharge. 48% of Medicare beneficiaries who were readmitted within 30 days from a SAR at a Northeast based urban academic hospital system died within 12 months.

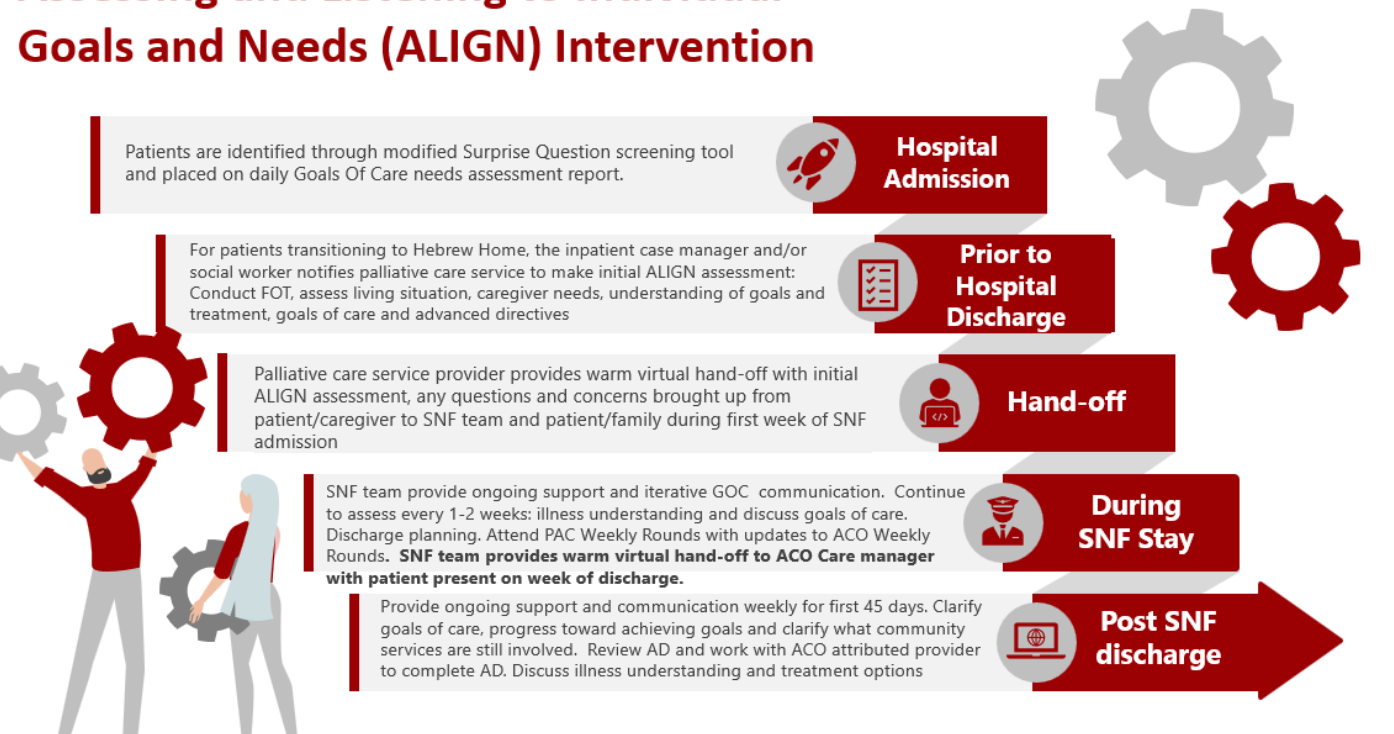
Objective/Aim Statement

For Medicare beneficiaries discharged from the hospital to a skilled nursing facility (P), does the Assessing and Listening to Individual Goals and Needs (ALIGN) intervention (I), compared to usual care (C), impact the completion of advanced directives, frequency of goals of care (GOC) communication, palliative care consults and hospice orders (O)?

Design/Methods

A pre- and post-intervention design for patients transitioning from the hospital to skilled nursing facility that have been identified for goals of care needs through the Surprise Question (SQ) tool for evaluation of the new ALIGN intervention process impact

Assessing and Listening to Individual Goals and Needs (ALIGN) Intervention



Participants

Medicare FFS beneficiaries that have been identified through the Surprise Question screening upon hospital admission and transitioning from the hospital to a skilled nursing facility. The participants will continue to receive the ALIGN intervention initiated from the inpatient stay, SNF stay and 45 days post-SNF stay.

Frequency of GOC Communication (Pre- and Post-Intervention)

