HealthCare
GILL HEART & VASCULAR INSTITUTE
Network

AFFILIATE STRATEGIES FOR IMPLEMENTING AND SUSTAINING CARDIOVASCULAR QUALITY

Lesli McDonogh, BSN, RN – Heart and Vascular Quality Director
Clyde Clarke, BSN, RN – Manager, Heart & Vascular Quality Outcomes
Steven White, BA, BSRT, RDCS, RDMS – Chest Pain Program Coordinator

UK Gill Affiliate Network
Empowering Care Together

OBJECTIVES

- After completing this educational activity, participants will be able to:
  - Recognize the value of establishing a dedicated cardiovascular quality department and learn key steps for successful implementation.
  - Explore effective strategies to reduce acute kidney injury (AKI) rates following cardiac catheterization procedures.
  - Identify “linchpin barriers” that influence multiple processes and apply multi-phase strategies to drive meaningful performance improvement.

EXPECTED OUTCOME & EDUCATIONAL NEED/ PRACTICE GAP

- Expected Outcome
  - Participants will gain skills to build effective cardiovascular quality programs, apply evidence-based strategies to reduce AKI after cardiac catheterization, and address key barriers that impact performance and patient outcomes.
- Educational Need/Practice Gap
  - Many cardiovascular programs lack structured quality processes, leading to variation in care and higher AKI rates. Clinicians need guidance on creating dedicated quality departments, implementing proven AKI prevention strategies, and overcoming system-wide barriers to drive sustained improvement.

SESSION PRESENTERS

Lesli McDonogh, BSN, RN
Quality Director – Norton Heart and Vascular Institute

Norton Healthcare

Clyde Clarke, BSN, RN
Manager – Heart and Vascular Clinical Quality Outcomes

UK King's Daughters

Steven White, BA, BSRT, RDCS, RDMS
Chest Pain Coordinator

Lake Cumberland Regional Hospital

Transforming Cardiovascular Quality: Establishing the Norton Heart and Vascular Institute (NHVI) Quality Department

Lesli McDonogh RN, BSN
Norton Heart and Vascular Institute Quality Director
Norton Healthcare
November 4, 2025

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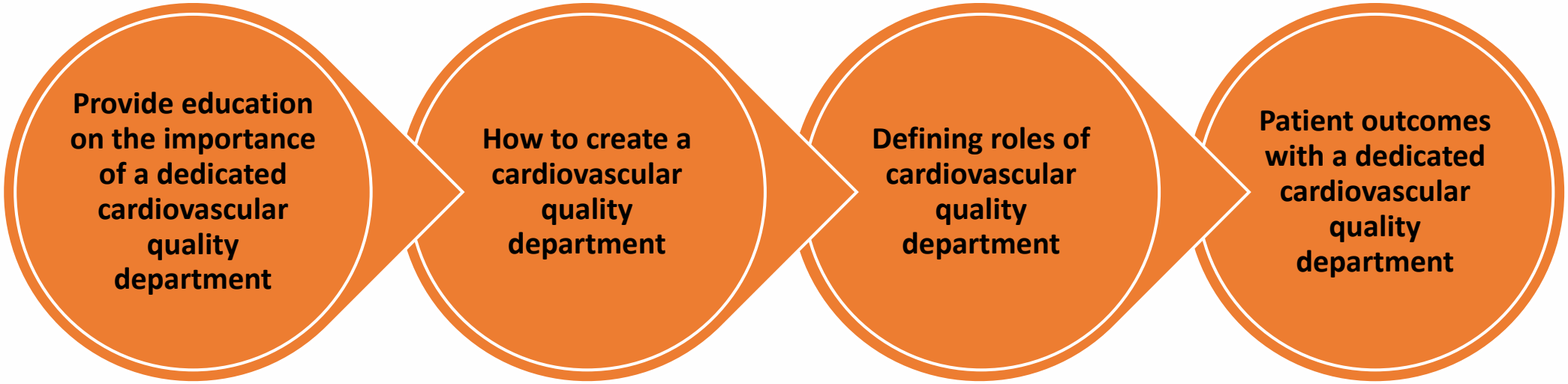
Faculty Disclosure

I have no relevant financial relationships with ineligible companies to disclose

Expected Outcome & Educational Need/ Practice Gap

- **Expected Outcome:** educational information on how a dedicated cardiovascular quality team can improve patient outcomes and metrics
- **Expected Need:** The facilities quality department is responsible for all service lines and does not have the dedicated time or staff to solely focus on CV measures
- **Practice Gap:** Most service line rely on the facilities quality department to improve CV measures

Objectives



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Why A Dedicated Quality Department?

- Norton Healthcare- 8 adult hospitals
- Too robust and complex at facility level
  - Managing quality, patient outcomes, registry metrics, accreditations, penalty programs, and multiple facility/service line initiatives
- Needed cardiovascular **intentional and dedicated focus** to enhance patient quality outcomes, performance oversight, metric analysis, accreditation readiness and initiative accountability

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Strategic Assessment and Business Plan

NHVI Vice President- NHVI Quality Department Business Plan

- Oversight of all CV quality metrics
  - General and Interventional Cardiology
    - PCI, STEMI, AMI readmissions, mortality
  - EP Cardiology
    - Pacemaker and Arrhythmia
  - HF Cardiology
    - Readmissions, ECMO, VAD
  - CT Surgery
    - CABG and AVR
  - Structural Heart
    - TAVR and LAAO
  - Vascular
    - Carotid, Aneurysm, PVI Infra/Supra Bypass
  - Pulmonary Embolus
  - HRRP, CMS Star, USNWR

- Oversight of all CV registry data
  - ACC CathPCI
  - AHA CAD
  - ACC TAVR
  - ACC LAAO
  - STS CABG and AVR
  - VQI
  - ELSO

- Oversight of Accreditations
  - ACC Chest Pain Center
  - ACC Cath Lab Accreditation
  - ACC TAVR Accreditation

Approval For NHVI Quality Department

Norton Heart & Vascular Institute (NHVI)
Quality Department

NHVI Quality Medical Director
NHVI Quality Director
NHVI Quality Program Coordinators (3)

May 2023- First dedicated quality department within a service line at NHC

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Get To Work!

NHVI Medical Quality Director and NHVI Quality Director Dyad

- Weekly meetings- prioritization metrics and initiatives
- Review of current metrics and patient outcomes
- Monthly meetings with CV Medical Directors:
  - CT surgery
  - Interventional Cardiology
  - Structural Cardiology
  - Heart Failure
  - Vascular

NHVI Program Coordinators

- Analyzation of registry data- definitions/ discrepancies
- CV readmission reviews- process compliance
- Daily monitoring PCI- case reviews and discharge medication
- Daily monitoring STEMI- core measures, process compliance and STEMI reports
- Creation of quality measures report for all CV conditions
- Creation of individual physician quality reports

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Measurable Improvements

The formation of an **NHVI dyad team** has **streamlined processes**, **fostered a respectful and collaborative culture** across the system, and **enhanced patient outcomes**. This structure also provides **targeted support and resources to the service line**. NHC CV physicians are now increasingly **engaged in performance improvement** projects and actively monitor key metrics.

