

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



2023 Poster Presentations

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Mobility is Medicine: A Novel Approach to Increasing Patient Activity During Hospitalization

Jeremy Barner PT, DPT, Board-Certified Geriatric Clinical Specialist

UNC Health — Jeremy.Barner@unchealth.unc.edu

Emily Hoke, PTA, MHA, IASSC-CBB

UNC Health — Emily.Hoke@unchealth.unc.edu



We know patients need to move – how can we help?

Problem: Ambulation and mobility is an essential component to patient care and is linked with shorter hospital stays. Previous efforts to increase the frequency of patient mobilization failed to yield desired results.

Solution: Create a team of entry-level patient care support personnel focused on mobilizing and ambulating patients – the Rehab Mobility Team (RMT).

- Targeted nursing units and physician service lines to **focus on patient activity and mobilization** with a goal to reduce length of stay (LOS).
- Designed **operational management and specific training on patient mobilization** by physical/occupational therapy staff.
- Using a PDSA approach, workflows were revised to maximize opportunities for patient encounters and individual coaching was conducted to **improve the rate of successful encounters**.
- A **decrease in LOS was observed** in the areas supported by the RMT.

Pilot 1.0 – Aug-Nov 2022; target population 5 units (4 acute, 1 stepdown), 5 services (Cardiac, Medicine, GI Surgery)

Plan

- Identify ideal patient populations
- Provide task-specific training related to mobility
- Establish KPIs to monitor impact
- Educate care team on RMT role and scope
- Create standard work
- Pilot program on 5 units

Do

- Implemented a nurse-driven mobility assessment as primary inclusion/exclusion tool
- Structured learning experiences to include nurse shadowing, classroom, and hands-on patient care training
- Rotated RMT in target units based on volume

Study

- Average 35.5 encounters attempted per day
- Average 17.2 encounters successful per day
- Inconsistent completion of mobility assessment tool
- Activity orders often missing resulting in delay in services
- Time waste identified in operational processes

Act

- Opportunities for action:
 - Decrease time spent in morning planning
 - Decrease delays to activity/ mobility initiation
 - Leverage relationship-building through anchored unit assignments
- Deployed nurse, staff, and patient satisfaction surveys

Pilot 2.0 – Dec 2022-Jan 2023; piloted on 1 of 5 units

Plan

- Revise standard work for identifying appropriate patients using an 'opt-out' mindset
- Improve morning assignment processes to decrease waste
- Increase visibility of activity attempts/successes/goal for each patient
- Engage leadership group in improvements related to activity order entry
- Pilot changes on 1 unit

Do

- Assigned RMT by zone (based on approx. # beds)
- Conducted additional case review to monitor for safety concerns with new screening process
- Revised workflow to incorporate existing Safe Patient Handling policy
- Provided at-the-elbow coaching by Supervisor to develop RMT skills in patient engagement

Study

- In study unit:
 - Average 60 encounters attempted per day
 - Average 34.4 encounters successful per day
 - No serious adverse events or near-misses associated with process changes
 - Satisfaction surveys yield positive results
 - LOS decreased by 0.3 days on units supported by RMT

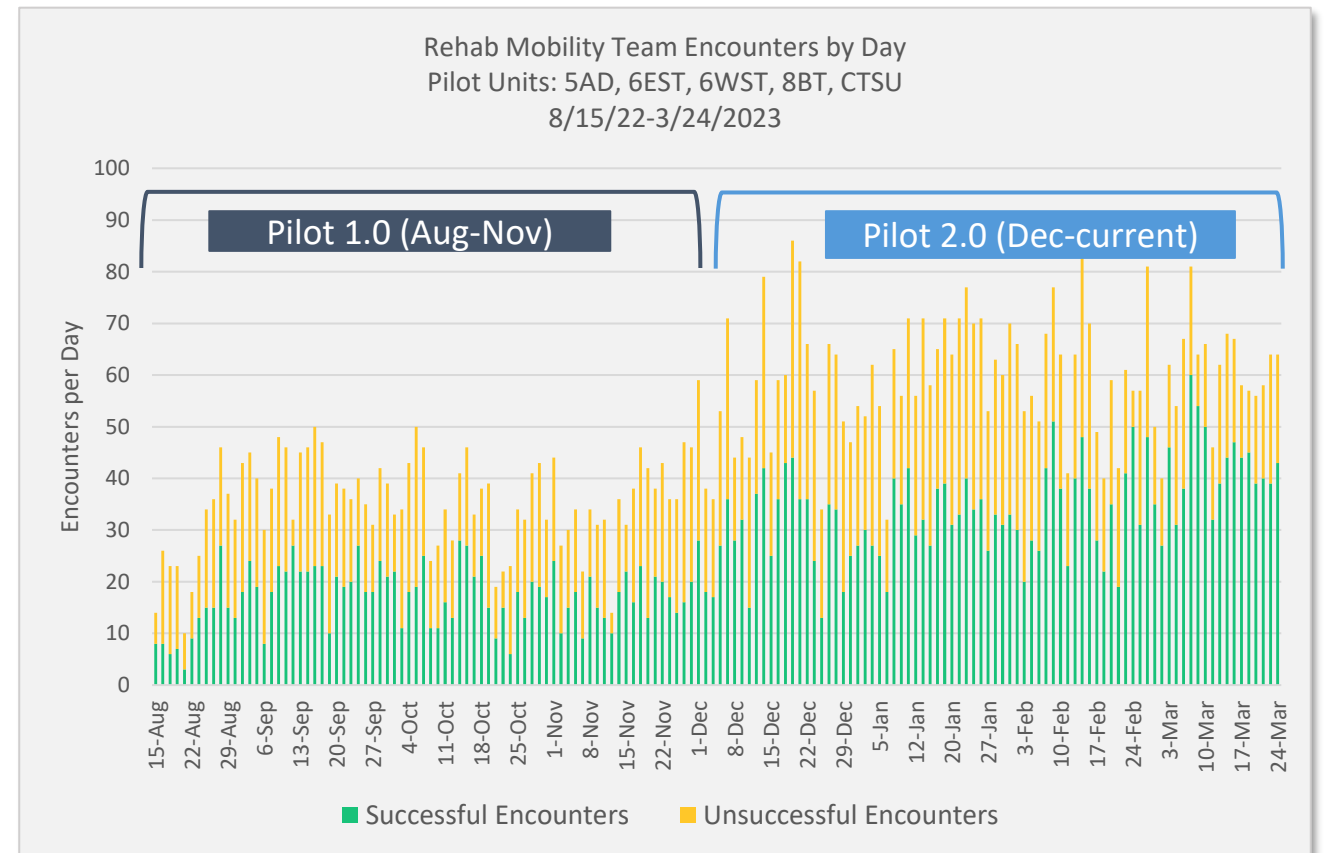
Act

- Decision to expand revised workflows to all units
- Program summary presented to executive leaders for budgetary review and recommendation for expansion

Are we getting better?

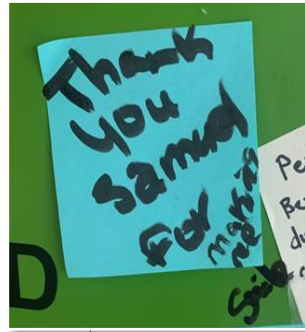
- Changes in Pilot 2.0 resulted in more attempts and **more successful encounters**.
- **LOS decreased by 0.3 days** for patients on target units and services while LOS increased for patients on other units and services.
- The RMT has added an average of **300 activity or mobilization opportunities per week** across approximately 80 beds.
- Nursing staff and patients **report high rates of satisfaction** with the program.

	Pilot 1.0				Pilot 2.0				Percent Change
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
Successful Encounters per Day	12.1	20.5	17.0	16.8	29.5	32.0	34.6	41.8	+100%
Total Attempts per Day	28.2	39.7	34.7	35.4	56.7	61.7	60.45	60.2	+69%



Now that we've learned, let's teach others

Note on 8BT gratitude board
from a patient



"This is truly more than we have received in any other hospital visit; it's really blown our minds. The doctors say get up and move but knowing that it can actually happen is reassuring."

"It helps you out, especially after you have surgery, helps get your strength up and get you on the road to recovery. Having that person to come and "push" you helps; otherwise I might give up and say I don't feel like doing it."

"You guys have some good people that listen and make you feel heard."

Comments from patient satisfaction survey

Embedding support staff with **specific mobility training** reduces barriers to patient activity and mobilization.

- The RMT is most effective on units with **lower acuity where skilled mobilization is needed with less frequency** (such as Occupational or Physical Therapy).
- General **education from interdisciplinary team** members on the importance of mobility is the key to consistency.
- **Close supervision** is necessary to maintain day-to-day operations.
- Creating this role has also provided a critical access point for individuals interested in **pursuing healthcare careers** to gain experience and exposure to the hospital setting.

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Atrium Health ED Direct Admits to Hospice

Emily Bowers, MPH, CPHQ

Emily.bowers@atriumhealth.org

Atrium Health

Project Overview

Expedited Referral to Hospice through the Emergency Department

Background

Patient & Caregiver Perspective:

Preventing hospital admission in favor of transfer to hospice (home or IPU) “can benefit select patients resulting in both improved quality and quantity of life¹.”

Operational Benefit: Referral to hospice can prevent acute admissions, increasing capacity, reduce potential readmissions, as well as 30-day and inpatient mortality rates.

Purpose & Goals

Purpose:

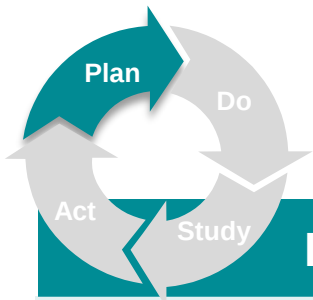
Identify and subsequently expedite patient placement for patients presenting to ED meeting hospice criteria and/or with a prognosis of ≤ 72 hours.

Goals:

- ✓ Help patients with care goals and end-of-life planning and connect eligible patients with expedited hospice services
- ✓ Avoid unnecessary inpatient or observation stays.
- ✓ Reduce 30-day readmissions, inpatient mortality

Methods

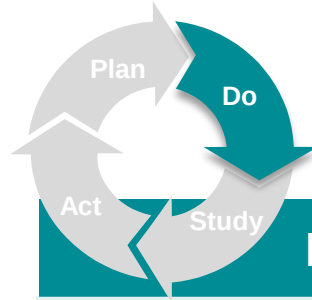
PDSA Cycle implemented with Didactics and Expedited Process



Phase One

Multidisciplinary discussions between Hospice Nursing leaders & Medical Director, ED Medical Director and nursing supervisor, case management and quality

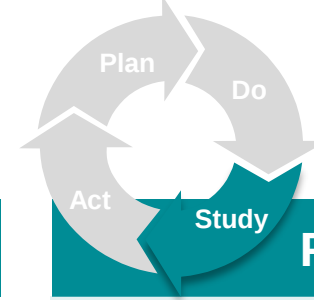
A Review of cases within the past 12 months who had a hospital LOS ≤ 72 hours and discharged to hospice or expired revealed a large potential base of patients.



Phase Two

A combination of didactics provided a faculty meetings and direct clinical brief education sessions were combined with an expedited process for admission.

A single phone number, made available 24/7/365, was staffed with a hospice RN who provided counselling to patients & families on choices of hospice services as well as direct discharge and referral to an inpatient hospice unit (IPU) or home with hospice care.



Phase Three

Weekly case review of potential hospice referrals was completed and shared with ED Medical Director and physicians. Top of mind Reminders (posters) were created and placed in staff-only areas.

Primary outcome was the gross number of patients directly referred to hospice on a month-to-month basis. Data was accrued directly from the hospice and analyzed. The control was rate of referral in the preceding years prior to the onset of the intervention.

Results

System of education and expedited referral increased utilization



Hospital Impact:

- Nine inpatient admissions avoided
 - *Also considered IP mortalities avoided*
- Three 30-Day readmissions avoided
- 27 days Inpatient LOS Days avoided
- \$28,836 dollars saved in cost avoidance (daily cost \$1068)
- No significant impact to ED throughput times
 - Mean Door to Door time: 470 minutes

Patient & Caregiver Impact:

- ✓ Hospice Length of Stay
 - Mean 6 days
 - Median 6.5 days
- ✓ Interdisciplinary care team support (RN, HHA, Social Worker, Chaplain, Bereavement Counselors)
- ✓ Symptomatic relief of chronic or incurable medical conditions, focusing on comfort directed care
- ✓ Alignment with goals of care & end-of-life preferences



82%

ED Direct to Hospice
Referral Admission rate

Lessons Learned

System of education and expedited referral increased utilization

- A system of education and expedited referral from the emergency department to Hospice resulted in an increase in utilization of hospice services.
- Concerns about timeliness of referral and provider inexperience and hesitance appear to have been overstated.
- The patients represented a diverse group in terms of their primary pathology. Hospice services are valuable for all members and should be offered to everyone who is otherwise eligible.
- Further study with more patients over a longer period is warranted to further elucidate the trend demonstrated during pilot study.
- Finally, additional interventions may be beneficial, such as a customized EMR clinical decision support tool, may increase provider recognition and rates of referral.