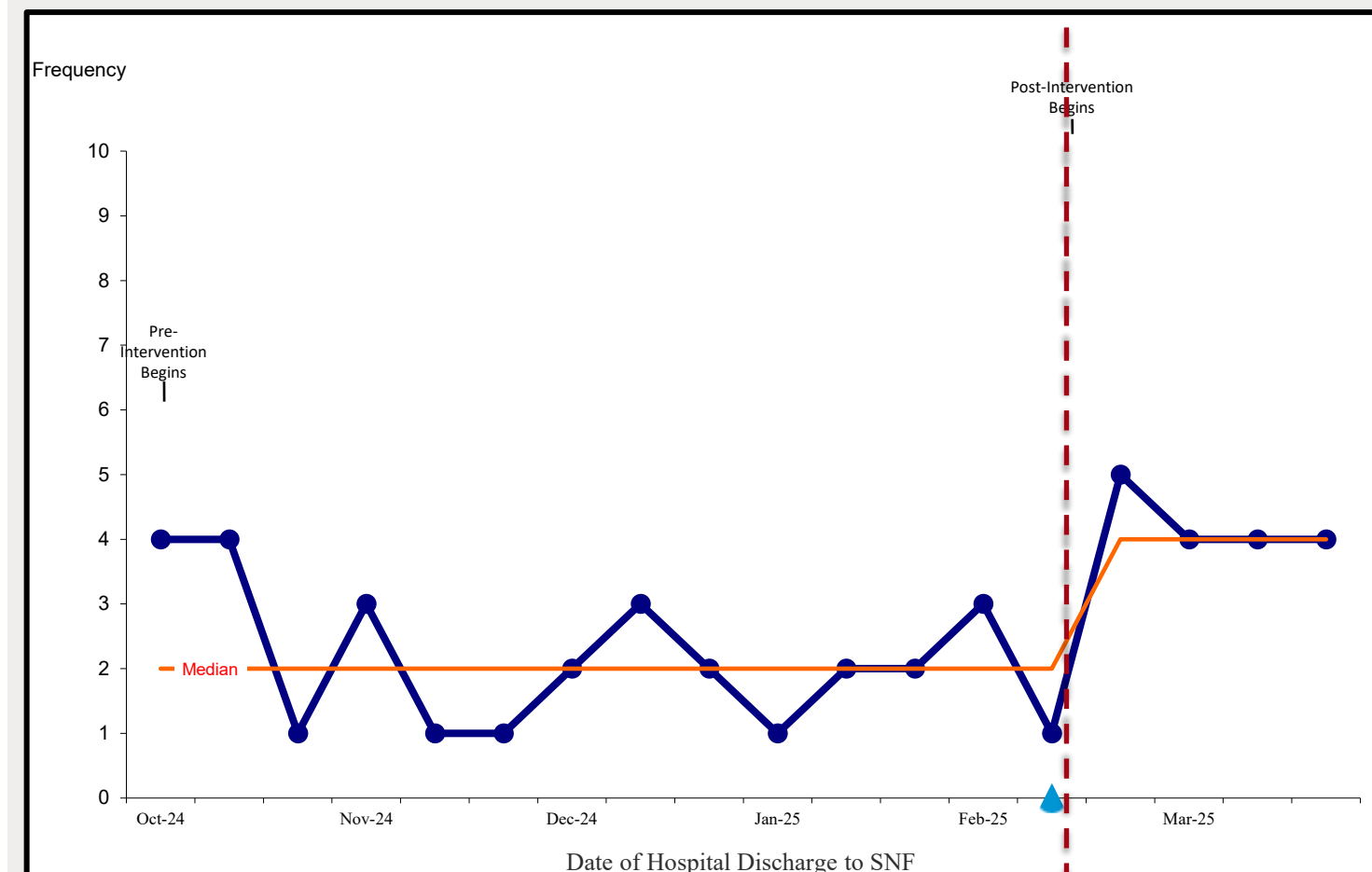
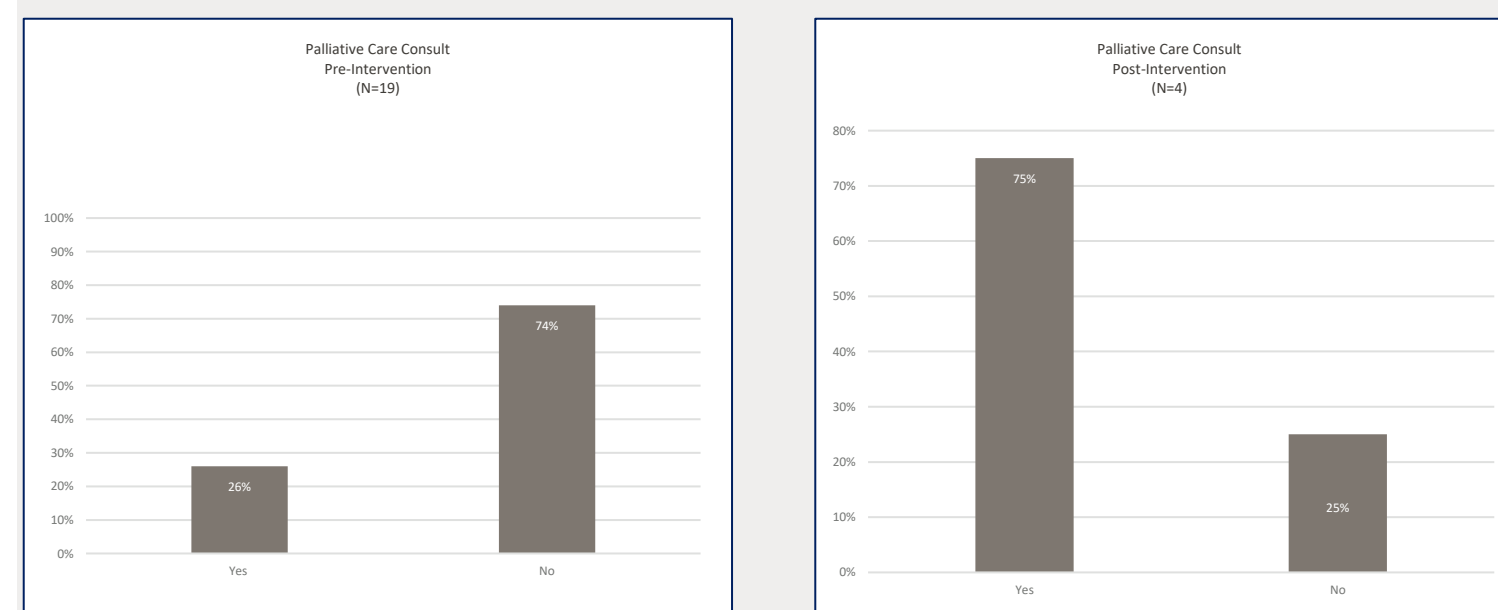
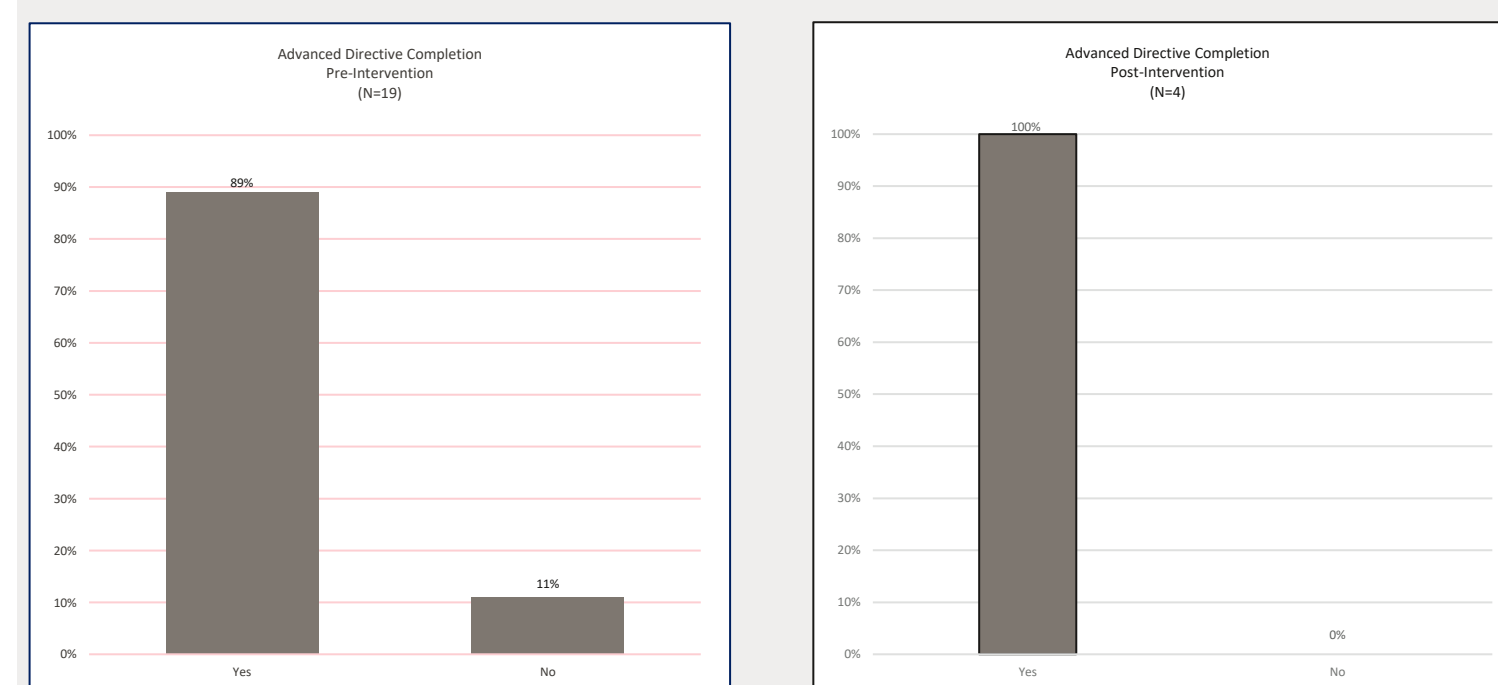


Table with 2 columns: Pre-Intervention and Post-Intervention. Rows: Median: 2, IQR: 2.