Integrating **NHVI Program Coordinators** into the quality team has added **valuable expertise** in **registry specific metric definitions, data collection, trend analysis, and process evaluation**. Through **data mining**, the team **identified** emerging concerns, trends, and process failures, which prompted meaningful discussions and initiatives **aimed at elevating the quality of care** across NHVI.

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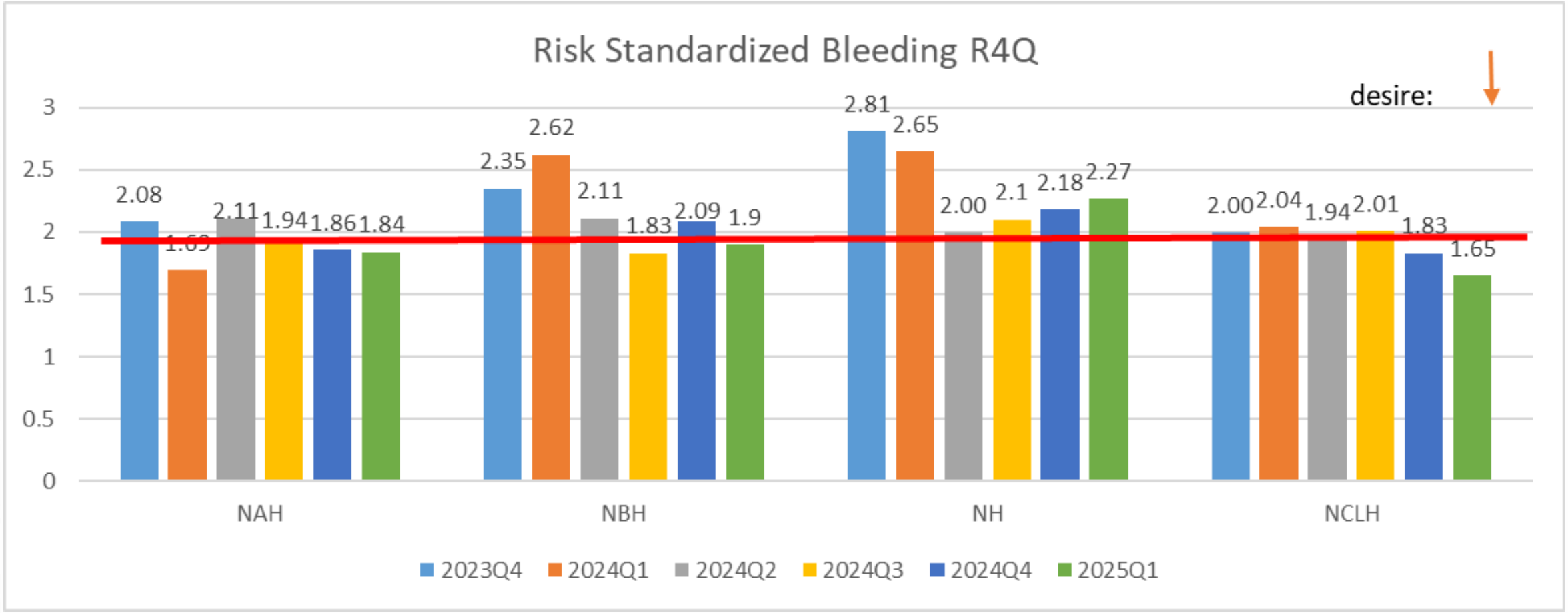
Decreased NCDR CathPCI Registry Bleeding Metric (2023Q4- 2025Q1) at the all 4 interventional facilities. Norton Audubon Hospital (NAH) by 11.5%, Norton Brownsboro Hospital (NBH) by 19.1%, Norton Hospital (NH) by 19.2%, and Norton Clark Hospital (NCLH) by 17.5%



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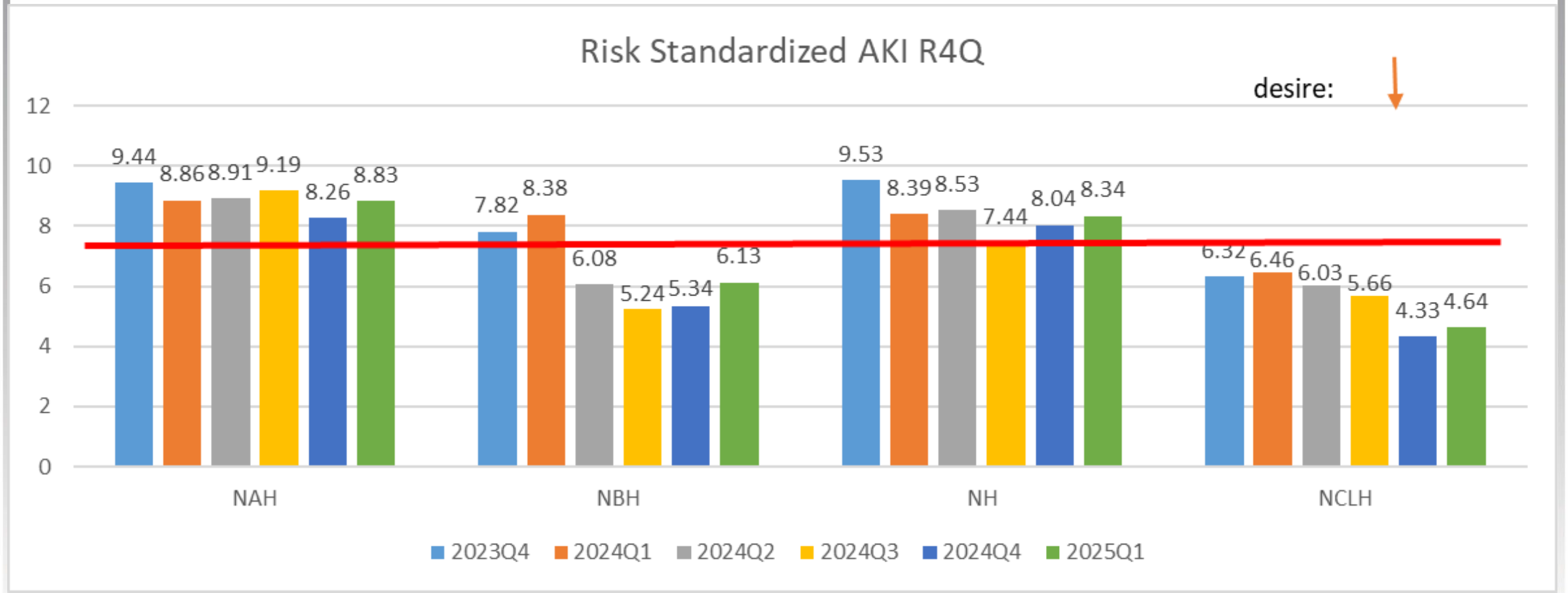
Decreased NCDR CathPCI Registry Acute Kidney Injury (AKI) Metric (2023Q4- 2025Q1) at all 4 interventional facilities. NAH by 6.5%, NBH by 21.6%, NH by 12.5% and NCLH by 26.9%