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Acute OT/PT Purple Belt – Triage Throughput UNC Medical Center, Chapel Hill, NC

Patrick Moseley, PT, DPT

Patrick.Moseley@unchealth.unc.edu

Sarah Shapiro, OTR/L

Sarah.Shapiro@unchealth.unc.edu

Becky Dodge RN-MBA-CSSBB, – Coach

Becky.Dodge@unchealth.unc.edu

April Xayavong, PT, DPT

Laura Andrews, PT, DPT

Kathryn Davis, OTR/L

Leslie Labelle, OTR/L

Devon Beer, PT, DPT – Process Owner

Dierdra Ricks, PT, MHA – Sponsor

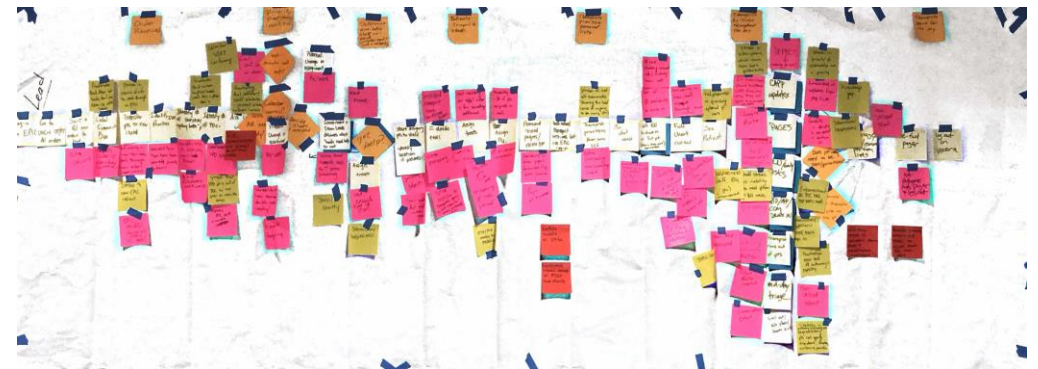
Project overview

Acute care OT & PT team leads and coordinators perform daily triage for their designated coverage areas which includes over 30 patient units across UNC Medical Center. Inefficiency with daily triage is attributed to:

- Variability of team lead daily assignments
- Lack of objective processes when determining daily priorities
- Plan of care (POC) follow up frequencies resulting in POC non-compliance

The following interventions were identified and implemented through a Purple Belt (Kaizen) project from January 2020 through January 2022:

- Reformatted OT/PT Communication Box in EPIC
- Revamped the triage process
- Created triage guide and FAQ



Study Design

- Utilized A3 methodology and completed a 5 day Kaizen event, in addition to conducting electronic surveys, observations and exhaustive data collection to assist with identifying core issues and root causes. Data was collected both in pre and post fashion, with post data collected at 30, 60 and 90 day intervals
- Results were utilized to guide the development of interventions that assisted with improving plan of care compliance, regularity of patient visits, and discharge throughput
- Group and 1:1 teaching were utilized to train staff members on these new interventions to support comprehension and compliance with the change in process

Name: Time to Triage (T2T)		Location: Conf Room A 7B1		Executive Sponsor: Dierdra Ricks		Start: 01/01/20		Revision:																																																																						
UNC Health		Process Owner: Devon Beer		Kaizen Coach: Becky Dodge		Current:		Revision:																																																																						
Patient Timeline Timeline Timeline Timeline Timeline Timeline Timeline Timeline Timeline Timeline	Box 1. Reason for Action			Box 4. Gap Analysis			Box 7. Completion Plan																																																																							
	PROBLEM STATEMENT: Acute care OT and PT team leads and coordinators perform daily triage for their designated neighborhood coverage areas which includes over 80 patient units. Inefficiency in daily triage is attributed to: variability of team lead daily engagement; lack of objective processes when determining daily priorities; plan of care (POC) follow-up frequency resulting in POC noncompliance. From May 2021, the average of met POCs for patients on case load for 7 days as per the recommended frequency was 22% OT and 38% PT with a 90-day target of 50% met POC. Alignment of scheduled vs actual daily staffing assignments per neighborhood occurred 32% of time for OT, 38% for PT.			1. Some triagers don't know the list, don't triage every day			1. Action																																																																							
	IMPORTANCE STATEMENT: When patients are not seen, their length of stay increases because they are not meeting their plan of care, and the patient and medical team's satisfaction with our services decreases.			2. Different criteria for good acute risk between therapists			2. Change criteria for Team Lead/Coordinators																																																																							
	Box 2. Current State & Box 3. Future State - True North Metrics			3. Triage challenges			3. Change role of Team Lead																																																																							
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Box 12. Insights			14. How will we share lessons learned with others? Report out in team meeting.			14. How will we share lessons learned with others? Report out in team meeting.																																																																								

Results/Outcomes

#	Metric	Unit	Pre Data	30 Day	60 Day	90 Day	Target
1	Plan of Care Met PT	%	38	54	41	43	90
2	Plan of Care Met OT	%	21	29	38	39	90
3	Patients not seen in 7+ Days PT	%	16	7.8	9.7	5.8	8
4	Patients not seen in 7+ days OT	%	31	8.2	4.9	10.8	15
5	Patients assigned per therapist per unit						
	1 patient/unit	%	38	28	29	37	30
	2 patients/unit	%	27	30	20	22	30
	3 patients/unit	%	35	42	51	40	40

Conclusions and Lessons learned

- Ongoing communication between the purple belt team and the rest of the acute OT/PT department was crucial in rolling out the process and ensuring buy-in and consistent implementation from team members.
- Non-traditional schedules made consistency challenging
- Continued reminders, emails and focus groups with staff were necessary to ensure carryover of the process, but avoiding information overload
- Identified unique issues faced by high volume coverage areas

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Moving and Grooving- Relocating and Growing a Rehab Center

Using Vertical Value stream

Becky Dodge, RN, MBA, CSSBB

Becky.Dodge@unchealth.unc.edu

Kelly Fletcher, PT, DPT, MHA, MPMC

Kelly.Fletcher@unchealth.unc.edu

UNC Medical Center

Project overview

The What and Why of a Vertical Value Stream (VVS)

What:

Identify key processes to focus on

Identify the inputs, process owners, key review sessions and completion review dates for each major process

Collect data related to processes involved in the move

Establish accountability for each major process

Why:

Used to plan a one time event

Strict cadence for completion of timeline

Clear ownership and accountability

Transparency

“Tight Connections”

Process improvement method or study design

Rehab and Nursing leadership and staff:

Met in September 2020 for a one day VVS.

Developed inputs, key review sessions and completion review dates.

Collected data on related processes, i.e., trachs, dietary consults, interpreter services, lab draws, dialysis, radiation therapy, etc.

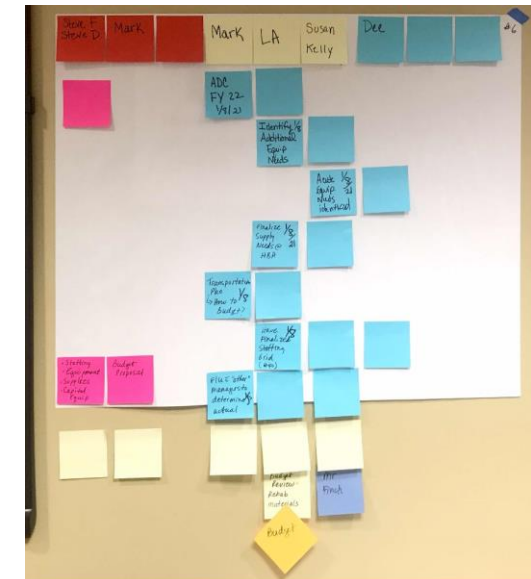
Transferred VVS results to a spreadsheet/RACI matrix and assigned responsibility for completion of projects.

Met weekly to ensure team stayed on track.

Physician leadership:

Met in November of 2020 for half day to develop the above.

Process mapping of the Intake/Admission process by attendings and residents to identify gaps.



Results/Outcomes

Met weekly to:

- Engage stakeholders
- F/u on progress
- Identify barriers and develop solutions
- Prepare for budget (This was a long range project so needed to prepare well in advance as this was the budget we would be operating under after the move)
- Recruited and hired staff to accommodate additional number of patients/beds
- Built relationships with key partners in Hillsborough Hospital prior to the move to promote collaboration
- Assisted in the move of Family Medicine to the 1st floor of Hillsborough to identify gaps
- The move was on time and on budget (and during

COVID!!)

We did it!!!



	Due Date	Task
Key Project Review HBH Meeting		
Inputs - Presentation		
Task 1	9/24/2020	Ask Jeff what he wants in presentation
Task 2	9/24/2020	Identify stakeholders
Task 3	10/13/2020	Pull data from other services
Task 4	10/20/2020	Create Rehab presentation
Task 5	11/6/2020	Initiate stakeholder newsletter
Key Project Review HBH Meeting/Presentation 10/27		
Key Project Review Architectural Review		
Inputs - Outdoor plan		
Task 1	10/5/2020	Kickoff Marketing plan
Task 2	11/30/2020	Finalize storage space
Task 3	11/30/2020	Allocate office space
Task 4	11/30/2020	Finalize lift equipment
Task 5	11/30/2020	Finalize Furniture
Task 6	11/30/2020	Finalize outdoor plan
Key Project Review Architectural Plan Finalized		
Key Project Review Workflow Review Monthly		
Inputs - LA spreadsheet and workflow maps		
Task 1	9/30/2020	Identify all workflows
Task 2	9/30/2020	Identify SME's for workflows
Task 3	10/13/2020	Pull/review data on utilization services
Task 4	11/4/2020	Identify gaps/needs in HBH
Task 5	11/19/2020	Collect staff feedback (survey, focus groups)
Task 6 - on hold	11/27/2020	Identify Rehab svcs staff training gaps (IV team)
Nursing Operations Workflow Review (Clinical workflows) 11/30		
Key Project Review Operational Plan Review		
Inputs - HBH Offerings and Capacity, list special service considerations		
Task 1	10/5/2020	Identify resource gap btw current and projected needs (FTE, supplies, equip)
Task 2	10/5/2020	Collect and analyze dept data - Kelly report Dec
Task 3	10/15/2020	Look at Legal re: transferring patients
Task 4	11/16/2020	Meet with Non RN services - connect w Oper leaders HBH - early Dec
Task 5	11/30/2020	Review existing workflows (MC, HBH)
Task 6	5/15/2021	Modify MC Rehab workflows
Key Project Review Operational Plan and Resource Assessment		
Key Project Review Other Departments		
Inputs - Assumptions and Data		
Task 1	11/16/2020	Meet with manager of "Other" Departments-Dec mtg
Task 2	12/7/2020	Develop a list of assumptions (census and utilization)
Task 3	12/7/2020	Develop a list of anticipated needs
Task 4	12/10/2020	Confirm labor request has been submitted
Task 5	12/15/2020	Discuss recommendations/alternative strategies

RACI matrix established for each line item

Lessons learned

The VVS delivered a framework that drove our strategic planning over a year and a half. Sticking to the framework/timelines enabled us to be successful.

Plan well in advance – this move involved physicians, nursing and therapy staff and a host of supportive departments. This allowed everyone to be on the same page re: budget preparation.

Collaboration and using data to determine strengths and weaknesses was key.

Having both leadership and staff (those closest to the process) perspective was important.

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Decreasing Readmission Risk of Stroke Patients

Chelsea Dunston, BSN, RN, SCRNP, ASC-BS

Chelsea.Dunston@atriumhealth.org

Atrium Health Cabarrus

Project overview

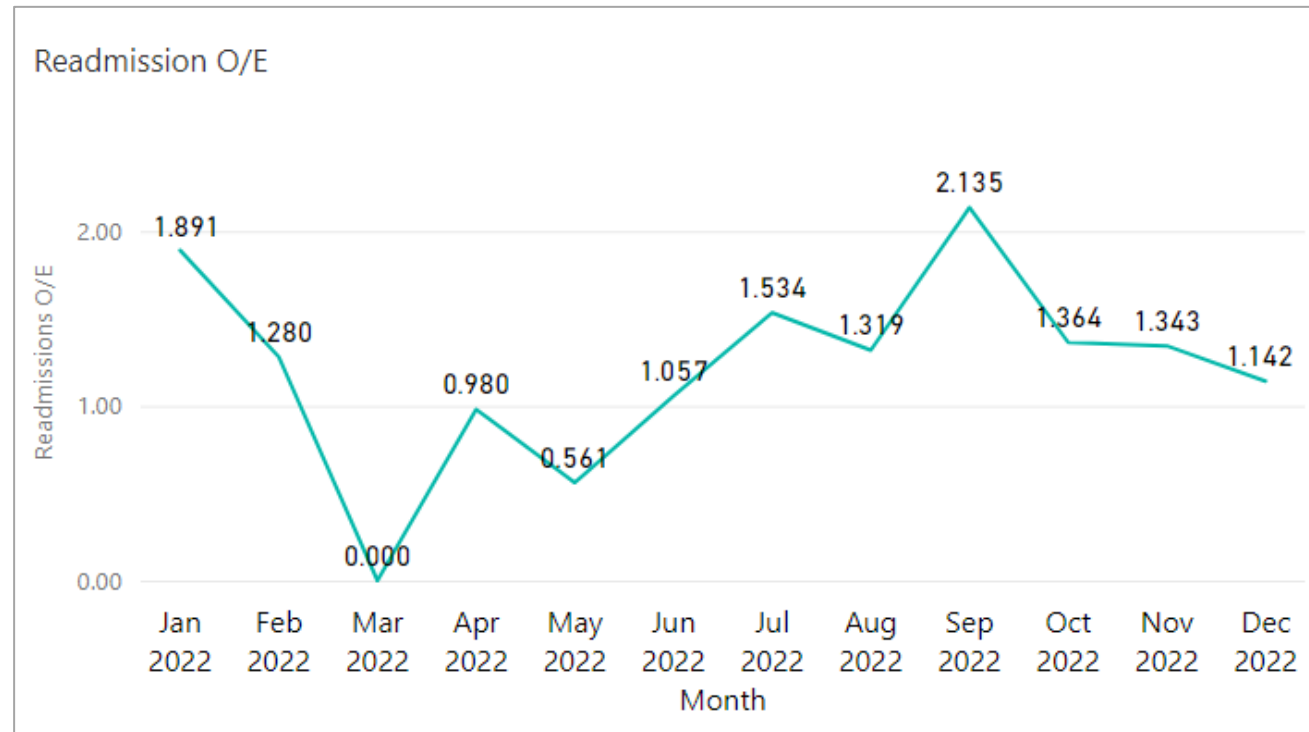
- Atrium Health Cabarrus serves more than 600 stroke patients each year. Care was siloed, with inconsistent flow and non-standardized communication pathways/processes. A high volume of readmissions resulted.
- Each readmission in the DRG 61-69 group was, and continues to be, reviewed for process improvement opportunities.
- As a result, a multidisciplinary team was created to review these cases and identify gaps in care and trends. The team consisted of stroke nurse navigators, case managers, hospitalists, physical therapists, neurohospitalists, neuroscience unit manager, stroke program coordinator, coding specialists, and performance improvement coordinator.