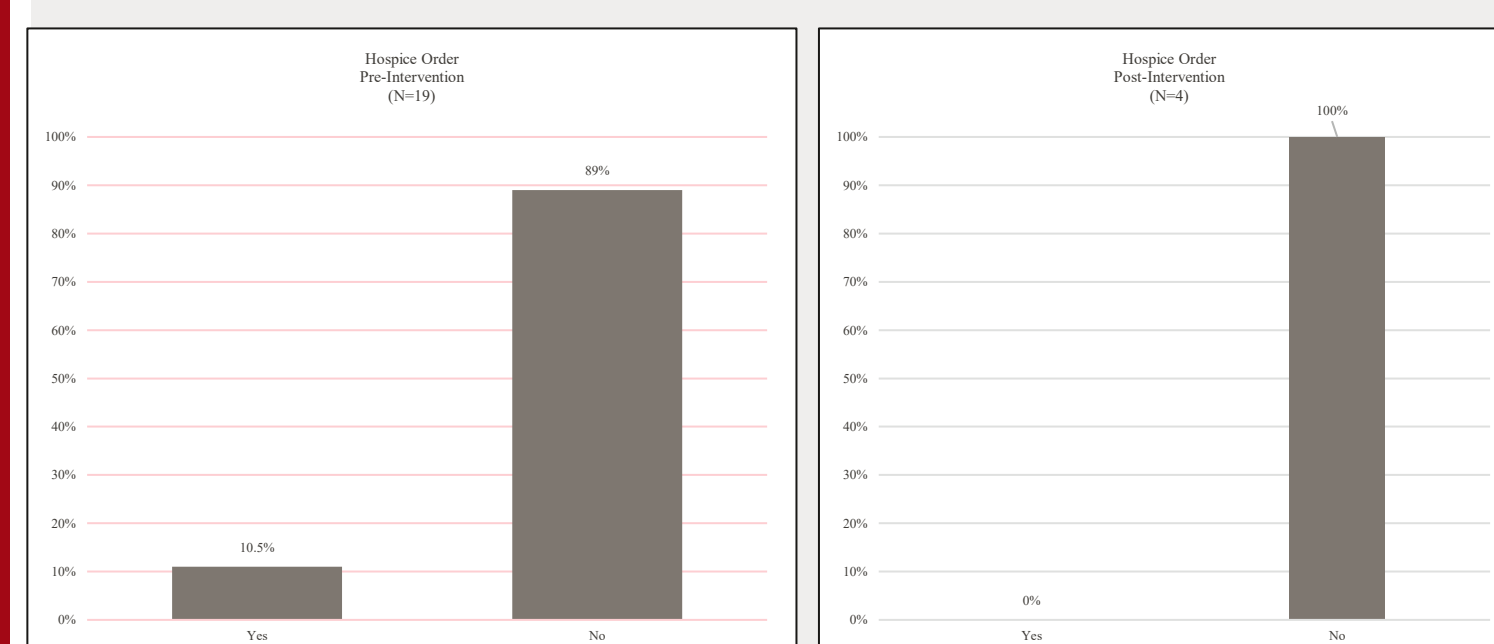
Palliative Care Consult (Pre- and Post-Intervention)



Completion of Advanced Directives (Pre- and Post-Intervention)



Hospice Orders (Pre- and Post-Intervention)



Acknowledgment: Special thanks to Paul Casale, MD, MPH; Kari Mastro, PhD, RN, NEA-BC, Melissa Patterson, MD, MBA; & Nancy O'Toole, MPA

Results

During the four-month pre-intervention period, 19 patients were identified. Among the 19 patients, 26% received a palliative care consult, 89% had an advanced directive completed, 10.5% had a hospice order completed, and the median frequency of goals of care communication per patient was 2 (IQR: 2). For patients with a multi-morbidity greater or equal to three, 89% fit the criteria in the pre-intervention group and 100% fit the criteria in the post-intervention group. During the five-week post-intervention period, 4 patients were identified. Among the 4 patients, 75% received a palliative care consult, 100% had an advanced directive completed, 0% had a hospice order completed, and the median of the frequency of GOC communication per patient was 5.5 (IQR: 1.25). For the four-month pre-intervention period, 42% of patients were associated with a 30-day hospital readmission with a 16% mortality rate. During the post-intervention period, 25% of patients were associated with a 30-day hospital readmission with a 0% mortality rate.

Conclusions/Lessons Learned

The ALIGN intervention can help bridge acute and post-acute care by enabling longitudinal, goal-concordant discussions for patients with serious illness, with potential for broader scale across SNFs and hospitals. A key limitation was limited visibility of the SQ screening tool and insufficient training among outpatient ACO care management teams and palliative care teams in goals-of-care, palliative care, and hospice, which constrained continuity of these discussions.

Next Steps

As a next step, the Medicare ACO has trained all care managers in palliative care and goals-of-care discussions based on lessons learned. We will continue strengthening collaboration across inpatient, SNF, and care management teams to support a sustainable, longitudinal approach to goal concordant care.

Colleen Ward, RN, BSN, CPAN; Katherine Babcock, MPA, BSN, CPAN;
Allison Pzena, Child Life Specialist

Problem Statement:

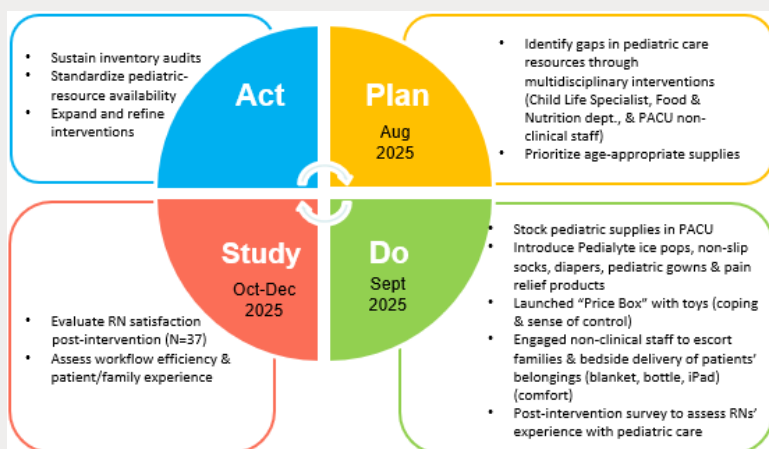
- Providing postoperative care for pediatric patients requires a recovery environment tailored to children's unique physiological, developmental, and emotional needs
- In predominantly adult PACUs, limited availability of pediatric-specific supplies can delay care and compromise safety, comfort, and age-appropriate interventions
- Nurses identified gaps in access to essential pediatric resources, including medication formulations, pain management tools, fall prevention equipment, toileting aids, and distraction/coping items, often requiring time-consuming coordination with other units. These barriers contribute to workflow inefficiencies and may negatively impact both patient and family experience