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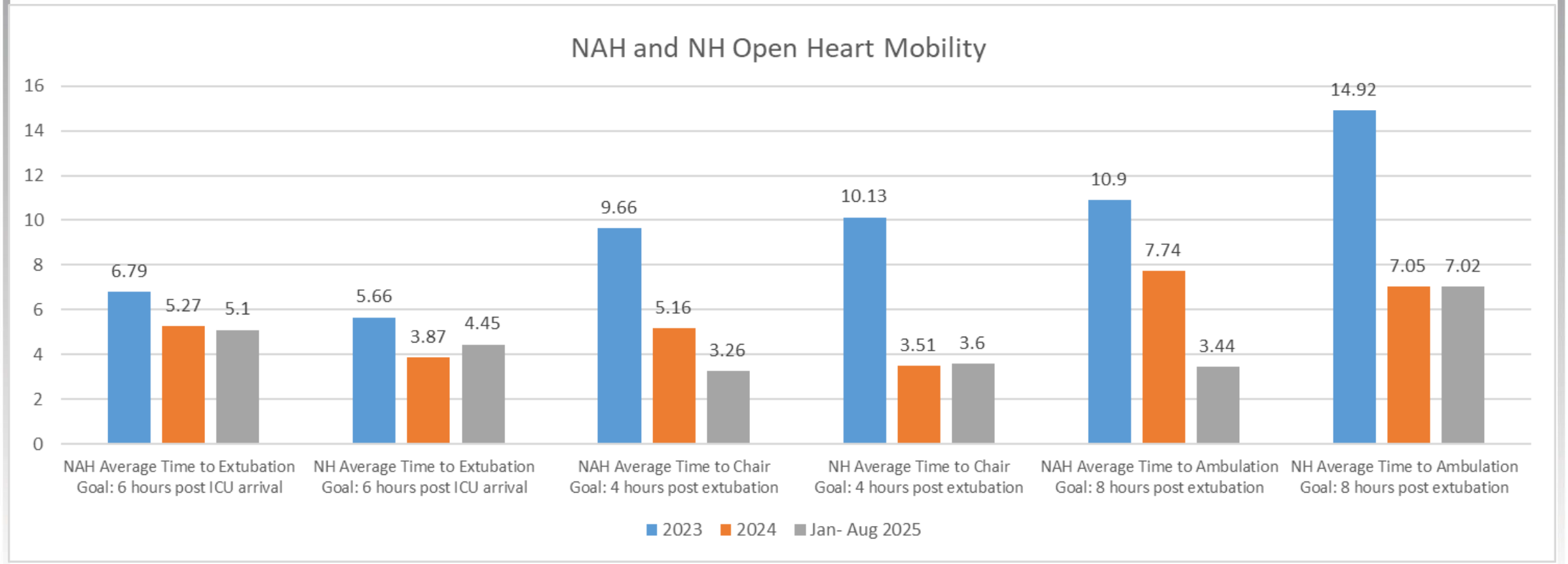
Decreased Post-op Open-Heart Extubation, Up to Chair and Ambulation Metrics

(2023, 20424, Jan-August 2025) at both open-heart facilities.

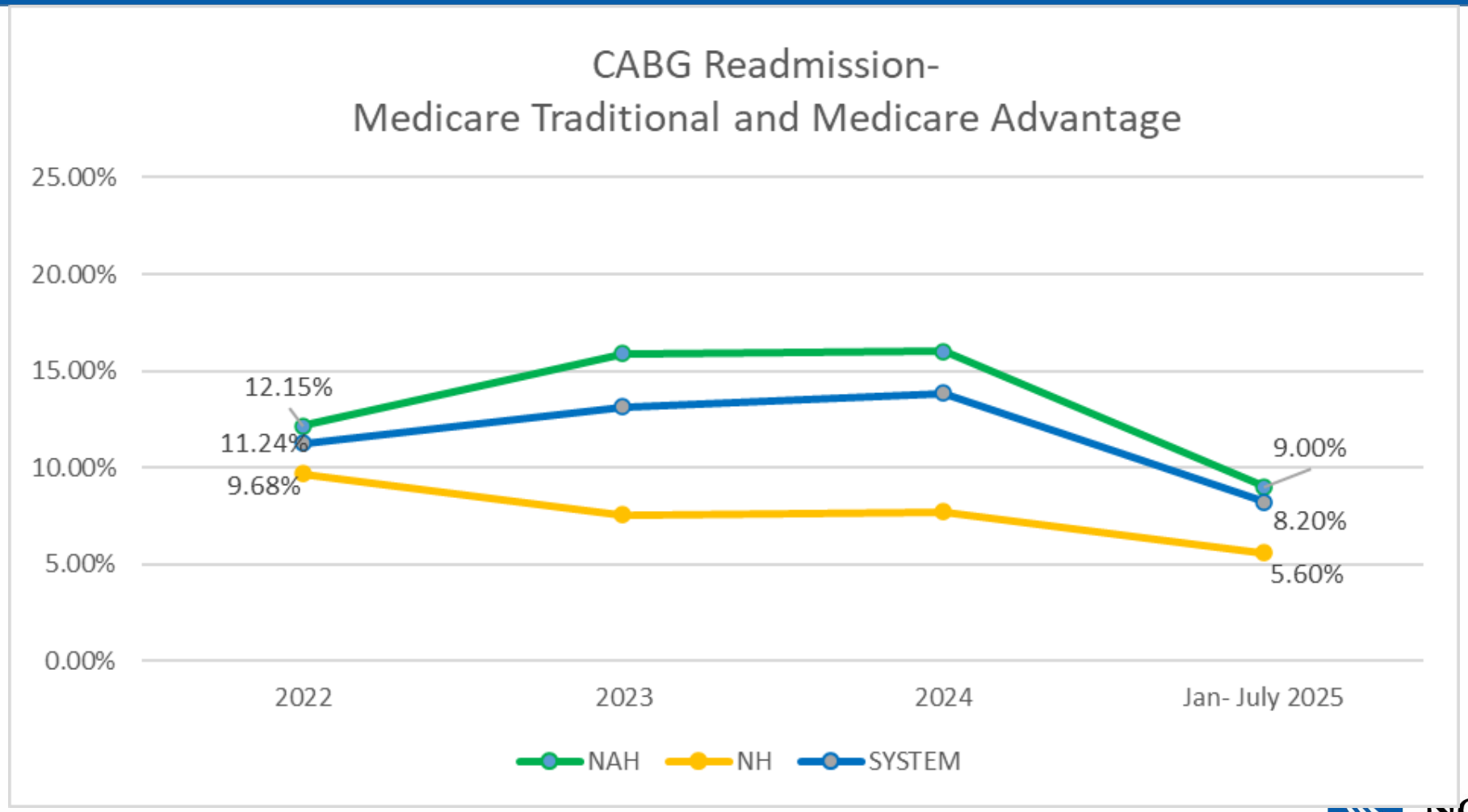
NAH extubation by 24.9%, chair by 66.3%, ambulation by 68.4%