Process improvement method or study design

- The goal was to reduce 30-day readmissions to an average of 4 or less per month for 2022, decreasing the O/E from 1.469 in 2021 to 1.032 in 2022.
- Cases were reviewed, trends and gaps were identified, and a gate chart was used to track and monitor performance.
- Gaps and trends included lack of follow up scheduled at discharge, inadequate discharge preparedness, and inappropriate coding at discharge.
- Countermeasures included:
 - Inpatient stroke navigators referred and scheduled complex medical patients to outpatient stroke clinic, transition care services, and mobile integrated health
 - Implemented a readiness for hospital discharge survey
 - Coding tip sheets for stroke documentation shared with inpatient providers

Results/Outcomes

- Stroke 30-day readmissions decreased from 7 in January to an average of 4 or less throughout the remainder of 2022. Stroke readmission O/E decreased from 1.469 in 2021 to a YTD O/E in 2022 of 1.223.



Lessons learned

- Areas of opportunity were identified across multiple disciplines. Each discipline contributed to the effort to decrease admissions for this high-risk patient population.
- Providers were grateful to have a tool to improve documentation with ease.
- The hospital discharge readiness survey was noted to be a labor-intensive tool which ultimately provided little benefit.
- Stroke nurse navigators partnered with the local transition care clinic to ensure high-risk patients have timely follow up after discharge, as well as the local community paramedicine programs to increase early identification of barriers following discharge (such as medication management, transportation, and vital sign monitoring).

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Competing Between Quality Data Collection & Efficiency? ePost Fall Huddle forms

Simone Evans-Allison, MBA-HCM, BSN, RN, CPHQ

simone.evansallison@atriumhealth.org

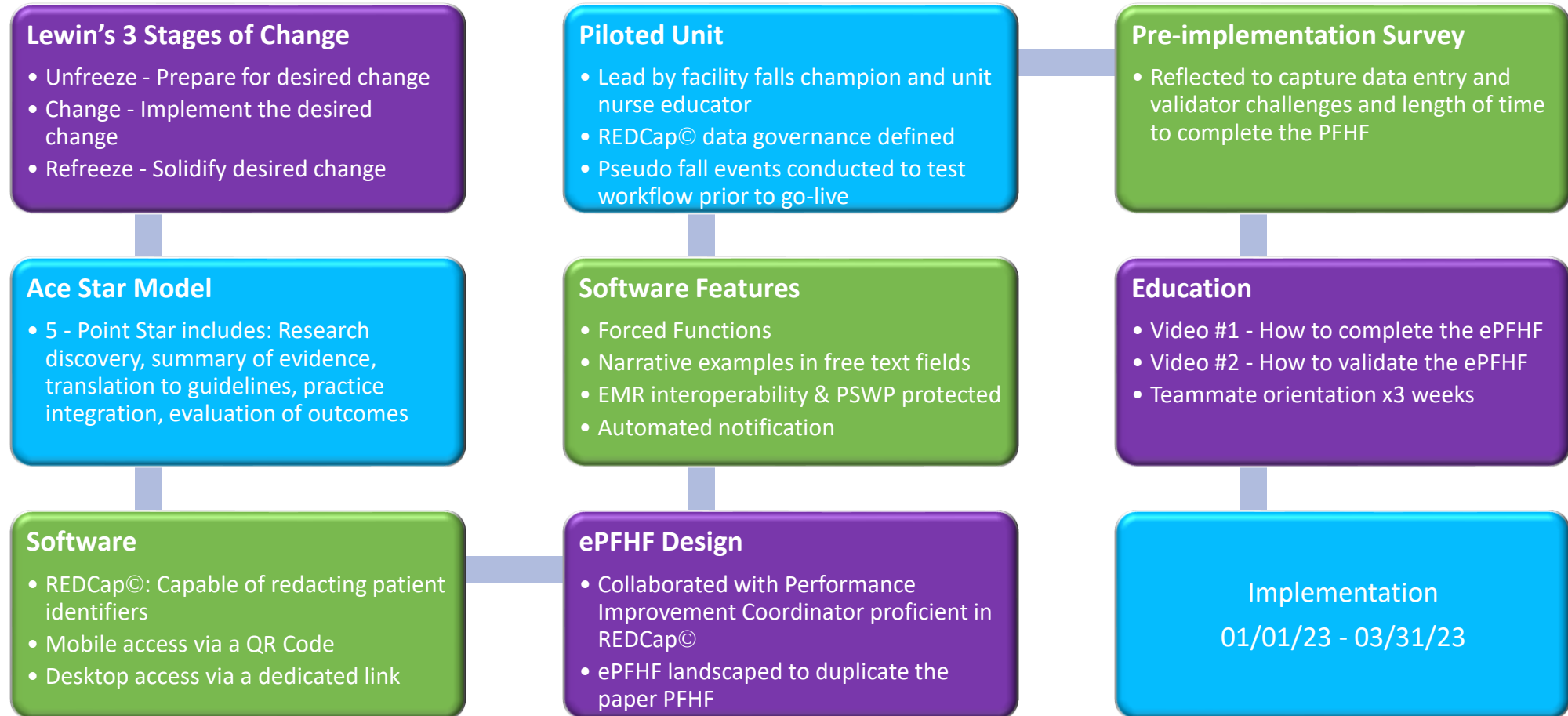
Atrium Health

Project overview

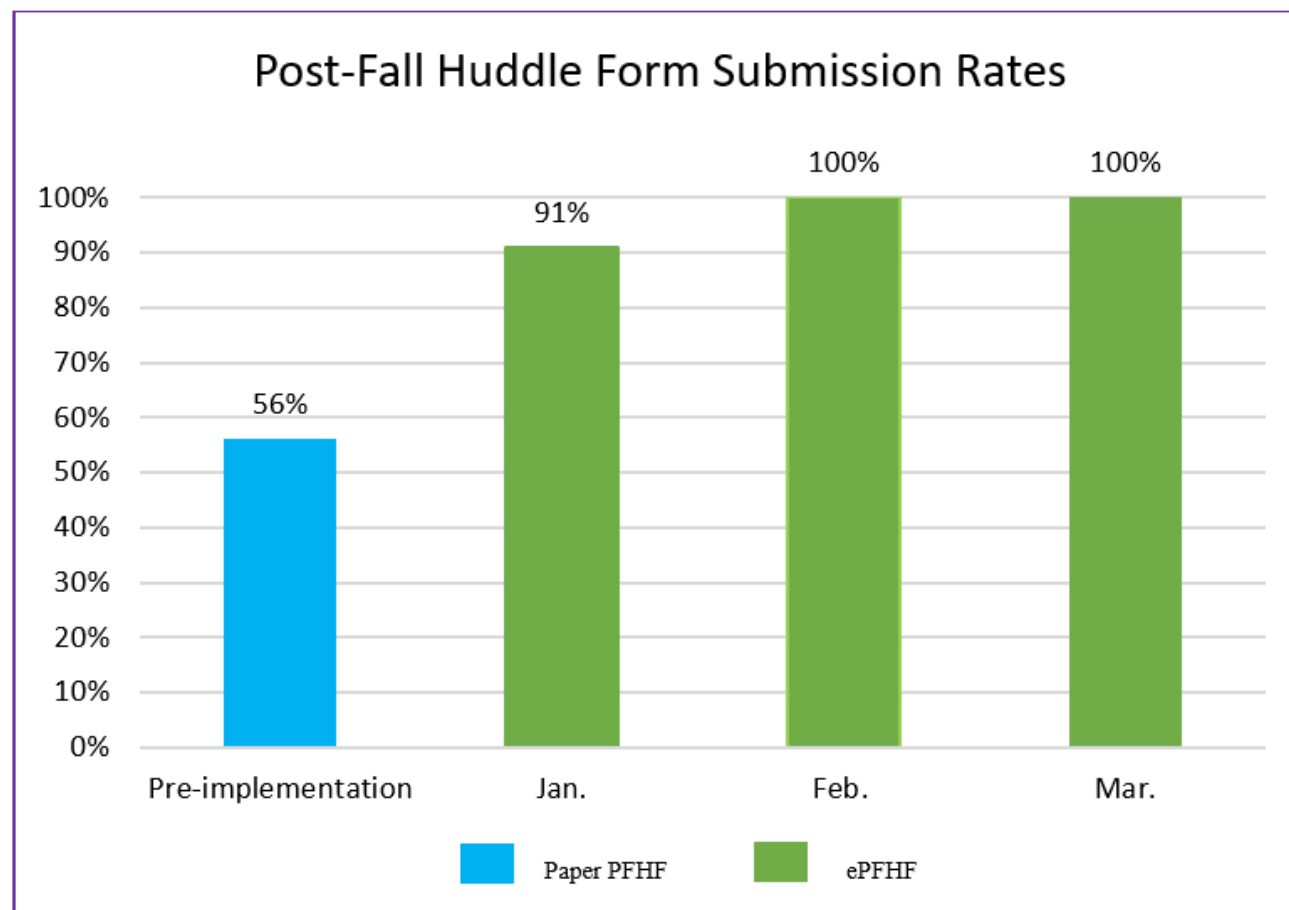
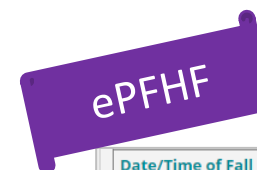
Completing a post-fall huddle form (PFHF) is a critical component of conducting the best practice known as a post-fall huddle. The investigative form identifies gaps and contributing factors related to the fall. However, the document is only available in paper format and compiles approximately 50 questions. This current state adversely impacts the direct-care nurse's workflow, nurse leaders responsible for reviewing the fall incident, data granularity, and documentation compliance. Tracking the completion of the form is a manual process which has revealed that the number of falls does not always equal the number of PFHFs. As a result, an electronic post fall huddle form (ePFHF) was created to increase completion rates and efficiency.



Study Design: Lewin's Change Theory & ACE Star Model

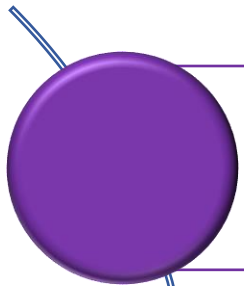


Results/Outcomes



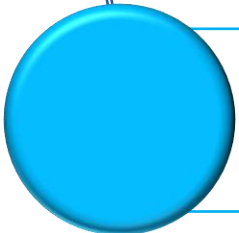
Date/Time of Fall Now M-D-Y H:M	HDS Score Pre-Fall 	Location of fall: ☐ Bathroom ☐ Patient Room ☐ Hallway ☐ Other:
Date/Time of Huddle Now M-D-Y H:M	HDS Score Post-Fall 	reset
Activity at time of fall: ☐ Ambulating ☐ Ambulating (to toilet/from toilet) ☐ From Bed ☐ From Chair/WC ☐ Toileting ☐ Transferring ☐ Reaching for belongings ☐ Showering ☐ Standing ☐ Dressing ☐ Unknown ☐ Other:		
reset		
Has the patient previously fallen during this hospital admission? ☐ Yes ☐ No		
reset		
Why do you (clinician) believe the patient fell? e.g. The patient has lower extremity weakness		
What did the patient state as the cause of the fall? e.g. I thought I could walk to bathroom by myself		
What was different during this activity than previous times when you did not fall? e.g. The patient has always called for assistance to toilet		
What caused or accounted for those differences? e.g. The patient had just woke up and had an urgent need		
Describe the fall event: e.g. The patient woke up at 0615 and had an urgent need to toilet. The patient did not call for assistance and stood up off bed to go to toilet. After taking 4 steps the patient's legs began shaking. Patient took another step and fell to the ground. Patient landed on side of legs but no visible injuries exist. The patient called out for help and was assisted to toilet and then back to bed.		
Expand		
Were correct interventions in place prior to the fall? ☐ Yes ☐ No		
reset		
List missing interventions:		
Was the patient injured? ☐ No ☐ Yes		
reset		
Describe type of injury:		
How was the plan of care updated to prevent the same occurrence in the future?		

Lessons learned



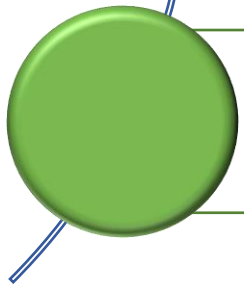
Adoptability

- Influenced by level of comfort to trust technical applications. At times, the paper PFHF was completed first and entered electronically later.



Accessibility

- ePFHF allows multi-user access to the form in real time and increases access to report communication
- Opportunity - Embed ePFHF links within the EMR to streamline workflow.



Efficiency

- Measuring efficiency with a post-implementation survey, May 2023
- Preliminary feedback indicates ePFHF is more efficient, especially with notification to validators.

Acknowledgements

- ePFHF Nursing Lead: Simone Evans-Allison
- ePFHF Designer: Thomas Schaefer
- ePFHF Pilot/Implementation Leads: Dr. Kim Pate & Rebecca Noe
- ePFHF Implementation Team: April Schultz & Elizabeth Mitchell

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Implementing a Falls Program Across an Organization *An Innovative Strategic Approach*

Simone Evans-Allison, MBA-HCM, BSN, RN, CPHQ

Simone.Evansallison@atriumhealth.org

Atrium Health

Project overview

Falls with injuries were noted to have increased across a southeast regional healthcare system. The following illustrates the successful implementation of the Hester Davis (HD) Falls Program® over 13 months. The implementation occurred in four waves and impacted 17 acute care sites across four states. The goal was to reduce falls with injuries, establish standards and align practice within three regional markets.