Aim:

To enhance pediatric and family-centered care in the PACU by improving timely access to age-appropriate supplies that support comfort, safety, and developmental needs

Methods:

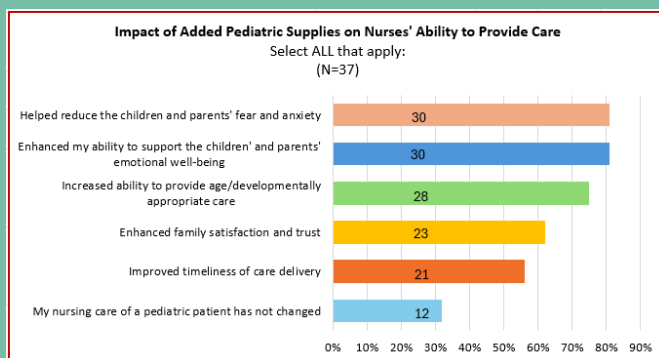


Key Findings:

- Universal perceived improvement. 100% (N=37) nurses reported that pediatric-focused supplies improved patient/family postoperative experience
- Verbal feedback from families has been overwhelmingly positive
- Smoother nursing workflow, reducing delays and reliance on other units

Results:

- High nurse satisfaction with the added supplies: 79% (n=29) of nurses were "Very satisfied", 16% (n=6) "Satisfied", 3% (n=1) "Somewhat satisfied", and 3% (n=1) "Dissatisfied."
- Nurses reported improved ability to address children's emotional and developmental needs, resulting in reduced anxiety and increased engagement, while also decreasing caregiver stress



Conclusion:

This project highlights the critical role of PACU nurses in shaping the perioperative experience through comfort-centered, family-focused care.

This low-cost intervention is scalable and replicable across perioperative settings to enhance pediatric readiness and quality of care

References:

Bongiorno, D., Ravicz, M., Nadeau, N., Michelson, K., Alpern, E., Myers, Samuels-Kalow, M. (2024). Pediatric capacity crisis: A framework and strategies to prepare for a pediatric surge. *Journal of American College of Emergency Physicians Open*. 16;5(1):e13093. doi: [10.1002/emp2.13093](https://doi.org/10.1002/emp2.13093)

Korell, L., and Fidler, F. (2025). Improving Postoperative Pediatric Recovery by Efficient Recovery Room Care—A Comprehensive Review. *Children (Basel)*, 28;12(5):568. doi: [10.3390/children12050568](https://doi.org/10.3390/children12050568)

Title: Standardized Protocol Implementation Increases Patient Follow-Up After Emergency Department–Initiated Medication Abortion

Authors: Miranda Duster, MD, Stefany Stempien, DO; Natalie Leek, DO; Michelle Kelley, MD; Catherine Hennessey, MD; Laura Melville, MD

Department: NYP Brooklyn Methodist Hospital; Department of Emergency Medicine & Department of Obstetrics & Gynecology (Complex Family Planning Division)

- 1. Statement of the problem:** Low follow-up rates after ED-initiated medication abortion at NYP BMH limit confirmation of treatment success and safety. From 7/24–6/25, only 3/6 (50%) patients completed follow-up and 4/6 (66%) required post-discharge clarification—well below the 75–95% adherence reported in outpatient settings—attributed to the absence of a standardized protocol, unclear departmental ownership, and inconsistent discharge instructions between EM and OBGYN.
- 2. Aim of the study:** By January 1, 2026, we aimed to increase follow-up adherence from 50% to 75% within six months of implementing a standardized interdisciplinary protocol.
- 3. Methods:** "Using Plan-Do-Study-Act" methodology, we implemented a standardized medication abortion protocol in the NYP BMH ED for confirmed intrauterine pregnancies ≤ 11 weeks, incorporating mandatory radiologist-read ultrasound, standardized EPIC documentation and discharge dot phrases, a dedicated OBBGYN-managed tracking list, and structured follow-up with 7-day serum β -hCG testing and resident-led telephone reminders. Educational sessions were conducted for EM and OBGYN providers to clarify roles and ensure adherence. The primary outcome was follow-up completion, with secondary outcomes including preventable clinic phone calls, preventable ED visits, and medication abortion efficacy (defined as $>80\%$ β -hCG decline 7 days post-abortion). Process measures assessed documentation adherence and patient list accuracy, while balancing measures included adverse events and ultrasound-related delays.
- 4. Results:** July 2025 to December 2025, there were 6 medication abortions; with 5 out of 6 patients completing follow up (adherence rate increase from 50% to 83%, exceeding the 75% target). 2 out of 6 patients initiated a clarification phone call (a decrease of 48.5%). Of the patients who followed up, 5 out of 5 had a successful medication abortion (100% efficacy exceeding the national average of 95–97%). Documentation adherence reached 67%. 0 of 6 patients experienced an adverse event. 0 out of 6 patients had a preventable ED visit after the abortion.
- 5. Conclusion:** A standardized interdisciplinary protocol significantly improved follow-up adherence after ED-initiated medication abortion. This model supports the ED as a viable access point for medication abortion when supported by coordinated, evidence-based workflows bridging the EM and OBGYN department. At least 4 more PDSA cycles and expansion across additional campuses and workflow optimization are planned.