NH extubation by 21.4%, chair by 64.5%, ambulation by 52.9%



Norton Heart & Vascular Institute

Decreased CABG Readmission- Medicare ONLY (2022, 2023, 2024, Jan- July 2025)
NAH by 25.9%, NH by 42.1%, System by 58.3%



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Conclusion

- The NHVI Quality Department:
  - provides **strategic direction** and **oversight** for the CV programs across all NHC facilities
  - provides a **dedicated team** focused on CV metrics
  - has achieved measurable **improvements in patient outcomes** and a **reduction in adverse cardiovascular events**
  - This targeted approach has **led to gains in key performance indicators**, reinforcing the **department's role in driving quality care**. Its strategic oversight model **offers a replicable framework** for other service lines seeking to enhance quality performance

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King's Daughters

Challenges of Managing Contrast Induced Acute Kidney Injury in the Cath Lab

Clyde Clarke, BSN, RN
Manager, Heart and Vascular Quality Outcomes
UK KDMC

Faculty Disclosure

- I have no relevant financial relationships with ineligible companies to disclose.

Objectives

- Define Contrast-Induced Acute Kidney Injury (CI-AKI)
- Describe CI-AKI Incidence, Consequences, and Risk Factors
- Describe Strategies for the Prevention/Reduction of CI-AKI in the Catheterization Lab

Educational Need / Practice Gap and Expected Outcomes

- Healthcare providers in the catheterization lab may have gaps in knowledge regarding the definition, incidence, consequences, and risk factors of Contrast-Induced Acute Kidney Injury (CI-AKI), as well as in implementing evidence-based prevention strategies.

- This activity will enable participants to accurately define CI-AKI, recognize its incidence and clinical impact, identify patient-specific risk factors, and apply evidence-based strategies to prevent or reduce CI-AKI, improving patient safety and outcomes.

CI-AKI DEFINITION

CI-AKI: Definition

Contrast-induced acute kidney injury (CI-AKI) is a sudden decline in kidney function that follows the intravascular administration of an iodinated contrast medium. It is diagnosed when a rise in serum creatinine is observed within 48 to 72 hours after contrast exposure and other potential causes of kidney injury have been ruled out. The condition was previously called "contrast-induced nephropathy" (CIN) but is now more commonly referred to as CI-AKI or contrast-associated acute kidney injury (CA-AKI).

Ramachandran P, Jayakumar D. Contrast-induced Acute Kidney Injury. Indian J Crit Care Med. 2020 Apr;24(Suppl 3):S122-S125. doi: 10.5005/jp-journals-10071-23379. PMID: 32704218; PMCID: PMC7347061.

CI-AKI: Definition

- NCDR defines Acute Kidney Injury as the following:
  - Increase in serum creatinine of > 0.3 mg/dL from baseline or Increase in serum creatinine of 50% or more from baseline
  - New requirement for dialysis

Coding Pre and Post Creatinine

- Pre-coding: the last value between 30 days prior to the procedure and the current procedure

- Post coding: The highest value up to 5 days after the procedure or until the next procedure or discharge

CI-AKI INCIDENCE, CONSEQUENCES, AND RISK FACTORS

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CI-AKI: Incidence

- Several diagnostic imaging services utilize a contrast medium: CT, MRI, Coronary Angiography
- Coronary angiography and angioplasty are more likely to cause CI-AKI than other contrast studies with an incidence estimated between 3% and 13%
- Contrast-induced acute kidney injury is the third most common cause for acute kidney injury (AKI) in hospitalized patients
- In pre-existing renal dysfunction with or without other risk factors like advanced age, diabetes, congestive heart failure and administration of other nephrotoxic drugs its incidence can be as high as 25%

Ramachandran P, Jayakumar D. Contrast-induced Acute Kidney Injury. Indian J Crit Care Med. 2020 Apr;24(Suppl 3):S122-S125. doi: 10.5005/jp-journals-10071-23379. PMID: 32704218; PMCID: PMC7347061.

CI-AKI: Incidence

- In patients older than 60 years, the incidence of CI-AKI has been reported as 8%-16%
- In patients with acute myocardial infarction who undergo coronary intervention, it has been shown that the age of 75 years or more is an independent risk factor for the development of CIN

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Modi K, Padala SA, Gupta M. Contrast-Induced Nephropathy. [Updated 2025 Jan 4]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK448066/

CI-AKI: Short-term Consequences

- **Increased mortality**: In-hospital mortality rates for patients who develop CI-AKI are significantly higher than for those who do not. The risk is especially high for patients who require in-hospital dialysis.
- **Need for dialysis**: A percentage of patients who develop severe CI-AKI require temporary dialysis to support kidney function. In the most serious cases, this can lead to the need for long-term dialysis.
- **Prolonged hospital stay**: CI-AKI is strongly associated with an increased length of hospital stay, which also increases overall healthcare costs.
- Complications from fluid and electrolyte imbalance leading to pulmonary edema and hyperkalemia.

CI-AKI: Long-term Consequences

- **Increased risk of chronic kidney disease (CKD):** A significant number of patients who experience CI-AKI will go on to develop CKD or have their pre-existing CKD worsen.
- **Higher long-term mortality:** Research has consistently shown that an episode of CI-AKI is an independent risk factor for higher long-term mortality, even for patients whose kidney function appears to recover.
- **Increased cardiovascular events:** CI-AKI is associated with a greater risk of adverse cardiovascular events, such as heart attack and major bleeding, both shortly after a procedure and in the long term.
- **Recurrence of AKI:** Patients who experience an initial episode of AKI are at a higher risk of having repeat episodes in the future.
- **End-stage renal disease (ESRD):** In some cases, CI-AKI can cause irreversible kidney damage, leading to ESRD. Patients with ESRD require either long-term dialysis or a kidney transplant to survive.