Process Improvement

Pre-Implementation

Agency for Healthcare Research and Quality (AHRQ) Toolkit

EMR build for HD Falls program

Identification of facility implementation leaders

Shared Governance lead by the Falls Collaborative team

Implementation

Standardized frequent communication cadence

Standardized core fall risk signage

Standardized the Post Fall Huddle Form

1:1 Consultation provided to facilities and specialty service lines

Post-Implementation

Monitored assessment & intervention audit submissions

Developed a facility compliance and progress heatmap to shared with nursing leadership

Monthly review of performance with each market

Sustainability

Defined and communicated levels of accountability

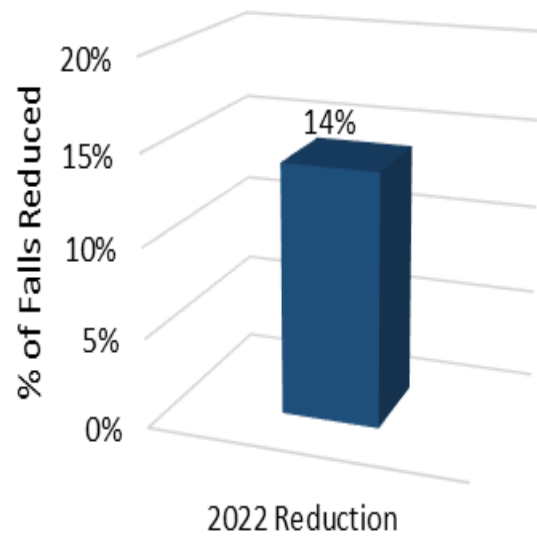
Defined expectation for leveraging data resources provided by HD Nursing

Monthly facility report-outs to regional Falls Collaborative

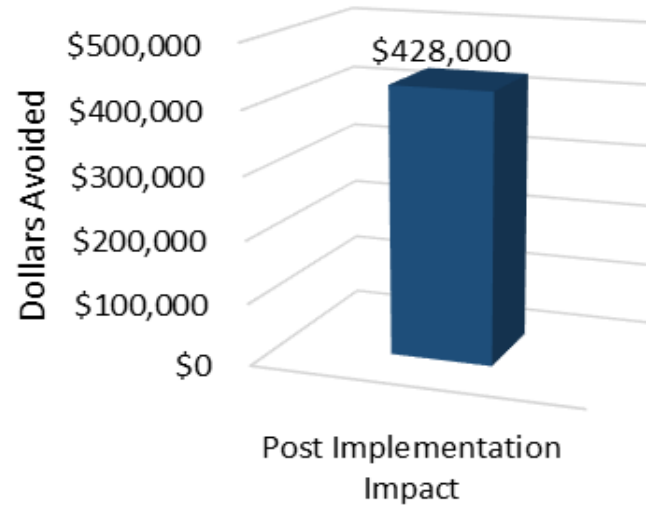
Ongoing resource streamlined and posted to a dedicated website

Results/Outcomes

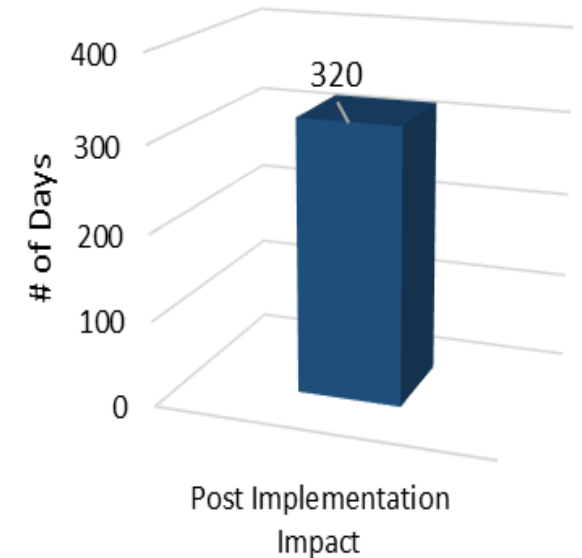
Falls w/Injuries Reduction
from 2021 to 2022



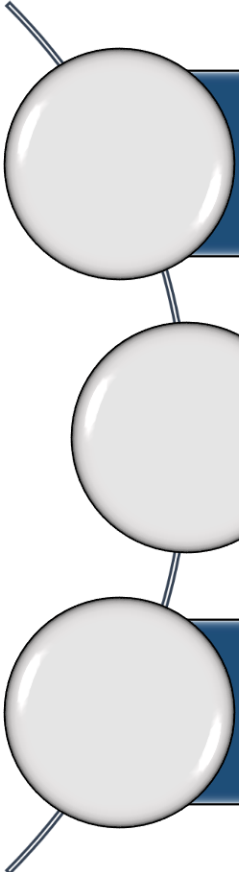
Falls w/Injury Cost
Avoidance



Additional Length of Stay
Days Avoided



Lessons learned



Additional education and rationale for using floor mat required to increase buy-in and clarify misconceptions

Enhance content and promote use of a Quick Tip Scoring Guide

Over-communication is proactive communication!

Acknowledgements

- CNO & CMO Champions
- Nursing Excellence AVP: Dr. Carmen Shaw
- AH Southeast Regional Implementation Leaders:
April Schultz & Simone Evans-Allison
- HD Nursing Implementation & Sustainability Coaches
- AH Southeast Regional Facility Team Leaders

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Peer Audit & Feedback: A Documentation Quality Improvement Project

Michal Glass MSN, RN, NE-BC, CPHQ¹; Kelly Powers, PhD, RN, CNE²; Carmen L. Shaw
DNP, RN-BC, NEA-BC³; Laura M. Magennis, DNP, RN, RNC-OB, NPD-BC²

¹Atrium Health Corporate Quality; ²UNC-Charlotte; ³Atrium Health Nursing Services



Atrium Health



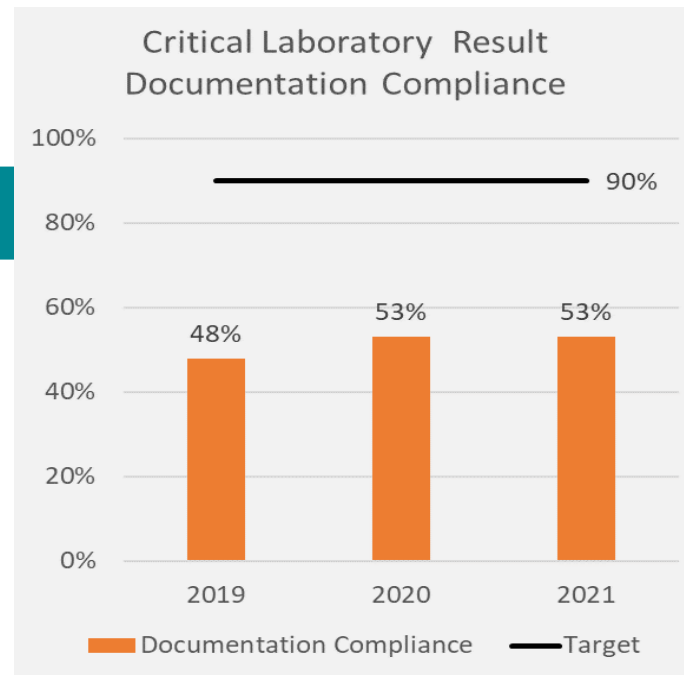
UNIVERSITY OF NORTH CAROLINA
CHARLOTTE

Contact information: michal.glass@atriumhealth.org

Project overview

Background

- Documentation is critical in nursing communication (Cartwright-Vanzant, 2010)
- The Joint Commission (TJC) identifies ineffective communication as the most common cause of Sentinel Events (Lippincott Advisor, 2020)
- Nursing Liability cases and license inquiries can be related to documentation discrepancies (Reiner, 2021)
- National Patient Safety Goals from TJC require monitoring of nursing documentation. (The Joint Commission Perspectives, 2008)



Literature review:

Systematic reviews

- Greater impact when practice was below standard (Ivers et al., 2012; Rogers et al., 2015)
- Ongoing and frequent feedback more effective (Hysong, 2009)
- Recommendation for further studies (Wang et al., 2011; Whalen et al., 2021)

Peer Review

- Professional Practice (ANA, 1988; George & Haag-Heitman, 2015)
- Engagement (George & Haag-Heitman, 2011)
- Quality Improvement (George & Haag-Heitman, 2011)

General Audit and Feedback Studies

- Individual and Timely (Borgert et al., 2016; LeClair-Smith, 2016, Wong et al., 2009)
- Improve engagement (LeClair-Smith, 2016)
- Empowerment to engage in solutions (Brann, 2014)

Audit and Feedback Studies Specific to documentation

- Identification of barriers (Moldskred et al., 2021)
- Improve engagement (Semper et al., 2016)
- Individualized feedback (Gloger et al, 2020)

Process improvement method or study design

Objective: To show that peer audit and feedback can improve compliance in documenting critical laboratory result communication.

Setting: Intensive Care Unit at Magnet Designated Facility

– All nurses, all Shifts

Audit team: Volunteers from Unit

Plan:

- Education plan (unit and audit team)
- Overall compliance monitoring (100% Critical Laboratory Results called to nursing)
 - Review compliance pre and post EMR change
- Audit tool (accessible by QR code or link)
 - Seeking barriers to documentation during feedback sessions
- Survey post intervention to all staff (January 2023)
- Preintervention data collected from April – July 2022
- Project implementation August 2022 through December 2022

Critical Result Notification Documentation Peer Review & Feedback Form

Nursing notification to physician is only required when nurse is notified by phone by lab personnel.

Call to provider responsible is required to be completed within 60 minutes of notification.

RN is required to document – critical result, provider called, T called, and any orders given.



Peer Review with Feedback Project Participant Survey

Please complete the survey below.

Thank you!

Where you a Reviewer for this project

* must provide value

☐ Yes

☐ No

reset

Did you have an event reviewed?

* must provide value

☐ Yes

☐ No

reset

I believe that peer review & feedback can help in overall quality improvement.

Strongly Disagree

Neutral

Strongly Agree

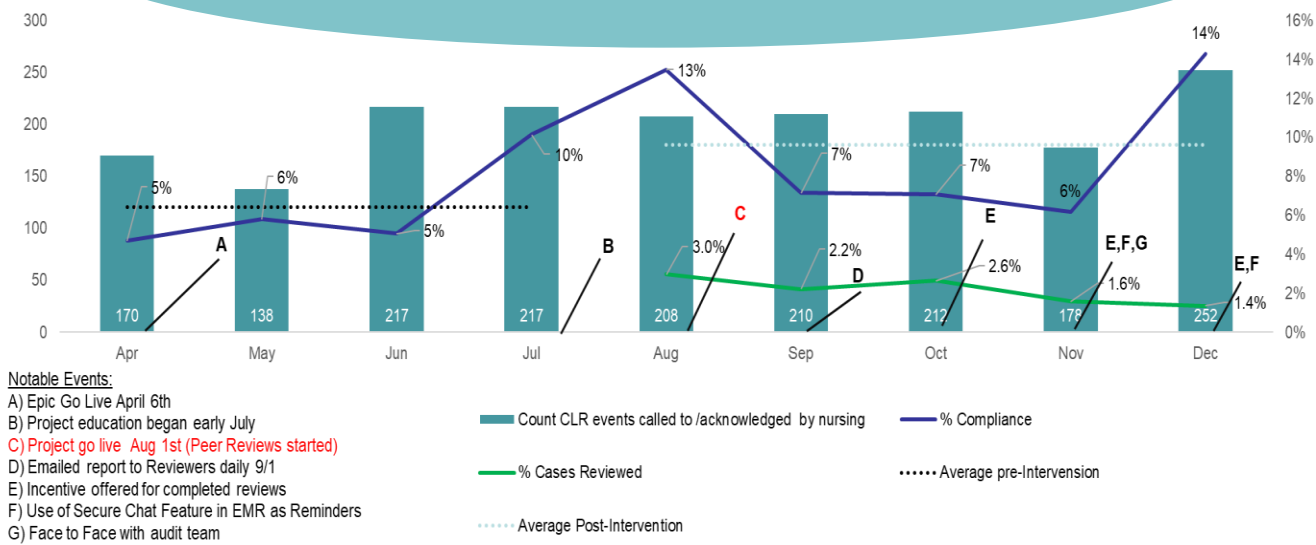
Results/Outcomes

- No Statistical Significance identified
 - Mann-Whitney U Test (p=.111)
- Clinical Significance:
 - Overall Compliance increased by 50% during project time period
 - Improvement noted for all 3 elements of required documentation (Lab name, provider name, actions ordered)
- Barriers to documentation identified during peer discussions:
 - Knowledge gap in requirements for documentation of CLR when protocol in place
 - Time to document (workload and patient flow)
 - Forgetting

Post-EMR (April - July 2022)	Project (Aug - Dec 2022)	% Change Post EMR Change & Project
6.40%	9.60%	↑50.0

Post EMR	Project	% Change Post EMR to Project
Documentation Lab Name		
9.1%	12.6%	↑38.5%
Documentation Provider Name		
11.6%	13.3%	↑14.7%
Documentation Action		
10.1%	11.5%	↑13.9%