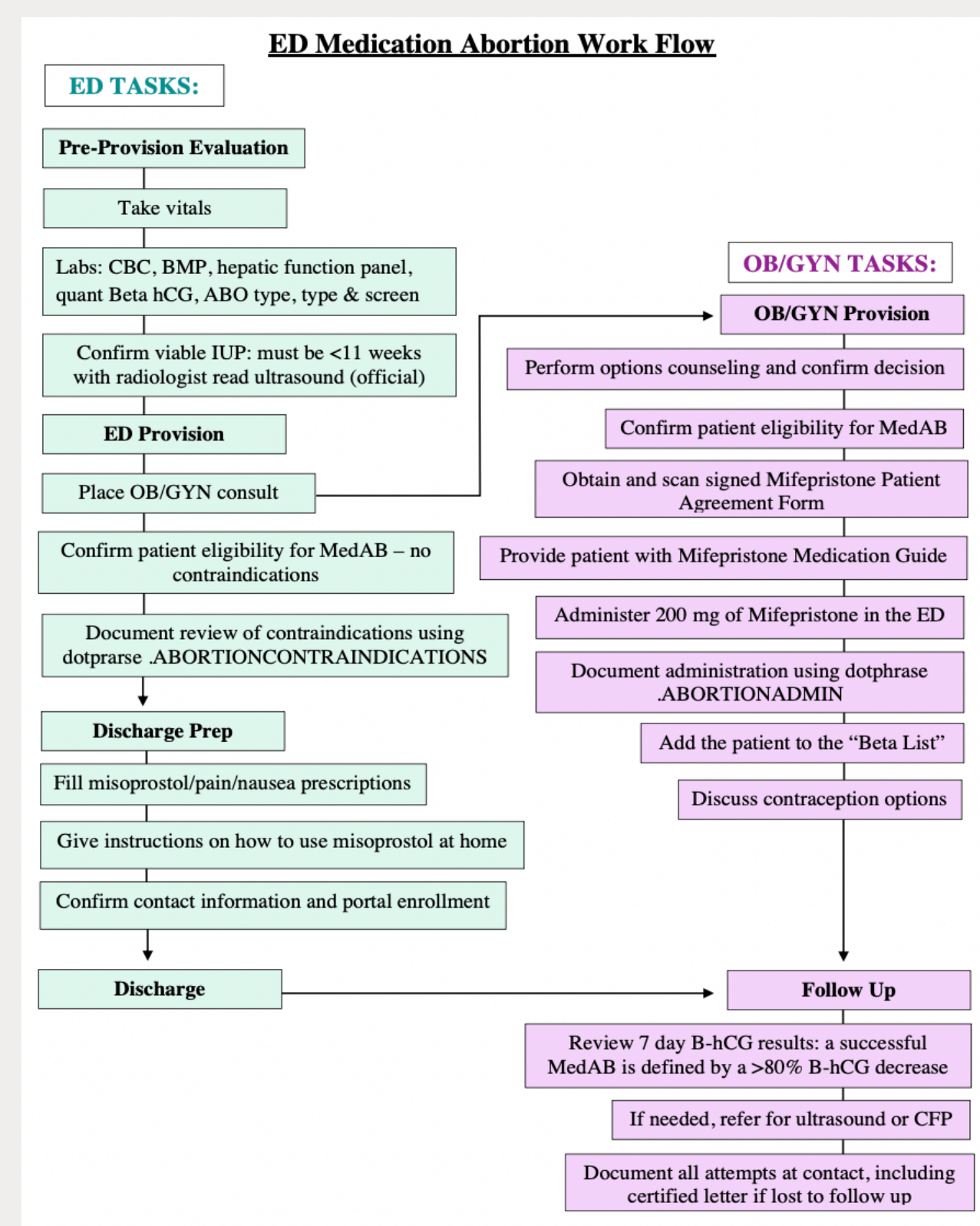
Problem Statement

- The Emergency Department (ED) serves as a critical access point for medication abortion (MAB), particularly for patients facing barriers to care.
- At NYP Brooklyn Methodist Hospital, low follow-up rates after ED-initiated MAB limit confirmation of treatment success and safety.
- From 7/1/24 - 6/30/2025, there were 6 MABs; 3/6 (50%) of patients completed follow-up, falling below the 75–95% adherence rate reported in outpatient settings.
- 4/6 (66%) patients had to seek some form of clarification of instructions or expectation post-ED discharge.
- These findings may be attributed to the absence of a standardized protocol, unclear departmental ownership, and inconsistent discharge instructions.

Objective/Aim Statement: Implement a standardized interdisciplinary protocol aiming to increase follow up adherence for ED-initiated MABs to 75% in 6 months.

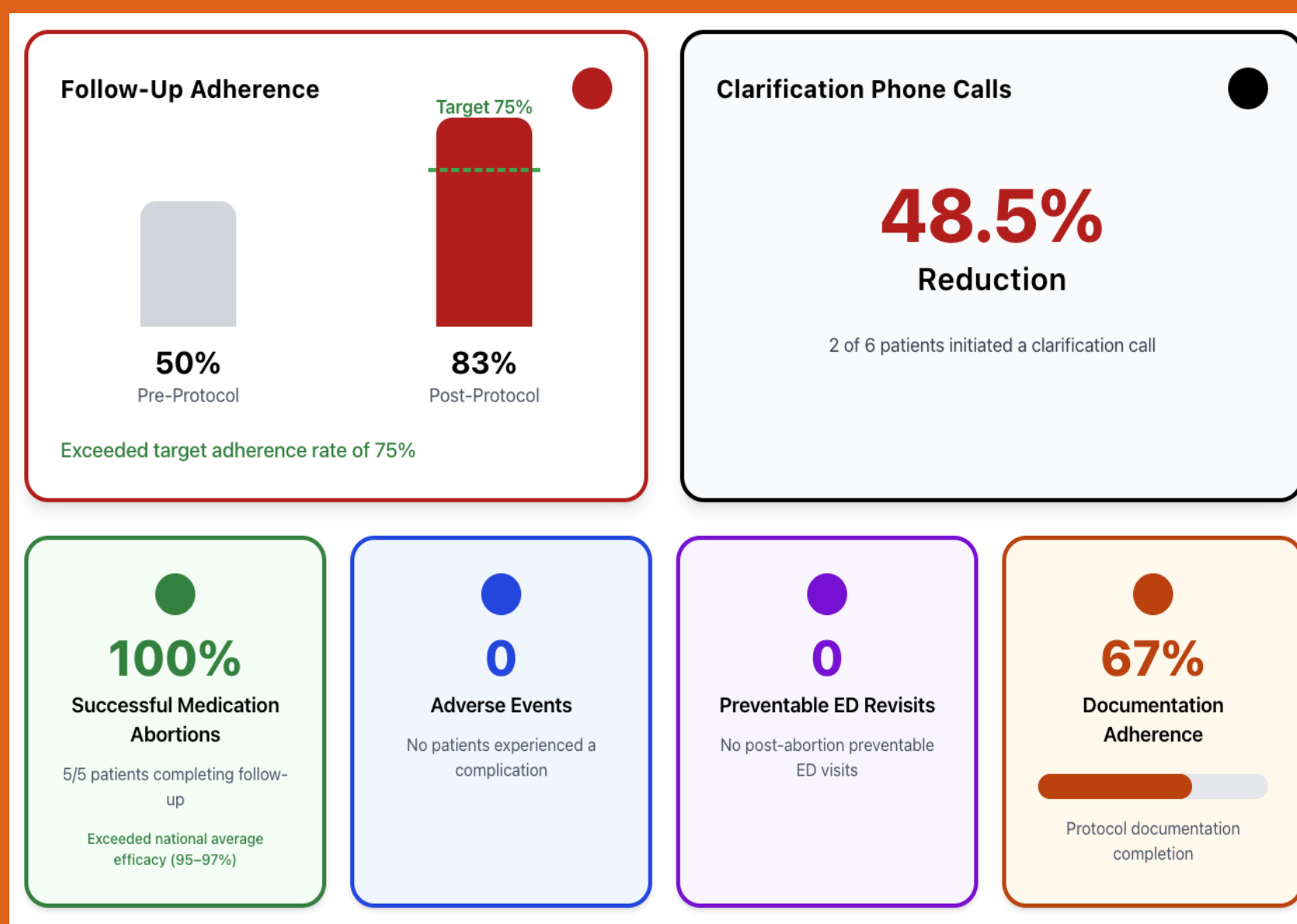
Design/Methods

- Plan-Do-Study-Act (PDSA) cycle 1 → a standardized MAB protocol implemented between July 1, 2025 – Jan 1, 2026
- Key components of protocol included:
 - Provider education sessions
 - Contraindication and eligibility criteria
 - ED & OBGYN Work Flow Algorithm
 - Radiology read reports for confirmation of intra-uterine pregnancy
 - Standardized EPIC documentation and discharge instructions with “dot-phrases”
 - Standardized measure of treatment success with 7 day β-hCG testing
 - Establishment of a patient tracking list to send follow up reminders, monitor symptoms, and answer clarifying questions
- Primary outcome: follow up completion
- Secondary outcomes: preventable clinic phone calls, return to ED visits, MAB efficacy (>80% decline β-hCG 7 days post-MAB)