CI-AKI Risk Factors

Non-modifiable	Modifiable
Pre-existing renal dysfunction	Contrast volume
Age >75 years	Hypotension
Female gender	Intra-aortic balloon pump
Diabetes	Pre-procedural hyperglycemia
Congestive heart failure	Periprocedural hypovolemia
	Anemia

STRATEGIES FOR THE PREVENTION/REDUCTION OF CI-AKI IN THE CATHETERIZATION LAB

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Prevention/Reduction Strategies

- Review NCDR AKI data
- Hydration Protocol
- Implementation of Acist CVI Contrast Delivery System
- Incorporate lab results into pre-procedural timeout
- Hawthorne Effect
- Softening of NPO status

Quarterly Data ‘Deep Dive’ for KDMC

- 18 patients in numerator
- Age range: 61-93
- Average age: 70 yrs old
- Females: 14 Males: 4
- Contrast: 30cc-250cc
- Average contrast: 121cc
- Diabetes: 8
- Heart Failure: 7
- NSTEMI: 7 STEMI: 4
- Starting creatinine 1.2 or greater: 6

Hydration Protocol

Hydration Protocol

- For dialysis patients please call the physician for orders

Pre-Procedure

- Patients without risk factors with be receive 0.9NS @3mL/kg X 1hr
- Patients with serum creatinine >1.5 in diabetics and 1.7 in non-diabetics or EGFR <60ml/min/1.73m2 will receive 0.9 NS @3ml/kg/hr X 4hrs if patient has no history of CHF and has normal LV function, if patient has history of CHF and or poor LV function patient will receive 0.9 NS @ 1ml/kg/hr X 4hrs

Intra-Procedure

- Patients without risk factor will receive 0.9NS @ 1.5/ml/kg/hr
- Patients with serum creatinine >1.5 in diabetics and 1.7 in non-diabetics or EGFR <60ml/min/1.73m2 will receive 0.9 NS @1.5ml/kg/hr if patient has no history of CHF and has normal LV function, if patient has history of CHF and or poor LV function patient will receive 0.9 NS @ 1ml/kg/hr

Post-Procedure

- Patients without risk factors will receive 0.9NS @ 1.5ml/kg/hr up to 4hrs or until discharged
- Risk Score: Please notify physician if patient has history of CHF and or poor LV function of these rates
  - Score < 5 receive 0.9NS @ 1.5ml/kg/hr up to 4hrs or until discharged
  - Score 6-10 receive 0.9NS @ 3ml/kg/hr X 6hrs
  - Score 11-15 receive 0.9NS @ 3ml/kg/hr X 12hrs
  - Score >16 notify physician
- Males with serum creatinine >1.4 and females with serum creatinine >1.2 or patients that received >300cc of contrast will have CMP ordered 48hrs post procedure if patient is discharged prior to this time they will be given a order at discharge. Transition nurses will follow up on results and notify physician if needed.
- Patient will be instructed to hold Lasix the morning of the procedure

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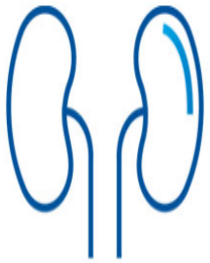
ACIST CVi™
Contrast Delivery System



Increasing patient safety

Up to 30% reduction in CI-AKI vs. manual injection.[1]

CI-AKI incremental cost range: **$13,294 to $14,266.**[2*]

Increasing patient safety

~25% reduction in contrast use without compromising image quality when comparing 4 Fr to 6 Fr diagnostic procedures.[3]

Bleeding and contrast use were significantly reduced with 5 Fr catheters compared to 6 Fr.[4]

Increasing workplace safety

Up to 50% reduction in clinician radiation exposure by stepping back.[5,6]

Increasing workplace safety

49.4% of interventional cardiologists have experienced at least one orthopedic injury.[7] Manual contrast injection may cause repetitive stress injuries to the operator's hand based on the force required to inject contrast and the number of procedures performed per day.[8]

Increasing operational efficiency

45 mL decrease per case when injector used.[9]

There is up to $0.30/mL savings in wasted contrast media.

Increasing operational efficiency

Average 5 min faster per procedure[10]

Time saved may allow for additional procedures to be performed in a day.[10]

*P<0.05 CVi vs. manual injection

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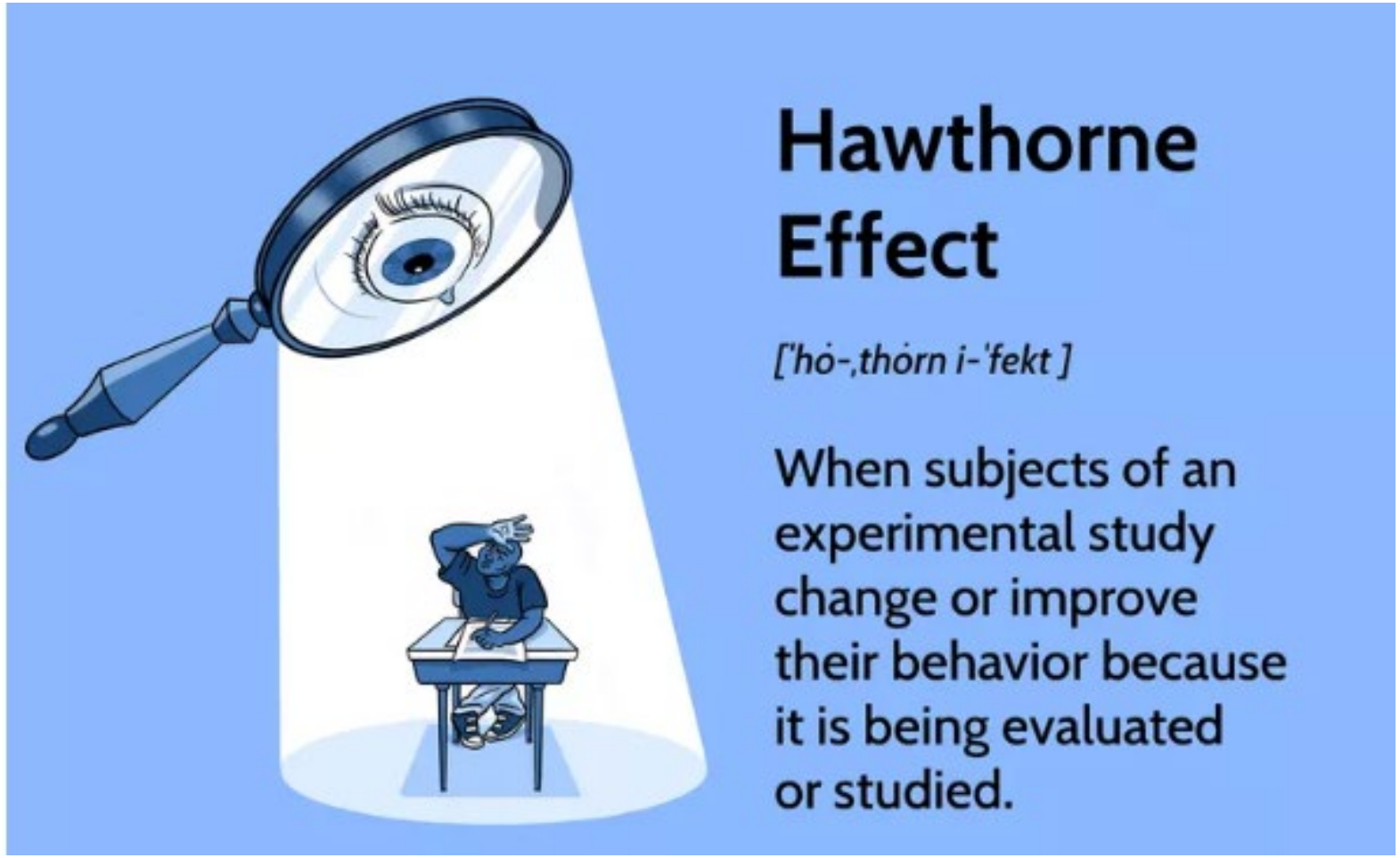
We are watching you!