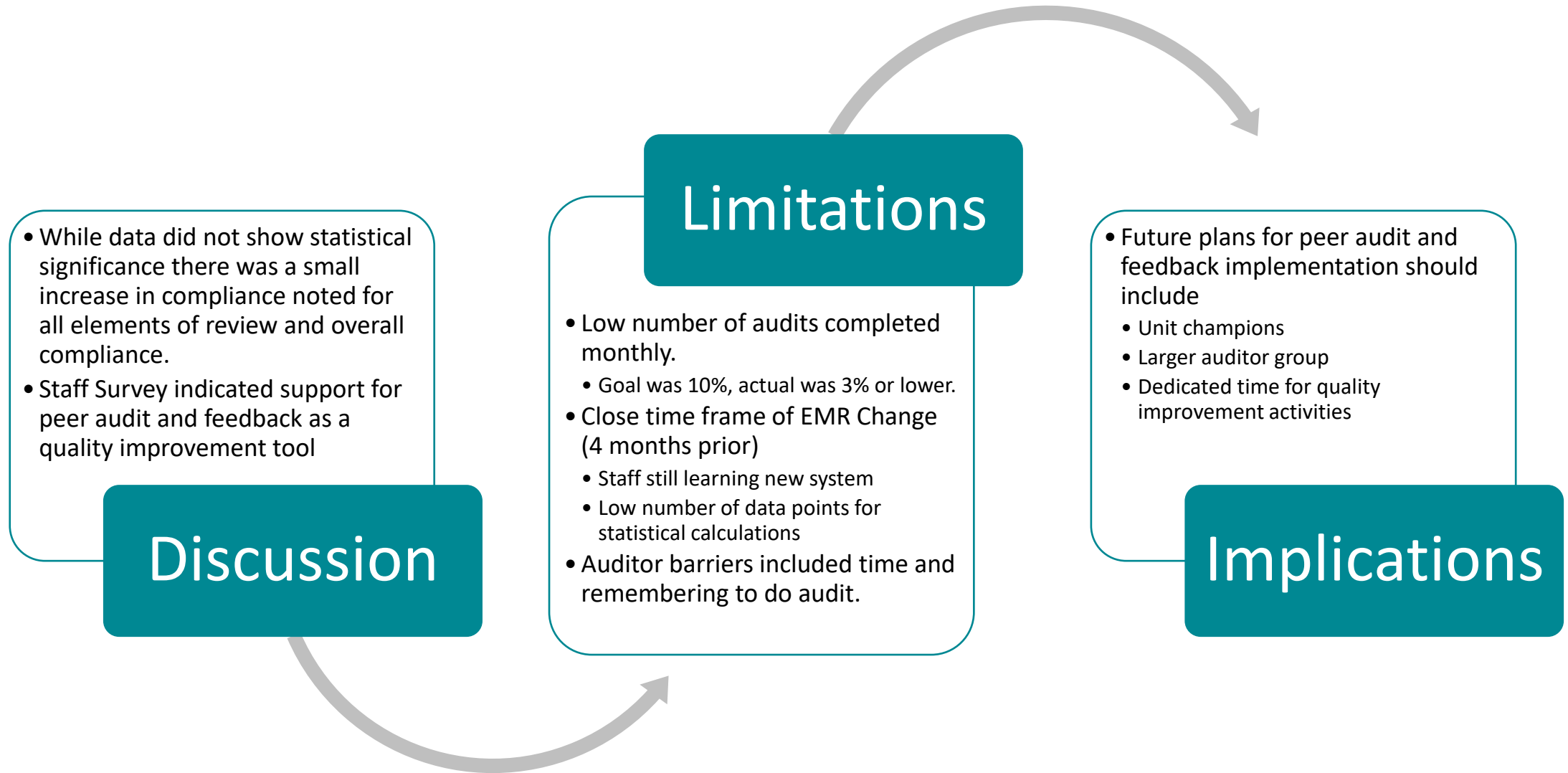
Change in EMR 4 months prior to intervention affected documentation of CLR. Compliance dropped by 51%



- Perception Survey
 - 24 total respondents (34% of unit nurses)
 - 3 auditors
 - 3 identified as having events audited
 - Positive perceptions related to project and peer audit and feedback

	n	Minimum	Maximum	Mean	Std. Deviation
The process of performing peer review helped my own practice.	3	50	100	75.7	25.0
The experience of peer review and feedback in this project was not punitive	3	78	100	91.7	11.9
I believe that peer review & feedback can help in overall quality improvement.	18	3	100	74.0	23.1

Lessons learned



References

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NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Innovating to Improve Care of the Stroke Patients: A Team Approach

Anna Maria Helms, MSN, RN, CCRN-E, SCRn, ASC-BC, NVRN-BC *Dara Myers, BSN, RN, CN-II

*Laura Williams, MSN, RN, CEN, NVRN-BC * Tammy Richardson, MSN, RN, CCRN-K, CPHQ

*Julia Retelski, MSN, RN, CCNS, SCRn



Atrium Health

Project Overview

- At Atrium Health in the Greater Charlotte Market we utilize a Telestroke Nursing Team to reach 21 sites. Code Strokes are activated via virtual carts with single button activation to our 24/7 Telestroke teams.
- The pilot focused on improving Telestroke notification and Door to CT times for patients arriving by EMS. After EMS notification of patients stroke symptoms, data review included bedside nurse activation of Telestroke prior to arrival and Door to CT complete times.

Process Improvement Method

Study Design

- Based on data analysis, two pilot sites were chosen that were having difficulty meeting activation and door to CT times. One site was a Freestanding Emergency Department (FSED) and another was a primary stroke center (PSC).
- The Telestroke nurse created materials that were shared with the sites via daily huddle education, unit handouts, and a voiced-over PowerPoint presentation for teammate unable to attend in person
- Telestroke nurses then monitored the performance sites to provide direct feedback on improvement or opportunity. This included number of stroke patients arriving via EMS, site notification status, Telestroke team notification, and door to CT times

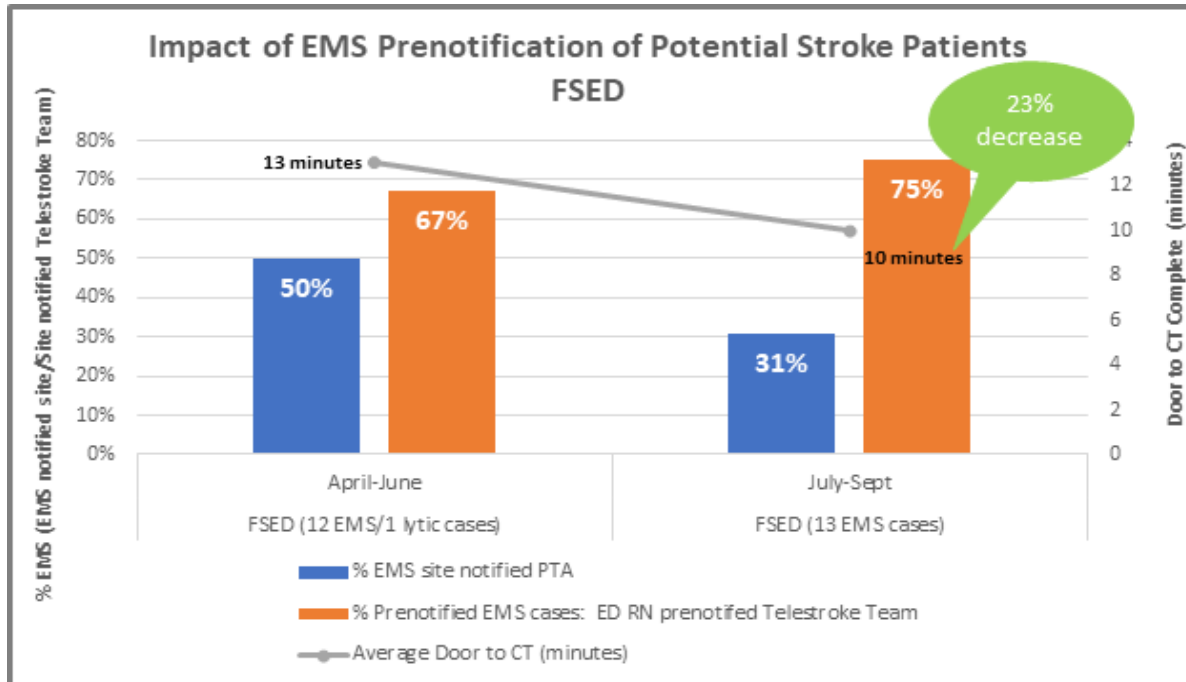
Outcomes Measures

- ED nurses will prenotify the Telestroke team 50% of the time.
- Door to CT times will decrease by 5 minutes with prenotification to Telestroke Nurses

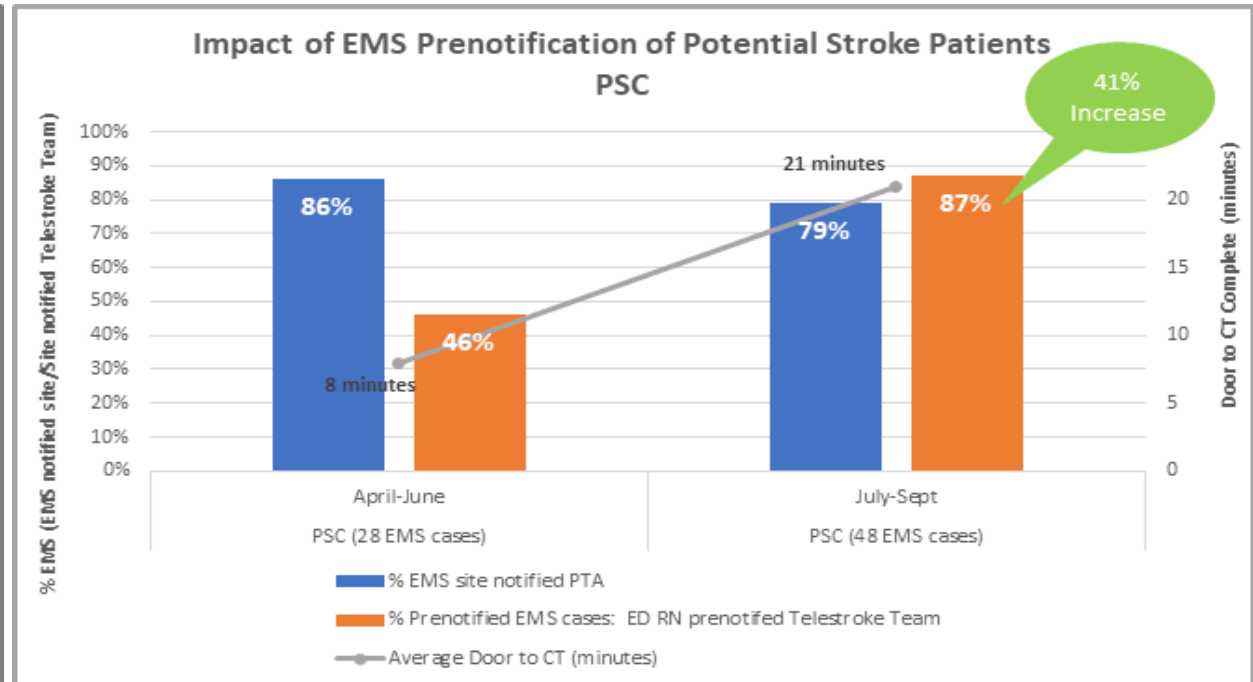
Results

- At the Primary Stroke Center (PSC) there was a 41% increase of prenotifications to our Telestroke nurses but no decrease in Door to CT times.
- At the FSED, there was an 8% increase in prenotification to Telestroke nurses and a 23% decrease in average Door to CT times from 13 minutes to 10 minutes. This 3 minutes savings equates to 6 million brain cells being saved!

Results and Outcomes



For our FSED, we saved 3 minutes in door-to-CT times.
This equates to almost 6 million brain cells being saved!!



Our PSC saw an increase of 41% of EMS cases that encoded with stroke symptoms the telestroke team was prenotified of the patient.

Lessons Learned

Barriers to early activation need to be addressed:

- ED physicians did not want to call Telestroke team until completing initial exam
- ED team understanding of stroke metrics

Barriers to decrease Door to CT times:

- Instability of the patient
- CT table was occupied

Time is Brain: Every minute an acute stroke goes untreated 2 million brain cells are lost

- Education and communication about time metrics for clinical teams involved in a process is essential
- If stroke is suspected activate the stroke team. The earlier they are involved the better!
- Protocols should allow ANYONE to activate a Code Stroke.
- Collaboration among virtual support and bedside clinicians is vital to patient care and successful project implementation.

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Atrium Health
Wake Forest Baptist

Interventions to Promote Exclusive Breastfeeding

The Birth Center at Atrium Health Wake Forest Baptist Medical Center

Karen Lindley MBA, CLSSGB, CPHQ klindley@wakehealth.edu

Jennifer Ingle, DNP, RN-BC, NEA-BC,

Penny Blake, DNP, RN, CENP, NEA-BC,

Anna Miller-Fitzwater, MD, MPH, FAAP,

Katie Maxey, MS, RD, IBCLC, CHES

Susan Kerby, BSHIM, SSLP, CPHQ

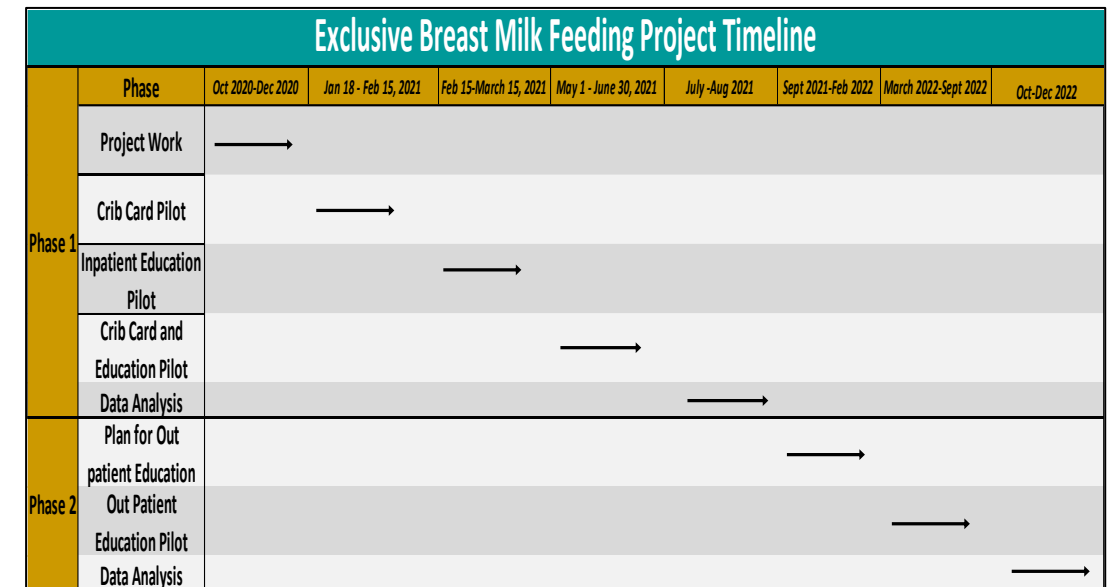
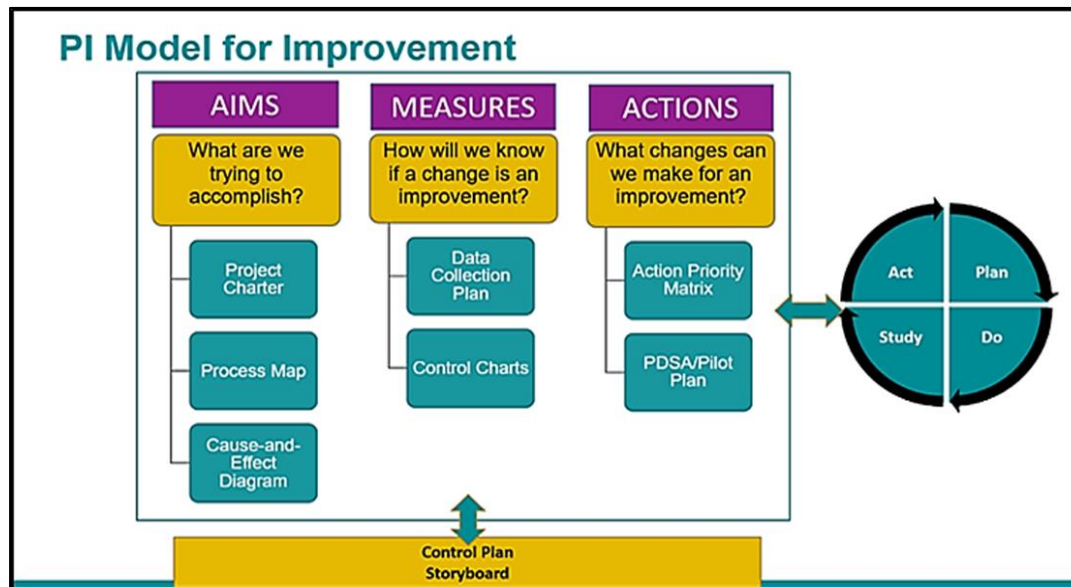
Project overview