Results

- 6 MABs July 1, 2025 to January 1, 2026
- 5/6 (83%) completed follow up
- 100% successful MAB of the 5 adherent patients
- 67% Documentation adherence



STAKEHOLDER	PROJECT ROLE	ENGAGEMENT STRATEGY
QI Team Leaders	- Provide oversight of protocol implementation - Roll out PDSA cycles and conduct periodic audits	- Introduce the new protocol - Facilitate provider education session(s) - Conduct quarterly meeting to analyze data and PDSA cycle progress
ED Attending	- Oversee/manage eligible patients - Provide oversight when an OBGYN Attending is uncomfortable supervising (consider repressing this, (e.g., OBGYN Attending is unavailable))	- Attend education session(s) - Participate in survey completion - Utilize protocol checklist in the ED - Attend joint departmental monthly status update meetings (ED and OBGYN staff) - Provide feedback during discussions
ED Residents	- Evaluate and manage eligible patients - Consult and collaborate with OBGYN providers	- Attend education session(s) - Participate in survey completion - Utilize protocol checklist in the ED
ED Nurses	- Collaborate with Pharmacy and Providers - Administer medication after OBGYN confirmation and patient discussions are completed - Triage and monitor vitals for eligible patients	- Attend education session(s)
OBGYN Attending	- Oversee/manage eligible patients - Provide oversight when an ED Attending is uncomfortable supervising (consider repressing this, (e.g., ED Attending is unavailable))	- Attend education session(s) - Participate in survey completion - Utilize protocol checklist in the ED - Attend joint departmental monthly status update meetings (ED and OBGYN staff) - Provide feedback during discussions
OBGYN Residents	- Evaluate and confirm eligibility patients for medication abortion - Administer medication after OBGYN confirmation and patient discussions are completed - Review patient agreement form - Coordinate order and administration of mifepristone with RN and pharmacy	- Attend education session(s) - Participate in survey completion - Utilize protocol checklist in the OBGYN floor
Radiology/US Team	- Conduct and review transvaginal US to confirm intrauterine pregnancy - Communicate with the ED and OBGYN teams - Prepare medication according to protocol - Confirm safety with ADR review	- Provide monthly updates from team leaders
Pharmacy	- Prepare medication according to protocol - Confirm safety with ADR review - Communicate any concerns with the ED/OBGYN team	- Provide monthly updates from team leaders

Conclusion

□ A standardized interdisciplinary protocol improved follow-up adherence after ED-initiated MAB. Clear delineation, structured tracking and follow up, standardized discharge instructions enhanced safety and reduced unnecessary healthcare utilization via return ED visits or clinic phone calls. This model supports the ED as a viable access point for MAB when supported by inter-disciplinary workflows.

Next Steps

- We aim to complete at least four more PDSA cycles, analyze length of stay barriers, and expand protocol across additional NYP campuses.

Title: Implementation of a Novel VTE Risk Assessment and Prophylaxis Strategy for Otolaryngology Surgery

Short Running Title: Application of the COBRA and Pannucci-NSQIP

Richard J. Lu, MD, MBA, MSc^{1,2}; Heather Berman, BS²; Inthat Boonpongmanee, BA²; Benjamin Persons, BS²; Ana Hae-Ok Kim, MD¹, Anthony Sclafani, MD, MBA²

Abstract

Objective

To evaluate the feasibility, process adherence, and clinical outcomes associated with department-wide implementation of simplified venous thromboembolism (VTE) risk assessment models (RAM) for inpatient and ambulatory otolaryngology surgical patients.

Methods

A mixed prospective and retrospective quality improvement initiative was conducted across two tertiary academic medical centers, including all scheduled adult otolaryngology surgical procedures from January 3, 2025, to November 20, 2025. Inpatient admissions were risk stratified using the COBRA score and ambulatory procedures using the Pannucci-NSQIP score; inpatient risk stratifications were shared with surgeons. High VTE risk was defined as COBRA ≥ 4 for inpatients and Pannucci-NSQIP ≥ 4 for ambulatory cases. Pharmacologic prophylaxis beginning on postoperative day 1 was recommended for high-risk inpatients. Process measures included adherence to prophylaxis guidance and documented rationales for deviation. Outcome measures included 30-day VTE and hemorrhage events.

Results

A total of 3,854 consecutive adult procedures were included (608 inpatient, 3,246 ambulatory). 65% of inpatients and 14% of ambulatory cases were classified as high risk. Among high-risk inpatients with length of stay ≥ 2 days, VTE occurred in 2.5% of patients receiving chemoprophylaxis on POD1 compared with 4.7% of those not receiving POD1 prophylaxis. No VTE events occurred in low-risk inpatients, high-risk inpatients discharged on POD1, or high-risk ambulatory patients. Hemorrhage rates were similar across prophylaxis groups (3.2–4.1%). Overall VTE rates were 1.8% for inpatients and 0.1% for ambulatory procedures.

Conclusion

The simplified COBRA and Pannucci-NSQIP RAMs provide a feasible and potentially scalable framework for integrating VTE risk stratification into routine otolaryngology practice.

The NYP ENT DVT Prophylaxis Quality Initiative

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1. PROBLEM: Use of DVT chemoprophylaxis is inconsistent due to clinical uncertainty and impractical risk stratification tools

From uncertainty and complexity ... to a simplified path forward for DVT chemoprophylaxis decision-making

VTEs are a leading cause of preventable post-operative morbidity and mortality

- 0.4 –1.3% risk in ENT surgeries
- Can exceed 2.4% in high-risk subspecialties

Chemoprophylaxis is underutilized due to clinical uncertainty despite lower risk of DVT

- Risk of increased post-operative hemorrhage, in a context where risk is already high