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Softening of NPO Status

In their updated April 2021 guidelines endorsed by the American College of Cardiology, the American Heart Association, Heart Rhythm Society, the SCAI states that “for elective procedures, the 2017 guidelines from the ASA are recommended. These guidelines recommend that clear liquids may be ingested up to 2 h prior to a procedure and light meals up to 6 hours prior to a procedure (and 8 hours for heavier meals).

Alexander J, Castelow C, Cieker C, Wilbanks D, Asbeutah AA, Melton CD, Khouzam RN. Is NPO (Nil Per Os) Order Helping or Hindering Elective Cardiac Procedures? Curr Probl Cardiol. 2023 Aug;48(8):101179. doi: 10.1016/j.cpcardiol.2022.101179. Epub 2022 Mar 25. PMID: 35341803.

RESULTS

AKI Reduction Results

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BUT WAIT, THERE'S MORE.....

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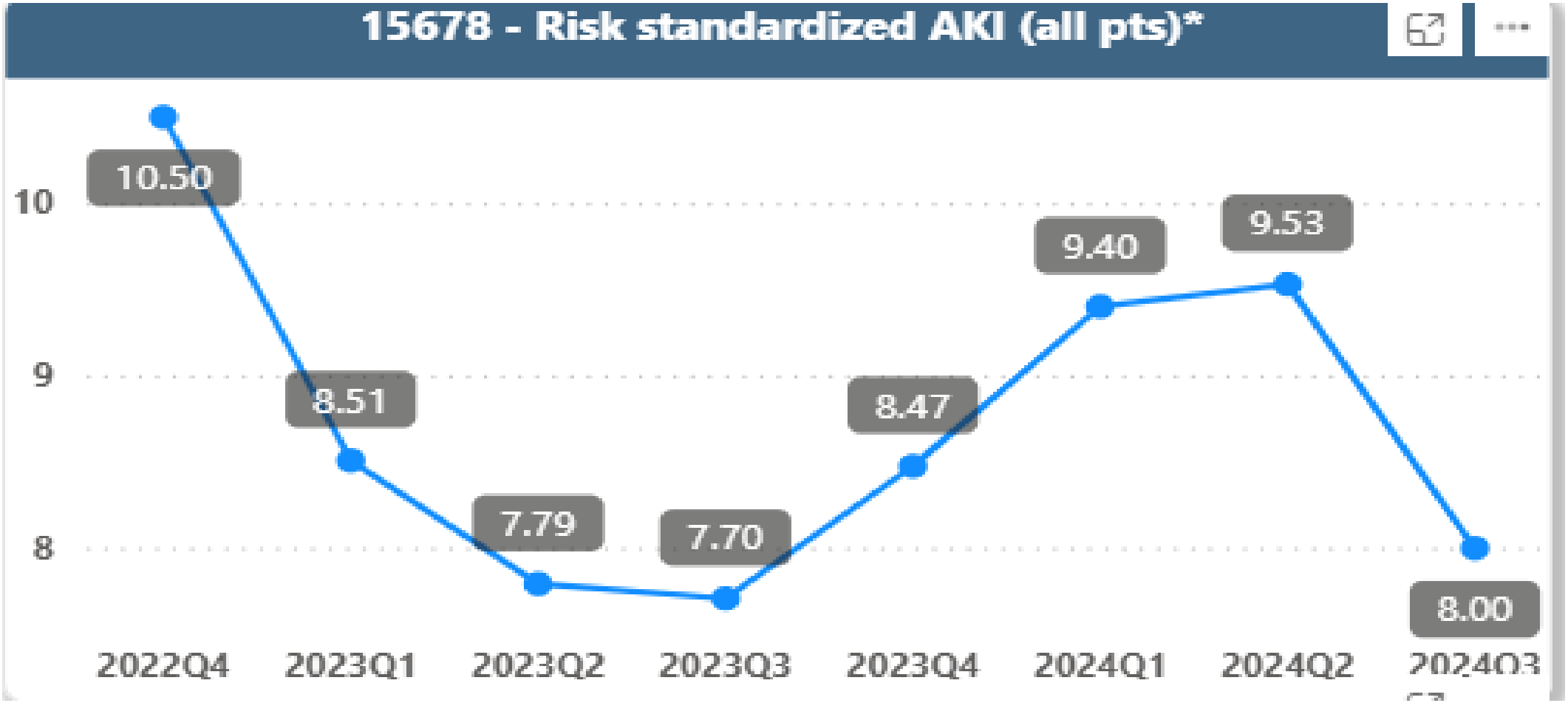
acIST Device Removed



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THANK YOU

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LINCHPINS AND DOMINOES:
How We Found Bigger Wins by Connecting the Dots

Steven White, BA, BSRT, RDCS, RDMS
Chest Pain Program Coordinator
Lake Cumberland Regional Hospital

UK Gill Affiliate Network
Empowering Care Together

LAKE CUMBERLAND
Regional Hospital
Chest Pain Program
Leading the way to better healthcare.

FACULTY DISCLOSURE

I have no relevant financial relationships with ineligible companies to disclose.

OBJECTIVES

After completing this educational activity, participants will be able to:

- Recognize the **Inter-relatedness** among key low-risk chest pain metrics
- Utilize the **Study Stage** of PI projects to identify remaining barriers and next steps
- Identify **Linchpin Barriers** impacting multiple processes
- Employ **Multi-phase Solutions** to address more complex Performance Improvement opportunities

EXPECTED OUTCOME & EDUCATIONAL NEED/ PRACTICE GAP

- **Educational Need:** Managing low-risk chest pain patients can be complex and encounter multiple barriers especially around Observation Utilization
- **Practice Gap:** The challenge is to build and employ an interconnected process that supports proper identification, management, and disposition of low-risk chest pain patients
- **Expected outcome:** A proper process will provide low-risk chest pain patients with efficient and effective care appropriate to their carefully identified individual risk.