- The Joint Commission (TJC) tracks exclusive breast milk feeding rates in full-term healthy newborns during their initial hospital stay via measure PC-05.
 - From July 2019-December 2020, The Birth Center (TBC) at Atrium Health Wake Forest Baptist Medical Center averaged 28% for PC-05, below the state average of approximately 40%.
 - Our aim for phase 1 of the project was to increase PC-05 rates from 28% to 45% by December 2021.
 - The aim for phase 2 was to increase PC-05 rates from 29% to 40% by December 2022.
-
- Project Team included Inpatient and Outpatient RNs, Nurse Educators, Lactation Consultants, MD, NP, Clinical Data Analyst, Performance Improvement Analyst, Registered Dietitians, Patient Representative

Process improvement method

- This project team used the IHI Model for Improvement to identify opportunities and interventions for improvement
- A two-phase approach was implemented

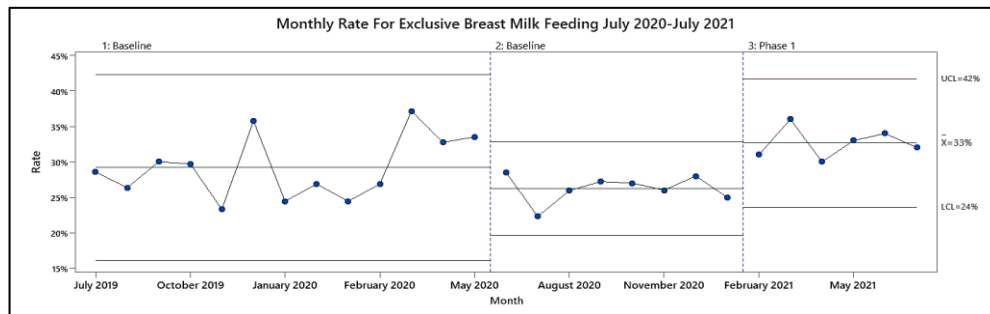


Results/Outcomes

Phase 1

Interventions included inpatient crib card reminders and laminated bedside education packets for medical staff and new mothers to reference.

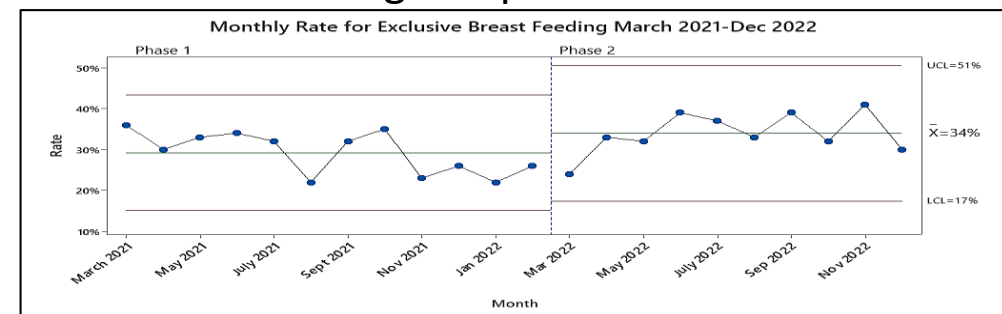
Implementation occurred January-July 2021. TJC PC-05 improved to a mean rate of 33% with statistically significant change (p-value 0.001)



This control charts compares baseline data to data gathered during Phase 1
1 Baseline: (July 2019-May 2020) average breastfeeding rate was 29%
2 Baseline: (June 2020-Jan 2021) average breastfeeding rate was 26%
3 Pilot: (Feb 2021-June 2021) average breastfeeding rate was 33%

Phase 2

Interventions were implemented March-September 2022 focusing on providing lactation consultation (LC) education for a convenience sample of patients during a third trimester OB clinic visit. Inpatient interventions included visual reminders of newborn stomach size using “belly beads,” increased LC support, and locks on formula cabinets. PC-05 mean from Mar-Dec 2022 was 34% and included all patients discharged from The Birth Center. A significant positive shift was noted on the control chart during this phase



This data is comparing Phase 1 with Phase 2
Phase 1 time period March 2021-Feb 2022 the mean rate for Exclusive breast feeding was 29%
Phase 2 time period March 2022 - Dec 2022 the mean rate for Exclusive breastfeeding is 34%

Lessons learned

- Prenatal education and continued inpatient education increased the rate of exclusive breast milk feeding for normal newborns
- Bedside education packets provide a resource to patients and the healthcare team to better support exclusive breast milk feeding for newborns while in the hospital
- Other campuses within the WFBH system expressed interest in using the bedside education packets, so these were shared with them
- Due to the positive response to bedside education packets, the team moved to include the breastfeeding education during the prenatal visits
- Prenatal education in the third trimester impacted exclusive breast milk feeding at discharge from postpartum
- The timing and availability of education impacts success in exclusive milk breastfeeding
- Continued study of the impact of breast milk feeding education in the prenatal phase of pregnancy is recommended

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



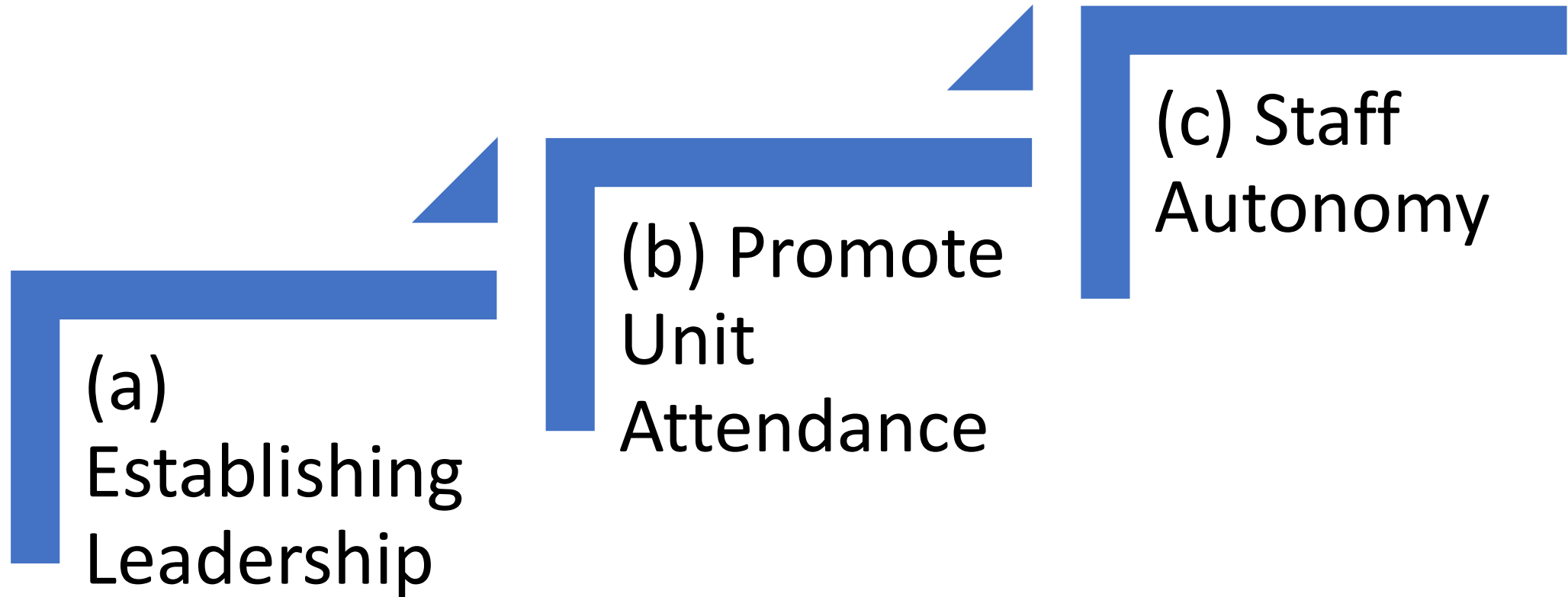
Under Construction-Palliative Care Unit-Based Council

April Meeks, BSN, RN, PCCN, ANM; Kathy Gilbert, BSN, RN-BC, Manager; Amy Hines, BSN, RN, CEN

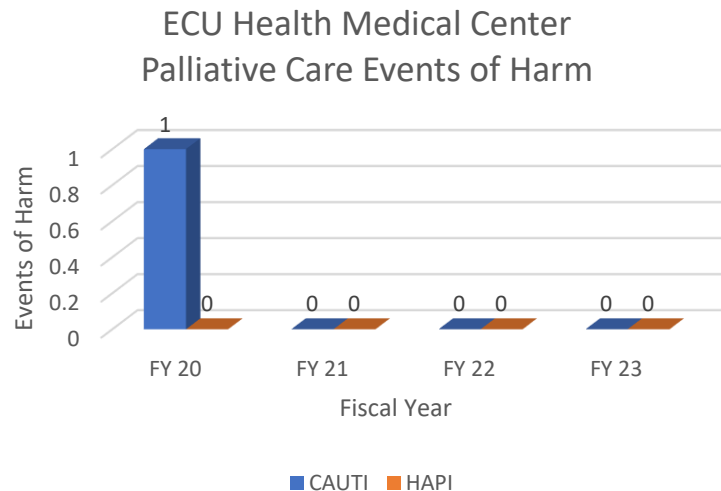
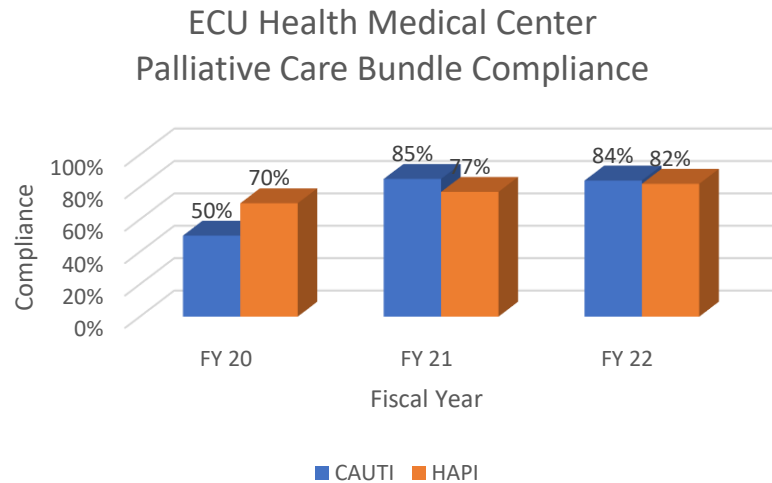
Project overview

- The key component for Magnet designation and pathways is a solid foundation involving partnership with shared governance councils.
- Shared governance and unit-based councils can have a direct impact on staff engagement in relation to education, certification and quality of care.
- Unit-based councils (UBC) are a mainstay for any unit to have direct access with shared governance with disseminating education and promoting unit camaraderie.
- Palliative Care Unit (PCU) is a 16-bed unit that specializes in palliative/hospice care.
- As most hospital committees were affected during COVID-19, palliative care was no exception with their UBC membership dissolving.
- An attempt to restore the UBC was initiated by leadership and the medical director in the summer of 2021.
- Membership consist of nurses from a variety of backgrounds including BSN, MSN and specialty certifications, a medical director, leadership, care partners and unit secretaries

Process improvement method or study design



Results/Outcomes



- The rebirth of a newly constructed UBC has influenced many activities on palliative care including education, COVID visitation and community service.
- In regards to members education 66% are BSN prepared and 11% MSN prepared with 22% having certifications in a nursing specialty.
- Quality leads were restored based on bilaw structure to circulate bundle education to staff.
- Quality leads were restored based on bilaw structure to circulate bundle education to staff.
- Overall bundle compliance for FY 22 as increased for HAPI's by 17% and CAUTI's by 40%.
- In regards to HAPI compliance, FY 20 stood at 71% and FY 21 showed an 8% increase.
- CAUTI also showed improvement with FY 20 at 50% and FY 21 showed a 29% increase

Lessons learned

Having an active unit-based council can increase staff unity, drive education and give staff autonomy to unit lead decisions.