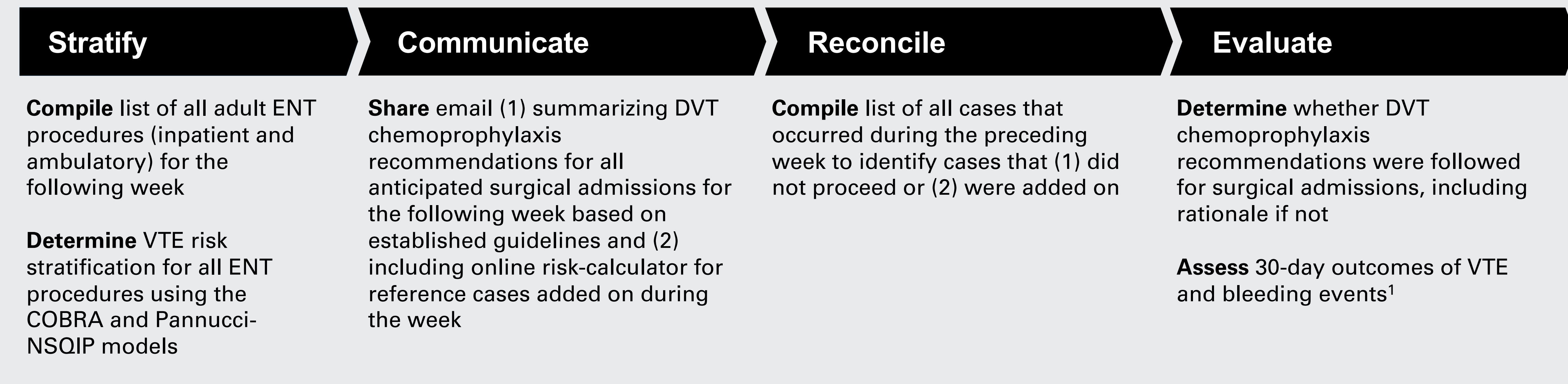
Current clinical decision-making workflows are cumbersome

- Caprini score requires up to 35 data inputs and has poor adoption due to high rates of incomplete / missing data

DVT Risk Model	Caprini (2005)	COBRA	Pannucci-NSQIP
Use Case	Any hospitalized patient	Surgical admissions	Ambulatory procedures
Variables	Age, Minor surgery, BMI, Swollen legs, Varicose veins, Pregnancy/postpartum, History of spontaneous abortion, Hormone therapy, Sepsis, Lung disease, Abnormal pulmonary function, Myocardial infarction, Congestive heart failure, Bed rest (medical patient), Arthroscopic surgery, Major surgery >45 min, Laparoscopic surgery >45 min, Malignancy, Bedridden ≥72 hours, Central venous access, History of DVT/PE, Family history of thrombosis, Factor V Leiden, Prothrombin 20210A, Lupus anticoagulant, Anticardiolipin antibodies, Elevated homocysteine, Heparin-induced thrombocytopenia, Other thrombophilia, Stroke, Lower extremity arthroplasty, Hip/pelvis/leg fracture, Spinal cord injury, Smoking, Inflammatory bowel disease	Age BMI >30 Cancer Race (Black/AA) ASA Score	Age BMI >40 Cancer Case >2 hours Pregnant Arthroscopic/Venous Procedure
DVT PPX Threshold Score (Range)	7 (0-77)	4 (1-9)	6 (0-47)

DVT chemoprophylaxis is recommended as subcutaneous heparin or enoxaparin on POD1 until the patient is ambulatory

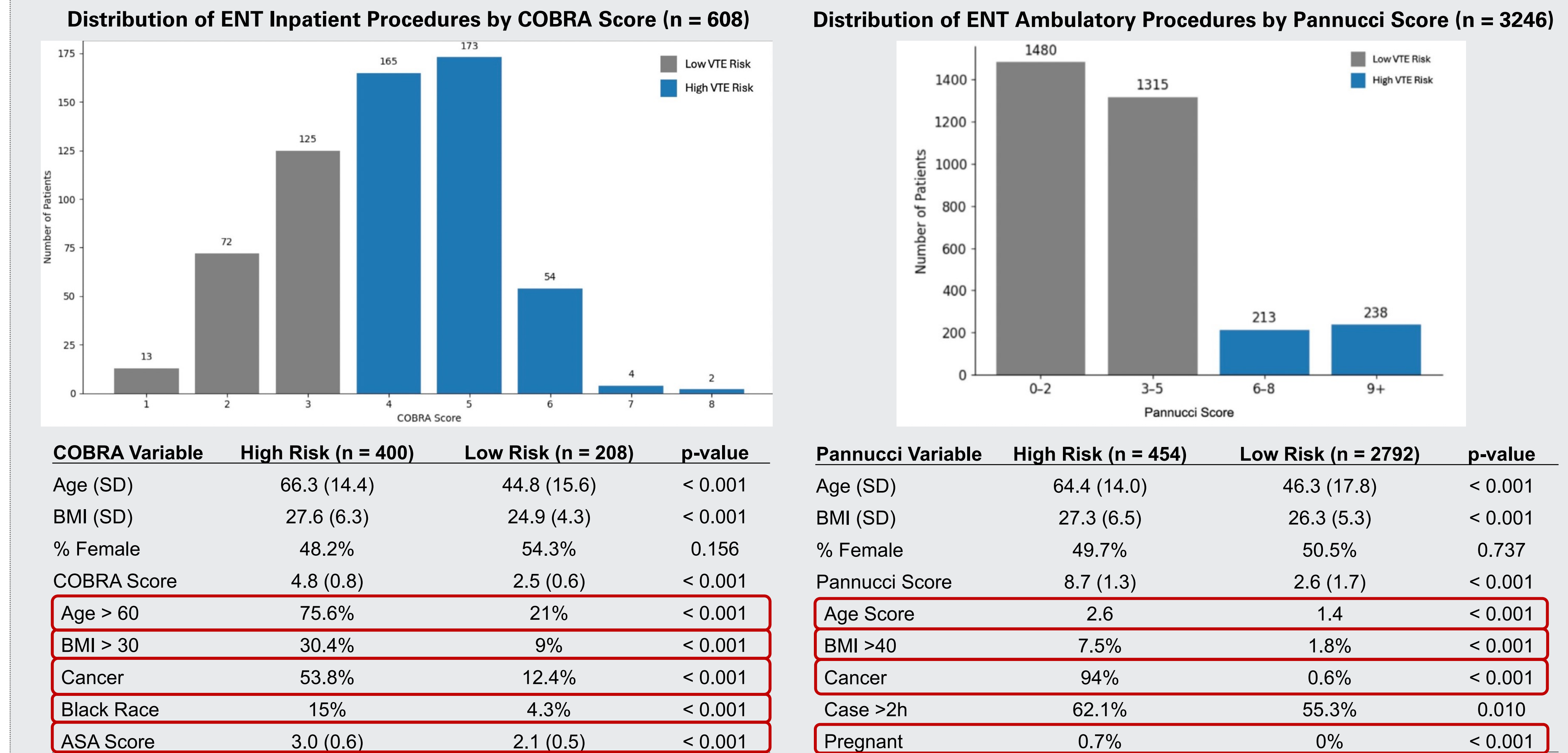
2. OBJECTIVE & METHODS: We implemented a quality improvement initiative to track every adult ENT procedure at NYP-Columbia University and NYP-Weill Cornell