INTRODUCTION:

- Sometimes Process Improvement seems like a game of **Whack a Mole** – singular problems pop up with singular solutions.

- Then…sometimes…problems are multi-faceted or interrelated and finding the **linchpin** can release a **domino effect** of performance improvement.

DISCOVERY:
CP Observation Utilization Opportunity

- **Qualitative Insights** – from morning rounds through cardiac areas
  - Hospitalists complain that ED providers keep sending patients for CP Obs that don't really belong there.
- **Quantitative Insights** – from data monitoring
  - ACC Accreditation Database – CMs 23-30 verify frequent ED use of Obs for low-risk CP
- **Process Insights** – from networking, benchmarking, analyzing process & workflow, and incorporating newly published models or guidelines
  - ACC Site Visit 7/2023 observed higher than expected low-risk CP Obs utilization
  - **UK GAN** reports Obs utilization for low-risk chest pain patients is very small

IMPACT:
Excessive CP Observation Bed Occupancy

- **Workflow**
  - Reduced bed availability
  - Increased ED holds
  - Earlier Diversion Status
- **Revenue**
  - Increased Staffing
  - Lower Reimbursement
    - CP Observation Bundle
    - Extended stay for completion of diagnostics
      - Diagnostics not separately reimbursed (no carve outs)
- **Patient Satisfaction**
  - Patient perception of a long stay to determine nothing was wrong

PI Initiative:
Low-Intermediate Risk CP Observation

Chest Pain Observation Length of Stay @ ACC Site Visit was **36 hours**
LCRH Goal was set for **≤ 20 hours** (ACC targets 16 hrs)

(Note: ACC database represents a random sample with small numerator)
Full population abstraction is needed to better **quantify** low-risk Obs placements

- **Where We Started Under Initial CP Observation process:**
  - Oct ’23: full population snapshot
  - Low Risk (CP Unsp/CP Oth)- 34 hr avg LOS X 14 pts = 482 CP Obs hours
  - Int Risk (USA/ASHD/NSTEMI)- 37 hr avg LOS X 12 pts = 442 CP Obs hours
  - Combined CP Observation
    - **Avg LOS = 36 hours**
    - **Combined CP Obs hours = 924**

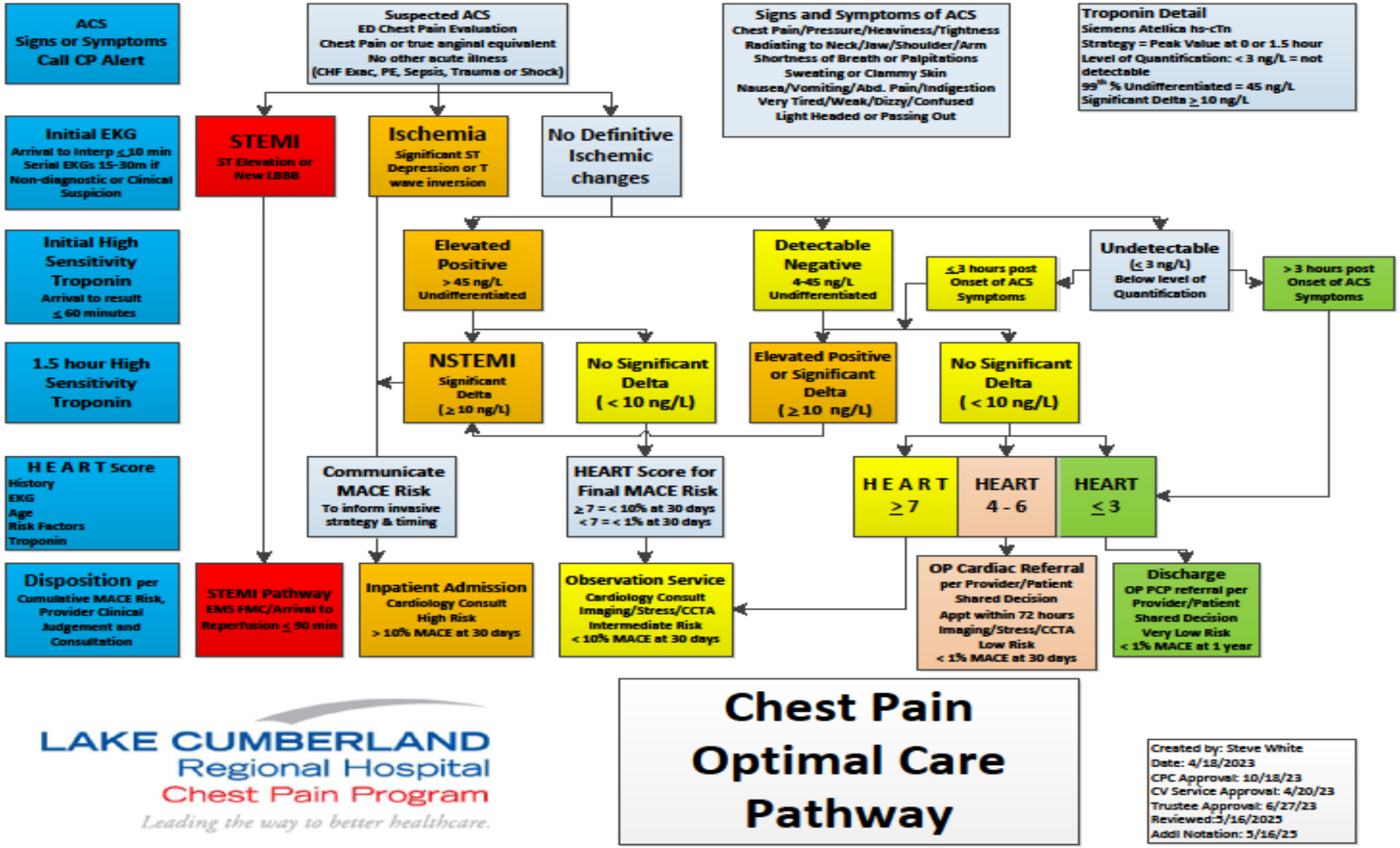
PLAN:
Ensure Appropriate CP Observation Placement

- Networking
  - Gill Affiliate Network Resource –
    - **UK ED Clinical Decision model identifies** most CP as **either IP appropriate or OP f/u appropriate**
- Process Analysis of LCRH CDP (clinical decision pathway)
  - Inherited in 2022, built on 2014 guidelines, no recent updates
  - New publications
    - 2021 AHA/ACC/ASE/CHEST/SAEM/SCTT/SCMR joint **Guidelines for Eval & Dx of Acute CP** promotes key elements of CDP strategy
    - 2022 release of several evidence based large population studies on **ACS risk stratification** validate Summative Application of HEART Score