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Improved Outcomes at UNC Health with Total Hip and Knee
Replacement Enhanced Recovery After Surgery (ERAS)

Candice Morton, Candice.Morton@unchealth.unc.edu, UNC Health

Project overview

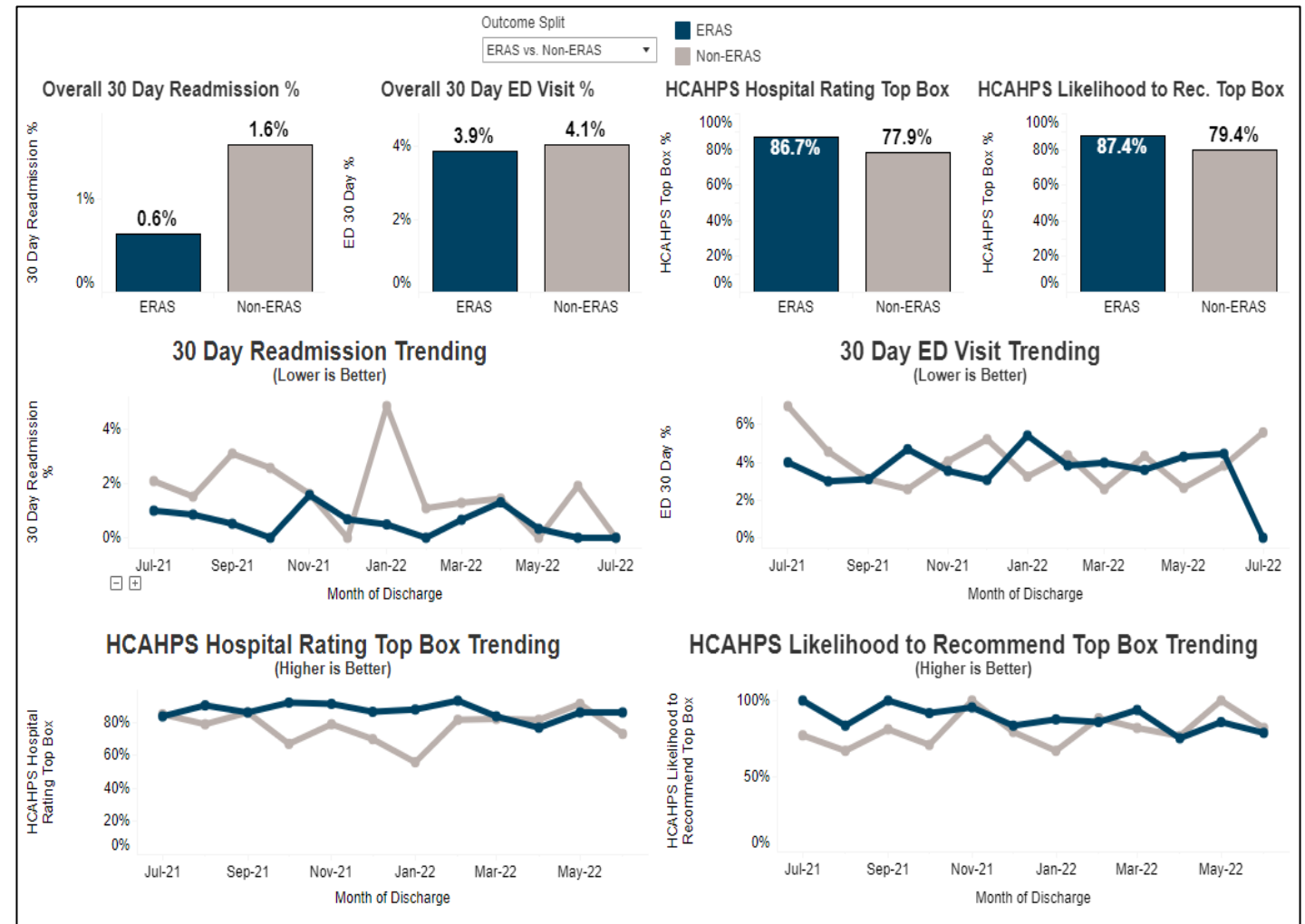
- Over our two-year joint replacement ERAS journey, we have clearly demonstrated the value of ERAS.
- Implementation of Total Hip and Knee Replacement Enhanced Recovery After Surgery (ERAS) at UNC Health led to improvements in multiple patient outcomes – length of stay, 30-day readmission rate, 30 day ED visit rate, and patient satisfaction top box scores.
- Enhanced Recovery After Surgery (ERAS) is a set of evidence-based best practices starting at the decision to have surgery and continuing through discharge. ERAS for Total Hip and Knee Replacement patients started at UNC Health in early 2021 with two hospitals.

UNC Health - ERAS Total Hip/Knee Replacement Pathway Perioperative Components					
Pre-Admit	ERAS Total Hip/Knee Replacement Pathway: Postoperative Components				
	Service-Specific	Pain Management	Nutrition & GI Recovery	Early Mobilization	Drains and Lines
Pre-Admit	• Screening & Optimization for: Anemia/nutrition (flag Hgb<10, Albumin<3.5, BMI>40, HbA1c>8.0 and address in relation to patient history) • Smoking Cessation (4 weeks prior to surgery) • Alcohol Cessation (screen for heavy drinking and manage per local process, consider CIWA protocol on admission to address withdrawal issues) • Education provided during patient's clinic visit: ERAS principles and expectations • Total Joint specific education: Patients receive Total Joint Replacement guidebook and attend Total Joint class • Address stopping anti-coagulation pre-operatively with patient, individualizing as needed				
Pre-Op DOS	• Pre-emptive Analgesia (administer 2 or more) • Acetaminophen • Cox2 inhibitor NSAID • Consider gabapentinoid				
Intraoperative	Antibiotics given within 1 hour of incision • 2g cefazolin/Ancef (pt weight <120kg) or 3g cefazolin/Ancef (pt weight >=120kg) pre-operatively within 1 hour of incision • B-lactam allergic patients managed per local institution nomogram • Intranasal decolonization individualized per patient risk VTE Prophylaxis • Both pharmacologic (individualized per patient risk) and mechanical (per local resources) prophylaxis should be used Patient Warming Strategy • Maintain normothermia (ie - warm blankets, Bair hugger, etc per local resources) Anti-Emetic Prophylaxis: • Patients should receive multimodal antiemetic prophylaxis perioperatively using local decision making algorithms				
PACU	• Plan for opioid minimization: multimodal approach including cryotherapy, avoid long-acting opioids • PONV treatment: multimodal, patient specific approach should be used to manage PONV post-operatively • PACU Diet: Regular diet allowed as tolerated				
POD 0	• Avoid using CPM post-operatively	Scheduled multimodals: PO NSAID, acetaminophen, consider gabapentinoid.	• Regular diet order, consider comorbidity appropriate diet as needed	• Ambulate with therapy on POD#0 • Ambulate with nursing if PT unavailable on POD#0	• IV fluids @100mL/hr, medlock when pt tolerating good oral intake, is normotensive, voiding, and nausea/vomiting well managed
POD 1			Scheduled bowel regimen: any of the following – sennalax, bisacodyl, Colace, Miralax	• Supervised ambulation two or more times per day with a clinician (PT, nursing, other clinician)	• Avoid foley catheter if able • If foley catheter in place, remove at 6am POD#1 unless epidural in place
POD 2	• arranged (for all TKA, if applicable for THA) • Ride/transportation arranged		• PRN bowel regimen: bisacodyl/Dulcolax • Consider gastroprotective meds to address NSAID side effects		
Post-Discharge	Discharge instructions should include: • Pain management, including continued multimodals and discharge opioids per Standard Opioid Prescription Schedule • Weight bearing status / hip precautions (if applicable) • Wound care / dressing change / shower guidance • Anticoagulants • Bowel regimen • PRN antiemetic • Info about devices (abductor pillow, knee brace, cryotherapy if applicable) • How and when to notify provider, info about follow up appointment		DISCHARGE OPIOIDS per UNC Health Standard Opioid Prescription Schedule (SOPS) Total Knee Replacement = 0-50 (5mg oxycodone tablets or equivalent MME) Total Hip Replacement = 0-30 (5mg oxycodone tablets or equivalent MME) Post Discharge Outcomes: Tracked locally and via ERAS Dashboard		

This is the Paper Pathway, a 2-page document organized by phase of care with elements agreed on by the subject matter experts.

Process improvement method or study design

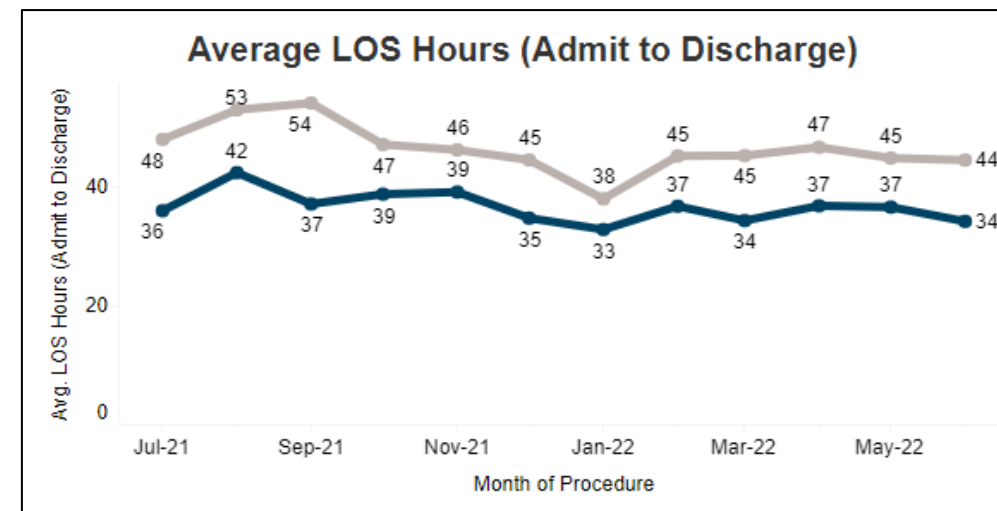
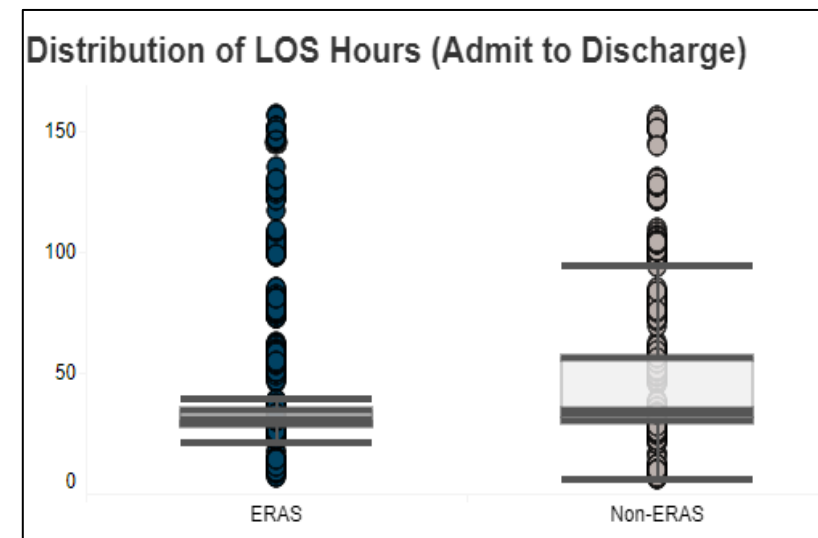
- Critical to this effort was the creation of system wide “dashboards” to share relevant data with clinicians across UNC Health so they can understand and optimize patient care.
- Implementation of ERAS for Total Hip and Knee Replacements has led to a decrease in length of stay, 30 day readmission rate, and 30 day ED visit rate.
- By including patient experience metrics, we consistently found that patient “likelihood to recommend” and “hospital rating” were higher for patients managed on an ERAS pathway vs off pathway.
- Displaying process and outcome metrics into our dashboard, along with sending filtered progress reports to clinician leads strengthened clinician buy-in, allowing us to scale this high-impact pathway quickly to ten hospitals in our 14-hospital health system.



Results/Outcomes

- Our tracked outcome metrics include length of stay, 30 day readmission rates, 30 day ED visit rates, morphine milligram equivalent consumption by phase of care, and patient satisfaction top box scores

	ON pathway	OFF pathway
TOTAL cases FY2022 (Jul 1, 2021 – Jun 30, 2022)	3,058	1,454
Length of Stay (hours) Median	30 hours	33 hours
Length of Stay Range 25th-75th% and Interquartile Range	28-34 hours (interquartile range = 6 hours)	30-56 hours (interquartile range = 26 hours)
30-Day Readmission Rate	0.6%	1.6%
30-Day Emergency Department Visit Rate	3.9%	4.1%
Patient Satisfaction – Rate Hospital (top box)	86.7%	77.9%
Patient Satisfaction – Likelihood to Recommend (top box)	87.4%	79.4%



Lessons learned

- With the success of this and our other system ERAS pathways, 12 hospitals across the UNC Health system have adopted at least one UNC Health ERAS pathway.

	Appalachian	Blue Ridge	Caldwell	Chatham	Johnston	Lenoir	Nash	Onslow	Pardee	Rex	Rockingham	Southeastern	UNCMC	Wayne
Total Joint														
Planned C-Section														
Colorectal														
Bariatric														
Thoracic (Lung)														
Peds G-Tube														

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



Code Chemo – Reducing Hospital Admissions for Pediatric Oncology Patients

Levine Children's – Atrium Health
Charlotte, NC

Project overview

Previously, febrile pediatric oncology patients with central lines were directly admitted to our inpatient (IP) unit. We transitioned this process to the children's emergency department (CED) to improve inpatient bed availability and minimize unnecessary hospital admissions, crucial during staff shortages.