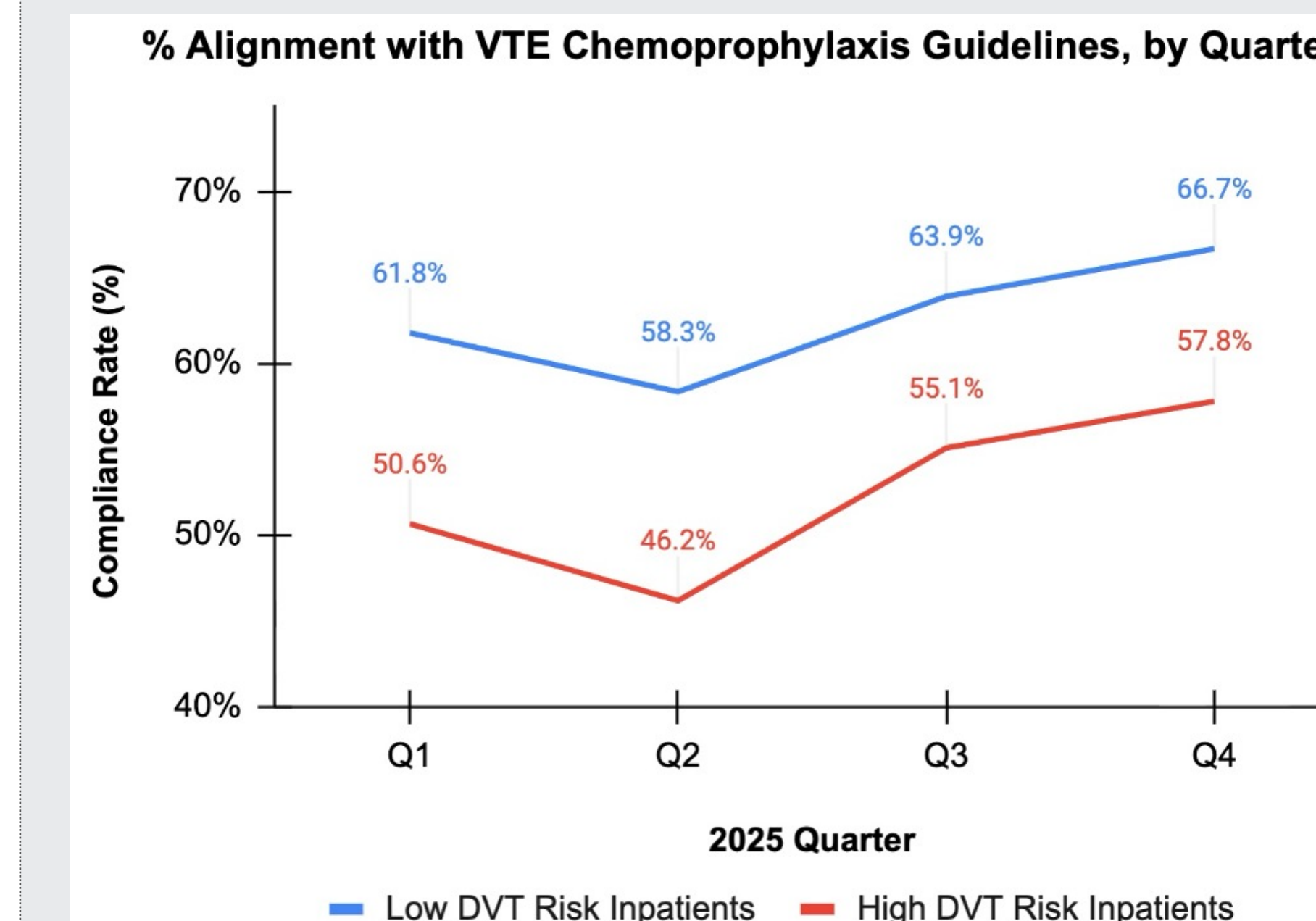
4. FUTURE DIRECTIONS

- Double-click analyses** that are sub-specialty specific and explore further other potential causes of VTE / bleeding events
- Refinement of VTE recommendation thresholds** based on outcome data to optimize risk-benefit ratio of VTE prophylaxis specific to ENT patients
- Assessment of attending and resident feedback** to generate next iteration of DVT risk communication as part of Plan-Do-Study-Act cycle
- Integration into EPIC** to facilitate risk score classification and ease of clinical decision support

3. RESULTS: Of 3854 ENT procedures, 65% of surgical admissions and 14% of ambulatory procedures were classified as high risk for DVT



Alignment of VTE chemoprophylaxis use with guidelines increased by 8-14% during the QI initiative



Reasons for not giving chemoprophylaxis in high-risk patients

- Patient not managed by ENT (59%)
- Increased bleeding risk based on surgery (14%)
- Recent post-operative hemorrhage/hematoma (5%)
- Early ambulation (7%)
- No documented rationale (14%)

Reasons for giving chemoprophylaxis in low-risk patients

- Patient not managed by ENT (78%)
- Increased bleeding risk based on surgery (8%)
- Restarting prior therapeutic anticoagulation (4%)
- No documented rationale (10%)

For high risk inpatients, appropriate use of VTE chemoprophylaxis reduced the relative risk of VTE by 47%

VTE & Hemorrhage Event Outcomes: Ambulatory ENT Procedures

DVT Risk	N	VTE	Hemorrhage
High	454	0 (0%)	4 (0.9%)
Low	2792	3 (0.1%)	30 (1.1%)
Total	3246	3 (0.1%)	34 (1.0%)

VTE & Hemorrhage Event Outcomes: Inpatient ENT Procedures

DVT Risk	DVT Prophylaxis	N	VTE	Hemorrhage
High	Started Post-op Day 1	158	4 (2.5%)	6 (3.8%)
	Not Started Post-op Day 1	148	7 (4.7%)	6 (4.1%)
	Discharged Post-op Day 1	94	0 (0%)	3 (3.2%)
Low	Started Post-op Day 1	46	0 (0%)	0 (0%)
	Not Started Post-op Day 1	76	0 (0%)	2 (2.6%)
	Discharged Post-op Day 1	86	0 (0%)	0 (0%)
Total	-	608	11 (1.8%)	17 (2.8%)

REFERENCES

Bartlett MA, Mauck KF, Stephenson CR, Ganesh R, Daniels PR. Perioperative Venous Thromboembolism Prophylaxis. *Mayo Clin Proc.* 2020;95(12):2775-2798.
 Cramer JD, Shuman AG, Brenner MJ. Antithrombotic Therapy for Venous Thromboembolism and Prevention of Thrombosis in Otolaryngology-Head and Neck Surgery: State of the Art Review. *Otolaryngol Neck Surg.* 2018;158(4):627-636.

Kahn SR, Morrison DR, Dienderé G, et al. Interventions for implementation of thromboprophylaxis in hospitalized patients at risk for venous thromboembolism. *Cochrane Database Syst Rev.* 2018;2018(4).
 Pannucci CJ, Shanks A, Moote MJ, et al. Identifying Patients at High Risk for Venous Thromboembolism Requiring Treatment After Outpatient Surgery. *Ann Surg.* 2012;255(6):1093-1099.
 Shuman AG, Hu HM, Pannucci CJ, Jackson CR, Bradford CR, Bahl V. Stratifying the Risk of Venous Thromboembolism in Otolaryngology. *Otolaryngol Neck Surg.* 2012;146(5):719-724.
 Weitzman RE, Zhao K, Sclafani MS, et al. Venous Thromboembolism Risk Assessment in Inpatient and Ambulatory Otolaryngology Surgical Patients. *Laryngoscope.* 2025;135(4):1359-1366.

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