DO:

Update Clinical Decision Pathway for ED Providers

- Blue Box Rows incorporate each 2021 Guideline
- CDP patterns UK's model with added precautions for USA
- Summative use of HEART score yields a highly individualized MACE risk



STUDY:
Education and Implementation Impact

New ED Clinical Decision Pathway implemented in October 2023

No Obs Placement of Low-Risk CP in Nov-Dec ACD Random Sample

Reference	Measure Title	GOAL	JUL	AUG	SEP	OCT	NOV	DEC
CM.M31	Length of Stay for Low Risk Obs services. EC7.M17 PREV M.36	16 hrs	40	24	25	31	*	*

Continued Monitoring Q1 2024

Rapid Return of Obs Placement of Low-Risk CP

Reference	Measure Title	GOAL	JAN	FEB	MAR
CM.M31	Length of Stay for Low Risk Obs services. EC7.M17 PREV M.36	20 hrs 16 hrs	31	85	44

Problematic LOS for Low-Risk CP Observation

LAKE CUMBERLAND
Regional Hospital
Chest Pain Program
Leading the way to better healthcare.

ACT: Phase II
Address CP Observation Management

PLAN:

- Revise Observation Management Process
  - Define Inclusion / Exclusion Criteria
  - Distinguish & Track Obs Status Patients within blended population
  - Conduct Nurse / Provider Assessment at 8 hrs
    - Discharge patients approp to OP f/u per symptom, EKG & troponin monitoring
    - ID & Escalate and further testing needed for disposition determination
  - Conduct Nurse / Provider Assessment at 16 hrs
    - ID as IP or OP appropriate
    - Formulate Discharge Plan
  - Utilize IDT (inter-disciplinary team) to address barriers

DO:
Implement New CP Observation Process

- Provide Hospitalist Education on the Revised Chest Pain Observation Model
- Implement the Model in January 2024
- Monitor LOS to gauge improvement

Reference	Measure Title	GOAL	JAN	FEB	MAR
CM.M31	Length of Stay for Low Risk Obs services. EC7.M17 PREV M.36	20 hrs 16 hrs	31	85	44

- ACC ACD first full month, February shows disappointing metrics

STUDY: Phase II Completed
New CP Observation Process

- **May 2024 full sample snapshot**
  - Low-Risk (CP Unsp/CP Oth) 47hr avg LOS x 3 pts = 140 CP Obs hours
  - Int Risk (USA/ASHD/NSTEMI) 24hr avg LOS x 5 pts = 120 CP Obs hours
- Significant improvement in **Observation utilization**
  - 2 cases D/C home at 12hrs = appropriate outcome for new process
  - 3 cases advanced to IP status in under 1 hour
  - Combined Obs Utilization of 8 patients for 260 total Obs hours
- **Goal not met for Obs LOS, especially Low-Risk>>Int Risk at 47hrs**

Root Cause Analysis -> LINCHPIN Discovery

Access to OP follow up was identified by providers as key barrier to appropriate disposition of Low-Risk CP patients

ACT: Phase III
Expand Outpatient CP Bandwidth

PLAN:

Establish additional OP CP follow up capacity to provide < 72hr F/U Appts for unattached or when > 72 hr wait w/ est. provider to:

- **Evaluate for recurrence or escalation of symptoms**
- **Repeat EKG for comparative changes from ED EKG**
- **Repeat Troponin if clinically warranted**
- **Order Diagnostic Studies for Non-Invasive Ischemia Evaluation**
  - Stress Testing (Routine Treadmill, Nuclear Stress or Stress Echo)
  - Coronary CT Angiography (CCTA) available with new LCRH 256 slice CT Scanner
- **Review and analyze results to determine continued course of care**

DO:
Identify & Engage Additional OP Providers

Stop Gap using current providers with additional capacity

- Source LC Medical Arts Combined Clinic, Internal Medicine Residents & Mentors Start Date: August 15, 2024

New provider recruitment: Q4 2024

- LC Medical Arts hire of APP with 20+ years of cardiac experience
- LC Cardiology Assoc hire & onboard 3 additional APPs

Provide Education for ED and Hospitalist providers on availability and process

STUDY:
LCMA Clinic Impact

ED Low-Risk Chest Pain Discharges

- 9/1 – End 2024 = **107 new CP f/u referrals** to LCMA
- Q1 – Q3 2025 = **> 200 new CP f/u referrals** to LCMA

Provider Feedback:

- ED Provider – Obs utilization is no longer required to access timely chest pain follow up for patient safety and continuity of care
- Hospitalist – Extended Obs stay to complete all testing is no longer required if 8-16 hrs observation proves no progression or acute changes

PI Summary:
Low-Int Risk CP Observation

Where We Started Under Initial CP Observation Process:

- Oct/Nov ‘23: snapshot
- Low Risk (CP Unsp/CP Oth) – 34hr avg LOS x 14 pts = 482 CP Obs hours
- Int Risk (USA/ASHD/NSTEMI) – 37hr avg LOS x 12 pts = 442 CP Obs hours
- Combined CP Observation avg **LOS = 36 hours, 924 Combined CP Obs hours**

Phase I ED Clinical Decision Pathway + Phase II Obs Management Process + Phase III Expanded OP Provider Capacity

- May ‘25 full sample snapshot
- Low Risk (CP Unsp/CP Oth) – 24hr avg LOS x 9 pts = 214 CP Obs hours
- Int Risk (USA/ASHD/NSTEMI) – 28 hr avg LOS x 5 pts = 142 CP Obs hours
- Combined CP Observation avg **LOS = 25 hours, 356 Combined CP Obs hours**

PI Outcome: **Obs LOS reduced by 11 hours**

Total CP Observation hours reduced by > 61%

TAKE AWAY:

Multi-faceted problems may require **multi-phase solutions** and sometimes reveal a common **Linchpin barrier**. Resolving these may prove to be both the most challenging and most rewarding part of the ongoing quality improvement process.

Even so, I hoped to be back to **Whack a Mole level problems** for a while… for a little **immediate gratification...**but

UK Gill Affiliate Network
Empowering Care Together

LAKE CUMBERLAND
Regional Hospital
Chest Pain Program
Leading the way to better healthcare.

No…
Already on to the Next Challenge:

Build and implement an ED scheduling mechanism for referrals

- ED Chest Pain discharges have f/u **referral appointment in hand at discharge**
  - Regardless of day/time of discharge
  - Participation open to all local providers
  - Timeframe of appointment is < 72 hours

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THANK YOU!

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