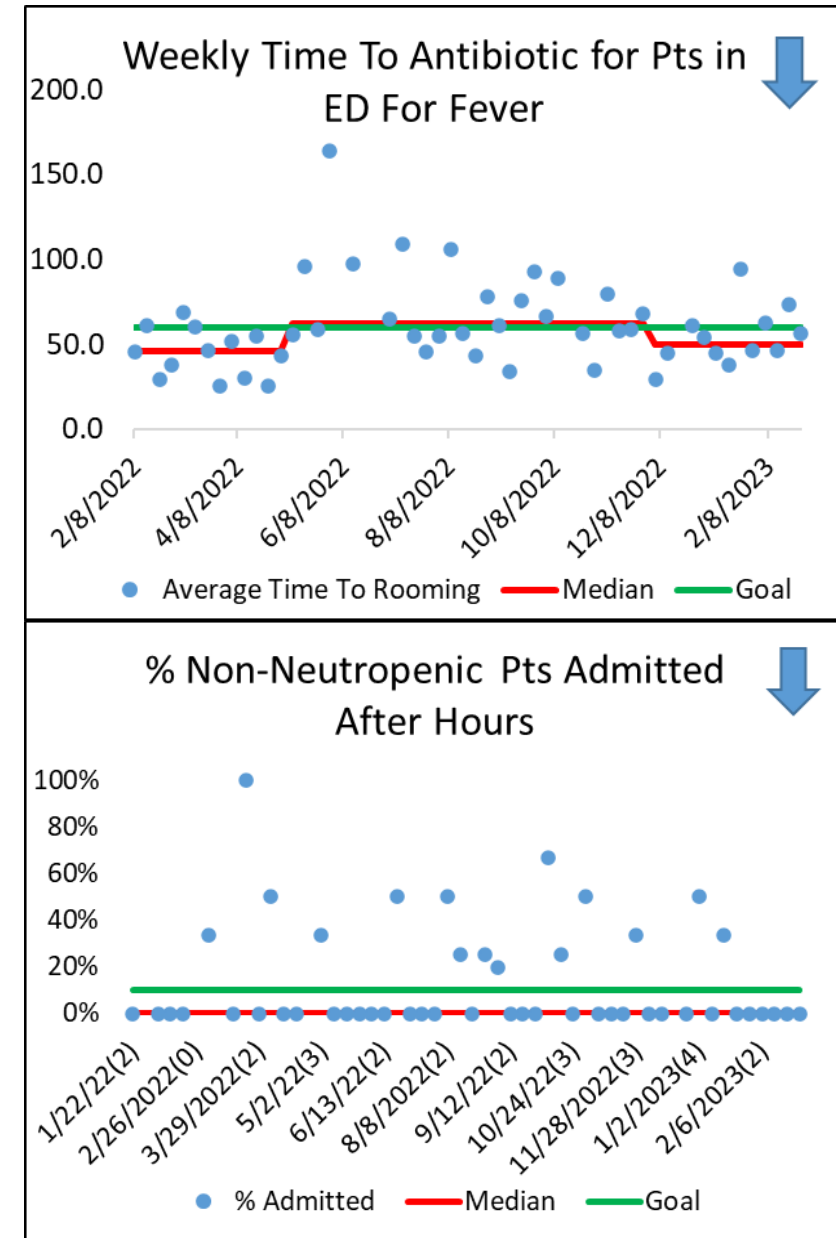
Process improvement method

ED and IP nurses and a multidisciplinary team planned and executed this project, with emphasis on understanding and appreciating the demands of others. A multilayered communication strategy featured visual tools and interdisciplinary flow map built around an EMR pathway.

- ED nurses received additional education on pediatric implanted port accessing and obtaining blood cultures.
- Oncology nurse navigators educated patients and families on the new process of care management in the pediatric ED.
- Instructions emphasized the importance of prompt evaluation and antibiotic administration, using standardized processes to maintain antibiotic administration time of <60 minutes.

Results/Outcomes

- Since inception of this work in Jan 2022, we have had **63 patients discharged home** from the ED improving patient flow and reducing inpatient admissions and costs.
- We estimated that this process change has potentially facilitated **\$844,200 in cost savings**, while opening beds for others (63* \$13,400 for an average pediatric non-birth hospitalization) .
- We continue to hover around an average of 60 min from patient arrival to antibiotic administration in the ED.



Lessons learned

- An engaged, inclusive interdisciplinary team with strong leadership resulted in a shared patient-centered vision.
- This work is a blueprint for translating a standardized pathway to a multi-tiered communication tool to protect patients from hospital-related risks.
- Collaboration among multiple roles and multiple departments is essential to maximize optimal results.

NORTH CAROLINA ASSOCIATION FOR HEALTHCARE QUALITY



**An Improvement Organization's Equity Journey: Individually and Collectively
Bringing an Equitable Lens to All We Do**

Our Superpowers: Ignite & Improve

Mary R. Webster, MSN, RN, CPHQ, mwebster@improvepartners.org;

Population Health Improvement Partners, Morrisville, NC

704.941.9664. www.improvepartners.org

Project overview

WHAT

- 2021-Our newly appointed Executive Director led the charge to **ignite** us on an individual-level and organization-wide **equity journey**.
- It was time to assure an equity lens was evident in all that we do- time for a deep dive.
- We felt it was the right thing to do

WHY

- We are improvers, learners, and change agents. We coach, facilitate, and support organizations and communities to improve health outcomes equitably for populations
- **Health Equity**: Project partners and funders evolving to request interwoven equity principles in project measures and goals.
- There is no Quality Improvement without Equity

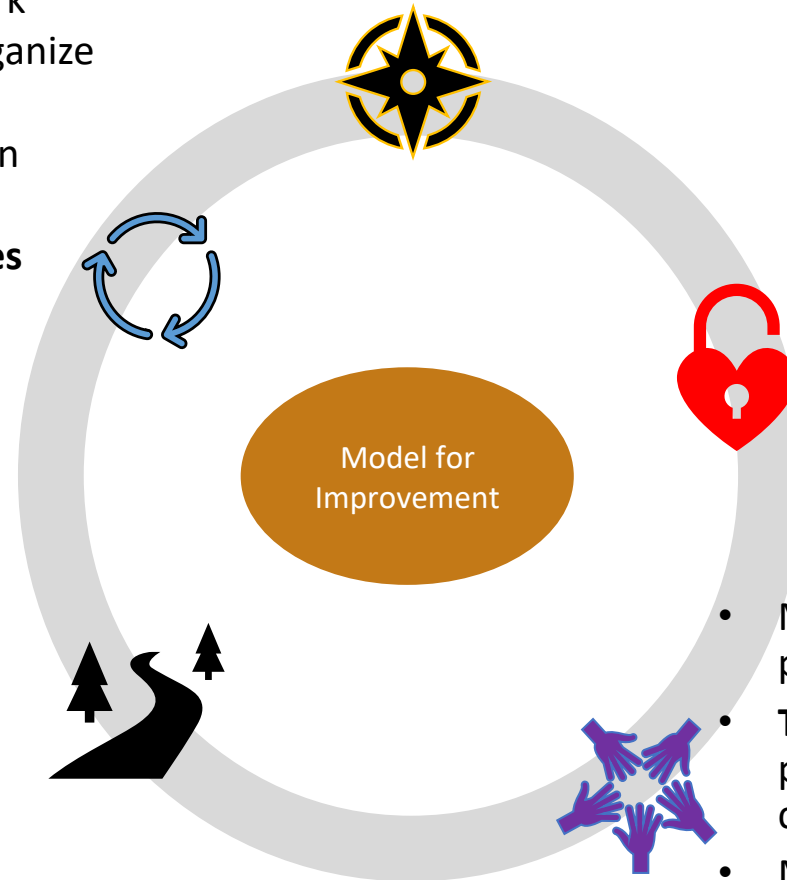
Ask: How
Might We...?

- ...Build our own capacity and heart for this new and richer approach?
- ...Interweave equitable approaches to the quality improvement principles and tools that we use as our foundation?
- ...Coach others to improve population outcomes in an equitable way?
- ...Build partnerships with other like-minded organizations/funders?

Process Improvement or Study Design

- Used the **Model for Improvement and Person Centeredness** for our journey's framework
- Utilized Project Management Tools to organize our learning journey
- Evenly distributed the learning/facilitation among the team members
- Practiced high functioning **team principles**
- Incorporated **change management** considerations
- Set Expectations, Data/Goals, Timeline
- **Leadership commitment**

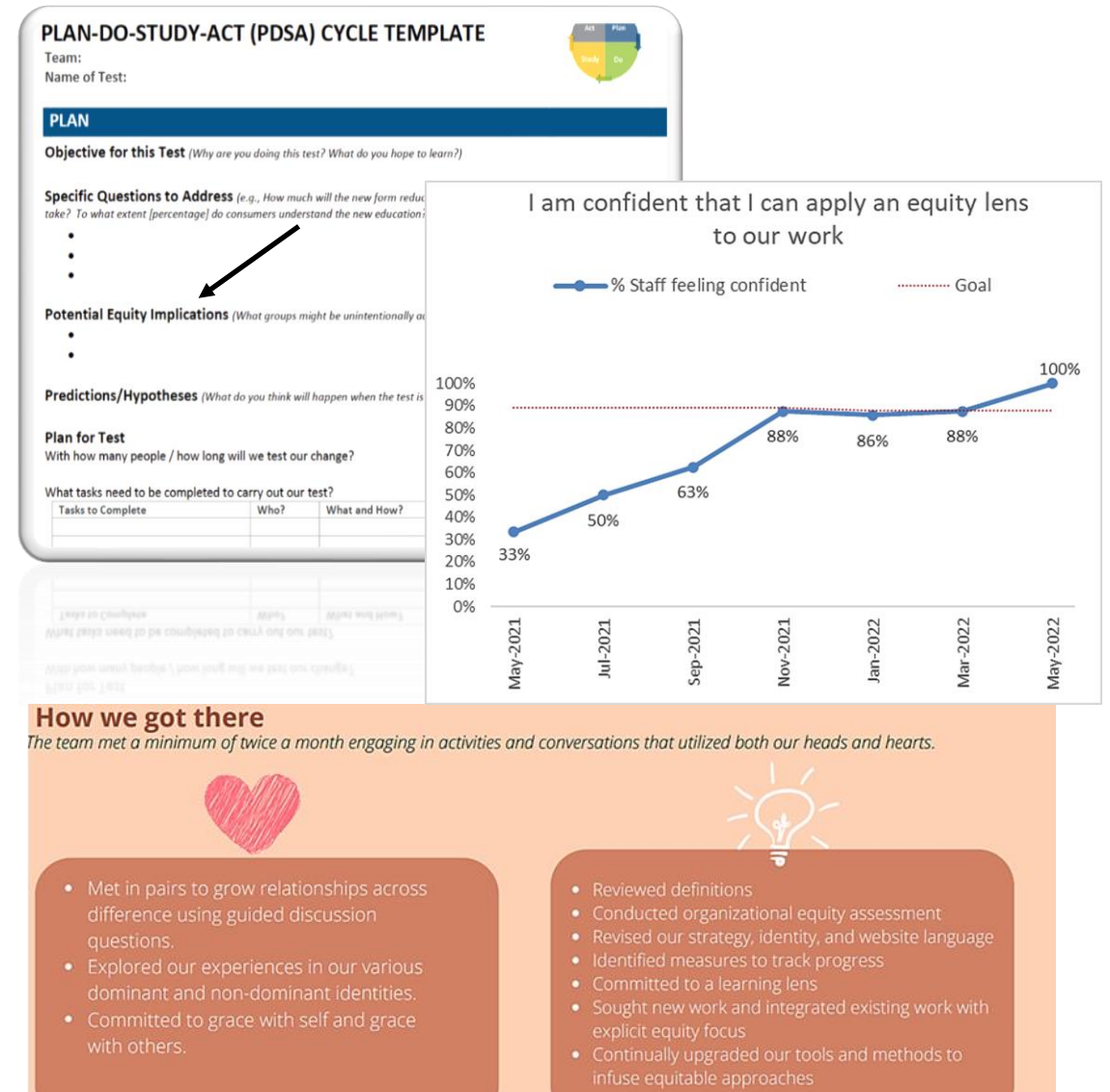
- Reviewed a **proven framework** (Roadmap to Reduce Disparities, AHE: Advancing Health Equity)
- **Looked to others** who have done this successfully
- Utilized a **standardized equity curriculum**
- **Connected with leaders** in this work- GOODSTOCK Consulting, LLC, County Health Rankings & Reports/Univ of WI Public Health



- **Revised our mission and goals** by asking “**Why Center Equity?**”
- Asked the right questions to better identify and understand equity, race and social injustices
- Practiced **mindfulness exercises** before our Equity team meetings
- *Strove* to connect the *HEART & MIND*
- Held **consistent leadership** checks with team members, continued to support each's journey
- Maintained **hub of equity resources** for shared & planned sharing/learning
- **Testing application of key equity principles** to our project works with QI: project tools, discussions, coaching topics, and data display and analysis.
- Monthly team **meeting time dedicated** project equity involvement- what's being tested, challenges, barriers, and successes.

Results/Outcomes

- ✓ We had longitudinal growth in our confidence to apply an equity lens to our work. It grew 3x in one year, from 31% to 100% (goal 80%). (see graph)
- ✓ Change **ideas began** with the heart, internal and collective growth. Mission/Vision: updating **website to reflect equity** commitment.
- ✓ Continuing to **infuse equity into project work**: testing new ideas & **tools**: internally and with customers/project teams. Reinforce narratives that drive health equity.
- ✓ **Population Health Improvement Partners** has been trained in the **narrative change process** and has facilitated multiple sessions as part of a health equity narrative infrastructure building project, co-led by the University of Wisconsin Population Health Institute's County Health Rankings and Roadmaps and Human Impact Partners, and funded by the Robert Wood Johnson Foundation.
- ✓ Presented *Changing Narratives to Drive Health Equity* at IHI Forum 2022
- ✓ Over 85% of our current project work includes an equity lens component from data analysis, QI tools, or group discovery via Community of Practice.



Lessons Learned



Equity journey work **takes time and patience**- with ourselves and others.



Make using equity lens the default. Can't fix what we can't see.
Disaggregate data- e.g., race, ethnicity, gender, SE level, education



Commit to team & personal learning, being of open mind, ask questions, challenge your mind & the status quo. (*improvement professionals* do this!)



The **focus** of our effort is on learning and growth- NOT evaluation and performance. The **AIM** is progress and improvement- not to hit a specific target.



Respect that everyone is on their own equity journey, at **different entry points**. We are learning alongside many of the organizations we work with, the desire to learn and use equitable practices is there.